Improvements to the Indiana Geological Survey's Petroleum Database Management System

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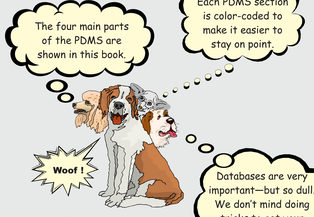
Indiana Geological Survey

Book I: Harry Plotter and the Sorcerer's Home

Abstract

The Indiana Geological Survey's Petroleum Database Management System (PDMS) is a web application that provides online access to petroleum-related geological information. Since its debut in 2004, the application has been widely used by the petroleum industry, academia, government agencies, and the general public. On June 6, 2011, a significantly enhanced version of the PDMS went online. New features include a robust search menu that permits elaborate queries of more than 74,000 petroleum wells, rapid and convenient online viewing and downloading of PDF-file well reports and both PDF- and TIFF-file geophysical and other well logs, and streamlined menus for easily accessing extensive well data. An interactive, context-driven Web Help explains every concept or term used.

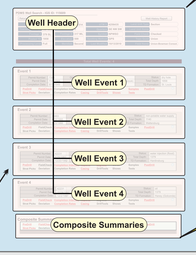
The PDMS is organized in three main sections, plus the **Web Help Section**. The **Well Record Tables Section** includes such information as well location descriptions, completion zones, logs, operators, lease names, tests, reports, hydrocarbon shows, samples, cores, geologic formations and tops, and directional survey data. The **Map Viewer Section** contains many user-selectable layer options for showing well locations, petroleum fields, producing formations, aerial photographs, and topographic maps. Wells shown in the Map Viewer are hyperlinked to the Well Tables for easy access to the well data. The **Fields and Production Section** summarizes oil, natural gas, and gas storage field data, including historical oil production volumes in both tables and charts.



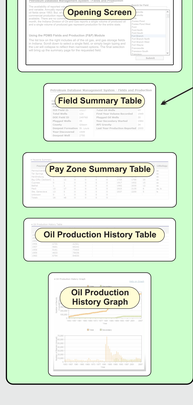
Your PDMS Home is protected by a ferocious four-headed dog.

Your PDMS Home Page
http://igs.indiana.edu/PDMS/

Well Record Tables

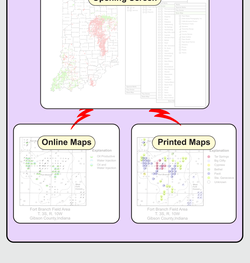


Fields and Production Module



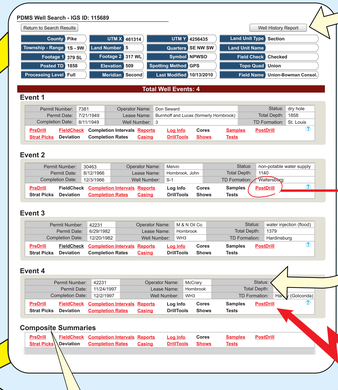
These background images are intentionally screened with my Cloak of Translucency so you won't be tempted to read them now. You will see them in their full beauty in later books in the Harry Plotter series. Brilliant!

Map Viewer



Book II: Harry Plotter and the Table of Secrets

Well Record Page



Click for a big surprise! See Book V.

Composite Summary Tables show the combined data for all of the Well Events for each subtable. Click the red underlined Composite Summary links to view.

Data Stored in Event Subtables

PreDrill Subtable
Sample Criteria
Application Type
Permit Type
Proposed TD
PTD Formation
Permit Elevation

Field Check Subtable
Date Checked
Field Checked By
Observed Field Status
Elevation
Elevation Method
Notes

Reports Subtable
Report ID
Report Type
Report Date
Report Comments
View Report

Shows Subtable
Show Top
Show Bottom
Show Description
Show Formation
Show Source
Comments

Log Info. Subtable
Log ID
Run Number
Log Category
Trade Name
Log Type
Date Logged
Log Top
Log Bottom
Log Scale
Small Scale
Log Datum
Elev Adjustment
View/Download
Comments

Stratigraphic Picks Subtable
Pick Depth
Pick TVD (Deviated Wells)
Pick Type
Log ID
Log Type
Picked By
Pick SubSea
Priority
Confidence
Pick Note
Stratigraphic (Strat) Pick System
Supergroup
Group
Formation
Member
Comments

Tests Subtable
Test Number
Test Type
Test Date
Test Top
Test Bottom
Formation
Duration
Recovery
ICIP (PPI)
FCIP (PPI)
Source
Comments

Core Subtable
File Number
Core Number
Box Number
Core Top
Core Bottom
Cored Formation
Date Received
Core Comments

Samples Subtable
Sample Top
Sample Bottom
Box Number
Received Date
Comments
Lith Numbers

Deviation Subtable
Measured Depth
Offset
TVD
X Shift
Y Shift
UTM X
UTM Y
Deviation Type
Deviation Symbol
Comments

Completion Interval Subtable
Interval ID
Interval Top
Interval Bottom
Formation
Comments

Completion Rates Subtable
IP Oil BOPD
IP Gas MCFGPD
IP Water BWPD
IP Descriptive
Treatments
Comments

Casing Subtable
Diameter
Casing Depth
Sacks Cement
Cu. Ft. Cement
Comments

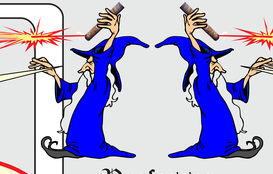
DrillTools Subtable
Tools Type
Tools Top
Tools Bottom

PostDrill Subtable
Commenced
~~Info Sheet~~
Reviewed By
IGS Well Class
API Post-Drill Class
New Field Name
Date Reviewed

Book III: Harry Plotter and the Prisoner of Ask-a-Man

Help will always be given at PDMS online to those who ask by clicking the many hot-linked data labels.

Roughly 450 entries currently reside in the **Online Help**. Ranging from a single sentence to a few pages, they attempt to explain every concept, plan, convention, flaw, definition, and procedure used in the PDMS.



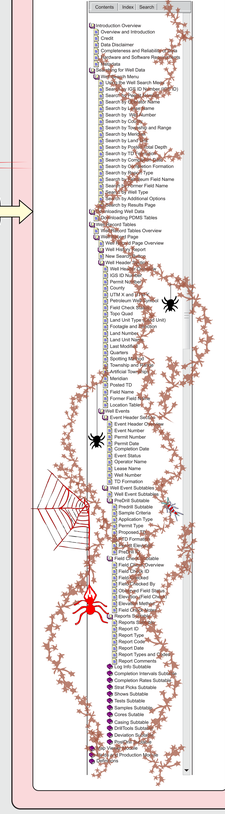
Professor Double-Core

Click label here.

Receive Help here.

A red underlined subtable label indicates that data are present in the subtable. All of the PDMS well data fields are shown below by their brief names. To know more, you need **Help** !

Help Contents



Help Pages

Not intended for reading at this reduced scale

Welcome to "Hard-Works" Academy !

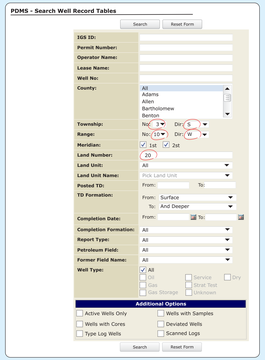
Book IV: Harry Plotter and the Goblet of Desire

Sophisticated searches can be made by combining search criteria.

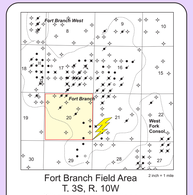
This simple example searches for wells only in 3S-10W-Section 20.

The same search results are returned by selecting wells with the hyperlink tool in the **Map Viewer**.

Well Search Menu

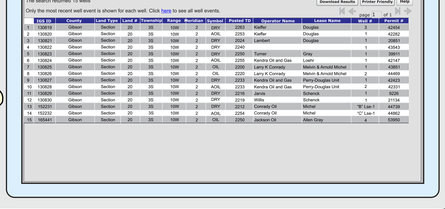


Select Wells From Map Viewer



Fort Branch Field Area
T. 3S, R. 10W
Gibson County, Indiana

The Hyperlink Tool looks just like the mighty burst that spews from your magic wand !

Click on any record line in the **Search Results** to be magically transported by "port key" to the **Well Record Page** for that well.

Search Results Page