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Economic minerals of Scotland – bedrock of Scotland's economic development.

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BRITISH GEOLOGICAL SURVEY

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Economic minerals of Scotland - bedrock of Scotland's economic development.

R.P. McIntosh, E.K. Hyslop, F. MacTaggart, T. Cullen, J. Rayner

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Foreword

The work is the result of a digitisation project funded by the New Opportunities Fund RLS (Resources for Learning in Scotland). This report contains 600 images and text descriptions on the economic minerals of Scotland. Most of the specimens have been sourced from the BGS collections. The digitisation project took place between December 2002 and March 2003 and the images and descriptions will be made available on the RLS website and the BGS National Archive of Geological Photographs.

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1 Introduction

Economic minerals of Scotland – bedrock of Scotland's economic development.

This project was a Resources and Learning in Scotland/Scottish Cultural Resources Access Network project. It ran from December 2002 to March 2003 and provided 600 full records, metadata plus images.

The aim of this project was to provide images of the minerals that form the basis of many of Scotland's industries – past and present, great and small. The mineral specimens were collected by the Geological Survey during its early phases of exploration.

The aim of the Geological Survey has always been to map the geology of Scotland and also to be keenly aware of any potential economic benefits that could be derived from the rocks. From as early as 1858 when James 'Paraffin' Young consulted Archibald Geikie, the Director of the Survey in Scotland about the oil-shale seams at Broxburn and so initiated the Scottish oil-shale industry, the Survey has had a major impact on the economic growth of Scotland.

The First and Second World Wars were great periods of exploration for rare and unusual strategic economic minerals. Lead, zinc, copper, barites, iron, silver etc. are all well-known commodities that have been mined in Scotland for centuries. During the First World War the Survey discovered the Raasay Ironstone deposits and the Ayrshire Bauxitic Clays while diatomite at Dinnet was extracted for use in the explosives industry at Ardeer. During the Second World War attention focused on coal, oil-shale, magnetite in Shetlands and Skye, pegmatite in Knoydart for mica, potash feldspar from Harris in the Outer Hebrides for the pottery industry, and limestone including the shell sands of John O' Groats and the crystalline limestones of Fort William.

Other industrial minerals include:

- Fireclay (used for high-quality ceramics).
- Brickclay.
- The rich metalliferous mineral veins of Perthshire (lead, copper, arsenic, gold).
- Mica, feldspar and beryl from the Highland pegmatites.
- Bauxitic clay from Ayrshire for high-temperature furnace bricks etc.
- Lead ore (galena) and other minerals from Leadhills and Wanlockhead.
- Oil shale and its products ranging from paraffin to wax candles (also cleaning fluid, bricks, crude oil).
- Coal.
- Bog iron ore and manganese.
- Talc deposits in Perthshire.
- Pure quartzites for silica.
- Gold at Aberfeldy.
- Magnetite from Tiree and Shetland.
- Ochre from Fife.
- Barites for the North Sea oil industry at Aberfeldy.

Together these resources provide an instructive insight into the basic raw materials of many of Scotland's extractive industries and as such the project will prove to be a unique complement to existing SCRAN/RLS resources.

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P229223 Barytes vein in the Foss Baryte Mine, Aberfeldy, Perthshire

The Caption:

Caption Title Barytes vein in the Foss Baryte Mine, Aberfeldy, Perthshire
Subtitle
Caption Text 1 Barytes vein in the Foss Baryte Mine, Aberfeldy. The image shows the contact between pyrite and banded barytes. Note minor faulting in barytes along which brown stained iron oxides have travelled and been deposited.
Caption Text 2 Stratabound barium-zinc-lead mineralization extends at intervals of over seven kilometres of the strike-length of the Dalradian (Precambrian) Ben Eagach Schist Formation to the north of Aberfeldy.
Caption Text 3 Mineralization can be traced for 1.8 km. from the Foss Mine. The main barytes bed averages four metres thick in the worked parts of the deposit.

The Basic Record:

Simple Name Photograph
Brief Description Barytes vein in the Foss Baryte Mine, Aberfeldy, Perthshire.
Materials Photograph
Associated Place Scotland, Perthshire, Aberfeldy
(Nature of
Grid Reference Location photograph was taken

Ref. Author Colman, T.B. and Cooper, D.C.
Ref Title Exploration for metalliferous and related minerals in Britain: a guide. 2nd. ed.
Ref. Publication Details Keyworth, Nottingham : British Geological Survey, 2000.

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P229772 Gold-bearing quartz veins, Calliachar Burn, near Aberfeldy, Perthshire

The Caption:

Caption Title Gold-bearing quartz veins, Calliachar Burn, near Aberfeldy, Perthshire
Subtitle
Caption Text 1 Gold-bearing quartz veins, Calliachar Burn one kilometre south of Urlan Farm, five kilometres south-south-west of Aberfeldy, Perthshire.
Caption Text 2 At the Calliachar Burn, thin quartz veins alter metamorphosed sedimentary and volcanic rocks of the Southern Highland Schists, Upper Dalradian (Precambrian).
Caption Text 3 A small amount of gold has recently been produced by the operating company, Colby Gold PLC, from the veins, following records of alluvial gold by the BGS Geochemical Survey

The Basic Record:

Simple Name Photograph
Brief Description Gold-bearing quartz veins, Calliachar Burn, near Aberfeldy, Perthshire.
Materials Photograph
Associated Place Scotland, Perthshire, Aberfeldy, Calliachar Burn
(Nature of
Grid Reference Location photograph was taken
Associated Name Colby Gold PLC
(Nature of Mining company
Ref. Author Colman, T.B. and Cooper, D.C.
Ref Title Exploration for metalliferous and related minerals in Britain: a guide. 2nd. ed.
Ref. Publication Details Keyworth, Nottingham : British Geological Survey, 2000.
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P229773 Lead-zinc mineralization, Ben Eagach, Aberfeldy, Perthshire

The Caption:

Caption Title Lead-zinc mineralization, Ben Eagach, Aberfeldy, Perthshire
Subtitle
Caption Text 1 High-grade zinc-lead mineralization in quartz-celsian (barium feldspar) rock at margin of bedded baryte in the Ben Eagach Schist Formation (Argyll Group, Dalradian, Precambrian) at the Ben Eagach Quarry, 60 metres south-west of the summit of Ben Eagach, 7 kilometres north of Aberfeldy, Perthshire.
Caption Text 2 Cubic galena can be seen amongst the pyrite-sphalerite-galena assemblage (brown-black).
Caption Text 3 The Aberfeldy deposits are thought to have formed by the exhalation of warm saline brines containing barium, iron, zinc and lead into small rifted basins floored by carbonaceous mud. It is thought that this was within a large basin.

The Basic Record:

Simple Name Photograph
Brief Description Lead-zinc mineralization, Ben Eagach, Aberfeldy, Perthshire.
Materials Photograph
Associated Place Scotland, Perthshire, Aberfeldy, Ben Eagach
(Nature of
Grid Reference Location photograph was taken

Ref. Author Colman, T.B. and Cooper, D.C.
Ref Title Exploration for metalliferous and related minerals in Britain: a guide. 2nd. ed.
Ref. Publication Details Keyworth, Nottingham : British Geological Survey, 2000.

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P229822 Barytes from the Foss Mine near Aberfeldy, Perthshire

The Caption:

Caption Title	Barytes from the Foss Mine near Aberfeldy, Perthshire
Subtitle	
Caption Text 1	Translucent barytes crystals in open cavity within baryte (metabaryte) bed at ridge between pits 2 and 3 of the Foss Mine, near Aberfeldy, Perthshire. The late stage barytes lies on a minor cross-fault and clearly formed by remineralisation of the bedded barytes.
Caption Text 2	The Foss barytes deposit was one of the significant discoveries in Britain in the 1970s. It has high-grade barytes deposits in Dalradian (Precambrian) metasediments associated with lead and zinc sulphides.
Caption Text 3	The deposit was discovered in 1976 by the British Geological Survey. Recent production figures show 50,000 tonnes per annum. A nearby and larger deposit is at Duntanlich is not yet in production. Reserves of barytes are in the region of several million tonnes.

The Basic Record:

Simple Name	Photograph
Brief Description	Barytes from the Foss Mine near Aberfeldy, Perthshire.
Materials	Photograph
Associated Place	Scotland, Perthshire, Aberfeldy, Foss Mine
(Nature of Grid Reference	Location photograph was taken
Associated Name	British Geological Survey
(Nature of	Discovered ore deposit
Ref. Author	Colman, T.B. and Cooper, D.C.
Ref Title	Exploration for metalliferous and related minerals in Britain: a guide. 2nd. ed.
Ref. Publication Details	Keyworth, Nottingham : British Geological Survey, 2000.
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P229827 High-grade zinc-lead mineralization, Ben Eagach, 7 kilometres north of Aberfeldy, Perthshire

The Caption:

Caption Title High-grade zinc-lead mineralization, Ben Eagach, 7 kilometres north of Aberfeldy, Perthshire
Subtitle
Caption Text 1 High-grade zinc-lead mineralization in quartz-celsian (barium feldspar) rock at margin of bedded barytes in the Ben Eagach Schist Formation (Argyll Group, Dalradian) at the Ben Eagach Quarry, 7 km. north of Aberfeldy, Perthshire. Cubic galena can be seen amongst the pyrite-sphalerite-galena assemblage (brown-black).
Caption Text 2 Two separate deposits have been identified east and west of Ben Eagach. To the west the Foss Mine is in production from an underground mine at a rate of 50,000 tonnes per year. To the east is the large Duntanlich deposit.
Caption Text 3 The mineralization occurs in the Ben Eagach Schist Formation and the mineralized zone is up to 110 metres thick and extends over seven kilometres along the strike. Bands of pure barytes occur up to fifteen metres thick.

The Basic Record:

Simple Name Photograph
Brief Description High-grade zinc-lead mineralization, Ben Eagach, 7 kilometres north of Aberfeldy, Perthshire.
Materials Photograph
Associated Place Scotland, Perthshire, Aberfeldy, Ben Eagach
(Nature of Grid Reference Location photograph was taken
Ref. Author Colman, T.B. and Cooper, D.C.
Ref Title Exploration for metalliferous and related minerals in Britain: a guide. 2nd. ed.
Ref. Publication Details Keyworth, Nottingham : British Geological Survey, 2000.
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P229905 Panned concentrate of gold from Borland Glen, Glendevon

The Caption:

Caption Title	Panned concentrate of gold from Borland Glen, Glendevon
Subtitle	
Caption Text 1	Borland Glen, Glendevon. Exploration for gold has been undertaken in the Borland Glen. This sample of panned concentrate from a mechanical concentrator product is derived from 1.7 tonnes of alluvium and regolith adjacent to the stream. Long dark particles adjacent to the gold are cinnabar.
Caption Text 2	Surveys for alluvial gold in Scotland indicate high concentrations in the Ochil Hills with the highest in Borland Glen where Lower Devonian andesitic lavas are intruded by a dioritic body and porphyry dykes. Locally there has been intense argillic hydrothermal alteration and brecciation indicative of an epithermal setting.
Caption Text 3	Exploration in the 1990s failed to find the source of the gold and though alluvial gold such as this sample was found it has not proved economic to work commercially.

The Basic Record:

Simple Name	Photograph
Brief Description	Panned concentrate of gold from Borland Glen, Glendevon.
Materials	Photograph
Associated Place	Scotland, Kinrosshire, Glendevon, Borland Glen
(Nature of Grid Reference	Location photograph was taken

Ref. Author	Colman, T.B. and Cooper, D.C.
Ref Title	Exploration for metalliferous and related minerals in Britain: a guide. nd. ed.
Ref. Publication Details	Keyworth, Nottingham : British Geological Survey, 2000.

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Inputter	R.P. McIntosh
Input Date	15/06/2003

P243790 Alluvial gold from Kildonan Burn, Helmsdale, Sutherland

The Caption:

Caption Title Alluvial gold from Kildonan Burn, Helmsdale, Sutherland
Subtitle
Caption Text 1 Gold grains from alluvium, Kildonan Burn, Helmsdale, Sutherland. Alluvial gold occurs in alluvial gravels and is found in a great variety of forms. It can appear black and rusty or appear to be light in weight when the gold particles are small.
Caption Text 2 Gold is a heavy, soft, malleable, ductile yellow metallic element. It is unusual in that it occurs naturally as the native metal.
Caption Text 3 The Suisgill and Kildonan streams are regarded as the most auriferous in the district. The source of the gold has not been found. In 1868 and 1869 there was a minor gold rush in the diggings near Kildonan.

The Basic Record:

Simple Name Photograph
Brief Description Alluvial gold from Kildonan Burn, Helmsdale, Sutherland.
Materials Photograph
Associated Place Scotland, Sutherland, Helmsdale, Kildonan Burn
(Nature of Grid Reference Location photograph was taken

Ref. Author Colman, T.B. and Cooper, D.C.
Ref Title Exploration for metalliferous and related minerals in Britain: a guide. 2nd. ed.
Ref. Publication Details Keyworth, Nottingham : British Geological Survey, 2000.
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Image and Other Asset Info:

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Input Date 15/06/2003

P527555 Chromite from Corrycharmaig, four miles north-west of Killin, Perthshire

The Caption:

Caption Title Chromite from Corrycharmaig, four miles north-west of Killin, Perthshire
Subtitle
Caption Text 1 A specimen of chromite from Corrycharmaig, four miles north-west of Killin, Perthshire. British Geological Survey Petrology Collection sample number MC 7335.
Caption Text 2 The antigorite-serpentine host-rock was probably an olivine rock containing enstatite with chromite as a product of magmatic differentiation. The chromite occurs as mostly reniform or lenticular masses from pea size to as much as 30 tons in weight. Small cavities lined with minute octahedral crystals of the ore are not uncommon.
Caption Text 3 Chromite is one of the spinel group of minerals and is composed of an iron chromium oxide. Trial workings raised 50 tons in 1855-56.

The Basic Record:

Simple Name Mineral specimen
Brief Description Chromite from Corrycharmaig, four miles north-west of Killin, Perthshire.
Materials Mineral specimen
Associated Place Scotland, Perthshire, Killin, Corrycharmaig
(Nature of Grid Reference Location specimen was found
Ref. Author Wilson, G.V. and Phemister, J.
Ref Title Talc and other magnesium minerals and chromite associated with British serpentines. Wartime pamphlet no 9. 2nd ed. 1946 reissue.
Ref. Publication Details London : Geological Survey and Museum, 1946.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527556 Chromite from Corrycharmaig, four miles north-west of Killin, Perthshire

The Caption:

Caption Title Chromite from Corrycharmaig, four miles north-west of Killin, Perthshire
Subtitle
Caption Text 1 The chromite occurs in an irregular mass of serpentine which is intruded into Precambrian, Dalradian Supergroup garnetiferous mica schists and hornblende schists. British Geological Survey Petrology Collection sample number MC 7336.
Caption Text 2 The chromite appears to be disseminated throughout the serpentine in detached grains or aggregates and not in veins. It occurs in masses, sometimes angular, but more often reniform or lenticular in shape varying in size from that of a pea to blocks 5, 10 and in one instance, as much as 30 tons in weight.
Caption Text 3 The host-rock is an antigorite-serpentine, probably an olivine rock containing enstatite.

The Basic Record:

Simple Name Mineral specimen
Brief Description Chromite from Corrycharmaig, four miles north-west of Killin, Perthshire.
Materials Mineral specimen
Associated Place Scotland, Perthshire, Killin, Corrycharmaig
(Nature of Grid Reference Location specimen was found
Ref. Author Wilson, G.V. and Phemister, J.
Ref Title Talc and other magnesium minerals and chromite associated with British serpentines. Wartime pamphlet no 9. 2nd ed. 1946 reissue.
Ref. Publication Details London : Geological Survey and Museum, 1946.
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Input Date 15/06/2003

P527557 Ross of Mull granite, Mull, Argyllshire

The Caption:

Caption Title Ross of Mull granite, Mull, Argyllshire
Subtitle
Caption Text 1 The Ross of Mull granite varies in colour from pale to deep red and is an acid biotite-granite with a little muscovite. British Geological Survey Petrology Collection sample number MC
Caption Text 2 The texture is coarse and fairly even without prominent feldspar phenocrysts. Several quarries were opened, their position determined by proximity to natural harbours.
Caption Text 3 Ross of Mull granite was used in the construction of Blackfriars Bridge, the Holborn Viaduct and the Albert Memorial in London. Quarrying was last undertaken by the Shap Granite Company and the material was taken out by sea and rail to Westmorland to be polished.

The Basic Record:

Simple Name Rock specimen
Brief Description Ross of Mull granite, Mull, Argyllshire.
Materials Rock specimen
Associated Place Scotland, Argyllshire, Mull, Ross of Mull
(Nature of
Grid Reference Location specimen was found

Ref. Author Anderson, J.G.C.
Ref Title The granites of Scotland.
Ref. Publication Details Edinburgh : HMSO, 1939.
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Input Date 15/06/2003

P527558 Sulphide slag from the Silver Ridge Mine, Kirkcudbrightshire

The Caption:

Caption Title	Sulphide slag from the Silver Ridge Mine, Kirkcudbrightshire
Subtitle	
Caption Text 1	This specimen is sulphide slag, the remains of the smelting process. Silver Ridge Mine was owned by the Earl of Galloway and is situated about half a mile east of the River Cree and two miles upstream from the Wood of Cree. British Geological Survey Petrology Collection sample number MC 7338.
Caption Text 2	The principal vein at the mine is about 5 feet wide and trends a few degrees to the north of west. It was opened up by shafts and levels in the 1870s. The workings were about 90 feet deep and good lead ore rich in silver is said to have been wrought.
Caption Text 3	A large number of mineral veins occur in the west part of Kirkcudbrightshire around and near to the large granite mass which forms the Cairnsmore of Fleet Granite.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Sulphide slag from the Silver Ridge Mine, Kirkcudbrightshire.
Materials	Rock specimen
Associated Place	Scotland, Kirkcudbrightshire, Silver Ridge Mine
(Nature of Grid Reference	Location specimen was found
Associated Name	Earl of Galloway
(Nature of	Mine owner
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
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Image File	P527558.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527559 Arsenopyrite, an iron arsenic sulphide from Talnotry about six miles south-west of Newton Stewart, Kirkcudbrightshire

The Caption:

Caption Title Arsenopyrite, an iron arsenic sulphide from Talnotry about six miles south-west of Newton Stewart, Kirkcudbrightshire

Subtitle

Caption Text 1 A specimen of arsenopyrite, an iron arsenic sulphide from Talnotry about six miles south-west of Newton Stewart. British Geological Survey Petrology Collection sample number MC 7339.

Caption Text 2 An old abandoned mine is located on the west side of Palnure Burn 250 yards south-east of Talnotry Cottage. The deposit is said to have been discovered in about 1885 and was first opened up by a small syndicate. It was mined for its pyrrhotite and niccolite ore.

Caption Text 3 Arsenopyrite is a hard, very heavy, fragile mineral with good cleavage and is regarded as the principal ore of arsenic with tin, gold, silver and cobalt as by-products.

The Basic Record:

Simple Name Mineral specimen

Brief Description Arsenopyrite, an iron arsenic sulphide from Talnotry about six miles south-west of Newton Stewart, Kirkcudbrightshire.

Materials Mineral specimen

Associated Place Scotland, Kirkcudbrightshire, Newton Stewart, Talnotry, Mispikel Mine

(Nature of Grid Reference Location specimen was found

Ref. Author Wilson, G.V.

Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.

Ref. Publication Details Edinburgh : HMSO, 1921.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P527560 Barytes from Aberfeldy, Perthshire

The Caption:

Caption Title Barytes from Aberfeldy, Perthshire
Subtitle
Caption Text 1 Barytes is a mineral composed of barium sulphate. This specimen comes from Aberfeldy in Perthshire. British Geological Survey Petrology Collection sample number MC 7340.
Caption Text 2 Barytes mining was once carried out for a few years in three Perthshire veins cutting the Lower Old Red Sandstone formation about 2 miles south-west of Aberfoyle. The mines were working in 1882 and stopped in about 1887.
Caption Text 3 In Scotland the mineral usually occurs in radiating aggregates 'cock's comb barytes' which may have a thinly-plated to coarsely-plated structure, or may form a compact, tough and rather confused mass of crystals.

The Basic Record:

Simple Name Mineral specimen
Brief Description Barytes from Aberfeldy, Perthshire.
Materials Mineral specimen
Associated Place Scotland, Perthshire, Aberfeldy
(Nature of Grid Reference Location specimen was found
Ref. Author MacGregor, A.G.
Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527561 Barytes from Aberfeldy, Perthshire

The Caption:

Caption Title Barytes from Aberfeldy, Perthshire
Subtitle
Caption Text 1 Barium sulphate occurs in nature as the mineral barytes which when pure contains 63.7 per cent barium oxide and 34.3 per cent sulphur trioxide. British Geological Survey Petrology Collection sample number MC 7341.
Caption Text 2 Barytes mining was once carried out for a few years in three Perthshire veins cutting the Lower Old Red Sandstone formation about 2 miles south-west of Aberfoyle.
Caption Text 3 The veins are the Arndrum Veins, the Gartloaning Vein and the Drum of Clashmore Veins. Mining ceased due to the increasing depth of the mines, trouble with water and scarcity of the barytes.

The Basic Record:

Simple Name Mineral specimen
Brief Description Barytes from Aberfeldy, Perthshire.
Materials Mineral specimen
Associated Place Scotland, Perthshire, Aberfeldy
(Nature of Grid Reference Location specimen was found

Ref. Author MacGregor, A.G.
Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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Input Date 15/06/2003

P527562 Galena from Tyndrum, Perthshire

The Caption:

Caption Title	Galena from Tyndrum, Perthshire
Subtitle	
Caption Text 1	Galena is a lead sulphide belonging to the cubic crystal system. It can occur as lead-grey crystals though usually it occurs as compact granular masses with many shiny surfaces. British Geological Survey Petrology Collection sample number MC 7342.
Caption Text 2	This specimen is from the Tyndrum mining district where lead was first discovered in 1741. The primary ores are galena, zinc-blende, chalcopyrites and pyrites.
Caption Text 3	At many locations galena and zinc-blende occur in roughly equal proportions and they are the only ores present in workable quantities. Gangue minerals include quartz, calcite and barytes.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Galena from Tyndrum, Perthshire.
Materials	Mineral specimen
Associated Place	Scotland, Perthshire, Tyndrum
(Nature of Grid Reference	Location specimen was found
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527563 Galena from Tyndrum, Perthshire

The Caption:

Caption Title Galena from Tyndrum, Perthshire
Subtitle
Caption Text 1 A specimen of galena from the Tyndrum mining district. Galena is the principal lead ore. It is a lead-grey mineral, 2.5 on Moh's scale of hardness. British Geological Survey Petrology Collection sample number MC 7343.
Caption Text 2 Galena is very heavy with a specific gravity of 7.2 to 7.6 and has a perfect cleavage that splits parallel to the cube faces.
Caption Text 3 At the Tyndrum mine there are two almost parallel veins that have been worked, the Hard Vein and the Clay Vein. The Hard Vein occurs in the quartzite on the west side of the fault and consists of a quartz gangue carrying galena, zinc-blende and chalcopyrite.

The Basic Record:

Simple Name Mineral specimen
Brief Description Galena from Tyndrum, Perthshire.
Materials Mineral specimen
Associated Place Scotland, Perthshire, Tyndrum
(Nature of Grid Reference Location specimen was found

Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527564 Galena from Tyndrum, Perthshire

The Caption:

Caption Title	Galena from Tyndrum, Perthshire
Subtitle	
Caption Text 1	A specimen of galena from Tyndrum. Galena is lead sulphide, a mineral belonging to the cubic crystal system and is the principal lead ore of the Tyndrum mining district. It has been worked in the area since the veins were found in 1741. British Geological Survey Petrology Collection sample number MC 7344.
Caption Text 2	A set of journals showing the monthly returns of work are held in the Leadhills Library. Adjacent to the mines was a smelting mill where the galena was processed to produce lead.
Caption Text 3	Following smelting it was sent to Glasgow. In 1791 it was recorded that a ton of lead was £19, 3s. 7 1/2d. and cartage and freight was 11s. 3d. for delivery to Glasgow.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Galena from Tyndrum, Perthshire.
Materials	Mineral specimen
Associated Place	Scotland, Perthshire, Tyndrum
(Nature of Grid Reference	Location specimen was found
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
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Image and Other Asset Info:

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Input Date	15/06/2003

P527565 Galena from Clachan Beag, Loch Fyne, Argyllshire

The Caption:

Caption Title Galena from Clachan Beag, Loch Fyne, Argyllshire
Subtitle
Caption Text 1 A specimen of galena from Clachan Beag, Loch Fyne. Galena is lead sulphide, a mineral belonging to the cubic crystal system. British Geological Survey Petrology Collection sample number MC 7345.
Caption Text 2 Galena is very heavy and fragile with perfect cleavage. The old mine at Clachan Beag mentioned in the Old Statistical Account is situated on the hillside one quarter of a mile south-west of Clachan Beag and about 200 yards from the sea.
Caption Text 3 The deposit is a metasomatic replacement of part of a bed of limestone. The replacement has given rise to a highly complex ore containing galena, blende and pyrites in a siderite matrix.

The Basic Record:

Simple Name Mineral specimen
Brief Description Galena from Clachan Beag, Loch Fyne, Argyllshire.
Materials Mineral specimen
Associated Place Scotland, Argyllshire, Loch Fyne, Clachan Beag
(Nature of Grid Reference Location specimen was found
Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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Input Date 15/06/2003

P527566 Galena from Cononish in the Tyndrum mining district, Perthshire

The Caption:

Caption Title Galena from Cononish in the Tyndrum mining district, Perthshire
Subtitle
Caption Text 1 A specimen of galena from Cononish in the Tyndrum mining district. The Tyndrum veins were discovered in 1741 by Sir Robert Clifton of Clifton, Nottinghamshire. British Geological Survey Petrology Collection sample number MC 7346.
Caption Text 2 Sir Robert Clifton appears to have taken a mining lease of the Breadlebane estate in 1730 and to have opened the mine and raised 1697 tons of lead ore between 1741 and 1745.
Caption Text 3 The ore was taken by packhorses to a furnace erected at the foot of Glen Falloch close to Loch Lomond. The veins are associated with a set of north-east lines of fracture.

The Basic Record:

Simple Name Mineral specimen
Brief Description Galena from Cononish in the Tyndrum mining district, Perthshire.
Materials Mineral specimen
Associated Place Scotland, Perthshire, Tyndrum, Cononish
(Nature of Grid Reference Location specimen was found
Associated Name Clifton, Sir Robert
(Nature of Discovered the Tyndrum mineral veins
Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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Input Date 15/06/2003

P527567 Galena from Cononish in the Tyndrum mining district, Perthshire

The Caption:

Caption Title	Galena from Cononish in the Tyndrum mining district, Perthshire
Subtitle	
Caption Text 1	A specimen of galena from Cononish in the Tyndrum mining district. The principal veins in the area are the Hard Vein, the Clay Vein, the Tyndrum Main Vein, the Mother Reef (Barren Quartz), the Cononish and Ben Lui Veins. British Geological Survey Petrology Collection sample number MC 7347.
Caption Text 2	In the vicinity of Cononish there were two mines, the Eas Anie Mines working two veins and the Ben Lui Mine situated one third of a mile up the Allt an Lund, a tributary of the River
Caption Text 3	The veins vary from mere strings to 20 feet in thickness and the infilling usually consists of massive white quartz gangue, with occasional patches of calcite and barytes. The primary ores are galena, zinc-blende, chalcopyrites and pyrites.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Galena from Cononish in the Tyndrum mining district, Perthshire.
Materials	Mineral specimen
Associated Place	Scotland, Perthshire, Tyndrum, Cononish
(Nature of Grid Reference	Location specimen was found
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
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Input Date	15/06/2003

P527568 Barytes from Aberfeldy, Perthshire

The Caption:

Caption Title	Barytes from Aberfeldy, Perthshire
Subtitle	
Caption Text 1	Barytes is the principal barium mineral of commerce. This specimen is from the Aberfoyle area where barytes is found in three sets of veins, the Arndrum Veins, the Gartloaning Vein and the Drum of Clashmore Veins. British Geological Survey Petrology Collection sample number MC 7348.
Caption Text 2	Barytes occurs in Scotland as radiating aggregates called 'cock's comb barytes' which may have a thinly-plated to coarsely-plated structure, or may form a compact, tough and rather confused mass of crystals. It is colourless when pure, usually opaque and is commonly banded in shades of pink or red by finely divided ferruginous material.
Caption Text 3	Barytes had many commercial uses from the manufacture of paints, as a filler in the manufacture of rubber and asbestos, wallpaper, playing cards and fine papers, more recently it has been used for drilling muds in the North Sea oil industry.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Barytes from Aberfeldy, Perthshire.
Materials	Mineral specimen
Associated Place	Scotland, Perthshire, Aberfeldy, Aberfoyle
(Nature of Grid Reference	Location specimen was found
Ref. Author	MacGregor, A.G.
Ref Title	Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details	London : Geological Survey and Museum, 1944.
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Input Date	15/06/2003

P527569 Barytes from Glen Sannox, Arran, Buteshire

The Caption:

Caption Title	Barytes from Glen Sannox, Arran, Buteshire
Subtitle	
Caption Text 1	The chemical composition of barytes is barium sulphate. The principal vein in Glen Sannox crosses the burn about two-thirds of a mile from its mouth and it is here that the crushing and screening plant belonging to the Arran Barytes Co. Ltd. is situated British Geological Survey Petrology Collection sample number MC 7349.
Caption Text 2	The barytes occurs as pockets or lenticles associated with fault-fissures, some of which trend north-south and others north-west - south-east.
Caption Text 3	The occurrence of barytes in Glen Sannox has been known since 1772. The locality was mentioned in Pennant's 'Tour of Scotland' in that year.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Barytes from Glen Sannox, Arran, Buteshire.
Materials	Mineral specimen
Associated Place	Scotland, Buteshire, Arran, Glen Sannox
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Arran Barytes Co. Ltd.
(Nature of	Mine owner
Ref. Author	MacGregor, A.G.
Ref Title	Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details	London : Geological Survey and Museum, 1944.
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Input Date	15/06/2003

P527570 Barytes from Glen Sannox, Arran, Buteshire

The Caption:

Caption Title Barytes from Glen Sannox, Arran, Buteshire
Subtitle
Caption Text 1 A specimen of barytes, barium sulphate from Glen Sannox on Arran. British Geological Survey Petrology Collection sample number MC 7350.
Caption Text 2 Barytes was first worked in the 1830s and 1840s by opencast excavations and/or shallow shafts more or less continuously until 1862.
Caption Text 3 The workings was reopened in 1918-1919 when shafts were driven in both sides of the Glen Sannox burn and levels to test the veins. The vein was followed for 300 feet before it thinned out to a few inches.

The Basic Record:

Simple Name Mineral specimen
Brief Description Barytes from Glen Sannox, Arran, Buteshire.
Materials Mineral specimen
Associated Place Scotland, Buteshire, Arran, Glen Sannox
(Nature of
Grid Reference Location specimen was found

Ref. Author MacGregor, A.G.
Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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Image and Other Asset Info:

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Input Date 15/06/2003

P527571 Barytes from Pockmuir Burn, Meikle Auchinstilloch area, Lanarkshire

The Caption:

Caption Title Barytes from Pockmuir Burn, Meikle Auchinstilloch area, Lanarkshire
Subtitle
Caption Text 1 This specimen of barytes is from the Pockmuir Burn. Barytes is barium sulphate. British Geological Survey Petrology Collection sample number MC 7351.
Caption Text 2 A number of localities of barytes are recorded in the Pockmuir Burn, one is about half-way from the Coal Burn to the River Nethan. At this locality there is a six feet wide north-west trending vein of reddish barytes which contains a good many strings of haematite. Some galena has also been recorded.
Caption Text 3 Nearby and 200 yards to the north-east early Ordnance Survey maps record an old lead mine, this probably indicates the presence of a parallel barytes vein. Another locality has a three feet wide vein of dark pink barytes with a north-south trend 900 yards from the 1,609 feet cairn on Meikle Auchinstilloch.

The Basic Record:

Simple Name Mineral specimen
Brief Description Barytes from Pockmuir Burn, Meikle Auchinstilloch area, Lanarkshire.
Materials Mineral specimen
Associated Place Scotland, Lanarkshire, Meikle Auchinstilloch, Pockmuir Burn
(Nature of
Grid Reference Location specimen was found

Ref. Author MacGregor, A.G.
Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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P527572 Barytes from Blairlogie, Ochil Hills, Perthshire

The Caption:

Caption Title	Barytes from Blairlogie, Ochil Hills, Perthshire
Subtitle	
Caption Text 1	A specimen of barytes, barium sulphate from Blairlogie, Perthshire. The Blairlogie veins are situated on the steep southern slopes of the Ochil Hills a short distance north of the Ochil Fault. British Geological Survey Petrology Collection sample number MC 7352.
Caption Text 2	Barytes occurs in a number of veins traversing the lavas and tuffs. The veins are in almost every case lines of faulting. The veins often contain blocks of lava and tuff and are strung through with mainly pink-coloured barytes.
Caption Text 3	Barytes had a wide range of uses and during the 1940s Scottish barytes was in greatest demand for the manufacture of 'Orr's White' now called 'lithophone'. It is also used as a filler or spreader in paints.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Barytes from Blairlogie, Ochil Hills, Perthshire.
Materials	Mineral specimen
Associated Place	Scotland, Perthshire, Ochil Hills, Blairlogie
(Nature of Grid Reference	Location specimen was found
Ref. Author	MacGregor, A.G.
Ref Title	Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details	London : Geological Survey and Museum, 1944.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Image CD	1
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527573 Barytes from the Alva Silver Mine, Silver Glen, east of Alva

The Caption:

Caption Title	Barytes from the Alva Silver Mine, Silver Glen, east of Alva
Subtitle	
Caption Text 1	Barytes is composed of barium sulphate. It is a mineral of the orthorhombic crystal system and has a high specific gravity. British Geological Survey Petrology Collection sample number MC 7353.
Caption Text 2	This specimen is from the Alva Silver Mine which is situated one-quarter of a mile up the Silver Glen and half a mile east of Alva. The vein was discovered in 1711 by Sir John Erskine who brought miners from Leadhills to work it.
Caption Text 3	The silver ore was found in thin strings at the surface. The barytes occurred in the veins as a gangue mineral along with calcite and quartz.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Barytes from the Alva Silver Mine, Silver Glen, east of Alva.
Materials	Mineral specimen
Associated Place	Scotland, Stirlingshire, Alva, Silver Glen, Alva Silver Mine
(Nature of Grid Reference	Location specimen was found
Associated Name	Erskine, Sir John
(Nature of	Discovered the mineral veins at Alva
Ref. Author	MacGregor, A.G.
Ref Title	Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details	London : Geological Survey and Museum, 1944.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Image CD	1
Image File	P527573.tif
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Input Date	15/06/2003

P527574 Galena, from a vein in An Gorbh Allt, Rough Burn near Roshven, south of Loch Ailort,

The Caption:

Caption Title Galena, from a vein in An Gorbh Allt, Rough Burn near Roshven, south of Loch Ailort, Invernesshire

Subtitle

Caption Text 1 This specimen is galena, lead ore from a vein in An Gorbh Allt, Rough Burn near Roshven, south of Loch Ailort, Invernesshire. British Geological Survey Petrology Collection sample number MC 7354.

Caption Text 2 Galena is the principal lead ore. It is lead sulphide and belongs to the cubic crystal system. It is usually found in compact granular masses and less frequently as lead-grey crystals.

Caption Text 3 Lead ores have a wide distribution in Scotland. Many of the localities have been worked in the past, usually small-scale and to no great depth. The principal districts are Strontian and Islay, Tyndrum in Perthshire, Minnigaff in Kirkcudbrightshire and Leadhills and Wanlockhead in Lanarkshire and Dumfriesshire respectively.

The Basic Record:

Simple Name Mineral specimen

Brief Description Galena, from a vein in An Gorbh Allt, Rough Burn near Roshven, south of Loch Ailort, Invernesshire.

Materials Mineral specimen

Associated Place Scotland, Invernesshire, Loch Ailort, Roshven, An Gorbh Allt

(Nature of Grid Reference Location specimen was found

Ref. Author Wilson, G.V.

Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.

Ref. Publication Details Edinburgh : HMSO, 1921.

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Image CD 1

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Input Date 15/06/2003

P527575 Barytes from Strontian, Argyllshire

The Caption:

Caption Title	Barytes from Strontian, Argyllshire
Subtitle	
Caption Text 1	A specimen of barytes, barium sulphate, a mineral of the orthorhombic crystal system. This specimen is from Strontian in Argyllshire. British Geological Survey Petrology Collection sample number MC 7355.
Caption Text 2	The Strontian mines are said to have been discovered by Sir Alexander Murray of Stanhope, the proprietor of the estate in 1772. The chief ores are galena, zinc-blende, jamesonite and iron pyrites. The gangue minerals are barytes, calcite and quartz. Small quantities of celestine and strontianite occur.
Caption Text 3	Strontianite is of special interest as strontia, the oxide of strontium was discovered in this mineral by Dr. Hope of Glasgow in 1791 and called after Strontian.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Barytes from Strontian, Argyllshire.
Materials	Mineral specimen
Associated Place	Scotland, Argyllshire, Strontian
(Nature of Grid Reference	Location specimen was found
Associated Name	Hope, Dr.
(Nature of	Discovered strontium
Ref. Author	MacGregor, A.G.
Ref Title	Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details	London : Geological Survey and Museum, 1944.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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P527576 Cassiterite, Mullach Creag Riaraidh, Glen Diebdale, Ross and Cromarty

The Caption:

Caption Title Cassiterite, Mullach Creag Riaraidh, Glen Diebdale, Ross and Cromarty
Subtitle
Caption Text 1 Tinstone (cassiterite) from Mullach Creag Riaraidh, Glen Diebdale (Glen Calvie area) 900 yards slightly south of east of Ordnance station 1692. British Geological Survey Petrology Collection sample number MC 7356.
Caption Text 2 Moine garnetiferous albite gneiss in the area contains black strings composed of chiefly magnetite but with some tinstone or cassiterite. The proportion of cassiterite is low, from 0 to 17 per cent.
Caption Text 3 The cassiterite is not distributed evenly through the iron oxide but occurs as irregularly distributed patches or nodules composed of small brown equigranular crystals.

The Basic Record:

Simple Name Mineral specimen
Brief Description Cassiterite, Mullach Creag Riaraidh, Glen Diebdale, Ross and Cromarty.
Materials Mineral specimen
Associated Place Scotland, Ross and Cromarty, Glen Diebdale, Mullach Creag Riaraidh
(Nature of
Grid Reference Location specimen was found

Ref. Author Peach, B.N. et al.
Ref Title The geology of Ben Wyvis, Carn Chuinneag, Inchbrae and the surrounding country. Explanation of sheet 93
Ref. Publication Details Edinburgh : HMSO, 1912.
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P527577 Bog iron ore from the Allt Eoin Thomain, Gairloch, Ross and Cromarty

The Caption:

Caption Title	Bog iron ore from the Allt Eoin Thomain, Gairloch, Ross and Cromarty
Subtitle	
Caption Text 1	The Loch Maree iron smelting furnaces are the oldest for which there are definite records c. 1607 to 1677. They superseded old furnaces and even older bloomeries. British Geological Survey Petrology Collection sample number MC 7357.
Caption Text 2	It may be assumed that the local supplies of bog iron ore that were found in comparatively small pans in this area were used up at an early stage.
Caption Text 3	Bog iron ore is recent in age and was deposited in lakes or lagoons that had restricted movement for bacteria. It can be found in a range of colours from reddish, blackish to yellowish, it is often compact with a fine grain size or, more commonly an oolitic porous texture in which the spherules are consolidated by clays and limonite.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bog iron ore from the Allt Eoin Thomain, Gairloch, Ross and Cromarty.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Gairloch, Allt Eoin Thomain
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Recent, 10,000 years to present
(Nature of Association)	Stratigraphic period
Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Input Date	15/06/2003

P527578 Bog iron ore from Gairloch, Ross and Cromarty

The Caption:

Caption Title	Bog iron ore from Gairloch, Ross and Cromarty
Subtitle	
Caption Text 1	Bog iron ore from a raised beach at Gairloch, Ross and Cromarty. The bog iron ores are of interest chiefly for their use in the numerous bloomeries of early times. British Geological Survey Petrology Collection sample number MC 7358.
Caption Text 2	Iron manufacture on a small scale from bog iron ores has been carried out for many centuries after the Roman occupation of the country. Traces of this industry are widely scattered and the siting of the bloomeries usually took advantage of the prevailing winds.
Caption Text 3	Bog iron ore from the Gairloch area supplied the Loch Maree furnaces c. 1607-1677, the oldest group of furnaces for which there are definite records.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bog iron ore from Gairloch, Ross and Cromarty.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Gairloch
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Recent, 10,000 years to present
(Nature of Association)	Stratigraphic period
Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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P527579 Bog iron ore from Lon Odhar, South Erradale, Gairloch, Ross and Cromarty

The Caption:

Caption Title	Bog iron ore from Lon Odhar, South Erradale, Gairloch, Ross and Cromarty
Subtitle	
Caption Text 1	The South Erradale bog iron ore is a good example of ore from the comparatively small pans that occur in the Loch Maree area were associated with the long history of bloomeries and furnaces in the area. British Geological Survey Petrology Collection sample number MC 7359.
Caption Text 2	An early analysis by Ivison Macadam of two samples of South Erradale bog iron ore are sample a, 70.88 per cent ferric oxide; 49.61 per cent metallic iron; 7.48 per cent silica. Sample b, 66.68 per cent ferric oxide; 46.67 per cent metallic iron and 8.24 per cent silica.
Caption Text 3	It is thought that the deposits were so small and few that the local bog iron ores would have been exhausted in early times and that iron would have been imported from elsewhere, possibly haematite from Cumberland and clayband ironstone from Fifeshire.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bog iron ore from Lon Odhar, South Erradale, Gairloch, Ross and Cromarty.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Gairloch, South Erradale, Lon Odhar
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Recent, 10,000 years to present
(Nature of Association)	Stratigraphic period
Associated Name	Macadam, Ivison
(Nature of)	Undertook chemical analysis of bog iron ore
Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
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Image File	P527579.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527580 Bog iron ore from Lon Odhar, South Erradale, Gairloch, Ross and Cromarty

The Caption:

Caption Title	Bog iron ore from Lon Odhar, South Erradale, Gairloch, Ross and Cromarty
Subtitle	
Caption Text 1	Bog iron ore from Lon Odhar, South Erradale, Gairloch, Ross and Cromarty. Bog iron ore is an organogenetic sedimentary rock. British Geological Survey Petrology Collection sample number MC 7360.
Caption Text 2	It can be found in a range of colours from reddish, blackish to yellowish, it is often compact with a fine grain size or, more commonly an oolitic porous texture in which the spherules are consolidated by clays and limonite. They frequently contain animal and vegetable fossil
Caption Text 3	Bog iron ores are usually recent in age and are usually deposited in lakes, lagoons or sea water where there is restricted movement for bacteria. South Erradale is a well-known locality for bog iron ore and it supported the Loch Maree group of furnaces, c. 1607 to 1677.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bog iron ore from Lon Odhar, South Erradale, Gairloch, Ross and Cromarty.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Gairloch, South Erradale, Lon Odhar
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Recent, 10,000 years to present
(Nature of Association)	Stratigraphic period
Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
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P527581 Bog iron ore from an iron pan on the west shore of Kirst Shun, one quarter of a mile north-north-east of Clothister Hill, Shetland

The Caption:

Caption Title	Bog iron ore from an iron pan on the west shore of Kirst Shun, one quarter of a mile north-north-east of Clothister Hill, Shetland
Subtitle	
Caption Text 1	Bog iron ore from an iron pan on the west shore of Kirst Shun, one quarter of a mile north-north-east of Clothister Hill, Shetland. It is recorded that in 1874 Shetland produced 692 tons of bog iron ore. British Geological Survey Petrology Collection sample number MC
Caption Text 2	Evidence for the earliest traces of iron-making in Scotland can be seen in the bloomeries where local bog iron ore of recent origin was smelted. They arose in several areas due to the availability of bog iron ore and a good supply of timber for charcoal making.
Caption Text 3	Bog iron ore is a general term for soft, spongy and porous sedimentary deposits of impure hydrous iron oxides formed in bogs, swamps, marshes, peat mosses and shallow lakes from the chemical precipitation from iron-bearing waters and by the oxidizing action of algae, iron bacteria or the atmosphere.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bog iron ore from an iron pan on the west shore of Kirst Shun, one quarter of a mile north-north-east of Clothister Hill, Shetland.
Materials	Mineral specimen
Associated Place	Scotland, Shetland Isles, Clothister Hill, Kirst Shun
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Recent, 10,000 years to present
(Nature of Association)	Stratigraphic period
Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
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Image CD	2
Image File	P527581.tif
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Input Date	15/06/2003

P527582 Bog iron ore from Caithness

The Caption:

Caption Title	Bog iron ore from Caithness
Subtitle	
Caption Text 1	Bog iron ores were an important source of raw material for the early iron industry in Scotland. Shetland and the Loch Maree area are the main sources where definite evidence exists for workings. British Geological Survey Petrology Collection sample number MC 7362.
Caption Text 2	Bog iron ores are soft, spongy and porous sedimentary deposits of impure hydrous iron oxides formed in bogs, swamps, marshes, peat mosses and shallow lakes from the chemical precipitation from iron-bearing waters and by the oxidizing action of algae, iron bacteria or the
Caption Text 3	Scottish iron ores can be roughly classified into the following categories: bog iron ores of recent origin, haematite ores of different ages, Carboniferous clayband ores, Carboniferous blackband ores and Jurassic ores. This grouping expresses in a general way the chronological order of their discovery.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bog iron ore from Caithness.
Materials	Mineral specimen
Associated Place	Scotland, Caithness
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Recent, 10,000 years to present
(Nature of Association)	Stratigraphic period
Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527583 Bog manganese from Caithness

The Caption:

Caption Title	Bog manganese from Caithness
Subtitle	
Caption Text 1	Bog manganese is a bog ore of variable composition but consisting chiefly of hydrous manganese oxide. The specimen is probably from the recorded locality north-west of Freswick in the Burn of Bog where oxide of manganese is deposited as a blackish blue mud with the evolution of sulphuretted hydrogen. An analysis made in the laboratory shows the deposit contains 56 per cent oxide of manganese. British Geological Survey Petrology Collection
Caption Text 2	Bog ores are poorly stratified accumulations of earthy metallic mineral substances, mostly oxides, that have formed in bogs, lakes, marshes, swamps and other low-lying moist places by direct chemical precipitation of surface or near-surface percolating waters.
Caption Text 3	Bog manganese is quite rare in Scotland, though bog iron ore, formed in a similar manner is more common and was an essential raw material for the early bloomeries in Scotland.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bog manganese from Caithness.
Materials	Mineral specimen
Associated Place	Scotland, Caithness
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Recent, 10,000 years to present
(Nature of Association)	Stratigraphic period
Ref. Author	Dewey, H. and Dines, H.G.
Ref Title	Tungsten and manganese ores. 3rd edition. Special reports on the mineral resources of Great Britain vol. 1.
Ref. Publication Details	London : HMSO, 1923.
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Image and Other Asset Info:

Image CD	2
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P527584 Magnetite, probably from the Clothister Mine, Clothister Hill, Shetland Isles

The Caption:

Caption Title Magnetite, probably from the Clothister Mine, Clothister Hill, Shetland Isles
Subtitle
Caption Text 1 A specimen of magnetite, an iron oxide belonging to the spinel group of minerals. It is a hard, very heavy mineral and can occur as black shiny octahedrons or iron-black compact and granular masses with a bluish iridescence. It is strongly magnetic. British Geological Survey Petrology Collection sample number MC 7364.
Caption Text 2 An important magnetite ore body occurs at Clothister Hill, Sullom. It consists of a massive magnetite deposit of a high degree of purity and exceptionally low phosphorous content.
Caption Text 3 The deposit was discovered by D. Haldane of the Geological Survey of Great Britain. It was investigated in detail between 1941 and 1943 with a view to exploitation by the Scottish Home Department.

The Basic Record:

Simple Name Mineral specimen
Brief Description Magnetite, probably from the Clothister Mine, Clothister Hill, Shetland Isles.
Materials Mineral specimen
Associated Place Scotland, Shetland Isles, Clothister Hill, Clothister Mine
(Nature of Grid Reference Location specimen was found
Associated Name Haldane, D.
(Nature of Discovered the deposit
Ref. Author Mykura, W.
Ref Title Orkney and Shetland. British regional geology.
Ref. Publication Details Edinburgh : HMSO, 1976.
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Image and Other Asset Info:

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P527585 Magnetite, from the Clothister Mine, Clothister Hill, Shetland Isles

The Caption:

Caption Title Magnetite, from the Clothister Mine, Clothister Hill, Shetland Isles
Subtitle
Caption Text 1 A specimen of magnetite, an iron oxide, almost certainly from the Clothister Hill magnetite ore body. Magnetite is a highly magnetic mineral. British Geological Survey Petrology Collection sample number MC 7365.
Caption Text 2 The ore body was first discovered in 1933 and is elongated in a north-south direction. It is lenticular in horizontal section as well as in east-west vertical section. Its outcrop trends north-north-east and has a length of 174 feet, with an estimated average width of 10 feet.
Caption Text 3 Analyses of samples of magnetite from this location indicate an iron content of 60 to 67 per

The Basic Record:

Simple Name Mineral specimen
Brief Description Magnetite, from the Clothister Mine, Clothister Hill, Shetland Isles.
Materials Mineral specimen
Associated Place Scotland, Shetland Isles, Clothister Hill, Clothister Mine
(Nature of
Grid Reference Location specimen was found

Ref. Author Mykura, W.
Ref Title Orkney and Shetland. British regional geology.
Ref. Publication Details Edinburgh : HMSO, 1976.
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P527586 Magnetite, from the Clothister Mine, Clothister Hill, Shetland Isles

The Caption:

Caption Title Magnetite, from the Clothister Mine, Clothister Hill, Shetland Isles
Subtitle
Caption Text 1 A specimen of magnetite, an iron oxide from the Clothister Mine, Clothister Hill magnetite ore body. British Geological Survey Petrology Collection sample number MC 7366.
Caption Text 2 The ore body was mined between 1954 and 1957 by Deering Shetland Mining Limited, a subsidiary of Deering Products Limited. The firm supplied the ore to the National Coal Board for use in the manufacture of heavy mud used in coal flotation. The ore was extracted both by mining through the existing adit and by opencast methods.
Caption Text 3 It is estimated that between 6,000 and 10,000 tons of ore were obtained and that the rate of extraction in 1955 was 300 to 400 tons of crushed rock per month.

The Basic Record:

Simple Name Mineral specimen
Brief Description Magnetite, from the Clothister Mine, Clothister Hill, Shetland Isles.
Materials Mineral specimen
Associated Place Scotland, Shetland Isles, Clothister Hill, Clothister Mine
(Nature of Grid Reference Location specimen was found
Associated Name Deering Shetland Mining Limited
(Nature of Mining company
Ref. Author Mykura, W.
Ref Title Orkney and Shetland. British regional geology.
Ref. Publication Details Edinburgh : HMSO, 1976.
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P527587 Haematite from Scotland

The Caption:

Caption Title	Haematite from Scotland
Subtitle	
Caption Text 1	A specimen of haematite from an unknown Scottish locality. The specimen shows a botryoidal form, i.e. it forms aggregates with rounded surfaces. British Geological Survey Petrology Collection sample number MC 7367.
Caption Text 2	Haematite is iron oxide, this botryoidal form of haematite shows a metallic lustre. It is a very heavy mineral with a specific gravity of 5.2 to 5.3, it belongs to the hexagonal crystal system and has a hardness on Moh's scale of hardness of 5.5 to 6.5. It has a dark cherry-red streak.
Caption Text 3	Haematite is the most important iron ore. Haematite forms a common accessory mineral of many igneous rocks, especially lavas. It is common in pegmatites and hydrothermal veins.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Haematite from Scotland.
Materials	Mineral specimen
Associated Place	Scotland
(Nature of Grid Reference	Location specimen was found

Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.

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Image File	P527587.tif
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Input Date	15/06/2003

P527588 Iron ore from Glenarm, Antrim

The Caption:

Caption Title	Iron ore from Glenarm, Antrim
Subtitle	
Caption Text 1	The iron ore of County Antrim occurs as a red bole, a hydrous aluminium silicate or clay-like substance occurring as red partings between successive lava flows. These are found in the Tertiary volcanic series in the north of Ireland and also the west of Scotland. The bole is formed from the decomposition of the basaltic rocks by deep tropical weathering processes, during intervals between the volcanic events. British Geological Survey Petrology Collection sample number MC 7368.
Caption Text 2	In the List of Mines worked under the Metalliferous Mines Regulation Act, in County Antrim during the year 1896 the Glenarm Iron Ore Company is recorded as employing 32 men working underground, and 16 surface workers.
Caption Text 3	Extensive workings in the interbasaltic iron ores of Antrim during the latter half of the nineteenth and the first two decades of the twentieth century removed some five million tons of

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Iron ore from Glenarm, Antrim.
Materials	Mineral specimen
Associated Place	Scotland, Antrim, Glenarm
(Nature of Grid Reference	Location specimen was found
Ref. Author	Cole, G.A.J. et. al.
Ref Title	The interbasaltic rocks (iron ores and bauxites) of north-east Ireland.
Ref. Publication Details	Dublin : HMSO, 1912.
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Input Date	15/06/2003

P527589 Ferruginous mudstone from the Noblehouse Haematite Mine, Lamancha, Peeblesshire

The Caption:

Caption Title Ferruginous mudstone from the Noblehouse Haematite Mine, Lamancha, Peeblesshire

Subtitle

Caption Text 1 A specimen of ferruginous mudstone from the Noblehouse Haematite Mine, Lamancha, Peeblesshire. This deposit is found in association with the spilitic lavas of Arenig age on the south side of the Southern Upland Fault. The lavas come to the surface at the centres of several anticlines running in a north-east - south-west direction and are overlain by red mudstones and radiolarian cherts. It is in these that the iron ore is concentrated. British Geological Survey Petrology Collection sample number MC 7369.

Caption Text 2 The ferruginous beds outcrop in three streams immediately north-east of Noblehouse Farm.

Caption Text 3 The Noblehouse haematite was known as early as the end of the eighteenth century. It was worked to a small extent between 1780 and 1790 but very little systematic exploration was done until 1884 when the minerals of Noblehouse were leased to Messrs. Merry and Cunninghame. Inclines were driven and ore worked until 1887. Output was 2218 tons in 1884, 3264 tons in 1885 and 803 tons in 1886. The value of the ore was 10s. per ton at the mine.

The Basic Record:

Simple Name Rock specimen

Brief Description Ferruginous mudstone from the Noblehouse Haematite Mine, Lamancha, Peeblesshire.

Materials Rock specimen

Associated Place Scotland, Peeblesshire, Lamancha, Noblehouse Mine

(Nature of Location specimen was found

Grid Reference

Associated Name Merry and Cunninghame

(Nature of Mining company

Ref. Author Macgregor, M., Lee, G.W. and Wilson, G.V.

Ref Title The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.

Ref. Publication Details Edinburgh : HMSO, 1920.

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Image CD 2

Image File P527589.tif

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Inputter R.P. McIntosh

Input Date 15/06/2003

P527590 Haematite from the Garleton Mine, Haddington, East Lothian

The Caption:

Caption Title	Haematite from the Garleton Mine, Haddington, East Lothian
Subtitle	
Caption Text 1	A specimen of haematite from the Garleton Mine. Haematite is an iron oxide belonging to the hexagonal crystal system. British Geological Survey Petrology Collection sample number MC 7370.
Caption Text 2	The mine is situated at the west end of the Garleton Hills near the Hopetoun Monument, about two miles north-west of Haddington. The ore deposit follows a well-defined fissure in the trachyte country rock. The deposit has been traced for 300 yards in a north-north-west direction dipping east-north-east at 80-90 degrees.
Caption Text 3	The mine was last worked in 1888 by the Coltness Iron Company. In 1874, 10,283 tons of brown haematite worth £6,186 16s. was mined.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Haematite from the Garleton Mine, Haddington, East Lothian.
Materials	Mineral specimen
Associated Place	Scotland, East Lothian, Haddington, Garleton Mine
(Nature of Grid Reference	Location specimen was found
Associated Name	Coltness Iron Company
(Nature of	Worked the vein
Ref. Author	MacGregor, A.G.
Ref Title	Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details	London : Geological Survey and Museum, 1944.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Image CD	2
Image File	P527590.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527591 Blackband ironstone from the Lumbo - Denhead field three miles south-west of St. Andrews, Fife

The Caption:

Caption Title Blackband ironstone from the Lumbo - Denhead field three miles south-west of St. Andrews, Fife

Subtitle

Caption Text 1 A specimen of blackband ironstone from the Lumbo - Denhead field three miles south-west of St. Andrews. British Geological Survey Petrology Collection sample number MC 7371.

Caption Text 2 The ironstone occurs within the Carboniferous Lower Limestone Group and is only of economic importance in this area. The deposit occurs in a syncline stretching from Denhead across Mount Melville to Lumbo. The strata is very steep generally dipping 20-25 degrees but up to 40 degrees in places.

Caption Text 3 The ironstone was worked as far back as the first half of the 1800s in the area to the south-west of Denhead. It was also mined south and west of Lumbo.

The Basic Record:

Simple Name Mineral specimen

Brief Description Blackband ironstone from the Lumbo - Denhead field three miles south-west of St. Andrews, Fife.

Materials Mineral specimen

Associated Place Scotland, Fife, St. Andrews

(Nature of Grid Reference) Location specimen was found

Ref. Author Macgregor, M., Lee, G.W. and Wilson, G.V.

Ref Title The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.

Ref. Publication Details Edinburgh : HMSO, 1920.

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Input Date 15/06/2003

P527592 Pyrite and siderite, Sandwick (Sandlodge) Mine, Shetland Isles

The Caption:

Caption Title	Pyrite and siderite, Sandwick (Sandlodge) Mine, Shetland Isles
Subtitle	
Caption Text 1	This mine was once worked for copper ore. It is located on the east coast of Shetland about fourteen miles south of Lerwick. A small pier existed at the mine. British Geological Survey Petrology Collection sample number MC 7372.
Caption Text 2	The vein trends north 10 degrees east and it occurs in a reddish sandstone country rock. The mine was opened at the end of the eighteenth century when a party of Welsh miners was brought to Shetland. They sunk shafts and raised £2000 worth of copper ore.
Caption Text 3	The principal vein is at least nine or ten feet wide and dips at 50-60 degrees. For the first 100 feet the vein consisted of haematite with rich pockets of copper pyrites (chalcopyrite). In the lower workings the ore was siderite with chalcopyrites.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Pyrite and siderite, Sandwick (Sandlodge) Mine, Shetland Isles.
Materials	Mineral specimen
Associated Place	Scotland, Shetland Isles, Sandwick Mine
(Nature of Grid Reference	Location specimen was found
Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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P527593 Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

The Caption:

Caption Title Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire
Subtitle
Caption Text 1 A very large specimen of muscovite mica from the Sgurr Coire nan Gobhar mica workings in Knoydart. The workings, active during 1943-1944, supplied the processing depot at Pitlochry with the raw mica. British Geological Survey Petrology Collection sample number MC 7373.
Caption Text 2 The workings consisted of five quarries of which one (the first to be opened up) was much more important than the others. Seventy per cent of the production came from this first quarry.
Caption Text 3 The mica was of high quality, it was brownish-ruby in colour, hard, substantially flat and glossy. A small proportion contained light vegetable stains or mineral dots but the entire output proved to be of strategic quality.

The Basic Record:

Simple Name Mineral specimen
Brief Description Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire.
Materials Mineral specimen
Associated Place Scotland, Invernessshire, Knoydart, Loch Nevis Mica Prospect
(Nature of
Grid Reference Location specimen was found

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details London : Geological Survey and Museum, 1943.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527594 Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

The Caption:

Caption Title	Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire
Subtitle	
Caption Text 1	A specimen of muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire. The mica workings are situated 1,100 yards south 12 degrees east of Sgurr Coire nan Gobhar. British Geological Survey Petrology Collection sample number MC 7374.
Caption Text 2	The deposit was the most extensive and valuable of all the sources of mica in the western Highlands.
Caption Text 3	The deposit occurs in coarsely crystalline mica gneisses or injected mica schists. It consists of a zone of country rock heavily impregnated with veins and lenticles of extremely quartz-rich pegmatite, containing books of muscovite mica up to eighteen inches or two feet in diameter. It was worked during the Second World War.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Knoydart, Loch Nevis Mica Prospect
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Input Date	15/06/2003

P527595 Muscovite mica from the Loch Glass area

The Caption:

Caption Title	Muscovite mica from the Loch Glass area
Subtitle	
Caption Text 1	A specimen of muscovite mica from the Loch Glass area. This is very close to the deposits found further south in the Strathgarve area, from Loch Garve to the slopes of Ben Wyvis. While explored, this site was not worked commercially. British Geological Survey Petrology Collection sample number MC 7375.
Caption Text 2	Muscovite sometimes known as 'white mica', is a potassium-bearing variety found in crystalline rocks such as granite, pegmatite, mica schists and in a finely divided state in
Caption Text 3	Under suitable conditions mica forms large crystals which split freely and yield extremely thin uniform plates and films from 1/1000 inch thick upwards. It has a high dielectric strength with remarkable electrical insulating properties at low and high temperatures.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica from the Loch Glass area.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Loch Glass
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P527596 Muscovite mica from Little Scatwell, Wester Ross, Rossshire

The Caption:

Caption Title	Muscovite mica from Little Scatwell, Wester Ross, Rossshire
Subtitle	
Caption Text 1	A specimen of muscovite mica from Little Scatwell deposit located half a mile south-south-west of the Falls of Conon and two miles south-west of Garve, Rossshire. British Geological Survey Petrology Collection sample number MC 7376.
Caption Text 2	At Little Scatwell three quarries reached a high level of production during the Second World War. The yield of block mica both in quality and grade did not match that of Knoydart. The production was of a greenish-ruby colour, comparatively free from metallic stains but generally containing vegetable inclusions and dense air inclusions.
Caption Text 3	Production started in late summer 1943 and finished spring 1944. Total production was 117,778 lbs. The mica was processed at the Pitlochry Sorting Factory.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica from Little Scatwell, Wester Ross, Rossshire.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Wester Ross, Little Scatwell
(Nature of Grid Reference	Location specimen was found
Associated Name	Pitlochry Sorting Factory
(Nature of	Mica processing factory
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P527597 Muscovite mica from Sguirr Marcasaidh, south of Loch Luichart, Ross and Cromarty

The Caption:

Caption Title Muscovite mica from Sguirr Marcasaidh, south of Loch Luichart, Ross and Cromarty

Subtitle

Caption Text 1 This specimen is from a muscovite mica deposit at Sguirr Marcasaidh, south of Loch Luichart, Ross and Cromarty. Mica is a hydrous potassium aluminium silicate of the monoclinic crystal system. It is soft with a hardness of 2.5 to 3 on Moh's scale of hardness. It forms tabular crystals with a psuedo-hexagonal or triangular outline. It has perfect basal cleavage which allows it to split into very fine sheets. British Geological Survey Petrology Collection sample number MC 7377.

Caption Text 2 The deposit is a pegmatite body inclined to the south-east at forty-five degrees in conformity with the enclosing pelitic schists of Moine (Precambrian) age.

Caption Text 3 Books of mica are less than four inches in diameter, the mica is of ruby type and flawless. It has many industrial uses though this deposit was not worked commercially.

The Basic Record:

Simple Name Mineral specimen

Brief Description Muscovite mica from Sguirr Marcasaidh, south of Loch Luichart, Ross and Cromarty.

Materials Mineral specimen

Associated Place Scotland, Ross and Cromarty, Loch Luichart, Sguirr Marcadaidh

(Nature of Grid Reference Location specimen was found

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P527598 Iron ore from a vein at the east end of Loch Monar, Ross and Cromarty

The Caption:

Caption Title	Iron ore from a vein at the east end of Loch Monar, Ross and Cromarty
Subtitle	
Caption Text 1	A collection of specimens of iron ore from a vein at the east end of Loch Monar, Ross and Cromarty, showing a distinctive botryoidal form. British Geological Survey Petrology Collection sample number MC 7378.
Caption Text 2	Iron making has had a long history in Scotland. Firstly bog iron ores were used in the early bloomeries and later, haematite and clayband ironstones were used, the former probably imported. Iron ores such as this specimen were fairly rare in Scotland, perhaps the most well known locality is the leicht Mine at Tomintoul.
Caption Text 3	Iron ores come in many types from bog iron ores, haematite ores, clayband and blackband Carboniferous ores and the much younger Jurassic ores such as those from Raasay.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Iron ore from a vein at the east end of Loch Monar, Ross and Cromarty.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Loch Monar
(Nature of Grid Reference	Location specimen was found

Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527599 Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

The Caption:

Caption Title	Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire
Subtitle	
Caption Text 1	This specimen of mica (showing lattice distortions) is from the quartz-mica pegmatite on Sgurr Coire nan Gobhar in Knoydart situated about 1.5 miles north-north-west of Kylesknoydart and 300 yards south-east from Loch Coir an Lochan, at an altitude of 1700-1800 feet. British Geological Survey Petrology Collection sample number MC 7379.
Caption Text 2	The quarry was opened up in May 1943, at first working the original pegmatite discovered by the Geological Survey but later four other quarries opened up in the vicinity. During the life of the operations the original quarry remained the most important, supplying almost 70% of the total production.
Caption Text 3	The mica zone in the pegmatite was about one metre wide and was proved for a length of about 80 metres. The muscovite mica sent for processing was of a high quality, it was brownish ruby in colour, hard, substantially flat and glossy. A small proportion had light vegetable staining and mineral dots. Overall, the mica from this deposit was graded as 'stained' or better. The mica 'books' were normally between seven and eight inches in diameter; books ranging up to 20 inches to two feet were not uncommon. They were about one inch thick.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire.
Materials	Mineral specimen
Associated Place (Nature of Grid Reference	Scotland, Invernessshire, Knoydart, Loch Nevis Mica Prospect Location specimen was found
Associated Name (Nature of	Geological Survey of Great Britain Discovered mineral deposit
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P527600 Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

The Caption:

Caption Title Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire
Subtitle
Caption Text 1 A specimen of muscovite mica from the quartz-mica pegmatite on Sgurr Coire nan Gobhar in Knoydart situated about 1.5 miles north-north-west of Kylesknoydart and 300 yards south-east from Loch Coir an Lochan. British Geological Survey Petrology Collection sample number MC 7380.
Caption Text 2 The muscovite was quarried here in 1943-1944. The rock was blasted and quarried and the mica transported by pony down a track constructed by troops which were training in the area.
Caption Text 3 The mica was rough-dressed in a shed and transported from a jetty by boat to Mallaig and from there by rail to Rannoch and then by bus to the sorting factory at Pitlochry.

The Basic Record:

Simple Name Mineral specimen
Brief Description Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire.
Materials Mineral specimen
Associated Place Scotland, Invernessshire, Knoydart, Loch Nevis Mica Prospect
(Nature of Grid Reference Location specimen was found
Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details London : Geological Survey and Museum, 1943.
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Input Date 15/06/2003

P527601 Biotite mica from Sguirr Marcasaidh, south of Loch Luichart, Ross and Cromarty

The Caption:

Caption Title	Biotite mica from Sguirr Marcasaidh, south of Loch Luichart, Ross and Cromarty
Subtitle	
Caption Text 1	This specimen of biotite is from a mica deposit at Sguirr Marcasaidh, south of Loch Luichart, Ross and Cromarty. The deposit is a pegmatite body inclined to the south-east at forty-five degrees in conformity with the enclosing pelitic schists of Moine (Precambrian) age. British Geological Survey Petrology Collection sample number MC 7381.
Caption Text 2	Books of mica are less than four inches in diameter, both biotite and muscovite micas occur in the deposit. This deposit was not of commercial value.
Caption Text 3	Mica is a hydrous potassium aluminium silicate of the monoclinic crystal system. It is soft with a hardness of 2.5 to 3 on Moh's scale of hardness. It has perfect basal cleavage which allows it to split into very fine sheets.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Biotite mica from Sguirr Marcasaidh, south of Loch Luichart, Ross and Cromarty.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Loch Luichart, Sguirr Marcadaidh
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Image and Other Asset Info:

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Input Date	15/06/2003

P527602 Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

The Caption:

Caption Title	Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire
Subtitle	
Caption Text 1	A specimen of graded mica classed as 'Graded No 5 1/2 good stained'. The specimen is of muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire and would have been worked at the Pitlochry Sorting Factory during the Second World War. British Geological Survey Petrology Collection sample number MC 7382.
Caption Text 2	After the mica 'books' were extracted from the quarry the first process they underwent was rough dressing. This was initially done near the quarry at Knoydart but soon transferred to the Pitlochry Sorting Factory. It consisted of splitting the books into sheets and the removal by cutting of the flaws, incrustations and striations. The mica would then be passed to the cutters who, using skill and great care would remove the remaining flaws and trim the edges leaving block mica of irregular shape with a curved and indented outline. Further fine splitting to remove stains and spots required great judgement to balance loss in weight with the possibility of improving the quality of the block.
Caption Text 3	The final process was the grading for size and quality. Size was defined by the area of the largest rectangle that could be cut from it, while quality was based on clearness, hardness and flatness. Typical remaining imperfections such as air spots, mineral or vegetable spots or lines, softness or waviness would affect the electrical and/or mechanical properties of the mica. Finally, mica to the weight of around 50 lbs. would be placed into wooden packing cases before despatch to London.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Knoydart, Loch Nevis Mica Prospect
(Nature of Grid Reference	Location specimen was found
Associated Name	Pitlochry Sorting Factory
(Nature of	Mica processing factory
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P527603 Muscovite mica from Carn Fearn, Garve, Rossshire

The Caption:

Caption Title	Muscovite mica from Carn Fearn, Garve, Rossshire
Subtitle	
Caption Text 1	The Carn Fearn muscovite mica deposit is located approximately two miles due east of Garve Railway Station at the southern outlet of a small lochan, 350 yards east 15 degrees north of the trigonometric station at 1,408 feet on Carn Fearn. British Geological Survey Petrology Collection sample number MC 7383.
Caption Text 2	At this deposit the mica occurs in a coarse dyke-like mass of white muscovite pegmatite twenty-five feet in width which cuts the highly injected pelitic Moine schists of the district. The body contains large masses of barren white quartz which particularly along the northern margin are accompanied by books of mica up to eight inches in length and two inches or so in
Caption Text 3	The mica belongs to the ruby type and most of the books are perfectly clear and of excellent quality.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica from Carn Fearn, Garve, Rossshire.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Garve, Carn Fearn
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Image and Other Asset Info:

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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527604 Muscovite mica from Loch Affric area

The Caption:

Caption Title	Muscovite mica from Loch Affric area
Subtitle	
Caption Text 1	In Scotland mica pegmatites occur in the Highland Region, usually as small disconnected and lenticular bodies. Most are found in the Precambrian Moine series in two areas of the Northern Highlands. A western belt extends from Knoydart southwards to Loch Shiel and Loch Sunnart and there is an eastern belt in the Strathpeffer and Garve districts. British Geological Survey Petrology Collection sample number MC 7384.
Caption Text 2	Mica is a collective name for various aluminium silicate minerals that are characterized by perfect basal cleavage. Of the many micas, muscovite has major industrial importance.
Caption Text 3	The uses of mica are based on a unique combination of physical, chemical and electrical properties. Sheet mica is used mainly by the electrical and electronic industries.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica from Loch Affric area.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Loch Affric
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P527605 Muscovite mica from Ben Fionnalaidh (Benula), south of Loch Mullardoch, Ross and Cromarty

The Caption:

Caption Title	Muscovite mica from Ben Fionnalaidh (Benula), south of Loch Mullardoch, Ross and
Subtitle	
Caption Text 1	Muscovite mica from Ben Fionnalaidh (Benula), south of Loch Mullardoch, Ross and Cromarty. Muscovite is a mica composed of hydrous potassium aluminium silicate. British Geological Survey Petrology Collection sample number MC 7385.
Caption Text 2	A large number of occurrences of mica were investigated during the Second World War to locate commercial sources. This location falls outside the two main concentration of sites, the western pegmatite belts at Knoydart and Loch Shiel and the Strathpeffer and Garve districts.
Caption Text 3	Owing to the geological nature of the pegmatite deposits from which sheet mica is obtained, mining is usually on a small scale and not highly mechanized. This particular location was not of economic significance.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica from Ben Fionnalaidh (Benula), south of Loch Mullardoch, Ross and
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Loch Mullardoch, Ben Fionnalaidh (Benula)
(Nature of	Location specimen was found
Grid Reference	
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
Text Copyright	British Geological Survey © NERC. All rights reserved.
<u>Image and Other Asset Info:</u>	
Image CD	2
Image File	P527605.tif
Image Copyright	British Geological Survey © NERC. All rights reserved.
Inputter	R.P. McIntosh
Input Date	15/06/2003

P527606 Muscovite mica from the Braetollie A deposit, five miles north 30 degrees west of Alness, Rossshire

The Caption:

Caption Title Muscovite mica from the Braetollie A deposit, five miles north 30 degrees west of Alness, Rossshire

Subtitle

Caption Text 1 A specimen of muscovite mica from the Braetollie A deposit, five miles north 30 degrees west of Alness, Rossshire and at an altitude of 1000 feet. British Geological Survey Petrology Collection sample number MC 7386.

Caption Text 2 Trial workings were undertaken at Braetollie A in 1943. The mica was found to occur in thin lenticular bodies in a pelitic band in the dominantly psammitic schists of the area.

Caption Text 3 The mica, as seen in the field was of a clear ruby colour. The 'books' in general were flat. 'Ruling' and 'A-structure' were present only to a small extent. Some 'books' in the field contained inclusions of tourmaline, magnetite and garnet but the amount of flawed material was quite small. Most 'books' were four to eight inches in diameter but ten-inch crystals were fairly

The Basic Record:

Simple Name Mineral specimen

Brief Description Muscovite mica from the Braetollie A deposit, five miles north 30 degrees west of Alness, Rossshire.

Materials Mineral specimen

Associated Place Scotland, Ross and Cromarty, Alness, Braetollie A deposit

(Nature of Location specimen was found

Grid Reference

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Image and Other Asset Info:

Image CD 2

Image File P527606.tif

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Inputter R.P. McIntosh

Input Date 15/06/2003

P527607 Feldspar from a pegmatite on Carn Gorm, Glengaich, near Garve, Rossshire

The Caption:

Caption Title Feldspar from a pegmatite on Carn Gorm, Glengaich, near Garve, Rossshire
Subtitle
Caption Text 1 Feldspar from a pegmatite from three-quarters of a mile from the top of Carn Gorm, Glengaich, near Garve, Rossshire. British Geological Survey Petrology Collection sample number MC
Caption Text 2 The occurrence of the pegmatite is as massive lenses in the Moine schist and not as regular veins. The pegmatite consists of mainly quartz and feldspar (microcline perthite) with subordinate muscovite and a little associated biotite.
Caption Text 3 The yield would be about 30 per cent of the excavated ground. The pegmatite is c. 25 yards wide and can be traced for 260 yards. Beyond that the pegmatite becomes more quartzose.

The Basic Record:

Simple Name Mineral specimen
Brief Description Feldspar from a pegmatite on Carn Gorm, Glengaich, near Garve, Rossshire.
Materials Mineral specimen
Associated Place Scotland, Ross and Cromarty, Glengaich, Carn Gorm
(Nature of
Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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Image and Other Asset Info:

Image CD 2
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527608 A box of heat-treated foreign vermiculite, larger specimens, for A. G. McGregor of the Geological Survey of Great Britain

The Caption:

Caption Title	A box of heat-treated foreign vermiculite, larger specimens, for A. G. McGregor of the Geological Survey of Great Britain
Subtitle	
Caption Text 1	The image shows specimens of heat treated vermiculite, a hydrated phlogopite mica. It has the ability to expand to many times its original volume when heated. This process is known as exfoliation. British Geological Survey Petrology Collection sample number MC 7388.
Caption Text 2	The concertina-shaped granules of exfoliated vermiculite are non-combustible as well as being insoluble in water and all organic solvents. They are completely safe and easy to handle. Exfoliated vermiculite is available in six different grades, micron, superfine, fine, medium, large and premium.
Caption Text 3	Vermiculite has many uses in horticulture as a potting soil, either alone or mixed with peat based soils; industrial applications include uses as an absorbent, in textured paints, as a filler, etc., use in brake linings, fiberglass reinforcement, and in composting. Building uses include lightweight insulating concrete and lightweight insulating plaster.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	A box of heat-treated foreign vermiculite, larger specimens, for A. G. McGregor of the Geological Survey of Great Britain.
Materials	Mineral specimen
Associated Name (Nature of	Macgregor, A.G. Received specimens
Associated Name (Nature of	Macgregor, A.G. Received specimens
Associated Name (Nature of	Macgregor, A.G. Received specimens
Associated Name (Nature of	Macgregor, A.G. Received specimens
Ref. Author	
Ref Title	Macdonald encyclopedia of rocks and minerals
Ref. Publication Details	London : Macdonald and Co., 1978
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	3
Image File	P527608.tif
Image Copyright	British Geological Survey © NERC. All rights reserved.
Inputter	R.P. McIntosh
Input Date	15/06/2003

P527609 A box of untreated foreign vermiculite, larger specimens, for A. G. McGregor of the Geological Survey of Great Britain

The Caption:

Caption Title	A box of untreated foreign vermiculite, larger specimens, for A. G. McGregor of the Geological Survey of Great Britain
Subtitle	
Caption Text 1	The image shows specimens of untreated vermiculite. Vermiculite is hydrated phlogopite mica, a member of the phyllosilicate group of minerals and closely resembles muscovite mica in appearance. British Geological Survey Petrology Collection sample number MC 7389.
Caption Text 2	Vermiculite is usually mined in opencast pits by drilling and blasting. The flake-shaped particles of vermiculite are separated from the host rock by a process of crushing and air separation. To maintain consistent and reliable ore, vermiculites are often blended. The final concentrate is graded, ready for shipment.
Caption Text 3	Vermiculite is found in various parts of the world. The major mines are located in South Africa, China, Brazil, Zimbabwe, and the United States.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	A box of untreated foreign vermiculite, larger specimens, for A. G. McGregor of the Geological Survey of Great Britain.
Materials	Mineral specimen
Ref. Author	
Ref Title	Macdonald encyclopedia of rocks and minerals
Ref. Publication Details	London : Macdonald and Co., 1978
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	3
Image File	P527609.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527610 A box of untreated foreign vermiculite, smaller specimens, for A.G.McGregor of the Geological Survey of Great Britain

The Caption:

Caption Title A box of untreated foreign vermiculite, smaller specimens, for A.G.McGregor of the Geological Survey of Great Britain

Subtitle

Caption Text 1 Specimens of untreated fine vermiculite, a hydrated phlogopite mica. The box also contains on close examination some treated, expanded vermiculite. British Geological Survey Petrology Collection sample number MC 7390.

Caption Text 2 The chief source of vermiculite has been the opencast Palabora Mine in the Transvaal which has been working since the 1940s.

Caption Text 3 After blasting, broken rock is loaded onto haul trucks. Ore is transported to the processing plant where it undergoes screening and crushing with the ore being fed to a stockpile from where it is distributed to three rotating driers. The driers reduce the moisture content of the crushed ore to less than 2 per cent at an average feed rate of 230 tons per hour. The ore then passes into the ore treatment plant, where it falls into an air stream which causes the lighter vermiculite particles to be deflected whilst falling, a process known as "winnowing". Here it is progressively winnowed, crushed and screened.

The Basic Record:

Simple Name Mineral specimen

Brief Description A box of untreated foreign vermiculite, smaller specimens, for A.G.McGregor of the Geological Survey of Great Britain.

Materials Mineral specimen

Ref. Author

Ref Title Macdonald encyclopedia of rocks and minerals

Ref. Publication Details London : Macdonald and Co., 1978

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Image and Other Asset Info:

Image CD 3

Image File P527610.tif

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Inputter R.P. McIntosh

Input Date 15/06/2003

P527611 A box of heat-treated foreign vermiculite, smaller specimens, for A. G. McGregor of the Geological Survey of Great Britain

The Caption:

Caption Title A box of heat-treated foreign vermiculite, smaller specimens, for A. G. McGregor of the Geological Survey of Great Britain

Subtitle

Caption Text 1 Fine heat-treated vermiculite, a hydrated variety of phlogopite mica. This image shows the vermiculite in its expanded state after heat-treatment. British Geological Survey Petrology Collection sample number MC 7391.

Caption Text 2 Most applications for vermiculite require it in its exfoliated form. Vermiculite is a very versatile mineral, it has excellent thermal stability and inertness. It is clean to handle, odourless, mould-resistant. It is also sterile due to the high temperature to which it is subjected in

Caption Text 3 Vermiculite is used in horticulture, in packing materials, fire protection, lightweight concretes, friction linings, vermiculite plasters as insulation in steelworks and foundries, and bitumen-coated vermiculite screeds.

The Basic Record:

Simple Name Mineral specimen

Brief Description A box of heat-treated foreign vermiculite, smaller specimens, for A. G. McGregor of the Geological Survey of Great Britain.

Materials Mineral specimen

Ref. Author

Ref Title Macdonald encyclopedia of rocks and minerals

Ref. Publication Details London : Macdonald and Co., 1978

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Inputter R.P. McIntosh

Input Date 15/06/2003

P527612 Muscovite mica with beryl from Lochan an Resipol, Invernessshire

The Caption:

Caption Title	Muscovite mica with beryl from Lochan an Resipol, Invernessshire
Subtitle	
Caption Text 1	A specimen of muscovite mica, with beryl, from Lochan an Resipol. British Geological Survey Petrology Collection sample number MC 7392.
Caption Text 2	This locality, Beinn Resipol, was one of the six localities recommended for further investigation for commercial production of mica during the Second World War. After investigation it compared unfavourably with the deposit at Knoydart.
Caption Text 3	Muscovite is a hydrous potassium aluminium silicate belonging to the phyllosilicates and was sought after commercially to replace mica from India. Beryl is another mineral, it is a beryllium aluminium silicate of the hexagonal crystal system. It is very hard, 7.5 to 8 on the Moh's scale of hardness. Beryl is also an economic mineral used as a source of beryllium and particularly as a gemstone.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica with beryl from Lochan an Resipol, Invernessshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Lochan an Resipol
(Nature of	Location specimen was found
Grid Reference	
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	3
Image File	P527612.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527613 Muscovite mica from the Ranochan, Loch Eilt area, Invernessshire

The Caption:

Caption Title Muscovite mica from the Ranochan, Loch Eilt area, Invernessshire
Subtitle
Caption Text 1 Muscovite mica from the Ranochan, Loch Eilt area, Invernessshire. This locality is situated in the western pegmatite belt which stretches from Loch Sunart, across Loch Shiel to Knoydart. British Geological Survey Petrology Collection sample number MC 7393.
Caption Text 2 Typically the pegmatite bodies comprise veins and similar bodies of quartz-rich pegmatite containing large books of white mica (muscovite) and occur within the highly metamorphosed Moine (Precambrian) series.
Caption Text 3 This area as well as the Strathpeffer, Garve area underwent extensive exploration for commercial deposits of mica during the Second World War. This deposit was not worked commercially though the deposit further north in Knoydart was successfully worked.

The Basic Record:

Simple Name Mineral specimen
Brief Description Muscovite mica from the Ranochan, Loch Eilt area, Invernessshire.
Materials Mineral specimen
Associated Place Scotland, Invernessshire, Loch Eilt, Ranochan
(Nature of Grid Reference Location specimen was found
Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details London : Geological Survey and Museum, 1943.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527615 Muscovite mica from the Diollaid mica prospect, west of Glenfinnan, Loch Eilt, Invernessshire

The Caption:

Caption Title Muscovite mica from the Diollaid mica prospect, west of Glenfinnan, Loch Eilt, Invernessshire
Subtitle
Caption Text 1 A specimen of muscovite mica from the Diollaid mica prospect, west of Glenfinnan, Loch Eilt, Invernessshire. British Geological Survey Petrology Collection sample number MC 7395.
Caption Text 2 The mica prospect is located at an altitude of 2000 feet. The deposit occurs in a dyke-like or vein-like body of white, quartz-rich albite pegmatite about 12 feet in width and concordant with the strike of the adjacent schists.
Caption Text 3 The mica books vary in size with the largest eight inches in diameter and four inches in thickness. There are other pegmatites in the area but the micas rarely exceed two inches in diameter and half an inch thick.

The Basic Record:

Simple Name Mineral specimen
Brief Description Muscovite mica from the Diollaid mica prospect, west of Glenfinnan, Loch Eilt, Invernessshire.
Materials Mineral specimen
Associated Place Scotland, Invernessshire, Loch Eilt, Diollaid Mhor
(Nature of
Grid Reference Location specimen was found

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details London : Geological Survey and Museum, 1943.
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Image and Other Asset Info:

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Inputter R.P. McIntosh
Input Date 15/06/2003

P527616 Ruled silvery muscovite from the old mica trial near Austincroft Dalilea, Loch Shiel, Invernessshire

The Caption:

Caption Title Ruled silvery muscovite from the old mica trial near Austincroft Dalilea, Loch Shiel, Invernessshire

Subtitle

Caption Text 1 A specimen of ruled silvery muscovite from the old mica trial near Austincroft Dalilea, Loch Sheil, Invernessshire. British Geological Survey Petrology Collection sample number MC

Caption Text 2 Ruled or ribbon mica is a structural feature caused by a series of more or less clean sharp parting planes which cut through the crystal at an angle of approximately 67 degrees to the basal cleavage. These parting planes may extend either entirely or only part of the way across and through the crystal and their effect is to divide the mica into narrow strips or even slivers of hair-like fineness.

Caption Text 3 The deposit from which this specimen was found is from one of two mica prospects, it is probably from the outcrop on the north side of Loch Sheil half a mile from Dalilea House which is noted for its silvery and heavily ruled muscovite.

The Basic Record:

Simple Name Mineral specimen

Brief Description Ruled silvery muscovite from the old mica trial near Austincroft Dalilea, Loch Shiel, Invernessshire.

Materials Mineral specimen

Associated Place Scotland, Invernessshire, Loch Sheil, Austincroft Dalilea

(Nature of Grid Reference Location specimen was found

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P527617 Ruled silvery muscovite from the old mica trial near Austincroft Dalilea, Loch Shiel, Invernessshire

The Caption:

Caption Title Ruled silvery muscovite from the old mica trial near Austincroft Dalilea, Loch Shiel, Invernessshire

Subtitle

Caption Text 1 Ruled muscovite indicates the presence of a structural defect in the crystal. It is caused by a series of more or less clean sharp parting planes which cut through the crystal at an angle of approximately 67 degrees to the basal cleavage. British Geological Survey Petrology Collection sample number MC 7397.

Caption Text 2 These parting planes may extend either entirely or only part of the way across and through the crystal and their effect is to divide the mica into narrow strips or even slivers of hair-like

Caption Text 3 The ruling is intimately related to the internal structure of the crystal. The specimen comes from a quartz-rich pegmatite near Dalilea, Loch Shiel.

The Basic Record:

Simple Name Mineral specimen

Brief Description Ruled silvery muscovite from the old mica trial near Austincroft Dalilea, Loch Shiel, Invernessshire.

Materials Mineral specimen

Associated Place Scotland, Invernessshire, Loch Sheil, Austincroft Dalilea

(Nature of Grid Reference Location specimen was found

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P527618 Quartz from the old mica trial near Austincroft Dalilea, Loch Shiel, Invernessshire

The Caption:

Caption Title Quartz from the old mica trial near Austincroft Dalilea, Loch Shiel, Invernessshire
Subtitle
Caption Text 1 A specimen of quartz from the old mica trial near Austincroft Dalilea on the north side of Loch Shiel, about half a mile west 20 degrees north of Dalilea House four miles from Acharacle. British Geological Survey Petrology Collection sample number MC 7398.
Caption Text 2 The quartz is from a quartz-rich pegmatite that also contains masses of relatively pure, cream-coloured albite as well as the white muscovite. Quartz is a mineral composed of silicon oxide and is one of the commonest minerals of the earth's crust making up 12 per cent by
Caption Text 3 Pegmatites are intrusive rocks formed from magmas rich in volatile elements resulting in large crystals containing an abundance of elements not used up in its earlier crystallization history.

The Basic Record:

Simple Name Mineral specimen
Brief Description Quartz from the old mica trial near Austincroft Dalilea, Loch Shiel, Invernessshire.
Materials Mineral specimen
Associated Place Scotland, Invernessshire, Loch Sheil, Austincroft Dalilea
(Nature of
Grid Reference Location specimen was found

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details London : Geological Survey and Museum, 1943.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527619 Muscovite mica from Lochan an Resipol, Invernesshire

The Caption:

Caption Title	Muscovite mica from Lochan an Resipol, Invernesshire
Subtitle	
Caption Text 1	A specimen of muscovite mica collected from Lochan an Resipol by A.G. Macgregor of the Geological Survey of Great Britain. British Geological Survey Petrology Collection sample number MC 7399.
Caption Text 2	This locality, Beinn Resipol, is one of the six localities recommended for further investigation for commercial production of mica during the Second World War. It was rejected as it compared unfavourably with the deposit at Knoydart.
Caption Text 3	Mica was a strategic mineral at this period due to the difficulty of obtaining it from India. Muscovite is a hydrous potassium aluminium silicate belonging to the phyllosilicates.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica from Lochan an Resipol, Invernesshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernesshire, Lochan an Resipol
(Nature of Grid Reference	Location specimen was found
Associated Name	Macgregor, A.G.
(Nature of	Collector
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Image CD	3
Image File	P527619.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527620 Muscovite-biotite intergrowth from the Carn Gorm mica prospect, near Garve, Rossshire

The Caption:

Caption Title	Muscovite-biotite intergrowth from the Carn Gorm mica prospect, near Garve, Rossshire
Subtitle	
Caption Text 1	This specimen shows a muscovite-biotite intergrowth from the Carn Gorm mica prospect, near Garve, Rossshire. British Geological Survey Petrology Collection sample number MC 7400.
Caption Text 2	Both biotite and muscovite are common in the pegmatite along with quartz and subordinate white feldspar. Biotite at this deposit can occur in books up to fifteen inches in diameter while the muscovite occurs up to eight inches in diameter.
Caption Text 3	The deposit was noted as a source of ruby type muscovite of good clarity and quality however the intergrowths of biotite and muscovite were regarded as a flaw. The mica prospect was investigated during the Second World War, c. 1943. The main source of mica in Scotland at this time was from Knoydart.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite-biotite intergrowth from the Carn Gorm mica prospect, near Garve, Rossshire.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Garve, Carn Gorm mica prospect
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Image File	P527620.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527621 Biotite from the Carn Gorm mica prospect, near Garve, Rossshire

The Caption:

Caption Title Biotite from the Carn Gorm mica prospect, near Garve, Rossshire
Subtitle
Caption Text 1 Biotite is a hydrous potassium aluminium silicate of the phyllosilicates, mica group of minerals. It occurs along with muscovite mica in the Carn Gorm mica prospect, near Garve, Rossshire. British Geological Survey Petrology Collection sample number MC 7401.
Caption Text 2 The prospect was investigated during the Second World War as a potential source of commercial grade mica for electrical and heat insulation and a wide range of other uses.
Caption Text 3 The two micas occur in a quartz-mica coarse pegmatite in a dyke-like mass which cuts across the pelitic Moine (Precambrian) schists. Biotite occurs in the prospect in books up to fifteen inches in diameter and is sometimes found intergrown with muscovite mica.

The Basic Record:

Simple Name Mineral specimen
Brief Description Biotite from the Carn Gorm mica prospect, near Garve, Rossshire.
Materials Mineral specimen
Associated Place Scotland, Ross and Cromarty, Garve, Carn Gorm mica prospect
(Nature of
Grid Reference Location specimen was found

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details London : Geological Survey and Museum, 1943.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527622 Muscovite garnet tourmaline pegmatite from the Carn Gorm mica prospect near Garve, Rossshire

The Caption:

Caption Title Muscovite garnet tourmaline pegmatite from the Carn Gorm mica prospect near Garve,
Subtitle
Caption Text 1 A specimen of muscovite garnet tourmaline pegmatite from the Carn Gorm mica prospect near Garve, Rossshire. Its exact location is 700 yards north-north-east of the summit of Carn Gorm and three and a half miles east-north-east of Garve. British Geological Survey Petrology Collection sample number MC 7402.
Caption Text 2 The muscovite from this deposit is of the ruby type, and is clear and of good quality especially from the western part of the deposit. Flawless sheets up to twelve inches square and three to four inches in thickness were common.
Caption Text 3 The deposit forms a dyke-like mass of coarse pegmatite which cuts across the strike of the Moine schist host rock.

The Basic Record:

Simple Name Rock specimen
Brief Description Muscovite garnet tourmaline pegmatite from the Carn Gorm mica prospect near Garve,
Materials Rock specimen
Associated Place Scotland, Ross and Cromarty, Garve, Carn Gorm mica prospect
(Nature of
Grid Reference Location specimen was found

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details London : Geological Survey and Museum, 1943.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527623 Muscovite pegmatite from the Carn Gorm mica prospect, near Garve, Rossshire

The Caption:

Caption Title Muscovite pegmatite from the Carn Gorm mica prospect, near Garve, Rossshire
Subtitle
Caption Text 1 This specimen shows a typical example of the mica pegmatite that existed in the Carn Gorm mica prospect near Garve in the Strathgarve district of Eastern Rossshire. British Geological Survey Petrology Collection sample number MC 7403.
Caption Text 2 The deposit was investigated during the Second World War as a source for commercial grade muscovite for use in a range of electrical and other industries.
Caption Text 3 A pegmatite is a very coarse-grained igneous rock with a grain size greater than three centimetres. Pegmatites often contain mineral suites that are otherwise rare such as lithium, beryllium and rare earths and are often economically important.

The Basic Record:

Simple Name Rock specimen
Brief Description Muscovite pegmatite from the Carn Gorm mica prospect, near Garve, Rossshire.
Materials Rock specimen
Associated Place Scotland, Ross and Cromarty, Garve, Carn Gorm mica prospect
(Nature of
Grid Reference Location specimen was found

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details London : Geological Survey and Museum, 1943.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527624 Tourmaline pegmatite, Carn Gorm mica prospect, near Garve, Rossshire

The Caption:

Caption Title Tourmaline pegmatite, Carn Gorm mica prospect, near Garve, Rossshire
Subtitle
Caption Text 1 The pegmatite at the Carn Gorm mica prospect consists mainly of quartz and mica with subordinate white feldspar. Small euhedral garnets and prisms of black tourmaline are locally abundant, with beryl as a rather rare accessory. British Geological Survey Petrology Collection sample number MC 7404.
Caption Text 2 Masses of barren quartz and white feldspar commonly occur throughout the body which also contains inclusions of the host rock, pelitic schists of Moine (Precambrian) age.
Caption Text 3 The mica prospect underwent investigation during the Second World War when there were shortages due to cuts in supplies from the usual source of mica, India.

The Basic Record:

Simple Name Rock specimen
Brief Description Tourmaline pegmatite, Carn Gorm mica prospect, near Garve, Rossshire.
Materials Rock specimen
Associated Place Scotland, Ross and Cromarty, Garve, Carn Gorm mica prospect
(Nature of
Grid Reference Location specimen was found

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details London : Geological Survey and Museum, 1943.
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Input Date 15/06/2003

P527625 Quartz pegmatite from the Carn Gorm mica prospect near Garve, Rossshire

The Caption:

Caption Title Quartz pegmatite from the Carn Gorm mica prospect near Garve, Rossshire
Subtitle
Caption Text 1 The quartz pegmatite is an intrusive rock formed from a magma rich in volatile elements resulting in large crystals containing an abundance of elements not used up in its earlier crystallization history. British Geological Survey Petrology Collection sample number MC
Caption Text 2 Quartz pegmatite from the Carn Gorm consists mainly of quartz and mica, with subordinate white feldspar. The prospect was investigated as a source of commercial mica during the Second World War.
Caption Text 3 The muscovite was a clear ruby type of good quality. The quartz had no economic use.

The Basic Record:

Simple Name Rock specimen
Brief Description Quartz pegmatite from the Carn Gorm mica prospect near Garve, Rossshire.
Materials Rock specimen
Associated Place Scotland, Ross and Cromarty, Garve, Carn Gorm mica prospect
(Nature of Location specimen was found
Grid Reference

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details London : Geological Survey and Museum, 1943.
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Input Date 15/06/2003

P527626 Muscovite mica from Tom an Neoil, in the close vicinity of the Loch Nevis mica prospect, Knoydart, Invernessshire

The Caption:

Caption Title Muscovite mica from Tom an Neoil, in the close vicinity of the Loch Nevis mica prospect, Knoydart, Invernessshire

Subtitle

Caption Text 1 This specimen of muscovite mica is from a deposit half a mile east-south-east of the Coire an Lochain, on the south face of Tom an Neoil. It is situated in the close proximity of the once commercially important Loch Nevis mica prospect. British Geological Survey Petrology Collection sample number MC 7406.

Caption Text 2 The location resides in a belt of muscovite-rich pegmatites that extends from Knoydart southwards to Loch Shiel and Loch Sunart.

Caption Text 3 Investigations into the muscovite-rich pegmatites of Knoydart were conducted by the Geological Survey of Scotland in late 1942. The deposit was opened up in May 1943 working five quarries. The mica was sent to Pitlochry for processing.

The Basic Record:

Simple Name Mineral specimen

Brief Description Muscovite mica from Tom an Neoil, in the close vicinity of the Loch Nevis mica prospect, Knoydart, Invernessshire.

Materials Mineral specimen

Associated Place Scotland, Invernessshire, Knoydart, Tom an Neoil

(Nature of Location specimen was found

Grid Reference

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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P527627 Galena from Yesnaby, Orkney Isles

The Caption:

Caption Title	Galena from Yesnaby, Orkney Isles
Subtitle	
Caption Text 1	A specimen of galena from Yesnaby, Orkney. Veins of calcite and barytes with small quantities of galena are quite common in Orkney and have been worked on a small scale at several periods during the last four hundred years, however all the mines are long since abandoned. British Geological Survey Petrology Collection sample number MC 7407.
Caption Text 2	When Professor Jameson visited the islands in 1799 he did not find any lead mines in operation and no lead mining has been carried out since then.
Caption Text 3	Regarding the Yesnaby location, Professor Jameson reported 'veins of barytes traversing the sandstone; and, intermixed with this barytes, there was calcareous spar [calcite], iron pyrites and galena'.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Galena from Yesnaby, Orkney Isles.
Materials	Mineral specimen
Associated Place	Scotland, Orkney Isles, Yesnaby
(Nature of Grid Reference)	Location specimen was found
Associated Name	Jameson, Professor
(Nature of)	Reported on mineral vein
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Input Date	15/06/2003

P527628 Fluorspar from the Corrie Beg (Glengairn) Veins, Ballater, Aberdeenshire

The Caption:

Caption Title	Fluorspar from the Corrie Beg (Glengairn) Veins, Ballater, Aberdeenshire
Subtitle	
Caption Text 1	A specimen of fluorspar, also known as fluorite, from the Corrie Beg (Glengairn) Veins, Ballater, Aberdeenshire. British Geological Survey Petrology Collection sample number MC
Caption Text 2	The main vein is associated with a fault that trends to the north-north-west and has several branches. The vein was worked for galena, a lead ore to a depth of thirty-six feet early in the 1800s. It yielded lead rich in silver.
Caption Text 3	Heddle in his 'Mineralogy of Scotland' mentions the occurrence of two intersecting veins in gneiss containing galena and yellow zinc-blende associated with fluorspar and calcite. The host rock is intrusive hornblende schist and thin bands of siliceous schist of the Precambrian (Dalradian) Banffshire Series.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Fluorspar from the Corrie Beg (Glengairn) Veins, Ballater, Aberdeenshire.
Materials	Mineral specimen
Associated Place	Scotland, Aberdeenshire, Ballater, Glen Gairn
(Nature of Grid Reference	Location specimen was found
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Input Date	15/06/2003

P527629 Fluorspar from the Corrie Beg (Glengairn) Veins, Ballater, Aberdeenshire

The Caption:

Caption Title Fluorspar from the Corrie Beg (Glengairn) Veins, Ballater, Aberdeenshire
Subtitle
Caption Text 1 A specimen of fluorspar from the Corrie Beg (Glengairn) Veins, Ballater, Aberdeenshire. The veins were worked in the early 1800s for galena, a lead ore. British Geological Survey Petrology Collection sample number MC 7409.
Caption Text 2 The galena was rich in silver. As well as galena and fluorspar the vein yields yellow zinc-blende and calcite.
Caption Text 3 Fluorspar is a mineral belonging to the cubic crystal system. It has a hardness of four on Moh's scale of hardness (semi-hard), and is a fragile mineral with perfect cleavage and vitreous lustre. When fluorspar is exposed to ultraviolet light it fluoresces strongly, usually blue or violet.

The Basic Record:

Simple Name Mineral specimen
Brief Description Fluorspar from the Corrie Beg (Glengairn) Veins, Ballater, Aberdeenshire.
Materials Mineral specimen
Associated Place Scotland, Aberdeenshire, Ballater, Glen Gairn
(Nature of Grid Reference Location specimen was found
Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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Input Date 15/06/2003

P527630 Fluorspar from the Corrie Beg (Glengairn) Veins, Ballater, Aberdeenshire

The Caption:

Caption Title	Fluorspar from the Corrie Beg (Glengairn) Veins, Ballater, Aberdeenshire
Subtitle	
Caption Text 1	A specimen of fluorspar, a calcium fluoride mineral belonging to the halides group of minerals. This specimen is from the Corrie Beg (Glengairn) Veins, Ballater, Aberdeenshire. British Geological Survey Petrology Collection sample number MC 7410.
Caption Text 2	The Old Statistical Account of Scotland in 1794 states that pieces of lead ore had been found near the castle of Glengairn but no attempt had been made to find the vein. Heddle in his 'Mineralogy of Scotland' mentions the occurrence of two intersecting veins in gneiss containing galena and yellow zinc-blende associated with fluorspar and calcite.
Caption Text 3	Fluorspar is a mineral belonging to the cubic crystal system. It has a hardness of four on Moh's scale of hardness (semi-hard), it is a fragile mineral with perfect cleavage and vitreous lustre.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Fluorspar from the Corrie Beg (Glengairn) Veins, Ballater, Aberdeenshire.
Materials	Mineral specimen
Associated Place	Scotland, Aberdeenshire, Ballater, Glen Gairn
(Nature of Grid Reference	Location specimen was found
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Input Date	15/06/2003

P527631 A manganese ore known as manganite from Oa on Islay,

The Caption:

Caption Title A manganese ore known as manganite from Oa on Islay,
Subtitle
Caption Text 1 A manganese ore called manganite occurs in the network of veins traversing the quartzite cliff in the south of the Oa peninsula on Islay. British Geological Survey Petrology Collection sample number MC 7411.
Caption Text 2 At the base of the cliff called Dun Athad it was worked many years ago and is said to have fetched £4 per ton. Works seem to have been given up due to the difficulty of access.
Caption Text 3 Manganite is a hydrated manganese oxide belonging to the monoclinic crystal system. Its usual form is as elongated prismatic black crystals, semi-opaque with a submetallic lustre and it has a hardness on Moh's scale of hardness of 4.

The Basic Record:

Simple Name Mineral specimen
Brief Description A manganese ore known as manganite from Oa on Islay,.
Materials Mineral specimen
Associated Place Scotland, Argyllshire, Islay, Oa
(Nature of
Grid Reference Location specimen was found

Ref. Author Dewey, H. and Dines, H.G.
Ref Title Tungsten and manganese ores. 3rd edition. Special reports on the mineral resources of Great Britain vol. 1.
Ref. Publication Details London : HMSO, 1923.
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Input Date 15/06/2003

P527632 Lead - copper vein from Blairlogie, Perthshire

The Caption:

Caption Title Lead - copper vein from Blairlogie, Perthshire
Subtitle
Caption Text 1 Several old mines and trials for copper ore have been made on the veins of barytes which occur in the Old Red Sandstone volcanic rocks behind Blairlogie. British Geological Survey Petrology Collection sample number MC 7412.
Caption Text 2 None of these old mines was of much value and they have long since been abandoned. The ores found were chalcocite and tetrahedrite with malachite and chrysocolla. The most westerly of the workings is a vein nine to twelve feet thick of pink barytes on the west side of the burn.
Caption Text 3 Another vein that has undergone small-scale working for copper is 140 yards east of Blairlogie. A quarter of a mile further east two veins occur on the hillside, one carried barytes and disseminated copper ores. The most easterly has two feet of pink barytes and quartz and minute disseminated specks of copper ores.

The Basic Record:

Simple Name Mineral specimen
Brief Description Lead - copper vein from Blairlogie, Perthshire.
Materials Mineral specimen
Associated Place Scotland, Perthshire, Blairlogie
(Nature of Grid Reference Location specimen was found
Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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Input Date 15/06/2003

P527633 A lead-copper vein in schist, north of Loch Tulla, Argyllshire

The Caption:

Caption Title A lead-copper vein in schist, north of Loch Tulla, Argyllshire
Subtitle
Caption Text 1 A lead-copper vein in schist, north of Loch Tulla, Argyllshire. British Geological Survey Petrology Collection sample number MC 7413.
Caption Text 2 Lead ores have a wide distribution and have been worked for centuries in Scotland. Copper ores likewise have had a very long history of mining.
Caption Text 3 It is certain that local ore would have been used during the Bronze Age, moulds for casting have been found in several places, especially Aberdeenshire and are thought to date back to 1500-1800 B.C. Very little smelting occurred in Scotland, most ore was exported to Swansea

The Basic Record:

Simple Name Mineral specimen
Brief Description A lead-copper vein in schist, north of Loch Tulla, Argyllshire.
Materials Mineral specimen
Associated Place Scotland, Argyllshire, Loch Tulla
(Nature of
Grid Reference Location specimen was found

Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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Input Date 15/06/2003

P527634 Barytes from Myres Burn, Eaglesham, Renfrewshire

The Caption:

Caption Title	Barytes from Myres Burn, Eaglesham, Renfrewshire
Subtitle	
Caption Text 1	A specimen of barytes from Myres Burn near Eaglesham. Barytes was located in Carboniferous volcanic rocks a few miles south of Eaglesham, Renfrewshire, namely in Myres Burn (the upper part of the Birks Burn) and in the Munzie Burn during the Geological Survey of Great Britain resurvey of the district in 1924. British Geological Survey Petrology Collection sample number MC 7414.
Caption Text 2	The veins occur in high peat-covered moorland area and are poorly exposed with a cover of both boulder clay up to 18 feet thick and overlying peat up to 12 feet thick.
Caption Text 3	The chemical composition of barytes is barium sulphate. It had many industrial uses and was mined in a number of localities in Scotland, though not from this locality.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Barytes from Myres Burn, Eaglesham, Renfrewshire.
Materials	Mineral specimen
Associated Place	Scotland, Refrewshire, Eaglesham, Myres Burn
(Nature of Grid Reference	Location specimen was found
Ref. Author	MacGregor, A.G.
Ref Title	Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details	London : Geological Survey and Museum, 1944.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Input Date	15/06/2003

P527635 Barytes from Pockmuir Burn, Meikle Auchinstilloch area, Lanarkshire

The Caption:

Caption Title Barytes from Pockmuir Burn, Meikle Auchinstilloch area, Lanarkshire
Subtitle
Caption Text 1 A specimen of barytes from the Pockmuir Burn, 400 yards south-east of the Ordnance Survey triangulation point 1428 feet on Mannoeh Hill. British Geological Survey Petrology Collection sample number MC 7415.
Caption Text 2 The barytes is from a six feet wide south-east - north-west trending vein. The vein is recorded as producing reddish-brown barytes with a good many strings of haematite along with some
Caption Text 3 There are a significant number of barytes veins in the Meikle Auchinstilloch - Nutberry Hill area. The main localities are those in the Coal Burn, Pockmuir Burn and River Nethan.

The Basic Record:

Simple Name Mineral specimen
Brief Description Barytes from Pockmuir Burn, Meikle Auchinstilloch area, Lanarkshire.
Materials Mineral specimen
Associated Place Scotland, Lanarkshire, Meikle Auchinstilloch, Pockmuir Burn
(Nature of
Grid Reference Location specimen was found

Ref. Author MacGregor, A.G.
Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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Input Date 15/06/2003

P527636 Barytes from the Redshaw Vein, Redshaw Burn, Douglas-Crawfordjohn district, Lanarkshire

The Caption:

Caption Title Barytes from the Redshaw Vein, Redshaw Burn, Douglas-Crawfordjohn district, Lanarkshire
Subtitle
Caption Text 1 A specimen of the mineral barytes from the Redshaw Vein, Redshaw Burn, Douglas-Crawfordjohn district, Lanarkshire. The Redshaw Vein is located in a small burn and its tributary 650 yards north of Redshaw near the Lesmahagow - Abington road. British Geological Survey Petrology Collection sample number MC 7416.
Caption Text 2 Pale pinkish barytes occurs in a vein trending west 30 degrees north. The hade is 25 degrees to the south-south-west. The vein is nine inches to one foot wide but at both exposures it contains thin bands of country rock. The thickest band of barytes is three inches across.
Caption Text 3 In the lavas and sediments of Lower Old Red Sandstone age between Douglas and the Southern Upland Fault at Crawfordjohn, occurrences of barytes are known at five localities at elevations between 850 feet and 1,200 feet. They are the Redshaw Vein, Pagie Hill Vein, Townhead Wood Vein, Auchensaugh Vein and Braidknowe Burn Veinlet.

The Basic Record:

Simple Name Mineral specimen
Brief Description Barytes from the Redshaw Vein, Redshaw Burn, Douglas-Crawfordjohn district, Lanarkshire.
Materials Mineral specimen
Associated Place Scotland, Lanarkshire, Douglas-Crawfordjohn, Redshaw Burn
(Nature of
Grid Reference Location specimen was found

Ref. Author MacGregor, A.G.
Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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P527637 Barytes from Gass Water, Cronberry, Cumnock, Ayrshire

The Caption:

Caption Title	Barytes from Gass Water, Cronberry, Cumnock, Ayrshire
Subtitle	
Caption Text 1	This mineral specimen of barytes is from the Gass Water Mines near Cumnock in Ayrshire. The veins from which it is found have been known since before 1870 and were first opened up by the Hedworth Barium Company Limited which carried out development work and mining from 1917 to 1921. British Geological Survey Petrology Collection sample number MC 7417.
Caption Text 2	The barytes spar was obtained by stoping from an adit level but the total amount raised was only 7976 tons.
Caption Text 3	In the Gass Water area barytes has been deposited along fault-crushes and fractures in a belt of country about two-thirds of a mile wide. The barytes is generally opaque and is of two main types, coarse platy 'cock's comb' barytes of a general white to pale pinkish colour, this is of the best quality; and compact and much less coarsely crystalline pink barytes with confused 'cock's comb' development.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Barytes from Gass Water, Cronberry, Cumnock, Ayrshire.
Materials	Mineral specimen
Associated Place	Scotland, Ayrshire, Cumnock, Cronberry, Gass Water
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Hedworth Barium Company Limited
(Nature of	Mining company
Ref. Author	MacGregor, A.G.
Ref Title	Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details	London : Geological Survey and Museum, 1944.
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P527638 Barytes from Myres Burn, Eaglesham, Renfrewshire

The Caption:

Caption Title Barytes from Myres Burn, Eaglesham, Renfrewshire
Subtitle
Caption Text 1 Barytes was located in Carboniferous volcanic rocks a few miles south of Eaglesham, Renfrewshire, namely in Myres Burn (the upper part of the Birks Burn) and in the Munzie Burn during the Geological Survey of Great Britain resurvey of the district in 1924. British Geological Survey Petrology Collection sample number MC 7418.
Caption Text 2 The subsequent exploration involved surface trenching with some minor burn diversions. According to old records a 'great quantity' of barytes was once believed to occur at Ballagioch Hill about two miles from Eaglesham.
Caption Text 3 No traces of this were found during the original geological survey or the 1923-24 revision.

The Basic Record:

Simple Name Mineral specimen
Brief Description Barytes from Myres Burn, Eaglesham, Renfrewshire.
Materials Mineral specimen
Associated Place Scotland, Renfrewshire, Eaglesham, Myres Burn
(Nature of
Grid Reference Location specimen was found

Ref. Author MacGregor, A.G.
Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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P527639 Barytes from Muirshiels No. 3 Adit, Muirshiels Mine, Renfrewshire

The Caption:

Caption Title Barytes from Muirshiels No. 3 Adit, Muirshiels Mine, Renfrewshire
Subtitle
Caption Text 1 Barytes is a mineral composed of barium sulphate. This specimen is from the Muirshiels No. 3 Adit at the Muirshiels Mine, Queenside Muir, Renfrewshire. British Geological Survey Petrology Collection sample number MC 7419.
Caption Text 2 Barytes mining was carried out at this locality more or less continuous from shortly after the middle of the 18th century until 1920. Only one vein was worked, it trends in a general north-north-east direction. The greatest width of barytes proved is 12.5 feet.
Caption Text 3 The barytes from the Muirshiels mine is mostly all a tough compact 'cock's comb' type and is thinly striped pink and white colour.

The Basic Record:

Simple Name Mineral specimen
Brief Description Barytes from Muirshiels No. 3 Adit, Muirshiels Mine, Renfrewshire.
Materials Mineral specimen
Associated Place Scotland, Renfrewshire, Muirshiels Mine
(Nature of Grid Reference Location specimen was found

Ref. Author MacGregor, A.G.
Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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P527640 Sandstone from Campbeltown, Argyllshire

The Caption:

Caption Title	Sandstone from Campbeltown, Argyllshire
Subtitle	
Caption Text 1	This specimen is probably from the Campbeltown Sandstone, of Carboniferous Limestone Coal Group age. It was worked by the Campbeltown Coal Company Limited at the Argyll Colliery, Machrihanish, as a sandstone that was ground for furnace hearth sands. British Geological Survey Petrology Collection sample number MC 7420.
Caption Text 2	The sandstone was worked by stoop and room and in places large galleries were opened up to work the full c. 63 feet thick sandstone. The rock was first holed and then the blasting charges were inserted some way up the working face. The rock was crushed at the pit but not washed.
Caption Text 3	The Campbeltown sand was used as a substitute for Belgian sand for lining the Siemens-Martin steel furnaces; also for steel and iron castings and for glass making. In 1918 it was reported to be transported by light railway to Campbeltown, shipped to Glasgow, places on the Ayrshire seaboard, Workington, Cumberland and a certain amount exported to Calcutta.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Sandstone from Campbeltown, Argyllshire.
Materials	Mineral specimen
Associated Place	Scotland, Argyllshire, Campbeltown
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Campbeltown Coal Company Limited
(Nature of	Mining company
Ref. Author	Anderson, J.G.C.
Ref Title	High-grade silica rocks in the Scottish Highlands & Islands. Wartime pamphlet no. 7. 2nd. ed.
Ref. Publication Details	London : Geological Survey and Museum, 1945.
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Input Date	15/06/2003

P527641 Feldspar with plates of biotite from the Sletteval No. 3, Upper Quarry, Harris, Outer Hebrides

The Caption:

Caption Title Feldspar with plates of biotite from the Sletteval No. 3, Upper Quarry, Harris, Outer Hebrides
Subtitle
Caption Text 1 The Roneval veins are situated on Sletteval, one of the eastern spurs of Roneval. The topmost or No. 3 quarry lies in the main central part of the vein. The vein has well-defined foot and hanging walls dipping north-north-west at 60 degrees. British Geological Survey Petrology Collection sample number MC 7421.
Caption Text 2 The feldspar makes up c. 75 per cent of the total vein content, with 25 per cent quartz and biotite mica 5 per cent or less. The feldspars average about two to three feet in length but some are up to five feet.
Caption Text 3 In the vein, there are equal amounts of pale pink-coloured spar very regularly rodded and intergrown with quartz, and a darker pink spar more coarsely and irregularly intergrown with quartz.

The Basic Record:

Simple Name Mineral specimen
Brief Description Feldspar with plates of biotite from the Sletteval No. 3, Upper Quarry, Harris, Outer Hebrides.
Materials Mineral specimen
Associated Place Scotland, Outer Hebrides, Harris, Sletteval Quarry, Quarry no. 3
(Nature of Grid Reference Location specimen was found
Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527642 Feldspar, from the roadside 1 mile south of Sletteval quarries

The Caption:

Caption Title Feldspar, from the roadside 1 mile south of Sletteval quarries
Subtitle
Caption Text 1 A white granular feldspar rock with biotite from the roadside one mile south of Sletteval quarries. British Geological Survey Petrology Collection sample number MC 7422.
Caption Text 2 This area contains a number of well-defined pegmatite veins of considerable width and elongation. The area underwent exploration during the Second World War in the quest for alkali feldspar.
Caption Text 3 Alkali feldspar was sought for fertilizer production and use in the ceramic and glass industries as an alternative to Scandinavian supplies that were severely curtailed due to war conditions.

The Basic Record:

Simple Name Mineral specimen
Brief Description Feldspar, from the roadside 1 mile south of Sletteval quarries.
Materials Mineral specimen
Associated Place Scotland, Outer Hebrides, Harris, Sletteval Quarry
(Nature of
Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.

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Input Date 15/06/2003

P527643 Feldspar from the Sletteval Quarry No. 1 Lower Quarry, Harris, Outer Hebrides

The Caption:

Caption Title Feldspar from the Sletteval Quarry No. 1 Lower Quarry, Harris, Outer Hebrides
Subtitle
Caption Text 1 From the Roneval veins, located on the eastern spur of Roneval, this specimen is from the lowest of the three quarries. This quarry is recorded to have provided white feldspar with quartz with a faint bluish opalescent tinge, though this specimen is pink. The top surface is a cleavage plane. British Geological Survey Petrology Collection sample number MC 7423.
Caption Text 2 The width of the vein in quarry No. 1 is 70 to 75 feet and it has no zonal arrangement of its contents. The vein dips 60 degrees on the footwall and 75 degrees on the hanging wall.
Caption Text 3 This quarry is noted for the purple blotchiness or staining in the feldspar. It is thought to be caused by deposition of iron oxide along cracks and cleavages rather than inherent colour in the mineral. Potash-bearing feldspar deposits were examined during the Second World War as a potential source of potash for fertilizers.

The Basic Record:

Simple Name Mineral specimen
Brief Description Feldspar from the Sletteval Quarry No. 1 Lower Quarry, Harris, Outer Hebrides.
Materials Mineral specimen
Associated Place Scotland, Outer Hebrides, Harris, Sletteval Quarry, Quarry no. 1
(Nature of Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.

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Inputter R.P. McIntosh
Input Date 15/06/2003

P527644 Feldspar from half a mile south of Sletteval Quarry, Harris, Outer Hebrides

The Caption:

Caption Title Feldspar from half a mile south of Sletteval Quarry, Harris, Outer Hebrides
Subtitle
Caption Text 1 Feldspar from half a mile south of Sletteval Quarry, Harris, Outer Hebrides. British Geological Survey Petrology Collection sample number MC 7424.
Caption Text 2 In South Harris, a narrow well-defined belt of pegmatites crosses the southern part of the island in a general north-north-westerly direction from Finsbay on the south-east coast to the island of Taransay. The pegmatites form massive bodies and have been explored and exploited for alkali feldspar.
Caption Text 3 Alkali feldspar has been exploited on Sletteval, three quarries have exploited a vein of pegmatite from which alkali feldspar has been worked. The rocks are Lewisian, Precambrian in age.

The Basic Record:

Simple Name Mineral specimen
Brief Description Feldspar from half a mile south of Sletteval Quarry, Harris, Outer Hebrides.
Materials Mineral specimen
Associated Place Scotland, Outer Hebrides, Harris, Sletteval Quarry
(Nature of
Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.

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Input Date 15/06/2003

P527645 Alkali-feldspar from the Chaipaval No. 1 Quarry, South Harris, Outer Hebrides

The Caption:

Caption Title Alkali-feldspar from the Chaipaval No. 1 Quarry, South Harris, Outer Hebrides
Subtitle
Caption Text 1 The Chaipaval pegmatite is two to three kilometres north-west of Northton. At its north-eastern end it dips at 70 degrees but in the south-west it dips at 40 degrees. The constituent minerals are quartz, plagioclase, microcline, muscovite and minor biotite and magnetite. British Geological Survey Petrology Collection sample number MC 7425.
Caption Text 2 In the vicinity of the quarry, the quartz and potash-feldspar crystals attain 45 cm. in length within the central lenticular zones (up to 2 metres wide).
Caption Text 3 Graphic intergrowths of quartz and feldspar are common particularly adjacent to the central coarse-grained lenses in the pegmatite.

The Basic Record:

Simple Name Mineral specimen
Brief Description Alkali-feldspar from the Chaipaval No. 1 Quarry, South Harris, Outer Hebrides.
Materials Mineral specimen
Associated Place Scotland, Outer Hebrides, South Harris, Chaipaval Quarry, Quarry no. 1
(Nature of
Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.

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Inputter R.P. McIntosh
Input Date 15/06/2003

P527646 Feldspar from half a mile north-east of Rodel, South Harris, Outer Hebrides

The Caption:

Caption Title Feldspar from half a mile north-east of Rodel, South Harris, Outer Hebrides
Subtitle
Caption Text 1 Feldspar from half a mile north-east of Rodel, South Harris, Outer Hebrides. Most of the pegmatites are light reddish or white in colour and are composed of feldspar crystals up to six inches in length. The red staining on the left of the image is iron oxides. British Geological Survey Petrology Collection sample number MC 7426.
Caption Text 2 A narrow well-defined belt of pegmatites crosses the southern part of the island in a general north-north-westerly direction from Finsbay in the south to the island of Taransay.
Caption Text 3 The pegmatites form massive bodies upwards of 20 feet thick which trend north-north-east to south-south-west in direction and are either vertical or highly inclined.

The Basic Record:

Simple Name Mineral specimen
Brief Description Feldspar from half a mile north-east of Rodel, South Harris, Outer Hebrides.
Materials Mineral specimen
Associated Place Scotland, Outer Hebrides, South Harris, Rodel
(Nature of Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.

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P527647 Feldspar from Rudha Sguta, Harris, Outer Hebrides

The Caption:

Caption Title	Feldspar from Rudha Sguta, Harris, Outer Hebrides
Subtitle	
Caption Text 1	A specimen of feldspar from north of Rudha Sguta, Harris, Outer Hebrides. Alkali feldspar was used in the British ceramic and glass industries. British Geological Survey Petrology Collection sample number MC 7427.
Caption Text 2	Most sources of alkali feldspar were from overseas but during the Second World War all the British localities were investigated. South Harris alkali feldspar was compared very favourably with the highest grades imported from Scandinavia and hence thought to be of great commercial importance.
Caption Text 3	The alkali feldspars come from a narrow well defined belt of pegmatites that cross the southern part of the island.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Feldspar from Rudha Sguta, Harris, Outer Hebrides.
Materials	Mineral specimen
Associated Place	Scotland, Outer Hebrides, Harris, Rudha Sguta
(Nature of Grid Reference	Location specimen was found
Ref. Author	Robertson, T.
Ref Title	Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details	London : Geological Survey and Museum, 1944.
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Input Date	15/06/2003

P527648 Feldspar from Sletterval No. 2 Quarry, South Harris, Outer Hebrides

The Caption:

Caption Title Feldspar from Sletterval No. 2 Quarry, South Harris, Outer Hebrides
Subtitle
Caption Text 1 Feldspar from Sletterval No. 2 Quarry, South Harris, Outer Hebrides. The Ben Chaipaval pegmatite deposit is the most important in the area. Second in importance is the conspicuous well-exposed sheet at Sletterval. British Geological Survey Petrology Collection sample number MC 7428.
Caption Text 2 The Middle or No. 2 Quarry is at a lower level than No. 3. It was carried in eastwards from ground level until the face increased to a height of forty feet.
Caption Text 3 The vein in this quarry is about eighty feet wide with a dip of 60 degrees northwards. The foliation of the surrounding rocks near the vein is parallel to the wall of the vein.

The Basic Record:

Simple Name Mineral specimen
Brief Description Feldspar from Sletterval No. 2 Quarry, South Harris, Outer Hebrides.
Materials Mineral specimen
Associated Place Scotland, Outer Hebrides, Harris, Sletteval Quarry, Quarry no. 2
(Nature of
Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.

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P527649 Feldspar from Sletterval No. 1 Quarry, South Harris, Outer Hebrides

The Caption:

Caption Title Feldspar from Sletterval No. 1 Quarry, South Harris, Outer Hebrides
Subtitle
Caption Text 1 A specimen of feldspar from Sletterval No. 1 Quarry, South Harris, Outer Hebrides. The Sletterval quarries, 1 2 and 3 are located on Sletterval, one of the eastern spurs of Roneval. No. 1 Quarry is the lowest of the three quarries. British Geological Survey Petrology Collection sample number MC 7429.
Caption Text 2 The principal vein can be traced for 450 yards in an east-north-west to west-south-west direction. The vein is 70 to 75 feet wide.
Caption Text 3 The south-west part of Harris is composed of a Lewisian (Precambrian) complex of schistose and igneous rocks marginal to the large mass of injection gneiss.

The Basic Record:

Simple Name Mineral specimen
Brief Description Feldspar from Sletterval No. 1 Quarry, South Harris, Outer Hebrides.
Materials Mineral specimen
Associated Place Scotland, Outer Hebrides, Harris, Sletteval Quarry, Quarry no. 1
(Nature of
Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.

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P527650 Feldspar from Sletterval No. 1, South Harris, Outer Hebrides

The Caption:

Caption Title Feldspar from Sletterval No. 1, South Harris, Outer Hebrides
Subtitle
Caption Text 1 South Harris is noted for a well-defined belt of pegmatites that forms massive bodies upwards of 20 feet thick. British Geological Survey Petrology Collection sample number MC 7430.
Caption Text 2 To the south-west of the main pegmatite belt there are numerous other pegmatites. The most conspicuous is the well-exposed sheet, 50 feet thick and lying at a low angle on the hill Sletterval a mile north of Lingarabay.
Caption Text 3 Another somewhat thinner sheet outcrops two hundred yards higher up the same hill while another large mass is seen on the steep western face of Beinn Tharsuinn.

The Basic Record:

Simple Name Mineral specimen
Brief Description Feldspar from Sletterval No. 1, South Harris, Outer Hebrides.
Materials Mineral specimen
Associated Place Scotland, Outer Hebrides, Harris, Sletteval Quarry, Quarry no. 1
(Nature of
Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.

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Input Date 15/06/2003

P527651 Feldspar from near Balsporran, near Dalwhinnie

The Caption:

Caption Title Feldspar from near Balsporran, near Dalwhinnie
Subtitle
Caption Text 1 A specimen of feldspar from a stream 770 yards west-south-west of the railway bridge at Balsporran and three and a half miles south of Dalwhinnie. A dyke-like body of pegmatite about six feet wide strikes east-south-east. British Geological Survey Petrology Collection sample number MC 7431.
Caption Text 2 The pegmatite contains pink feldspar with some quartz, a little muscovite and a very small quantity of biotite.
Caption Text 3 Several other similar pegmatites of about the same width occur further to the west, some contain large crystals of pink feldspar. While recorded these outcrops are not known to have

The Basic Record:

Simple Name Mineral specimen
Brief Description Feldspar from near Balsporran, near Dalwhinnie.
Materials Mineral specimen
Associated Place Scotland, Inverness, Dalwhinnie, Balsporran
(Nature of
Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.

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P527652 Pegmatite with potash feldspar from the River Mashie, Invernessshire

The Caption:

Caption Title Pegmatite with potash feldspar from the River Mashie, Invernessshire
Subtitle
Caption Text 1 A dyke-like body of red pegmatite about 10 feet wide occurs in a low cliff on the River Mashie, 1,350 yards south by west of the Kinlochlaggan-Newtonmore road. British Geological Survey Petrology Collection sample number MC 7432.
Caption Text 2 Large crystals of pink feldspar with a little quartz and muscovite occur in the pegmatite.
Caption Text 3 The Dalradian (Precambrian) rocks of south-eastern Invernessshire are injected by numerous veins, sheets and dykes of granitic and pegmatitic material. In particular the granite pegmatites consisting of essentially large crystals of pink feldspar were investigated as a source of feldspar in the Newtonmore, Loch Laggan, Dalwhinnie area.

The Basic Record:

Simple Name Rock specimen
Brief Description Pegmatite with potash feldspar from the River Mashie, Invernessshire.
Materials Rock specimen
Associated Place Scotland, Invernessshire, River Mashie
(Nature of
Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.

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Input Date 15/06/2003

P527653 Feldspar from Little Scatwell, by Garve, Ross and Cromarty

The Caption:

Caption Title Feldspar from Little Scatwell, by Garve, Ross and Cromarty
Subtitle
Caption Text 1 Feldspar from Little Scatwell, by Garve, Ross and Cromarty. There are six separate outcrops of coarse pegmatite. They lie roughly along a line that runs east-north-east to west-south-west which crosses the track from Little Scatwell to Glenmarskie. British Geological Survey Petrology Collection sample number MC 7433.
Caption Text 2 The pegmatite bodies are lenticular in form and are all steeply inclined to the south-south-east in accordance with the foliation of the surrounding Moine (Precambrian) rocks.
Caption Text 3 The pegmatite contains high quality feldspar and was also worked during the Second World War for its muscovite mica. This specimen is a pink feldspar.

The Basic Record:

Simple Name Mineral specimen
Brief Description Feldspar from Little Scatwell, by Garve, Ross and Cromarty.
Materials Mineral specimen
Associated Place Scotland, Ross and Cromarty, Garve, Little Scatwell
(Nature of Grid Reference Location specimen was found
Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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P527654 Feldspar from Little Scatwell mica prospect, by Garve, Ross and Cromarty

The Caption:

Caption Title Feldspar from Little Scatwell mica prospect, by Garve, Ross and Cromarty

Subtitle

Caption Text 1 The Little Scatwell deposit is located half a mile south-south-west of the Falls of Conon and two miles south-west of Garve, Rossshire. This specimen has a white colour. The light brownish mineral is muscovite. British Geological Survey Petrology Collection sample number

Caption Text 2 The pegmatites, of which there are six separate outcrops, consist of feldspar and quartz, the former predominating, and in general contain numerous 'books' of muscovite measuring up to twenty inches in diameter.

Caption Text 3 All the outcrops have been tested for mica and extensive quarrying was undertaken during the Second World War. It was noted at the time that several of the outcrops could be worked for feldspar and considerable quantities of the latter could be worked from the dumps.

The Basic Record:

Simple Name Mineral specimen

Brief Description Feldspar from Little Scatwell mica prospect, by Garve, Ross and Cromarty.

Materials Mineral specimen

Associated Place Scotland, Ross and Cromarty, Garve, Little Scatwell

(Nature of Grid Reference Location specimen was found

Ref. Author Robertson, T.

Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.

Ref. Publication Details London : Geological Survey and Museum, 1944.

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P527655 Feldspar from Sron na Saobhaidh, Loch Sunart, Invernessshire.

The Caption:

Caption Title Feldspar from Sron na Saobhaidh, Loch Sunart, Invernessshire.
Subtitle
Caption Text 1 Feldspar from the loch shore of Loch Sunart on the west side of Sron na Saobhaidh, Invernessshire. A label on the specimens indicates they are a 'reasonably' picked sample of feldspars as sent to Ministry of Munitions. British Geological Survey Petrology Collection sample number MC 7435.
Caption Text 2 The Moine country rocks north of Loch Linne throughout much of north-west Argyll and western Invernessshire are extensively permeated and injected by pegmatite. There are two narrow zones of pegmatites, the first extends from the north side of Loch Shiel, a little to the east of Dalilea, through Ben Resipol to Loch Sunart where this specimen was collected.
Caption Text 3 The second zone of pegmatites called the Great Pegmatite Belt runs from the Glenelg district southward towards Glenfinnan to Morvern.

The Basic Record:

Simple Name Mineral specimen
Brief Description Feldspar from Sron na Saobhaidh, Loch Sunart, Invernessshire..
Materials Mineral specimen
Associated Place Scotland, Argyllshire, Loch Sunart
(Nature of Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.

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Input Date 15/06/2003

P527656 Crushed samples of feldspar from Scotland

The Caption:

Caption Title Crushed samples of feldspar from Scotland
Subtitle
Caption Text 1 Crushed samples of feldspar. Potash feldspar was first in demand for the production of fertilizers, later during the Second World War deposits of potash feldspar were investigated for the production of ceramic ware. British Geological Survey Petrology Collection sample number MC 7436.
Caption Text 2 To extract the potash numerous methods have been devised. They include 1. Simple wet grinding and electrolysis, this proved unsuccessful and only one-third of the alkali present could be extracted by this method. 2. Treatment with chemical solutions, either caustic alkalis or
Caption Text 3 3. Volatization of potash-salts, this involved heating feldspar with gypsum and carbon with potassium sulphate being volatilized and then recovered. 4. A number of dry processes for the separation of potash existed e.g. separation of potash as hydroxide or carbonate; as sodium or potassium chlorides; extraction of sodium and potassium sulphate.

The Basic Record:

Simple Name Mineral specimen
Brief Description Crushed samples of feldspar from Scotland.
Materials Mineral specimen
Associated Place Scotland
(Nature of Grid Reference Location specimen was found
Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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Input Date 15/06/2003

P527657 Muscovite mica from Strontian, Argyllshire

The Caption:

Caption Title	Muscovite mica from Strontian, Argyllshire
Subtitle	
Caption Text 1	Samples of mica almost certainly from the Ardarie deposit located on the north side of Loch Sunart 630 yards north 20 degrees east of Ardarie, at an altitude of 700 feet, one-third of a mile from Ardarie Farm and approximately four miles west of Strontian, Argyllshire. British Geological Survey Petrology Collection sample number MC 7437.
Caption Text 2	The mica deposit is a quartz-rich pegmatite vein which runs in a general north and south direction and can be traced along the strike for 30 yards.
Caption Text 3	Books of mica up to twelve inches in diameter have been found closely crowded together resulting in mutual interference, bending and distortion of a large percentage of the mica. Because of this it was thought that most material would have been suitable only for grinding or pulping rather than higher quality sheet mica.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica from Strontian, Argyllshire.
Materials	Mineral specimen
Associated Place	Scotland, Argyllshire, Strontian
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P527658 Haematite from Auchenleck, Kirkudbrightshire

The Caption:

Caption Title	Haematite from Auchenleck, Kirkudbrightshire
Subtitle	
Caption Text 1	A specimen of haematite from Auchenleck, Kirkudbrightshire. Haematite is the most important iron ore. British Geological Survey Petrology Collection sample number MC 7438.
Caption Text 2	It is iron oxide and belongs to the hexagonal system. It can occur in a number of forms from stubby black rhombohedral crystals though more commonly in massive, granular masses, compact or soft and earthy (red ochre). It is often oolitic, botryoidal or concretionary in appearance.
Caption Text 3	This locality is mentioned in the Highland Society's transactions for 1843 and the New Statistical Account of Scotland vol. iv, 1845 where it states in the latter that from 50 to 70 tons of ore were obtained weekly from this mine and sent to Birmingham.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Haematite from Auchenleck, Kirkudbrightshire.
Materials	Mineral specimen
Associated Place	Scotland, Kirkudbrightshire, Auchenleck
(Nature of Grid Reference	Location specimen was found

Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527659 Haematite from Auchenleck, Kirkcudbrightshire

The Caption:

Caption Title	Haematite from Auchenleck, Kirkcudbrightshire
Subtitle	
Caption Text 1	At Auchenleck, about five miles east of the town of Kirkcudbright a haematite vein occurs in the Dalbeattie granite mass. British Geological Survey Petrology Collection sample number MC 7439.
Caption Text 2	The trend of the vein is west 18 degrees north and it is the most important vein of iron ore in the district.
Caption Text 3	Hay Cunningham's 'Geognostical Account of the Stewartry of Kirkcudbright' (Highland Society's Transactions v. viii, 1843 p. 730) describes the vein as being mined by a horizontal shaft. 'The ore is of red botryoidal haematite and, in drusy cavities fine specimens of this beautiful mineral may be found. The minerals which accompany the iron-ore are ferruginous quartz and sulphate of barytes.'

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Haematite from Auchenleck, Kirkcudbrightshire.
Materials	Mineral specimen
Associated Place	Scotland, Kirkcudbrightshire, Auchenleck
(Nature of Grid Reference	Location specimen was found
Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
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Input Date	15/06/2003

P527660 Ochre bed from the shore at Largo, Fifeshire

The Caption:

Caption Title	Ochre bed from the shore at Largo, Fifeshire
Subtitle	
Caption Text 1	Ochre consists essentially of a mixture of clay, siliceous matter and hydrated iron oxide (limonite). The iron oxide usually varies in content from 15 to 30 per cent or more. British Geological Survey Petrology Collection sample number MC 7440.
Caption Text 2	Ochre is known from a number of localities in Fifeshire. In the Leven and Durie coalfields there are several beds of ochre in the uppermost part of the Productive Coal Measures and in the overlying Barren Red Measures.
Caption Text 3	There are reports that in 1843 ochres were worked from a pit at the side of the road down to Methil and about half a mile to the west of where Leven no. 1 and no. 2 pits were sunk. The good ochre was picked out from the blaes on the pit head and carted to West Wemyss. Ochre was also worked on the Durie fields at about the same time.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Ochre bed from the shore at Largo, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Largo
(Nature of Grid Reference	Location specimen was found
Ref. Author	Knox, J.
Ref Title	The economic geology of the Fife coalfields. Area 3. Markinch, Dysart and Leven.
Ref. Publication Details	Edinburgh : HMSO, 1954.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Input Date	15/06/2003

P527661 Ochre bed from the shore at Largo, Fifeshire

The Caption:

Caption Title	Ochre bed from the shore at Largo, Fifeshire
Subtitle	
Caption Text 1	Ochre is an earthy, usually impure red, yellow or brown iron oxide that is extensively used as a pigment. Yellow or brown ochre is the iron mineral limonite. The term ochre also refers to any clays strongly coloured by iron oxides. British Geological Survey Petrology Collection sample number MC 7441.
Caption Text 2	Ochre has been found in a number of areas including one from the Barren Red Measures that outcrops on the shore at Buckhaven and another on the shore at Lundin Links.
Caption Text 3	Other ochres have been reported in the Leven and Durie coalfields where there are several beds of ochre in the uppermost part of the Productive Coal Measures and in the overlying Barren Red Measures.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Ochre bed from the shore at Largo, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Largo
(Nature of Grid Reference	Location specimen was found
Ref. Author	Knox, J.
Ref Title	The economic geology of the Fife coalfields. Area 3. Markinch, Dysart and Leven.
Ref. Publication Details	Edinburgh : HMSO, 1954.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527662 Ochre bed from the shore at Largo, Fifeshire

The Caption:

Caption Title	Ochre bed from the shore at Largo, Fifeshire
Subtitle	
Caption Text 1	A specimen of ochre from the shore at Largo, Fife. Ochre is an earthy, pulverulent usually impure, red, yellow or brown iron oxide that is extensively used as a pigment. British Geological Survey Petrology Collection sample number MC 7442.
Caption Text 2	Ochre has been found in a number of areas including one from the Barren Red Measures that outcrops on the shore at Buckhaven and another on the shore at Lundin Links.
Caption Text 3	In the Leven and Durie coalfields there are several beds of ochre in the uppermost part of the Productive Coal Measures and in the overlying Barren Red Measures. Some have been worked in the past including one which lies 60 fathoms above the Chemniss Coal.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Ochre bed from the shore at Largo, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Largo
(Nature of Grid Reference	Location specimen was found
Ref. Author	Knox, J.
Ref Title	The economic geology of the Fife coalfields. Area 3. Markinch, Dysart and Leven.
Ref. Publication Details	Edinburgh : HMSO, 1954.
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Input Date	15/06/2003

P527663 Plastic clay from Calderwood Estate, East Kilbride

The Caption:

Caption Title Plastic clay from Calderwood Estate, East Kilbride
Subtitle
Caption Text 1 Plastic clay was a raw material that was used as a bonding material in the silica-brick trade. British Geological Survey Petrology Collection sample number MC 7443.
Caption Text 2 It is recorded that in the 1870s the Eglinton Silica Brick Company Limited, 43 Renfield Street, Glasgow used plastic clays to bond silica-bricks made from flints either imported from the Thames area or northern France and that the bricks were bonded with highly plastic clay from South Wales. The resulting bricks were used in steel works.
Caption Text 3 There is no evidence that plastic clay from this locality was worked, though it was collected during exploration for natural resources.

The Basic Record:

Simple Name Rock specimen
Brief Description Plastic clay from Calderwood Estate, East Kilbride.
Materials Rock specimen
Associated Place Scotland, East Kilbride, East Kilbride, Calderwood Estate
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period
Associated Name Eglinton Silica Brick Company Limited
(Nature of) Manufacturer of silica bricks
Ref. Author
Ref Title Refractory materials: ganister and silica-rock - sand for open-hearth steel furnaces - dolomite. Resources and geology. Special reports on the mineral resources of Great Britain v. 6.
Ref. Publication Details London : HMSO, 1918.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527664 Limestone from Durness, Sutherland

The Caption:

Caption Title Limestone from Durness, Sutherland
Subtitle
Caption Text 1 Limestone from Durness, Sutherland. The specimen comes from the Cambro-Ordovician Durness Group, a sequence of limestones, dolomitic limestones and dolomite. British Geological Survey Petrology Collection sample number MC 7444.
Caption Text 2 Huge resources exist though they have been worked only on a small scale due to their
Caption Text 3 In this area there are over 1500 feet of bedded dolomites and subordinate limestones and magnesian limestones. The rocks as a rule are comparatively free from impurities and siliceous matter occurs mainly in the form of chert nodules or bands restricted to certain horizons.

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from Durness, Sutherland.
Materials Rock specimen
Associated Place Scotland, Sutherland, Durness
(Nature of Grid Reference) Location specimen was found
Display Date / Period Cambro-Ordovician 545-443 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.
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P527665 Limestone from Durness, Sutherland

The Caption:

Caption Title	Limestone from Durness, Sutherland
Subtitle	
Caption Text 1	Limestone from Durness, Sutherland. The Durness area has outcrops of all seven stratigraphic subdivisions of the Cambro-Ordovician Durness Limestone or more correctly, Durness Formation. British Geological Survey Petrology Collection sample number MC 7445.
Caption Text 2	The Durness Formation is a series of limestones, dolomitic limestones, calcareous dolostone and dolostone (i.e. fine-grained carbonate rock grading from pure limestone to pure dolomite.) A few minor variants exist such as cherty limestone and chert nodules at some horizons.
Caption Text 3	There is evidence in some units of authigenic dolomitization of limestone e.g. dolomitized fossils and oolites, though some of the Durness sequence comprises primary dolomite.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Durness, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Durness
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527666 Part of a haematite vein from Eas an Fholaich, near Loch Eilt, west of Fort William, Invernessshire

The Caption:

Caption Title Part of a haematite vein from Eas an Fholaich, near Loch Eilt, west of Fort William, Invernessshire

Subtitle

Caption Text 1 Haematite is an iron ore mineral composed of iron oxide. It belongs to the hexagonal crystal system and can occur as stubby black rhombohedral crystals or more commonly massive, granular masses, compact, or soft and earthy. It has a dark cherry streak. British Geological Survey Petrology Collection sample number MC 7446.

Caption Text 2 There is evidence that haematite in veins has been known in Scotland from a very early date. In the middle of the 18th century haematite was mined at Tomintoul, Pennel Burn in Ayrshire and at Garleton in East Lothian.

Caption Text 3 Iron ores come in many forms from bog iron ores, sedimentary bedded ores, to ore deposits injected as metalliferous intrusions. Haematite is often in the latter category.

The Basic Record:

Simple Name Mineral specimen

Brief Description Part of a haematite vein from Eas an Fholaich, near Loch Eilt, west of Fort William, Invernessshire.

Materials Mineral specimen

Associated Place Scotland, Invernessshire, Loch Eilt, Eas an Fholaich

(Nature of Grid Reference Location specimen was found

Ref. Author Macgregor, M., Lee, G.W. and Wilson, G.V.

Ref Title The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.

Ref. Publication Details Edinburgh : HMSO, 1920.

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P527667 Granite with psammitic schist inclusions, Tulloch, Glen Spean, Invernesshire

The Caption:

Caption Title Granite with psammitic schist inclusions, Tulloch, Glen Spean, Invernesshire
Subtitle
Caption Text 1 A specimen of granite with psammitic schist inclusions, from the railcut west of Tulloch, Glen Spean, Invernesshire. The main granodiorite of the Strath Ossian Granitic Complex has previously been worked at two quarries in the Glen Spean area for building stone. British Geological Survey Petrology Collection sample number MC 7447.
Caption Text 2 Dimension stone from these quarries was used in the construction of the Laggan Dam. Unworked reserves remain in both quarries for use as dimension stone or aggregate.
Caption Text 3 Strath Ossian Granitic Complex is a post-tectonic granite of the Caledonian Orogeny and has been dated at c. 400 to 405 Ma.

The Basic Record:

Simple Name Rock specimen
Brief Description Granite with psammitic schist inclusions, Tulloch, Glen Spean, Invernesshire.
Materials Rock specimen
Associated Place Scotland, Invernesshire, Glen Spean, Tulloch
(Nature of Grid Reference Location specimen was found
Ref. Author Key, R.
Ref Title Geology of the Glen Roy district. Memoir for 1:50,000 geological sheet 63W.
Ref. Publication Details London : Stationery Office, 1997.
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P527668 Crushed granite, River Trieg, Fersit Bridge, Invernessshire

The Caption:

Caption Title Crushed granite, River Trieg, Fersit Bridge, Invernessshire
Subtitle
Caption Text 1 A specimen of crushed granite, River Trieg, Fersit Bridge, Invernessshire. In the vicinity of Fersit is a microgranite adjoining the granodiorite of the Strath Ossian Granitic Complex. British Geological Survey Petrology Collection sample number MC 7448.
Caption Text 2 There is a marked transition between the two over several metres from granodiorite to feldspar-phyric microgranite. The pluton is deformed by two subvertical joint sets as well as late brittle faults that have discrete shatter zones up to several metres wide. This is possibly the source of the crushed granite specimen.
Caption Text 3 Strath Ossian Granitic Complex is a post-tectonic granite of the Caledonian Orogeny and has been dated at c. 400 to 405 Ma.

The Basic Record:

Simple Name Rock specimen
Brief Description Crushed granite, River Trieg, Fersit Bridge, Invernessshire.
Materials Rock specimen
Associated Place Scotland, Invernessshire, Fersit Bridge, River Trieg
(Nature of Grid Reference Location specimen was found

Ref. Author Key, R.
Ref Title Geology of the Glen Roy district. Memoir for 1:50,000 geological sheet 63W.
Ref. Publication Details London : Stationery Office, 1997.
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P527669 Dunite from Grosa Cleit, one mile north-west of Grosebay, South Harris, Outer Hebrides

The Caption:

Caption Title Dunite from Grosa Cleit, one mile north-west of Grosebay, South Harris, Outer Hebrides
Subtitle
Caption Text 1 Dunite from the north-east slope of Grosa Cleit, one mile north-west of Grosebay, South Harris, Outer Hebrides. British Geological Survey Petrology Collection sample number MC 7449.
Caption Text 2 Mr. D. Haldane undertook exploration of the ultrabasic rocks of South Harris during the Second World War and noted four new localities.
Caption Text 3 Marginally these rocks are now serpentines, and have often been sheared with the development of talc and actinolite. This is clearly seen at the centre of the shore of Loch Cluer, where a vein-like band of fibrous asbestiform chryotile, 3-4 inches wide occurs.

The Basic Record:

Simple Name Rock specimen
Brief Description Dunite from Grosa Cleit, one mile north-west of Grosebay, South Harris, Outer Hebrides.
Materials Rock specimen
Associated Place Scotland, Outer Hebrides, South Harris, Groseby, Grosa Cleit
(Nature of Grid Reference Location specimen was found
Display Date / Period Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association) Stratigraphic period
Associated Name Haldane, D.
(Nature of Collector
Ref. Author Wilson, G.V. and Phemister, J.
Ref Title Talc and other magnesium minerals and chromite associated with British serpentines. reissued 1946 with some additions by J.G.C. Anderson. Wartime pamphlet no. 9.
Ref. Publication Details London : Geological Survey and Museum, 1946.
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P527670 Dunite from Harris, Outer Hebrides

The Caption:

Caption Title	Dunite from Harris, Outer Hebrides
Subtitle	
Caption Text 1	Dunite, an ultrabasic rock from Harris, Outer Hebrides. Dunite is an rock rich in olivine, a magnesium iron silicate mineral that belongs to the orthorhombic crystal system. British Geological Survey Petrology Collection sample number MC 7450.
Caption Text 2	Harris is noted for its development of ultrabasic rocks within the Lewisian (Precambrian) highly metamorphosed rocks. Ultrabasic rocks on Harris may belong to the Older Ultrabasics which are heavily altered and the younger ultrabasics distinguished by their less altered appearance.
Caption Text 3	The olivine forms a continuous isomorphous series between the iron silicate called fayalite and the magnesium silicate called forsterite.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dunite from Harris, Outer Hebrides.
Materials	Rock specimen
Associated Place	Scotland, Outer Hebrides
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Wilson, G.V. and Plemister, J.
Ref Title	Talc and other magnesium minerals and chromite associated with British serpentines. reissued 1946 with some additions by J.G.C. Anderson. Wartime pamphlet no. 9.
Ref. Publication Details	London : Geological Survey and Museum, 1946.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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P527671 Dunite from Maaruig, on Loch Seaforth, North Harris, Outer Hebrides

The Caption:

Caption Title	Dunite from Maaruig, on Loch Seaforth, North Harris, Outer Hebrides
Subtitle	
Caption Text 1	Dunite, an ultrabasic rock rich in olivine from a knoll north of a track from Maaruig, on Loch Seaforth, North Harris, Outer Hebrides. British Geological Survey Petrology Collection sample number MC 7451.
Caption Text 2	The ultrabasic body at Maaruig in North Harris is one of the largest and best-described of the ultrabasic complexes. The complex covers an area of about 0.3 square kilometres and is regarded as a layered cumulate complex where different minerals precipitated out from a melt, sank and formed layers of particular types and composition.
Caption Text 3	The minerals include olivines, orthopyroxenes and calcic plagioclases at the top with accessory biotite, spinel and chromite.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dunite from Maaruig, on Loch Seaforth, North Harris, Outer Hebrides.
Materials	Rock specimen
Associated Place	Scotland, Outer Hebrides
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Wilson, G.V. and Phemister, J.
Ref Title	Talc and other magnesium minerals and chromite associated with British serpentines. reissued 1946 with some additions by J.G.C. Anderson. Wartime pamphlet no. 9.
Ref. Publication Details	London : Geological Survey and Museum, 1946.
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P527673 Ultramafic rock from Loch Langavat, South Harris, Outer Hebrides

The Caption:

Caption Title Ultramafic rock from Loch Langavat, South Harris, Outer Hebrides
Subtitle
Caption Text 1 Ultramafic rock from 500 yards east of the south-east end of Loch Langavat, South Harris, Outer Hebrides. British Geological Survey Petrology Collection sample number MC 7452.
Caption Text 2 One of the greatest developments of ultrabasic rocks on South Harris is the Langavat Belt, form a series of isolated lenses ranging from a few metres wide up to 900 metres long and 100 metres wide. The lenses are elongate with their long axis parallel with the regional gneissic banding.
Caption Text 3 These ultramafic pods weather to prominent buff-coloured rocky hillocks. Seven major lenses have been identified.

The Basic Record:

Simple Name Rock specimen
Brief Description Ultramafic rock from Loch Langavat, South Harris, Outer Hebrides.
Materials Rock specimen
Associated Place Scotland, Outer Hebrides, South Harris, Loch Langavat
(Nature of Grid Reference Location specimen was found
Display Date / Period Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Wilson, G.V. and Phemister, J.
Ref Title Talc and other magnesium minerals and chromite associated with British serpentines. reissued 1946 with some additions by J.G.C. Anderson. Wartime pamphlet no. 9.
Ref. Publication Details London : Geological Survey and Museum, 1946.
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P527674 Ultramafic rock from Rudha Sgeir nan Sgarbh, Borve, South Harris, Outer Hebrides.

The Caption:

Caption Title Ultramafic rock from Rudha Sgeir nan Sgarbh, Borve, South Harris, Outer Hebrides.
Subtitle
Caption Text 1 Ultramafic rock from Rudha Sgeir nan Sgarbh, Borve, South Harris, Outer Hebrides. British Geological Survey Petrology Collection sample number MC 7453.
Caption Text 2 A series of isolated ultrabasic lenses extends from Rudha Sgeir nan Sgarbh, Borve to Loch Meurach. The lenses range from a few metres to a hundred metres wide and to 900 metres long. They form the Langavat Belt and are Lewisian (Precambrian) in age.
Caption Text 3 The ultrabasic rocks are composed of a central zone of olivine-tremolite-serpentine rocks which grade outwards through an anthophyllite-rich ultramafic rock to chlorite schist or chlorite actinolite schist. Marginal to the lenses are ultrabasic lenses and bands composed of

The Basic Record:

Simple Name Rock specimen
Brief Description Ultramafic rock from Rudha Sgeir nan Sgarbh, Borve, South Harris, Outer Hebrides..
Materials Rock specimen
Associated Place Scotland, Outer Hebrides
(Nature of Grid Reference) Location specimen was found
Display Date / Period Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Wilson, G.V. and Phemister, J.
Ref Title Talc and other magnesium minerals and chromite associated with British serpentines. reissued 1946 with some additions by J.G.C. Anderson. Wartime pamphlet no. 9.
Ref. Publication Details London : Geological Survey and Museum, 1946.
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P527675 Ultramafic rock from Loch Chlachan Deuga, south of Loch Shell, Harris, Outer Hebrides

The Caption:

Caption Title	Ultramafic rock from Loch Chlachan Deuga, south of Loch Shell, Harris, Outer Hebrides
Subtitle	
Caption Text 1	An ultramafic rock from the east shore of Loch Chlachan Deuga half a mile south of Loch Shell on North Harris, Outer Hebrides. British Geological Survey Petrology Collection sample number MC 7454.
Caption Text 2	Ultrabasics are particularly common in North Harris and in south central Lewis. They usually occur as isolated knobs, some of which are aligned to form trails.
Caption Text 3	At this locality to the south of Loch Shell a narrow belt of ultrabasic 'knobs' and debris can be traced for almost two kilometres. It is unknown whether this is a dyke-like intrusion or a glacial trail.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Ultramafic rock from Loch Chlachan Deuga, south of Loch Shell, Harris, Outer Hebrides.
Materials	Rock specimen
Associated Place	Scotland, Outer Hebrides, Harris, Loch Chlachan Deuga
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Wilson, G.V. and Phemister, J.
Ref Title	Talc and other magnesium minerals and chromite associated with British serpentines. reissued 1946 with some additions by J.G.C. Anderson. Wartime pamphlet no. 9.
Ref. Publication Details	London : Geological Survey and Museum, 1946.
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Input Date	15/06/2003

P527676 Ultramafic rock from Maaruig Bay, Outer Hebrides.

The Caption:

Caption Title	Ultramafic rock from Maaruig Bay, Outer Hebrides.
Subtitle	
Caption Text 1	Ultramafic rock from Maaruig Bay, Outer Hebrides. Lewisian (Precambrian) age ultrabasic rocks are common on Harris. One of the best known outcrops is the one at Maaruig Bay. British Geological Survey Petrology Collection sample number MC 7455.
Caption Text 2	The mass lying on the north side of Maaruig Bay covers about 0.3 square kilometres and is considered to be a layered cumulate complex.
Caption Text 3	The complex consists of a range of ultramafic rock types composed of olivines, orthopyroxenes, clinopyroxenes and calcium-rich feldspars.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Ultramafic rock from Maaruig Bay, Outer Hebrides..
Materials	Rock specimen
Associated Place	Scotland, Outer Hebrides
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Wilson, G.V. and Plemister, J.
Ref Title	Talc and other magnesium minerals and chromite associated with British serpentines. reissued 1946 with some additions by J.G.C. Anderson. Wartime pamphlet no. 9.
Ref. Publication Details	London : Geological Survey and Museum, 1946.
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P527677 Torbanite from New South Wales, processed in Scotland

The Caption:

Caption Title	Torbanite from New South Wales, processed in Scotland
Subtitle	
Caption Text 1	A specimen of torbanite from New South Wales. Torbanite or boghead cannel coal is a cannel coal very rich in gas constituents. British Geological Survey Petrology Collection sample number MC 7456.
Caption Text 2	Cannel (i.e. Candle) coals, in which the volatile matter exceeds 40 per cent (air-dried basis) were once extensively employed in the manufacture of illuminating gas and were worked locally as a source for oil.
Caption Text 3	By far the richest and best-known cannel coal of this type was the torbanite of the Armadale district. The latter was soon worked out and was replaced by oil-shales from the West Lothian Oil-shale Formation (Lower Carboniferous) or imported torbanite such as this specimen.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Torbanite from New South Wales, processed in Scotland.
Materials	Rock specimen
Associated Place	Australia, New South Wales
(Nature of Grid Reference	Location specimen was found
Ref. Author	Gibson, W.
Ref Title	Cannel coals, lignite and mineral oil in Scotland. Special reports on the mineral resources of Great Britain vol XXIV.
Ref. Publication Details	London : HMSO, 1922.
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P527678 Torbanite from New South Wales, processed in Scotland

The Caption:

Caption Title	Torbanite from New South Wales, processed in Scotland
Subtitle	
Caption Text 1	A specimen of torbanite from New South Wales. Torbanite or boghead coal is regarded as a highly carbonaceous oil shale. British Geological Survey Petrology Collection sample number MC 7457.
Caption Text 2	Torbanite or boghead coal consists mainly of algal material and peat mud, it formed as oozes or organic muds. It is rich in gas constituents and was formerly used to produce gas and oil.
Caption Text 3	Torbanite is named after its type locality Torbane Hill in Scotland. It occurs in the Armadale district. It was worked from 1850 to 1862 until the field was exhausted.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Torbanite from New South Wales, processed in Scotland.
Materials	Rock specimen
Associated Place	Australia, New South Wales
(Nature of Grid Reference	Location specimen was found
Ref. Author	Gibson, W.
Ref Title	Cannel coals, lignite and mineral oil in Scotland. Special reports on the mineral resources of Great Britain vol XXIV.
Ref. Publication Details	London : HMSO, 1922.
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P527679 Torbanite, Torbanehill mineral presented by D. MacQueen, United Colliers, Glasgow

The Caption:

Caption Title Torbanite, Torbanehill mineral presented by D. MacQueen, United Colliers, Glasgow
Subtitle
Caption Text 1 Torbanite or boghead cannel coal is a cannel coal very rich in gas constituents. In appearance it is dull and when burnt it makes a chattering noise. For this reason it was sometimes known as 'parrot coal'. British Geological Survey Petrology Collection sample number MC 7458.
Caption Text 2 Crude oil can be extracted from the coal by heating the material in a retort, as was demonstrated at the Great Exhibition in 1851 by James 'Paraffin' Young. In the same year the first plant in Scotland to process oil-shale was set up in Bathgate.
Caption Text 3 At first the Bathgate works used this cannel coal which occurred at the base of the Coal Measures (Upper Carboniferous) over a small area on the Torbanehill Estate. It was in great demand for gas-making and gave an oil yield of up to 580 litres/tonne. By the early 1860s the resource was exhausted and was replaced by oil-shales from the West Lothian Oil-shale Formation (Lower Carboniferous).

The Basic Record:

Simple Name Rock specimen
Brief Description Torbanite, Torbanehill mineral presented by D. MacQueen, United Colliers, Glasgow.
Materials Rock specimen
Associated Place Scotland, Lanarkshire, Glasgow
(Nature of Location specimen was found
Grid Reference
Associated Name D. MacQueen, United Colliers
(Nature of Mining company
Associated Name Young, James 'Paraffin'
(Nature of Developed the Scottish oil-shale industry
Ref. Author Gibson, W.
Ref Title Cannel coals, lignite and mineral oil in Scotland. Special reports on the mineral resources of Great Britain vol XXIV.
Ref. Publication Details London : HMSO, 1922.
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P527680 Indian kyanite supplied to the Glenboig Union Fireclay Company Limited 18.2.37

The Caption:

Caption Title Indian kyanite supplied to the Glenboig Union Fireclay Company Limited 18.2.37
Subtitle
Caption Text 1 Kyanite is a mineral composed of aluminium silicate. It belongs to the triclinic crystal system and generally forms elongated tabular crystals and is usually blue in colour, often in zones with darker blue in the centre of the crystal. British Geological Survey Petrology Collection sample number MC 7459.
Caption Text 2 It is found in pelitic rocks that have undergone high pressure metamorphism and are often associated with garnet, staurolite and mica.
Caption Text 3 Its commercial uses were as a raw material for high-temperature porcelain, perfect electrical insulators and acid-resistant products. The Glenboig Union Fireclay Company Limited had offices in Glasgow and works at Glenboig where it processed material from its Gain Mine and Gartcosh Pit for refractories.

The Basic Record:

Simple Name Mineral specimen
Brief Description Indian kyanite supplied to the Glenboig Union Fireclay Company Limited 18.2.37.
Materials Mineral specimen
Associated Place India
(Nature of Location specimen was found
Grid Reference
Associated Name Glenboig Union Fireclay Company Limited
(Nature of Kyanite imported by
Ref. Author
Ref Title Macdonald encyclopedia of rocks and minerals
Ref. Publication Details London : Macdonald and Co., 1978
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Input Date 15/06/2003

P527681 Brick clay from the Brora brickworks, Sutherland

The Caption:

Caption Title Brick clay from the Brora brickworks, Sutherland
Subtitle
Caption Text 1 Brora brickworks was located half a mile west of the railway station on the outskirts of the town. British Geological Survey Petrology Collection sample number MC 7460.
Caption Text 2 The clay is different to those elsewhere in north-east Scotland, being a consolidated sediment, a clay-shale of Jurassic (Oxford Clay) age. The clay bed was c. 45 feet thick without the base being reached and it dipped to the south-east.
Caption Text 3 Overburden consists of gravel 10 feet thick, though on the north side of the pit this increased to 15 or 20 feet thick where the clay lies under a mound of glacial gravel.

The Basic Record:

Simple Name Rock specimen
Brief Description Brick clay from the Brora brickworks, Sutherland.
Materials Rock specimen
Associated Place Scotland, Sutherland, Brora brickworks
(Nature of
Grid Reference Location specimen was found

Ref. Author Eyles, V.A. and Anderson, J.G.C.
Ref Title Brick clays of north-east Scotland. Wartime pamphlet no 47.
Ref. Publication Details London : Geological Survey and Museum, 1946.
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P527682 Brick clay from the Brora brickworks, Sutherland

The Caption:

Caption Title Brick clay from the Brora brickworks, Sutherland
Subtitle
Caption Text 1 A specimen of brick clay from the former Brora brickworks which was located half a mile west of the railway station on the outskirts of the town, Sutherland. British Geological Survey Petrology Collection sample number MC 7461.
Caption Text 2 Clay from a pit was worked up to the 1940s for the manufacture of bricks. The clay is different to those elsewhere in north-east Scotland, being a consolidated sediment, a clay-shale of Jurassic (Oxford Clay) age.
Caption Text 3 In general the clay was a dark grey, soft and rather sandy clay and contained fossils particularly belemnites which when found detracted from the value of the clay. The seam was c 45 feet

The Basic Record:

Simple Name Rock specimen
Brief Description Brick clay from the Brora brickworks, Sutherland.
Materials Rock specimen
Associated Place Scotland, Sutherland, Brora brickworks
(Nature of Grid Reference Location specimen was found
Ref. Author Eyles, V.A. and Anderson, J.G.C.
Ref Title Brick clays of north-east Scotland. Wartime pamphlet no 47.
Ref. Publication Details London : Geological Survey and Museum, 1946.
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P527683 A letter about samples of Kukersite

The Caption:

Caption Title	A letter about samples of Kukersite
Subtitle	
Caption Text 1	This item is a letter about the donation of a sample of the Estonian shale, the kukersite, an oil-shale, to the Geological Survey and Museum in Jermyn Street, London. Dated 9th November 1920 from J. Allan Howe to Dr. G.W. Lee at the Edinburgh office of the Survey.
Caption Text 2	The kukersite was still thought to be Tertiary in age. This is erroneous as it is known and recorded in another letter that the rock is Ordovician in age.
Caption Text 3	Kukersite is an oil-shale and was used in Estonia as raw material for the production of fuel for use in households, steam boilers, locomotives, for cement combustion in rotary furnaces and producing lighting gas. The sample was sent to the Survey offices in Edinburgh by the importer, Scottish Oils Limited in Glasgow.

The Basic Record:

Simple Name	Document
Brief Description	A letter about samples of Kukersite.
Materials	Document
Associated Place	Estonia
(Nature of Grid Reference	A letter about samples of Kukersite from
Ref. Author	Kattai, V and Lokk, U.
Ref Title	Historical review of the kukersite oil shale exploration in Estonia (web site)
Ref. Publication Details	Tallinn : Geological Survey of Estonia, 1998
Text Copyright	British Geological Survey © NERC. All rights reserved.

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P527684 A letter about samples of Kukersite

The Caption:

Caption Title	A letter about samples of Kukersite
Subtitle	
Caption Text 1	This item is a letter concerning samples of kukersite from Estonia from a company called Scottish Oils Limited to Dr. G.W. Lee of the Geological Survey in Edinburgh.
Caption Text 2	The letter is dated 6th October 1920 and was sent by the company along with the samples of kukersite for an opinion. The letter erroneously states that it is Tertiary in age.
Caption Text 3	A handwritten note at the bottom of the page states 'Kuckers Shale = c2 formation of von Schmidt, Middle Ordovician.' This is the correct age for the rock.

The Basic Record:

Simple Name	Document
Brief Description	A letter about samples of Kukersite.
Materials	Document
Associated Place	Estonia
(Nature of	A letter about samples of Kukersite from
Grid Reference	
Associated Name	Lee, G.W.
(Nature of	Letter sent to
Associated Name	Scottish Oils Limited
(Nature of	Letter sent by
Ref. Author	Kattai, V and Lokk, U.
Ref Title	Historical review of the kukersite oil shale exploration in Estonia (web site)
Ref. Publication Details	Tallinn : Geological Survey of Estonia, 1998
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P527685 Kukersite (oil-shale) from Estonia

The Caption:

Caption Title	Kukersite (oil-shale) from Estonia
Subtitle	
Caption Text 1	Early investigations in 1916 found the following uses for kukersite (oil-shale) as fuel in households, steam boilers, locomotives, for cement combustion in rotary furnaces and producing lighting gas. This specimen was donated by the Scottish Oil Company in Glasgow. British Geological Survey Petrology Collection sample number MC 7462.
Caption Text 2	It was found that kukersite is easily extractable in large amounts; however, it would be more effective to use kukersite for combustion in power plants or distilling different oils. Kukersite ash can be used for making cement and bricks.
Caption Text 3	Soon after the 1916 explorations, oil-shale open casts near the villages of Järve and Pervade and a mine near the village of Kukruse were opened heralding the start of the oil-shale industry in Estonia.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Kukersite (oil-shale) from Estonia.
Materials	Mineral specimen
Associated Place	Estonia
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Scottish Oils Limited
(Nature of	Donor of specimen
Ref. Author	Kattai, V and Lokk, U.
Ref Title	Historical review of the kukersite oil shale exploration in Estonia (web site)
Ref. Publication Details	Tallinn : Geological Survey of Estonia, 1998
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Input Date	15/06/2003

P527686 Kukersite (oil-shale) from Estonia

The Caption:

Caption Title	Kukersite (oil-shale) from Estonia
Subtitle	
Caption Text 1	The beginning of World War I in Estonia brought along lack of fuel and raised the issue of taking kukersite (oil-shale) into production. Extensive exploration works were undertaken in 1916 and are regarded as the foundation of oil-shale industry and mining in Estonia. British Geological Survey Petrology Collection sample number MC 7463.
Caption Text 2	Permanent kukersite mining started as soon as Estonia obtained its sovereignty in 1918. In 1918, seventeen thousand tonnes of oil-shale were mined out.
Caption Text 3	One of the oldest oil-shale enterprises, the State Oil Shale Industry, was established. The private companies formed almost at the same time were owned by Estonian, as well as by German, English, Swedish and Danish owners.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Kukersite (oil-shale) from Estonia.
Materials	Mineral specimen
Associated Place	Estonia
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kattai, V and Lokk, U.
Ref Title	Historical review of the kukersite oil shale exploration in Estonia (web site)
Ref. Publication Details	Tallinn : Geological Survey of Estonia, 1998
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Input Date	15/06/2003

P527687 Dolomite from Elphin, Assynt, Sutherland

The Caption:

Caption Title	Dolomite from Elphin, Assynt, Sutherland
Subtitle	
Caption Text 1	Specimens of dolomite collected in August 1914 by Lt. Col. Anderson and Mr. Hanton of Hogo Knoblauch Sons & Co. Ltd., Leith. The specimen is from Elphin, Assynt, Sutherland. From the north side of Amhainn a' Chnocain near where the stream crosses the track just east of the main road. British Geological Survey Petrology Collection sample number MC 7464.
Caption Text 2	A number of exposures occur in the vicinity of Knockan in an extensive tract of pale-grey or cream-coloured, hard, fine-grained, compact dolomites belonging to the Group II of the Durness Limestone, the Eilean Dubh Group.
Caption Text 3	The rocks are inclined to the east and the lower part of the succession is about 250 feet thick. A bulk sample gave an analysis of calcium carbonate 52.40 per cent and magnesium carbonate 38.48 per cent.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dolomite from Elphin, Assynt, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Assynt, Elphin
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Associated Name	Anderson Lt. Col.
(Nature of)	Collector of specimen
Associated Name	Hanton, Mr.
(Nature of)	Collector of specimen
Associated Name	Hogo Knoblauch Sons & Co. Ltd.
(Nature of)	Collector of specimen
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527688 Dolomite from Durness, Sutherland

The Caption:

Caption Title	Dolomite from Durness, Sutherland
Subtitle	
Caption Text 1	The specimen of dolomite is from the east side of the road near Drochaid Mhor, Durness. It is a Group III dolomite, from the Sailmhor Group of the Cambro-Ordovician Durness Limestone. British Geological Survey Petrology Collection sample number MC 7465.
Caption Text 2	The Durness Limestone is divided into seven lithological groups. The Sailmhor Group consists of 130 feet of grey crystalline medium to fine-grained dolomite with beds and lines of nodular chert overlain by 90 feet of alternating beds of grey and black mottled, medium-grained, crystalline dolomite with individual beds ranging from 2 to 10 feet thick.
Caption Text 3	The specimen of dolomite was collected in August 1914 by Lt. Col. Anderson and Mr. Hanton of Hogo Knoblauch Sons & Co. Ltd., Leith.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dolomite from Durness, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Durness
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527689 Dolomite from near An Corr-eilean, Eriboll, Sutherland

The Caption:

Caption Title	Dolomite from near An Corr-eilean, Eriboll, Sutherland
Subtitle	
Caption Text 1	This specimen of dolomite is from the head of a promontory east of south end of An Corr-eilean, a small island, Eriboll, Sutherland. The dolomite belongs to the Group II, Eilean Dubh Group of the Cambro-Ordovician Durness Limestone. British Geological Survey Petrology Collection sample number MC 7466.
Caption Text 2	The Eilean Dubh Group consists of c. 340 feet of dolomites and dolomitic mudstones, the later composed of fine-grained flaggy argillaceous dolomite and limestone with many stromatolitic algal bands.
Caption Text 3	The specimen of dolomite was collected in August 1914 by Lt. Col. Anderson and Mr. Hanton of Hogo Knoblauch Sons & Co Ltd, Leith.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dolomite from near An Corr-eilean, Eriboll, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Eriboll, An Coor-eilean
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Associated Name	Anderson Lt. Col.
(Nature of)	Collector of specimen
Associated Name	Hanton, Mr.
(Nature of)	Collector of specimen
Associated Name	Hogo Knoblauch Sons & Co. Ltd.
(Nature of)	Collector of specimen
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527690 Dolomite from Durness, Sutherland

The Caption:

Caption Title	Dolomite from Durness, Sutherland
Subtitle	
Caption Text 1	A specimen of dolomite from a point on the coast one mile west of the island in Loch Borralaidh (Loch Borralie). The dolomite is a Group II, Eilean Dubh Group dolomite. British Geological Survey Petrology Collection sample number MC 7467.
Caption Text 2	This area, lying to the west of Durness has comparatively large reserves, but lacks any means of access either by road or sea.
Caption Text 3	The specimen of dolomite was collected in August 1914 by Lt. Col. Anderson and Mr. Hanton of Hogo Knoblauch Sons & Co. Ltd., Leith. The dolomites of Durness and Eriboll have been examined at several times with a view to exploitation including during and after World War

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dolomite from Durness, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Durness
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Associated Name	Anderson Lt. Col.
(Nature of Associated Name)	Collector of specimen
Associated Name	Hanton, Mr.
(Nature of Associated Name)	Collector of specimen
Associated Name	Hogo Knoblauch Sons & Co. Ltd.
(Nature of Associated Name)	Collector of specimen
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527691 A specimen of Cambrian Pipe rock from south-west of Achnashellach, Strathcarron, Ross and Cromarty

The Caption:

Caption Title	A specimen of Cambrian Pipe rock from south-west of Achnashellach, Strathcarron, Ross and Cromarty
Subtitle	
Caption Text 1	Lying stratigraphically above the nearby Cambrian Basal Quartzite is the Pipe rock. The rock is composed essentially of quartz grains which are commonly elongated with their long axes sub-parallel. British Geological Survey Petrology Collection sample number MC 7468.
Caption Text 2	The quartz grains range in length up to 2 mm. and are strained. Under a microscope quartz grains from the Pipe rock from this locality have fluid inclusions which in some cases stop at grain boundaries and in others traverse the grain boundaries without deflection.
Caption Text 3	Both the Pipe rock and the Basal Quartzite were investigated as a source for high grade silica during World War Two. Samples were taken for bulk analysis and the results were written up in the Geological Survey of Great Britain Wartime Pamphlet No. 7.

The Basic Record:

Simple Name	Rock specimen
Brief Description	A specimen of Cambrian Pipe rock from south-west of Achnashellach, Strathcarron, Ross and Cromarty.
Materials	Rock specimen
Associated Place	Scotland, Ross and Cromarty, Strathcarron, Achnashellach
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Cambrian 545-495 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Anderson, J.G.C.
Ref Title	High-grade silica rocks in the Scottish Highlands & Islands. Wartime pamphlet no. 7. 2nd. ed.
Ref. Publication Details	London : Geological Survey and Museum, 1945.
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P527692 Pyrite and magnetite, St. Catherine's jetty, Argyllshire

The Caption:

Caption Title Pyrite and magnetite, St. Catherine's jetty, Argyllshire
Subtitle
Caption Text 1 Pyrite and magnetite from 450 yards south-west of St. Catherine's jetty, Argyllshire. The Loch Fyne metalliferous district comprises both sides of Loch Fyne. British Geological Survey Petrology Collection sample number MC 7469.
Caption Text 2 The ores are usually associated with the Dalradian Supergroup (Precambrian) Ardrishaig Phyllites and underlying quartzites.
Caption Text 3 The veins in the area vary from mere strings to 10 or 12 feet in width. Magnetite is an iron oxide that is black either as shiny perfect octahedrons or more commonly as iron-black compact and granular masses.

The Basic Record:

Simple Name Mineral specimen
Brief Description Pyrite and magnetite, St. Catherine's jetty, Argyllshire.
Materials Mineral specimen
Associated Place Scotland, Argyllshire, St. Catherine's jetty
(Nature of
Grid Reference Location specimen was found

Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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P527693 Pyrite and magnetite, Creggans Point (McPhun's Cairn), Argyllshire

The Caption:

Caption Title	Pyrite and magnetite, Creggans Point (McPhun's Cairn), Argyllshire
Subtitle	
Caption Text 1	Pyrite and magnetite, Creggans Point (McPhun's Cairn), Argyllshire. The Loch Fyne area is a well-known area of mineralization. British Geological Survey Petrology Collection sample number MC 7470.
Caption Text 2	There are two main types of mineralization, metasomatic replacement deposits that usually occur as replacements of limestone by metallic sulphide ores and mineral veins that vary from mere strings to ten or twelve feet in width.
Caption Text 3	Many of the veins consist entirely of gangue, either quartz or calcite while others contain fair quantities of siderite. Many of the deposits have been worked for ores of copper, chalcopyrites, chalcocite and cupriferous pyrites.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Pyrite and magnetite, Creggans Point (McPhun's Cairn), Argyllshire.
Materials	Mineral specimen
Associated Place	Scotland, Argyllshire, Creggans Point, McPhuns Cairn
(Nature of Grid Reference	Location specimen was found
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
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P527694 Quartz from a quartz vein, A' Bhuidheanach, Dalwhinnie, Invernessshire

The Caption:

Caption Title	Quartz from a quartz vein, A' Bhuidheanach, Dalwhinnie, Invernessshire
Subtitle	
Caption Text 1	A specimen of quartz from a thick quartz vein that occurs at the head of an unnamed stream three-quarters of a mile north by east of A' Bhuidheanach, Dalwhinnie, Invernessshire. British Geological Survey Petrology Collection sample number MC 7471.
Caption Text 2	The quartz vein form a dyke-like reef 85 feet wide and consists of very pure quartz, uniform throughout except for one or two very thin impersistent veins of feldspar near the western
Caption Text 3	High grade silica rock was in demand for the manufacture of silica refractories, however, vein-quartz was thought to be unsuitable due to its matrix of pure silica. In addition to vein-quartz Other high grade silica refractories are quartzites and highly siliceous sandstones.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Quartz from a quartz vein, A' Bhuidheanach, Dalwhinnie, Invernessshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Dalwhinnie, A'Bhuidheanach
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Anderson, J.G.C.
Ref Title	High-grade silica rocks in the Scottish Highlands & Islands. Wartime pamphlet no. 7. 2nd. ed.
Ref. Publication Details	London : Geological Survey and Museum, 1945.
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P527695 Quartz from a quartz vein, A' Bhuidheanach, Dalwhinnie, Invernessshire

The Caption:

Caption Title Quartz from a quartz vein, A' Bhuidheanach, Dalwhinnie, Invernessshire
Subtitle
Caption Text 1 An outcrop of a thick quartz vein occurs at the head of a unnamed stream three-quarters of a mile north by east of A' Bhuidheanach, Dalwhinnie, Invernessshire. This specimen is from that deposit. British Geological Survey Petrology Collection sample number MC 7472.
Caption Text 2 The deposit is Dalradian (Precambrian) in age and is c. 85 feet wide. It can be traced for c. 3 miles though it is thought that it may not be of uniform thickness along its whole length.
Caption Text 3 Recently it has been suggested that the deposit could provide considerable quantities of decorative aggregate.

The Basic Record:

Simple Name Mineral specimen
Brief Description Quartz from a quartz vein, A' Bhuidheanach, Dalwhinnie, Invernessshire.
Materials Mineral specimen
Associated Place Scotland, Invernessshire, Dalwhinnie, A'Bhuidheanach
(Nature of Grid Reference Location specimen was found
Display Date / Period Precambrian, Dalradian 750-515 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Anderson, J.G.C.
Ref Title High-grade silica rocks in the Scottish Highlands & Islands. Wartime pamphlet no. 7. 2nd. ed.
Ref. Publication Details London : Geological Survey and Museum, 1945.
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P527696 Vein calcite from Parkmore Quarry, Dufftown, Banffshire

The Caption:

Caption Title Vein calcite from Parkmore Quarry, Dufftown, Banffshire
Subtitle
Caption Text 1 A specimen of vein calcite from Parkmore Quarry, three-quarters of a mile north-east of Dufftown. The quarry worked Dalradian (Precambrian) limestone for ground limestone for agricultural purposes. British Geological Survey Petrology Collection sample number MC
Caption Text 2 The limestone had many calcite veins and some schist partings and was a grey, medium to coarse type with some accessory quartz. It was composed of 93.75 per cent calcium carbonate and 2.69 per cent magnesium carbonate.
Caption Text 3 The limestone was 105 feet thick and reserves were reported as very large, being on a siding of the L.N.E.R. it was described as a large modern plant in 1949.

The Basic Record:

Simple Name Mineral specimen
Brief Description Vein calcite from Parkmore Quarry, Dufftown, Banffshire.
Materials Mineral specimen
Associated Place Scotland, Banffshire, Dufftown, Parkmore Quarry
(Nature of
Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.

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P527697 Vein calcite from Parkmore Quarry, Dufftown, Banffshire

The Caption:

Caption Title	Vein calcite from Parkmore Quarry, Dufftown, Banffshire
Subtitle	
Caption Text 1	Vein calcite from the Parkmore Quarry, three-quarters of a mile north-east of Dufftown, Banffshire. Many calcite veins and some schist partings occurred in the 105 feet thick Dalradian (Precambrian) Limestone. British Geological Survey Petrology Collection sample number MC 7474.
Caption Text 2	Banffshire is one of the Scottish counties most richly endowed with limestones. They were exploited mainly for agricultural purposes around Keith and Dufftown and were recorded as being worked since c. 1800.
Caption Text 3	By 1949 the number of working quarries had declined to three or four producing lime or ground limestone for agricultural purposes.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Vein calcite from Parkmore Quarry, Dufftown, Banffshire.
Materials	Mineral specimen
Associated Place	Scotland, Banffshire, Dufftown, Parkmore Quarry
(Nature of Grid Reference	Location specimen was found

Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527698 Quartzite from Achnashellach, Ross and Cromarty

The Caption:

Caption Title	Quartzite from Achnashellach, Ross and Cromarty
Subtitle	
Caption Text 1	A specimen of the Cambrian Basal Quartzite from Achnashellach, Ross and Cromarty. The Basal Quartzite is exposed in the River Lair about half a mile west-north-west of Achnashellach Station and also in the cliffs south-west of the river where it can be seen to dip off the Torridonian. British Geological Survey Petrology Collection sample number MC 7475.
Caption Text 2	The quartzite is well exposed in a cliff 70 feet high from which bulk samples were collected during the Second World War during exploration for commercial sources of high grade silica. It was found that reserves were very great and there was no overburden that would need removing before exploitation.
Caption Text 3	Petrographic examination of a portion of the analysed Basal Quartzite indicated the rock to be composed of quartz grains closely interlocked and with slightly sutured contacts.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Quartzite from Achnashellach, Ross and Cromarty.
Materials	Rock specimen
Associated Place	Scotland, Ross and Cromarty, Strathcarron, Achnashellach
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambrian 545-495 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Anderson, J.G.C.
Ref Title	High-grade silica rocks in the Scottish Highlands & Islands. Wartime pamphlet no. 7. 2nd. ed.
Ref. Publication Details	London : Geological Survey and Museum, 1945.
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P527699 Quartzite from Achnashellach, Strathcarron, Ross and Cromarty

The Caption:

Caption Title	Quartzite from Achnashellach, Strathcarron, Ross and Cromarty
Subtitle	
Caption Text 1	Cambrian Basal Quartzite from Achnashellach, Strathcarron, Ross and Cromarty. This locality was investigated during the Second World War as a source for high-grade silica rock and the results written up complete with analyses in the Geological Survey's Wartime pamphlet no 7. British Geological Survey Petrology Collection sample number MC 7476.
Caption Text 2	The Basal Quartzite occurs in the River Lair west-north-west of Achnashellach Lodge, resting unconformably on the underlying Torridonian Sandstone and dipping gently at 20 degrees to the south-east.
Caption Text 3	The Basal Quartzite is overlain by the Cambrian Pipe rock, regarded as another source of high-grade silica. The modern name for the Basal Quartzite and the Pipe rock are the False-bedded Quartzite Formation and the Pipe Rock Formation, both are part of the Eriboll Sandstone Formation.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Quartzite from Achnashellach, Strathcarron, Ross and Cromarty.
Materials	Rock specimen
Associated Place	Scotland, Ross and Cromarty, Strathcarron, Achnashellach
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambrian 545-495 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Anderson, J.G.C.
Ref Title	High-grade silica rocks in the Scottish Highlands & Islands. Wartime pamphlet no. 7. 2nd. ed.
Ref. Publication Details	London : Geological Survey and Museum, 1945.
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P527700 Quartzite from Portsoy, Banffshire

The Caption:

Caption Title	Quartzite from Portsoy, Banffshire
Subtitle	
Caption Text 1	This specimen is almost certainly from the well-known Dalradian Supergroup (Precambrian) Durn Hill Quartzite. British Geological Survey Petrology Collection sample number MC 7477.
Caption Text 2	There are two major outcrops of quartzite, the more westerly, the Cullen Quartzite is too feldspathic for consideration as a high-grade silica rock and the easterly Durn Hill Quartzite which is more siliceous.
Caption Text 3	A large quarry was reported on the north face of Durn Hill in 1945, however it was worked for roadstone. In thin section the rock is seen to be schistose quartzite made up of elongate grains of quartz and very small plates of white mica and a few grains of zircon, magnetite and green or brown tourmaline.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Quartzite from Portsoy, Banffshire.
Materials	Rock specimen
Associated Place	Scotland, Banffshire, Portsoy
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Anderson, J.G.C.
Ref Title	High-grade silica rocks in the Scottish Highlands & Islands. Wartime pamphlet no. 7. 2nd. ed.
Ref. Publication Details	London : Geological Survey and Museum, 1945.
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P527701 Quartzite from Caol Isla Distillery, Islay, Argyllshire

The Caption:

Caption Title	Quartzite from Caol Isla Distillery, Islay, Argyllshire
Subtitle	
Caption Text 1	Large outcrops of quartzite worthy of note occur on Islay. The first is on the shore 200-250 yards north of the Caol Isla Distillery and half a mile north of Portaskaig. It is a band of hard, white quartzite at least sixty feet thick. British Geological Survey Petrology Collection sample number MC 7478.
Caption Text 2	The second outcrop is at Leac Thiolastaraidh about 500 yards north of Caol Isla Distillery. It is another band of hard white quartzite with occasional annelid tubes, 'pipe rock'. It is 100 feet thick and dips to the north-north-west at 20 degrees. The rock is quite jointed with the joint face covered by oxides of iron.
Caption Text 3	The quartzite is Dalradian Supergroup (Precambrian) in age. High quality quartzite is used for silica refractories.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Quartzite from Caol Isla Distillery, Islay, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Islay, Caol Isla Distillery
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	
Ref Title	Refractory materials: ganister and silica-rock - sand for open-hearth steel furnaces - dolomite. Resources and geology. Special reports on the mineral resources of Great Britain v. 6.
Ref. Publication Details	London : HMSO, 1918.
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P527702 Quartzite from Jura, Argyllshire

The Caption:

Caption Title	Quartzite from Jura, Argyllshire
Subtitle	
Caption Text 1	Quartzite from Jura, Argyllshire. Nearly the whole island of Jura is composed of Dalradian Supergroup (Precambrian) Islay Quartzite. British Geological Survey Petrology Collection sample number MC 7479.
Caption Text 2	The only part which is likely to yield high-grade silica rock lies on the eastern side of the Sound of Islay, between Inver Cottage and Traigh nan Feannaig a mile to the north of the former point. The rock is a fine-grained, very hard and pure white quartzite and occurs in regular beds two to three feet thick.
Caption Text 3	Examination of this area was carried out during the Second World War and described in the Wartime pamphlet.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Quartzite from Jura, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Jura
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Anderson, J.G.C.
Ref Title	High-grade silica rocks in the Scottish Highlands & Islands. Wartime pamphlet no. 7. 2nd. ed.
Ref. Publication Details	London : Geological Survey and Museum, 1945.
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P527703 Quartzite from Achara, Duror, Argyllshire

The Caption:

Caption Title	Quartzite from Achara, Duror, Argyllshire
Subtitle	
Caption Text 1	Quartzite was once worked from the Duror area. The rock is a thick-bedded, white somewhat feldspathic quartzite and appears to be free from iron. It belongs to the Dalradian (Precambrian) Appin Quartzite. British Geological Survey Petrology Collection sample number MC 7480.
Caption Text 2	The Laganha Quarry at Duror was worked for use as a polisher and supplied to Lever brothers Port Sunlight and to Brookes for 'Monkey Soap'. By 1918 it is recorded that it was sent to Kirkcaldy and Glasgow, chiefly for grinding up with pottery clay.
Caption Text 3	It was also supplied to Stein's Silica Brick Works for cylinder linings.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Quartzite from Achara, Duror, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Duror, Achara
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	
Ref Title	Refractory materials: ganister and silica-rock - sand for open-hearth steel furnaces - dolomite. Resources and geology. Special reports on the mineral resources of Great Britain v. 6.
Ref. Publication Details	London : HMSO, 1918.
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<u>Image and Other Asset Info:</u>	
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Input Date	15/06/2003

P527704 Quartzite from Loch Nevis, Invernessshire

The Caption:

Caption Title	Quartzite from Loch Nevis, Invernessshire
Subtitle	
Caption Text 1	Two outcrops of quartzite occur in the Loch Nevis area. An exceptionally pure quartz vein occurs at Allt Rhuiri Leathainn west of Ardnamurach, Invernessshire. The vein is from four to five feet wide and is sill-like in nature. British Geological Survey Petrology Collection sample number MC 7481.
Caption Text 2	A thick sill-like quartz vein occurs a short distance west of Glaschoille House, on the north shore of Loch Nevis, near Inverie.
Caption Text 3	One of the chief sources of high grade silica rock is in the manufacture of silica refractories. Three main sources are vein quartz, quartzites and highly siliceous sandstones.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Quartzite from Loch Nevis, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Loch Nevis
(Nature of Grid Reference	Location specimen was found

Ref. Author	Anderson, J.G.C.
Ref Title	High-grade silica rocks in the Scottish Highlands & Islands. Wartime pamphlet no. 7.
Ref. Publication Details	London : Geological Survey and Museum, 1940.
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P527705 Quartz reef from Pitfichie Hill, Monymusk, Aberdeenshire.

The Caption:

Caption Title Quartz reef from Pitfichie Hill, Monymusk, Aberdeenshire.
Subtitle
Caption Text 1 A large quartz vein cuts the Bennachie Granite at Henley's Quarry near the summit of Pitfichie Hill, near Monymusk, Aberdeenshire British Geological Survey Petrology Collection sample number MC 7482.
Caption Text 2 In addition to the quartz being looked at as a source of high grade silica, it is also a possible source for iron. Specular haematite was found and trial excavations were made, but the haematite was found to be a small pocket in the quartz vein and work was soon abandoned.
Caption Text 3 Heddle also mentions a feldspar quarry at this location as well as the specular iron ore.

The Basic Record:

Simple Name Mineral specimen
Brief Description Quartz reef from Pitfichie Hill, Monymusk, Aberdeenshire..
Materials Mineral specimen
Associated Place Scotland, Invernessshire, Monymusk, Pitfichie Hill
(Nature of
Grid Reference Location specimen was found

Ref. Author Anderson, J.G.C.
Ref Title High-grade silica rocks in the Scottish Highlands & Islands. Wartime pamphlet no. 7. 2nd. ed.
Ref. Publication Details London : Geological Survey and Museum, 1945.
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P527706 Pitchstone from Schoolhouse garden, Brodick, Arran

The Caption:

Caption Title	Pitchstone from Schoolhouse garden, Brodick, Arran
Subtitle	
Caption Text 1	A specimen of pitchstone from Schoolhouse garden Brodick, Arran. Arran is famous for its Tertiary pitchstone sills and dykes. British Geological Survey Petrology Collection sample number MC 7483.
Caption Text 2	The pitchstone is exposed in the Brodick Schoolhouse garden and in the wood to the west. It appears to be a sill injected into the steeply-dipping New Red Sandstone. It also contains feldspar and olivine crystals and is often beautifully flow-banded.
Caption Text 3	Pitchstone is a glassy igneous rock which is characterized by a dull 'pitchy' lustre and a rather flat fracture as opposed to the conchoidal fracture of obsidian.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Pitchstone from Schoolhouse garden, Brodick, Arran.
Materials	Rock specimen
Associated Place	Scotland, Buteshire, Arran, Brodick
(Nature of Grid Reference	Location specimen was found

Ref. Author	Tyrell, G.W.
Ref Title	The geology of Arran.
Ref. Publication Details	Edinburgh : HMSO, 1928.
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P527707 A specimen of pitchstone from 0.5 mile west-south-west of Brodick Church, Arran

The Caption:

Caption Title A specimen of pitchstone from 0.5 mile west-south-west of Brodick Church, Arran
Subtitle
Caption Text 1 Tertiary dykes and sills of pitchstone for which the Isle of Arran has long been celebrated are numerous. British Geological Survey Petrology Collection sample number MC 7484.
Caption Text 2 In the Brodick area there are a number of outcrops where pitchstone can be seen. It is exposed in the Brodick Schoolhouse garden and in the wood to the west. Other localities include Glen Shurig, Glen Cloy Glen Dubh, Glenloig and headwater of Lag a' Bheith.
Caption Text 3 This glassy rock which in some parts of Arran is called 'bottle-rock' is found in various shades of green from light yellowish-green to black. It can vary from a clear glass to a coarse pitchstone porphyry and there are spherulitic and banded versions.

The Basic Record:

Simple Name Rock specimen
Brief Description A specimen of pitchstone from 0.5 mile west-south-west of Brodick Church, Arran.
Materials Rock specimen
Associated Place Scotland, Buteshire, Arran, Brodick
(Nature of Grid Reference Location specimen was found
Display Date / Period Tertiary 65-2.5 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Tyrell, G.W.
Ref Title The geology of Arran.
Ref. Publication Details Edinburgh : HMSO, 1928.
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P527708 Pitchstone from Judd's No. 1 Dyke, Tomore, south side of Machrie Bay, Arran, Buteshire

The Caption:

Caption Title Pitchstone from Judd's No. 1 Dyke, Tomore, south side of Machrie Bay, Arran, Buteshire
Subtitle
Caption Text 1 A specimen of pitchstone from Judd's No. 1 Dyke, Tomore, south side of Machrie Bay, Arran, Buteshire. This is the largest pitchstone intrusion on the Tomore shore. British Geological Survey Petrology Collection sample number MC 7485.
Caption Text 2 The dyke appears at low water 200 yards north of An Cumhann and runs in a north-north-east direction. Its total exposed length is about 600 yards. At its northern end it is entirely pitchstone; the southern exposures, however, show the pitchstone passing into banded
Caption Text 3 Arran is famous for its range of pitchstone dykes and sills. The glassy rock which in some parts is called 'bottle-rock' by the locals, is found in various shades of green from a light yellowish-green through various shades to a black rock.

The Basic Record:

Simple Name Rock specimen
Brief Description Pitchstone from Judd's No. 1 Dyke, Tomore, south side of Machrie Bay, Arran, Buteshire.
Materials Rock specimen
Associated Place Scotland, Buteshire, Arran, Machrie Bay, Tomore
(Nature of Grid Reference Location specimen was found
Display Date / Period Tertiary 65-2.5 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Tyrell, G.W.
Ref Title The geology of Arran.
Ref. Publication Details Edinburgh : HMSO, 1928.
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P527709 Pitchstone from Pennyghael, Isle of Mull, Argyllshire

The Caption:

Caption Title Pitchstone from Pennyghael, Isle of Mull, Argyllshire
Subtitle
Caption Text 1 A specimen of pitchstone from near the head of a small stream nearly 1 mile south of Pennyghael, Isle of Mull, Argyllshire. British Geological Survey Petrology Collection sample number MC 7486.
Caption Text 2 The island of Mull is formed from a highly complex Tertiary central intrusion complex formed from many stages and with many types of intrusions and lavas. Pitchstone sills and sheets of the Loch Scridain area are one such stage.
Caption Text 3 This stage is characterized by sills and sheets of tholeiite and andesitic rocks, the latter with cores of glassy pitchstone.

The Basic Record:

Simple Name Rock specimen
Brief Description Pitchstone from Pennyghael, Isle of Mull, Argyllshire.
Materials Rock specimen
Associated Place Scotland, Argyllshire, Mull, Pennyghael
(Nature of Grid Reference) Location specimen was found
Display Date / Period Tertiary 65-2.5 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Richey, J.E., Anderson, F.W., MacGregor, A.G.
Ref Title Scotland: the Tertiary volcanic districts. (British Regional Geology; 3). 3rd ed.
Ref. Publication Details Edinburgh : HMSO, 1961.
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P527710 Pitchstone from Ben Hiant, Ardnamurchan, Argyllshire

The Caption:

Caption Title	Pitchstone from Ben Hiant, Ardnamurchan, Argyllshire
Subtitle	
Caption Text 1	A specimen of pitchstone from a gully with a stream east of Stallochan Dubha, Ben Hiant, Ardnamurchan, Argyllshire. British Geological Survey Petrology Collection sample number MC 7487.
Caption Text 2	The pitchstone is Tertiary in age and is part of the major central igneous complex that forms the whole of the Ardnamurchan peninsula.
Caption Text 3	The Ben Hiant vent was the earliest of the volcanic vents in the centre. Great explosion-cavities were filled with layer after layer of beds of tuff and agglomerates, while pitchstone lavas flowed out over the rising accumulation of fragmental material.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Pitchstone from Ben Hiant, Ardnamurchan, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Ardnamurchan, Ben Hiant
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Tertiary 65-2.5 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Richey, J.E., Anderson, F.W., MacGregor, A.G.
Ref Title	Scotland: the Tertiary volcanic districts. (British Regional Geology; 3). 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1961.
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P527711 Ganister from Handaxwood, West Lothian

The Caption:

Caption Title	Ganister from Handaxwood, West Lothian
Subtitle	
Caption Text 1	Ganister is a highly siliceous bedded sedimentary rock that resembles quartzite. It is a compact rock with a very fine even granular texture composed of sub-angular quartz grains usually from 0.5 to 0.15 mm. in greatest dimensions. British Geological Survey Petrology Collection sample number MC 7488.
Caption Text 2	Ganister is hard and tends to fracture with smooth sub-conchoidal fractures. True ganister is usually found as part of a seat-earth of a coal seam i.e. a fossil soil.
Caption Text 3	The Central Valley of Scotland contains a stratigraphic unit called the Upper Fireclay that belongs to the Millstone Grit of the Carboniferous. It has been worked for fireclay and ganisters though the latter should be more correctly known as ganister-like sandstones.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Ganister from Handaxwood, West Lothian.
Materials	Rock specimen
Associated Place	Scotland, West Lothian, Handaxwood
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	
Ref Title	Refractory materials: ganister and silica-rock - sand for open-hearth steel furnaces - dolomite. Resources and geology. Special reports on the mineral resources of Great Britain v. 6.
Ref. Publication Details	London : HMSO, 1918.
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P527712 Ganister from the United Collieries Limited Drum Pits, Torbanehill, Whitburn near Armadale, West Lothian

The Caption:

Caption Title	Ganister from the United Collieries Limited Drum Pits, Torbanehill, Whitburn near Armadale, Linlithgowshire
Subtitle	
Caption Text 1	This specimen of ganister is from Ganister from the United Collieries Limited, Drum Pits, Torbanehill, Whitburn near Armadale and is Carboniferous, Millstone Grit in age. British Geological Survey Petrology Collection sample number MC 7489.
Caption Text 2	The works associated with the pit were called the Atlas and Etna Brick Works at Armadale about half a mile south-east of the village.
Caption Text 3	Ganister is a highly siliceous bedded sedimentary rock that resembles quartzite. The name Upper Fireclay has been given to a group of fireclays and ganisters in the upper part of the Millstone Grit. In the Bonnybridge district of Stirlingshire, a few miles east of Falkirk, the economic value of the Upper Fireclay has long been recognised and the beds have been extensively worked. The Upper Fireclay includes both refractory clays and ganisters.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Ganister from the United Collieries Limited Drum Pits, Torbanehill, Whitburn near Armadale, Linlithgowshire.
Materials	Rock specimen
Associated Place	Scotland, Linlithgowshire, Whitburn, Torbanehill
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Associated Name	United Collieries Limited
(Nature of Associated Name)	Specimen from mine owned by
Associated Name	Atlas and Etna Brick Works
(Nature of Associated Name)	Works associated with pit
Ref. Author	
Ref Title	Refractory materials: ganister and silica-rock - sand for open-hearth steel furnaces - dolomite. Resources and geology. Special reports on the mineral resources of Great Britain v. 6.
Ref. Publication Details	London : HMSO, 1918.
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P527713 Ganister from the Top Ganister Bonnybridge Fireclay Works, Stirlingshire

The Caption:

Caption Title	Ganister from the Top Ganister Bonnybridge Fireclay Works, Stirlingshire
Subtitle	
Caption Text 1	Ganister from the Top Ganister Bonnybridge Fireclay Works. A number of works and mines were active in the Bonnybridge area. They worked and processed the Carboniferous, Millstone Grit Upper Fireclay, a series of fireclays and ganisters. British Geological Survey Petrology Collection sample number MC 7490.
Caption Text 2	The works at Bonnybridge included James Dougal and Sons Limited working the Bonnybridge Pit and the Bonnybridge Fireclay Works (the only pit recorded working the 'Top Ganister'); the Bonnybridge Silica and Fireclay Company working the Drum Mine; Dykehead Ganister and Firebrick Company Limited working the Dykehead Mine and the Glenyards Fireclay Company working the Glenyards Mine.
Caption Text 3	The ganisters were usually crushed at the works and sold in the ground condition to steel manufacturers for lining converters etc. Mixtures of ground ganister and fireclay were also supplied to foundries and chemical works.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Ganister from the Top Ganister Bonnybridge Fireclay Works, Stirlingshire.
Materials	Rock specimen
Associated Place	Scotland, Stirlingshire, Bonnybridge Silica and Fireclay Company
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Associated Name	James Dougal and Sons Limited
(Nature of	Mine owners
Associated Name	Bonnybridge Silica and Fireclay Company
(Nature of	Mine owners
Associated Name	Dykehead Ganister and Firebrick Company Limited
(Nature of	Mine owners
Associated Name	Glenyards Fireclay Company
(Nature of	Mine owners
Ref. Author	
Ref Title	Refractory materials: ganister and silica-rock - sand for open-hearth steel furnaces - dolomite. Resources and geology. Special reports on the mineral resources of Great Britain v. 6.
Ref. Publication Details	London : HMSO, 1918.
Text Copyright	British Geological Survey © NERC. All rights reserved.
<u>Image and Other Asset Info:</u>	
Image CD	6
Image File	P527713.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527714 Ganister from the Bonnybridge Silica and Fireclay Company, Stirlingshire

The Caption:

Caption Title Ganister from the Bonnybridge Silica and Fireclay Company, Stirlingshire
Subtitle
Caption Text 1 A specimen of ganister from the Bonnybridge Silica and Fireclay Company. Probably from the company's Drum Mine located at Bonnybridge adjacent to the station. British Geological Survey Petrology Collection sample number MC 7491.
Caption Text 2 Ganister is a highly siliceous bedded sedimentary rock that resembles quartzite in general characteristics. It is a compact rock with a very fine grain and even granular texture. It is used for the manufacture of silica brick.
Caption Text 3 The ganister at this locality averaged three feet thick, there were large reserves and it was used for ground ganister and ganister bricks. It is of Carboniferous, Millstone Grit in age.

The Basic Record:

Simple Name Rock specimen
Brief Description Ganister from the Bonnybridge Silica and Fireclay Company, Stirlingshire.
Materials Rock specimen
Associated Place Scotland, Stirlingshire, Bonnybridge Silica and Fireclay Company
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period
Ref. Author
Ref Title Refractory materials: ganister and silica-rock - sand for open-hearth steel furnaces - dolomite. Resources and geology. Special reports on the mineral resources of Great Britain v. 6.
Ref. Publication Details London : HMSO, 1918.
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Input Date 15/06/2003

P527715 A collection of samples from the Sartil, Digg, diatomite deposit on Skye, Invernessshire

The Caption:

Caption Title A collection of samples from the Sartil, Digg, diatomite deposit on Skye, Invernessshire

Subtitle

Caption Text 1 A collection of samples from the Sartil, Digg diatomite deposit on Skye. When dry and pure diatomite resembles white clay or chalk but is readily distinguished by its extreme light weight and the fact that it is not plastic when wet nor effervesces with acid like chalk. British Geological Survey Petrology Collection sample number MC 7492.

Caption Text 2 The diatomite deposits of Scotland are all of recent origin and are found in old lake bottoms, often drained or silted and usually under a cover of peat. There are six localities in the northern part of the Trotternish peninsula. The material from the Sartil workings were conveyed by aerial ropeway to a pier at Staffin Bay. Between 1907 and 1913 some 1056 tons were quarried, in part from Loch Cuithir and in part from Sartil.

Caption Text 3 Diatomite is a whitish, fine-grained substance consisting essentially of siliceous skeletons or frustules of diatoms. Deposits of diatomite are due to the accumulation of vast quantities of these organisms on the sea floor or in ponds or lakes.

The Basic Record:

Simple Name Mineral specimen

Brief Description A collection of samples from the Sartil, Digg, diatomite deposit on Skye, Invernessshire.

Materials Mineral specimen

Associated Place Scotland, Invernessshire, Skye, Digg, Sartil

(Nature of Location specimen was found

Grid Reference

Display Date / Period Recent, 10,000 years to present

(Nature of Association) Stratigraphic period

Ref. Author Haldane, D., Eyles, V.A. and Davidson, C.F.

Ref Title Diatomite. Wartime pamphlet no. 5.

Ref. Publication Details London : Geological Survey and Museum, 1940.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P527716 Diatomite from the deposit at Sartil, Digg, Trotternish peninsula on Skye, Invernesshire

The Caption:

Caption Title	Diatomite from the deposit at Sartil, Digg, Trotternish peninsula on Skye, Invernesshire
Subtitle	
Caption Text 1	A close view of a sample of diatomite from Sartil, Digg on Skye. Diatomite is a whitish, fine-grained substance consisting essentially of siliceous skeletons or frustules of diatoms. British Geological Survey Petrology Collection sample number MC 7493.
Caption Text 2	As a result of its composition and mode of origin diatomite possesses certain chemical and physical properties that make it specially valuable in many different industries. It is chemically inert, insoluble in acids. Since the organic matter of the diatoms has disappeared and left the siliceous cells empty the resultant substance is extremely porous and highly absorbent. It can absorb between one and a half and three times its weight of water. It has low thermal
Caption Text 3	Commercial applications of diatomite are varied. Its two main uses are as a filtering medium for which its high porosity and chemical inertness render it especially valuable and as an insulator against heat, cold and sound. Its absorbent properties were used as a carrier for nitro-glycerine in the manufacture of dynamite, however, the presence of up to 25 per cent of inert matter reduces the explosive strength.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Diatomite from the deposit at Sartil, Digg, Trotternish peninsula on Skye, Invernesshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernesshire, Skye, Digg, Sartil
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Recent, 10,000 years to present
(Nature of Association)	Stratigraphic period
Ref. Author	Haldane, D., Eyles, V.A. and Davidson, C.F.
Ref Title	Diatomite. Wartime pamphlet no. 5.
Ref. Publication Details	London : Geological Survey and Museum, 1940.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Input Date	15/06/2003

P527717 Diatomite from the deposit at Loch Cuithir, Trotternish peninsula on Skye, Invernessshire

The Caption:

Caption Title	Diatomite from the deposit at Loch Cuithir, Trotternish peninsula on Skye, Invernessshire
Subtitle	
Caption Text 1	Specimen of diatomite from the deposit at Loch Cuithir, one of five locations on the Trotternish peninsula on Skye where diatomite can be found. British Geological Survey Petrology Collection sample number MC 7494.
Caption Text 2	The Loch Cuithir deposit occupied a hollow near the base of the lava escarpment and about three miles from the nearest point on the Portree-Staffin road. It was estimated to cover an area of about 24 acres, borings put down at the south-west end of the loch showed at least 14 feet 4 inches of diatomite immediately underlying a cover of peat with an average thickness of three feet. The diatomite was described as remarkably pure and free from impurities.
Caption Text 3	Between the years 1899-1902 some 900 tons of diatomite were produced from Loch Cuithir. The diatomite was transported by tramway operated by manual labour or horses to the hillside above Invertote at the mouth of the Lealt River, and the loaded trams were lowered to the point of shipment by a winch. Drying ovens were erected at the loch side and grinding machinery and calcining sheds were set up at Invertote.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Diatomite from the deposit at Loch Cuithir, Trotternish peninsula on Skye, Invernessshire.
Materials	Mineral specimen
Associated Place (Nature of Grid Reference)	Scotland, Invernessshire, Skye, Trotternish Peninsula, Loch Cuithir Location specimen was found
Display Date / Period (Nature of Association)	Recent, 10,000 years to present Stratigraphic period
Ref. Author	Haldane, D., Eyles, V.A. and Davidson, C.F.
Ref Title	Diatomite. Wartime pamphlet no. 5.
Ref. Publication Details	London : Geological Survey and Museum, 1940.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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P527718 A collection of specimens of diatomite from the deposit at Loch Cuithir in the Trotternish peninsula on Skye, Invernessshire

The Caption:

Caption Title	A collection of specimens of diatomite from the deposit at Loch Cuithir in the Trotternish peninsula on Skye, Invernessshire
Subtitle	
Caption Text 1	A collection of specimens of diatomite from the deposit at Loch Cuithir in the Trotternish peninsula on Skye. Diatomite is a whitish, fine-grained substance consisting essentially of siliceous skeletons or frustules of diatoms and had many commercial uses especially as a filtering mechanism and as an insulator for heat, cold and sound. British Geological Survey Petrology Collection sample number MC 7495.
Caption Text 2	The Kilmaur estate on which the Skye occurrences of diatomite can be found was taken over by the Department of Agriculture for Scotland. In 1936 the diatomite deposits were leased to a syndicate which carried out an extensive series of borings at Loch Cuithir and arranged comprehensive and chemical and physical tests.
Caption Text 3	The area investigated covered an area of 22 acres, 101 borings were put down, the deepest being 42 feet. The overburden, mostly peat varied from 1.5 feet to six feet. The diatomite occurred immediately below the peat and was a pale bluish-grey colour at the top passing down to a light-brown material below. It rested on a stiff blue gritty clay. The diatomite varied from two feet to 35 feet thick and was of a very uniform fine texture.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	A collection of specimens of diatomite from the deposit at Loch Cuithir in the Trotternish peninsula on Skye, Invernessshire.
Materials	Mineral specimen
Associated Place (Nature of Grid Reference)	Scotland, Invernessshire, Skye, Trotternish Peninsula, Loch Cuithir Location specimen was found
Display Date / Period (Nature of Association)	Recent, 10,000 years to present Stratigraphic period
Ref. Author	Haldane, D., Eyles, V.A. and Davidson, C.F.
Ref Title	Diatomite. Wartime pamphlet no. 5.
Ref. Publication Details	London : Geological Survey and Museum, 1940.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Input Date	15/06/2003

P527719 Diatomite from the Muir of Dinnet, Ballater, Aberdeenshire

The Caption:

Caption Title Diatomite from the Muir of Dinnet, Ballater, Aberdeenshire
Subtitle
Caption Text 1 A specimen of diatomite from the deposit at Muir of Dinnet near Ballater, Aberdeenshire. Diatomite is a fine-grained earth substance resembling chalk or white clay in appearance and when dry easily breaking down into a white powder. Some specimens are as light as cork and can absorb four times their weight of water. It is composed of frustules of diatoms, extremely minute siliceous organisms. British Geological Survey Petrology Collection sample number
Caption Text 2 In about 1880 a substance referred to as 'white moss' was reported underneath the peat at Muir of Dinnet. It was recognized as a diatomaceous deposit by the Rev. George Davidson and was regarded as a substance that could replace kieselguhr in the manufacture of dynamite.
Caption Text 3 Practically the whole commercial output was sent to the Ardeer explosive works in Ayrshire where the organic matter was burnt away in kilns before use as an absorbent for nitro-glycerine in the manufacture of dynamite.

The Basic Record:

Simple Name Mineral specimen
Brief Description Diatomite from the Muir of Dinnet, Ballater, Aberdeenshire.
Materials Mineral specimen
Associated Place Scotland, Aberdeenshire, Ballater, Muir of Dinnet
(Nature of Grid Reference) Location specimen was found
Display Date / Period Recent, 10,000 years to present
(Nature of Association) Stratigraphic period
Ref. Author Haldane, D., Eyles, V.A. and Davidson, C.F.
Ref Title Diatomite. Wartime pamphlet no. 5.
Ref. Publication Details London : Geological Survey and Museum, 1940.
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P527720 Diatomite from the Muir of Dinnet, Ballater, Aberdeenshire

The Caption:

Caption Title	Diatomite from the Muir of Dinnet, Ballater, Aberdeenshire
Subtitle	
Caption Text 1	A collection of specimens of diatomite from the deposit at Muir of Dinnet near Ballater, Aberdeenshire. Diatomite is a whitish, fine-grained substance consisting essentially of siliceous skeletons or frustules of diatoms, minute organisms. British Geological Survey Petrology Collection sample number MC 7497.
Caption Text 2	Most diatomite is laid down in freshwater lakes and swamps. This deposit was first recognized as diatomaceous by the Rev. George Davidson in about 1880. An analysis by Mr. Ivison Macadam showed that the inorganic portion contained 82.96 per cent silica, 5.5 per cent iron oxide, 2.1 per cent alumina and 2.93 magnesia. It compared with the specimens of German
Caption Text 3	The deposit was explored by sinking shafts and it was estimated that the deposit contained 800,000 cubic yards of kieselguhr, 6 cubic yards of which, when fully dried would make a ton. The diatomite occurred at a number of localities: Black Moss, 162 acres in area, 15 feet to a few inches thick and 800,000 cubic yards; Ordie Moss, originally 8 acres but now worked out; Loch Kinnord; Haugh of Milton 10-12 acres, one foot thick 17,700 cubic yards; Auchnarran, 46 acres, 15 inches thick 92,700 cubic yards.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Diatomite from the Muir of Dinnet, Ballater, Aberdeenshire.
Materials	Mineral specimen
Associated Place	Scotland, Aberdeenshire, Ballater, Muir of Dinnet
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Recent, 10,000 years to present
(Nature of Association)	Stratigraphic period
Ref. Author	Haldane, D., Eyles, V.A. and Davidson, C.F.
Ref Title	Diatomite. Wartime pamphlet no. 5.
Ref. Publication Details	London : Geological Survey and Museum, 1940.
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Input Date	15/06/2003

P527721 Parrot coal from West Wemyss, Fifeshire

The Caption:

Caption Title	Parrot coal from West Wemyss, Fifeshire
Subtitle	
Caption Text 1	A typical cannel coal burns with a long smoky flame like a candle from which the name is said to originate. In burning it produces a crackling or chattering noise caused by a rich volatile content hence the term 'parrot'. British Geological Survey Petrology Collection sample number
Caption Text 2	Typical cannel coals are massive with a satiny lustre, marked conchoidal fracture and do not soil the hands. Scottish cannel coals rarely exceed two feet in thickness. They contain 25 to 45 per cent fixed carbon and 45 to 70 per cent volatile matter. Ash content is always high.
Caption Text 3	During the later stages of the First World War experiments on cannels as a source for oil were carried out by the Ministry of Munitions at the Dundee Gasworks.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Parrot coal from West Wemyss, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, West Wemyss
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Gibson, W.
Ref Title	Cannel coals, lignite and mineral oil in Scotland. Special reports on the mineral resources of Great Britain vol XXIV.
Ref. Publication Details	London : HMSO, 1922.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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P527722 Upper Cannel or Big Gas Coal from the Afton No. 1 Pit, New Cumnock, Ayrshire

The Caption:

Caption Title	Upper Cannel or Big Gas Coal from the Afton No. 1 Pit, New Cumnock, Ayrshire
Subtitle	
Caption Text 1	The New Cumnock coal basin contains two well-known cannel coals, known as the Lanemark and the Boig or as the Upper and Lower Gas coal, though other names do exist. British Geological Survey Petrology Collection sample number MC 7499.
Caption Text 2	A typical cannel coal burns with a long smoky flame like a candle from which the name is said to originate. In burning it produces a crackling or chattering noise caused by a rich volatile content hence the term 'parrot'. Cannel coals contain 25 to 45 per cent fixed carbon and 45 to 70 per cent volatile matter. Ash content is always high.
Caption Text 3	Typical cannel coals are massive with a satiny lustre, marked conchoidal fracture and do not soil the hands. Scottish cannel coals rarely exceed two feet in thickness.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Upper Cannel or Big Gas Coal from the Afton No. 1 Pit, New Cumnock, Ayrshire.
Materials	Rock specimen
Associated Place	Scotland, Ayrshire, New Cumnock
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Gibson, W.
Ref Title	Cannel coals, lignite and mineral oil in Scotland. Special reports on the mineral resources of Great Britain vol XXIV.
Ref. Publication Details	London : HMSO, 1922.
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Input Date	15/06/2003

P527723 Upper Cannel or Big Gas Coal from the Afton No. 1 Pit, New Cumnock, Ayrshire

The Caption:

Caption Title	Upper Cannel or Big Gas Coal from the Afton No. 1 Pit, New Cumnock, Ayrshire
Subtitle	
Caption Text 1	The most important development of cannel coal in the Carboniferous Coal Measures of southern Ayrshire is in the small half-detached basin of New Cumnock. British Geological Survey Petrology Collection sample number MC 7500.
Caption Text 2	Two seams containing cannels have long been known in this basin as the Lanemark and the Boig or as the Upper and Lower Gas coal, though other names do exist. The Upper seam was by far the most important, it was four feet thick resting on one foot six inches of free coal.
Caption Text 3	Typical cannel coals are massive with a satiny lustre, marked conchoidal fracture and do not soil the hands.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Upper Cannel or Big Gas Coal from the Afton No. 1 Pit, New Cumnock, Ayrshire.
Materials	Rock specimen
Associated Place	Scotland, Ayrshire, New Cumnock
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Gibson, W.
Ref Title	Cannel coals, lignite and mineral oil in Scotland. Special reports on the mineral resources of Great Britain vol XXIV.
Ref. Publication Details	London : HMSO, 1922.
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P527724 Diatomite from Toombridge, Bann Valley, Northern Ireland

The Caption:

Caption Title	Diatomite from Toombridge, Bann Valley, Northern Ireland
Subtitle	
Caption Text 1	A specimen of diatomite from Toombridge, Bann Valley, Northern Ireland. The diatomaceous earth deposits of the Bann Valley have been known and exploited for many years and have been used by many British manufacturers. British Geological Survey Petrology Collection sample number MC 7501.
Caption Text 2	The deposits occur in the counties of Antrim and Londonderry on both banks of the River Bann to the north of Lough Neagh. They were deposited in former glacially-formed lakes that have now been artificially drained.
Caption Text 3	The principal workings are in Toombridge, but other beds of diatomaceous earth have been worked at Glassgort, eight miles north of Coleraine and between Portglenone and Portna. The diatomite is found in beds up to six feet thick under a thin covering of peat. In quality and content of impurities it varies considerably. Most of the production was sold for the manufacturing of insulating bricks.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Diatomite from Toombridge, Bann Valley, Northern Ireland.
Materials	Mineral specimen
Associated Place	Northern Ireland, Antrim/Londonderry, Bann Valley, Toombridge
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Recent, 10,000 years to present
(Nature of Association)	Stratigraphic period
Ref. Author	Haldane, D., Eyles, V.A. and Davidson, C.F.
Ref Title	Diatomite. Wartime pamphlet no. 5.
Ref. Publication Details	London : Geological Survey and Museum, 1940.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

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P527725 Dolomite from Eriboll, Sutherland

The Caption:

Caption Title	Dolomite from Eriboll, Sutherland
Subtitle	
Caption Text 1	The dolomite in Eriboll belongs to the Cambro-Ordovician Durness Limestone. It is exposed east of Durness along the eastern shore of Loch Eriboll and on An Corr Eilean in the centre of the loch. British Geological Survey Petrology Collection sample number MC 7502.
Caption Text 2	Around Eriboll village it forms a fairly extensive outcrop and includes a considerable thickness of dolomite.
Caption Text 3	The dolomite is similar to that at Durness and includes a large proportion of high-grade dolomites suitable for either refractory purposes or as a source of metallic magnesium.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dolomite from Eriboll, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Erriboll
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527726 Dolomite from the Durness Limestone, Sarsgrum, Eriboll, Sutherland

The Caption:

Caption Title	Dolomite from the Durness Limestone, Sarsgrum, Eriboll, Sutherland
Subtitle	
Caption Text 1	Sarsgrum is two and a half miles south-west of Durness and contains a number of exposures of Cambro-Ordovician dolomites. This specimen shows veining. British Geological Survey Petrology Collection sample number MC 7503.
Caption Text 2	Mottled dolomites of a high grade belonging to the Sailmhor Group form a rocky bluff at Sarsgrum. A chemical analysis from this locality yielded 52.7 per cent calcium carbonate and 44.4 per cent magnesium carbonate.
Caption Text 3	Less than half a mile north of Sarsgrum and five-sixths of a mile south of Keodale, a section of the Eilean Dubh Group can be seen along the course of a small stream flowing into the Kyle of Durness. A chemical analysis from this locality yielded 49.3 per cent calcium carbonate and 40.3 per cent magnesium carbonate.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dolomite from the Durness Limestone, Sarsgrum, Eriboll, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Erriboll, Sarsgrum
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527727 Dolomite from near Keodale, Durness, Sutherland

The Caption:

Caption Title	Dolomite from near Keodale, Durness, Sutherland
Subtitle	
Caption Text 1	The Durness district has large resources of dolomite that have been examined for exploitation for commercial purposes. This specimen shows a waterworn surface. British Geological Survey Petrology Collection sample number MC 7504.
Caption Text 2	In the vicinity of Keodale and the Durness outcrop as a whole there are a number of subdivisions of the Cambrian Durness Limestone or more correctly known today as the Durness
Caption Text 3	The seven divisions from the base up are: I. Ghrudaidh. II. Eilean Dubh. III. Sailmhor. IV. Sangamore. V. Balnakiel. VI. Croisaphuill. VII. Durine. Rocks from all groups occur in the Durness area.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dolomite from near Keodale, Durness, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Durness, Keodale
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527728 Dolomite from Keodale, Durness, Sutherland

The Caption:

Caption Title	Dolomite from Keodale, Durness, Sutherland
Subtitle	
Caption Text 1	A specimen of dolomite from Keodale, Durness, Sutherland. Dolomite is a magnesium carbonate rock. British Geological Survey Petrology Collection sample number MC 7505.
Caption Text 2	The Durness Limestone ranges from pure limestone to pure dolomite. When analysed the limestones never contained more than 16 per cent magnesium carbonate while the dolomites never contained less than 41 per cent magnesium carbonate. There are no rocks with magnesium carbonate between these figures.
Caption Text 3	A fairly quick way of separating out the dolomites from the limestone was to use Specific Gravity (SG). The SG of high-grade dolomite is greater than 2.82 while the SG of Limestone with up to 16 per cent magnesium carbonate is less than 2.75. Rocks between these ranges were dolomites with equi-molecular magnesium-calcium carbonate with over 10 per cent impurities.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dolomite from Keodale, Durness, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Durness, Keodale
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527729 Mottled limestone from Durness, Sutherland

The Caption:

Caption Title	Mottled limestone from Durness, Sutherland
Subtitle	
Caption Text 1	Mottled Durness Limestone from a quarry 100 yards east of Sango Bay, Durness, Sutherland. This specimen is probably from the Group III Salmhor formation, noted for its 'leopard stone', alternating beds of grey and black mottled medium-grained, flaggy to massive crystalline dolomite. British Geological Survey Petrology Collection sample number MC 7506.
Caption Text 2	Individual beds normally range from two to ten feet in thickness. There are two very distinct mottled beds at the base with chert in bands and lenses more abundant towards the top.
Caption Text 3	The Durness Limestone, or more correctly the Durness Group is a sequence of seven distinct sub-formations or limestones, dolomitic limestones and dolomites and associated chert bands of different types.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Mottled limestone from Durness, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Durness, Keodale
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527730 Limestone from Durness, Sutherland

The Caption:

Caption Title	Limestone from Durness, Sutherland
Subtitle	
Caption Text 1	A red fine-grained brittle limestone with sub-conchoidal fractures. The most extensive outcrop of the Cambro-Ordovician Durness Group, formerly known as the Durness Limestone occurs in the Durness area. This specimen is from the Coinstone Skerry. British Geological Survey Petrology Collection sample number MC 7507.
Caption Text 2	The Durness Group consists of c. 1500 feet of bedded dolomites with minor limestones and magnesian limestones. The rocks dip towards the east-south-east at angles from 12 degrees to 30 degrees.
Caption Text 3	The limestones of Group V and VI, the Balnakiel and Croisaphuill Groups are confined to two comparatively narrow outcrops. A 300 yard belt running southwards from the coast at Balnakiel and a quarter of a mile east of Sarsgrum-Drochaid Mhor road.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Durness, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Durness
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527731 Limestone from Durness, Sutherland

The Caption:

Caption Title	Limestone from Durness, Sutherland
Subtitle	
Caption Text 1	A light and dark grey mottled rock. The Durness Group consists of seven distinct stratigraphic divisions. Four stratigraphical groups are composed mainly of dolomites while two, Group V and VI, the Balnakiel and Croisaphuill Groups are composed of limestones. This specimen has a mottled appearance. British Geological Survey Petrology Collection sample number MC
Caption Text 2	Throughout the Durness district the calcareous rocks dip at angles of twelve to thirty degrees east-south-east.
Caption Text 3	The beds often form terraced outcrops that would greatly facilitate quarrying operations though important questions of access and transport could in some cases pose problems.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Durness, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Durness
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527732 Limestone from Durness, Sutherland

The Caption:

Caption Title	Limestone from Durness, Sutherland
Subtitle	
Caption Text 1	A light grey very fine-grained limestone from a skerry at the most east-north-easterly point of Balnakeil Bay, Sutherland. British Geological Survey Petrology Collection sample number MC 7509.
Caption Text 2	The dolomites and limestones of Sutherland constitute what is known as the Durness Limestone Group. It is of Cambro-Ordovician age and is divided into seven distinct
Caption Text 3	Durness is the type area with all seven groups outcropping on the east side of Kyle of Durness, Balnakeil Bay. They are mostly dolomites with associated limestones and chert beds.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Durness, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Durness
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527733 Limestone from Eilean Dubh, Durness, Sutherland

The Caption:

Caption Title	Limestone from Eilean Dubh, Durness, Sutherland
Subtitle	
Caption Text 1	The island Eilean Dubh gives its name to the second distinctive Durness Limestone formation, the Group II Eilean Dubh Formation. The Durness Limestone, or to give it its current name, the Durness Group is Cambro-Ordovician in age. British Geological Survey Petrology Collection sample number MC 7510.
Caption Text 2	The Eilean Dubh Formation consists of 340 feet of fine-grained, flaggy, argillaceous 'dolomite' and limestone with many stromatolitic and algal bands.
Caption Text 3	Below the Eilean Dubh Formation rests the Ghrudaidh Formation, a generally dark, lead-coloured and mottled dolomite with Salterella. Above it is the Group III Sailmhor, a massive mottled granular dolomite.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Eilean Dubh, Durness, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Durness, Eilean Dubh
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527734 Limestone from Croisaphuills, Durness, Sutherland

The Caption:

Caption Title	Limestone from Croisaphuills, Durness, Sutherland
Subtitle	
Caption Text 1	Thin band of dolomite by Croisaphuills, east side of Loch Borralie, Durness, Sutherland. British Geological Survey Petrology Collection sample number MC 7511.
Caption Text 2	The Durness area is the type area for the Durness Group, a series of Cambro-Ordovician limestones and dolomites that can be found extending from the Durness region to Skye.
Caption Text 3	In the vicinity of Loch Croisaphuill the Group V Balnakeil group outcrops on the west side of the loch and the Group VI, the Croisaphuill outcrops on the east side.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Croisaphuills, Durness, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Durness, Croisaphuills
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527735 Limestone from the Torran area, Strath, Skye, Invernessshire

The Caption:

Caption Title Limestone from the Torran area, Strath, Skye, Invernessshire
Subtitle
Caption Text 1 The Durness Limestone, or more correctly the Durness Group is a series of limestones, dolomitic limestones and dolomites. They outcrop in the Torran area and adjoin the Beinn an Dubhaich granite which has created a metamorphic aureole and converted some of the limestones and dolomites to marbles and brucite marbles respectively. British Geological Survey Petrology Collection sample number MC 7512.
Caption Text 2 This specimen is an unaltered limestone.
Caption Text 3 Apart from three restricted dolomitic areas the whole of the Durness Limestone outcrop outside the aureole is composed of limestones with thin dolomitic bands and is often heavily charged with chert.

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from the Torran area, Strath, Skye, Invernessshire.
Materials Rock specimen
Associated Place Scotland, Invernessshire, Skye, Torran
(Nature of Grid Reference) Location specimen was found
Display Date / Period Cambro-Ordovician 545-443 Ma.
(Nature of Association) Stratigraphic period

Ref. Author Wilson, H.E.
Ref Title The Cambro-Ordovician limestones and dolomites of the Ord and Torran areas, Skye and the Kishorn area, Ross-shire. Special reports on the mineral resources of Great Britain vol. XXXVI.
Ref. Publication Details Edinburgh : HMSO, 1954.
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P527736 Limestone from the Torran area, Skye, Invernessshire

The Caption:

Caption Title	Limestone from the Torran area, Skye, Invernessshire
Subtitle	
Caption Text 1	Limestone from the Torran area, Skye, Invernessshire. The limestone is part of the Cambro-Ordovician outcrop of Durness Limestone, a series of dolomites, dolomitic limestones and dolomites, some of which have been contact-metamorphosed to marbles by the emplacement of the adjacent Beinn Dubhaich granite. British Geological Survey Petrology Collection sample number MC 7513.
Caption Text 2	Outside the contact aureole the limestones all present a remarkably similar appearance, dull, medium or dark grey, very fine-grained rocks with, invariably, random white streaks, wisps and veins of calcite.
Caption Text 3	The specific gravity of the limestones varies from 2.675 to 2.71 and is controlled by three variables, silica content, magnesia content and porosity. In thin section all specimens show a very fine-grained tessellate mosaic of calcite grains cut by numerous veins of coarser calcite.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from the Torran area, Skye, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Torran
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Wilson, H.E.
Ref Title	The Cambro-Ordovician limestones and dolomites of the Ord and Torran areas, Skye and the Kishorn area, Ross-shire. Special reports on the mineral resources of Great Britain vol. XXXVI.
Ref. Publication Details	Edinburgh : HMSO, 1954.
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P527737 Limestone from the Torran area, Strath, Skye, Invernessshire

The Caption:

Caption Title Limestone from the Torran area, Strath, Skye, Invernessshire
Subtitle
Caption Text 1 The Cambro-Ordovician Durness Limestone rocks of the Torran area consist of dolomites, limestones and contact-altered rocks, mostly marbles and brucite marbles. British Geological Survey Petrology Collection sample number MC 7514.
Caption Text 2 This specimen is an unaltered limestone. Outside the contact aureole the limestones all present a remarkably similar appearance, dull, medium or dark grey, very fine-grained rocks with, invariably random white streaks, wisps and veins of calcite.
Caption Text 3 In general, the limestones contain chert nodules, they are usually common and occur in rows along the bedding planes projecting as ragged knobs from weathered surfaces.

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from the Torran area, Strath, Skye, Invernessshire.
Materials Rock specimen
Associated Place Scotland, Invernessshire, Skye, Torran
(Nature of Grid Reference Location specimen was found
Display Date / Period Cambro-Ordovician 545-443 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Wilson, H.E.
Ref Title The Cambro-Ordovician limestones and dolomites of the Ord and Torran areas, Skye and the Kishorn area, Ross-shire. Special reports on the mineral resources of Great Britain vol. XXXVI.
Ref. Publication Details Edinburgh : HMSO, 1954.
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P527738 Limestone from the Torran area, Skye, Invernessshire

The Caption:

Caption Title	Limestone from the Torran area, Skye, Invernessshire
Subtitle	
Caption Text 1	Very large quantities of limestone of Cambro-Ordovician age outcrop in Torran, Strath area on Skye. The outcrop extends from Creag Strollamus, two miles north-west of Broadford, southwards for a distance of 3 miles up Strath Suardal. British Geological Survey Petrology Collection sample number MC 7515.
Caption Text 2	It then branches into two, the most southerly swells out eastwards to form Ben Suardal and then passes west to the south of Beinn an Dubhaich while the most northerly runs westwards by Loch Cill Chrisosd to the head of Loch Slapin at Torran.
Caption Text 3	The Cambro-Ordovician limestones and dolomites of the Torran area were investigated in the early 1950s for the presence of dolomite of high commercial purity for use as a refractory for the steel industry.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from the Torran area, Skye, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Torran
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Wilson, H.E.
Ref Title	The Cambro-Ordovician limestones and dolomites of the Ord and Torran areas, Skye and the Kishorn area, Ross-shire. Special reports on the mineral resources of Great Britain vol. XXXVI.
Ref. Publication Details	Edinburgh : HMSO, 1954.
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P527739 Brucite marble from Ledbeg, Assynt, Sutherland

The Caption:

Caption Title	Brucite marble from Ledbeg, Assynt, Sutherland
Subtitle	
Caption Text 1	In Assynt, typical brucite marbles are found in the Ledbeg River about half a mile east-south-east of Loyne shepherd's house. British Geological Survey Petrology Collection sample number MC 7516.
Caption Text 2	The rocks are medium grained, nearly white in colour and consist of calcite and brucite together with a little dolomite. This specimen is quite coarsely crystalline.
Caption Text 3	The brucite forms small aggregates from 0.1 mm. to 1 mm. in diameter. The large grains are mostly rounded in outline but the smaller ones are often square, triangular or hexagonal. Calcite and dolomite are usually present in roughly equal proportions and form irregular crystals of somewhat larger size than the brucite.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Brucite marble from Ledbeg, Assynt, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Assynt, Ledbeg
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Knox, W.Q.
Ref Title	Dolomite and brucite marble in the Scottish Highlands. Supplement no. 2. Durness, Loch Eireboll and Assynt districts. Wartime pamphlet no. 6.
Ref. Publication Details	London : Geological Survey and Museum, 1941.
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P527740 Brucite marble from Ledbeg, Assynt, Sutherland

The Caption:

Caption Title	Brucite marble from Ledbeg, Assynt, Sutherland
Subtitle	
Caption Text 1	A light-green saccharoidal marble. Typical brucite marbles can be found on the hill-slope roughly three-quarters of a mile to the north-west of Ledbeg and again near the south-western end of the side road leading to Loch Ailsh at the eastern end of the Cnoc na Sroine intrusion, part of the Loch Borrallan Complex of mafic and ultramafic syenites. British Geological Survey Petrology Collection sample number MC 7517.
Caption Text 2	The intrusion of the Loch Borrallan Complex was responsible for the contact metamorphism of the limestones and dolomites to marbles and in this case, brucite marble. Typically, brucite marbles have a granular texture, are medium-grained and whitish or greyish in colour. This specimen is finer-grained, saccharoidal with a green tinge.
Caption Text 3	Recently the brucite-bearing dolomite marbles have been evaluated as a potential source of high brightness carbonate for filler and possible paper coating applications.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Brucite marble from Ledbeg, Assynt, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Assynt, Ledbeg
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Knox, W.Q.
Ref Title	Dolomite and brucite marble in the Scottish Highlands. Supplement no. 2. Durness, Loch Eireboll and Assynt districts. Wartime pamphlet no. 6.
Ref. Publication Details	London : Geological Survey and Museum, 1941.
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P527741 Brucite marble from Ledbeg, Assynt, Sutherland

The Caption:

Caption Title	Brucite marble from Ledbeg, Assynt, Sutherland
Subtitle	
Caption Text 1	In Assynt brucite marbles were reported by Teall in the Northwest Highlands Memoir to occur in the Ledbeg River, half a mile east-south-east of Loyne. However investigations in c. 1941 failed to locate this outcrop though brucite marbles were found on the hill-slope roughly three-quarters of a mile to the north-west of Ledbeg. British Geological Survey Petrology Collection sample number MC 7518.
Caption Text 2	A fairly fine-grained specimen though typically the marbles are medium-grained, nearly white in colour and consist of calcite and brucite together with a little dolomite.
Caption Text 3	Brucite forms small aggregates from about 0.1 mm. to 1 mm. in diameter. The large grains are mostly rounded in outline but the smaller ones give square, triangular and hexagonal sections.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Brucite marble from Ledbeg, Assynt, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Assynt, Ledbeg
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Knox, W.Q.
Ref Title	Dolomite and brucite marble in the Scottish Highlands. Supplement no. 2. Durness, Loch Eireboll and Assynt districts. Wartime pamphlet no. 6.
Ref. Publication Details	London : Geological Survey and Museum, 1941.
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P527742 Brucite marble from Ledbeg, Assynt, Sutherland

The Caption:

Caption Title	Brucite marble from Ledbeg, Assynt, Sutherland
Subtitle	
Caption Text 1	Brucite marble from Ledbeg, Assynt, Sutherland. The marbles of Assynt have long attracted attention of many previous writers on the geology of the district. This specimen is a fairly fine-grained whitish specimen. British Geological Survey Petrology Collection sample number MC 7519.
Caption Text 2	The localities where the marble occurs lie around, and nowhere more than one mile from, the Loch Borrallan syenite complex, in particular, Cnoc na Sroine. The marble is formed by the contact metamorphism of the Durness Limestones by the intrusion.
Caption Text 3	On the hillside above Ledbeg it is thought the marbles cover an area of c. 12 to 15 acres at a height varying between 200 and 400 feet above the level of the road.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Brucite marble from Ledbeg, Assynt, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Assynt, Ledbeg
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Knox, W.Q.
Ref Title	Dolomite and brucite marble in the Scottish Highlands. Supplement no. 2. Durness, Loch Eireboll and Assynt districts. Wartime pamphlet no. 6.
Ref. Publication Details	London : Geological Survey and Museum, 1941.
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P527743 Marble from Ledbeg, Assynt, Sutherland

The Caption:

Caption Title	Marble from Ledbeg, Assynt, Sutherland
Subtitle	
Caption Text 1	This marble is formed from the contact metamorphism of Durness Limestone by the Loch Borrolan Complex during its emplacement during the Caledonian Orogeny. British Geological Survey Petrology Collection sample number MC 7520.
Caption Text 2	Extensive areas of marble occur in the Ledbeg and Loyne areas, some are straight marbles others are brucite marbles.
Caption Text 3	The marbles in the Ledbeg area vary from bluish-grey coarse crystalline marbles to pale greenish-white compact marbles to near pure white brucite marbles.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Marble from Ledbeg, Assynt, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Assynt, Ledbeg
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527744 Marble from Ledbeg, Assynt, Sutherland

The Caption:

Caption Title	Marble from Ledbeg, Assynt, Sutherland
Subtitle	
Caption Text 1	Marble from Ledbeg, Assynt, Sutherland. The marble has been formed by the contact metamorphism of the Cambro-Ordovician Durness Limestone by the Loch Borrallan Complex a suite of mafic and ultramafic syenites intruded as a sheet-like complex. British Geological Survey Petrology Collection sample number MC 7521.
Caption Text 2	The heat from the intrusion has altered the surrounding limestones and dolomites to marble and brucite marbles. The principal outcrops are near Loyne and Ledbeg with a much smaller occurrence at Elphin.
Caption Text 3	The dolomite and brucite marbles were investigated for economic value during the Second World War.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Marble from Ledbeg, Assynt, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Assynt, Ledbeg
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527745 Marble from Ledbeg, Assynt, Sutherland

The Caption:

Caption Title Marble from Ledbeg, Assynt, Sutherland
Subtitle
Caption Text 1 A medium-grained marble with grey streaks from Ledbeg, Assynt, Sutherland. Marble, a metamorphosed limestone was formed by the intense heat from the nearby Caledonian intrusion, the Loch Borrallan Complex. British Geological Survey Petrology Collection sample number MC 7522.
Caption Text 2 The contact metamorphism causes recrystallization of the original limestone or dolomite.
Caption Text 3 During the Second World War, the Geological Survey of Great Britain carried out extensive research into the dolomites, limestones, marbles and brucite marbles of Scotland. Sutherland was found to contain large reserves though distance to industrial centres meant exploitation was difficult.

The Basic Record:

Simple Name Rock specimen
Brief Description Marble from Ledbeg, Assynt, Sutherland.
Materials Rock specimen
Associated Place Scotland, Sutherland, Assynt, Ledbeg
(Nature of Grid Reference) Location specimen was found
Display Date / Period Cambro-Ordovician 545-443 Ma.
(Nature of Association) Stratigraphic period

Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.

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Inputter R.P. McIntosh
Input Date 15/06/2003

P527746 Marble from Ledbeg, Assynt, Sutherland

The Caption:

Caption Title	Marble from Ledbeg, Assynt, Sutherland
Subtitle	
Caption Text 1	A banded marble from Ledbeg, Assynt, Sutherland. The Cambro-Ordovician Durness Limestone in the vicinity of Ledbeg is all contact metamorphosed due to the heat of the intrusion of the Loch Borrallan Complex during the Caledonian Orogeny. British Geological Survey Petrology Collection sample number MC 7523.
Caption Text 2	A number of notable localities exist for marble in the Ledbeg area. There was a small disused quarry 1,000 yards north-west of Ledbeg containing bluish-grey coarsely crystalline marble. Three-quarters of a mile north-west of Ledbeg on the hillside there is a large area of white marbles containing a high percentage of the mineral brucite.
Caption Text 3	Four hundred and thirty yards east-north-east of Ledbeg there is a small quarry with a pale, greenish-white compact marble.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Marble from Ledbeg, Assynt, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Assynt, Ledbeg
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527747 Brucite marble from Kilchrist, Locality 3, Skye, Invernessshire

The Caption:

Caption Title Brucite marble from Kilchrist, Locality 3, Skye, Invernessshire
Subtitle
Caption Text 1 This brucite marble is from a well-known locality, Kilchrist (Loch Cill Chriosd) on Skye. British Geological Survey Petrology Collection sample number MC 7524.
Caption Text 2 The marble outcrops at various localities along the hillside to the south of Loch Kilchrist, where it forms massive workable bands associated with other varieties of marble.
Caption Text 3 In the early 1940s it was recognized that brucite marble had been used as a substitute for magnesite in the manufacture of basic refractory linings. Linings were reputedly equal in every way to magnesite and superior to burnt dolomite refractories.

The Basic Record:

Simple Name Rock specimen
Brief Description Brucite marble from Kilchrist, Locality 3, Skye, Invernessshire.
Materials Rock specimen
Associated Place Scotland, Invernessshire, Skye, Kilchrist
(Nature of Grid Reference Location specimen was found
Display Date / Period Cambro-Ordovician 545-443 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Kennedy, W.Q.
Ref Title Dolomite and brucite marble in the Scottish Highlands. Supplement no. 1. Additional information concerning brucite marble in Skye. Wartime pamphlet no. 6.
Ref. Publication Details London : Geological Survey and Museum, 1941.
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P527748 Brucite marble from 800 yards north-north-west of Camas Malag, south of Torran, Skye, Invernessshire

The Caption:

Caption Title	Brucite marble from 800 yards north-north-west of Camas Malag, south of Torran, Skye, Invernessshire
Subtitle	
Caption Text 1	The brucite marble has formed due to the contact metamorphism (and possibly regional) of the Cambro-Ordovician Durness dolomites by the intrusion of the granite of Beinn an Dubhaich. This specimen is whitish in appearance. British Geological Survey Petrology Collection sample number MC 7525.
Caption Text 2	The contact aureole is generally several hundred yards wide. The rocks in the contact-altered areas are all grey or white marbles, mostly forsterite marbles.
Caption Text 3	Brucite marbles also exist though they are rarely pure, the marbles containing brucite and forsterite. Brucite is a magnesium hydroxide mineral found commonly in the metamorphism of dolomites where it forms at the expense of periclase, magnesium oxide.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Brucite marble from 800 yards north-north-west of Camas Malag, south of Torran, Skye, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Camas Malag
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Wilson, H.E.
Ref Title	The Cambro-Ordovician limestones and dolomites of the Ord and Torran areas, Skye and the Kishorn area, Ross-shire. Special reports on the mineral resources of Great Britain vol. XXXVI.
Ref. Publication Details	Edinburgh : HMSO, 1954.
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Input Date	15/06/2003

P527749 Brucite marble from the Torran area, Skye, Invernesshire

The Caption:

Caption Title	Brucite marble from the Torran area, Skye, Invernesshire
Subtitle	
Caption Text 1	These specimens of brucite marble are from the south slope of Cnoc Dubh 575 yards west 15.5 degrees south of Dun Mor, 200 feet from granite in the Torran, Strath area of Skye, Invernesshire. British Geological Survey Petrology Collection sample number MC 7526.
Caption Text 2	Brucite marble from this locality is found in only small quantities and is usually impure and therefore uneconomic for working as a commercial refractory.
Caption Text 3	Following interest by Scottish steel manufacturers the area was investigated by the Geological Survey with a view to ascertain whether dolomite of high commercial purity was available on a large scale in certain areas of Skye and the neighbouring coast of Rossshire at Kishorn. Results proved disappointing regarding quarrying on a large scale.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Brucite marble from the Torran area, Skye, Invernesshire.
Materials	Rock specimen
Associated Place	Scotland, Invernesshire, Skye, Torran
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Wilson, H.E.
Ref Title	The Cambro-Ordovician limestones and dolomites of the Ord and Torran areas, Skye and the Kishorn area, Ross-shire. Special reports on the mineral resources of Great Britain vol. XXXVI.
Ref. Publication Details	Edinburgh : HMSO, 1954.
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Input Date	15/06/2003

P527750 Brucite marble from the Torran area, Skye, Invernesshire

The Caption:

Caption Title	Brucite marble from the Torran area, Skye, Invernesshire
Subtitle	
Caption Text 1	The Cambrian - Ordovician Durness Limestone in the Torran area is, in the south, in contact with the Beinn an Dubhaich granite and is markedly metamorphosed in its vicinity. British Geological Survey Petrology Collection sample number MC 7527.
Caption Text 2	The main rock type in the aureole is forsterite marble though brucite marble occurs near the granite contact at Cnoc Dubh.
Caption Text 3	The Durness Limestone has been altered by thermal metamorphism. The rocks in the contact-aureole are all grey and white marbles, often coarsely crystalline in appearance. In thin section they are seen to be recrystallized rocks, generally containing metamorphic minerals and may be described as forsterite-brucite-diopside marbles.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Brucite marble from the Torran area, Skye, Invernesshire.
Materials	Rock specimen
Associated Place	Scotland, Invernesshire, Skye, Torran
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Wilson, H.E.
Ref Title	The Cambro-Ordovician limestones and dolomites of the Ord and Torran areas, Skye and the Kishorn area, Ross-shire. Special reports on the mineral resources of Great Britain vol. XXXVI.
Ref. Publication Details	Edinburgh : HMSO, 1954.
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Input Date	15/06/2003

P527751 Brucite marble from the Torran area, Skye, Invernessshire

The Caption:

Caption Title	Brucite marble from the Torran area, Skye, Invernessshire
Subtitle	
Caption Text 1	The occurrence of brucite marble was first brought to the attention of the Geological Survey by Mr. Gordon S. Duncan though they were known two miles to the east from Cill Chriod. This specimen was found only nine feet from the Beinn an Dubhaich granite. British Geological Survey Petrology Collection sample number MC 7528.
Caption Text 2	The brucite marbles are near the contact with the granite of Beinn an Dubhaich in the vicinity of Cnoc Dubh. They are rarely pure usually containing forsterite (a variety of olivine) that often shows alteration to serpentine. The brucite normally occurs as rounded grains rarely exceeding 0.5 mm. in diameter and many are much smaller.
Caption Text 3	Brucite marble if pure as a brucite-calcite rock, might be used instead of dolomite as a commercial refractory. In the Torran area however, supplies of the pure material are very small. Brucite marble occurs in the Cnoc Dubh area but it is always contaminated with forsterite.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Brucite marble from the Torran area, Skye, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Torran
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Wilson, H.E.
Ref Title	The Cambro-Ordovician limestones and dolomites of the Ord and Torran areas, Skye and the Kishorn area, Ross-shire. Special reports on the mineral resources of Great Britain vol. XXXVI.
Ref. Publication Details	Edinburgh : HMSO, 1954.
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Input Date	15/06/2003

P527752 Brucite marble from the Kilchrist area of Skye, Invernessshire

The Caption:

Caption Title	Brucite marble from the Kilchrist area of Skye, Invernessshire
Subtitle	
Caption Text 1	Dolomite and brucite marble were considered important resources during the Second World War for use as a basic refractory or for the extraction of metallic magnesium. British Geological Survey Petrology Collection sample number MC 7529.
Caption Text 2	Locally, in Assynt and in the Isle of Skye dolomite has been converted into brucite marble, a mixture of calcite and brucite, the hydrous oxide of magnesia, by the natural calcining action of intrusive igneous rocks, followed by hydration.
Caption Text 3	This specimen is from the Kilchrist - Loch Cill Chriosd area of Skye where Cambrian Durness Limestone has been altered by the heat of emplacement of the Beinn an Dubhaich granite.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Brucite marble from the Kilchrist area of Skye, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Kilchrist
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Kennedy, W.Q.
Ref Title	Dolomite and brucite marble in the Scottish Highlands. Supplement no. 1. Additional information concerning brucite marble in Skye. Wartime pamphlet no. 6.
Ref. Publication Details	London : Geological Survey and Museum, 1941.
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P527753 Brucite marble, Cill Chriosd Quarry, Torran, Skye, Invernessshire

The Caption:

Caption Title Brucite marble, Cill Chriosd Quarry, Torran, Skye, Invernessshire
Subtitle
Caption Text 1 Brucite marbles of the penatite and predazzite type are found at several localities in Skye, particularly in the Kilchrist and Loch Cill Chriosd district where they have been formed by the thermal action of the Beinn an Dubhaich granite and the Cambrian Durness Limestone. British Geological Survey Petrology Collection sample number MC 7530.
Caption Text 2 In the 1940s brucite marble was successfully employed in America as a substitute for magnesite in the manufacture of basic refractory linings. Because of this there was renewed interest in finding brucite marble deposits in Great Britain during the Second World War.
Caption Text 3 Brucite is magnesium oxide. It belongs to the hexagonal crystal system, it is a soft mineral, only 2.5 on Moh's scale of hardness. It can be colourless, green or blue in colour.

The Basic Record:

Simple Name Rock specimen
Brief Description Brucite marble, Cill Chriosd Quarry, Torran, Skye, Invernessshire.
Materials Rock specimen
Associated Place Scotland, Invernessshire, Skye, Torran, Cill Chrisod Quarry
(Nature of Grid Reference) Location specimen was found
Display Date / Period Cambro-Ordovician 545-443 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Kennedy, W.Q.
Ref Title Dolomite and brucite marble in the Scottish Highlands. Supplement no. 1. Additional information concerning brucite marble in Skye. Wartime pamphlet no. 6.
Ref. Publication Details London : Geological Survey and Museum, 1941.
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P527754 Brucite marble, Cill Chriosd Quarry, Torran, Skye, Invernessshire

The Caption:

Caption Title Brucite marble, Cill Chriosd Quarry, Torran, Skye, Invernessshire
Subtitle
Caption Text 1 Brucite marble consists of a mixture of calcite and the magnesian mineral brucite. It is formed when dolomite is subjected to the natural calcining action of intrusive igneous rocks. British Geological Survey Petrology Collection sample number MC 7531.
Caption Text 2 At high temperature the dolomite alters to calcite, periclase and carbon dioxide, however the periclase is unstable at normal temperatures and pressures and undergoes rapid hydration to form brucite.
Caption Text 3 This specimen was formed by the thermal action of the Beinn an Dubhaich granite and the Cambrian Durness Limestone.

The Basic Record:

Simple Name Rock specimen
Brief Description Brucite marble, Cill Chriosd Quarry, Torran, Skye, Invernessshire.
Materials Rock specimen
Associated Place Scotland, Invernessshire, Skye, Torran, Cill Chrisod Quarry
(Nature of Grid Reference Location specimen was found
Display Date / Period Cambro-Ordovician 545-443 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Kennedy, W.Q.
Ref Title Dolomite and brucite marble in the Scottish Highlands. Supplement no. 1. Additional information concerning brucite marble in Skye. Wartime pamphlet no. 6.
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Input Date 15/06/2003

P527755 Dolomite and calcite vein from Newbigging, Nine Lums, one mile west of Burntisland, Fife

The Caption:

Caption Title Dolomite and calcite vein from Newbigging, Nine Lums, one mile west of Burntisland, Fife
Subtitle
Caption Text 1 A specimen of dolomite and calcite vein from the Newbigging Mine. Limestone varying in thickness between 15 to 23 feet was exploited entirely by mining, the workings were approached from Nine Lums by a level and cross-cut mine. British Geological Survey Petrology Collection sample number MC 7532.
Caption Text 2 Dolomite and calcite veins were common in the vicinity of faults and along zones of crush and disturbance. Individual veins extended to several feet in width. The vein filling is mainly ferro-dolomite, but coarsely crystalline white calcite veining is also common.
Caption Text 3 The limestone was mined by the Carron Company for use in iron smelting.

The Basic Record:

Simple Name Rock specimen
Brief Description Dolomite and calcite vein from Newbigging, Nine Lums, one mile west of Burntisland, Fife.
Materials Rock specimen
Associated Place Scotland, Fife, Newbigging, Nine Lums
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.
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Input Date 15/06/2003

P527756 Limestone from Freuchie Quarry, Maspie, Falkland, Fifeshire

The Caption:

Caption Title	Limestone from Freuchie Quarry, Maspie, Falkland, Fifeshire
Subtitle	
Caption Text 1	Limestone from Freuchie Quarry, Maspie, Falkland, Fifeshire. The Lomond Hills district, the high ground between Falkland and Leslie has a number of more or less discontinuous outcrops of limestone, in many places in association with dolerite sills. British Geological Survey Petrology Collection sample number MC 7533.
Caption Text 2	There are many old limestone quarries most of them in the Carboniferous, Lower Limestone Group, Charlestown Main Limestone.
Caption Text 3	As well as Freuchie Quarry, other old quarries include East Lomond Quarry at the base of East Lomond Hill, Easter Glassie, one quarter of a mile south of East Lomond Quarry, Balgeddie, half a mile north-north-west of Leslie Bridge and Forthar, one mile east-south-east of Freuchie.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Freuchie Quarry, Maspie, Falkland, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Falkland, Maspie, Freuchie Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527757 Limestone from White Craigs, Bishop Hill, Kinrossshire

The Caption:

Caption Title	Limestone from White Craigs, Bishop Hill, Kinrossshire
Subtitle	
Caption Text 1	A specimen of limestone with fossil fragments from White Craigs, Bishop Hill, Kinrossshire. This specimen is from the same formation as the limestone at nearby Clatteringwell Quarry, namely the Charlestown Main Limestone of Carboniferous age. British Geological Survey Petrology Collection sample number MC 7534.
Caption Text 2	Along with the Clatteringwell Quarry outcrop the limestones form an outlier on the summit of Bishop Hill on top of the 250 feet thick quartz dolerite sill. There is an area of c. 10 acres underlain by this limestone.
Caption Text 3	The total thickness of the limestone is probably not more than 20 feet.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from White Craigs, Bishop Hill, Kinrossshire.
Materials	Rock specimen
Associated Place	Scotland, Kinrossshire, Bishop Hill, White Craigs
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527758 Dolomite from Little Raith, Fifeshire

The Caption:

Caption Title	Dolomite from Little Raith, Fifeshire
Subtitle	
Caption Text 1	This dolomite is probably from the Charlestown Station Limestone of the Carboniferous Lower Limestone Group which is recorded as being worked at Little Raith in the Geological Survey publication 'Limestones of Scotland'. British Geological Survey Petrology Collection sample number MC 7535.
Caption Text 2	Fife possesses considerable reserves of easily accessible limestone that have been drawn upon for quarrying and mining, chiefly for agricultural and building purposes.
Caption Text 3	The principal seam is Charlestown Main Limestone in the Lower Limestone Group which is higher stratigraphically than the Charlestown Station Limestone.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dolomite from Little Raith, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Little Raith
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527759 Limestone from White Craigs, Bishop Hill, Kinrossshire

The Caption:

Caption Title Limestone from White Craigs, Bishop Hill, Kinrossshire
Subtitle
Caption Text 1 White Craigs is situated on the western edge of Bishop Hill very close the former Clatteringwell Quarry. The quarry and White Craigs is formed of the Charlestown Main Limestone and is Carboniferous in age. British Geological Survey Petrology Collection sample
Caption Text 2 The limestone sits on top of a major quartz-dolerite sill. and is probably not more than 20 feet thick.
Caption Text 3 The Bishop Hill occurrences of limestone despite their high altitude on the top of the hill are the main limestone prospects in Kinrossshire, though there are many localities in adjacent

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from White Craigs, Bishop Hill, Kinrossshire.
Materials Rock specimen
Associated Place Scotland, Kinrossshire, Bishop Hill, White Craigs
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.
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Input Date 15/06/2003

The Caption:

Caption Title Baked blaes from Clatteringwell Quarry, Bishop Hill, c. one mile north-east of Kinnesswood, Kinrossshire

Subtitle

Caption Text 1 Baked blaes from Clatteringwell Quarry, Bishop Hill, c. one mile north-east of Kinnesswood, Kinrossshire. The quarry worked the Carboniferous Charlestown Main Limestone and formed an outlier of the summit of Bishop Hill, resting on the top of a quartz-dolerite sill about 250 feet thick. British Geological Survey Petrology Collection sample number MC 7537.

Caption Text 2 The limestone is c. 10 feet thick and probably does not exceed 15 feet. The overburden consists for the most part of the baked blaes, baked carbonaceous shale. The baked blaes were between five and twenty feet thick.

Caption Text 3 Blaes is a local Scottish term for baked carbonaceous shale. It has been baked by the heat of intrusion of the underlying sill.

The Basic Record:

Simple Name Rock specimen

Brief Description Baked blaes from Clatteringwell Quarry, Bishop Hill, c. one mile north-east of Kinnesswood, Kinrossshire.

Materials Rock specimen

Associated Place Scotland, Kinrossshire, Bishop Hill, Clatteringwell Quarry

(Nature of Location specimen was found

Grid Reference

Display Date / Period Carboniferous 354-290 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Input Date 15/06/2003

P527761 Limestone from Rothes Lime Works, Balgeddie, half a mile north-north-west of Leslie Bridge, Fifeshire

The Caption:

Caption Title	Limestone from Rothes Lime Works, Balgeddie, half a mile north-north-west of Leslie Bridge, Fifeshire
Subtitle	
Caption Text 1	This specimen is a grey, fine-grained and fossiliferous limestone from the Rothes Lime Works. The works were located at the former quarry at Balgeddie half a mile north-north-west of Leslie Bridge, Fifeshire. British Geological Survey Petrology Collection sample number MC 7538.
Caption Text 2	The Charlestown Main Limestone of the Carboniferous Lower Limestone Group was mined here between 1870 and 1902. The thickness worked was about ten feet under 24 feet of shale and the quality deteriorated eastwards.
Caption Text 3	There are a number of more or less discontinuous outcrops and many old workings in the high ground between Falkland and Leslie.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Rothes Lime Works, Balgeddie, half a mile north-north-west of Leslie Bridge, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Balgeddie, Lesliw Bridge
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527762 Limestone from near Kirkintilloch, Stirlingshire

The Caption:

Caption Title	Limestone from near Kirkintilloch, Stirlingshire
Subtitle	
Caption Text 1	Limestone from the Queenzieburn Index Limestone of the Blackhall Limestone a limestone of the Carboniferous Lower Limestone Group, the uppermost division of the Dinantian. British Geological Survey Petrology Collection sample number MC 7539.
Caption Text 2	The Blackhall Limestone, in the Glasgow area is the equivalent of the Charlestown Main Limestone found further east in Fife where it has formed one of the most widely worked seams.
Caption Text 3	Stirlingshire has been a small producer of lime for many years chiefly from the Lower Limestone Group in the Lennoxton area where the Hurlet Limestone was exploited for over

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from near Kirkintilloch, Stirlingshire.
Materials	Rock specimen
Associated Place	Scotland, Stirlingshire, Kirkintilloch
(Nature of Grid Reference	Location specimen was found
Display Date / Period (Nature of Association)	Carboniferous 354-290 Ma. Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527763 Limestone from north-east of Queenzieburn, Stirlingshire

The Caption:

Caption Title	Limestone from north-east of Queenzieburn, Stirlingshire
Subtitle	
Caption Text 1	A light, fine to medium-grained limestone with some black, possibly carbonaceous material from 1.5 miles north-east of Queenzieburn. The specimen is from the Blackhall Limestone, known locally as the Shields Limestone. British Geological Survey Petrology Collection sample number MC 7540.
Caption Text 2	A number of north-south trending outcrops occur in this area and have been worked on a small scale. Three Carboniferous Lower Limestone Group limestones outcrop, the Main Campsie or Hurllet Limestone, the Shields or Blackhall Limestone and the Bellarophon Limestone.
Caption Text 3	Stirling has been a small producer of lime for many years, chiefly from the Lower Limestone Group beds in the Lennoxtown area. Other locations in the county where limestone was worked are Balmaha, Ballagan Burn and the Murrayshall Limestone Mine at Cambusbarron.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from north-east of Queenzieburn, Stirlingshire.
Materials	Rock specimen
Associated Place	Scotland, Stirlingshire, Queenzieburn
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527764 Limestone from Corrie Burn, Arran, Buteshire

The Caption:

Caption Title	Limestone from Corrie Burn, Arran, Buteshire
Subtitle	
Caption Text 1	Limestone from Corrie Burn, Arran, Buteshire. The county of Bute contains little limestone of economic significance. On Arran there are some outcrops of Carboniferous limestone but only the Hurlet, locally called the Corrie Limestone is of economic significance. There have been fairly extensive workings of this seam, chiefly by mining. British Geological Survey Petrology Collection sample number MC 7541.
Caption Text 2	The quarry and mine workings are long since abandoned. The full thickness of the limestone was said to be 20 feet thick lying under a cover of sandstone and shale reaching 30 feet thick.
Caption Text 3	The individual limestone beds are separated by partings of red fossiliferous shales and the roof of the old mines is formed of a hard band crowded with <i>Productus giganteus</i> , a large Carboniferous brachiopod.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Corrie Burn, Arran, Buteshire.
Materials	Rock specimen
Associated Place	Scotland, Buteshire, Arran, Corrie Burn
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527766 Limestone from Thorntonhall Mine (Thorntonhall Lime Works) three miles west of East Kilbride

The Caption:

Caption Title Limestone from Thorntonhall Mine (Thorntonhall Lime Works) three miles west of East
Subtitle
Caption Text 1 The Main (Hurlet) Limestone was extensively wrought here in quarries and mines, and part of the product was burnt. Work appears to have ceased about 1926. The seam is 10 to 12 feet thick and lies almost flat. British Geological Survey Petrology Collection sample number MC
Caption Text 2 There were extensive opencast and underground workings. Two of the old mine-mouths just north of Thornton are still readily accessible and lead into a series of large, fairly dry, underground chambers. The overburden is partly of rock, partly of boulder clay. The old kilns and loading bank were adjacent. Access was by tramway to the railway south of Thorntonhall
Caption Text 3 The quality of the Thorntonhall limestone (S.L. 222) is high, the analysis showing: calcium carbonate, 92.59 per cent; magnesium carbonate, 1.28 per cent; insoluble residue 3.97 per cent.

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from Thorntonhall Mine (Thorntonhall Lime Works) three miles west of East
Materials Rock specimen
Associated Place Scotland, Lanarkshire, East Kilbride, Thorntonhall Mine
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period

Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.

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Input Date 15/06/2003

P527767 Limestone from Newbigging Limestone Mine, Nine Lums, Burntisland, Fifeshire

The Caption:

Caption Title	Limestone from Newbigging Limestone Mine, Nine Lums, Burntisland, Fifeshire
Subtitle	
Caption Text 1	A specimen of Burdiehouse Limestone from the Newbigging Mine, Nine Lums, 1 mile west of Burntisland. This specimen was tested by the Edinburgh map publishers, Bartholomews, as a source of lithographic stone; it was passed and considered satisfactory. The outcrop extends for a distance of about three-quarters of a mile in an east-west direction from Grange to Dalachy, and is indicated by a line of old quarries, all of which were stated over 40 years ago to have been long abandoned. From the outcrop the limestone dips north at 5 degrees to 15 degrees and underlies the ground in that direction for about half a mile, being stepped up northwards in that distance several times by small faults. British Geological Survey Petrology Collection sample number MC 7543.
Caption Text 2	A short distance north of the Burntisland-Cowdenbeath road, however, it is thrown out by an east-west fault. Within the area described above, a surface survey indicated that the limestone is penetrated by agglomerate in volcanic vents, and this will reduce the total amount of stone available. The limestone varies in thickness from about 15 to 23 feet, the thickness worked being approximately 15 feet where seen in 1943.
Caption Text 3	The lowest post, called the Bottoming, is variable in thickness and sticks to the ganister pavement: it is not usually extracted. Exploitation was entirely by mining, the workings being approached from Nine Lums by a level cross-cut mine which intersects the limestone about 200 yards north of the old quarries. Thence the seam is followed to the dip. The mouth of the mine is on the Aberdour-Burntisland road and near the main L. & N.E. railway line.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Newbigging Limestone Mine, Nine Lums, Burntisland, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Newbigging, Nine Lums
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527768 Limestone from Cults Quarry and Mine, Cupar, Fifeshire

The Caption:

Caption Title	Limestone from Cults Quarry and Mine, Cupar, Fifeshire
Subtitle	
Caption Text 1	A specimen of black crystalline limestone from Cults Quarry and Mine four miles south-south-west of Cupar, Fifeshire. The Charlestown Main Limestone crops out, on a hill-slope facing north, from Cults westwards to Coaltown of Burnturk, a distance of about 2 miles. The rocks dip south at 5 degrees. British Geological Survey Petrology Collection
Caption Text 2	The limestone has been quarried along practically the whole outcrop, and mining was resorted to when the overburden became too thick for opencast work. The workings at Cults have now extended nearly 4 miles south from the outcrop, but reserves are still available. On the east the limestone is eventually cut off by a dolerite sill, and westwards also it is seen in close contact with dolerite at Bowden Hill.
Caption Text 3	The limestone in the present Cults working is 12 to 13 feet in overall thickness. It is overlain by a thick bed of shale and rests on a black fireclay 4 feet thick. The top 3 feet. bed of the limestone is left to support the roof in the main levels, but elsewhere the whole thickness of limestone is worked. About 80 per cent of the limestone is extracted, leaving pillars 10 to 12

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Cults Quarry and Mine, Cupar, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Cupar, Cults Quarry and Mine
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527769 Limestone from Lannilane Quarry, Straiton, Ayrshire

The Caption:

Caption Title	Limestone from Lannilane Quarry, Straiton, Ayrshire
Subtitle	
Caption Text 1	Specimen of pale crystalline limestone from the Lannielane Lime Works 1 mile south-west of Blair farm, 5 miles west-south-west of Straiton, Ayrshire. At this locality a quarry was first opened up, and then short mines were driven from the quarry face. The specimen is Old Red Sandstone in age. British Geological Survey Petrology Collection sample number MC 7545.
Caption Text 2	The thickness of the bed is 12 feet and it dips north-west at 40 degrees under an overburden of several feet of rock. Reserves are large, but the steep dip makes mining almost imperative. The quarry might be extended to the south-west but the overburden of drift increases in this
Caption Text 3	An analysis on another specimen at this locality (S.L. 156) indicates a limestone of a high degree of purity : calcium carbonate, 92.05 per cent; magnesium carbonate, 2.48 per cent insoluble residue 5.92 per cent. Another cornstone bed, 4 feet thick, below the horizon of the worked seam, is exposed in the stream close at hand. Analysis (S.L. 155) has shown this band to be of great purity: calcium carbonate 97.98 per cent; magnesium carbonate 1.11 per cent; insoluble residue 1.72 per cent.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Lannilane Quarry, Straiton, Ayrshire.
Materials	Rock specimen
Associated Place	Scotland, Ayrshire, Straiton, Lannilane Quarry
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527770 Limestone from Loch Thom, Renfrewshire

The Caption:

Caption Title	Limestone from Loch Thom, Renfrewshire
Subtitle	
Caption Text 1	A banded pale limestone from the Upper Old Red Sandstone (Devonian). The Inverkip, Gourock, Loch Thom area is known for its nodular concretionary limestones of Devonian age. British Geological Survey Petrology Collection sample number MC 7546.
Caption Text 2	The quarries are not now worked but historical records exist, for instance in the nearby Inverkip area, nodular conglomeratic limestone, with pebbles of quartz, was at one time worked and calcined at old quarries and kilns a little west-south-west of Inverkip House.
Caption Text 3	The calcareous portion is concentrated into nodules, and these were sufficiently abundant to allow of the bed being worked as a whole. Montgomery (1839) described it as a 'bed of limestone, 8 to 10 feet thick, which has been wrought to a considerable extent'.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Loch Thom, Renfrewshire.
Materials	Rock specimen
Associated Place	Scotland, Renfrewshire, Loch Thom
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date	15/06/2003

P527771 Limestone from Ballachullish, Argyllshire

The Caption:

Caption Title	Limestone from Ballachullish, Argyllshire
Subtitle	
Caption Text 1	Fine-grained banded white Balachullish Limestone from Kentallen, Argyllshire. Part of the Lochaber Group of the Dalradian Supergroup (Precambrian) the Balachullish Limestone was never regarded as of economic importance due to the poor to moderate quality and lack of suitable outcrops for quarrying. British Geological Survey Petrology Collection sample number
Caption Text 2	The Balachullish Limestone Formation, to give it its modern name, is a series of grey-green calcareous phyllites, cream and grey dolostones, dark bluish-grey limestones and intercalations of slaty pelite.
Caption Text 3	Limestones are plentiful and widely distributed in Argyll though seldom of the highest purity. At one time they were quarried and burnt for lime all over the county but now this has

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Ballachullish, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Ballachulish
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527772 Limestone from Dalnatrat, Argyllshire

The Caption:

Caption Title	Limestone from Dalnatrat, Argyllshire
Subtitle	
Caption Text 1	A white crystalline banded limestone/dolomite from Dalnatrat in Argyllshire. The rock belongs to the Appin Limestone or more correctly known today as the Appin Phyllite and Limestone Formation. British Geological Survey Petrology Collection sample number MC 7548.
Caption Text 2	The rock is Dalradian Supergroup (Precambrian) in age and consists of an alternating sequence of carbonate rocks and phyllites with flaggy psammites and thin quartzites. Carbonates include the pure white Onich Limestone.
Caption Text 3	The Appin Limestone has been viewed as a possible source of dolomite, although it has been quarried in the past for agricultural purposes. The best quality is known to outcrop at Dalnatrat.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Dalnatrat, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Dalnatrat
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527773 Weathered limestone from Balachullish, Argyllshire

The Caption:

Caption Title	Weathered limestone from Balachullish, Argyllshire
Subtitle	
Caption Text 1	Limestone from Balachullish weathered to a deep yellow with a honeycomb structure. The yellow will be iron oxide or iron carbonate. British Geological Survey Petrology Collection sample number MC 7549.
Caption Text 2	The rock belongs to the Appin Phyllite and Limestone Formation belonging to the Dalradian Supergroup (Precambrian). This is probably from the distinctive 'tiger rock' which consists of regularly-spaced 5 to 10 cm. layers of deep yellow-weathering dolostone and dark phyllite.
Caption Text 3	Limestones are in plentiful supply in Argyllshire. They occur in the Precambrian, in both the Dalradian, the Loch Tay, Tayvallich, Appin, Shira, Lismore and Islay limestones, in the Precambrian Lewisian such as the marbles on Iona and in the much younger Jurassic of Loch Aline and Ardnamurchan.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Weathered limestone from Balachullish, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Ballachulish
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527774 Limestone from Loch Kishorn, Ross and Cromarty

The Caption:

Caption Title	Limestone from Loch Kishorn, Ross and Cromarty
Subtitle	
Caption Text 1	A specimen of grey-reddish Durness Limestone from Loch Kishorn area. It is brittle with flinty fractures and red staining on some fractures. British Geological Survey Petrology Collection sample number MC 7550.
Caption Text 2	Durness Limestone belonging to Groups I and II crops out from beneath the Kishorn Thrust on the left bank of the River Kishorn from Seafield to 1 mile north of Tornapress.
Caption Text 3	Ross and Cromarty contains little limestone and the only occurrences are those in the western part of the county where accessibility is poor. The principal types are metamorphic limestone in the Lewisian (Precambrian) of the Loch Maree district and the Cambrian dolomite in the vicinity of Ullapool and Loch Kishorn.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Loch Kishorn, Ross and Cromarty.
Materials	Rock specimen
Associated Place	Scotland, Ross and Cromarty, Loch Kishorn
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
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P527775 Nullipore or coralline sand from Dunvegan, Skye, Invernessshire

The Caption:

Caption Title	Nullipore or coralline sand from Dunvegan, Skye, Invernessshire
Subtitle	
Caption Text 1	Nullipore or coralline sand probably from the shore at Claigan, about four miles north of Dunvegan Castle. Coralline or nullipore sand is found in three small bays near Claigan. It consists of broken fragments of the calcareous algae <i>Lithothamnion calcarum</i> . It forms dazzling white beaches. British Geological Survey Petrology Collection sample number MC 7551.
Caption Text 2	The sand is coarsely granular and the fragments composing it have a marked coral-like appearance. The quantity varies somewhat from year to year depending on the incidence of storms. Camas Ban, the most southerly of the three bays, is accessible by road.
Caption Text 3	An estimated minimum of 2,500 tons is available at low tide, possibly less than 1,000 tons at high tide. The other two beaches are inaccessible by road; the minimum quantity available at low tide from the two beaches would probably amount to about 5,000 tons. The sand has been used locally for agricultural purposes. Analysis showed this sand (S.L. 6) to contain 84.32 per cent calcium carbonate and 10.35 per cent magnesium carbonate.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Nullipore or coralline sand from Dunvegan, Skye, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Dunvegan
(Nature of	Location specimen was found
Grid Reference	
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527776 Limestone from Elgol, Skye, Invernessshire

The Caption:

Caption Title	Limestone from Elgol, Skye, Invernessshire
Subtitle	
Caption Text 1	Jurassic limestones are found in two portions of the Jurassic succession in the islands of Invernessshire, namely near the base of the Lias and in the higher beds of the Great Estuarine Series. This specimen of highly fossiliferous shelly muddy limestone is from the latter. British Geological Survey Petrology Collection sample number MC 7552.
Caption Text 2	Limestones belonging to the Great Estuarine Series occur on the islands of Skye, Raasay, Eigg and Muck. The most important of these are to be found in Strathaird where three calcareous horizons outcrop over a distance of six miles from Loch Slapin to Elgol.
Caption Text 3	The three limestones are the Cyrena, Ostrea hebridica and Paludina scotia limestones. The Jurassic limestone beds are not considered to be worth exploiting for anything other than local use.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Elgol, Skye, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Elgol
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527777 Nullipore sands from Craig, Plockton, Invernesshire

The Caption:

Caption Title	Nullipore sands from Craig, Plockton, Invernesshire
Subtitle	
Caption Text 1	Nullipore or coralline sand from Craig, two miles east of Plockton, near Kyle of Lochalsh. In certain areas the calcareous alga <i>Lithothamnion calcarreum</i> flourishes in great abundance and broken fragments of the thallus form dazzling, creamy-white beaches which are composed almost exclusively of this material. British Geological Survey Petrology Collection sample number MC 7553.
Caption Text 2	<i>Lithothamnion calcarreum</i> lives in the upper and lower sub-littoral zone. In places they have been dug for agricultural lime.
Caption Text 3	Colonies have been found elsewhere in Scotland, especially on Skye near Dunvegan, particularly from three bays the largest of which is Camus Ban north of Rubha na Gairbhe.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Nullipore sands from Craig, Plockton, Invernesshire.
Materials	Rock specimen
Associated Place	Scotland, Invernesshire, Plockton, Craig
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Recent, 10,000 years to present
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527778 Limestone from Heast, Skye, Sutherland

The Caption:

Caption Title	Limestone from Heast, Skye, Sutherland
Subtitle	
Caption Text 1	The chief development of Liassic (Jurassic) limestones in Invernessshire is the Broadford district of Strath. Calcareous beds are found right around the coast of Broadford Bay and extend eastwards to Oblusa which lies half way between Broadford and Kyleakin. British Geological Survey Petrology Collection sample number MC 7554.
Caption Text 2	Southwards from Broadford this same outcrop extends for about three miles to Heast where this particular sample is from. It is a grey fine-grained limestone with a fossil bivalve clearly showing. O
Caption Text 3	Other occurrences of Liassic limestones are at Sconser, on the south side of Loch Sligachan and Hallaig and Susnish Point on Raasay.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Heast, Skye, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Heast
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527779 Limestone from Kilmarie, Skye, Invernessshire

The Caption:

Caption Title	Limestone from Kilmarie, Skye, Invernessshire
Subtitle	
Caption Text 1	This specimen is a medium-grained fossiliferous Cyrena Limestone from Kilmarie. The Cyrena Limestone is exposed in the banks of the Abhainn Cille Mhaire at Kilmarie, 150 yards west of the church and 650 yards south-west of Strathaird House. British Geological Survey Petrology Collection sample number MC 7555.
Caption Text 2	The Cyrena Limestone is the lowest of three horizons in the Jurassic Great Estuarine Series. The three horizons are close together, the Cyrena Limestone is about 70 feet thick, and consists of a massive blue, and often crystalline limestone band in calcareous sandstone.
Caption Text 3	The other two calcareous bands are the beds with <i>Ostrea hebridica</i> and the <i>Paludina scotia</i> limestones. The Cyrena Limestone at Kilmarie was easily accessible and was formerly burnt in a nearby kiln.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Kilmarie, Skye, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Kilmarie
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527780 Cyrena Limestone from Elgol, Skye, Invernessshire

The Caption:

Caption Title	Cyrena Limestone from Elgol, Skye, Invernessshire
Subtitle	
Caption Text 1	A dark fossiliferous limestone called the Cyrena Limestone outcrops in the vicinity of Elgol in Strathaird on Skye. British Geological Survey Petrology Collection sample number MC 7556.
Caption Text 2	Cyrena Limestones are noted as massive blue sandy and often crystalline limestones and calcareous sandstones, full of small bivalves, Cyrena, generally crushed together with alternate dark shales. Beneath the Cyrena Limestone are the Cyrena Shales and above are the Ostrea hebridica and Paludina scotia limestones. They are part of the Great Estuarine Series of the Jurassic.
Caption Text 3	The Great Estuarine Series or Great Estuarine Group as it is known today is a freshwater sequence with a freshwater fauna. The group is dated by the marine strata above and below and is regarded as Bathonian in age.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Cyrena Limestone from Elgol, Skye, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Elgol
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527781 Limestone from the Chapel Quarry, Kirkaldy, Fifeshire

The Caption:

Caption Title	Limestone from the Chapel Quarry, Kirkaldy, Fifeshire
Subtitle	
Caption Text 1	A specimen of limestone from the Chapel Quarry, 2 miles north-west of Kirkaldy, Fifeshire and from the lower part of the seam where the limestone is baked by the close proximity to the underlying quartz-dolerite sill. The specimen is light whitish-grey with pink bands and contains a fossil coral. BGS Sample SL 10. British Geological Survey Petrology Collection sample number MC 7557.
Caption Text 2	The average thickness of the limestone is 30 feet and the general dip is north at 10 degrees. The seam has been worked, opencast for the most part, on a length of face of about 300 yards; but some recent development in the lowest 10 to 12 feet was by mining, the overburden being too heavy to permit further quarrying. Immediately below the seam there is a thick sill of quartz-dolerite, and a thin dolerite dyke cuts vertically through the limestone in the western part of the quarry. The stone is of moderately good quality and has been extensively worked. An attempt at development in the 1940s, however, proved unsatisfactory owing to the tendency of the limestone to fuse in the kilns.
Caption Text 3	Petrological examination disclosed the presence of the mineral datolite (calcium borosilicate) in some quantity, irregularly distributed through the limestone, and associated with other alteration products of a thermal metamorphism. The presence of boron in considerable quantities was confirmed by the chemical analyses, and may have been the cause of the difficulty

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from the Chapel Quarry, Kirkaldy, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Kirkaldy, Chapel Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527782 Limestone from Loch an Eilean, near Aviemore, Invernessshire

The Caption:

Caption Title	Limestone from Loch an Eilean, near Aviemore, Invernessshire
Subtitle	
Caption Text 1	The specimen is a pale grey Dalradian Supergroup (Precambrian) limestone from the disused quarry at the north end of Loch an Eilean, two and three-quarter miles south by east of Aviemore. BGS Sample SL 15. British Geological Survey Petrology Collection sample
Caption Text 2	The limestone is a massive, coarsely crystalline white type with numerous subordinate minerals, including quartz, alkali-feldspar, tremolite and zoisite. It showed on analysis : Calcium carbonate, 86.64 per cent, magnesium carbonate 0.88 per cent, insoluble residue 10.03
Caption Text 3	The limestone dips south-west at 30 degrees to 50 degrees in the main part of the quarry, but near the top it turns over and dips gently west-south-west into the hillside. The thickness is about 15 feet. There is no overburden at the quarry but hill-scrree partly hides the continuation of the limestone to north-north-west. There are probably appreciable reserves in this direction, but their exploitation might be difficult due to folding and to the manner in which the limestone, in the flat parts of the folds, dips into the hillside under schist.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Loch an Eilean, near Aviemore, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Aviemore, Loch an Eilean
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527783 Gilmerton Limestone from Ferniehill Quarry, Midlothian

The Caption:

Caption Title	Gilmerton Limestone from Ferniehill Quarry, Midlothian
Subtitle	
Caption Text 1	A very fine-grained uniform mid-grey limestone belonging to the Carboniferous Gilmerton Limestone. The workings in the Gilmerton Limestone at Gilmerton are amongst the earliest recorded in the Lothians, but they have long been abandoned. They are still, however, quite accessible for observation in quarries and mines, at Ferniehill, west of Gilmerton. BGS Sample SL 19. British Geological Survey Petrology Collection sample number MC 7559.
Caption Text 2	At Ferniehill the section is composed of sandstone, 12 feet, limy shale, 12 feet, massive yellow-weathering limestone, 35 feet, blue encrinital limestone, 8 feet.
Caption Text 3	The limestone resources of Midlothian are almost wholly contained in the two lowest subdivisions of the Scottish Carboniferous formation, the Calciferous Sandstone Series and the Carboniferous Limestone Series.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Gilmerton Limestone from Ferniehill Quarry, Midlothian.
Materials	Rock specimen
Associated Place	Scotland, Midlothian, Ferniehill Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527784 Limestone from Clippens Lime Works, Straiton, Midlothian

The Caption:

Caption Title	Limestone from Clippens Lime Works, Straiton, Midlothian
Subtitle	
Caption Text 1	Limestone from Clippens Lime Works, Straiton, Midlothian. The Burdiehouse Limestone was originally worked opencast in a series of quarries between Straiton and Burdiehouse Mains and also to the south of Pentland Mains. Later it was wrought in a pit at Clippens by the Shotts Iron Company Limited. British Geological Survey Petrology Collection sample number MC
Caption Text 2	The seam dips south-eastwards at 30 degrees, and has a thickness of 27 feet. It is extracted in three leaves or benches; bottom leaf, 84 feet; middle leaf, 7 feet; top leaf, 114 feet. The top leaf is the purest of the three, but the superiority is exaggerated somewhat by the presence of bituminous matter in the two lower leaves. This imparts a dark colour to the limestone but does not impair its suitability for burning. The low silica and low total insoluble residue of all three beds are noteworthy.
Caption Text 3	The stone is used for iron smelting, cement-making and lime-burning, and as ground limestone for agricultural use. Five kilns of the continuous-burning, open type, are in operation. There is also a grinding plant and a ground-lime plant. The lime is prepared in the ground-lime and small-lime forms and is marketed for agricultural, plaster and building purposes. Reserves of stone available by mining are plentiful.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Clippens Lime Works, Straiton, Midlothian.
Materials	Rock specimen
Associated Place	Scotland, Midlothian, Straiton, Clippens Lime Works
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527785 Limestone from Randerston, near Fife Ness, Fifeshire

The Caption:

Caption Title	Limestone from Randerston, near Fife Ness, Fifeshire
Subtitle	
Caption Text 1	Weathered fossiliferous limestone from Randerston, Kingsbarns, Fifeshire. It is a finely laminated muddy limestone with abundant shell fragments. BGS Sample SL 29. British Geological Survey Petrology Collection sample number MC 7561.
Caption Text 2	There are thin calcareous beds in the Randerston area just north-west of Fife Ness and in the ground between Crail and Anstruther. These lie in the Calciferous Sandstone Series, and in composition and physical character they resemble strongly the cementstones of the lower Carboniferous sequence elsewhere in the Midland Valley and in the Border counties. None of them is more than a few feet thick so there is no likelihood that they will ever be of economic
Caption Text 3	Old workings, both quarries and mines, occur in a number of places in East Fife and indicate a considerable amount of former exploitation. The limestone in nearly every case is one that was taken as the base of the Carboniferous Limestone Series in the original survey of the district. It has been found that this limestone corresponds to the Charlestown Main Limestone of West

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Randerston, near Fife Ness, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Kingsbarns, Randerstone
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527786 Limestone from the shore at Randerston, Kingsbarns, Fifeshire

The Caption:

Caption Title	Limestone from the shore at Randerston, Kingsbarns, Fifeshire
Subtitle	
Caption Text 1	Banded fine-grained pale brown to mid-grey limestone from the shore at Randerston, Kingsbarns, Fifeshire. BGS Sample SL 28. British Geological Survey Petrology Collection sample number MC 7562.
Caption Text 2	Limestones in the Randerston shore are of Carboniferous age. None of them is more than a few feet thick, the largest four feet, and are they are therefore considered to be of little economic use.
Caption Text 3	Fife possessed considerable reserves of easily accessible limestone worked by mining and opencast chiefly for agricultural and building purposes.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from the shore at Randerston, Kingsbarns, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Kingsbarns, Randerstone
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527787 Crinoidal limestone from Roscobie Quarry, three miles north of Dunfermline, Fifeshire

The Caption:

Caption Title Crinoidal limestone from Roscobie Quarry, three miles north of Dunfermline, Fifeshire
Subtitle
Caption Text 1 Crinoidal limestone from Roscobie Quarry, three miles north of Dunfermline on the Saline Kelty Road, Fifeshire. BGS Sample SL 9. British Geological Survey Petrology Collection sample number MC 7563.
Caption Text 2 The seam, in the Charlestown Main Limestone varies from 12 to 60 feet in thickness. It has been extensively quarried and mined. The quarrying was mainly carried out in a reef-knoll dome of limestone similar to that at Charlestown. With increase of cover mining was resorted to, and the principal workings are now in thick limestone to the north-east of the opencast area. The thickness of limestone at the south end of the workings, however, is only about 12 feet.
Caption Text 3 Petrographically the limestone consists of a turbid, locally black powdered matrix apparently composed of shell debris and calcareous mud, with fragments of granular carbonate representing for the most part crinoid ossicles.

The Basic Record:

Simple Name Rock specimen
Brief Description Crinoidal limestone from Roscobie Quarry, three miles north of Dunfermline, Fifeshire.
Materials Rock specimen
Associated Place Scotland, Fifeshire, Dunfermline, Roscobie Quarry
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527788 Crinoidal limestone from Roscobie Quarry, three miles north of Dunfermline, Fifeshire

The Caption:

Caption Title Crinoidal limestone from Roscobie Quarry, three miles north of Dunfermline, Fifeshire
Subtitle
Caption Text 1 Crinoidal limestone from Roscobie Quarry, three miles north of Dunfermline, Fifeshire. The rock has a dark to black fine-grained matrix with crinoid ossicles. BGS Sample SL 9. British Geological Survey Petrology Collection sample number MC 7564.
Caption Text 2 The limestone is stratigraphically the Charlestown Main Limestone and varies from 12 to 60 feet in thickness. It belongs to the Lower Limestone Group of the Carboniferous. The quarrying was mainly carried out in a reef-knoll dome of limestone similar to that at Charlestown.
Caption Text 3 Two other limestones in the Lower Limestone Group that are economically significant are the Charlestown Station or Hurllet and the Charlestown Green.

The Basic Record:

Simple Name Rock specimen
Brief Description Crinoidal limestone from Roscobie Quarry, three miles north of Dunfermline, Fifeshire.
Materials Rock specimen
Associated Place Scotland, Fifeshire, Dunfermline, Roscobie Quarry
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527789 Limestone from the Vicar's Bridge, one and three-quarter miles east of Dollar, Kinrossshire

The Caption:

Caption Title Limestone from the Vicar's Bridge, one and three-quarter miles east of Dollar, Kinrossshire
Subtitle
Caption Text 1 Limestone from the Vicar's Bridge, one and three-quarter miles east of Dollar, Kinrossshire. It is a fine-grained dark limestone with prominent bedding. BGS Sample SL 7. British Geological Survey Petrology Collection sample number MC 7565.
Caption Text 2 The western edge of Bishop Hill lies in Kinross, and it is in this area alone that the county possesses workable limestone.
Caption Text 3 Away from Bishop Hill, there are only two places in which limestone has been worked in the past to an appreciable extent, namely at Vicar's Bridge and at Westmuir, east of Dollar, where there were once mines and quarries in the Carboniferous Castlecary Limestone. These occurrences, however, cannot be looked on as of value at the present day.

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from the Vicar's Bridge, one and three-quarter miles east of Dollar, Kinrossshire.
Materials Rock specimen
Associated Place Scotland, Kinrossshire, Dollar, Vicar's Bridge
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527790 Limestone from Deeppsykehead, near Carlops, Peeblesshire

The Caption:

Caption Title	Limestone from Deeppsykehead, near Carlops, Peeblesshire
Subtitle	
Caption Text 1	A dark grey uniform limestone from a stream at the east end of Deeppsykehead. BGS Sample SL 22. British Geological Survey Petrology Collection sample number MC 7566.
Caption Text 2	The locality, 800 yards east of Deeppsykehead shows the Bilston Burn Limestone. It crops out in the stream, but only the top foot or so was available for analysis. This proved to be an irony dolomite rather similar to the same bed in Esperston Quarry, Midlothian.
Caption Text 3	Limestones of economic value, however, are present in Peeblesshire, worked in the extreme north of the county, where a small area between Carlops, Macbiehill and Whim is occupied by Carboniferous strata. These limestones belong to the Lower Limestone Group, the sequence being the same as that of Midlothian.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Deeppsykehead, near Carlops, Peeblesshire.
Materials	Rock specimen
Associated Place	Scotland, Peeblesshire, Carlops, Deeppsykehead
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date	15/06/2003

P527791 Limestone from the Duloch Limestone Mine, near Dunfermline, Fifeshire

The Caption:

Caption Title Limestone from the Duloch Limestone Mine, near Dunfermline, Fifeshire
Subtitle
Caption Text 1 A light grey fine-grained limestone with small fossils from the Duloch Limestone Mine, near Dunfermline, Fifeshire. BGS Sample SL 8. British Geological Survey Petrology Collection sample number MC 7567.
Caption Text 2 A curved outcrop, concave southwards, extends north-east from the Firth of Forth at Charlestown and then east by Dunfermline to Duloch, then turning south to Inverkeithing.
Caption Text 3 At Charlestown the limestones are well exposed and the Charlestown Main, which is exceptionally thick, has been worked for nearly 200 years. Elsewhere in this area, however, there is a considerable drift-cover, and the small thickness of the limestones in general makes it unlikely that any further work will be done on them.

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from the Duloch Limestone Mine, near Dunfermline, Fifeshire.
Materials Rock specimen
Associated Place Scotland, Fifeshire, Dunfermline, Duloch Limestone Mine
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period

Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.

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P527792 Limestone from Bent's Quarry, Macbiehill, Peeblesshire

The Caption:

Caption Title	Limestone from Bent's Quarry, Macbiehill, Peeblesshire
Subtitle	
Caption Text 1	A medium-grained limestone containing a few what are though to be crinoids weathering to pale brown from Bent's Quarry, 700 yards south of Macbiehill, Peeblesshire. Macbiehill Quarry is in close proximity to the Bankhead Quarry. The limestone is Carboniferous in age. BGS Sample SL 23. British Geological Survey Petrology Collection sample number MC 7568.
Caption Text 2	These two quarries are practically adjacent. The North Greens Limestone is worked on a face 12 feet high. The bed dips east at 5 degrees under a cover of 4 to 8 feet of drift at present (1945). The stone was burnt on the site.
Caption Text 3	An analysis of limestone from the quarry indicates: calcium carbonate, 86.95 per cent; magnesium carbonate, 1.45 per cent; insoluble residue 8.72 per cent. The recorded thickness of the North Greens Limestone in neighbouring mineral bores is about 60 ft. The basal 12 to 20 feet are always of better quality than the higher part, and it is this lower portion that is quarried

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Bent's Quarry, Macbiehill, Peeblesshire.
Materials	Rock specimen
Associated Place	Scotland, Peeblesshire, Macbiehill, Bent's Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527793 Limestone from Chapel Limestone Quarry, near Kirkcaldy, Fifeshire

The Caption:

Caption Title	Limestone from Chapel Limestone Quarry, near Kirkcaldy, Fifeshire
Subtitle	
Caption Text 1	A coarsely crystalline banded fossiliferous and possibly brecciated limestone from Chapel Limestone Quarry, about two miles north-west of Kirkcaldy, Fifeshire. Chapel quarries lie just north of Chapel village. BGS Sample SL 10. British Geological Survey Petrology Collection sample number MC 7569.
Caption Text 2	The average thickness of the limestone is 30 feet, and the general dip is north at 10 degrees. The seam has been worked, opencast for the most part, on a length of face of about 300 yards; but development in the lowest 10 to 12 feet was by mining, the overburden being too heavy to permit of further quarrying. Immediately below the seam there is a thick sill of quartz-dolerite, and a thin dolerite dyke cuts vertically through the limestone in the western part of the quarry. The stone is of moderately good quality and has been extensively worked. A recent attempt at development, however, proved unsatisfactory owing to the tendency of the limestone to fuse in
Caption Text 3	Petrological examination has shown the presence of the mineral datolite (calcium borosilicate) in some quantity, irregularly distributed through the limestone, and associated with other alteration products of a thermal metamorphic nature. The presence of boron in considerable quantities was confirmed by the chemical analyses, and may be the cause of the difficulty in the

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Chapel Limestone Quarry, near Kirkcaldy, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Kirkcaldy, Chapel Quarry
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527794 Limestone from Petershill Quarry, near Bathgate, West Lothian

The Caption:

Caption Title	Limestone from Petershill Quarry, near Bathgate, West Lothian
Subtitle	
Caption Text 1	A coarse crystalline limestone from Petershill Quarry half a mile east of Bathgate. BGS Sample SL 53. British Geological Survey Petrology Collection sample number MC 7570.
Caption Text 2	The quarry is in Carboniferous Petershill (Blackhall) Limestone. The thickness is 40 to 60 feet but only 15 to 20 feet are now exposed. The limestone dips west at 25 degrees to 35 degrees, and is overlain by 4 to 12 feet of boulder clay. The stone, in general, is a cream-coloured, shelly, somewhat siliceous limestone up to 66 feet thick. The full thickness is nowhere
Caption Text 3	The quarry was formerly extensively worked as part of a series of quarries from Petershill northwards to Wester Tartraven farm. Because of its rather steep dip an overburden of rock as well as of drift overlies the limestone on the west side of the quarries. This overburden is probably least at Glenbare Quarry at the south end of the exposure.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Petershill Quarry, near Bathgate, West Lothian.
Materials	Rock specimen
Associated Place	Scotland, West Lothian, Bathgate, Petershill Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527795 Limestone from Parkmore Quarry, Dufftown

The Caption:

Caption Title	Limestone from Parkmore Quarry, Dufftown
Subtitle	
Caption Text 1	A limestone with coarse crystalline banding of white calcite with a weathered surface from Parkmore Quarry, three-quarters of a mile north-east of Dufftown. BGS Sample SL 70. British Geological Survey Petrology Collection sample number MC 7571.
Caption Text 2	The quarry was located close to the main road and on a siding of the L.N.E.R. Ground limestone was produced in a large modern plant, and some stone was burnt. The limestone is a grey, medium to coarse type with some accessory quartz. There are many calcite veins and some schist partings.
Caption Text 3	The limestone dips north 35 degrees west at 40 degrees to 50 degrees, and was 105 feet thick. The main face was 50 feet high, and a lower bench was also worked. The overburden was light. The reserves were considered very large, and the quarry could be extended along the strike to the north.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Parkmore Quarry, Dufftown.
Materials	Rock specimen
Associated Place	Scotland, Banffshire, Dufftown, Parkmore Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527796 Limestone from Saltoun Lime Works, East Lothian

The Caption:

Caption Title	Limestone from Saltoun Lime Works, East Lothian
Subtitle	
Caption Text 1	A fine-grained grey limestone with calcite vein from Saltoun Lime Works, besides Middle Main Farm, three-quarters of a mile north-west of the village, East Lothian. BGS Sample SL 62. British Geological Survey Petrology Collection sample number MC 7572.
Caption Text 2	A long opencast uncovered both the Carboniferous Long Craig and the Skateraw limestones. The Long Craig limestones were exposed in the part of the quarry north of the road, but this is now obscured. They are cut off by a fault just south of the road, and the higher Skateraw limestones appear in the south end of the quarry. Here 10 feet of massive limestone, of which 6 feet are visible, were wrought under 14 feet of limestone and limy shale in bands. Above the rock is an overburden of 6 to 12 feet of boulder clay.
Caption Text 3	The limestone from the quarry was of excellent quality, the analysis indicating as follows: calcium carbonate, 94.59 per cent; magnesium carbonate, 1.91 per cent; insoluble residue 3.21 per cent.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Saltoun Lime Works, East Lothian.
Materials	Rock specimen
Associated Place	Scotland, East Lothian, Saltoun Lime Works
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527797 Limestone from the Harburn Limestone Mine, near West Calder, Midlothian

The Caption:

Caption Title	Limestone from the Harburn Limestone Mine, near West Calder, Midlothian
Subtitle	
Caption Text 1	A cherty limestone from the Carboniferous Burdiehouse Limestone formation from the Harburn Limestone Mine, two and a half miles south-east of West Calder, Midlothian. BGS Sample SL 54. British Geological Survey Petrology Collection sample number MC 7573.
Caption Text 2	The Burdiehouse Limestone was mined here by the Glasgow Iron and Steel Company Ltd. The thickness of the seam is about 27 feet. There is a two-inch rib of coal about 10 feet from the top. The stone is removed in benches, and pillars are left to support the roof. The bed dips westwards at about 5 degrees. The limestone is a fine-grained rather dark rock of uniform quality. It was used as a flux, for cement manufacture, and ground for agricultural purposes. It is recorded that up to 1949 it was not burnt for lime.
Caption Text 3	The present Harburn Limestone Mine is the second mine of this name. The first mine was situated three-quarters of a mile north-west of the later mine, beside Harburn Quarry. The workings, which covered about 19 acres of ground, were abandoned in 1916. Some stone was also extracted at the now disused Torphin Quarry, adjacent to the railway.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from the Harburn Limestone Mine, near West Calder, Midlothian.
Materials	Rock specimen
Associated Place (Nature of Grid Reference	Scotland, Midlothian, West Calder, Harburn Mine Location specimen was found
Display Date / Period (Nature of Association)	Carboniferous 354-290 Ma. Stratigraphic period
Associated Name (Nature of	Glasgow Iron and Steel Company Ltd. Mining company
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527798 Limestone from Carnbee Den, Anstruther, Fifeshire

The Caption:

Caption Title	Limestone from Carnbee Den, Anstruther, Fifeshire
Subtitle	
Caption Text 1	A fine-grained dark grey limestone from Carnbee Den, three miles north-west of Anstruther, Fifeshire. BGS Sample SL 33. British Geological Survey Petrology Collection sample number MC 7574.
Caption Text 2	Old workings, both quarries and mines occur in a number of places in East Fife indicating a considerable amount of former working especially in the Cults, Ceres and Largo Ward. In most instances the limestone that was exploited is the equivalent of the Charlestown Main Limestone of west Fifeshire.
Caption Text 3	An analysis of limestone from Carnbee Den is calcium carbonate 34.97 per cent, magnesium carbonate 20.34 per cent, iron carbonate 12.7 per cent and insoluble residue 21.14 per cent.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Carnbee Den, Anstruther, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Anstruther, Carnbee Den
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527799 Limestone from Cameron Burn, Lathockar, Fifeshire

The Caption:

Caption Title	Limestone from Cameron Burn, Lathockar, Fifeshire
Subtitle	
Caption Text 1	A pale grey, fine-grained, uniform limestone that has weathered to a light brown from the Cameron Burn, Lathockar, two miles north-east of Radernie. BGS Sample SL 40. British Geological Survey Petrology Collection sample number MC 7575.
Caption Text 2	The limestone bed is two feet thick at this location. A chemical analysis of a typical sample from this location is calcium carbonate 52.18 per cent, magnesium carbonate 36.40 per cent and insoluble matter 5.37 per cent.
Caption Text 3	Old workings in the area, both quarries and mines indicate a considerable amount of former workings. The distribution of limestones is affected by faulting and igneous intrusions.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Cameron Burn, Lathockar, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Lathockar, Cameron Burn
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527800 Limestone from Backland (Backfield) of Ladeddie, Pitscottie, Fifeshire

The Caption:

Caption Title	Limestone from Backland (Backfield) of Ladeddie, Pitscottie, Fifeshire
Subtitle	
Caption Text 1	A coarse fossiliferous mid-grey crinoidal limestone from Ladeddie Quarries, located just south of the farm steading of Backfield of Ladeddie. BGS Sample SL 47. British Geological Survey Petrology Collection sample number MC 7576.
Caption Text 2	In 1949 it was reported that the limestone was not now exposed in the quarry. Some blocks of dolomitic limestone were found lying near the old kilns. The dip of the beds is south-east at six to eight degrees and the ground gently rises in the same direction.
Caption Text 3	There were two limestones recorded, a lower whitish-grey limestone about eleven feet thick with a impure fossiliferous limestone two feet thick above it. Blaes, fakes and sandstones make up the succession above the limestones.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Backland (Backfield) of Ladeddie, Pitscottie, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Pitscottie, Backland of Ladeddie
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527801 Limestone from the Cults and Pitlessie Limeworks, four miles south-south-west of Cupar, Fifehire

The Caption:

Caption Title	Limestone from the Cults and Pitlessie Limeworks, four miles south-south-west of Cupar, Fifehire
Subtitle	
Caption Text 1	A dark grey, fine-grained limestone with white calcite veins from Cults and Pitlessie Limeworks, four miles south-south-west of Cupar, Fifehire. BGS Sample SL 48. British Geological Survey Petrology Collection sample number MC 7577.
Caption Text 2	The Charlestown Main Limestone crops out on a hill-slope facing north, from Cults westwards to Coalton of Burnturk, a distance of about 2 miles.
Caption Text 3	The limestone has been quarried along practically the whole outcrop, and mining was resorted to when the overburden became too thick for opencast work. The workings at Cults, by 1949, had extended nearly 4 miles south from the outcrop.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from the Cults and Pitlessie Limeworks, four miles south-south-west of Cupar, Fifehire.
Materials	Rock specimen
Associated Place	Scotland, Fifehire, Cupar, Cults and Pileessie Limeworks
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527802 Limestone from Espeston, Midlothian

The Caption:

Caption Title	Limestone from Espeston, Midlothian
Subtitle	
Caption Text 1	A very fine-grained, uniform dark grey limestone from Espeston, Midlothian. BGS Sample SL 43. British Geological Survey Petrology Collection sample number MC 7578.
Caption Text 2	The quarries originally opened up here were in the Carboniferous Bilston Burn Limestone, but later, not much stone had been taken from them, and a new quarry has been started in the North Greens Limestone about a mile away from the kilns, on the right bank of the North Middleton Burn, half a mile south of Esperston Farm.
Caption Text 3	The beds in the basal 10 feet are clean and massive, but towards the top the courses are thinner, with some shale partings and occasional nodules of chert up to 6 inches in diameter. The limestone from both quarries was originally all burnt, grinding limestone is now also in operation and a plant for grinding was added later.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Espeston, Midlothian.
Materials	Rock specimen
Associated Place	Scotland, Midlothian, Esperton
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527803 Limestone from Oldday, Balneil Den, Balcarres, Colinsburgh, Fifeshire

The Caption:

Caption Title	Limestone from Oldday, Balneil Den, Balcarres, Colinsburgh, Fifeshire
Subtitle	
Caption Text 1	A medium-grained fossiliferous crystalline limestone from Oldday, Balneil Den, Balcarres, Colinsburgh, Fifeshire. BGS Sample SL 34. British Geological Survey Petrology Collection sample number MC 7579.
Caption Text 2	In the Cults, Ceres and Largo Ward of Fife there are a number of old limestone workings, both quarries and mines. This specimen is from an outcrop that runs for two miles northeastwards from Colinsburgh and has three old quarries, at Ballcarres, Gibliston and Baldutho.
Caption Text 3	On the whole the old workings do not show much promise for working, most of the surface resources have been exploited so what limestones that are left will be present at moderate

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Oldday, Balneil Den, Balcarres, Colinsburgh, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Colinsburgh, Balcarres, Balneil Den
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527804 Limestone from Thomsford Bridge, Hatton Burn, Lundin Links, Fifeshire

The Caption:

Caption Title	Limestone from Thomsford Bridge, Hatton Burn, Lundin Links, Fifeshire
Subtitle	
Caption Text 1	A pale grey, fossiliferous vuggy limestone from Thomsford Bridge, Hatton Burn, Lundin Links Station, Fifeshire. BGS Sample SL 36. British Geological Survey Petrology Collection sample number MC 7580.
Caption Text 2	This limestone is situated at the top of the Carboniferous Upper Limestone Group and immediately below the Passage Group. It is part of the Levenseat Limestone and occurs in a small basin between Thomsford and Hatton.
Caption Text 3	It was reported in 1902 that the workings have long since been abandoned. This area of Fife is rich in limestone resources working mainly the Charlestown Main and the Hurllet seams.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Thomsford Bridge, Hatton Burn, Lundin Links, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Lundin Links, Hatton Burn, Thomsford Bridge
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527805 Limestone from Old West Quarry, Forthar, Freuchie, Fifeshire

The Caption:

Caption Title	Limestone from Old West Quarry, Forthar, Freuchie, Fifeshire
Subtitle	
Caption Text 1	A fine-grained, dark limestone with lithostrotion coral from Old West Quarry, Forthar, one mile east-sout-east of Freuchie, Fifeshire. BGS Sample SL 50. British Geological Survey Petrology Collection sample number MC 7581.
Caption Text 2	The section at Freuchie of the Charlestown Main Limestone was as follows: sandstone, 3 feet shale; 8 feet; limestone, with parting, 10 feet; sandstone, fakes and shale, 3 feet; limestone, red, 2 feet; sandstone and shale, with coaly top, 1 foot, limestone, 18 feet; shale with sandstone, 5 feet. This limestone was formerly quarried and mined on a large scale, but was abandoned about 70 years ago. Reserves are probably considerable in depth to the south-east, but faulting might make further working troublesome. Road and rail access are convenient.
Caption Text 3	The county of Fife possesses large resources of limestone and has been worked for hundreds of years in both quarries and mines. Many of the older workings were exploited for lime in agriculture and quarries and kilns were at work all over the region.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Old West Quarry, Forthar, Freuchie, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Freuchie, Forthar, Old West Quarry
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527806 Limestone from the Harburn Limestone Mine, West Calder, Midlothian

The Caption:

Caption Title Limestone from the Harburn Limestone Mine, West Calder, Midlothian
Subtitle
Caption Text 1 A fine-grained, dark grey limestone with black carbonaceous fragments from the Harburn Limestone Mine, two and a half miles south-east of West Calder, Midlothian. BGS Sample SL 54. British Geological Survey Petrology Collection sample number MC 7582.
Caption Text 2 The Burdiehouse Limestone was mined here by the Glasgow Iron and Steel Co. Ltd. The thickness of the seam is about 27 feet. There is a two-inch rib of coal about 10 feet from the top. The stone was removed in benches, and pillars are left to support the roof. The bed dips west at about 5 degrees.
Caption Text 3 It is used as a flux, for cement manufacture, and ground for agricultural purposes.

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from the Harburn Limestone Mine, West Calder, Midlothian.
Materials Rock specimen
Associated Place Scotland, Midlothian, West Calder, Harburn Mine
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period
Associated Name Glasgow Iron and Steel Company Ltd.
(Nature of) Mining company
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.
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P527807 Limestone from Teassies, Lundin Links, Fifeshire

The Caption:

Caption Title Limestone from Teassies, Lundin Links, Fifeshire
Subtitle
Caption Text 1 A coarse-grained crystalline limestone with small vugs from Teassies, Lundin Links, Fifeshire. BGS Sample SL 37. British Geological Survey Petrology Collection sample number MC
Caption Text 2 Old workings in the Cults, Ceres and Largo Ward occur in a number of areas including Teassies, three miles north of Lundin Links Station. The limestone belongs to the Lower Limestone Group of the Carboniferous.
Caption Text 3 The distribution of the limestones in the area is controlled by faults and igneous intrusions. Generally speaking it lies in a syncline with a north-south axis, the western outcrop running northwards from near Largo through Ceres to Ladeddie and the eastern one from St. Monans and Elie through Largo Ward to Winthank and Lumbo.

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from Teassies, Lundin Links, Fifeshire.
Materials Rock specimen
Associated Place Scotland, Fifeshire, Lundin Links, Teassies
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period

Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.

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P527808 Crushed limestone from Onich, Invernesshire

The Caption:

Caption Title	Crushed limestone from Onich, Invernesshire
Subtitle	
Caption Text 1	Crushed limestone powder from Onich, as supplied to the Charlestown Lime Co. Ltd. in 1940. BGS Sample SL 35. British Geological Survey Petrology Collection sample number MC
Caption Text 2	There are two main limestones in Invernesshire south-east of the Great Glen and of Dalradian Supergroup (Precambrian) age, the Balachullish Limestone and the Appin Limestone.
Caption Text 3	The Appin Limestone crops out near Onich, on the north side of Loch Leven. It differs from the Balachullish Limestone in being dolomitic, but analyses of samples from the shore and from a disused quarry farther north show it to be of poor quality. It is doubtful therefore if the Invernesshire occurrences of the Appin Limestone are of economic value, although it should be noted that dolomites of fairly high quality occur in the same formation near Balachullish and Duror.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Crushed limestone from Onich, Invernesshire.
Materials	Rock specimen
Associated Place	Scotland, Invernesshire, Onich
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Associated Name	Charlestown Lime Co. Ltd.
(Nature of	Manufacturer of lime
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527809 Limestone from Baluachraig, Kilmartin, Argyllshire

The Caption:

Caption Title	Limestone from Baluachraig, Kilmartin, Argyllshire
Subtitle	
Caption Text 1	Banded crystalline limestone with small sulphides from Baluachraig, probably from the Baluachraig Quarry on the north-east side of the main road, 270 yards south-east of Baluachraig which lies one and a quarter miles south by west of Kilmartin, Argyllshire. BGS Sample SL 125. British Geological Survey Petrology Collection sample number MC 7585.
Caption Text 2	The limestone in the quarry is very variable in grain, and in the coarsest beds there are pebbles of quartz and feldspar up to half an inch in length in a matrix of calcite. The limestone dips west 30 degrees north at 70 degrees, and is at least 180 feet thick. The quarry face was recorded as 15 feet high with no overburden, and as being in a disused state. There are considerable reserves up the hillside to the east.
Caption Text 3	The specimen collected from the quarry showed on analysis: calcium carbonate 66.44 per cent, magnesium 0.55 per cent, insoluble residue 32.05 per cent.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Baluachraig, Kilmartin, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Kilmartin, Baluachraig
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527810 Limestone from Askomill Quarry, Campbeltown, Argyllshire

The Caption:

Caption Title	Limestone from Askomill Quarry, Campbeltown, Argyllshire
Subtitle	
Caption Text 1	A specimen of Loch Tay Limestone, a very coarse, blackish limestone or marble. Quartz is recorded as the principal impurity, along with pyrite and graphite. BGS Sample SL 128. British Geological Survey Petrology Collection sample number MC 7586.
Caption Text 2	Analysis showed: calcium carbonate 83.87 per cent, magnesium oxide 1.30 per cent, insoluble residue 14.83 per cent. Many calcite veins are present in the quarry, some stained with
Caption Text 3	The limestone dips east 25 degrees north at 25 degrees to 30 degrees and is 40 to 50 feet thick. The face of the quarry was recorded in 1949 as about 50 ft. high, excluding overburden, which amounts to 10 to 15 feet of boulder clay. Near the floor of the quarry there is a sill of epidiorite, 3 to 4 feet thick. The stone was worked to produce ground limestone.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Askomill Quarry, Campbeltown, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Campbeltown, Askomill Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527811 Limestone from Kilchrenan Quarry, Argyllshire

The Caption:

Caption Title	Limestone from Kilchrenan Quarry, Argyllshire
Subtitle	
Caption Text 1	A specimen of dark grey foliated limestone with calcite veins from Kilchrenan Quarry, located on the west side of the road to Taynuilt, Argyllshire. The rock is from the Tayvallich Limestone of Dalradian Supergroup (Precambrian) age. BGS Sample SL 123. British Geological Survey Petrology Collection sample number MC 7587.
Caption Text 2	The quarry is reported to have a dark grey to black, fine-grained limestone, with scattered quartz grains. Many veins of calcite occur. The limestone dips west 5 degrees north at 30 degrees and is 20 feet thick in the face. If it persists down to road-level, as appears likely, the total thickness would be at least 40 feet. The limestone showed on analysis: calcium carbonate 82.39 per cent, magnesium carbonate 0.88 per cent, insoluble residue 13.54 per cent.
Caption Text 3	The Tayvallich Limestones were formerly quarried at numerous localities around the south end of Loch Awe and Kilmartin, for example, at Fincharn and Eurach north of Kilmartin, and at Tayness and Baluachraig south-west and south of Kilmartin.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Kilchrenan Quarry, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Kilchrenan Quarry
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527812 Limestone from the Blair Atholl Limestone Quarry, Perthshire

The Caption:

Caption Title	Limestone from the Blair Atholl Limestone Quarry, Perthshire
Subtitle	
Caption Text 1	A medium-grained foliated crystalline limestone with a silver-grey colour from the Blair Atholl Limestone Quarry, Perthshire. The limestone is Dalradian Supergroup (Precambrian) in age. British Geological Survey Petrology Collection sample number MC 7588.
Caption Text 2	The Blair Atholl Limestones are, on the whole, purer than the Loch Tay Limestone. Moreover they are free from epidiorite sills. They form part of an extensive group of rocks termed the 'Blair Atholl Series', which can be readily divided in most districts into two groups, termed the 'Pale Group' and the 'Dark Group,' each containing distinctive types of limestone.
Caption Text 3	The limestones of the 'Pale Group' are of varying character and include saccharoidal marble and cream or salmon-coloured limestone with dark micaceous stripes. The 'Pale Group' also contains one band of white dolomite, traceable for two miles at Loch Moraig, north-east of Blair Atholl. The limestones of the 'Dark Group' are grey in colour and carbonaceous, and are associated with black graphitic schist. All the limestones in the immediate vicinity of Blair Atholl belong to this group. Around Blair Atholl itself limestone forms a number of outcrops.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from the Blair Atholl Limestone Quarry, Perthshire.
Materials	Rock specimen
Associated Place	Scotland, Perthshire, Blair Atholl Quarry
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527813 Limestone from Inverteil Quarry, near Kirkcaldy, Fifeshire

The Caption:

Caption Title	Limestone from Inverteil Quarry, near Kirkcaldy, Fifeshire
Subtitle	
Caption Text 1	A pale grey uniform limestone with crinoid ossicles from the Inverteil Quarry, near Kirkcaldy, Fifeshire. BGS Sample SL 121. British Geological Survey Petrology Collection sample number MC 7589.
Caption Text 2	From about two miles north-east of Inverkeithing the outcrop of the Carboniferous, Lower Limestone Group, Charlestown Main Limestone can be traced at intervals north-eastwards to Loch Gelly, and thence to Chapel. Beyond this it turns southwards by Raith to the Firth of Forth between Kirkcaldy and Kinghorn.
Caption Text 3	There were a number of quarries in the area including Chapel, two miles north-west of Kirkcaldy, Bogie Mains Quarry, one mile north-west of Kirkcaldy and Glenniston about one mile north of Auchtertool.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Inverteil Quarry, near Kirkcaldy, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Kirkcaldy, Inverteil Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

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Input Date	15/06/2003

P527814 Limestone from Clatteringwell Quarry, Bishop Hill, Kinrossshire

The Caption:

Caption Title	Limestone from Clatteringwell Quarry, Bishop Hill, Kinrossshire
Subtitle	
Caption Text 1	A weathered, muddy, pale grey limestone with orange iron staining from Clatteringwell Quarry, Bishop Hill, Kinrossshire. BGS Sample SL 102. British Geological Survey Petrology Collection sample number MC 7590.
Caption Text 2	The quarry worked the Carboniferous Charlestown Main Limestone. The limestone forms an outlier at the summit of Bishop Hill, resting on top of a quartz-dolerite sill about 250 feet thick. The contact with the sill is not exposed. There appears to be an area of about ten acres underlain by limestone.
Caption Text 3	The western edge of Bishop Hill is the only major potential source of limestone in Kinrossshire though other smaller outcrops exist in the county.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Clatteringwell Quarry, Bishop Hill, Kinrossshire.
Materials	Rock specimen
Associated Place	Scotland, Kinrossshire, Bishop Hill, Clatteringwell Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527815 Limestone from Inverteil, Fifeshire

The Caption:

Caption Title	Limestone from Inverteil, Fifeshire
Subtitle	
Caption Text 1	A grey uniform muddy limestone displaying a fossil shell, possibly a brachiopod from Inverteil, Fifeshire. BGS Sample SL 121. British Geological Survey Petrology Collection sample number MC 7591.
Caption Text 2	An outcrop of the Carboniferous, Lower Limestone Group, Charlestown Main Limestone can be traced from two miles north-east of Inverkeithing at intervals north-eastwards to Loch Gelly, and thence to Chapel. Beyond this it turns southwards by Raith to the Firth of Forth between Kirkcaldy and Kinghorn.
Caption Text 3	The principal seam in the Lower Limestone Group is the Charlestown Main Limestone, it is normally six to ten feet thick though it can swell out to twice that size where reef knolls have formed.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Inverteil, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Kirkcaldy, Inverteil Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527816 Limestone from Craignavie, Killin, Perthshire

The Caption:

Caption Title	Limestone from Craignavie, Killin, Perthshire
Subtitle	
Caption Text 1	A silvery-grey limestone from Craignavie, Killin, Perthshire. Stratigraphically, it belongs to the Loch Tay Limestone of Dalradian Supergroup (Precambrian) age. BGS Sample SL 2. British Geological Survey Petrology Collection sample number MC 7592.
Caption Text 2	The Loch Tay Limestone is of only moderate purity and there is always an appreciable amount of silica present. Calc-silicate minerals sometimes occur.
Caption Text 3	A number of localities near Killin were looked at in the 1940s and samples taken and analysed. As well as limestone from a small quarry at Craignavie, samples were taken from Dun Beag.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Craignavie, Killin, Perthshire.
Materials	Rock specimen
Associated Place	Scotland, Perthshire, Killin, Craignavie
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527817 Limestone from Vane Quarry, Benarty Hill, Kinrossshire

The Caption:

Caption Title	Limestone from Vane Quarry, Benarty Hill, Kinrossshire
Subtitle	
Caption Text 1	A brecciated fine-grained dark grey limestone with a weathered surface from Vane Quarry, north-east of Benarty Hill, Kinrossshire. The limestone is Upper Old Red Sandstone (Devonian) in age. BGS Sample SL 104. British Geological Survey Petrology Collection
Caption Text 2	There are only four main locations in Kinrossshire where limestone has been worked Clatteringwell Quarry on Bishop Hill, Vicar's Bridge east of Dollar and at Westmuir also near Dollar and this location at Vane Quarry.
Caption Text 3	The first three work Carboniferous Limestones (Charlestown Main Limestone at Clatteringwell and the Castlecary Limestone at the other two locations) while Vane Quarry is in Devonian cornstones.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Vane Quarry, Benarty Hill, Kinrossshire.
Materials	Rock specimen
Associated Place	Scotland, Kinrossshire, Benarty Hill, Vane Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527818 Limestone from Dun Beag, Killin, Perthshire

The Caption:

Caption Title	Limestone from Dun Beag, Killin, Perthshire
Subtitle	
Caption Text 1	A coarse silver-grey crystalline limestone with thin orange dolomite veins from Dun Beag, one-third of a mile south of Bridge of Lochay, Killin, Perthshire. The limestone is Dalradian Supergroup (Precambrian) in age. BGS Sample SL 3. British Geological Survey Petrology Collection sample number MC 7594.
Caption Text 2	Limestone is exposed in crag and stream sections on the west side of the main road, one-third of a mile south of the Bridge of Lochay. The limestone beds dip north-west at 20 degrees. A thickness of 20 feet is exposed in the crag, and of 40 feet in the stream to the south. Overburden consists of a certain amount of scree piled against the hillslope.
Caption Text 3	The reserves present are probably considerable, as the limestone could be worked along the slope for 150 yards between the crag and the burn, and could also be opened up south of the latter. To the west the limestone dips under epidiorite about 100 yards up the slope.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Dun Beag, Killin, Perthshire.
Materials	Rock specimen
Associated Place	Scotland, Perthshire, Killin, Dun Beag
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527819 Limestone from Sandydub Quarry, Saline, Fifeshire

The Caption:

Caption Title	Limestone from Sandydub Quarry, Saline, Fifeshire
Subtitle	
Caption Text 1	A dark greenish-grey, very fine limestone with black fossil fragments from Sandydub Quarry, Saline, Fifeshire. BGS Sample SL 117. British Geological Survey Petrology Collection sample number MC 7595.
Caption Text 2	The limestone is the Plean No. 2 Limestone of the Carboniferous, Upper Limestone Group. This outcrops in Sandydub Brae dipping north-west at about 8 degrees.
Caption Text 3	Fife possessed considerable reserves of easily accessible limestone, however most of the workable limestone is in the Lower Limestone Group, sources in the Upper Limestone Group should be considered of local importance only.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Sandydub Quarry, Saline, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Saline, Sandydub Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527820 Limestone from Caviehall Old Mine, Culross, Fifeshire

The Caption:

Caption Title	Limestone from Caviehall Old Mine, Culross, Fifeshire
Subtitle	
Caption Text 1	A medium-grained, crystalline, mid-grey limestone with orange weathering from Caviehall Old Mine, Culross, Fifeshire. BGS Sample SL 120. British Geological Survey Petrology Collection sample number MC 7596.
Caption Text 2	This limestone is probably the Castlecary Limestone, the top member of the Carboniferous Upper Limestone Group (Carboniferous Limestone Series) that outcrops one and a half miles west of Culross. The pale crystalline beds are characteristic of the Castlecary.
Caption Text 3	The Castlecary Limestone is also known as the Levenseat Limestone and is well developed in west Fife.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Caviehall Old Mine, Culross, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Culross, Caviehall Old Mine
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527821 Limestone from Black Devon, North Shaw Wood, Saline, Fifeshire

The Caption:

Caption Title Limestone from Black Devon, North Shaw Wood, Saline, Fifeshire
Subtitle
Caption Text 1 A dark, purple-grey limestone with black carbonaceous fragments from Black Devon, North Shaw Wood, Saline, Fifeshire. BGS Sample SL 115. British Geological Survey Petrology Collection sample number MC 7597.
Caption Text 2 This is probably from the Castlecary Limestone recorded from Black Devon one and a half miles west of Saline. It is the topmost bed of the Carboniferous Limestone Series (Upper Limestone Group). The limestone is recorded as being only one feet six inches thick.
Caption Text 3 The Castlecary Limestone cannot be regarded as a major source of limestone due to the narrowness of the limestone bed. Most limestones of economic importance in Fifeshire come from the more productive Lower Limestone Group where the thickness of major limestones are measured in tens of feet.

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from Black Devon, North Shaw Wood, Saline, Fifeshire.
Materials Rock specimen
Associated Place Scotland, Fifeshire, Saline, North Shaw Wood, Black Devon
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527822 Limestone from Turnalt Quarry, Argyllshire

The Caption:

Caption Title	Limestone from Turnalt Quarry, Argyllshire
Subtitle	
Caption Text 1	A very fine-grained dark grey and banded limestone from the Turnalt Quarry, Argyllshire. The limestone belongs to the Shira Limestone of Dalradian Supergroup (Precambrian) age. BGS Sample SL 124. British Geological Survey Petrology Collection sample number MC 7598.
Caption Text 2	The only occurrence of the Shira Limestone of economic importance is this locality at Turnalt. It was quarried and burnt on a small scale for local requirements. The stone is a fine-grained, bluish limestone with thin phyllitic partings and subordinate quartz, showing on analysis: calcium carbonate 86.04 per cent, magnesium carbonate 2.69 per cent, insoluble residue 10.64
Caption Text 3	There is a general dip in a direction east 25 degrees south at 70 degrees, but the strata are repeated by a small anticline and syncline on the east side of the quarry. The limestone is about 15 feet thick stratigraphically, but owing to repetition by the folds just mentioned shows a width of 30 feet in the quarry-face. The reserves are very considerable to the north-north-east.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Turnalt Quarry, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Turnalt Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527823 Limestone from the foreshore immediately west of Culross, Fifeshire

The Caption:

Caption Title	Limestone from the foreshore immediately west of Culross, Fifeshire
Subtitle	
Caption Text 1	A very fine-grained uniform dark grey limestone that outcrops on the foreshore immediately west of Culross, Fifeshire. BGS Sample SL 119. British Geological Survey Petrology Collection sample number MC 7599.
Caption Text 2	The limestone is probably the Carboniferous Upper Limestone Group Calmy Limestone. This outcrops on the shore at Culross. The limestone is also called the Jenny Pate Limestone.
Caption Text 3	The limestone has been used locally as a building stone, large blocks can be found in the old pier and the old parts of Culross were paved with cobbles of it.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from the foreshore immediately west of Culross, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Culross
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527824 Limestone from Port Ramsay, Lismore, Argyllshire

The Caption:

Caption Title	Limestone from Port Ramsay, Lismore, Argyllshire
Subtitle	
Caption Text 1	A specimen of fine-grained dark grey limestone with coarse white calcite crystals in a vein from Port Ramsay, Lismore, Argyllshire. The rock is part of the Dalradian Supergroup (Precambrian) Lismore Limestone. BGS Sample SL 88. British Geological Survey Petrology Collection sample number MC 7600.
Caption Text 2	The island of Lismore consists mainly of limestone with partings and subordinate beds of black graphitic schist and igneous intrusions. The limestone varies considerably in composition. In the past the Lismore Limestone was quarried and burnt at numerous localities. The most important working was a large quarry situated 700 yards north-east of Port Salen (Sailean).
Caption Text 3	Limestone has also been worked in the past in a quarry just north of Port Ramsay. On analysis it showed: calcium carbonate 87.17 per cent, magnesium carbonate 0.25 per cent and insoluble residue 11.25 per cent.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Port Ramsay, Lismore, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Lismore, Port Ramsay
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527825 Limestone from Wilkie's Quarry, West Lomond Hill, Strathmiglio, Fifeshire

The Caption:

Caption Title Limestone from Wilkie's Quarry, West Lomond Hill, Strathmiglio, Fifeshire
Subtitle
Caption Text 1 A variably grey medium-grained crystalline limestone with thin veins from Wilkie's Quarry, West Lomond Hill, Strathmiglio, Fifeshire. The limestone is of Carboniferous age. BGS Sample SL 100. British Geological Survey Petrology Collection sample number MC 7601.
Caption Text 2 The Lomond Hills district, the high ground between Falkland and Leslie shows a number of more or less discontinuous outcrops of limestones in many places in close association with dolerite dykes.
Caption Text 3 There are many old limestone quarries, most of them in the Charlestown Main. The old Longcraigs and Wilkie's quarries on West Lomond Hill are of no economic significance.

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from Wilkie's Quarry, West Lomond Hill, Strathmiglio, Fifeshire.
Materials Rock specimen
Associated Place Scotland, Fifeshire, Strathmiglio, West Lomond Hill, Wilkies Quarry
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.
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Input Date 15/06/2003

P527826 Limestone from the Allt na Samhnachain Quarry (Loch Aline Quarry), Argyllshire

The Caption:

Caption Title	Limestone from the Allt na Samhnachain Quarry (Loch Aline Quarry), Argyllshire
Subtitle	
Caption Text 1	A specimen of pale grey limestone with fossil fragments from Allt na Samhnachain Quarry (Loch Aline Quarry), on the east side of Loch Aline, Argyllshire. The limestone is Lias, Jurassic in age and was worked for lime. BGS Sample SL 89. British Geological Survey Petrology Collection sample number MC 7602.
Caption Text 2	There are three types of limestone exposed in the quarry, a lower 8 feet of massive limestone with shale partings and a few Gryphaea, 10 feet of nodular limestone with many shale partings (forming 40 per cent of the whole) and abundant Gryphaea and at the top, 5 feet of massive limestone with shale partings and some Gryphaea shells.
Caption Text 3	The chief occurrences of Jurassic limestones in Argyll are in the Lower Lias of Loch Aline and Ardnamurchan. In Ardnamurchan there are disused quarries at Mingary Castle, Kilchoan and Swordle.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from the Allt na Samhnachain Quarry (Loch Aline Quarry), Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Allt na Samhnachain Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527827 Limestone from Corrie, Arran, Buteshire

The Caption:

Caption Title	Limestone from Corrie, Arran, Buteshire
Subtitle	
Caption Text 1	The specimen is a fine-grained limestone of variable colour, pale brown-purple-grey. It contains irregular bands. The limestone belongs to the Corrie (Hurlet) Limestone and is Carboniferous in age. BGS Sample SL 82. British Geological Survey Petrology Collection sample number MC 7603.
Caption Text 2	There is a line of disused quarries following the outcrop up the steep hillside above Corrie Harbour for a distance of about 400 yards before it is cut off by a fault.
Caption Text 3	There are other occurrences of the Corrie Limestone on Arran located between Corrie and Brodick. Some have considerable deposits that would require to be mined.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Corrie, Arran, Buteshire.
Materials	Rock specimen
Associated Place	Scotland, Buteshire, Arran, Corrie
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527828 Limestone from the Creag Aoil, Bridge of Lundy, near Fort William, Invernessshire

The Caption:

Caption Title	Limestone from the Creag Aoil, Bridge of Lundy, near Fort William, Invernessshire
Subtitle	
Caption Text 1	A strongly-banded pale grey coarse crystalline limestone with thin dark grey bands from Creag Aoil, two and a half miles east by north of Bridge of Lundy, five miles east-north-east of Fort William. It belongs to the Ballachulish Limestone of Dalradian Supergroup (Precambrian) age. BGS Sample SL 85. British Geological Survey Petrology Collection sample number MC
Caption Text 2	It was reported in 1949 that an old quarry on the north face of the crag had recently been reopened and ground limestone was being produced.
Caption Text 3	The limestone is a medium-grained, light grey, banded type with very thin micaceous partings. It carries, as impurities, a little quartz, muscovite and biotite. It dips west-north-west at 70 degrees to 80 degrees and is at least 350 ft. thick. Reserves are immense, as the main crag is 400 yards long, and smaller crags show the outcrop as a whole to be 1,000 yards long.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from the Creag Aoil, Bridge of Lundy, near Fort William, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Bridge of Lundy, Creag Aoil
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527829 Limestone from the Mains of Midstrath Quarry, Aboyne, Aberdeenshire

The Caption:

Caption Title	Limestone from the Mains of Midstrath Quarry, Aboyne, Aberdeenshire
Subtitle	
Caption Text 1	A coarse-grained, uniform, crystalline, speckled, pale grey limestone with dark weathered surfaces. The limestone from Mains of Midstrath Quarry is located four and a half miles east-south-east of Aboyne and is of Dalradian Supergroup (Precambrian) age. BGS Sample SL 78. British Geological Survey Petrology Collection sample number MC 7605.
Caption Text 2	It was worked in a massive, coarse, greyish-white limestone composed of calcite with subordinate scapolite and pyroxene. The stone, which is at least 30 ft. thick, lies horizontally or dips gently east at the east end of the quarry.
Caption Text 3	The quarry worked the Deeside Limestone. Other quarries in similar rock are located at Gallowhill Wood and Wood Cottage nearby.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from the Mains of Midstrath Quarry, Aboyne, Aberdeenshire.
Materials	Rock specimen
Associated Place	Scotland, Aberdeenshire, Aboyne, Mains of Midstrath Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527830 Limestone from Corrie, Arran, Buteshire

The Caption:

Caption Title	Limestone from Corrie, Arran, Buteshire
Subtitle	
Caption Text 1	A limestone showing a highly deformed faulted surface. Its colour is variable, purple and grey. The limestone is the Carboniferous Corrie (Hurlet) Limestone. BGS Sample SL 82. British Geological Survey Petrology Collection sample number MC 7606.
Caption Text 2	The quarry and mine workings are now abandoned. The full thickness of the limestone is said to be 20 ft, it lies under a cover of sandstone and shale reaching 30 feet. The individual limestone beds are separated by partings of reddish fossiliferous shales; and the roof of the old mines is formed of a hard band crowded with <i>Productus giganteus</i> .
Caption Text 3	The present line of quarries follows the outcrop up the steep hillside above Corrie Harbour for a distance of about 400 yards before it is cut off by a fault. Other occurrences of the Corrie Limestone are to be found between Corrie and Brodick; and some of these, for example, that at An Sgriob, 14 miles south by west of Corrie Harbour and 8 miles north of Maol Donn are considerable deposits. They would require to be mined.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Corrie, Arran, Buteshire.
Materials	Rock specimen
Associated Place	Scotland, Buteshire, Arran, Corrie
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527831 Limestone from Strichen, Aberdeenshire

The Caption:

Caption Title	Limestone from Strichen, Aberdeenshire
Subtitle	
Caption Text 1	A grey, compact granulite with thin dull white limestone laminae. Composed of quartz and potash feldspar with alternate laminae rich in pale green tremolite and/or pyroxene from an old quarry 550 yards south-east of Strichen station. BGS Sample SL 145. British Geological Survey Petrology Collection sample number MC 7607.
Caption Text 2	A Dalradian metamorphic limestone. Limestones occur in the Glenbuchat and Corgarff districts as well as further to the north-east with exposures in the Coreen Hills, at Largie, Old Meldrum, Auchnagatt, Fetterangus, Strichen, Fraserburgh and elsewhere.
Caption Text 3	These locations are regarded as minor and of only local importance.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Strichen, Aberdeenshire.
Materials	Rock specimen
Associated Place	Scotland, Aberdeenshire, Strichen
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527832 Loch Tay limestone from near Ronachan House, West Loch Tarbert, Argyllshire

The Caption:

Caption Title Loch Tay limestone from near Ronachan House, West Loch Tarbert, Argyllshire
Subtitle
Caption Text 1 A uniform, blue-grey, medium-grained, crystalline limestone belonging to the Dalradian Supergroup (Precambrian) Loch Tay Limestone. It is from Ronachen Quarry, 1300 yards east by south of Ronachan House, West Loch Tarbert, Argyllshire. BGS Sample SL 147. British Geological Survey Petrology Collection sample number MC 7608.
Caption Text 2 The limestone has accessory quartz, albite, muscovite, clinozoisite and pyrite. The thickness of the worked band is about 24 feet and 30 feet to the east is another band 18 feet thick.
Caption Text 3 There are considerable reserves. The limestone was worked for ground limestone.

The Basic Record:

Simple Name Rock specimen
Brief Description Loch Tay limestone from near Ronachan House, West Loch Tarbert, Argyllshire.
Materials Rock specimen
Associated Place Scotland, Argyllshire, Loch Tarbert, Ronachan House
(Nature of Grid Reference) Location specimen was found
Display Date / Period Precambrian, Dalradian 750-515 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date 15/06/2003

P527833 Limestone from Portgower, Sutherland

The Caption:

Caption Title	Limestone from Portgower, Sutherland
Subtitle	
Caption Text 1	A pale grey limestone containing numerous shells from the Jurassic 'Boulder Beds' south-west of the 'Fallen Stack', Portgower, Sutherland. BGS Sample SL 162. British Geological Survey Petrology Collection sample number MC 7609.
Caption Text 2	Jurassic limestone in thin beds is to be found on the east coast at Portgower, Brora and Golspie. It is of such poor quality, however, that there is little likelihood of its ever again proving of value for lime; and reserves are not sufficient to make it worth investigation as a
Caption Text 3	Sutherland contains very large reserves of limestone at Durness and Eriboll and also in Assynt. Apart from this there are very few limestones elsewhere in Sutherland.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Portgower, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Portgower
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527834 Limestone from Portgower, Sutherland

The Caption:

Caption Title	Limestone from Portgower, Sutherland
Subtitle	
Caption Text 1	A fine-grained, fossiliferous limestone from the Jurassic Brora Arenaceous Series, Ardassie Point, Brora, Sutherland. BGS Sample SL 161. British Geological Survey Petrology Collection sample number MC 7610.
Caption Text 2	A dull, dark grey compact limestone. Composed of a base of intermingled clear, finely granular calcite and very fine-grained calcite in which are set angular grains of quartz, irregular granular groups of pyrite, splinters of coaly matter, accessory muscovite, biotite and siliceous pebbles, and a few 'galls' of calcareous grit.
Caption Text 3	Jurassic limestones are not worked commercially. Usually of only very local significance.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Portgower, Sutherland.
Materials	Rock specimen
Associated Place	Scotland, Sutherland, Portgower
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527835 Limestone from Darnley Quarry, near Nitshill station, Renfrewshire

The Caption:

Caption Title	Limestone from Darnley Quarry, near Nitshill station, Renfrewshire
Subtitle	
Caption Text 1	Limestone from the more southerly of Darnley quarries, about one mile south-east of Nitshill station, Renfrewshire. BGS Sample SL 161. British Geological Survey Petrology Collection sample number MC 7611.
Caption Text 2	Grey, compact, uniformly fine-grained limestone with sharp angular fracture. It has small shelly and crinoidal fragments scattered rather sparsely through a very fine-grained turbid base composed of finely divided carbonate and clay and numerous small grains and rhombs of carbonate up to 0-2 mm. across.
Caption Text 3	At present only the Calmy Limestone can be looked upon as an economic proposition. It is worked and burnt at the Darnley quarries, about one mile south-east of Nitshill station. Its thickness is 11.5 feet in three posts, separated by thin partings of limy shales. The dip is gently undulating. Overburden consists of shale 0 to 6 feet under boulder clay up to 10 feet. The kilns are close to the road and are served by a full-gauge mineral railway. Reserves were considered to be large, especially for mining.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Darnley Quarry, near Nitshill station, Renfrewshire.
Materials	Rock specimen
Associated Place	Scotland, Renfrewshire, Nitshill Station, Darnley Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527836 Limestone from Robbery Head, Lybster, Caithness

The Caption:

Caption Title	Limestone from Robbery Head, Lybster, Caithness
Subtitle	
Caption Text 1	Dark fine-grained dolomitic limestone, thinly laminated in shades of grey. Robbery Head, south of Lybster, Caithness. BGS Sample SL 167. British Geological Survey Petrology Collection sample number MC 7612.
Caption Text 2	There are several different kinds of calcareous beds in Caithness but only one of these, namely the shell sand of the John o' Groat's area, is of substantial economic interest. Of the other sorts, there are two different types of limestone in the Middle Old Red Sandstone, freshwater lake marl is found in several areas, and one or two springs deposit calcareous tufa.
Caption Text 3	The calcareous beds associated with the flagstones of the Middle Old Red Sandstone have been examined in several places, that at Robbery Head, two miles south-west of Lybster, showed 52.41 per cent calcium carbonate, and 12-15 per cent magnesium carbonate.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Robbery Head, Lybster, Caithness.
Materials	Rock specimen
Associated Place	Scotland, Caithness, Lybster, Robbery Head
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527837 Dolomite from Newbigging Mine, South Lums, Burntisland, Fifeshire

The Caption:

Caption Title	Dolomite from Newbigging Mine, South Lums, Burntisland, Fifeshire
Subtitle	
Caption Text 1	Dolomite vein in Carboniferous Burdiehouse or Grange Limestone from the Newbigging Mine, one mile west of Burntisland, Fifeshire. The dolomite is brown with lustrous crystalline surfaces, composed of an aggregate of anhedral ankerite of uniform grain size, and of a uniform pale brown tint. BGS Sample SL 172. British Geological Survey Petrology Collection sample number MC 7613.
Caption Text 2	In the vicinity of faults, and along zones of crush and disturbance, there is a good deal of veining, individual veins sometimes extending to several feet in width. The vein-filling is mainly dark-brown crystalline ferro-dolomite, but coarsely crystalline white calcite veining is
Caption Text 3	An analysis of the ferro-dolomite showed the following composition: calcium carbonate 53.15 per cent, magnesium carbonate 25.97 per cent, iron carbonate 19.19 per cent, insoluble residue 0.46 per cent.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dolomite from Newbigging Mine, South Lums, Burntisland, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Burntisland, South Lums, Newbigging Mine
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527838 Flaggy limestone from Halkirk station, Caithness

The Caption:

Caption Title	Flaggy limestone from Halkirk station, Caithness
Subtitle	
Caption Text 1	Flaggy limestone from a stream four miles east-south-east of Halkirk station. The limestone is a black limestone flag with thin lamination in shades of grey. BGS Sample SL 163. British Geological Survey Petrology Collection sample number MC 7614.
Caption Text 2	The calcareous beds associated with the flagstones of the Middle Old Red Sandstone have been examined in several places, and analyses were made in two cases. That at Robbery Head, 2 miles south-west of Lybster, the other, from a stream section at this location.
Caption Text 3	This specimen when analysed showed 28.93 per cent calcium carbonate, and 12.15 per cent magnesium carbonate.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Flaggy limestone from Halkirk station, Caithness.
Materials	Rock specimen
Associated Place	Scotland, Caithness, Halkirk Station
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527839 Limestone from Murrayshall Lime Works, Cambusbarron, Stirlingshire

The Caption:

Caption Title	Limestone from Murrayshall Lime Works, Cambusbarron, Stirlingshire
Subtitle	
Caption Text 1	Carboniferous Murrayshall (Hurlet) Limestone from the Murrayshall Limeworks, Cambusbarron, 14 miles south-west of Stirling. BGS Sample SL 159. British Geological Survey Petrology Collection sample number MC 7615.
Caption Text 2	A black, compact, fine-grained limestone showing conchoidal fracture; specks of pyrite and crinoid columnals are sparsely distributed. Composed of a turbid, very fine-grained matrix of calcareous fossil debris, calcite granules, and probably some clay, in which are numerous fragmentary large and small shells, crinoid columnals, foraminifera, spines and polyzoa.
Caption Text 3	The quality of the Murrayshall Limestone (S.L. 159) is shown by the following percentage figures: calcium carbonate 86.56, magnesium carbonate 2.28, insoluble residue 8.18. The Murrayshall (Hurlet) Limestone crops out on the west side of Gillies Hill, south of Cambusbarron, and underlies the Stirling dolerite sill throughout the area. The old workings were entered by an adit driven from Cambusbarron southwards to cut the limestone through an east-west upthrow fault.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Murrayshall Lime Works, Cambusbarron, Stirlingshire.
Materials	Rock specimen
Associated Place	Scotland, Stirlingshire, Cambusbarron, Murrayshall Limeworks
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527840 Limestone from Old Quarry, Ardlethen, Aberdeenshire

The Caption:

Caption Title	Limestone from Old Quarry, Ardlethen, Aberdeenshire
Subtitle	
Caption Text 1	Limestone from Old Quarry, half a mile north of Ardlethen, Aberdeenshire. A pale grey, fine-grained limestone with some thin calcite veins. BGS Sample SL 146. British Geological Survey Petrology Collection sample number MC 7616.
Caption Text 2	It is composed of a matrix of granular calcite (0.2-0.4 mm grain-size) containing a large number of phlogopite flakes and grains of diopside. The limestone is Dalradian Supergroup (Precambrian) in age.
Caption Text 3	Aberdeenshire is poor in limestones of economic value. The limestones are all metamorphic rocks belonging to the Dalradian. The best known is the Deeside Limestone.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Old Quarry, Ardlethen, Aberdeenshire.
Materials	Rock specimen
Associated Place	Scotland, Aberdeenshire, Ardlethan
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527841 Limestone from Hopetoun Wood Quarry, Abercorn, West Lothian

The Caption:

Caption Title	Limestone from Hopetoun Wood Quarry, Abercorn, West Lothian
Subtitle	
Caption Text 1	A specimen of Carboniferous Burdiehouse Limestone from Hopetoun Wood Quarry, Abercorn, West Lothian. BGS Sample SL 173. British Geological Survey Petrology Collection sample number MC 7617.
Caption Text 2	Almost black aphanitic rock, resembling bituminous mudstone. Composed of a very fine calcite aggregate coloured brownish and yellowish by finely disseminated bituminous matter.
Caption Text 3	The Burdiehouse Limestone has been quarried at numerous locations along a sinuous outcrop between Newton and Parkhead. It is flaggy in character and said to have been about nine feet thick. Analysis of the limestone gives calcium carbonate, 86.46 per cent, magnesium carbonate, 2.84 per cent and insoluble residue 5.68 per cent.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Hopetoun Wood Quarry, Abercorn, West Lothian.
Materials	Rock specimen
Associated Place	Scotland, West Lothian, Abercorn, Hopetoun Wood Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527842 Limestone from Sursetter, Voe, Shetland

The Caption:

Caption Title Limestone from Sursetter, Voe, Shetland

Subtitle

Caption Text 1 A specimen of Weisdale Limestone from Sursetter, 1.5 miles north of Voe, Shetland. A moderately coarse-grained, pale grey to white, streaky, crystalline limestone. It is composed of coarsely sutured grains of calcite, about 1 mm. long, which tend to be elongated in a direction of rather poor schistosity defined by a general parallel orientation of muscovite. BGS Sample SL 190. British Geological Survey Petrology Collection sample number MC 7618.

Caption Text 2 The limestone outcrop is about 500 yards wide. It has been quarried in several places, both at Sursetter, in an excavation on the east side of the road 250 yards north-east of the farm house, and also farther to the north through Dale to Dales Voe. It reappears on Fora Ness, still farther north-east, where it terminates against a fault. Reserves are very large.

Caption Text 3 Percentage composition of the limestone (S.L. 190) is calcium carbonate 88.04, magnesium carbonate 1.80, insoluble residue 9.63.

The Basic Record:

Simple Name Rock specimen

Brief Description Limestone from Sursetter, Voe, Shetland.

Materials Rock specimen

Associated Place Scotland, Shetland Isles, Voe, Sursetter

(Nature of Grid Reference Location specimen was found

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P527843 Limestone from Berry, Scalloway, Shetland

The Caption:

Caption Title	Limestone from Berry, Scalloway, Shetland
Subtitle	
Caption Text 1	A grey coarsely crystalline limestone with occasional micaceous films from Berry, half a mile north of Scalloway, Shetland. The specimen has banded white calcite veins with a biotite augen, an eye-shaped feature. BGS Sample SL 185. British Geological Survey Petrology Collection sample number MC 7619.
Caption Text 2	Belonging to the Tingwall Limestone it consists essentially of metalimestone with intricately sutured grains of calcite, about 0-5 mm across, together with about 25 per cent of quartz in grains which are usually distributed singly among the calcite but also form small aggregates with or without associated muscovite.
Caption Text 3	The quarry is in the western branch of the limestone. The outcrop of limestone is about 100 yards wide, and the dip is west at 70 degrees to 80 degrees. Analysis of the specimen gives the following percentages (S.L. 185): calcium carbonate, 82.37, magnesium carbonate, 1.78, insoluble residue 13.19.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Berry, Scalloway, Shetland.
Materials	Rock specimen
Associated Place	Scotland, Shetland Isles, Scalloway, Berry
(Nature of	Location specimen was found
Grid Reference	
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527844 Limestone from Sursetter, Voe, Shetland

The Caption:

Caption Title	Limestone from Sursetter, Voe, Shetland
Subtitle	
Caption Text 1	A specimen of Weisdale Limestone from Sursetter, 1.5 miles north of Voe, Shetland. A very coarse-grained, white, banded pale metalimestone. It has a white calcite vein and is micaceous. BGS Sample SL 190. British Geological Survey Petrology Collection sample
Caption Text 2	The Weisdale Limestone has been worked at Sursetter and farther to the north at Dale. It forms an outcrop 500 yards wide. Percentage composition of the limestone (S.L. 190) is calcium carbonate 88.04, magnesium carbonate 1.80, insoluble residue 9.63.
Caption Text 3	Shetland has very extensive reserves of crystalline metamorphic limestone with a calcium carbonate content of 80 to 90 per cent. The limestones traverse the mainland in a north-south direction and are concentrated for the most part in the central portion of the island between Scalloway on the south and Mossbank to the north.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Sursetter, Voe, Shetland.
Materials	Rock specimen
Associated Place	Scotland, Shetland Isles, Voe, Sursetter
(Nature of Grid Reference	Location specimen was found
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Input Date	15/06/2003

P527845 Limestone from Girsta, Shetland

The Caption:

Caption Title	Limestone from Girsta, Shetland
Subtitle	
Caption Text 1	The Tingwall Limestone from Girsta Quarry, near shore of Wadbister Voe and 550 yards north-east of Girstla school, Shetland. A pale grey, fine-grained crystalline limestone. The rock is composed of interlocking grains of calcite 0.5 mm across. BGS Sample SL 187. British Geological Survey Petrology Collection sample number MC 7621.
Caption Text 2	Tingwall Limestone in this belt is about 300 yards wide and a quarry was opened near the middle of the belt. The drift cover is thin. The limestone is banded and lensed with calcite and a little quartz, but was comparatively free from impurities when seen in 1931.
Caption Text 3	The quarry has been worked intermittently for many years, and the stone burnt in a kiln on the spot. Analysis of material from Girsta (S.L. 187) showed percentages as follows: calcium carbonate 76.47 per cent, magnesium carbonate, 3.41 per cent, insoluble residue 16.73 per cent, including silicon dioxide 11.02 per cent.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Girsta, Shetland.
Materials	Rock specimen
Associated Place	Scotland, Shetland Isles, Girstla
(Nature of Grid Reference	Location specimen was found
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	10
Image File	P527845.tif
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Input Date	15/06/2003

P527846 Limestone from Bay of Fladdabister, Lerwick, Shetland

The Caption:

Caption Title	Limestone from Bay of Fladdabister, Lerwick, Shetland
Subtitle	
Caption Text 1	A medium-grained, grey crystalline limestone with veins of white and pink calcite from the south side of the Bay of Fladdabister. The limestone contains thin dark seams. BGS Sample SL 184. British Geological Survey Petrology Collection sample number MC 7622.
Caption Text 2	A metamorphic limestone. Pink and blue crystalline limestone forms the Ness of Fladdabister and extends to the south-west for a distance of over half a mile with a width of about 440 yards. It is cut off on the west by a fault. There is a good deal of schist interbanded with the limestone in some places. The dip is mainly north-west at 20 degrees to 35 degrees from the Fladdabister-Okraquoy road.
Caption Text 3	Reserves are abundant and overburden is negligible. A smaller outcrop of the same limestone, about 300 yards square, occurs in the Bay of Okraquoy, half a mile south of Fladdabister on the south side of the bay. On analysis this limestone (S.L. 184) showed the following percentages: calcium carbonate, 89.64, magnesium carbonate, 2.01, insoluble residue 6.37.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Bay of Fladdabister, Lerwick, Shetland.
Materials	Rock specimen
Associated Place	Scotland, Shetland Isles, Lerwick, Bay of Fladdabister
(Nature of	Location specimen was found
Grid Reference	

Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	10
Image File	P527846.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527847 Limestone from Weisdale, Flemington, Shetland

The Caption:

Caption Title	Limestone from Weisdale, Flemington, Shetland
Subtitle	
Caption Text 1	A massive, pale grey, siliceous fine-grained, crystalline limestone with patches of coarse muscovite from Weisdale, a quarry on the west side of the road half a mile south of Flemington, Shetland. BGS Sample SL 189. British Geological Survey Petrology Collection sample number MC 7623.
Caption Text 2	It is composed of equidimensional grains of calcite, 0-5 mm across, with quartz occurring in interstitial aggregates of small grains, 0.1-0.2 mm across, and forming about 30 per cent by volume of the rock.
Caption Text 3	There is a considerable amount of interbanding with schist, and the stone as a whole was found to be poor in quality. It showed the following percentages (S.L. 189): calcium carbonate 35.03, magnesium carbonate 3.58, carbon dioxide 29.07, insoluble residue 30.85.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Weisdale, Flemington, Shetland.
Materials	Rock specimen
Associated Place	Scotland, Shetland Isles, Flemington, Weisdale
(Nature of Grid Reference	Location specimen was found
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527848 Limestone from Bay of Fladdabister, Lerwick, Shetland

The Caption:

Caption Title Limestone from Bay of Fladdabister, Lerwick, Shetland
Subtitle
Caption Text 1 A mid-grey crystalline metamorphic limestone cut by veins of white and pink calcite from Fladdabister, six miles south-south-west of Lerwick. BGS Sample SL 184. British Geological Survey Petrology Collection sample number MC 7624.
Caption Text 2 Pink and blue crystalline limestone forms the Ness of Fladdabister and extends to the south-west for a distance of over half a mile with a width of about 440 yards.
Caption Text 3 An analysis of this limestone (S.L. 184) showed the following percentages: calcium carbonate, 89.64, magnesium carbonate, 2.01, insoluble residue 6.37.

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from Bay of Fladdabister, Lerwick, Shetland.
Materials Rock specimen
Associated Place Scotland, Shetland Isles, Lerwick, Bay of Fladdabister
(Nature of
Grid Reference Location specimen was found

Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.

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Image File P527848.tif
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527849 Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire

The Caption:

Caption Title	Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire
Subtitle	
Caption Text 1	A specimen of the Carboniferous Burdiehouse Limestone, 'Top Bed' from Newbigging Mine, Nine Lums, one mile west of Burntisland. BGS Sample SL 219. British Geological Survey Petrology Collection sample number MC 7625.
Caption Text 2	Dull pale cream-coloured limestone, containing in many places clear quartz grains, black bodies and scattered carbonaceous fragments. The rock is composed of very finely divided calcite slightly recrystallized. Ostracod valves are numerous, and when entire contain coarse-grained clear calcite.
Caption Text 3	The outcrop extends for a distance of about three-quarters of a mile in an east-west direction from Grange to Dalachy, and is indicated by a line of old quarries, all of which have long been abandoned.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Burntisland, Nine Lums, Newbigging Mine
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

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Image File	P527849.tif
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Input Date	15/06/2003

P527850 Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire

The Caption:

Caption Title	Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire
Subtitle	
Caption Text 1	A specimen of the Burdiehouse Limestone, 'Flooring' from the Newbigging Mine, Nine Lums, one mile west of Burntisland. It belongs to the Oil Shale Group of the Carboniferous. BGS Sample SL 216. British Geological Survey Petrology Collection sample number MC 7626.
Caption Text 2	A dull fawn-grey limestone, composed of very finely granular calcite recrystallized to grains reaching 0.06 mm across. In this matrix are scattered fragments of shells, mainly ostracod, and of cellular organisms and some quartz grains of 0.2 mm grain-size.
Caption Text 3	The Burdiehouse Limestone is a high-grade stone that was used principally for fluxing. It comes to the surface in the core of the Burntisland anticline along a line of outcrops extending from Dalachy, a mile east of Aberdour, to Burntisland Golf Course, about 1 mile north-east of the town. Even in this short distance it is broken into by the volcanic rocks of the Binn, and at its eastern end reserves are doubtful on account of contemporaneous volcanic rocks replacing part of the sequence. The chief workable area is in the neighbourhood of Nine Lums, a mile west of Burntisland. Here it has been quarried extensively along a length of outcrop of about half a mile and also mined over a considerable area.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Burntisland, Nine Lums, Newbigging Mine
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527851 Dolomite from Chapel Limestone Quarry, Kirkcaldy, Fifeshire

The Caption:

Caption Title	Dolomite from Chapel Limestone Quarry, Kirkcaldy, Fifeshire
Subtitle	
Caption Text 1	Coarse, bluish dolomite, mottled with duller, cream-coloured dolomite from Chapel Limestone Quarry, about two miles north-west of Kirkcaldy, Fifeshire. BGS Sample SL 210. British Geological Survey Petrology Collection sample number MC 7627.
Caption Text 2	The dolomite belongs to the Carboniferous Lower Limestone Group, Charlestown Main Limestone. The specimen is from 22-23 feet from the base of quarry face.
Caption Text 3	As a result of the folded and faulted character of the Carboniferous rocks in Fife the rocks of the Lower Limestone Group are brought to the surface in a number of different areas. The three limestones of economic interest in this part of the sequence, namely, the Charlestown Station or Hurllet, the Charlestown Green, and the Charlestown Main or Blackhall are present throughout the whole district, but nearly everywhere it is only the last-mentioned that is of importance.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dolomite from Chapel Limestone Quarry, Kirkcaldy, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Kirkcaldy, Chapel Limestone Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527852 Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire

The Caption:

Caption Title	Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire
Subtitle	
Caption Text 1	A dull fawn-grey limestone, containing scattered smooth-surfaced black bodies which include limestone belonging to the Burdiehouse Limestone, 'Bottom Bed', Oil Shale Group of the Carboniferous. It is from the Newbigging Mine, Nine Lums, one mile west of Burntisland. BGS Sample SL 217. British Geological Survey Petrology Collection sample number MC
Caption Text 2	A typical section of the Burdiehouse Limestone is as follows from bottom upwards: 6 feet of ganister pavement, Limestone Bottoming (not worked) 2 to 4 feet; Limestone, Flooring, one to one and a half feet; Limestone, Bottom Bed, five feet; Limestone, Middle Bed, four feet; Limestone, Top Bed, four and a half feet. The roof is composed of fakes and shales with limy
Caption Text 3	The limestone was mined by Carron Company for use in iron smelting.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Burntisland, Nine Lums, Newbigging Mine
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527853 Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire

The Caption:

Caption Title	Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire
Subtitle	
Caption Text 1	Dull fawn-grey limestone containing a few black bodies and laminated locally by indefinite dark brown laminae. The specimen belongs to the Burdiehouse Limestone, 'Middle Bed' of the Oil Shale Group of Carboniferous age. BGS Sample SL 218. British Geological Survey Petrology Collection sample number MC 7629.
Caption Text 2	The limestone of the 'Middle Bed' is four feet thick and after analysis it has been found to contain calcium carbonate 53.87 per cent; magnesium carbonate 0.77 per cent; iron as iron oxide 0.87 per cent; and insoluble residue at 1.11 per cent.
Caption Text 3	Exploitation was entirely by mining, the workings being approached from Nine Lums by a level cross-cut mine which intersects the limestone about 200 yards north of the old quarries. The mouth of the mine was on the Aberdour-Burntisland road and near the main L. & N.E. railway-line.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Burntisland, Nine Lums, Newbigging Mine
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Image File	P527853.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527854 Limestone from the Chapel Limestone Mine, Kirkcaldy, Fifeshire

The Caption:

Caption Title	Limestone from the Chapel Limestone Mine, Kirkcaldy, Fifeshire
Subtitle	
Caption Text 1	A specimen of the Carboniferous, Lower Limestone Group, Charlestown Main Limestone, sampled from 12-22 feet above the base of the quarry face. BGS Sample SL 211. British Geological Survey Petrology Collection sample number MC 7630.
Caption Text 2	It is a grey compact, translucent limestone, with numerous spots of a white fibrous mineral. The rock is composed of granular calcite, of 0.1-0.4 mm in grain size.
Caption Text 3	Chapel Quarries lie just north of Chapel village. The average thickness of the limestone is 30 feet and the general dip is 10 degrees to the north.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from the Chapel Limestone Mine, Kirkcaldy, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Kirkcaldy, Chapel Limestone Quarry
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Image File	P527854.tif
Image Copyright	British Geological Survey © NERC. All rights reserved.
Inputter	R.P. McIntosh
Input Date	15/06/2003

P527855 Limestone from the Chapel Limestone Mine, Kirkcaldy, Fifeshire

The Caption:

Caption Title	Limestone from the Chapel Limestone Mine, Kirkcaldy, Fifeshire
Subtitle	
Caption Text 1	A specimen of the Carboniferous, Lower Limestone Group, Charlestown Main Limestone, sampled from 6-9 feet above the base of quarry face. BGS Sample SL 213. British Geological Survey Petrology Collection sample number MC 7631.
Caption Text 2	The limestone is a dull grey limestone with numerous white spots and scarcer pale green spots, and with a band in which a greenish mineral is more abundant than calcite and is streaked out parallel to the band.
Caption Text 3	The limestone is composed of granular calcite, 0.02 mm-0.6 mm grain-size, together with numerous large grains representing crinoid ossicles.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from the Chapel Limestone Mine, Kirkcaldy, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Kirkcaldy, Chapel Limestone Quarry
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527856 Limestone from Richmond Quarry, Dufftown, Banffshire

The Caption:

Caption Title	Limestone from Richmond Quarry, Dufftown, Banffshire
Subtitle	
Caption Text 1	A grey crystalline limestone belonging to the Sandend Group of the Dalradian Supergroup (Precambrian) age and from the Richmond Quarry, Dufftown, Banffshire. BGS Sample SL 239. British Geological Survey Petrology Collection sample number MC 7632.
Caption Text 2	The limestone is composed of closely twinned interlocking and often sutured grains of calcite, about 1.5 mm across, and subordinate quartz forming not more than 5 per cent, except in small pockets.
Caption Text 3	The quarry was formerly worked for agricultural lime and later as a source for roadstone. On analysis (S.L. 239) it showed: calcium carbonate, 82.75 per cent, magnesium carbonate, 8.33 per cent, insoluble residue 7.98 per cent.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Richmond Quarry, Dufftown, Banffshire.
Materials	Rock specimen
Associated Place	Scotland, Banffshire, Dufftown, Richmond Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527857 Limestone from Strollamus, Skye, Invernesshire

The Caption:

Caption Title	Limestone from Strollamus, Skye, Invernesshire
Subtitle	
Caption Text 1	A specimen of the Jurassic Great Estuarine Series limestone that has been contact metamorphosed by proximity to the nearby granophyre. The specimen is from Allt Eoghainn, 200 yards south of the old main road, Strollamus, Skye, Invernesshire. BGS Sample SL 239. British Geological Survey Petrology Collection sample number MC 7633.
Caption Text 2	It is a patchily grey and white altered limestone, the grey part effervescing freely with cold dilute HCl, while the white part is insoluble and shows the fibrous character of wollastonite.
Caption Text 3	Shelly limestones and shales of the Great Estuarine Series are exposed in the Allt Eoghainn from 200 yards to 300 yards south of the old road, with dip south-east at 42 degrees to 65 degrees but are rather thin. Some of the limestone beds appear to be of good quality. Stone nearest the granophyre intrusion is highly altered, the analysis (S.L. 243) showing CaO 40.57 per cent; MgO 0.30, carbon dioxide, 11.22, insoluble residue 40.55 per cent.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Strollamus, Skye, Invernesshire.
Materials	Rock specimen
Associated Place	Scotland, Invernesshire, Skye, Strollamus
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527858 Calcareous tufa, Tornapress Bridge, Loch Kishorn, Ross and Cromarty

The Caption:

Caption Title	Calcareous tufa, Tornapress Bridge, Loch Kishorn, Ross and Cromarty
Subtitle	
Caption Text 1	Calcareous tufa from the roadside 680 yards south of Tornapress Bridge, Loch Kishorn, Ross and Cromarty. BGS Sample SL 254. British Geological Survey Petrology Collection sample number MC 7634.
Caption Text 2	A flesh-coloured, porous mass of tufa, composed of a turbid mass of very fine-grained calcium carbonate showing irregularly concentric growths from many centres. The open aggregate formed by these growths is partly filled by a brownish, slightly ferruginous marl containing small organic debris and scarce grains of quartz and feldspar.
Caption Text 3	Durness Limestone of Group II, lavender to reddish in colour, forms a cliff about 20 ft. high, the dip being to east. It is a compact dolomite with flinty fracture and containing numerous small grains of quartz. A spring issues from the limestone a short distance above the top of the cliff and forms a waterfall, depositing calcareous tufa. The tufa was of sufficient amount to be a useful source of lime for local use.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Calcareous tufa, Tornapress Bridge, Loch Kishorn, Ross and Cromarty.
Materials	Rock specimen
Associated Place	Scotland, Ross and Cromarty, Loch Kishorn, Tornapress Bridge
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Recent, 10,000 years to present
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Image File	P527858.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527859 Limestone from Broadford, Skye, Invernessshire

The Caption:

Caption Title	Limestone from Broadford, Skye, Invernessshire
Subtitle	
Caption Text 1	A white, grey-mottled, altered limestone (marble) of aphanitic aspect. The limestone is Cambro-Ordovician Durness Limestone, Group II, Eilean Dubh, that has undergone contact metamorphism. It is from an old marble quarry, 14 miles north-west of Broadford church, Skye. BGS Sample SL 245. British Geological Survey Petrology Collection sample number MC
Caption Text 2	White marble, veined in places with grey and yellow. This locality is one of a number, between Camas na Sgianadin and the Broadford River a mile and a half farther south, in which the Durness Limestone has been invaded by gabbro. The magnesia content of the marble is very variable but appears to be high in some places.
Caption Text 3	In thin section the analysed specimen consists of interlocking grains of calcite, about 0.5 mm. across, which enclose or interlock with aggregates of flaky brucite pseudomorphous after periclase. Forsterite is also present. In 1949 it was recorded that there were dumps at the old quarry containing several hundreds of tons of clean marble, and considerable reserves occur in the vicinity.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Broadford, Skye, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Broadford
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527860 Marble from Cill Chriosd (Kilchrist), Skye, Invernessshire

The Caption:

Caption Title Marble from Cill Chriosd (Kilchrist), Skye, Invernessshire
Subtitle
Caption Text 1 Cambro-Ordovician Durness Limestone marble from a quarry 800 yards south 40 degrees east of Cill Chriosd (Kilchrist) church, Skye, Invernessshire. BGS Sample SL 248. British Geological Survey Petrology Collection sample number MC 7636.
Caption Text 2 A white translucent saccharoidal marble composed of interlocking grains of dolomite which are equidimensional but only rarely rhomboid and are usually about 0.5 mm across. There are a very few grains of forsterite, serpentized along cracks.
Caption Text 3 White crystalline limestone that has undergone contact metamorphism to a brucite marble. Two openings were recorded in 1949, one east and the other west of the metalled tramway from near Suardal. Taken together they would make a face at least 30 ft. high. The marble contains brucite in places, but there appears to be also a good deal of non-magnesian material.

The Basic Record:

Simple Name Rock specimen
Brief Description Marble from Cill Chriosd (Kilchrist), Skye, Invernessshire.
Materials Rock specimen
Associated Place Scotland, Invernessshire, Skye, Cill Chriosd (Kilchrist) Church
(Nature of Grid Reference) Location specimen was found
Display Date / Period Cambro-Ordovician 545-443 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527861 Limestone from Tom an Aoil, Spean Bridge, Invernessshire

The Caption:

Caption Title	Limestone from Tom an Aoil, Spean Bridge, Invernessshire
Subtitle	
Caption Text 1	A grey, crystalline limestone of Ballachulish Limestone, Dalradian Supergroup (Precambrian) age and from a quarry 300 yards north-north-west of Tom an Aoil, one and three quarter miles east-north-east of Spean Bridge. BGS Sample SL 229. British Geological Survey Petrology Collection sample number MC 7637.
Caption Text 2	The bedding of the limestone is vertical and strikes north-north-east to north-east. The thickness of the band of high-quality limestone is at least 25 to 30 feet in the quarry, which is nowhere more than 15 feet deep. Overburden consists of a variable thickness of morainic gravel, probably not more than 6 feet thick and less in places. Reserves were considered considerable, as the band of high-grade limestone, 20 to 36 feet wide, can be traced by means of stream exposures for at least a mile to the north-east.
Caption Text 3	The limestone (S.L. 229) is similar to that at Creag Aoil and showed on analysis: calcium carbonate, 96.59 per cent, magnesium carbonate, 1.41 per cent, insoluble residue 2.38 per cent.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Tom an Aoil, Spean Bridge, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Spean Bridge, Tom an Aoil
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527862 Limestone from Glenlia Quarry, near Foyers, Invernessshire

The Caption:

Caption Title	Limestone from Glenlia Quarry, near Foyers, Invernessshire
Subtitle	
Caption Text 1	A dull, compact, grey, greenish and pinkish-mottled limestone. Composed essentially of calcite, talc-silicates, mica and feldspar, with accessory sphene. The limestone is of Dalradian Supergroup (Precambrian) age and is from the Glenlia Quarry, near Foyers, Invernessshire. BGS Sample SL 241. British Geological Survey Petrology Collection sample number MC 7638.
Caption Text 2	The calcite is in grains up to 0.5 mm across. The talc-silicates include zoisite, epidote, pyroxene and pale green tremolite.
Caption Text 3	As a whole the mainland of Invernessshire is not rich in limestone. One band of considerable size and high quality occurs in the Fort William area while others of lesser extent and purity are somewhat sparsely scattered throughout the county.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Glenlia Quarry, near Foyers, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Foyers, Glenlia Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527863 Limestone from St. Monans shore, Fifeshire

The Caption:

Caption Title Limestone from St. Monans shore, Fifeshire
Subtitle
Caption Text 1 The specimen is from the Charlestown Main Limestone of the Carboniferous, Lower Limestone Group and is from the St. Monans shore, east of the harbour. BGS Sample SL 234. British Geological Survey Petrology Collection sample number MC 7639.
Caption Text 2 A dull grey dolomite showing crinoid ossicles. These do not effervesce in cold dilute HCl, but a slight overall effervescence in the rock shows the dissemination of calcite.
Caption Text 3 The lowest beds of the Lower Limestone Group crop out on the shore one quarter of a mile east of Coalfarm which lies east of St. Monans station.

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from St. Monans shore, Fifeshire.
Materials Rock specimen
Associated Place Scotland, Fifeshire, St. Monan's shore
(Nature of Location specimen was found
Grid Reference
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.
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Input Date 15/06/2003

P527864 Limestone from St. Monans shore, Fifeshire

The Caption:

Caption Title	Limestone from St. Monans shore, Fifeshire
Subtitle	
Caption Text 1	The specimen is a dull grey limestone (dolomite) showing crinoid ossicles. It is from St. Monans shore, Fifeshire. BGS Sample SL 234. British Geological Survey Petrology Collection sample number MC 7640.
Caption Text 2	It is Carboniferous in age and belongs to the Lower Limestone Group. The lowest beds of the Lower Limestone Group crop out on the shore one quarter of a mile east of Coalfarm which lies east of St. Monans station.
Caption Text 3	Fife possesses very large reserves of easily accessible limestone. They occur in the Calciferous Sandstone Series in a number of places in eastern Fife, in the Oil Shale Group, the Burdiehouse Limestone is the most important in Fife and in the Lower Limestone Group where the principal seam is the Charlestown Main Limestone.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from St. Monans shore, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, St. Monan's shore
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527865 Limestone from Dun Beag, Torran, Skye, Invernessshire

The Caption:

Caption Title	Limestone from Dun Beag, Torran, Skye, Invernessshire
Subtitle	
Caption Text 1	A specimen of darkish grey limestone with saccharoidal texture, which shows bedding by alternation of paler and darker grey tints. It shows whitish calcite veins. It is of Cambro-Ordovician age and belongs to the Durness Limestone (Durness Group) and is from Torran, Dun Beag, Skye, Invernessshire. BGS Sample SL 247. British Geological Survey Petrology Collection sample number MC 7641.
Caption Text 2	Practically the whole of the Torran area is composed of limestone, for the most part low in magnesia. There is no drift cover and the limestone rises steeply from the shore with deep water close at hand on the west and south-west sides. The dip is west at 45 degrees to 60 degrees.
Caption Text 3	The limestone at Dun Mor itself is nearly all distinctly cherty, but the overlying beds a quarter of a mile farther north and just west of the village show several non-cherty beds of good quality.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Dun Beag, Torran, Skye, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Torran, Dun Beag
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527866 Limestone from Elgol, Skye, Invernessshire

The Caption:

Caption Title	Limestone from Elgol, Skye, Invernessshire
Subtitle	
Caption Text 1	A specimen of the Jurassic (Great Estuarine Series) Paludina scotia limestone from a coast section 800 yards north of the school at Elgol, Skye, Invernessshire. BGS Sample SL 251. British Geological Survey Petrology Collection sample number MC 7642.
Caption Text 2	The limestone is a dark grey, compact, structureless rock composed of a carbonate-clay groundmass in which the carbonate granules are about 0.002 mm across.
Caption Text 3	There are three calcareous horizons lying close together in the sequence. The lowest is the Cyrena limestone group, about 70 feet thick, and consisting of massive blue, and often crystalline, limestone bands in calcareous sandstone. Above it lies a less massive group of calcareous beds with Ostrea hebridica, thickness, say, 20 feet. A short distance higher in the sequence are the Paludina scotica limestones, about 30 to 40 feet thick, consisting of blue fine-grained smooth argillaceous limestones or cementstones, weathering cream-coloured and alternating with shales and calcareous sandstones.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Elgol, Skye, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Elgol
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527867 Limestone from Applecross, Ross and Cromarty

The Caption:

Caption Title	Limestone from Applecross, Ross and Cromarty
Subtitle	
Caption Text 1	A grey, compact oolitic limestone with a buff crust from an old quarry on the north side of Kishorn Road, 1,100 yards south-west of Applecross House. The limestone is from the base of the Lias, Jurassic. BGS Sample SL 253. British Geological Survey Petrology Collection sample number MC 7643.
Caption Text 2	The rocks dip north-west at 12 to 16 degrees corresponding to the average slope of the ground. The limestone is good quality and low in magnesia.
Caption Text 3	The limestone is a grey, compact, oolitic rock with buff crust. The ooliths are 0.5 to 1.5 mm. diameter and are embedded in a very fine-grained matrix of calcite-mudstone with a few thin-walled shells and scarce grains of quartz. Analysis of the rock from the quarry (S.L. 253) gave calcium carbonate 93.96 per cent, magnesium carbonate 2.99 per cent, insoluble residue 2.89 per cent.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Applecross, Ross and Cromarty.
Materials	Rock specimen
Associated Place	Scotland, Ross and Cromarty, Applecross
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527868 Cornstone from Toward, Taynuill, Argyllshire

The Caption:

Caption Title	Cornstone from Toward, Taynuill, Argyllshire
Subtitle	
Caption Text 1	A cornstone from 250 yards north of Toward, Taynuill, Argyllshire. The cornstone is a whitish compact dolomite, saccharoidal on fresh fracture. It is Old Red Sandstone, Devonian in age. BGS Sample SL 283. British Geological Survey Petrology Collection sample number MC
Caption Text 2	Nearly all the cornstones that have been worked in Scotland belong to the Upper Old Red Sandstone Series. They are very irregular in development, and in consequence the analyses available show extreme variability in lime content. Where they are thick enough to make it possible to obtain clean stone the grade is high, often over 90 per cent calcium carbonate.
Caption Text 3	A noteworthy feature is the low magnesia content in nearly every case. The cornstone bed is practically at the top of the Old Red Sandstone sequence and not far removed in the succession from the cementstone of the lowest part of the Calciferous Sandstone Series, which are also in most cases magnesian.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Cornstone from Toward, Taynuill, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Taynull, Toward
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527869 Dolomite from Seafield, Loch Kishorn, Ross and Cromarty

The Caption:

Caption Title Dolomite from Seafield, Loch Kishorn, Ross and Cromarty
Subtitle
Caption Text 1 A dove-grey, compact, structureless dolomite of Cambro-Ordovician age belonging to the Durness Limestone and from a cliff on the shore of Loch Kishorn 350 yards south-east of Seafield and about 120 yards from the road. BGS Sample SL 256. British Geological Survey Petrology Collection sample number MC 7645.
Caption Text 2 Composed of grains of dolomite of uniform size, 0.01-0.04 mm, among which small grains, 0.01 mm, of quartz are common and occasionally concentrated in short narrow streaks.
Caption Text 3 The specimen is of limestone of Group II, Eilean Dubh, light grey, mottled with red. A face of bedded limestone about 25 feet high, reasonably accessible was reported in 1949. The dip is east at 45 degrees. An analysis gave the following figures (S.L. 256) calcium carbonate, 49.91 per cent, magnesium carbonate, 39.74 per cent, insoluble residue 8.39 per cent.

The Basic Record:

Simple Name Rock specimen
Brief Description Dolomite from Seafield, Loch Kishorn, Ross and Cromarty.
Materials Rock specimen
Associated Place Scotland, Ross and Cromarty, Loch Kishorn, Seafield
(Nature of Grid Reference) Location specimen was found
Display Date / Period Cambro-Ordovician 545-443 Ma.
(Nature of Association) Stratigraphic period

Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.

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Input Date 15/06/2003

P527870 Marble from Cill Chriosd (Kilchrist) church, Skye, Invernessshire

The Caption:

Caption Title Marble from Cill Chriosd (Kilchrist) church, Skye, Invernessshire
Subtitle
Caption Text 1 A white marble belonging to the Durness Limestone Group V, Balnakiel Group from Marble quarry 800 yards south 40 degrees east of Cill Chriosd (Kilchrist) church, Skye, Invernessshire. BGS Sample SL 248. British Geological Survey Petrology Collection sample number MC
Caption Text 2 A white translucent saccharoidal medium-grained dolomite marble composed of interlocking grains of dolomite which are equidimensional but only rarely rhomboid and are usually about 0.5 mm across. There are a very few grains of forsterite, serpentinized along cracks.
Caption Text 3 An analysis gave the following figures (S.L. 248) CaO, 49.91 per cent, MgO, 39.74 per cent, carbon dioxide 37.43, insoluble residue 6.78 per cent.

The Basic Record:

Simple Name Rock specimen
Brief Description Marble from Cill Chriosd (Kilchrist) church, Skye, Invernessshire.
Materials Rock specimen
Associated Place Scotland, Invernessshire, Skye, Cill Chriosd (Kilchrist) Church
(Nature of Grid Reference) Location specimen was found
Display Date / Period Cambro-Ordovician 545-443 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.
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Input Date 15/06/2003

P527871 Limestone from Glenbuchat, Aberdeenshire

The Caption:

Caption Title	Limestone from Glenbuchat, Aberdeenshire
Subtitle	
Caption Text 1	A limestone from the most southerly quarry, east of the road, three miles north-west of Kirkton of Glenbuchat, Aberdeenshire. The sample is dark grey with patches of black biotite. The limestones vary from medium-grained grey type to a fine, hard, somewhat less pure type. BGS Sample GS 3. British Geological Survey Petrology Collection sample number MC 7647.
Caption Text 2	The limestone beds are vertical and strike north 20 degrees west. The total width is 60 feet.
Caption Text 3	The limestone is Dalradian Supergroup (Precambrian) in age. In thin section it shows recrystallized calcite crystals up to 1.0 mm across and shows complex lamellar twinning.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Glenbuchat, Aberdeenshire.
Materials	Rock specimen
Associated Place	Scotland, Aberdeenshire
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527872 Limestone from Bogie Mains Quarry, Kirkcaldy, Fifeshire

The Caption:

Caption Title	Limestone from Bogie Mains Quarry, Kirkcaldy, Fifeshire
Subtitle	
Caption Text 1	A pale grey limestone with a coarse appearance due to the abundance of large crinoidal remains. The limestone belongs to the Charlestown Main Limestone of the Lower Limestone Group, Carboniferous and is from Bogie Mains Quarry, one mile north-west of Kirkcaldy station. BGS Sample SL 278. British Geological Survey Petrology Collection sample number MC 7648.
Caption Text 2	There are three bands of limestone in the quarry, all rather coarse-grained and which appear to have been altered by the proximity to intrusive whinstone.
Caption Text 3	The workings, which are in the Charlestown Main Limestone, were noted in 1949 as being abandoned and full of water. The general dip is east-north-east at 10 degrees to 12 degrees. In the centre of the old quarry, just north of the east-and-west track, the dip of the beds west of the flooded area is south-westerly in direction and this suggests that there may have been some reef-knoll development.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Bogie Mains Quarry, Kirkcaldy, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Kirkcaldy, Bogie Mains Quarry
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527873 Silicified shale from the Bogie Mains Quarry, Kirkcaldy, Fifeshire

The Caption:

Caption Title	Silicified shale from the Bogie Mains Quarry, Kirkcaldy, Fifeshire
Subtitle	
Caption Text 1	Silicified shale from the Charlestown Main Limestone from the Bogie Mains Quarry one mile north-west of Kirkcaldy station. BGS Sample SL 277. British Geological Survey Petrology Collection sample number MC 7649.
Caption Text 2	The rock occurs in the top one feet six inches of the Charlestown Main Limestone. It is a dark grey rock with white angular specks, showing a faint undulating lamination. The rock appears to be a silicified shale, originally calcareous and rich in fossil debris. The large amount of chlorite suggests that pyroclastic material formed part of the original sediment. The silica available for silicification may also have been of volcanic origin.
Caption Text 3	The rock is Carboniferous, Lower Limestone Group age. An analysis of the rock indicates only 10.75 per cent CaO compared with the main limestone 60.5 calcium carbonate.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Silicified shale from the Bogie Mains Quarry, Kirkcaldy, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Kirkcaldy, Bogie Mains Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527874 Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire

The Caption:

Caption Title	Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire
Subtitle	
Caption Text 1	A dull fawn-grey limestone from the Burdiehouse Limestone 'Middle Bed' from the Newbigging Mine, Nine Lums, one mile west of Burntisland, Fifeshire. BGS Sample SL 218. British Geological Survey Petrology Collection sample number MC 7650.
Caption Text 2	The limestone forms part of an outcrop that extends for a distance of three-quarters of a mile in an east-west direction from Grange to Dalachy and is indicated by a line of old quarries. The Burdiehouse Limestone varies in thickness from 15 to 23 feet. The Middle Bed contains CaO 53.87 per cent, MgO 0.77 per cent, iron oxide 0.87 per cent.
Caption Text 3	The limestone was mined by the Carron Company for use in iron smelting. The Burdiehouse Limestone is a high-grade stone that was used principally for fluxing.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Newbigging Mine, Nine Lums, Burntisland, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Burntisland, Nine Lums, Newbigging Mine
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527875 Dolomite from Tornapress Bridge, Loch Kishorn, Ross and Cromarty

The Caption:

Caption Title	Dolomite from Tornapress Bridge, Loch Kishorn, Ross and Cromarty
Subtitle	
Caption Text 1	A pale, flesh-grey, compact dolomite with flinty fracture. It is traversed by thin cracks filled with white dolomite. It is from the Durness Limestone Group II, Eilean Dubh and is of Cambro-Ordovician in age. It outcrops at the roadside, 680 yards south of Tornapress Bridge, Loch Kishorn, Ross and Cromarty. BGS Sample SL 255. British Geological Survey Petrology Collection sample number MC 7651.
Caption Text 2	This lavender to reddish in colour dolomite forms a cliff 20 feet high with the beds dipping to the east. It is a compact dolomite with flinty fracture and contains small grains of quartz. A spring issues from the limestone depositing calcareous tufa.
Caption Text 3	An analysis of the limestone gives calcium carbonate 47.76 per cent, magnesium carbonate 40.32 per cent and insoluble residue 10.45 per cent. Limestone belonging to Groups I and II crops out from beneath the Kishorn Thrust on the left bank of the River Kishorn from Seafield to 1 mile north of Tornapress. For about a mile in this area the limestone rises steeply from the

The Basic Record:

Simple Name	Rock specimen
Brief Description	Dolomite from Tornapress Bridge, Loch Kishorn, Ross and Cromarty.
Materials	Rock specimen
Associated Place	Scotland, Ross and Cromarty, Loch Kishorn, Tornapress Bridge
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527876 Limestone from Charlestown, Dunfermline, Fifeshire

The Caption:

Caption Title	Limestone from Charlestown, Dunfermline, Fifeshire
Subtitle	
Caption Text 1	A brownish, compact dolomitized limestone, having a crystalline appearance due to the abundance of crinoid plates. The limestone belongs to the Carboniferous Lower Limestone Group, Charlestown main Limestone from West Quarry, Charlestown Quarries, three miles south-west of Dunfermline. BGS Sample SL 276. British Geological Survey Petrology Collection sample number MC 7652.
Caption Text 2	The limestone is composed of fossil debris consisting essentially of crinoidal and polyzoan fragments; subordinate fossil components include shells, spines, foraminifera, siliceous spicules and scarce phosphatic fragments.
Caption Text 3	The thickness of the Charlestown Main Limestone is very variable owing to the development in places of lenticular reef-knoll structure, a thickness of up to 66 ft. being found in the central portion of one of these dome-like masses which occupied the greater part of the worked-out portion of the West Quarry.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Charlestown, Dunfermline, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Dunfermline, Charlestown
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527877 Limestone from the Lismore Limestone Quarry on Eilean nan Caorach, Lismore, Argyllshire

The Caption:

Caption Title Limestone from the Lismore Limestone Quarry on Eilean nan Caorach, Lismore, Argyllshire
Subtitle
Caption Text 1 A dark grey, rudely flaggy limestone from the Lismore Limestone Quarry on Eilean nan Caorach, Lismore, Argyllshire. British Geological Survey Petrology Collection sample number
Caption Text 2 The limestone is Dalradian Supergroup (Precambrian) in age.
Caption Text 3 Lismore consists mainly of limestone with partings and subordinate beds of black graphitic schist and igneous intrusions. The limestone varies considerably in composition and was quarried and burnt at numerous locations, the most important being north-east of Port Salen.

The Basic Record:

Simple Name Rock specimen
Brief Description Limestone from the Lismore Limestone Quarry on Eilean nan Caorach, Lismore, Argyllshire.
Materials Rock specimen
Associated Place Scotland, Argyllshire, Lismore, Eilean nan Caorach, Lismore Limestone Quarry
(Nature of Location specimen was found
Grid Reference
Display Date / Period Precambrian, Dalradian 750-515 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.
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Input Date 15/06/2003

P527878 Loch Tay Limestone from Glendaruel House, Argyllshire

The Caption:

Caption Title	Loch Tay Limestone from Glendaruel House, Argyllshire
Subtitle	
Caption Text 1	A metamorphosed limestone with white mica, quartz and albite of Dalradian Supergroup (Precambrian) age. British Geological Survey Petrology Collection sample number MC 7654.
Caption Text 2	The Loch Tay Limestone makes an extensive outcrop on the west side of Glendaruel. It was formerly quarried in the sides of a stream 750 yards north of Glendaruel House, where a considerable thickness of limestone is exposed, with some mica-schist partings and sills of epidiorite.
Caption Text 3	Limestones are both plentiful and widely distributed in Argyll and although rarely of the highest degree of purity they are frequently of moderate or good quality. At one time they were quarried and burnt in almost every part of the county, but by the 1940s the number of kilns in operation had steadily declined to four quarries producing ground limestone, and one at which limestone was burnt for local use.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Loch Tay Limestone from Glendaruel House, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Glendaruel House
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527879 Ballachulish Limestone from a quarry at Tom an Aoil, Spean Bridge, Invernessshire

The Caption:

Caption Title Ballachulish Limestone from a quarry at Tom an Aoil, Spean Bridge, Invernessshire
Subtitle
Caption Text 1 A grey, crystalline limestone belonging to the Dalradian Supergroup (Precambrian) and from a quarry 300 yards north-north-west of Tom an Aoil, and one and three-quarters of a mile east-north-east of Spean Bridge, Invernessshire. British Geological Survey Petrology Collection sample number MC 7655.
Caption Text 2 The limestone is composed of a mosaic of equidimensional grains of closely twinned calcite, 0.4-1-0 mm. across, between which small idioblastic quartz grains, about 0.1 mm across, are scattered.
Caption Text 3 The bedding of the limestone is vertical and strikes north-north-east to north-east. The thickness of the band of high-quality limestone was at least 25 to 30 feet in the quarry, which was nowhere more than 15 feet deep.

The Basic Record:

Simple Name Rock specimen
Brief Description Ballachulish Limestone from a quarry at Tom an Aoil, Spean Bridge, Invernessshire.
Materials Rock specimen
Associated Place Scotland, Invernessshire, Spean Bridge, Tom an Aoil
(Nature of Grid Reference) Location specimen was found
Display Date / Period Precambrian, Dalradian 750-515 Ma.
(Nature of Association) Stratigraphic period

Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.

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P527880 Limestone from Lismore, Argyllshire

The Caption:

Caption Title	Limestone from Lismore, Argyllshire
Subtitle	
Caption Text 1	A dark grey, medium-grained limestone with calcite veins from the Lismore Limestone 100 yards west of Achadun Castle. British Geological Survey Petrology Collection sample number MC 7656.
Caption Text 2	The whole of Lismore is composed mainly of limestones with partings and minor beds of black graphitic schist and igneous intrusions.
Caption Text 3	The Lismore Limestone is one of several Dalradian Supergroup (Precambrian) limestones that were widely worked throughout Argyll. The other limestones include: the Loch Tay Limestone, Shira Limestone, Tayvallich Limestone and the Appin Limestone.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Lismore, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Lismore
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527881 Limestone from Swordle, Ardnamurchan, Argyllshire

The Caption:

Caption Title	Limestone from Swordle, Ardnamurchan, Argyllshire
Subtitle	
Caption Text 1	A plain grey limestone with fine banding from a limestone quarry, a quarter of a mile west of Swordle on Ardnamurchan. British Geological Survey Petrology Collection sample number MC 7657.
Caption Text 2	The chief occurrences of Jurassic limestone are in the Lower Lias and Loch Aline and Ardnamurchan. The Loch Aline quarry produced lime until the 1940s. In Ardnamurchan the quarries are now disused and were found at Mingary castle, Kilchoan and Swordle.
Caption Text 3	Argyllshire has a widespread distribution of limestones. Those of economic importance are mostly Dalradian Supergroup (Precambrian) in age with a small number of relatively unimportant Jurassic limestones of purely local importance.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Swordle, Ardnamurchan, Argyllshire.
Materials	Rock specimen
Associated Place	Scotland, Argyllshire, Ardnamurchan, Swordle
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527882 Limestone from Broadland Quarry, between Drumdelgie and Broadland, Aberdeenshire

The Caption:

Caption Title	Limestone from Broadland Quarry, between Drumdelgie and Broadland, Aberdeenshire
Subtitle	
Caption Text 1	A dark-grained crystalline limestone from the quarry and kiln one-quarter of a mile north-west of Broadland and three and one-quarter miles west-north-west of Huntly, Aberdeenshire. British Geological Survey Petrology Collection sample number MC 7658.
Caption Text 2	Broadland Quarry worked in a blue, medium-grained limestone with thin impure partings belonging to the Dalradian Portsoy Group of the Dalradian Supergroup (Precambrian) in age. The limestones are at least 30 feet thick and dip to the east at eighty degrees.
Caption Text 3	Limestones in Aberdeen are relatively poor in economic value. Most are metamorphosed limestones of Dalradian age. The best known is the Deeside Limestone, in the south-west the Blair Atholl Limestone is of local importance. Further north are a series of outcrops of purely local significance.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Broadland Quarry, between Drumdelgie and Broadland, Aberdeenshire.
Materials	Rock specimen
Associated Place	Scotland, Aberdeenshire, Broadland, Broadland Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527883 Limestone from Portsoy Marble Quarry, Banffshire

The Caption:

Caption Title	Limestone from Portsoy Marble Quarry, Banffshire
Subtitle	
Caption Text 1	A greenish, streaky limestone with dark grey laminae from the Portsoy Marble Quarry, Banffshire. British Geological Survey Petrology Collection sample number MC 7659.
Caption Text 2	Belonging to the Easdale Subgroup of the Argyll Group of the Dalradian Supergroup the Portsoy Limestone formation contains impersistent bands of limestone that have been worked for many years.
Caption Text 3	Banffshire is one of the highland counties that are richly endowed with limestone and their exploitation for agricultural and other purposes has proceeded for hundreds of years. A key factor in early exploitation of limestones were location of limestones, situated in a prime arable agricultural area, limestones in plentiful supplies in Banff and not generally found in adjacent counties and the high cost of transport from centres of production further south.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Portsoy Marble Quarry, Banffshire.
Materials	Rock specimen
Associated Place	Scotland, Banffshire, Portsoy Marble Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527884 Limestone from Largie, Aberdeenshire

The Caption:

Caption Title	Limestone from Largie, Aberdeenshire
Subtitle	
Caption Text 1	A sheared blue-grey limestone with flesh-coloured veins from the east side of the pond 200 yards north-east of Largie School, Aberdeenshire. British Geological Survey Petrology Collection sample number MC 7660.
Caption Text 2	A Dalradian Supergroup (Precambrian) limestone occurs in the Coreen Hills at Largie, Old Meldrum, Auchnagatt, Fetterangus, Strichen and Fraserburgh and elsewhere, however they have never been regarded of significant economic importance.
Caption Text 3	Most limestone resources in Aberdeen lay further south in the best known and readily accessible Deeside Limestone. It forms a large outcrop between Ballater and Aboyne. Unfortunately it is poor to moderate in quality with a high calc-silicate mineral residue.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Largie, Aberdeenshire.
Materials	Rock specimen
Associated Place	Scotland, Aberdeenshire, Largie
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527885 Limestone from Goukstone Quarry near Keith, Banffshire

The Caption:

Caption Title	Limestone from Goukstone Quarry near Keith, Banffshire
Subtitle	
Caption Text 1	A mid-grey medium-grained limestone from Goukstone Quarry, 250 yards east of Goukstone Farm five miles north-east of Keith, Banffshire. British Geological Survey Petrology Collection sample number MC 7661.
Caption Text 2	The limestone, which was worked for roadstone, is a grey, banded, medium-grained, slightly flaggy type with a few black schist partings, the stone appears to be of fairly good quality. Joints in the limestone are thickly coated with calcite.
Caption Text 3	The general dip is to south-east at 15 degrees, but there is a flattish anticline at the north end of the quarry, with a slight pitch to north-east. The thickness of the limestone is at least 25 feet. The face of the quarry was 20 feet high, and overburden did not amount to more than 4 feet. The reserves were classed as large.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Goukstone Quarry near Keith, Banffshire.
Materials	Rock specimen
Associated Place	Scotland, Banffshire, Keith, Goukstone Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527886 Limestone from Loch Clunie, Perthshire

The Caption:

Caption Title	Limestone from Loch Clunie, Perthshire
Subtitle	
Caption Text 1	A brecciated dolomitic limestone from the south end of Loch Clunie, four miles west of Blairgowrie, Perthshire. British Geological Survey Petrology Collection sample number MC 7662.
Caption Text 2	Brecciated dolomitic limestone, replacing serpentine along the Highland Boundary Fault, is exposed in a disused quarry between the south end of the Loch of Clunie and the farm of Hawkhill, at a locality once known as Limestonebank. It is cut by a quartz-dolerite dyke, which has also been worked. The dolomitic limestone, which is at least 30 feet thick, was formerly
Caption Text 3	The dolomitic limestone is traversed by minor fault-planes inclined steeply north-west associated thin barytes veins. The dyke is unaffected by the fault movement. The dolomitic limestone probably continues along the fault, but it is very doubtful if it would be worth working unless the dolerite were being extracted at the same time. It is almost certainly of suitable composition for the manufacture of rock wool.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Loch Clunie, Perthshire.
Materials	Rock specimen
Associated Place	Scotland, Perthshire, Loch Clunie
(Nature of	Location specimen was found
Grid Reference	
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527887 Cornstone from Linksfield Quarry, Morayshire

The Caption:

Caption Title	Cornstone from Linksfield Quarry, Morayshire
Subtitle	
Caption Text 1	An outcrop of Old Red Sandstone cornstone runs from just south of Elgin north-eastwards to the coast through Nether Meft and Stonewells in Morayshire. It is Upper Old Red Sandstone in age (Devonian). British Geological Survey Petrology Collection sample number MC 7663.
Caption Text 2	Moray and Nairn are both exceptionally poor in limestones. The area has Dalradian metamorphic rocks entirely devoid of limestones, however a calcareous band occurs in the Middle Old Red Sandstone and is exposed in several localities but it is of no economic value.
Caption Text 3	What is important are the cornstones in the Upper Old Red Sandstone. One, at Cothall, near Forres was worked on a considerable scale. Other cornstones with cherty bands which outcrop near Elgin have been worked in the past.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Cornstone from Linksfield Quarry, Morayshire.
Materials	Rock specimen
Associated Place	Scotland, Morayshire, Linksfield Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527888 Limestone from Randerston, near Fife Ness, Fifeshire

The Caption:

Caption Title	Limestone from Randerston, near Fife Ness, Fifeshire
Subtitle	
Caption Text 1	A specimen of 'Kirkby's III Limestone' from the shore at Randerston, seven miles east-south-east of St. Andrews, Fife. This limestone is one of several thin calcareous beds in the Randerston area just north-west of Fife Ness. British Geological Survey Petrology Collection sample number MC 7664.
Caption Text 2	It is a four feet thick coarsely platy, irony, shelly rock of lumachelle type. The shells are replaced by turbid coarsely granular ferriferous dolomite, and are embedded in a matrix of carbonate, stained and cemented by limonite. This carbonate is in part very finely granular, in part recrystallized to a mosaic of irregular grain up to 0.1 mm across.
Caption Text 3	Numerous fragments of small shells and scarce quartz and mica are scattered through the fine-grained matrix. The rock is Carboniferous Calciferous Sandstone Series age and resemble strongly the Lower Carboniferous cementstones from other parts of the Midland Valley.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Randerston, near Fife Ness, Fifeshire.
Materials	Rock specimen
Associated Place	Scotland, Fifeshire, Fife Ness, Randerston
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date	15/06/2003

P527889 Cornstone from Huntley Hill, Brechin, Angus

The Caption:

Caption Title	Cornstone from Huntley Hill, Brechin, Angus
Subtitle	
Caption Text 1	A specimen of nodular cornstone from Huntley Hill, half a mile south of Brae of Pert, two and a half miles north-east of Brechin, Angus. A Lower Old Red Sandstone nodular cornstone. British Geological Survey Petrology Collection sample number MC 7665.
Caption Text 2	A dark grey-brown compact limestone composed of finely divided turbid calcite, recrystallized along dessication cracks to a coarser grain.
Caption Text 3	The county of Angus has practically no limestones of economic value. South-east of the Highland Boundary Fault the county is composed of rocks of Old Red Sandstone age. In the lower division of this formation there is a well marked bed of cornstone which was formerly worked in a line of quarries near Brechin. Cornstones in the Upper Old Red Sandstone were once quarried at Bodden Point, two miles south of Montrose. Neither cornstones are of

The Basic Record:

Simple Name	Rock specimen
Brief Description	Cornstone from Huntley Hill, Brechin, Angus.
Materials	Rock specimen
Associated Place	Scotland, Angus, Brechin, Huntley Hill
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527890 Fireclay from the Hareshaw Fireclay, Calder Fireclay Company, Lanarkshire

The Caption:

Caption Title	Fireclay from the Hareshaw Fireclay, Calder Fireclay Company, Lanarkshire
Subtitle	
Caption Text 1	Black carbonaceous waxy fireclay from the Hareshaw Fireclay, Calder Fireclay Company. The specimen was donated to the Geological Survey of Great Britain in 1916. British Geological Survey Petrology Collection sample number MC 7666.
Caption Text 2	Scotland has large resources of fireclay that include some of the best high alumina fireclays in Britain.
Caption Text 3	Fireclays are restricted to the Passage Group and the lower part of the Coal Measures. Most recent production has come from the Central Coalfield, though fireclays were worked in Ayrshire and reserves are known in the Douglas Coalfield.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Fireclay from the Hareshaw Fireclay, Calder Fireclay Company, Lanarkshire.
Materials	Rock specimen
Associated Place	Scotland, Lanarkshire, Hareshaw Fireclay Works
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Associated Name	Calder Fireclay Company
(Nature of)	Mining company
Ref. Author	
Ref Title	Refractory materials: ganister and silica-rock - sand for open-hearth steel furnaces - dolomite. Resources and geology. Special reports on the mineral resources of Great Britain v. 6.
Ref. Publication Details	London : HMSO, 1918.
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Input Date	15/06/2003

P527891 Fireclay from the Bonnyside Fireclay Works, Bonnybridge, Stirlingshire

The Caption:

Caption Title	Fireclay from the Bonnyside Fireclay Works, Bonnybridge, Stirlingshire
Subtitle	
Caption Text 1	Fireclay with a waxy feel from the Middle Fireclay, Bonnyside Fireclay Works, Dougal and Sons, Bonnybridge, Stirlingshire British Geological Survey Petrology Collection sample number MC 7667.
Caption Text 2	The Carboniferous rocks of the Midland Valley contain some of the most valuable fireclays in the United Kingdom. The main source are the Passage Group and the Lower Coal Measures.
Caption Text 3	Those in the Passage Group of the Central Coalfield have been worked by opencast and mining methods. Those in the Lower Coal Measures have been worked by opencast methods in conjunction with extraction of coal.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Fireclay from the Bonnyside Fireclay Works, Bonnybridge, Stirlingshire.
Materials	Rock specimen
Associated Place	Scotland, Stirlingshire, Bonnybridge, Bonnyside Fireclay Works
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	
Ref Title	Refractory materials: ganister and silica-rock - sand for open-hearth steel furnaces - dolomite. Resources and geology. Special reports on the mineral resources of Great Britain v. 6.
Ref. Publication Details	London : HMSO, 1918.
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Input Date	15/06/2003

P527892 A specimen of the Glenboig Main Fireclay from Glenboig, Lanarkshire

The Caption:

Caption Title	A specimen of the Glenboig Main Fireclay from Glenboig, Lanarkshire
Subtitle	
Caption Text 1	Glenboig Main Fireclay from the Glenboig Union Fireclay Company. The specimen was sent to Dr. Simpson of the Geological Survey of Great Britain from Mr. McBroom. British Geological Survey Petrology Collection sample number MC 7668.
Caption Text 2	Fireclays are poorly-bedded mudstones consisting essentially of kaolinite; most are seatclays below coals, but many of the most sought after aluminous beds are not associated with coal.
Caption Text 3	Fireclay was once worked extensively in the Central Coalfield, especially underground. Most fireclay now is worked opencast. Fireclay production in Scotland has fallen dramatically and reached an all time low in the 1980s as a result of the decline of the Scottish iron and steel industry.

The Basic Record:

Simple Name	Rock specimen
Brief Description	A specimen of the Glenboig Main Fireclay from Glenboig, Lanarkshire.
Materials	Rock specimen
Associated Place	Scotland, Lanarkshire, Glenboig
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Associated Name	Glenboig Union Fireclay Company
(Nature of)	Mining company
Associated Name	Simpson, Dr.
(Nature of)	Recipient of specimen
Associated Name	McBroom, Mr.
(Nature of)	Donor of specimen
Ref. Author	
Ref Title	Refractory materials: ganister and silica-rock - sand for open-hearth steel furnaces - dolomite. Resources and geology. Special reports on the mineral resources of Great Britain v. 6.
Ref. Publication Details	London : HMSO, 1918.
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Input Date	15/06/2003

P527893 Beryl from Knoydart, Invernessshire

The Caption:

Caption Title	Beryl from Knoydart, Invernessshire
Subtitle	
Caption Text 1	A large specimen of light green beryl from the Loch Nevis mica prospect in Knoydart. The prospect is situated on the north side of Loch Nevis, 1100 yards south 12 degrees east of the summit of Sgurr Coire nan Gobhar, 7.5 miles due east of Mallaig. British Geological Survey Petrology Collection sample number MC 7669.
Caption Text 2	This specimen is from the more easterly end of the outcrop. Beryl crystals up to twelve inches in length have been found. The deposit is a coarsely crystalline pegmatite along with large 'books' of mica.
Caption Text 3	Beryl is beryllium aluminium silicate and is characteristic of granitic rocks and pegmatites and often occurs in enormous crystals. It is regarded as the main industrial source of beryllium.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Beryl from Knoydart, Invernessshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Knoydart
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P527894 Beryl from Knoydart, Invernessshire

The Caption:

Caption Title	Beryl from Knoydart, Invernessshire
Subtitle	
Caption Text 1	A small crystal of light green beryl from the Loch Nevis mica prospect in Knoydart. The prospect is situated on the north side of Loch Nevis, 1100 yards south 12 degrees east of the summit of Sgurr Coire nan Gobhar, 7.5 miles due east of Mallaig. British Geological Survey Petrology Collection sample number MC 7670.
Caption Text 2	The crystal displays its characteristic hexagonal prism. Beryl is a very hard mineral 7.5 to 8 on the Moh's scale of hardness, it belongs to the hexagonal crystal system.
Caption Text 3	Beryl is the main industrial source for beryllium. It is also a gemstone. Emerald, aquamarine and heliodor are important gem varieties. This locality does not produce gem quality beryl.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Beryl from Knoydart, Invernessshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Knoydart
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P527895 Beryl in muscovite pegmatite, Knoydart, Invernesshire

The Caption:

Caption Title	Beryl in muscovite pegmatite, Knoydart, Invernesshire
Subtitle	
Caption Text 1	A large elongate beryl in its muscovite pegmatite host rock. This specimen is from the Loch Nevis mica prospect in Knoydart. The prospect is situated on the north side of Loch Nevis, 1100 yards south 12 degrees east of the summit of Sgurr Coire nan Gobhar, 7.5 miles due east of Mallaig. British Geological Survey Petrology Collection sample number MC 7671.
Caption Text 2	The pegmatite is a coarse-grained igneous rock that forms from magma rich in volatile elements, resulting in large crystals containing an abundance of elements not used up in earlier crystallization history.
Caption Text 3	This pegmatite is part of the Loch Shiel Migmatite Complex. It consists of a lit par lit pelitic gneiss with associated pegmatites.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Beryl in muscovite pegmatite, Knoydart, Invernesshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernesshire, Knoydart
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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P527896 Feldspar-quartz-mica pegmatite, Knoydart, Invernessshire

The Caption:

Caption Title Feldspar-quartz-mica pegmatite, Knoydart, Invernessshire
Subtitle
Caption Text 1 A feldspar-quartz-mica pegmatite from the Loch Nevis mica prospect in Knoydart. The prospect is situated on the north side of Loch Nevis, 1100 yards south 12 degrees east of the summit of Sgurr Coire nan Gobhar, 7.5 miles due east of Mallaig. British Geological Survey Petrology Collection sample number MC 7672.
Caption Text 2 The pink mineral is the orthoclase feldspar, the grey glassy mineral the quartz and the flat flaky mineral is the muscovite mica.
Caption Text 3 This locality was worked for mica during the Second World War. 'Books' of mica were extracted up to two feet in diameter and sent to Pitlochry for processing for electrical

The Basic Record:

Simple Name Mineral specimen
Brief Description Feldspar-quartz-mica pegmatite, Knoydart, Invernessshire.
Materials Mineral specimen
Associated Place Scotland, Invernessshire, Knoydart
(Nature of
Grid Reference Location specimen was found

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details London : Geological Survey and Museum, 1943.
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P527897 Biotite-muscovite pegmatite, Knoydart, Invernessshire

The Caption:

Caption Title	Biotite-muscovite pegmatite, Knoydart, Invernessshire
Subtitle	
Caption Text 1	A specimen of biotite-muscovite pegmatite from the Loch Nevis mica prospect in Knoydart. The prospect is situated on the north side of Loch Nevis, 1100 yards south 12 degrees east of the summit of Sgurr Coire nan Gobhar, 7.5 miles due east of Mallaig. British Geological Survey Petrology Collection sample number MC 7673.
Caption Text 2	Biotite is the darker blackish mineral and muscovite the lighter silvery-white mineral. Both are members of the mica group of minerals and both are hydrous potassium aluminium silicates. They form tabular crystals that have perfect basal cleavage and so split readily into flakes. In the pegmatite they crystallize in a heavily interlocking mass, usually with feldspar and quartz.
Caption Text 3	The mica prospect was worked during the Second World War for the extremely large mica crystals or 'books' that could be obtained in sizes up to two feet across. It was the major source of muscovite mica in Scotland.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Biotite-muscovite pegmatite, Knoydart, Invernessshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Knoydart
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P527898 Garnet pegmatite, Knoydart, Invernessshire

The Caption:

Caption Title	Garnet pegmatite, Knoydart, Invernessshire
Subtitle	
Caption Text 1	This specimen contains red-purple garnets in a quartz-mica pegmatite from the Loch Nevis mica prospect in Knoydart. The prospect is situated on the north side of Loch Nevis, 1100 yards south 12 degrees east of the summit of Sgurr Coire nan Gobhar, 7.5 miles due east of Mallaig. British Geological Survey Petrology Collection sample number MC 7674.
Caption Text 2	Garnet is a very hard silicate mineral of varying composition (iron, magnesium, calcium) and belonging to the cubic crystal system. It is a common mineral along with quartz and mica in pegmatites.
Caption Text 3	This pegmatite is part of the Loch Shiel Migmatite Complex, a suite of pelitic gneisses that have undergone migmatization and injection of coarse pegmatites.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Garnet pegmatite, Knoydart, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Knoydart
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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P527899 Muscovite-beryl-quartz, feldspar pegmatite, Knoydart, Invernesshire

The Caption:

Caption Title	Muscovite-beryl-quartz, feldspar pegmatite, Knoydart, Invernesshire
Subtitle	
Caption Text 1	A specimen of Muscovite-beryl-quartz, feldspar pegmatite, Knoydart, Invernesshire from the Loch Nevis mica prospect. The prospect is situated on the north side of Loch Nevis, 1100 yards south 12 degrees east of the summit of Sgurr Coire nan Gobhar, 7.5 miles due east of Mallaig. British Geological Survey Petrology Collection sample number MC 7675.
Caption Text 2	The pegmatite, a very coarse-grained igneous rock having a grain size 3 cm. or larger, consists of an intergrown mass of beryl, quartz and feldspar. The interesting mineral is the light green beryl. Crystals of beryl from this site have been found up to twelve inches long.
Caption Text 3	Beryl is a beryllium aluminium silicate. Beryl is the only common beryllium mineral and is much source after as a source for that metal. It occurs mainly in granite pegmatites.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Muscovite-beryl-quartz, feldspar pegmatite, Knoydart, Invernesshire.
Materials	Rock specimen
Associated Place	Scotland, Invernesshire, Knoydart
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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P527900 Concretionary ironstone from Lecht, Tomintoul, Banffshire

The Caption:

Caption Title	Concretionary ironstone from Lecht, Tomintoul, Banffshire
Subtitle	
Caption Text 1	A specimen of concretionary ironstone from the Lecht (Leicht) Mine, five and a half miles east-south-east of Tomintoul, Banffshire. The mine is situated on a hillside called Carn Liath and on the banks of a small stream which flows south to join the Conglass Water. British Geological Survey Petrology Collection sample number MC 7676.
Caption Text 2	The first attempt to work this vein on a commercial scale was in 1730 by the York Buildings Company. They erected furnaces at Nethybridge on Speyside and brought the ore from Lecht on horseback, smelting it with charcoal prepared in the extensive woods of Abernethy. The works were abandoned and operations ceased in 1737.
Caption Text 3	The mine was reopened in 1840 by Cookson of Newcastle who sought the manganese ore.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Concretionary ironstone from Lecht, Tomintoul, Banffshire.
Materials	Mineral specimen
Associated Place	Scotland, Banffshire, Tomintoul, Lecht
(Nature of Grid Reference	Location specimen was found
Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
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Input Date	15/06/2003

P527901 Concretionary ironstone from Lecht, Tomintoul, Banffshire

The Caption:

Caption Title	Concretionary ironstone from Lecht, Tomintoul, Banffshire
Subtitle	
Caption Text 1	The old mine at Lecht or Leicht, is situated about five and a half miles east-south-east of Tomintoul in Banffshire and was worked for ironstone and manganese ore. British Geological Survey Petrology Collection sample number MC 7677.
Caption Text 2	The ironstone ore specimen has a concretionary form of iron oxide, probably goethite. The specimen is oxidized, showing typical orange and yellow colours. The mine works a vein that outcrops in several places.
Caption Text 3	The mine was first worked in 1730 by the York Building Company and then later in 1840 by Cookson of Newcastle who mined the manganese ore. The latter sunk a shaft 70 or 80 feet deep and built a mill powered by water power from a dam and mill lade.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Concretionary ironstone from Lecht, Tomintoul, Banffshire.
Materials	Mineral specimen
Associated Place	Scotland, Banffshire, Tomintoul, Lecht
(Nature of	Location specimen was found
Grid Reference	
Associated Name	York Building Company
(Nature of	Mining company
Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
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Input Date	15/06/2003

P527902 Ironstone and manganese from Lecht, Tomintoul, Banffshire

The Caption:

Caption Title	Ironstone and manganese from Lecht, Tomintoul, Banffshire
Subtitle	
Caption Text 1	A specimen of ironstone and manganese from the old mine at Lecht or Leicht, situated about five and a half miles east-south-east of Tomintoul in Banffshire. British Geological Survey Petrology Collection sample number MC 7678.
Caption Text 2	The specimen was from the wall of the vein in the old workings to the east of the mill. The manganese is in a black powdery form.
Caption Text 3	The mine has had a long history; mining commenced in 1730 for seven years then opened again in 1840 for the manganese. At this time the manganese was worth £8 per ton. The ore was broken up by hand and picked, the old spalling floors were reported to be still visible in 1920. The ore was dressed at a mill that had been constructed on the site and then sent to Speymouth, a distance of 45 miles by horseback, where it was shipped. In 1845 the price of manganese fell to £3 per ton and the mine became uneconomic and closed.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Ironstone and manganese from Lecht, Tomintoul, Banffshire.
Materials	Mineral specimen
Associated Place	Scotland, Banffshire, Tomintoul, Lecht
(Nature of	Location specimen was found
Grid Reference	
Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
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P527903 Ironstone and manganese from Lecht, Tomintoul, Banffshire

The Caption:

Caption Title Ironstone and manganese from Lecht, Tomintoul, Banffshire
Subtitle
Caption Text 1 Ironstone and manganese from the wall of the vein in the old workings to the east of the mill at the Lecht or Leicht Mine, about five and a half miles east-south-east of Tomintoul in Banffshire. British Geological Survey Petrology Collection sample number MC 7679.
Caption Text 2 The mine has been re-worked for both minerals at several periods since 1730 and has also been looked at with a view to opening. Recent work on the deposit indicates that the ores were goethite and cryptomelane and the deposit is a post-Dalradian explosive-intrusion breccia.
Caption Text 3 The Geological Survey of Scotland visited the mine in 1917 and undertook exploratory work and collected samples. This specimen is probably one that was collected at that time.

The Basic Record:

Simple Name Mineral specimen
Brief Description Ironstone and manganese from Lecht, Tomintoul, Banffshire.
Materials Mineral specimen
Associated Place Scotland, Banffshire, Tomintoul, Lecht
(Nature of
Grid Reference Location specimen was found

Ref. Author Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details Edinburgh : HMSO, 1920.

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P527904 Haematite in quartz vein, Tillyfourie, Aberdeenshire

The Caption:

Caption Title Haematite in quartz vein, Tillyfourie, Aberdeenshire
Subtitle
Caption Text 1 Haematite in quartz vein, Tillyfourie, Aberdeenshire. The haematite is the dark reddish mineral in the massive white quartz. British Geological Survey Petrology Collection sample number MC 7680.
Caption Text 2 Haematite is an iron ore, it is an iron oxide belonging to the hexagonal crystal system. It can occur as black crystals, however, it is more likely to occur as dark red massive or earthy or compact form. It often colours the rock or minerals in which it is found red or reddish brown.
Caption Text 3 Iron ores in Scotland can be classified into bog iron ores, haematite ores in veins, Carboniferous clayband ores, Carboniferous blackband ores and the Jurassic ores.

The Basic Record:

Simple Name Mineral specimen
Brief Description Haematite in quartz vein, Tillyfourie, Aberdeenshire.
Materials Mineral specimen
Associated Place Scotland, Aberdeenshire, Tillyfourie
(Nature of Grid Reference Location specimen was found

Ref. Author Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details Edinburgh : HMSO, 1920.

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P527905 Torbanehill mineral, R. Muir and Co. pit, Armadale, West Lothian

The Caption:

Caption Title	Torbanehill mineral, R. Muir and Co. pit, Armadale, West Lothian
Subtitle	
Caption Text 1	A large specimen of 'Torbanehill mineral' or torbanite. It is a cannel coal very rich in gas constituents. In appearance it is dull and when burnt it makes a chattering noise. For this reason it was sometimes known as 'parrot coal'. This specimen is from the R. Muir and Company pit at Armadale, West Lothian. British Geological Survey Petrology Collection sample number MC 7681.
Caption Text 2	Torbanehill mineral was used as a source of oil. Whereas a rich oil shale would give 60 or 70 gallons of crude oil per ton, Torbanehill mineral or torbanite as it is known today would give a yield of 90 to 130 gallons of crude oil per ton.
Caption Text 3	The Torbanehill or Boghead Cannel Coal was found over a small area in the Armadale district. It was worked from about 1850 to 1862 until the field was exhausted. It has mainly historic interest and when available it was in great demand due to its very high yield.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Torbanehill mineral, R. Muir and Co. pit, Armadale, West Lothian.
Materials	Rock specimen
Associated Place	Scotland, West Lothian, Armadale
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Associated Name	R. Muir and Company
(Nature of)	Mining company
Ref. Author	Gibson, W.
Ref Title	Cannel coals, lignite and mineral oil in Scotland. Special reports on the mineral resources of Great Britain vol XXIV.
Ref. Publication Details	London : HMSO, 1922.
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Input Date	15/06/2003

P527906 Magnetite from Tiree, Argyllshire

The Caption:

Caption Title	Magnetite from Tiree, Argyllshire
Subtitle	
Caption Text 1	A specimen of magnetite from Tiree, Argyllshire. An extensive band of magnetite was found in the Lewisian gneiss of Tiree in 1922 by J.B. Simpson of the Geological Survey. British Geological Survey Petrology Collection sample number MC 7682.
Caption Text 2	The outcrop is four and one-third miles long and is not wholly magnetite but a magnetite-rich pyroxene gneiss. The magnetite content varies along the strike of the deposit and on average, is c. ten feet wide.
Caption Text 3	The deposit was investigated by the Home Ore Department during the Second World War by employing a company called Messrs. Wilkins and Deveraux to undertake a traverse with a Thalen-Tiberg magnetometer and opening up trenches at selected points which were then sampled. All samples contained excess silica so none would be a commercial proposition.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Magnetite from Tiree, Argyllshire.
Materials	Mineral specimen
Associated Place	Scotland, Argyllshire, Tiree
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Groves, A.W.
Ref Title	Wartime investigations into the haematite and manganese ore resources of Great Britain and Northern Ireland.
Ref. Publication Details	London : Ministry of Supply, 1952.
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P527907 Galena from North Glencrieff, Wanlockhead, Dumfriesshire

The Caption:

Caption Title Galena from North Glencrieff, Wanlockhead, Dumfriesshire
Subtitle
Caption Text 1 A specimen of galena with slickensides from the 240 fathom level of North Glencrieff Vein. British Geological Survey Petrology Collection sample number MC 7683.
Caption Text 2 The lead and zinc deposits of the district are all connected with lines of fracture and in many cases repeated movement of the veins can be seen such as the slickensides on this galena.
Caption Text 3 When one surface of a rock moves over another surface in close contact and under pressure the two surfaces develop a series of linear grooves and ridges parallel to the direction of movement. This is slickensiding and can be clearly seen on this specimen of galena.

The Basic Record:

Simple Name Mineral specimen
Brief Description Galena from North Glencrieff, Wanlockhead, Dumfriesshire.
Materials Mineral specimen
Associated Place Scotland, Dumfriesshire, Wanlockhead, North Glencrieff Mine
(Nature of
Grid Reference Location specimen was found

Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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P527908 Calcite after barytes pseudomorph, Wanlockhead, Dumfriesshire

The Caption:

Caption Title	Calcite after barytes pseudomorph, Wanlockhead, Dumfriesshire
Subtitle	
Caption Text 1	A specimen of calcite as a pseudomorph after barytes from Wanlockhead, Dumfriesshire. Calcite is a gangue mineral, one of no economic value that occurs in the veins with the 'ore' minerals, the economically valuable mineral. British Geological Survey Petrology Collection sample number MC 7684.
Caption Text 2	This specimen is interesting as there must originally have been a barytes crystal that became encrusted with calcite, the original barytes would then have been corroded and dissolved by mineral waters leaving a hollow pseudomorph of granular calcite the shape of the original barytes crystal.
Caption Text 3	A range of pseudomorphs are known from this area, galena is often altered to pyromorphite as well as pseudomorphs of galena after pyromorphite.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Calcite after barytes pseudomorph, Wanlockhead, Dumfriesshire.
Materials	Mineral specimen
Associated Place	Scotland, Dumfriesshire, Wanlockhead
(Nature of Grid Reference	Location specimen was found
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
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P527909 Hemimorphite and aragonite, South Glencrieff Vein, (New Glencrieff Mine), Wanlockhead, Dumfriesshire

The Caption:

Caption Title Hemimorphite and aragonite, South Glencrieff Vein, (New Glencrieff Mine), Wanlockhead, Dumfriesshire

Subtitle

Caption Text 1 A specimen of hemimorphite and aragonite, South Glencrieff vein, Wanlockhead, Dumfriesshire. British Geological Survey Petrology Collection sample number MC 7685.

Caption Text 2 Hemimorphite is a secondary accessory ore. It is hydrated silicate of zinc and usually occurs as fine crystals lining cavities and was particularly plentiful at the south end of the New Glencrieff Vein at the 100 fathom level. It occurred up to three feet in thickness. The mineral ranged from the 80 to 120 fathom levels.

Caption Text 3 Aragonite is a gangue mineral, one of no economic significance. Aragonite is the rhombic variety of calcium carbonate and is an occasional constituent of the veins and often occurs in beautifully radiating clusters.

The Basic Record:

Simple Name Mineral specimen

Brief Description Hemimorphite and aragonite, south end of the New Glencrieff Vein, Wanlockhead, Dumfriesshire.

Materials Mineral specimen

Associated Place Scotland, Dumfriesshire, Wanlockhead, South Glencrieff Mine

(Nature of Location specimen was found

Grid Reference

Ref. Author Wilson, G.V.

Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.

Ref. Publication Details Edinburgh : HMSO, 1921.

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P527910 Calcite on zinc blende, South Glencrieff Vein, (New Glencrieff Mine), Wanlockhead, Dumfriesshire

The Caption:

Caption Title Calcite on zinc blende, South Glencrieff Vein, (New Glencrieff Mine), Wanlockhead, Dumfriesshire

Subtitle

Caption Text 1 A specimen of calcite on zinc blende (sphalerite) from the South Glencrieff Vein, Wanlockhead, Dumfriesshire. British Geological Survey Petrology Collection sample number MC 7686.

Caption Text 2 The zinc blende is an ore mineral. It is zinc sulphide, an important and abundant constituent of some of the veins.

Caption Text 3 It is sometimes found by itself though most often it is mixed with galena and chalcopyrite. The colour is dark brown but some of the better developed crystals are black and are known as 'black jack'.

The Basic Record:

Simple Name Mineral specimen

Brief Description Calcite on zinc blende, south end of the New Glencrieff Vein, Wanlockhead, Dumfriesshire.

Materials Mineral specimen

Associated Place Scotland, Dumfriesshire, Wanlockhead, South Glencrieff Mine

(Nature of Grid Reference Location specimen was found

Ref. Author Wilson, G.V.

Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.

Ref. Publication Details Edinburgh : HMSO, 1921.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P527911 Galena from the Wanlockhead mining district, Dumfriesshire area

The Caption:

Caption Title	Galena from the Wanlockhead mining district, Dumfriesshire area
Subtitle	
Caption Text 1	A specimen of galena from Wanlockhead, Dumfriesshire. Galena is the principal lead ore of the Leadhills - Wanlockhead mining district. British Geological Survey Petrology Collection sample number MC 7687.
Caption Text 2	Galena usually is found as massive, coarse-grained crystalline aggregates but fine-grained 'steel ore' is also found. It is often found with zinc-blende and chalcopyrite, zinc and copper ores respectively.
Caption Text 3	Leadhills - Wanlockhead mining district has been the most productive lead mining district in Scotland. The lead veins in Wanlockhead were discovered by a German, Cornelius Hardskins during the minority of James IV. They were opened by James Stampfield in 1680.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Galena from the Wanlockhead mining district, Dumfriesshire area.
Materials	Mineral specimen
Associated Place	Scotland, Dumfriesshire, Wanlockhead
(Nature of Grid Reference)	Location specimen was found
Associated Name	Hardskins, Cornelius
(Nature of)	Discovere of lead veins
Associated Name	Stampfield, James
(Nature of)	Mine opened by
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527912 Galena from the Leadhills mining district, Lanarkshire

The Caption:

Caption Title	Galena from the Leadhills mining district, Lanarkshire
Subtitle	
Caption Text 1	A large specimen of galena from Leadhills, Lanarkshire. Galena is lead sulphide and is the principal ore of lead. It has been mined in Leadhills for hundreds of years, the first record of mining being a lead mine in Glengonnar being mined by monks from Newbattle in 1239. British Geological Survey Petrology Collection sample number MC 7688.
Caption Text 2	Galena can be found in almost all veins in the district, most also contain zinc-blende or sphalerite. There is a wide distribution of alluvial gold in the area but it has not been found in-situ in any of the veins.
Caption Text 3	The mines were worked intermittently until the 17th century when they were worked almost continuously until the 20th century. The total amount of lead ore from the veins in Leadhills is thought to be c. 500,000 tons.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Galena from the Leadhills mining district, Lanarkshire.
Materials	Mineral specimen
Associated Place	Scotland, Lanarkshire, Leadhills
(Nature of Grid Reference	Location specimen was found
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P527913 Aragonite on galena, South Glencrieff, (New Glencrieff Mine), Wanlockhead, Dumfriesshire

The Caption:

Caption Title Aragonite on galena, South Glencrieff, (New Glencrieff Mine), Wanlockhead, Dumfriesshire

Subtitle

Caption Text 1 A specimen of massive aragonite on galena from South Glencrieff, Wanlockhead, Dumfriesshire. Galena is the principal lead ore of the district and aragonite is a gangue mineral of no commercial value. British Geological Survey Petrology Collection sample number MC 7689.

Caption Text 2 Galena is lead sulphide and belongs to the cubic crystal system. It is a soft mineral, only 2 to 2.5 on Moh's scale of hardness. It is very heavy with a specific gravity of 7.2 to 7.6. It is typically a mineral of medium-temperature hydrothermal deposits associated with sphalerite

Caption Text 3 The aragonite is composed of calcium carbonate and belongs to the orthorhombic crystal system. It is closely related to calcite which has the same composition but belongs to the hexagonal crystal system. It is a high-pressure polymorph of calcite.

The Basic Record:

Simple Name Mineral specimen

Brief Description Aragonite on galena, South Glencrieff (New Glencrieff Mine), Wanlockhead, Dumfriesshire.

Materials Mineral specimen

Associated Place Scotland, Dumfriesshire, Wanlockhead, South Glencrieff Mine

(Nature of Location specimen was found

Grid Reference

Ref. Author Wilson, G.V.

Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.

Ref. Publication Details Edinburgh : HMSO, 1921.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P527914 Plumbonacrite on galena, North Glencrieff, Wanlockhead, Dumfriesshire

The Caption:

Caption Title Plumbonacrite on galena, North Glencrieff, Wanlockhead, Dumfriesshire
Subtitle
Caption Text 1 A specimen of plumbonacrite on galena from the 40 fathoms level, North Glencrieff, Wanlockhead, Dumfriesshire. Galena is a primary ore of lead and plumbonacrite is a variety of hydrocerussite, a hydrated carbonate of lead, one of the secondary accessory ores of lead. British Geological Survey Petrology Collection sample number MC 7690.
Caption Text 2 Plumbonacrite is the name given to those varieties of hydrocerussite that have a nacreous lustre.
Caption Text 3 Secondary accessory ores are formed by the oxidation of the primary ores. They are usually restricted to the upper portions of the veins, though in the New Glencrieff Vein they extend to about 200 fathoms from the surface (120 fathoms below adit level).

The Basic Record:

Simple Name Mineral specimen
Brief Description Plumbonacrite on galena, North Glencrieff, Wanlockhead, Dumfriesshire.
Materials Mineral specimen
Associated Place Scotland, Dumfriesshire, Wanlockhead, North Glencrieff Mine
(Nature of
Grid Reference Location specimen was found

Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P527915 Pyromorphite on galena from the Old Glencrieff Vein, Wanlockhead, Dumfriesshire

The Caption:

Caption Title Pyromorphite on galena from the Old Glencrieff Vein, Wanlockhead, Dumfriesshire
Subtitle
Caption Text 1 A specimen of pyromorphite on galena from the Old Glencrieff Vein, Wanlockhead, Dumfriesshire. British Geological Survey Petrology Collection sample number MC 7691.
Caption Text 2 Galena is the primary lead ore, pyromorphite is a secondary accessory ore created by oxidation. Pyromorphite lead chlorophosphate and mimetite lead chloroarsenate are common oxidation mineral of the district.
Caption Text 3 The two minerals are isomorphous and practically all mixtures from pure pyromorphite to pure mimetite can be found. They range in colour but are usually olive-green to orange-red or even yellow.

The Basic Record:

Simple Name Mineral specimen
Brief Description Pyromorphite on galena from the Old Glencrieff Vein, Wanlockhead, Dumfriesshire.
Materials Mineral specimen
Associated Place Scotland, Dumfriesshire, Wanlockhead, Glencrieff Mine
(Nature of Grid Reference Location specimen was found
Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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P527916 Galena from the Leadhills - Wanlockhead mining district, Lanarkshire, Dumfriesshire

The Caption:

Caption Title	Galena from the Leadhills - Wanlockhead mining district, Lanarkshire, Dumfriesshire
Subtitle	
Caption Text 1	Galena from the Leadhills - Wanlockhead area. Galena is the principal lead ore in the district. It occurs as massive coarse-grained crystalline aggregates and occasionally as fine-grained 'steel ore'. British Geological Survey Petrology Collection sample number MC 7692.
Caption Text 2	The chemical composition of galena is lead sulphide. It belongs to the cubic crystal system and has a low hardness of between 2.5 and 2.8 on Moh's scale and a high specific gravity of 7.2 to 7.6 i.e. it will feel very 'heavy'.
Caption Text 3	Almost all the veins in the area contain galena, most contain sphalerite (zinc-blende) the other primary ore. All other minerals are primary accessory ores such as chalcopyrite, pyrites and jamesonite, secondary ores as reduction products, secondary accessory ores as the result of oxidation and the gangue minerals that have no economic value.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Galena from the Leadhills - Wanlockhead mining district, Lanarkshire, Dumfriesshire.
Materials	Mineral specimen
Associated Place	Scotland, Dumfriesshire, Wanlockhead
(Nature of Grid Reference	Location specimen was found
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
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Input Date	15/06/2003

P527917 Witherite from West Branch (New Glencrieff Vein), Wanlockhead, Dumfriesshire

The Caption:

Caption Title	Witherite from West Branch (New Glencrieff Vein), Wanlockhead, Dumfriesshire
Subtitle	
Caption Text 1	A specimen of witherite from West Branch (New Glencrieff Vein), Wanlockhead, Dumfriesshire. Witherite is barium carbonate and is a gangue mineral, one of no economic value. British Geological Survey Petrology Collection sample number MC 7693.
Caption Text 2	Witherite is actually one of the rarest minerals in Scotland. A cavity opened up in the year 1918 at the West Branch, New Glencrieff Vein yielded the first authentic Scottish specimens.
Caption Text 3	The mineral occurs as beautifully formed botryoidal masses up to eight inches in diameter. It is associated with barytes and is regarded as a secondary product due to the alteration of that mineral.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Witherite from West Branch (New Glencrieff Vein), Wanlockhead, Dumfriesshire.
Materials	Mineral specimen
Associated Place	Scotland, Dumfriesshire, Wanlockhead, Glencrieff Mine
(Nature of Grid Reference	Location specimen was found
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
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P527918 Sparry calcite from the Leadhills - Wanlockhead mining district, Lanarkshire, Dumfriesshire

The Caption:

Caption Title Sparry calcite from the Leadhills - Wanlockhead mining district, Lanarkshire, Dumfriesshire
Subtitle
Caption Text 1 Sparry calcite from the Leadhills - Wanlockhead mining district, Lanarkshire, Dumfriesshire. British Geological Survey Petrology Collection sample number MC 7694.
Caption Text 2 Calcite is a very common 'gangue' mineral, a mineral of no economic value compared with the 'ore' mineral which is extracted for use. Calcite is the hexagonal form of calcium carbonate and occurs in a great many forms both crystalline as in this example and massive.
Caption Text 3 The large cavities in the veins are often lined with dog-tooth spar, large scalenahedra. In other cases nail-head spar occurs that have flatter points. It had perfect rhombohedral cleavage, has a hardness of three on Moh's scale of hardness and effervesces with dilute hydrochloric acid.

The Basic Record:

Simple Name Mineral specimen
Brief Description Sparry calcite from the Leadhills - Wanlockhead mining district, Lanarkshire, Dumfriesshire.
Materials Mineral specimen
Associated Place Scotland, Dumfriesshire, Wanlockhead
(Nature of Grid Reference Location specimen was found
Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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Input Date 15/06/2003

P527919 Aragonite from North Glencrieff, Wanlockhead, Dumfriesshire

The Caption:

Caption Title Aragonite from North Glencrieff, Wanlockhead, Dumfriesshire
Subtitle
Caption Text 1 A specimen of aragonite, an orthorhombic variety of calcium carbonate. It is from North Glencrieff, Wanlockhead, Dumfriesshire. British Geological Survey Petrology Collection sample number MC 7695.
Caption Text 2 An occasional constituent of the veins, it often occurs in beautifully radiating clusters. It is a gangue mineral.
Caption Text 3 Metalliferous mineral deposits are often called ore-deposits. An ore is material that is commercial to work for some metal. The ore deposit is a mixture of the desired mineral, the ore mineral and the unwanted minerals, the gangue.

The Basic Record:

Simple Name Mineral specimen
Brief Description Aragonite from North Glencrieff, Wanlockhead, Dumfriesshire.
Materials Mineral specimen
Associated Place Scotland, Dumfriesshire, Wanlockhead, North Glencrieff Mine
(Nature of
Grid Reference Location specimen was found

Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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P527920 Galena from the Leadhills - Wanlockhead mining district, Dumfriesshire area

The Caption:

Caption Title Galena from the Leadhills - Wanlockhead mining district, Dumfriesshire area
Subtitle
Caption Text 1 A specimen of galena, the primary lead ore from the Leadhills-Wanlockhead mining district, Dumfriesshire. British Geological Survey Petrology Collection sample number MC 7696.
Caption Text 2 Galena is lead sulphide, a mineral of the cubic crystal system. It is often found in lead-grey crystals of cubo-octahedral form or more usually in compact, granular masses with many shiny faces.
Caption Text 3 The Leadhills - Wanlockhead mining district was the dominant source of lead in Scotland. Exploitation continued into the 1930s and resumed briefly in the 1950s.

The Basic Record:

Simple Name Mineral specimen
Brief Description Galena from the Leadhills - Wanlockhead mining district, Dumfriesshire area.
Materials Mineral specimen
Associated Place Scotland, Dumfriesshire, Wanlockhead
(Nature of Grid Reference Location specimen was found
Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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Input Date 15/06/2003

P527921 Hemimorphite from South Glencrieff Mine, (New Glencrieff Mine), Wanlockhead, Dumfriesshire

The Caption:

Caption Title Hemimorphite from South Glencrieff Mine, (New Glencrieff Mine), Wanlockhead, Dumfriesshire
Subtitle
Caption Text 1 A specimen of hemimorphite, a secondary accessory ore from South Glencrieff Mine, Wanlockhead, Dumfriesshire. British Geological Survey Petrology Collection sample number MC 7697.
Caption Text 2 Hemimorphite is a hydrated silicate of zinc and occurs as fine crystals lining cavities and was very plentiful at the south end of the 100 fathom level in the New Glencrieff Vein. It was found in veins up to three feet wide. The mineral ranged from to 80 to 120 fathom level and was associated with cerussite, pyromorphite, blende and galena.
Caption Text 3 Hemimorphite belongs to the orthorhombic crystal system. It derives its name from its habit of having different terminations at either end of the crystal's c-axis i.e. hemimorphic.

The Basic Record:

Simple Name Mineral specimen
Brief Description Hemimorphite from South Glencrieff Mine (New Glencrieff Mine), Wanlockhead, Dumfriesshire.
Materials Mineral specimen
Associated Place Scotland, Dumfriesshire, Wanlockhead, South Glencrieff Mine
(Nature of Grid Reference Location specimen was found

Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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P527922 Photomicrograph of coccolite marble. Quarry 92 yards east 31 degrees south of Balephetrish, Tiree, Argyllshire, Scotland

The Caption:

Caption Title	Photomicrograph of coccolite marble. Quarry 92 yards east 31 degrees south of Balephetrish, Tiree, Argyllshire, Scotland
Subtitle	
Caption Text 1	The outcrop is an elongated mass of pink marble speckled with green clots, 200 feet by 50 feet, enclosed on three sides by black hornblende-augite-gneiss. The fourth side passes under drift deposits. This specimen is Lewisian (Precambrian) in age. BGS sample number GS 1. British Geological Survey Petrology Collection sample number S 31697. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The thin section shows an aggregation of very fine-grained calcite in which numerous lens-shaped relics of larger grains are arranged parallel in shear-schistosity. Rounded crystals of pale green pyroxene, micacized scapolite, a negative alkali-feldspar and large grains of calcite form xenolith-like aggregates.
Caption Text 3	Sphene, apatite and limonitic aggregate are accessory constituents which occur both as isolated grains in the calcite matrix and in association with the pyroxene clusters.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of coccolite marble. Light: XPL. Magnification: x2.5. Quarry 92 yards east 31 degrees south of Balephetrish, Tiree, Argyllshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Argyllshire, Tiree
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527924 Photomicrograph of Loch Tay Limestone. Old quarry 550 yards west of Dalveich Farm, Loch Earn, Perthshire, Scotland

The Caption:

Caption Title	Photomicrograph of Loch Tay Limestone. Old quarry 550 yards west of Dalveich Farm, Loch Earn, Perthshire, Scotland
Subtitle	
Caption Text 1	Dark grey, saccharoidal, crystalline limestone with broadly spaced micaceous laminae. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 1. British Geological Survey Petrology Collection sample number S 34426. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock is composed of twinned calcite grains up to 1.5 mm long, subordinate quartz, accessory graphite, iron ore (probably pyrite), colourless and pale brown micas and occasional large plates and small particle-filled grains of albite-oligoclase. Trains of graphite and elongation of calcite grains show some degree of schistosity.
Caption Text 3	In some places the limestone is mottled dark grey and white and schistose with micaceous partings producing a thinly flaggy fracture. Here it is composed of elongated grains of calcite, up to 3 mm long, sieved with quartz, albite and opaque granules, foliated with granoblastic, clean calcite of about 0.5 mm grain. Quartz and albite are abundant along laminae of white mica. Some pyrite is present, and possibly graphite also.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Loch Tay Limestone. Light: XPL. Magnification: x2.5. Old quarry 550 yards west of Dalveich Farm, Loch Earn, Perthshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Perthshire, Loch Earn
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Image File	P527924.tif
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Inputter	E.K. Hyslop
Input Date	15/06/2003

P527925 Photomicrograph of Loch Tay Limestone. East face, Dunbeag, Killin, Perthshire, Scotland

The Caption:

Caption Title	Photomicrograph of Loch Tay Limestone. East face, Dunbeag, Killin, Perthshire, Scotland
Subtitle	
Caption Text 1	Grey crystalline limestone. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 3. British Geological Survey Petrology Collection sample number S 34429. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock is composed of grains of closely twinned calcite, 2 to 0.5 mm grain size, subordinate quartz and alkali-feldspars in nests with which graphite is associated. Zoisite is present locally, yellowish mica and a serpentinous mineral are accessory. One large grain 1 mm across, of alkali-feldspar occurs in the thin section and there is some pyrite and a little limonite.
Caption Text 3	The sample can be summarised as a limestone with quartz, albite, muscovite and zoisite. It is medium-grained and heteroblastic.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Loch Tay Limestone. Light: XPL. Magnification: x2.5. East face, Dunbeag, Killin, Perthshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Perthshire, Killin
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date	15/06/2003

P527926 Photomicrograph of Blair Atholl Limestone. Quarry north of White Bridge, 3.5 miles south by east of Tummel Bridge, Perthshire, Scotland

The Caption:

Caption Title	Photomicrograph of Blair Atholl Limestone. Quarry north of White Bridge, 3.5 miles south by east of Tummel Bridge, Perthshire, Scotland
Subtitle	
Caption Text 1	Bluish-grey schistose limestone of fine grain size with abundant quartz and mica. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 4. British Geological Survey Petrology Collection sample number S 34430. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	Schistosity is marked by the elongation of closely twinned calcite and the attitude of mica flakes, and quartz, alkali-feldspar and white mica are concentrated in lenticles parallel to this direction. The calcite grains reach 3 mm in length by 0.8 mm width. The feldspar is turbid and is probably albite. Some pyrite, a little sphene and apatite and possibly graphite are also
Caption Text 3	A limestone recrystallized under stress. The calcite grains are elongated parallel to the plane of schistosity and the rock is granoschistose in structure. Small lenses of granular quartz define a foliation parallel to the schistosity produced by elongation of the calcite.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Blair Atholl Limestone. Light: XPL. Magnification: x2.5. Quarry north of White Bridge, 3.5 miles south by east of Tummel Bridge, Perthshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Perthshire, White Bridge
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527927 Photomicrograph of Charlestown Main Limestone. Chapel Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Charlestown Main Limestone. Chapel Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland
Subtitle	
Caption Text 1	Dark grey limestone mottled with white powdery material. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 10. British Geological Survey Petrology Collection sample number S 34444. Photomicrograph details: Light: XPL, Magnification:
Caption Text 2	The rock is composed of granular carbonate, 0.1 mm grain size, with debris of shells and crinoids. Nests of more coarsely granular carbonate have a dusky brown appearance. The carbonate is all calcite. Some bands of the rock are rich in tiny grains, giving square and six-sided sections, of garnet (grossular) and also in poorly shaped crystals of datolite. The largest garnet grains are about 0.08 mm across.
Caption Text 3	Part of the rock is more shaly, enclosing crinoid remains. This portion is brown and opaque, but near the edge of the slide it shows fibres and a multitude of minute grains and prisms with high extinction angle. Pectolite has been observed as the main constituent of two very thin sinuous and impersistent veins in one of which the pectolite is locally replaced by apophyllite.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Charlestown Main Limestone. Light: XPL. Magnification: x2.5. Chapel Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Kirkcaldy, Chapel Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527928 Photomicrograph of Petershill Limestone, 10 feet from top. North-east end of Petershill Reservoir, Bathgate, West Lothian, Scotland

The Caption:

Caption Title	Photomicrograph of Petershill Limestone, 10 feet from top. North-east end of Petershill Reservoir, Bathgate, West Lothian, Scotland
Subtitle	
Caption Text 1	Brownish-grey, compact limestone. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 52. British Geological Survey Petrology Collection sample number S 34447. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock is composed of calcareous debris including fragments of small shells and crinoids and numerous tests of foraminifera. A little bituminous matter is present. The matrix is of finely divided calcite in process of recrystallization.
Caption Text 3	The sample is a microclastozoic limestone, of small fossil debris and entire foraminifera in a matrix of finely granular, recrystallized calcite. The term clastozoic is an old term meaning a limestone containing animal remains mainly in the form of angular, little-worn debris which may be sorted or unsorted in size. Clastozoic limestones commonly contain entire microfossils.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Petershill Limestone, 10 feet from top. Light: XPL. Magnification: x2.5. North-east end of Petershill Reservoir, Bathgate, West Lothian, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, West Lothian, Bathgate, Petershill Reservoir
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527929 Photomicrograph of Burdiehouse Limestone. Haeburn Limestone Mine, 1 mile south of Haeburnhead, Edinburgh, Lothian Region, Scotland

The Caption:

Caption Title	Photomicrograph of Burdiehouse Limestone. Haeburn Limestone Mine, 1 mile south of Haeburnhead, Edinburgh, Lothian Region, Scotland
Subtitle	
Caption Text 1	Compact earthy-brown, fine-grained limestone. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL54. British Geological Survey Petrology Collection sample number S 34449. Photomicrograph details: Light: PPL, Magnification:
Caption Text 2	The sample consists of minutely granular calcite, grain size in general less than 0.02 mm, permeated by films of yellow bituminous matter. Complete and fragmentary ostracod shells, enclosing clear coarsely granular calcite are numerous. Grains of pyrite granules, occasional streaks of bitumen and traces of fossil phosphate are present.
Caption Text 3	Some fine-grained gritty quartz occurs in certain laminae along with small aggregates of a radiating mineral which, in view of the chemical analysis of this rock, may be celestite. On heating the powdered rock emits a little oily vapour.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Burdiehouse Limestone. Light: PPL. Magnification: x2.5. Haeburn Limestone Mine, 1 mile south of Haeburnhead, Edinburgh, Lothian Region, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Lothian Region, Harburnhead, Harburn Limestone Mine
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527930 Photomicrograph of Kirkby's IIIa Limestone. Shore at Randerston, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Kirkby's IIIa Limestone. Shore at Randerston, Fifeshire, Scotland
Subtitle	
Caption Text 1	The limestone is a banded grey and buff close-grained dolomite with flinty fracture. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 28. British Geological Survey Petrology Collection sample number S 34450. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The sample is composed of finely granular dolomite of 0.02-0.03 mm grain size, the refractive index of which is 1.697 or slightly greater, indicating a content of about 20 per cent ferrodolomite. The rock contains numerous thin tests of ostracods many of which are preserved in black material which is probably pyrite. Granules and tiny cubes of oxidized pyrite are scattered through the rock. Yellow phosphatic fossil fragments are very scarce.
Caption Text 3	In summary, a ferriferous dolomite in which the grain varying from microcrystalline to peltomorphous probably reflects the variation of grain in the original limestone. Shells of ostracods are delineated by more and less dense concentrations of pyrite powder through which the more coarsely crystalline dolomite within the shells grows.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Kirkby's IIIa Limestone. Light: PPL. Magnification: x2.5. Shore at Randerston, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Randerston shore
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527931 Photomicrograph of Kirkby's III Limestone. Shore at Randerston, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Kirkby's III Limestone. Shore at Randerston, Fifeshire, Scotland
Subtitle	
Caption Text 1	A crudely platy, irony, shelly rock of lumachelle type. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 29. British Geological Survey Petrology Collection sample number S 34451. Photomicrograph details: Light: PPL,
Caption Text 2	The shells are replaced by turbid coarsely granular ferriferous dolomite, and are embedded in a matrix of carbonate stained and cemented by limonite. This carbonate is in part very finely granular, in part recrystallized to a mosaic of irregular grain up to 0.1 mm across. Numerous fragments of small shells and scarce quartz and mica are scattered through the fine-grained
Caption Text 3	The rock has an ordinary refractive index of mostly 1.700 but varies upward, the highest value observed being 1.715, indicating a content of fully 20 per cent of ferrodolomite.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Kirkby's III Limestone. Light: PPL. Magnification: x2.5. Shore at Randerston, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Randerston shore
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527932 Photomicrograph of Kirkby's V Limestone. Shore at Randerston, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Kirkby's V Limestone. Shore at Randerston, Fifeshire, Scotland
Subtitle	
Caption Text 1	Brownish-buff massive rock which in some bands are almost wholly composed of shells. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 30. British Geological Survey Petrology Collection sample number S 34452. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	In thin section the shells are seen to be cemented by a matrix of fine granular clear carbonate in which are set numerous granules of oxidized siderite (0.01-0.02 mm), angular quartz grains (0.1-0.5 mm) and a few yellow phosphatic fossil fragments. A few small cavities are filled with kaolin.
Caption Text 3	The carbonate replacing the shells is an ankerite the refractive index of which is variable being generally between 1.690 and 1.700 but as high as 1.705, and the fine-grained carbonate of the matrix is similar.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Kirkby's V Limestone. Light: PPL. Magnification: x2.5. Shore at Randerston, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Randerston shore
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527933 Photomicrograph of Kirkby's VII Limestone. Shore at Randerston, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Kirkby's VII Limestone. Shore at Randerston, Fifeshire, Scotland
Subtitle	
Caption Text 1	Buff-grey, finely saccharoidal dolomite with cavities containing tiny crystals of ankerite, refractive index 1.715. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 31. British Geological Survey Petrology Collection sample number S 34453. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	In thin section the rock is seen to be completely recrystallized to a mosaic of irregular grains of carbonate, 0.1-0.2 mm across, which are partly turbid, partly clear. Ghosts of shells and of finely granular matrix are outlined and depicted by dust patterns and variations in grain persisting through the recrystallized carbonate, which is a ferriferous dolomite with refractive index varying slightly about 1.690.
Caption Text 3	Perfect rhombs of carbonate in the fine-grained dolomite are probably ankerite similar to the crystals of the cavities.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Kirkby's VII Limestone. Light: XPL. Magnification: x2.5. Shore at Randerston, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Randerston shore
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527934 Photomicrograph of dolomitic limestone. Muiredge, 2 miles north of Anstruther, Fifeshire

The Caption:

Caption Title Photomicrograph of dolomitic limestone. Muiredge, 2 miles north of Anstruther, Fifeshire, Scotland

Subtitle

Caption Text 1 Earthy brown dolomite with streaks of calcite. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 32. British Geological Survey Petrology Collection sample number S 34454. Photomicrograph details: Light: PPL, Magnification:

Caption Text 2 The rock is composed of a great number of small shells, preserved in turbid ferriferous dolomite, all lying parallel to the bedding and cemented by irregularly oil-stained fine-grained carbonate which is largely a ferriferous dolomite, with varying content of ferrodolomite but never pure dolomite. Scarce granules of sideritic carbonate of high refractive index are distributed through the fine-grained carbonate; finely divided clay material occurs in shell casts, and some phosphatic fragments and grains of pyrite are present.

Caption Text 3 When this rock is powdered and heated in a closed tube a heavy yellow oil is evolved.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of dolomitic limestone. Light: PPL. Magnification: x2.5. Muiredge, 2 miles north of Anstruther, Fifeshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Fifeshire, Anstruther, Muiredge

(Nature of Location specimen was found

Grid Reference

Display Date / Period Carboniferous 354-290 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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P527935 Photomicrograph of dolomite. Carnbee Dean, 2.5 miles north-north-west of Pittenweem, Fifeshire

The Caption:

Caption Title	Photomicrograph of dolomite. Carnbee Dean, 2.5 miles north-north-west of Pittenweem, Fifeshire, Scotland
Subtitle	
Caption Text 1	Dark grey dolomitized encrinal limestone. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 33. British Geological Survey Petrology Collection sample number S 34456. Photomicrograph details: Light: XPL, Magnification:
Caption Text 2	The sample consists of a mass of fragments of crinoid, some shells and scarce foraminifera replaced by granular dolomite in a base of finely granular dolomite and clay among which deeply yellow stained grains of sideritic carbonate are distributed. The dolomite replacing the fossil fragments is ferriferous with a variable content of ferrodolomite of about 20 per cent estimated from the refractive index, 1.700 and slightly less.
Caption Text 3	Quartz in small angular grains, 0.05 mm, and pyrite in clusters of granules are common throughout the fine-grained matrix.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of dolomite. Light: XPL. Magnification: x2.5. Carnbee Dean, 2.5 miles north-north-west of Pittenweem, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Pittenweem, Carnbee Dean
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527936 Photomicrograph of thin limestone above the Hurlet (Charlestown Main?). Old West Quarry, Forthar Old Limeworks, Fifeshire, Scotland

The Caption:

Caption Title Photomicrograph of thin limestone above the Hurlet (Charlestown Main?). Old West Quarry, Forthar Old Limeworks, Fifeshire, Scotland

Subtitle

Caption Text 1 A dark calcareous dolomite with Lithostrotion fossils. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 50. British Geological Survey Petrology Collection sample number S 34465. Photomicrograph details: Light: XPL, Magnification:

Caption Text 2 The corals, completely recrystallized but occasionally showing traces of septa in the form of trains of mineral particles, are set in a matrix of granular carbonate, coloured brownish by carbonaceous matter, and clear shell fragments. A little pyrite is present. The dolomite is feriferous, the ordinary refractive index varying about 1.697. Immersion in stain failed to reveal calcite, and staining by the silver nitrate-potassium chromate method produced a general pinkish stain with numerous minute points of concentration. Since the chemical analysis indicates the presence of excess calcite over the proportions required for feriferous dolomite, the failure of the staining method to reveal discrete crystals of calcite suggests that the excess carbonate is present in solid solution in the dolomite.

Caption Text 3 In summary this rock is a fine-grained feriferous dolomite, with fossils partially destroyed by recrystallization.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of thin limestone above the Hurlet (Charlestown Main?). Light: XPL. Magnification: x2.5. Old West Quarry, Forthar Old Limeworks, 1 mile east-south-east of Freuchie, Fifeshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Fifeshire, Freuchie, Forthar Old Limeworks

(Nature of Location specimen was found

Grid Reference

Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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P527937 Photomicrograph of Lismore Limestone. Quarry just north of Port Ramsay, Argyllshire, Scotland

The Caption:

Caption Title Photomicrograph of Lismore Limestone. Quarry just north of Port Ramsay, Argyllshire,
Subtitle
Caption Text 1 A dark grey, rudely flaggy limestone with a set of rectangular narrow calcite veins normal to the bedding. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 88. British Geological Survey Petrology Collection sample number S 34483. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2 The rock is composed essentially of elongated grains of calcite darkened with dust, possibly graphitic, and containing subordinate alkali-feldspar and quartz. The calcite is of varying grain size reaching 0.5 mm in length and is elongated parallel to the flagginess. A subordinate proportion of the calcite shows biaxiality.
Caption Text 3 Apatite and tourmaline are accessory minerals in the rock, and pyrite is common in euhedral crystals reaching 2 mm across.

The Basic Record:

Simple Name Photomicrograph
Brief Description Photomicrograph of Lismore Limestone. Light: XPL. Magnification: x2.5. Quarry just north of Port Ramsay, Argyllshire, Scotland.
Materials Photomicrograph
Associated Place Scotland, Argyllshire, Port Ramsay
(Nature of Grid Reference) Location specimen was found
Display Date / Period Precambrian, Dalradian 750-515 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Muir, A. and Phemister, J. et. al.
Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details Edinburgh : HMSO, 1956.
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527938 Photomicrograph of Charlestown Main Limestone. Easter Glasslie, 2.5 miles north of Leslie, Fifeshire

The Caption:

Caption Title	Photomicrograph of Charlestown Main Limestone. Easter Glasslie, 2.5 miles north of Leslie, Fifeshire, Scotland
Subtitle	
Caption Text 1	Grey, brownish weathering dolomite. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 97. British Geological Survey Petrology Collection sample number S 34489. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The sample is composed of irregular, interlocking grains of turbid dolomite, 0.5-0.2 mm, with accessory pyrite and disseminated fine carbonaceous particles.
Caption Text 3	The dolomite grains are of varying size and form an uneven mosaic in the rock. Contiguous grains interpenetrate so that in the thin section detailed portions of one grain appear isolated within another diagenetically recrystallized structure.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Charlestown Main Limestone. Light: XPL. Magnification: x2.5. Easter Glasslie, 2.5 miles north of Leslie, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Leslie, Easter Glassie
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527939 Photomicrograph of Grantown Limestone. 450 yards south-east of Coldholme, Dulnain Bridge, Morayshire, Scotland

The Caption:

Caption Title	Photomicrograph of Grantown Limestone. 450 yards south-east of Coldholme, Dulnain Bridge, Morayshire, Scotland
Subtitle	
Caption Text 1	Pale grey and yellowish grey banded, medium-grained crystalline limestone. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 13. British Geological Survey Petrology Collection sample number S 34499. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The sample consists of granular calcite of varying grain size, 0.2 to 3 mm, with bands rich in granular potash-feldspar, albite and decomposed plagioclase, together with numerous rounded and prismatic grains of diopside and tremolite and flakes of brown phlogopite. Apatite and sphene are accessory.
Caption Text 3	In summary, a limestone with feldspars, diopside, tremolite and phlogopite, foliated, granoblastic. In some parts plagioclase (oligoclase) is abundant, diopside forms large ragged prisms and pale brown phlogopite is an important constituent. Zoisite also is an accessory.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Grantown Limestone. Light: XPL. Magnification: x2.5. 450 yards south-east of Coldholme, Dulnain Bridge, Morayshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Morayshire, Dulnain Bridge
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527940 Photomicrograph of metamorphic limestone. Quarry at Ladyleys, east of Old Meldrum, Aberdeenshire

The Caption:

Caption Title	Photomicrograph of metamorphic limestone. Quarry at Ladyleys, east of Old Meldrum, Aberdeenshire, Scotland
Subtitle	
Caption Text 1	Dark grey banded rock, effervescing with HCl only in some bands. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 66. British Geological Survey Petrology Collection sample number S 34505. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	In thin section a banded granulite (hornfels) containing biotite, pyroxene, epidote, calcite, calcic plagioclase, oligoclase and albite, with subordinate muscovite, colourless hornblende and accessory pyrite and sphene, in varying proportions in different bands. Some parts are grey limestone of impure type, composed of calcite of varying grain size, 0.05 to 1 mm, partly granulitized, with subordinate pyroxene, hornblende, epidote, accessory pyrite, sphene and biotite, scattered grains of plagioclase and small nests of quartz.
Caption Text 3	In summary a limestone with calcsilicates and quartz, grain-foliated and granoschistose.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of metamorphic limestone. Light: XPL. Magnification: x2.5. Quarry at Ladyleys, east of Old Meldrum, Aberdeenshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Aberdeenshire, Old Meldrum
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527941 Photomicrograph of limestone, Sandend Group. Blackhillock Quarry, 1 rnil south of Coachford and about 5 miles north-west of Huntly, Aberdeenshire, Scotland

The Caption:

Caption Title	Photomicrograph of limestone, Sandend Group. Blackhillock Quarry, 1 rnil south of Coachford and about 5 miles north-west of Huntly, Aberdeenshire, Scotland
Subtitle	
Caption Text 1	Grey crystalline limestone with dark micaceous partings. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 71. British Geological Survey Petrology Collection sample number S 34511. Photomicrograph details: Light: XPL,
Caption Text 2	The rock consists of twinned granular calcite in interdigitating grains of varying size, 0.1 to 2 mm, the larger being elongated along the schistosity. Quartz, muscovite and chlorite are subordinate, and opacite including pyrite, leucoxene and perhaps graphite, accessory. The quartz is distributed as individual grains and as lenticles, the other constituents usually in contorted films swelling in places to small nests.
Caption Text 3	In summary the rock is a limestone with quartz, muscovite and chlorite. It is medium-grained, grano-schistose and foliated.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone, Sandend Group. Light: XPL. Magnification: x2.5. Blackhillock Quarry, 1 rnil south of Coachford and about 5 miles north-west of Huntly, Aberdeenshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Aberdeenshire, Coachford, Blackhillock Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527942 Photomicrograph of limestone, Sandend Group. Hillockhead Quarry, 2.5 miles west by south of Keith, Banffshire, Scotland

The Caption:

Caption Title	Photomicrograph of limestone, Sandend Group. Hillockhead Quarry, 2.5 miles west by south of Keith, Banffshire, Scotland
Subtitle	
Caption Text 1	Dove-grey, medium-grained crystalline limestone. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 72. British Geological Survey Petrology Collection sample number S 34512. Photomicrograph details: Light: XPL, Magnification:
Caption Text 2	The sample is composed of interlocking grains of closely twinned calcite, 0.5 to 2 mm grain size, with numerous small quartz grains at the junctions of the calcite grains. Locally large grains of quartz are elongated along the foliation. Muscovite is a subordinate mineral. Sphene, apatite and graphite are accessory; zoistic epidote is present in some laminae.
Caption Text 3	In summary the rock is a limestone with quartz, muscovite and zoisite. It is coarse-grained, granoblastic, and foliated.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone, Sandend Group. Light: XPL. Magnification: x2.5. Hillockhead Quarry, 2.5 miles west by south of Keith, Banffshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Banffshire, Keith, Hillockhead Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527943 Photomicrograph of limestone, Sandend Group. Quarry, Rinaitin, Glen Rinnes, Banffshire

The Caption:

Caption Title	Photomicrograph of limestone, Sandend Group. Quarry, Rinaitin, Glen Rinnes, Banffshire, Scotland
Subtitle	
Caption Text 1	Banded pale and dark grey, crystalline limestone with micaceous films. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 75. British Geological Survey Petrology Collection sample number S 34515. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The rock is composed of elongated grains of calcite, up to 3 mm in length, showing a close, curved twinning and traversed by fracture veins in which both calcite and dolomite are present. Quartz is accessory as small grains enclosed in calcite. In the darker bands the calcite grains are enveloped by black graphitic and pyritous dust. Micas, partly chloritized, are present but scarce.
Caption Text 3	In summary a dolomitic limestone, with some quartz. It is granoschistose and sheared.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone, Sandend Group. Light: PPL. Magnification: x2.5. Quarry, Rinaitin, Glen Rinnes, Banffshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Banffshire, Glen Rinnes
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date	15/06/2003

P527944 Photomicrograph of Bilston Burn (No. 3) Limestone. Esperston Limeworks, 600 yards north-east of Esperton, Midlothian, Scotland

The Caption:

Caption Title	Photomicrograph of Bilston Burn (No. 3) Limestone. Esperston Limeworks, 600 yards north-east of Esperton, Midlothian, Scotland
Subtitle	
Caption Text 1	Pale buff, very fine-grained limestone with brown bituminous films. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 45. British Geological Survey Petrology Collection sample number S 34534. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The sample consists of finely granular calcite (0.01 mm grain) enclosing numerous shell fragments which are often flat or flattened along the bedding. Clay is sometimes recognizable in small aggregates as kaolin. Quartz is rarely distinguishable as small grains, 0.01 mm, but many feebly birefringent aggregates may be more finely divided quartz.
Caption Text 3	Shreds of bituminous and limonitic matter are common and limonite replaces scattered rhombs of siderite.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Bilston Burn (No. 3) Limestone. Light: XPL. Magnification: x2.5. Esperston Limeworks, 600 yards north-east of Esperton, Midlothian, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Midlothian, Esperston Limeworks
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date	15/06/2003

P527945 Photomicrograph of Gilmerton (No. 1) Limestone. Common Hill Quarry, 670 yards south-west of Middleton, Midlothian, Scotland

The Caption:

Caption Title	Photomicrograph of Gilmerton (No. 1) Limestone. Common Hill Quarry, 670 yards south-west of Middleton, Midlothian, Scotland
Subtitle	
Caption Text 1	A grey and brownish, compact, fine-grained limestone with calcite-filled fractures. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 46. British Geological Survey Petrology Collection sample number S 34535. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The thin section contains tiny calcareous fossils including foraminifera, spines, fragments of thin shells and pellets, accessory grains of quartz and granules of pyrite in a fine-grained turbid matrix of calcite, 0.01 mm grain size, recrystallized extensively to clear calcite of grain size 0.02 to 0.04 mm. In this base larger fragments of crinoid and shell and large spines are
Caption Text 3	In summary the rock is a microfossiliferous limestone.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Gilmerton (No. 1) Limestone. Light: XPL. Magnification: x2.5. Common Hill Quarry, 670 yards south-west of Middleton, Midlothian, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Midlothian, Middleton
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527946 Photomicrograph of North Greens (No. 2) Limestone. Quarry 160 yards north-west of Northfield, Cousland Lime Workings, Midlothian, Scotland

The Caption:

Caption Title	Photomicrograph of North Greens (No. 2) Limestone. Quarry 160 yards north-west of Northfield, Cousland Lime Workings, Midlothian, Scotland
Subtitle	
Caption Text 1	A grey and brownish, earthy limestone. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 57. British Geological Survey Petrology Collection sample number S 34539. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The thin section shows almost equal proportions of brown argillaceous and calcareous material, among which thin rectangular sections (possibly pieces of thin-walled shells) are prominent. Remains of crinoids, polyzoa, shells and spines can be recognized but for the most part the calcareous material is small platy debris. Angular grains of quartz and shreds of muscovite and bleached biotite are common throughout the rock.
Caption Text 3	The rock is a calcareous shale, containing animal remains mainly in the form of angular, little-worn debris.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of North Greens (No. 2) Limestone. Light: XPL. Magnification: x2.5. Quarry 160 yards north-west of Northfield, Cousland Lime Workings, 2.5 miles east-north-east of Dalkeith, Midlothian, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Midlothian, Northfield
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527947 Photomicrograph of North Greens (No. 2) Limestone, lower massive half. Quarry 160 yards north-west of Northfield, Midlothian, Scotland

The Caption:

Caption Title	Photomicrograph of North Greens (No. 2) Limestone, lower massive half. Quarry 160 yards north-west of Northfield, Midlothian, Scotland
Subtitle	
Caption Text 1	Bedded limestone composed largely of fragments of calcareous organisms. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 59. British Geological Survey Petrology Collection sample number S 34541. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	In thin section the fossils are associated with cementing fine calcareous debris and some argillaceous and bituminous matter. Crinoids, foraminifera, shells and polyzoan fragments are numerous and lie with their flatter surfaces along the bedding.
Caption Text 3	A microclastitic limestone composed of well-sorted small fragments of fossils and entire microfossils of comparable size embedded in a bedded matrix of pelitomorphic calcite admixed with clay and bituminous matter.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of North Greens (No. 2) Limestone, lower massive half. Light: PPL. Magnification: x2.5. Quarry 160 yards north-west of Northfield, Cousland Lime Workings, 2.5 miles east-north-east of Dalkeith, Midlothian, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Midlothian, Northfield
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527948 Photomicrograph of cornstone. Old lime kiln at base of cliff, 400 yards north-north-east of Seagreens, East Mathers, Kincardineshire, Scotland

The Caption:

Caption Title	Photomicrograph of cornstone. Old lime kiln at base of cliff, 400 yards north-north-east of Seagreens, East Mathers, Kincardineshire, Scotland
Subtitle	
Caption Text 1	Purplish-grey, compact limestone with veins of clear calcite. This specimen is Upper Old Red Sandstone (Devonian) in age. BGS sample number SL 24. British Geological Survey Petrology Collection sample number S 34545. Photomicrograph details: Light: XPL,
Caption Text 2	The rock contains granular calcite, and has the patchy distribution of fine, medium and coarse grains typical of cornstones, suggesting the original rock was of fine texture, 0.005 mm grain, with coarser material recrystallized or depositing in drying cracks. Relics of the original very fine semi-opaque carbonate-rock show pellet-structure and, rarely, a cellular structure which may indicate algal growths.
Caption Text 3	The thin section is crossed by large prominent veins containing relatively coarse-grained

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of cornstone. Light: XPL. Magnification: x2.5. Old lime kiln at base of cliff, 400 yards north-north-east of Seagreens, East Mathers, Kincardineshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Kincardineshire, East Mathers
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527949 Photomicrograph of nodular cornstone. Old quarry 400 yards west-south-west of Huntley Hill, 2.5 miles north-east of Brechin, Angus, Scotland

The Caption:

Caption Title	Photomicrograph of nodular cornstone. Old quarry 400 yards west-south-west of Huntley Hill, 2.5 miles north-east of Brechin, Angus, Scotland
Subtitle	
Caption Text 1	Dark grey-brown compact limestone composed of finely-divided turbid calcite, recrystallized along desiccation cracks to a coarser grain size. This specimen is Lower Old Red Sandstone (Devonian) in age. BGS sample number SL 27. British Geological Survey Petrology Collection sample number S 34548. Photomicrograph details: Light: XPL, Magnification:
Caption Text 2	The sample contains angular grains of quartz and subordinate plagioclase, felsite with microporphyritic quartz, chert and feldspathic siltstone are abundant and range from 1 mm downwards in length. Long slivers of muscovite, biotite, oxidized biotite and chlorite are present. Garnet and staurolite are scarce accessories.
Caption Text 3	In summary the rock is an arenaceous, micrograined limestone, with small impurities scattered throughout.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of nodular cornstone. Light: XPL. Magnification: x2.5. Old quarry 400 yards west-south-west of Huntley Hill, 2.5 miles north-east of Brechin, Angus, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Angus, Brechin
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527950 Photomicrograph of North Greens (No. 2) Limestone. Upper Side Quarry, 2.5 miles south-west of Temple, Midlothian, Scotland

The Caption:

Caption Title	Photomicrograph of North Greens (No. 2) Limestone. Upper Side Quarry, 2.5 miles south-west of Temple, Midlothian, Scotland
Subtitle	
Caption Text 1	Compact, dark grey limestone. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 81. British Geological Survey Petrology Collection sample number S 34555. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	Partly recrystallized fragments of thin shells, scarce foraminifera, scarce small shells filled with clear granular calcite, numerous pyrite-impregnated straight and curved fragments and very scarce polyzoan fragments are embedded in a base of very fine-grained, granular calcite and probably clay. The grain size of the base increases in places to 0.03 mm size.
Caption Text 3	The rock is traversed by very thin impersistent calcite-filled fractures. A few small crystals of a yellow, highly refractive, isotropic mineral taken to be sphalerite occur in a shell and a spine.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of North Greens (No. 2) Limestone. Light: XPL. Magnification: x2.5. Upper Side Quarry, 100 yards south-south-west of Fountainside, 2.5 miles south-west of Temple, Midlothian, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Midlothian, Fountainside
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
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P527951 Photomicrograph of Skateraw Middle Limestone. Shore at Skateraw, East Lothian, Scotland

The Caption:

Caption Title	Photomicrograph of Skateraw Middle Limestone. Shore at Skateraw, East Lothian, Scotland
Subtitle	
Caption Text 1	Pale brownish-grey limestone, showing scattered cleavage faces of calcite and dull dark greenish specks. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 84. British Geological Survey Petrology Collection sample number S 34557. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock is composed of the debris of shells, spines, occasional Calcisphaera, foraminifera, algae and scarce crinoidal remains in a very fine-grained base of calcite granules, 0.002-0.01 mm. Locally the base is recrystallized. The walls of many of the fossil fragments are impregnated with pyrite. Bituminous matter occurs sparsely in foraminifera chambers and in
Caption Text 3	In summary, a fine-grained microfossiliferous limestone.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Skateraw Middle Limestone. Light: XPL. Magnification: x2.5. Shore at Skateraw, East Lothian, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, East Lothian, Skateraw shore
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527952 Photomicrograph of Hawthorn Limestone. Quarry at Glenmuir Limeworks, 6 miles north-east of High

Glenmuir, 4 miles east of Cumnock, Ayrshire, Scotland

The Caption:

Caption Title Photomicrograph of Hawthorn Limestone. Quarry at Glenmuir Limeworks, 6 miles north-east of High Glenmuir, 4 miles east of Cumnock, Ayrshire, Scotland

Subtitle

Caption Text 1 Reddish-grey compact limestone. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 93. British Geological Survey Petrology Collection sample number S 34559. Photomicrograph details: Light: PPL, Magnification: x2.5.

Caption Text 2 The rock is composed of small debris of shells, crinoid columnals, spines, foraminifera and polyzoan fragments set in a matrix of very fine-grained calcite which is considerably recrystallized to larger grains of 0.02-0.03 mm. In this matrix small angular grains of quartz, shreds of white and bleached micas and traces of kaolinite are accessory. Small groups, 0.2 mm across, of small crystals of siderite with oxidized borders are scattered throughout the rock.

Caption Text 3 In summary, a muddy or silty limestone, fine-grained and sideritic, containing microfossils.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Hawthorn Limestone. Light: PPL. Magnification: x2.5. Quarry at Glenmuir Limeworks, 6 miles north-east of High Glenmuir, 4 miles east of Cumnock,

Materials Photomicrograph

Associated Place Scotland, Ayrshire, Cumnock, Glenmuir Limeworks

(Nature of Location specimen was found

Grid Reference

Display Date / Period Carboniferous 354-290 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Image CD 14

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Inputter E.K. Hyslop

Input Date 15/06/2003

P527953 Photomicrograph of cornstone. Craigdullyear Limeworks, 3 miles east-north-east of New Cumnock, Ayrshire, Scotland

The Caption:

Caption Title	Photomicrograph of cornstone. Craigdullyear Limeworks, 3 miles east-north-east of New Cumnock, Ayrshire, Scotland
Subtitle	
Caption Text 1	Dull cream-coloured rock which is much fractured. This specimen is Upper Old Red Sandstone (Devonian) in age. BGS sample number SL 94. British Geological Survey Petrology Collection sample number S 34560. Photomicrograph details: Light: XPL, Magnification:
Caption Text 2	The sample is composed of a mixture of very fine-grained turbid carbonate and recrystallized granular carbonate of grain size varying from 0.03-0.3 mm. Rarely short tubules in the fine, turbid component suggest that it is partly algal in origin. In recrystallization clay material is concentrated sometimes round the periphery of relict pieces of fine-grained carbonate, sometimes interstitially between the recrystallized grains.
Caption Text 3	Angular quartz and subordinate alkali-feldspar grains, up to 0.5 mm long, occur abundantly in patches; clay is present as impersistent irregular films; flakes of chlorite and grains of chert are accessory.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of cornstone. Light: XPL. Magnification: x2.5. Craigdullyear Limeworks, 3 miles east-north-east of New Cumnock, Ayrshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ayrshire, New Cumnock, Craigdullyear Limeworks
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	E.K. Hyslop
Input Date	15/06/2003

P527954 Photomicrograph of Index Limestone. 300 yards south of High Polquhirter, 1 mile south-east of New

Cumnock, Ayrshire, Scotland

The Caption:

Caption Title	Photomicrograph of Index Limestone. 300 yards south of High Polquhirter, 1 mile south-east of New Cumnock, Ayrshire, Scotland
Subtitle	
Caption Text 1	Dull, brownish-grey, fine-grained dolomite. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 95. British Geological Survey Petrology Collection sample number S 34561. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The rock consists of granular dolomite, about 0.1 mm grain which is turbid with amorphous dust and speckled with opaque brown material, perhaps limonite. The dolomite is ankeritic. The section shows a number of fragmentary fossils which have been recrystallized and filled in with coarse carbonate.
Caption Text 3	Staining of the sample by the silver nitrate-potassium chromate method shows that this carbonate as well as coarse material in cracks is dolomite, calcite being present only as specks distributed abundantly in and throughout the dolomite of the matrix. A small quantity of bitumen is present, mainly along stylolitic films, and also a little pyrite.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Index Limestone. Light: PPL. Magnification: x2.5. 300 yards south of High Polquhirter, 1 mile south-east of New Cumnock, Ayrshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ayrshire, New Cumnock, High Polquhirter
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	E.K. Hyslop
Input Date	15/06/2003

P527955 Photomicrograph of Tayvallich Limestone. Roadside quarry, 1 mile north of Kilchrenan, Argyllshire

The Caption:

Caption Title Photomicrograph of Tayvallich Limestone. Roadside quarry, 1 mile north of Kilchrenan, Argyllshire, Scotland

Subtitle

Caption Text 1 Grey limestone, laminated lighter and darker grey. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 123. British Geological Survey Petrology Collection sample number S 34571. Photomicrograph details: Light: XPL, Magnification:

Caption Text 2 The rock is composed of calcite, subordinate quartz and micaceous carbonaceous films. The quartz is mostly in large composite grains, or aggregates of smaller grains, associated with granular calcite of about 1.0 mm grain size. The quartz and this type of calcite, which is brownish and highly cleaved, form ellipsoidal nodules, or less regular lenticular aggregates round which sweep laminae composed of more fine-grained calcite, about 0.1 mm grain size, and streaked with carbonaceous matter. Small grains of quartz also occur throughout this

Caption Text 3 In summary, a coarse to fine-grained limestone with quartz, and a granoschistose and grain-foliated texture.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Tayvallich Limestone. Light: XPL. Magnification: x2.5. Roadside quarry, 1 mile north of Kilchrenan, Argyllshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Argyllshire, Kilchrenan

(Nature of Grid Reference) Location specimen was found

Display Date / Period Precambrian, Dalradian 750-515 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Inputter E.K. Hyslop

Input Date 15/06/2003

P527956 Photomicrograph of Tayvallich Limestone. Quarry 270 yards south-east of Baluachraig, one and a quarter miles south by west of Kilmartin, Argyllshire, Scotland

The Caption:

Caption Title	Photomicrograph of Tayvallich Limestone. Quarry 270 yards south-east of Baluachraig, one and a quarter miles south by west of Kilmartin, Argyllshire, Scotland
Subtitle	
Caption Text 1	Dark grey, moderately crystalline limestone, containing numerous pebbles of vitreous quartz, pink feldspar and dark red material. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 125. British Geological Survey Petrology Collection sample number S 34573. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	In thin section, irregular areas of brownish oolite are seen to pass into a mosaic of clearer recrystallized calcite. Grains and aggregates of quartz and rounded crystals of microcline reaching up to 3 mm in length are numerous. The dark red pebbles appear to be microcline with much haematitic impregnation. The quartz probably originated as pebble grains, but shows considerable recrystallization. This can be observed as rims of regrowth, the old outline being marked by a zone of fine mineral matter, by intercrystallization of the grains among the new calcite and by partial inclusion of broken ooliths in quartz.
Caption Text 3	The feldspars appear to have been pebbles in the oolitic limestone but are now bordered by a thin zone of recrystallized calcite where contact with oolitic rock would be expected. It may be invaded by calcite tongues and permeation aggregates of limonite and calcite. A little muscovite and albite, probably detrital, are present. Carbonaceous granules are disseminated in parts of the oolitic rock, trains of them being cut off against recrystallized calcite. Carbonaceous matter also occurs in streaks along small and irregular slip traces.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Tayvallich Limestone. Light: PPL. Magnification: x2.5. Quarry 270 yards south-east of Baluachraig, one and a quarter miles south by west of Kilmartin, Argyllshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Argyllshire, Kilmartin, Baluachraig
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	E.K. Hyslop
Input Date	15/06/2003

P527957 Photomicrograph of Tayvallich Limestone. Fincharn Quarry at south end of Loch Awe, Argyllshire

The Caption:

Caption Title	Photomicrograph of Tayvallich Limestone. Fincharn Quarry at south end of Loch Awe, Argyllshire, Scotland
Subtitle	
Caption Text 1	Dark grey sparkling limestone, of medium grain size, containing small aggregates of white calcite. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL126. British Geological Survey Petrology Collection sample number S 34574. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock contains granular dusty calcite, 0.4 mm grain size, partially recrystallized to clear calcite, forming lenticular aggregates in a finer-grained rock, of mixed dusty and clear calcite grains, 0.1 mm, showing foliation which curves round the lenticles. The foliation is shown by elongation of grains and by alternation of coarser and finer laminae with streaks of carbonaceous matter.
Caption Text 3	Quartz occurs as an essential but subordinate constituent, as large grains partly recrystallized along with calcite, sometimes showing regrowth rims, partly as lenticular aggregates of smaller grains, and to a subordinate extent interstitial in the coarser dusty limestone.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Tayvallich Limestone. Light: XPL. Magnification: x2.5. Fincharn Quarry at south end of Loch Awe, Argyllshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Argyllshire, Loch Awe, Fincharn Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	E.K. Hyslop
Input Date	15/06/2003

P527958 Photomicrograph of Tayvallich Limestone. Fincharn Quarry at south end of Loch Awe, Argyllshire

The Caption:

Caption Title	Photomicrograph of Tayvallich Limestone. Fincharn Quarry at south end of Loch Awe, Argyllshire, Scotland
Subtitle	
Caption Text 1	Dark grey sparkling limestone, of medium grain size, containing small aggregates of white calcite. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL126. British Geological Survey Petrology Collection sample number S 34574. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The sample is composed of granular dusty calcite, 0.4 mm grain, partially recrystallized to clear calcite, forming lenticular aggregates in a finer-grained rock, of mixed dusty and clear calcite grains, 0.1 mm, showing foliation which curves round the lenticles. The foliation is shown by elongation of grains and by alternation of coarser and finer laminae with streaks of carbonaceous matter.
Caption Text 3	Quartz occurs as an essential but subordinate constituent, as large grains partly recrystallized along with calcite, sometimes showing regrowth rims, partly as lenticular aggregates of smaller grains, and to a subordinate extent interstitial in the coarser dusty limestone.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Tayvallich Limestone. Light: XPL. Magnification: x2.5. Fincharn Quarry at south end of Loch Awe, Argyllshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Argyllshire, Loch Awe, Fincharn Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	E.K. Hyslop
Input Date	15/06/2003

P527959 Photomicrograph of Tayvallich Limestone. Fincharn Quarry at south end of Loch Awe, Argyllshire

The Caption:

Caption Title Photomicrograph of Tayvallich Limestone. Fincharn Quarry at south end of Loch Awe, Argyllshire, Scotland

Subtitle

Caption Text 1 Dark grey sparkling limestone, of medium grain size, containing small aggregates of white calcite. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL126. British Geological Survey Petrology Collection sample number S 34574. Photomicrograph details: Light: XPL, Magnification: x2.5.

Caption Text 2 The rock contains granular dusty calcite, 0.4 mm grain, partially recrystallized to clear calcite, forming lenticular aggregates in a finer-grained rock, of mixed dusty and clear calcite grains, 0.1 mm, showing foliation which curves round the lenticles. The foliation is shown by elongation of grains and by alternation of coarser and finer laminae with streaks of carbonaceous matter.

Caption Text 3 Quartz occurs as an essential but subordinate constituent, as large grains partly recrystallized along with calcite, sometimes showing regrowth rims, partly as lenticular aggregates of smaller grains, and to a subordinate extent interstitial in the coarser dusty limestone.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Tayvallich Limestone. Light: XPL. Magnification: x2.5. Fincharn Quarry at south end of Loch Awe, Argyllshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Argyllshire, Loch Awe, Fincharn Quarry

(Nature of Grid Reference) Location specimen was found

Display Date / Period Precambrian, Dalradian 750-515 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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P527961 Photomicrograph of Tayvallich Limestone. Quarry east of Eurach, near Ford, Argyllshire, Scotland

The Caption:

Caption Title Photomicrograph of Tayvallich Limestone. Quarry east of Eurach, near Ford, Argyllshire, Scotland

Subtitle

Caption Text 1 Dark grey, fine-grained crystalline limestone. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 127. British Geological Survey Petrology Collection sample number S 34575. Photomicrograph details: Light: XPL, Magnification:

Caption Text 2 The thin section shows irregular, diffuse relics of very fine-grained black-powdered limestone, in a recrystallized base of granular brownish calcite, among which small grains and aggregates of quartz are scattered. The form of the quartz indicates recrystallization. Black dust, graphitic or carbonaceous, and granules are distributed through the recrystallized calcite. One recrystallized oolith was observed and in one place the rock contains an indication of former oolitic structure.

Caption Text 3 In summary the rock is a limestone with some quartz, with variable grain size. It is partly granoblastic.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Tayvallich Limestone. Light: XPL. Magnification: x2.5. Quarry east of Eurach, near Ford, Argyllshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Argyllshire, Ford

(Nature of Grid Reference) Location specimen was found

Display Date / Period Precambrian, Dalradian 750-515 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

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P527962 Photomicrograph of Loch Tay Limestone. Askomill Quarry, 4 miles east-north-east of Campbeltown, Argyllshire, Scotland

The Caption:

Caption Title	Photomicrograph of Loch Tay Limestone. Askomill Quarry, 4 miles east-north-east of Campbeltown, Argyllshire, Scotland
Subtitle	
Caption Text 1	Banded coarse- and fine-grained limestone. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 128. British Geological Survey Petrology Collection sample number S 34576. Photomicrograph details: Light: XPL, Magnification:
Caption Text 2	The coarse bands which show curved cleavage surfaces of blackish calcite are in thin section composed of large irregular grains of calcite with patchy and undulose extinction. The finer-grained bands are composed of grains of calcite of irregular size and shape, very numerous clear and dust-impregnated grains of albite, 0.1 mm, and abundant opaque granular material sometimes recognisable as pyrite. Quartz and potash-feldspar are also present. Scattered grains of feldspar and opaque granules occur also in the coarse-grained bands.
Caption Text 3	The black residue from digestion of the sample in concentrated hydrochloric acid is mainly dust-impregnated albite and shapeless black grains, many of which are pyrite. On prolonged roasting in a crucible the residue becomes pale grey and the discharge of colour indicates that much carbon is present.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Loch Tay Limestone. Light: XPL. Magnification: x2.5. Askomill Quarry, 4 miles east-north-east of Campbeltown, Argyllshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Argyllshire, Campbeltown, Askomill Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527963 Photomicrograph of Islay Limestone. Leorin Quarry, two and one eighth miles north by west of Port Ellen, Islay, Argyllshire, Scotland

The Caption:

Caption Title	Photomicrograph of Islay Limestone. Leorin Quarry, two and one eighth miles north by west of Port Ellen, Islay, Argyllshire, Scotland
Subtitle	
Caption Text 1	Grey fine-grained limestone, laminated and cut by lines of calcite. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL129. British Geological Survey Petrology Collection sample number S 34577. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock contains schistose granular calcite, 0.05 mm grain size, the schistosity being marked by elongation of the calcite grains, by trains of opaque dark mineral matter and by occasional elongated grains of quartz. Laminae of coarser granular calcite, 0.3 mm grain, appear parallel to the schistosity and show ellipsoidal swellings which occasionally contain large turbid grains of calcite with undulose extinction. These coarser laminae pass without change of the type of calcite into cross-cutting veins. Granular quartz occurs in the coarser laminae and idiomorphic quartz in the veins. It seems likely that the coarse laminae were recrystallized at the time of the cross-cutting veins by permeation of the solutions along lines of weakness, perhaps produced by the presence of relict augen of coarser calcite.
Caption Text 3	A limestone recrystallized under stress and showing foliation by alternation of bands of coarser and finer-grained grain-foliated structure which are parallel to a schistosity produced by elongation of calcite grains and trains of dark mineral matter.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Islay Limestone. Light: XPL. Magnification: x2.5. Leorin Quarry, two and one eighth miles north by west of Port Ellen, Islay, Argyllshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Argyllshire, Islay, Leorin Quarry
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	E.K. Hyslop
Input Date	15/06/2003

P527964 Photomicrograph of Islay Limestone. Lower Cragabus Quarry, two and a quarter miles west of Port Ellen, Islay, Argyllshire, Scotland

The Caption:

Caption Title Photomicrograph of Islay Limestone. Lower Cragabus Quarry, two and a quarter miles west of Port Ellen, Islay, Argyllshire, Scotland

Subtitle

Caption Text 1 Fine-grained, grey crystalline limestone. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 130. British Geological Survey Petrology Collection sample number S 34578. Photomicrograph details: Light: PPL, Magnification: x2.5.

Caption Text 2 The sample is composed of granular calcite of irregular shape and size ranging from 0.01 to 0.4 mm and often with diffuse boundaries between neighbouring grains. Bedding is roughly marked by slightly greater and less concentration of opaque, black finely-divided material which is mainly soluble in strong hydrochloric acid and therefore must be largely iron oxides or sulphides. The insoluble residue consists mainly of quartz with an impregnation of black dust.

Caption Text 3 In summary a fine-grained, grain-foliated limestone.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Islay Limestone. Light: PPL. Magnification: x2.5. Lower Cragabus Quarry, two and a quarter miles west of Port Ellen, Islay, Argyllshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Argyllshire, Islay, Lower Cragabus Quarry

(Nature of Location specimen was found

Grid Reference

Display Date / Period Precambrian, Dalradian 750-515 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Inputter E.K. Hyslop

Input Date 15/06/2003

P527965 Photomicrograph of Islay Limestone. In angle of main road and Persabus road, 2 mile west-south-west of Port Askaig, Argyllshire, Scotland

The Caption:

Caption Title	Photomicrograph of Islay Limestone. In angle of main road and Persabus road, 2 mile west-south-west of Port Askaig, Argyllshire, Scotland
Subtitle	
Caption Text 1	Grey compact and crystalline banded limestone which seems to have a poor cleavage at a low angle to the banding. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 132. British Geological Survey Petrology Collection sample number S 34580. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The rock contains numerous patches and wisps, often contorted but with a general parallel orientation, of dark, very fine-grained limestone in a recrystallized granular base of calcite, illustrating a palimpsest structure. The grain of the base is about 0.03-0.1 mm and small crystals of albite, about 0.1 mm across, are scattered through it. Small crystals and grains of pyrite appear in both the dark patches and the base.
Caption Text 3	The term palimpsest is used to describe a texture in a metamorphic rock characterized by relics of a premetamorphic structure.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Islay Limestone. Light: PPL. Magnification: x2.5. In angle of main road and Persabus road, 2 mile west-south-west of Port Askaig, Argyllshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Argyllshire, Port Askaig
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527966 Photomicrograph of Tayvallich Limestone. Cairnban Locks, Crinan Canal, Argyllshire, Scotland

The Caption:

Caption Title Photomicrograph of Tayvallich Limestone. Cairnban Locks, Crinan Canal, Argyllshire,
Subtitle
Caption Text 1 Moderately coarse, pale grey, crystalline, gritty limestone, abundantly speckled with dark vitreous quartz grains. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 133. British Geological Survey Petrology Collection sample number S 34581. Photomicrograph details: Light: XPL, Magnification: x2.5.

Caption Text 2 The sample contains granular calcite forming a schistose matrix to numerous quartz and feldspar pebbles. Schistosity is marked by elongation of many calcite grains (up to 0.5 mm in length) and by streaks of dark matter, possibly carbonaceous.

Caption Text 3 The pebbles include quartz, strained quartzite or composite quartz-blebs from granite, microcline, albite, perthite, and micro-pegmatite from granophyre. The quartz shows marginal granulitization and the margins, where not granulitized, are intercrystallized with the calcite. Much granulitic quartz among the calcite is evidently a crystallization of the same period as the latter. An albite pebble shows marginal regrowth. A little white mica is associated with

The Basic Record:

Simple Name Photomicrograph
Brief Description Photomicrograph of Tayvallich Limestone. Light: XPL. Magnification: x2.5. Cairnban Locks, Crinan Canal, Argyllshire, Scotland.

Materials Photomicrograph
Associated Place Scotland, Argyllshire, Crinan Canal, Cairnban Locks
(Nature of Grid Reference) Location specimen was found

Display Date / Period Precambrian, Dalradian 750-515 Ma.
(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.
Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.

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Inputter E.K. Hyslop
Input Date 15/06/2003

P527967 Photomicrograph of Loch Tay Limestone. 400 yards south-west of Glensluan Cottage, 1 mile south of

Strachur, Argyllshire, Scotland

The Caption:

Caption Title	Photomicrograph of Loch Tay Limestone. 400 yards south-west of Glensluan Cottage, 1 mile south of Strachur, Argyllshire, Scotland
Subtitle	
Caption Text 1	Grey crystalline sparkling limestone. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 134. British Geological Survey Petrology Collection sample number S 34582. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock is composed of elongated twinned and cleaved grains of calcite 1.0 mm and over in length, of lens-shape and arranged with the long axes in one plane. Small grains and aggregates of quartz, 0.5 mm across, and flakes of muscovite, sometimes with bent detrital appearance, are numerous and plagioclase feldspar grains are scarce. Opaque grains and granules of pyrite and probably carbon are numerous.
Caption Text 3	In summary a limestone with quartz and muscovite, with a medium-grained and granoschistose texture.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Loch Tay Limestone. Light: XPL. Magnification: x2.5. 400 yards south-west of Glensluan Cottage, 1 mile south of Strachur, Argyllshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Argyllshire, Strachur
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527968 Photomicrograph of marble. Old Quarry 250 yards south-west of west end of Loch an Sgor Ghaothair,

Glen Urquhart, Invernessshire, Scotland

The Caption:

Caption Title Photomicrograph of marble. Old Quarry 250 yards south-west of west end of Loch an Sgor Ghaothair, Glen Urquhart, Invernessshire, Scotland

Subtitle

Caption Text 1 Coarse crystalline marble with numerous phlogopite, calcsilicate and ore grains. This specimen is Lewisian (Precambrian) in age. BGS sample number SL 106. British Geological Survey Petrology Collection sample number S 34585. Photomicrograph details: Light: XPL, Magnification: x2.5.

Caption Text 2 The sample contains interlocking large grains of calcite within and between which are scattered grains of quartz, prisms of tremolite and flakes of phlogopite. Quartz is more abundant in some bands and is then accompanied by large grains of zoisite, containing vermicular inclusions of quartz, and by muscovite.

Caption Text 3 Apatite, rutile, sphene, oligoclase and pyrite are accessory minerals. Sphene grains in phlogopite have pleochroic haloes.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of marble. Light: XPL. Magnification: x2.5. Old Quarry 250 yards south-west of west end of Loch an Sgor Ghaothair, Glen Urquhart, Invernessshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Invernessshire, Glen Urquhart

(Nature of Grid Reference) Location specimen was found

Display Date / Period Precambrian, Lewisian 3100-1600 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Input Date 15/06/2003

P527969 Photomicrograph of limestone. Rebeg Quarry, Inverness, Invernessshire, Scotland

The Caption:

Caption Title	Photomicrograph of limestone. Rebeg Quarry, Inverness, Invernessshire, Scotland
Subtitle	
Caption Text 1	Coarse, flaggy banded white and grey crystalline limestone. This specimen is Moine (Precambrian) in age. BGS sample number SL 107. British Geological Survey Petrology Collection sample number S 34586. Photomicrograph details: Light: XPL, Magnification:
Caption Text 2	Large grains of twinned calcite are closely interlocked and tend to be elongated parallel to the foliation. Small quartz grains and muscovite flakes are scattered sparsely through the calcite. In bands there is a considerable concentration of tremolite, patched by crocidolite, and phlogopite which are orientated with their long axes parallel to the plane of foliation. Grains of oxidized iron ore and trains of limonitic material occur; there are many small grains of yellow pyrite, and acute lozenges of sphene are accessory.
Caption Text 3	In summary a limestone with phlogopite and tremolite, with a coarse-grained, foliated, and grano-schistose texture.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone. Light: XPL. Magnification: x2.5. Rebeg Quarry, Inverness, Invernessshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Invernessshire, Rebeg Quarry
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Precambrian, Moine 1000-870 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527970 Photomicrograph of Castlecary Limestone, upper leaf. Black Devon at North Shaw Wood, 1.5 miles west of Saline, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Castlecary Limestone, upper leaf. Black Devon at North Shaw Wood, 1.5 miles west of Saline, Fifeshire, Scotland
Subtitle	
Caption Text 1	Pale bluish-grey, dull, compact dolomite. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 115. British Geological Survey Petrology Collection sample number S 34588. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The rock is composed of dolomitized fragments of large shells in a matrix of dolomite-quartz sandstone. The shells show so sharp a difference in coarseness of dolomite recrystallization, 0.2 mm grain size, from that of the matrix 0.04 mm, that they may represent a period of dolomitization prior to their accumulation as detrital grains in the present sediment. Some of the fragments look like dolomite-rock rather than shells. The matrix is composed of granular dolomite without rhomboid shape, small and angular grains of quartz, many streaks of dark material, probably decomposed rock or feldspar, abundant pyrite and some pyritized carbonaceous material. The dolomite is ankeritic.
Caption Text 3	Arenaceous dolomite in which the original elastic and clastozoic structures are preserved, though the internal structure of the fossils has been destroyed.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Castlecary Limestone, upper leaf. Light: PPL. Magnification: x2.5. Black Devon at North Shaw Wood, 1.5 miles west of Saline, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Saline, Black Devon, North Shaw Wood
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	E.K. Hyslop
Input Date	15/06/2003

P527971 Photomicrograph of Jenny Pate Limestone. Sandydub old quarry, 1 mile west of Saline, Fifeshire

The Caption:

Caption Title Photomicrograph of Jenny Pate Limestone. Sandydub old quarry, 1 mile west of Saline, Fifeshire, Scotland

Subtitle

Caption Text 1 Dull grey, compact dolomite. Small relics of shells, crinoids and foraminifera are scattered rather sparsely in a matrix of turbid granular dolomite of grain size 0.01 mm. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 117. British Geological Survey Petrology Collection sample number S 34590. Photomicrograph details: Light: PPL, Magnification: x2.5.

Caption Text 2 The foraminifera are preserved as casts, the chambers being filled by pyrites while the walls are recrystallized as dolomite indistinguishable from the matrix. The shell and crinoid fragments, though partly replaced by pyrite, retain the original organic fabric and are probably still calcite. Angular grains of quartz, 0.05 mm across, and carbonaceous particles are scarce. The dolomite is ferriferous.

Caption Text 3 In summary a muddy ferriferous dolomite, micrograined with relict fossil remains.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Jenny Pate Limestone. Light: PPL. Magnification: x2.5. Sandydub old quarry, 1 mile west of Saline, Fifeshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Fifeshire, Saline

(Nature of Grid Reference) Location specimen was found

Display Date / Period Carboniferous 354-290 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Inputter E.K. Hyslop

Input Date 15/06/2003

P527972 Photomicrograph of Castlecary Limestone. Caviehall old mine, 1 mile west of Culross, Fifeshire

The Caption:

Caption Title Photomicrograph of Castlecary Limestone. Caviehall old mine, 1 mile west of Culross, Fifeshire, Scotland

Subtitle

Caption Text 1 Brownish-grey, coarsely crystalline dolomite. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 120. British Geological Survey Petrology Collection sample number S 34593. Photomicrograph details: Light: PPL, Magnification: x2.5.

Caption Text 2 The rock contains granular and rhomboid dolomite of varying grain size, 0.2-0.6 mm with ghost relics of organic fragments, some of which are large and equidimensional and probably represent crinoid plates; others are composed of opaque dust so arranged as to indicate the fibrous texture of shells. A typical stylolitic film traverses the rock and grains of dolomite grow across it. The dolomite is ferriferous.

Caption Text 3 The image clearly shows the stylolitic film in a dolomite that shows vague but unmistakable indications of the presence of animal fossils. The original fossiliferous limestone has been dolomitized to a mosaic of uniform grain.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Castlecary Limestone. Light: PPL. Magnification: x2.5. Caviehall old mine, 1 mile west of Culross, Fifeshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Fifeshire, Culross, Caviehall old mine

(Nature of Grid Reference) Location specimen was found

Display Date / Period Carboniferous 354-290 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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P527973 Photomicrograph of Broadstone Limestone. Auchenmade Quarry, Dalry, Ayrshire, Scotland

The Caption:

Caption Title Photomicrograph of Broadstone Limestone. Auchenmade Quarry, Dalry, Ayrshire, Scotland
Subtitle
Caption Text 1 Grey argillaceous limestone with Lithostrotion. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 136. British Geological Survey Petrology Collection sample number S 34622. Photomicrograph details: Light: PPL, Magnification:
Caption Text 2 The sample is composed of large and small fragments of crinoids and of shells, spines, large and small foraminifera, Calcisphaera, and occasional coral and polyzoan pieces in a bedded matrix of finely granular calcite mixed with small fossil relics, limonite shreds and opaque carbonaceous fragments and pyrite grains. Orange and opaque bituminous material forms undulating films and streaks along the bedding.
Caption Text 3 The larger organic fragments are mostly arranged with their long axes parallel to the bedding.

The Basic Record:

Simple Name Photomicrograph
Brief Description Photomicrograph of Broadstone Limestone. Light: PPL. Magnification: x2.5. Auchenmade Quarry, Dalry, Ayrshire, Scotland.
Materials Photomicrograph
Associated Place Scotland, Ayrshire, Dalry, Auchenmade Quarry
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Muir, A. and Phemister, J. et. al.
Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details Edinburgh : HMSO, 1956.
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date 15/06/2003

P527974 Photomicrograph of Loch Tay Limestone. Quarry, West Craig of Soilzarie, 3 miles east of Kirkmichael, Perthshire, Scotland

The Caption:

Caption Title Photomicrograph of Loch Tay Limestone. Quarry, West Craig of Soilzarie, 3 miles east of Kirkmichael, Perthshire, Scotland

Subtitle

Caption Text 1 Pale bluish-grey, crystalline limestone. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL137. British Geological Survey Petrology Collection sample number S 34623. Photomicrograph details: Light: XPL, Magnification: x2.5.

Caption Text 2 The thin section shows interlocking grains of twinned calcite (0.5-2.0 mm) with a small quantity of iron-stained chloritic material, and grains of quartz and albite scattered sparsely through the rock. Black granules, possibly of iron ore, are disseminated uniformly, but in small

Caption Text 3 In summary the rock is a medium to coarse-grained limestone with a granoblastic texture.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Loch Tay Limestone. Light: XPL. Magnification: x2.5. Quarry, West Craig of Soilzarie, 3 miles east of Kirkmichael, Perthshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Perthshire, Kirkmichael

(Nature of Grid Reference) Location specimen was found

Display Date / Period Precambrian, Dalradian 750-515 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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P527975 Photomicrograph of Loch Tay Limestone. 1250 yards east by south of Dunie, 1 mile south-east of Kirkmichael, Perthshire, Scotland

The Caption:

Caption Title	Photomicrograph of Loch Tay Limestone. 1250 yards east by south of Dunie, 1 mile south-east of Kirkmichael, Perthshire, Scotland
Subtitle	
Caption Text 1	Pale bluish-grey medium-grained limestone, discoloured along some bands by yellowish oxidized iron ore. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 138. British Geological Survey Petrology Collection sample number S 34624. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock is composed of interlocking grains of calcite (0.3-1.0 mm) among which a few quartz and albite grains (probably recrystallized) are distributed. Specks of black material are abundantly disseminated and are aggregated in scattered clots along with limonite and yellowish isotropic chloritic material. Flakes of muscovite and grains and prisms of apatite are
Caption Text 3	In summary the rock is a medium-grained limestone with a granoblastic texture.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Loch Tay Limestone. Light: XPL. Magnification: x2.5. 1250 yards east by south of Dunie, 1 mile south-east of Kirkmichael, Perthshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Perthshire, Kirkmichael
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527976 Photomicrograph of metamorphic limestone. Old quarry 550 yards south-east of Strichen station, Aberdeenshire, Scotland

The Caption:

Caption Title	Photomicrograph of metamorphic limestone. Old quarry 550 yards south-east of Strichen station, Aberdeenshire, Scotland
Subtitle	
Caption Text 1	Grey, compact granulite with thin dull white limestone laminae. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 145. British Geological Survey Petrology Collection sample number S 34647. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock contains quartz and potash feldspar with alternate laminae rich in pale green tremolite and/or pyroxene. Biotite is abundant in ragged poikiloblastic plates in a few laminae. Spene is usually an abundant accessory. Calcite is present both in quartz-feldspar laminae and in those rich in hornblende, but is confined to thin bands in the rock. Iron ore in irregular grains and aggregates is an abundant accessory.
Caption Text 3	The rock is a calcareous quartz-feldspar granulite with talc-silicates, and a foliated texture.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of metamorphic limestone. Light: XPL. Magnification: x2.5. Old quarry 550 yards south-east of Strichen station, Aberdeenshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Aberdeenshire, Strichen Station
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	E.K. Hyslop
Input Date	15/06/2003

P527977 Photomicrograph of limestone. Old Quarry, one third of a mile north of Ardlethen, Aberdeenshire

The Caption:

Caption Title Photomicrograph of limestone. Old Quarry, one third of a mile north of Ardlethen, Aberdeenshire, Scotland

Subtitle

Caption Text 1 Pale grey, fine-grained limestone with some thin calcite veins. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 146. British Geological Survey Petrology Collection sample number S 34648. Photomicrograph details: Light: XPL, Magnification: x2.5.

Caption Text 2 The thin section shows a matrix of granular calcite (0.2-0.4 mm grain size) containing a large number of phlogopite flakes and grains of diopside. The latter has a salite (001) cleavage in addition to the usual prismatic cleavage. The phlogopite flakes tend to be orientated parallel to one direction.

Caption Text 3 In summary the limestone is a calcite-diopside-phlogopite rock, with a fine-grained, granoblastic texture.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of limestone. Light: XPL. Magnification: x2.5. Old Quarry, one third of a mile north of Ardlethen, Aberdeenshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Aberdeenshire, Ardlethan

(Nature of Grid Reference) Location specimen was found

Display Date / Period Precambrian, Dalradian 750-515 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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P527978 Photomicrograph of Loch Tay Limestone. Quarry 1300 yards east by south of Ronachan House, West Loch Tarbert, Argyllshire, Scotland

The Caption:

Caption Title	Photomicrograph of Loch Tay Limestone. Quarry 1300 yards east by south of Ronachan House, West Loch Tarbert, Argyllshire, Scotland
Subtitle	
Caption Text 1	Sparkling grey medium-grained limestone. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 147. British Geological Survey Petrology Collection sample number S 34649. Photomicrograph details: Light: XPL, Magnification:
Caption Text 2	The sample is composed of granular calcite of varying grain up to 2 mm, with scattered small quartz and albite grains and muscovite flakes. Some less limy bands are composed of granulitic quartz and albite and irregularly prismatic crystals of clinozoisite cemented by granular calcite. The clinozoisite is charged with black powder (possibly carbon) and encloses also grains of pyrite.
Caption Text 3	Pyrite occurs in large irregular grains, particularly in the quartz-feldspar bands of the rock, but is also present in small grains in the pure carbonate.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Loch Tay Limestone. Light: XPL. Magnification: x2.5. Quarry 1300 yards east by south of Ronachan House, West Loch Tarbert, Argyllshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Argyllshire, Loch Tarbet
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527979 Photomicrograph of Patna Limestone. Cairnshalloch Limeworks, 800 yards south-south-west of Patna, Isle of Bute, Ayrshire, Scotland

The Caption:

Caption Title	Photomicrograph of Patna Limestone. Cairnshalloch Limeworks, 800 yards south-south-west of Patna, Isle of Bute, Ayrshire, Scotland
Subtitle	
Caption Text 1	Compact buff-grey limestone with small crinoid fragments. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 149. British Geological Survey Petrology Collection sample number S 34651. Photomicrograph details: Light: XPL, Magnification: x10.
Caption Text 2	The rock contains a fine-grained base of granular carbonate (0.03 mm average grain size) containing small, partly recrystallized organic debris. Opaque material occurs as grains of pyrite, pyritic replacement of minute fossils, and black bituminous or carbonaceous specks disseminated through the rock. Brownish calcareous clay is locally common.
Caption Text 3	The organic remains include crinoid plates and many and various foraminifera, polyzoan fragments, brachiopod spines and thin-walled shells.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Patna Limestone. Light: XPL. Magnification: x10. Cairnshalloch Limeworks, 800 yards south-south-west of Patna, Isle of Bute, Ayrshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ayrshire, Isle of Bute, Patna, Cairnshalloch Limeworks
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527980 Photomicrograph of Index Limestone. Keirs Glen, just below Keirs Farm, Ayrshire, Scotland

The Caption:

Caption Title	Photomicrograph of Index Limestone. Keirs Glen, just below Keirs Farm, Ayrshire, Scotland
Subtitle	
Caption Text 1	Dull grey argillaceous limestone. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 150. British Geological Survey Petrology Collection sample number S 34652. Photomicrograph details: Light: PPL, Magnification: x10.
Caption Text 2	Fragments of medium and small shells, a few foraminiferal and crinoidal remains are enclosed in a turbid base composed of shapeless calcite, probably with a clay admixture and numerous small rhombs of ferriferous carbonate. Locally, small aggregates of scaly kaolinite can be distinguished. Pyrite, carbonaceous and bituminous matter, and some limonite and quartz are
Caption Text 3	The small rhombs show by their acute form and their refractive index that the mineral approaches siderite in composition (probably about 80% iron carbonate).

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Index Limestone. Light: PPL. Magnification: x10. Keirs Glen, just below Keirs Farm, Ayrshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ayrshire, Keirs Glen
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527981 Photomicrograph of Craighead (Stinchar) Limestone. Craighead Limeworks, 1.5 miles north-north-east of Old Dailly and 3.5 miles north-east of Girvan, Ayrshire, Scotland

The Caption:

Caption Title	Photomicrograph of Craighead (Stinchar) Limestone. Craighead Limeworks, 1.5 miles north-north-east of Old Dailly and 3.5 miles north-east of Girvan, Ayrshire, Scotland
Subtitle	
Caption Text 1	Compact limestone, pale green in colour with white mottles. This specimen is Ordovician in age. BGS sample number SL 152. British Geological Survey Petrology Collection sample number S 34654. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	Large algal growths, in finely granular clear calcite, are embedded in a turbid, very fine textured aggregate of calcite granules probably with clay admixture and in places cemented by Girvanella fossils. In this base groundmass the main fossils are echinodermal and polyzoan fragments and a few thin-walled shells.
Caption Text 3	The groundmass base has a patchy appearance suggesting the break-up of a clean limestone followed by packing of more muddy limestone round the fragments. A few tiny quartz grains are scattered in the turbid limestone. The rock is traversed by calcite-filled cracks.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Craighead (Stinchar) Limestone. Light: PPL. Magnification: x2.5. Craighead Limeworks, 1.5 miles north-north-east of Old Dailly and 3.5 miles north-east of Girvan, Ayrshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ayrshire, Old Dailly, Craighead Limeworks
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Ordovician 495-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527982 Photomicrograph of Stinchar Limestone. Tormitchell Quarry, Pinmore, Ayrshire, Scotland

The Caption:

Caption Title	Photomicrograph of Stinchar Limestone. Tormitchell Quarry, Pinmore, Ayrshire, Scotland
Subtitle	
Caption Text 1	Pale buff, or cream-coloured, compact limestone with semicrystalline lustre. This specimen is Ordovician in age. BGS sample number SL 154. British Geological Survey Petrology Collection sample number S 34656. Photomicrograph details: Light: PPL, Magnification:
Caption Text 2	The rock is composed of a matrix of clear calcite, of 0.05-0.3 mm grain size, containing ooliths and numerous fairly well sorted calcareous pebbles, comprising subrounded fragments and knobby spheroids from 0.3-1.5 mm in size, perhaps of algal origin, subangular to rounded pieces of very fine-grained limestone containing ooliths and crinoid fragments but sometimes uniformly structureless, and rare crinoid ossicles. The rock is traversed by many thin calcite-filled cracks which show tensional rupture without lateral displacements. A few quartz grains are present in the matrix and in the semi-opaque limestone.
Caption Text 3	The rock has oolitic and pseudo-oolitic structures. Oval ooliths have radial and concentric internal structure; pseudo-ooliths are less regularly rounded and do not possess regular internal structure.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Stinchar Limestone. Light: PPL. Magnification: x2.5. Tormitchell Quarry, Pinmore, Ayrshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ayrshire, Pinmore, Tormitchell Quarry
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Ordovician 495-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527983 Photomicrograph of cornstone. Lannielane Limeworks, Straiton, Ayrshire, Scotland

The Caption:

Caption Title	Photomicrograph of cornstone. Lannielane Limeworks, Straiton, Ayrshire, Scotland
Subtitle	
Caption Text 1	Dense, pale buff limestone containing impersistent veins or segregations of white calcite. This specimen is Upper Old Red Sandstone (Devonian) in age. BGS sample number SL 156. British Geological Survey Petrology Collection sample number S 34658. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The rock contains very fine-grained granular carbonate (0.01 mm or less) which is patchily recrystallized, sometimes to a granular aggregate of 0.02-0.04 mm grain size, sometimes to quite coarse segregations of clear calcite. Small rhombs of dolomite or ankerite occur sporadically in the fine calcite and also line a vein of coarse calcite. These are destroyed by a late infiltration of yellow chert, the latter replacing the dolomite with ejection of limonite. Grains of quartz, up to 0.5 mm, are scattered sparsely through the fine-grained limestone and are coated with and enclose granules of opaque matter, probably limonitic clay.
Caption Text 3	The rock has a clotted structure; original pelitomorphous calcite forms dark clots in a base of grey, recrystallized calcite of less fine grain. More coarsely crystalline calcite occurs in a network of veins which produces a breccoid structure.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of cornstone. Light: PPL. Magnification: x2.5. Lannielane Limeworks, Straiton, Ayrshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ayrshire, Straiton, Lannielane Limeworks
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date	15/06/2003

P527984 Photomicrograph of Durness Limestone. Field about 350 yards south-south-west of Sarsgrum, about 50 yards east of the road, Sutherland, Scotland

The Caption:

Caption Title	Photomicrograph of Durness Limestone. Field about 350 yards south-south-west of Sarsgrum, about 50 yards east of the road, Sutherland, Scotland
Subtitle	
Caption Text 1	Crystalline dolomite of grain size varying from 0.2-0.6 mm and of a slightly brown colour in transmitted light. This specimen is Cambro-Ordovician in age. BGS sample number SL 176. British Geological Survey Petrology Collection sample number S 34838. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The grains are interlocking and mostly of irregular shape but a proportion of them show rhomboid outlines. Ferruginous clay locally forms impersistent, intergranular films. The thin section includes parts with grain size of about 0.1 mm, irregularly and transitionally mixed with coarser-grained dolomite of about 0.4 mm grain size. Ferruginous material is present in very small quantity as short films and intergranular pellicles.
Caption Text 3	Recrystallization to coarse grain size has taken place along sharp-walled channels separating portions in which recrystallization to smaller grain size has occurred.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Durness Limestone. Light: PPL. Magnification: x2.5. Field about 350 yards south-south-west of Sarsgrum, about 50 yards east of the road, Sutherland, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Sutherland, Durness, Sarsgrum
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527985 Photomicrograph of Durness Limestone. Field about 350 yards south-south-west of Sarsgrum, about 50 yards east of the road, Sutherland, Scotland

The Caption:

Caption Title	Photomicrograph of Durness Limestone. Field about 350 yards south-south-west of Sarsgrum, about 50 yards east of the road, Sutherland, Scotland
Subtitle	
Caption Text 1	Dolomite of uniform grain size, 0.5-1.0 mm. This specimen is Cambro-Ordovician in age. BGS sample number SL 176. British Geological Survey Petrology Collection sample number S 34841. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The grains are equidimensional and anhedral, no rhomboid outlines having been observed. Limonite is present in small quantity as granules and intergranular films. Some granular quartz and ferruginous matter are also present.
Caption Text 3	The image shows a breccoid structure in dolomite. Recrystallization to coarse grain has taken place along sharp-walled channels separating portions in which recrystallization to smaller grain has occurred.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Durness Limestone. Light: PPL. Magnification: x2.5. Field about 350 yards south-south-west of Sarsgrum, about 50 yards east of the road, Sutherland, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Sutherland, Durness, Sarsgrum
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date	15/06/2003

P527986 Photomicrograph of colomite. Stream five-sixths of a mile south of Keoldale, Sutherland, Scotland

The Caption:

Caption Title Photomicrograph of colomite. Stream five-sixths of a mile south of Keoldale, Sutherland, Scotland

Subtitle

Caption Text 1 A fine-grained, uniform dolomite of grain size about 0.1 mm. This specimen is Cambro-Ordovician in age. BGS sample number SL 175. British Geological Survey Petrology Collection sample number S 34842. Photomicrograph details: Light: XPL, Magnification:

Caption Text 2 Local patches of coarser grain with occasional limonitic fillings along the cleavages occur. Styolitic films of limonitic clay are present but scarce and there are traces of quartz. Dolomite, fine-grained, mosaic. Some is bedded with alternating laminae of 0.01 to 0.05 mm grain size containing numerous streaky impregnations of limonite and occasional laminae of chert and ferruginous material. Small angular grains of quartz are numerous and the rock probably contains some clay.

Caption Text 3 Other parts of the rock are fine-grained, sandy dolomite with some bands of slightly coarser material; composed of grains of dolomite, about 0.03 mm average grain, with subordinate quartz and alkali-feldspar in angular grains up to 0.1 mm long, and some muscovite in small thin flakes. The rock is cut by thin veins of coarser dolomite. There is a local cement of limonite which is only enough to form coatings to the dolomite grains. Limonite is present also along lines of fracture. Chert occurs in sporadic vacuoles.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of colomite. Light: XPL. Magnification: x2.5. Stream five-sixths of a mile south of Keoldale, Sutherland, Scotland.

Materials Photomicrograph

Associated Place Scotland, Sutherland, Durness, Keoldale

(Nature of Grid Reference Location specimen was found

Display Date / Period Cambro-Ordovician 545-443 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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P527987 Photomicrograph of colomite. Stream five-sixths of a mile south of Keoldale, Sutherland, Scotland

The Caption:

Caption Title Photomicrograph of colomite. Stream five-sixths of a mile south of Keoldale, Sutherland, Scotland

Subtitle

Caption Text 1 Dolomite of grain varying between 0.03 and 0.3 mm. This specimen is Cambro-Ordovician in age. BGS sample number SL 175. British Geological Survey Petrology Collection sample number S 34845. Photomicrograph details: Light: XPL, Magnification: x2.5.

Caption Text 2 There is a local cement of limonite which is only enough to form coatings to the dolomite grains. Limonite is present also along lines of fracture. The variation in grain size is abrupt so that the rock has a brecciated or nodular appearance in hand specimen, but enclosure of limonitic dust trains in the large dolomite grains suggests that recrystallization to coarse dolomite is later than the fracturing of the rock. Chert occurs in sporadic vacuoles.

Caption Text 3 A muddy dolomite in which the original sedimentary structure of alternating fine and finer grain of the carbonate and silt particles has been preserved.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of colomite. Light: XPL. Magnification: x2.5. Stream five-sixths of a mile south of Keoldale, Sutherland, Scotland.

Materials Photomicrograph

Associated Place Scotland, Sutherland, Durness, Keoldale

(Nature of Grid Reference) Location specimen was found

Display Date / Period Cambro-Ordovician 545-443 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

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P527988 Photomicrograph of limestone in Brora Arenaceous Series. Ardassie Point, Brora, Sutherland

The Caption:

Caption Title	Photomicrograph of limestone in Brora Arenaceous Series. Ardassie Point, Brora, Sutherland, Scotland
Subtitle	
Caption Text 1	A dull, dark grey compact limestone. This specimen is Jurassic in age. BGS sample number SL 161. British Geological Survey Petrology Collection sample number S 34848. Photomicrograph details: Light: PPL, Magnification: x10.
Caption Text 2	The sample is composed of a base of intermingled clear, finely granular calcite and pelitomorphic calcite in which are set angular grains of quartz, irregular granular groups of pyrite, splinters of coaly matter, accessory muscovite, biotite and siliceous pebbles, and a few 'galls' of calcareous grit. Echinodermal and shell fragments are present and small spherical
Caption Text 3	The spherical bodies range in diameter from 0.05 to 0.12 mm. Many present smooth, continuous surfaces to the matrix and some appear to possess a thin peripheral shell. Many however present no definite boundary to the matrix and the carbonate sectors of which they are composed project to different amounts into the matrix. The nature of these bodies is uncertain; they resemble 'sporangites' described in Devonian black shales.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone in Brora Arenaceous Series. Light: PPL. Magnification: x10. Ardassie Point, Brora, Sutherland, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Sutherland, Brora
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P527989 Photomicrograph of limestone in 'Boulder Beds'. South-west of the 'Fallen Stack', Portgower, Sutherland, Scotland

The Caption:

Caption Title	Photomicrograph of limestone in 'Boulder Beds'. South-west of the 'Fallen Stack', Portgower, Sutherland, Scotland
Subtitle	
Caption Text 1	A pale grey limestone containing numerous shells. This specimen is Jurassic in age. BGS sample number SL 162. British Geological Survey Petrology Collection sample number S 34849. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	In thin section large and small echinodermal and shell fragments and poorly assorted sand grains are cemented by calcite. Over most of the section quartz and cementing calcite are in approximately equal proportion. The calcite is partly fine-grained and turbid but more generally coarsely recrystallized and often poikilitic. The sand grains are angular and rarely reach 1 mm in size. They are mostly of quartz which is often strained but include microcline and crushed quartz-rock, scarce chert and cellophane.
Caption Text 3	The rock shows a poikilocrystalline structure, where calcite forms large shapeless crystals enclosing angular grains of quartz and feldspar and shell fragments.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone in 'Boulder Beds'. Light: PPL. Magnification: x2.5. South-west of the 'Fallen Stack', Portgower, Sutherland, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Sutherland, Portgower, Fallen Stack
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P527990 Photomicrograph of flaggy limestone. Stream 4 miles east-south-east of Halkirk station, Caithness

The Caption:

Caption Title	Photomicrograph of flaggy limestone. Stream 4 miles east-south-east of Halkirk station, Caithness, Scotland
Subtitle	
Caption Text 1	Black flaggy limestone with thin lamination in shades of grey. This specimen is Middle Old Red Sandstone (Devonian) in age. BGS sample number SL 163. British Geological Survey Petrology Collection sample number S 34850. Photomicrograph details: Light: PPL,
Caption Text 2	In thin section alternating bands are seen to consist of: (1) coarser bands containing rhombs of dolomite up to 0.1 mm across, angular quartz grains, usually in subordinate proportion but sometimes abundant, plagioclase and scarce muscovite flakes, in a matrix of shapeless calcite obscured by disseminated bitumen or bituminous clay; (2) thin bands and lenticles of finely granular carbonate containing rhombs of dolomite, but little quartz or bituminous matter; (3) films of reddish-brown almost opaque bituminous clay. In places these films almost coalesce to form thin bands of gritty, calcareous bituminous shale.
Caption Text 3	The image has a yellowish colour due to the alteration of the Canada Balsam in which the thin section is mounted.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of flaggy limestone. Light: PPL. Magnification: x2.5. Stream 4 miles east-south-east of Halkirk station, Caithness, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Caithness, Halkirk Station
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527991 Photomicrograph of limestone. Robbery Head, south of Lybster, Caithness, Scotland

The Caption:

Caption Title	Photomicrograph of limestone. Robbery Head, south of Lybster, Caithness, Scotland
Subtitle	
Caption Text 1	Dark fine-grained dolomitic limestone, thinly laminated in shades of grey. This specimen is Middle Old Red Sandstone (Devonian) in age. BGS sample number SL 167. British Geological Survey Petrology Collection sample number S 34851. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	In thin section the rock has a micronodular appearance, smooth and corrugated lenticles of clear granular carbonate being swathed in a darker matrix lined with corrugated films of bituminous matter. The clear carbonate is predominantly dolomite with which some quartz is associated while the darker matrix consists of anhedral calcite, dolomite rhombs, bituminous clay and elastic quartz. The grain size of dolomite and quartz may be 0.1 mm but is usually less. Small flakes of muscovite and biotite are present, mostly in the argillaceous laminae.
Caption Text 3	A dolomitic limestone showing micronodular structure. The small, clear nodules and lenses are of dolomite, the matrix of fine-grained calcite, bituminous clay, small rhombs of dolomite and elastic quartz.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone. Light: PPL. Magnification: x2.5. Robbery Head, south of Lybster, Caithness, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Caithness, Lybster, Robbery Head
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527992 Photomicrograph of limestone. Shinness Quarry, the Airde, near Lairg, Sutherland, Scotland

The Caption:

Caption Title	Photomicrograph of limestone. Shinness Quarry, the Airde, near Lairg, Sutherland, Scotland
Subtitle	
Caption Text 1	A coarse, grey-white crystalline limestone mottled with greenish calcsilicates. This specimen is Moine (Precambrian) in age. BGS sample number SL 169. British Geological Survey Petrology Collection sample number S 34852. Photomicrograph details: Light: XPL,
Caption Text 2	In thin section anhedral grains of calcite up to 5.0 mm in width are seen to interlock with one another and with diopside which forms thick prisms imperfectly developed and up to 6 mm in length. Tremolite is often present as small blades in the diopside and locally forms large prisms with replacing relations to the associated diopside.
Caption Text 3	In summary, the rock is a limestone with diopside and tremolite, and a coarse-grained, porphyroblastic texture. The diopside appears as brightly coloured grains in the image.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone. Light: XPL. Magnification: x2.5. Shinness Quarry, the Airde, near Lairg, Sutherland, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Sutherland, Lairg, Shinness Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Moine 1000-870 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date	15/06/2003

P527993 Photomicrograph of cornstone. Middlefield Quarry, 1.5 miles north-west of Muirkirk, Ayrshire

The Caption:

Caption Title	Photomicrograph of cornstone. Middlefield Quarry, 1.5 miles north-west of Muirkirk, Ayrshire, Scotland
Subtitle	
Caption Text 1	A brownish-grey limestone mottled in light and darker shades and of stony appearance. This specimen is Upper Old Red Sandstone (Devonian) in age. BGS sample number SL 170. British Geological Survey Petrology Collection sample number S 34854. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock is composed of turbid fine-grained carbonate which is recrystallized along a diffuse network of channels to anhedral carbonate of grain size 0.03-0.1 mm. This coarser clear carbonate (calcite) occupies extensive areas free from the turbid type. The latter contains numerous pellet structures which are sometimes uniformly almost opaque, sometimes composed of an opaque rind on a clear granular centre. Elsewhere the pellet structure is absent or forms only part of a more complex structural aggregate. Rarely irregular concentric structure suggests algal origin. It seems as if the carbonate had been originally deposited as a mud, in which perhaps worms worked faecal pellets, and that this had been brecciated and recrystallized. Streaks of opaque limonite are present.
Caption Text 3	Pellet structure; small ovoid bodies, thought to be faecal pellets, form groups in a matrix of granular, recrystallized calcite. The outer coat of the pellet seems to be more resistant to recrystallization than the interior.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of cornstone. Light: XPL. Magnification: x2.5. Middlefield Quarry, 1.5 miles north-west of Muirkirk, Ayrshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ayrshire, Muirkirk, Middlefield Quarry
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527995 Photomicrograph of cementstone. Lower Sandy Bed, Devonshaw Old Quarry, Kinrossshire

The Caption:

Caption Title	Photomicrograph of cementstone. Lower Sandy Bed, Devonshaw Old Quarry, Kinrossshire, Scotland
Subtitle	
Caption Text 1	Compact, mottled grey-brown and cream dolomite. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 158. British Geological Survey Petrology Collection sample number S 34858. Photomicrograph details: Light: XPL,
Caption Text 2	The rock is composed of a base of dolomite in grains and rhombs of 0.02 to 0.1 mm size in which relic patches of very fine-grained pelleted carbonate rock are preserved. In this base irregular patches and single rhombs of coarsely crystallized dolomite about 1 mm across are numerous. Subangular grains of quartz are sporadically abundant in both the coarse and fine dolomite. Ferruginous clay films are common locally and their material has been pressed aside by the large dolomite crystals during their growth.
Caption Text 3	The image shows porphyrocrystalline structure in dolomite. One large and two smaller euhedral crystals of dolomite appear within a matrix of fine-grained, granular dolomite. These crystals occur at the intersection of bituminous films which may have guided and concentrated the action of the recrystallizing solutions.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of cementstone. Light: XPL. Magnification: x2.5. Lower Sandy Bed, Devonshaw Old Quarry, Kinrossshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Kinrossshire, Devonshaw Old Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527997 Photomicrograph of Cementstone 'Upper Cement Bed'. Devonshaw Old Quarry, 2.5 miles east of Dollar, Kinrossshire, Scotland

The Caption:

Caption Title Photomicrograph of Cementstone 'Upper Cement Bed'. Devonshaw Old Quarry, 2.5 miles east of Dollar, Kinrossshire, Scotland

Subtitle

Caption Text 1 Dull greyish-white, compact dolomite banded with less fine-grained, gritty cream-coloured calcareous dolomite. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 157. British Geological Survey Petrology Collection sample number S 34857. Photomicrograph details: Light: XPL, Magnification: x2.5.

Caption Text 2 In thin section the compact dolomite is composed of a close aggregate of rhomboid granules, about 0.005 mm across, of dolomite among which calcite is abundant, and through which angular grains of quartz, up to 0.2 mm in size, shreds of colourless mica and fragments of pelitomorphic dolomite are irregularly distributed.

Caption Text 3 The gritty portion is composed of angular grains of quartz, up to 0.5 mm, and numerous pseudo-ooliths of pelitomorphic dolomite which with subordinate microcline and fine-grained silica-rock are cemented by rhomboid dolomite of varying grain and by shapeless calcite.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Cementstone 'Upper Cement Bed'. Light: XPL. Magnification: x2.5. Devonshaw Old Quarry, 2.5 miles east of Dollar, Kinrossshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Kinrossshire, Devonshaw Old Quarry

(Nature of Grid Reference) Location specimen was found

Display Date / Period Carboniferous 354-290 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Input Date 15/06/2003

P527998 Photomicrograph of Murrayshall (Hurlet) Limestone. Murrayshall Limeworks, Cambusbarron, 1.5 miles south-west of Stirling, Stirlingshire, Scotland

The Caption:

Caption Title	Photomicrograph of Murrayshall (Hurlet) Limestone. Murrayshall Limeworks, Cambusbarron, 1.5 miles south-west of Stirling, Stirlingshire, Scotland
Subtitle	
Caption Text 1	A black, compact, fine-grained limestone showing conchoidal fracture; specks of pyrite and crinoid columnals are sparsely distributed. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 159. British Geological Survey Petrology Collection sample number S 34859. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The sample is composed of a turbid, very fine-grained matrix of calcareous fossil debris, calcite granules, 0.005 mm, and probably some clay, in which are numerous fragmentary large and small shells, crinoid columnals, foraminifera, spines and polyzoa.
Caption Text 3	The sample contains small opaque granules and wisps which are fairly abundantly distributed, and are largely carbonaceous though some appears to be of pyrite. Shreds of bleached mica are present.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Murrayshall (Hurlet) Limestone. Light: XPL. Magnification: x2.5. Murrayshall Limeworks, Cambusbarron, 1.5 miles south-west of Stirling, Stirlingshire,
Materials	Photomicrograph
Associated Place	Scotland, Stirlingshire, Cambusbarron, Murrayshall Limeworks
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P527999 Photomicrograph of cornstone. Gargunock Burn, three-quarters of a mile south of Gargunock, Stirlingshire, Scotland

The Caption:

Caption Title Photomicrograph of cornstone. Gargunock Burn, three-quarters of a mile south of Gargunock, Stirlingshire, Scotland

Subtitle

Caption Text 1 A flaggy medium-grey compact dolomite. This specimen is Upper Old Red Sandstone (Devonian) in age. BGS sample number SL 160. British Geological Survey Petrology Collection sample number S 34860. Photomicrograph details: Light: PPL, Magnification:

Caption Text 2 In this section the rock is seen to be composed of turbid very finely granular dolomite, of grain size about 0.005 mm, which is recrystallized irregularly along streaks and channels to clear dolomite of 0.03 mm grain size. Obscure vermiform structure in the finer material suggests algal activity. Scarce secondary quartz is associated with good rhombs of dolomite in small lenticular spaces. Thin flakes of mica and angular grains of quartz are sparsely distributed and there are some relics of micro-fossils.

Caption Text 3 The rock is a mud-rich dolomite, with a laminated or bedded texture and occasional clotted groundmass.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of cornstone. Light: PPL. Magnification: x2.5. Gargunock Burn, three-quarters of a mile south of Gargunock, Stirlingshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Stirlingshire, Gargunock

(Nature of Grid Reference) Location specimen was found

Display Date / Period Devonian 417-354 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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P528000 Photomicrograph of cornstone. Quarry 400 yards west by north of Selms, 1.25 miles south of East Calder, Midlothian, Scotland

The Caption:

Caption Title	Photomicrograph of cornstone. Quarry 400 yards west by north of Selms, 1.25 miles south of East Calder, Midlothian, Scotland
Subtitle	
Caption Text 1	A nodular rock composed of larger buff nodules which effervesce freely in cold dilute hydrochloric acid and greenish non-effervescent nodules, in a fine breccia-like base containing much recrystallized or infiltrated calcite. This specimen is Upper Old Red Sandstone (Devonian) in age. BGS sample number SL 180. British Geological Survey Petrology Collection sample number S 34901. Photomicrograph details: Light: PPL, Magnification:
Caption Text 2	The thin section image shows the greenish nodules and these are composed of silty micaceous argillite or mudstone, marginally replaced by prisms of calcite growing in from the infilling calcite. The latter is composed of coarse grains which show growth zones and in places two periods of growth separated by a period of silica deposition. Some of the vein-like infillings contain also a central deposit of chalcidonic quartz.
Caption Text 3	The rock is a mud-rich very fine-grained limestone containing clear nodules of coarser-grained calcite and occasional calcite veins.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of cornstone. Light: PPL. Magnification: x2.5. Quarry 400 yards west by north of Selms, 1.25 miles south of East Calder, Midlothian, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Midlothian, Selms
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Devonian 417-354 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P528001 Photomicrograph of cementstone. Linhouse Water, 120 yards north-west of the upper (south) railway viaduct, 2 miles south of Mid Calder, Midlothian, Scotland

The Caption:

Caption Title Photomicrograph of cementstone. Linhouse Water, 120 yards north-west of the upper (south) railway viaduct, 2 miles south of Mid Calder, Midlothian, Scotland

Subtitle

Caption Text 1 A dull compact grey rock, composed mainly of grains of carbonate, 0.005-0.01 mm across, which by refractive index tests is shown to be ferriferous dolomite. Slightly larger grains up to 0.02 mm are much altered to limonite and probably represent original siderite. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 181. British Geological Survey Petrology Collection sample number S 34902. Photomicrograph details: Light: XPL, Magnification: x2.5.

Caption Text 2 In thin seams rich in quartz and muscovite the carbonates are less finely grained and oxidized siderite up to 0.05 mm can be distinguished among clear finely granular carbonate. Fresh biotite is present but scarce in these seams and alkali-feldspar, muscovite and chlorite also are present. Contemporaneous brecciation of the fine-grained dolomite into the arenaceous seams suggest that the dolomite is an original precipitation or a lime-mud contemporaneously

Caption Text 3 The rock is a micrograined ferriferous dolomite with arenaceous laminae.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of cementstone. Light: XPL. Magnification: x2.5. Linhouse Water, 120 yards north-west of the upper (south) railway viaduct, 2 miles south of Mid Calder, Midlothian, Scotland.

Materials Photomicrograph

Associated Place Scotland, Midlothian, Midcalder, Linhouse Water

(Nature of Location specimen was found

Grid Reference

Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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P528002 Photomicrograph of limestone. South side of Bay of Fladdabister, Shetland Isles, Scotland

The Caption:

Caption Title	Photomicrograph of limestone. South side of Bay of Fladdabister, Shetland Isles, Scotland
Subtitle	
Caption Text 1	A grey crystalline limestone with thin dark seams. This specimen is Shetland metamorphic in age. BGS sample number SL 184. British Geological Survey Petrology Collection sample number S 34947. Photomicrograph details: Light: PPL, Magnification: x10.
Caption Text 2	The rock is composed essentially of anhedral grains of calcite showing close glide twinning. In thin section the grains, which are about 1.0 mm long, interlock, or are cemented by finely granular calcite which is due to trituration by shearing; similar fine calcite cuts through the larger calcite grains and also forms thin parallel seams. Quartz in grains 0.1-0.2 mm across, and small flakes of muscovite are abundant accessories.
Caption Text 3	A little finely divided opaque mineral is present throughout the sample, the larger grains being recognizable as oxidized iron-ore, probably pyrite. Apatite and tourmaline are accessory

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone. Light: PPL. Magnification: x10. South side of Bay of Fladdabister, Shetland Isles, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Shetland Isles, Bay of Fladdabister
(Nature of Grid Reference	Location specimen was found
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date	15/06/2003

P528003 Photomicrograph of Tingwall Limestone. One-third of a mile north of Scalloway, Shetland Isles

The Caption:

Caption Title Photomicrograph of Tingwall Limestone. One-third of a mile north of Scalloway, Shetland Isles, Scotland

Subtitle

Caption Text 1 A grey crystalline limestone with occasional micaceous films and clots. This specimen is Shetland metamorphic in age. BGS sample number SL 185. British Geological Survey Petrology Collection sample number S 34948. Photomicrograph details: Light: XPL,

Caption Text 2 The rock consists essentially of intricately sutured grains of calcite, about 0.5 mm across, together with about 25 per cent of quartz in grains which are usually distributed singly among the calcite but also form small aggregates with associated muscovite. Muscovite occurs also in irregular or streaky aggregates, some of which have associated red biotite and alkali-feldspar. A little dolomite is present in rhombs about 2 mm across. Pyrite, rutile and opaque mineral dust are common accessories, whilst tourmaline is scarce.

Caption Text 3 In summary the sample is a dolomitic limestone containing quartz, muscovite, biotite and pyrite. It is medium-grained and foliated.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Tingwall Limestone. Light: XPL. Magnification: x2.5. One-third of a mile north of Scalloway, Shetland Isles, Scotland.

Materials Photomicrograph

Associated Place Scotland, Shetland Isles, Scalloway

(Nature of Grid Reference) Location specimen was found

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Input Date 15/06/2003

P528004 Photomicrograph of Tingwall Limestone. Quarry, east side of road 1 mile north-north-east of Scalloway, Shetland Isles, Scotland

The Caption:

Caption Title	Photomicrograph of Tingwall Limestone. Quarry, east side of road 1 mile north-north-east of Scalloway, Shetland Isles, Scotland
Subtitle	
Caption Text 1	A grey crystalline limestone with a lamination in shades of grey, which is flaggy and laminated in places. This specimen is Shetland metamorphic in age. BGS sample number SL 186. British Geological Survey Petrology Collection sample number S 34949. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock is composed of anhedral interlocking grains of twinned calcite, with thin laminae of muscovite, or muscovite-graphite-schist. These laminae have been cut into schlieren by the flowage of calcite and show internal schistosity differing in direction from the parallel arrangement of the schlieren. Quartz is sparsely distributed among the calcite and graphite is disseminated on the grain surfaces in the calcite bands. Pyrite is accessory; apatite scarce.
Caption Text 3	In summary, the rock is a limestone with graphite, quartz and pyrite. It is fine-grained, with a sheared texture.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Tingwall Limestone. Light: XPL. Magnification: x2.5. Quarry, east side of road 1 mile north-north-east of Scalloway, Shetland Isles, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Shetland Isles, Scalloway
(Nature of Grid Reference)	Location specimen was found
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P528005 Photomicrograph of Tingwall Limestone. Girlsta Quarry, near shore of Wadbister Voe, Shetland Isles

The Caption:

Caption Title Photomicrograph of Tingwall Limestone. Girlsta Quarry, near shore of Wadbister Voe, Shetland Isles, Scotland

Subtitle

Caption Text 1 A pale grey, fine-grained crystalline limestone. This specimen is Shetland metamorphic in age. BGS sample number SL 187. British Geological Survey Petrology Collection sample number S 34951. Photomicrograph details: Light: PPL, Magnification: x2.5.

Caption Text 2 The rock is composed of interlocking grains of calcite 0.5 mm across, which show glide twinning and a little peripheral granulation. Small patches of coarser-grained, clear calcite are present throughout. Quartz is abundant, about 5-10 per cent by volume, in small grains, and occurs also as larger grains in quartz-clinoclone aggregates. Muscovite is in places a subordinate mineral and elsewhere is only accessory. Pyrite is accessory.

Caption Text 3 In summary, the sample is a limestone with quartz, chlorite and muscovite. It is medium-grained and granoblastic, with a moderate foliation.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Tingwall Limestone. Light: PPL. Magnification: x2.5. Girlsta Quarry, near shore of Wadbister Voe, Shetland Isles, Scotland.

Materials Photomicrograph

Associated Place Scotland, Shetland Isles, Wadbister Voe, Girlsta Quarry

(Nature of Grid Reference) Location specimen was found

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Image CD 16

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Inputter E.K. Hyslop

Input Date 15/06/2003

P528006 Photomicrograph of Weisdale Limestone. Sursetter, 1.5 miles north of Voe, Shetland Isles

The Caption:

Caption Title	Photomicrograph of Weisdale Limestone. Sursetter, 1.5 miles north of Voe, Shetland Isles, Scotland
Subtitle	
Caption Text 1	A moderately coarse-grained, white crystalline limestone. This specimen is Shetland metamorphic in age. BGS sample number SL 190. British Geological Survey Petrology Collection sample number S 34954. Photomicrograph details: Light: XPL, Magnification:
Caption Text 2	The sample is composed of coarsely sutured grains of calcite, about 1 mm long, which tend to be elongated in a direction of rather poor schistosity defined by a general parallel orientation of muscovite. The latter is a subordinate essential constituent forming flakes approaching, and rarely exceeding, 1 mm in length. A minor quantity of oligoclase and quartz is present, generally in association with muscovite. Prismatic zoisite, tremolite and a fibrous aggregate which develops into micaceous flakes, are minor essential constituents.
Caption Text 3	Zoisite and muscovite form symplectitic intergrowths with quartz. Colourless tourmaline in small hexagonal prisms, leucocene, pyrite and pyrrotite are abundant; apatite, sphene and zircon are scarce accessories.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Weisdale Limestone. Light: XPL. Magnification: x2.5. Sursetter, 1.5 miles north of Voe, Shetland Isles, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Shetland Isles, Voe, Sursetter
(Nature of	Location specimen was found
Grid Reference	
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P528007 Photomicrograph of limestone. 300 yards south of Loch of Burriland, Sullom, 4 miles north of Brae, North Maven, Shetland Isles, Scotland

The Caption:

Caption Title	Photomicrograph of limestone. 300 yards south of Loch of Burriland, Sullom, 4 miles north of Brae, North Maven, Shetland Isles, Scotland
Subtitle	
Caption Text 1	A grey, fractured, crystalline limestone. This specimen is Shetland metamorphic in age. BGS sample number SL 191. British Geological Survey Petrology Collection sample number S 34955. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The rock is composed of strained calcite in grains 0.5-1.5 mm across, traversed by narrow shear zones in which calcite is triturated, and along which muscovite and chlorite are abundant. Yellow tourmaline occurs along thin shear-zones in good prisms which have been fractured by later movement. Oxidized pyrite occurs mainly in or near shear-lines.
Caption Text 3	In summary, the sample is a coarse to medium-grained limestone with muscovite-chlorite schist folia. It has a granoblastic texture and is foliated.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone. Light: PPL. Magnification: x2.5. 300 yards south of Loch of Burriland, Sullom, 4 miles north of Brae, North Maven, Shetland Isles, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Shetland Isles, North Maven, Loch of Burriland
(Nature of	Location specimen was found
Grid Reference	

Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P528008 Photomicrograph of cementstones, Ballagan Beds. Ballagan Burn, 530 yards north of Ballagan House, Stirlingshire, Scotland

The Caption:

Caption Title	Photomicrograph of cementstones, Ballagan Beds. Ballagan Burn, 530 yards north of Ballagan House, Stirlingshire, Scotland
Subtitle	
Caption Text 1	Compact grey rock, composed of a mass of rhomboid dolomite crystals, 0.005-0.02 mm across, with very little turbid matter of any kind, argillaceous or calcareous. This specimen is Calciferosus Sandstone Series (Carboniferous) in age. BGS sample number SL 192. British Geological Survey Petrology Collection sample number S 34968. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	Angular grains of quartz, 0.1-0.5 mm across, are abundantly scattered through the rock along with scarce alkali-feldspar, secondary quartz-rock, chlorite and thin prisms of a mineral, occurring in cracks and in association with quartz, which is probably baryte.
Caption Text 3	The thin section may contain small prisms of gypsum, but this is not proven. The rock is a very fine-grained muddy dolomite, with a uniform granular texture.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of cementstones, Ballagan Beds. Light: PPL. Magnification: x2.5. Ballagan Burn, 530 yards north of Ballagan House, Stirlingshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Stirlingshire, Ballagan Burn
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P528009 Photomicrograph of limestone. Thorlieshope Limeworks, 400 yards south of Hob Knowe, 4 miles east of Riccarton Junction, Roxburghshire, Scotland

The Caption:

Caption Title	Photomicrograph of limestone. Thorlieshope Limeworks, 400 yards south of Hob Knowe, 4 miles east of Riccarton Junction, Roxburghshire, Scotland
Subtitle	
Caption Text 1	A grey, fine-grained cavernous limestone, with cavities which in some cases represent shells dissolved away. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 200. British Geological Survey Petrology Collection sample number S 35056. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	Small black pellets are numerous in patches. The rock is composed of a large number of large fairly thin-walled shells, which enclose turbid calcite-mudstone in various stages of recrystallization, in a partially recrystallized and dolomitized matrix. The less recrystallized portions show a clotted structure and contain fragments of thin shells.
Caption Text 3	In places the rock contains rolled or angular fragments of shelly calcite-mudstone, shell fragments coated with precipitated calcite and, more rarely, oolites, together with fragments of hollow structures, perhaps spines. Refractive index tests show that both dolomite and ankerite are present in the sample.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone. Light: PPL. Magnification: x2.5. Thorlieshope Limeworks, 400 yards south of Hob Knowe, 4 miles east of Riccarton Junction, Roxburghshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Roxburghshire, Hob Knowe, Thorlieshope Limeworks
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	E.K. Hyslop
Input Date	15/06/2003

P528010 Photomicrograph of limestone. Muir Burn, 660 yards north-west of Liddelbank House, Roxburghshire

The Caption:

Caption Title Photomicrograph of limestone. Muir Burn, 660 yards north-west of Liddelbank House, Roxburghshire, Scotland

Subtitle

Caption Text 1 A granular dark brownish-grey limestone, showing small crinoid columnals. This specimen is Calciferos Sandstone Series (Carboniferous) in age. BGS sample number SL 203. British Geological Survey Petrology Collection sample number S 35063. Photomicrograph details: Light: PPL, Magnification: x2.5.

Caption Text 2 The rock is composed of the debris of crinoid columnals, shells, ostracods, foraminifera, polyzoa and spines, the fine material being recrystallized to clear fine-grained calcite in which the polyzoan and foraminiferal fragments are prominently picked out by opaque bituminous impregnations in the cell walls. Angular grains of quartz up to 0.5 mm long, are abundant throughout the rock.

Caption Text 3 The sample is a fine-grained, arenaceous limestone which is microfossiliferous.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of limestone. Light: PPL. Magnification: x2.5. Muir Burn, 660 yards north-west of Liddelbank House, Roxburghshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Roxburghshire, Liddelbank House, Muir Burn

(Nature of Grid Reference) Location specimen was found

Display Date / Period Carboniferous 354-290 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Input Date 15/06/2003

P528011 Photomicrograph of limestone. Shore cliff close to Bathing Pool, quarter of a mile south of Sharper Head, Berwick-on-Tweed, Northumberland, Scotland

The Caption:

Caption Title	Photomicrograph of limestone. Shore cliff close to Bathing Pool, quarter of a mile south of Sharper Head, Berwick-on-Tweed, Northumberland, Scotland
Subtitle	
Caption Text 1	A brownish-cream, compact, fine-grained crinoidal limestone. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 207. British Geological Survey Petrology Collection sample number S 35072. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The rock consists of a turbid mass of granular calcite, 0.01 mm, and small calcareous organic debris through which are scattered foraminifera, larger shell fragments, ostracod valves, crinoidal fragments and scarcer polyzoan and algal fragments. There are numerous spines and Calcisphaera. The rock is traversed by occasional calcite-filled fractures. Microgranular pyrites, limonite and possibly bituminous matter impregnate some of the fossil fragments.
Caption Text 3	In summary the limestone is micrograined and microfossiliferous, with occasional stylolitic seams.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone. Light: PPL. Magnification: x2.5. Shore cliff close to Bathing Pool, quarter of a mile south of Sharper Head, Berwick-on-Tweed, Northumberland, Scotland.
Materials	Photomicrograph
Associated Place	England, Northumberland, Berwick-on-Tweed
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P528012 Photomicrograph of limestone. Old quarry, 100 yards north of Stobs Quarry, Limekilnedge, 9 miles south of Hawick, Roxburghshire, Scotland

The Caption:

Caption Title	Photomicrograph of limestone. Old quarry, 100 yards north of Stobs Quarry, Limekilnedge, 9 miles south of Hawick, Roxburghshire, Scotland
Subtitle	
Caption Text 1	A fine-grained whitish, nodular, argillaceous limestone. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 208. British Geological Survey Petrology Collection sample number S 35073. Photomicrograph details: Light: PPL,
Caption Text 2	The rock is composed of a mass of granular carbonate of which the grain size is occasionally 0.03 mm but usually 0.01 mm and often less. This has a turbid appearance and there may be films of clay on the grains, but the apparent turbidity may be caused only by the small grain size. Through this mass small angular quartz chips (0.2 mm and less) are sporadically scattered. Recrystallization to clear granular calcite (0.1 mm grain size) has taken place along impersistent sinuous or irregular channels.
Caption Text 3	The sample is a micrograined, uniform granular muddy limestone. The irregular calcite-filled fractures are sometimes termed crook-veined.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone. Light: PPL. Magnification: x2.5. Old quarry, 100 yards north of Stobs Quarry, Limekilnedge, 9 miles south of Hawick, Roxburghshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Roxburghshire, Limekilnedge
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P528013 Photomicrograph of colomite. South side of railway, 400 yards west of Carham station, Roxburghshire, Scotland

The Caption:

Caption Title Photomicrograph of colomite. South side of railway, 400 yards west of Carham station, Roxburghshire, Scotland

Subtitle

Caption Text 1 Pale cream, compact, very fine-grained dolomite with small-scale nodular structure. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 221. British Geological Survey Petrology Collection sample number S 35075. Photomicrograph details: Light: XPL, Magnification: x2.5.

Caption Text 2 The rock is composed of small, occasionally rhomboid grains (0.02-0.04 mm grainsize) of dolomite, probably coated with some argillaceous matter. The nodular structure is not seen in thin section but there is a weak banding of clearer and more turbid dolomite. The rock is cut by calcite-filled fractures which are faulted by narrow fractures, also calcite-filled. Quartz grains, up to 0.5 mm long, are sparsely scattered through the rock.

Caption Text 3 In summary, the rock is a micrograined dolomite, with a uniform granular texture.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of colomite. Light: XPL. Magnification: x2.5. South side of railway, 400 yards west of Carham station, Roxburghshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Roxburghshire, Carham Station

(Nature of Location specimen was found

Grid Reference

Display Date / Period Carboniferous 354-290 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Input Date 15/06/2003

P528014 Photomicrograph of Main Limestone. 800 yards east-south-east of Thorntonhall station, 3 mile west of East Kilbride, Lanarkshire, Scotland

The Caption:

Caption Title	Photomicrograph of Main Limestone. 800 yards east-south-east of Thorntonhall station, 3 mile west of East Kilbride, Lanarkshire, Scotland
Subtitle	
Caption Text 1	A compact, brownish-grey limestone. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 222. British Geological Survey Petrology Collection sample number S 35080. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The rock is composed of the debris of shells, crinoids, productid spines and polyzoa, together with well-preserved foraminifera of various genera, in a plentiful matrix of calcite which is now crystallized in grains averaging 0.5 mm across, but of quite variable size in different portions of the rock. Bituminous, probably argillaceous matter and carbonaceous particles are widely disseminated interstitially to the calcite.
Caption Text 3	The rock contains layers in which the shell and crinoid fragments are concentrated but foraminifera scarce, and the bituminous clay is gathered into fairly persistent sinuous and branching films. Foraminifera and polyzoa are usually heavily impregnated with opaque dust.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Main Limestone. Light: PPL. Magnification: x2.5. 800 yards east-south-east of Thorntonhall station, 3 mile west of East Kilbride, Lanarkshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Lanarkshire, Thorntonhall Station
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date	15/06/2003

P528015 Photomicrograph of Main Limestone. Old quarry 300 yards north-west of Crosshouse Farm, 1.5 miles south of Hairmyres station, Lanarkshire, Scotland

The Caption:

Caption Title	Photomicrograph of Main Limestone. Old quarry 300 yards north-west of Crosshouse Farm, 1.5 miles south of Hairmyres station, Lanarkshire, Scotland
Subtitle	
Caption Text 1	A compact, dull brownish-grey limestone showing scattered small crinoid columnals. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 223. British Geological Survey Petrology Collection sample number S 35081. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The thin section shows large and small debris of shells and crinoids, with many spines, scattered foraminifera and ostracods, scarce polyzoa and phosphatic fossil fragments. This is contained within a matrix of pelitomorphic calcite which is recrystallized to granular calcite of grain size usually about 0.02 mm but varying up to about 0.15 mm in places. Recrystallization has nearly obliterated many small organisms in the matrix and has affected some of the crinoid
Caption Text 3	The section also contains one fragment of kaolin-filled cavernous limonite and two nodules of semi-opaque marl which may be faecal in origin. There is a considerable dissemination of ferruginous clay in the matrix and this is locally concentrated in thin black stylolitic films.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Main Limestone. Light: PPL. Magnification: x2.5. Old quarry 300 yards north-west of Crosshouse Farm, 1.5 miles south of Hairmyres station, Lanarkshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Lanarkshire, Crosshouse Farm
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P528016 Photomicrograph of Charlestown Main Limestone, higher dolomitic part. North end of West Quarry, Charlestown, 3 miles south-west of Dunfermline, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Charlestown Main Limestone, higher dolomitic part. North end of West Quarry, Charlestown, 3 miles south-west of Dunfermline, Fifeshire, Scotland
Subtitle	
Caption Text 1	A buff microcrystalline dolomite with many cavities which are surrounded by iron staining. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 224. British Geological Survey Petrology Collection sample number S 35082. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock is composed of turbid grains, rhomboid and irregular 0.1-0.25 mm across, of dolomite. Diffuse curved outlines of shells and crinoid columnals are preserved as single crystals of dolomite. There are a few small irregular grains of chert and secondary quartz and of composite granular quartz probably of detrital origin. Occasionally a crinoid columnal is considerably replaced by secondary quartz in which trabecular structure may be retained.
Caption Text 3	The well preserved crinoid columnals can be seen in the hand specimen. They do not react with cold dilute acid but usually active effervescence can be seen on their borders or in the canal. No calcite can be distinguished in these positions in the section.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Charlestown Main Limestone, higher dolomitic part. Light: XPL. Magnification: x2.5. North end of West Quarry, Charlestown, 3 miles south-west of Dunfermline, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Charlestown, West Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P528017 Photomicrograph of Charlestown Main Limestone, 2-5 ft above dolerite sill. Mine, at north-west end of Roscobie Quarry, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Charlestown Main Limestone, 2-5 ft above dolerite sill. Mine, at north-west end of Roscobie Quarry, Fifeshire, Scotland
Subtitle	
Caption Text 1	A grey limestone with a greenish tinge, with rough fracture and altered aspect. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 226. British Geological Survey Petrology Collection sample number S 35084. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The limestone is composed of a mosaic of clear granular calcite of varying grain size (0.01-0.2 mm). In this are scattered numerous relics of crinoid columnals and shells. The shape of the columnals is retained but the plates are recrystallized to granular aggregates. The shape of the shells is very largely lost through recrystallization. Small black grains are scattered in accessory proportions in the rock and larger grains of pyrite are scarce.
Caption Text 3	The rock contains a considerable quantity of clear interstitial substance amongst the calcite mosaic. This is an aggregate of very small fibres and scales insoluble in cold dilute HCl and appears as a greenish clay when the calcite is dissolved out. When thus separated the colour of the mineral is in general pale greenish, but often yellow and occasionally brown; from its optical properties it seems to be an antigoritic chlorite.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Charlestown Main Limestone, 2-5 ft above dolerite sill. Light: PPL. Magnification: x2.5. Mine, at north-west end of Roscobie Quarry, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Roscobie Quarry
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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Input Date	15/06/2003

P528018 Photomicrograph of calcareous sandstone. Allt na Teangaidh, 500 yards north-east of Balmeanach, Gribun, Mull, Argyllshire, Scotland

The Caption:

Caption Title	Photomicrograph of calcareous sandstone. Allt na Teangaidh, 500 yards north-east of Balmeanach, Gribun, Mull, Argyllshire, Scotland
Subtitle	
Caption Text 1	A dark, fine-grained, rough rock, containing many small aggregates of finely divided pyrite. This specimen is Jurassic in age. BGS sample number SL 227. British Geological Survey Petrology Collection sample number S 35085. Photomicrograph details: Light: PPL,
Caption Text 2	The sample is composed of angular grains of quartz and subordinate, but abundant albite, in a matrix of brownish calcite which tends to form large irregular grains enveloping several grains of quartz. Orthoclase is an accessory constituent, as are muscovite and scarce phosphatic fossil fragments and grains of garnet, zircon and rutile. Thin-walled shell fragments are common. Pyrite and carbonaceous matter are abundant. The former is mostly in small grains and streaks, but locally forms large lumps enclosing many quartz grains.
Caption Text 3	The carbonaceous matter in the rock is black in reflected light, brown in transmitted light and in some larger fragments looks like wood. Dolomite appears in minor amount as rhombs of 0.1 mm size, in the calcite, and may be a very early if not a primary constituent.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of calcareous sandstone. Light: PPL. Magnification: x2.5. Allt na Teangaidh, 500 yards north-east of Balmeanach, Gribun, Mull, Argyllshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Argyllshire, Mull, Gribun, Allt na Teangaidh
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P528019 Photomicrograph of Ballachulish Limestone. Quarry, 300 yards north-north-west of Tom an Aoil, Spean Bridge, Invernessshire, Scotland

The Caption:

Caption Title	Photomicrograph of Ballachulish Limestone. Quarry, 300 yards north-north-west of Tom an Aoil, Spean Bridge, Invernessshire, Scotland
Subtitle	
Caption Text 1	A grey, crystalline limestone dominated by coarse-grained calcite. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 229. British Geological Survey Petrology Collection sample number S 35178. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock is composed of a mosaic of equidimensional grains of closely twinned calcite, 0.4-1.0 mm across, between which small idiomorphic quartz grains, about 0.1 mm across, are scattered. The quartz grains occasionally appear within the calcite grains. Mineral dust and granules of pyrite, rutile and possibly graphite granules are peppered sparsely and uniformly through the
Caption Text 3	In summary, the rock is a limestone with some quartz. It has a medium-grained, granoblastic texture.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Ballachulish Limestone. Light: XPL. Magnification: x2.5. Quarry, 300 yards north-north-west of Tom an Aoil, Spean Bridge, Invernessshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Invernessshire, Spean Bridge, Tom an Aoil
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P528020 Photomicrograph of Hosie Limestone. St. Monans shore east of harbour, Fifeshire, Scotland

The Caption:

Caption Title Photomicrograph of Hosie Limestone. St. Monans shore east of harbour, Fifeshire, Scotland

Subtitle

Caption Text 1 A dull brownish-grey fine-grained dolomite with many small cavities. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 233. British Geological Survey Petrology Collection sample number S 35236. Photomicrograph details: Light: PPL, Magnification: x2.5.

Caption Text 2 The thin section shows numerous dolomitized fossil relics including shell and crinoid fragments, small gastropod shells, round bodies and scarce fragments of ostracods and possibly of polyzoa. These lie within a matrix of fine debris which has been converted to dolomite of grain size about 0.01 mm. Ferriferous dolomite of grain up to 0.2 mm occurs in irregular small patches. Pyrite impregnates some of the crinoids, gastropods and other shell fragments.

Caption Text 3 The rock is a micrograined ferriferous dolomite, with clasts of fossil debris.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Hosie Limestone. Light: PPL. Magnification: x2.5. St. Monans shore east of harbour, Fifeshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Fifeshire, St. Monans shore

(Nature of Location specimen was found

Grid Reference

Display Date / Period Carboniferous 354-290 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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P528021 Photomicrograph of Charlestown Main Limestone (?). St. Monans shore east of harbour, Fifeshire

The Caption:

Caption Title	Photomicrograph of Charlestown Main Limestone (?). St. Monans shore east of harbour, Fifeshire, Scotland
Subtitle	
Caption Text 1	A dull grey dolomite containing crinoid ossicles. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 234. British Geological Survey Petrology Collection sample number S 35237. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The thin section shows large crinoid columnals and shell fragments, the structure of which is destroyed by recrystallization, in a ground of dolomite, of grain size 0.02-0.1 mm, coloured brown by disseminated bituminous clay. Stylolitic films separate bands of debris of differing grain size. There are a few small brown isotropic phosphatic fossil fragments. The crinoid columnals are preserved in dolomite though generally retaining their single crystal structure and enclosing small rhombs of dolomite.
Caption Text 3	The crinoid ossicles in this rock do not effervesce in cold dilute HCl, but a slight overall effervescence in the rock shows the dissemination of calcite. The dolomite is ferriferous, the ordinary refractive index being 1.695.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Charlestown Main Limestone (?). Light: PPL. Magnification: x2.5. St. Monans shore east of harbour, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, St. Monans shore
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P528022 Photomicrograph of Charlestown Green?. St. Monans shore east of harbour, Fifeshire, Scotland

The Caption:

Caption Title Photomicrograph of Charlestown Green?. St. Monans shore east of harbour, Fifeshire, Scotland
Subtitle
Caption Text 1 A grey bituminous limestone with a rough texture, containing much fossil debris. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 235. British Geological Survey Petrology Collection sample number S 35238. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2 The rock is composed of rather coarse shell, polyzoan and crinoidal debris in a matrix of finely divided calcite and small debris containing complete foraminifera, ostracods and spines. The rock is spotted with brownish probably bituminous matter. Many of the foraminifera and some shell fragments are deeply impregnated with opaque matter, which is pyritic in some cases.
Caption Text 3 When powdered this rock gives off heavy oil when heated in a closed tube, and in the thin section bituminous matter is abundantly distributed as short films and small clots.

The Basic Record:

Simple Name Photomicrograph
Brief Description Photomicrograph of Charlestown Green?. Light: PPL. Magnification: x2.5. St. Monans shore east of harbour, Fifeshire, Scotland.
Materials Photomicrograph
Associated Place Scotland, Fifeshire, St. Monans shore
(Nature of Grid Reference) Location specimen was found
Display Date / Period Carboniferous 354-290 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Muir, A. and Phemister, J. et. al.
Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details Edinburgh : HMSO, 1956.
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.
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Input Date 15/06/2003

P528023 Photomicrograph of pseudobreccia limestone. St. Monans shore east of harbour, Fifeshire

The Caption:

Caption Title Photomicrograph of pseudobreccia limestone. St. Monans shore east of harbour, Fifeshire, Scotland

Subtitle

Caption Text 1 Dark brownish-grey limestone with conchoidal fracture, speckled with small crinoid columnals and impregnated with pyrite in bulbous growths from which small bud-like aggregates extend. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 236. British Geological Survey Petrology Collection sample number S 35239. Photomicrograph details: Light: PPL, Magnification: x2.5.

Caption Text 2 The limestone is composed of very fine debris through which foraminifera and fragments of shells and crinoid are scattered. The matrix is recrystallized in fine-grained calcite (0.02 mm grain size), and the outlines of the fossils are in part lost. The pyrite appears as a spongy aggregate enclosing some unaltered fossil fragments and enters as an impregnation along with mainly carbonaceous matter, into some foraminifera and shell and polyzoan fragments. A crinoid columnal is seen in process of replacement by pyrite.

Caption Text 3 Examination of this sample under reflected light shows organic structure in the opaque pyrite aggregate. The pyritic growths are thus replacement deposits in the limestone.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of pseudobreccia limestone. Light: PPL. Magnification: x2.5. St. Monans shore east of harbour, Fifeshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Fifeshire, St. Monans shore

(Nature of Grid Reference) Location specimen was found

Display Date / Period Carboniferous 354-290 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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P528024 Photomicrograph of limestone. Old Quarry, east bank of Allt Folais, 620 yards north of Letterewe House, Rossshire, Scotland

The Caption:

Caption Title	Photomicrograph of limestone. Old Quarry, east bank of Allt Folais, 620 yards north of Letterewe House, Rossshire, Scotland
Subtitle	
Caption Text 1	Massive, white, fine-grained limestone which has undergone shearing and fracture. This specimen is Lewisian (Precambrian) in age. BGS sample number SL 258. British Geological Survey Petrology Collection sample number S 35262. Photomicrograph details: Light: XPL, Magnification: x10.
Caption Text 2	The thin section shows a limestone which has been sheared so that eye-shaped fragments about 0.3 mm in size and irregularly lenticular areas of medium-grained carbonate are set in a parallel arrangement in a finely granular matrix of about 0.02 mm grain. Colourless phlogopite is accessory and lies in the direction of lenticularity of the calcite. The carbonate is partly calcite and partly aragonite, the admixture being patchy and without regular pattern, but the eye-shaped fragments are all of calcite.
Caption Text 3	The sample is a sheared and recrystallized limestone composed of calcite and aragonite. Under higher magnification the crystal form and the characteristic re-entrant angles produced by twinning distinguish the aragonite from calcite.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone. Light: XPL. Magnification: x10. Old Quarry, east bank of Allt Folais, 620 yards north of Letterewe House, Rossshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ross and Cromarty, Letterewe House, Allt Folais
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P528025 Photomicrograph of limestone and dolomite. Old quarry, west bank of Allt Folais, 690 yards north of Letterewe House, Rossshire, Scotland

The Caption:

Caption Title	Photomicrograph of limestone and dolomite. Old quarry, west bank of Allt Folais, 690 yards north of Letterewe House, Rossshire, Scotland
Subtitle	
Caption Text 1	Thinly and irregularly flaggy limestone with a reticulation of thin veins of calcite. This specimen is Lewisian (Precambrian) in age. BGS sample number SL 259. British Geological Survey Petrology Collection sample number S 35264. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The thin section shows a rock in which angular grains of calcite about 0.05 to 0.3 mm across are scattered like sand grains in a very fine matrix of carbonate of grain size 0.01 mm. This is cut by thin veins containing calcite, quartz and barytes. The latter two minerals occur also in small aggregates throughout the rock. Phlogopite is present in flakes up to 0.5 mm long. A sericitic clay aggregate is also present. Some curious small spheroidal growths of calcite in the rock seem to be of the same age as the formation of phlogopite.
Caption Text 3	When the sample was dissolved in cold hydrochloric acid, the residue contains barytes, quartz, phlogopite and dolomite in that order of abundance.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone and dolomite. Light: PPL. Magnification: x2.5. Old quarry, west bank of Allt Folais, 690 yards north of Letterewe House, Rossshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ross and Cromarty, Letterewe House, Allt Folais
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P528026 Photomicrograph of limestone and dolomite. Old quarry, north bank of Allt Coire nan Dearcaig, Rossshire, Scotland

The Caption:

Caption Title	Photomicrograph of limestone and dolomite. Old quarry, north bank of Allt Coire nan Dearcaig, , Rossshire, Scotland
Subtitle	
Caption Text 1	A pale violet limestone with films of yellow-green phlogopite. This specimen is Lewisian (Precambrian) in age. BGS sample number SL 260. British Geological Survey Petrology Collection sample number S 35266. Photomicrograph details: Light: XPL, Magnification:
Caption Text 2	The thin section shows irregular fragments of calcite in a matrix of turbid, very finely granular calcite. Contorted phlogopite, chlorite and spongy tremolite, partly replaced by the carbonate matrix, are abundant. The matrix invades the fragmental calcite along 'corrosion' embayments and cracks. The mean refractive index of the tremolite is 1.620. Apatite and limonite are
Caption Text 3	The rock has clearly been faulted or sheared and there are some short lengths of shear bands. After shearing there seems to have been brecciation and more uniform pressure under which the fine matrix formed a plastic medium which showed no shear effects.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone and dolomite. Light: XPL. Magnification: x2.5. Old quarry, north bank of Allt Coire nan Dearcaig, 50 yards upstream from junction with Allt Airidh a' Char, Rossshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ross and Cromarty, Allt Coire nan Dearcaig
(Nature of Grid Reference	Location specimen was found
Display Date / Period	Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P528027 Photomicrograph of colomite. Old quarry 430 yards east 14 degrees south of Sheildaig Lodge, Gairloch, Rossshire, Scotland

The Caption:

Caption Title	Photomicrograph of colomite. Old quarry 430 yards east 14 degrees south of Sheildaig Lodge, Gairloch, Rossshire, Scotland
Subtitle	
Caption Text 1	A white coarsely crystalline dolomite containing scales of pale brown mica. This specimen is Lewisian (Precambrian) in age. BGS sample number SL 261. British Geological Survey Petrology Collection sample number S 35268. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock is composed of interlocking grains of carbonate up to 15 mm long and usually slightly elongated in the direction of foliation as shown by the mica flakes. These are abundant, colourless, almost uniaxial highly birefringent phlogopite. Quartz is an abundant accessory or subordinate constituent and is arranged in lenticular groups of elongated twinned grains in which all the directions of elongation are parallel to the foliation. Colourless tourmaline is an abundant accessory, in stout prisms with rounded terminations, up to 0.5 mm long. The carbonate is locally slightly granulitized.
Caption Text 3	In summary the rock is a dolomite with phlogopite and quartz. It is medium-grained, with a foliated texture.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of colomite. Light: XPL. Magnification: x2.5. Old quarry 430 yards east 14 degrees south of Sheildaig Lodge, Gairloch, Rossshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ross and Cromarty, Gairloch, Sheildaig Lodge
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P528028 Photomicrograph of limestone. 650 yards north 18 degrees east of outflow of Lochan Druim na Fearn, Rossshire, Scotland

The Caption:

Caption Title	Photomicrograph of limestone. 650 yards north 18 degrees east of outflow of Lochan Druim na Fearn, Rossshire, Scotland
Subtitle	
Caption Text 1	A crystalline calcareous dolomite, foliated and with greenish laminae, and traversed by pinkish ferruginous streaks and cracks. This specimen is Lewisian (Precambrian) in age. BGS sample number SL 263. British Geological Survey Petrology Collection sample number S 35270. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The sample is composed of interlocking grains of twinned and cleaved dolomite slightly elongated in the direction of foliation, with finely granular calcite on the periphery, in irregular spaces within the dolomite grains and in irregular laminae through the rock. Phlogopite, partly chloritized, tremolite and quartz are subordinate minerals and are elongated in the direction of foliation. Colourless tourmaline and apatite are accessory, and a little rutile is present in small aggregates of irregular deep brown grains. Limonitized iron ore is intergrown locally with mica.
Caption Text 3	The rock is a calcareous dolomite containing phlogopite, quartz and tremolite. It is medium-grained, and has a foliated and strained texture.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone. Light: XPL. Magnification: x2.5. 650 yards north 18 degrees east of outflow of Lochan Druim na Fearn, Rossshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ross and Cromarty, Lochan Druim na Fearn
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Lewisian 3100-1600 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P528029 Photomicrograph of limestone, Sandend Group. Glenisla Quarry, Keith, Banffshire, Scotland

The Caption:

Caption Title Photomicrograph of limestone, Sandend Group. Glenisla Quarry, Keith, Banffshire, Scotland
Subtitle
Caption Text 1 Grey foliated crystalline limestone of medium grain size. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 238. British Geological Survey Petrology Collection sample number S 35271. Photomicrograph details: Light: XPL,
Caption Text 2 The twinned interlocking calcite grains of which the rock is composed are elongated in the plane of foliation and reach 4 mm in length. Quartz is present as a subordinate mineral and forms grains, often with crystal faces, usually about 0.3 mm but up to 0.5 mm across. The content of quartz is about 5-7 per cent, but is variable.
Caption Text 3 Opaque black and yellow granular matter is also present in the rock and is certainly in part pyrite, but perhaps includes graphite. Muscovite and phlogopite are present as accessory minerals, and rare alkali feldspar also occurs.

The Basic Record:

Simple Name Photomicrograph
Brief Description Photomicrograph of limestone, Sandend Group. Light: XPL. Magnification: x2.5. Glenisla Quarry, Keith, Banffshire, Scotland.
Materials Photomicrograph
Associated Place Scotland, Banffshire, Keith, Glenisla Quarry
(Nature of Grid Reference) Location specimen was found
Display Date / Period Precambrian, Dalradian 750-515 Ma.
(Nature of Association) Stratigraphic period
Ref. Author Muir, A. and Phemister, J. et. al.
Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details Edinburgh : HMSO, 1956.
Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P528030 Photomicrograph of limestone, Portsoy Group. Broadland Quarry, between Drumdelgie and Broadland, 3.25 miles west-north-west of Huntly, Aberdeenshire, Scotland

The Caption:

Caption Title	Photomicrograph of limestone, Portsoy Group. Broadland Quarry, between Drumdelgie and Broadland, 3.25 miles west-north-west of Huntly, Aberdeenshire, Scotland
Subtitle	
Caption Text 1	Dark grey crystalline limestone, composed of calcite of varying grain size, ranging from 3.0-0.5 mm across, and elongated in the foliation planes. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number SL 240. British Geological Survey Petrology Collection sample number S 35273. Photomicrograph details: Light: XPL, Magnification:
Caption Text 2	The rock has a rather intricate interlocking texture between the calcite grains and between calcite and quartz. Quartz is present in subordinate amounts (fully 5 per cent by eye estimation), and occurs as grains ranging from 0.5 to fully 2.0 mm in length. The large grains are intergrown with calcite. Phlogopite and opaque grains, which include pyrite, are abundant accessories.
Caption Text 3	In summary, the rock is a limestone with quartz. It is coarse- to medium-grained, with a granoschistose and grain-foliated texture.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone, Portsoy Group. Light: XPL. Magnification: x2.5. Broadland Quarry, between Drumdelgie and Broadland, 3.25 miles west-north-west of Huntly, Aberdeenshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Aberdeenshire, Broadland, Broadland Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Precambrian, Dalradian 750-515 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Inputter	E.K. Hyslop
Input Date	15/06/2003

P528031 Photomicrograph of limestone. Glenlia Quarry, near Foyers, Invernessshire, Scotland

The Caption:

Caption Title	Photomicrograph of limestone. Glenlia Quarry, near Foyers, Invernessshire, Scotland
Subtitle	
Caption Text 1	A dull, compact limestone with varying shades of grey, greenish and pinkish-mottle. This specimen is Lower Cambrian Fucoïd Beds in age. BGS sample number SL 241. British Geological Survey Petrology Collection sample number S 35274. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The rock is composed essentially of calcite, talc-silicates, mica and feldspar, with accessory sphene. The calcite is in grains up to 0.5 mm across. The talc-silicates include zoisite, epidote, pyroxene, pale green tremolite, the total and relative abundance of which vary from place to place in the sample. The feldspar is chiefly potash-feldspar and shows microcline twinning occasionally. Some albite is also present. The mica is a brown phlogopite.
Caption Text 3	In summary the sample is a limestone with feldspathic calcisilicate folia. It has a foliated, granoschistose texture.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone. Light: PPL. Magnification: x2.5. Glenlia Quarry, near Foyers, Invernessshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Invernessshire, Foyers
(Nature of	Location specimen was found
Grid Reference	
Display Date / Period	Cambrian 545-495 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P528032 Photomicrograph of Lower Lias limestone. Western outcrop of limestone in Allt Eas Mhor, Sconser, Skye, Invernessshire, Scotland

The Caption:

Caption Title	Photomicrograph of Lower Lias limestone. Western outcrop of limestone in Allt Eas Mhor, Sconser, Skye, Invernessshire, Scotland
Subtitle	
Caption Text 1	A dark grey limestone with large shall fragments and a brecciated appearance in parts and veined by calcite. This specimen is Jurassic in age. BGS sample number SL 242. British Geological Survey Petrology Collection sample number S 35342. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	In thin section the rock is seen to be essentially a dark calcite-mudstone of very fine grainsize, about 0.003 mm. It contains fragments of shells of very varying size. The largest show detailed internal structures, whilst the smallest are down to embryo forms. The shells are considerably recrystallized, but the original fibrous structure is indicated by streaks of dust. Patches of coarsely recrystallized clear calcite represent in most cases fragments of large thick shells.
Caption Text 3	In summary, the sample is a highly fossiliferous limestone with a very fine-grained mud-rich matrix.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Lower Lias limestone. Light: PPL. Magnification: x2.5. Western outcrop of limestone in Allt Eas Mhor, Sconser, Skye, Invernessshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Invernessshire, Skye, Sconser, Allt Eas Mhor
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P528050 Galena from Wanlockhead Lead Mine, Glencrieff Shaft Stope in South Straitstep Vein, Wanlockhead, Dumfriesshire

The Caption:

Caption Title	Galena from Wanlockhead Lead Mine, Glencrieff Shaft Stope in South Straitstep Vein, Wanlockhead, Dumfriesshire
Subtitle	
Caption Text 1	A specimen of galena from the Wanlockhead Lead Mine, Glencrieff Shaft Stope in South Straitstep Vein, Wanlockhead, Dumfriesshire. British Geological Survey Petrology Collection sample number MC 7699.
Caption Text 2	Almost all the veins in the district carry galena as the principal valuable mineral, a few carry copper ores in excess of other sulphides and have been worked for that metal. Most contain zinc blende (sphalerite) but not in commercial quantities. There is widespread alluvial gold in the area but no auriferous quartz veins have been found.
Caption Text 3	The lead and zinc deposits are associated with lines of fracture and in many cases signs of repeated movement can be seen e.g. slickensided galena and blende.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Galena from Wanlockhead Lead Mine, Glencrieff Shaft Stope in South Straitstep Vein, Wanlockhead, Dumfriesshire.
Materials	Mineral specimen
Associated Place	Scotland, Dumfriesshire, Wanlockhead
(Nature of	Location specimen was found
Grid Reference	
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
Text Copyright	British Geological Survey © NERC. All rights reserved.
<u>Image and Other Asset Info:</u>	
Image CD	16
Image File	P528050.tif
Image Copyright	British Geological Survey © NERC. All rights reserved.
Inputter	R.P. McIntosh
Input Date	15/06/2003

P528051 Galena from Wanlockhead, Stope no. 8, Wanlockhead, Dumfriesshire

The Caption:

Caption Title Galena from Wanlockhead, Stope no. 8, Wanlockhead, Dumfriesshire
Subtitle
Caption Text 1 Lead sulphide, known by its mineral name galena, is by far the most important mineral in the Leadhills, Wanlockhead mining district. This specimen of galena is from the Wanlockhead Mine, Stope no. 8. British Geological Survey Petrology Collection sample number MC 7700.
Caption Text 2 A stope or stoping is a method of extracting ore from a vertical or steeply dipping vein by driving tunnels along the strike of a vein and extracting the ore from above or below the tunnel.
Caption Text 3 The Wanlockhead mine had a large number of levels and stopes at different depths. The amount of galena would range from extremely rich to non-existent.

The Basic Record:

Simple Name Mineral specimen
Brief Description Galena from Wanlockhead, Stope no. 8, Wanlockhead, Dumfriesshire.
Materials Mineral specimen
Associated Place Scotland, Dumfriesshire, Wanlockhead
(Nature of
Grid Reference Location specimen was found

Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P528053 Quartzite from opposite sheepfold east of Ord, Skye, Invernessshire

The Caption:

Caption Title	Quartzite from opposite sheepfold east of Ord, Skye, Invernessshire
Subtitle	
Caption Text 1	A specimen of quartzite from opposite a sheepfold east of Ord, Skye, Invernessshire. The rock belongs to the Cambrian Basal Quartzite, now known as the False-bedded Quartzite Formation of the Eriboll Sandstone Group. British Geological Survey Petrology Collection sample number MC 7702.
Caption Text 2	It is a hard white quartzite that forms a conspicuous feature of the landscape in the North-West Highlands as it does here in Ord. Petrographic examination shows it consists of irregular interlocking grains of quartz with an average diameter of 3 mm.
Caption Text 3	The total width of the outcrop is 330 feet which corresponds to an actual bed thickness of 230 feet. The Wartime pamphlet records that 'overburden is absent and reserves are great'.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Quartzite from opposite sheepfold east of Ord, Skye, Invernessshire.
Materials	Rock specimen
Associated Place	Scotland, Invernessshire, Skye, Ord
(Nature of Grid Reference	Location specimen was found
Ref. Author	Anderson, J.G.C.
Ref Title	High-grade silica rocks in the Scottish Highlands & Islands. Wartime pamphlet no. 7. 2nd. ed.
Ref. Publication Details	London : Geological Survey and Museum, 1945.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528054 Sketch map of the Durness Limestone areas, Strath, Isle of Skye

The Caption:

Caption Title Sketch map of the Durness Limestone areas, Strath, Isle of Skye

Subtitle

Caption Text 1 The Cambro-Ordovician Durness Limestone outcrops at two localities in Skye, near Ord and in the Broadford district.

Caption Text 2 In the Ord area the formation occupies a small area but is of considerable thickness. The rocks vary from coarsely crystalline to fine and granular. There are appreciable amounts of pure dolomite and beds of chert are contained in certain parts of the succession.

Caption Text 3 At Broadford the Durness Limestone occupies an area of five or six square miles in an irregular curve from Torran on Loch Slapin through Strath Suardal to the Sound of Scalpay. What limestones that occur are usually compact, fine-grained bedded rocks, the dolomites on the other hand have crystalline saccharoidal texture. The carbonate rocks have been intruded by the Beinn an Dubhaich granite which has contact-metamorphosed the rocks to marbles which have been extensively quarried especially in the hill-slope south of Loch Kilchrist.

The Basic Record:

Simple Name Map

Brief Description Sketch map of the Durness Limestone areas, Strath, Isle of Skye.

Materials Map

Associated Place Scotland, Invernessshire, Skye, Strath

(Nature of Map of area

Grid Reference

Ref. Author Kennedy, W.Q.

Ref Title Dolomite and brucite marble in the Scottish Highlands. Wartime pamphlet no 6. With Supplement no 1.

Ref. Publication Details London : Geological Survey and Museum, 1940.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528055 Map showing the pegmatite belts of the western Highlands

The Caption:

Caption Title	Map showing the pegmatite belts of the western Highlands
Subtitle	
Caption Text 1	There are very large feldspathic pegmatites in the Strontian and Dalilea districts. There is also a zone of coarse pegmatites from one to three miles wide traversing western Inverness and Argyll from Glenelg to Glenfinnan, this zone is called the Great Pegmatite Belt.
Caption Text 2	An occurrence at Ardrie, Loch Sunart formed a dyke 20-35 feet wide and 200 yards long of highly feldspathic pegmatite. A pegmatite at Port-na-Saobhaidh on the north shore of Loch Sunart consists of a mainly white microcline perthite and partly oligoclase, it was estimated that up to 100,000 tons would be readily available.
Caption Text 3	During the Second World War these localities underwent detailed investigation for commercial deposits of mica. The conclusions were that despite high concentrations of feldspar they were, in general, of the mica-bearing type; this combined with the extreme inaccessibility discounted them as a source for alkali feldspar.

The Basic Record:

Simple Name	Map
Brief Description	Map showing the pegmatite belts of the western Highlands.
Materials	Map
Associated Place	Scotland, Northern Highlands
(Nature of Grid Reference	Map of area

Ref. Author	Robertson, T.
Ref Title	Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details	London : Geological Survey and Museum, 1945.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528056 Map showing alkali feldspar pegmatite at Portsoy, Banffshire

The Caption:

Caption Title Map showing alkali feldspar pegmatite at Portsoy, Banffshire
Subtitle
Caption Text 1 A brick-red pegmatite body of great extent is exposed on the west side of East Head, near Portsoy and has been used as a source of alkali feldspar.
Caption Text 2 The pegmatite body ranges from 40 feet thick at the coast to 10 feet thick to the south-south-west. It consists essentially of a fine graphic intergrowth of microcline and
Caption Text 3 Knobs of pegmatite between the cliff and high-water mark estimated to contain 7,000 tons have been worked for a number of years. It was crushed and sold for rough-cast work, garden paths etc. A new quarry was reported in 1945 to have opened towards the top of the cliff as a source of feldspar for the Potteries district.

The Basic Record:

Simple Name Map
Brief Description Map showing alkali feldspar pegmatite at Portsoy, Banffshire.
Materials Map
Associated Place Scotland, Banffshire
(Nature of Map of area
Grid Reference

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1945.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P528057 Map showing the mica and alkali feldspar occurrences at Little Scatwell, Wester Ross, Rossshire

The Caption:

Caption Title Map showing the mica and alkali feldspar occurrences at Little Scatwell, Wester Ross,
Subtitle
Caption Text 1 Alkali feldspar occurrences can be found in a tract running south-south-west from Ben Wyvis across Strath Conon to Glen Strathfarrar.
Caption Text 2 There are six separate outcrops of coarse pegmatite marked A to F on the map. These lie roughly along an east-north-east - west-south-west line which crosses the track from Little Scatwell to Glenmarskie about 550 yards north-north-west of Little Scatwell.
Caption Text 3 The pegmatites consist of predominantly of feldspar with quartz and also large books of muscovite mica measuring up to 20 inches in diameter. A large quantity of high-grade feldspar is easily accessible and prospects B and E and possibly A were regarded as the most promising in 1945.

The Basic Record:

Simple Name Map
Brief Description Map showing the mica and alkali feldspar occurrences at Little Scatwell, Wester Ross,
Materials Map
Associated Place Scotland, Ross and Cromarty
(Nature of Grid Reference Map of area
Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1945.
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Input Date 15/06/2003

P528058 Map showing the distribution of pegmatite veins in west Sutherland, a source for alkali (potash) in West Sutherland

The Caption:

Caption Title	Map showing the distribution of pegmatite veins in west Sutherland, a source for alkali (potash) feldspar
Subtitle	
Caption Text 1	Map showing the distribution of pegmatite veins in west Sutherland, a source for alkali (potash) feldspar. Two localities are of importance, at Cnoc an Tuir, 3/4 mile north-north-west of Rhiconich at the head of Loch Inchard and at Loch Laxford.
Caption Text 2	At Cnoc an Tuir a pegmatite 50 feet wide and at least 100 feet long is composed of 74 per cent feldspar and is predominantly potassic, and is the most suitable for commercial exploitation.
Caption Text 3	In the Loch Laxford area within abundant veins of pink granite and pegmatite there are six particular veins lying near the north shore of Laxford marked B to G on the map. These pegmatites are composed of mainly pink microcline feldspar and quartz with subordinate plagioclase feldspar.

The Basic Record:

Simple Name	Map
Brief Description	Map showing the distribution of pegmatite veins in west Sutherland, a source for alkali (potash) feldspar.
Materials	Map
Associated Place	Scotland, Sutherland
(Nature of	Map of area
Grid Reference	
Ref. Author	Robertson, T.
Ref Title	Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details	London : Geological Survey and Museum, 1945.
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Image and Other Asset Info:

Image CD	17
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528059 Map showing the pegmatite veins in the Durness district of Sutherland

The Caption:

Caption Title	Map showing the pegmatite veins in the Durness district of Sutherland, a source for alkali (potash) feldspar
Subtitle	
Caption Text 1	Map showing the pegmatite veins in the Durness district of Sutherland, a source for alkali (potash) feldspar. Pegmatites are extremely common in most areas occupied by Lewisian gneiss in the north-west of Scotland. In the Durness area there are two main occurrences, Beinn Ceannabeinne and at Sangobeag.
Caption Text 2	On the north-west slope of Beinn Ceannabeinne are a series of more or less vertical pegmatite veins which run in a north-west - south-east direction and are from one or two feet to 120 feet thick. The pegmatite consists of reddish-pink microcline and quartz often intergrown in a graphic manner.
Caption Text 3	The second locality at Sangobeag has a thick vein of pegmatite and has an average thickness of over 25 feet for a distance of at least 140 yards. Trial quarries were opened in 1817 and the feldspar was separated by hand picking.

The Basic Record:

Simple Name	Map
Brief Description	Map showing the pegmatite veins in the Durness district of Sutherland, a source for alkali (potash) feldspar.
Materials	Map
Associated Place	Scotland, Sutherland
(Nature of Grid Reference	Map of area
Ref. Author	Robertson, T.
Ref Title	Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details	London : Geological Survey and Museum, 1945.
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<u>Image and Other Asset Info:</u>	
Image CD	17
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528060 Map showing the Roneval pegamatite veins, South Harris, a source for alkali (potash) feldspar, Outer Hebrides

The Caption:

Caption Title Map showing the Roneval pegamatite veins, South Harris, a source for alkali (potash) feldspar, Outer Hebrides

Subtitle

Caption Text 1 Map showing the Roneval pegamatite veins, South Harris, a source for alkali (potash) feldspar. A number of occurrences exist the chief of which is on Sletterval.

Caption Text 2 The principal vein can be traced for 450 yards in an east-north-east - west-south-west direction, the east end being about one mile south-west of Finsbay. Three quarries were noted in 1945. The topmost quarry had feldspar crystals two to three feet in length with some more than five feet or more. The other quarries were the Middle or No. 2 Quarry and the lowest or No. 1

Caption Text 3 A number of other localities were explored, they include veins in anorthosite on the eastern slope of Roneval; Beinn na h'Aire and Rodilpark; Beinn Tharsuinn; the isle of Stromay; west side of Taransay on the isthmus connecting the peninsula of Aird Vanish.

The Basic Record:

Simple Name Map

Brief Description Map showing the Roneval pegamatite veins, South Harris, a source for alkali (potash) feldspar, Outer Hebrides.

Materials Map

Associated Place Scotland, Outer Hebrides, South Harris

(Nature of Map of area

Grid Reference

Ref. Author Robertson, T.

Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.

Ref. Publication Details London : Geological Survey and Museum, 1945.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528061 Map showing the Northton pegmatite vein, South Harris, a source for alkali (potash) feldspar, Outer Hebrides

The Caption:

Caption Title Map showing the Northton pegmatite vein, South Harris, a source for alkali (potash) feldspar, Outer Hebrides

Subtitle

Caption Text 1 Map showing the Northton pegmatite vein, a source for alkali (potash) feldspar. It yields a high-grade microcline microperthite fusing to a clear colourless glass. The Northton Vein is one of two deposits in South Harris, the other is the Roneval pegmatite veins.

Caption Text 2 The Northton pegmatite vein forms a conspicuous feature on the south-east slope of Chaipaval, over a mile north-west of Northton village. It attains a height of over 900 feet at the highest point of the outcrop. The general trend is north-east - south-west but the vein varies considerably, not only in strike and in thickness but also in inclination to the horizontal. The workings in 1945 were reported to lie at the north-east end and extended over 200 yards.

Caption Text 3 Access to the workings was reported to be by 'motor transport over the sands from Nisishee, but this was only possible at certain states of the tide'.

The Basic Record:

Simple Name Map

Brief Description Map showing the Northton pegmatite vein, South Harris, a source for alkali (potash) feldspar, Outer Hebrides.

Materials Map

Associated Place Scotland, Outer Hebrides

(Nature of Map of area

Grid Reference

Ref. Author Robertson, T.

Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.

Ref. Publication Details London : Geological Survey and Museum, 1945.

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Input Date 15/06/2003

P528062 Map showing the alkali feldspar pegmatite veins in South Harris (after Jehu and Craig, 1927)

The Caption:

Caption Title Map showing the alkali feldspar pegmatite veins in South Harris (after Jehu and Craig, 1927)
Subtitle
Caption Text 1 Map showing the alkali feldspar pegmatite veins in South Harris. The South Harris deposits are of three different types.
Caption Text 2 The three types are: Northton (Chaipaval) which yields a high-grade microcline microperthite fusing to a clear colourless glass. At Roneval (Sletteval) there are two types, one a microcline microperthite and the other a medium-grained microcline microperthite with a good deal of intergrown quartz and some black mica.
Caption Text 3 The Roneval deposit of microcline microperthite is of considerable purity and proved to be of sufficient quality for the manufacture of electrical porcelain. The second Roneval category is useful for general purposes and very large reserves were said to exist. It has been found particularly useful for bonding some abrasives.

The Basic Record:

Simple Name Map
Brief Description Map showing the alkali feldspar pegmatite veins in South Harris (after Jehu and Craig, 1927).
Materials Map
Associated Place Scotland, Outer Hebrides, South Harris
(Nature of Grid Reference Map of area

Ref. Author Robertson, T.
Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.
Ref. Publication Details London : Geological Survey and Museum, 1945.

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Inputter R.P. McIntosh
Input Date 15/06/2003

P528063 Sketch map of occurrences of alkali feldspar in Scotland

The Caption:

Caption Title Sketch map of occurrences of alkali feldspar in Scotland

Subtitle

Caption Text 1 Sketch map of occurrences of alkali feldspar in Scotland. There are four main occurrences: 1. South Harris, Northton and Roneval. 2. North-west Sutherland, Durness, Loch Inchar and Loch Laxford. 3. Wester Ross, Garve, Little Scatwell and Loch Monar. 4. South-east Inverness, Loch Laggan and Glen Truim.

Caption Text 2 A number of other locations have rocks with a high proportion of alkali feldspar, they include the syenites of Ben Loyal, Loch Ailsh and Cnoc na Sroine in Sutherland, a pegmatite at Portsoy and the Corrennie Granite in Aberdeenshire.

Caption Text 3 During the First World War some of the known deposits of potash-bearing feldspar in Scotland were examined with a view to exploitation for the manufacture of fertilizer. Later during the Second World War when this map was created, the search for economic deposits was driven by the interruption of supplies from Norway and Sweden on which Britain depended, though the need for feldspar was now as an ingredient for ceramic ware.

The Basic Record:

Simple Name Map

Brief Description Sketch map of occurrences of alkali feldspar in Scotland.

Materials Map

Associated Place Scotland

(Nature of Map of area

Grid Reference

Ref. Author Robertson, T.

Ref Title Scottish sources of alkali feldspar. Wartime pamphlet no 44.

Ref. Publication Details London : Geological Survey and Museum, 1945.

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Input Date 15/06/2003

P528064 Sketch map of Unst showing the chromite quarries and localities

The Caption:

Caption Title	Sketch map of Unst showing the chromite quarries and localities
Subtitle	
Caption Text 1	Sketch map of Unst showing the chromite quarries and localities. A great mass of serpentine crosses the island from the south coast to Nor Wick. It has a narrow western belt consisting largely of antigorite with bands of talc-schist and talc-carbonate rock and a broad eastern belt in which the rock contains a good deal of unaltered olivine and pyroxene.
Caption Text 2	The discovery of chromite seems to have been made by Hibbert in 1817. He found innumerable fragments scattered over the hillside to the west of Hagdale including one large mass weighing one hundredweight and twenty pounds. In several localities the chromite was found in situ in thin ramifying veins 2-5 feet in breadth.
Caption Text 3	Several early attempts to exploit the deposits were made but most seemed to be abortive, however in 1914 100 tons were wrought. During the 1920s there was a great expansion in the uses of chromium and between 1922 and 1927 about 3,000 tons of ore were produced. In 1936 Messrs. Alexander Sandison & Sons Ltd. shipped 325 tons to Liverpool. A bulk sample was sent to Oughtibridge Silica Firebrick Co. for tests and in 1938 they took 710 tons and 1,100 tons was shipped year ending July 31st 1940. The chromium content of the ore was low at about 26 per cent.

The Basic Record:

Simple Name	Map
Brief Description	Sketch map of Unst showing the chromite quarries and localities.
Materials	Map
Associated Place	Scotland, Shetland Isles, Unst
(Nature of	Map of area
Grid Reference	
Associated Name	Alexander Sandison & Sons Ltd.
(Nature of	Mining company
Associated Name	Oughtibridge Silica Firebrick Co.
(Nature of	Tested chromite samples
Ref. Author	Wilson, G.V. and Phemister, J.
Ref Title	Talc and other magnesium minerals and chromite associated with British serpentines. reissued 1946 with some additions by J.G.C. Anderson. Wartime pamphlet no. 9.
Ref. Publication Details	London : Geological Survey and Museum, 1946.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528065 Sketch map of Fetlar showing the distribution of serpentine and talc

The Caption:

Caption Title	Sketch map of Fetlar showing the distribution of serpentine and talc
Subtitle	
Caption Text 1	Sketch map of Fetlar showing the distribution of serpentine and talc. The largest mass of serpentine extends across the island from the north coast to the Wick of Tresta on the south coast. It is an ochreous-weathering rock generally with pale greenish-yellow bastite but at other localities it is more homogenous and consists largely of antigorite.
Caption Text 2	The most important locality for talc is associated with the serpentine of Hesta Ness where Hedde also records golden yellow chrysotile. The talc is pale-green and nearly translucent.
Caption Text 3	This locality was worked on a small scale in 1914 and the material taken to Bonnybridge. It was also worked later between 1920 and 1923 when output was 400 tons. After quarrying the material was taken by barrow to the coast, by flit-boat to a small steamer, or else carried by motor boat to Lerwick and then by mail steamer to Leith. The quarrying was abandoned due to the prohibitive cost of transport.

The Basic Record:

Simple Name	Map
Brief Description	Sketch map of Fetlar showing the distribution of serpentine and talc.
Materials	Map
Associated Place	Scotland, Shetland Isles, Fetlar
(Nature of Grid Reference	Map of area
Ref. Author	Wilson, G.V. and Phemister, J.
Ref Title	Talc and other magnesium minerals and chromite associated with British serpentines. reissued 1946 with some additions by J.G.C. Anderson. Wartime pamphlet no. 9.
Ref. Publication Details	London : Geological Survey and Museum, 1946.
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Input Date	15/06/2003

P528066 Map showing the alkaline syenites and other alkali feldspar occurrences in the Northern Highlands

The Caption:

Caption Title	Map showing the alkaline syenites and other alkali feldspar occurrences in the Northern Highlands
Subtitle	
Caption Text 1	Non-pegmatite occurrences of alkali feldspar include the Cnoc na Sroine intrusion on the north side of Loch Borollan in western Sutherland, the Loch Ailsh syenite intrusion situated 3 miles north of the Lairg Lochiver road at a point 2.5 miles south-east of Altnacealgach, the Ben Loyal intrusion 10 miles to the south of Tongue and the Corrennie Granite in Aberdeen (not marked on the map).
Caption Text 2	The Cnoc na Sroine intrusion offered both quartz-bearing and quartz-free types, the former would yield a lower grade. At Loch Ailsh electromagnetic treatment of powdered rock yielded 52.9 per cent feldspar concentrate but burnt to a deep sepia colour therefore making it uneconomic. Similar treatment of the Ben Loyal syenite offered a 57.2 per cent feldspar concentrate that would fuse to a clear white, translucent product, it also had the advantage of
Caption Text 3	The Corrennie Granite, a pale pink-coloured granite provided samples that fused to a clear transparent glass.

The Basic Record:

Simple Name	Map
Brief Description	Map showing the alkaline syenites and other alkali feldspar occurrences in the Northern Highlands.
Materials	Map
Associated Place	Scotland, Northern Highlands
(Nature of	Map of area
Grid Reference	
Ref. Author	Wilson, G.V. and Phemister, J.
Ref Title	Talc and other magnesium minerals and chromite associated with British serpentines. reissued 1946 with some additions by J.G.C. Anderson. Wartime pamphlet no. 9.
Ref. Publication Details	London : Geological Survey and Museum, 1946.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528067 Map showing the British localities of diatomite

The Caption:

Caption Title	Map showing the British localities of diatomite
Subtitle	
Caption Text 1	Map showing the British localities of diatomite. Diatomite is a whitish, fine-grained substance consisting essentially of the siliceous skeletons or frustules of diatoms, non-cellular free-living organisms which float in the surface waters of the sea and freshwater lakes and are classified under the plants.
Caption Text 2	The chief locations are in the Trotternish peninsula on Skye, Muir of Dinnet in Aberdeenshire, Kentmere in the English Lake District and Toombridge in the Bann Valley in Northern Ireland. Minor occurrences include North Tolsta in Lewis, near Loch Ba on Mull, in the alluvial area facing the Bay of Laig on Eigg, north of Uyeasound on Unst in the Shetlands, Lynn Arenig Bach 8 miles north-west of Bala and near Dolgelly.
Caption Text 3	Commercial uses include use as a filtering medium for which its high porosity and chemical inertness render it especially valuable and as an insulator against heat, cold and sound. It also has uses as an absorbent, as a catalyst, as a lightweight filler, as a mild abrasive in many domestic metal polishes, as lightweight building blocks, partitions and roofing tiles and some grades were used for bleaching in a similar manner to fuller's earth.

The Basic Record:

Simple Name	Map
Brief Description	Map showing the British localities of diatomite.
Materials	Map
Associated Place	Great Britain
(Nature of	Map of area
Grid Reference	
Ref. Author	Haldane, D., Eyles, V.A. and Davidson, C.F.
Ref Title	Diatomite. Wartime pamphlet no. 5.
Ref. Publication Details	London : Geological Survey and Museum, 1940.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	17
Image File	P528067.tif
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Input Date	15/06/2003

P528068 Plan of Loch Nevis Mica prospect, Knoydart, Invernessshire

The Caption:

Caption Title	Plan of Loch Nevis Mica prospect, Knoydart, Invernessshire
Subtitle	
Caption Text 1	Map showing the location of the Loch Nevis mica prospect in Knoydart. It was situated on the north side of Loch Nevis, 1100 yards south 12 degrees east of the summit of Sgurr Coire nan Gobhar, 7.5 miles due east of Mallaig.
Caption Text 2	The deposit was the most extensive and most valuable source of mica known in the Western Highlands. Books of mica up to 2 feet in diameter and crystals a foot or more were common. The mica is excellent quality and is graded as a good fair-stained ruby.
Caption Text 3	Mica-bearing pegmatites are common throughout the Highlands, however, commercial grade and quality are comparatively rare. During the Second World War mica deposits of economic potential were looked at in the Strathgarve district of eastern Rossshire and western Invernessshire and north-west Argyll, along a north-south belt extending from Loch Sunart across Loch Shiel and Loch Nevis into Knoydart.

The Basic Record:

Simple Name	Map
Brief Description	Plan of Loch Nevis Mica prospect, Knoydart, Invernessshire.
Materials	Map
Associated Place	Scotland, Invernessshire
(Nature of Grid Reference	Map of area
Ref. Author	Wilson, G.V. and Phemister, J.
Ref Title	Talc and other magnesium minerals and chromite associated with British serpentines. reissued 1946 with some additions by J.G.C. Anderson. Wartime pamphlet no. 9.
Ref. Publication Details	London : Geological Survey and Museum, 1946.
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<u>Image and Other Asset Info:</u>	
Image CD	17
Image File	P528068.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528069 Geological map of Corrycharmaig area, south-west side of the River Lochy about four miles north-west of Killin, Perthshire

The Caption:

Caption Title Geological map of Corrycharmaig area, south-west side of the River Lochy about four miles north-west of Killin, Perthshire

Subtitle

Caption Text 1 Geological map of Corrycharmaig chromite workings, Corrycharmaig farm, on the south-west side of the River Lochy about four miles north-west of Killin, Perthshire. A rough track led from the farm to the serpentine which forms the craggy hill known as Dun Garbh Beag.

Caption Text 2 Exploration during the Second World War found the outcrop to consist of largely antigorite-serpentine. It carries a certain amount of chromite which was worked many years ago by the Marquis of Breadalbane. The old workings seemed to have been small quarries or pits. The chrome ore is disseminated throughout the serpentine in detached grains or aggregates from the size of a pea to blocks 5, 10 and in one instance 30 tons in weight.

Caption Text 3 Trial workings yielded 60 tons of ore in 1855-56. During the Second World War explorations the Corrycharmaig intrusion was reported to contain several minerals of potential value including chromite, chrysotile, talc and magnesite.

The Basic Record:

Simple Name Map

Brief Description Geological map of Corrycharmaig area, south-west side of the River Lochy about four miles north-west of Killin, Perthshire.

Materials Map

Associated Place Scotland, Perthshire

(Nature of Grid Reference Map of area

Ref. Author Anderson, J.G.C., Dunham, K.C. and Harvey, C.O.

Ref Title Talc and other magnesium minerals and chromite associated with British serpentines. Supplement no. 1. The Corrycharmaig serpentine intrusion, Glen Lochay, Perthshire.

Ref. Publication Details London : Geological Survey and Museum, 1949.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528070 Map of serpentine belt near Toward Taynuill, Argyllshire

The Caption:

Caption Title Map of serpentine belt near Toward Taynuill, Argyllshire
Subtitle
Caption Text 1 Map of serpentine belt near Toward Taynuill, Argyllshire showing the detailed geology of the outcrop.
Caption Text 2 Talc was worked at the junction of two streams north of Toward Taynuill where the fault forming the south-east margin of the Serpentinite Belt crossed the combined stream 15 feet below the confluence. Near the fault the serpentine is partially converted to dolomitic fault rock. In the most easterly branch, 20 feet above the confluence there is a two feet wide vein of talc, ten feet further upstream is another vein one foot thick that was worked by means of a mine in
Caption Text 3 The mine was worked by the late Mr. Mather who produced 183 tons of the mineral in

The Basic Record:

Simple Name Map
Brief Description Map of serpentine belt near Toward Taynuill, Argyllshire.
Materials Map
Associated Place Scotland, Argyllshire
(Nature of
Grid Reference Map of area

Ref. Author Wilson, G.V. and Phemister, J.
Ref Title Talc and other magnesium minerals and chromite associated with British serpentines. reissued 1946 with some additions by J.G.C. Anderson. Wartime pamphlet no. 9.
Ref. Publication Details London : Geological Survey and Museum, 1946.
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Input Date 15/06/2003

P528071 Map of serpentine belt between Innellan and Toward, Argyllshire

The Caption:

Caption Title Map of serpentine belt between Innellan and Toward, Argyllshire
Subtitle
Caption Text 1 Map of serpentine belt between Innellan and Toward, Argyllshire. This locality yielded talc in lenticular veins in a belt of serpentinite lying between two faults in the Highland Boundary Fault Zone extending from Innellan Pier to the shore west of Toward Point.
Caption Text 2 Talc was worked at the junction of two streams north of Toward Taynuill where the late Mr. Mather produced 183 tons of the mineral in 1928-1929. Quality was good though samples show the presence of small irregular grains of magnetite and picolite under the microscope.
Caption Text 3 Talc is a hydrous magnesium silicate formed from the decomposition of serpentine. It has a soft soapy feel and is usually silvery-white, green, greyish or yellowish in colour.

The Basic Record:

Simple Name Map
Brief Description Map of serpentine belt between Innellan and Toward, Argyllshire.
Materials Map
Associated Place Scotland, Argyllshire
(Nature of
Grid Reference Map of area

Ref. Author Wilson, G.V. and Phemister, J.
Ref Title Talc and other magnesium minerals and chromite associated with British serpentines. reissued 1946 with some additions by J.G.C. Anderson. Wartime pamphlet no. 9.
Ref. Publication Details London : Geological Survey and Museum, 1946.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P528072 Photograph showing grades of commercial mica

The Caption:

Caption Title	Photograph showing grades of commercial mica
Subtitle	
Caption Text 1	Photograph showing grades of commercial mica, numbers 1-7 are Indian and number 8 is Brazilian. The illustration is from a publication that dealt with the features of commercial mica in Scotland that was published during the Second World War.
Caption Text 2	Mica was graded on type, colour and freedom from staining. The primary division is into muscovite or white mica and phlogopite or amber mica. Muscovite is further subdivided into ruby, green and spotted types having seven, three and three clarity grades respectively. Mica was further classified by size: extra specials over 48 square inches; specials 36-48 square inches, then grades number 1 to number 7, 24-36 to less than 1 square inches respectively.
Caption Text 3	During the Second World War mica was processed at the main sorting factory at Pitlochry which opened in August 1943. It had a staff of six, for the first few weeks under the direction of Mr. A.B. Mudie of the Eastern Mica Company and later under Mrs. D.G. Readdie (the wife of Mr. D.G. Readdie, of the Ministry of Supply, Mica Control department). The staff complement increased to 36 in November 1943.

The Basic Record:

Simple Name	Photograph
Brief Description	Photograph showing grades of commercial mica.
Materials	Photograph
Associated Name (Nature of	Mudie, A.B. Manager of the Pitlochry Sorting Factory
Associated Name (Nature of	Readdie, D.G. Manager of the Pitlochry Sorting Factory
Associated Name (Nature of	Great Britain. Ministry of Supply. Mica Control Manager of the Pitlochry Sorting Factory
Ref. Author	Kennedy, W.Q.
Ref Title	Commercial mica in Scotland. Part I. Characteristics of commercial mica.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

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Image File	P528072.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528073 Mica localities in western Invernessshire and north-west Argyllshire

The Caption:

Caption Title	Mica localities in western Invernessshire and north-west Argyllshire
Subtitle	
Caption Text 1	Map showing the location of mica deposits. They are located in western Invernessshire and north-west Argyll, along a north-south belt extending from Loch Sunart across Loch Shiel and Loch Nevis into Knoydart.
Caption Text 2	There are five main localities of which two Dalilea and Knoydart yielded ruby mica of excellent quality. The five localities are Ardarie, near Strontian, Argyllshire; Dalilea, Loch Shiel, Invernessshire; Austincroft, near Dalilea, Loch Shiel, Invernessshire; Diollaid, west of Glenfinnan, Invernessshire and the Loch Nevis Mica prospect, Knoydart, Invernessshire.
Caption Text 3	In Scotland, the only source of muscovite-rich pegmatites suitable for sheet mica are those pegmatites cutting the Moinian rocks in two areas: in a western belt extending from Knoydart southwards to Loch Shiel and Loch Sunart and an eastern group in the Strathpeffer and Garve districts of Rossshire. Both provided a site for commercial production of sheet mica during the Second World War.

The Basic Record:

Simple Name	Map
Brief Description	Mica localities in western Invernessshire and north-west Argyllshire.
Materials	Map
Associated Place	Scotland, Invernessshire
(Nature of	Map of area
Grid Reference	
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
Text Copyright	British Geological Survey © NERC. All rights reserved.
<u>Image and Other Asset Info:</u>	
Image CD	17
Image File	P528073.tif
Image Copyright	British Geological Survey © NERC. All rights reserved.
Inputter	R.P. McIntosh
Input Date	15/06/2003

P528074 Mica localities in the Strathgarve District, eastern Rossshire

The Caption:

Caption Title Mica localities in the Strathgarve District, eastern Rossshire
Subtitle
Caption Text 1 Map showing mica localities in the Strathgarve District, eastern Rossshire. This area includes the country extending north-eastwards from Loch Garve to the slopes of Ben Wyvis.
Caption Text 2 A number of small deposits were found in pegmatites at: Carn Fearn, two miles due east of Garve Station; Glensgaich, near Garve and two localities on Carn Gorm, near Garve.
Caption Text 3 The Geological Survey of Great Britain working with the Ministry of Supply was involved in the search for a range of strategic mineral resources during the Second World War. One such mineral, normally obtained from India, was mica. Used extensively in the electrical industries especially for radio parts it was in very great demand.

The Basic Record:

Simple Name Map
Brief Description Mica localities in the Strathgarve District, eastern Rossshire.
Materials Map
Associated Place Scotland, Ross and Cromarty
(Nature of Map of area
Grid Reference

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details London : Geological Survey and Museum, 1943.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P528075 Map showing the principal known occurrences of diatomite in Trotternish peninsula, Skye, Invernessshire

The Caption:

Caption Title Map showing the principal known occurrences of diatomite in Trotternish peninsula, Skye, Invernessshire

Subtitle

Caption Text 1 Map showing the principal known occurrences of diatomite in Trotternish peninsula, Skye. These deposits were the most important in Scotland.

Caption Text 2 The deposits numbered on the map are 1. The old basin of Loch Chaluim Chille or Monkstadt. 2. Loch Sneosdal or Snuisdale. 3. Loch Cleat, Duntulm. 4. A small dried-up basin near Sartil, Digg. 5 Loch Mealt. 6 Loch Cuithir or Quire.

Caption Text 3 The Loch Cuithir deposit was said to be up to 40 feet thick and was worked by the British Diatomite Company between 1907-1911 and the Skye Mineral Syndicate Company between 1911-1914.

The Basic Record:

Simple Name Map

Brief Description Map showing the principal known occurrences of diatomite in Trotternish peninsula, Skye, Invernessshire.

Materials Map

Associated Place Scotland, Invernessshire, Skye

(Nature of Map of area

Grid Reference

Associated Name Skye Mineral Syndicate Company

(Nature of Mining company

Ref. Author Haldane, D., Eyles, V.A. and Davidson, C.F.

Ref Title Diatomite. Wartime pamphlet no. 5.

Ref. Publication Details London : Geological Survey and Museum, 1940.

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P528076 Sketch map showing Muirshiels Barytes Mine and Berryglen Burn barytes vein

The Caption:

Caption Title Sketch map showing Muirshiels Barytes Mine and Berryglen Burn barytes vein
Subtitle
Caption Text 1 Sketch map showing Muirshiels Barytes Mine and Berryglen Burn barytes vein. Muirshiels mine is situated in the Hill of Stake and Misty Law district of Renfrewshire and Ayrshire.
Caption Text 2 The mine is believed to have been in more or less continuous operation from a little after 1750 until the year 1920. The two barytes veins are 15-20 feet, two to four feet wide respectively.
Caption Text 3 The veins cut a variety of volcanic rocks of Carboniferous Calciferous Sandstone Series age in an area of great geological complexity.

The Basic Record:

Simple Name Map
Brief Description Sketch map showing Muirshiels Barytes Mine and Berryglen Burn barytes vein.
Materials Map
Associated Place Scotland, Renfrewshire, Muirshiels
(Nature of
Grid Reference Map of area

Ref. Author MacGregor, A.G.
Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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P528077 Diagram showing Muirshiels barytes vein, section of workings showing opencasts, levels and winzes, Renfrewshire

The Caption:

Caption Title Diagram showing Muirshiels barytes vein, section of workings showing opencasts, levels and winzes, Renfrewshire

Subtitle

Caption Text 1 A cross section showing Muirshiels barytes vein, section of workings showing opencasts, levels and winzes.

Caption Text 2 There are three areas of opencast workings. Lowest Opencast has taken the form of sinking a winze on the vein near the entrance to No. 5 adit. Intermediate Opencast which varies in width from 40 feet at the northern end to 15 feet at the southern end. The Highest Opencast varies in width from 24 feet at the northern end to five feet at its southern end, there is a well-marked bend about 100 feet from the northern end.

Caption Text 3 The mine had a long history of working from 1750 until the year 1920.

The Basic Record:

Simple Name Diagram

Brief Description Diagram showing Muirshiels barytes vein, section of workings showing opencasts, levels and winzes, Renfrewshire.

Materials Diagram

Associated Place Scotland, Renfrewshire, Muirshiels

(Nature of Diagram of mine in this location

Grid Reference

Ref. Author MacGregor, A.G.

Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.

Ref. Publication Details London : Geological Survey and Museum, 1944.

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Inputter R.P. McIntosh

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P528078 Map showing the barytes and other mineral veins of the area around Misty Law and Hill of Stake (Ayrshire and Renfrewshire)

The Caption:

Caption Title Map showing the barytes and other mineral veins of the area around Misty Law and Hill of Stake (Ayrshire and Renfrewshire)

Subtitle

Caption Text 1 Situated in the Hill of Stake and Misty Law district of Renfrewshire and Ayrshire, this occurrence is one of numerous veins in the high, bleak and very inaccessible area of Carboniferous volcanic rocks.

Caption Text 2 Muirshiels is the only barytes mine in this area. Over 40 occurrences of barytes are known all over 1,000 feet above sea level.

Caption Text 3 The two widest barytes veins are the one at Muirshiels Mine which has 15-20 feet of spar and the neighbouring vein in Berryglen Burn which is recorded as being two to four feet wide.

The Basic Record:

Simple Name Map

Brief Description Map showing the barytes and other mineral veins of the area around Misty Law and Hill of Stake (Ayrshire and Renfrewshire).

Materials Map

Associated Place Scotland, Ayrshire, Misty Law

(Nature of
Grid Reference Map of area

Ref. Author MacGregor, A.G.

Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.

Ref. Publication Details London : Geological Survey and Museum, 1944.

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Inputter R.P. McIntosh

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P528079 An enlarged sketch of Myres Burn barytes veins 450 yards south 35 degrees east of Myres and accompanying key map of the barytes veins south of Eaglesham, Renfrewshire

The Caption:

Caption Title An enlarged sketch of Myres Burn barytes veins 450 yards south 35 degrees east of Myres and accompanying key map of the barytes veins south of Eaglesham, Renfrewshire

Subtitle

Caption Text 1 This map shows an enlarged sketch of Myres Burn barytes veins 450 yards south 35 degrees east of Myres and accompanying key map of the barytes veins south of Eaglesham,

Caption Text 2 From locality A to B the barytes vein is four feet six inches thick. At B the outcrop is displaced a few yards eastwards to C along the line of a fault. From C the main vein runs north-north-eastwards to E with an average width of three feet six inches while another vein can be traced south-eastwards along the burn to D, the vein is at least one foot nine inches wide.

Caption Text 3 From localities F to G on the map the vein is practically vertical and between two and three feet thick. At G the barytes is cut off abruptly against a fault. At H about 210 feet downstream from A there is another outcrop of barytes in the left bank - it is about three feet in width.

The Basic Record:

Simple Name Map

Brief Description An enlarged sketch of Myres Burn barytes veins 450 yards south 35 degrees east of Myres and accompanying key map of the barytes veins south of Eaglesham, Renfrewshire.

Materials Map

Associated Place Scotland, Renfrewshire, Eaglesham, Myres Burn

(Nature of Diagram of mine in this location

Grid Reference

Ref. Author MacGregor, A.G.

Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.

Ref. Publication Details London : Geological Survey and Museum, 1944.

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Inputter R.P. McIntosh

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P528080 Map showing the barytes veins at the Gass Water mines six miles east 12 degrees north of Cumnock, Ayrshire

The Caption:

Caption Title Map showing the barytes veins at the Gass Water mines six miles east 12 degrees north of Cumnock, Ayrshire

Subtitle

Caption Text 1 The map shows the location of the Gass Water barytes veins in relation to the geology of the

Caption Text 2 There are four sub-parallel veins that have been worked trending west-north-west to east-south-east. They are the Main Vein (or East Vein), the West Vein, the Quarry Vein and the No. 2 South Mine Vein as well as three short cross-cut veins.

Caption Text 3 The workings extend intermittently along the veins for one and two-third miles. The width of the spar in the stopes has been very variable though locally the barytes has formed extensive sheets, particularly the Main Vein which reaches widths of 10 to 25 feet.

The Basic Record:

Simple Name Map

Brief Description Map showing the barytes veins at the Gass Water mines six miles east 12 degrees north of Cumnock, Ayrshire.

Materials Map

Associated Place Scotland, Ayrshire, Cumnock, Gass Water

(Nature of Map of area

Grid Reference

Ref. Author MacGregor, A.G.

Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.

Ref. Publication Details London : Geological Survey and Museum, 1944.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528081 Gass Water barytes mines, diagrammatic horizontal sections showing levels driven in main vein and in veins at No. 2 South Mine, Ayrshire

The Caption:

Caption Title Gass Water barytes mines, diagrammatic horizontal sections showing levels driven in main vein and in veins at No. 2 South Mine, Ayrshire

Subtitle

Caption Text 1 The illustration shows diagrammatic cross-sections across the Gass Water barytes mine. The mine has four sub-parallel veins that have been worked trending west-north-west to east-south-east.

Caption Text 2 The four veins are the Main Vein (or East Vein), the West Vein, the Quarry Vein and the No. 2 South Mine Vein. The barytes is deposited along fault-crushes. The veins were worked almost entirely by overhead stoping, with drainage by adit with outflow to the Gass Water.

Caption Text 3 Barytes was conveyed from a loading stage at the Main Shaft to the dressing plant two miles away by aerial ropeway. It was then transferred to railway waggons. Clean barytes was sent off without treatment but dirty material was milled and washed before despatch. There was a crusher and jig but no screening plant. The barytes was sent to Messrs. Orr's Zinc White Limited, Widnes, Lancashire.

The Basic Record:

Simple Name Diagram

Brief Description Gass Water barytes mines, diagrammatic horizontal sections showing levels driven in main vein and in veins at No. 2 South Mine, Ayrshire.

Materials Diagram

Associated Place Scotland, Ayrshire, Cumnock, Gass Water

(Nature of Grid Reference Diagram of mine in this location

Associated Name Orr's Zinc White Limited

(Nature of Barytes processing firm

Ref. Author MacGregor, A.G.

Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.

Ref. Publication Details London : Geological Survey and Museum, 1944.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528082 Map showing the barytes veins of Meikle Auchinstilloch - Nutberry Hill area, Lanarkshire

The Caption:

Caption Title Map showing the barytes veins of Meikle Auchinstilloch - Nutberry Hill area, Lanarkshire
Subtitle
Caption Text 1 Map showing the barytes veins of Meikle Auchinstilloch - Nutberry Hill area, Lanarkshire five miles north-east of Muirkirk, Ayrshire.
Caption Text 2 On a general line from the head of Coal Burn, south of Meikle Auchinstilloch to the head of the River Nethan south of Nutberry Hill (a distance of little over a mile), there are a number of exposures and records of exposures of barytes veins up to six feet in width with a general north-west trend.
Caption Text 3 It is thought that there are two veins that cut mostly Silurian sediments, shales, mudstones, greywackes, sandstones and occasional conglomerates.

The Basic Record:

Simple Name Map
Brief Description Map showing the barytes veins of Meikle Auchinstilloch - Nutberry Hill area, Lanarkshire.
Materials Map
Associated Place Scotland, Lanarkshire, Meikle Auchinstilloch, Nutberry Hill
(Nature of
Grid Reference Map of area

Ref. Author MacGregor, A.G.
Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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Image and Other Asset Info:

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Image File P528082.tif
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Inputter R.P. McIntosh
Input Date 15/06/2003

P528083 Sketch map showing the occurrence of barytes in the Ochil Hills near Blairlogie, Stirlingshire

The Caption:

Caption Title Sketch map showing the occurrence of barytes in the Ochil Hills near Blairlogie, Stirlingshire

Subtitle

Caption Text 1 The map illustrates the stratigraphic units, geological faults and occurrence of barytes in the Blairlogie area. The barytes occurs in a number of veins traversing the lavas and tuffs of the Ochil Hills. Barytes occurred in a number of veins in the area as a gangue mineral, it was only at Blairlogie that there was sufficient quantity for it to be considered for commercial

Caption Text 2 The veins are in almost all cases lines of faulting. At locality F on the map massive barytes is exposed for 50 to 60 yards with the barytes not more than ten feet wide, it is pink in colour, passing into pale pink or nearly white. Localities D and E are on the more eastern vein. Large masses of good quality pink barytes were found at D.

Caption Text 3 At E a little up the burn irregular barytes veining occurs. At C is an old adit driven for copper, the barytes is only five to six feet wide and is irregularly veined. A vein in the face of the scarp was seen, its width was four feet at the most with barytes in bands in the broken rock. B1 is a branch of the most easterly vein.

The Basic Record:

Simple Name Map

Brief Description Sketch map showing the occurrence of barytes in the Ochil Hills near Blairlogie, Stirlingshire.

Materials Map

Associated Place Scotland, Stirlingshire, Ochil Hills, Blairlogie

(Nature of Map of area

Grid Reference

Ref. Author MacGregor, A.G.

Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.

Ref. Publication Details London : Geological Survey and Museum, 1944.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528084 Map showing the barytes and other mineral veins of the Muirkirk district of Ayrshire and Lanarkshire

The Caption:

Caption Title	Map showing the barytes and other mineral veins of the Muirkirk district of Ayrshire and Lanarkshire
Subtitle	
Caption Text 1	There are about eighty occurrences of barytes in a seven mile radius of Muirkirk. Usually the barytes occurs alone though in ten instances it is associated with haematite, with galena (lead ore) in six instances, zinc-blende in four instances and manganese oxide in three instances. The haematite forms ramifying veins in the barytes and is of a later date.
Caption Text 2	The veins are roughly concentrated in five areas. 1. In the area of the Pennel and Wyndy Burns six miles west of Muirkirk there are two small veins approaching one foot. 2. The Gass Water area where the veins were of great economic importance. 3. Small veins not more than eight inches at Guelt Water, Shiel Burn and Polwhannan Burn. 4. A few veins not more than nine inches wide between Greenock Water and the Posnek Burn. 5. The area between Meikle Auchinstilloch and Nutberry Hill has a number of veins up to six feet wide, some of these veins carry a little galena and zinc blende.
Caption Text 3	Most of the baryte veins occur in Silurian or Lower and Upper Old Red Sandstone strata and the lower part of the Carboniferous Cementstones Group.

The Basic Record:

Simple Name	Map
Brief Description	Map showing the barytes and other mineral veins of the Muirkirk district of Ayrshire and Lanarkshire.
Materials	Map
Associated Place (Nature of Grid Reference	Scotland, Ayrshire, Muirkirk Map of area
Ref. Author	MacGregor, A.G.
Ref Title	Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details	London : Geological Survey and Museum, 1944.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	18
Image File	P528084.tif
Image Copyright	British Geological Survey © NERC. All rights reserved.
Inputter	R.P. McIntosh
Input Date	15/06/2003

P528085 Map of the Glen Sannox barytes deposit, Arran, Buteshire

The Caption:

Caption Title Map of the Glen Sannox barytes deposit, Arran, Buteshire
Subtitle
Caption Text 1 Map of the Glen Sannox barytes deposit, Arran, Buteshire.
Caption Text 2 The principal vein crosses the Glen Sannox Burn about two-thirds of a mile up from its mouth. A crushing and screening plant was located here along with a light railway with a self acting conveyor which went down to the loading pier.
Caption Text 3 The principal veins are the Main Vein in which the greatest part of the stoping has been carried out; the North Hill veins which lie north-north-west of the mine and have been investigated from the North Hill Adit; and Dron's Adit and the Punch Bowl Vein to the south-east of the

The Basic Record:

Simple Name Map
Brief Description Map of the Glen Sannox barytes deposit, Arran, Buteshire.
Materials Map
Associated Place Scotland, Buteshire, Arran, Glen Sannox
(Nature of
Grid Reference Map of area

Ref. Author MacGregor, A.G.
Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details London : Geological Survey and Museum, 1944.
Text Copyright British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

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Image File P528085.tif
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Inputter R.P. McIntosh
Input Date 15/06/2003

P528086 Diagram showing the Glen Sannox barytes mine, section of workings, Arran, Buteshire

The Caption:

Caption Title Diagram showing the Glen Sannox barytes mine, section of workings, Arran, Buteshire
Subtitle
Caption Text 1 The diagram shows the various levels in the Glen Sannox mine on Arran together with the shafts which gave access to the levels and the areas stoped i.e. the areas worked.
Caption Text 2 The deposits underwent two periods of working, one starting between 1836 and 1840 and another period when the mine reopened in 1918-1919 until finally closing in 1938-1939.
Caption Text 3 The illustration shows the various levels and shafts that were dug during this latter period of working. The vein was followed to a depth of 300 feet before the barytes thinned out to a few inches. Output from the mine rose from 300 tons in 1920 to 8,693 tons in 1934.

The Basic Record:

Simple Name Diagram
Brief Description Diagram showing the Glen Sannox barytes mine, section of workings, Arran, Buteshire.
Materials Diagram
Associated Place Scotland, Buteshire, Arran, Glen Sannox
(Nature of
Grid Reference Map of area

Ref. Author MacGregor, A.G.
Ref Title Barytes in central Scotland. Wartime pamphlet no. 38.
Ref. Publication Details London : Geological Survey and Museum, 1944.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P528087 Index map showing the localities for Scottish dolomites

The Caption:

Caption Title Index map showing the localities for Scottish dolomites
Subtitle
Caption Text 1 The map shows the location of the six outcrops of dolomite and brucite marble in Scotland. Six of the localities have dolomite resources and two of the six also have brucite marble.
Caption Text 2 The dolomite localities are: 1. Durness, 2. Eriboll and 3. Assynt, all in Sutherland; location 4. is the Isle of Skye, location 5. Loch Kishorn, Rossshire 1 to 5 are all in the Durness Limestone. Locality 6. is Duror in Argyllshire, this is in the Dalradian (Precambrian) Appin
Caption Text 3 The two brucite marble localities are Assynt and Isle of Skye.

The Basic Record:

Simple Name Map
Brief Description Index map showing the localities for Scottish dolomites.
Materials Map
Associated Place Scotland
(Nature of Grid Reference Diagram of mine in this location

Ref. Author Kennedy, W.Q.
Ref Title Dolomite and brucite marble in the Scottish Highlands. Wartime pamphlet no 6. With Supplement no 1.
Ref. Publication Details London : Geological Survey and Museum, 1940.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P528088 Sketch map of the Durness and Eriboll areas, north-west Sutherlandshire

The Caption:

Caption Title	Sketch map of the Durness and Eriboll areas, north-west Sutherlandshire
Subtitle	
Caption Text 1	The map shows the location of the Cambrian-Ordovician Durness Limestone, once considered as a source for high-grade dolomite for use as a basic refractory or for the extraction of metallic magnesium.
Caption Text 2	The most extensive outcrop of Durness Limestone is found in the neighbourhood of Durness in north-west Sutherland. In this area the formation reaches its maximum thickness and includes over 1500 feet of dolomites with subordinate limestones and magnesian limestones.
Caption Text 3	The outcrop at Loch Eriboll includes a considerable thickness of dolomite and is identical in character to those at Durness, and would certainly include a large proportion of high-grade dolomites suitable for economic purposes.

The Basic Record:

Simple Name	Map
Brief Description	Sketch map of the Durness and Eriboll areas, north-west Sutherlandshire.
Materials	Map
Associated Place	Scotland, Sutherland, Durness
(Nature of Grid Reference	Map of area
Ref. Author	Kennedy, W.Q.
Ref Title	Dolomite and brucite marble in the Scottish Highlands. Wartime pamphlet no 6. With Supplement no 1.
Ref. Publication Details	London : Geological Survey and Museum, 1940.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

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Image File	P528088.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528089 Geological map of the Torran area showing areas sampled for limestones and dolomites, Strath, Skye, Invernessshire

The Caption:

Caption Title	Geological map of the Torran area showing areas sampled for limestones and dolomites, Strath, Skye, Invernessshire
Subtitle	
Caption Text 1	The area was investigated to determine the potential resources of high commercial purity dolomite for use as a refractory. The distribution of rock types was considered under three headings. 1. Dolomites and dolomitic limestones 2. Limestones with little or no dolomite and 3. Contact-altered rocks, brucite marbles and forsterite marbles.
Caption Text 2	Dolomite areas I, IV were estimated to have 200,000 tons of reserves each and area V on the map is an area of siliceous dolomitic limestone with over 1,000,000 tons of reserves. Areas with little or no dolomite were Dun Beag area, area IV and area III, the latter limestones are heavily impregnated with silica and hence reduce the reserves to c. 500,000 tons. Likewise area II has poor quality due to the presence of silica.
Caption Text 3	The contact-altered rocks occur in a band usually a few hundred yards wide adjacent to the Beinn an Dubhaich granite and are composed mainly of grey or white marbles.

The Basic Record:

Simple Name	Map
Brief Description	Geological map of the Torran area showing areas sampled for limestones and dolomites, Strath, Skye, Invernessshire.
Materials	Map
Associated Place	Scotland, Invernessshire, Skye, Strath
(Nature of Grid Reference	Map of area
Ref. Author	Wilson, H.E.
Ref Title	The Cambro-Ordovician limestones and dolomites of the Ord and Torran areas, Skye and the Kishorn area, Ross-shire. Special reports on the mineral resources of Great Britain vol. XXXVI.
Ref. Publication Details	Edinburgh : HMSO, 1954.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	18
Image File	P528089.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528090 Map of the Cambrian Quartzite and Pipe rock near Achnashellach, Ross and Cromarty

The Caption:

Caption Title	Map of the Cambrian Quartzite and Pipe rock near Achnashellach, Ross and Cromarty
Subtitle	
Caption Text 1	During World War Two there were investigations looking at potential resources of high-grade silica rocks for their use as silica refractories. This map shows the location of the Cambrian Pipe rock and the Basal Quartzite at Achnashellach, both of which were examined, samples collected and reported on in the Geological Survey Wartime Pamphlet No. 7.
Caption Text 2	A number of outcrops were considered, the Basal Quartzite is exposed in the River Lair half a mile west-north-west of Achnashellach Station and in the cliffs south-west of the river. The quartzite is composed of quartz grains closely interlocked with slightly sutured contacts. Five to 10 per cent of the rock is composed of partially kaolinized orthoclase and microcline.
Caption Text 3	South-east of the outcrop of the Basal Quartzite about 250 yards north-west of the railway bridge the Pipe rock is exposed in a large knoll where it is at least 50 feet thick.

The Basic Record:

Simple Name	Map
Brief Description	Map of the Cambrian Quartzite and Pipe rock near Achnashellach, Ross and Cromarty.
Materials	Map
Associated Place	Scotland, Ross and Cromarty
(Nature of Grid Reference	Map of area
Ref. Author	Anderson, J.G.C.
Ref Title	High-grade silica rocks in the Scottish Highlands & Islands. Wartime pamphlet no. 7. 2nd. ed.
Ref. Publication Details	London : Geological Survey and Museum, 1945.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	18
Image File	P528090.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528091 Map of dykes on Tormore shore, Arran. Shows location of Judd's dyke No I

The Caption:

Caption Title Map of dykes on Tormore shore, Arran. Shows location of Judd's dyke No I

Subtitle

Caption Text 1 The map shows the location of the Judd's dyke no I on the Tormore shore, Arran, Buteshire. A number of Tertiary dykes outcrop on the shore first referenced by J.W. Judd in the Quarterly Journal of the Geological Society v. 49 p. 552.

Caption Text 2 The dyke is pitchstone at the northern end and composite at the southern end, where it is pitchstone passing on both sides of the dyke into spherulitic felsite.

Caption Text 3 Arran has been studied for centuries by famous geologists from Hutton, Boue, De Saussure, Ramsay and many others. Judd's main contribution was to the petrological study of the rocks of Arran.

The Basic Record:

Simple Name Map

Brief Description Map of dykes on Tormore shore, Arran. Shows location of Judd's dyke No I.

Materials Map

Associated Place Scotland, Buteshire, Arran, Tormore

**(Nature of
Grid Reference** Map of area

Ref. Author Tyrell, G.W.

Ref Title The geology of Arran.

Ref. Publication Details Edinburgh : HMSO, 1928.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528092 Map of the quartz veins and sills near Dalwhinnie

The Caption:

Caption Title	Map of the quartz veins and sills near Dalwhinnie
Subtitle	
Caption Text 1	Map of the quartz veins and sills near Dalwhinnie showing best location for working. In the Dalradian Supergroup (Precambrian) a thick vein occurs at the head of an unnamed stream three-quarters of a mile north by east of A' Bhuidheanach.
Caption Text 2	It forms a dyke-like reef. The reef is 85 feet wide and consists of very pure quartz, uniform throughout except for two thin impersistent veins of feldspathic nature near the western margin. The vein can be traced for about one mile to the north-north-east and for two miles in a south-south-west direction.
Caption Text 3	Under the microscope a thin section of a sample of quartz from the reef turned out to be part of a single crystal that was deformed by stress in an irregular honeycomb pattern.

The Basic Record:

Simple Name	Map
Brief Description	Map of the quartz veins and sills near Dalwhinnie.
Materials	Map
Associated Place	Scotland, Invernessshire, Dalwhinnie
(Nature of Grid Reference	Map of area
Ref. Author	Anderson, J.G.C.
Ref Title	High-grade silica rocks in the Scottish Highlands & Islands. Wartime pamphlet no. 7. 2nd. ed.
Ref. Publication Details	London : Geological Survey and Museum, 1945.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Input Date	15/06/2003

P528093 Sketch map showing the distribution of Limestone in the Durness district of Sutherland

The Caption:

Caption Title Sketch map showing the distribution of Limestone in the Durness district of Sutherland

Subtitle

Caption Text 1 Sketch map showing the distribution of Limestone in the Durness district of Sutherland. The Durness Limestone is Cambro-Ordovician in age.

Caption Text 2 Group I is the Ghrudaidh Formation consists of dark, lead coloured and mottled dolomite with some oolitic horizons. Group II, the Eilean Dubh Formation consists of fine-grained flaggy argillaceous 'dolomite' and limestone with many stromatolitic algal bands. Group III is the Sailmhor Formation, massive mottled granular dolomite.

Caption Text 3 Group IV, the Sangamore Formation comprises fine, granular dolomites with pink limestones near the top and chert bands near the base. Group V, Balnakeil Formation comprises dark and light grey dolomites and limestones with impure cherts. Group VI, Croissaphuill Formation is made up of black and dark grey dolomites and white limestone. The overlying Durine Formation is fine-grained light grey dolomites containing gastropods.

The Basic Record:

Simple Name Map

Brief Description Sketch map showing the distribution of Limestone in the Durness district of Sutherland.

Materials Map

Associated Place Scotland, Sutherland, Durnes

(Nature of Grid Reference Map of area

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528094 Sketch map showing the distribution of Limestone in the Loch Eriboll district of Sutherland

The Caption:

Caption Title Sketch map showing the distribution of Limestone in the Loch Eriboll district of Sutherland
Subtitle
Caption Text 1 Sketch map showing the distribution of Limestone in the Loch Eriboll district of Sutherland. The Eriboll area contains only the Ghrudaidh Formation and the Eilean Dubh Formation i.e. groups I and II of the Cambro-Ordovician Durness Group.
Caption Text 2 The two groups occupy three separate tracts, two on the eastern shore of the loch, at Eriboll and Heilem respectively and the third on An Corr-eilean, an islet opposite Eriboll. The dolomite was formerly burnt at Heilem where the old kilns are located.
Caption Text 3 The Eriboll tract has been proved to contain high-grade dolomite with one analysis being 51.8 per cent calcium carbonate and 43.1 per cent magnesium carbonate.

The Basic Record:

Simple Name Map
Brief Description Sketch map showing the distribution of Limestone in the Loch Eriboll district of Sutherland.
Materials Map
Associated Place Scotland, Sutherland, Loch Eiriboll
(Nature of
Grid Reference Map of area

Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.

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P528095 A specimen of Scottish oil-shale

The Caption:

Caption Title	A specimen of Scottish oil-shale
Subtitle	
Caption Text 1	A specimen of Scottish oil-shale. The whole of the Scottish oil-shale industry was based on the occurrence of this particular rock type in a fairly small area from Dalmeny and Abercorn on the shores of the Forth through the fertile tract between the River Almond and the Bathgate Hills to the moorland district of Cobbinshaw and Tarbrax. British Geological Survey Petrology Collection sample number MC 7703.
Caption Text 2	Good typical oil-shale is black or brown in colour, fine-grained and free from grit. It is distinguished by its brown streak and its resistance to disintegration by weathering. Some shales are 'plain', they have parallel laminae, others are 'curly' with wave-shaped curved or irregular masses with black brightly-polished surfaces.
Caption Text 3	Oil-shales are kerogen-bearing rocks that will yield liquid or gaseous hydrocarbons on

The Basic Record:

Simple Name	Rock specimen
Brief Description	A specimen of Scottish oil-shale.
Materials	Rock specimen
Associated Place	Scotland, West Lothian, Pumpherston
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Associated Name	Pumpherston Oil Company Limited
(Nature of)	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528096 A specimen of 'spent' Scottish oil-shale

The Caption:

Caption Title	A specimen of 'spent' Scottish oil-shale
Subtitle	
Caption Text 1	A specimen of 'spent' oil-shale. The freshly mined raw oil-shales were heated in retorts to produce shale-oil for distillation and other uses. The waste product of the process was the red spent oil-shale fragments seen in the photograph. They contrast with the less altered black oil-shale. British Geological Survey Petrology Collection sample number MC 7704.
Caption Text 2	The waste spent oil-shale was tipped onto massive waste heaps locally called 'bings' . The spent oil shale when emptied from the retorts is dark grey at first but on the bing and exposed to the atmosphere it is oxidized to a bright brick-red tint.
Caption Text 3	The bings are 30-40 m. flat-topped artificial hills of spent oil-shale and are now being worked to provide a low cost aggregate capable of good compaction. The aggregate is used as a base for road, motorways, industrial sites and housing estates. It has also been used for low energy brick-making.

The Basic Record:

Simple Name	Rock specimen
Brief Description	A specimen of 'spent' Scottish oil-shale.
Materials	Rock specimen
Associated Place	Scotland, West Lothian, Pumpherston
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pumpherston Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528097 A specimen of still coke, a product of the Scottish oil-shale industry

The Caption:

Caption Title	A specimen of still coke, a product of the Scottish oil-shale industry
Subtitle	
Caption Text 1	Still coke is a solid residue from the distillation process of oil-shale. It was sold as a fuel for use in electrical furnaces and in the manufacture of aluminium, magnesium and sodium. British Geological Survey Petrology Collection sample number MC 7705.
Caption Text 2	One of the products of the first distillation of the crude oil is the formation of the still coke. In the later stages of this distillation, heavy constituents are decomposed with the separation of carbon or carbonaceous material in the form of coke.
Caption Text 3	The yield of coke from the first distillation of the crude oil amounts to about 2.5 per cent. It contains very little ash and sulphur and is much superior to gas coke obtained from coal.

The Basic Record:

Simple Name	Rock specimen
Brief Description	A specimen of still coke, a product of the Scottish oil-shale industry.
Materials	Rock specimen
Associated Place	Scotland, West Lothian, Pumpherston
(Nature of Grid Reference	Location specimen was found
Associated Name	Pumpherston Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
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Image and Other Asset Info:

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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528098 A block of paraffin wax, a product of the Scottish oil-shale industry

The Caption:

Caption Title	A block of paraffin wax, a product of the Scottish oil-shale industry
Subtitle	
Caption Text 1	This block of paraffin wax is a product of the Scottish oil-shale industry. There are several grades of refined paraffin wax, ranging in melting-point from 100 to 125 degrees Fahrenheit; small quantities of even higher melting point up to 140 degrees F. being also manufactured. British Geological Survey Petrology Collection sample number MC 7706.
Caption Text 2	The grades of the lower melting point were used for burning in miner's lamps (not safety lamps) and for tipping matches; also in the manufacture of night-lights and as insulating and waterproofing material. Wax of higher melting point was employed in the manufacture of candles, the paraffin wax being, for this purpose, mixed with a small proportion of stearine or the hard portion of mutton fat.
Caption Text 3	In 1872 wax was reaching nearly 7d. per lb. and its price had been as high as 1s. per lb. a few years before. The market looked secure. During the late 1870s huge imports of American wax reduced the price considerably until a voluntary agreement was reached with the American producers to limit production of Scottish and American wax to agreed quotas. The agreement soon broke down and the price of wax fell considerably.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	A block of paraffin wax, a product of the Scottish oil-shale industry.
Materials	Mineral specimen
Associated Place	Scotland, West Lothian, Pumpherston
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pumpherston Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
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P528099 Paraffin wax candles, an original product of the Scottish oil-shale industry

The Caption:

Caption Title	Paraffin wax candles, an original product of the Scottish oil-shale industry
Subtitle	
Caption Text 1	An important product of the oil-shale distillation process was refined paraffin wax which was used for numerous purposes including the manufacture of candles. The candles in the image are products created from Scottish oil shale. British Geological Survey Petrology Collection sample number MC 7707.
Caption Text 2	During the period of falling wax prices in the late 1870s and 1880s the companies which made candles fared better than those who sold their output as wax.
Caption Text 3	The manufacture of candles began in Addiewell in 1867 and at Broxburn in 1880; they were also made by Linlithgow Company and by a series of companies which successively operated at Lanark, but the remaining companies (Clippens, Oakbank, Pumpherston, Burntisland and Stanrigg) were dependent on the open market for the sale of their wax.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Paraffin wax candles, an original product of the Scottish oil-shale industry.
Materials	Mineral specimen
Associated Place	Scotland, West Lothian, Pumpherston
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pumpherston Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
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Input Date	15/06/2003

P528100 Brick made from spent shale, an original product of the Scottish oil-shale industry

The Caption:

Caption Title	Brick made from spent shale, an original product of the Scottish oil-shale industry
Subtitle	
Caption Text 1	Oil-shale was first discovered as a raw material for the production of shale-oil in West Lothian in the 1850s. It was mined in the area from then until the 1960s. The waste material from this industry created huge spoil heaps locally called 'bings'. British Geological Survey Petrology Collection sample number MC 7708.
Caption Text 2	These imposing 30-40 m. flat-topped artificial hills of spent oil-shale are now being worked to provide a low cost aggregate capable of good compaction.
Caption Text 3	It is used as a base for road, motorways, industrial sites and housing estates. It has also been used for low energy brick-making.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Brick made from spent shale, an original product of the Scottish oil-shale industry.
Materials	Mineral specimen
Associated Place	Scotland, West Lothian, Pumpherston
(Nature of Grid Reference	Location specimen was found
Associated Name	Pumpherston Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
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P528101 Bottle of cleaning spirit, an original product of the Scottish oil-shale industry

The Caption:

Caption Title	Bottle of cleaning spirit, an original product of the Scottish oil-shale industry
Subtitle	
Caption Text 1	The cleaning spirit is an original sample from the Pumpherston Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7709.
Caption Text 2	Cleaning oil is a highly refined oil that was used by the railway companies for cleaning engines and machinery. It was also employed in the manufacture of axle greases.
Caption Text 3	One of the many product of the distillation process. A product of earlier distillation called blue oil is further distilled into heavy burning oil, heavy gas oil and cleaning oil.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bottle of cleaning spirit, an original product of the Scottish oil-shale industry.
Materials	Mineral specimen
Associated Place	Scotland, West Lothian, Pumpherston
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pumpherston Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
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P528102 Bottle of power oil, an original product of the Scottish oil-shale industry

The Caption:

Caption Title Bottle of power oil, an original product of the Scottish oil-shale industry
Subtitle
Caption Text 1 The power oil is an original sample from the Pumpherston Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7710.
Caption Text 2 Various grades of illuminating oil or 'burning oil' were manufactured or marketed. Lamp or power oil was employed for burning in ordinary household lamps and is largely used in oil-engines as the source of power such as in motor boats and tractors.
Caption Text 3 A product of the distillation process, power oil is a product of the distillation of crude burning oil, itself a product of the crude oil which had been distilled to crude distillate.

The Basic Record:

Simple Name Mineral specimen
Brief Description Bottle of power oil, an original product of the Scottish oil-shale industry.
Materials Mineral specimen
Associated Place Scotland, West Lothian, Pumpherston
(Nature of Grid Reference Location specimen was found
Associated Name Pumpherston Oil Company Limited
(Nature of Oil-shale processing company
Ref. Author Carruthers, R.G. et. al.
Ref Title Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details Edinburgh : HMSO, 1927.
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P528103 Bottle of lighthouse oil, an original product of the Scottish oil-shale industry

The Caption:

Caption Title	Bottle of lighthouse oil, an original product of the Scottish oil-shale industry
Subtitle	
Caption Text 1	The lighthouse oil is an original sample from the Pumpherston Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7711.
Caption Text 2	Lighthouse oil has been used for many years by the national lighthouse services as the source of illumination, with greatest advantage. It is a special refined oil of great illuminating power and is a particularly safe oil due to its high flash point (151 degrees F.)
Caption Text 3	Lighthouse oil is one of several grades of illuminating or burning oil. It is manufactured from the distillation and treatment of crude burning oil, itself a product of distillation from crude

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bottle of lighthouse oil, an original product of the Scottish oil-shale industry.
Materials	Mineral specimen
Associated Place	Scotland, West Lothian, Pumpherston
(Nature of Grid Reference	Location specimen was found
Associated Name	Pumpherston Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
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P528104 Bottle of motor spirit, an original product of the Scottish oil-shale industry

The Caption:

Caption Title Bottle of motor spirit, an original product of the Scottish oil-shale industry
Subtitle
Caption Text 1 The motor spirit is an original sample from the Pumpherston Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7712.
Caption Text 2 Various spirits was obtained such as motor spirit or petrol for motor-cars, omnibuses and commercial vehicles generally.
Caption Text 3 The motor-car, in the early years of the 20th century brought an unlimited market for the lighter products of the oil-shale distillation process and soon made motor spirit the most valuable of the liquid products. The entire production was consumed locally and was considered superior to other petrol due to its freedom from detonation.

The Basic Record:

Simple Name Mineral specimen
Brief Description Bottle of motor spirit, an original product of the Scottish oil-shale industry.
Materials Mineral specimen
Associated Place Scotland, West Lothian, Pumpherston
(Nature of
Grid Reference Location specimen was found
Associated Name Pumpherston Oil Company Limited
(Nature of Oil-shale processing company
Ref. Author Carruthers, R.G. et. al.
Ref Title Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
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P528105 Bottle of ammoniacal liquor, an original product of the Scottish oil-shale industry

The Caption:

Caption Title	Bottle of ammoniacal liquor, an original product of the Scottish oil-shale industry
Subtitle	
Caption Text 1	The ammoniacal liquor is an original sample from the Pumpherston Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7713.
Caption Text 2	The ammoniacal liquor is formed at an early stage in the oil-shale distillation process. The raw oil-shale is heated in retorts and the resulting hot steam and gases are drawn off and condensed into crude oil and ammonia liquor.
Caption Text 3	The ammoniacal liquor is then drawn off and pumped into an ammonia still where the distillate is drawn off to a saturator box containing sulphuric acid. The ammonia and sulphuric acid combine to form sulphate of ammonia for use as a fertilizer. It was sold for £15 per ton in 1912.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bottle of ammoniacal liquor, an original product of the Scottish oil-shale industry.
Materials	Mineral specimen
Associated Place	Scotland, West Lothian, Pumpherston
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pumpherston Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
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P528106 Bottle of sulphate of ammonia, an original product of the Scottish oil-shale industry

The Caption:

Caption Title Bottle of sulphate of ammonia, an original product of the Scottish oil-shale industry
Subtitle
Caption Text 1 The sulphate of ammonia is an original sample from the Pumpherston Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7714.
Caption Text 2 Sulphate of ammonia is an end product that was marketed as a fertilizer. It is recorded that it sold for £15 per ton in 1912 and that the price obtained covered the whole cost of mining the
Caption Text 3 It was a distillate derived from the ammonia still, the distillate was drawn off to a saturator box containing sulphuric acid. The ammonia and sulphuric acid combine to form sulphate of

The Basic Record:

Simple Name Mineral specimen
Brief Description Bottle of sulphate of ammonia, an original product of the Scottish oil-shale industry.
Materials Mineral specimen
Associated Place Scotland, West Lothian, Pumpherston
(Nature of
Grid Reference Location specimen was found
Associated Name Pumpherston Oil Company Limited
(Nature of Oil-shale processing company
Ref. Author Carruthers, R.G. et. al.
Ref Title Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
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P528107 Bottle of crude scrubber naptha, an original product of the Scottish oil-shale industry

The Caption:

Caption Title	Bottle of crude scrubber naptha, an original product of the Scottish oil-shale industry
Subtitle	
Caption Text 1	The scrubber naptha is an original sample from the Pumpherston Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7715.
Caption Text 2	Scrubber naptha is a product of the first process the raw oil-shale undergoes, namely the heating in the retorts. The gases are led off to the condensers where the ammoniacal liquor and crude oil flows into a separator while the uncondensed gasses are led to two scrubbers, one a water scrubber to remove the remaining ammonia and the second an oil scrubber to remove the
Caption Text 3	In the oil scrubber a descending spray of mineral oil absorbs the naptha which is then heated to drive off the naptha which is then condensed into steam and raw scrubber naptha, the latter ready for refining.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bottle of crude scrubber naptha, an original product of the Scottish oil-shale industry.
Materials	Mineral specimen
Associated Place	Scotland, West Lothian, Pumpherston
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pumpherston Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
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P528108 Bottle of crude solid paraffin, an original product of the Scottish oil-shale industry

The Caption:

Caption Title	Bottle of crude solid paraffin, an original product of the Scottish oil-shale industry
Subtitle	
Caption Text 1	Crude solid paraffin is an intermediate stage in the distillation process of oil-shale. It is derived from a number of sources. This original sample is from the Pumpherston Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7716.
Caption Text 2	Crude oil is distilled to crude distillate which is further treated and distilled to heavy oil containing solid paraffin. This is then cooled, refined and pressed to produce crude solid paraffin and blue oil.
Caption Text 3	The blue oil is treated and further distilled several times to produce a wide range of end products and as part of this process many of them isolate out further crude solid paraffin.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bottle of crude solid paraffin, an original product of the Scottish oil-shale industry.
Materials	Mineral specimen
Associated Place	Scotland, West Lothian, Pumpherston
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pumpherston Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
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P528109 Bottle of crude distillate or 'green oil', an original product of the Scottish oil-shale industry

The Caption:

Caption Title Bottle of crude distillate or 'green oil', an original product of the Scottish oil-shale industry
Subtitle
Caption Text 1 Crude distillate or 'green oil', is an original sample from the Pumpherston Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7717.
Caption Text 2 The first stage in the refining process of crude oil derived from the oil-shale is the distillation of the crude oil and the separation of the various grades of oil. The crude oil is separated into crude naptha, crude distillate and coke.
Caption Text 3 The stills used in the process are entirely fueled by impurities in the oil in the form of tar produced by the chemical treatment of the 'crude distillate' or 'green oil'.

The Basic Record:

Simple Name Mineral specimen
Brief Description Bottle of crude distillate or 'green oil', an original product of the Scottish oil-shale industry.
Materials Mineral specimen
Associated Place Scotland, West Lothian, Pumpherston
(Nature of Grid Reference Location specimen was found
Associated Name Pumpherston Oil Company Limited
(Nature of Oil-shale processing company
Ref. Author Carruthers, R.G. et. al.
Ref Title Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
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P528110 Bottle of heavy oil and paraffin, an original product of the Scottish oil-shale industry

The Caption:

Caption Title	Bottle of heavy oil and paraffin, an original product of the Scottish oil-shale industry
Subtitle	
Caption Text 1	Heavy oil and paraffin, an original sample from the Pumpherston Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7718.
Caption Text 2	An intermediate product in the oil-shale refining process, it is formed when the crude distillate or green oil is further treated and distilled into crude burning oil, heavy oil containing solid paraffin, and coke with a residuum being returned to the crude oil.
Caption Text 3	This process is known as the 'second distillation' and is quite different from the first distillation in that to enable the easy removal of more crystalline solid paraffin the later stages of distillation in the 'green' pots is conducted entirely without steam.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bottle of heavy oil and paraffin, an original product of the Scottish oil-shale industry.
Materials	Mineral specimen
Associated Place	Scotland, West Lothian, Pumpherston
(Nature of Grid Reference	Location specimen was found
Associated Name	Pumpherston Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
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P528111 Bottle of crude naphtha, an original product of the Scottish oil-shale industry

The Caption:

Caption Title	Bottle of crude naphtha, an original product of the Scottish oil-shale industry
Subtitle	
Caption Text 1	Crude naphtha sample from the Pumpherston Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7719.
Caption Text 2	A product of the first distillation process where the crude oil is distilled into crude naphtha as well as crude distillate (or 'green' oil) and coke.
Caption Text 3	The first distillation process is facilitated by the use of steam which passes through the oil in each still. This lowers the temperature at which the oil distils and so prevents decomposition of the oil and it causes a certain amount of agitation and so tends to prevent any local overheating in the still which may have led to damage.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bottle of crude naphtha, an original product of the Scottish oil-shale industry.
Materials	Mineral specimen
Associated Place	Scotland, West Lothian, Pumpherston
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pumpherston Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
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P528112 Bottle of crude burning oil, an original product of the Scottish oil-shale industry

The Caption:

Caption Title Bottle of crude burning oil, an original product of the Scottish oil-shale industry
Subtitle
Caption Text 1 Crude burning oil sample from the Pumpherston Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7720.
Caption Text 2 Crude burning oil is a product of the second distillation process where crude distillate ('green' oil) is treated and distilled into crude burning oil, heavy oil containing solid paraffin and coke.
Caption Text 3 Crude burning oil is further treated and distilled in a series of boiler stills called 'fine oil boilers' to produce lamp or power oil, signal oil and lighthouse oil. Any residuum is blown into a single boiler still and redistilled to give heavy burning oil, light gas oil and heavy gas oil.

The Basic Record:

Simple Name Mineral specimen
Brief Description Bottle of crude burning oil, an original product of the Scottish oil-shale industry.
Materials Mineral specimen
Associated Place Scotland, West Lothian, Pumpherston
(Nature of Grid Reference Location specimen was found
Associated Name Pumpherston Oil Company Limited
(Nature of Oil-shale processing company
Ref. Author Carruthers, R.G. et. al.
Ref Title Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
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P528113 Bottle of crude shale oil, an original product of the Scottish oil-shale industry

The Caption:

Caption Title	Bottle of crude shale oil, an original product of the Scottish oil-shale industry
Subtitle	
Caption Text 1	Crude shale oil sample from the Pumpherstons Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7721.
Caption Text 2	Production of crude shale oil is the first stage in the manufacture of a wide range of products. Oil-shale from the mine is first passed through a 'breaker', heavy cast iron rollers with wedge-shaped blunt teeth made of specially tempered hard steel and crushed to blocks about
Caption Text 3	The oil-shale is then fed through a hopper, into a retort where the shale passes down slowly, gradually being exposed to increasing temperatures, from 270 to about 1300 degrees F. Steam is introduced and eventually the hydrocarbons in the oil-shale are converted to gases which are then drawn off to atmospheric condensers where the first distillates appear. They are ammoniacal liquor, scrubber naphtha and the crude shale oil.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Bottle of crude shale oil, an original product of the Scottish oil-shale industry.
Materials	Mineral specimen
Associated Place	Scotland, West Lothian, Pumpherstons
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pumpherstons Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
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P528114 Bottle of blue oil, an original product of the Scottish oil-shale industry

The Caption:

Caption Title Bottle of blue oil, an original product of the Scottish oil-shale industry
Subtitle
Caption Text 1 Blue oil sample from the Pumpherston Oil Company Limited at Mid-Calder, a leading company in the former Scottish oil-shale industry. British Geological Survey Petrology Collection sample number MC 7722.
Caption Text 2 After the second distillation the heavy oil containing solid paraffin is cooled down then passed through a filter press. The filter press separates out the crude solid paraffin from the remaining oil, this oil is known as the 'blue oil'.
Caption Text 3 Blue oil is further treated and distilled to produce heavy gas oil, cleaning oil, lubricating oil and residuum oil, there are some variations depending on the type of still that is used.

The Basic Record:

Simple Name Mineral specimen
Brief Description Bottle of blue oil, an original product of the Scottish oil-shale industry.
Materials Mineral specimen
Associated Place Scotland, West Lothian, Pumpherston
(Nature of Grid Reference Location specimen was found
Associated Name Pumpherston Oil Company Limited
(Nature of Oil-shale processing company
Ref. Author Carruthers, R.G. et. al.
Ref Title Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
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P528115 Samples of the different distillates that are produced during the processing of Scottish oil-shale

The Caption:

Caption Title Samples of the different distillates that are produced during the processing of Scottish oil-shale
Subtitle
Caption Text 1 Samples of the different distillates and products that are produced during the processing of Scottish oil-shale.
Caption Text 2 Samples on the left contain distillates that are intermediary stages in the process such as the crude oil, crude distillate (green oil), blue oil.
Caption Text 3 Samples on the right are the final products that are marketed for a range of uses e.g. motor spirit, lighthouse oil, cleaning spirit.

The Basic Record:

Simple Name Mineral specimens
Brief Description Samples of the different distillates that are produced during the processing of Scottish oil-shale.
Materials Mineral specimens
Associated Place Scotland, West Lothian, Pumpherston
(Nature of
Grid Reference Specimens from company in this location

Ref. Author Carruthers, R.G. et. al.
Ref Title Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details Edinburgh : HMSO, 1927.

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Input Date 15/06/2003

P528116 From oil-shale to candle, from the raw material, intermediate distillates to final product. Examples from the Scottish oil-shale industry

The Caption:

Caption Title	From oil-shale to candle, from the raw material, intermediate distillates to final product. Examples from the Scottish oil-shale industry
Subtitle	
Caption Text 1	The image shows a range of samples to illustrate the steps from raw oil-shale as fresh from the mine to a finished product - a packet of candles made from paraffin wax. Sourced from the Pumpherstons Oil Company Limited at Mid-Calder, a leading manufacturer in the Scottish oil-shale industry.
Caption Text 2	Raw, black oil-shale is crushed and heated in a retort with injected steam to produce crude oil, this undergoes the first distillation to produce crude distillate (green oil).
Caption Text 3	A second distillation of the green oil produced heavy oil containing paraffin. This was then separated into blue oil and crude solid paraffin. The latter paraffin wax in its unfinished state was refined and then manufactured into candles.

The Basic Record:

Simple Name	Mineral specimens
Brief Description	From oil-shale to candle, from the raw material, intermediate distillates to final product. Examples from the Scottish oil-shale industry.
Materials	Mineral specimens
Associated Place	Scotland, West Lothian, Pumpherstons
(Nature of	Specimens from company in this location
Grid Reference	
Associated Name	Pumpherstons Oil Company Limited
(Nature of	Oil-shale processing company
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	19
Image File	P528116.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528117 Diagram illustrating processes of manufacture in the Scottish oil-shale industry

The Caption:

Caption Title Diagram illustrating processes of manufacture in the Scottish oil-shale industry

Subtitle

Caption Text 1 The diagram shows the complete process from the original shale through the various treatments and distillations and showing the end products.

Caption Text 2 The process can be conveniently considered in two stages. The raw oil-shale is distilled/heated in retorts in the absence of air and in the presence of steam. This allows the shale to undergo decomposition and distillation into crude oil and ammonia.

Caption Text 3 The second stage is refining the crude oil. The object is to obtain from the crude oil various types of refined oil and wax as required by the prevailing markets at the lowest possible working cost and with the smallest amount of capital spent on refining plant.

The Basic Record:

Simple Name Diagram

Brief Description Diagram illustrating processes of manufacture in the Scottish oil-shale industry.

Materials Diagram

Ref. Author Carruthers, R.G. et. al.

Ref Title Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.

Ref. Publication Details Edinburgh : HMSO, 1927.

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Image and Other Asset Info:

Image CD 19

Image File P528117.tif

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Input Date 15/06/2003

P528118 Diagram illustrating the processes of manufacture in the Scottish mineral oil industry compiled by H.M. Cadell, 1915

The Caption:

Caption Title	Diagram illustrating the processes of manufacture in the Scottish mineral oil industry compiled by H.M. Cadell, 1915
Subtitle	
Caption Text 1	Diagram illustrating the processes of manufacture in the Scottish mineral oil industry. It shows the processes and products from the mine through the crude oil works, refinery and candle
Caption Text 2	Shale from the mine is conveyed in trucks by endless wire rope to a 'breaker' where it is broken into pieces about four inches cube and then passed up a conveyor to the top of a bank of retorts into which it is fed by a hopper. The retorts distill the raw oil shale and deliver crude oil, ammonia and spent oil shale.
Caption Text 3	The next process is to refine the crude oil through a range of further distillation and treatment processes to produce a range of end products from sulphate of ammonia, naphtha motor spirit or petrol and a range of burning, lighting, lubricating etc. oils.

The Basic Record:

Simple Name	Diagram
Brief Description	Diagram illustrating the processes of manufacture in the Scottish mineral oil industry compiled by H.M. Cadell, 1915.
Materials	Diagram
Associated Name (Nature of	Cadell, H.M. Compiler of diagram
Ref. Author	Cadell, H.M.
Ref Title	Story of the Forth.
Ref. Publication Details	Glasgow : James Maclehose and Sons, 1913.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	19
Image File	P528118.tif
Image Copyright	British Geological Survey © NERC. All rights reserved.
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Input Date	15/06/2003

P528119 Sectional drawing of a Scottish oil-shale retort, Pumpherston type

The Caption:

Caption Title	Sectional drawing of a Scottish oil-shale retort, Pumpherston type
Subtitle	
Caption Text 1	In 1894 the Bryson or Pumpherston retort appeared and was quickly recognized as the highest development of plant of its kind and remained so for thirty years.
Caption Text 2	This retort, while retaining the valuable principle developed by Young and Beilby, added perfection of mechanical design and increased fuel economy. Throughput was increased from 27 cwt. to 4 or 5 tons per day. Retort costs were reduced to 1s. per ton per day against 1s. 10d. for the Young and Beilby type.
Caption Text 3	A single bench of Pumpherston retorts took the place of two Young and Beilby retorts with a saving of labour of 32 men and 170 tons of coal per day, the new retorts being heated entirely by their own return gas.

The Basic Record:

Simple Name	Diagram
Brief Description	Sectional drawing of a Scottish oil-shale retort, Pumpherston type.
Materials	Diagram
Associated Name (Nature of	Beilby, George Thomas Inventor of a type of oil-shale report
Associated Name (Nature of	Young, James Inventor of a type of oil-shale report
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
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Image and Other Asset Info:

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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528120 Sectional drawing of a Scottish oil-shale retort, Young and Beilby type

The Caption:

Caption Title	Sectional drawing of a Scottish oil-shale retort, Young and Beilby type
Subtitle	
Caption Text 1	Young and Beilby's retort of 1882, with cast-iron retort twelve feet long for oil recovery, and firebrick portion ten feet long for ammonia recovery. Total height of structure is 34 feet.
Caption Text 2	With the appearance of the Young and Beilby retort (Patent No. 1377 of 21st March 1882), the industry entered its modern phase and it is safe to say that the adoption of its principles enabled the industry to survive the severe trials of the next few years.
Caption Text 3	The Young and Beilby retort was heated by gas, partly its own permanent gas, but mainly produced from coal distilled in special retorts within the bench. At one time this retort was practically universal being in operation at Addiewell, Uphall, Hopetoun, Clippens, Oakbank and Pumpherston as well as at the smaller works such as Hermand, Holmes and Tarbrax.

The Basic Record:

Simple Name	Diagram
Brief Description	Sectional drawing of a Scottish oil-shale retort, Young and Beilby type.
Materials	Diagram
Associated Name (Nature of	Beilby, George Thomas Inventor of a type of oil-shale report
Associated Name (Nature of	Young, James Inventor of a type of oil-shale report
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	19
Image File	P528120.tif
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Input Date	15/06/2003

P528121 Illustration of the Scottish oil-shale retort, Young and Beilby's 'Pentland' type

The Caption:

Caption Title	Illustration of the Scottish oil-shale retort, Young and Beilby's 'Pentland' type
Subtitle	
Caption Text 1	Young and Beilby's 'Pentland' retort, 1881. The central feature of their retort was the adoption of a two-stage process of distillation, the shale passing continuously through a vertical retort, the upper portion of which was heated to a suitable temperature for the production of oil, while in the lower part a higher temperature was maintained and, in an atmosphere of steam, a larger percentage of the nitrogen of the shale was converted into ammonia.
Caption Text 2	Other improvements were also embodied, but while the yield of crude oil showed no marked difference, that of sulphate of ammonia was in some cases almost doubled.
Caption Text 3	The Inventors were William Young (1841-1907) of the Clippens Oil Works, Midlothian (not related to Dr. James Young) and George Thomas Beilby (1850-1924) (later Sir George) of Oakbank Works.

The Basic Record:

Simple Name	Diagram
Brief Description	Illustration of the Scottish oil-shale retort, Young and Beilby's 'Pentland' type.
Materials	Diagram
Associated Name (Nature of	Beilby, George Thomas Inventor of a type of oil-shale report
Associated Name (Nature of	Young, James Inventor of a type of oil-shale report
Associated Name (Nature of	Henderson, N.M. Inventor of a type of oil-shale report
Ref. Author	Cadell, H.M.
Ref Title	Story of the Forth.
Ref. Publication Details	Glasgow : James Maclehose and Sons, 1913.
Text Copyright	British Geological Survey © NERC. All rights reserved.

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Image File	P528121.tif
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Input Date	15/06/2003

P528122 Illustration of Henderson's 1873 oil-shale retort

The Caption:

Caption Title	Illustration of Henderson's 1873 oil-shale retort
Subtitle	
Caption Text 1	In 1873 N.M. Henderson of Broxburn designed a retort that was a notable advance on previous designs. The retort had downward distillation using superheated steam. A separate chamber was provided beneath the vertical retort into which the hot spent shale was dropped and the heat derived from the combustion of its fixed carbon conveyed to the heating chamber of the retort above, in which also was a coil of pipes in which steam was superheated before injection into the retort.
Caption Text 2	The Henderson 1873 cost £60 per retort and had a capacity of 25 cwt. per day. Young's company adopted it in 1880. Others that adopted it include Burntisland, Linlithgow and
Caption Text 3	In 1883 the Young and Beilby 'Pentland' type was invented and soon became the retort of preference. By 1889, one half of the 5000 retorts in use were Young and Beilby retorts, the remainder were Henderson's with less than a hundred of two or three other types including 50 Stanriggs.

The Basic Record:

Simple Name	Diagram
Brief Description	Illustration of Henderson's 1873 oil-shale retort.
Materials	Diagram
Associated Name (Nature of	Beilby, George Thomas Inventor of a type of oil-shale report
Associated Name (Nature of	Young, James Inventor of a type of oil-shale report
Ref. Author	Carruthers, R.G. et. al.
Ref Title	Oil-shales of the Lothians. Memoirs of the Geological Survey, Scotland. 3rd ed.
Ref. Publication Details	Edinburgh : HMSO, 1927.
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Image and Other Asset Info:

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Image File	P528122.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528123 Muscovite mica, cut and trimmed at the mica processing Pitlochry Depot during World War Two

The Caption:

Caption Title Muscovite mica, cut and trimmed at the mica processing Pitlochry Depot during World War

Subtitle

Caption Text 1 After the mica 'books' were extracted from the quarry the first process they underwent was rough dressing. This was initially done near the quarry at Knoydart but soon transferred to the Pitlochry Sorting Factory. It consisted of splitting the books into sheets and the removal by cutting of the flaws, inclusions and striations. The mica would then be passed to the cutters who, using skill and great care would remove the remaining flaws and trim the edges leaving block mica of irregular shape with a curved and indented outline. British Geological Survey Petrology Collection sample number MC 7731.

Caption Text 2 Further fine splitting to remove stains and spots required great judgment to balance loss in weight with the possibility of improving the quality of the block. The final process was the grading for size and quality.

Caption Text 3 Size was defined by the area of the largest rectangle that could be cut from it, while quality was based on clearness, hardness and flatness. Typical remaining imperfections such as air spots, mineral or vegetable spots or lines, softness or waviness would affect the electrical and/or mechanical properties of the mica.

The Basic Record:

Simple Name Mineral specimen

Brief Description Muscovite mica, cut and trimmed at the mica processing Pitlochry Depot during World War

Materials Mineral specimen

Associated Place Scotland, Perthshire, Pitlochry

(Nature of Location specimen was found

Grid Reference

Associated Name Pitlochry Sorting Factory

(Nature of Mica processing factory

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Image and Other Asset Info:

Image CD 20

Image File P528123.tif

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528124 Muscovite mica, a close-up of mica cut and trimmed at the mica processing Pitlochry Depot during World War Two

The Caption:

Caption Title	Muscovite mica, a close-up of mica cut and trimmed at the mica processing Pitlochry Depot during World War Two
Subtitle	
Caption Text 1	A close-up photograph of some cut, trimmed and split mica sheets. The mica clearly shows bevelled edges caused by trimming with a knife. British Geological Survey Petrology Collection sample number MC 7732.
Caption Text 2	The split mica sheets are trimmed of all flaws, structural imperfections or, less serious, inclusions. The cutting knife is held at a low angle to the cleavage so the edges are consequently bevelled.
Caption Text 3	The mica was used for a wide range of radio, electrical and scientific purposes. Typical items include condenser plates, valve bridges, cathode ray plates and discs, commutator separators, wrappings and washers, heater plates and stove plates. In addition to the block mica the depot produced a large amount of scrap mica.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica, a close-up of mica cut and trimmed at the mica processing Pitlochry Depot during World War Two.
Materials	Mineral specimen
Associated Place	Scotland, Perthshire, Pitlochry
(Nature of Grid Reference	Location specimen was found
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
Text Copyright	British Geological Survey © NERC. All rights reserved.
<u>Image and Other Asset Info:</u>	
Image CD	20
Image File	P528124.tif
Image Copyright	British Geological Survey © NERC. All rights reserved.
Inputter	R.P. McIntosh
Input Date	15/06/2003

P528125 Muscovite mica split, trimmed and graded as 'No. 1', 'heavy stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty.

The Caption:

Caption Title	Muscovite mica split, trimmed and graded as 'No. 1', 'heavy stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty.
Subtitle	
Caption Text 1	A large specimen of muscovite mica graded 'No 1', 'heavy stained' from Little Scatwell mica prospect, 550 yards north-west of Little Scatwell, eight miles from Strathpeffer, Ross and Cromarty British Geological Survey Petrology Collection sample number MC 7733.
Caption Text 2	The deposit at which this specimen was found is composed of a number of separate outcrops of mica-bearing pegmatite that run along a line east-north-east to west-south-west and are bounded by pelitic schists to the north and siliceous schist to the south, both are Moine (Precambrian) in age.
Caption Text 3	The pegmatite consists of quartz and feldspar, with feldspar predominating and with 'books' of mica up to 20 inches in diameter and two or three inches thick. The great majority of 'books' do not exceed seven to eight inches in diameter.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica split, trimmed and graded as 'No. 1', 'heavy stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty..
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Little Scatwell
(Nature of	Location specimen was found
Grid Reference	
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	20
Image File	P528125.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528126 Muscovite mica split, trimmed and graded as 'No. 2', 'white' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

The Caption:

Caption Title	Muscovite mica split, trimmed and graded as 'No. 2', 'white' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty
Subtitle	
Caption Text 1	Three specimens of mica graded as 'No. 2', 'white' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty. This indicated that the surface area of the specimens is 15-24 square inches. This is the fourth grade down in size. British Geological Survey Petrology Collection sample number MC 7734.
Caption Text 2	Books of mica were found up to 20 inches in diameter though most did not exceed seven or eight inches in diameter. Most books extracted from near the surface had a silvery appearance, the larger ones bent and often badly ruled.
Caption Text 3	The Little Scatwell mica prospect was the second most productive source of mica in Scotland during the Second World War. The 'run of mine' output was sent to Pitlochry Sorting Station for processing.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica split, trimmed and graded as 'No. 2', 'white' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Little Scatwell
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pitlochry Sorting Factory
(Nature of	Mica processing factory
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

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Input Date	15/06/2003

P528127 Muscovite mica split, trimmed and graded as 'No. 3', 'white' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

The Caption:

Caption Title Muscovite mica split, trimmed and graded as 'No. 3', 'white' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

Subtitle

Caption Text 1 A number of specimens of 'No. 3', 'stained' muscovite mica from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty. British Geological Survey Petrology Collection sample number MC 7735.

Caption Text 2 The No. 3 indicates specimens with a surface area of 10-15 square inches and the 'staining' refers to imperfections in clarity, usually dark shadowy internal markings.

Caption Text 3 Processing, which usually consisted of rough cobbing, splitting the mica books with a knife into thin sheets and trimming the edges to remove imperfections and finally grading was undertaken at the Pitlochry Sorting Factory during World War Two.

The Basic Record:

Simple Name Mineral specimen

Brief Description Muscovite mica split, trimmed and graded as 'No. 3', 'white' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty.

Materials Mineral specimen

Associated Place Scotland, Ross and Cromarty, Little Scatwell

(Nature of Location specimen was found

Grid Reference

Associated Name Pitlochry Sorting Factory

(Nature of Mica processing factory

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Image and Other Asset Info:

Image CD 20

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Input Date 15/06/2003

P528128 Muscovite mica split, trimmed and graded as 'No. 4', 'good quality white' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

The Caption:

Caption Title Muscovite mica split, trimmed and graded as 'No. 4', 'good quality white' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

Subtitle

Caption Text 1 Two specimens of muscovite mica split, trimmed and graded as 'No. 4', 'good quality white' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty. British Geological Survey Petrology Collection sample number MC 7736.

Caption Text 2 The No. 4 indicates specimens with a surface area of 6-10 square inches. During processing, the rough mica books are split into sheets one-eighth of an inch or less in thickness by means of special splitting knives. The sheets are then trimmed of all flaws.

Caption Text 3 In this last operation the cutting knife is held at a low angle to the cleavage plane, so the edges of the mica are consequently bevelled.

The Basic Record:

Simple Name Mineral specimen

Brief Description Muscovite mica split, trimmed and graded as 'No. 4', 'good quality white' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty.

Materials Mineral specimen

Associated Place Scotland, Ross and Cromarty, Little Scatwell

(Nature of Location specimen was found

Grid Reference

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Image CD 20

Image File P528128.tif

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528129 Muscovite mica split, trimmed and graded as 'No. 4', 'stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

The Caption:

Caption Title Muscovite mica split, trimmed and graded as 'No. 4', 'stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

Subtitle

Caption Text 1 Two specimens of muscovite mica split, trimmed and graded as 'No. 4', 'stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty. British Geological Survey Petrology Collection sample number MC 7737.

Caption Text 2 Mica is graded by type, ruby, green and spotted, it is further subdivided depending on clarity. The ruby type has seven clarity grades, green has three and the spotted type also has three. There are also ten size gradings depending on the number of square inches of area in the sheet.

Caption Text 3 The grading of size used during the Second World War, when these specimens were processed is based on the Bihar (Bengal) classification. Pre-war India was a world leading supplier of muscovite.

The Basic Record:

Simple Name Mineral specimen

Brief Description Muscovite mica split, trimmed and graded as 'No. 4', 'stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty.

Materials Mineral specimen

Associated Place Scotland, Ross and Cromarty, Little Scatwell

(Nature of Location specimen was found

Grid Reference

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528130 Muscovite mica split, trimmed and graded as 'No. 5', 'spotted' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

The Caption:

Caption Title Muscovite mica split, trimmed and graded as 'No. 5', 'spotted' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

Subtitle

Caption Text 1 Three specimens of muscovite mica split, trimmed and graded as 'No. 5', 'spotted' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty. British Geological Survey Petrology Collection sample number MC 7738.

Caption Text 2 The size No. 5 indicates the sheets were between three and six square inches in area. No. 5 was one of the most highly sought sizes.

Caption Text 3 The 'spotted' rating indicates a clarity graded by imperfections of included films and spots of various metallic oxides such as magnetite, haematite and limonite.

The Basic Record:

Simple Name Mineral specimen

Brief Description Muscovite mica split, trimmed and graded as 'No. 5', 'spotted' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty.

Materials Mineral specimen

Associated Place Scotland, Ross and Cromarty, Little Scatwell

(Nature of

Grid Reference Location specimen was found

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Image and Other Asset Info:

Image CD 20

Image File P528130.tif

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528131 Muscovite mica split, trimmed and graded as 'No. 5.5', 'good stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

The Caption:

Caption Title Muscovite mica split, trimmed and graded as 'No. 5.5', 'good stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

Subtitle

Caption Text 1 Several specimens of muscovite mica split, trimmed and graded as 'No. 5.5', 'good stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty. British Geological Survey Petrology Collection sample number MC 7739.

Caption Text 2 Grades between 4 and 6 were regarded as 'strategic mica' with 5 and 5.5 being the grades most heavily in demand. Mica was sold by the pound weight and usually in small consignments.

Caption Text 3 Muscovite was mined at a number of locations in Scotland during the Second World War. The two most productive were the Knoydart mica prospect and the Little Scatwell prospect. Output from both went to the Pitlochry Sorting Factory for processing and grading into commodities such as these.

The Basic Record:

Simple Name Mineral specimen

Brief Description Muscovite mica split, trimmed and graded as 'No. 5.5', 'good stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty.

Materials Mineral specimen

Associated Place Scotland, Ross and Cromarty, Strathpeffer, Little Scatwell mica prospect

(Nature of Location specimen was found

Grid Reference

Associated Name Pitlochry Sorting Factory

(Nature of Mica processing factory

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528132 Muscovite mica split, trimmed and graded as A1 from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

The Caption:

Caption Title Muscovite mica split, trimmed and graded as A1 from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

Subtitle

Caption Text 1 The muscovite from Sgurr Coire nan Gobhar in Knoydart situated about 1.5 miles north-north-west of Kylesknoydart and 300 yards south-east from Loch Coir an Lochan was processed at the Pitlochry Sorting Factory. British Geological Survey Petrology Collection sample number MC 7740.

Caption Text 2 A ruby mica of excellent quality, clarity and size. The latter is eight by nine inches in

Caption Text 3 The Knoydart deposit was the chief source of mica during the Second World War Knoydart. Production was rock quarried, 3,606 tons; crude mica produced, 74,606 lbs.; crude mica yield, 20.69 lbs./ton.

The Basic Record:

Simple Name Mineral specimen

Brief Description Muscovite mica split, trimmed and graded as A1 from the Loch Nevis Mica Prospect, Knoydart, Invernessshire.

Materials Mineral specimen

Associated Place Scotland, Invernessshire, Knoydart, Loch Nevis

(Nature of Grid Reference) Location specimen was found

Associated Name Pitlochry Sorting Factory

(Nature of) Mica processing factory

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528133 Muscovite mica split, trimmed and graded as 'No. 2', 'good stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

The Caption:

Caption Title	Muscovite mica split, trimmed and graded as 'No. 2', 'good stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire
Subtitle	
Caption Text 1	Two specimens of muscovite mica graded as 'No 2' and 'good stained'. The mica is from Sgurr Coire nan Gobhar in Knoydart situated about 1.5 miles north-north-west of Kylesknoydart and 300 yards south-east from Loch Coir an Lochan and was processed at the Pitlochry Sorting Factory c. 1944. British Geological Survey Petrology Collection sample number MC 7741.
Caption Text 2	The value of sheet mica depends on the grade or quality and the size of the sheet that can be obtained. The larger sizes such as this specimen are used for special purposes and the so called 'strategic' mica in most demand during the Second World War was the No. 4 to No. 6, particularly No. 5 and No. 5 and a half.
Caption Text 3	Mica was sold by the pound and usually in comparatively small consignments. In December 1942 the value of this grade mica was c. 15s. 0d. per pound. This compares with the price of 'super clear ruby' at the same size 38s. 0d. per pound.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica split, trimmed and graded as 'No. 2', 'good stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Knoydart, Loch Nevis
(Nature of Grid Reference)	Location specimen was found
Associated Name	Pitlochry Sorting Factory
(Nature of)	Mica processing factory
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P528134 Muscovite mica split, trimmed and graded as 'No. 2', 'slightly stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

The Caption:

Caption Title	Muscovite mica split, trimmed and graded as 'No. 2', 'slightly stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire
Subtitle	
Caption Text 1	This large specimen of mica is graded as No. 2 slightly stained. The No. 2 refers to a specimen that is 15-24 square inches in area and 'slightly stained' refers to the amount of 'staining' in the specimen, staining being the amount of dark shadowy internal markings. British Geological Survey Petrology Collection sample number MC 7742.
Caption Text 2	The specimen is from the Loch Nevis Mica Prospect, Knoydart, located at Sgurr Coire nan Gobhar, about 1.5 miles north-north-west of Kylesknoydart and 300 yards south-east from Loch Coir an Lochan. The mica would have been cut and prepared at the Pitlochry Sorting Factory.
Caption Text 3	Grading of mica was based on type, colour and freedom from staining. There are two main types, 'ruby' and 'green'. The ruby type is subdivided into seven sub-categories depending on the amount of staining. The green type into three categories.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica split, trimmed and graded as 'No. 2', 'slightly stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Knoydart, Loch Nevis
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pitlochry Sorting Factory
(Nature of	Mica processing factory
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P528135 Muscovite mica cut, trimmed, split and graded as 'No. 3', 'stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

The Caption:

Caption Title	Muscovite mica cut, trimmed, split and graded as 'No. 3', 'stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire
Subtitle	
Caption Text 1	Three specimens of muscovite mica cut, trimmed and graded as 'No. 3', 'stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire and processed at the Pitlochry Sorting Factory. Grade No. 3 refers to a surface area of 10-15 square inches. British Geological Survey Petrology Collection sample number MC 7743.
Caption Text 2	Out of seven categories of clarity, 'stained' is second poorest. These specimens at grade No. 3 are regarded as one of the larger sizes and hence used for special purposes only.
Caption Text 3	Sheet mica had many uses during the Second World War when this specimen was mined and processed. It was used almost exclusively in the electrical industry as a dielectric. It was used for separating copper bars of commutators and for commutator rings; for electrical heating units; for disc, washers, bushings etc. in all types of electrical power and lighting equipment.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica cut, trimmed, split and graded as 'No. 3', 'stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Knoydart, Loch Nevis
(Nature of Grid Reference)	Location specimen was found
Associated Name	Pitlochry Sorting Factory
(Nature of)	Mica processing factory
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P528136 Muscovite mica split, trimmed and graded as 'No. 5', 'fair stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

The Caption:

Caption Title	Muscovite mica split, trimmed and graded as 'No. 5', 'fair stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire
Subtitle	
Caption Text 1	Two specimens of muscovite mica cut, trimmed and graded as 'No. 5', 'stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire and processed at the Pitlochry Sorting Factory. Grade No. 5 refers to a surface area of 3-6 square inches. British Geological Survey Petrology Collection sample number MC 7744.
Caption Text 2	'Fair stained' is the fourth best category for clarity in a scale consisting of seven steps. This category was one of the main strategic categories heavily in demand for a range of electrical industry uses.
Caption Text 3	Muscovite is the commonest member of the mica group and is found in crystalline rocks throughout the world and also in sedimentary rocks. Under suitable conditions it forms large crystals which can split freely and yield extremely thin, uniform plates.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica split, trimmed and graded as 'No. 5', 'fair stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Knoydart, Loch Nevis
(Nature of Grid Reference)	Location specimen was found
Associated Name	Pitlochry Sorting Factory
(Nature of)	Mica processing factory
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P528137 Muscovite mica split, trimmed and graded as 'No. 5.5 ', '1st quality' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

The Caption:

Caption Title	Muscovite mica split, trimmed and graded as 'No. 5.5 ', '1st quality' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire
Subtitle	
Caption Text 1	Many specimens of muscovite mica cut, trimmed and graded as grade 5.5 splittings of 1st quality from the Loch Nevis Mica Prospect, Knoydart, Invernessshire and processed at the Pitlochry Sorting Factory. Grade No. 5.5 refers to a surface area of 2.5-3 square inches. British Geological Survey Petrology Collection sample number MC 7745.
Caption Text 2	The preparation for the market of sheet mica is a fairly simple but skilled operation and is carried out entirely by hand with a splitting knife. Three stages are involved, rough cobbing, splitting and trimming.
Caption Text 3	These specimens are known as 'splittings', the mica sheets have been split by hand into thin films 0.001 to 0.002 inch thick for use in mica board or micanite, flexible mica sheet or mica tape. The splittings are cemented together with shellac and built into the micanite.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica split, trimmed and graded as 'No. 5.5 ', '1st quality' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Knoydart, Loch Nevis
(Nature of Grid Reference	Location specimen was found
Associated Name	Pitlochry Sorting Factory
(Nature of	Mica processing factory
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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P528138 Muscovite mica from the Braetollie mica prospect, Alness, Rossshire

The Caption:

Caption Title	Muscovite mica from the Braetollie mica prospect, Alness, Rossshire
Subtitle	
Caption Text 1	The Braetollie mica prospect is in the valley of the Tollie Burn approximately 1400 yards north by west of Braetollie Farm, about 5.5 miles north-west of Alness Station. These specimens have been split and trimmed at the Pitlochry Sorting Factory. British Geological Survey Petrology Collection sample number MC 7746.
Caption Text 2	The mica occurs in four or five thin lenticular sheet-like bodies of pegmatite 20 to 50 yards apart which are enclosed in Moine pelitic schists. The pegmatites do not exceed a few feet in thickness and are concordant with the host rock.
Caption Text 3	The pegmatite consists mainly of quartz and mica with subordinate white feldspar; tourmaline and garnet are also present. The mica is a clear ruby muscovite forming books up to ten inches in diameter and three inches in thickness. The books are generally flat and well spaced.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica from the Braetollie mica prospect, Alness, Rossshire.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Alness, Braetollie
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pitlochry Sorting Factory
(Nature of	Mica processing factory
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P528139 Muscovite mica split and trimmed from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

The Caption:

Caption Title Muscovite mica split and trimmed from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

Subtitle

Caption Text 1 The specimens are typical of the split and trimmed muscovite from the Little Scatwell mica prospect, processed at the Pitlochry Sorting Factory. British Geological Survey Petrology Collection sample number MC 7747.

Caption Text 2 After the mica 'books' were extracted from the quarry the first process they underwent was rough dressing or rough cobbing. It consisted of splitting the books into sheets and the removal by cutting of the flaws, incrustations and striations.

Caption Text 3 The mica would then be passed to the cutters who, using skill and great care would remove the remaining flaws and trim the edges leaving block mica of irregular shape with a curved and indented outline. Further fine splitting to remove stains and spots required great judgement to balance loss in weight with the possibility of improving the quality of the block. The final process was the grading for size and quality.

The Basic Record:

Simple Name Mineral specimen

Brief Description Muscovite mica split and trimmed from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty.

Materials Mineral specimen

Associated Place Scotland, Ross and Cromarty, Strathpeffer, Little Scatwell mica prospect

(Nature of Grid Reference Location specimen was found

Associated Name Pitlochry Sorting Factory

(Nature of Mica processing factory

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Input Date 15/06/2003

P528140 Muscovite mica from Little Scatwell, with accompanying letter

The Caption:

Caption Title	Muscovite mica from Little Scatwell, with accompanying letter
Subtitle	
Caption Text 1	A large specimen of muscovite mica, a single crystal that has been rough dressed or rough cobbled i.e. split into smaller parts by using the perfect cleavage that is a major characteristic of micas. The specimen is five by four inches. British Geological Survey Petrology Collection sample number MC 7748.
Caption Text 2	The specimens sit on an original letter dated 16th May 1944 from a company Keir and Cawder Ltd. from Glasgow. However the address in handwriting is Little Scatwell, Strathpeffer. The letter is addressed to Dr. A. MacGregor of the Geological Survey of Great Britain.
Caption Text 3	The Little Scatwell mica deposit was located half a mile south-south-west of the Falls of Conon and two miles south-west of Garve, Rossshire.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica from Little Scatwell, with accompanying letter.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Little Scatwell
(Nature of Grid Reference)	Location specimen was found
Associated Name	Macgregor, A.G.
(Nature of)	Letter addressed to
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528141 Muscovite mica split, trimmed and graded as 'No. 5', 'dotted green' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

The Caption:

Caption Title Muscovite mica split, trimmed and graded as 'No. 5', 'dotted green' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

Subtitle

Caption Text 1 Several specimens of No. 5, dotted green muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernessshire and processed at the Pitlochry Sorting Factory. British Geological Survey Petrology Collection sample number MC 7749.

Caption Text 2 No. 5 mica has sheets between 3 and 6 square inches. The colour is graded as green type but the actual grade of green is not given. It is 'dotted' or spotted, i.e. it contains inclusions of various metallic oxides such as magnetite, haematite, limonite etc.

Caption Text 3 The Loch Nevis Mica Prospect was the most extensive and valuable deposit of mica in Scotland. Output from the quarry was processed at the sorting factory at Pitlochry.

The Basic Record:

Simple Name Mineral specimen

Brief Description Muscovite mica split, trimmed and graded as 'No. 5', 'dotted green' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire.

Materials Mineral specimen

Associated Place Scotland, Invernessshire, Knoydart, Loch Nevis

(Nature of Location specimen was found

Grid Reference

Associated Name Pitlochry Sorting Factory

(Nature of Mica processing factory

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528142 Muscovite mica split, trimmed and graded as 'No. 5', 'dotted' from the Loch Nevis Mica Prospect, Knoydart, Invernesshire

The Caption:

Caption Title	Muscovite mica split, trimmed and graded as 'No. 5', 'dotted' from the Loch Nevis Mica Prospect, Knoydart, Invernesshire
Subtitle	
Caption Text 1	Three specimens of No. 5 'dotted' muscovite mica from the Loch Nevis Mica Prospect, Knoydart, Invernesshire and processed at the Pitlochry Sorting Factory. British Geological Survey Petrology Collection sample number MC 7750.
Caption Text 2	No. 5 is one of the strategic grades that is in most demand and indicates the mica sheets are between 3 and 6 square inches. The value of mica was extremely high in proportion to its
Caption Text 3	The proportion of useable mica from a deposit is very small and does not normally exceed one or two per cent of the total quantity of rock excavated. Ninety-five per cent of sheet mica is graded No. 4 or under.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica split, trimmed and graded as 'No. 5', 'dotted' from the Loch Nevis Mica Prospect, Knoydart, Invernesshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernesshire, Knoydart, Loch Nevis
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pitlochry Sorting Factory
(Nature of	Mica processing factory
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P528143 Muscovite mica split, trimmed and graded as 'No. 6', 'fair stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire

The Caption:

Caption Title	Muscovite mica split, trimmed and graded as 'No. 6', 'fair stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire
Subtitle	
Caption Text 1	No. 6 is one of the smaller sizes, it refers to sheets of muscovite between 1 and 2.5 square inches in area. There is only No. 7 that is smaller and that refers to mica in sheets less than one square inch in area. British Geological Survey Petrology Collection sample number MC 7751.
Caption Text 2	The grading 'fair stained' is in the fourth category out of seven and the staining refers to dark shadowy internal markings. This is different from the 'spotting' grades which refer to solid definite inclusions.
Caption Text 3	The main object of mica mining is not to extract the maximum amount of material in the shortest possible time but to extract the mica with the minimum damage to the mica 'books'. The rough cobbing, splitting, trimming and grading of mica is a skilled task.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica split, trimmed and graded as 'No. 6', 'fair stained' from the Loch Nevis Mica Prospect, Knoydart, Invernessshire.
Materials	Mineral specimen
Associated Place	Scotland, Invernessshire, Knoydart, Loch Nevis
(Nature of	Location specimen was found
Grid Reference	
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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P528144 Muscovite mica split, trimmed and graded as 'No. 5', 'heavily stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

The Caption:

Caption Title	Muscovite mica split, trimmed and graded as 'No. 5', 'heavily stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty
Subtitle	
Caption Text 1	Specimens of muscovite mica with the grade 'No. 5', 'heavily stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty and processed at the Pitlochry Sorting Factory. British Geological Survey Petrology Collection sample number MC 7752.
Caption Text 2	For commercial purposes mica is graded according to type, colour and freedom from staining. The primary division is into muscovite or white mica, phlogopite or amber mica. Two types of muscovite are recognized, 'ruby' type and 'green' type.
Caption Text 3	Other factors that affect the grading and commercial value of the mica is the amount of 'staining', dark shadowy internal marks and spotting, spots of various metallic minerals such as magnetite, haematite or limonite.

The Basic Record:

Simple Name	Mineral specimen
Brief Description	Muscovite mica split, trimmed and graded as 'No. 5', 'heavily stained' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty.
Materials	Mineral specimen
Associated Place	Scotland, Ross and Cromarty, Little Scatwell
(Nature of	Location specimen was found
Grid Reference	
Associated Name	Pitlochry Sorting Factory
(Nature of	Mica processing factory
Ref. Author	Kennedy, W.Q. and Lawrie, T.R.M.
Ref Title	Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.
Ref. Publication Details	London : Geological Survey and Museum, 1943.
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Input Date	15/06/2003

P528145 Muscovite mica split, trimmed and graded as 'No. 5', 'spotted' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

The Caption:

Caption Title Muscovite mica split, trimmed and graded as 'No. 5', 'spotted' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

Subtitle

Caption Text 1 Two specimens of muscovite mica split, trimmed and graded as 'No. 5', 'spotted' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty. British Geological Survey Petrology Collection sample number MC 7753.

Caption Text 2 No. 5 was one of the most important size grades of sheet mica. Sheet mica was of great strategic importance and was indispensable in the production of many types of electrical equipment having a direct application to the military field hence the exploitation during World War Two.

Caption Text 3 Sheet mica included sheets from one inch square upwards and from a few thousandths of an inch to one-eighth of an inch or so in thickness. It was desirable for the sheet to be free from imperfections and flaws and to be as flat as possible.

The Basic Record:

Simple Name Mineral specimen

Brief Description Muscovite mica split, trimmed and graded as 'No. 5', 'spotted' from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty.

Materials Mineral specimen

Associated Place Scotland, Ross and Cromarty, Little Scatwell

(Nature of Location specimen was found

Grid Reference

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Input Date 15/06/2003

P528146 Map of Leadhills and Wanlockhead district showing the distribution of metalliferous mines and veins

The Caption:

Caption Title Map of Leadhills and Wanlockhead district showing the distribution of metalliferous mines and veins

Subtitle

Caption Text 1 The Leadhills and Wanlockhead district contained the most productive lead mines in Scotland. The map shows the location of all the major veins, mines, levels and abandoned shafts and trials. About 70 veins are known in the area.

Caption Text 2 The first recorded mining was that at the lead mine at Glengonnar (Leadhills) being worked by the monks of Newbattle in 1239 but there is little doubt that mining occurred long before then.

Caption Text 3 Almost all the veins contain galena as the principal valuable mineral. Some few contain copper ores and they have been worked for them. Most veins contain zinc-blend (sphalerite) but not usually in commercial quantities. There is also a wide distribution of alluvial gold in the area.

The Basic Record:

Simple Name Map

Brief Description Map of Leadhills and Wanlockhead district showing the distribution of metalliferous mines and veins.

Materials Map

Associated Place Scotland, Lanarkshire

(Nature of Map of area

Grid Reference

Ref. Author Wilson, G.V.

Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.

Ref. Publication Details Edinburgh : HMSO, 1921.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528147 Leadhills mine, a plan of the workings in Brow and Brown's Veins, Leadhills, Lanarkshire

The Caption:

Caption Title Leadhills mine, a plan of the workings in Brow and Brown's Veins, Leadhills, Lanarkshire
Subtitle
Caption Text 1 About forty veins have been worked for lead ore in the Leadhills district but in many instances the workings have been shallow and on a small scale.
Caption Text 2 The bulk of the veins belong to two main sets, one trending north-west and the other varying from north-north-west to a few degrees east of north.
Caption Text 3 The Glengonnar Shaft, at an elevation of 1460 feet allows access to the Brow and Brown's Veins. The shaft is vertical until it cuts the Brow Vein at 100 fathoms.

The Basic Record:

Simple Name Map
Brief Description Leadhills mine, a plan of the workings in Brow and Brown's Veins, Leadhills, Lanarkshire.
Materials Map
Associated Place Scotland, Lanarkshire
(Nature of
Grid Reference Diagram of mine in this location

Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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Input Date 15/06/2003

P528148 Sections of the workings in Brow and Brown's Veins Leadhills, Lanarkshire

The Caption:

Caption Title Sections of the workings in Brow and Brown's Veins Leadhills, Lanarkshire

Subtitle

Caption Text 1 The workings in the Brow and Brown's Veins, Leadhills, was extensive. It was reported in 1917 that all the workings in the Brow Vein were to the south-east of the Glengonnar Shaft and they have been carried to their intersection with Brown's Vein over a total length of 300 fathoms and to a depth of 187 fathoms.

Caption Text 2 The workings in Brown's Vein extend over a distance of 500 fathoms and reach a depth of 160 fathoms below the adit.

Caption Text 3 The two veins are also connected by a cross-cut at Gripps level driven from Glengonnar Shaft to a few fathoms north of Jeffrey's Shaft.

The Basic Record:

Simple Name Diagram

Brief Description Sections of the workings in Brow and Brown's Veins Leadhills, Lanarkshire.

Materials Diagram

Associated Place Scotland, Lanarkshire

**(Nature of
Grid Reference** Diagram of mine in this location

Ref. Author Wilson, G.V.

Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.

Ref. Publication Details Edinburgh : HMSO, 1921.

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528149 Plan of Wanlockhead Mine, Dumfriesshire

The Caption:

Caption Title Plan of Wanlockhead Mine, Dumfriesshire
Subtitle
Caption Text 1 The main working in the district, the Wanlockhead Mine (Glencrieff Shaft) is situated just below the village at an elevation of 1195 feet.
Caption Text 2 The shaft is sunk in the west branch of the West Grove Vein, it had continued downwards for 240 fathoms on the slope of the vein and is connected with the New Glencrieff Vein by levels and crosscuts.
Caption Text 3 About ten veins have been worked for lead ore in the Wanlockhead district. The main veins occur in a more or less parallel set and have a general direction of 30 degrees west of north.

The Basic Record:

Simple Name Map
Brief Description Plan of Wanlockhead Mine, Dumfriesshire.
Materials Map
Associated Place Scotland, Dumfriesshire, Wanlockhead
(Nature of
Grid Reference Map of area

Ref. Author Wilson, G.V.
Ref Title The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details Edinburgh : HMSO, 1921.
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Inputter R.P. McIntosh
Input Date 15/06/2003

P528150 Sections of the workings in the New Glencrieff Vein, Wanlockhead, Dumfriesshire

The Caption:

Caption Title	Sections of the workings in the New Glencrieff Vein, Wanlockhead, Dumfriesshire
Subtitle	
Caption Text 1	The diagrams shows sections of the workings in the New Glencrieff Vein and its west branch, Wanlockhead. It shows which areas of the vein contained galena, the lead ore. The stoped areas for galena and zinc blende (sphalerite) and the areas of galena, zinc blende and hemimorphite are indicated.
Caption Text 2	The mine was sunk to a depth of 1320 feet and the bottom of the shaft was about 140 feet below sea level. Water was pumped in two stages, from the bottom to the 160 fathom level and from there to an adit level 90 feet from the surface.
Caption Text 3	The main vein varied in thickness. At the south end of the top levels it was exceedingly rich in galena and the main ore shoot was continuous for 200 fathoms.

The Basic Record:

Simple Name	Diagram
Brief Description	Sections of the workings in the New Glencrieff Vein, Wanlockhead, Dumfriesshire.
Materials	Diagram
Associated Place	Scotland, Dumfriesshire, Wanlockhead
(Nature of Grid Reference	Diagram of mine in this location
Ref. Author	Wilson, G.V.
Ref Title	The lead, zinc, copper and nickel ores of Scotland. Special reports on the mineral resources of Great Britain vol XVII.
Ref. Publication Details	Edinburgh : HMSO, 1921.
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Image File	P528150.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528151 Rough block mica from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

The Caption:

Caption Title Rough block mica from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty

Subtitle

Caption Text 1 A collection of specimens of rough block mica from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty. They have undergone very little processing other than extraction and some rough shaping and splitting - a process known as rough dressing or rough cobbing. British Geological Survey Petrology Collection sample number MC 7759.

Caption Text 2 Beyond this the mica would undergo further processing, further splitting and then trimming to remove imperfections. The preparation of block mica for industrial use was a highly specialized task and the workers employed, young girls recruited locally, had to undergo many weeks of training though it was possible to judge after only a few days if a girl had the aptitude for the work.

Caption Text 3 The trainees' first task was to master the technique of cutting the mica quickly and cleanly and from there they learnt how to extract the largest possible plate with the minimum of waste, how and when to remove interlaminar stains by splitting, and how to remove damaged films from the surface of the block as thinly as possible. Once trained a worker could produce from 4.5 lbs. daily for the smaller grades to 16 lbs. for the larger grades.

The Basic Record:

Simple Name Mineral specimen

Brief Description Rough block mica from the Little Scatwell mica prospect, eight miles from Strathpeffer, Ross and Cromarty.

Materials Mineral specimen

Associated Place Scotland, Ross and Cromarty, Strathpeffer, Little Scatwell mica prospect

(Nature of

Grid Reference Location specimen was found

Ref. Author Kennedy, W.Q. and Lawrie, T.R.M.

Ref Title Commercial mica in Scotland. Part II. Preliminary description of some occurrences north of the Great Glen.

Ref. Publication Details London : Geological Survey and Museum, 1943.

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Image CD 21

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Inputter R.P. McIntosh

Input Date 15/06/2003

P528152 Map of the Lecht iron ore vein, Tomintoul, Banffshire

The Caption:

Caption Title	Map of the Lecht iron ore vein, Tomintoul, Banffshire
Subtitle	
Caption Text 1	The map indicates the site of the mine and a number of known outcrops of the vein. The vein can be traced along a line running south 15 degrees west, then south, then south-south-east for a distance of four miles.
Caption Text 2	The outcrop of the vein runs in a narrow and fairly deep valley drained by two small streams which unite to form the Conglass Water. The course of these valleys has been determined by the belt of brecciated rock in which the iron ores occur. Recent work indicates this is a post-Dalradian explosive intrusion-breccia.
Caption Text 3	The mine can be found at the point marked A on the map. A trenching exercise by the Geological Survey of Scotland in 1917 proved a vein 30 feet wide. Adjacent to the vein the country rock is much broken and filled with ochreous material. On the east side there was 15 feet of lumpy, reddish brown siliceous limonite with manganese ore. The material was more compact on the western side.

The Basic Record:

Simple Name	Map
Brief Description	Map of the Lecht iron ore vein, Tomintoul, Banffshire.
Materials	Map
Associated Place	Scotland, Banffshire, Tomintoul
(Nature of	Map of area
Grid Reference	

Ref. Author	Macgregor, M., Lee, G.W. and Wilson, G.V.
Ref Title	The iron ores of Scotland. Special reports on the mineral resources of Great Britain vol XI.
Ref. Publication Details	Edinburgh : HMSO, 1920.
Text Copyright	British Geological Survey © NERC. All rights reserved.

Image and Other Asset Info:

Image CD	21
Image File	P528152.tif
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Inputter	R.P. McIntosh
Input Date	15/06/2003

P528153 Limestone from Petershill Reservoir, West Lothian

The Caption:

Caption Title	Limestone from Petershill Reservoir, West Lothian
Subtitle	
Caption Text 1	A brown coarse-grained limestone composed mainly of whole and fragmentary crinoid ossicles from a quarry, 1,000 yards north 5 degrees east of the north-east end of the Petershill Reservoir, near Bathgate, West Lothian. British Geological Survey Petrology Collection sample number MC 7761.
Caption Text 2	The Petershill (Blackhall) Limestone is up to 60 feet thick. It was formerly extensively worked in a series of quarries from Pertershill northwards to Wester Tartraven Farm.
Caption Text 3	The limestones of West Lothian are all Carboniferous age. The Carboniferous Lower Limestone Group contains several beds of limestone and at least one of these, the Petershill (Blackhall) Limestone has been extensively worked.

The Basic Record:

Simple Name	Rock specimen
Brief Description	Limestone from Petershill Reservoir, West Lothian.
Materials	Rock specimen
Associated Place	Scotland, West Lothian, Petershill Reservoir
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Image and Other Asset Info:

Image CD	21
Image File	P528153.tif
Image Copyright	British Geological Survey © NERC. All rights reserved.
Inputter	R.P. McIntosh
Input Date	15/06/2003

P531423 Photomicrograph of Great Estuarine limestone, . Allt Eoghainn, 200 yards south of old main road, Strollamus, Skye, Invernessshire, Scotland

The Caption:

Caption Title Photomicrograph of Great Estuarine limestone, . Allt Eoghainn, 200 yards south of old main road, Strollamus, Skye, Invernessshire, Scotland

Subtitle

Caption Text 1 A patchily grey and white altered calcsilicate limestone, part calcite and part white fibrous wollastonite. This specimen is Jurassic in age. BGS sample number SL 243. British Geological Survey Petrology Collection sample number S 35343. Photomicrograph details: Light: XPL, Magnification: x2.5.

Caption Text 2 In thin section the rock is seen to be composed of sutured grains of calcite and large aggregates of fibrous and prismatic wollastonite. Idiomorphic, birefringent grossular occurs in small crystals set both in the calcite and in the wollastonite. Rare colourless epidote forming small aggregates is present. Clots of quartz act as centres for wollastonite growths and are traversed by many needles of wollastonite. Occasionally small prisms of diopside occur on the periphery of

Caption Text 3 The grey part of the rock effervesces freely with cold dilute HCl, while the white part is insoluble and shows the fibrous character of wollastonite.

The Basic Record:

Simple Name Photomicrograph
Brief Description Photomicrograph of Great Estuarine limestone, metamorphosed near contact with granophyre. Light: XPL. Magnification: x2.5. Allt Eoghainn, 200 yards south of old main road, Strollamus, Skye, Invernessshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Invernessshire, Skye, Stromallus, Allt Eoghainn
(Nature of Grid Reference) Location specimen was found

Display Date / Period Jurassic 206-142 Ma.
(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.
Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.
Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details Edinburgh : HMSO, 1949.

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Inputter E.K. Hyslop
Input Date 15/06/2003

P531424 Photomicrograph of limestone. Roadside 550-650 yards south-west of Cill Chriosd (Kilchrist) Church, Invernessshire, Scotland

The Caption:

Caption Title	Photomicrograph of limestone. Roadside 550-650 yards south-west of Cill Chriosd (Kilchrist) Church, Invernessshire, Scotland
Subtitle	
Caption Text 1	A grey, fine-grained saccharoidal limestone. This specimen is Cambro-Ordovician in age. BGS sample number SL 249. British Geological Survey Petrology Collection sample number S 35349. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	In thin section shows patchily varying grain size, being mostly of grain size 0.05-0.2 mm, but in places 0.01 mm or less and elsewhere of coarse grain up to 1.0 mm. Associated with the coarser carbonate are small areas of microcrystalline aggregate consisting of clear grains of carbonate and dark finely granular calcsilicates which include pyroxene and tremolite. Curved areas of coarser grain than the groundmass represent shell fragments.
Caption Text 3	In summary, the rock is a limestone with calcsilicates, with a variable grain size and containing recrystallized fossil remains.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone. Light: XPL. Magnification: x2.5. Roadside 550-650 yards south-west of Cill Chriosd (Kilchrist) Church, Invernessshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Invernessshire, Skye, Cill Chriosd
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Image File	P531424.tif
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Inputter	E.K. Hyslop
Input Date	15/06/2003

P531425 Photomicrograph of Lower Lias limestone. Old quarry, 1100 yards south-east of Applecross House, Ross and Cromarty, Scotland

The Caption:

Caption Title	Photomicrograph of Lower Lias limestone. Old quarry, 1100 yards south-east of Applecross House, Ross and Cromarty, Scotland
Subtitle	
Caption Text 1	A grey, compact oolitic limestone with a buff weathered crust. This specimen is Jurassic in age. BGS sample number SL 253. British Geological Survey Petrology Collection sample number S 35353. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	In thin section the ooliths are found to be 0.5-1.5 mm in diameter and frequently have as kernels irregular pieces of shell or echinodermal plate and spine and, less commonly, earlier ooliths with limonitized or pyritized borders. They are embedded in a very fine-grained matrix of calcite containing a few thin-walled microshells and scarce tiny grains of quartz. Subordinate detrital constituents include rolled shell fragments and rolled pebbles of oolite.
Caption Text 3	In summary the sample is a micrograined oolitic limestone.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Lower Lias limestone. Light: XPL. Magnification: x2.5. Old quarry, 1100 yards south-east of Applecross House, Ross and Cromarty, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ross and Cromarty, Applecross House
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Jurassic 206-142 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P531426 Photomicrograph of calcareous tufa. Roadside 680 yards south of Tornapress Bridge, Kishorn, Ross and Cromarty, Scotland

The Caption:

Caption Title Photomicrograph of calcareous tufa. Roadside 680 yards south of Tornapress Bridge, Kishorn, Ross and Cromarty, Scotland

Subtitle

Caption Text 1 A flesh-coloured, porous mass of tufa, composed of a turbid mass of very fine-grained calcium carbonate showing irregularly concentric growths from many centres. This specimen is Recent in age. BGS sample number SL 254. British Geological Survey Petrology Collection sample number S 35354. Photomicrograph details: Light: XPL, Magnification: x2.5.

Caption Text 2 The thin section shows an open aggregate formed by concentric calcium carbonate growths, which is partly filled by a brownish, slightly ferruginous marl containing small organic debris and scarce grains of quartz and feldspar. Tests on the material give the ordinary refractive index for calcite.

Caption Text 3 This rock is formed as a contemporary tufa deposit in a waterfall where a spring issues from an outcrop of Durness Limestone. The tufa is sufficient in amount and composition to be a useful source of lime for local use.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of calcareous tufa. Light: XPL. Magnification: x2.5. Roadside 680 yards south of Tornapress Bridge, Kishorn, Ross and Cromarty, Scotland.

Materials Photomicrograph

Associated Place Scotland, Ross and Cromarty, Kishorn, Tornapress Bridge

(Nature of Grid Reference Location specimen was found

Display Date / Period Recent, 10,000 years to present

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Inputter E.K. Hyslop

Input Date 15/06/2003

P531427 Photomicrograph of colomite. Roadside 680 yards south of Tornapress Bridge, Kishorn, Ross and Cromarty, Scotland

The Caption:

Caption Title Photomicrograph of colomite. Roadside 680 yards south of Tornapress Bridge, Kishorn, Ross and Cromarty, Scotland

Subtitle

Caption Text 1 A pale, flesh-grey, compact dolomite with flinty fracture. It is traversed by thin cracks filled with white dolomite. This specimen is Cambro-Ordovician in age. BGS sample number SL 255. British Geological Survey Petrology Collection sample number S 35355. Photomicrograph details: Light: XPL, Magnification: x2.5.

Caption Text 2 In thin section the rock is seen to be composed of small grains of dolomite, 0.01-0.05 mm across, with veins and patches of coarser grain, up to 0.3 mm. Quartz grains, 0.05-0.07 mm across, are numerous, but on the whole probably form less than 5 per cent by volume of the rock. There are occasional films of limonitic silt of stylolitic character.

Caption Text 3 In summary, the rock is a fine-grained dolomite, which is veined and brecciated.

The Basic Record:

Simple Name Photomicrograph
Brief Description Photomicrograph of colomite. Light: XPL. Magnification: x2.5. Roadside 680 yards south of Tornapress Bridge, Kishorn, Ross and Cromarty, Scotland.

Materials Photomicrograph

Associated Place Scotland, Ross and Cromarty, Kishorn, Tornapress Bridge

(Nature of Location specimen was found

Grid Reference

Display Date / Period Cambro-Ordovician 545-443 Ma.
(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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P531428 Photomicrograph of limestone. Quarry, Blackwoodridge Limeworks, 50 yards south of Blackwoodridge Farm, 1 mile south of Waterbeck, Dumfriesshire, Scotland

The Caption:

Caption Title	Photomicrograph of limestone. Quarry, Blackwoodridge Limeworks, 50 yards south of Blackwoodridge Farm, 1 mile south of Waterbeck, Dumfriesshire, Scotland
Subtitle	
Caption Text 1	A reddish, compact limestone with duller red banding, reacting freely with dilute hydrochloric acid. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 264. British Geological Survey Petrology Collection sample number S 35468. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	In thin section the more crystalline part is seen to be composed of anhedral grains of calcite about 0.05-0.1 mm across, among which are preserved relics of fossil structures. The duller red portion is composed of fossil debris, including foraminifera, shell and crinoid fragments, ostracod shells, productid spines, scarce algal nodules and coral. The matrix is recrystallized to fine-grained granular calcite, and red iron ore is abundantly disseminated through it. There may be a little dolomite in the matrix, as some grains give rhomboid sections.
Caption Text 3	The sample is a micrograined limestone, containing recrystallized remains of microfossils.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of limestone. Light: PPL. Magnification: x2.5. Quarry, Blackwoodridge Limeworks, 50 yards south of Blackwoodridge Farm, 1 mile south of Waterbeck, Dumfriesshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Dumfriesshire, Waterbeck, Blackwoodridge Limeworks
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Image File	P531428.tif
Image Copyright	British Geological Survey © NERC. All rights reserved.
Inputter	E.K. Hyslop
Input Date	15/06/2003

P531429 Photomicrograph of Charlestown Main Limestone. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland

The Caption:

Caption Title Photomicrograph of Charlestown Main Limestone. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland

Subtitle

Caption Text 1 The sample is a whitish fine-grained saccharoidal limestone. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 232. British Geological Survey Petrology Collection sample number S 35471. Photomicrograph details: Light: XPL, Magnification:

Caption Text 2 In thin section it shows numerous pseudomorphs, in granular calcite, or crinoidal columnals, the internal structure being retained and picked out by impregnations of opaque dust around the pores. Adjacent samples are impure and contain debris of chlorite, muscovite and garnet.

Caption Text 3 The sample was collected from the lower half of the quarry face, a short distance above a two hundred foot quartz dolerite sill.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Charlestown Main Limestone. Light: XPL. Magnification: x2.5. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Fifeshire, Kirkcaldy, Chapel Limestone Quarry

(Nature of Grid Reference Location specimen was found

Display Date / Period Carboniferous 354-290 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Image File P531429.tif

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Inputter E.K. Hyslop

Input Date 15/06/2003

P531430 Photomicrograph of Stinchar Limestone. Aldons Limeworks, 1.5 miles south of Pinmore station, Ayrshire, Scotland

The Caption:

Caption Title	Photomicrograph of Stinchar Limestone. Aldons Limeworks, 1.5 miles south of Pinmore station, Ayrshire, Scotland
Subtitle	
Caption Text 1	A dark grey compact limestone showing films of calcite coating irregular joints or fracture surfaces. This specimen is Ordovician in age. BGS sample number SL 266. British Geological Survey Petrology Collection sample number S 35504. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	Microscopically the sample is a calcilutite (calcite-mudstone) greatly recrystallized to clear granular calcite, 0.02-0.01 mm grain size. Numerous aggregations of algal tubes (Girvanella) are present and have in part resisted the recrystallization which has affected the matrix. Ostracods are common and parts of the rock are rich in crinoid columnals and shell fragments. A little quartz (about 3-5 per cent) is present and pyrite in similar proportions occurs in small irregular grains and clots. In places clayey material is present in sufficient quantity to give the appearance of a calcite breccia with clay matrix.
Caption Text 3	The rock contains fragments of pelitomorphic limestone and is veined and patched by coarsely crystallized calcite.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Stinchar Limestone. Light: PPL. Magnification: x2.5. Aldons Limeworks, 1.5 miles south of Pinmore station, Ayrshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ayrshire, Pinmore Station, Aldons Limeworks
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Ordovician 495-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P531431 Photomicrograph of Stinchar Limestone. Kirkdominae Hill, Auchensoul Farm, 2 miles west of Barr, Ayrshire, Scotland

The Caption:

Caption Title	Photomicrograph of Stinchar Limestone. Kirkdominae Hill, Auchensoul Farm, 2 miles west of Barr, Ayrshire, Scotland
Subtitle	
Caption Text 1	A fine-grained compact, dark grey limestone. This specimen is Ordovician in age. BGS sample number SL 267. British Geological Survey Petrology Collection sample number S 35505. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	Microscopically the rock is a calcilitite (calcite-mudstone) recrystallized so far that the matrix is an admixture of turbid brown carbonate and clear fine-grained calcite, but without the destruction of the numerous fossil remains of Girvanella and ostracods. Scarce fragments of crinoid, polyzoan and shell, possibly brachiopod, are present. Pyrite is scattered in small grains and clots through the rock as an accessory constituent, and there are stylolitic wisps of
Caption Text 3	In summary the sample is a very fine-grained muddy limestone, composed of slightly recrystallized pelitomorph calcite, scarce microdebris of fossils and numerous algal growths.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Stinchar Limestone. Light: PPL. Magnification: x2.5. Kirkdominae Hill, Auchensoul Farm, 2 miles west of Barr, Ayrshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Ayrshire, Barr, Kirkdominae Hill, Auchensoul Farm
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Ordovician 495-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P531432 Photomicrograph of marble. Roadside 430 yards east-north-east of Ledbeg, Sutherland, Scotland

The Caption:

Caption Title	Photomicrograph of marble. Roadside 430 yards east-north-east of Ledbeg, Sutherland,
Subtitle	
Caption Text 1	A massive, structureless, compact, white serpentinous marble, with faint yellow patternless markings. This specimen is Cambro-Ordovician in age. BGS sample number SL 271. British Geological Survey Petrology Collection sample number S 35796. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The rock is composed of an aggregate of shapeless interlocking grains of calcite, 0.05-0.15 mm in size. These are generally traversed by very close-set cleavage and twinning planes. In places the rock shows a mottling due to angularly patchy distribution of clear and turbid calcite. The clear patches are composed of the small grains and the turbid patches seem to be relics of large crystals in which almost submicroscopic striations (due to cleavage or twinning or both) have been produced. The striations are subparallel throughout the patch and are interrupted where new small grains with broader twin lamellae have crystallized. The orientation of the lamellae in such grains is diverse. In places narrow lines of shear are shown by granulation and parallel orientation of calcite grains and by a lining of thin serpentine flakes.
Caption Text 3	Pseudomorphs of olivine in serpentine are sporadic in the rock as individual crystals or clusters. Phlogopite also is present in small flakes and aggregates, the calcite associated with which is coarser in grain than elsewhere in the rock. The rock is a marble triturated by stress.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of marble. Light: PPL. Magnification: x2.5. Roadside 430 yards east-north-east of Ledbeg, Sutherland, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Sutherland, Ledbeg
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Cambro-Ordovician 545-443 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P531433 Photomicrograph of Charlestown Main Limestone, top 7 ft. West Quarry. Charlestown Quarries, 3 miles south-west of Dunfermline, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Charlestown Main Limestone, top 7 ft. West Quarry. Charlestown Quarries, 3 miles south-west of Dunfermline, Fifeshire, Scotland
Subtitle	
Caption Text 1	A brownish, compact dolomitized limestone, having a crystalline appearance due to the abundance of crinoid plates. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 276. British Geological Survey Petrology Collection sample number S 35799. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	It is composed of fossil debris consisting essentially of crinoidal and polyzoan fragments; subordinate fossil components include shells, spines, foraminifera, siliceous spicules and scarce phosphatic fragments. Parts of the rock are completely dolomitized; in other parts, while the matrix is recrystallized in dolomite and partly replaced by quartz, the larger fossil structures remain wholly or in part of calcite.
Caption Text 3	In summary, the sample is a fossiliferous dolomitic limestone, containing angular fossil debris.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Charlestown Main Limestone, top 7 ft. Light: PPL. Magnification: x2.5. West Quarry. Charlestown Quarries, 3 miles south-west of Dunfermline, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Dunfermline, Charlestown Quarries, West Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

P531434 Photomicrograph of Charlestown Main Limestone. Bogie Mains Quarry, 1 mile north-west of Kirkcaldy station, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Charlestown Main Limestone. Bogie Mains Quarry, 1 mile north-west of Kirkcaldy station, Fifeshire, Scotland
Subtitle	
Caption Text 1	Dark grey bedded dolomitic chert, with white angular specks, showing an undulating lamination. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 277. British Geological Survey Petrology Collection sample number S 35800. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	In thin section the rock consists of a matrix of fine-grained silica and obscure opaque material, in which are embedded numerous bodies of round, rectangular or less regular shapes, sometimes showing relics of shell structure. These may be composed entirely of cherty silica, of silica and prochlorite, silica and dolomite, or of all three; or they may be entirely of chlorite or of dolomite. Only in one large dolomite-silica fragment was the trabecular structure of a crinoid recognized. The chlorite is pleochroic from yellow to colourless.
Caption Text 3	The rock appears to be a silicified shale, originally calcareous and rich in fossil debris. The large amount of chlorite suggests that pyroclastic material formed part of the original sediment. The silica available for silicification may also have been of volcanic origin.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Charlestown Main Limestone. Light: PPL. Magnification: x2.5. Bogie Mains Quarry, 1 mile north-west of Kirkcaldy station, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Kirkcaldy Station, Bogie Mains Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P531435 Photomicrograph of Charlestown Main Limestone. Glenniston Quarry, 1 mile north of Auchtertool, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Charlestown Main Limestone. Glenniston Quarry, 1 mile north of Auchtertool, Fifeshire, Scotland
Subtitle	
Caption Text 1	A compact, fawn-coloured dolomite with crinoid ossicles. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 279. British Geological Survey Petrology Collection sample number S 35802. Photomicrograph details: Light: XPL, Magnification:
Caption Text 2	The rock is composed of interlocking grains of dolomite, 0.1-0.2 mm across, amongst which there are single crystal dolomite replacements of crinoid ossicles and coarsely crystalline aggregates after shell casts. There is great variation in the degree of preservation of the original outline of the organic constituents, some ossicles and shell casts being perfect, while others are mere indications.
Caption Text 3	Calcite was not distinguished in the thin section, but must be fairly uniformly present through the rock on the evidence of slight overall effervescence with cold dilute hydrochloric acid.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Charlestown Main Limestone. Light: XPL. Magnification: x2.5. Glenniston Quarry, 1 mile north of Auchtertool, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Auchtertool, Glenniston Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P531436 Photomicrograph of Charlestown Main (Seafield Tower) Limestone. Shore south of Seafield Tower, Kirkcaldy, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Charlestown Main (Seafield Tower) Limestone. Shore south of Seafield Tower, Kirkcaldy, Fifeshire, Scotland
Subtitle	
Caption Text 1	A brown, compact, microcrystalline dolomite with crinoid ossicles scattered in the rock. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 280. British Geological Survey Petrology Collection sample number S 35803. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	In thin section the rock is a dolomite of very variable grain, parts being of 0.1 mm grain size and cemented by limonitic clay, most being about 0.2 mm grain size, but large areas show recrystallized dolomite of grain 0.5-1.0 mm across. In this rock there is much more disseminated limonite (or limonitic clay) than in associated limestones, and because of original impurities having impregnated the carbonate of the crinoids, the trabecular structure is extensively preserved in spite of the dolomitization, which may have completely destroyed all other evidence, including shape.
Caption Text 3	The rock shows some reaction with dilute hydrochloric acid, whilst the crinoid remains do not, indicating they have been dolomitized.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Charlestown Main (Seafield Tower) Limestone. Light: XPL. Magnification: x2.5. Shore south of Seafield Tower, Kirkcaldy, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Kirkcaldy, Seafield Tower
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P531437 Photomicrograph of Burdiehouse Limestone, 'Bottom Bed'. Newbigging Mine, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Burdiehouse Limestone, 'Bottom Bed'. Newbigging Mine, Fifeshire, Scotland
Subtitle	
Caption Text 1	A dull fawn-grey limestone, containing scattered smooth-surfaced black bodies which include limestone. This specimen is Calciferous Sandstone Series (Carboniferous) in age. BGS sample number SL 217. British Geological Survey Petrology Collection sample number S 35897. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The rock is composed of very finely divided calcite, locally slightly and irregularly recrystallized, with sparse, small rhombs of dolomite reaching 0.2 mm size. Scattered through the rock are fairly numerous thin shells and shell fragments densely permeated by pyrite. Quartz grains are small and few. Irregular, short veins of limonitic matter and cracks sealed by calcite
Caption Text 3	Many of the fossils are ostracods, either whole or broken and collapsed, and often filled with clear coarsely granular calcite.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Burdiehouse Limestone, 'Bottom Bed'. Light: XPL. Magnification: x2.5. Newbigging Mine, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Burntisland, Nine Lums, Newbigging Mine
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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P531440 Photomicrograph of Charlestown Main Limestone. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland

The Caption:

Caption Title Photomicrograph of Charlestown Main Limestone. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland

Subtitle

Caption Text 1 Coarse-grained, bluish dolomite mottled with duller, cream-coloured dolomite. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 210. British Geological Survey Petrology Collection sample number S 35900. Photomicrograph details: Light: XPL, Magnification: x2.5.

Caption Text 2 The thin section shows dolomite in crystals up to 1.0 mm in size, mostly of irregular shape, but often showing rhomboidal angles. Interstitial between the grains is a patchy cement of clay aggregate, faintly yellowish-green in places and possessing a moderate birefringence. A little secondary quartz is present and pyrite occurs in small scattered grains. The dolomite usually shows undulose extinction.

Caption Text 3 In summary, the rock is a dolomite with a clay aggregate. It is medium-grained, with an uneven mosaic texture, and shows some evidence for strain in the dolomite crystals.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Charlestown Main Limestone. Light: XPL. Magnification: x2.5. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Fifeshire, Kirkcaldy, Chapel Limestone Quarry

(Nature of Grid Reference) Location specimen was found

Display Date / Period Carboniferous 354-290 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Input Date 15/06/2003

P531441 Photomicrograph of Charlestown Main Limestone. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Charlestown Main Limestone. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland
Subtitle	
Caption Text 1	Compact grey limestone permeated with and containing compact aggregates of greenish-yellow structureless clay and also some microcrystalline greenish-white aggregates. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 212. British Geological Survey Petrology Collection sample number S 35902. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The limestone is composed of granular calcite of 0.1 mm grain size and over, with occasional relict organic structures of which the most conspicuous are foraminifera, within the chambers of which the calcite is coarsely recrystallized. Masses of an almost opaque, finely divided clay aggregate are abundant in patches.
Caption Text 3	In summary, the sample is a limestone with calcsilicates. It has a variable grain size, contains fossil debris and is in part granoblastic.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Charlestown Main Limestone. Light: PPL. Magnification: x2.5. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Kirkcaldy, Chapel Limestone Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P531442 Photomicrograph of Charlestown Main Limestone. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Charlestown Main Limestone. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland
Subtitle	
Caption Text 1	Compact grey limestone permeated with and containing compact aggregates of greenish-yellow structureless clay and also some microcrystalline greenish-white aggregates. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 212. British Geological Survey Petrology Collection sample number S 35902. Photomicrograph details: Light: XPL, Magnification: x2.5.
Caption Text 2	The limestone is composed of granular calcite of 0.1 mm grain size and over, with masses of an almost opaque, finely divided clay aggregate abundant in patches. Occasional relict organic structures are present, including foraminifera, within the chambers of which the calcite is coarsely recrystallized, and spines and occasional crinoid ossicles are also obvious.
Caption Text 3	Garnet is locally developed in dodecahedra and in irregular grains or aggregates up to 0.2 mm across and the microcrystalline greenish aggregate seen in hand specimen is largely grossular.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Charlestown Main Limestone. Light: XPL. Magnification: x2.5. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Kirkcaldy, Chapel Limestone Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P531443 Photomicrograph of Charlestown Main Limestone. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland

The Caption:

Caption Title	Photomicrograph of Charlestown Main Limestone. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland
Subtitle	
Caption Text 1	Dull grey limestone with numerous white spots and scarcer pale green spots, and with a band in which a greenish mineral is more abundant than calcite and is streaked out parallel to the band. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 213. British Geological Survey Petrology Collection sample number S 35903. Photomicrograph details: Light: PPL, Magnification: x2.5.
Caption Text 2	The limestone is composed of granular calcite, 0.02 mm-0.6 mm grain size, together with numerous large grains representing crinoid ossicles. Relict organic structures are preserved by outlines in clay, and large shapeless masses of opaque clay are abundant. Also aggregates of translucent cryptocrystalline, moderately birefringent material are common.
Caption Text 3	The white spots seen in the specimen are a finely divided flaky aggregate of moderate birefringence, perhaps talc.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Charlestown Main Limestone. Light: PPL. Magnification: x2.5. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Fifeshire, Kirkcaldy, Chapel Limestone Quarry
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
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P531445 Photomicrograph of Charlestown Main Limestone. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland

The Caption:

Caption Title Photomicrograph of Charlestown Main Limestone. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland

Subtitle

Caption Text 1 Dark grey limestone with grey spots, passing to yellowish-grey overall with black streaks and a pale green mineral filling spaces lined with black material. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 214. British Geological Survey Petrology Collection sample number S 35904. Photomicrograph details: Light: XPL, Magnification:

Caption Text 2 The rock is well crystallized to irregular granular calcite of varying size and uniformly permeated by brown dust or stain. It contains crinoid ossicles and outlines of shells in both cases recrystallized, though the former may still be of one piece and retain internal structure. Garnet (grossular) is distributed throughout the whole rock. Only a small quantity of fine-grained, almost opaque, aggregate is present in the section.

Caption Text 3 The thin section shows a thermally altered limestone. The carbonate has been completely recrystallized to coarse grains, and tiny garnets (small dark dots and aggregates) have been produced by the action of heat. The outlines of fossils are partially preserved.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Charlestown Main Limestone. Light: XPL. Magnification: x2.5. Chapel Limestone Quarry, about 2 miles north-west of Kirkcaldy, Fifeshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Fifeshire, Kirkcaldy, Chapel Limestone Quarry

(Nature of Grid Reference) Location specimen was found

Display Date / Period Carboniferous 354-290 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Image File P531445.tif

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Inputter E.K. Hyslop

Input Date 15/06/2003

P531447 Photomicrograph of limestone. Quarry, 1450 yards south by west of Achvarasdal, Reay, Caithness

The Caption:

Caption Title Photomicrograph of limestone. Quarry, 1450 yards south by west of Achvarasdal, Reay, Caithness, Scotland

Subtitle

Caption Text 1 A pale buff, compact limestone, composed essentially of rather turbid calcite with grain size 0.01-0.15 mm across, with scattered larger grains. This specimen is Middle Old Red Sandstone (Devonian) in age. BGS sample number SL 282. British Geological Survey Petrology Collection sample number S 35911. Photomicrograph details: Light: XPL,

Caption Text 2 Angular quartz, up to 0.15 mm grain size, white mica, in flakes generally 0.1 mm long, and potash-feldspar are abundantly distributed in the rock and are concentrated along thin laminae coloured dark by bituminous matter.

Caption Text 3 Following dissolution of the sample in cold dilute hydrochloric acid, the insoluble residue contains chlorite, hornblende and clay found as accessory constituents, and potash-feldspar which has developed crystal faces during recrystallisation. In summary the rock is a fine-grained muddy and bituminous limestone with strong bedding lamination.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of limestone. Light: XPL. Magnification: x2.5. Quarry, 1450 yards south by west of Achvarasdal, Reay, Caithness, Scotland.

Materials Photomicrograph

Associated Place Scotland, Caithness, Reay, Achvarasdal

(Nature of Grid Reference) Location specimen was found

Display Date / Period Devonian 417-354 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Input Date 15/06/2003

P531448 Photomicrograph of Lake Marl. Westfield Loch, 4 miles south-west of Thurso, Caithness, Scotland

The Caption:

Caption Title Photomicrograph of Lake Marl. Westfield Loch, 4 miles south-west of Thurso, Caithness, Scotland

Subtitle

Caption Text 1 This sample of limestone has been dissolved in dilute acetic acid, leaving a residual dark grey powder showing much brown and opaque organic matter, together with mineral dust which is mostly alkali-feldspar and quartz with chlorite, bleached biotite, carbonaceous clay, scarce opaline diatoms and spicules. This specimen is Recent in age. BGS sample number SL 168. British Geological Survey Petrology Collection sample number S 35985. Photomicrograph details: Light: PPL, Magnification: x10.

Caption Text 2 The thin section image shows aggregates of scales of fresh biotite and rare flakes of muscovite. Brown isotropic fragments of arthropods are common, and scarce sponge spicules are present. Heavy mineral particles include grains and rhombs of dolomite and possibly kyanite.

Caption Text 3 The sample is a marl formed as a contemporary deposit in the bed of a drained loch. Such deposits are extensive in Caithness and it has been calculated that there are about 553,000 tons of recoverable marl slurry in Caithness, having a lime content of around 90 per cent.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of Lake Marl. Light: PPL. Magnification: x10. Westfield Loch, 4 miles south-west of Thurso, Caithness, Scotland.

Materials Photomicrograph

Associated Place Scotland, Caithness, Thurso, Westfield Loch

(Nature of Grid Reference) Location specimen was found

Display Date / Period Recent, 10,000 years to present

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Input Date 15/06/2003

P531450 Photomicrograph of limestone. 3 miles north-west of Kirkton of Glenbucket, Aberdeenshire

The Caption:

Caption Title Photomicrograph of limestone. 3 miles north-west of Kirkton of Glenbucket, Aberdeenshire, Scotland

Subtitle

Caption Text 1 Dove-grey crystalline limestone composed of interlocked, recrystallized calcite crystals up to 1.0 mm across and showing complex lamellar twinning. This specimen is Dalradian Supergroup (Precambrian) in age. BGS sample number GS 3. British Geological Survey Petrology Collection sample number S 37487. Photomicrograph details: Light: PPL,

Caption Text 2 Granulitization occurs along ill-defined narrow bands. Small rounded quartz grains and white mica flakes are scattered through the rock. Pyrite and opaque black dust are accessory.

Caption Text 3 In summary, a limestone with quartz and phlogopite, with a medium-grained texture, in part granoschistose.

The Basic Record:

Simple Name Photomicrograph

Brief Description Photomicrograph of limestone. Light: PPL. Magnification: x2.5. Most southerly quarry immediately east of the road, 200 yards south of the school, 3 miles north-west of Kirkton of Glenbucket, Aberdeenshire, Scotland.

Materials Photomicrograph

Associated Place Scotland, Aberdeenshire, Kirkton of Glenbucket

(Nature of Grid Reference) Location specimen was found

Display Date / Period Precambrian, Dalradian 750-515 Ma.

(Nature of Association) Stratigraphic period

Ref. Author Muir, A. and Phemister, J. et. al.

Ref Title The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.

Ref. Publication Details Edinburgh : HMSO, 1956.

Ref. Author Robertson, T.

Ref Title The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.

Ref. Publication Details Edinburgh : HMSO, 1949.

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Input Date 15/06/2003

P531452 Photomicrograph of Gilmerton (No. 1) Limestone. Whitfield Limeworks, 600 yards north-west of Deepsdykehead, 1 mile south-east of Carlops, Peeblesshire, Scotland

The Caption:

Caption Title	Photomicrograph of Gilmerton (No. 1) Limestone. Whitfield Limeworks, 600 yards north-west of Deepsdykehead, 1 mile south-east of Carlops, Peeblesshire, Scotland
Subtitle	
Caption Text 1	The sample is a grey to dark grey compact limestone. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 183. British Geological Survey Petrology Collection sample number S 40472. Photomicrograph details: Light: XPL, Magnification:
Caption Text 2	In thin section it is seen to be composed of round and angular grains of very fine-grained calcite, 0.02-0.05 mm across, with a cement of calcite and clay. Fragments of shell are common, with scattered small crinoid columnals and rare fragments of phosphate. Small angular quartz grains, granules of pyrite and drops of opaque bitumen are present.
Caption Text 3	In summary the sample is a very fine-grained muddy limestone composed of granules of clear calcite in a matrix of calcite and clay. The granular calcite is in part recognizable as fossil debris and includes tiny algal growths.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Gilmerton (No. 1) Limestone. Light: XPL. Magnification: x2.5. Whitfield Limeworks, 600 yards north-west of Deepsdykehead, 1 mile south-east of Carlops, Peeblesshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Peeblesshire, Carlops, Whitfield Limeworks
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Image CD	22
Image File	P531452.tif
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Input Date	15/06/2003

P531454 Photomicrograph of Gilmerton (No. 1) Limestone. Whitfield Limeworks, 600 yards north-west of Deepsdykehead, 1 mile south-east of Carlops, Peeblesshire, Scotland

The Caption:

Caption Title	Photomicrograph of Gilmerton (No. 1) Limestone. Whitfield Limeworks, 600 yards north-west of Deepsdykehead, 1 mile south-east of Carlops, Peeblesshire, Scotland
Subtitle	
Caption Text 1	Grey to dark grey compact limestone composed of very fine-grained calcite with larger crinoid fossil debris. This specimen is Carboniferous Limestone Series in age. BGS sample number SL 183. British Geological Survey Petrology Collection sample number S 40472. Photomicrograph details: Light: XPL, Magnification: x10.
Caption Text 2	The thin section image shows a large round fragment of crinoid ossicle enclosed within a matrix of very fine-grained rounded and angular grains of calcite, 0.02-0.05 mm across. The matrix is cemented by calcite and clay. The fossil fragment and matrix have been cut by a planar fracture which appears to be infilled by semi-opaque brown bituminous material.
Caption Text 3	Fragments of shell are common in the rock, and such crinoid columnals are scattered throughout. Small angular quartz grains, granules of pyrite and drops of bitumen are also present in the rock. In summary the sample is a very fine-grained limestone with a granular calcite matrix cemented by mud or clay, with common fossils scattered throughout.

The Basic Record:

Simple Name	Photomicrograph
Brief Description	Photomicrograph of Gilmerton (No. 1) Limestone. Light: XPL. Magnification: x10. Whitfield Limeworks, 600 yards north-west of Deepsdykehead, 1 mile south-east of Carlops, Peeblesshire, Scotland.
Materials	Photomicrograph
Associated Place	Scotland, Peeblesshire, Carlops, Whitfield Limeworks
(Nature of Grid Reference)	Location specimen was found
Display Date / Period	Carboniferous 354-290 Ma.
(Nature of Association)	Stratigraphic period
Ref. Author	Muir, A. and Phemister, J. et. al.
Ref Title	The limestones of Scotland: chemical analyses and petrography. Special report on the mineral resources of Great Britain v. 37.
Ref. Publication Details	Edinburgh : HMSO, 1956.
Ref. Author	Robertson, T.
Ref Title	The limestones of Scotland. Special reports of the mineral resources of Great Britain. v.35.
Ref. Publication Details	Edinburgh : HMSO, 1949.
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Input Date	15/06/2003

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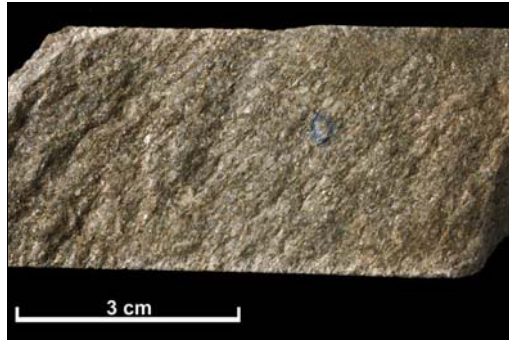


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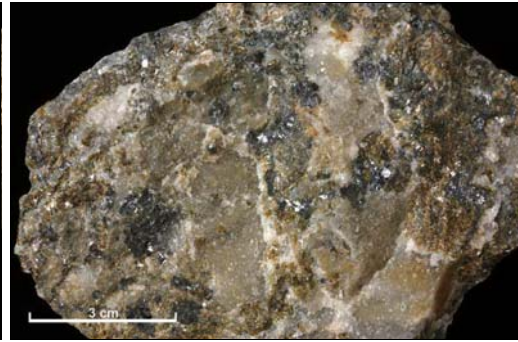
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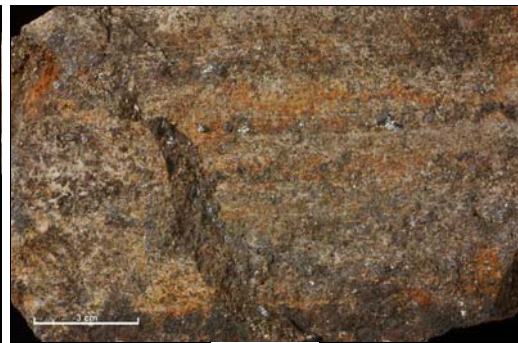
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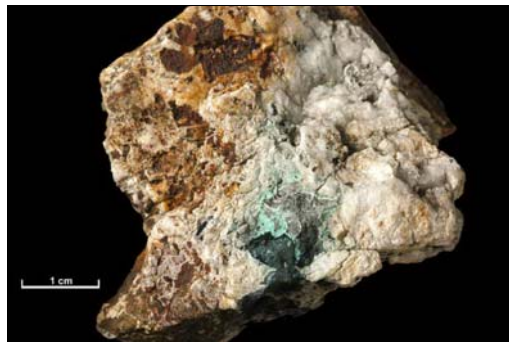
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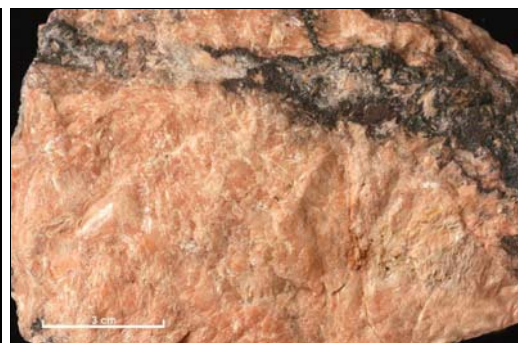
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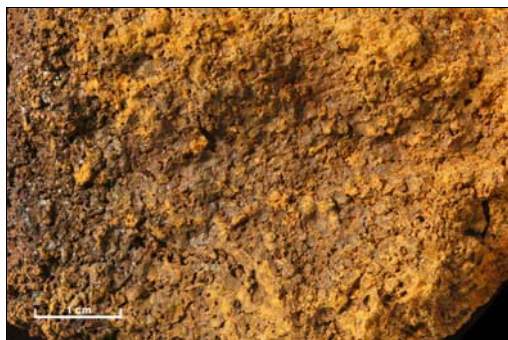
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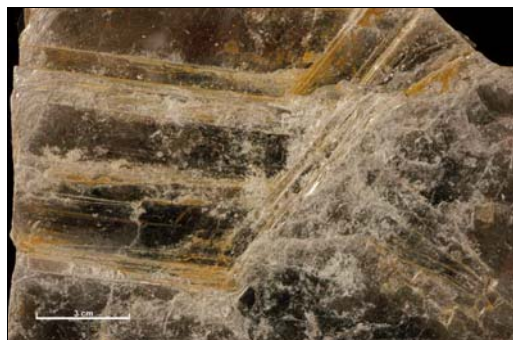
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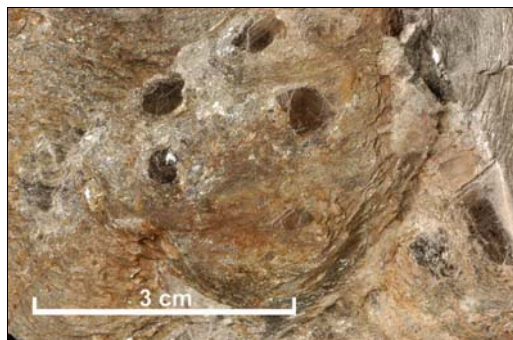
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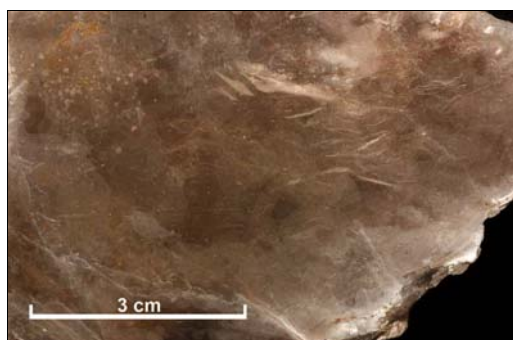
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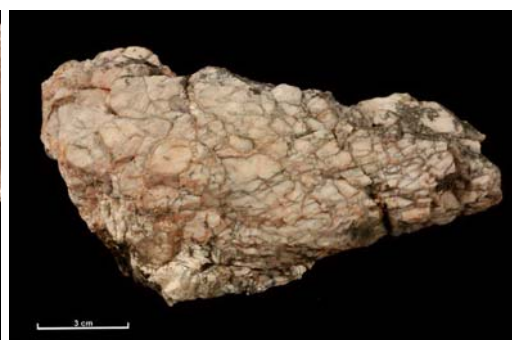
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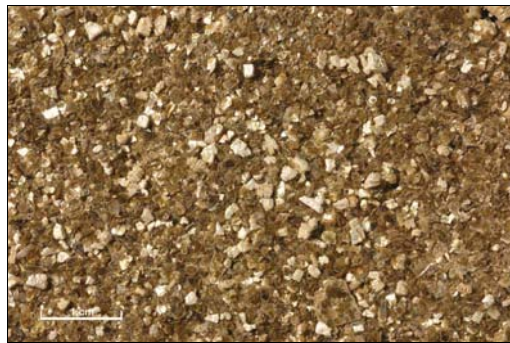
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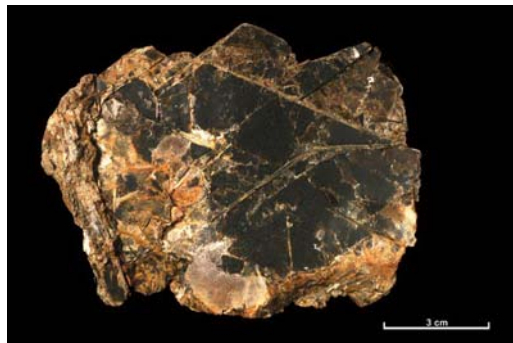


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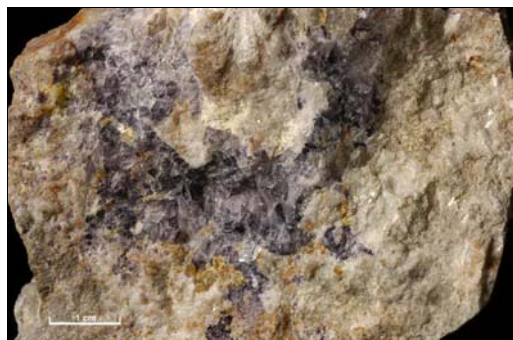
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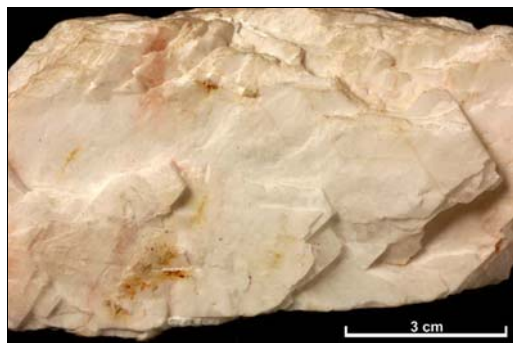
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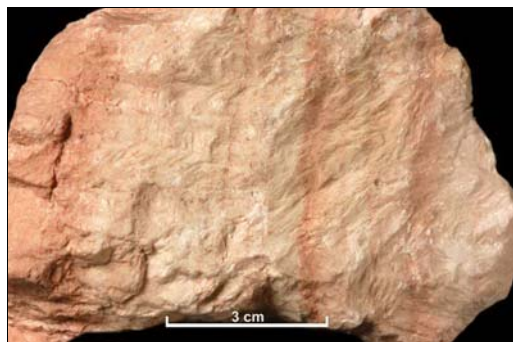
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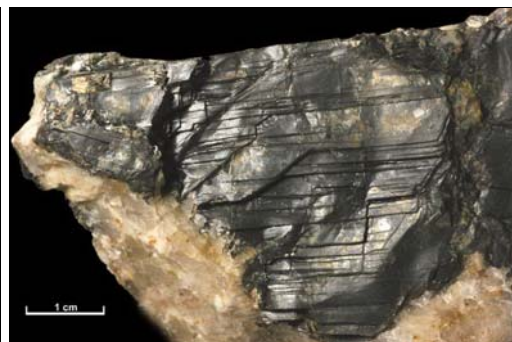
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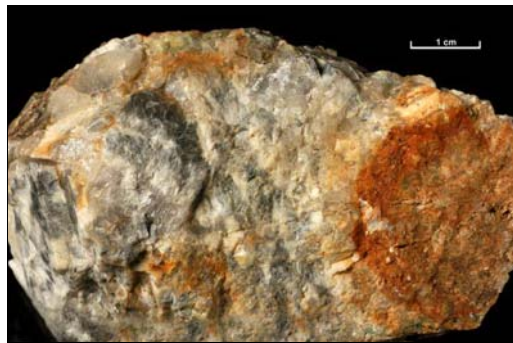


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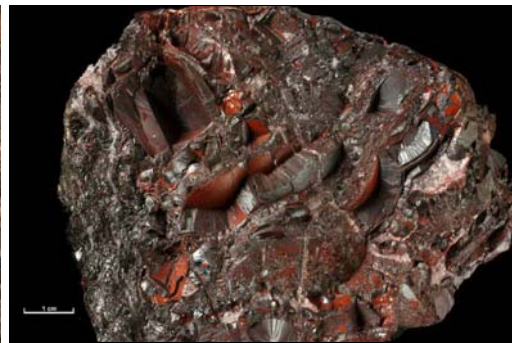
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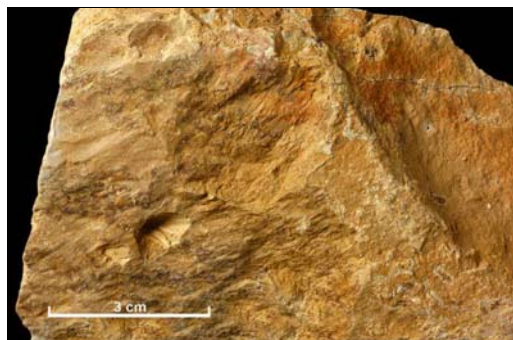
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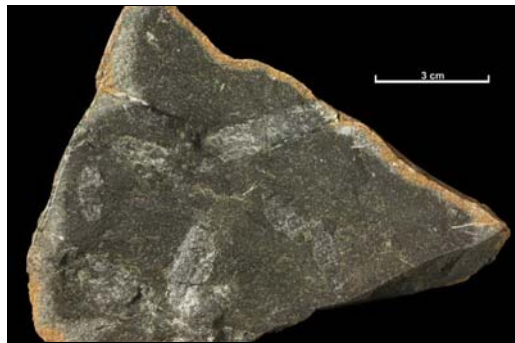


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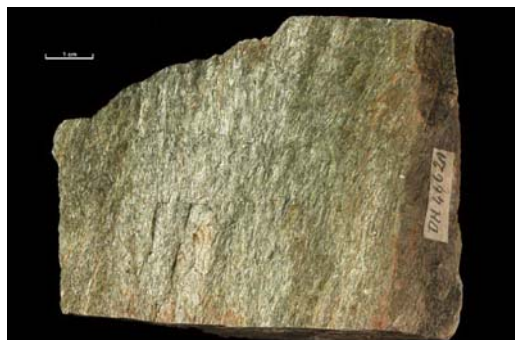
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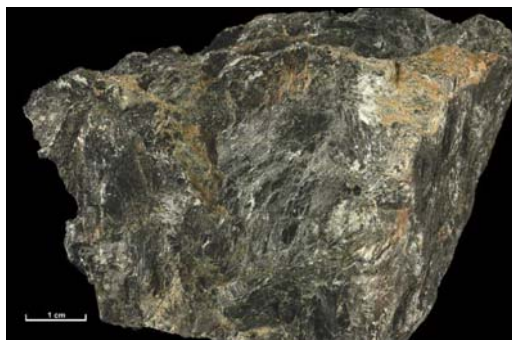
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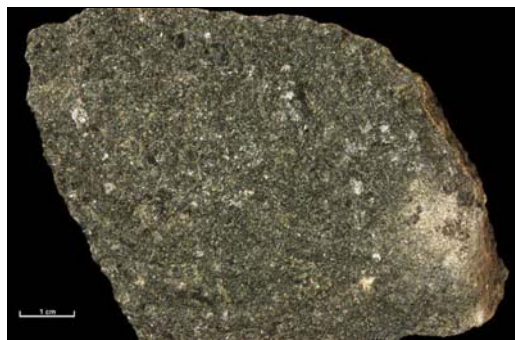
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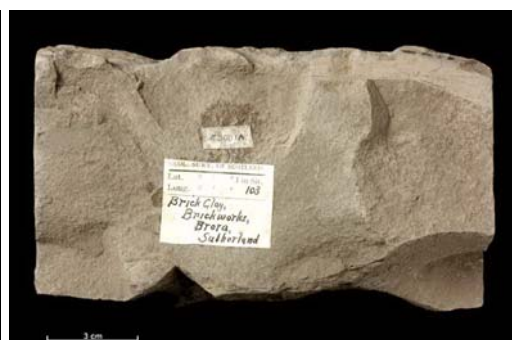
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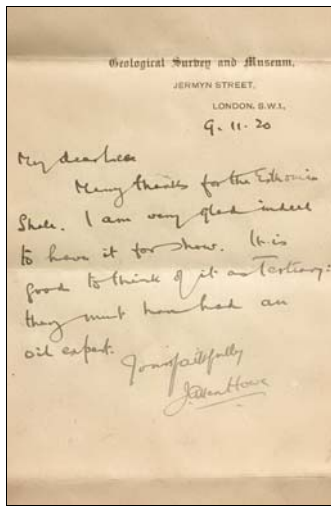


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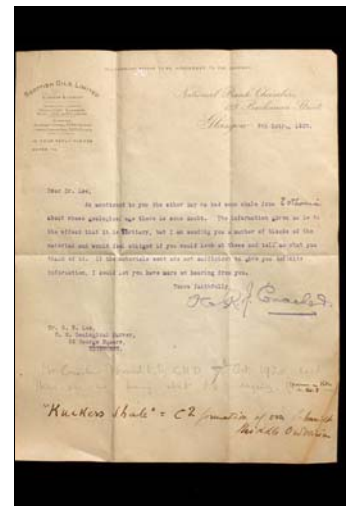
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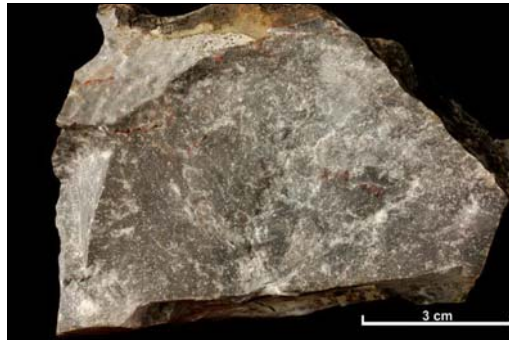
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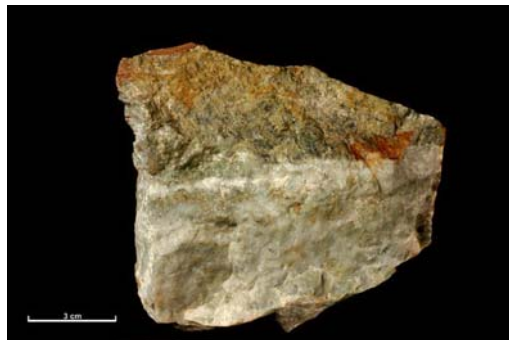
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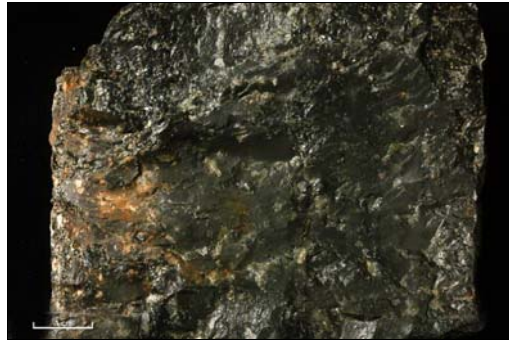


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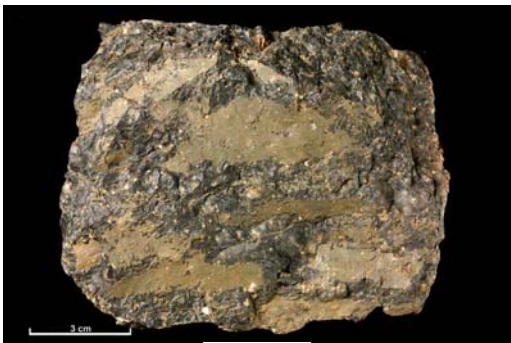
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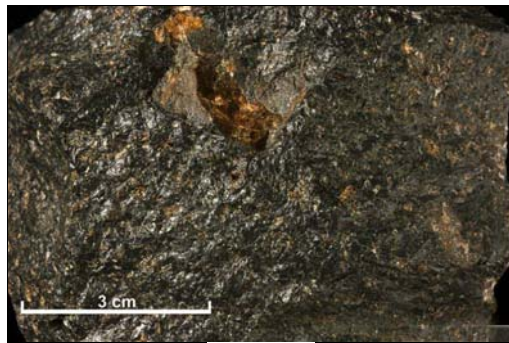
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Economic minerals of Scotland



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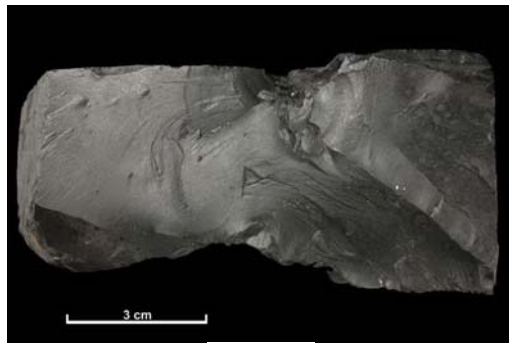
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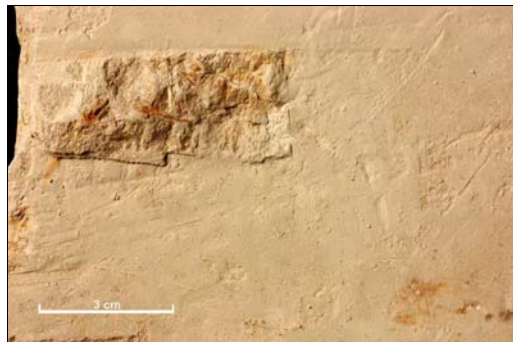
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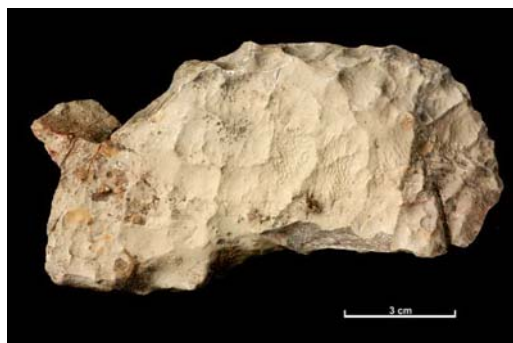
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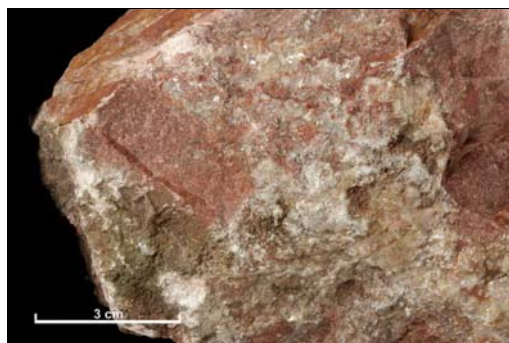
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Economic minerals of Scotland



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Economic minerals of Scotland



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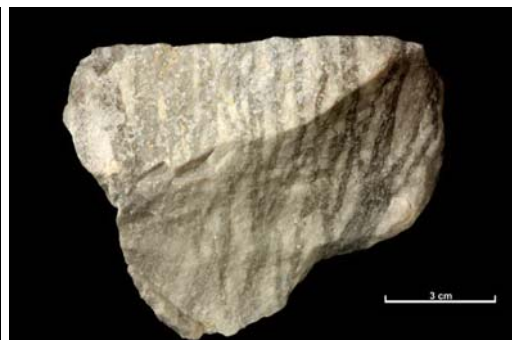
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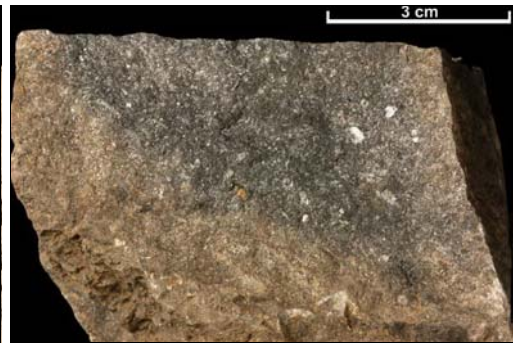
Economic minerals of Scotland



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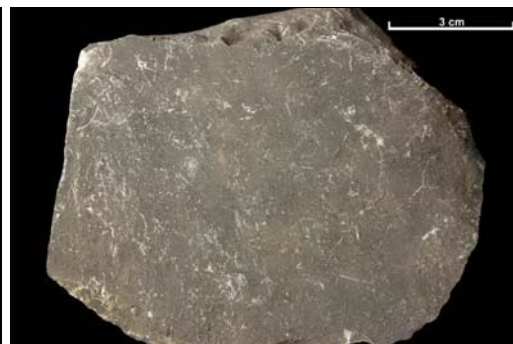
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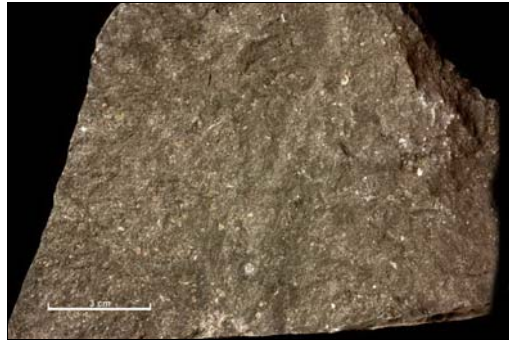


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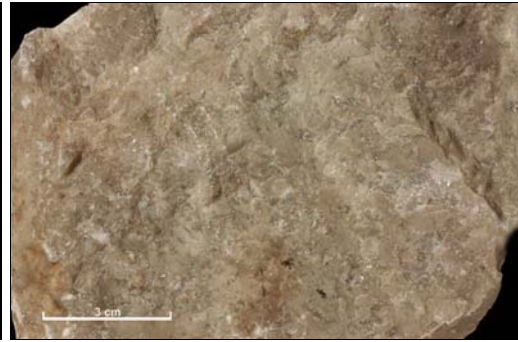
Economic minerals of Scotland



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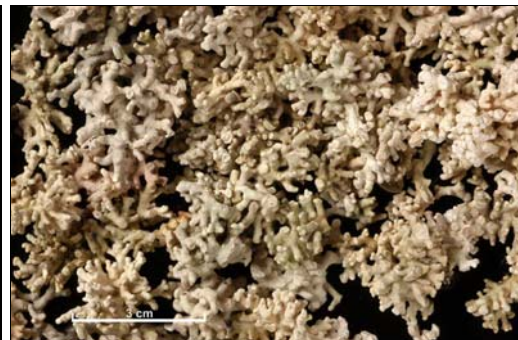
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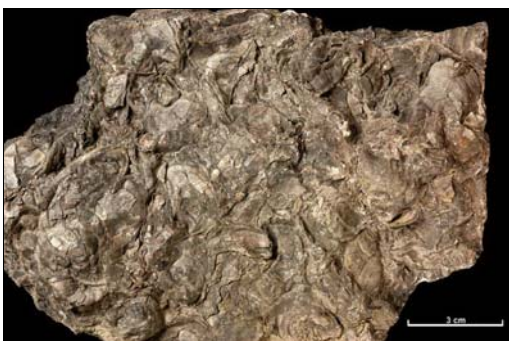
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P527774



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P527776



P527777

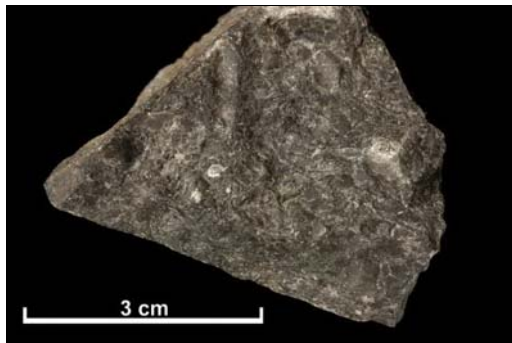


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Economic minerals of Scotland



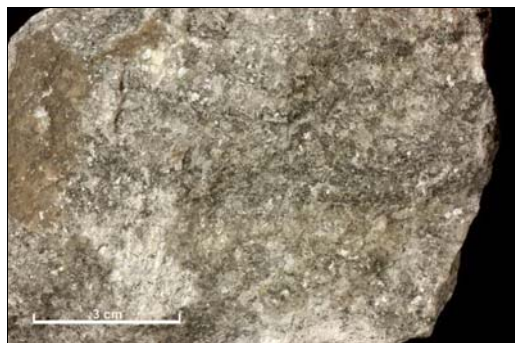
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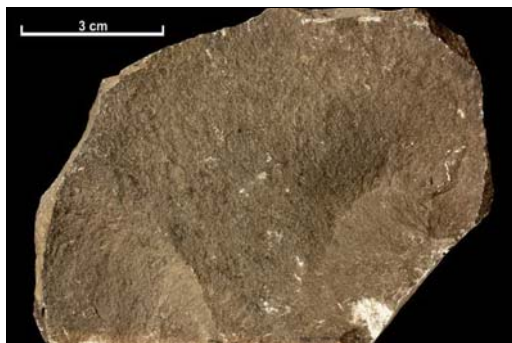
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P527782



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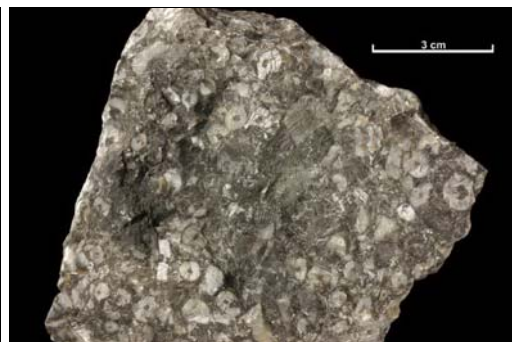
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P527787



P527788



P527789



P527790

Economic minerals of Scotland



P527791



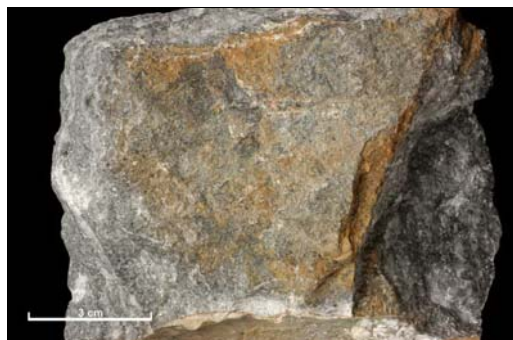
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P527797



P527798



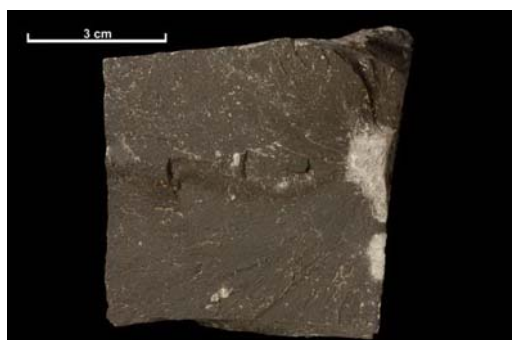
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P527800



P527801



P527802

Economic minerals of Scotland



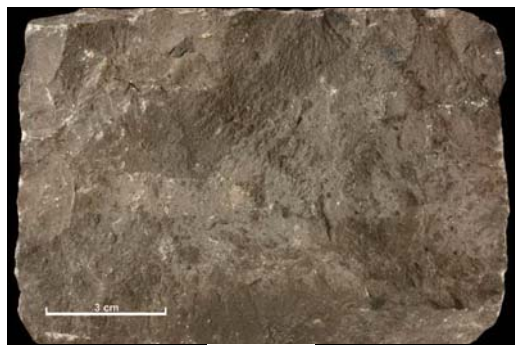
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P527804



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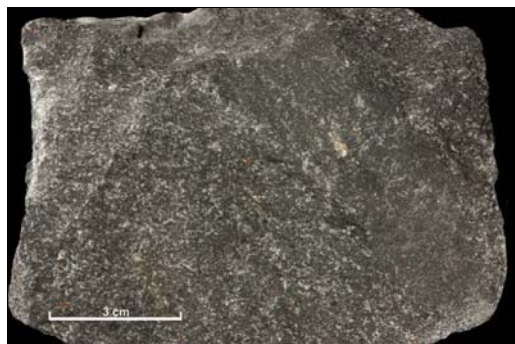
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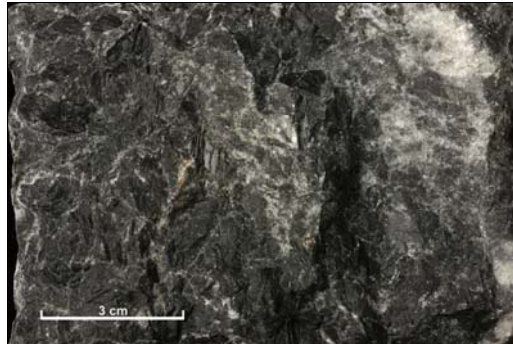
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P527808



P527809



P527810



P527811



P527812



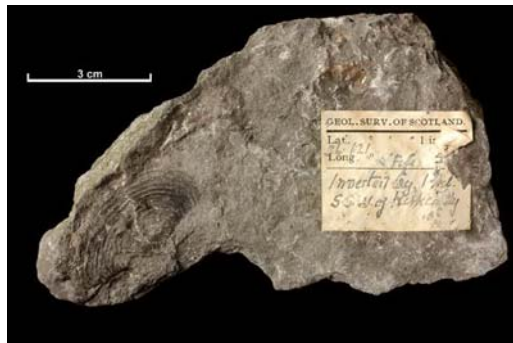
P527813



P527814

SL 102
NEOL. SECT. OF SCOTLAND
Lat. 56° 13' 5" N Long. 4° 18' 50" W
Clatteriswell Gt.
Bishop Hill
Kinross-shire

Economic minerals of Scotland



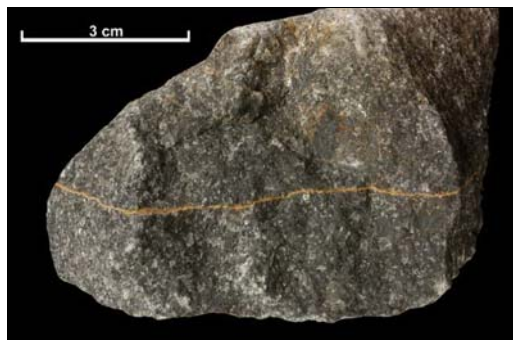
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P527816



P527817



P527818



P527819



P527820



P527821



P527822



P527823



P527824



P527825

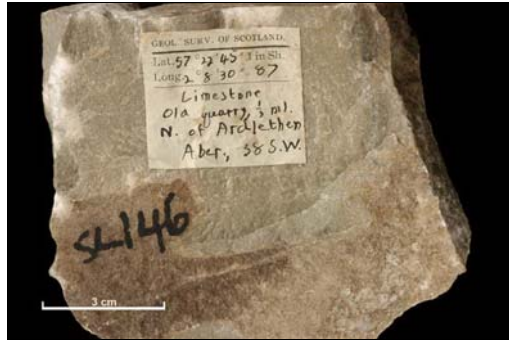


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Economic minerals of Scotland



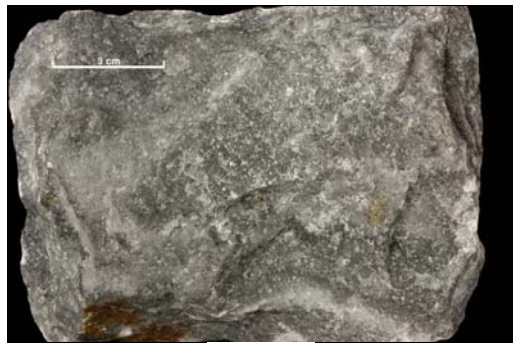
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P527840



P527841



P527842



P527843



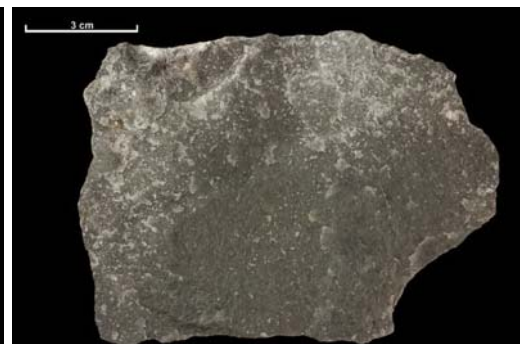
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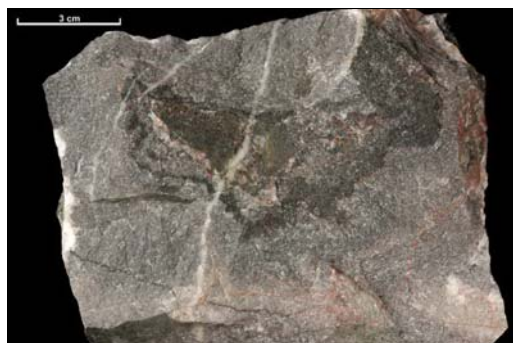
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P527846



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P527848



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P527850

Economic minerals of Scotland



P527851



P527852



P527853



P527854



P527855



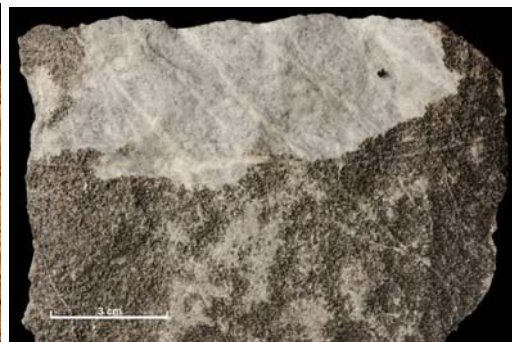
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P527858



P527859



P527860

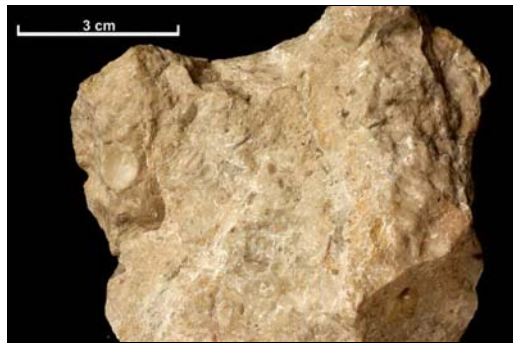


P527861



P527862

Economic minerals of Scotland



P527863



P527864



P527865



P527866



P527867



P527868



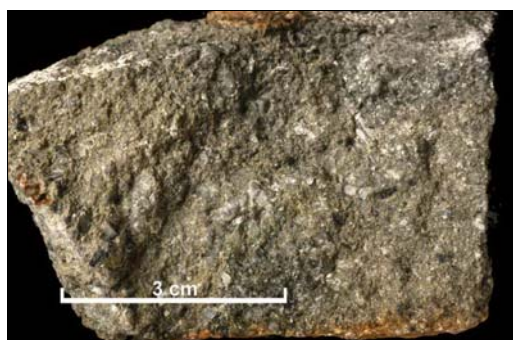
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P527870



P527871



P527872



P527873

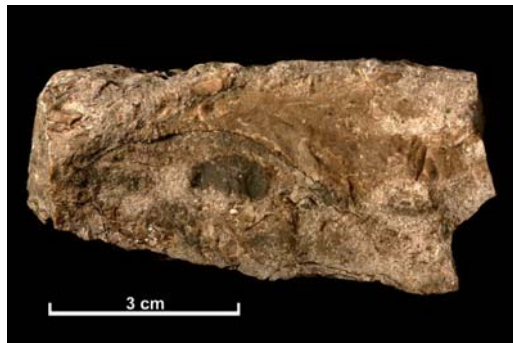


P527874

Economic minerals of Scotland



P527875



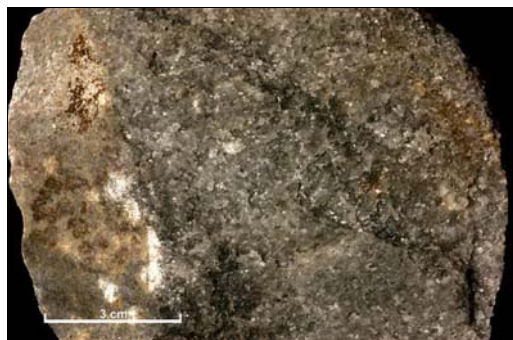
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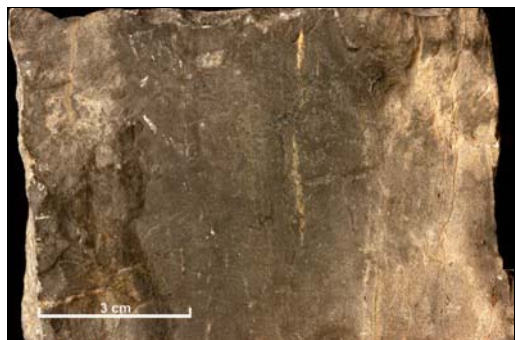
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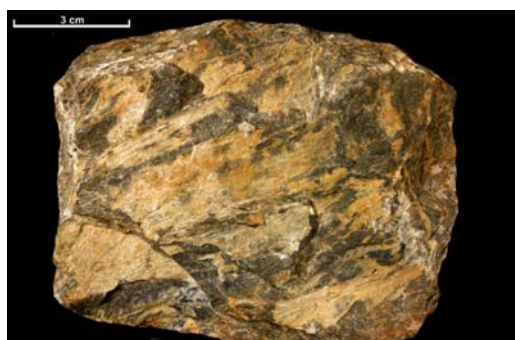
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P527882



P527883



P527884



P527885



P527886

Economic minerals of Scotland



P527887



P527888



P527889



P527890



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P527892



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P527896



P527897



P527898

Economic minerals of Scotland



P527899



P527900



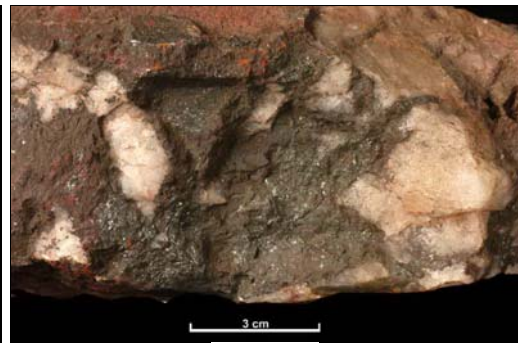
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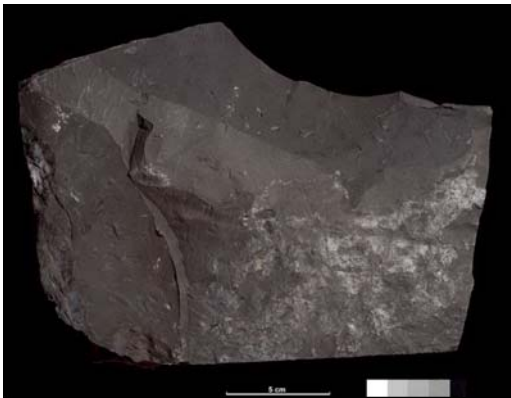
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P527903



P527904



P527905



P527906



P527907



P527908



P527909



P527910

Economic minerals of Scotland



P527911



P527912



P527913



P527914



P527915



P527916



P527917



P527918



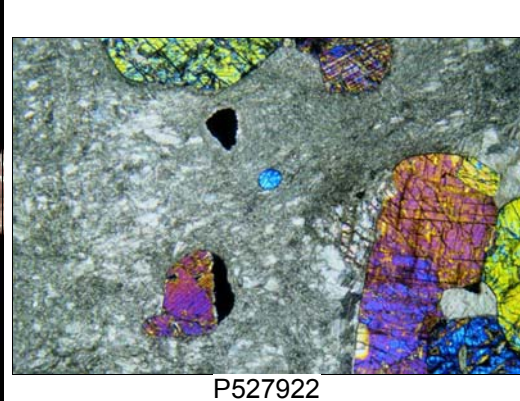
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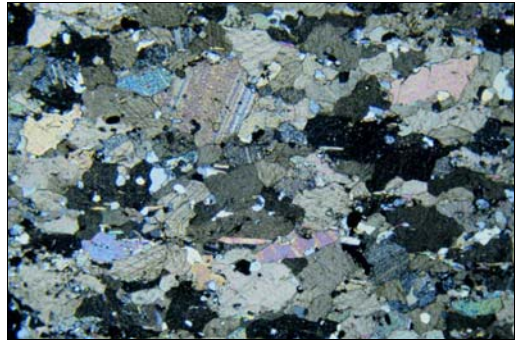


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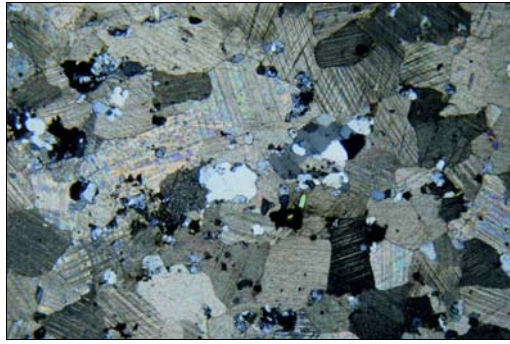


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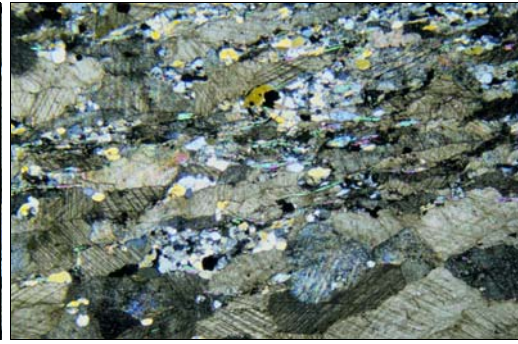
Economic minerals of Scotland



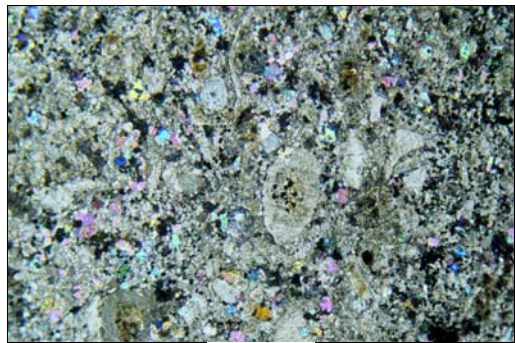
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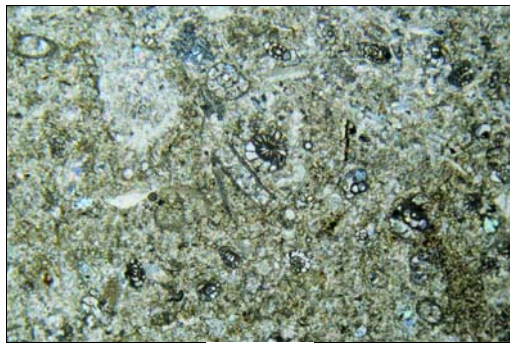
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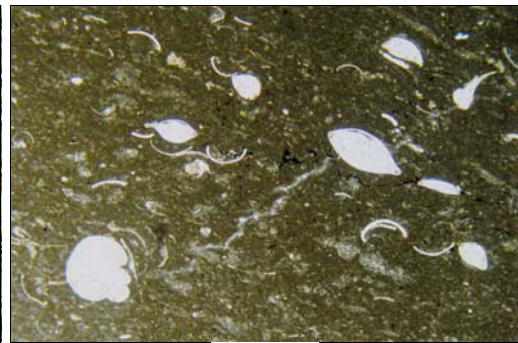
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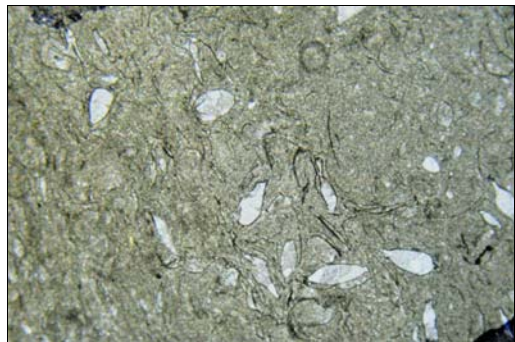
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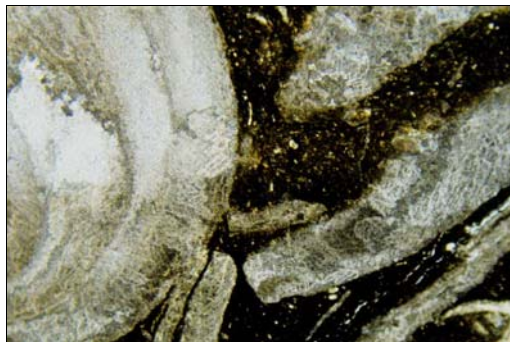
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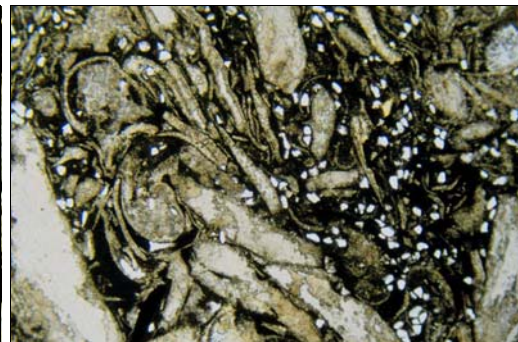
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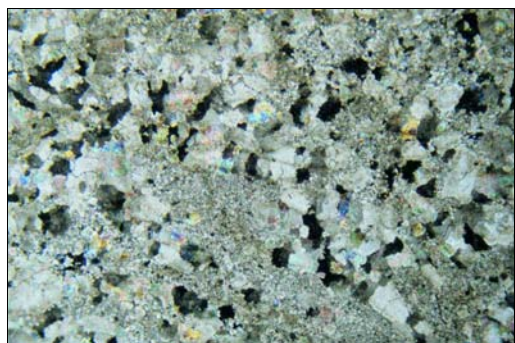
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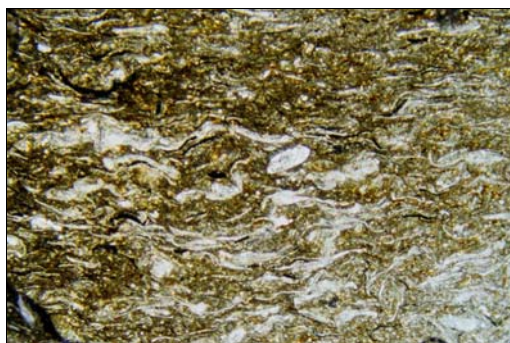
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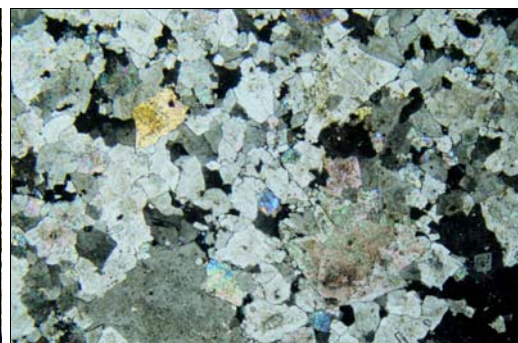
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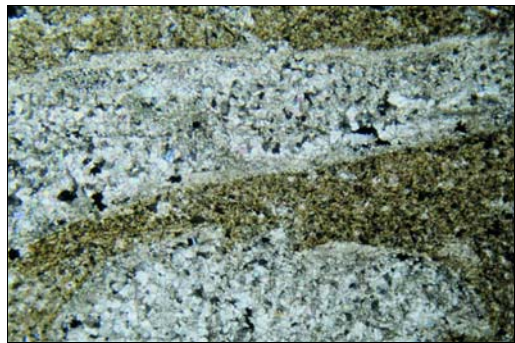


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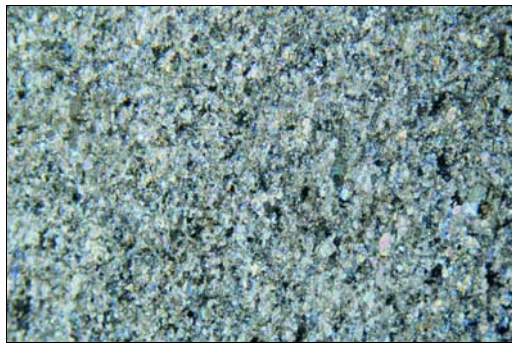


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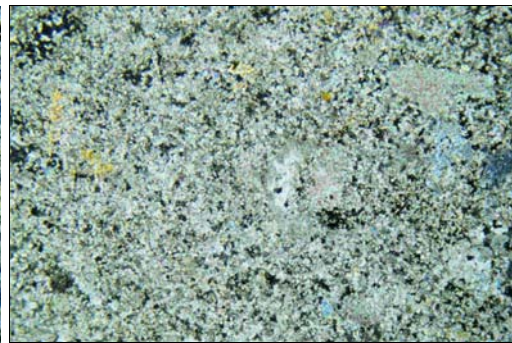
Economic minerals of Scotland



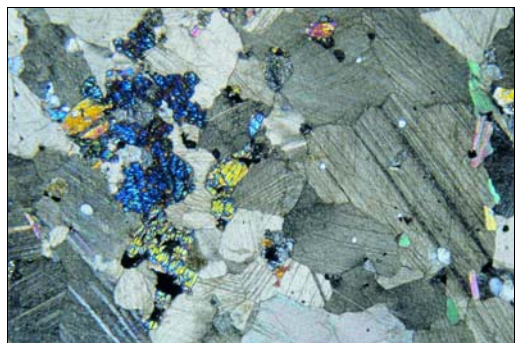
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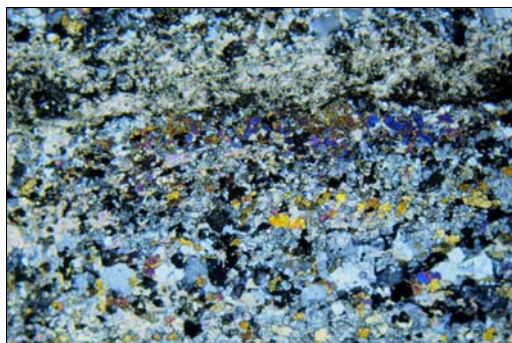
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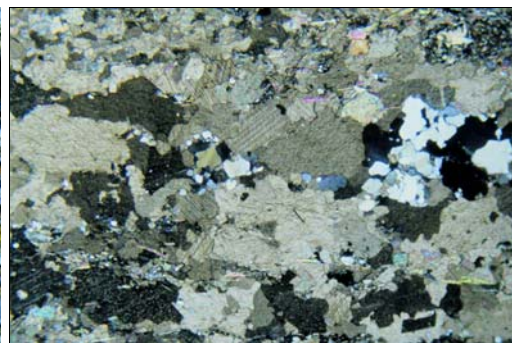
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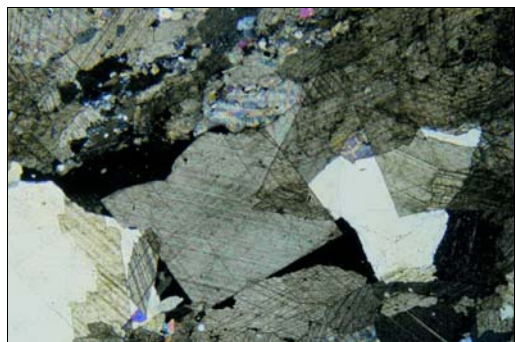
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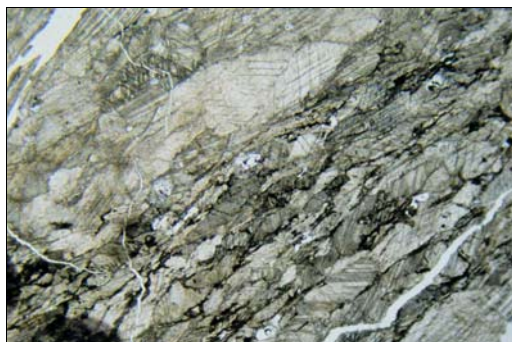
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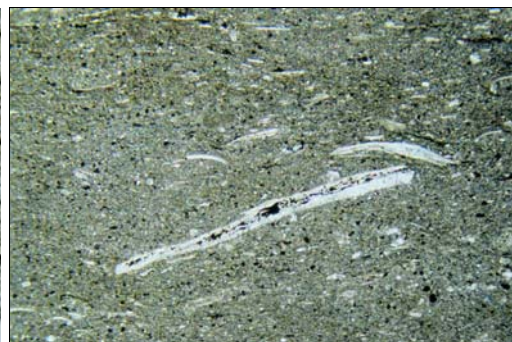
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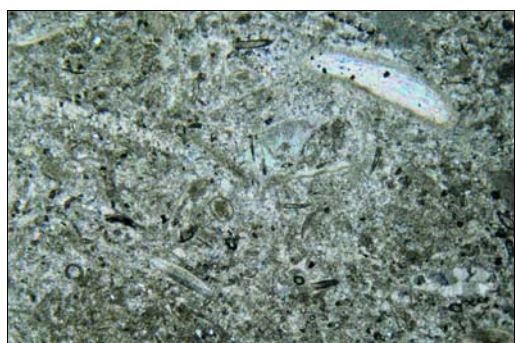
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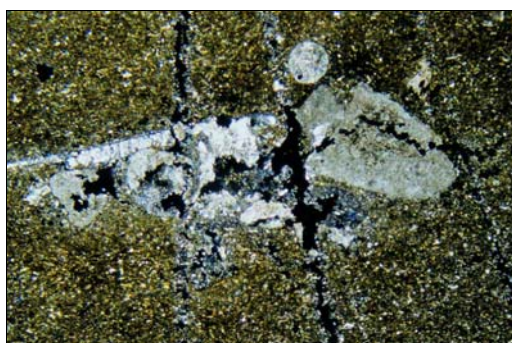
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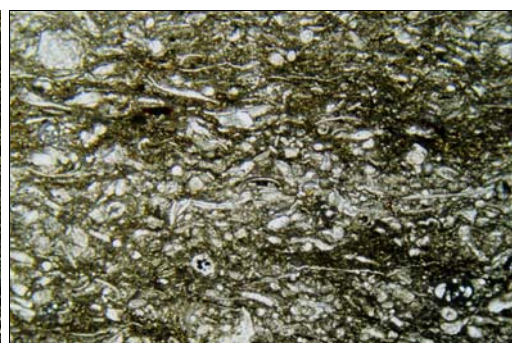
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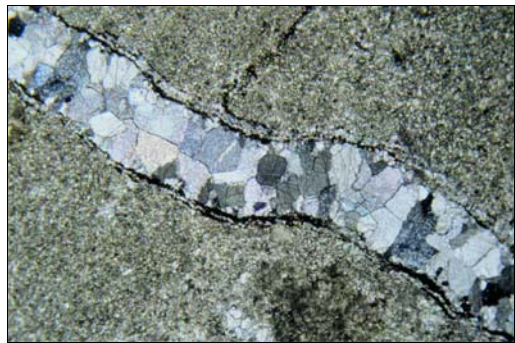


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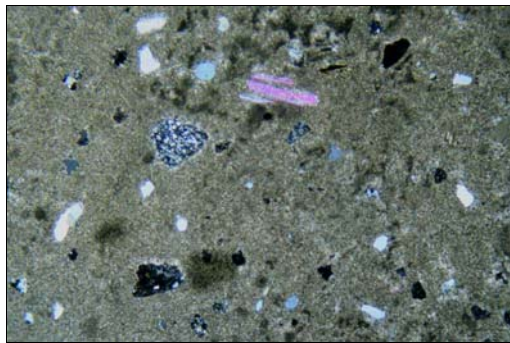


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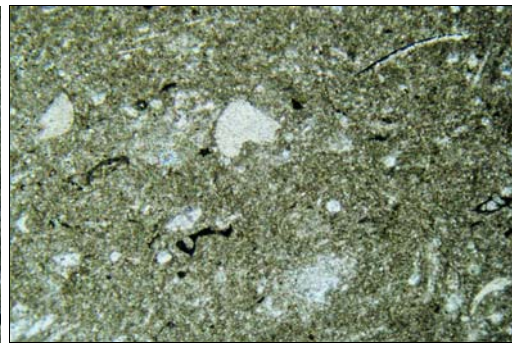
Economic minerals of Scotland



P527948



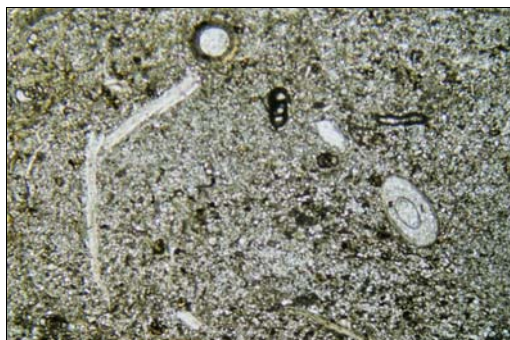
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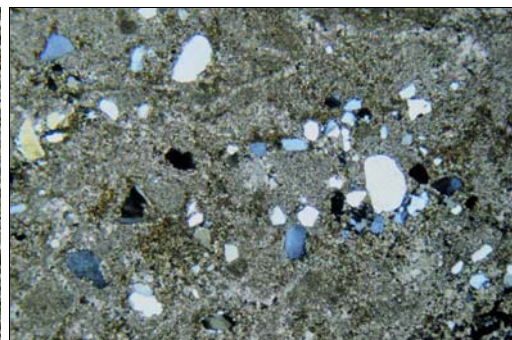
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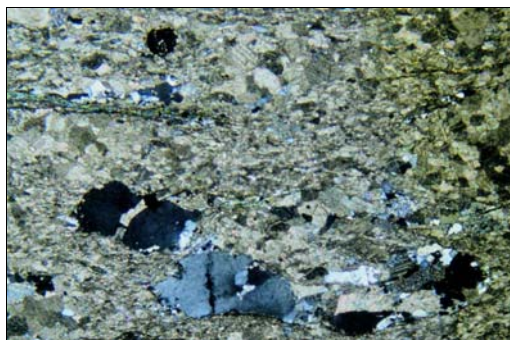
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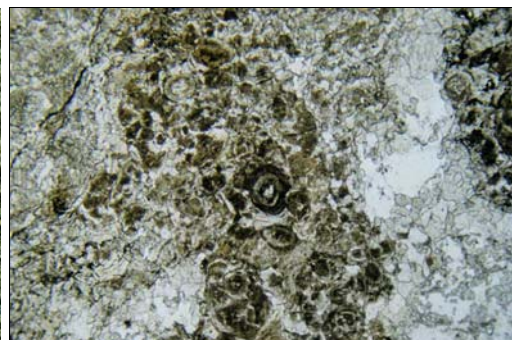
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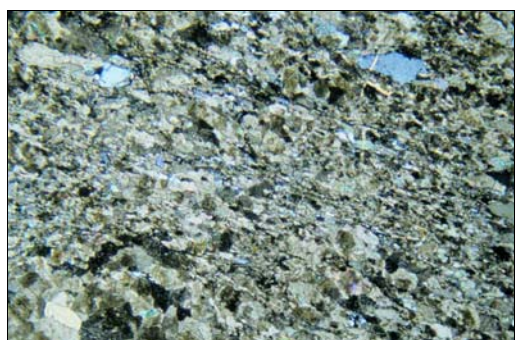
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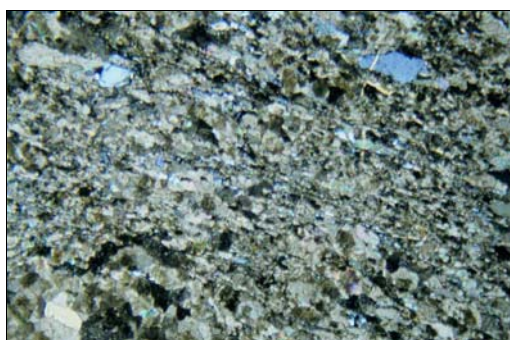
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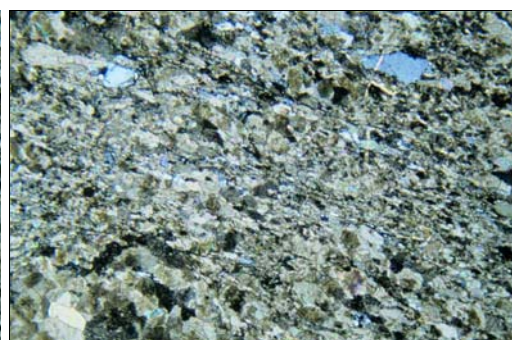
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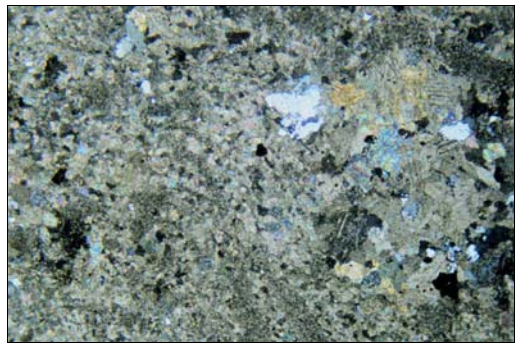


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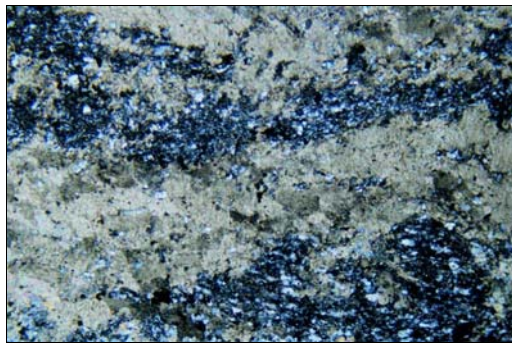


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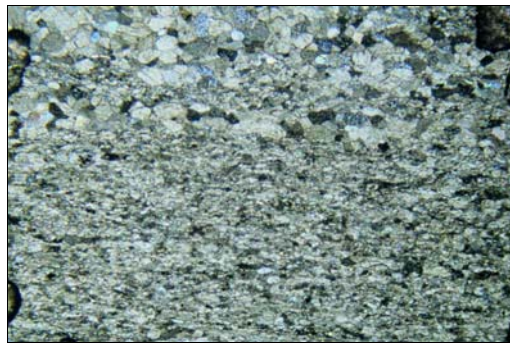
Economic minerals of Scotland



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P527962



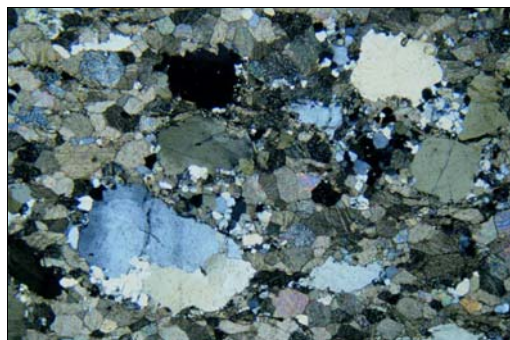
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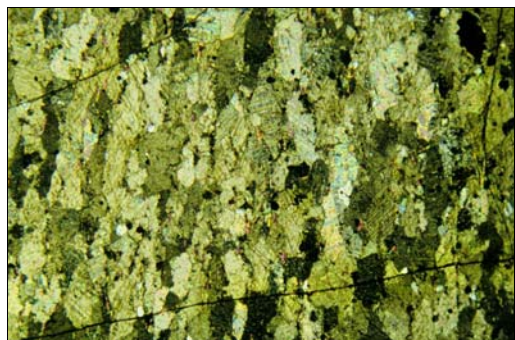
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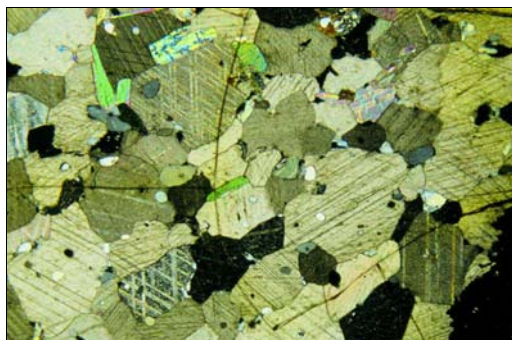
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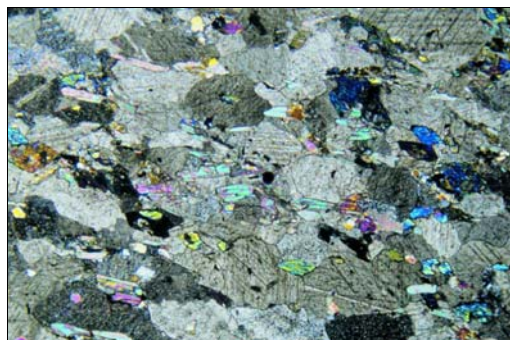
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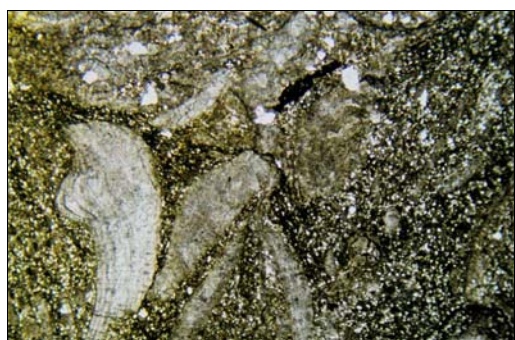
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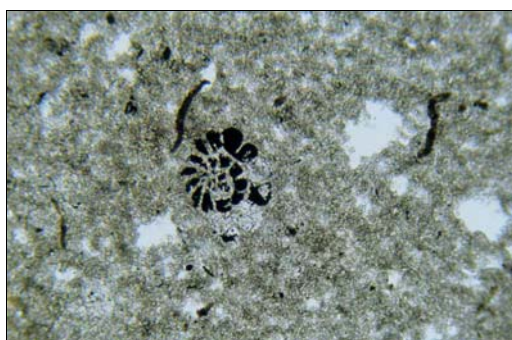
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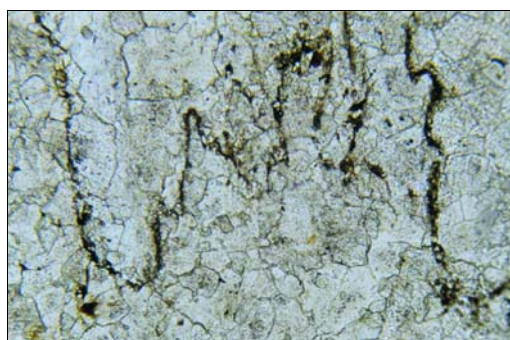
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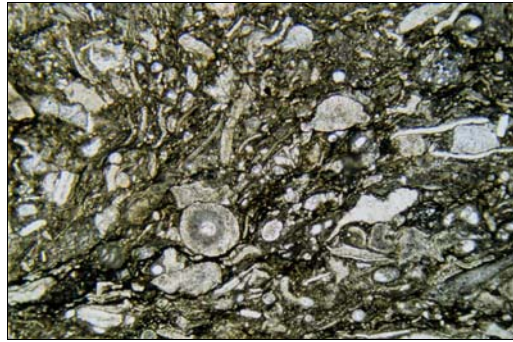


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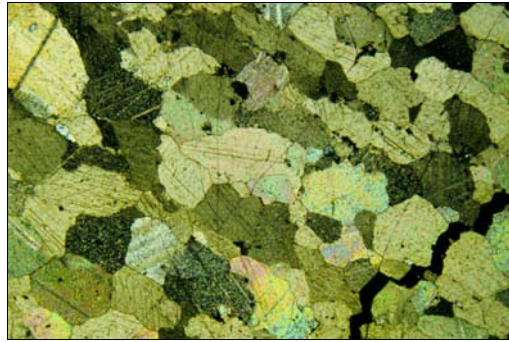


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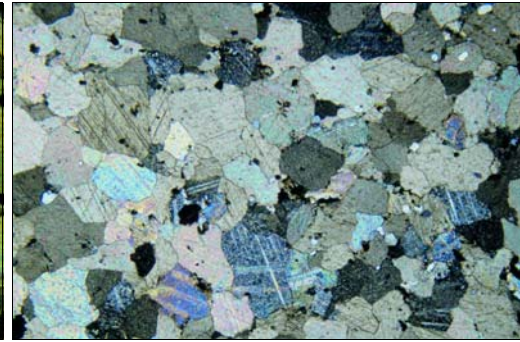
Economic minerals of Scotland



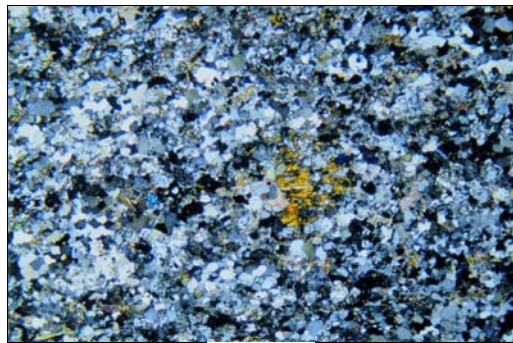
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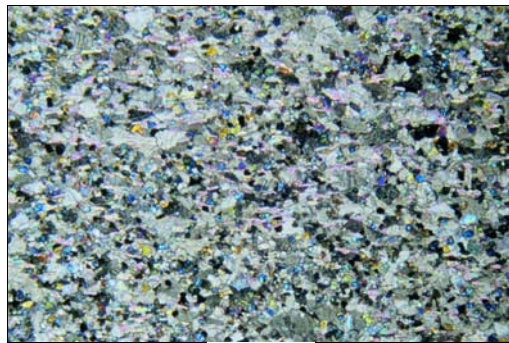
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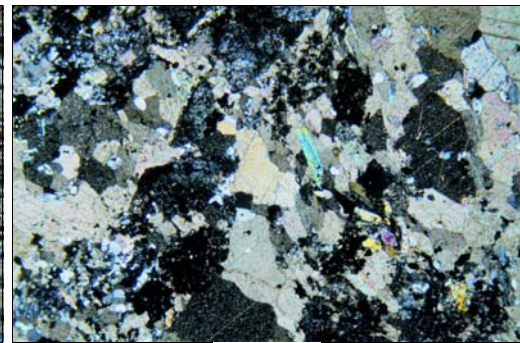
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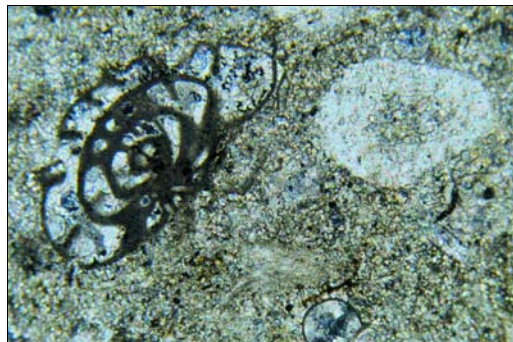
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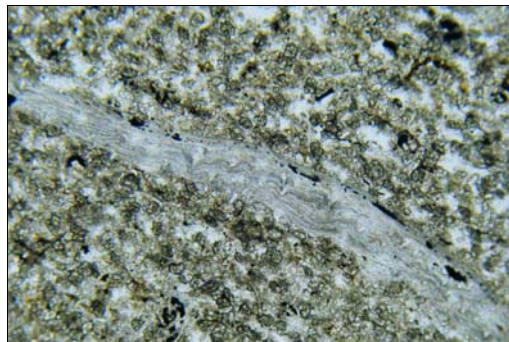
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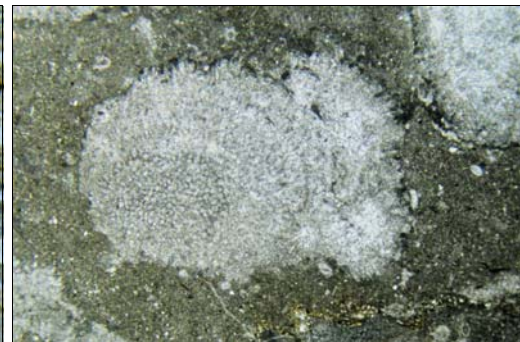
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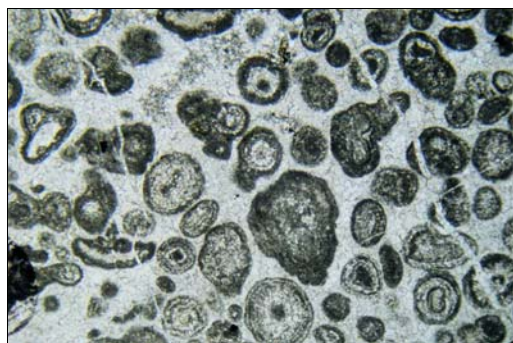
P527979



P527980



P527981



P527982



P527983

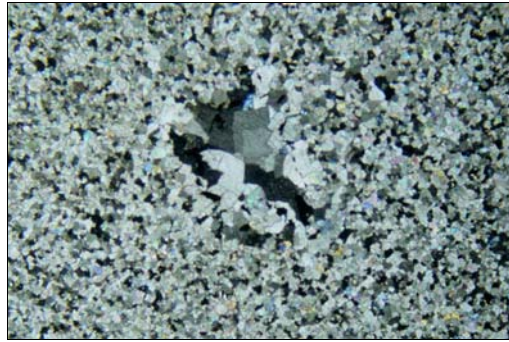


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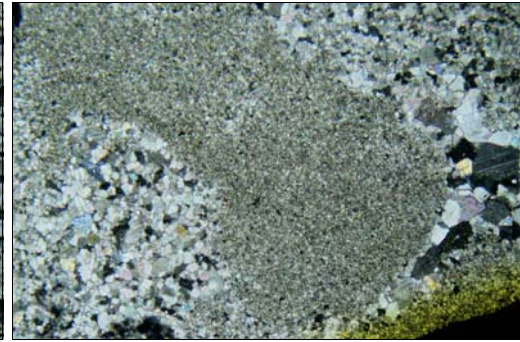
Economic minerals of Scotland



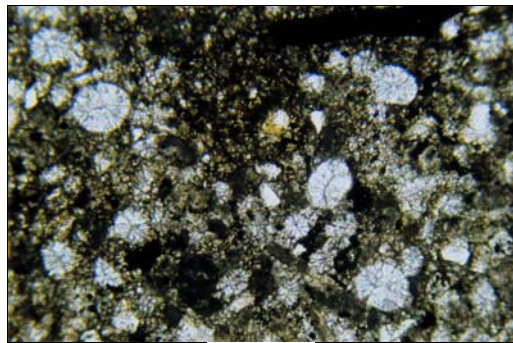
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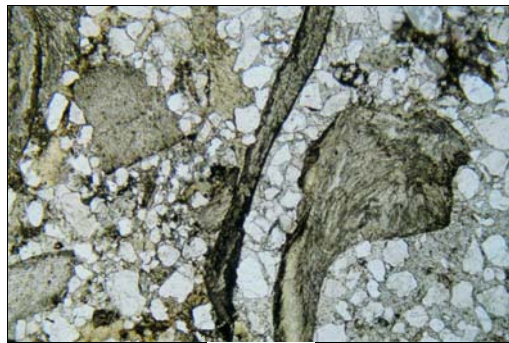
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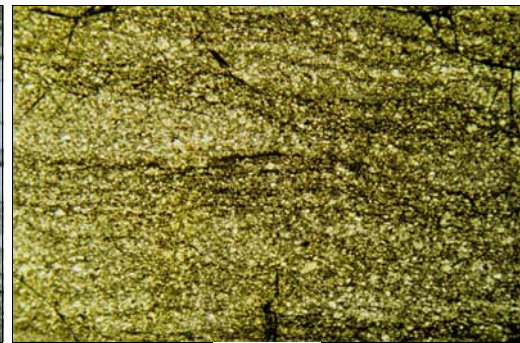
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P527988



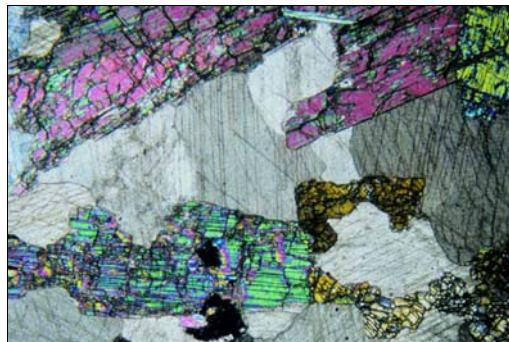
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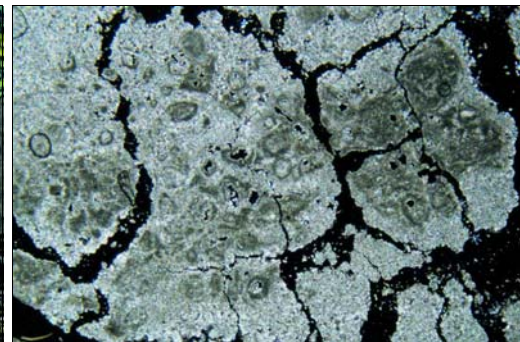
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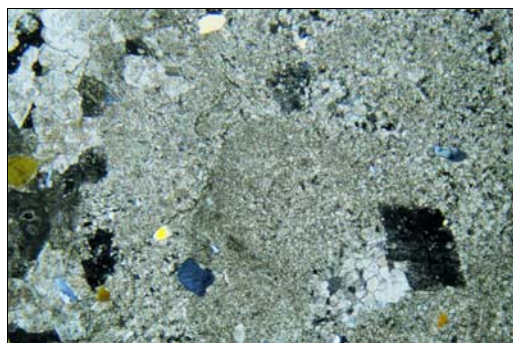
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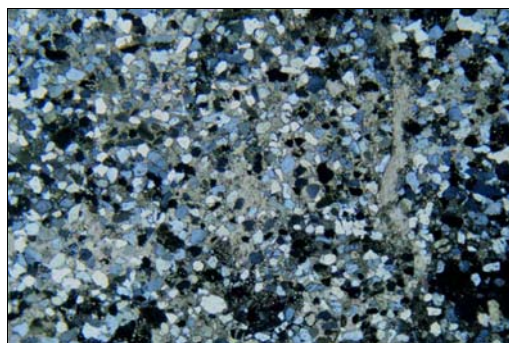
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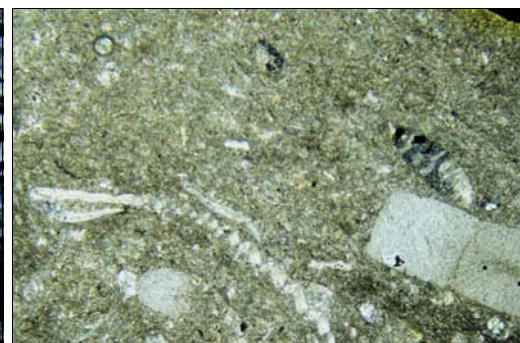
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P527995

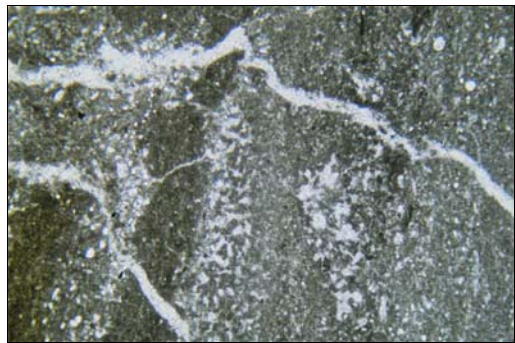


P527997



P527998

Economic minerals of Scotland



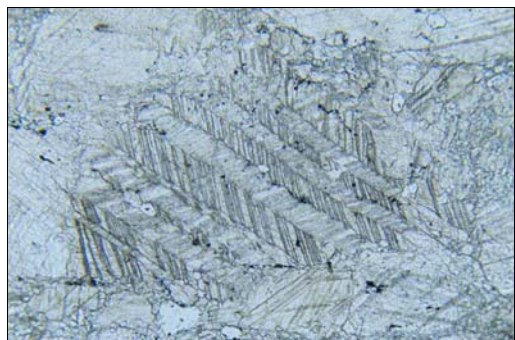
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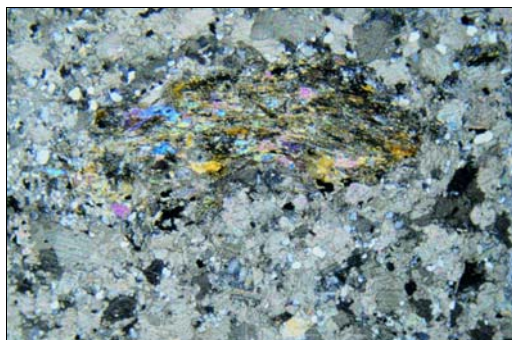
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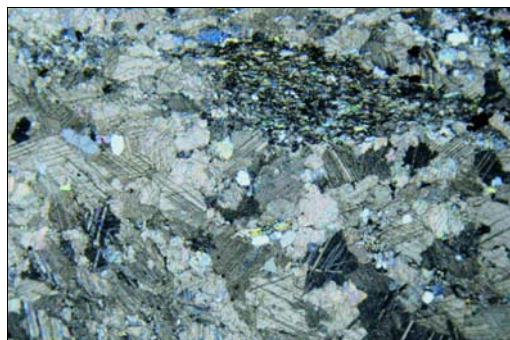
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P528002



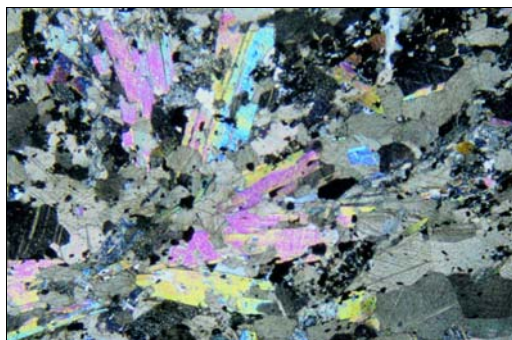
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P528004



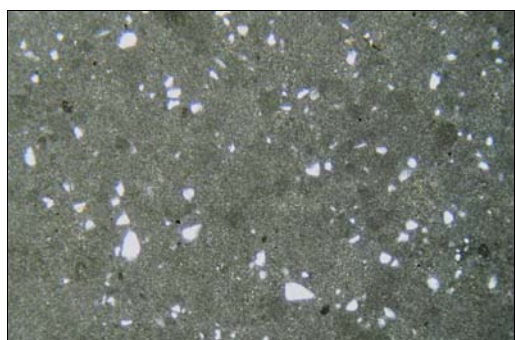
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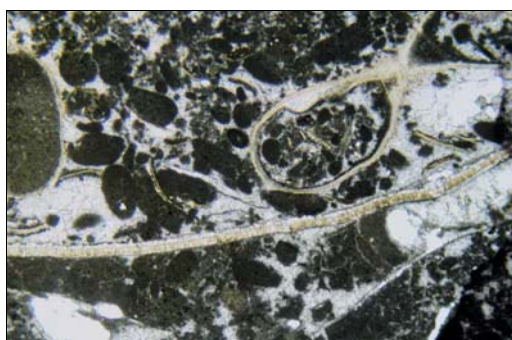
P528006



P528007



P528008



P528009

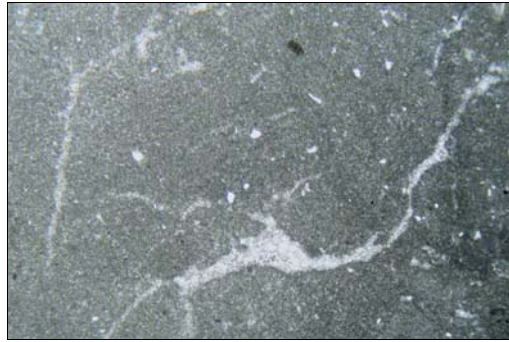


P528010

Economic minerals of Scotland



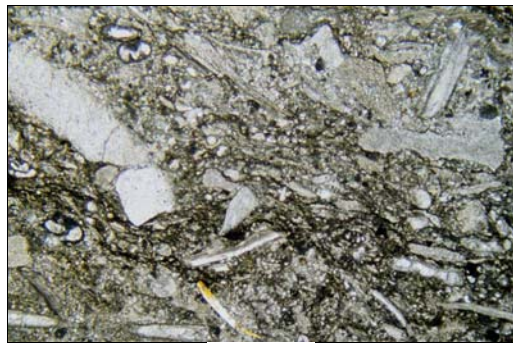
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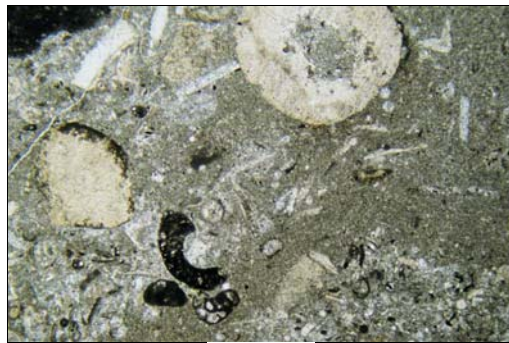
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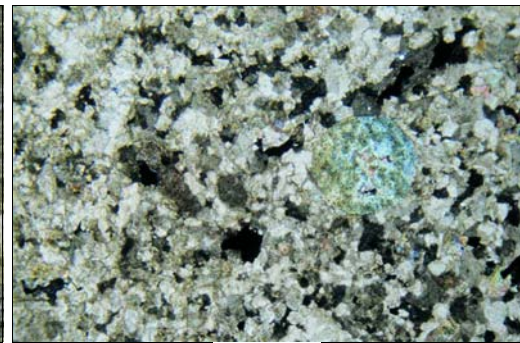
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P528014



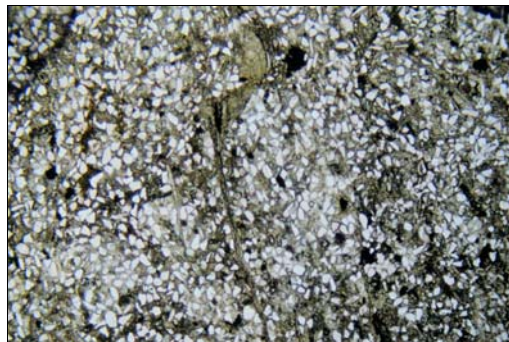
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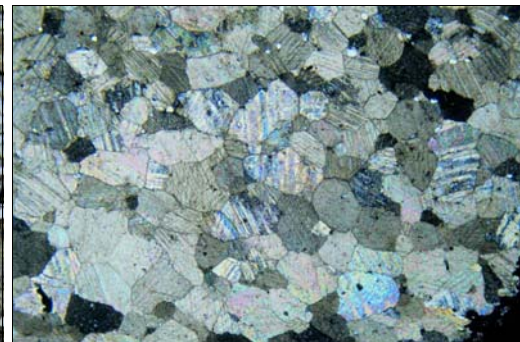
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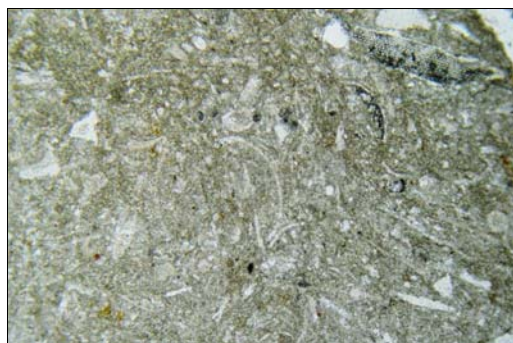
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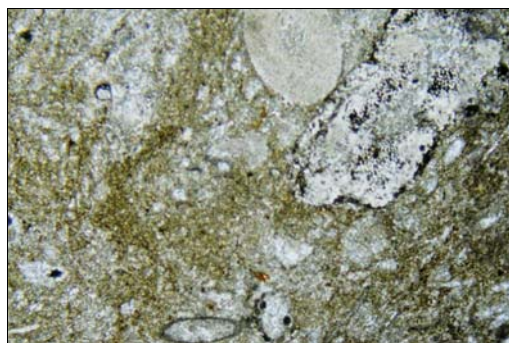
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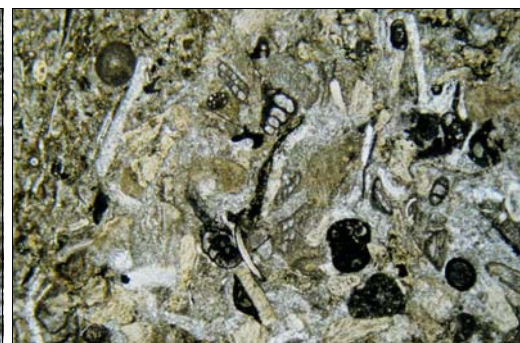
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P528020

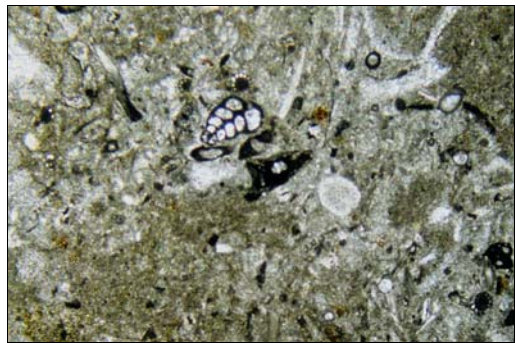


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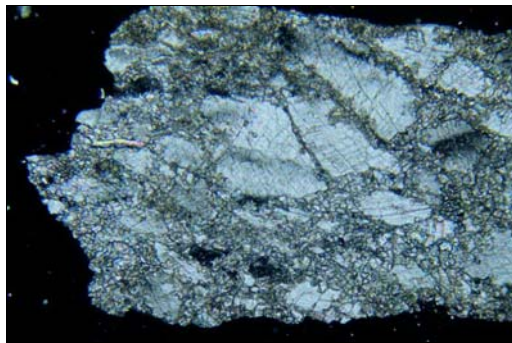


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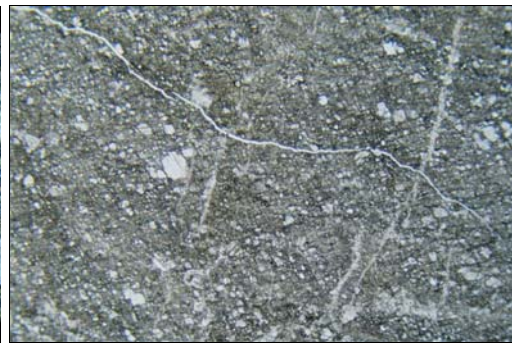
Economic minerals of Scotland



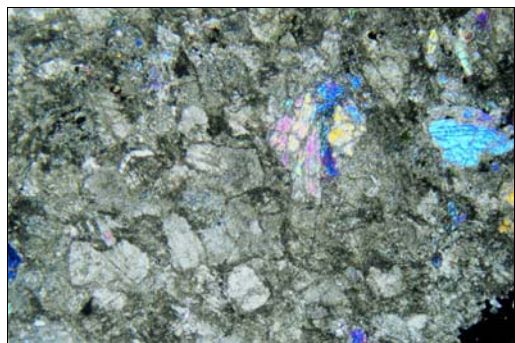
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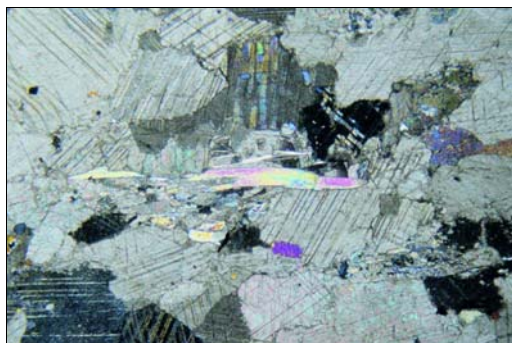
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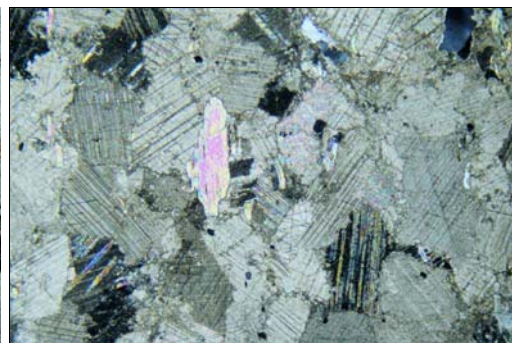
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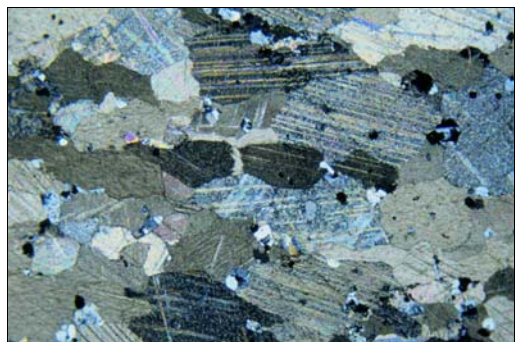
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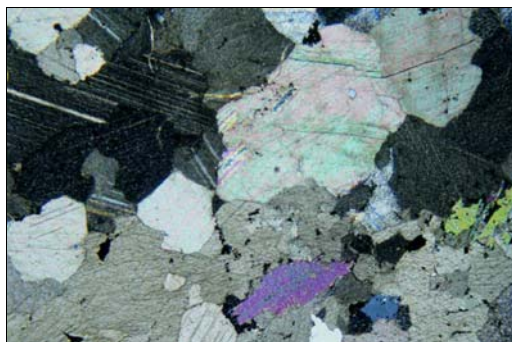
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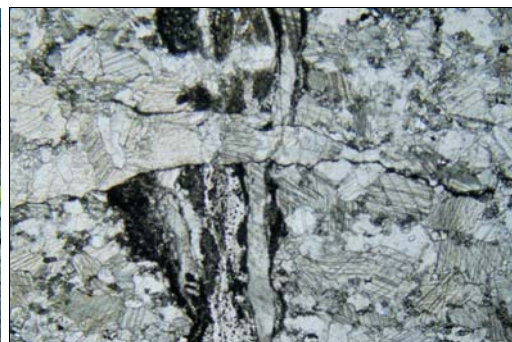
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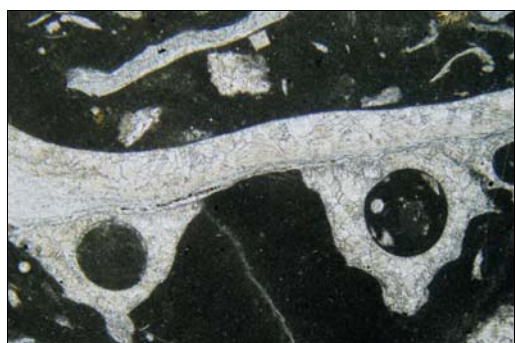
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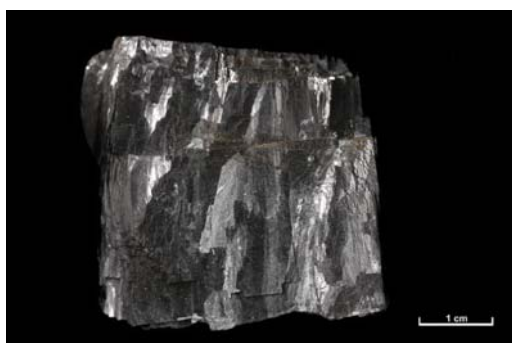
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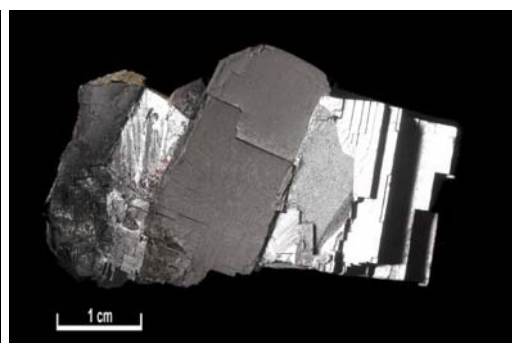
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P528032



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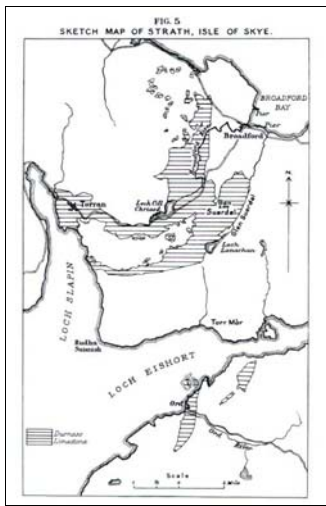


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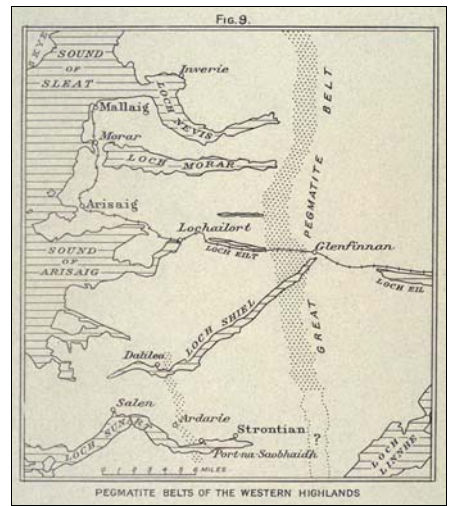
Economic minerals of Scotland



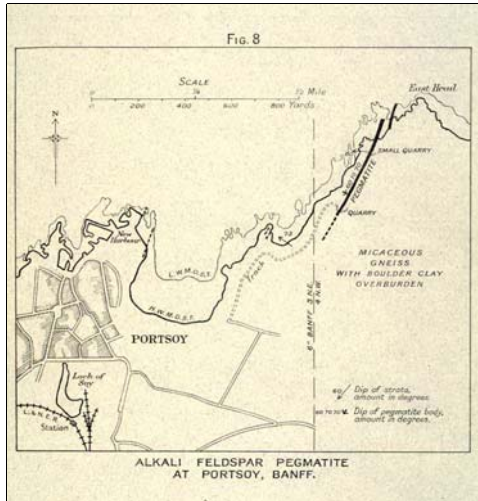
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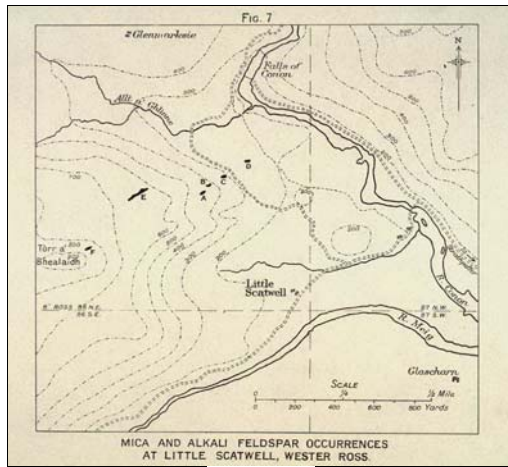
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P528055



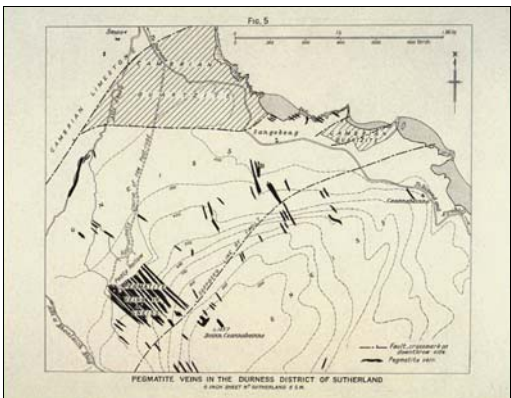
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P528057



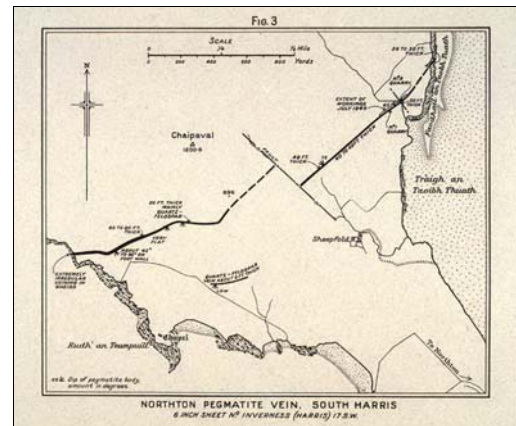
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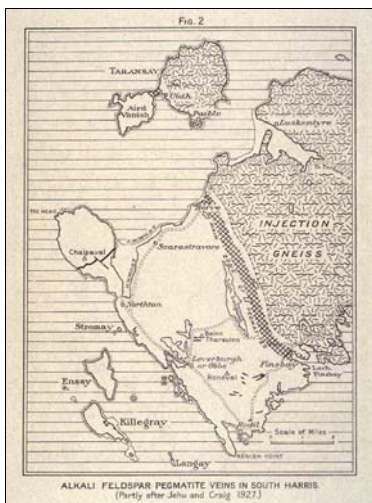
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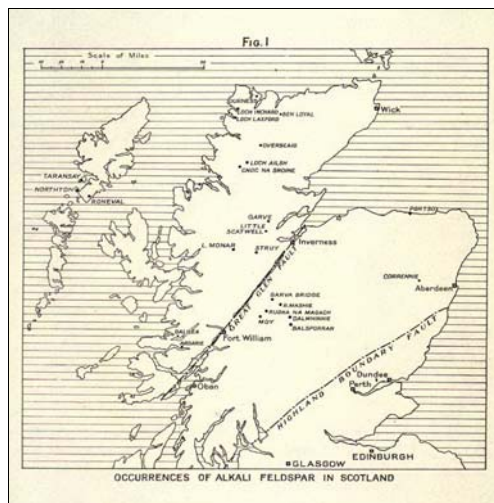
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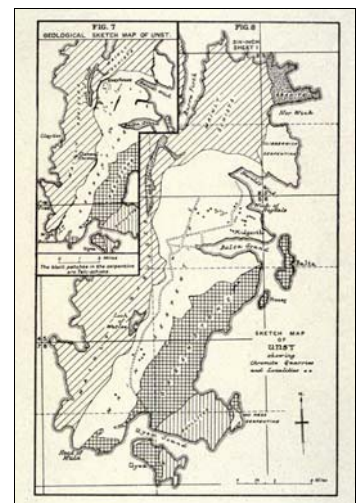
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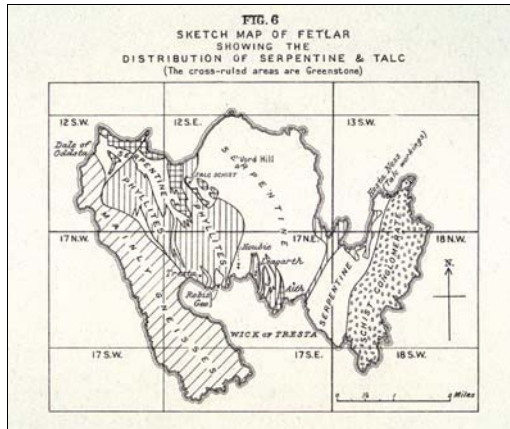


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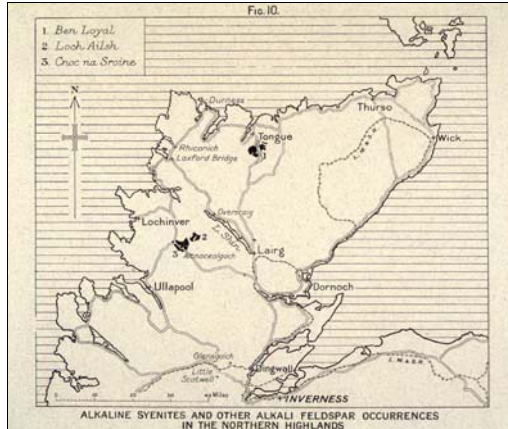


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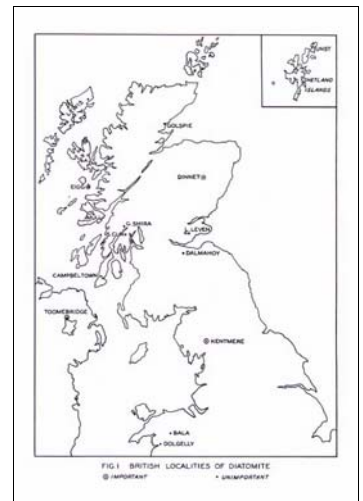
Economic minerals of Scotland



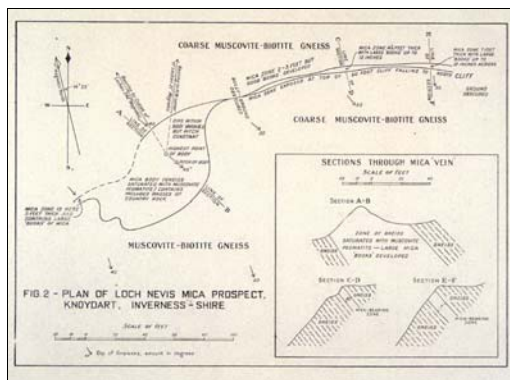
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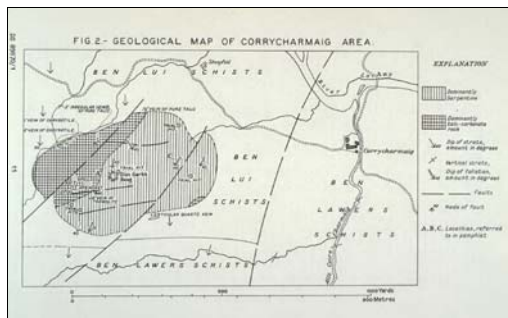
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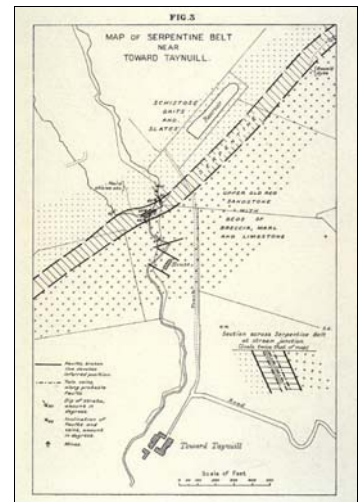
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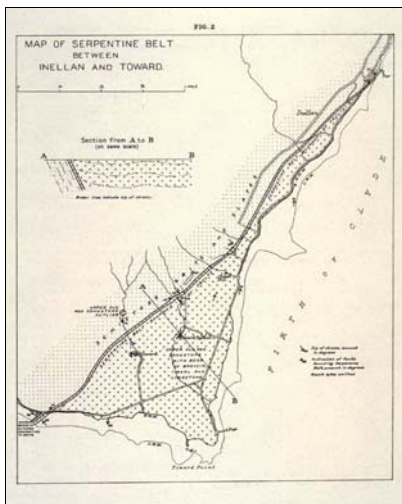
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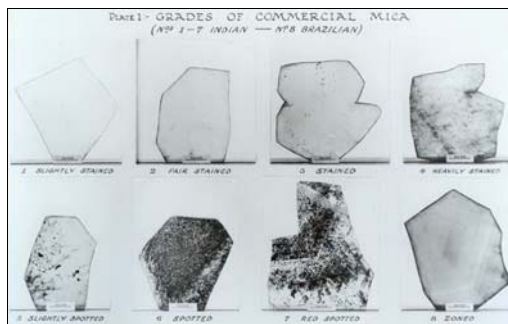
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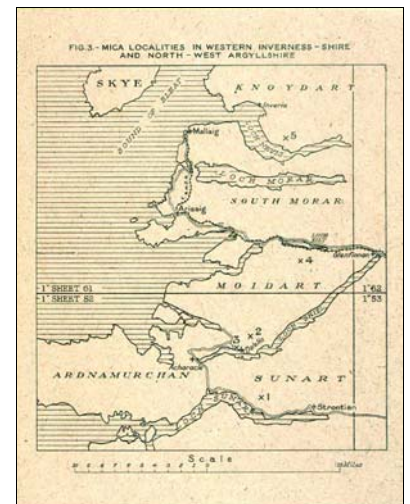
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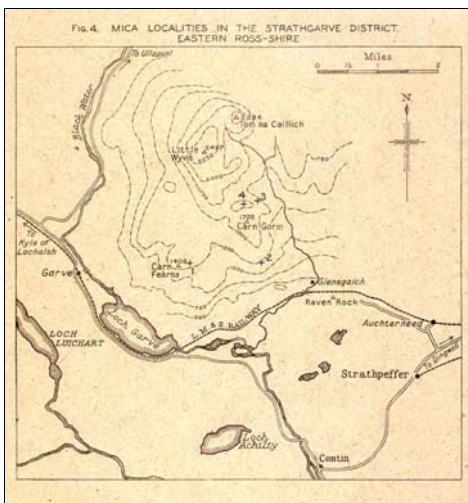
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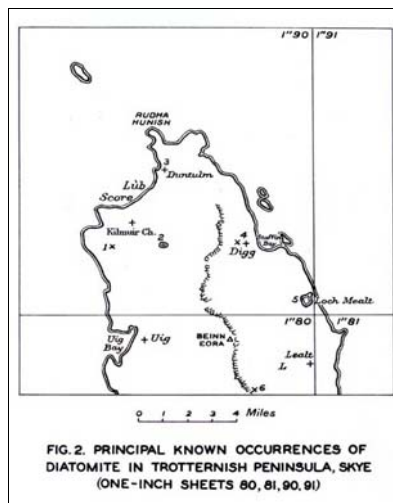
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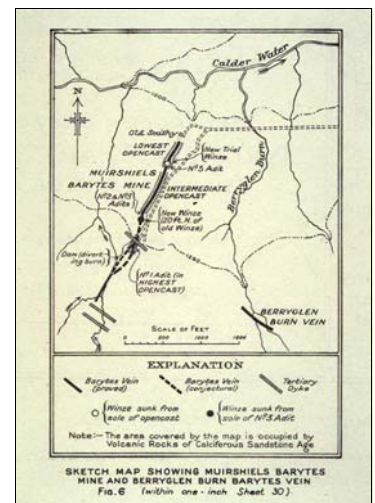
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P528074

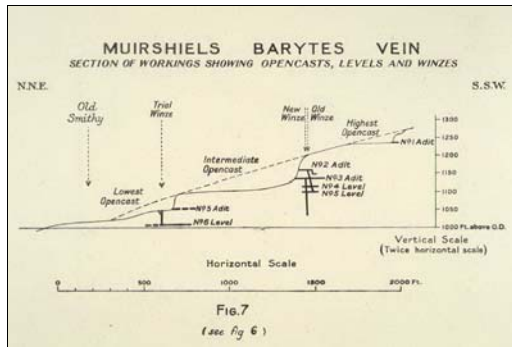


P528075



P528076

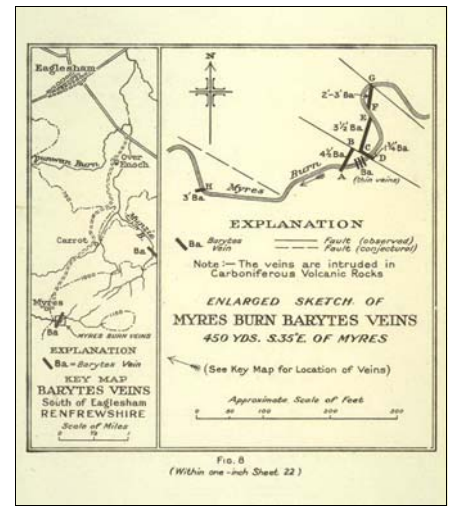
Economic minerals of Scotland



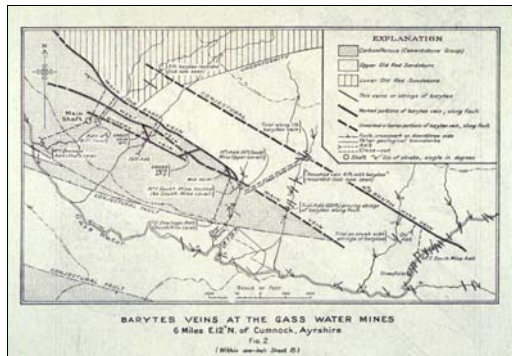
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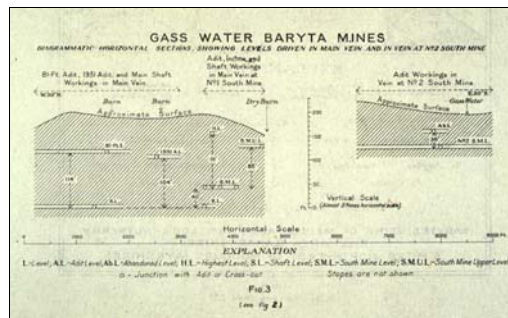
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P528079



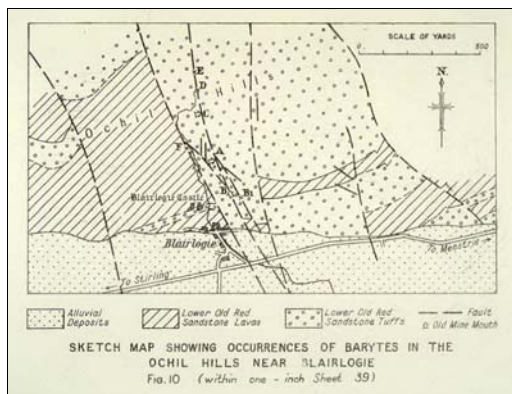
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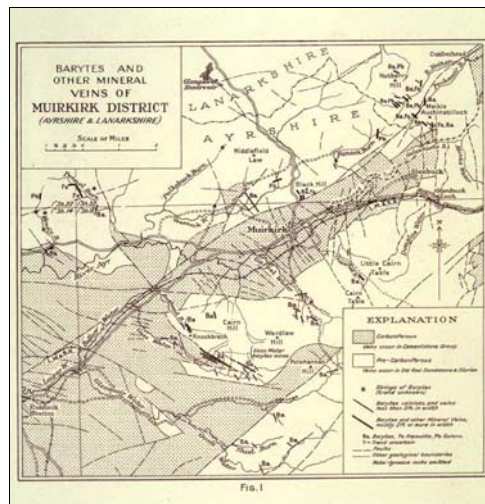
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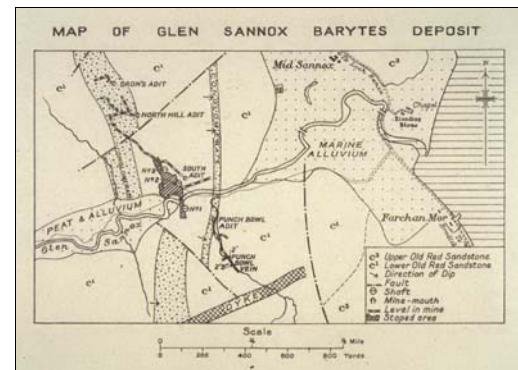
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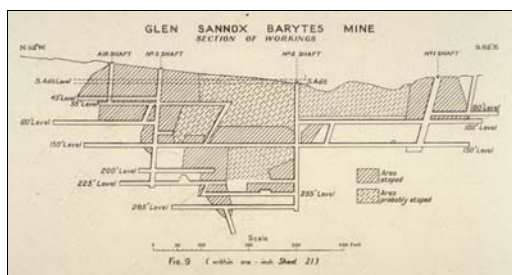
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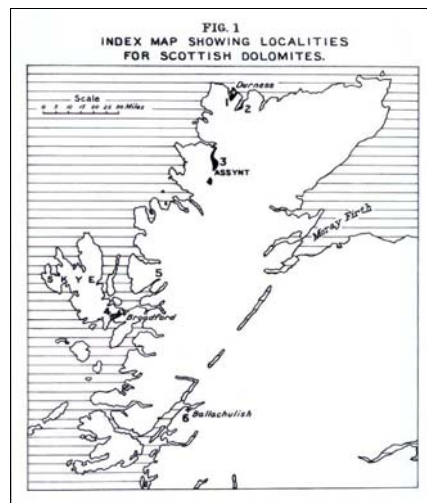
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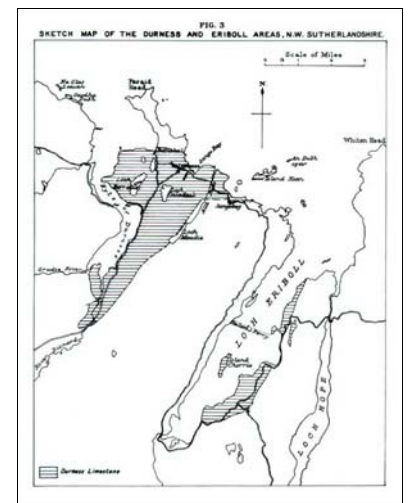
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P528086

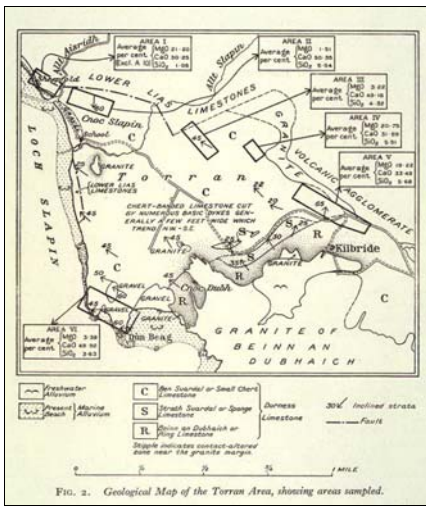


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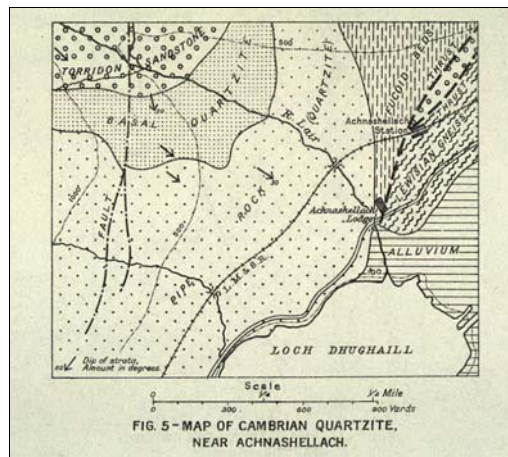


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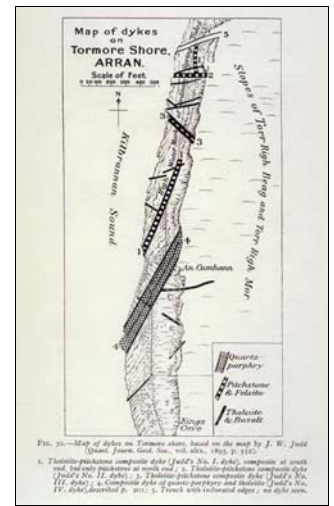
Economic minerals of Scotland



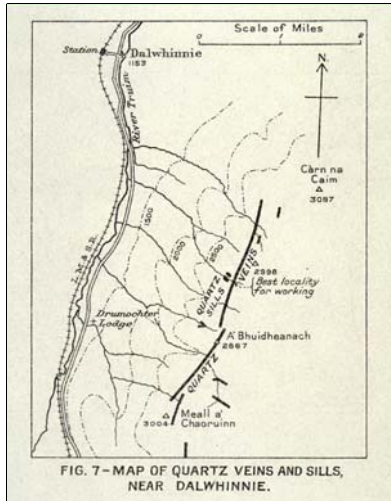
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P528090



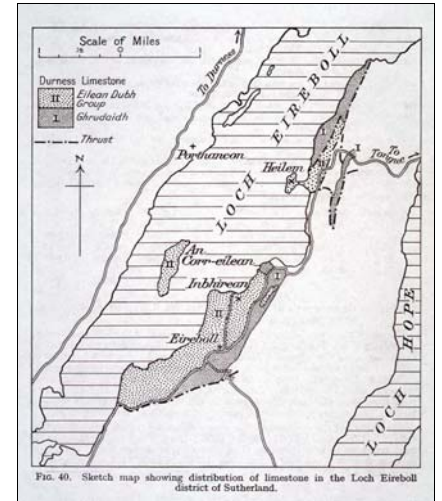
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P528092



P528093



P528094



P528095



P528096



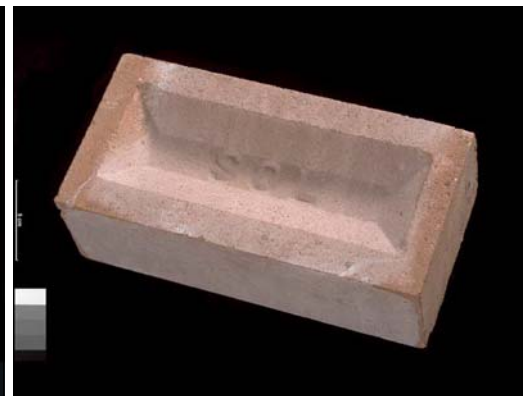
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P528098



P528099

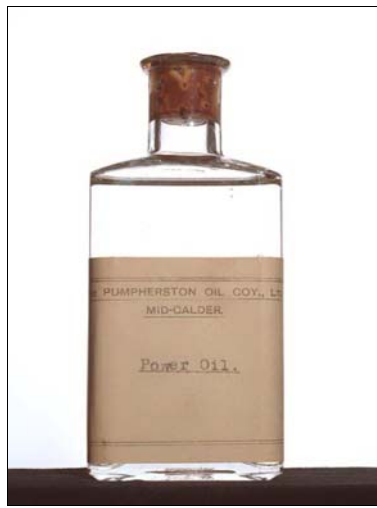


P528100

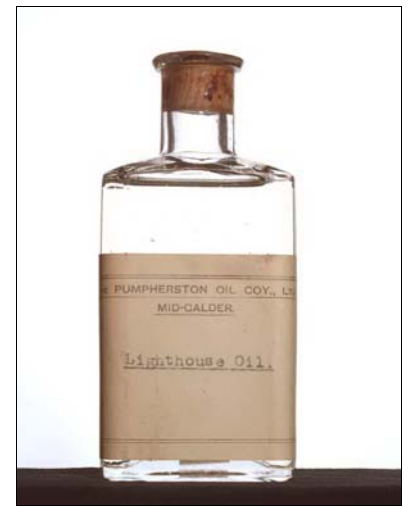
Economic minerals of Scotland



P528101



P528102



P528103



P528104



P528105



P528106



P528107



P528108



P528109



P528110

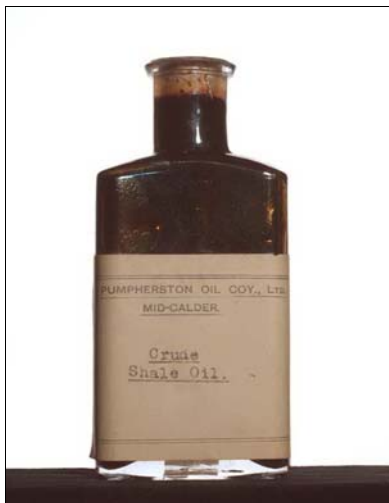


P528111



P528112

Economic minerals of Scotland



P528113



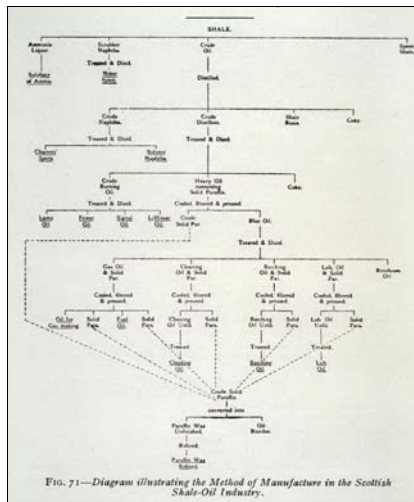
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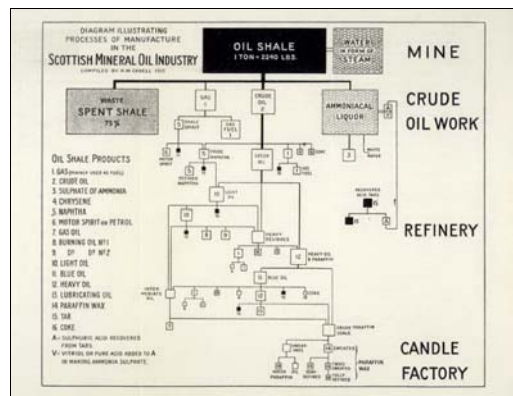
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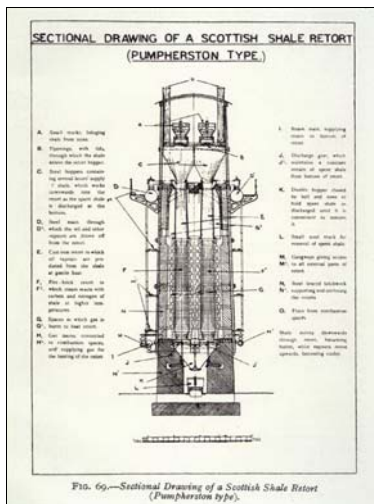
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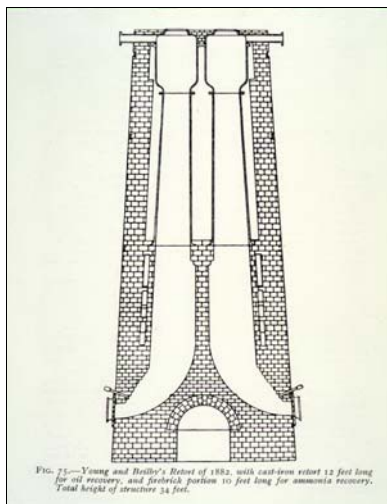
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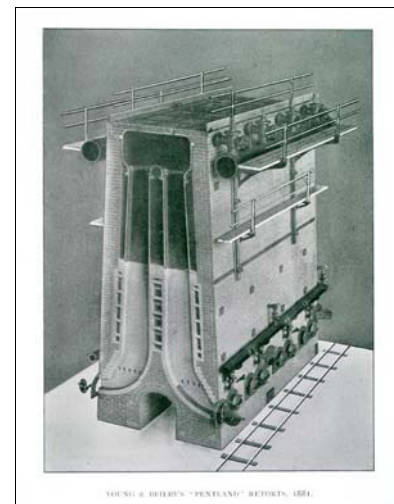
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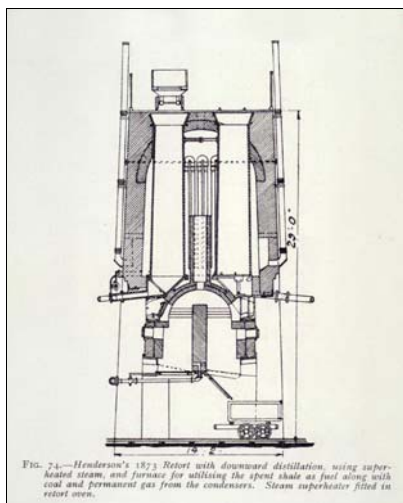
P528119



P528120



P528121



P528122



P528123

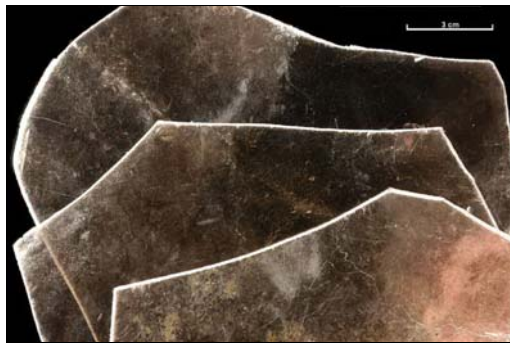


P528124

Economic minerals of Scotland



P528125



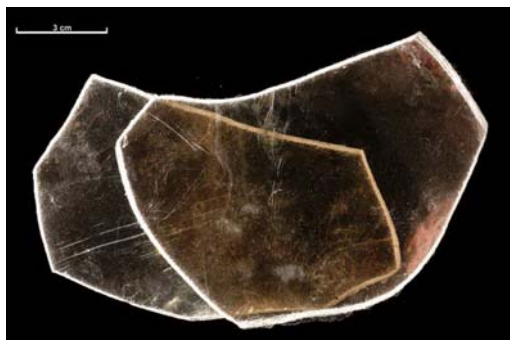
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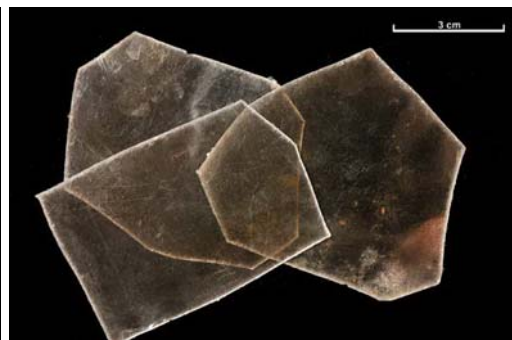
P528127



P528128



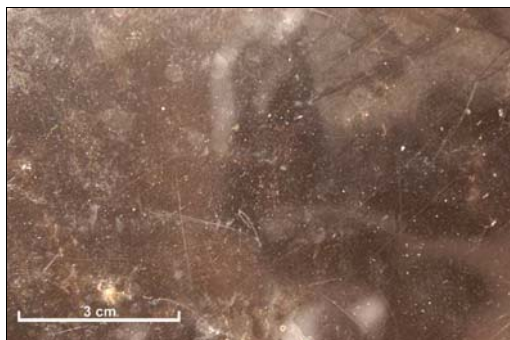
P528129



P528130



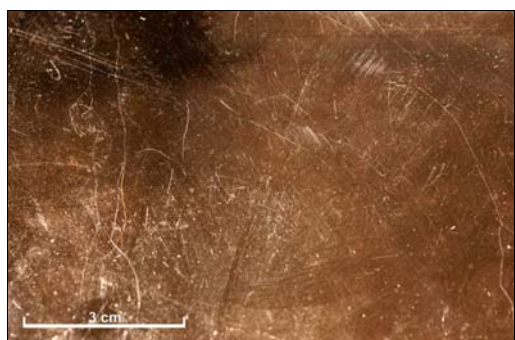
P528131



P528132



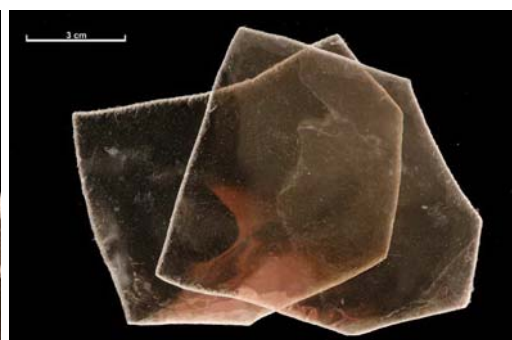
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P528134

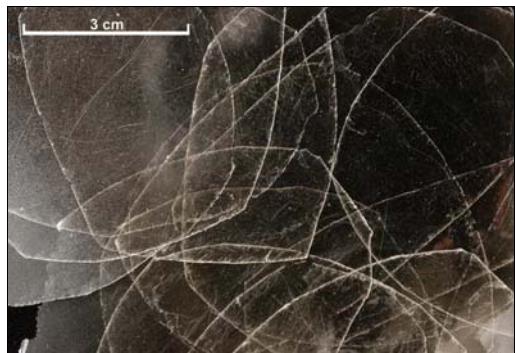


P528135



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Economic minerals of Scotland



P528137



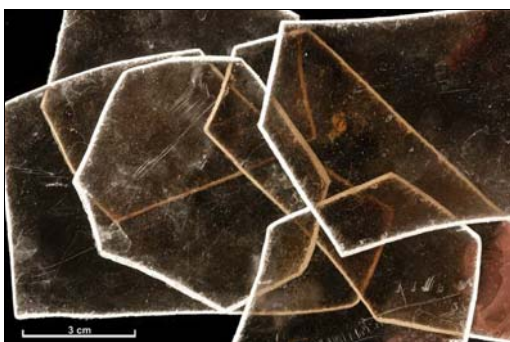
P528138



P528139



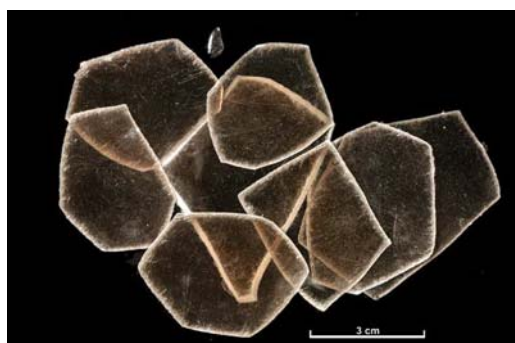
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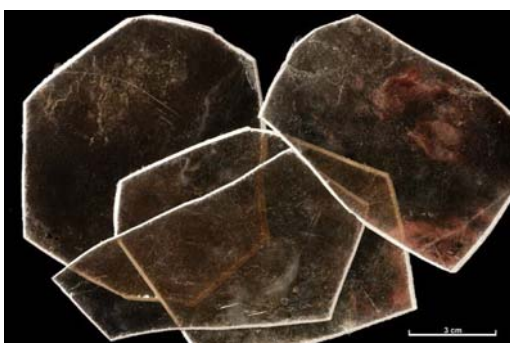
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P528142



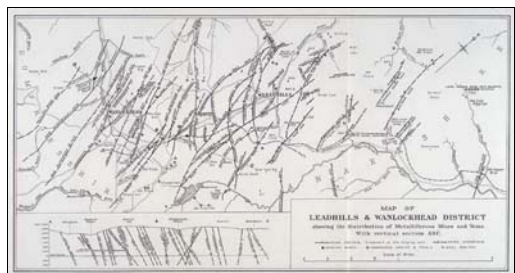
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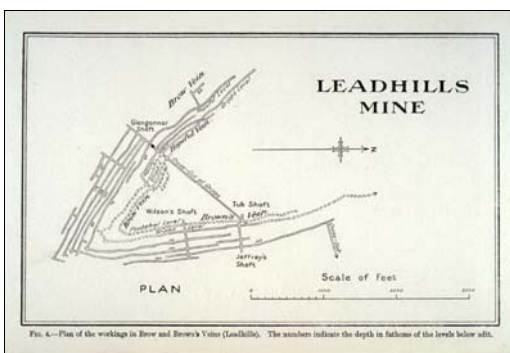
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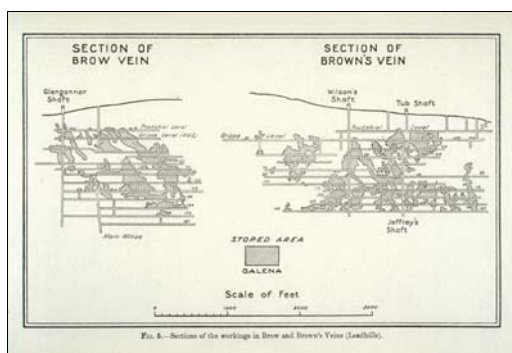
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P528146

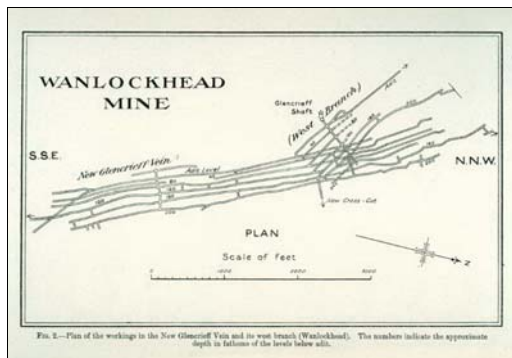


P528147

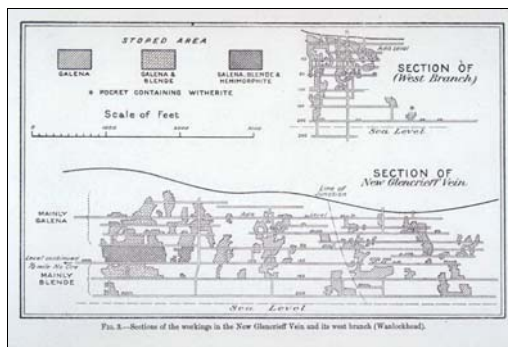


P528148

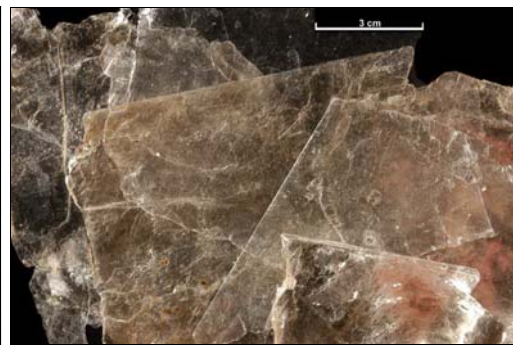
Economic minerals of Scotland



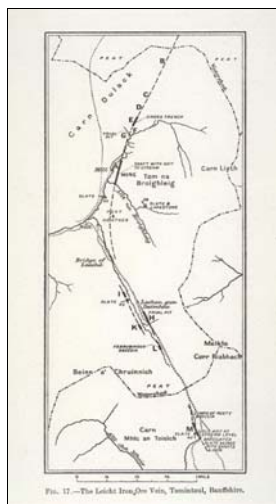
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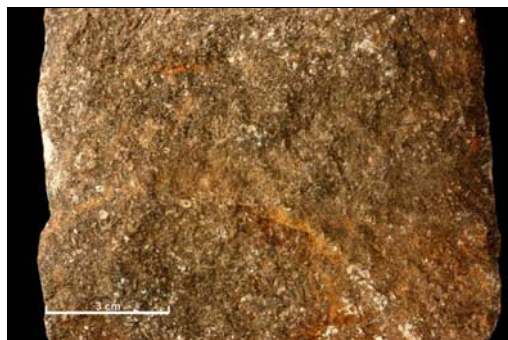
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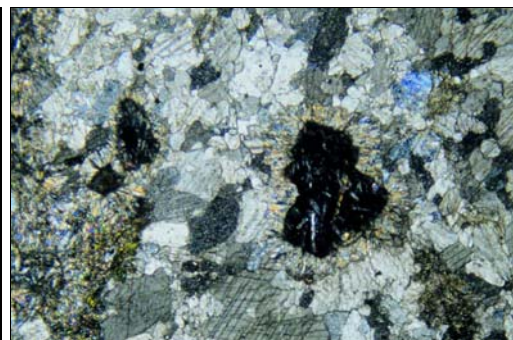
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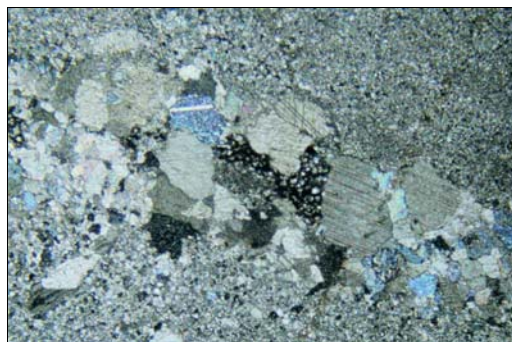
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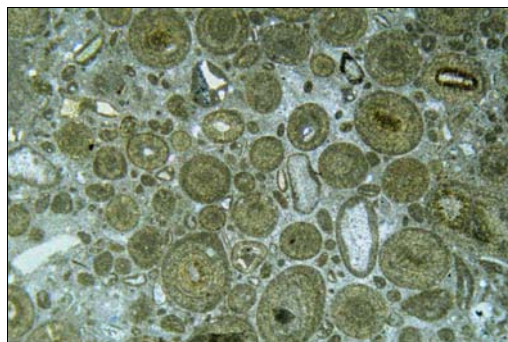
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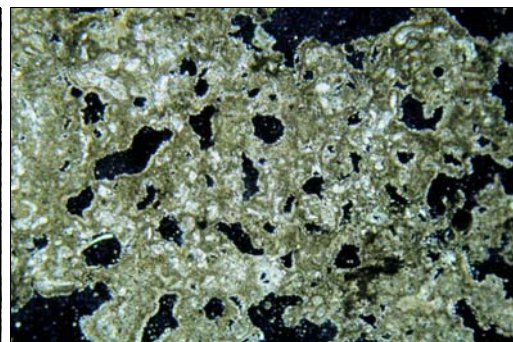
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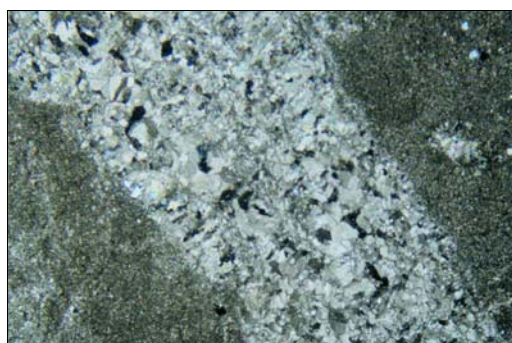
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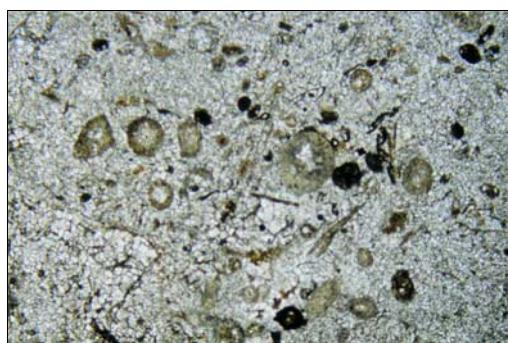
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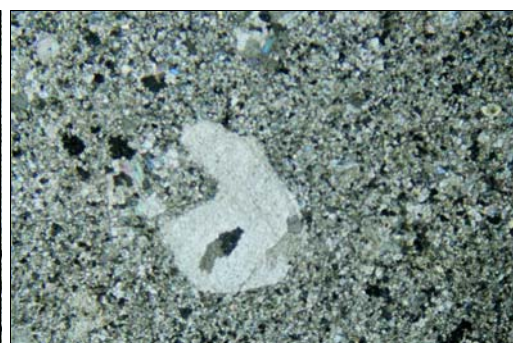
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P531427

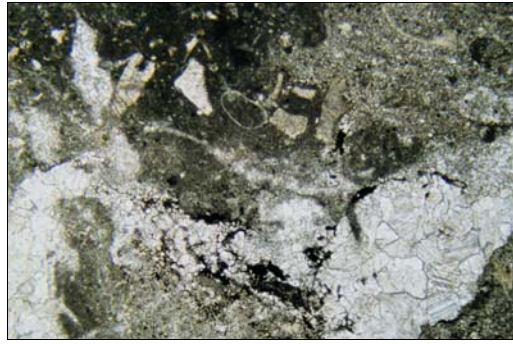


P531428

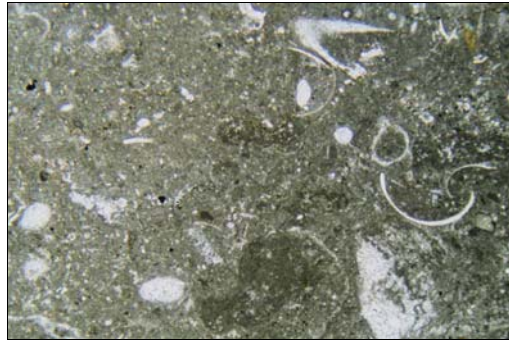


P531429

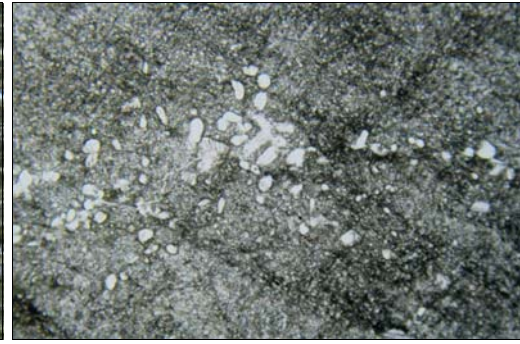
Economic minerals of Scotland



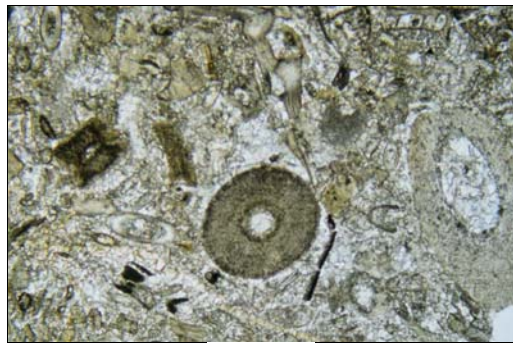
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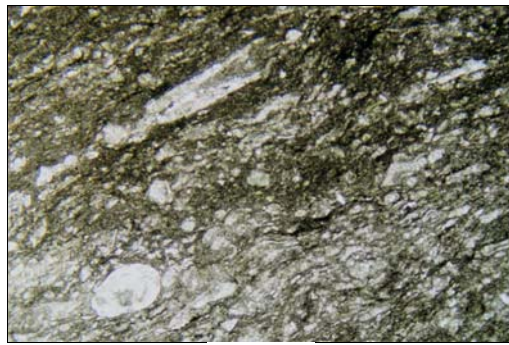
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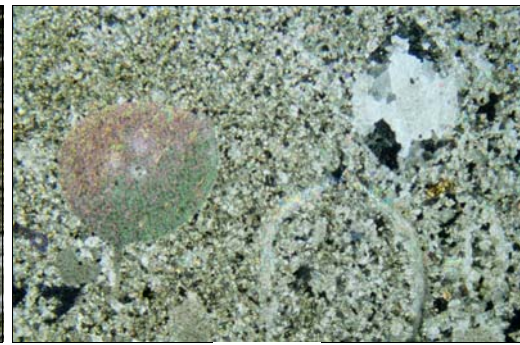
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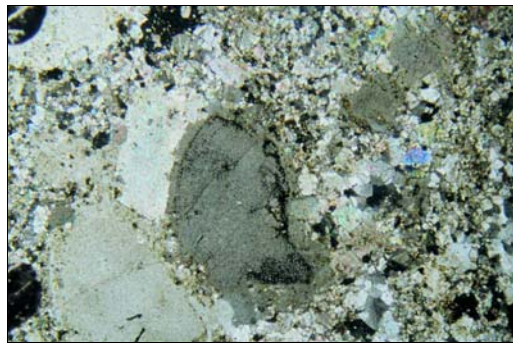
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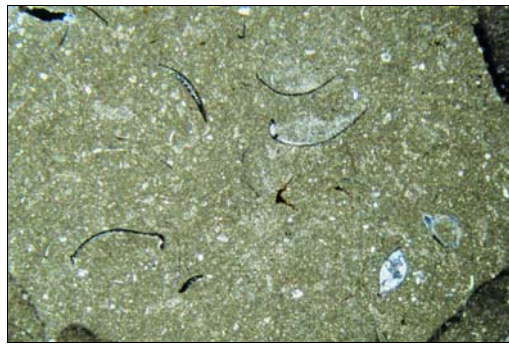
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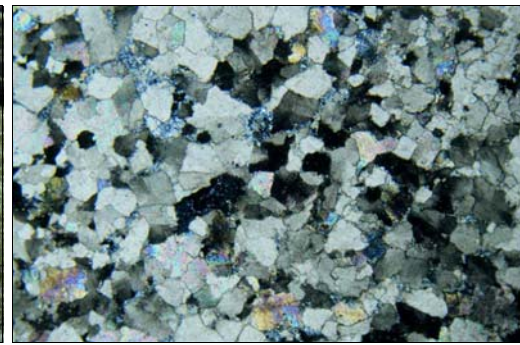
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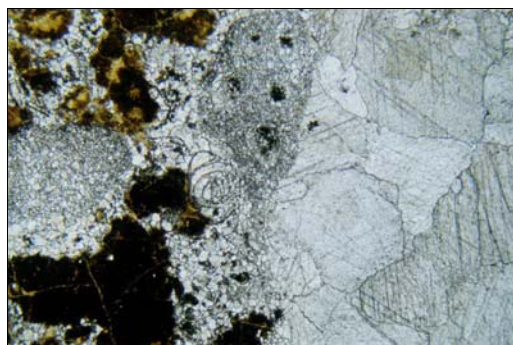
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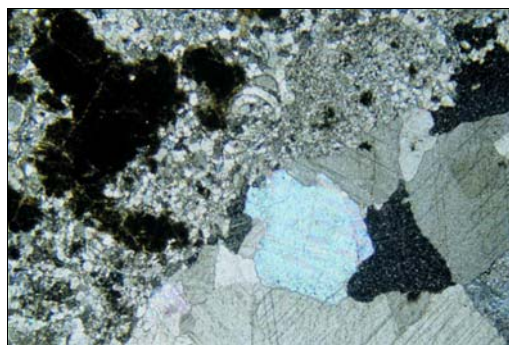
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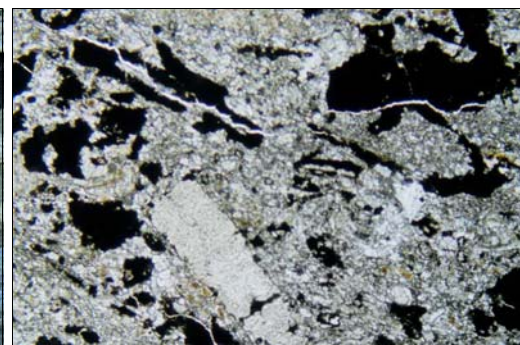
P531440



P531441

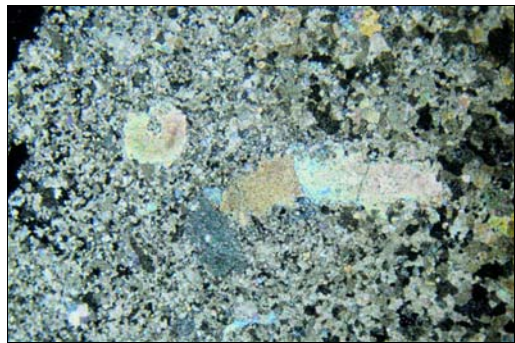


P531442

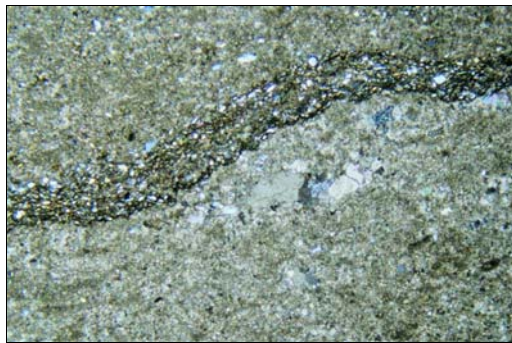


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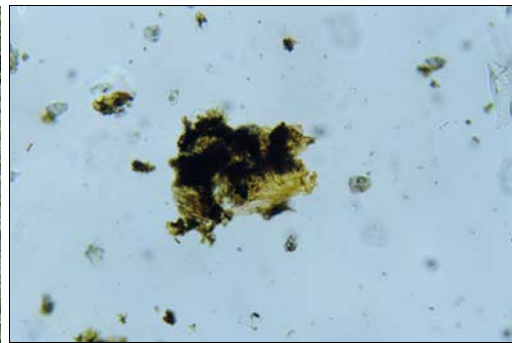
Economic minerals of Scotland



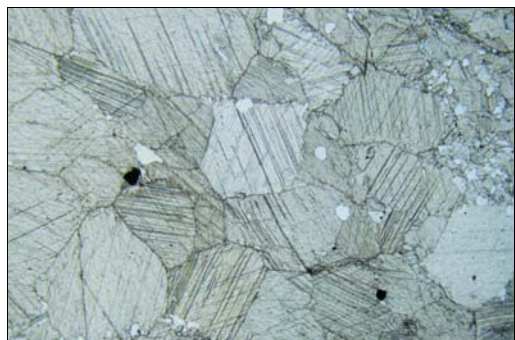
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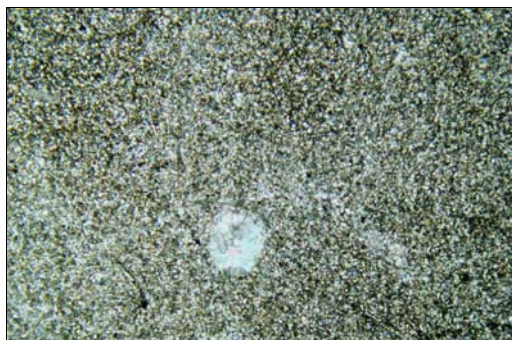
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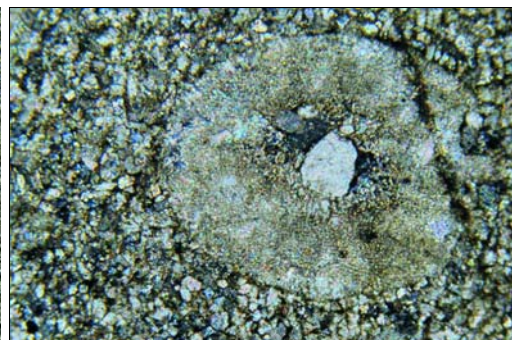
P531448



P531450



P531452



P531454