

Guided Activity: Historical Documents
Sproul State Forest Fieldwork
July 19, 2015

Although using maps and aerial photography can indicate broad areas of likely historic oil and gas development, exploring historical documents can help narrow the scope of these regions. This activity is designed to walk you through the process of using historical documents to identify the locations of specific wells. There are a diversity of historic documents that could be useful in this effort such as land deeds, property surveys, and land transfer documents. The resources that we will explore in this exercise include United States Geological Survey (USGS) publications, well records, well logs, and well location maps.

Part I: USGS Publications

USGS publications provide a broad summary of the regional geology and the natural resource (oil, gas, mineral) development in an area. Annual reports by the USGS include Mineral Resources, Annual Bulletins, Contributions to Economic Geology, and The Geology of “Specific Region.”

Older USGS publications can be accessed using open access databases such as Hathi Trust or Google Books. Using these resources you can type in keywords (i.e. “USGS Hyner Run oil gas well”) and also limit the scope of your search by identifying a time period. Since we are exploring oil and gas development in the Hyner Run region during the late 1800s to early 1900s we will limit our search to USGS publications between 1880 and 1920.

We will begin with the most general reference of the USGS publications that contained the keywords in our search, the “Department of the Interior United States Geological Survey Mineral Resources of the United States Calendar Year 1903.” The Mineral Resources publications provide descriptive and statistical information on economic geology throughout the United States each calendar year. These resources include information on oil and gas production, in addition to other minerals.

Q1: Identify which chapter(s) in the table of contents would be applicable in our search for information on potential oil and gas development in Hyner Run.

Navigate to the “Natural Gas” chapter. Statistical and descriptive information about natural gas production is organized by state. Explore the chapter and locate information relevant to historic oil and gas development in Hyner Run.

Q2: Record information relevant to historic oil and gas development in Pennsylvania and in Hyner Run.

From this USGS document, we have now established that a gas well was drilled on the Susquehanna River near Hyner Station in 1903. Now we can move on to a more detailed USGS publication, which contains our keywords, the “Department of Interior United States Geological Survey Contributions to Economic Geology 1903.” The Contributions to Economic Geology publications provide information on recent developments in mineral and natural resource development throughout the United States each calendar year.

Q3: Identify which chapter(s) in the table of contents would be applicable in our search for information on potential oil and gas development in Hyner Run.

Navigate to the “Petroleum, Natural Gas, and Asphalt” chapter. Explore the chapter and locate information relevant to historic oil and gas development in Hyner Run.

Q4: Record information relevant to historic oil and gas development in Hyner Run.

We now know from this document that several gas wells were drilled in the area between Hyner and Ritchie Stations on the Pennsylvania Railroad. The first gas well was drilled in 1877 to recover natural gas present in the Catskill Red Sandstone and the Chemung Shale. Nearly a quarter century later, two gas wells were drilled in 1903 by the Interstate Development Company to exploit the same gas pool.

Finally, we will move on to the most specific USGS publication that contained the keywords in our search, the “Second Geological Survey of Pennsylvania: Report of Progress The Geology of Clinton County 1880.” During the Second Geologic Survey, the USGS produced geologic reports for each county in Pennsylvania. These documents include detailed descriptions of rock units and geologic structures present in each county at a township level.

Q5: Identify which chapter(s) in the table of contents would be applicable in our search for information on potential oil and gas development in Hyner Run.

Q6: Record information relevant to historic oil and gas development in Hyner Run.

Although this document doesn't provide any more detailed information on the gas wells drilled near Hyner State in 1877 and 1903, it does provide a more comprehensive understanding of the regional geology and the presence of oil and gas development in this region.

Part II: Well Records

Information on specific wells can be located through Pennsylvania's Department of Environmental Protection (PA DEP) and Department of Conservation of Natural Resources (PA DCNR). The DEP and DCNR archive well records, production reports, and well maps online on the Oil and Gas Electronic Reporting Website and the Well Information System. Using these databases it is possible to search for information about wells drilled during a specific year. Searching for more information on the two gas wells drilled in 1903 in Hyner Run provided several relevant documents.

A well record and well map exist from a gas well drilled in 1903 at Goodling Farm at Hyner Station. Well records and maps provide a specific well location (latitude and longitude), which is useful to know prior to fieldwork.

Q7: Using the well record and well map for Goodling Farm, what is the location of the well drilled on Goodling Farm?

Q8: At what depth did drillers encounter the Catskill Red Sandstone? At what depths did operators encounter gas and oil? Is this consistent with the USGS publications explored earlier in this exercise?

Another well record exists for a gas well drilled in 1903 at Harmon Farm at Hyner Station.

Q9: Using the well record and well map for Harmon Farm, what is the location of the well drilled on Harmon Farm?

Q10: At what depth did drillers encounter the Catskill Red Sandstone? At what depths did operators encounter gas and oil? Is this consistent with the USGS publications explored earlier in this exercise?

Part III: References

USGS publications

<http://www.hathitrust.org>

<http://www.books.google.com>

Well records

<https://www.paoilandgasreporting.state.pa.us/publicreports/>

http://www.dcnr.state.pa.us/topogeo/econresource/oilandgas/resrefs/wis_home/

Historic newspaper archives

<http://www.chroniclingamerica.loc.gov>