



PENNECO

PENNECO ENVIRONMENTAL SOLUTIONS, LLC

**UIC Application
SEDAT #4A
Plum Borough
Allegheny County
Pennsylvania**

Binder #1

**Penneco Environmental Solutions, LLC
Sedat #4A**

Table of Contents

Binder #1

Tab 1 – Permit Application

Tab A – Attachment A – Area of Review

Tab B – Attachment B – Maps of Well Area & Area of Review

Tab C – Attachment C – Corrective Action Plan & Well Data

Binder #2

Tab E – Attachment E – Name & Depth of USWDs

Tab G – Attachment G – Geologic Data on the Injection and Confining Zones

Tab H – Attachment H – Operating Data

Tab I – Attachment I – Formation Testing Program

Tab J – Attachment J – Stimulation Program

Tab K – Attachment K – Injection Procedures

Tab L – Attachment L – Construction Procedures

Tab M – Attachment M – Construction Details

Tab O – Attachment O – Plan for Well Failures

Tab P – Attachment P – Monitoring Program

Tab Q – Attachment Q – Plugging & Abandonment Plan

Tab R – Attachment R – Necessary Resources

Tab U – Attachment U – Description of Business

INSTRUCTIONS FOR FORM 7520-6 (CLASS II WELLS)

A permit application must be completed by all owners or operators of current or proposed Class I, II, and III wells, and some Class V injection wells subject to the requirement to obtain an Underground Injection Control (UIC) permit as described at 40 CFR 144.31 and others directed by a UIC official to apply for a UIC permit. Please note that the information needs vary by well class. These instructions are specific to Class III wells; other versions are available for other well classes. Please note that this form must be signed by a responsible entity as described at 40 CFR 144.32, even if the attachments are prepared by contractors or service companies. If the application covers multiple wells, use additional pages as necessary to provide all the requested information.

I. OWNER NAME, ADDRESS, PHONE AND/OR EMAIL: Enter the name and street address, city/town, state, and ZIP code of the owner of the well, well field, or company. Also provide an email address (if available) and/or a phone number.

II. OPERATOR NAME, ADDRESS, PHONE AND/OR EMAIL: Enter the name and street address, city/town, state, and ZIP code of the operator of well or well field; also provide an email address (if available) and/or a phone number. If the operator is the same as the owner, enter "same as owner."

III. COMMERCIAL FACILITY: Check the appropriate box to indicate the type of facility. A commercial facility is a single or multiple well facility that is specifically engaged in the business of injecting waste fluids generated by third party producers that is originated off-site and transported to the facility by truck for a fee or compensation.

IV. OWNERSHIP: Check the appropriate box to indicate whether the owner of the well/facility is a private, Federal, or State/Tribal/Municipal entity.

V. TYPE OF PERMIT ACTION REQUESTED: Check "new permit" if the well has never been subject to a UIC permit (e.g., for a newly constructed or converted well). Check "permit renewal" for an application associated with extending an expiring UIC permit. Check "modification" for an application to modify an existing permit that is not expiring. Check "add well to area permit" if additional wells are to be covered under an existing UIC area permit. Check "other," if needed and describe the situation.

VI. SIC CODES: List at least one and no more than four Standard Industrial Classification (SIC) Codes that best describe the nature of the business in order of priority. A list of SIC codes is available from the U.S. Department of Labor at <https://www.osha.gov/pls/imis/sicsearch.html>.

VII. INDIAN COUNTRY: Check yes if the well is located in Indian country. Indian country (as defined in 18 U.S.C. 1151) includes: all land within the limits of any Indian reservation under the jurisdiction of the U.S. government; all dependent Indian communities within the borders of the U.S.; and all Indian allotments, the Indian titles to which have not been extinguished.

VIII. TYPE OF PERMIT: Check "Individual" or "Area" to indicate the type of permit requested. Individual permits cover a single injection well, while area permits may cover more than one injection well. Note that area permits are issued at the discretion of the Director and that wells covered by an area permit must: be at one contiguous site, be under the control of one entity, and may not inject hazardous waste. If an area permit is requested, enter the **number of wells** to be included in the permit. In the case of a project or field that crosses State lines, it may be possible to consider an area permit if EPA has jurisdiction in all affected States (each such case will be considered individually). Also provide the **name of the well field or project**.

IX. CLASS AND TYPE OF WELL: Enter the class (as defined in 40 CFR 144.6) and type of injection well for which a permit is requested. Use the most pertinent code selected from the table below. When selecting type "X", please explain in the space provided.

TABLE OF CLASS II WELL TYPES

A	Annular Disposal Well.
D	Produced Fluid Disposal Well.
H	Hydrocarbon Storage Well (excluding natural gas).
R	Enhanced Recovery Well.
X	Other Class II Wells (not included in Type "A," "D," "H," or "R").

X. WELL STATUS: Check **Box A, Operating** if the well currently operates as an injection well (e.g., if a permit renewal is requested or a permit is sought for an existing rule-authorized injection well). Check **Box B, Conversion** for an existing well not currently being utilized for injection that is proposed to be converted to an injection well. Check **Box C, Proposed** for an underground injection well not yet constructed or completed. Provide relevant dates if A or B are checked.

XI. WELL INFORMATION: Enter the **API number** (the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system). Enter the **Permit or EPA ID number** assigned to the injection well by the EPA or the permitting authority. If you do not have a number (e.g., for a new well), this will be provided by EPA or the permitting authority, and you can leave the field blank. Also enter the **Full Name of the Well** or project.

XII. LOCATION: For individual permit applications, in the fields provided, enter the location of the well using latitude and longitude and/or the Public Land Survey System. When using latitude and longitude, use decimal degrees to five or six places after the decimal, if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a

negative sign for the latitude of a well in the Southern Hemisphere. When using the Public Land Survey System, fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. For area permit applications, provide the latitude and longitude of the approximate center of the area.

XIII. ATTACHMENTS: Specific instructions for completing the attachments are presented on pages 3 through 6. Place the permit or EPA ID number (or, if none has been assigned, other identifying information such as an API number or the project name) in the upper right hand corner of each page of the attachments.

XIV. CERTIFICATION: All permit applications must be signed by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency, or a duly authorized representative of that person.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average 61 hours per response for a Class II well permit application. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW, Washington, DC 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

Instructions for Completing Attachments to Form 7520-6 (Class II Wells)

The Underground Injection Control (UIC) program, as promulgated under the Safe Drinking Water Act (SDWA), is designed to prevent injection activity from allowing the movement of fluid containing any contaminant into underground sources of drinking water (USDWs), if the presence of that contaminant may cause a violation of any primary drinking water regulation or may otherwise adversely affect the health of persons as found at Title 40 of the Code of Federal Regulations (40 CFR) section 144.12. Any applicant for a permit under this program shall have the burden of showing that their proposed construction, operation, maintenance, conversion, plugging, abandonment, and injection activity, does not endanger USDWs.

The attachments below have been constructed to provide applicants with clear expectations as to what information EPA needs to make a determination that an applicant's proposed activities will not endanger USDWs.

Pre-Application Coordination

Coordination between the UIC program and the permit applicant prior to submittal of the permit application is an important step for efficient and effective permitting. Early discussions will ensure that the applicant is aware of all the permit application requirements, including state specific requirements found at 40 CFR part 147. These discussions may also help the applicant plan how to invest time and resources needed to develop a comprehensive and complete permit application.

Applicants are encouraged to contact their EPA regional UIC program for a pre-application coordination meeting.

Note: If the owner or operator of *existing rule authorized Class II UIC well(s)* is required by the EPA to apply for a permit (40 CFR § 144.25), consult with EPA staff during the pre-application coordination for additional requirements that may apply.

When completing each attachment, please be sure to specify the units reported, e.g., of depth, pressure, temperature, etc.

Attachment A. Map(s) and Area of Review

Part I. Well Location(s)

For Individual Permits: If the surface location provided in the accompanying 7520-6 form does not adequately describe the well location (i.e., due to deviation, directional, or horizontal drilling), please describe the well's orientation and provide the top- and bottom-hole coordinates, as appropriate. If any monitoring wells are proposed as part of this permit application, provide coordinates for all monitoring wells.

For Area Permits (40 CFR § 144.33): Provide information similar to what is outlined above for individual permits for each well (existing or proposed) to be covered by this permit. In addition, provide a description of the proposed permitted area. At a minimum, this area should include all the proposed or existing wells known at the time of permit application submittal. For circular areas, this description should consist of a defined-radius from a singular point whose coordinates have been given. For polygonal areas, use a series of coordinates describing the vertices or corners of the area. Submit a Geographic Information System (GIS) file, if available.

Part II. Area of Review Size Determination (40 CFR § 146.6)

For All Permits. Give the method (fixed radius or equation) and, if appropriate, all calculations used to determine the size of the area of review (AOR). If you are uncertain as to which method to use, consult with your regional EPA office.

The AOR must be a minimum radius of one-fourth (1/4) mile from the well bore, including a well's lateral, or the proposed area permit boundary for area permits, unless the use of an equation is approved by the Director.

In addition, for Class II enhanced oil recovery well(s). The AOR will be at a minimum the larger of the following: one-fourth (1/4) mile radius or the distance to the nearest active producer in the production formation.

Part III. Map(s) (40 CFR §§ 144.31 & 146.24)

Submit a topographic map (or other map if a topographic map is unavailable) extending one mile beyond the facility property boundary showing:

- project injection well(s), well pad(s) and/or project area,
- applicable area of review,
- all outcrops of injection and confining formations,
- all surface water intake and discharge structures, and
- all hazardous waste treatment, storage, or disposal facilities.

Consult with your EPA regional office for the definition of the facility property boundary.

The information below does not apply to existing rule authorized Class II well(s).

Within the one-fourth (1/4) mile beyond the facility property boundary or the AOR, whichever is larger, the map will also show the:

- name and location of all production wells, injection wells, abandoned wells, dry holes, and all water wells, noting their types (public water system, domestic drinking water, stock, etc.),

- springs and surface bodies of water,
- mines (surface and subsurface) and quarries, and
- other pertinent surface features, including residences, schools, hospitals, and roads.

Only information of public record and pertinent information known to the applicant is required to be included on this map. Multiple maps may be needed to display this information clearly. If a certain feature is not present in the area covered, please state so definitively (e.g., "There are no known outcrops of the confining formation in the mapped area.").

Part IV, below does not apply to existing rule authorized Class II well(s).

Part IV. Area of Review Wells and Corrective Action Plans (40 CFR §§ 144.55 & 146.24)

Submit a tabulation of data and wellbore diagrams reasonably available from public records or otherwise known to the applicant on all wells within the AOR included on the map, which penetrate the proposed confining zone(s). Such information will include:

- well name, location and depth,
- well type,
- date well was drilled,
- well construction that includes casing and cement details, including demonstrated or calculated top of cement,
- cement bond logs (if available), and
- record of well completion and plugging (if applicable).

For such wells which are improperly sealed, completed, or abandoned, also submit a plan consisting of such steps or modifications as are necessary to prevent movement of fluid into USDWs.

Part V. Landowners Information (40 CFR § 144.31 and part 147)

Identify and submit a list with the names and addresses of all owners of record of land within one-fourth (1/4) mile of the facility property boundary. This requirement may be waived by the Regional Administrator if the site is in a populous area and the Regional Administrator determines that the requirement would be impracticable.

Consult with your regional EPA office, as additional state landowner notification requirements may apply (40 CFR part 147).

Attachment B. Geological and Geophysical Information

Part I. Geological Data (40 CFR § 146.24)

Provide the following information:

- geological data on all formations from the surface to the base of the injection well, identifying all USDWs and confining and injection zone(s). This data includes the lithologic description, geological name, thickness, depth, and total dissolved solids (TDS) concentrations from these formations (if known),
- source of information for the geologic data and formation TDS,
- porosity and permeability of injection formation (if available),
- geological cross-sections (if available) proximate to the injection well that includes the confining and injection zones. The cross-sections should illustrate the regional geologic setting and show the thickness and lateral continuity of the confining zone(s) through the area of review,
- within the AOR, identify known or suspected faults and fracture systems. If identified, provide proximity to the injection zone and the effect the fault/fracture system may have on the injection activities, and
- a history of seismic activity in the area and proximity to crystalline (i.e., granitic) basement.

Part II. Proposed Formation Testing Program (40 CFR § 146.22)

Provide a formation testing program to obtain data on:

- fluid pressure,
- estimated fracture pressure, and
- physical and chemical characteristics of the injection zone.

Attachment C. Well Construction/Conversion Information

Part I. Well Schematic Diagram (40 CFR § 146.24)

Provide a detailed proposed well schematic diagram that includes:

- identification of USDWs and confining and injection zones,
- casing and cementing details, including demonstrated or calculated top of cement,
- tubing and packer (if applicable),
- open hole or perforated intervals, and

- surface trace (if horizontal or deviated well).

For wells that are drilled and to be converted to an injection well, also provide the current well schematic diagram.

Part II. Well Construction or Conversion Procedures (40 CFR §§ 144.52, 146.22, & 146.24)

Provide detailed description of well construction or conversion procedures, that includes:

- proposed logs and other tests conducted during the drilling and construction of new well(s),
- proposed stimulation plan(s), if planned, and
- description of alarms and shut-down systems at the well (if applicable).

For wells that are drilled and to be converted to an injection well, also provide:

- well completion and cementing records, and
- previously run logs/tests.

Attachment D. Injection Operation and Monitoring Program (40 CFR §§ 146.23 & 146.24)

Submit the following information:

- flow diagram of fluid flow through the facility,
- contingency plan(s) to cope with well failure, so as to prevent migration of contaminating fluids into a USDW,
- drawing of the surface construction,
- locations of all monitoring devices (show on the map(s) referenced in section A.III. above), and
- description of sampling and monitoring devices to monitor the nature of the injected fluids, injection pressure, annulus pressure (if applicable), flowrate, and cumulative volume.

Hydrocarbon storage and enhanced recovery may be monitored on a field or project basis rather than on an individual well basis by manifold monitoring. If a manifold monitoring program is utilized, describe details of the monitoring program and how the program is comparable to individual well monitoring. Also, include on the map in section A.III.B, the distribution manifold applying injection fluid to all wells in the area, including location of all system monitoring locations.

Additionally, submit the following proposed operating data for each well in the individual or area permit:

- average and maximum daily rate and volume of fluids to be injected,
- average and maximum injection pressure,
- source(s) of injection fluids (including field and formation names),
- proposed annular fluid, and
- analysis of the chemical and physical characteristics of the injection fluid. At a minimum, this should include pH, specific gravity, TDS, and conductivity. Consult with the regional EPA office for additional guidance.

Attachment E. Plugging and Abandonment Plan (40 CFR §§ 144.31, 144.51 & 146.24)

Submit a plugging and abandonment (P&A) plan of the well on EPA Form 7520-19 along with a P&A diagram. The plan should include:

- type, and number of plugs to be used,
- placement of each plug including the elevation of top and bottom,
- type, grade, and quantity of cement to be used, and
- method of placement of the plugs.

Provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to conduct the work proposed in the P&A plan for EPA to contract plugging of the well. This is to ensure that EPA has adequate funding to plug the well(s) if the operator is unable to plug the well(s).

Consult with the regional EPA office for additional guidance on developing the P&A plan and cost estimate calculations.

Attachment F. Financial Assurance (40 CFR § 144.52)

Submit evidence of financial resources, such as a surety bond or financial statement, necessary for a third party to close, plug, or abandon the well in the event an owner or operator is unable to do so. The monetary amount is based on the P&A plan cost estimate provided in Attachment E.

Attachment G. Site Security and Manifest Requirements (Commercial Wells Only)

Provide a proposed site security plan. This could include fencing around the perimeter of the facility. Consult with the regional EPA office for additional guidance on manifest requirements.

Attachment H. Aquifer Exemptions (40 CFR §§ 144.7 & 146.4)

If an aquifer exemption (AE) is requested, submit the information required at 40 CFR § 144.7 and to demonstrate that the criteria found at 40 CFR § 146.4 are met. Consult with your regional EPA office for additional guidance.

Attachment I. Existing EPA Permits (40 CFR § 144.31)

Submit a listing of all permits or construction approvals received or applied for under any of the following programs:

- Hazardous Waste Management program under RCRA,
- UIC program under SDWA,
- NPDES program under CWA,
- Prevention of Significant Deterioration (PSD) program under the Clean Air Act,
- Nonattainment program under the Clean Air Act,
- National Emission Standards for Hazardous Pollutants (NESHAPS) preconstruction approval under the Clean Air Act.
- Ocean dumping permits under the Marine Protection Research and Sanctuaries Act,
- Dredge and fill permits under section 404 of CWA, and
- Other relevant environmental permits, including State permits.

Attachment J. Description of Business (40 CFR § 144.31)

Provide a brief description of the nature of the business.

Attachment K. Optional Additional Project Information (40 CFR § 144.4)

The following is a list of Federal laws that may apply prior to the issuance of permits. When any of these laws are applicable, EPA must ensure that they are followed. The optional additional information requested below will assist EPA in its analyses to satisfy these laws.

- The Wild and Scenic Rivers Act, 16 U.S.C. 1273 et seq.
Identify any national wild and scenic river that may be impacted by the activities associated with the proposed project.
- The National Historic Preservation Act of 1966, 16 U.S.C. 470 et seq.
Identify properties listed or eligible for listing in the National Register of Historic Places that may be affected by the activities associated with the proposed project. If previous historic and cultural resource survey(s) have been conducted, provide the results of the survey(s).
- The Endangered Species Act, 16 U.S.C. 1531 et seq.
Identify any endangered or threatened species that may be affected by the activities associated with the proposed project. If a previous endangered or threatened species survey has been conducted, provide the results of the survey.
- The Coastal Zone Management Act, 16 U.S.C. 1451 et seq.
Identify any coastal zones that may be affected by the activities associated with the proposed project.



United States Environmental Protection Agency
Underground Injection Control
Permit Application for a Class II Well
(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, and 40 CFR Part 144)

For Official Use Only

Date Received

Permit Number

Read Attached Instructions Before Starting

I. Owner Name, Address, Phone Number and/or Email

Penneco Environmental Solutions, LLC
 6608 Route 22
 Delmont, PA 15626
 724-468-8232
 dmrcj@penneco.com

II. Operator Name, Address, Phone Number and/or Email

Penneco Environmental Solutions, LLC
 6608 Route 22
 Delmont, PA 15626
 724-468-8232
 dmrcj@penneco.com

III. Commercial Facility

Yes
 No

IV. Ownership

Private
 Federal
 State/Tribal/
 Municipal

V. Permit Action Requested

New Permit
 Permit Renewal
 Modification
 Add Well to Area Permit
 Other

VI. SIC Code(s)

1311

VII. Indian Country

Yes
 No

VIII. Type of Permit (For multiple wells, use additional page(s) to provide the information requested for each additional well)

A. Individual
 B. Area

Number of Wells
 1

Well Field and/or Project Names

Sedat

IX. Class and Type of Well (see reverse)

A. Class
 II

B. Type (enter code(s))
 D

C. If type code is "X," explain.

X. Well Status

A. Operating
 B. Conversion
 C. Proposed
 Date Injection Started
 Date Well Constructed
 06/21/2004

XI. Well Information

API Number 37-003-21644
 Permit (or EPA ID) Number
 Full Well Name Sedat #4A

XII. Location of Well or, for Multiple Wells, Approximate Center of Field or Project

Locate well in two directions from nearest lines of quarter section and drilling unit

Surface Location

1/4 of 1/4 of Section Township Range

5,366.42 ft. from (N/S) 40.542 Line of quarter section

749.80 ft. from (E/W) 79.708 Line of quarter section.

Latitude 40.526916

Longitude -79.711027

XIII. Attachments

In addition to this form, complete Attachments A-U (as appropriate for the specific well class) on separate sheets. Submit complete information, as required in the instructions and list all attachments, maps or other figures, by the applicable letter.

XIV. Certification

I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)

Name and Official Title (Please Type or Print)

D. Marc Jacobs, Jr. Senior Vice President

Signature

Date Signed

5/4/21



COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL PROTECTION
 Oil and Gas Management Program
 WELL LOCATION PLAT

DEP USE ONLY	DEP Application Tracking #	G:
	Permit #	C:
	Project #	

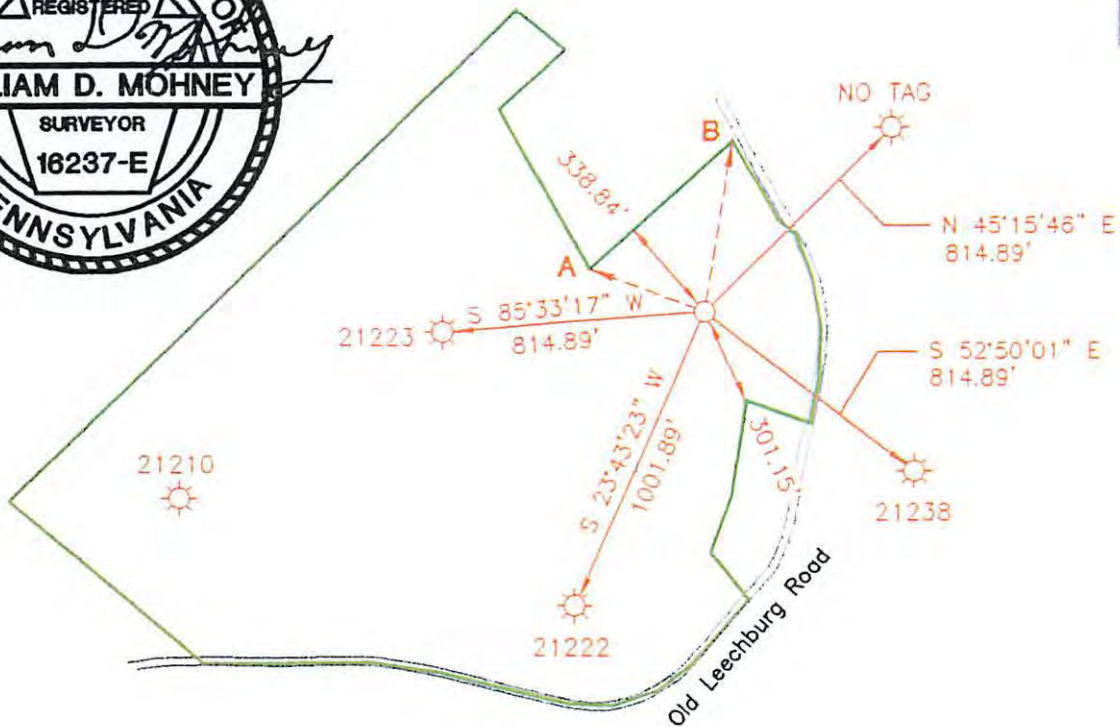
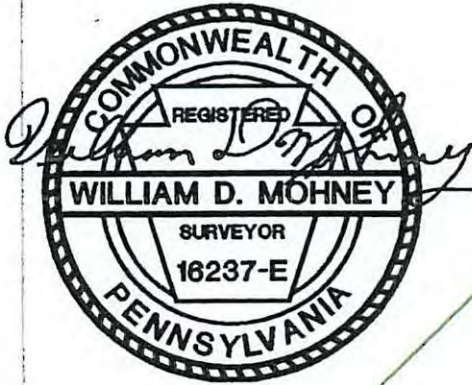
Well is located on topo map 5366.42 feet south of latitude 40 . 32 , 30 "

	Denotes location of well on topo map.
True Latitude: NORTH	
<u>40 ° 31 ' 36.9 "</u>	
True Longitude: WEST	
<u>79 ° 42 ' 39.7 "</u>	

Loc-A N 70°03'58" W 384.91'
Loc-B N 09°11'04" E 537.62'
A-B N 48°15'12" E 600.00'

- Proposed Well Location
- Existing Well
- Plugged Well

- Lease Line
- Property Line
- Roads
- Streams/Water



Well is located on topo map 749.80 feet west of longitude 79 . 42 , 30 "

Surveyor of Engineer	W.D. Mohney & Associates	Reg. #	sedatplum	Date	December 15, 2003	Scale	1" = 600'	Tract Acreage	69.54 Acres	
Applicant / Well Operator Name	Penneco Oil Company, Inc.	DEP ID#	7674	Well (Farm) Name	SEDAT	Well #	4 A	Serial #	PS-748	
Address	P.O. Box 300, 200 US Route 22, Delmont PA 15626		County - Code	Allegheny - 65		Municipality	Plum Borough			
Surface Owner	Sedat Inc.		USGS 7 1/2 Quadrangle Map Name	New Kensington East, PA		Map Section	7			
Surface Lessor	n/a		Angle & Course of Deviation (Drilling)	None		Surface Elevation	1068	ft.	Anticipated Total Depth	3800' ft.
Surface Owner or Water Purveyor with a Water Supply within 1000'	Approximate Course and Distance to Water Supply	Owner, Lessee, or Operator of Workable Coal Seam		Name of Coal Seam Owned, Leased, or Operated						
See Attached Sheet		Noncoal Area		N/A						

SURFACE OWNER OR WATER PURVEYOR
WITH A WATER SUPPLY WITHIN 1000'
OF THE SEDAT #4A GAS WELL LOCATION

	<u>SURFACE OWNER OR</u> <u>WATER PURVEYOR</u>	<u>APPROXIMATE COURSE &</u> <u>DISTANCE TO WATER SUPPLY</u>	
1.	JOHN & MARTHA SLACK	N 5° E	1,000'
2.	MARY C. SCHWARTZ	N 10° E	900'
3.	MATTHEW W. PODOBNIK	N 25° E	700'
4.	EDWARD TAYLOR	N 45° E	500'
5.	BEVERLY SISKOS	N 70° E	600'
6.	RALPH & ETHELYN ANKROM	S 85° E	900'
7.	HERMAN & IRENE VANHORN	N 80° E	800'
8.	JANET & RUSSELL MITCHELL	S 70° E	800'
9.	EARL & JEAN WILKERSON	S 40° E	400'
10.	FRANK T. & MARCIA SMOLENSKI	S 30° E	700'
11.	THEODORE & VIRGINIA SMOLENSKI	S 20° E	600'

SEDAT #4A SURFACE OWNERS IN THE AREA OF REVIEW

Tax Parcel Number	COUNTY	MUNICIPALITY	Property Owner	Street Address	City & Zip
1233-P-00036	Allegheny	Plum	ROSENBERG NANCY	2032 Old Leechburg Road	New Kensington, PA 15068
1234-G-00148	Allegheny	Plum	SPROUSE SHIRLEY ANN & EDDIE LION (H)	1927 Drennen Road	New Kensington, PA 15068
1234-G-00155	Allegheny	Plum	SMITH JAMES & SHIRLEY (W)	1933 Drennen Road	New Kensington, PA 15068
1234-G-00219	Allegheny	Plum	KOZUCH ROMAINE E	229 5th Ave	New Kensington, PA 15068
1234-G-00230	Allegheny	Plum	KOZUCH ROMAINE E	229 5th Ave	New Kensington, PA 15068
1234-L-00142	Allegheny	Plum	DZIUBAN ROBERT J & MARY LEE	P.O. Box 961252	Fort Worth, TX 76161
1234-L-00184	Allegheny	Plum	OSWALT LARA BETH ROBINSON	1924 Drennen Road	New Kensington, PA 15068
1234-M-00208	Allegheny	Plum	BOBICK RANDALL D & TERRI LYNN (W)	1965 Drennen Road	New Kensington, PA 15068
1234-M-00208	Allegheny	Plum	BOBICK STEPHEN C	1965 Drennen Road	New Kensington, PA 15068
1234-M-00211	Allegheny	Plum	BOBICK STEPHEN C	1965 Drennen Road	New Kensington, PA 15068
1234-M-00237	Allegheny	Plum	TWIDWELL ROBERT L	1977 Drennen Road	New Kensington, PA 15068
1234-M-00263	Allegheny	Plum	BABINSACK VICTOR K & KATHLEEN E (W)	1985 Drennen Road	New Kensington, PA 15068
62-80-00-0-001	Westmoreland	Upper Burrell	CALLENDER JESSALIN M	1920 Greensburg Road	New Kensington, PA 15068
1233-P-00003	Allegheny	Plum	PATTOCK JAMES D & SUZANNE (W)	2029 Old Leechburg Road	New Kensington, PA 15068
1234-A-00160	Allegheny	Plum	PATTOCK KIRT E & LISA M (W)	4059 Seventh Street Road	New Kensington, PA 15068
1234-F-00085	Allegheny	Plum	BUCHHOLZ BENJAMIN F	1924 Old Leechburg Road	New Kensington, PA 15068
1096-M-00010	Allegheny	Plum	VISNANSKY A WILLIAM BALAZIK SUSAN M MILKO JEAN A	9517 Ferry Harbour Court	Alexandria, VA 22309
1097-M-00126	Allegheny	Plum	PALOMBO BENEDICT PALOMBO FERDINAND PALOMBO ANDREW	370 Hamilton Drive Ext	Pittsburgh, PA 15235
1098-D-00277	Allegheny	Plum	JOYCE PETER R	1730 Old Leechburg Road	New Kensington, PA 15068
1233-N-00269	Allegheny	Plum	ROSALYN CHRISTOPHERSON	1770 Greensburg Road	New Kensington, PA 15068
1233-N-00285	Allegheny	Plum	MATT ROBERT W & BARBARA L (W)	1750 Greensburg Road	New Kensington, PA 15068
1233-N-00303	Allegheny	Plum	NATHAN KOSOWSKI	1746 Faulk Road	New Kensington, PA 15068
1233-N-00326	Allegheny	Plum	OTLANO PHILLIP JR & ALLENE C (W)	5137 Butler Street	Pittsburgh, PA 15201
1233-N-00362	Allegheny	Plum	WILLIAMS MARVIN H	431 Markle Road	Apollo, PA 15613
1233-N-00375	Allegheny	Plum	STRANO ANDREW R & LINDA E (W)	1823 Greensburg Road	New Kensington, PA 15068
1233-N-00384	Allegheny	Plum	DAUGHERTY JENNIE E & LOUIS R DAUGHERTY	1769 Greensburg Road	New Kensington, PA 15068
1233-P-00069	Allegheny	Plum	PARK LOTTIE E PHILLIPS ARTHUR D PHILLIPS ANNA	1804 Greensburg Road	New Kensington, PA 15068
1233-P-00109	Allegheny	Plum	SWEENY MARK M & JUDITH ANN BLACK SWEENY (W)	2024 Old Leechburg Road	New Kensington, PA 15068
1233-P-00129	Allegheny	Plum	JOHN L PATER	2016 Old Leechburg Road	New Kensington, PA 15068
1234-B-00160	Allegheny	Plum	PODOBNIK MATTHEW W	1932 Old Leechburg Road	New Kensington, PA 15068
1234-B-00198	Allegheny	Plum	SCHWARTZ MARY C	4198 Brittany Drive	Ellicott, MD 21043
1234-B-00217	Allegheny	Plum	LARIS GEORGE	2008 Old Leechburg Road	New Kensington, PA 15068
1234-B-00227	Allegheny	Plum	LARIS GEORGE	2008 Old Leechburg Road	New Kensington, PA 15068
1234-B-00293	Allegheny	Plum	LABELLA JOHN R & MARGARET J (W)	77 South Main Street	Washington, PA 15301
1234-B-00322	Allegheny	Plum	HUSKA PAUL JR	864 Hill Street	New Kensington, PA 15068
1234-F-00242	Allegheny	Plum	GIACCO LEWIS R	P.O. Box 327	West Sunbury, PA 16061
1234-G-00071	Allegheny	Plum	ANKROM RALPH & ETHELYN (W)	38 Terrace Road	Carnegie, PA 15106
1234-G-00098	Allegheny	Plum	PODOBNIK MATTHEW W	1932 Old Leechburg Road	New Kensington, PA 15068
1234-H-00270	Allegheny	Plum	HIPPLE JOSHUA	1958 Greensburg road	New Kensington, PA 15068
1234-J-00010	Allegheny	Plum	SCHEETZ THOMAS W	1730 Old Leechburg Road	New Kensington, PA 15068
1234-L-00073	Allegheny	Plum	FAVERO SHAWN L & MELISSA A (W)	1957 Drennen Road	New Kensington, PA 15068
1234-L-00165	Allegheny	Plum	HOEY JAMES J & DONNA J (W)	P.O. Box 8469	Canton, OH 44711

1234-M-00133	Allegheny	Plum	DEMAO RAYMOND LEONARD BARTLETT KELLY MARIE	1982 Drennen Road	New Kensington, PA 15068
1234-M-00192	Allegheny	Plum	FAVERO DAVID L & KATHLEEN L (W)	1961 Drennen Road	New Kensington, PA 15068
1234-M-00221	Allegheny	Plum	THE RICHARD F OSKIN FAMILY TRUST (RICHARD F OSKIN (TRUSTEE)	1969 Drennen Road	New Kensington, PA 15068
1234-M-00251	Allegheny	Plum	PASTUCHA JOANN G	450 Woodlawn Ave	Verona, PA 15147
1234-M-00274	Allegheny	Plum	LUCIANA JONATHAN R	1989 Drennen Road	New Kensington, PA 15068
62-07-00-0-014	Westmoreland	Upper Burrell	HOUSEHOLDER DWIGHT E II+KENNA	101 Myers Drive	New Kensington, PA 15068
62-08-00-0-010	Westmoreland	Upper Burrell	MCVEY JEFFREY	621 Cleveland Drive	Lower Burrell, PA 15068
1097-M-00142	Allegheny	Plum	ASPDEN ANNA	1781 Old Leechburg Road	New Kensington, PA 15068
62-08-00-0-006	Westmoreland	Upper Burrell	CRAFT CLINT W.	520 Menk Road	New Kensington, PA 15068
62-08-00-0-008	Westmoreland	Upper Burrell	RESNIK MATTHEW R	1501 Menk Road	New Kensington, PA 15068
1096-H-00355	Allegheny	Plum	CHAMBERS CLARENCE	1609 Greensburg Road	New Kensington, PA 15068
1096-M-00016	Allegheny	Plum	HARRIS MABLE	Undeliverable	
1097-S-00348	Allegheny	Plum	PALOMBO BENEDICT & KATHY ANN (W)	1778 Old Leechburg Road	New Kensington, PA 15068
1098-D-00128	Allegheny	Plum	MILLER ALVIN R III & DIANE ELIZABETH (W)	Undeliverable	
1233-J-00342	Allegheny	Plum	MILLER ANNA LOUISE COSTA KATHLEEN	2240 Freeport Road	New Kensington, PA 15068
1233-N-00346	Allegheny	Plum	SRK REAL PROPEERTIES	3160 Chestnut Street	Murrysville, PA 15668
1233-P-00044	Allegheny	Plum	MACRO KLINT L & JENNIFER S (W)	1814 Greensburg Road	New Kensington, PA 15068
1234-C-00347	Allegheny	Plum	FRERE LUCILLE CHRISTINA FRERE RAYMOND ARMOUL LOGAN FRERE	1206 5th Avenue	New Kensington, PA 15068
1234-C-00377	Allegheny	Plum	HALL LUKE	232 Fairhaven Drive	Monroeville, PA 15146
1234-F-00206	Allegheny	Plum	PENNECO ENVIRONMENTAL SOLUTIONS	6608 Route 22	Delmont, PA 15626
1234-G-00077	Allegheny	Plum	TTMAR INC	Undeliverable	Undeliverable
1234-G-00126	Allegheny	Plum	VAGLIA JOSEPH & MICHELLE (W)	418 Willowbrook Road	Apollo, PA 15613
1234-K-00134	Allegheny	Plum	SMOLENSKI THEODORE & VIRGINIA	14 Tenby Chase Drive	Newark, DE 19711
1234-K-00154	Allegheny	Plum	SMOLENSKI THEODORE & VIRGINIA	14 Tenby Chase Drive	Newark, DE 19711
1234-L-00106	Allegheny	Plum	ZEBRAK JOSHUA F	3520 Ivy Drive	Murrysville, PA 15668
1234-M-00379	Allegheny	Plum	HAMILTON JOHN	Undeliverable	
62-07-00-0-015	Westmoreland	Upper Burrell	LOMBARDO LOUIS ANTHONY & SANDY	1550 Menk Road	New Kensington, PA 15068
62-08-00-0-007	Westmoreland	Upper Burrell	TRZECIAK LOUIS JR CYNTHIA LOU	1500 Menk Road	New Kensington, PA 15068
62-08-00-0-009	Westmoreland	Upper Burrell	SANTUCCI JOSEPH & PAMELA	437 5th Ave	New Kensington, PA 15068
62-08-00-0-086	Westmoreland	Upper Burrell	TRZECIAK LOUIS CYNTHIA LOUISE	1500 Menk Road	New Kensington, PA 15068
1234-G-00086	Allegheny	Plum	VANHORN HERMAN E & IRENE B	1920 Drennen Road	New Kensington, PA 15068
1234-M-00154	Allegheny	Plum	DEMAO RAYMOND LEONARD BARTLETT KELLY MARIE	1982 Drennen Road	New Kensington, PA 15068
1234-G-00026	Allegheny	Plum	MITCHELL JANET ANN & RUSSELL WILLIAM MITCHELL	504 Clarendon St	Pittsburgh, PA 15238
1233-N-00241	Allegheny	Plum	TEORSKY ROBERT M	1 Home Campus	Des Moines, IA 50328
1233-P-00086	Allegheny	Plum	MACRO KLINT L & JENNIFER S (W)	1814 Greensburg Road	New Kensington, PA 15068
1233-P-00198	Allegheny	Plum	HASSON LEONARD J & NINA E (W)	1823 Greensburg Road	New Kensington, PA 15068
1233-P-00215	Allegheny	Plum	MARTIN RICHARD A & MARY JANE (W)	1819 Greensburg Road	New Kensington, PA 15068
1233-P-00227	Allegheny	Plum	DAUGHERTY LOUIS R & PAMELA E (W)	1815 Greensburg Road	New Kensington, PA 15068
1233-P-00245	Allegheny	Plum	DAUGHERTY LOUIS R	1815 Greensburg Road	New Kensington, PA 15068
1233-P-00258	Allegheny	Plum	DAUGHERTY DAVID R	1801 Greensburg Road	New Kensington, PA 15068
1233-P-00262	Allegheny	Plum	DAUGHERTY DAVID R	1801 Greensburg Road	New Kensington, PA 15068
1234-B-00254	Allegheny	Plum	PLANCE DAVID A & STEPHANIE (W)	2013 Old Leechburg Road	New Kensington, PA 15068
1234-B-00258	Allegheny	Plum	PLANCE DAVID A & STEPHANIE (W)	2013 Old Leechburg Road	New Kensington, PA 15068
1234-F-00159	Allegheny	Plum	COOPER DANIEL S	1855 Old Leechburg Road	New Kensington, PA 15068
1234-G-00164	Allegheny	Plum	AMY J ROSSWOG	1930 Greensburg Road	New Kensington, PA 15068
1234-G-00204	Allegheny	Plum	ANUSKIEWICZ DONALD J & FLORENCE M (W)	1938 Greensburg Road	New Kensington, PA 15068
1234-J-00087	Allegheny	Plum	CHOLTKO FRANK III	1820 Old Leechburg Road	New Kensington, PA 15068

1234-K-00185	Allegheny	Plum	SMOLENSKI FRANK T & MARCIA MARIE (W)	1900 Old Leechburg Road	New Kensington, PA 15068
1234-K-00222	Allegheny	Plum	SMOLENSKI, FRAND & SHEEHAN, KATIE MARIE	1835 Old Leechburg Road	New Kensington, PA 15068
62-07-00-0-015	Westmoreland	Upper Burrell	LOMBARDO LOUIS ANTHONY & SANDY	1550 Menk road	New Kensington, PA 15068
62-07-00-0-030	Westmoreland	Upper Burrell	MILLER SHANE		
62-08-00-0-086	Westmoreland	Upper Burrell	TRZECIAK LOUIS CYNTHIA LOUISE		
1233-N-00354	Allegheny	Plum	Combined with other parcel.		

ATTACHMENT "A"
Area of Review Methods

Attachment A
Area of Review Methods
Sedat #4A Injection Well

Area of Review Methods:

The size of the area of review was determined by a fixed radius of one quarter mile as required by permit application. Maps with a half mile, and one mile radius were also prepared. Maps detailing the area of review are in Attachment B. Research was conducted by:

- 1) Survey by Fox and Fox, Inc. registered professional surveyors
- 2) Conversation with surface landowners by Fox and Fox, representatives of Penneco Environmental Solutions LLC.
- 3) Research of Pennsylvania Bureau of Oil and Gas Management's well records
- 4) Research of Pennsylvania Geological Survey publications covering the area of review
- 5) Research of USGS publications covering the area of review.
- 6) Master Thesis (Two) From West Virginia University
- 7) Series of reservoir test by HFrac Consulting Services.

Using the results from the above research, along with topographic and tax maps displaying surface features such as buildings, and streams, maps of the AOR were prepared for and included in Attachment B.

The same research used to map the area of review was used to provide data on the geology of the injection zone and the confining formations described in Attachment G.

As part of larger study to assess its lease acreage in the area of the Sedat lease Penneco ran a series of reservoir tests using HFrac Consulting Services to determine the character of the Murrysville reservoir and the results are included in Attachment H.

ATTACHMENT "B"
Maps of Well Area/Area of Review Methods

ATTACHMENT "B"

Maps of Well Area /Area of Review Methods Sedat #4A Injection Well

Maps of Well Area Sedat #4A Injection Well

This section contains topographical maps of the ¼ mile AOR, the AOR with a ¼ mile radius buffer, the AOR with a 1-mile radius buffer, well records for wells within the AOR, an AOR Water Supply Inventory list, and Water Supply Survey Map.

Also relevant to the Area of Review is a property-search history of "phantom wells" noted on 1970's vintage coal mine maps. Over the years, as the property and surrounding area was developed for oil and gas, multiple surveys were conducted to satisfy the health, safety, and environmental interests of the Pennsylvania Department of Environmental Protection. Each time a new well was permitted in the proximity of one of the phantom wells, another search was required and executed. One developmental well was drilled within mere feet of a phantom plot and the other, a shallow, horizontal oil well, intersected another. Penneco drilled a third well outside of the Area of Review, on an adjacent property, right on top of another phantom plot. No communication with any previously constructed extraction conduit was ever realized. During the PA DEP phase of permitting for the Sedat 3A UIC well, the Department requested another surface search using metal detection equipment confirming once again that no signs of legacy oil and gas activities were present (ie. paths suitable for vehicle access, level areas supportive of drilling, wellhead/casing evidence, surface appurtenances, pipelines, etc.). The Department was satisfied and the permit was issued. It is based on this 30-year history of regulatory scrutiny and oil and gas production on the property that we can confidently assert that the wells alleged by the mine maps were only forecast and never drilled. Also included in this section are maps representing the phantom well locations, the Penneco Summary of Finding submitted to the PA DEP, and the Department's Geologic Review issued with the permit.



May 31, 2018

RE:SUMMARY OF FINDING

In response to Andrea Mullen's Notice of Incomplete Application dated April 17, 2018 and the DEP/Penneco meeting on April 24, 2018, Penneco submits the following summary of finding with regard to additional research into unknown gas/oil wells in the area of review;

1. The Environmental Protection Agency (EPA) has identified the area of review as a ¼ mile fixed radius around the center of the Sedat #3A Well (See attachment).
2. Historical farm maps from EQT and Peoples Natural Gas Company seem to indicate that some wells were drilled within the area of review which are not represented on Penneco's maps. We have found that gas wells shown on these maps are historically inaccurate and cannot be relied on as factual.
3. The DEP mine maps of the Renton Coal Mine indicate the presence of 2 gas wells within the area of review which are not represented on Penneco's maps. We have found that the mine maps are generally a good representation of the wells drilled, plugged or abandoned at the time the coal was mined. Penneco has conducted a field investigation, including metal detecting instruments, and has not found any evidence of the 2 wells indicated on the mine map which are within the area of review. On May 22, 2018, I visited the offices of the DEP California District Mining Office in California, PA and met with Joseph Stepusin, Mining Specialist. Mr Stepusin and I reviewed the Renton Mine maps for further detail on the 2 wells in question. The 2 wells were identified on the mine maps as Well #80 (Abandoned) and Well #81 (Abandoned). No other information was listed and I was told by Mr. Stepusin that there is no reference in the mine documents to the wells identified by #80 & #81.

As evidenced above, Penneco has conducted a thorough due diligence review and investigation into existing, abandoned and plugged wells within the established area of review.

Respectfully submitted,

PENNECO ENVIRONMENTAL SOLUTIONS

David T. Smail
Land & Engineering Supervisor



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

Response to Comments
for
The Issuance of an Underground Injection Control (UIC) Permit
for
Penneco Environmental Solutions, LLC

On June 22, 2017, the U.S. Environmental Protection Agency Region III (EPA or the Region) issued a public notice in the Pittsburgh Tribune-Review requesting comment and announcing the opportunity for a public hearing for the proposed issuance of an Underground Injection Control (UIC) permit, PAS2D701BALL, to Penneco Environmental Solutions, LLC (Penneco) for one Class II-D underground injection well. EPA received numerous requests for a hearing which was held on July 26, 2017 at the Plum Community Center in Plum Borough, Pennsylvania. About 200 people attended the public hearing and EPA received oral comments from people in attendance at the hearing. At the hearing, EPA extended the public comment period until August 9, 2017, and invited the submission of any additional written comments. In total, EPA received approximately 400 comments from over 120 people. During the public comment period, all the information submitted by the applicant was available for review at the Plum Community Library in Plum Borough and at the EPA regional office in Philadelphia and online at the EPA web site.

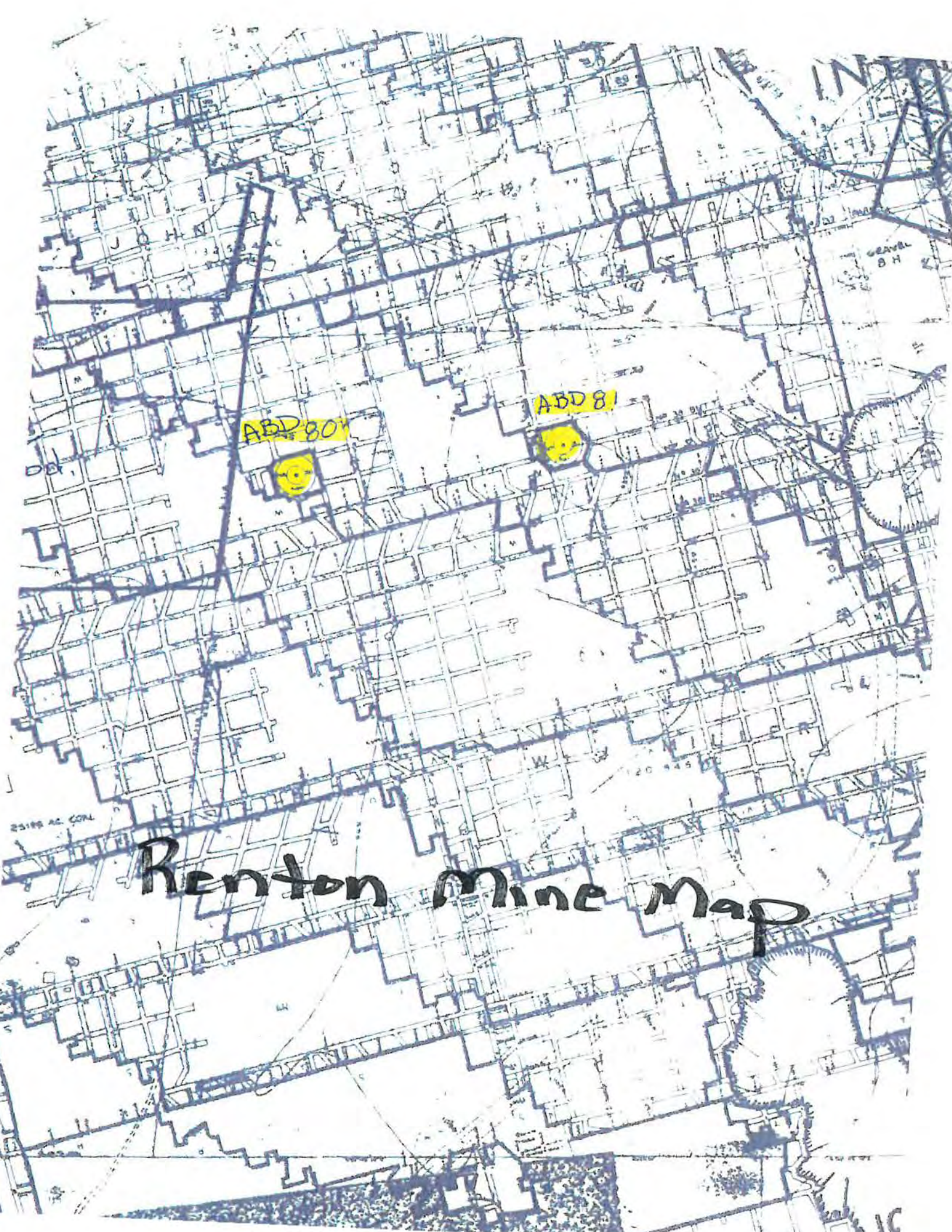
The response to comments and questions which follows consolidates and provides responses to questions and issues raised by people who sent timely written public comment during the public comment period and who provided oral comments at the public hearing. EPA wishes to thank the public for their informative and thoughtful comments and to thank the people from the Plum Community Center and Public Library that assisted EPA in hosting the public hearing.

- 8) **The wells in the Area of Review were not thoroughly evaluated. The method and data used for calculating the Zone of Endangering Influence and the Area of Review is questionable.**

40 C.F.R. §§ 144.3 and 146.6(b), defines the Area of Review (AOR) as "the area surrounding an injection well described according to the criteria set forth in § 146.06..." 40 C.F.R. § 144.3. Section 146.06 provides that the area of review for each injection well shall be determined according to either the zone of endangering influence (ZEI) or by a fixed radius. Penneco proposed a fixed radius of ¼-mile (1,320 feet) for the AOR and a maximum injection volume of 54,000 barrels per month.

EPA does not specify a method for determining porosity and permeability because there is more than one accepted method for determining such values. Based on the information provided and other relevant data, EPA calculated the zone of endangering influence (ZEI) in accordance with 40 C.F.R. § 146.6(a)(2) using the modified Theis equation and confirmed the adequacy of the ¼-mile fixed radius AOR. This evaluation also considered the chemistry and specific gravity of the fluids to be injected, proposed injection pressures and volumes and the injection formation permeability and porosity. EPA confirmed, based on the ZEI calculation, that the ¼-mile fixed radius AOR was acceptable.

The applicant must then research and then develop a program for corrective action to address any wells which penetrate the injection zone and which may provide conduits for fluid migration within the AOR. Penneco provided information on the well population within the AOR by conducting reviews of Pennsylvania Department of Environmental Protection Bureau of Oil and Gas well records and conducting a field survey of the area. After extensive research of company, local, county and state well records, five wells were identified that penetrate the injection zone within this AOR. Additionally, detailed well completion records were evaluated for approximately 60 wells which penetrate the injection zone within a one-mile radius. The permit requires Penneco to perform corrective action on any unplugged/abandoned wells that penetrate the injection zone within the Area of Review if they are identified at a future date.



ABD 80

ABD 81

Renton Mine Map



pennsylvania
DEPARTMENT OF ENVIRONMENTAL
PROTECTION

BB 4/14/2020

TO Brian Babb, PG
Subsurface Permits Environmental Program Manager
Department of Environmental Protection
District Oil and Gas Operations

THRU Thomas E. Donohue, PG TD 4/10/20
Professional Geologist Manager
Department of Environmental Protection
District Oil & Gas Operations

FROM Andrea Mullen, PG AM 4/10/20
Licensed Professional Geologist
Department of Environmental Protection
District Oil and Gas Operations

Harry C. Wise, PG HCW 4-10-20
Professional Geologist Manager
Bureau of Oil & Gas Planning and Program Management

DATE March 31, 2020

RE Geologic Review of Proposed Disposal Well
Penneco Environmental Solutions – Sedat #3A Well
Plum Borough, Allegheny County

Introduction

This technical review assesses the suitability of the geologic structure and setting for waste disposal via injection in the vicinity of the Sedat 3A gas well in Plum Borough, Allegheny County, Pennsylvania, owned and operated by Penneco Environmental Solutions (Penneco). The conclusions of this report are based on a review of all documents submitted by Penneco, published maps and reports from the DCNR and others, and my experience as a licensed professional geologist.

Background

The Sedat 3A (API #003-21223) was originally drilled and constructed as a gas well targeting the Bradford Formation. The Sedat 3A was drilled from January 25, 1989 to February 1, 1989 to a total



vertical depth (TVD) of 4,320 feet below grade (fbg). The Sedat 3A produced gas until 2015, when Penneco plugged it back to 1,940 fbg, targeting the Murrysville Formation as a disposal stratum. Currently, the Sedat 3A has 13 3/8 in diameter casing set from 0-16 fbg and sanded in, 9 5/8 in casing set from 0-643 fbg and cemented, 7 in diameter casing set from 0-1,948 fbg, and a 4 1/2 in injection string set from 0-1,796 fbg, held in place with a Parmaco Tension Packer. A bridge plug is set in the Sedat 3A at 1,940 fbg, and the 7 in casing is perforated from 1,896-1,936 fbg.

On March 13, 2018, the Department received a permit application from Penneco to change the designation of the Sedat 3A from a gas well to an injection disposal well. Attached was an EPA permit and approved EPA permit application and required related documentation submitted for the disposal well to the EPA.

Geologic Setting

The Sedat 3A is located in the Pittsburgh Low Plateau Section of the Allegheny Plateau Physiographic Province, which is characterized by high local relief, deep valleys, and relatively flat-lying strata relative to other areas of the state. The surface is characterized by rocks of Pennsylvanian age, mostly the Monongahela Group, the Casselman Formation, and the Glenshaw Formation (Figure 1). The Sedat 3A is sited approximately 630 ft northwest of the mapped axis of the Duquesne Syncline, and locally beds dip towards the southeast. There are no local mapped faults, although faults are inferred approximately 5 miles to the southeast and 8 miles to the northwest. The Blairsville-Broadtop Lineament is located approximately 6 miles to the northeast.

The Murrysville Formation is the target stratum for the injection well. Also referred to as the Cussewago Sandstone, the Murrysville is characterized by a coarse-grained, poorly cemented sandstone, fining upward and interbedded with siltstone. The basal portion of the Murrysville has high permeability, while the finer-grained tightly cemented sand at the top of the Murrysville has low porosity and permeability. The Murrysville grades upwards into the Riddlesburg Shale. The Riddlesburg Shale is composed of interbedded shales, siltstones and scour-based fine-grained sandstones (Bjerstedt and Kammer, 1988). Gamma logs submitted by Penneco appear to show a distinctly lower porosity in the Riddlesburg as compared to the Murrysville; however, the locations of where the gamma logs were collected were not shown on the map, and an examination of the metadata indicate they may be located several miles outside of the area of review (AOR). Isopach maps submitted by Penneco indicate that the Riddlesburg has an approximate thickness in the area of the Sedat 3A of approximately 50 ft. The thickness and low porosity of the Riddlesburg in this area indicate that it is an effective upper confining layer.

Water and Groundwater Resources

Penneco's application identified no streams or wetlands within the quarter mile AOR. This is consistent with the Department's records.

The Department has no record of public water supplies within the AOR. Penneco conducted a survey of property owners within 1 mile of the Sedat 3A to identify owners of private water supplies. Five wells and two springs were identified as being within the quarter mile AOR. The sources of the springs are likely shallow water bearing zones in the Casselman Formation. The identified wells and springs are situated on the edge of the quarter mile AOR.



In the permit application, Penneco identified underground sources of drinking water (USDWs) as the Monongahela Group, the Conemaugh Group, and the Allegheny Group, a section which can be as thick as 1,300 ft. According to the Pennsylvania Groundwater Information System (PAGWIS), wells for domestic and industrial use in Plum Borough and Upper Burrell Township have depths ranging from 18 fbg to 500 fbg, but the median depths appear to be between 125 fbg and 150 fbg. The Pennsylvania Geologic Survey identifies formations below the bottommost member of the Allegheny Group (Worthington Formation) as producing water too high in salt to be considered adequate drinking water sources.

The Monongahela Group (to a small extent) and the top two members of the Conemaugh Group (the Casselman Formation and Glenshaw Formation), are mapped at the surface. This indicates that the total thickness of the USDWs is approximately 710 ft. With the thickness of the Riddlesburg Shale of 50 ft with its base at 1,822 fbg, this provides sufficient separation between any USDWs and the Murrysville Sand.

Given the distances and depths, and absent any mechanical integrity issues of the Sedat 3A, the private water supplies are unlikely to be affected by UIC activities at the Sedat 3A. However, because domestic use water wells and springs are within the quarter mile AOR, additional monitoring beyond the EPA permit is warranted. The proposed Sedat 1A is located approximately 1,010 ft to the southwest and was proposed as a monitoring well for the injection formation. This distance is closer to the injection well than any identified or suspected water supply well. Monitoring of water levels at this well would provide an early warning if fluid injected into the Murrysville Formation could migrate via unidentified abandoned wells or fractures into an area where it would pose a risk to USDWs. Suggested special permit conditions are included as Appendix B.

Mining

Mining, particularly of coal, is common in Allegheny County. Three abandoned underground mines are present within 1 mi of the Sedat 3A. The boundary of the Renton No. 5, targeting the Pittsburgh Coal Seam, is approximately 3,500 ft to the southwest of the Sedat 3A. The Springdale Mine, formerly operated by the Allegheny Pittsburgh Coal Company and targeting the Upper Freeport, is located approximately 1,500 ft to the northwest. The Sedat 3A was drilled through the former Renton Mine, operated by Villa Coal Company, also targeting the Upper Freeport Formation. All three mines have been sealed, and no active mining permits currently exist in the 1 mi area of review. All other coal seams are either absent or inferred.

Abandoned underground coal mines may provide pathways for groundwater flow, including from injection and disposal wells. However, the top of the injection zone is located at approximately 720 ft below mean sea level. The elevation of the mined-out area is at 560 ft above mean sea level, separating it from the injection zone by 1,280 ft, at least 50 ft of which is the Riddlesburg Shale confining layer. Absent mechanical integrity issues with the cementing and casing, fluid migration into the mined-out area is unlikely due to the distance of separation.



Oil and Gas

In this geologic review, two major areas of concern are storage field locations and other oil and gas wells within the area of review. The Murrysville has been identified as a candidate for oil and gas storage, and operation of a disposal well in this formation could interfere with the operation of a storage field. Other oil and gas wells in the area of review could also interfere with the operation of the disposal well, possibly presenting a pathway for disposed fluids to return to the surface.

The nearest active gas storage field to the Sedat 3A is the Murrysville Storage field, approximately 4 mi south. The Murrysville Storage Field targets the Venango Group. The Venango group is below the Murrysville stratigraphically, and should not be affected by activities at the Sedat 3A. The nearest active storage field that targets the Murrysville formation is the Oakford Storage Field, approximately 11.5 miles to the southeast. The distance between the Sedat 3A and the Oakford Storage Field likely prohibits any interaction between the storage field and the disposal well.

DEP records identify sixteen oil & gas wells within a half mile of the Sedat #3A. One well is in DEP records as being Operator Reported Not Drilled (ORND), and one is recorded as Plugged. Of the remaining wells, four are located in the quarter mile AOR- the Sedat 1, the Sedat 5H, the Sedat 4A, and the Sedat 2A, all owned by Penneco. The Sedat 1 will be converted into the Sedat 1A monitoring point. The status, depth, depth of casing, and locations of all sixteen wells were all verified by a DEP Oil and Gas Inspector. The Inspector also found that the active wells had adequate mechanical integrity and were unlikely to provide a pathway for injected fluid to reach USDWs.

Penneco's application also correctly identified 66 oil & gas wells within a mile radius of the Sedat 3A. However, a number of wells from sources other than eFACTS are unaccounted for. Such wells can be located on EQT and People's Natural Gas Company historic farm maps, as well as on the mine maps from the former Renton Mine, and in the original Sedat 3A permit file. On May 31, 2018, Penneco submitted a summary of findings in response to the PADEP notice of deficiency dated April 17, 2018, stating that they had investigated the site with metal detecting equipment in search of these wells, and were unable to locate them.

Seismic events (prepared by Harry Wise, P.G.):

The Department's review indicates there are no historical seismic events within the quarter mile radius area of review. There are no historical earthquakes (since 1970) of magnitude two (2M) or greater within Allegheny County.

In EPA's Response to Comments for The Issuance of an Underground Injection Control (UIC) Permit for Penneco Environmental Solutions, LLC Question 10 notes "Injection wells may increase seismic activity which could cause fluid migration and USDW contamination and mine subsidence. One commentator specifically referenced the proximity of the injection well to the Blairsville-Broadtop (Mahoning River) Lineament" as problematic. In response to this statement, EPA discusses how induced seismic events associated with injection wells in Ohio were created by disposal in Precambrian basement rock. These rocks are often cross-cut by blind faults or are crystalline in nature. Additional studies by the State of Oklahoma (<http://earthquakes.ok.gov/>) and within the geologic community appear to corroborate the belief that injecting fluid into brittle, crystalline basement rock can induce seismicity. The EPA comment response document noted that the "Blairsville-Broadtop (Mahoning River) Lineament is part of this deep



Precambrian fault system approximately 7,000 feet below the Murrysville Sand injection zone and thus will not allow fluid movement into USDWs.” The Department’s review of the basement rock (depths of approximately 18,000 to 19,000 feet below land surface) confirmed a separation distance of thousands of feet, in this case of approximately 17,000 feet.

The Department also reviewed the maps from “Topographic and Geologic Atlas of Pennsylvania, No. 36, Freeport Quadrangle”, 1933, prepared by H. Herbert Hughes, for the Commonwealth of Pennsylvania, Department of Internal Affairs and the Topographic and Geologic Survey. This review indicates the site is located on the northwestern side of the axis of the Duquesne-Fairmount Syncline. No other structural geologic features were noted around the proposed well with the closest structure being an inferred fault located approximately 4.8 miles to the southeast of the site. Based on this review, the Department concurs with EPA’s statement in their comment response document that injection will not occur within, or should not flow into, the deeper Precambrian crystalline rocks.

Induced seismicity relating to the operation of injection wells results from the interrelationship of factors such as depth to basement rock, distance to existing faults, fault plane orientation and pore pressure regimes. This geologic analysis has not revealed indicators suggestive of a heightened potential for induced seismicity; however, there are some reported structural geologic anomalies that have been noted within the area surrounding the well. Based upon the review of all available information, it is my professional opinion that injection activities at this well pose a very low risk with regards to induced seismicity. It is recommended that to better understand the response of the Murrysville sandstone to injection fluids and to best manage any seismic risk, the application of the specific permit conditions addressing seismic monitoring and mitigation listed in Appendix A should be implemented.

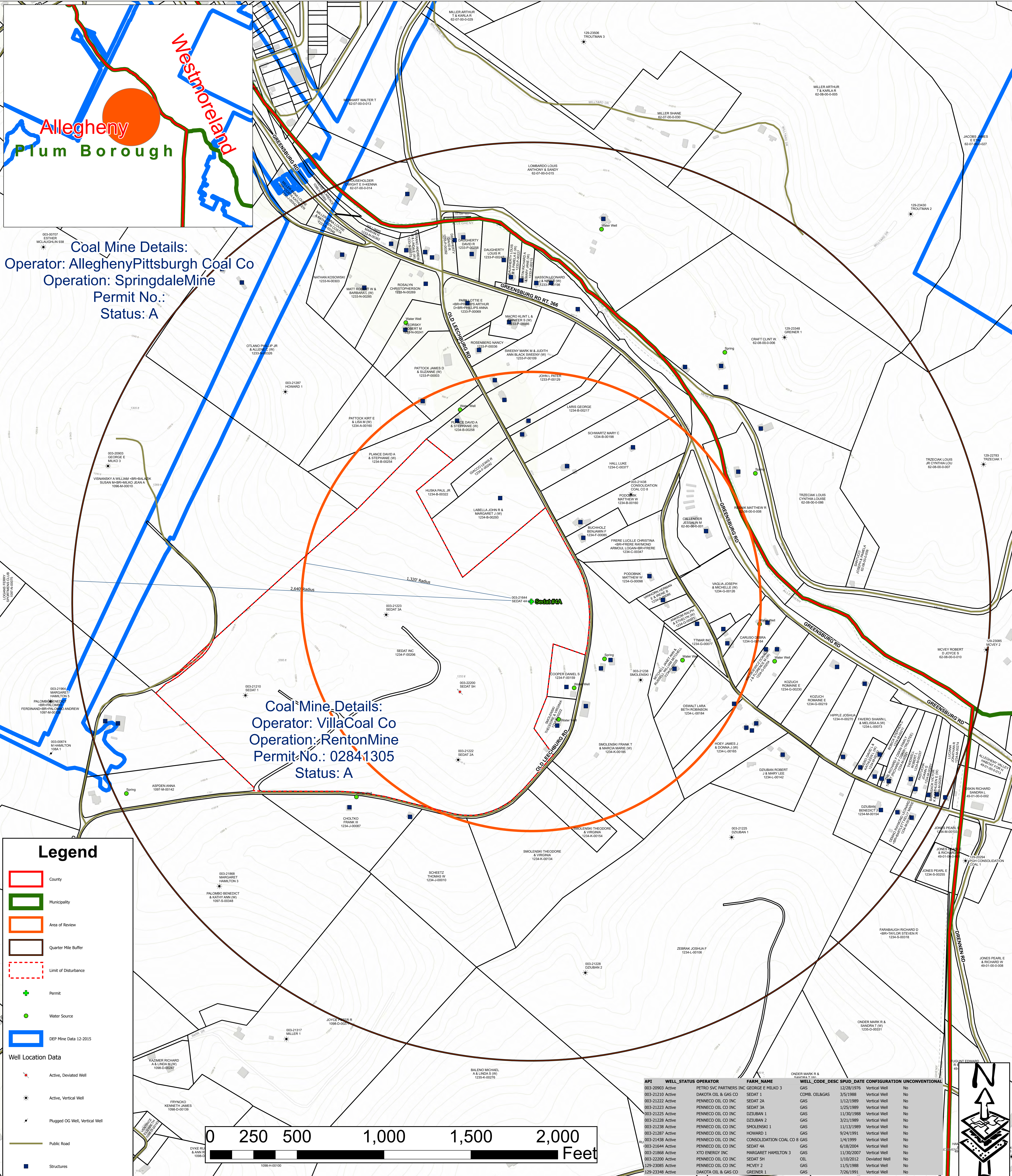
Conclusions

The Sedat 3A is completed in the Murrysville Formation, which is approximately 17,000 ft above basement rock, and is not located within a mile of any known or inferred faults. Seismic risk of injection into the Murrysville Formation is therefore low. The Murrysville formation has an upper confining layer of Riddlesburg Shale approximately 50 ft thick, and is separated from known USDWs by approximately 1,800 ft. There are no known faults or lineaments within the quarter mile AOR. The risk of injected fluid migrating from the Murrysville through natural pathways is therefore low.

Sixteen oil & gas wells were identified within a half mile of the Sedat 3A. Of these, one was ORND, and another was in DEP records as Plugged. The remaining wells were found to have mechanical integrity. The risk of fluid migration through known oil and gas wells to USDWs is therefore low.

The deepest underground mining in the area is located approximately 1,280 ft above the injection zone, which includes 50 ft of the Riddlesburg Shale. The risk of fluid migration from the Murrysville Formation to USDWs mediated by underground mining is low.

Due to the low risk of fluid migration to USDWs and induced seismicity, operation of the Sedat 3A as a Class III disposal well is unlikely to be prejudicial to the public interest. However, to mitigate risks, I recommend the special conditions outlined in Appendix A and B to be included on the permit. I hold these opinions with a reasonable degree of scientific certainty.



Coal Mine Details:
 Operator: AlleghenyPittsburgh Coal Co
 Operation: Springdale Mine
 Permit No.:
 Status: A

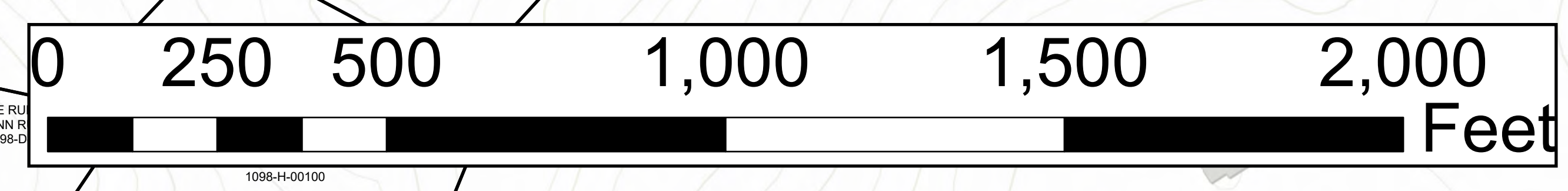
Coal Mine Details:
 Operator: Villa Coal Co
 Operation: Renton Mine
 Permit No.: 02841305
 Status: A

Legend

- County
- Municipality
- Area of Review
- Quarter Mile Buffer
- Limit of Disturbance
- + Permit
- Water Source
- DEP Mine Data 12-2015

Well Location Data

- * Active, Deviated Well
- * Active, Vertical Well
- * Plugged OG Well, Vertical Well
- Structures



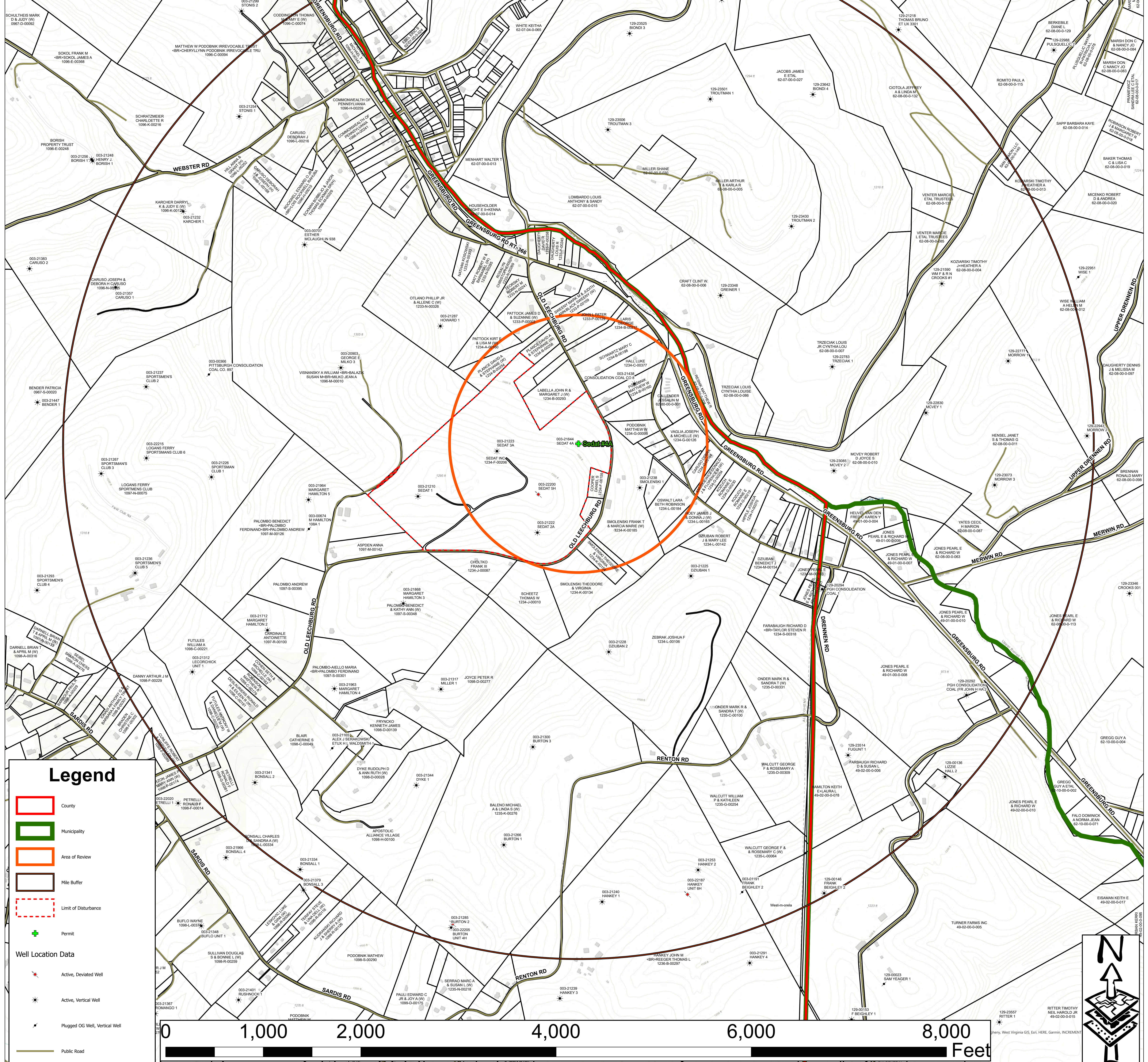
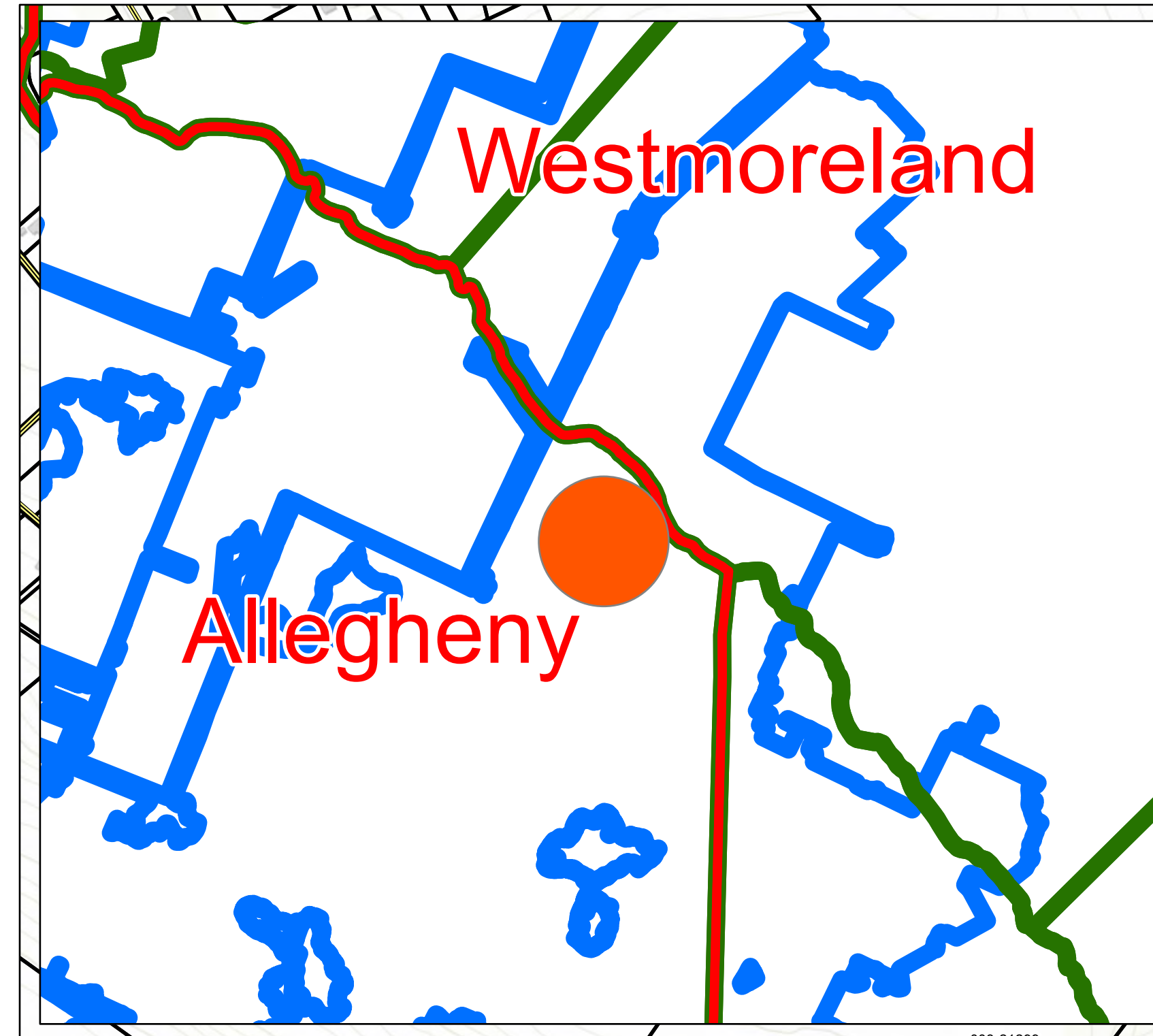
API	WELL STATUS	OPERATOR	FARM NAME	WELL CODE	DESC	SPUD DATE	CONFIGURATION	UNCONVENTIONAL
003-20903	Active	PETRO SVC PARTNERS INC	GEORGE E MILKO 3	GAS		12/28/1976	Vertical Well	No
003-21210	Active	DAKOTA OIL & GAS CO	SEDAT 1	COMB. OIL/GAS		3/5/1988	Vertical Well	No
003-21222	Active	PENNECO OIL CO INC	SEDAT 2A	GAS		1/12/1989	Vertical Well	No
003-21223	Active	PENNECO OIL CO INC	SEDAT 3A	GAS		1/25/1989	Vertical Well	No
003-21225	Active	PENNECO OIL CO INC	DZILBAN 1	GAS		11/30/1988	Vertical Well	No
003-21228	Active	PENNECO OIL CO INC	DZILBAN 2	GAS		3/21/1989	Vertical Well	No
003-21287	Active	PENNECO OIL CO INC	SMOLENSKI 1	GAS		11/13/1989	Vertical Well	No
003-21287	Active	PENNECO OIL CO INC	HOWARD 1	GAS		9/24/1991	Vertical Well	No
003-21438	Active	PENNECO OIL CO INC	CONSOLIDATION COAL CO 8	GAS		1/4/1999	Vertical Well	No
003-21644	Active	PENNECO OIL CO INC	SEDAT 4A	GAS		6/18/2004	Vertical Well	No
003-21868	Active	XTD ENERGY INC	MARGARET HAMILTON 3	GAS		11/30/2007	Vertical Well	No
003-22200	Active	PENNECO OIL CO INC	SEDAT 5H	OIL		1/10/2012	Deviated Well	No
129-23085	Active	PENNECO OIL CO INC	MCVEY 2	GAS		11/5/1988	Vertical Well	No
129-23348	Active	DAKOTA OIL & GAS CO	GREINER 1	GAS		7/26/1991	Vertical Well	No

BY: MEC
 DATE: 9/13/2020
 Scale: see Scale bar
 FILE: Penneco Sedat#4A 9-13-2020
 JOB NO: 677415
 SHEET: 2 of 3

**AOR WITH 1/4 MILE EXTENSION MAP
 FOR SEDAT #4A
 PENNECO ENVIRONMENTAL
 SOLUTIONS, LLC
 Plum Borough, Allegheny County
 Commonwealth of Pennsylvania**

FOX & FOX, INC.
 58 Timber Bridge Rd.
 Clarion, PA 16214
 Phone: 814-745-2861
 Fax: 814-745-2248
 email: ronaldfox@foxandfoxinc.us
 web: www.foxandfoxinc.us

Details for Area of Review:
 -Area of Review is AOR with a 1/4 Mile Buffer.
 -80 Structures noted within the AOR + Buffer.
 -9 Water Wells and 4 Springs noted within the AOR+Buffer.
 -AOR+Buffer is within the limits of the Renton Coal Mine.
 Operator: Villa Coal Co., Permit No. 02841505
 and the Springdale Mine, Operator: Allegheny &
 Pittsburgh Coal Co., Permit No. ABANDONED
 -No schools, hospitals, or public offices within
 AOR+Buffer.
 -Geology has determined that no fractures or faults are
 within the defined limits of this permit.
 -List of existing oil & gas well information. (see above)

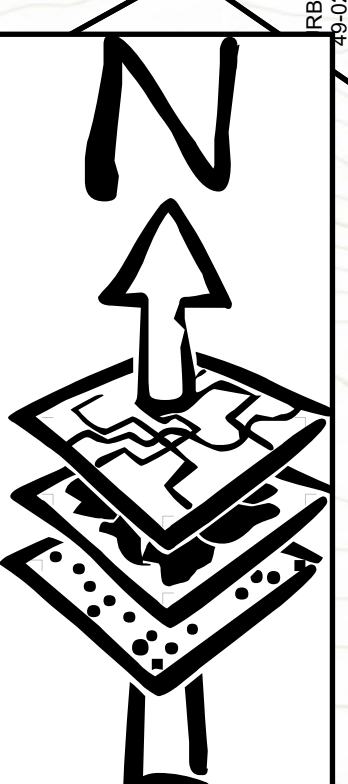
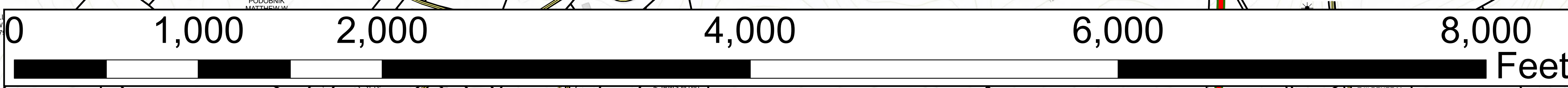


Legend

- County
- Municipality
- Area of Review
- Mile Buffer
- Limit of Disturbance
- + Permit

Well Location Data

- * Active, Deviated Well
- * Active, Vertical Well
- * Plugged OG Well, Vertical Well

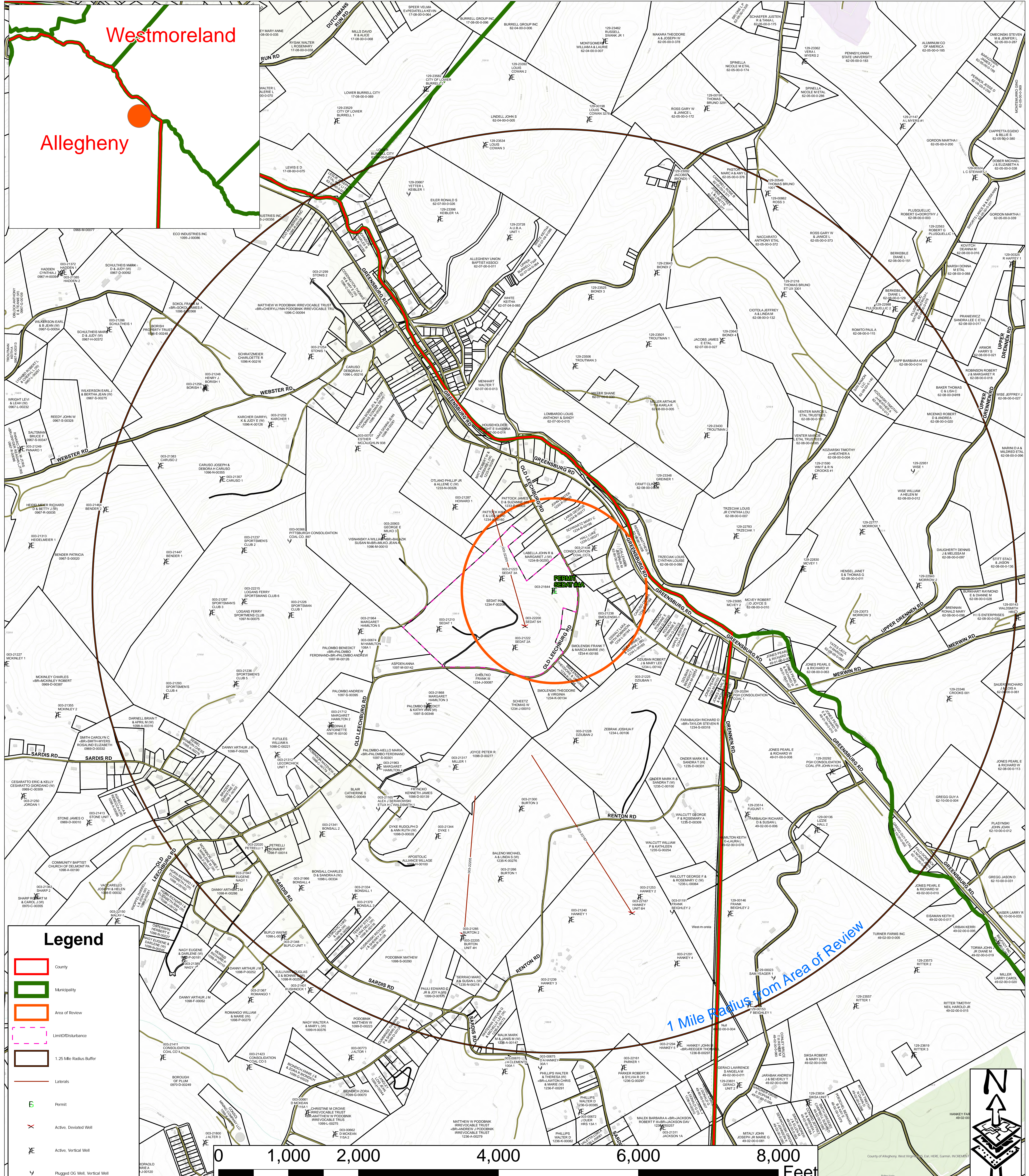


BY: MEC
 DATE: 9/13/2020
 Scale: see Scale Bar
 FILE: Penneco Sedat#4A 9-13-2020
 JOB NO: 677415
 SHEET: 3 of 3

AOR WITH 1 MILE EXTENSION MAP FOR SEDAT #4A PENNECO ENVIRONMENTAL SOLUTIONS, LLC Plum Borough, Allegheny County Commonwealth of Pennsylvania

FOX & FOX, INC.
 58 Timber Bridge Rd.
 Clarion, PA 16214
 Phone: 814-745-2861
 Fax: 814-745-2248
 email: ronaldfox@foxandfoxinc.us
 web: www.foxandfoxinc.us

Details for Area of Review:
 -Area of Review is AOR with a 1 Mile Buffer.
 -No hazardous waste treatment, storage, or disposal facilities within AOR+Buffer.
 -Geology has determined that no outcrops of injection formations are within the defined limits of this permit.

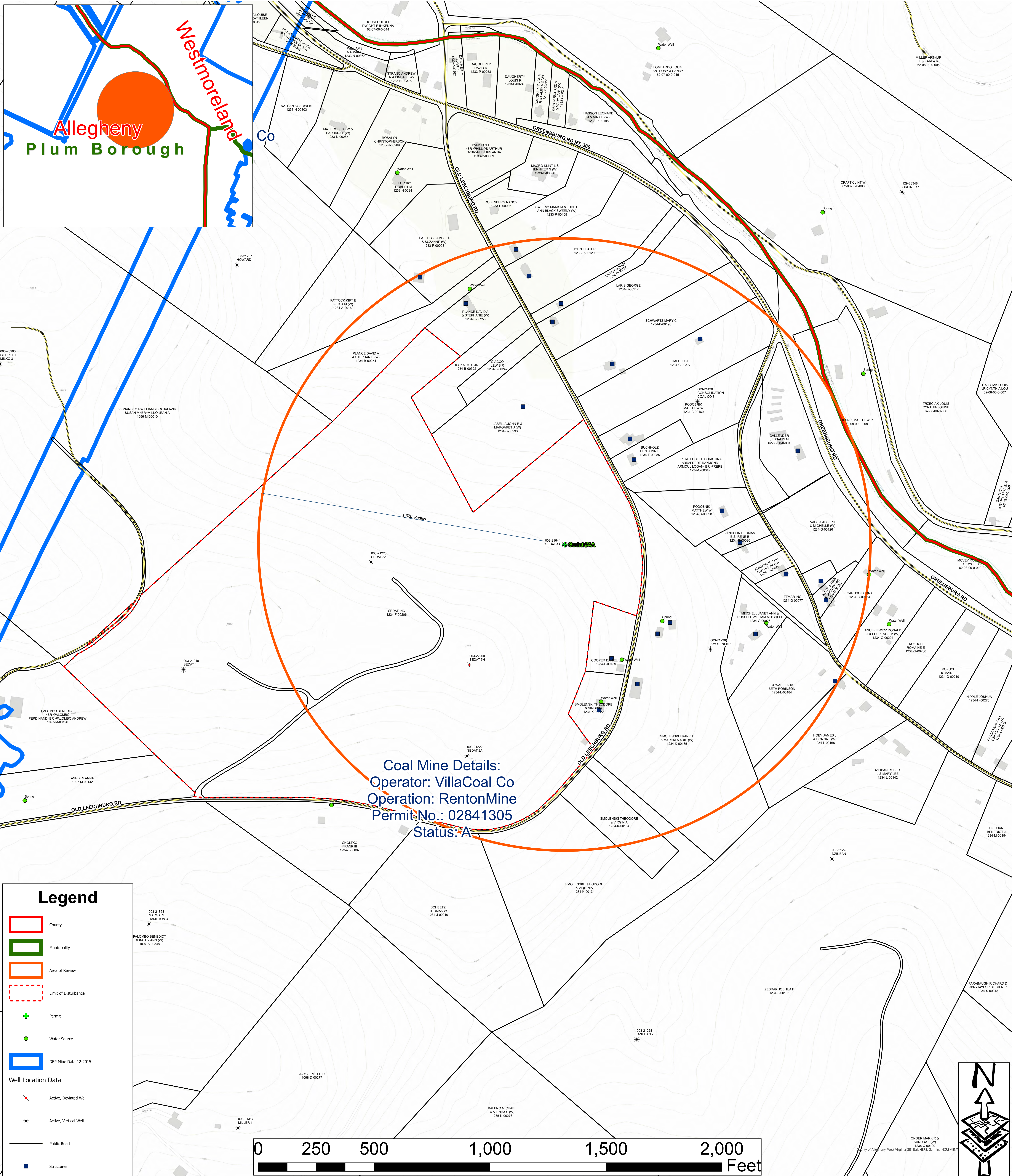


BY: MEC
 DATE: 5/13/2021
 Scale: see Scale Bar
 FILE: Penneco
 JOB NO: 677415
 SHEET: 3 of 3

AREA OF REVIEW WITH ADDITIONAL 1 MILE BUFFER FOR SEDAT #4A PENNECO ENVIRONMENTAL SOLUTIONS, LLC Plum Borough, Allegheny County Commonwealth of Pennsylvania

Details for Area of Review:
 -Area of Review is AOR with an additional 1 Mile Buffer.
 -No hazardous waste treatment, storage, disposal facilities within AOD or 1 Mile Additional Buffer.
 -Geology has determined that no outcrops of injection formations are within the defined limits of this permit.

FOX & FOX, INC.
 58 Timber Bridge Rd.
 Clarion, PA 16214
 Phone: 814-745-2861
 Fax: 814-745-2248
 email: ronaldfox@foxandfoxinc.us
 web: www.foxandfoxinc.us



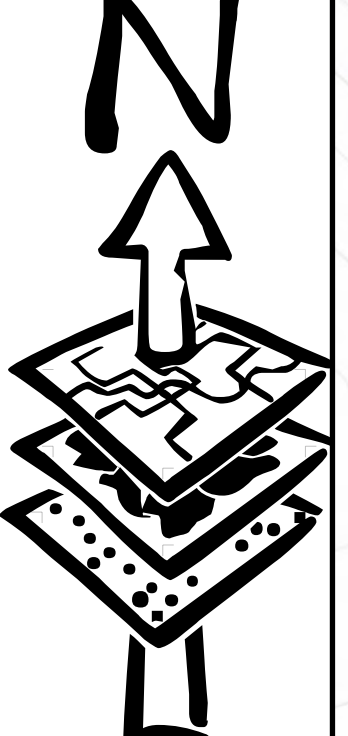
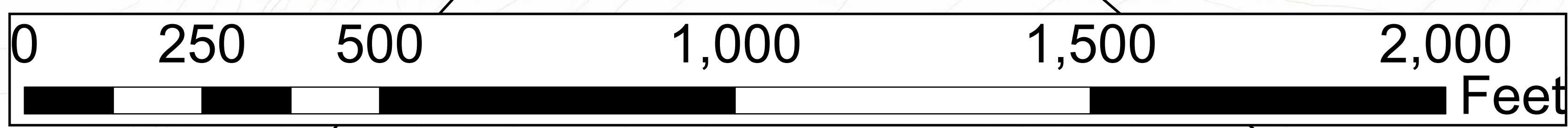
Coal Mine Details:
 Operator: VillaCoal Co
 Operation: RentonMine
 Permit No.: 02841305
 Status: A

Legend

- County
- Municipality
- Area of Review
- Limit of Disturbance
- + Permit
- Water Source
- DEP Mine Data 12-2015

Well Location Data

- * Active, Deviated Well
- * Active, Vertical Well
- Public Road
- Structures



BY: MEC
 DATE: 9/13/2020
 Scale: see Scale Bar
 FILE: Penneco Sedat#4A 9-13-2020
 JOB NO: 677415
 SHEET: 1 of 3

AREA OF REVIEW MAP FOR SEDAT #4A

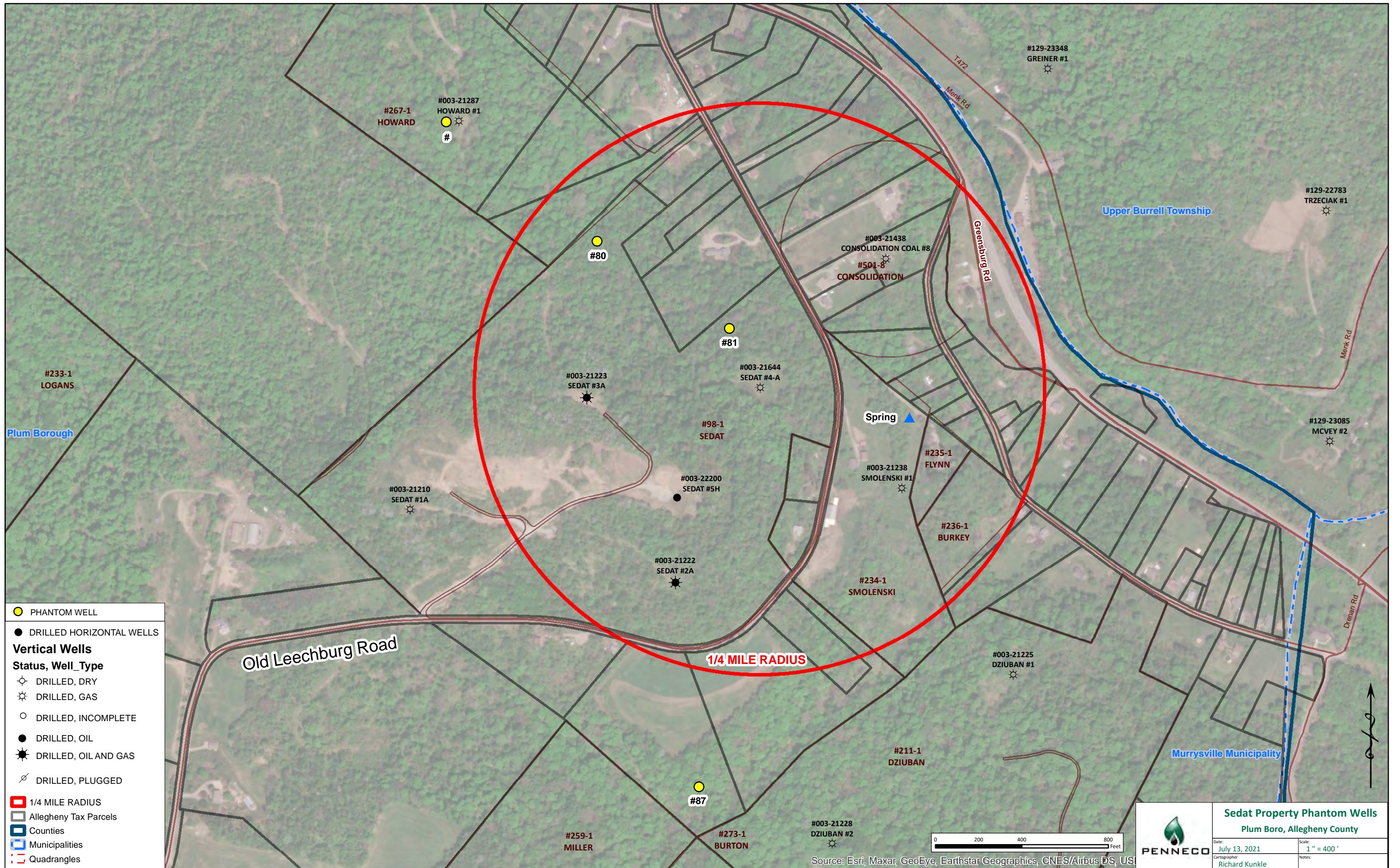
PENNECO ENVIRONMENTAL SOLUTIONS, LLC

Plum Borough, Allegheny County
 Commonwealth of Pennsylvania

FOX & FOX, INC.
 58 Timber Bridge Rd.
 Clarion, PA 16214
 Phone: 814-745-2861
 Fax: 814-745-2248
 email: ronaldfox@foxandfoxinc.us
 web: www.foxandfoxinc.us

Details for Area of Review:
 -AOR is 1/4 Mile Radius from Well Surface Location
 -24 Structures noted within the AOR.
 -4 Water Wells and 1 Spring noted within the AOR.
 -AOR is within the limits of the Renton Coal Mine,
 Operator: Villa Coal Co., Permit No. 02841505.
 -No schools, hospitals, or public offices within AOR.
 -Geology has determined that no fractures or faults are
 within the defined limits of this permit.
 -List of existing wells:

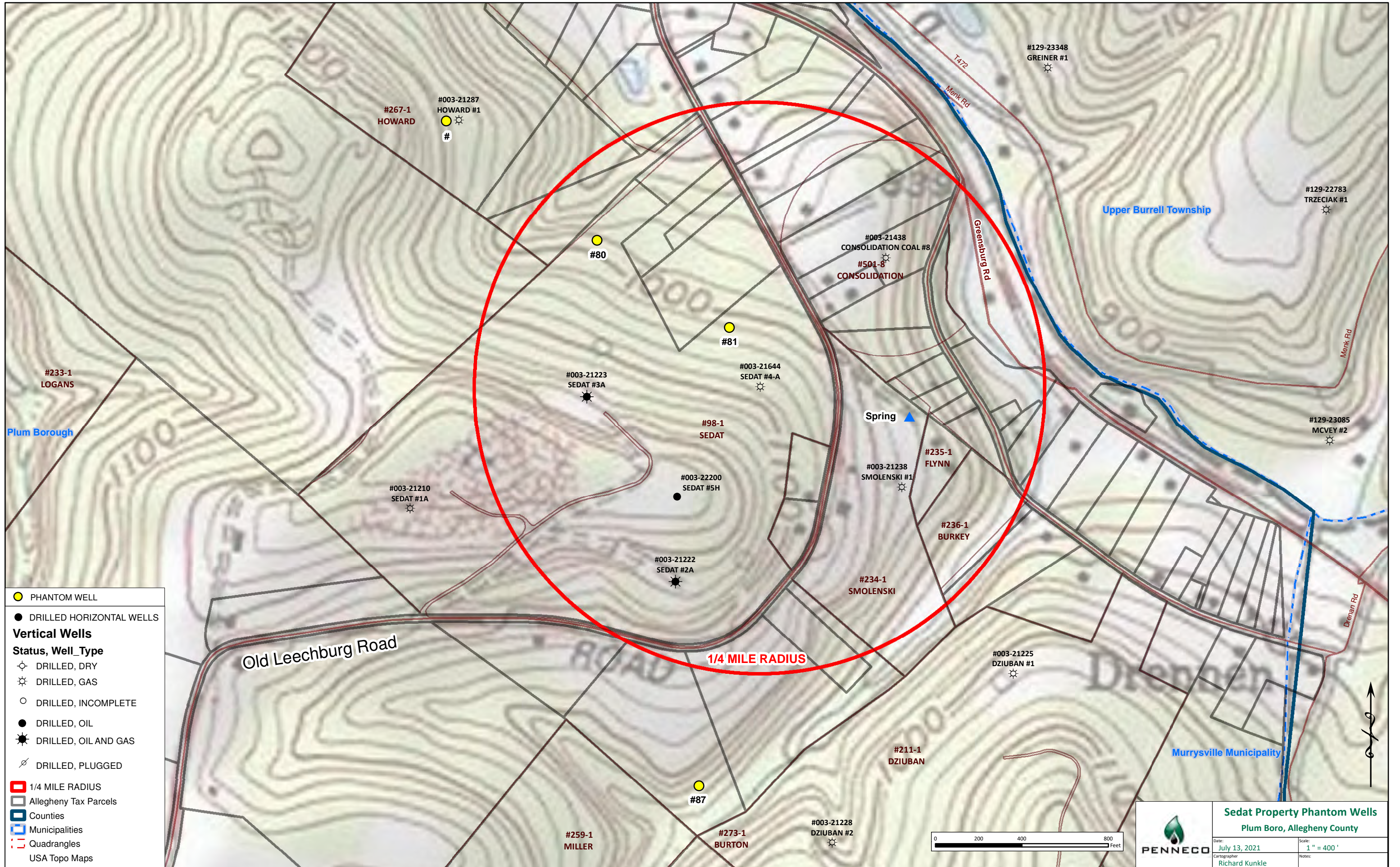
API	WELL STATUS	OPERATOR	FARM_NAME	WELL_CODE_DESC	SPUD_DATE	CONFIGURATION	UNCONVENTIONAL
003-21222	Active	PENNECO OIL CO INC	SEDAT 2A	GAS	1/12/1989	Vertical Well	No
003-21223	Active	PENNECO OIL CO INC	SEDAT 3A	GAS	1/29/1989	Vertical Well	No
003-21238	Active	PENNECO OIL CO INC	SMOLENSKI 1	GAS	11/13/1989	Vertical Well	No
003-21438	Active	PENNECO OIL CO INC	CONSOLIDATION COAL CO 8	GAS	1/4/1999	Vertical Well	No
003-21644	Active	PENNECO OIL CO INC	SEDAT 4A	GAS	6/18/2004	Vertical Well	No
003-22200	Active	PENNECO OIL CO INC	SEDAT 5H	OIL	1/10/2012	Deviated Well	No



- PHANTOM WELL
- DRILLED HORIZONTAL WELLS
- Vertical Wells**
- Status, Well_Type**
- ⊙ DRILLED, DRY
- ⊙ DRILLED, GAS
- DRILLED, INCOMPLETE
- DRILLED, OIL
- ⊙ DRILLED, OIL AND GAS
- ⊙ DRILLED, PLUGGED
- 1/4 MILE RADIUS
- Allegheny Tax Parcels
- Counties
- Municipalities
- Quadrangles

	Sedat Property Phantom Wells	
	Plum Boro, Allegheny County	
	Date: July 13, 2021	Scale: 1" = 400'
Cartographer: Richard Kunkle	Notes:	

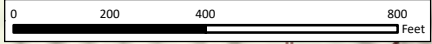
Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USA



● PHANTOM WELL
● DRILLED HORIZONTAL WELLS
Vertical Wells
Status, Well_Type
○ DRILLED, DRY
⊗ DRILLED, GAS
○ DRILLED, INCOMPLETE
● DRILLED, OIL
⊗ DRILLED, OIL AND GAS
⊗ DRILLED, PLUGGED
 1/4 MILE RADIUS
 Allegheny Tax Parcels
 Counties
 Municipalities
 Quadrangles
 USA Topo Maps

Sedat Property Phantom Wells
 Plum Boro, Allegheny County

Date: July 13, 2021	Scale: 1" = 400'
Cartographer: Richard Kunkle	Notes:



Sedat #4H Injection Well Inventory

	API	SPUD_DATE	OPERATOR	COUNTY	MUNICIPALITY	FARM_NAME	WELL_CODE_DESC	WELL_STATUS	LATITUDE	LONGITUDE	CONFIGURATION	UNCONVENTIONAL
1	003-00366	1/1/1800 0:00:00	PEOPLES NATURAL GAS CO LLC	Allegheny	Plum Boro	PITTSBURGH CONSOLIDATION COAL CO. 897	GAS	Plugged OG Well	40.528646	-79.724456	Vertical Well	No
2	003-00674	1/1/1800 0:00:00	PHILLIPS EXPLORATION INC	Allegheny	Plum Boro	M HAMILTON 108A 1	GAS	Plugged OG Well	40.524366	-79.720644	Vertical Well	No
3	003-00707	1/1/1800 0:00:00	PEOPLES NATURAL GAS CO LLC	Allegheny	Plum Boro	ESTHER MCLAUGHLIN 938	GAS	Active	40.532352	-79.721039	Vertical Well	No
4	003-01191	1/1/1800 0:00:00	PEOPLES TWP LLC	Allegheny	Plum Boro	FRANK BEIGHLEY 2	GAS	Plugged OG Well	40.514433	-79.704377	Vertical Well	No
5	003-20903	12/28/1976	PETRO SVC PARTNERS INC	Allegheny	Plum Boro	GEORGE E MILKO 3	GAS	Active	40.528921	-79.7196	Vertical Well	No
6	003-21165	1/1/1800 0:00:00	PEOPLES TWP LLC	Allegheny	Plum Boro	ALEX J SERAKOWSKI ETUX H L WALDSMITH 1	GAS	Plugged OG Well	40.518216	-79.719598	Vertical Well	No
7	003-21210	3/5/1988	DAKOTA OIL & GAS CO	Allegheny	Plum Boro	SEDAT 1	COMB. OIL&GAS	Active	40.525353	-79.71665	Vertical Well	No
8	003-21222	1/12/1989	PENNECO OIL CO INC	Allegheny	Plum Boro	SEDAT 2A	GAS	Active	40.524694	-79.712729	Vertical Well	No
9	003-21223	1/25/1989	PENNECO OIL CO INC	Allegheny	Plum Boro	SEDAT 3A	GAS	Active	40.527384	-79.713484	Vertical Well	No
10	003-21225	11/30/1988	PENNECO OIL CO INC	Allegheny	Plum Boro	DZIUBAN 1	GAS	Active	40.523287	-79.706527	Vertical Well	No
11	003-21226	12/30/1988	PENNECO OIL CO INC	Allegheny	Plum Boro	SPORTSMAN CLUB 1	OIL	Active	40.525764	-79.724275	Vertical Well	No
12	003-21228	3/21/1989	PENNECO OIL CO INC	Allegheny	Plum Boro	DZIUBAN 2	GAS	Active	40.521099	-79.709491	Vertical Well	No
13	003-21232	10/17/1989	DAKOTA OIL & GAS CO	Allegheny	Plum Boro	KARCHER 1	GAS	Active	40.533216	-79.725536	Vertical Well	No
14	003-21236	11/2/1989	DAKOTA OIL & GAS CO	Allegheny	Plum Boro	SPORTSMEN'S CLUB 5	GAS	Active	40.523019	-79.727008	Vertical Well	No
15	003-21237	10/25/1989	PENNECO OIL CO INC	Allegheny	Plum Boro	SPORTSMEN'S CLUB 2	GAS	Active	40.528261	-79.726758	Vertical Well	No
16	003-21238	11/13/1989	PENNECO OIL CO INC	Allegheny	Plum Boro	SMOLENSKI 1	GAS	Active	40.525737	-79.708484	Vertical Well	No
17	003-21240	12/5/1989	PENNECO OIL CO INC	Allegheny	Plum Boro	HANKEY 1	GAS	Active	40.514072	-79.709527	Vertical Well	No
18	003-21253	3/5/1991	DAKOTA OIL & GAS CO	Allegheny	Plum Boro	HANKEY 2	GAS	Active	40.515026	-79.706018	Vertical Well	No
19	003-21254	10/19/1990	PENNECO OIL CO INC	Allegheny	Plum Boro	STONIS 1	GAS	Active	40.53592	-79.723558	Vertical Well	No
20	003-21266	2/22/1991	DAKOTA OIL & GAS CO	Allegheny	Plum Boro	BURTON 1	GAS	Active	40.515609	-79.713196	Vertical Well	No
21	003-21267	3/13/1991	PENNECO OIL CO INC	Allegheny	Plum Boro	SPORTSMAN'S CLUB 3	GAS	Active	40.52579	-79.72834	Vertical Well	No
22	003-21285	10/18/1991	PENNECO OIL CO INC	Allegheny	Plum Boro	BURTON 2	GAS	Active	40.513248	-79.715066	Vertical Well	No
23	003-21287	9/24/1991	PENNECO OIL CO INC	Allegheny	Plum Boro	HOWARD 1	GAS	Active	40.530156	-79.715967	Vertical Well	No
24	003-21300	3/9/1992	PENNECO OIL CO INC	Allegheny	Plum Boro	BURTON 3	GAS	Active	40.518381	-79.712207	Vertical Well	No
25	003-21312	10/27/1992	PENNECO OIL CO INC	Allegheny	Plum Boro	LECORCHICK UNIT 1	GAS	Active	40.520274	-79.724814	Vertical Well	No
26	003-21317	12/31/1992	DAKOTA OIL & GAS CO	Allegheny	Plum Boro	MILLER 1	GAS	Active	40.519946	-79.715642	Vertical Well	No
27	003-21334	11/9/1993	DAKOTA OIL & GAS CO	Allegheny	Plum Boro	BONSALL 1	GAS	Active	40.514785	-79.720676	Vertical Well	No
28	003-21341	3/4/1994	PENNECO OIL CO INC	Allegheny	Plum Boro	BONSALL 2	GAS	Active	40.517203	-79.722417	Vertical Well	No
29	003-21344	5/11/1994	PENNECO OIL CO INC	Allegheny	Plum Boro	DYKE 1	GAS	Active	40.517228	-79.716469	Vertical Well	No
30	003-21357	10/21/1994	PENNECO OIL CO INC	Allegheny	Plum Boro	CARUSO 1	GAS	Active	40.531035	-79.727969	Vertical Well	No
31	003-21438	1/4/1999	PENNECO OIL CO INC	Allegheny	Plum Boro	CONSOLIDATION COAL CO 8	GAS	Active	40.52866	-79.708772	Vertical Well	No
32	003-21644	6/18/2004	PENNECO OIL CO INC	Allegheny	Plum Boro	SEDAT 4A	GAS	Active	40.526935	-79.710783	Vertical Well	No
33	003-21712	12/30/2005	XTO ENERGY INC	Allegheny	Plum Boro	MARGARET HAMILTON 2	GAS	Active	40.521494	-79.722083	Vertical Well	No
34	003-21868	11/30/2007	XTO ENERGY INC	Allegheny	Plum Boro	MARGARET HAMILTON 3	GAS	Active	40.522332	-79.7171	Vertical Well	No
35	003-21963	11/13/2008	XTO ENERGY INC	Allegheny	Plum Boro	MARGARET HAMILTON 4	GAS	Active	40.519891	-79.719567	Vertical Well	No
36	003-21964	6/22/2009	XTO ENERGY INC	Allegheny	Plum Boro	MARGARET HAMILTON 5	GAS	Active	40.525188	-79.72068	Vertical Well	No
37	003-22187	6/13/2011	PENNECO OIL CO INC	Allegheny	Plum Boro	HANKEY UNIT 6H	OIL	Active	40.514333	-79.706388	Deviated Well	No
38	003-22200	1/10/2012	PENNECO OIL CO INC	Allegheny	Plum Boro	SEDAT 5H	OIL	Active	40.525486	-79.712216	Deviated Well	No
39	003-22205	6/14/2012	PENNECO OIL CO INC	Allegheny	Plum Boro	BURTON UNIT 4H	OIL	Active	40.513358	-79.715013	Deviated Well	No
40	003-22215	3/29/2012	PENNECO OIL CO INC	Allegheny	Plum Boro	LOGANS FERRY SPORTSMANS CLUB 6	GAS	Active	40.526255	-79.726688	Vertical Well	No
41	129-00136	10/1/1918	DAKOTA OIL & GAS CO	Westmorelar	Upper Burrell Twp	LIZZIE HALL #2	GAS	Active	40.517807	-79.697005	Vertical Well	No
42	129-20294	1/1/1800 0:00:00	XTO ENERGY INC	Westmorelar	Murrysville Boro	PGH CONSOLIDATION COAL 1	GAS	Active	40.523	-79.70168	Vertical Well	No
43	129-21590	1/1/1800 0:00:00	ECONOMY NATURAL GAS INC	Westmorelar	Upper Burrell Twp	WM F & R N CROOKS #1	GAS	Active	40.531666	-79.697527	Vertical Well	No
44	129-22777	2/24/1986	DAKOTA OIL & GAS CO	Westmorelar	Upper Burrell Twp	MORROW 1	COMB. OIL&GAS	Active	40.529535	-79.695019	Vertical Well	No
45	129-22783	6/2/1986	PENNECO OIL CO INC	Westmorelar	Upper Burrell Twp	TRZECIAK 1	GAS	Active	40.529259	-79.701494	Vertical Well	No
46	129-22830	1/26/1987	DAKOTA OIL & GAS CO	Westmorelar	Upper Burrell Twp	MCVEY 1	GAS	Active	40.528025	-79.698004	Vertical Well	No
47	129-22943	1/30/1987	PENNECO OIL CO INC	Westmorelar	Upper Burrell Twp	MORROW #2	GAS	Active	40.527402	-79.692575	Vertical Well	No
48	129-23073	2/19/1988	PENNECO OIL CO INC	Westmorelar	Upper Burrell Twp	MORROW 3	GAS	Active	40.526036	-79.695413	Vertical Well	No

49	129-23085	11/5/1988	PENNECO OIL CO INC	Westmorelar Upper Burrell Twf MCVEY 2	GAS	Active	40.526336	-79.701349	Vertical Well	No
50	129-23348	7/26/1991	DAKOTA OIL & GAS CO	Westmorelar Upper Burrell Twf GREINER 1	GAS	Active	40.531193	-79.705668	Vertical Well	No
51	129-23430	9/6/1991	PENNECO OIL CO INC	Westmorelar Upper Burrell Twf TROUTMAN 2	GAS	Active	40.533184	-79.703115	Vertical Well	No
52	129-23501	5/14/1992	PENNECO OIL CO INC	Westmorelar Upper Burrell Twf TROUTMAN 1	GAS	Active	40.53671	-79.706211	Vertical Well	No
53	129-23506	8/3/1992	PENNECO OIL CO INC	Westmorelar Upper Burrell Twf TROUTMAN 3	GAS	Active	40.535784	-79.709959	Vertical Well	No
54	129-23514	7/7/1992	DAKOTA OIL & GAS CO	Westmorelar Murrys ville Boro FUGUNT 1	GAS	Active	40.518349	-79.700589	Vertical Well	No
55	129-23525	8/11/1992	PENNECO OIL CO INC	Westmorelar Upper Burrell Twf BIONDI 3	GAS	Active	40.538501	-79.70924	Vertical Well	No
56	129-23642	10/21/1993	DAKOTA OIL & GAS CO	Westmorelar Upper Burrell Twf BIONDI 4	GAS	Active	40.536903	-79.702433	Vertical Well	No
57	129-23643	10/14/1993	PENNECO OIL CO INC	Westmorelar Upper Burrell Twf BIONDI 2	GAS	Active	40.539513	-79.705874	Vertical Well	No
58	129-23728	8/11/1994	PENNECO OIL CO INC	Westmorelar Upper Burrell Twf A.U.B.A. UNIT 1	GAS	Active	40.540765	-79.713485	Vertical Well	No

003-00364

Map N E
 Pg. 7 EL. BK. 7613 Pg. 7
 Date

Latitude 40° 02' 30"



A-B	N 25° 42' E	381.5'
B-C	N 55° 34' 30" E	474.3'
C-D	N 63° 15' 30" E	381.5'
D-E	N 78° 25' 30" E	145.5'
E-F	N 28° 25' E	232.5'
F-G	N 17° 15' 30" E	123.2'
G-H	N 20° 35' 30" E	214.1'
H-I	N 18° 25' 30" E	278.7'
I-J	N 17° 25' 30" E	342.2'
J-K	S 41° 15' E	352.7'
K-L	N 20° 35' 30" E	278.7' ALL L.S.
L-M	S 71° 15' E	214.1'
M-N	S 32° 15' 30" E	232.5'
N-O	S 41° 15' E	352.7'
O-P	S 43° 15' 30" E	145.5'
P-Q	S 55° 15' 30" E	123.2' ALL L.S.

135
 147.4
 137.4
 132.2
 346.5

Map Location
 Well Depth
 Contourment
 etc.

Company ...
 Address ...
 State ...
 Acres 129 Lease No. 6000
 Well Name No. 1 Co. Serial No. 177
 Name of Well, if any ...
 Location ... Township ...
 State's Registration No. ...
 Drawing No. ...
 Scale ...

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF MINES
 Oil and Gas Division
 HARRISBURG
 WELL LOCATION MAP
 Dept. File No. 366-7-ALL
 003-00364
 ⊕ Denotes Values of Well on United States Topographic Maps.
 Scale 15' = 1" = 7 1/2'
 WORKABLE COAL SEAMS TO BE PENETRATED
 Name of Seam Owner of Seam

WELL RECORD

003-00366 280

1225
 Name High Coal Co #1 Co. Allegheny Twp. Ohio No. 897
 Owner P.N.G.X. Contr. _____
 Date Apr 25, 1913 Elev. _____ Product _____ Drill _____
 Obtained by Hughes Authority _____ Quad. _____

Locate by Sketch

GEOLOGICAL NAME	THICKNESS	DEPTH		GEOLOGICAL NAME	THICKNESS	DEPTH	
		FROM	TO			FROM	TO
UF		334	341				
LK		535	538				
Murrysville		1548	1662	gas water		1548	
4th		2115	2130	gas		2115	
	T.D.	2141					

TO: OIL AND GAS DIVISION
 DEPARTMENT OF MINES AND MINERAL INDUSTRIES
 1203-05 STATE OFFICE BUILDING
 300 LIBERTY AVENUE
 PITTSBURGH, PENNSYLVANIA 15222

4750' S 40° 32' 30"
 4650' W 79° 42' 30"

(G)

003-00366

FROM: The Peoples Natural Gas Company

DATE: June 23, 1964

SUBJECT: "PROPOSED ALTERNATE METHOD OF PLUGGING AND VENTING"

Well No. S97 Farm Pgh. Consolidation Coal Co. #1 Township Plum Boro County Allegheny

Permit No. or File No. 366-P-ALL

FMTD - }
 PROD FM } Vernengo
 FIELD - Renton
 ELEV. 900'

"PROPOSED ALTERNATIVE METHOD" is subject to provisions stated in Act 225, Section 207 (A)

PRESENT WELL STATUS

<u>Formation</u>	<u>Top</u>	<u>Bott.</u>	<u>Gas/Oil Water</u>	<u>Pipe Size</u>	<u>Amt. Run</u>	<u>Remarks</u>
Upper Freeport Coal	334	341		10"	136'	
Lower Kittanning Coal	535	538		8-1/4"	568'	
2nd Salt Sand	776	820				
Patton	860	1364				
Murrysville	1548	1662	H ₂ O 1548			
100' Sand	1702	1811				
Snee Sand	1834	1915		6-5/8"	1830'	
Gordon Stray	1936	1946				
Gordon Sand	1962	1976				
" "	2000	2070				
4th Sand	2075	2081				
" "	2115	2130	Gas 2115	3"	2093'	6-5/8" x 3" Hook Wall packed off @ 2065'
" "	2131	2141				
Total Depth	2134					

PROCEDURE

2093' of 3" tubing in well.

Pulled on 3" tubing and pulled apart at 50' below surface, due to surface movement.

Ran 1931'-91 joints 1-1/2" pour pipe. Pumped 100 sacks of cement. Pulled 386'-18 joints of pour pipe and pipe parted. Left in hole 1545'-1-1/2" pour pipe. Cement filled the inside of 3" tubing.

Pumped 100 sacks of cement and filled to surface, but cement dropped down hole. Pumped 150 sacks of cement and filled hole to surface. Cemented to ground level. 350 sacks of cement in hole. Swedge nipple on top of 10" casing with 2" pipe for monument.

Plugged & Abandoned June 23, 1964.

SIGNED: [Signature]
 Well Owner & Operator

Approved: [Signature]
 Coal Owner or Operator

Approved: [Signature]
 Division Representative

Date: June 23 1964

Date: [Signature]

File
6102-144

003-00366

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

CERTIFICATE OF PLUGGING WELL THROUGH WORKABLE COAL SEAMS

Consolidation Coal Company
Coal Operator or Owner
J. R. Talin
Liberty, Pa.
Address
Allegheny-Pittsburgh Coal Co.
Coal Operator or Owner
R. J. Walters, Chief Engineer
East Hill, Greensburg, Pa.
Address
Coal Operator or Owner
Address
Richard F. Walther
Division Representative Supervising

The Peoples Natural Gas Company
Well Operator
Two Gateway Center
Pittsburgh, Pennsylvania 15222
Address
July 23, 1964
Date
Plum Boro
Township
Allegheny
County
Pittsburgh Consolidation Coal Company
Farm
Well (Farm) No. 1 Serial No. 197
Coal Representative Observing

We, the undersigned representatives of the well operator certify that we participated in the plugging of the above well, and that the work was started June 23, 1964, and that the well was plugged as follows:

Filling Material and Plugs	From	To	Casing and Tubing		
			Size	Pulled	Left
Pulled on 3" tubing and pulled about 50' below surface, due to surface movement.			10 1/4"	None	136'
On 10 1/4" - 12 joints of 1 1/2" casing pipe.			8 5/8"	None	60' - 7"
Ran 10 1/4" - 12 joints of 1 1/2" casing pipe.			6 5/8"	None	157' - 10"
Ran 200 sacks of cement.			7"	56'	203'
Pulled 285' - 12 joints of 1 1/2" casing pipe and pipe parted.					Depth of Coal Seams
Left in hole 1545' of 1 1/2" casing pipe.			334 - 341		
Cement filled the inside of 3" tubing.			437 - 438		
Pumped 100 sacks of cement and filled to surface, but cement dropped down hole.					Description of Monument
Pumped 100 sacks of cement and filled hole to surface.					12" x 24" Square
					6" of 2" Pipe

and that the work of plugging and filling said well was completed on the 23 day of June, 1964.

Qualified Participants: Robert E. Loper
Thos C. Hauer
The Peoples Natural Gas Company
Well Operator
By [Signature]
Title Assistant General Superintendent

Permit No. 366-P-411

One copy of this certificate to be mailed to each coal operator or owner, and one to the Division, by registered mail, upon completion of plugging.

003-00674

5500-PM-CG0002-DXF Rev. 11/2003

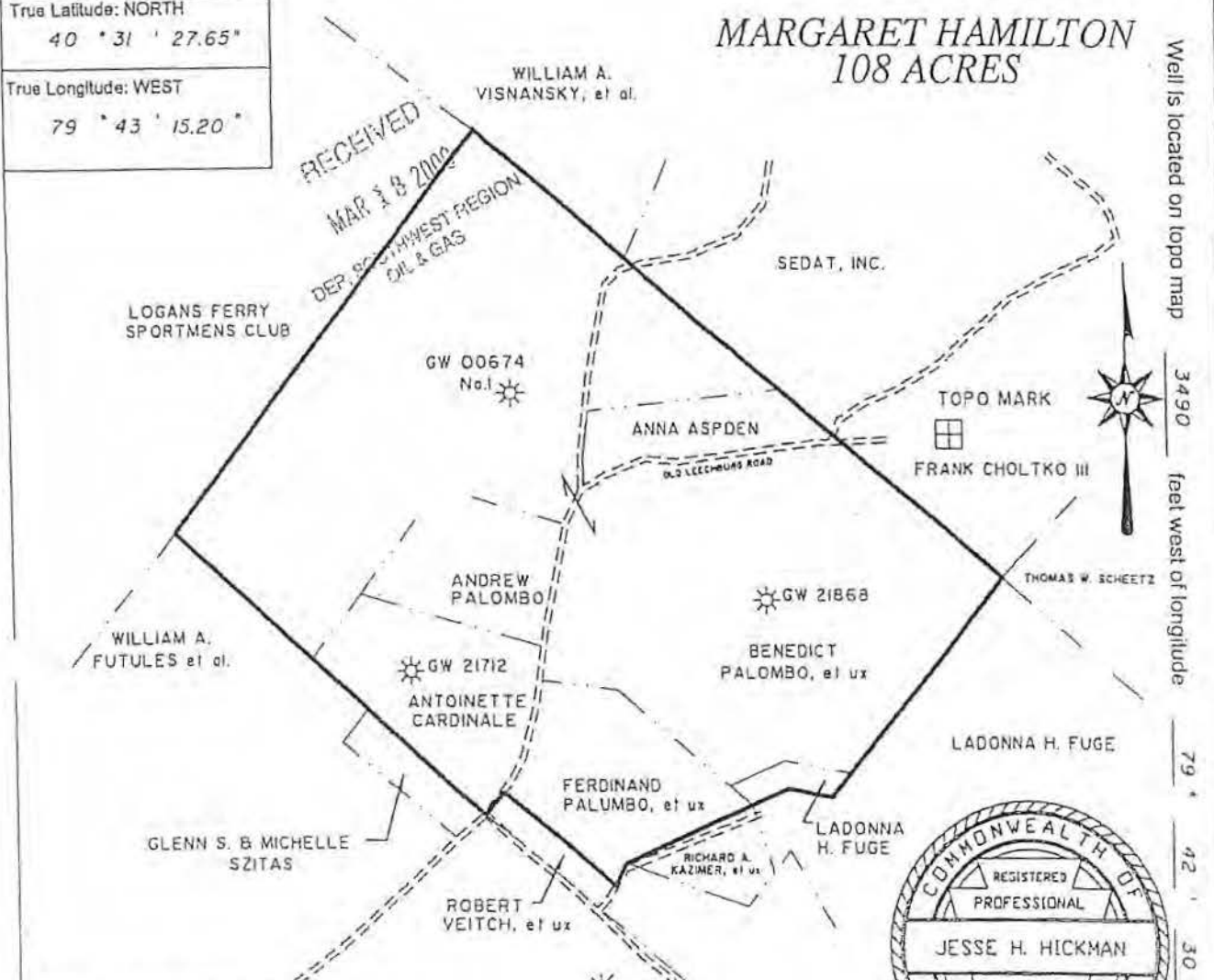


COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Oil and Gas Management Program
WELL LOCATION PLAT

DEP USE ONLY	DEP Application Tracking #	785717	G:	4/3
	Permit #	37-003-00674	C:	1/14/09
	Project #			

<input type="checkbox"/>	Denotes location of well on topo map.
True Latitude: NORTH	
40° 31' 27.65"	
True Longitude: WEST	
79° 43' 15.20"	

Well is located on topo map 6310 feet south of latitude 40° 32' 30"



Well is located on topo map 3490 feet west of longitude 79° 42' 30"



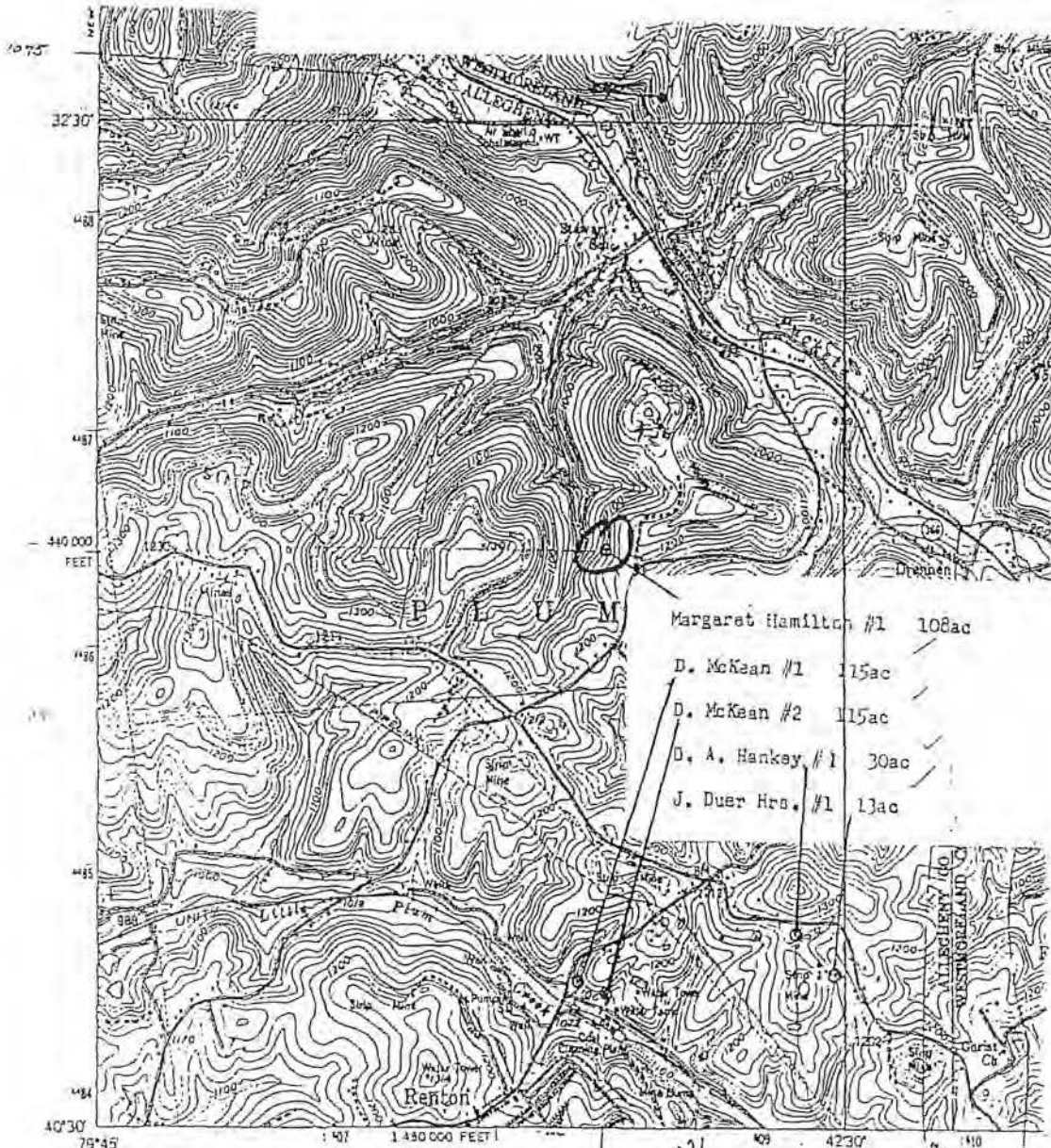
NOTE: This map is for well location purposes only and does not represent a complete boundary survey. Owners and some property lines are shown as per tax assessment records.

Surveyor of Jesse H. Hickman Phone # 412-549-0733 Dwg. # BK 18 PG 43 Date 5-2-08 Scale 1" = 600 FEET Tract N/A Acreage 108
Engineer SU - 53654 MHAMILTON-IP.DWG

Lat & Long Method Method ITPMP Accuracy 0.20" ft Datum NAD 1927	Elevation Method Method TOPO Accuracy +/- 20' ft Datum NAD 27	Survey Date 5-1-08
Applicant / Well Operator Name P C EXPLORATION INC.	Well/Farm Name MARGARET HAMILTON	Well # 1
Address 602 KEYSTONE DRIVE WARRENDALE, PA. 15088	County - Code ALLEGHENY-02	Municipality PLUM BOROUGH
Surface Landowner BENEDICT PALUMBO, et ux.	USGS 7 1/2 Quadrangle Map Name NEW KENSINGTON EAST	Map Section 7
Surface Lessor N/A	Angle & Course of Deviation (Drilling) 0	Surface Elevation 1180
Surface Owner or Water Surveyor with a Water Supply within 1,000 ft.	Approximate Course and Distance to Water Supply N 54-02 W 845'	Anticipated Total Depth 5000
W-56 ANNA ASPDEN	Owner, Lessee, or Operator of Workable Coal Seam NO WORKABLE COAL SEAMS	Name of Coal Seam Up. Freeport

Att-00674
003

6400' W
3700' (G)



(B) 4000000
300' W NE

Mapped, edited, and published by the Geological Survey
Control by USGS and USC&GS

Topography from aerial photographs by multiplex methods
Aerial photographs taken 1952. Field check 1953

Polyconic projection. 1927 North American datum
10,000-foot grid based on Pennsylvania coordinate system, south
1000-meter Universal Transverse Mercator grid ticks, zone 17,
shown in blue

Red tint indicates areas in which only landmark buildings are shown
Revisions shown in purple compiled in cooperation with
State of Pennsylvania agencies from aerial photographs taken 1969
This information not field checked

New Kensington East Quad

T. W. Phillips Gas And Oil Co.



UTM GRID AND 1948 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

THIS IS
FOR SALE
A FOLDER DESCR

WELL REGISTRATION FORM

003-00674

To be used for wells not permitted or issued drilling file numbers under Act 225, The Pennsylvania Gas Operations, Well-Drilling, Petroleum and Coal Mining Act. Supply all available information.

Code
96-24 P-24

2400' to 32' 30"
3700' to 29' 42' 30"
05' 12' 30"
7 1/2' South

T. W. Phillips Gas and Oil Co.
205 North Main Street
Butler, PA 16001
412-287-2751

Agent _____ Signature _____
Address _____
Telephone # _____

Project # _____
County Allegheny
FIELD - RENTON
ELEV - 132'

API/Registration #	Municipality	Farm Name	Well #	Serial # Optional	Date Drilled	Type Well	T.D.	Casing Record (Size/diam.) Length (ft.)	Type and amount of cement	Packers Size/Type/Setting/Length	Producing Horizons
00673	Plum Boro	J. Elliott - 123A	2		1924	Gas	4005' P.B.O. 3898'	8"-200' & 61" Pulled 4-3/4" 1970' 2" 3898'	10 Sks.	2" Anchor 3860'	3872'-3893'
00674	Plum Boro	M. Hamilton-108A	1		1938	Gas	3992'	10"-164' & 81"-208' 61"-939' & 4-3/4"-2072' 3" 3992'		3" Anchor 2292'	Gas 2315' 2372'-2400' 3245'-3247' 3926'-3955'
00675	Plum Boro	D. A. Hankey - 30A	1		1913	Gas	4045'	10"-117' & 81"-937' 6-5/8"-2163' & 4"-2406'		3" Anchor 2379'	3245'-3247' 3926'-3955'
00676	Plum Boro	R. Jackson - 75A	3		1912	Gas	3225'	8 1/2" 150' 61"-1046' & 4-7/8"-2075'		3" Anchor 2412'	2505'-2517' 3154'-3179'

Attachments Needed: 7 1/2 minute topographic map or other description to enable the Department to find the well site on the ground Driller's log (if available)
 Proof of bond or blanket bond Alternate fees in lieu of bond Registration fee of \$15 per well or \$250 for blanket registration on well registrations submitted simultaneously for same project.

The registration number issued pursuant to this registration form shall be installed on the well in a legible, conspicuous and permanent manner within 60 days of issuance.

003-00674

DRILLERS' RECORD - H.C. Folio 3747

No. 1 on Margaret L. Hamilton Farm of 19.8 acres in R.R.M. Twp. Allegheny County, Pa.
 bounded North by Ralph Wadsworth, H.S. Miller East by H.T. Miller, John Baker
 South by John Baker, H.L. Wadsworth, Clements, Est. West by Clements, Est., Edge & Cleveland, Coal Co.
 The well is located about 68.9 feet from the P.M.A. line & 67.5 ft. from this point up of the Wadsworth line
 for the T.W. Phillips, Gas & Oil Company and completed in the month of August, 1938.
 Conductor Pipe Length 167m Ft. If pipe state size 10"
 with 70.2 feet of 6 1/2" inch casing set in 3/4" on packer
 and with 22.9 feet of 6 1/2" inch casing set in on packer
 and with 20.7 A feet of 4 1/2" inch casing set in on packer
 and valves 4.08, 2.60, 7.5 R, gas at 22.9, 20.7, 4.10, 5 ft.

ACC-00674
003-

Kind of section of or c, etc.	Top	Bottom	Thick-ness	Dist. from top of H. F.	If Sand, give name	Description	If it contains gas, oil or water, state quantity and where in the sand found
and	565	600	35				
"	960	1006	46				Salt water at 1000 ft 530 ltrs over Sunday.
"	1126	1462	336				Gas 1225 burned 9 ft. blew down to 6 ft. blaze
"	1624	1642	18				
"	1754	1785	31				
"	1820	1931	111		Murresville		Salt water at 1829 ft. filled up 600 ft.
"	1964	2071	107		Hundred ft.		
"	2074	2097	23		" "		
"	2126	2344	148	232		Red	Gas 2315 burned 5 ft.
"	2372	2400	28	408	Fifth		2375 all burned 6 ft.
"	2684	2694	10	720			
"	3076	3087	11	1112	Speckley		
"	3214	3253	39	1250	"		Gas 3220 all burned 8 ft. " 3242 " " 13 "
"	3312	3365	47	1354	Tiona		
"	3535	3590	55	1571	Sheffield		
"	3760	3833	73	1796	ETX Bradford		
"	3853	3890	37	1889	Bradford		Gas 3856 all burned 15 ft.

Remarks:

above record was NOT copied by me until it had been O. K'd or approved on the 29th day of Aug, 1938
 by Sup't. C.H.L. C.P.H.

GEN-TOS

003-60674

003-60674

Well No. 1 on Margaret L. Hamilton Farm Plum Township Allegheny Co., Pa.
 Operations commenced May 9, 1931. Drilling started May 20, 1931. Drilling stopped Aug. 27, 1931.
 Driller on morning tour W. H. Neill Tool dresser on morning tour H. L. Hilt
 Driller on morning tour Tool dresser on morning tour
 Driller on afternoon tour H. E. Busard Tool dresser on afternoon tour J. B. Holliday
 Driller on afternoon tour W. E. Dutton Tool dresser on afternoon tour
 Total depth of well 299.2 feet. Depth of water well 150 feet
 Deepened to feet from in
 Driller on morning tour Tool dresser on morning tour
 Driller on morning tour Tool dresser on morning tour
 Driller on afternoon tour Tool dresser on afternoon tour
 Driller on afternoon tour Tool dresser on afternoon tour

RECEIVED
 MAR 18 2009
 DEP. SOUTHWEST REGION
 OIL & GAS

GEU COPY 003-00674

5500-FM-OG0005 Rev. 5/2000



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS MANAGEMENT PROGRAM

DEP USE ONLY	
Auth # 785717	APS # 688827
Site # 5126	Primary Facility #
eFACTS Client # 50451	Sub-fac #

Notice of Intention by Well Operator to Plug a Well

<input checked="" type="checkbox"/> Well Operator PC Exploration, Inc.	<input type="checkbox"/> Coal Operator	DEP ID# 52451	Well API # (Permit / Reg) 37-003-00674	Date Drilled (if known) 8/27/1938
Address 502 Keystone Drive		Phone 724-772-3500	Well Farm Name Margaret Hamilton (108ac)	
City Warrendale	State PA	Zip Code 15086	Well # 1	Well Serial #
<input type="checkbox"/> Agent (contractor) acting on behalf of the operator named above.			County Allegheny	
Address		Phone	Municipality Plum Borough	
City	State	Zip Code	Attach well record if not previously submitted.	

Coal Operator, Owner, and Lessee Complete this section if applicable. Prior to abandoning any well in an area underlain by a workable coal seam, the well operator or owner shall notify the coal operator, lessee, or owner of the intention to plug and abandon the well, and shall submit a plat showing the location and affix the date and time at which the work of plugging will commence.

Coal <input type="checkbox"/> Operator <input type="checkbox"/> Owner <input type="checkbox"/> Lessee	Coal <input type="checkbox"/> Operator <input type="checkbox"/> Owner <input type="checkbox"/> Lessee	Coal <input type="checkbox"/> Operator <input type="checkbox"/> Owner <input type="checkbox"/> Lessee
Address "Non-Coal" area	Address	Address
City, State, Zip	City, State, Zip	City, State, Zip
Phone Notified? <input type="checkbox"/> Yes <input type="checkbox"/> No	Phone Notified? <input type="checkbox"/> Yes <input type="checkbox"/> No	Phone Notified? <input type="checkbox"/> Yes <input type="checkbox"/> No
This Party hereby waives the rights to be notified of the date and time before plugging work will begin, and to be present at the plugging of this well. Signature:	This Party hereby waives the rights to be notified of the date and time before plugging work will begin, and to be present at the plugging of this well. Signature:	This Party hereby waives the rights to be notified of the date and time before plugging work will begin, and to be present at the plugging of this well. Signature:

Scheduled Date and Time of Plugging: Plugging is scheduled to begin on (date) 3/24/2009 at (time) 7:00am.

<input checked="" type="checkbox"/> Location Plat <input type="checkbox"/> Current Well Record <input checked="" type="checkbox"/> Available Well Record <input type="checkbox"/> Application for Approval of Alternate Method of Plugging <input type="checkbox"/> Other, describe:	Signature of Applicant (Operator or Agent)
	Signature: _____ Date: 3/17/09
	Print or Type Signer's Name and Title Gary A. Clark Vice President of Operations
NonCoal GOB - Up-Fr. Frac out	

DEP USE ONLY		
If this well has not been permitted or registered previously, DEP hereby assigns this permit / registration number to the well location described in this notice: API# 37-003-00674 Date: 4/14/09 Please refer to this number in all future correspondence.	Notice acknowledged by: DEP Rep: (Signature) [Signature] (Print Name) Alan Eichler	Date: 4/14/09 Geologist: SKB Date: 4/14/09

DEP will fill in the information below and send a copy of this approved notice to the applicant and these DEP staff or offices.

DEP Oil and Gas Inspector	DEP Mine Inspector MID # 7	Rec'd in DEP Reg. Ofc. Plugging must begin within 30 days of: RECEIVED MAR 18 2009 DEP. SOUTHWEST REGION OIL & GAS
Name: MICHAEL ARCH	Name: RICHARD MURPHY	
Address: 400 WATERFRONT DRIVE	Address: 3122 PARK DRIVE	
City, State, Zip: PITTSBURGH PA 15222-4745	City, State, Zip: CLARKSBURG PA 15725	
Phone: 412-442-4010	Phone: 724-726-9516	

LA. Tower = 5/16/09



RECEIVED

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL & GAS MANAGEMENT PROGRAM

003-00674

DEP USE ONLY	
Site ID#	Primary Facility ID#
eFACTS Client #	Sub-facility ID#
Bonded Well <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Bond Agreement #

LOB

MAY 04 2009

Certificate of Well Plugging *page 1*

Well Operator DEP, SOUTHWEST REGION OIL & GAS PC Exploration, Inc	DEP ID# 52451	Well API # (Permit / Reg) 37-003-00674	Project Number	Type of Well Gas
Address 502 Keystone Drive	State PA	Zip Code 15086	Well Form Name Margaret Hamilton (108ac)	Well # 1
City Warrendale	County Allegheny	Municipality Plum Borough	Serial #	
Phone 724-772-3500	Fax 724-772-3505	Complete the next section (coal) if applicable.		

Coal <input type="checkbox"/> Operator <input type="checkbox"/> Owner <input type="checkbox"/> Lessee	Coal <input type="checkbox"/> Operator <input type="checkbox"/> Owner <input type="checkbox"/> Lessee	Coal <input type="checkbox"/> Operator <input type="checkbox"/> Owner <input type="checkbox"/> Lessee
Address "Non-Coal" area	Address	Address
City, State, Zip	City, State, Zip	City, State, Zip

The undersigned representatives of the Well Operator certify that we participated in plugging this well, and that the work was started on (date) April 9, 2009, and that the well was plugged as follows

Filling Material and Plugs	Depth		Casing and Tubing		
	From	To	Size	Pulled	Left
well plugged from attainable bottom		3968'			
perforate 3" with 1 shot per 50' from 3910' to 2366' (28 holes)					
144 5 sks, 50/50 poz, 10% salt, 2% gel	3978'	2292'			
dressed plug at 2312', seen 2 bbls					
separate 3" at 2282'					
19 66 sks, 50/50 poz, 10% salt, 2% gel	2278'	2072'			
dress plug at 2074', seen 1/2 bbl					
separate 4 3/4" at 2022'					
260 sks, 50/50 poz, 10% salt, 2% gel	2022'	929'			
pipe separated at 4 3/4" permission from DEP to perforate					
4 3/4" from 486' to 632'					
38 29 sks, 50/50 poz, 10% salt, 2% gel	666'	453'			
					Describe Monument

MAR 19 2010

DEP, SOUTHWEST REGION
OIL & GAS

Depth to coal seams, if any

Signature of Participants		
Signature - Well Operator <i>[Signature]</i> Print or Type Signer's Name and Title Gary A. Clark Vice President of Operations	Signature - Qualified Participant <i>[Signature]</i> Print or Type Signer's Name, Title & Co Frank A. Bracis RIG OPERATOR - WHIPSTOCK	Signature - Qualified Participant <i>[Signature]</i> Print or Type Signer's Name, Title, & Co SHAWN LONDON UNIVERSAL WELL SERVICES CEMENT SUPERVISOR

Signers certify that the work of plugging this well was completed on (date) April 20, 2009 and that the information above is true and accurate	DEP USE ONLY		
	<input checked="" type="checkbox"/> Approved DEP Rep <i>[Signature]</i>	<input type="checkbox"/> Denied Date 3-15-10	Plug Inspector Date
			Site Restoration (WQS) Date
			Bond Rel? <input type="checkbox"/> Yes <input type="checkbox"/> No

Upon completion of plugging, mail one copy of this certificate to each coal operator, owner, or lessee, if any, and one copy to the appropriate DEP Regional Oil and Gas Management Program office

Dept of Environmental Protection NW Regional Office - Oil & Gas 230 Chestnut Street Meadville, PA 16335-3481	Dept of Environmental Protection SW Regional Office - Oil & Gas 400 Waterfront Drive Pittsburgh, PA 15222-4745
---	---



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL & GAS MANAGEMENT PROGRAM

003-00674
RECEIVED
MAY 04 2009

Certificate of Well Plugging

DEP, SOUTHWEST REGION
OIL & GAS

DEP USE ONLY	
Site ID#	Primary Facility ID#
eFACTS Client #	Sub-facility ID#
Bonded Well?	Bond Agreement #
<input type="checkbox"/> Yes <input type="checkbox"/> No	

Well Operator PC Exploration, Inc	DEP ID# 52451	Well API # (Permit / Reg) 37-003-00674	Project Number	Type of Well Gas
Address 502 Keystone Drive	State PA	Zip Code 15086	Well Farm Name Margaret Hamilton (108ac)	Well # 1
City Warrendale	Fax 724-772-3505	County Allegheny	Municipality Plum Borough	Send #
Phone 724-772-3500	Complete the next section (coal) if applicable.			

Coal <input type="checkbox"/> Operator <input type="checkbox"/> Owner <input type="checkbox"/> Lessee <input type="checkbox"/>	Coal <input type="checkbox"/> Operator <input type="checkbox"/> Owner <input type="checkbox"/> Lessee <input type="checkbox"/>	Coal <input type="checkbox"/> Operator <input type="checkbox"/> Owner <input type="checkbox"/> Lessee <input type="checkbox"/>
Address	Address	Address
"Non-Coal" area	City, State, Zip	City, State, Zip

The undersigned representatives of the Well Operator certify that we participated in plugging this well, and that the work was started on (date) April 9, 2009, and that the well was plugged as follows

Filling Material and Plugs	Depth		Casing and Tubing		
	From	To	Size	Pulled	Left
dressed plug at 463', seen 3 bbls			10"		16 5'
separate 3 1/2" at 453'			8"		208'
attempt to pull surface casing, unsuccessful			6 25"		929'
79 65 sks, 50/50 poz, 10% salt, 2 % gel	453'	0'	4 3/4 "	1618'	454'
			3 1/2"	1710'	2282'
			Depth to coal seams, if any		
			600'-606'		
			750'-54'		
			Describe Monument		
			Burned plate with permit number affixed		

MAR 19 2010
DEP, SOUTHWEST REGION
OIL & GAS

Signature of Participants		
Signature - Well Operator <i>[Signature]</i> Print or Type Signer's Name and Title Gary A. Clark Vice President of Operations	Signature - Qualified Participant <i>[Signature]</i> Print or Type Signer's Name, Title, & Co Frank R. Broebus RW OPERATOR - WHIPSTOCK	Signature - Qualified Participant <i>[Signature]</i> Print or Type Signer's Name, Title & Co Shawn London UNIVERSAL WELL SERVICES CEMENT SUPERVISOR

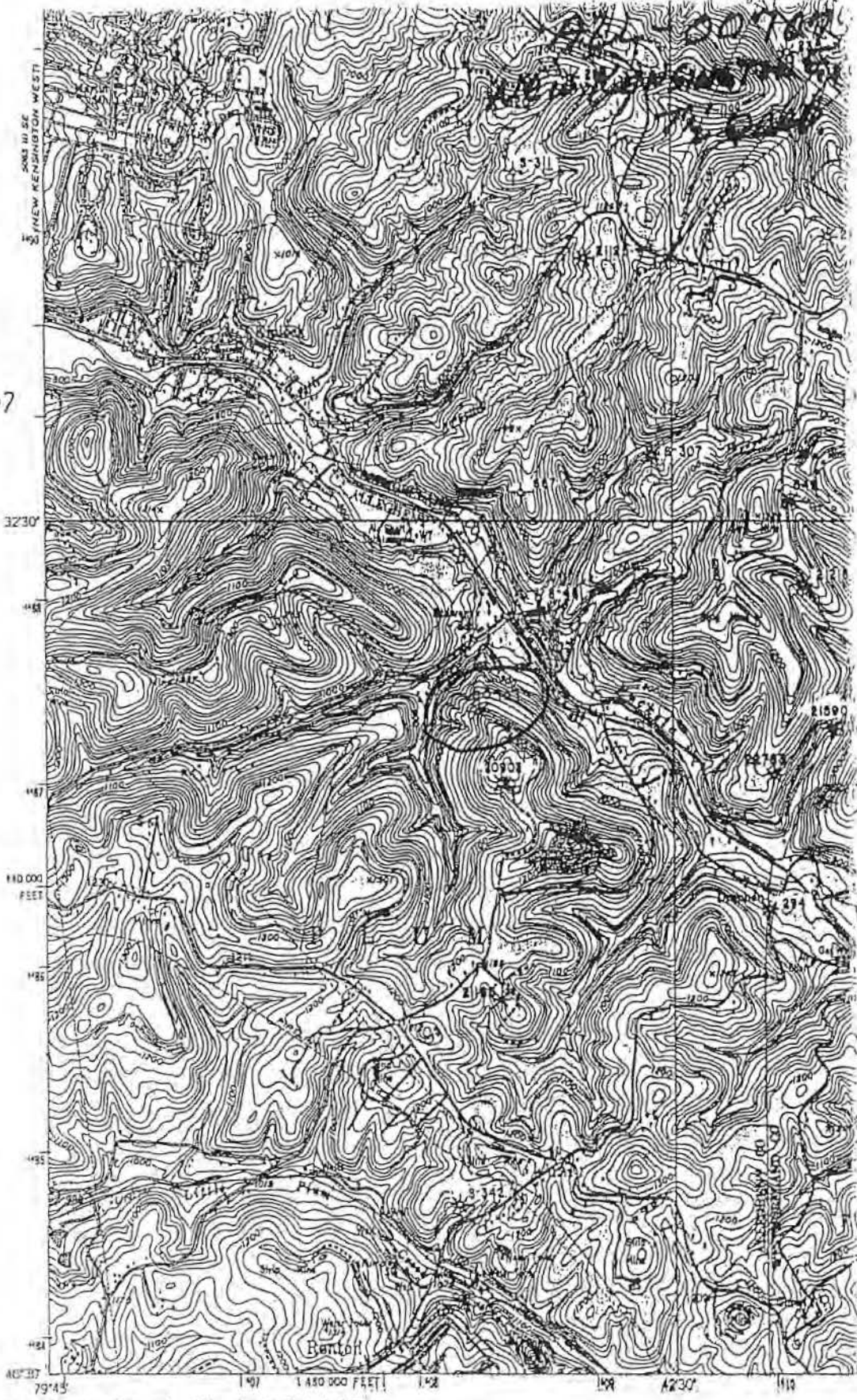
Signers certify that the work of plugging this well was completed on (date) April 20, 2009 and that the information above is true and accurate	DEP USE ONLY		
	<input checked="" type="checkbox"/> Approved DEP Rep <i>[Signature]</i>	<input type="checkbox"/> Denied Date 3-15-10	Plug Inspector Date

Upon completion of plugging, mail one copy of this certificate to each coal operator, owner, or lessee, if any, and one copy to the appropriate DEP Regional Oil and Gas Management Program office

Dept of Environmental Protection NW Regional Office - Oil & Gas 230 Chestnut Street Meadeville, PA 16335-3481	Dept of Environmental Protection SW Regional Office - Oil & Gas 400 Waterfront Drive Pittsburgh, PA 15222-4745
--	---

003-00707

063
00707



Mapped, edited, and published by the Geological Survey

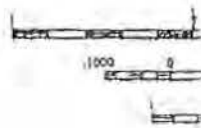
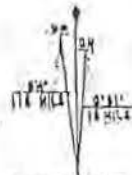
Control by USGS and USC&GS

Topography from aerial photographs by multiplex methods

Aerial photographs taken 1962. Field check 1963

Polyconic projection. 1927 North American datum
10,000-foot grid based on Pennsylvania coordinate system, south zone
1000-meter Universal Transverse Mercator grid ticks, zone 17
shown in blue

To place on the predicted North American Datum 1983



UTM GRID AND 1978 MAGNETIC NORTH

003-00707

003-00707

WELL REGISTRATION FORM

To be used for well(s) not permitted or issued drilling file numbers under Act 225, The Pennsylvania Gas Operations, Well-Drilling, Petroleum and Coal Mining Act. Supply all available information.

DATE USE ONLY

Code	
911Z/11	3-20-86

Address
19
Telephone #

Laura L. Langer
420 Blvd. of the Allies
Pittsburgh, PA 15219
(412) 553-6132

Project # _____
If previously assigned by Dept

County ALLEGHENY
FM, TD BRADFORD GROUP.
PROD FM, VENTAGE & BRADFORD GROUPS.
FIELD RENTON FIELD.
ELEV. 1087'

Locality	Farm Name	Well #	Serial # Optional	Date Drilled	Type Well	T.D.	Casing Record Size(Diam.) Length (ft.)	Type and amount of cement	Packers Size/Type/Setting/Depth	Producing Horizons
1	ESTHER McLAUGHLIN	938		1911	GAS	3785	10"-11' 3"-2196 9"-897 6 5/8"-1924		6 5/8" X 3 HW 2196	5th Specimen Bradford
2	A.C. WRIGHT	963		1899	GAS	2208	10"-21' 4 7/8"-1900 8 1/4"-180 2"-2152 6 1/4"-965		4 7/8" X 2 A 2123	5th SEW SE1 1/2
3	NOAH SHAFER	990		1906	GAS	1855	10"-7' 4 7/8"-1500 8 1/4"-308 3"-1650 6"-658		4 7/8" X 3 HW 1560	5th CAR NW 1/2
4	W.C. KROEGHER	993		1910	GAS	2208	10"-296 2"-1793 6 5/8"-1671 3"-61		6 5/8" X 3 W 1842	GORDON SEW SE 1/2
	SUSANNA DAVIDSON	3292		1943	GAS	2113	10"-247' 3"-2113' 8 1/4"-1080' 6 5/8"-2046'		6 5/8" X 3 A 2057'	30' FSH NE 2
	KATHERINE KRON	3296		1944	GAS	2811	7 1/4"-Caso 6 5/8"-2249 10"-132' 8 1/4"-1315'			BARARD SB NW 1/2
	AGNES SHARP	3303		1944	GAS	4103	13"-105' 6 5/8"-2170' 10"-386' 8 1/4"-1199'			Bradford PGH NE 2

Attach map or other description to enable the Department to find the well sites on the ground Driller's log (if available)

Blanket bond Alternate fees in lieu of bond Registration fee of \$15 per well or \$250 for blanket registration on well registrations submitted simultaneously for same project.

Used pursuant to this registration form shall be installed on the well in a legible, conspicuous and permanent manner within 60 days of issuance.

003-00707

WELL NO. **938** LESSOR **M. Laughlin** ESTERLEASE NO. **2222** ACRES **100** MAP **F. 2573** ELEVATION **1007** DIV. **G.** DIST. **F. 2573**

COUNTY PLUM TRACT SECTION COMPLETED PURCHASED FROM DATE PURCHASED OUTSIDE SERIAL NO. SOLD TO DATE SOLD DATE ABANDONED DATE PLUGGED ANNUAL ROYALTY \$ WORKMEN'S COMP. NOTICE POSTED DRILLER'S LOG IN FILE COAL DATA OWNER ADDRESS DATE NOTIFIED LOCATION DATE APPROVED DEPARTMENT OF MINES DATA DRILLER'S PERMIT NO. DATE DRILLER'S OPER. PERMIT NO. DATE PLUGGING PERMIT NO. DATE FREE GAS DATA ANNUAL ALLOWANCE CONSUMER ADDRESS	FORMATIONS TOP BOTTOM GAS AT OIL AT WATER AT FORMATIONS TOP BOTTOM GAS AT OIL AT WATER AT CLASSIFICATION 1908 1916 1850 1860 1918 1920 1924 1925 1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939 1940 1941 1942 1943 1944 1945 1946 1947 1948 1949 1950 1951 1952 1953 1954 1955 1956 1957 1958 1959 1960 1961 1962 1963 1964 1965 1966 1967 1968 1969 1970 1971 1972 1973 1974 1975 1976 1977 1978 1979 1980 1981 1982 1983 1984 1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025
--	--

OPEN FLOW VOLUME & PRESSURE DATA												PIPE LINE DATA										
DATE	READING	LIQUID	SIZE	MINUTES										DATE	VOLUME	PRODUCING SAND	C/O NO.	DATE LAID	DATE ROL'D	SIZE	FEET LAID	FEET ROL'D
7-1-11			3"	1	2	3	4	5	6	7	8	9	10	11	12	10-27-42	4000	5th				
7-1-28			3"	1	2	3	4	5	6	7	8	9	10	11	12	11-17-42	4000	5th				
11-27-42			3"	1	2	3	4	5	6	7	8	9	10	11	12							

REPAIR AND DRILLING DEEPER										SHOOTING RECORD						
W/O NO.	DATE	REASON	COMMENCED	COMPLETED	C/O OR D/O	VOLUME				ROCK PRESS.		DATE	AMT.	DEPTH	VOLUME	
						BEFORE	AFTER	BEFORE	AFTER						BEFORE	AFTER
	11-27-42	ROD	8-12-42	7-1-29	21.5	51	41.2			70	188	73	342			

DAILY VOLUME FACTOR **11.957**

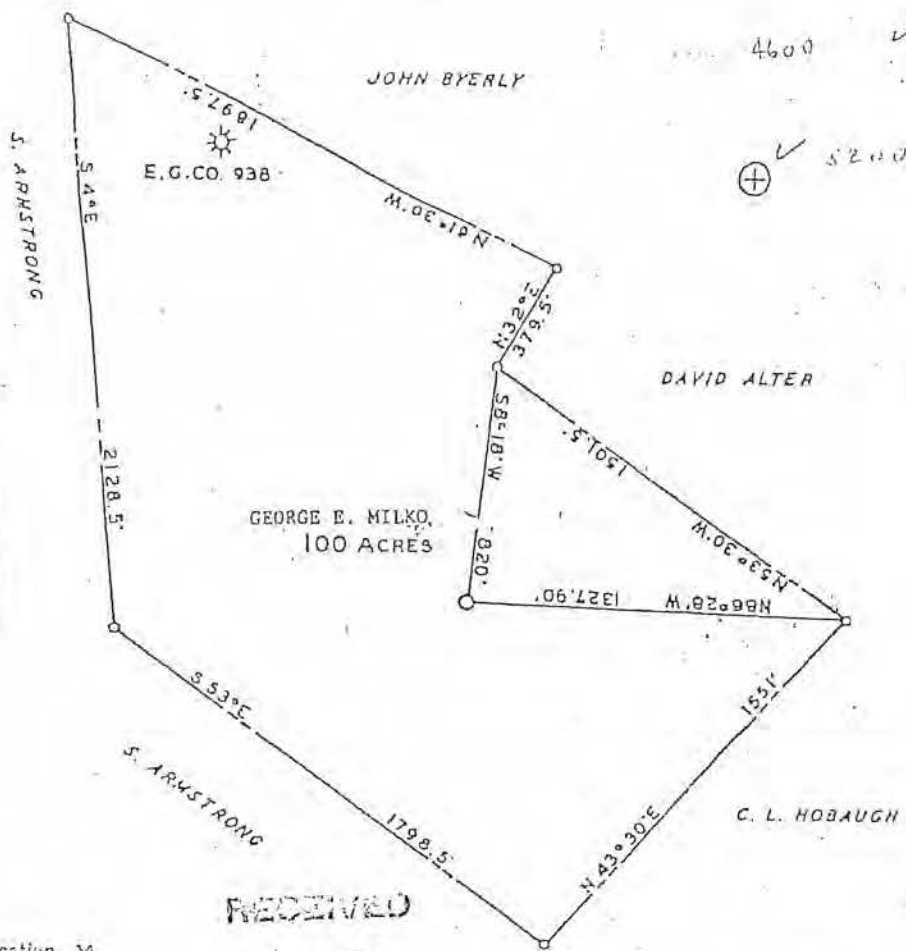
003-00707

PLUM COUNTY

003-20903

LATITUDE 40° 32' 30"

LONGITUDE 79° 42' 30"



RECEIVED

DEC 1 1976
PA. GEOLOGIC SURVEY
Oil & Gas Division

- New Location
- Drill Deeper
- Abandonment
- Re-drill

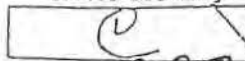
Company FOY OIL AND GAS INC.
 Address 1725 WASHINGTON ROAD
PITTSBURGH PENNA 15241
 Farm GEORGE E. MILKO
 Tract _____ Area 100 Lease No PI2379
 Well Name No. 3 Co. Serial No. _____
 Angle of Deviation, if any NONE
 Elevation 1230 TOPO Quadrangle NFW, KEN, EAST
 County ALLEGHENY Township PLUM BORO
 Engineer William G. Patton
 Engineer's Registration No. 17573-E
 File No. FPT.S.W. 35 Drawing No. _____
 Date 5-29-76 Scale 1" = 500'

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 HARRISBURG 12-14-76
 WELL LOCATION MAP
 DEPT. FILE NO. ALL-20903
 ⊕ Denotes Values of Well on United States Topographic Map
 Scale 1" = 7 1/2 MI
 WORKABLE COAL SEAMS TO BE PENETRATED
 NAME OF SEAM _____ OWN. OF SEAM _____
 Freeport series All-Pittsburgh Coal Co.
West Penn Power Co. Green
 All other seams George E. Milko 13211
12934 McKelvey Rd.
Pittsburgh, PA 15221



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
DIVISION OF OIL AND GAS
PITTSBURGH, PENNSYLVANIA 15222

Office Use Only



003-20903

PERMIT NO. ~~111-20903~~

PROJECT NO. _____

TYPE OF WELL Gas

Plum Township
Renton Field

WELL RECORD
7 1/2' LOCATION
4,650' S 40° 32' 30"
3,200' W 79° 42' 30"
NEW KENSINGTON EAST

WELL OPERATOR Fox O. & G. Inc. Area Code 412- TELEPHONE NO. 343 4322

ADDRESS 900 Washington Road Pittsburgh, Pa. ZIP 15228

FARM NAME George E. Milko FARM NO. 3 SERIAL NO. ACRES 100

TOWNSHIP Plum Borough COUNTY Allegheny

DRILLING COMMENCED 12/28/76 DRILLING COMPLETED 1/7/77

ELEVATION 1230' QUADRANGLE ~~New Kent East~~ **NEW KENT EAST** 7 1/2' 15'

CASING AND TUBING RECORD

Pipe Size	Amount In Well	Cement	Material Behind Pipe (Sks.)	Pipe Gel (Sks.)	Packer Type	Size	Depth	Date Run
13 3/8	18.00	None		None	None	None	None	12/28/76
9 5/8	822.50	250 SKS	Neat W/3% CACL 2	None	None	None	None	12/31/76
7"	2122.00	50 SKS	Neat W/3% CACL 2	None	None	None	None	1/5/77

D.	D.D.	J.H.	Class	O/G	Lease
3792	X	3006	D	X	X

Perforation Record

Stimulation Record

Date	Interval Perforated From	To	Date	Interval Treated	Amount Fluid	Amount Sand	Injection Rate

NATURAL OPEN FLOW 2,000,000 NATURAL ROCK PRESSURE 60PSI 72 hrs. 3 days

AFTER TREATMENT OPEN FLOW None AFTER TREATMENT ROCK PRESSURE None hrs. days

REMARKS: Did not run any 4 1/2" casing. Well was not hydro fractured and no type of well logging was attempted, due to large flow.

RECEIVED

MAY 2 1977

PA. GEOLOGIC SURVEY
Oil & Gas Division

76

FORMATION ON REVERSE SIDE

003-20903

FORMATIONS

NAME	TOP	BOTTOM	GAS AT	OIL AT	WATER AT (Fresh or Salt Water)	SOURCE OF DATA
SUBSTRUCTURE	0	10				DRILLERS LOG
SHALE	10	15				
SAND	15	41				
COAL	41	43				
SHALE & SAND	43	60			1" Water	
RED SHALE	60	270			545'	
SHALE & SAND	270	395				
RED ROCK	395	415				
SAND & SHALE	415	700				
COAL	700	705				
SHALE AND SAND	705	2236				ELECTRIC LOG
RED ROCK	2236	2280				
SAND & SHALE	2280	2310			Gas Show	
SAND & SHALE	2310	2350			@ 3006'	
RED ROCK	2350	2380				
SAND	2380	2410				
RED ROCK	2410	2415				
SAND (HARD)	2415	2510				
SHALE	2510	2700				
SAND	2700	2810				
SAND & SHALE	2810	2900				
SAND sp.	2900	3020	3006'			
SAND & SHALE	3020	3310				
SAND	3310	3380				
SAND & SHALE	3380	3792				
T.P.	3792					



Date 4/20, 1977

APPROVED

By

La Jos
Bus
Title

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
DIVISION OF OIL AND GAS
PITTSBURGH, PENNSYLVANIA 15222

Office Use Only

This permit number to be voided:

* PERMIT NO. ALL-21030-R
Note: To be reissued as ALL-20903
PROJECT NO. 08P-21820

WELL RECORD

OWW

TYPE OF WELL Gas

7
Renton Field

WELL OPERATOR	Fox O & G, Inc.	TELEPHONE NO.	412-941-2450
ADDRESS	924 N. Washington Road, McMurray, PA	ZIP	15317
FARM NAME	George E. Milko	FARM NO.	3
		SERIAL NO.	
		ACRES	100
TOWNSHIP	Plum Borough	COUNTY	Allegheny
DRILLING COMMENCED	August 6, 1980	DRILLING COMPLETED	June 21, 1981
ELEVATION	1230'	QUADRANGLE	New Ken. East
			<input checked="" type="checkbox"/> 7 1/2' <input type="checkbox"/> 15'

CASING AND TUBING RECORD

Pipe Size	Amount In Well	Material Behind Pipe Cement (Sks.)	Material Behind Pipe Gel (Sks.)	Packer Type	Size	Depth	Date Run
13 3/8"	18.00'	--	--	-	-	-	12-28-76
9 5/8"	822.50'	250 Neat w/3% Cal. Chl.	--	Guide Shoe	9 5/8"	824.50'	12-29-76
7"	2122.00'	50 Neat w/3% Cal. Chl.	--	Guide Shoe	7"	2124.00'	1-04-77
4 1/2"	3483.90'	250 Pozmix A w/ 1% Salt	10	Float Shoe	4 1/2"	3485.40'	6-21-81

Perforation Record

Stimulation Record

Date	Interval Perforated From	To	Date	Interval Treated	Amount Fluid	Amount Sand	Injection Rate
6-30-81	3345'	3375'	6-30-81	Speechley	12,000gal	20,000#	16.7

Class	O	G	Lease

NATURAL OPEN FLOW 10,000 cu. ft. NATURAL ROCK PRESSURE - hrs. days
AFTER TREATMENT OPEN FLOW 400,000 cu. ft. AFTER TREATMENT ROCK PRESSURE 800 PSI ,72 hrs. days

REMARKS: Circulated with water before cementing 4 1/2" pipe.
In August 1980, we cleaned out hole, but did not regain the natural gas flow. In June 1981, the rig moved back on the well, cleaned out the hole, ran 4 1/2" pipe, cemented and hydrofracked.

RECEIVED

OCT 5 1981

PA GEOLOGICAL SURVEY (Oil & Gas Geology Division) FORMATION ON REVERSE SIDE

9-10-81 check note re permit number

003-20903

FORMATIONS

NAME	TOP	BOTTOM	FORMATION			SOURCE OF DATA
			GAS AT	OIL AT	WATER AT	
SUBSTRUCTURE	0	10				DRILLERS LOG
SHALE	10	15				
SAND	15	41				
COAL	41	43				
SHALE & SAND	43	60			1" WATER 545'	
RED SHALE	60	270				
SHALE & SAND	270	395				
RED ROCK	395	415				
SAND & SHALE	415	700				
COAL	700	705				
SHALE & SAND	705	2236				ELECTRIC LOG
RED ROCK	2236	2280			GAS SHOW @ 3006'	
SAND & SHALE	2280	2310				
SAND & SHALE	2310	2350				
RED ROCK	2350	2380				
SAND	2380	2410				
RED ROCK	2410	2415				
SAND (HARD)	2415	2510				
SHALE	2510	2700				
SAND	2700	2810				
SAND & SHALE	2810	2900				
SAND	2900	3020				
SAND & SHALE	3020	3310				
SAND	3310	3380				
SAND & SHALE	3380	3792				
T.D.	3792'		This addition made by Frank E. Mackey per telephone conversation with Diana McNea of Fox Oil & Gas on 9-10-81 <i>Frank E. Mackey</i>			

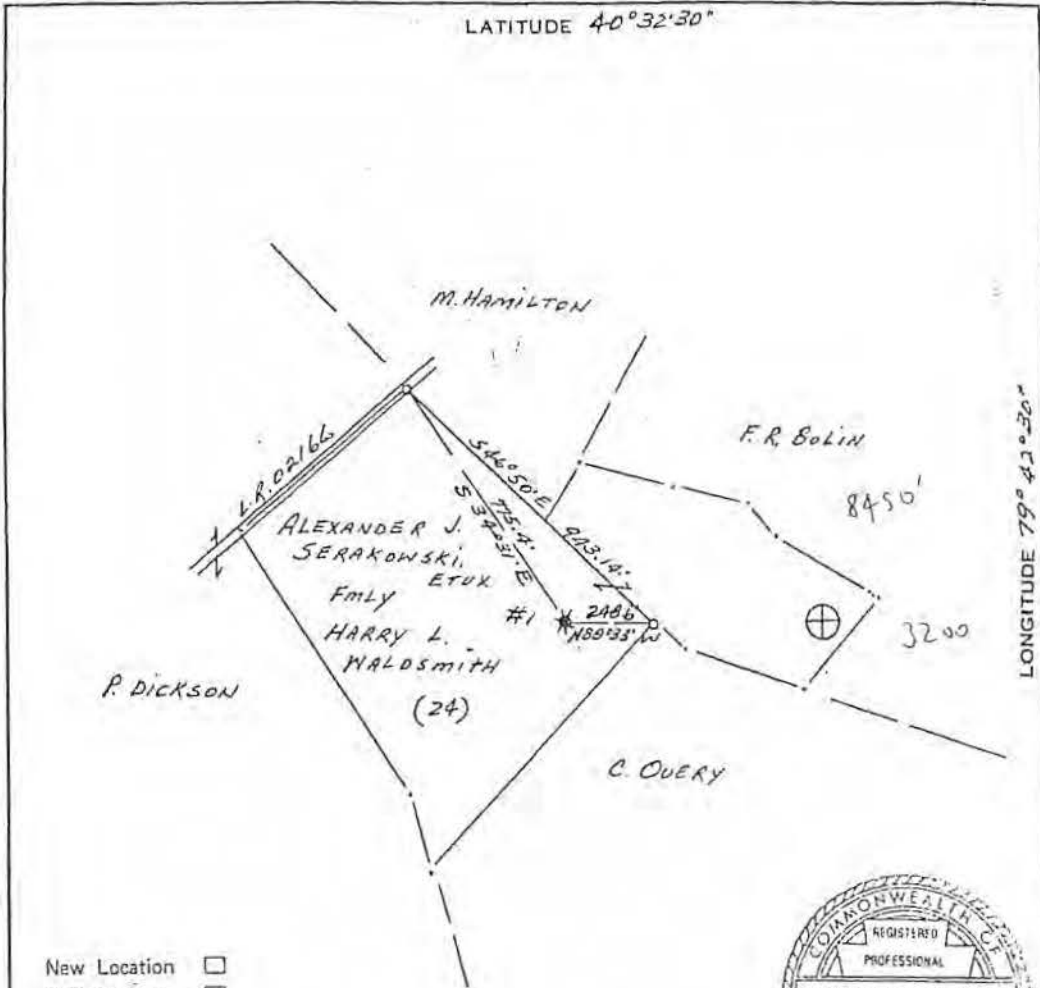
Date August 24, 19 81

APPROVED *F. E. Mackey*

By *President*
Title

DER-163
 AUG 25 1981
 DIVISION OF OIL AND GAS REGULATION
 DER-163

003-21165



- New Location
- Drill Deeper
- Abandonment
- Re-Drill



Company T. W. PHILLIPS GAS AND OIL CO.
 Address 205 N. Main St., Butler, Pa. 16001
 Farm Alexander J. Serakowski, etux Fmly Henry L. Waldsmith
 Tract 1 Acres 24 Lease No. 56
 Well (Farm) No. 1 Co. Serial No. _____
 Angle of Deviation, if any _____
 Elevation 1182' Quadrangle New Kensington East
 Township Plum Borg County Allegheny
 Engineer or Surveyor [Signature]
 Registration No. 5U-C32493-E
 File No. _____ Drawing No. _____
 Date March 20, 1984
 Scale 1"=100'

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL RESOURCES
 DIVISION OF OIL AND GAS REGULATION
 PITTSBURGH, PENNSYLVANIA 15222
WELL LOCATION MAP
 Dept. File No. ALL-21165-R
 ☒ Denotes Values of Well on United States Topographic Maps.

Scale 15' 7 1/2'
 WORKABLE COAL SEAMS, IF ANY

NAME OF SEAM	OWNER OF SEAM
All Seams	Consolidation Coal Co. 450 Race Track Road Washington, Pa. 15301

RECEIVED

APR 13 1984

PA GEOLOGICAL SURVEY
 (Oil & Gas Geology Division)

APR 13 1984
 500-1-11

12913

NEW KENSINGTON EAST

003-21165

DER Office Use Only

RE

8,550' S 40°32'30"
3,200' W 79°42'30"
(G) (X)

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF OIL AND GAS REGULATION

Code	CP
Oil & Gas Inspector	
Date Approved	

1986 MAR 21 AM 11:14

CERTIFICATE OF PLUGGING WELL

Consolidation Coal Co.
 Coal Operator Owner Lessee
 450 Race Track Road, Washington, PA
 Address 15301
 Coal Operator Owner Lessee
 Address
 Coal Operator Owner Lessee
 Address

Type of Well Gas
 Name of Well Operator T. W. Phillips Gas and Oil Co.
 205 N. Main St., Butler, PA 16001
 Address
 Date march 10 19 86

Plum Boro
 Political Subdivision, Borough, City or Township
 Allegheny County
 Alexander J. Serakowski, et ux.
 Farm fmly. Henry L. Waldsmith
 Well (Farm) No. 1 Serial No. _____

COMPLETE ABOVE SECTION IF APPLICABLE
FM TD - BRALLIER,
PROD FM - VENANGO + BRADFORD
FIELD - RENTON
ELEV - 1182'

We, the undersigned representatives of the Well Operator certify that we participated in the plugging of the above well, and that the work was started September 24 19 85, and that the well was plugged as follows:

FILLING MATERIAL AND PLUGS	FROM	TO	Casing and Tubing		
			SIZE	PULLED	LEFT
Cavings and Sand Pumpings	4020'	3288'	6 1/2"	1045'	in 1920
Cement	3288'	3120'	4-3/4"	2066'	94'
Aquagel	3120'	2450'	3"	3288'	732'
Cement	2450'	2160'			
Aquagel	2160'	2066'			
Cement	2066'	1800'			
Aquagel	1800'	1050'	Depth of Coal Seam, If Any		
Cement	1050'	773'	612' to 619' = 7'		
Ran 773' of 4-3/4" vent pipe & cement outside	773'	0'	670' to 673' = 3'		
			Description of Monument		
			773' of 4-3/4" vent pipe from 773' to surface A 4-3/4" x 2" sweded & 7' of 2" stand pipe with 2" tee & 2-2" st ells on top as weather cap.		

I certify that the work of plugging and filling said well was completed on the 22 day of January 19 86 and that the above information is true and accurate.

(Well Operator) Paul W. Harter Vice President (Qualified Participant)
 PERMIT/REGISTRATION NO. ALL-21165-P Don S. Linn Superintendent (Qualified Participant)
 PROJECT NO. _____ Harter J. Bolt Gas Well Maintenance Technician (Qualified Participant)

One copy of this certificate to be mailed to each coal operator, lessee, or owner, if any, and one to the Bureau of Oil and Gas Management, upon completion of plugging.

CHE
4-28-86
Led

RECEIVED
JUL 12 1986

PA GEOLOGICAL SURVEY
(Oil & Gas Geology Division)

DRILLERS' RECORD NEW KENSINGTON EAST

803-21165-P

803-21165-P

Well No. 1 on Henry L. Hamilton Farm of 25 acres in Plum Twp. Allegheny County, Pa.
 bounded North by L. Hamilton East by John B. Adams
 South by L. Hamilton West by S. Taylor & H. Hamilton
 The well is located about 170 feet from the corner line and about 200 feet from the line of the farm
 owned by Phillips Gas & Oil Company and completed in the month of Oct. 1920
 at 1048 feet of 1 1/4 inch casing set in. Sand packer
 used with 2 1/2 inch casing set in. Sand packer
 coal veins 162-169-7 ft
 " 170-172-9 ft
 limestone 180-182-10 ft & 160-167-7 ft

Kind of formation Sand or Slate, etc.	Top	Bottom	Thick-ness	Dist. from top of H. F.	If Sand, give name	Description	If it contains gas, oil or water, state quantity and where in the sand found
Sand	370	410	40		1st Bluff	Hard	
"	535	610	55		2nd	"	
"	865	1040	75		40 ft	"	
"	1100	1300	200		70 ft	" Yellow	
"	1315	1320	5			" Black	
"	1525	1625	300				
Sand	1730	1800	100		Gas Sand	Shells White	Water - 1886
"	1825	1910	85			Hard-Limy	
"	1912	1960	48		100 ft	Hard-White	Little gas - 1962
"	1960	2067	107			" Black	Oil & Water 2030
"	2067	2162	95	107		" White	
"	2230	2244	14	270	Third	"	
"	2272	2278	6	312		"	
"	2308	2350	45	345	Fourth	"	
"	2379	2445	66	419	Fifth	"	
"	3160	3190	30	1200	Speckly	Brown	
"	3233	3275	42	1273	Speckly	Hard-White	Gas 3235 burns 5 ft Gas 3258 Burns
"	3545	3553	8	1585		Brown	
"	3865	3891	26	1905	Bradford	"	Gas 3865 Burns 25 ft Below sediment up 200 ft
	T.D.	4020					

T.D.	D.D.	D.P.I.	Class	O	G	Lease

All - 21165-P

REG. NO. 11172
 DRILLERS

Remarks:

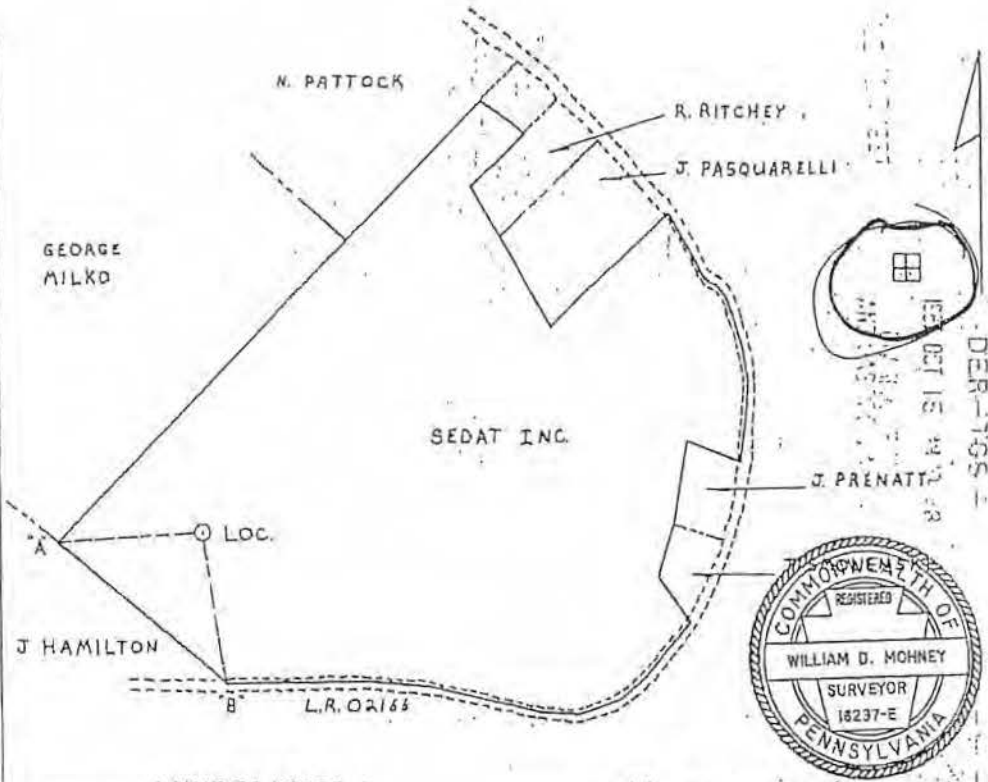
The above record was NOT copied by me until it had been O. K'd or approved on the 18 day of Oct. 1920.

by Supl. R.A.B. *[Signature]*

003-21210

Well is located on topo map 5950 feet south of LATITUDE 40 ° 32 ' 30 "

Well is located on topo map 2,380 feet west of LONGITUDE 79 ° 42 ' 30 "



— LIMIT OF LEASE

— PROPERTY LINE

SCALE: 1" = 500'

LOC TO A S 86° 52' 41" W 524.02'

LOC TO B S 9° 14' 09" E 531.90'

"A" TREE ON CORNER

"B" CENTER LINE OF ROAD CORNER

Include description of the property and courses and distances of the well(s) location to two or more permanent identifiable points or land marks, all buildings and water supplies within 200', all springs, bodies of water and streams within 100' identified on the most current 7 1/2" topographic map and wetlands within 100'. Reference to buildings, springs, bodies of water and wetlands is not required for well plugging.

□ Denotes location of well on 7 1/2" topo map. Permit # 37-003-21210-00 Project #

Well Operator Pennaco Oil Company Inc.	Revision Re-Issue <input type="checkbox"/> Alteration <input type="checkbox"/> Storage Recondition <input type="checkbox"/> New Location <input type="checkbox"/> Drill Deeper <input type="checkbox"/> Abandonment <input type="checkbox"/> Registration <input type="checkbox"/> Plugging <input type="checkbox"/>	Surveyor/Engineer W.D. Mohney
Address U.S. Route #22		Drawing Number S-1
Delmont, PA 15629		Date 11/1/86
Surface Owner Sedat Inc.	Surface landowner and water purveyor with water supply within 1,000'	Date
Surface Lessor (if any) N/A	Frank Choltko	Approximate course and distance to water supply
Farm Name Sedat	Ferdinand Palombo	S 45° E 850'
Well No. #1	Serial No. PS-7	S 55° W
Acres 69.5	Ground Elevation 1260'	RECEIVED
Topo Quadrangle New Kensington East	Section 7	DEC 31 1987
County Allegheny	Political Subdivision Plum	Owner/Operator Villa Coal Company
Angle of Deviation None	Anticipated TD 3,500'	Workable Coal Seams Name of Seams Upper Freeport
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		All others

RENTON MIDE

10-21-87

5950' S 40° 32' 30"
 2380' W 79° 42' 30"
 (G)

NEW KENSINGTON EAST

ER-00-4; Rev. 8/84

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL RESOURCES
 BUREAU OF OIL AND GAS REGULATION
 PITTSBURGH, PENNSYLVANIA 15208-2988

RE D# 38212
 38213
 38214

~~38212~~

Office Use Only
 003-21210

WELL RECORD

PERMIT NO. 37-003-21210-00

PROJECT NO.

FIADRENTON-DEV

TYPE OF WELL

Gas and Oil

WELL OPERATOR
 Penneco Energy Corporation

TELEPHONE NO.
 412-468-8232

ADDRESS
 U. S. Route #22, Delmont, PA

ZIP
 15626

FARM NAME

Sedar #1A

FARM NO.

1

SERIAL NO.

PS-7

ACRES

20.620

TOWNSHIP

Plum Borough

COUNTY

Allegheny

DRILLING COMMENCED

3-5-88

DRILLING COMPLETED

3-13-88

ELEVATION

1,260'

QUADRANGLE

New Kensington East

7 1/2' x 15'

CASING AND TUBING RECORD

PIPE SIZE	AMOUNT IN WELL	MATERIAL BEHIND PIPE		PACKER			DATE RUN
		CEMENT (SKS.)	GEL (SKS.)	TYPE	SIZE	DEPTH	
16"	39	Cuttings	None	N/A	N/A	39	3-5-88
9-5/8"	742	300	30	Float shoe	8-5/8"	752	3-10-88
7"	2,256	551	7	Float shoe	7"	2,266	3-11-88
4-1/2"	3,486	175	4	Float shoe	4-1/2"	3,496	3-13-88
1-1/2"	3,311	N/A	N/A	N/A	N/A	3,311	3-23-88

PERFORATION RECORD

STIMULATION RECORD

DATE	INTERVAL PERFORATED FROM	TO	DATE	INTERVAL TREATED	AMOUNT FLUID	AMOUNT SAND	INJECTION RATE
3-22-88	3312	3352	3-22-88	3312-3352	32,000	47,000#	33.3BPM
3-22-88	3237	3243	3-22-88	3237-3243	10,000	13,000#	30.0BPM
3-22-88	2406	2408	3-22-88	2406-2488	11,000	8,500#	16.8BPM
	2420	2421					
	2468	2488					

T.D.	D.D.	D.P.I.	Class	O	G	Lease
3522		3352	0		2	1

NATURAL OPEN FLOW

Not Taken

NATURAL ROCK PRESSURE

Not Taken

HRS. DAYS

AFTER TREATMENT OPEN FLOW

312 MCF

AFTER TREATMENT ROCK PRESSURE

720#

72 HRS. DAYS

REMARKS:

Good cement returned to surface after setting 9-5/8" casing and 7" casing. No water encountered in Renton Mine.

PROD FM → VENANGO
 + BRADFORD
 FM TD - BRALLIER

1988 JUL 29 AM 10:34
 PITTSBURGH REGION
 DER-BOGM

1988 OCT 24 AM 10:56
 PITTSBURGH REGION
 DER-BOGM

RECEIVED (FORMAT AND DATE)

NOV 22 1988

PA GEOLOGICAL SURVEY
 (Oil & Gas Geology Division)

MAP
 10-20-88

003-21210

CO-1

FORMATIONS						
NAME	TOP	BOTTOM	GAS AT	OIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA
Sub	0	10				Driller's Log
Fill	10	70				
Sand	70	100				
Red Rock	100	125				
Sand	125	135				
Red rock	135	150				
Sand	150	160			155 1/2 stream	
Red rock	160	175				
Sand and Shale	175	245				
Red Rock	245	255				
Sand	255	285				
Coal	285	287				
Sandy shale	287	340				
Red rock	340	355				
Sandy Shale	355	375				
Red Rock	375	385				
Sandy Shale	385	395				
Red rock	395	410				
Shale	410	420				
Coal	420	424				
Sandy Shale	424	485				
Shale	485	502				
Sand and Shale	502	697				
Coal	697	700				
Sand	700	755				
Sand and Shale	755	815				
Shale	815	850			1" - 2,000 ft.	
Sand and Shale	850	910				
Sand	910	940				
Shale	940	985				
Sand	985	1015				
Shale	1015	1040				
Sand	1040	1100				
Sandy Shale	1100	1135				
Sand	1135	1175				
Red Rock	1175	1180				
Sandy Shale	1180	1200				
Sand	1200	1290				
Sand and Shale	1290	1310				
Shale	1310	1325				
Sand and Shale	1325	1430				
Sand	1430	1660				
Red Rock	1660	1663				
Sand	1663	1710				
Shale	1710	1815				
Sand	1815	1895				
Shale	1895	1975				
Sand	1975	2160				
Sand and Shale	2160	2205				
Red rock	2205	2210				
Sand and Shale	2210	2230				
Red Rock	2230	2235				
Sandy Shale	2235	2280				
Red Rock	2280	2380				
Sand	2380	2500			Geophysical Log Data	
Sand and Shale	2500	2565				
Shale	2565	2645			Fourth 2400-2434	
Sand and Shale	2645	2740			Fifth 2440-2504	
Sand	2740	2985			Speechley Stray 3234-3244	
Shale	2985	3095			Speechley 3312-3352	
Sand and shale	3095	3145				
Shale	3145	3230				
Sandy Shale	3230	3285				
Shale	3285	3340				
Sandy Shale	3340	3385				
Shale	3385	3420				
Sandy Shale	3420	3475				
Shale	3475	3522				

T. D.

CRALLIER

DATE July 28 1988
 APPROVED BY [Signature]
 TITLE Vice-President

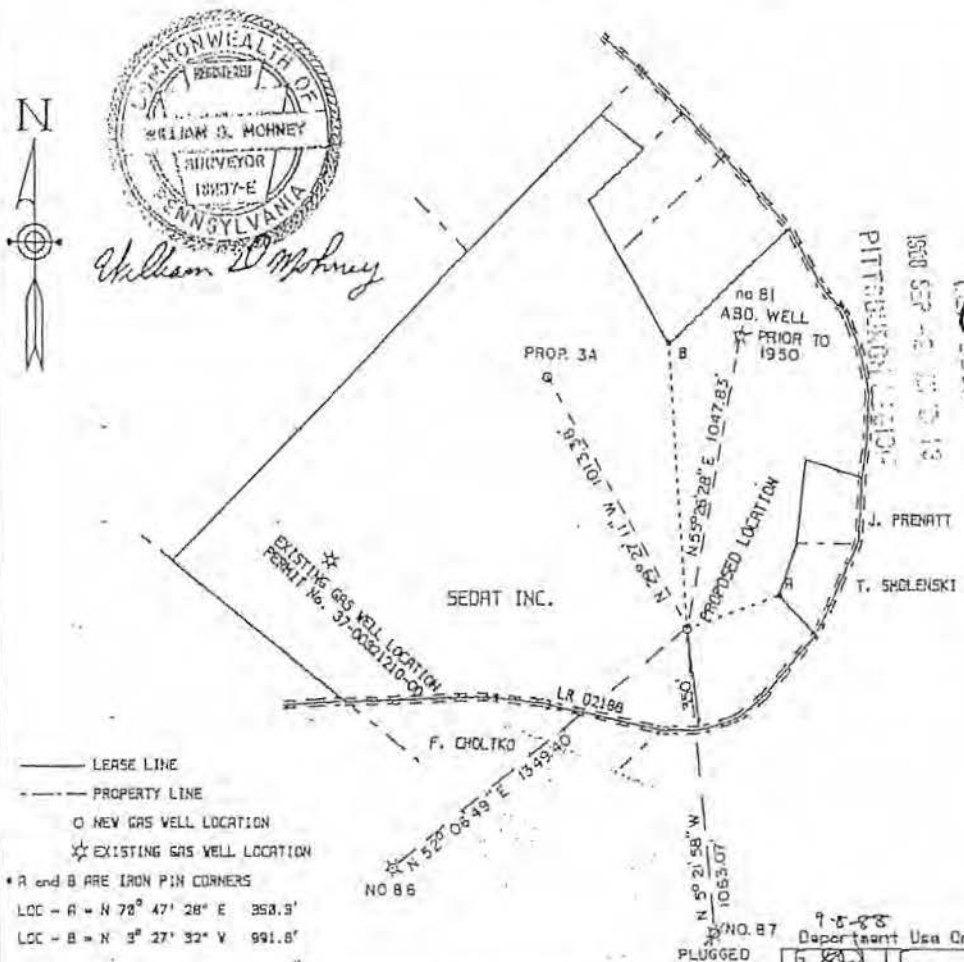
WELL LOCATION PLAT

003-21222

Well is located on topo map 6190 Feet south of LATITUDE 40 ° 32 ' 30 "

NOTE: The locations of the abandoned gas wells No. 80, 81, 86 and 87 have been located on the maps from the old Renton ALNA maps due to the absence of any evidence in the field.

Well is located on topo map 1298 feet west of LONGITUDE 79 ° 42 ' 30 "



Include description of the property and courses and distances of the well(s) locations to two or more permanent identifiable points or land marks, all buildings and water supplies within 200', all springs, bodies of water and streams within 100' identified on the most current 7 1/2 topographic map and wetlands within 100'. Reference to buildings, springs, bodies of water wetlands and water supplies within 1,000 is not required for well plugging

Denotes location of well on 7 1/2" topo map Permit No. 57-003-21222-00 Project No. _____

PENNECO OIL COMPANY INC. Well Permittee/Registrant 208 U.S. ROUTE 22 Address DELMONT PA 15826		Revision <input type="checkbox"/> Alteration <input type="checkbox"/> Storage Recondition <input type="checkbox"/> New Location <input type="checkbox"/> Drill Deeper <input type="checkbox"/> Abandonment <input type="checkbox"/> Registration <input type="checkbox"/> Plugging <input type="checkbox"/>	W. D. MOHNEY Surveyor/Engineer 16237-E 5-2A Drawing Number 7-12-88, 8-29-88 Date 1" = 500' Scale
SEDAT INC. Surface Owner N/A Surface Lessor (if any) SEDAT Form Name 2A		Surface landowner and water purveyor with water supply within 1,000' J. PREWITT T. SHOLENSKI F. CHOLTKO	Approximate course and distance to water supply N 88° E 625' N 81° E 955' S 49° V 550'
Well No. <u>69.5</u> Acres <u>NONE</u> Angle of Deviation (Drilling) ALLEGHENY County EV KENSINGTON EAST 300 Quadrangle	Tract <u>PS - 8</u> Serial No. <u>1162</u> Ground Elevation <u>3420'</u> Anticipated TD - PLUM BORO Municipality G Section	VILLAGE COAL COMPANY SEDAT INC. CONSOLIDATION COAL CO.	Verifiable Coal Seam None of Seam UPPER FREEPORT ALL OTHERS UPPER FREEPORT

RECEIVED

SEP 26 1988

GEOLOGICAL SURVEY

6190' S 40° 32' W
1240' W 14' 42' 30"
(G)

RE

39254
39255

NEW KENSINGTON EAST

ER-06-4: Rev. 5/84

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF OIL AND GAS REGULATION
PITTSBURGH, PENNSYLVANIA 15208-2988

21222

Office Use Only
003-21222

WELL RECORD

PERMIT NO. 37-003-21222-00 PROJECT NO. [] TYPE OF WELL Gas and Oil

RENTON FIELD DEV

WELL OPERATOR *Oil Co. Inc. Construction under contract by Pennco Energy Corporation* PENNECO ENERGY CORPORATION TELEPHONE NO. 412-468-8232

ADDRESS 200 Route 22, Delmont, PA ZIP 15626

FARM NAME Sedat #2A FARM NO. SERIAL NO. PS-8 ACRES 70

TOWNSHIP Plum Borough COUNTY Allegheny

DRILLING COMMENCED 1-12-89 DRILLING COMPLETED 1-19-89

ELEVATION 1162' QUADRANGLE New Kensington East 7 1/2' 15'

CASING AND TUBING RECORD

PIPE SIZE	AMOUNT IN WELL	MATERIAL BEHIND PIPE		PACKER			DATE RUN
		CEMENT (SKS.)	GEL (SKS.)	TYPE	SIZE	DEPTH	
13-3/8"	16	Cuttings	None	N/A	N/A	16	1-12-89
9-5/8"	653	225	5	Float Shoe	9-5/8"	663	1-13-89
7"	1,985	280	11	Float Shoe	7"	1,995	1-17-89

T.D.	D.D.	D.P.I.	Class	O.G.	Loss
4323		2375	D	1/1	

PERFORATION RECORD

STIMULATION RECORD

DATE	INTERVAL PERFORATED FROM	TO	DATE	INTERVAL TREATED	AMOUNT FLUID	AMOUNT SAND	INJECTION RATE
NATURAL OPEN FLOW		294 MCF	NATURAL ROCK PRESSURE		50#	72 HRS. DAYS	
AFTER TREATMENT OPEN FLOW		N/A	AFTER TREATMENT ROCK PRESSURE		N/A	HRS. DAYS	

REMARKS:

Good cement returned to surface after setting 9-5/8" casing and 7" casing. No water encountered in Renton Mine. Well is to be produced naturally.

RECEIVED

PRODFM - Bradford

PMTP - BRALLIER

JUN 2 1989

PA GEOLOGICAL SURVEY
(Oil & Gas Geology Division)


(FORMATION ON REVERSE SIDE)

4-25-89

003-21227

PS 2

FORMATIONS							
NAME	TCP	BOTTOM	GAS AT	OIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA	
Clay and Shale	0	10				Driller's Log	
Shale and Sand	10	16					
Sand and Shale	16	105			Damp @ 60'		
Sand and Shale	105	460					
Sand and Shale	460	495					
Sandy Shale	495	611					
Shale	611	621					
Shale	621	669					
Sand and Shale	669	865			1/2" @ 700'		
Shale	865	940					
Sand and Shale	940	1040					
Sand	1040	1219					
Sand and Shale	1219	1490					
Sand and Shale	1490	1950					
Sand	1950	2029					
Sand and Shale	2029	2210					
Red Rock	2210	2330					
Sand	2330	2445	2375'				
Sand and Shale	2445	2485					
Shale	2485	2600					
Sand and Shale	2600	3140					
Shale and Sand	3140	3800					
Shale	3800	4323					
t.D.	4323						
<div style="border: 1px dashed black; padding: 5px; display: inline-block;"> <p>12/16/89 12:00 PM</p> <p>GEOPHYSICAL LOG DATA</p> </div>							
Fourth					2334-2351		
Fifth					2391-2426		
Speechley Stray					3170-3188		
Speechley					3250-3286		
2nd Balltown					3561-3570		
2nd Bradford					3874-3884		

March 22, 1989
 DATE

 APPROVED BY
 Vice-President
 TITLE

WELL LOCATION PLAT

003-21223

Well is located on topo map 5218 feet south of LATITUDE 40 0 32 30 "

NOTE: The locations of the abandoned gas wells No. 80, 81, 86 and 87 have been located on the maps from the old Renton Mine maps due to the absence of any evidence in the field.

Well is located on topo map 1588 feet west of LONGITUDE 79 0 42 30 "



• A and B ARE PROPERTY CORNERS
 LOC - A = S 47° 22' 09" E 1128.9'
 LOC - B = N 75° 45' 07" E 452.4'

Include description of the property and courses and distances of the well(s) locations to two or more permanent identifiable points or land marks, all buildings and water supplies within 200', all springs, bodies of water and streams within 100' identified on the most current 7 1/2 topographic map and wetlands within 100'. Reference to buildings, springs, bodies of water wetlands and water supplies within 1,000 is not required for well plugging

Department Use Only
 6-92 L

Denotes location of well on 7 1/2" topo map Permit No. 32-003-21223-00 Project No.

PENNCO OIL COMPANY, INC.		Revision	<input type="checkbox"/>	W. D. MOHNEY
Well Permittee/Registrant 220 U.S. ROUTE 22		Alteration	<input type="checkbox"/>	Surveyor/Engineer 16297-E
Address DELMONT, PA 15626		Storage Recondition	<input type="checkbox"/>	5 - 3A
SEDAT INC.		New Location	<input checked="" type="checkbox"/>	Drawing Number 7-12-88, 8-19-88
Surface Owner N/A		Drill Deeper	<input type="checkbox"/>	Date 1" = 500'
Surface Lessee (if any) SEDAT		Abandonment	<input type="checkbox"/>	Scale
Form Name 3A		Registration	<input type="checkbox"/>	Approximate course and distance to water supply within 1,000'
Well No. Tract Serial No. 69.5 1126		Plugging	<input type="checkbox"/>	
Perce NONE		NONE		RECEIVED
Angle of Deviation (Drilling) ALLEGHENY		Anticipated TD PLUM BORO		SEP 26 1988
County NEW KENSINGTON EAST		Municipality G 7		PA GEOLOGICAL SURVEY
Topo Quadrangle		Section		(Oil & Gas Geology Division) Variable Coal Seam Name of Seam
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		Owner/Operator/Lessee	VILLA COAL COMPANY	UPPER FREEPORT
			SEDAT INC.	ALL OTHERS
			CONSOLIDATION COAL CO.	UPPER FREEPORT?

5310' S 40° 33' 30"
 1762' W 71° 42' 30"
 (6)
 BH# 39241
 39242
 RE

003-21223

NEW KENSINGTON EAST
 21223
 Office Use Only
 003-21223

ER-00-4: Rev. 6/84

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL RESOURCES
 BUREAU OF OIL AND GAS REGULATION
 PITTSBURGH, PENNSYLVANIA 15206-2988

WELL RECORD

PERMIT NO. 37-003-21223-00
RENTON FIELD
 PROJECT NO. []
 TYPE OF WELL DEV Gas and ~~Oil~~
 WELL OPERATOR Oil Co. Inc. CONNECTION MADE BY PHONE
Penneco Energy Corporation AS SET FORTH IN PERMIT
4-25-89
 TELEPHONE NO. 412-468-8232
 ADDRESS 200 Route 22, Delmont, PA ZIP 15626
 FARM NAME Sedat #3A FARM NO. SERIAL NO. PS-46 ACRES 70
 TOWNSHIP Plum Borough COUNTY Allegheny
 DRILLING COMMENCED 1-25-89 DRILLING COMPLETED 2-1-89
 ELEVATION 1,106' QUADRANGLE NEW KENSINGTON EAST 7' 16'

CASING AND TUBING RECORD

PIPE SIZE	AMOUNT IN WELL	MATERIAL BEHIND PIPE		PACKER			DATE RUN
		CEMENT (SKS.)	GEL (SKS.)	TYPE	SIZE	DEPTH	
13-3/8"	16-1/2	Cuttings	None	N/A	N/A	16-1/2	1-25-89
9-5/8"	643	150	3	Float Shoe	9-5/8"	653	1-26-89
7"	1,948	265	8	Float Shoe	7"	1,958	1-28-89
4-1/2"	3,999	110	4	Float Shoe	4-1/2"	4,009	2-1-89
1-1/2"	3,270	N/A	N/A	N/A	N/A	3,270	2-10-89

PERFORATION RECORD

STIMULATION RECORD

DATE	INTERVAL PERFORATED FROM	TO	DATE	INTERVAL TREATED	AMOUNT FLUID	AMOUNT SAND	INJECTION RATE
2-8-89	3890	3893	2-8-89	3557-3893	14,500	14,000#	17.0BPM
2-8-89	3874	3878	2-8-89	3342-3276	31,000	33,600#	30.0BPM
2-8-89	3557	3561	2-8-89	3102-3169	10,500	9,200#	28.0BPM
	3242	3276					
	3102	3104					
	3166	3169					

T.D.	D.D.	D.P.I.	Class	O	G	Lease
4320		3893	2	1	1	

NATURAL OPEN FLOW	NATURAL ROCK PRESSURE	HRS. DAYS
29 MCF	Not Taken	
AFTER TREATMENT OPEN FLOW	AFTER TREATMENT ROCK PRESSURE	HRS. DAYS
287 MCF	720#	72

REMARKS:
 Good cement returned to surface after setting 9-5/8" casing and 7" casing. No water encountered in Renton Mine.
 PROP. FM - Bradford
 FMTD - BRALLIER

RECEIVED
 JUN 2 1989
 DEPARTMENT OF GEOLOGICAL SURVEY
 (Oil & Gas Geology Division)

4-25-89

003-21223

192

FORMATIONS						
NAME	TOP	BOTTOM	GAS AT	OIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA
Fill	0	6				Driller's Log
Shale	6	14				
Sand	14	16				
Sand and Shale	16	48			Hole damp @ 48'	
Sand and Shale	48	475			1" @ 220 ft.	
Shale	475	669				
Sand and Shale	669	760				
Shale	760	890				
Sand	890	960				
Shale	960	1105				
Sandy Shale	1105	1190				
Sand and Shale	1190	1550				
Sand and Shale	1550	1900			1" @ 1860 Ft.	
Sand	1900	1934				
Red Rock	1934	1938				
Sand	1938	2000				
Sand	2000	2032				
Sand and Shale	2032	2571	2360-2390			
Sand and Shale	2571	3030				
Shale and Sand	3030	3630	3240-50			
Shale	3630	4320	3560-70'			
T.D.	4320		3880-3900			
<i>BRADLEY</i>						
GEOPHYSICAL LOG DATA						
	Speechley Stray			3099-3172		
	Speechley			3240-3280		
	2nd Balltown			3556-3562		
	2nd Bradford			3868-3892		
[REVERSE SIDE OF LOG]						

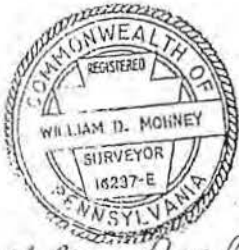
DATE March 17, 1989
 APPROVED BY [Signature]
 TITLE Vice-President

003-21225

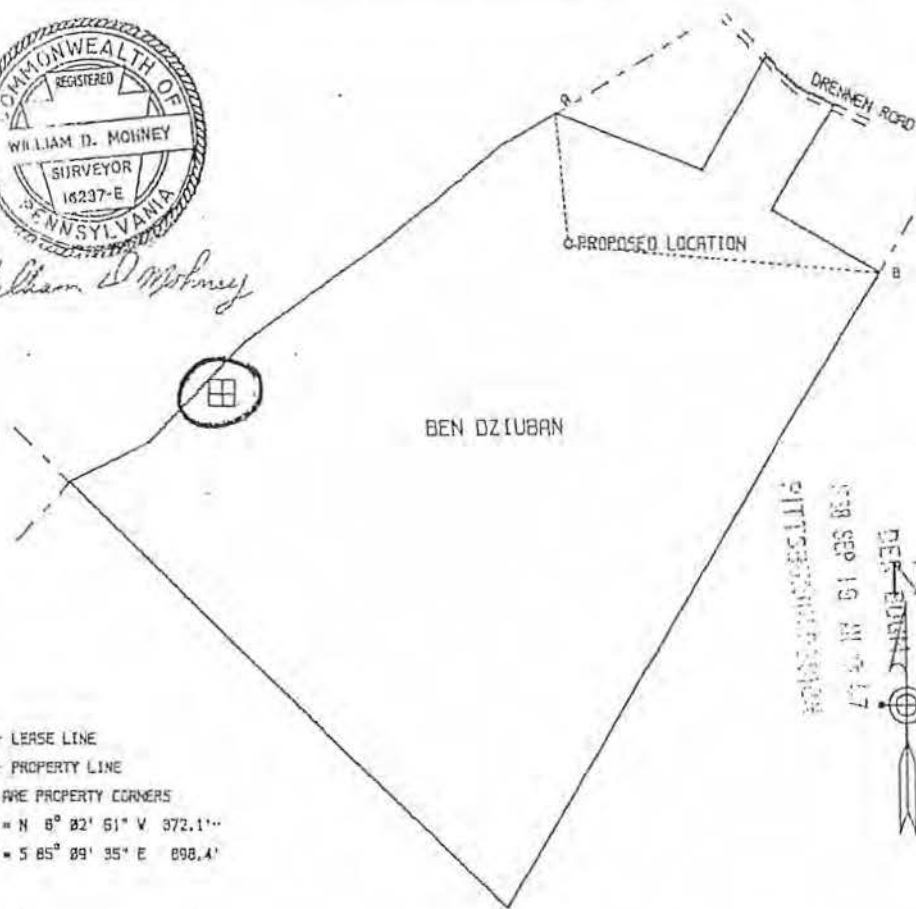
WELL LOCATION PLAT

Well is located on topo map 6700 feet south of LATITUDE 40 0 32' 38"

Well is located on topo map 11,150 feet west of LONGITUDE 79 0 40' 00"



William D. Mohney



— LEASE LINE
 - - - PROPERTY LINE
 A and B ARE PROPERTY CORNERS
 LOC - A = N 89° 02' 51" W 372.1'
 LOC - B = S 85° 09' 35" E 898.4'

9-21-88
 Department Use Only
 6 49 IC

Include description of the property and courses and distances of the well(s) locations to two or more permanent identifiable points or land marks, all buildings and water supplies within 200', all springs, bodies of water and streams within 100' identified on the most current 7 1/2 topographic map and wetlands within 100'. Reference to buildings, springs, bodies of water, wetlands and water supplies within 1,000 is not required for well plugging.

□ Denotes location of well on 7 1/2" topo map Permit No. 37-003-21225-09 Project No.

PENNECO OIL COMPANY, INC. Well Permittee/Registrant 200 U.S. ROUTE 22 Address DELMONT, PA 15626		Revision <input type="checkbox"/> Alteration <input type="checkbox"/> Storage Recondition <input type="checkbox"/> New Location <input type="checkbox"/> Drill Deeper <input type="checkbox"/> Abandonment <input type="checkbox"/> Registration <input type="checkbox"/> Plugging <input type="checkbox"/>	WILLIAM D. MOHNEY Surveyor/Engineer 16237-E DZ-1 Drawing Number B-12-88 Date 1" = 40' Scale RECEIVED OCT 19 1988 PA GEOLOGICAL SURVEY
BEN DZIUBAN Surface Owner NONE Surface Lessor (if any) DZIUBAN Form Name 1 PD 73 Well No. Tract Serial No. B2.S 1038 Acres NONE 3600' Angle of Deviation (Drilling) ALLEGHENY Anticipated To County Municipality W KENSINGTON EAST 1408 B Top Quadrangle Section		Surface landowner and water purveyor with water supply within 1,000' BEN DZIUBAN N 64° E 609' SAM DZIUBAN N 72° E 988' RICHARD OSKIN SR N 57° E 988' STEVE BOBIK N 51° E 843' RANDY BOBIK N 37° E 813' JOHN DZIUBAN N 12° E 618'	Approximate distance to water supply Gas-Gookany Drilling Workable Coal Seams Name of Seams VILLA COAL COMPANY UPPER FREEPORT BEN DZIUBAN ALL OTHERS WATER PLAYEYOR : COURSE & DIST. Willie Crooks N 2° V 888' Consolidation Coal Co. Upper Freeport (?) RENTON MILUE

Commonwealth of Pennsylvania
 Department of Environmental Resources
 Bureau of Oil and Gas Management

6700' S 40° 33' 30"
 11150' W 74° 40' 00"
 (6) (X)

L 2
 NEW KENSINGTON EAST

ER-OG-4; Rev. 6/84

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL RESOURCES
 BUREAU OF OIL AND GAS REGULATION
 PITTSBURGH, PENNSYLVANIA 15206-2988

003-21225

WELL RECORD

Office Use Only
 003-21225

PERMIT NO. 37-003-21225-00 PROJECT NO. [] TYPE OF WELL Gas

RENTON FIELD **DEV**

WELL OPERATOR OIL CO. INC. Pennaco Energy Corporation TELEPHONE NO. 412-468-8232

ADDRESS 200 Route 22, Delmont, PA ZIP 15626

FARM NAME Ben Dziuban #1 FARM NO. SERIAL NO. PD-73 ACRES 60

TOWNSHIP Plum Borough COUNTY Allegheny

DRILLING COMMENCED 11-30-88 DRILLING COMPLETED 12-6-88

ELEVATION 1038' QUADRANGLE New Kensington East 7 1/2' 16'

CASING AND TUBING RECORD

PIPE SIZE	AMOUNT IN WELL	MATERIAL BEHIND PIPE		PACKER			DATE RUN
		CEMENT (SKS.)	GEL (SKS.)	TYPE	SIZE	DEPTH	
13-3/8"	30	Cuttings	None	N/A	N/A	30	11-30-88
7"	1,910	380	20	Float Shoe	7"	1,920	12-3-88
4-1/2"	3,798	175	12	Float Shoe	4-1/2"	3,808	12-7-88
1-1/2"	3,408	N/A	N/A	N/A	N/A	3,408	12-8-88

PERFORATION RECORD

STIMULATION RECORD

DATE	INTERVAL PERFORATED FROM	INTERVAL PERFORATED TO	DATE	INTERVAL TREATED	AMOUNT FLUID	AMOUNT SAND	INJECTION RATE
12-11-88	3405	3410	12-11-88	3405-3410	8,500	7,200#	25BPM
12-11-88	3094	3124	12-11-88	3094-3124	31,000	33,600#	33BPM
12-11-88	3019	3023	12-11-88	3019-3023	9,000	7,200#	25BPM

T.D.	D.D.	D.P.I.	Class	O G	Lease
4181		3410	D		

NATURAL OPEN FLOW 38 MCF	NATURAL ROCK PRESSURE Not Taken	HRS. DAYS
AFTER TREATMENT OPEN FLOW 280 MCF	AFTER TREATMENT ROCK PRESSURE 910	72 HRS. DAYS

REMARKS:

Good cement returned to surface after setting 7" casing.

PROD FM - Bradford

FM TO - BRALLIER

RECEIVED
 (FORMATION ON REVERSE SIDE)

JUN 2 1989

PA GEOLOGICAL SURVEY
 (Oil & Gas Geology Division)

4-21-89
 4-27-89

003-21225-
192

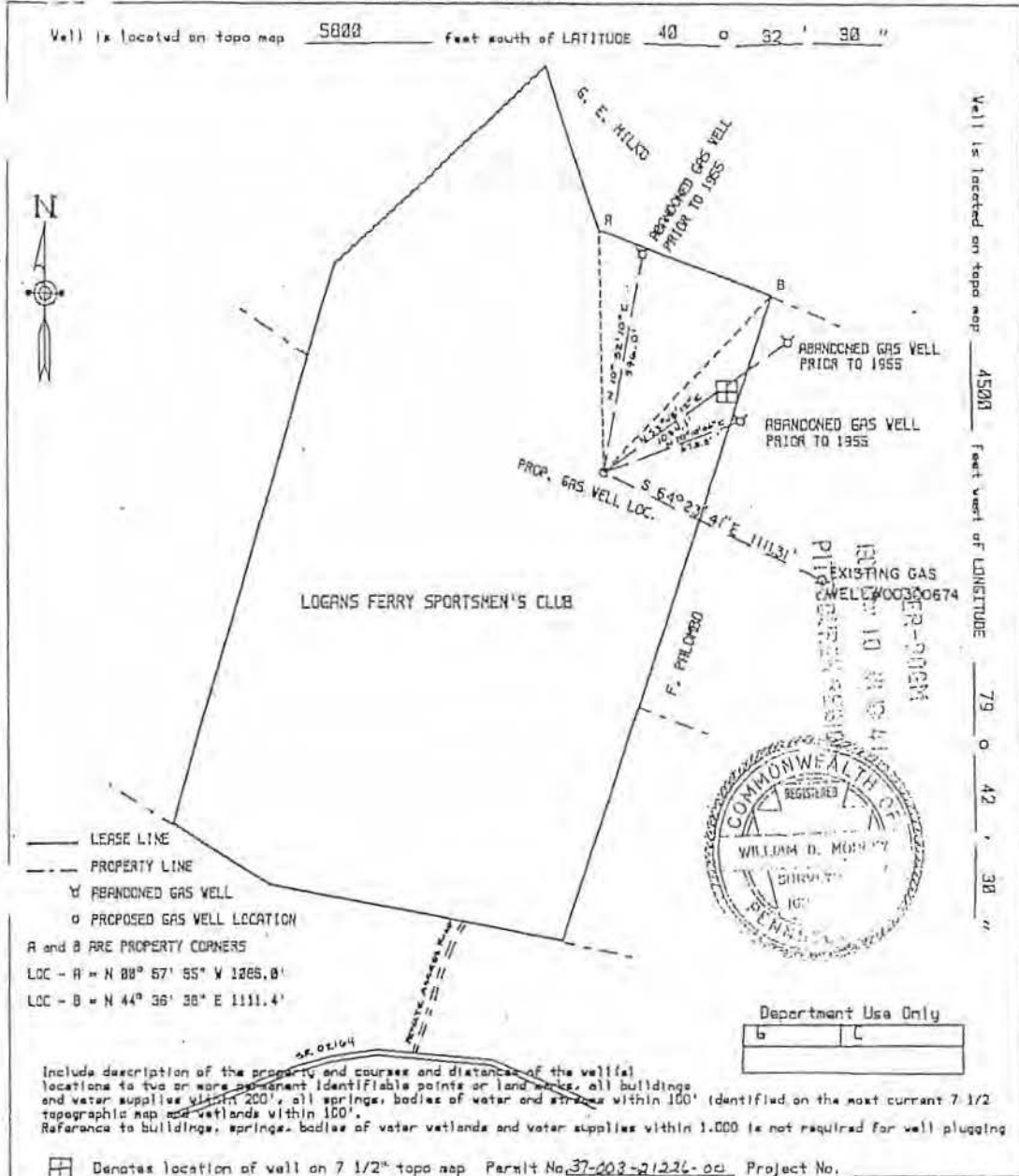
FORMATIONS							
NAME	TOP	BOTTOM	GAS AT	OIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA	
Clay	0	10				Driller's Log	
Shale	10	20					
Sand	20	23					
Sand and Shale	23	430			Damp @ 90'		
Sand and Shale	430	600			1" @ 430'		
Coal	600	602					
Sand and Shale	602	650					
Shale and Sand	650	1120					
Sand and Shale	1120	1549					
Sand and Shale	1549	1870			1" @ 1750'		
Sand and Shale	1870	1938					
Sand and Shale	1938	2064					
Sand, Shale & Red Rock	2064	2450					
Sand and Shale	2450	2930					
Sand and Shale	2930	3530					
Shale and Sand	3530	3810					
Shale	3810	4181					
T.D.	4181						
<i>Boiler</i>							
GEOPHYSICAL LOG DATA							
Fifth					2270-2290		
Speechley Stray					3018-3024		
Speechley					3092-3126		
2nd Balicown					3404-3412		
2nd Bradford					3710-3740		

[REDACTED]

March 31, 1989
 DATE
[Signature]
 APPROVED BY
 Vice-President
 TITLE

WELL LOCATION PLAT

003-21224



PENNECO OIL COMPANY, INC. Well Permittee/Registrant 200 U.S. ROUTE 22 Address DELMONT, PA 15626		Revision <input type="checkbox"/> Alteration <input type="checkbox"/> Storage Recondition <input type="checkbox"/> New Location <input checked="" type="checkbox"/> Drill Deeper <input type="checkbox"/> Abandonment <input type="checkbox"/> Registration <input type="checkbox"/> Plugging <input type="checkbox"/>	W. D. MOHNEY Surveyor/Engineer 16237-E 5-1 Drawing Number 10-13-88 11-4-88 Date 1" = 800' Scale
LOGANS FERRY SPORTSMEN'S CLUB Surface Owner N/A Surface Lessor (if any) SPORTSMEN'S CLUB Form Name 1		Surface landowner and water purveyor with water supply within 1,000' APPROXIMATE COURSE AND DISTANCE TO WATER SUPPLY WITHIN 1,000'	RECEIVED DEC 9 1988 RECEIVED DEC 9 1988
Well No. 142,323	Tract NONE	Serial No. 1064	PA GEOLOGICAL SURVEY PA DEPARTMENT OF ENVIRONMENTAL RESOURCES Bureau of Oil and Gas Management
Acres NONE	Ground Elevation 3720	Anticipated TO PLUM BORO	Name of Seam ALL SEAMS
Angle of Deviation (Drilling) ALLEGHENY	Municipality EV KENSINGTON EAST	Section 7	YELLA COAL CO AND CONSOLIDATION COAL CO
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management			EJB 11/7-86

003-21226

5800' S 40' 33" W
4500' W 79' 49" 30
RE: (G)

ER-0G-4: Rev. 8/84

D# 39364
39365

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF OIL AND GAS REGULATION
PITTSBURGH, PENNSYLVANIA 15208-2888
PH 1: 46
NEW KENSINGTON EAST
Office Use Only
003-21226

WELL RECORD PITTSBURGH REGION

PERMIT NO. 37-003-21226-00 PROJECT NO. [] TYPE OF WELL Gas and

WELL OPERATOR Penneco Energy Corporation TELEPHONE NO. 412-468-8777

ADDRESS 200 Route 22, Delmont, PA ZIP 15626

FARM NAME Logans Ferry Sportsman's Club #1 FARM NO. 1 SERIAL NO. PL-79 ACRES 142.323

TOWNSHIP Plum Borough COUNTY Allegheny

DRILLING COMMENCED 12-30-88 DRILLING COMPLETED 1-9-89

ELEVATION 1064' QUADRANGLE New Kensington East 7 1/2" x 16"

CASING AND TUBING RECORD

PIPE SIZE	AMOUNT IN WELL	MATERIAL BEHIND PIPE		PACKER			DATE RUN
		CEMENT (SKS.)	GEL (SKS.)	TYPE	SIZE	DEPTH	
13-3/8"	28	Cuttings	None	N/A	N/A	28	12-30-88
9-5/8"	578	250	5	Float shoe	9-5/8"	588	1-4-89
7"	1,920	265	12	Float shoe	7"	1,930	1-6-89
4-1/2"	3,601	N/A	N/A	N/A	N/A	3,610	1-9-89

PERFORATION RECORD

STIMULATION RECORD

DATE	INTERVAL PERFORATED FROM TO	DATE	INTERVAL TREATED	AMOUNT FLUID	AMOUNT SAND	INJECTION RATE

T.D.	D.D.	D.P.I.	Class	O'G	Loss
4230		2300	D	0	1

NATURAL OPEN FLOW	875 MCF	NATURAL ROCK PRESSURE	50	72 HRS. DAYS
AFTER TREATMENT OPEN FLOW	N/A	AFTER TREATMENT ROCK PRESSURE	N/A	HRS. DAYS

REMARKS:

Good cement returned to surface after setting 9-5/8" casing and 7" casing.

No water encountered in mine. 4-1/2" casing was not cemented in due to

Large natural flow. ~~BRALLIER~~ VENANGO - PROD FM
BRALLIER - FM TD

RECEIVED (FORMATION ON REVERSE SIDE)

JUL 31 1989

PA GEOLOGICAL SURVEY (Oil & Gas Geology Division)

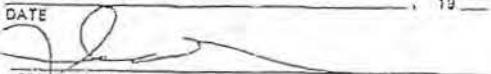
H.M.P. 7.3-28

003-21226

PS 2

FORMATIONS						
NAME	TOP	BOTTOM	GAS AT	OIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA
Shale and Sand	0	28				Driller's Log
Sand and Shale	28	180			1/2" @ 100'	
Shale and Sand	180	430				
Sand and Shale	430	540				
Mine	540	545				
Shale	545	580				
Sand and Shale	580	740				
Shale	740	780				
Sandy Shale	780	890				
Shale	890	915				
Sand	915	955				
Shale	955	1020				
Sand and Shale	1020	1340				
Sand and Shale	1340	1763				
Sand and Shale	1763	1825			1-1/2" @ 1825'	
Sand	1825	1943				
Shale, Sand & Red Rock	1943	2216				
Red Rock, Shale & Sand	2216	2720				
Sand and Shale	2720	3356	2100'			
Sand and Shale	3356	3800				
Shale	3800	4230				
T.D.	4230					
<u>GEOPHYSICAL LOG DATA</u>						
Fourth					2278-2292	
Fifth					2344-2372	
Speechley Spray					3124-3132	
Speechley					3194-3238	
2nd Balltown					3515-3621	
2nd Bradford					3835-3837	

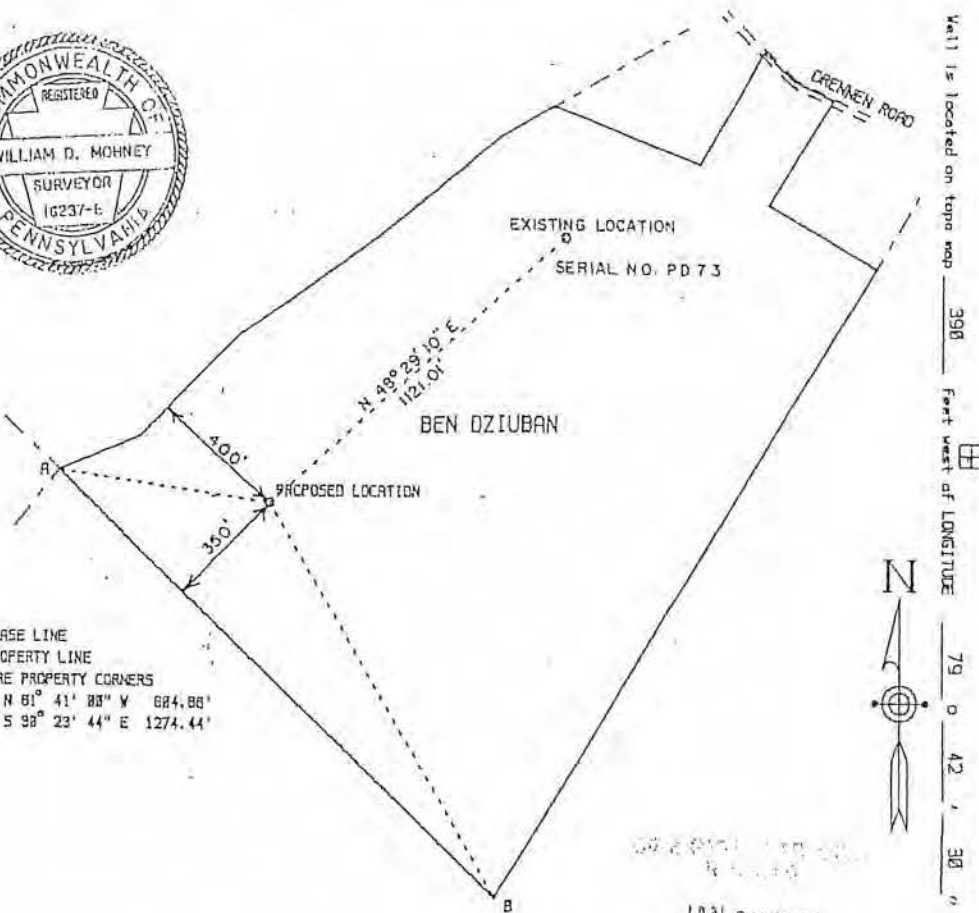
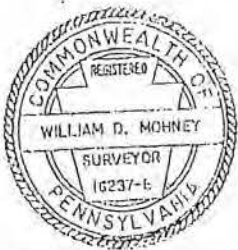
[Faint mirrored text, likely bleed-through from the reverse side of the page]

March 22, 1989
 DATE

 APPROVED BY
 Vice-President
 TITLE

WELL LOCATION PLAT

003-21228

Well is located on topo map 7500 feet south of LATITUDE 40° 32' 30"



Well is located on topo map 390 feet west of LONGITUDE 79° 0' 42' 30"

— LEASE LINE
 - - - PROPERTY LINE
 A and B ARE PROPERTY CORNERS
 LOC - A = N 81° 41' 00" W 684.86'
 LOC - B = S 98° 23' 44" E 1274.44'

JAN 26 1989

1-31-89
 Department Use Only
 G C

[Include description of the property and courses and distances of the well(s) locations to two or more permanent identifiable points or land marks, all buildings and water supplies within 200', all springs, bodies of water and streams within 100' identified on the most current 7 1/2 topographic map and wetlands within 100'. Reference to buildings, springs, bodies of water wetlands and water supplies within 1,000 is not required for well plugging]

Denotes location of well on 7 1/2" topo map Permit No. 37-003-21228-00 Project No. _____

PENNECO OIL COMPANY, INC. Well Permittee/Registrant 280 U.S. ROUTE 22 Address DELMONT, PA 15626		Revision <input type="checkbox"/> Alteration <input type="checkbox"/> Storage Recondition <input type="checkbox"/> New Location <input checked="" type="checkbox"/> Drill Deeper <input type="checkbox"/> Abandonment <input type="checkbox"/> Registration <input type="checkbox"/> Plugging <input type="checkbox"/>	W. D. MOHNEY Surveyor/Engineer 16237-E DZ - 2 Drawing Number 1-5-89 Date 1" = 400' Scale
BEN DZIUBAN Surface Owner NONE Surface Lessor (if any) DZIUBAN Farm Name 2		Surface landowner and water purveyor with water supply within 1,000' J. GRABOWSKI	Approximate course and distance to water supply <div style="text-align: center; font-weight: bold; font-size: 1.2em;">RECEIVED</div> S 21° E 1000' <div style="text-align: center; font-weight: bold; font-size: 1.2em;">FEB 24 1989</div>
Well No. EB.5	Tract 1818	Serial No. PD-74	PA GEOLOGICAL SURVEY (Oil & Gas Geology Division)
Area NONE	Ground Elevation 3600	Anticipated TO ALLEGHENY	Muncipality PLUM BORO
County NEW KENSINGTON EAST 1408	Municipality PLUM BORO	Section <input checked="" type="checkbox"/>	Owner/Operator/Lessor VILLA COAL COMPANY B CONSOLIDATED COAL CO BEN DZIUBAN
Topo Quadrangle Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		Workable Coal Seams None of Seem UPPER FREEPORT U. FREEPORT ALL OTHERS	<div style="font-size: 1.5em; font-weight: bold; text-align: center;">RENTON ALIVE</div>

7500' S 4032' 30"
 370' W 79' 42' 30"
 (a)

03-21228

EN-00-4: Rev. 8/84

COMMONWEALTH OF PENNSYLVANIA
 DEPARTMENT OF ENVIRONMENTAL RESOURCES
 BUREAU OF OIL AND GAS REGULATION
 PITTSBURGH, PENNSYLVANIA 15206-8988

DER-BOGM NEW KENNINGTON EAST
 JUN -6 PM 4:48
 Office Use Only

39366
 39367

WELL RECORD - PITTSBURGH REGION

PERMIT NO. 17-003-21228-00
 PROJECT NO. 1112
 TYPE OF WELL GAS
 WELL OPERATOR Pennaco Energy Corporation
 ADDRESS 200 Route 22, Delmont, PA
 FARM NAME Ben Dziuban #2
 TOWNSHIP Plum Borough
 DRILLING COMMENCED 3-21-89
 ELEVATION 2010'

CASING AND TUBING RECORD

PIPE SIZE	AMOUNT IN WELL	MATERIAL BEHIND PIPE		PACKER			DATE RUN
		CEMENT (SKS.)	GEL (SKS.)	TYPE	SIZE	DEPTH	
13-3/8"	25	Cuttings	None	N/A	N/A	25	3-21-89
9-5/8"	497	175	6"	Float Shoe	9-5/8"	507	3-22-89
7"	1905	165	12"	Float Shoe	7"	1,915	3-24-89
4-1/2"	3,886	190	5"	Float Shoe	4-1/2"	3,896	3-28-89

T.D.	D.D.	D.P.I.	Class	O	G	Large
4301		3750	A			

PERFORATION RECORD

STIMULATION RECORD

DATE	INTERVAL PERFORATED FROM	TO	DATE	INTERVAL TREATED	AMOUNT FLUID	AMOUNT SAND	INJECTION RATE
4-11-89	3728 3740 3748	3732 3740 3750	4-11-89	3720-3750	11,800	12,000#	30BPM
4-11-89	3417	3422	4-11-89	3417-3422	10,000	8,000#	25BPM
4-11-89	3107 3118 3124	3112 3118 3138	4-11-89	3107-3138	28,000	34,000#	37BPM
4-11-89	3030 3034	3031 3038	4-11-89	3030-3038	10,000	9,200#	25BPM

NATURAL OPEN FLOW	43 MCF	NATURAL ROCK PRESSURE	Not Taken	HRS. DAYS
AFTER TREATMENT OPEN FLOW	280 MCF	AFTER TREATMENT ROCK PRESSURE	810	72 HRS. DAYS

REMARKS: Good cement returned to surface after setting 7" casing.
 FM TD - ELK GROUP
 PROD FM - BRADFORD

DER-BOGM
 JUN 17 1989

RECEIVED

(FORMATION ON REVERSE SIDE)
 JUL 3 1 1989


PA GEOLOGICAL SURVEY
 (Oil & Gas Geology Division)

76-100
 7-2-89

003-21228

ps 2

FORMATIONS						
NAME	TOP	BOTTOM	GAS AT	OIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA
Clay and Shale	0	25				Driller's Log
Sand and Shale	25	48			1/2" @ 48'	
Sand and shale	48	75				
Sand	75	160				
Sand and shale	160	342				
Shale	342	405				
Sand	405	465				
Coal	465	475				
Shale	475	520				
Shale	520	590			1/2" @ 540'	
Sand and Shale	590	805				
Shale	805	1005				
Sand	1005	1110				
Sand and Shale	1110	1250				
Shale and Sand	1250	1600				
Sand and shale	1600	1720				
Sand	1720	1890			1" @ 1750'	
Sand and Shale	1890	1915				
Sand and Shale	1915	2300				
Sand and Shale	2300	2764				
Shale and Sand	2764	3240	3/20'			
Sand and Shale	3240	3850				
Shale	3850	4201				
T.D.	4201					
GEOPHYSICAL LOG DATA						
Fifth					2244-2304	
Speechley Spray					3029-3038	
Speechley					3100-3140	
2nd Balltown					3416-3423	
2nd Bradford					3725-3751	

DATE April 28, 1989
 APPROVED BY 
 Vice-President
 TITLE

WELL LOCATION PLAT

003-21232

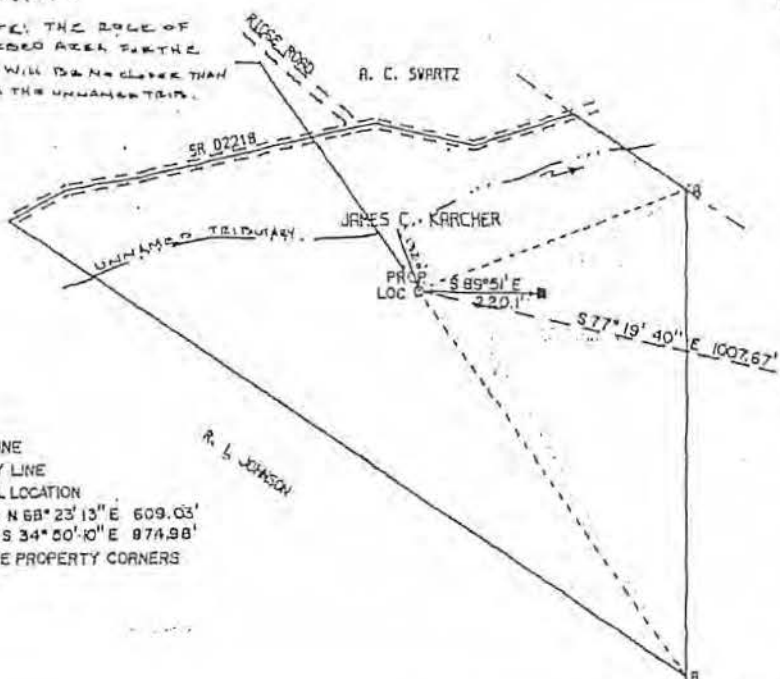
Well is located on topo map 3085 feet south of LATITUDE 48° 0' 32" 30"



DER-BOGM
89 MAR 29 AM 10:55
PITTSBURGH REGION



NOTE: THE ROLE OF THE DISTURBED AREA SURROUNDING THE LOCATION WILL BE NO CLOSER THAN 100' FROM THE UNMARKED.



Well is located on topo map 4850 feet west of LONGITUDE 79° 0' 42" 30" EXISTING GAS WELL 00707

— LEASE LINE
- - - PROPERTY LINE
o GAS WELL LOCATION
LOC - A = N 68° 23' 13" E 609.03'
LOC - B = S 34° 00' 10" E 874.98'
AND B ARE PROPERTY CORNERS

Department Use Only

G	C
---	---

Include description of the property and courses and distances of the well(s) locations to two or more permanent identifiable points or land marker, all buildings and water supplies within 200', all springs, bodies of water and streams within 100' identified on the most current 7 1/2" topographic map and wetlands within 100'. Reference to buildings, springs, bodies of water wetlands and water supplies within 1,000' is not required for well plugging.

Denotes location of well on 7 1/2" topo map Permit No. 37-043-21232-00 Project No. _____

PENNECO OIL COMPANY, INC. <u>13835</u> Well Permittee/Registrant 200 U.S. ROUTE 22 Address DELMONT, PA 15626		Revision <input type="checkbox"/> Alteration <input type="checkbox"/> Storage/Recondition <input type="checkbox"/> New Location <input checked="" type="checkbox"/> Drill Drasper <input type="checkbox"/> Abandonment <input type="checkbox"/> Registration <input type="checkbox"/> Plugging <input type="checkbox"/>	W. D. MOHNEY Surveyor/Engineer 16237-E K - J Drawing Number 9-6-88 2-3-89 2-15-89 Date 1" = 300' Scale
JAMES KARCHER Surface Owner N/A Surface Lessor (if any) KARCHER Park Name 1 PK 78		Surface landowner and water purveyor with water supply within 1,000' Approximate course and distance to water supply James C. Karcher S 42° 47' E . 235.7' Richard S. Borowski N 61° 00' E 910' S. A. Borowski N 61° 30' E 980' Walter Hummel N 65° 30' E 690'	
Well No. <u>20</u> Acres <u>NONE</u> Angle of Deviation (Drilling) ALLEGHENY County EV KENSINGTON EAST Topo Quadrangle	Tract Serial No. <u>898</u> Ground Elevation <u>3500'</u> Anticipated TD PLUM BORO Municipality <u>7</u> Section	RECEIVED Owner/Operator/Access Vaughningheny & Ohio Coal James C. Karcher Verifiable Coal Seams Name of Seams U. MAY 9 1989 all seams except U.P. PA GEOLOGICAL SURVEY 100 & Geology Division FSB 3/31/89	

Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Oil and Gas Management

RE

FIELD - RENTON - DEV

NEW KENSINGTON EAST

ER-OG-4; Rev. 3/89

Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Oil and Gas Management

3085' S 40° 32' 30"
4850' W 77° 42' 30"

21232
003-21232

(c). WELL RECORD AND COMPLETION REPORT
PITTSBURGH

L

1. In accordance with 25 Pa. Code 78.122(a), a Well Record must be submitted to the Department within 30 calendar days of cessation of drilling or altering a well.
2. In accordance with 25 Pa. Code 78.122(b), a Completion Report must be submitted within 30 calendar days after completion of the well. In addition, the information on land application of top-hole water and disposal of residual waste (including contaminated drill cuttings) in a pit is to be filed with the Completion Report (see ER-OG-76).

Well Operator	Penneco Energy Corporation		Telephone Number	412-468-8232	
Address	200 Route 22, Delmont, PA		Zip	15626	
Permit Number	37-003-21232-00		Project Number		
Firm Name	Karcher #1	Firm Number	Serial Number	PK-78	Acres 20
Township	Plum Boro		County	Allegheny	
Type of Well	<input checked="" type="checkbox"/> Gas <input type="checkbox"/> Oil <input type="checkbox"/> Injection <input type="checkbox"/> Storage <input type="checkbox"/> Disposal <input type="checkbox"/> Other (Specify)				

WELL RECORD
(Include Driller's Log on Reverse Side)

Drilling Method	Rotary (Air <input checked="" type="checkbox"/> Mud <input type="checkbox"/> Cable Tool <input type="checkbox"/>	Date Drilling Started	10-17-89		Date Drilling Completed	10-25-89	
Elevation	898'	Total Depth	4139'		7W' Quadrange	New Kensington East	

FMTD BRALLIER

CASING AND TUBING RECORD

Hole Size	Pipe Size	Amount In Well	Material Behind Pipe Type and Amount	Packer/Hardware			Date Run
				Type	Size	Depth	
15"	13"	34	Cuttings	N/A	N/A	N/A	10-17-89
12-1/2"	9-5/8"	370	Cement - 125 sacks	Float Shoe	9-5/8"	378	10-18-89
8-3/4"	7"	1,697	Cement - 245 sacks	Float Shoe	7"	1,705	10-19-89
6-1/4"	4-1/2"	3,099	Cement - 60 sacks	Float Shoe	4-1/2"	3,107	10-24-89
N/A	1-1/2"	2,980	N/A	N/A	N/A	N/A	11-9-89

Cement return on surface casing? yes no

COMPLETION REPORT
PROD FM - BRADFORD

Perforation Record			Stimulation Record						
Date	Interval Perforated		Data	Interval Treated	Fluid		Propping Agent		Average Injection Rate
	From	To			Type	Amount	Type	Amount	
11-1	2,956	2,999	11-1	2,956 - 2,999	Water	31,500	Sand	61,400#	28.48BPM

T.D.	O.D.	D.P.I.	Class	O'G	Lease
4139		2999	D		BRADFORD

Natural Open Flow	219 MCF	Natural Rock Pressure	Not Taken	Hours	Days
After Treatment Open Flow	350 MCF	After Treatment Rock Pressure	680#	Hours	Days

RECEIVED

Name, Address, and Telephone Number of Well Service Companies		APR 27 1990
F. D. Hill Drilling Co.	Rte. 321 South, Kane PA 16735	814-837-6612
Dowell Schlumberger	P. O. Box 437, Blacklick, PA 15401	12-459-7900
Allegheny Nuclear Surveys, Inc.	Elderton, PA 15736	(Oil & Gas Geology Division) 412-354-3090

003-21232

PS 2

DRILLER'S LOG OF FORMATIONS						
Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Clay	0	5				Driller's Log
Shale	5	25				
Sand	25	34				
Sand and Shale	34	100				
Sand and Shale	100	300				
Sand and Shale	300	335			5" @ 330'	
Open Mine	335	340				
Sand and Shale	340	870			1" @ 475'	
Sand and Shale	870	1280				
Shale and Sand	1280	1703			5" @ 1600'	
Sand	1703	1920				
Red Rock and Sand	1920	1970				
Sand and Shale	1970	2360	1750'			
Shale and Sand	2360	2930				
Sand and shale	2930	3550	2980'			
Shale	3550	4139				
T.D.	4139					
BRILLI						
GEOPHYSICAL LOG DATA						
	Fifth				2099-2130	
	Third Warren				2817-2834	
	Speechley				2954-3001	
	2nd Balltown				3272-3281	
	Bradford				3628-3631	

BY: [Signature] Vice-President 11-22-89
 Operator's Signature Title Date

FOR OFFICIAL USE ONLY

Reviewed By William H. [Signature] 11/25/89 Date
 Comments _____

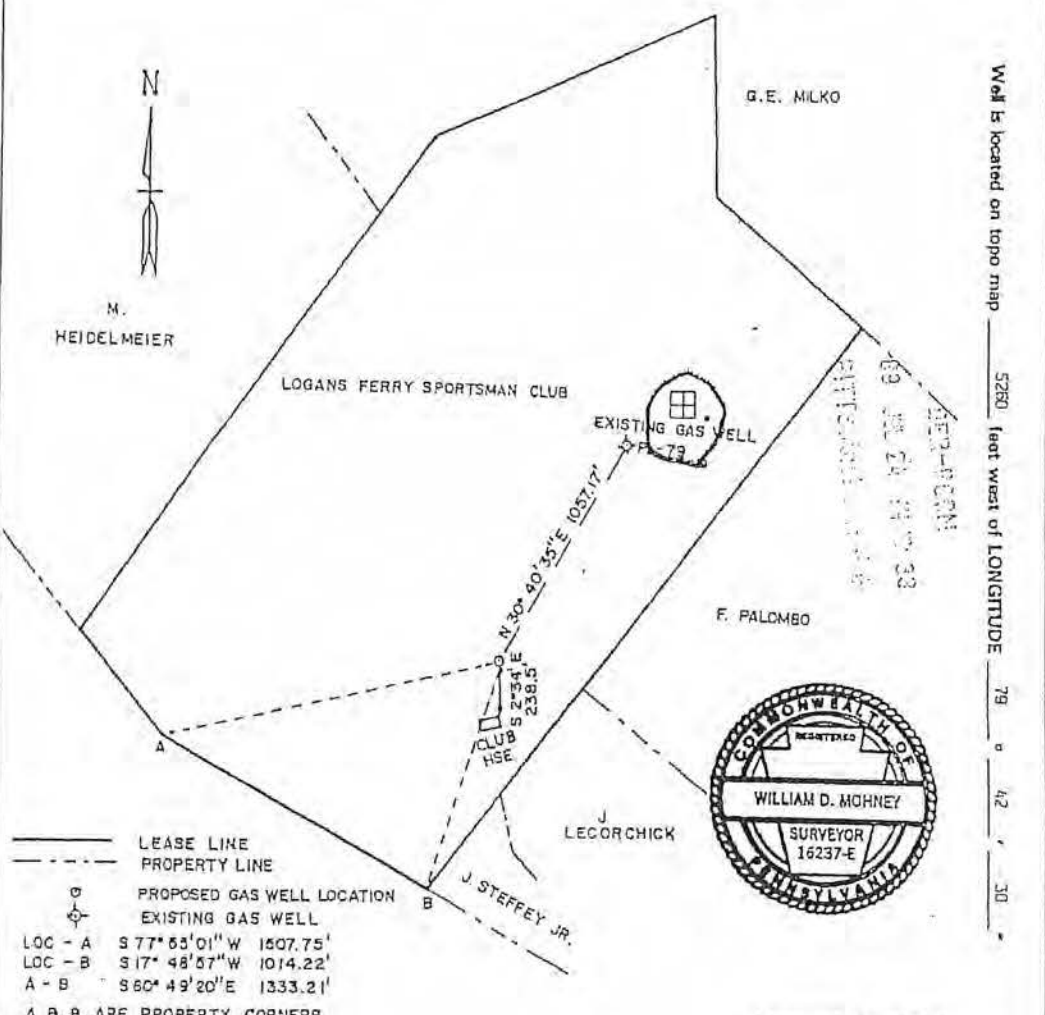
003-21236

EL-CG-2; Rev. 8/84

WELL LOCATION PLAT

44078

Well is located on topo map 6800 feet south of LATITUDE 40 ° 32 ' 30 "



Well is located on topo map 5280 feet west of LONGITUDE 79 ° 42 ' 30 "



- LEASE LINE
 - - - PROPERTY LINE
 - ⊙ PROPOSED GAS WELL LOCATION
 - ⊕ EXISTING GAS WELL
- LOC - A S 77° 55' 01" W 1507.75'
- LOC - B S 17° 48' 57" W 1014.22'
- A - B S 60° 49' 20" E 1333.21'
- A B A ARE PROPERTY CORNERS

Department Use Only

G	C
---	---

Include description of the property and courses and distances of the well(s) location to two or more permanent identifiable points or land marks, all buildings and water supplies within 200', all springs, bodies of water and streams within 100' identified on the most current 7 1/2" topographic map and wetlands within 100'. Reference to buildings, springs, bodies of water wetlands and water supplies within 1,000 is not required for well plugging.

⊕ Denotes location of well on 7 1/2" topo map Permit # 37-167-21236-06 Project #

Paneco Oil Company, Inc. 13825		Revision	<input type="checkbox"/>	M.D. Mohney
Well Permittee/Registrant 200 U.S. Route 22		Alteration	<input type="checkbox"/>	Surveyor/Engineer
Address Delmont, PA 15626		Storage Recondition	<input type="checkbox"/>	S - 5
Logans Ferry Sportaman's Club		New Location	<input checked="" type="checkbox"/>	Drawing Number
Surface Owner N/A		Drill Deeper	<input type="checkbox"/>	7-14-89
Surface Lessor (if any) Sportaman's Club		Abandonment	<input type="checkbox"/>	Date
Firm Name S		Registration	<input type="checkbox"/>	1" = 600'
Well No. 142.323		Plugging	<input type="checkbox"/>	Scale
Tract 1243		Surface landowner and water purveyor with water supply within 1,000'		
Acres None		Approximate course and distance to water supply		
Ground Elevation 3900'		Logan's Ferry Sportaman's Club S 21° E 758'		
Anticipated TD		RECEIVED		
Allegheny Plum Boro				
County New Kensington East 418		SEP 25 1989		
Municipality Plum Boro		GEOLOGICAL SURVEY		
Section 7		Name of Seams		
Topo Quadrangle		Consolidation Coal Co. All Seams		
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		EJB 8/2/89		

RE

FIELD RENTON - DEV

NEW KENSINGTON EAST
~~21236~~
003-21236

ER-OG-4: Rev. 3/89

Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Oil and Gas Management

4800' S 40° 32' 30"
5260' W 79° 42' 30"

(G)

WELL RECORD AND COMPLETION REPORT

- In accordance with 25 Pa. Code 78.122(a), a Well Record must be submitted to the Department within 30 calendar days of cessation of drilling or altering a well.
- In accordance with 25 Pa. Code 78.122(b), a Completion Report must be submitted within 30 calendar days after completion of the well. In addition, the information on land application of topsoil water and disposal of residual waste (including contaminated drill cuttings) in a pit is to be filed with the Completion Report (see ER-OG-75).

Well Operator Penneco Energy Corporation		Telephone Number 412-468-8232	
Address 200 Route 22, Delmont, PA		Zip 15626	
Permit Number 17-003-21236-00		Project Number	
Farm Name Logans Ferry Sportsman's Club #5	Farm Number	Serial Number PL-83	Acres 1.42
Township Blum Boro		County Allegheny	
Type of Well <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Oil <input type="checkbox"/> Injection <input type="checkbox"/> Storage <input type="checkbox"/> Disposal <input type="checkbox"/> Other (Specify)			

WELL RECORD
(Include Driller's Log on Reverse Side)

Drilling Method Rotary (Air <input checked="" type="checkbox"/> Mud <input type="checkbox"/> Cable Tool <input type="checkbox"/> Other (Specify)	Date Drilling Started 11-2-89	Date Drilling Completed 11-9-89
Elevation 1243'	Total Depth 4517'	7/8' Quadrangle New Kensington East

FMTD - BRALLIER

CASING AND TUBING RECORD

Hole Size	Pipe Size	Amount in Well	Material Behind Pipe	Packer/Hardware			Date Run
			Type and Amount	Type	Size	Depth	
15"	13"	34	Cuttings	N/A	N/A	34	11-2-89
12-1/2"	9-5/8"	734	Cement - 140 Sacks			741	11-3-89
8-3/4"	7"	2068	Cement - 275 Sacks	Float Shoe	7"	2,078	11-7-89
6-1/4"	4-1/2"	3712	Cement - 150 Sacks	Float Shoe	4-1/2"	3,718	11-10-89
	1-1/2"	3316	N/A				11-16-89

Cement return on surface casing? yes no

COMPLETION REPORT
PROD FM - BRADFORD

Perforation Record			Stimulation Record						
Date	Interval Perforated		Date	Interval Treated	Fluid		Propping Agent		Average Injection Rate
	From	To			Type	Amount	Type	Amount	
11-15	3,614	3,619	11-15	3614-3619	Water	8,500	Sand	13,000#	24 BPM
11-15	3,300	3,336	11-15	3300-3336	Water	32,000	Sand	60,000#	29 BPM

T.D.	D.D.	D.P.I.	Class	O'G	Lease
4517		3619	D		

BRADFORD

Natural Open Flow 136 MCF	Natural Rock Pressure Not Test	Hours N/A	Days 1
After Treatment Open Flow 350 MCF	After Treatment Rock Pressure 750#	Hours 60	Days 1

RECEIVED
APR 27 1990
PA GEOLOGICAL SURVEY
814-877-6612
412-479-2700
412-54-3090

Name, Address, and Telephone Number of Well Service Companies	F. D. Hill Drilling Co. Rte. 321 South, Kane, PA 17830	814-877-6612
Dowell Schlumberger	P. O. Box 437, Blacklick, PA 15716	412-479-2700
Allegheny Nuclear Surveys, Inc.	Elderton, PA 15736	412-54-3090

003-21236

P 2

DRILLER'S LOG OF FORMATIONS						
Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Fill	0	12				Driller's Log
Shale	12	34				
Sand	34	40				
Shale and Sand	40	100				
Sand and Shale	100	520			1" @ 420'	
Sand and Shale	520	760			1" @ 640'	
Shale and Sand	760	1030				
Red Rock, Sand, Shale	1030	1450				
Sand and Shale	1450	1900				
Sand and Shale	1900	2087			4" @ 1935'	
Sand and Shale	2087	2180				
Shale and Sand	2180	2270				
Red Rock and Shale	2270	2750				
Sand and Shale	2750	3430				
Sand and Shale	3430	4020				
Shale	4020	4517				
T.D.	4517					
	Brallier					
GEOPHYSICAL LOG DATA						
		Fourth			2384-2400	
		Fifth			2444-2470	
		Speechley			3296-3340	
		2nd Balltown			3612-3622	

PENNECO ENERGY CORPORATION

BY: [Signature]
Operator's Signature

Vice-President
Title

December 9, 1989
Date

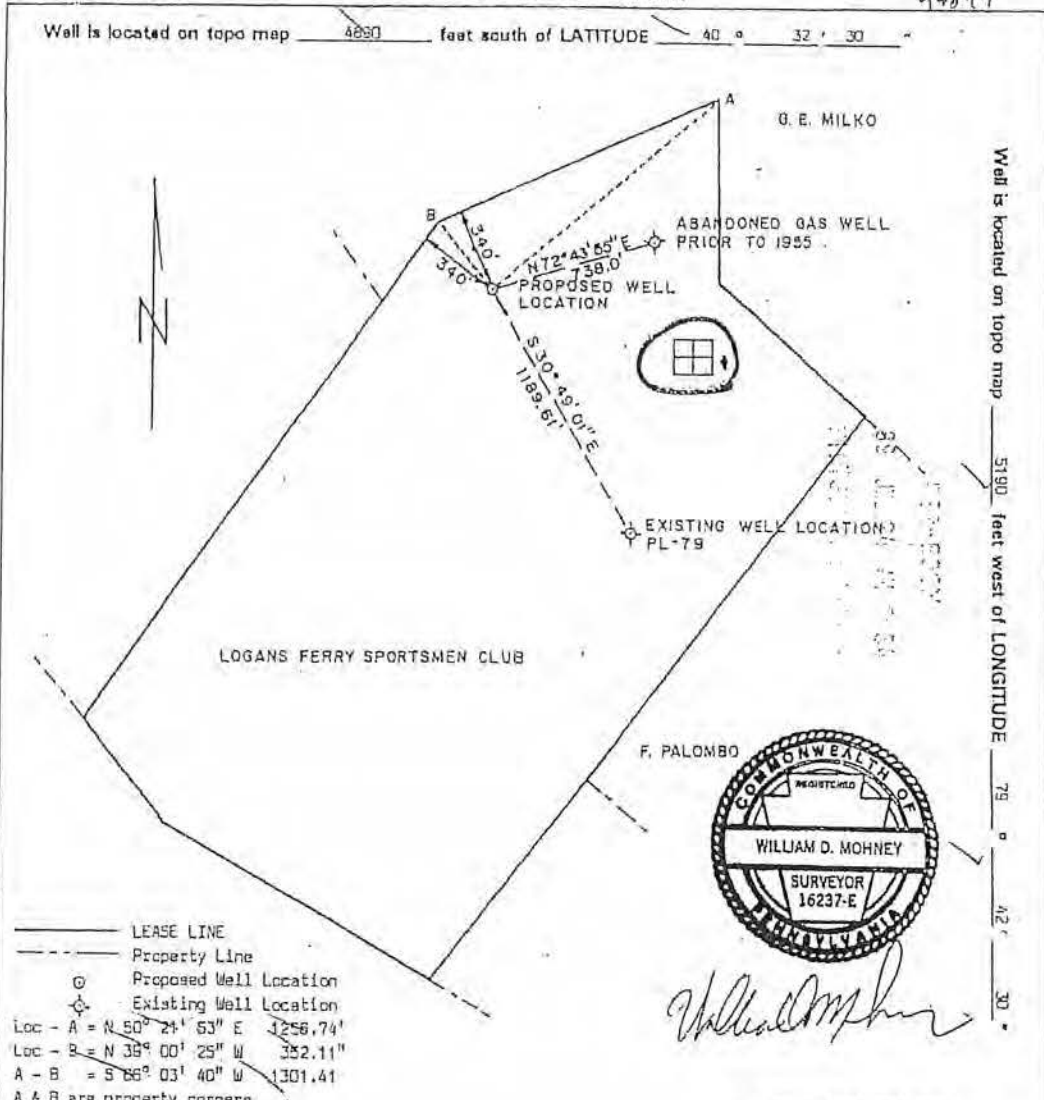
FOR OFFICIAL USE ONLY

[Signature] 11/25/86
Reviewed By Date

Comments _____

WELL LOCATION PLAT

003-21237
44047



Department Use Only

G	C
---	---

Include description of the property and courses and distances of the well(s) location to two or more permanent identifiable points or land marks, all buildings and water supplies within 200', all springs, bodies of water and streams within 100' identified on the most current 7 1/2" topographic map and wetlands within 100'. Reference to buildings, springs, bodies of water wetlands and water supplies within 1,000 is not required for well plugging.

Denotes location of well on 7 1/2" topo map Permit # 27-003-21237-00 Project #

Pennaco Oil Company, Inc. Well Permittee/Registrant 200 U.S. Route 22 Address Delmont, PA 15626		Revision <input type="checkbox"/> Alteration <input type="checkbox"/> Storage Recondition <input type="checkbox"/> New Location <input checked="" type="checkbox"/> Drill Deeper <input type="checkbox"/> Abandonment <input type="checkbox"/> Registration <input type="checkbox"/> Plugging <input type="checkbox"/>	W.D. Mohney Surveyor/Engineer 16237-E S-2 Drawing Number B-27-89 Date 1" = 600' Scale
Logans Ferry Sportsmen's Club Surface Owner N/A Surface Lessor (if any) Sportsmen's Club Prime Name 2 PL-80 Well No. Tract Serial No. 142,323 1105 Access Ground Elevation None 3700' Angle of Deviation (Drilling) Anticipated TD Allegheny Plum Bore County Municipality New Kensington East 7 Topo Quadrangle Section		Surface landowner and water purveyor with water supply within 1,000' None	Approximate course and distance to water supply RECEIVED SEP 25 1989 PA GEOLOGICAL SURVEY (Oil & Gas Ecology Division) Workable Coal Seams Name of Seams Consolidation Coal Co. All Seams RBS 8/2/89
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management			



003-21237

WELL RECORD AND COMPLETION REPORT

CF

Well Operator Penneco Oil Company, Inc	DEP ID# 7674	Well API # (Permit / Reg) 37-003-21237	Project Number	Acres 142
Address 200 Rt 22, PO Box 300	State PA	Zip Code 15626	Well Farm Name Logans Ferry Sportsmen's Club	Well # 2
City Delmont	County Allegheny	Municipality Plum Boro	Sanol # PL-80	
Phone 724-468-8232	USGS 7.5 min quadrangle map New Kensington East			

Check all that apply: Original Well Record Original Completion Report Amended Well Record Amended Completion Report

WELL RECORD

Well Type: Gas Oil Combination Oil & Gas Injection Storage Disposal

Drilling Method: Rotary - Air Rotary - Mud Cable Tool

Date Drilling Started: 10/25/89 Date Drilling Completed: 11/2/89 Surface Elevation: 1105 ft Total Depth - Driller: 4520 ft Total Depth - Logger: 4522 ft

Casing and Tubing Cement returned on surface casing? Yes No
 Cement returned on coal protective casing? Yes No N/A

Hole Size	Pipe Size	WT	Thread / Weld	Amount in Well (ft)	Material Behind Pipe Type and Amount	Packer / Hardware / Centralizers Type	Size	Depth	Date Run
15"	13"	N/A	thread	34	Cuttings	N/A	N/A	N/A	10/25/8
12 1/4"	9 5/8"	N/A	thread	573	Cement - 240 sacks	Float Shoe	9 5/8"	581	10/26/8
8 3/4"	7"	N/A	thread	1904	Cement - 245 sacks	Float Shoe	7"	1912	10/30/8
6 1/4"	4 1/2"	9 5#	thread	3237	71 sks Completion Blend Cement	Float Shoe	4 1/2"	3237	6/17/05

COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type	Fluid Amount	Propping Agent Type	Propping Agent Amount	Average Injection
6/27/05	3173	3213	8/27/05	3173 - 3213	Water	23,016 gal	Sand	29,300#	38 BPM

IAN 2 9 2008
 DEP COMPLETION REPORT

Natural Open Flow	1300 MCF	Natural Rock Pressure	50#	72 Hours	Days
After Treatment Open Flow	531 MCFPD	After Treatment Rock Pressure	300 PSI	72 Hours	Days

Well Service Companies -- Provide the name, address, and phone number of all well service companies involved

Name Hill Drilling Address P O Box 309 City - State - Zip Bradford, PA 16701 Phone 814-368-3831	Name Dowell Schlumberger Address P O Box 437 City - State - Zip Blacklick, PA 15718 Phone 412-459-7900	Name BJ Services Company Address RR #1, Box 144A City - State - Zip Fairmount City, PA 16224 Phone 814-365-2003
--	---	--

DEC 12 2008

003-21237

LOG OF FORMATIONS

Well API# 37-003-21237

Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine, ft)	Source of Data
Clay and Shale	0	10				Driller's Log
Sand	10	34				
Sand & Shale	34	48				
Sand & Shale	48	380			½" @ 100'	
Sand & Shale	380	550			½" @ 490'	
Coal	550	555			6" @ 550'	
Shale & Sand	555	581				
Sand & Shale	581	920			½" @ 710'	
Shale & Sand	920	1320				
Sand & Shale	1320	1667			2" @ 1805'	
Sand & Shale	1667	1925			2" @ 1850'	
Sand & Shale	1925	2390				
Shale & Sand	2390	2720	2387'			
Sand & Shale	2720	3350				
Sand & Shale	3350	3890				
Shale	3890	4520				
T D	4520					

Please delete empty rows if necessary to make all of page 2 fit on one page

Well Operator Signature		DEP USE ONLY	
Title _____ Vice President	Date _____ 12/7/05	Reviewed by _____ Comments: MA	Date _____ 1/23/08



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS MANAGEMENT PROGRAM

Client Id Sub-facility Id

003-21237

WELL RECORD AND COMPLETION REPORT

CF

Well Operator Penneco Oil Company, Inc.		DEP ID# 7674	Well API # (Permit / Reg) 37-003-21237	Project Number	Acres 142
Address 200 Rt. 22, PO Box 300			Well Farm Name Logans Ferry Sportsmen's Club	Well # 2	Serial # PL-80
City Delmont	State PA	Zip Code 15626	County Allegheny	Municipality Plum Boro	
Phone 724-468-8232	Fax 724-468-8230	USGS 7.5 min. quadrangle map New Kensington-East			

Check all that apply: Original Well Record Original Completion Report Amended Well Record Amended Completion Report

WELL RECORD Also on plate Log or Formations on back page

Well Type	<input checked="" type="checkbox"/> Gas	<input type="checkbox"/> Oil	<input type="checkbox"/> Combination Oil & Gas	<input type="checkbox"/> Injection	<input type="checkbox"/> Storage	<input type="checkbox"/> Disposal	
Drilling Method	<input checked="" type="checkbox"/> Rotary - Air	<input type="checkbox"/> Rotary - Mud	<input type="checkbox"/> Cable Tool				
Date Drilling Started 10/25/89	Date Drilling Completed 11/2/89	Surface Elevation 1105 ft.	Total Depth - Driller 4520 ft.	Total Depth - Logger 4522 ft.			
Casing and Tubing		Cement returned on surface casing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No					
		Cement returned on coal protective casing? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A					
Hole Size	Pipe Size	WT.	Thread / Weld	Amount in Well (ft)	Material Behind Pipe Type and Amount	Packer / Hardware / Centralizers Type Size Depth	Date Run
15"	13"	N/A	thread	34	Cuttings	N/A N/A N/A	10/25/8
12 1/4"	9 5/8"	N/A	thread	573	Cement - 240 sacks	Float Shoe 9 5/8" 581	10/26/8
8 3/4"	7"	N/A	thread	1904	Cement - 245 sacks	Float Shoe 7" 1912	10/30/8
6 1/4"	4 1/2"	9.5#	thread	3237	71 sks Completion Blend Cement	Float Shoe 4 1/2" 3237	6/17/05

COMPLETION REPORT

Perforation Record			Stimulation Record				
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type Amount	Propping Agent Type Amount	Average Injection
6/27/05	3173	3213	6/27/05	3173 - 3213	Water 23,016 gal	Sand 29,300#	38 BPM

Natural Open Flow	1300 MCF	Natural Rock Pressure	50#	72 Hours	Days
After Treatment Open Flow	531 MCFPD	After Treatment Rock Pressure	300 PSI	72 Hours	Days

Well Service Companies -- Provide the name, address, and phone number of all well service companies involved.

Name Hill Drilling	Name Dowell Schlumberger	Name BJ Services Company
Address P.O. Box 309	Address P.O. Box 437	Address RR #1, Box 144A
City - State - Zip Bradford, PA 16701	City - State - Zip Blacklick, PA 15716	City - State - Zip Fairmount City, PA 16224
Phone 814-368-3831	Phone 412-459-7900	Phone 814-365-2003

LOG OF FORMATIONS

Well API#: 37-003-21237

Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine: ft.)	Source of Data
Clay and Shale	0	10				Driller's Log
Sand	10	34				
Sand & Shale	34	48				
Sand & Shale	48	380			½" @ 100'	
Sand & Shale	380	550			½" @ 490'	
Coal	550	555			6" @ 550'	
Shale & Sand	555	581				
Sand & Shale	581	920			½" @ 710'	
Shale & Sand	920	1320				
Sand & Shale	1320	1667			2" @ 1805'	
Sand & Shale	1667	1925			2" @ 1850'	
Sand & Shale	1925	2390				
Shale & Sand	2390	2720	2387'			
Sand & Shale	2720	3350				
Sand & Shale	3350	3890				
Shale	3890	4520				
T.D.	4520					

Please delete empty rows if necessary to make all of page 2 fit on one page.

<p>Well Operator's Signature:</p> <p>Title: Vice President</p> <p>Date: 12/7/05</p>	<p style="text-align: center; border: 1px solid black; padding: 2px;">DEP USE ONLY</p> <p>Reviewed by: _____ Date: _____</p> <p>Comments:</p>
--	---

RE

FIELD-RENTON-DEV

NEW KENSINGTON EAST

21237

003-21237

ER-OG-4; Rev. 3/89

Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Oil and Gas Management

4890' 540° 32' 30"
5190' 479° 42' 30"

(G)

WELL RECORD AND COMPLETION REPORT 89 DEC -4 AM 11:30

PITTSBURGH REGION

- In accordance with 25 Pa. Code 78.122(a), a Well Record must be submitted to the Department within 30 calendar days of cessation of drilling or altering a well.
- In accordance with 25 Pa. Code 78.122(b), a Completion Report must be submitted within 30 calendar days after completion of the well. In addition, the information on land application of topsoil water and disposal of residual waste (including contaminated drill cuttings) in a pit is to be filed with the Completion Report (see ER-OG-75).

Well Operator Penneco Energy Corporation		Telephone Number 412-468-8232	
Address 200 Route 22, Delmont, PA		Zip 15626	
Permit Number 37-003-21237-00		Project Number	
Farm Name Logans Ferry Sportsmen's Club #3	Farm Number	Serial Number PL-80	Acres 142
Township Plum Boro		County Allegheny	
Type of Well <input checked="" type="checkbox"/> GA <input type="checkbox"/> OG <input type="checkbox"/> Injection <input type="checkbox"/> Storage <input type="checkbox"/> Disposal <input type="checkbox"/> Other (Specify)			

WELL RECORD (Include Driller's Log on Reverse Side)

Drilling Method Rotary (Air <input checked="" type="checkbox"/> Mud <input type="checkbox"/> Cable Tool <input type="checkbox"/> Other <input type="checkbox"/> (Specify)	Date Drilling Started 10-25-89	Date Drilling Completed 11-2-89
Elevation 1,105'	Total Depth 4,520'	TX' Quadrangle New Kensington East

FM TD BRALLIER

CASING AND TUBING RECORD

Hole Size	Pipe Size	Amount In Well	Material Behind Pipe		Packer/Hardware			Date Run
			Type and Amount	Type	Size	Depth		
15"	13"	34	Cuttings	N/A	N/A	N/A	10-25-89	
12-1/4"	9-5/8"	573	Cement - 240 sacks	Float Shoe	9-5/8"	581	10-26-89	
8-3/4"	7"	1,904	Cement - 245 sacks	Float Shoe	7"	1,912	10-30-89	
			T.D.	D.D.	D.P.I.	Class	O G	Lease
			4520		2307	D	T	T

Cement return on surface casing? yes no

COMPLETION REPORT Prep FM - Vantage (Beyard?) Fifth

Perforation Record			Stimulation Record						
Date	Interval Perforated		Date	Interval Treated	Fluid		Propping Agent		Average Injection Rate
	From	To			Type	Amount	Type	Amount	

Natural Open Flow 1,300 MCF	Natural Rock Pressure 50#	Hours	Days
After Treatment Open Flow N/A	After Treatment Rock Pressure N/A	Hours	Days

RECEIVED

APR 27 1990

Name, Address, and Telephone Number of Well Service Companies			
F. D. Hill Drilling Co.	Rte. 321 South, Kane, PA 16735	PA GEOLOGICAL SURVEY	817-6612
Dowell Schlumberger	P. O. Box 437, Blacklick, PA 15716	Oil & Gas Technology Division	412-459-7900
Allegheny Nuclear Surveys, Inc.	Elderton, PA 15736		412-354-3090

203-21237

B L

DRILLER'S LOG OF FORMATIONS						
Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Clay and Shale	0	10				Driller's Log
Sand	10	34				
Sand and Shale	34	48				
Sand and Shale	48	380			1/2" @ 100'	
Shale and Sand	380	550			1/2" @ 490'	
Coal	550	555			6"	
Shale and Sand	555	581				
Sand and Shale	581	920			1/2" @ 710'	
Shale and Sand	920	1320				
Sand and Shale	1320	1667			2" @ 1805	
Sand and Shale	1667	1925			2" @ 1850	
Sand and Shale	1925	2390				
Shale and Sand	2390	2720	2387'			
Sand and Shale	2720	3350				
Sand and Shale	3350	3890				
Shale	3890	4520				
T.D.	4520					
GEOPHYSICAL LOG DATA						
	Fifth				2318-2349	
	Third Warren				3035-3041	
	Speechley Stray				3108-3110	
	Speechley				3169-3215	

Brillie

BY: [Signature] Vice-President 11-22-89
 Operator's Signature Title Date

FOR OFFICIAL USE ONLY

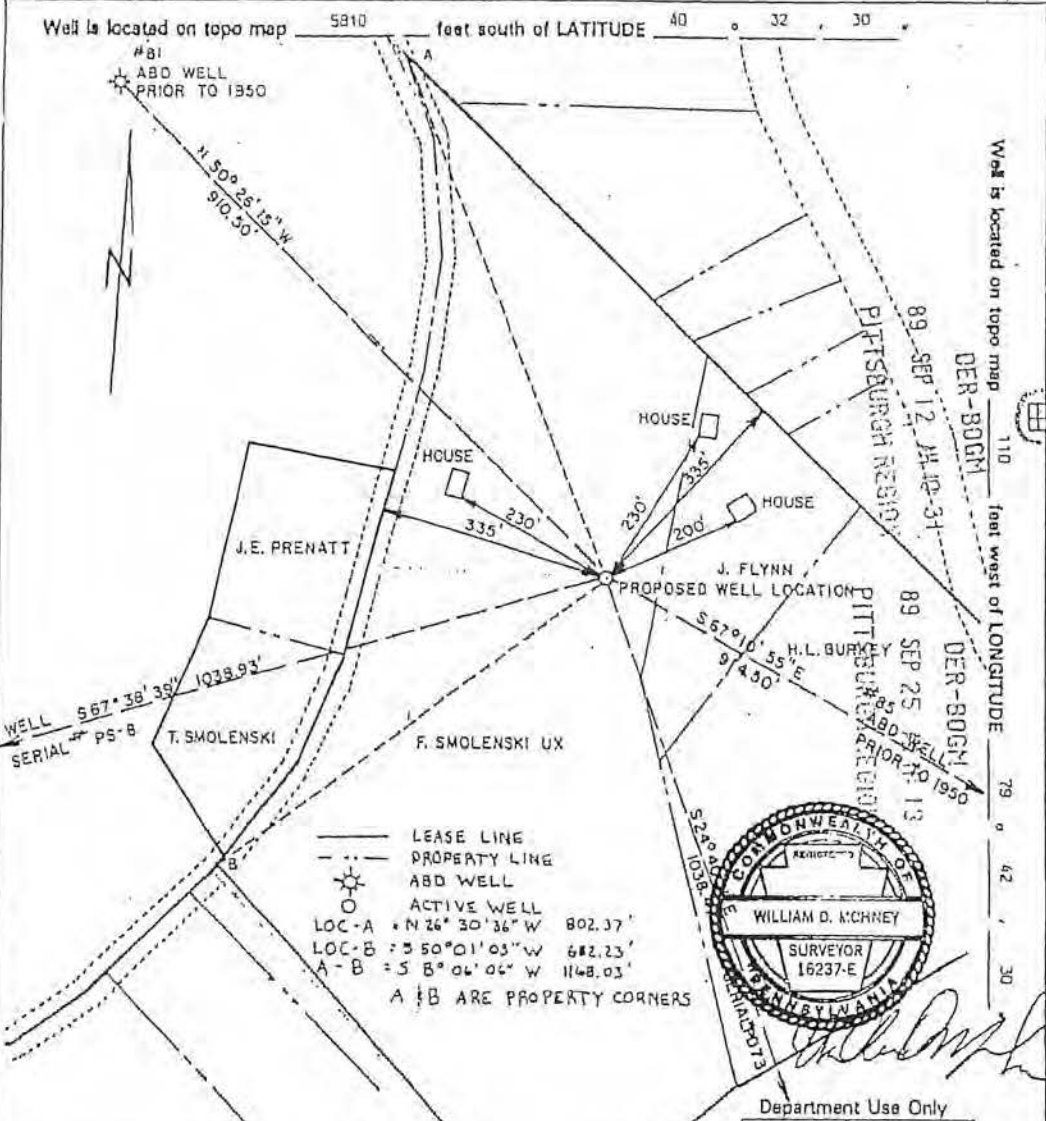
Reviewed By [Signature] 11/22/89 Date
 Comments _____

003-21238

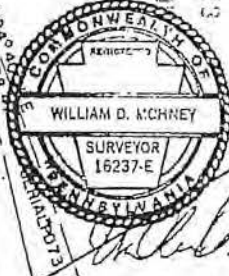
CG-2: Rev. 8/88

WELL LOCATION PLAT

4427



LEASE LINE
 PROPERTY LINE
 ABD WELL
 ACTIVE WELL
 LOC-A = N 26° 30' 36" W 802.37'
 LOC-B = S 50° 01' 03" W 682.23'
 A-B = S 5° 04' 04" W 1148.03'
 A & B ARE PROPERTY CORNERS



Department Use Only

G	C
---	---

Include description of the property and courses and distances of the walls; location to two or more permanent identifiable points or land marks, all buildings and water supplies within 200', all springs, bodies of water and streams within 100' identified on the most current 7 1/2" topographic map and wetlands within 100'. Reference to buildings, springs, bodies of water wetlands and water supplies within 1,000' is not required for well plugging.

Denotes location of well on 7 1/2" topo map Permit # 37-009-21238-00 Project #

Pennaco Oil Company, Inc. 138257		Revision <input type="checkbox"/>		W.D. McHney	
Well Permits/Registrars		Alteration <input type="checkbox"/>		Surveyor/Engineer	
200 U.S. Route 22		Storage Recondition <input type="checkbox"/>		S-1	
Address		New Location <input type="checkbox"/>		Drawing Number	
Delmont, PA 15626		Drill Deeper <input type="checkbox"/>		8-15-89	
F. Smolenski		Abandonment <input type="checkbox"/>		Date	
Surface Owner		Registration <input type="checkbox"/>		067201989	
N/A		Plugging <input type="checkbox"/>		1" = 200'	
Surface Lessor (if any)		Surface landowner and water purveyor with water supply within 1,000'		Scale PA GEOLOGICAL SURVEY	
Smolenski		E. Taylor N4° W 940'		Approximate course and distance to water supply	
Farm Name		J. Prenatt S84° W 450'		C.J. Flynn N55°E 231'	
1		T. Smolenski S71° W 520'		D. Maloney N35°E 650'	
Well No. Tract Serial No.		F. Choltka S45° W 810'		J. Smith N49°E 600'	
14.58 975		W. Barker N68° E 800'		W. Burkey S75°E 550'	
Acres Ground Elevation		Walter Barker N66°E 800'		J. Hoey S71°E 700'	
None 4250		D. Aruskiewicz 780'		R. Ozubian S62°E 910'	
Angle of Deviation (Drang)		D. Aruskiewicz 780'		F. Smolenski N2°E 310'	
None Anticipated TD		R. Smolenski N3°E 255'		Name of Seam	
Allegheny Plum Eco		Owner/Owner/Leases		Upper F28AP1C	
County Municipality		Consolidated Coal Co.		Name of Seam	
New Kensington East 1488 7		F. Smolenski		All Others	
Topo Quadrangle Section				FOS W/2R1	

Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Oil and Gas Management

58° 10' S 40° 32' 30" W
110° 1' W 79° 42' 30" W

(G)
Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Oil and Gas Management

NEW KENSINGTON EAST

21238
003-21238

RE
349 33
349 34

WELL RECORD AND COMPLETION REPORT

FIELD- RENTON - DEV

- In accordance with 25 Pa. Code 78.122(a), a Well Record must be submitted to the Department within 30 calendar days of cessation of drilling or altering a well.
- In accordance with 25 Pa. Code 78.122(b), a Completion Report must be submitted within 30 calendar days after completion of the well. In addition, the information on land application of topsoil water and disposal of residual waste (including contaminated drill cuttings) in a pit is to be filed with the Completion Report (see ER-QG-75).

Well Operator Penneco Energy Corporation		Telephone Number 412-468-8232	
Address 200 Route 22, Delmont, PA		Zip 15626	
Permit Number 37-003-21238-00		Project Number	
Well Name Smolenski #1	Well Number	Serial Number PS-75	Acres 14
Township Plum Boro		County Allegheny	
Type of Well <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Oil <input type="checkbox"/> Injection <input type="checkbox"/> Storage <input type="checkbox"/> Disposal <input type="checkbox"/> Other (Specify)			

WELL RECORD
(Include Driller's Log on Reverse Side)

Drilling Method Rotary (Air <input checked="" type="checkbox"/> Mud <input type="checkbox"/> Cable Tool <input type="checkbox"/> Other <input type="checkbox"/> (Specify)	Date Drilling Started 11-13-89	Date Drilling Completed 11-17-89
Elevation 975'	Total Depth 4264'	7 1/2' Quadrangle New Kensington East

FM TD-BEALLIER

CASING AND TUBING RECORD

Hole Size	Pipe Size	Amount In Well	Material Behind Pipe		Packer/Hardware			Date Run
			Type and Amount	Type	Size	Depth		
15"	13-3/8"	34	Cuttings		N/A	N/A	N/A	11-13-89
8-3/4"	7"	1,817	Cement - 400 sacks		Float Shoe	7"	1,824	11-15-89
6-1/4"	4-1/2"	3,797	Cement - 175 sacks		Float Shoe	4-1/2"	3,804	11-17-89
	1-1/2"	1,046	N/A		N/A	N/A	N/A	11-30-89

Cement return on surface casing? <input checked="" type="checkbox"/> Yes	T.D.	D.D.	D.P.I.	Class	O'G	Lease
	4264		3666	D	FI	

COMPLETION REPORT
READ FM-BRADFORD

Perforation Record			Stimulation Record						
Date	Interval Perforated		Date	Interval Treated	Fluid		Propping Agent		Average Injection Rate
	From	To			Type	Amount	Type	Amount	
11-28	3,660	3,666	11-28	3,660-3,666	Water	12,500	Sand	15,000#	26 BPM
11-28	3,348	3,351	11-28	3,348-3,351	Water	10,500	Sand	13,000#	25 BPM
11-28	3,036	3,072	11-28	3,036-3,072	Water	30,500	Sand	48,000#	30 BPM
11-28	2,957	2,964	11-28	2,957-2,964	Water	10,500	Sand	13,000#	25 BPM

Natural Open Flow 124 MCF	Natural Rock Pressure Not Taken	Hours N/A	Days
After Treatment Open Flow 400 MCF	After Treatment Rock Pressure 860#	Hours RECEIVED	Days

Name, Address, and Telephone Number of Well Service Companies		MAY 21 1990
D. Hill Drilling Co.	Rte. 321 South, Kane, PA 16735	814-837-6612
Dovell Schlumberger	P. O. Box 437, Blacklick, PA 15716	412-459-7900
Allegheny Nuclear Surveys, Inc.	Elderton, PA 15736	412-354-3090

003-21238

B2

DRILLER'S LOG OF FORMATIONS						
Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Shale	0	10				Driller's Log
Shale and Sand	10	34				
Sand and Shale	34	250			1" @ 90'	
Sand and Shale	250	425				
Coal	425	428				
Sand and shale	428	459				
Sand and Shale	459	950			1/2" @ 500'	
Sand and Shale	950	1,400				
Sand and Shale	1,400	1,850			1" @ 1650'	
Sand and Shale	1,850	1,950				
Sand and Shale	1,950	2,516	2217'			
Shale and Sand	2,516	3,170				
Sand and Shale	3,170	3,830				
Shale	3,830	4,264				
T.D.	4,264					
	Bottle ←					
<u>GEOPHYSICAL LOG DATA</u>						
	Hundred Foot				1171-1835	
	Gordon				2018-2034	
	Fourth				2120-2171	
	Fifth				2177-2228	
	Speechley Stray				2955-2965	
	Speechley				3032-3072	

PENNERO ENERGY CORPORATION

BY: [Signature]
Operator's Signature

Vice-President
Title

12-17-89
Date

FOR OFFICIAL USE ONLY

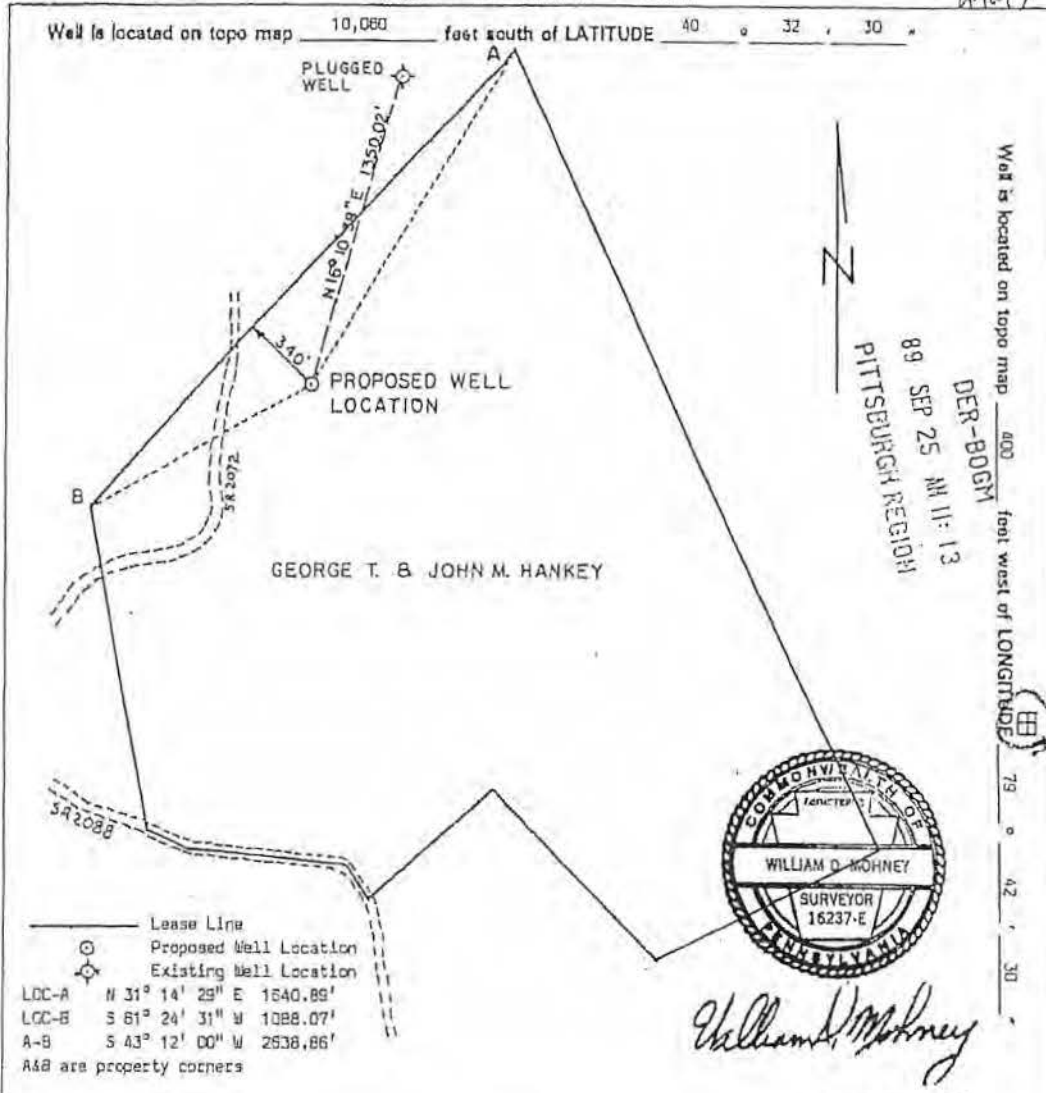
Reviewed By William Prosser 2-2-90
Date

Comments _____

WELL LOCATION PLAT

442937

003-21240



Include description of the property and courses and distances of the well(s) location to two or more permanent identifiable points or land marks, all buildings and water supplies within 200', all springs, bodies of water and streams within 100' identified on the most current 7 1/2" topographic map and wetlands within 100'. Reference to buildings, springs, bodies of water wetlands and water supplies within 1,000 is not required for well plugging.

Denotes location of well on 7 1/2" topo map Permit # 39-608-21240-00 Project #

Pennoco Oil Company, Inc.		Revision	<input type="checkbox"/>	W. D. Mohney
Well Permitter/Registrant 200 U.S. Route 22		Alteration	<input type="checkbox"/>	Surveyor/Engineer
Address Delmont, PA 15626		Storage Recondition	<input type="checkbox"/>	H-1
George T. & John M. Hankey		New Location	<input checked="" type="checkbox"/>	Drawing Number
Surface Owner N/A		Drill Deeper	<input type="checkbox"/>	9-7-89
Surface Lessor (if any) Hankey		Abandonment	<input type="checkbox"/>	Date
Farm Name 1 PH-84		Registration	<input type="checkbox"/>	1" = 600'
Well No. Tract Serial No. 162.9S 1250		Plugging	<input type="checkbox"/>	Scale
Acres Ground Elevation None 4260		Surface landowner and water purveyor with water supply within 1,000'		Approximate course and distance to water supply
Angle of Deviation (Drilling) Allighery		G.T. & J.M. Hankey		S 11° 30' W 350'
County 1408 Murkissity		Approximate course and distance to water supply		RECEIVED
New Kensington East 7		G.T. & J.M. Hankey		OCT 20 1989
Topo Quadrangle Section		PA GEOLOGICAL SURVEY		
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		Owner/Operator/Lessee Consolidated Coal Co. G.T. & J.M. Hankey		Workable Coal Seams Name of Seam Upper Freeport All others
				FJB 10/3/89

RE

10060'S 40°32'30"
400'W 79°42'30"
(G)

NEW KENSINGTON EAST

21240
003-21240-2
L

ER-00-4: Rev. 3/89

D# 39935
27436

Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Oil and Gas Management

WELL RECORD AND COMPLETION REPORT

FIELD - RENTON-DEV

- In accordance with 25 Pa. Code 78.122(a), a Well Record must be submitted to the Department within 30 calendar days of cessation of drilling or altering a well.
- In accordance with 25 Pa. Code 78.122(b), a Completion Report must be submitted within 30 calendar days after completion of the well. In addition, the information on land application of topsoil water and disposal of residual waste (including contaminated drill cuttings) in a pit is to be filed with the Completion Report (see ER-OG-75).

Well Operator Pennaco Energy Corporation		Telephone Number 412-468-8232	
Address 200 Route 22, Delmont, PA		15626	
Permit Number 37-003-21240-00		Project Number	
Firm Name Hankey #1	Firm Number	Serial Number PH-84	Area 162
Township Plum Borough		County Allegheny	
Type of Well <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Oil <input type="checkbox"/> Injection <input type="checkbox"/> Storage <input type="checkbox"/> Disposal <input type="checkbox"/> Other (Specify)			

WELL RECORD
(Include Driller's Log on Reverse Side)

Drilling Method Rotary (Air <input checked="" type="checkbox"/> Mud <input type="checkbox"/> Cable Tool <input type="checkbox"/> Other <input type="checkbox"/> (Specify)	Date Drilling Started 12-5-89	Date Drilling Completed 12-15-89
Elevation 1250'	Total Depth 4530'	7 1/2' Quadrangle New Kensington East

FMTD - BRAUER

CASING AND TUBING RECORD

Hole Size	Pipe Size	Amount In Well	Material Behind Pipe Type and Amount	Packer/Hardware			Date Run
				Type	Size	Depth	
15"	13-3/8"	26	Cuttings	N/A	N/A	N/A	12-5-89
12-1/4"	9-5/8"	730	Cement - 265 sacks	Float Shoe	9-5/8"	730	12-12-89
8-3/4"	7"	2,100	Cement - 295 sacks	Float Shoe	7"	2,108	12-13-89
6-1/4"	4-1/2"	4,142	Cement - 175 sacks	Float Shoe	4-1/2"	4,150	12-16-89
	1-1/2"	3,333	N/A	N/A	N/A	N/A	12-21-89

Cement return on surface casing? yes

4530	D.D.	D.P.I.	Class	O'G	Lease
		3958	D		

COMPLETION REPORT
PROD BY B and F and Ford

Perforation Record			Stimulation Record						
Date	Interval Perforated		Date	Interval Treated	Fluid		Propping Agent		Average Injection Rate
	From	To			Type	Amount	Type	Amount	
12-20	3,036	3,053	12-20	3036-3053	Water	16,500	Sand	21,000#	29BPM
12-20	3,089	3,501	12-20	3089-3501	Water	12,500	Sand	15,000#	28BPM
12-20	3,321	3,351	12-20	3321-3351	Water	30,500	Sand	48,000#	32BPM
12-20	3,243	3,251	12-20	3243-3251	Water	12,500	Sand	15,000#	29BPM

Natural Open Flow 158 MCF	Natural Rock Pressure Not Taken	Hours 90	Days
After Treatment Open Flow 300 MCF	After Treatment Rock Pressure 850#	Hours 24	Days

RECEIVED
MAY 21 1990
DNR-106

Name, Address, and Telephone Number of Well Service Companies		PA GEOLOGICAL SURVEY
F. D. Hill Drilling Co.	Rte. 321 South, Kane, PA 14833	412-817-6612
Dowell Schlumberger	P. O. Box 437, Blacklick, PA 15716	412-459-7900
Allegheny Nuclear Surveys, Inc.	Elderton, PA 15736	412-354-3090

003-21240

A 2

DRILLER'S LOG OF FORMATIONS						
Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Shale	0	20				Driller's Log
Sand	20	25				
Sand	25	40				
Shale and Sand	40	340			2 1/2" @ 224	
Sand and Shale	340	680				
Gob	680	685				
Shale and Sand	685	755				
Sand and Shale	755	1187			1/2" @ 900'	
Sand and Shale	1187	1550				
Shale and Sand	1550	2000			2" @ 1955	
Sand and Shale	2000	2146				
Sand	2146	2210				
Red Rock and Shale	2210	2500	2500'			
Shale and Sand	2500	3100				
Shale	3100	3261				
Sand	3261	3291				
Shale	3291	3441				
Sand	3441	3471				
Shale	3471	3651				
Sand	3651	3581				
Shale	3581	3951				
Sand	3951	3981				
Shale	3981	4530				
TD	4530					
Buller						
GEOPHYSICAL LOG DATA						
Hundred Foot					2058-2118	
Fourth					2452-2491	
Fifth					2493-2517	
Speechley Stray					3242-3252	
Speechley					3320-3352	
1st Balltown					3498-3502	
2nd Balltown					3630-3640	
2nd Bradford					3935-3959	

PENNECO ENERGY CORPORATION

BY: [Signature]
Operator's Signature

Vice-President
Title

1-15-90
Date

FOR OFFICIAL USE ONLY

William Person 7-6-90
Reviewed By Date

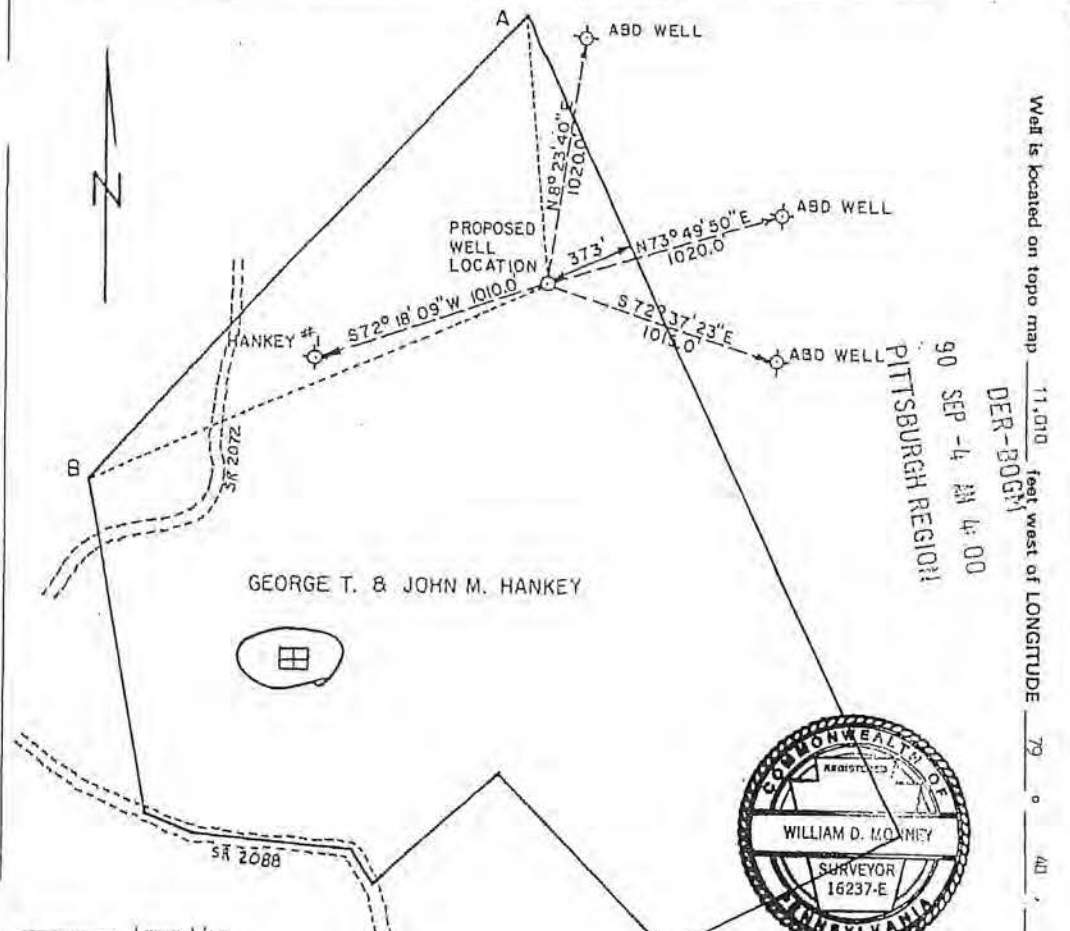
Comments _____

GEO COPY

WELL LOCATION PLAT

C-45349 003-21253

Well is located on topo map 9710 feet south of LATITUDE 40 0 32 30



Well is located on topo map 11,010 feet west of LONGITUDE 79 0 40 00

90 SEP -4 AM 4:00
DER-B0631
PITTSBURGH REGION

GEORGE T. & JOHN M. HANKEY



William D. Mohney

- Lease Line
- Proposed Well Location
- ⊙ Existing Well Location
- LCC - A = N 5° 47' 31" W 1101.53'
- LCC - B = S 66° 39' 08" W 2088.61'
- A - B = S 43° 12' 00" W 2638.86'
- A & B are property corners

Department Use Only

G	C st
---	------

Include description of the property and courses and distances of the well(s) location to two or more permanent identifiable points or land marks, all buildings and water supplies within 200', all springs, bodies of water and streams within 100' identified on the most current 7 1/2" topographic map and wetlands within 100'. Reference to buildings, springs, bodies of water wetlands and water supplies within 1,000 is not required for well plugging.

Denotes location of well on 7 1/2" topo map Permit # 37-202-21253-e Project #

Penneco Oil Company, Inc.		Revison <input type="checkbox"/>	W.D. Mohney
Well Permittee/Registrant 200 U.S. Route 22		Alteration <input type="checkbox"/>	Surveyor/Engineer H-2
Address Delmont, PA 15625		Storage Recondition <input type="checkbox"/>	Drawing Number 8-7-89
George T. & John M. Hankey		New Location <input checked="" type="checkbox"/>	Date 1" = 800'
Surface Owner N/A		Drill Deeper <input type="checkbox"/>	Scale
Surface Lessor (if any) Hankey		Abandonment <input type="checkbox"/>	Approximate course and distance to water supply RECEIVED
Farm Name 2 PH-85		Registration <input type="checkbox"/>	
Well No. 162,95	Tract PH-85	Plugging <input type="checkbox"/>	None
Acres None	Ground Elevation 4235		
Angle of Deviation (Drilling) Allegheny County	Anticipated TD Plum Boro		
County New Kensington East 1408	Municipality B		
Topo Quadrangle	Section		
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		Workable Coal Seams Owner/Operator/Lessor Consolidated Coal Co. G.T. & J.M. Hankey	Name of Seams Upper Freeport All others
			cum 9/19/90

NEW KENSINGTON EAST
003-21253 2

RE D# 41126
ER-00-4: Rev. 3/89 41127

Commonwealth of Pennsylvania
Department of Environmental Resources
Bureau of Oil and Gas Management

9710' S 40° 32' 30"
11010' W 79° 40' 00"
(H)

WELL RECORD AND COMPLETION REPORT

- In accordance with 25 Pa. Code 78.122(a), a Well Record must be submitted to the Department within 30 calendar days of cessation of drilling or altering a well.
- In accordance with 25 Pa. Code 78.122(b), a Completion Report must be submitted within 30 calendar days after completion of the well. In addition, the information on land application of topsoil water and disposal of residual waste (including contaminated drill cuttings) in a pit is to be filed with the Completion Report (see ER-00-75).

RENTON - DEV

Well Operator Penneco Energy Corporation		Telephone Number 412-468-8232	
Address 200 U.S. Route 22, Delmont, PA			Zip 15626
Permit Number 37-003-21253-00	Project Number		
Farm Name Hankey #2	Farm Number	Serial Number PH-85	Acres 162.95
Township Plum Borg		County Allegheny Co.	
Type of Well <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Oil <input type="checkbox"/> Injection <input type="checkbox"/> Storage <input type="checkbox"/> Disposal <input type="checkbox"/> Other (Specify)			

WELL RECORD
(Include Driller's Log on Reverse Side)

Drilling Method Rotary (Air <input checked="" type="checkbox"/> Mud <input type="checkbox"/> Cable Tool <input type="checkbox"/> Other (Specify)	Date Drilling Started 3-5-91	Date Drilling Completed 3-12-91
Elevation 1125	Total Depth 4038	7 1/2' Quadrangle New Kensington East

BRADLER

CASING AND TUBING RECORD

Hole Size	Pipe Size	Amount in Well	Material Behind Pipe		Packer/Hardware			Date Run
			Type	Amount	Type	Size	Depth	
15"	13-3/8"	34.30	Sanded in		N/A	N/A	N/A	3-5-91
12-1/4"	9-5/8"	657	Cement - 240 Sacks		Float Shoe	9-5/8"	665	3-6-91
8-3/4"	7"	2013	Cement - 280 Sacks		Float Shoe	7"	2014	3-8-91
			T.D.	D.D.	D.P.L.	Class	O G	Lease
			4038		2385	D		

Cement return on surface casing? yes no

COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated		Date	Interval Treated	Fluid		Propping Agent		Average Injection Rate
	From	To			Type	Amount	Type	Amount	

Natural Open Flow 490 M cFpd	Natural Rock Pressure 70 psi	Hours 72	Days
After Treatment Open Flow	After Treatment Rock Pressure	Hours	Days

JUL 21 1992

Name, Address, and Telephone Number of Well Service Companies	
F.D. Hill Drilling Co., Rte 321 South, Kane, PA 16735	814-837-6612
Universal Well Services, P.O. Box 305, Punxsutawney, PA 15767	814-938-2051
Allegheny Nuclear Surveys, Inc., Elderton, PA 15736	412-354-2090

PITTSBURGH RECEIVED
JUL 19 11:10 AM '92
DER-BGM

LEE - 21253

003-21253

DRILLER'S LOG OF FORMATIONS

Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Shale	10	10				Drillers Log
Sand	10	40				
Red Bed	40	48				
Red BED & Shale	48	110				
Sand & Shale	110	350			Damp at 78'	
Shale & Sand	350	590			1/2" @ 110'	
Gob (Mine)	590	597				
Shale & Sand	597	691				
Sand & Shale	691	960			1/2" @ 750'	
Shale & Sand	960	1010				
Sand & Shale	1010	1380				
Sand & Shale	1380	1762				
Sand & Shale	1762	2046			2" @ 1830'	
Sand, Red Rock, & Shale	2046	2350			2" @ 1865'	
Sand & Shale	2350	2870	2385			
Sand & Shale	2870	3375				
Sand & Shale	3375	3875				
Sand & Shale	3875	4038				
T D	4038					

A 2

[Signature]
Operator's Signature

[Signature]
Title

6/28/91
Date

FOR OFFICIAL USE ONLY

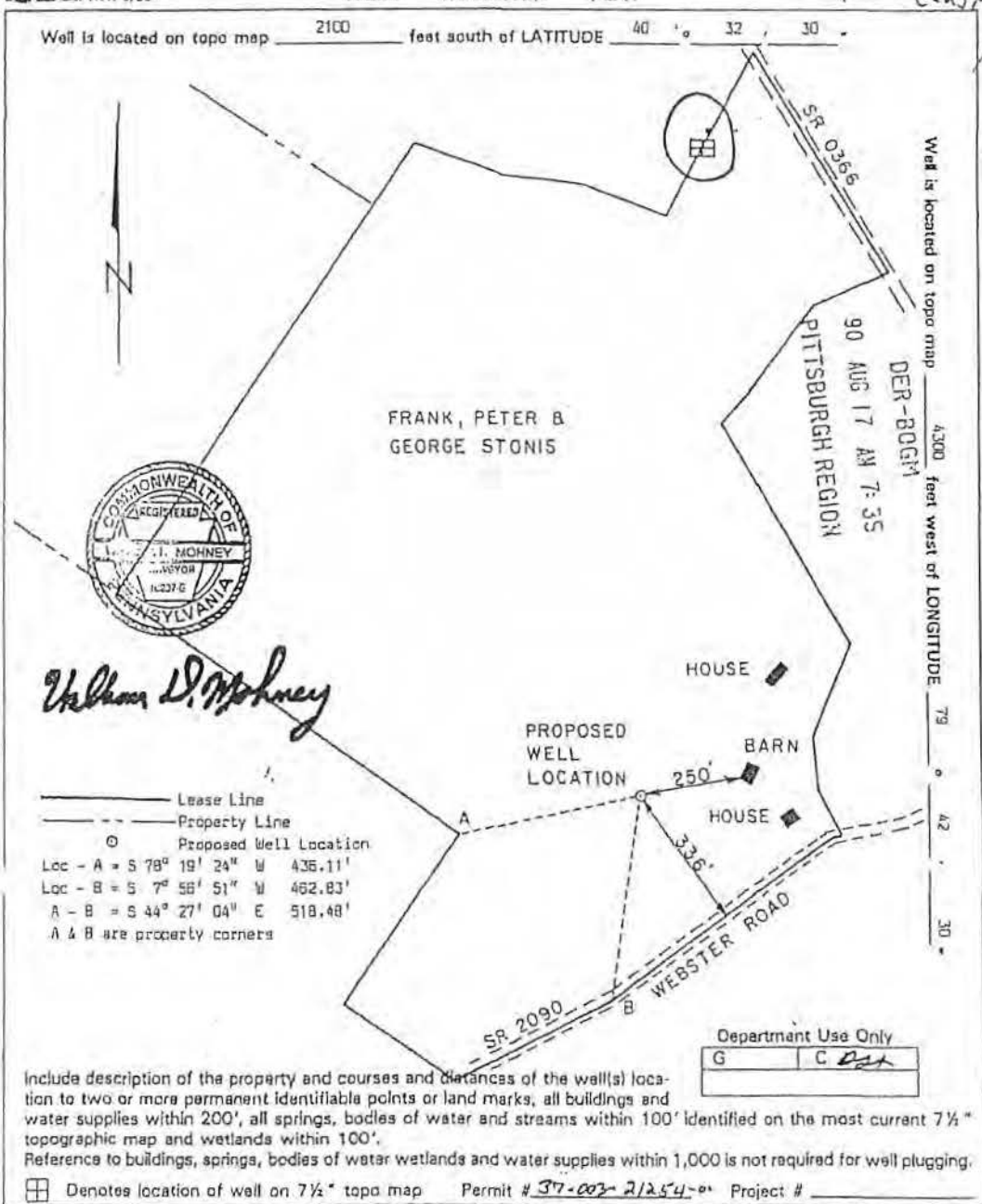
[Signature] 5-19-92
Reviewed By Date

Comments _____

GEO COPY

WELL LOCATION PLAT

C-454 003-21254



William D. Mohney

- Lease Line
- - - Property Line
- ⊙ Proposed Well Location
- Loc - A = S 78° 19' 24" W 436.11'
- Loc - B = S 7° 58' 51" W 462.83'
- A - B = S 44° 27' 04" E 518.48'
- A & B are property corners

Permae Oil Company, Inc. Well Permittee/Registrant 200 U.S. Route 22 Address Delmont, PA 15626		Revison <input type="checkbox"/> Alteration <input type="checkbox"/> Storage Recondition <input type="checkbox"/> New Location <input checked="" type="checkbox"/> Drill Deeper <input type="checkbox"/> Abandonment <input type="checkbox"/> Registration <input type="checkbox"/> Plugging <input type="checkbox"/>	W.D. Mohney Surveyor/Engineer S-1 Drawing Number 7-17-90 Date 1" = 300' Scale PA GEOLOGICAL SURVEY RECEIVED OCT 5 1990
Frank, Peter and George Stonis Surface Owner N/A		Surface landowner and water purveyor with water supply within 1,000': Richard Borowski, John Schech, Walter Hummel, Stan Borowski, Charles Hemphill, Richard Armbryel, Walter Casella, Ed Rockwell, Ed Rockwell	Approximate course and distance to water supply: S 20° 00' E 600' S 82° 30' E 950' S 1° 00' E 750' S 29° 00' E 590' S 39° 00' E 600' S 71° 30' E 800' S 71° 30' E 910' S 75° 00' E 1000' S 75° 00' E 900'
Well No. 50.0 Acres None Angle of Deviation (Drilling) Allegheny Co. Township New Kensington East 1408 Section 7	Tract PS-90 Serial No. 940 Ground Elevation 3550 Anticipated TD Plum Boro Municipality 7	Owner/Operator/Lessor Tough Technology & Util. Corp Name of State Frank Stonis et al All others cum 9/26/90	

NEW KENSINGTON EAST
21254
1003-21254
DER-0000

2100' s 40° 32' 30" W
4300' w 79° 42' 30" E
40676
40677
(4)

WELL RECORD AND COMPLETION REPORT

FEB-6 AM 11:20

PITTSBURGH REGION

- In accordance with 25 Pa. Code 78.122(a), a Well Record must be submitted to the Department within 30 calendar days of cessation of drilling or altering a well.
- In accordance with 25 Pa. Code 78.122(b), a Completion Report must be submitted within 30 calendar days after completion of the well. In addition, the information on land application of topsoil water and disposal of residual waste (including contaminated drill cuttings) in a pit is to be filed with the Completion Report (see ER-OG-75).

FIELD **RENTON-DEV**

Well Operator Penneco Energy Corporation		Telephone Number 412-468-8232	
Address 200 Route 22, Delmont, PA		Zip 15626	
Permit Number 37-003-21254-00		Project Number	
Farm Name Stonis #1	Farm Number	Serial Number PS-90	Acres 50
Township Derry Boro		County Allegheny	
Type of Well <input checked="" type="checkbox"/> Gas <input type="checkbox"/> Oil <input type="checkbox"/> Injection <input type="checkbox"/> Storage <input type="checkbox"/> Disposal <input type="checkbox"/> Other (Specify)			

WELL RECORD
(Include Driller's Log on Reverse Side)

Drilling Method Rotary (Air <input checked="" type="checkbox"/> Mud <input type="checkbox"/> Cable Tool <input type="checkbox"/> Other (Specify)	Date Drilling Started 10-19-90	Date Drilling Completed 10-26-90
Elevation → 940'	Total Depth 4110'	7 1/2' Quadrangle New Kensington East

F M T D - **BEALLER**

CASING AND TUBING RECORD

Hole Size	Pipe Size	Amount In Well	Material Behind Pipe		Packer/Hardware			Date Run
			Type and Amount	Type	Size	Depth		
15"	17-3/8"	32	Cuttings	N/A	N/A	N/A	10-19-90	
17-3/4"	16"	15	Cuttings	N/A	N/A	N/A	10-19-90	
12-1/2"	9-5/8"	426	Cement - 260 Sacks	Float shoe	9-5/8"	434	10-22-90	
8-3/4"	7"	1772	Cement - 215 Sacks	Float shoe	7"	1780	10-24-90	
6-1/4"	4-1/2"	3462	Cement - 170 Sacks	Float shoe	4-1/2"	3470	10-26-90	

Cement return on surface casing? yes no

COMPLETION REPORT

PROD FM - **BRAD**

Perforation Record			Stimulation Record						
Date	Interval Perforated		Date	Interval Treated	Fluid		Propping Agent		Average Injection Rate
	From	To			Type	Amount	Type	Amount	
11-8-90	3324'	3328'	11-8-90	3324 - 3328	Water	11,800 Gal	Sand	15,000#	26.2BPM
11-8-90	3008'	3034'	11-8-90	3008-3034	Water	34,000 Gal	Sand	62,000#	23.2BPM

T.D.	D.D.	D.P.I.	Class	O G	Lease
4110		3328	D	I	I

Natural Open Flow	Not Taken	Natural Rock Pressure	Not Taken
After Treatment Open Flow	200 MCFD	After Treatment Rock Pressure	920#
		Hours	Days
		72	

RECEIVED
APR 3 1991

PA GEOLOGICAL SURVEY
(Oil & Gas Geology Division)

Name, Address, and Telephone Number of Well Service Companies		
D. Hill Drilling Co.	Rte. 321 South, Kane, PA 16735	814-837-6612
Halliburton Services, Inc.	P. O. Box 427, Indiana, PA 15701	412-479-9046
Allegheny Nuclear Surveys, Inc.	Elderton, PA 15736	412-354-3090

11-19-91