

1996 FIELD TRIP

EARTH AND SPACE SCIENCE DIVISION  
OHIO ACADEMY OF SCIENCE

GEOLOGIC CONSIDERATIONS IN SUSTAINABLE DEVELOPMENT:  
EXAMPLES IN THE AKRON-CANTON INTERLOBATE AREA

May 5, 1996

by

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ROAD LOG - MAY 5, 1996

Segment  
(Miles)

- 0.0 Start at Malone College, Osborne Hall parking lot. Turn right (west) onto 25th Street. (CANTON WEST QUADRANGLE).
- 0.2 Intersection of 25th Street and Cleveland Ave. Turn right (north) onto Cleveland Ave. Keep to right.
- 0.7 Entrance ramp for US-62 west bound. Turn left (west).

Directly to the west, beyond I-77, an outcrop of the Brookville coal beneath the Putnam Hill Limestone occurs roughly half way up the slope between the highway and the top of the cut.

- 1.2 Ramp onto I-77, north bound. Turn right (north).

- 1.3 The valley we are traveling in was a major outwash channel for the Akron-Canton Interlobate Area.

The forward advance of the Killbuck lobe is on the left (west) and on the right (east) is the forward advance of the Grand River Lobe (White, 1982).

- 1.4-1.8 On the right (east) side of the valley, there are a number of coal mine entrances, gob piles and houses.

The drainage levels within this valley have been lowered as much as 20 feet from pre-pioneer positions.

- 1.9 Intermediate-level terrace position.
- 2.2 Lower level terrace association.
- 2.4 A mastodon skeleton was found during the construction of one of the apartment buildings. I reported that the mastodon bones, buried in silts under muck, were surround by in-situ 2-3 inch diameter cobbles. Paleo-Indians may have had something to do with placement of the stones.
- 3.3 Putnam Hill Limestone outcrop at the level of I-77 beneath off-ramp bridge.
- 3.4 Highest of the three (3) outwash levels easily observable in this valley. This terrace level was lowered roughly 20 feet by sand & gravel operations and borrowing for fill.

Directly to the east of this shale-cored hill is another eroded drainage channel. The water table level has been lowered by up to 20 feet by more recent channelization.

- 3.5 Directly across I-77, is the Belden Village Shopping Center. The area of the shopping center was kame-kettle topography with organics as much as 30 feet deep in the lower areas.
- 4.4 South end of high sand & gravel ridge. (NORTH CANTON QUADRANGLE).
- 4.6 Area to left has been cut down roughly 10-15 feet.
- 5.2 Portage Street.  
To the west, Portage Street goes over the sand & gravel ridge. Within the last six months, Portage Street had been cut down as much as 25 feet.
- 5.5 The lower area to east of I-77 is a gravel-lined

glacial outwash valley.

- 7.6 Off ramp to Akron-Canton Airport. Turn right and proceed to first intersection.
- 7.7 The hill to the northeast of this off-ramp is the site of subsurface and later surface mining of the Brookville (No.4) Coal (see Stop I).
- 8.1 Intersection of ramp and Lauby Drive. Turn left (south). Proceed south on Lauby Drive.
- 8.7 Intersection of Lauby Drive and Mount Pleasant Street. Turn left (east) on Mount Pleasant Street.
- 8.9 Railroad tracks and drainage ditch that occupy the center of the outwash channel.
- 9.0 Intersection of Mount Pleasant Street and Mayfair Road (Aultman Road). Turn left (north) on Mayfair Road (Aultman Road).
- 9.1 Intermediate and high level terrace positions.
- 9.7 Cross railroad tracks that were laid through the col eroded by melt waters. The meltwater flowed southward to the extensive outwash terraces south of US-62.
- 10.0 STOP I  
Limited parking on the left side of Mayfair Road across the street from a fenced off disposal site.

Mine cave-in depressions in the wooded area to the south of the parking area.

The Putnam Hill Limestone outcrops immediately to the west of the parking area.

North of the parking area, abandoned attempts to

surface mine the underground coal workings.

- 10.5 Continue northward on Mayfair Road until the next intersection, State Street.

Turn right (east) on State Street and proceed down the side of the eroded col.

- 11.0 Right turn (south) on to Aultman Road just after the railroad tracks that cross State Street.

- 11.2 Continue southward through this col to the intersection with Highland Street.

The surface mined area to the east has cut into underground mine workings.

- 11.3 The former ceramic-brick plant and yards are on the right (south) side of the street.

As late as 1962, there was active surface mining of coal, clay and also sand & gravel. It was permitted as a sand and gravel operation.

- 11.6 Foundation for tipple associated with underground mining.

- 11.7 Intersection of Aultman Road & Highland Street.

Highland Street was not to be built until recommendations were made about draining the water-saturated, unoxidized till materials there.

POSSIBLE SIDE TRIP TO CONSTRUCTION - GRADING SITE

Continue southward on Aultman Road, merge into Mayfair Road and continue to the next traffic light at the intersection with Mount Pleasant Street.

- 12.5 Proceed across Mount Pleasant Street and continue

southward on Pittsburgh Road.

- 12.8 The higher upland to the east contains abandoned underground coal mine workings.

Continue for roughly a mile to the traffic light at the intersection with Applegrove Street.

- 13.7 Turn left (east) on Applegrove Street and continue 1.0 mile to Ellsmere Avenue. Turn left (north) STOP II.

- 14.7 STOP II

Houses recently built over abandoned underground coal mine workings that were known in the community.

Stark County has not allowed building over known underground mining operations. There have been special approvals for individual buildings built by longer term land owners.

- 15.1 Return to Applegrove Street and turn west. Continue to the first traffic light.

POSSIBLE SIDE TRIP TO SUBSIDENCE DEPRESSIONS UP TO 15 FEET DEEP.

- 15.6 Turn left (south) onto North Main Street. Continue about 0.4 miles to the next traffic light.

- 16.0 Turn right (west) onto Woodrow Street,

- 16.5 Proceed to Browning Avenue.

NOTE: Some of the houses on the cull-de-sac have had grout pumped beneath them. The cost, roughly \$10,000 - \$12,000 per house site 10 years ago, was funded by an O.S.M. program.

- 16.8 Continue to the end of Woodrow Street and turn to the left (south) onto Pittsburgh Road.

Pittsburgh Road is generally along the contact between the outwash terrace and the till-covered upland.

- 17.0 Proceed to the first traffic light and turn right (west) onto Portage Street.

As we proceed toward I-77, we recross the wide floor of the outwash valley.

- 17.4 Deep drainage ditch that was excavated to drain these sandy soils that were formally quite wet.

As we approach I-77, observe the high upland ridge that is on the west side of I-77.

- 17.7 Note the pavement failures on Portage Street beneath I-77. Inadequate surface and subsurface drainage accelerated the deterioration of the sub-base.

- 17.8 Proceed 0.2 miles and turn right onto Sunset Strip. Continue 0.2 miles, past the high upland on the left, and then turn left onto Eagle Circle STOP III.

- 18.1 STOP III  
Exposures of interbedded sands and gravels that comprise this large, land form.

- 18.2 Return to Sunset Strip, turn left (north) and continue to the end of this street at the

- 18.5 Intersection with Wayview Street.

Roughly one half mile east is a large water well field. Except for the City of Alliance; all of Stark County residents obtain their water from ground water sources.

- 19.0 Turn left (west) and proceed to the intersection with

Frank Avenue.

To the right (west) observe a large, flooded kettle-hole at the base of a kame deposit.

Continue southward to the next traffic light, the intersection of Portage Street & Frank Avenue.

19.4 Note the denuded ridge to the east of Frank Avenue. Observe the irregular heights and linear characteristics of this landform.

19.8 The intersection of Portage Street and Frank Avenue (Elev. 1127 M.S.L.) is 53 feet higher than Portage Street beneath I-77 (Elev. 1074 M.S.L.). The relief on the linear upland landform is as much as 113 feet (Elev. 1187 M.S.L.).

Continue southward on Frank Avenue.

20.3 Rise onto a high terrace position. This is the same terrace observed to the east of I-77 near Belden Village and at Everhard Street. (CANTON WEST QUADRANGLE).

20.7 STOP IV

DEPENDENT UPON TIME, travel either west or east of the intersection of Frank Avenue and East Lake Street.

Our purpose is to view landforms, land uses, street building, and mass movements.

Proceeded southward on Frank Road, cross through kame deposits and descend to the lower terrace position.

22.0 Turn right (west) onto Fulton Road.

--- Lunch Stop - On Your Own ---



Roughly 0.9 miles west of Frank Road is Lake Cable.

- 22.9 Lake Cable was created by flooding an extensive lowland by a relatively low dam. This lake and housing layout was created in the early 1930's.
- 23.0 The stone commercial building was supposedly the first single-building, shopping mall in Stark County.
- 23.3 Brunnerdale Avenue (Elev. 1105.5 M.S.L.).

Note the irregular heights and linear nature of the long landform in front of you.

Continue west on Fulton Road.

- 24.1 The higher elevations on the ridge range between 1180-1220 M.S.L.

This landform consists of mixed glacial materials very similar to an end or recessional moraine.

As you cross over the crest of this moraine-like landform you are entering an interior drainage basin of over 1,600 acres. All surface water enters the ground, mostly at Nobles Pond.

At Noble Pond, water flows underground for roughly 1500 feet, then comes out into a lower wetland area as high volume springs.

Continue westward and downward to the intersection of Fulton Drive with Wales Road.

- 24.6 Turn left (south) onto Wales Road. Proceed roughly 0.7 miles and turn left into The Meadows and onto Shady Hollow Drive.

Proceed 0.5 miles to the end of Shady Hollow Drive

25.1 STOP V Noble Pond.

Noble Pond is the outlet for this interior drainage basin.

Nobles Pond was the site of a recurring Paleo-Indian camp site.

25.6 Return to Wales Road, turn right (north) and proceed 1.4 miles.

27.0 Turn left onto Mudbrook Street. Continue for more than 1.0 miles just past Arlington Avenue. (MASSILLON QUADRAANGLE).

28.2 There are abandoned underground mines beneath the hill to the north.

Continue west on Mudbrook Street.

28.9 The sand & gravel pit to the south is in a terrace position that is apparently related to the esker at Stop-VI.

Northeast of Lutz road is an abandoned underground shaft mine.

29.3 Observe the long esker to the south that is roughly parallel to Mudbrook Street.

29.9 Continue to the end of Mudbrook Street at the intersection with Highmill Avenue. Turn left (south) and proceed 0.2 miles to Stop VI.

30.1 STOP VI, The Rohr Esker - Possible Drive-By

31.2 Proceed southward on Highmill Road 0.8 miles, past the base of an old water mill on the east side of Highmill Road.

31.3 Turn left (east) onto Fulton Road.

31.6 Note the old mill race way as it crosses under the road.

32.1 A pond was constructed to supply water to the mill. Later, the size of the pond was increased.

POSSIBLE SIDE TRIP TO OBSERVE CURRENT RESIDENTIAL DEVELOPMENT IMMEDIATELY ADJACENT TO WETLANDS

33.1 Proceed eastward 1.0 miles to the entrance to Jackson "Bog" or fen. Turn left into parking lot. (CANTON WEST QUADRANGLE).

STOP VII, Jackson "Bog"

This fen is maintained by the infiltration of water into the terrace deposit. Water flows laterally over a restrictive horizon then outlets near the base of the slope.

It is very probable that the restrictive horizon is a layer of Hayesville till that has been documented by water wells.

It must be remembered that the water level in the ponded area to the south of the bog would not be nearly as high except for the construction of the mill pond.

RETURN TO MALONE COLLEGE: travel east on Fulton road for about 6.5 miles to 25th Street. Turn left (northeast) on 25th Street and proceed 0.5 miles to Malone College.

END OF ROAD LOG

HAVE A SAFE TRIP HOME

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MALONE COLLEGE

STOP II

STOP I

STOP III

STOP IV

STOP V

STOP VII

STOP VI



2 miles

2 kilometers

0

0

1

1

2

2

