

ATTACHMENT 9
PART 1



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

Binder #1

Penneco Environmental Solutions, LLC
Sedat #4A

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 United States Environmental Protection Agency Underground Injection Control Permit Application for a Class II Well <i>(Collected under the authority of the Safe Drinking Water Act. Sections 1421, 1422, and 40 CFR Part 144)</i>		For Official Use Only	
		Date Received 	
		Permit Number 	
Read Attached Instructions Before Starting			
I. Owner Name, Address, Phone Number and/or Email		II. Operator Name, Address, Phone Number and/or Email	
Penneco Environmental Solutions, LLC 6608 Route 22 Delmont, PA 15626 724-468-8232 dmarcj@penneco.com		Penneco Environmental Solutions, LLC 6608 Route 22 Delmont, PA 15626 724-468-8232 dmarcj@penneco.com	
III. Commercial Facility	IV. Ownership	V. Permit Action Requested	VI. SIC Code(s)
☒ Yes ☐ No	☒ Private ☐ Federal ☐ State/Tribal/Municipal	☒ New Permit ☐ Permit Renewal ☐ Modification ☐ Add Well to Area Permit ☐ Other	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		XI. Well Information	
☐ A. Operating Date Injection Started		☒ B. Conversion Date Well Constructed 06/21/2004	
☐ C. Proposed		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			
<i>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.</i>			
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)		Signature	Date Signed
D. Marc Jacobs, Jr. Senior Vice President			

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			II. Operator Name, Address, Phone Number and/or Email		
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III. Commercial Facility		IV. Ownership		V. Permit Action Requested	
☒ Yes ☐ No		☒ Private ☐ Federal ☐ State/Tribal/ Municipal		☒ 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)					
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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			XI. Well Information		
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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					
<i>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.</i>					
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 #	

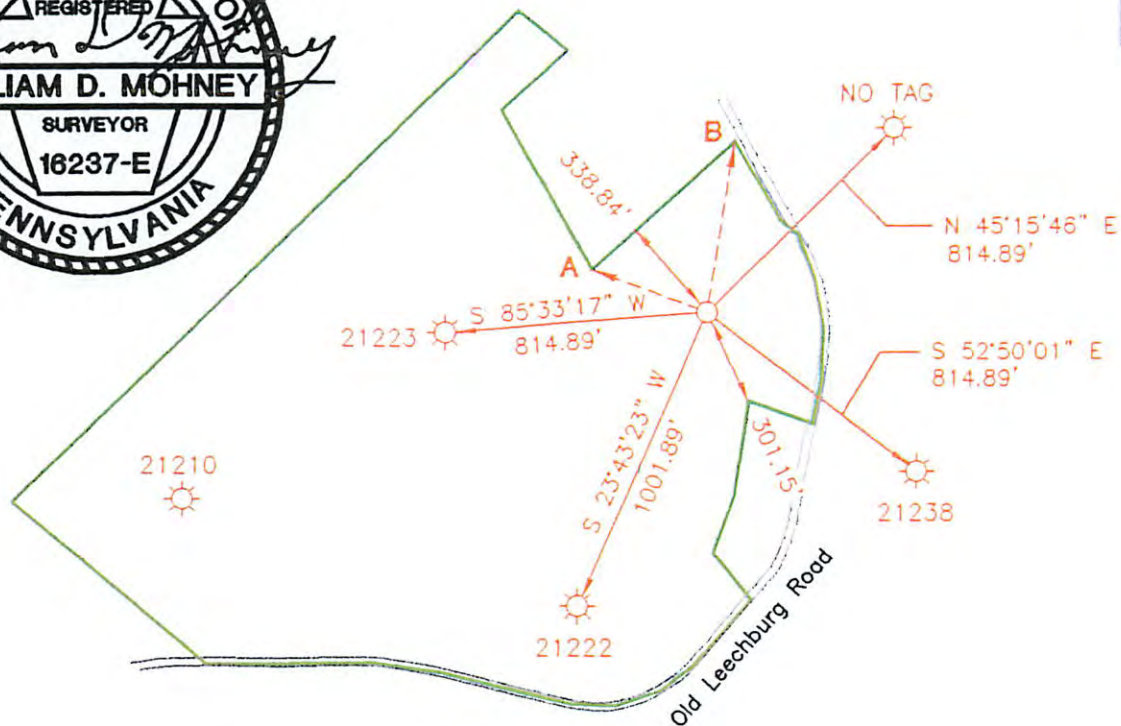
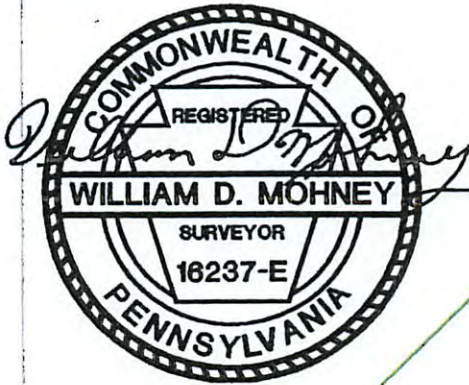
Well is located on topo map 5366.42 feet south of latitude 40 • 32 • 30 "

☐	Denotes location of well on topo map.
True Latitude: NORTH	
<u>40</u> °	<u>31</u> ' <u>36.9</u> "
True Longitude: WEST	
<u>79</u> °	<u>42</u> ' <u>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'	See Attached Sheet			Approximate Course and Distance to Water Supply	Noncoal Area		Owner, Lessee, or Operator of Workable Coal Seam	Name of Coal Seam Owned, Leased, or Operated		

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	Undelivarable	
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.

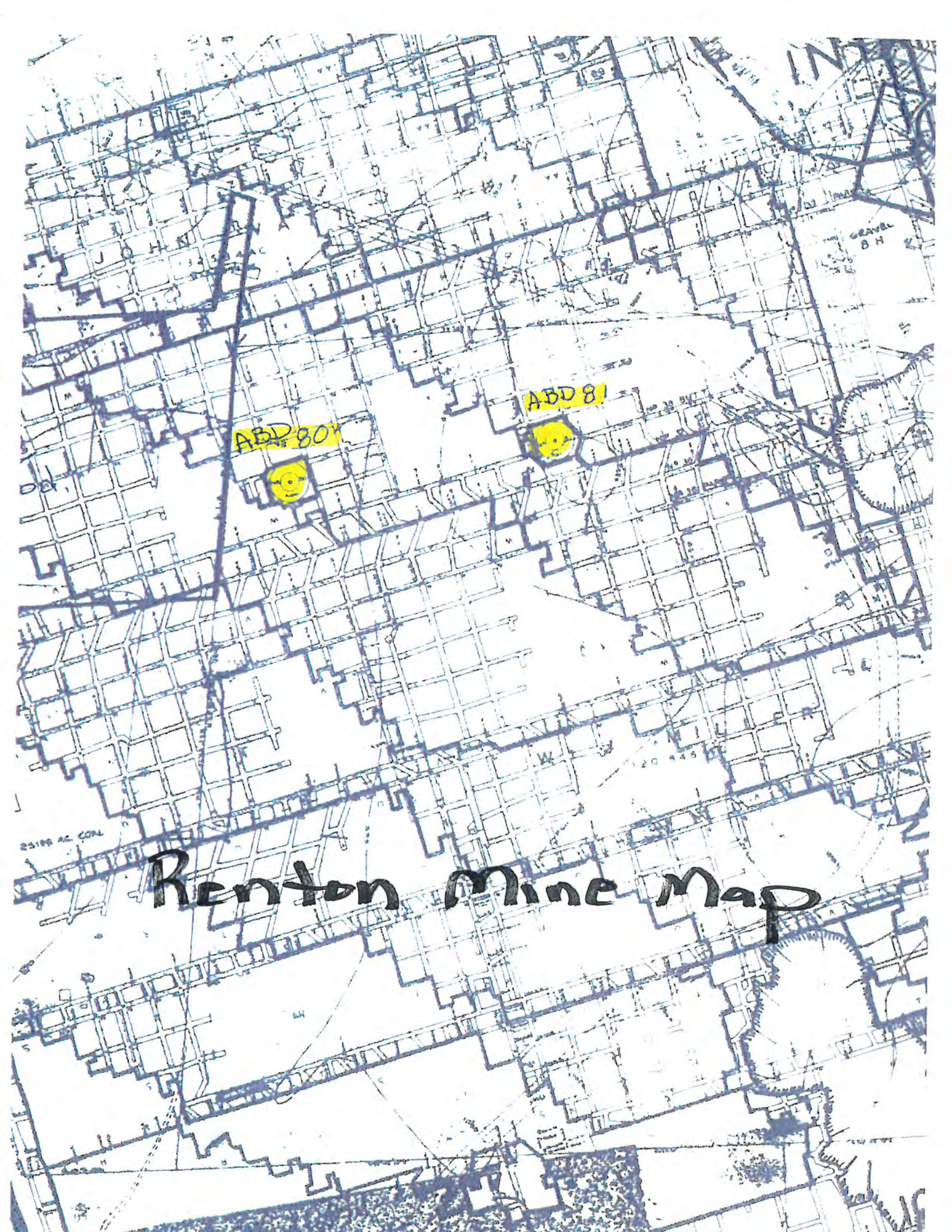
The response to comments and questions which follows consolidates and provides responses to questions and issues raised by people who sent timely written public comment during the public comment period and who provided oral comments at the public hearing. EPA wishes to thank the public for their informative 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.



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 Murrys ville 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 Murrys ville Storage field, approximately 4 mi south. The Murrys ville Storage Field targets the Venango Group. The Venango group is below the Murrys ville stratigraphically, and should not be affected by activities at the Sedat 3A. The nearest active storage field that targets the Murrys ville 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.

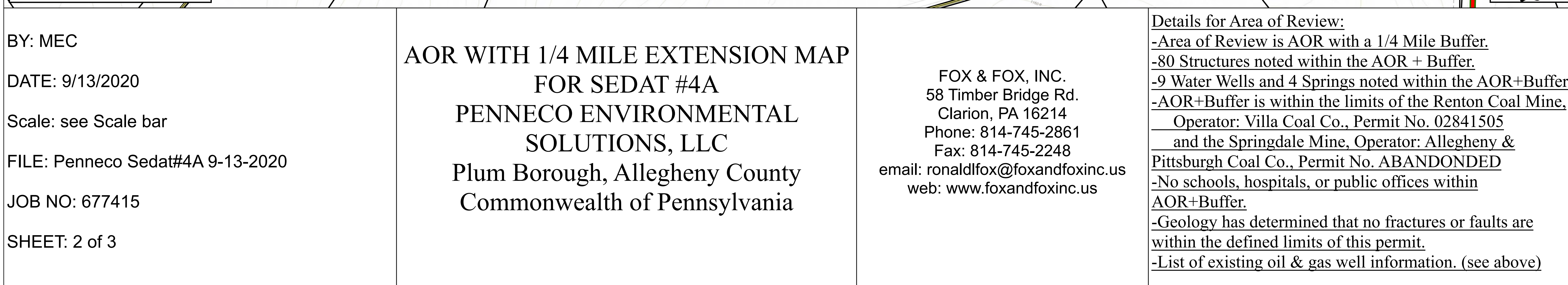
Conclusions

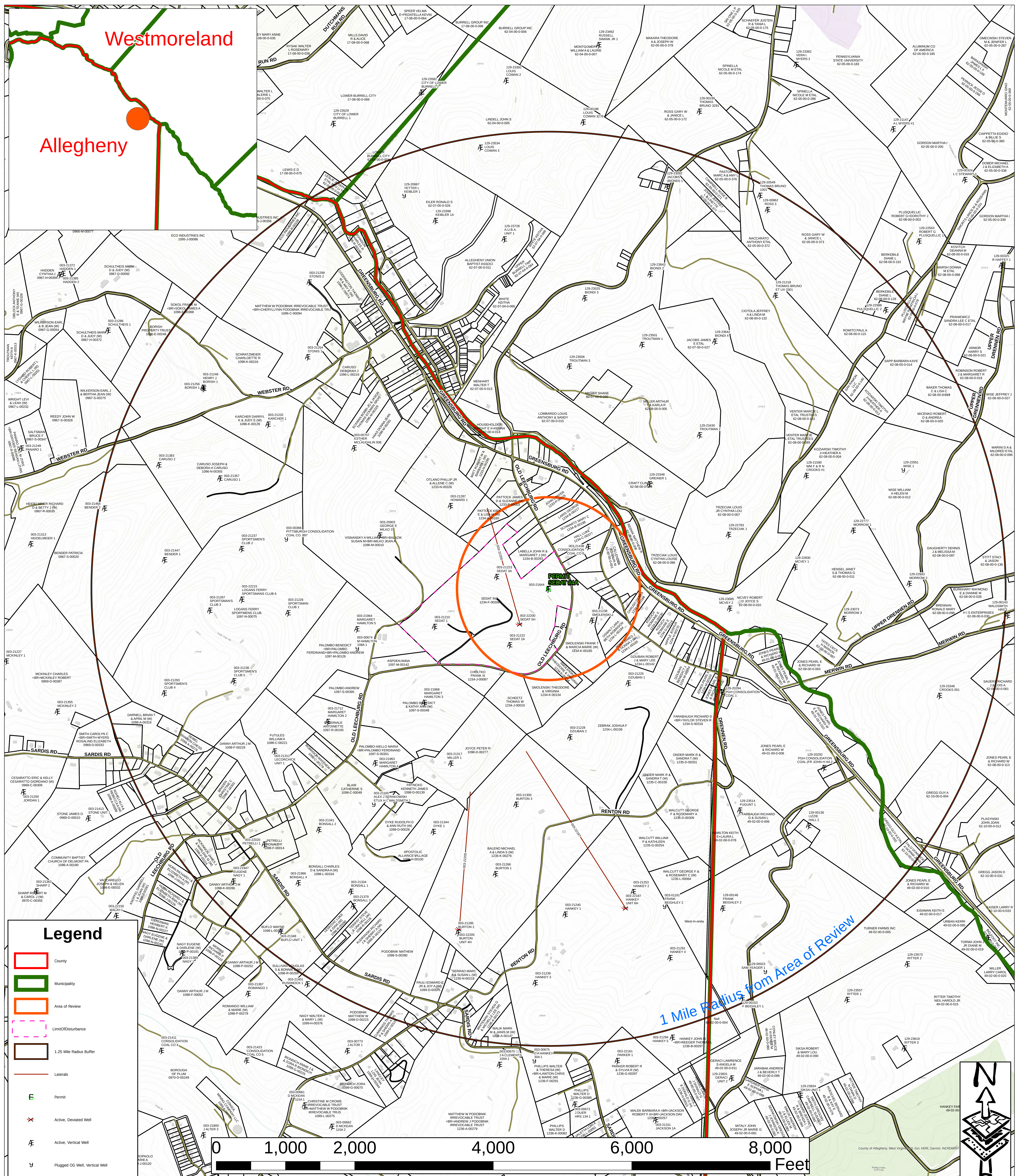
The Sedat 3A is completed in the Murrysville Formation, which is approximately 17,000 ft above basement rock, and is not located within a mile of any known or inferred faults. Seismic risk of injection into the Murrysville Formation is therefore low. The Murrysville formation has an upper confining layer 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.





BY: MEC

DATE: 5/13/2021

Scale: see Scale Bar

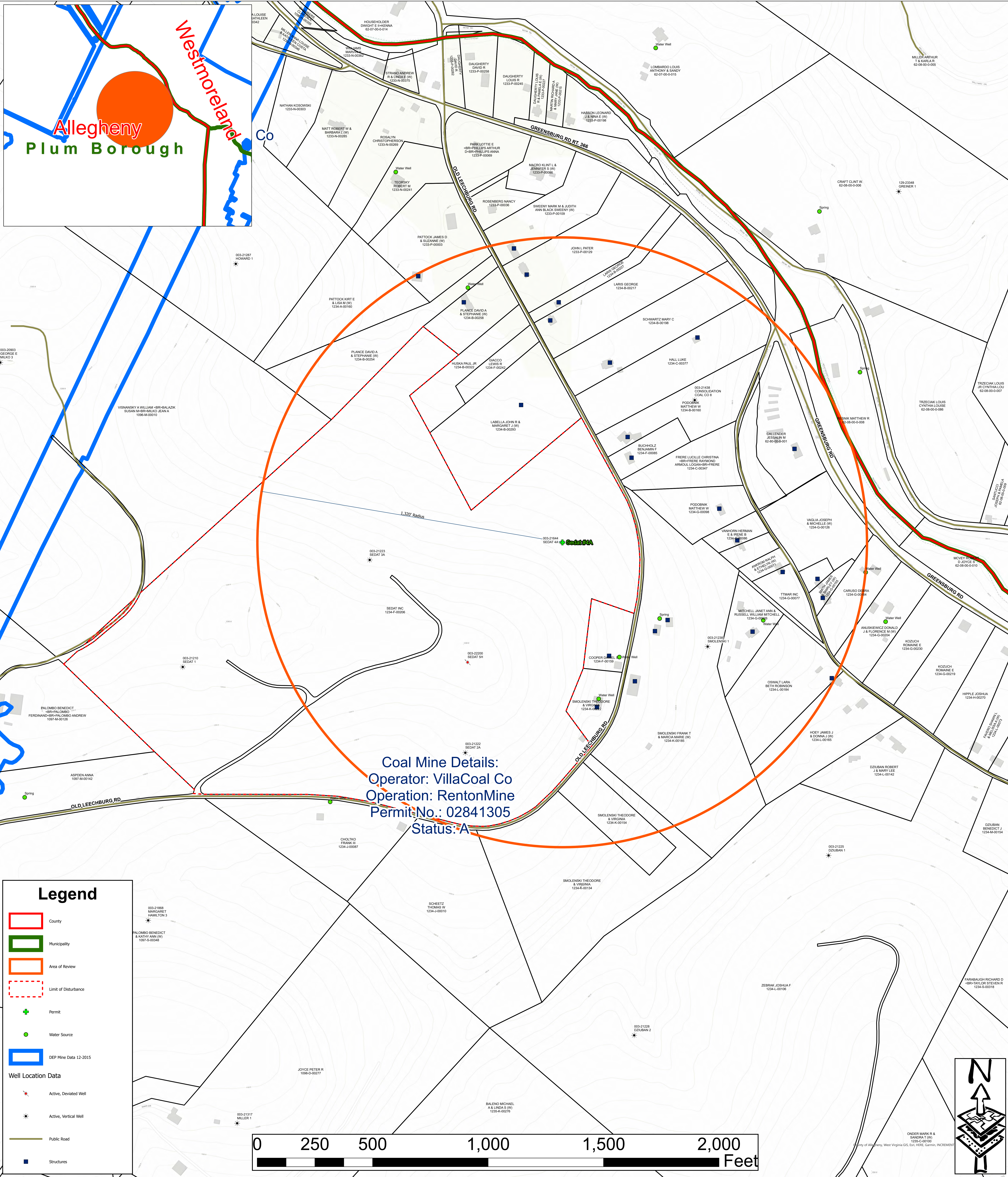
FILE: Penneco

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

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



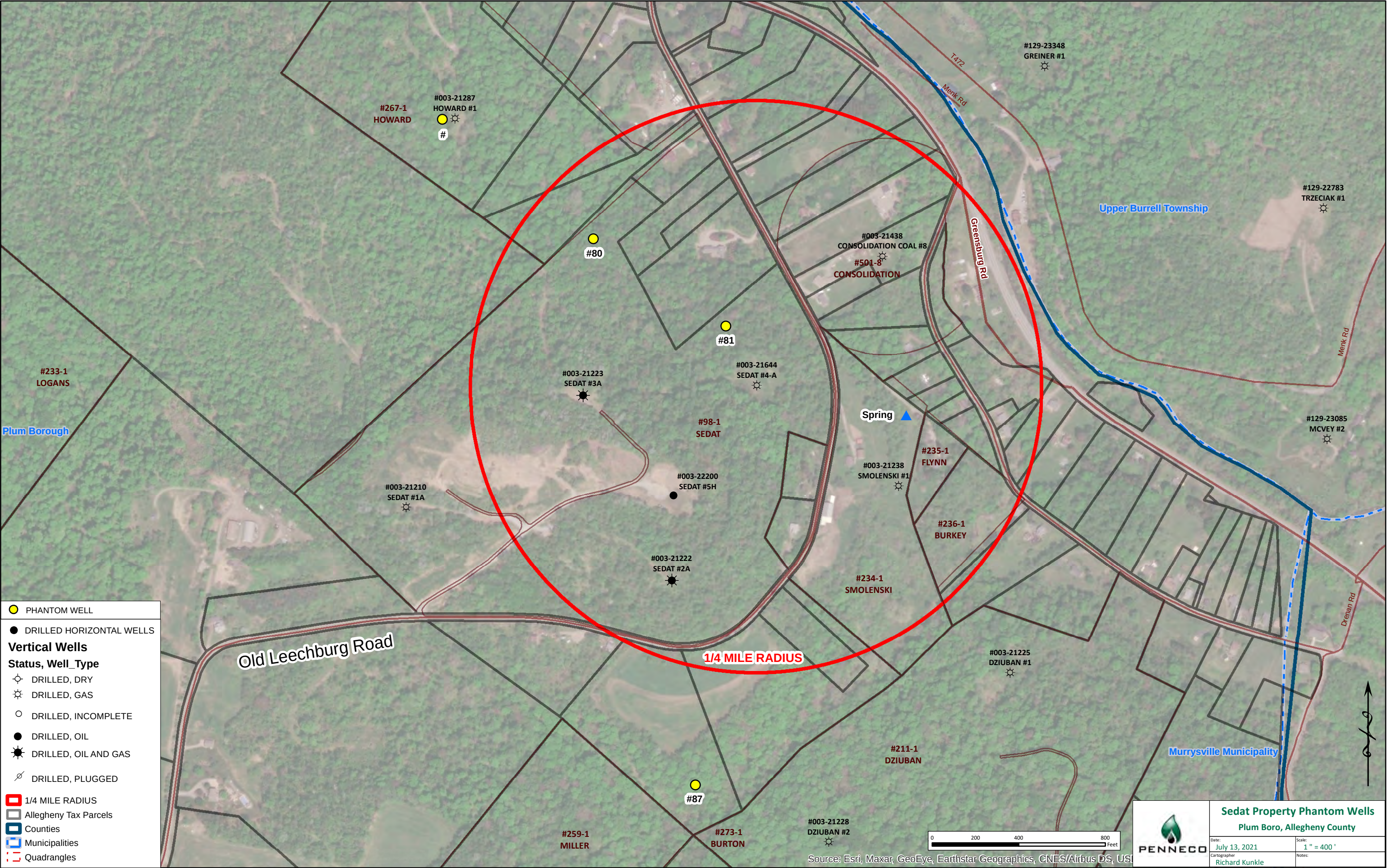
BY: MEC
DATE: 9/13/2020
Scale: see Scale Bar
FILE: Penneco Sedat#4A 9-13-2020
JOB NO: 677415
SHEET: 1 of 3

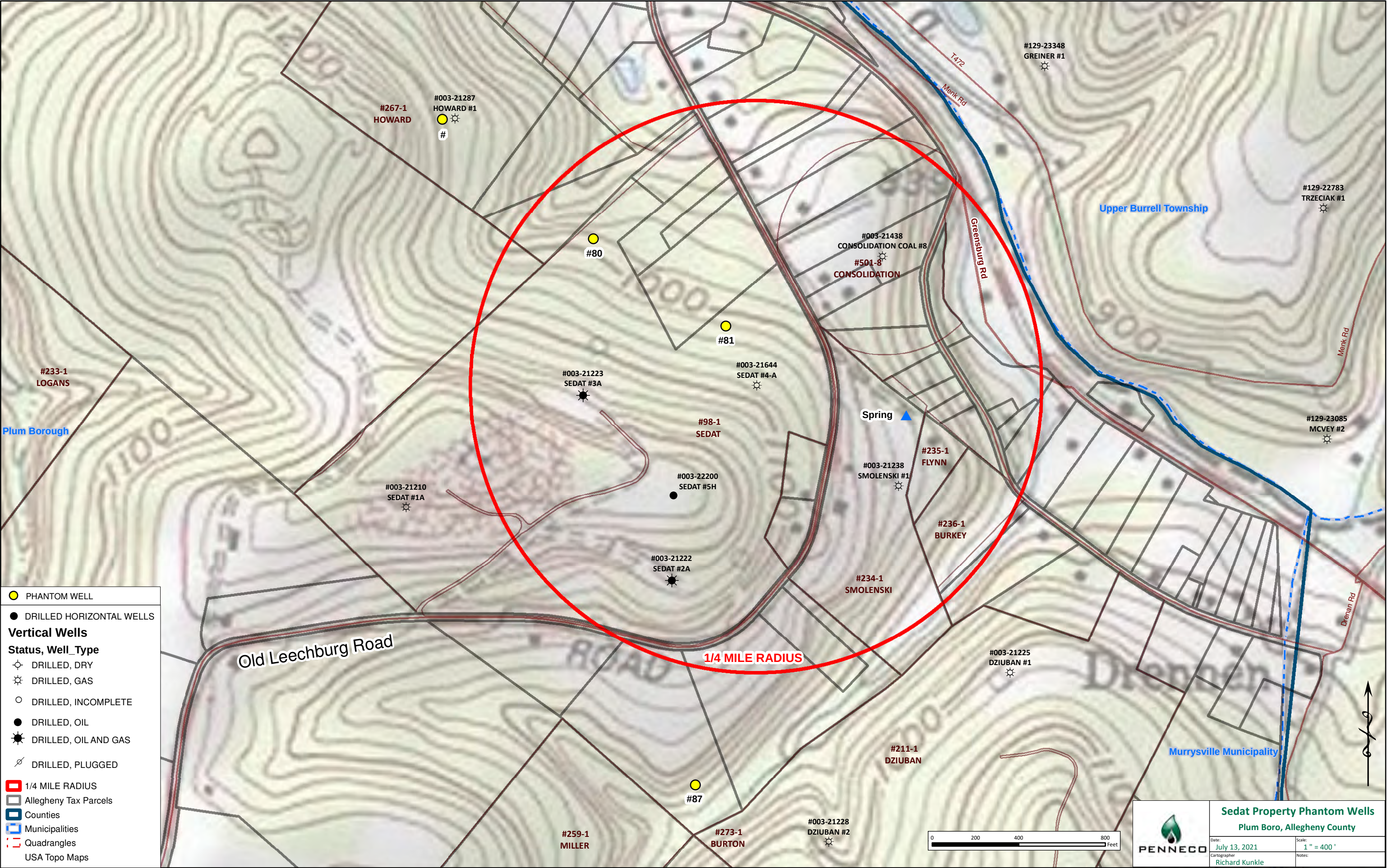
AREA OF REVIEW MAP
FOR SEDAT #4A
PENNECO ENVIRONMENTAL
SOLUTIONS, LLC
Plum Borough, Allegheny County
Commonwealth of Pennsylvania

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 J	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 SH	OIL	1/10/2012	Deviated Well	No





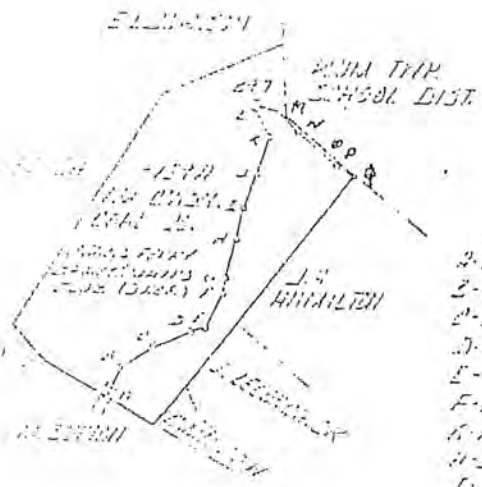
Sedat #4H Injection Well Inventory

	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

003-00366

Map No. N. E.
 Pg. Sl. Sk. 7613 Pg. 7
 Date



⊕ TAPED REF.

Point	Bearing	Distance
A-B	N 85° 22' E	321.5'
B-C	N 55° 34' 30" E	417.3'
C-D	N 58° 15' 30" E	381.5'
D-E	N 73° 5' 30" E	140.5'
E-F	N 26° 25' E	232.5'
F-G	N 12° 15' 30" E	152.2'
G-H	N 12° 15' 30" E	211.2'
H-I	N 12° 15' 30" E	212.3'
I-J	N 12° 15' 30" E	345.2'
J-K	N 12° 15' 30" E	252.7'
K-L	N 22° 34' 30" E	378.4' (to L)
L-M	S 71° 10' E	215.2'
M-N	S 53° 14' 30" E	222.2'
N-O	S 41° 13' E	212.5'
O-P	S 43° 14' 30" E	147.4'
P-Q	S 52° 17' 30" E	152.8' (to Q)

135
 146.4
 133.8
 132.3
 246.4

Map Location
 Well Depth
 Ownership
 Notes

County Acres 127 Lease No. 6228
 Well Name Co. Serial No. 177
 Name of Deviation, if any
 Location Quadrangle
 Township
 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
 ⊕ 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

003-00366 280

Locate by Sketch

COL. NAME	THICK-NESS	FROM	TO	GEOL. NAME	Quad.	Locate by Sketch
UF		334	341			
LK		535	538			
Murrayville		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

FMTO - } Ventrino
PROD FM - }
FIELD - Ranton
ELEV. 900'

DATE: June 23, 1964

SUBJECT: "PROPOSED ALTERNATE METHOD OF PLUGGING AND VENTING"

Well No. 897 Farm Pgh. Consolidation Coal Co. #1 Township Plum Boro County Allegheny

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

"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</u> <u>Water</u>	<u>Pipe</u> <u>Size</u>	<u>Amt.</u> <u>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	1804	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
" "	2131	2141				Wall packed off @
Total Depth	2134					2065'

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]

OG P.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. H. Palin

Library, Ru.

Address

Allegheny-Pittsburgh Coal Co.
Coal Operator or Owner

Mr. H. J. Walters, Chief Engineer

Castle Hill, Greensburg, Pa.
Address

Coal Operator or Owner

The Peoples Natural Gas Company

Well Operator

Two Gateway Center

Pittsburg, Pennsylvania 15222

Address

July 22,

Date _____

Plum Boro

Township

Allegheny

County

Pittsburgh Consolidation Coal Company

Farm

Well (Farm) No. 2 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, 1961, and that the well was plugged as follows:

Filling Material and Plugs	From	To	Casing and Tubing		
			Size	Pulled	Left
Run on 3" tubing and pull on about 5' below surface, due to surface movement.			10 3/4"	None	136'
Run 102' - 12 joints of 1 1/2" casing pipe.			8 5/8"	None	146' - 3"
Pumped 200 sacks of cement.			6 5/8"	None	157' - 10'
Pulled 286' - 18 joints of 1 1/2" casing pipe and pipe started.			3"	56'	203'
Left in hole 154 1/2' of 1 1/2" casing pipe.					Depth of Coal Seams
Cement filled the inside of 3" tubing.			134' - 34'		
Runned 100 sacks of cement and filled to surface.			137' - 136'		
Run cement dropped down hole.					
Pumped 100 sacks of cement and filled hole to surface.					Description of Monument
					12' x 24" Sweden
					6' of 2" Pipe

and that the work of plugging and filling said well was completed on the 23 day
of June, 1954.

Qualified Participants

Robert E. Cooper
Thos C. Hawes

422a

File No. 366-P-ALL

The Peoples Natural Gas Company

Well Operator

By James M. Smith

Title Assistant General Superintendent

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

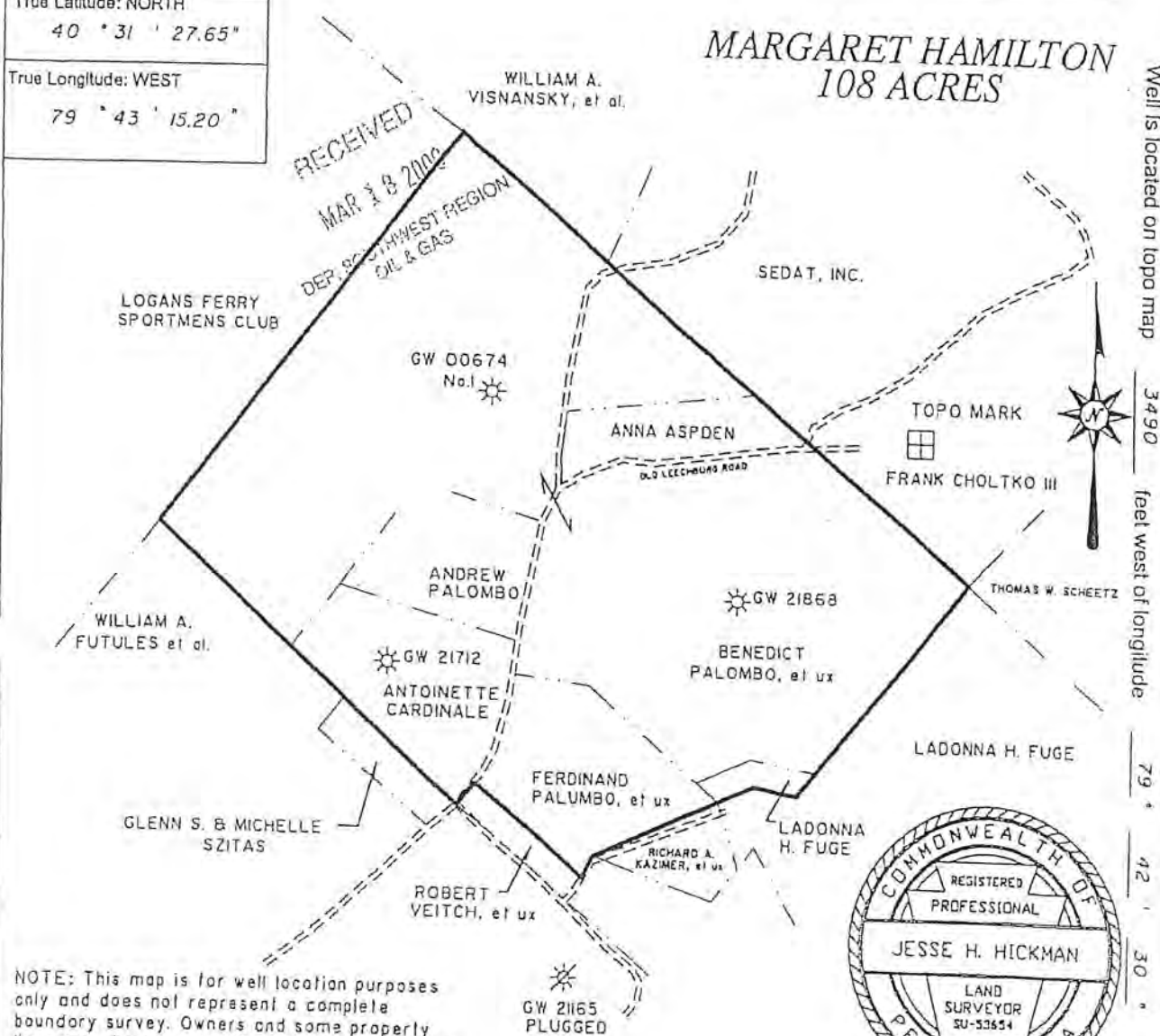
DEP USE ONLY	DEP Application Tracking #	785717	G: <i>GRB</i>
	Param #	37-003-00674	<i>7/1/02</i>
	Project #		C: <i>7/1/02</i>

saw 1/

saw 1/14/09

	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"



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
Engineer SU - 53654 MHAMILTON-IP

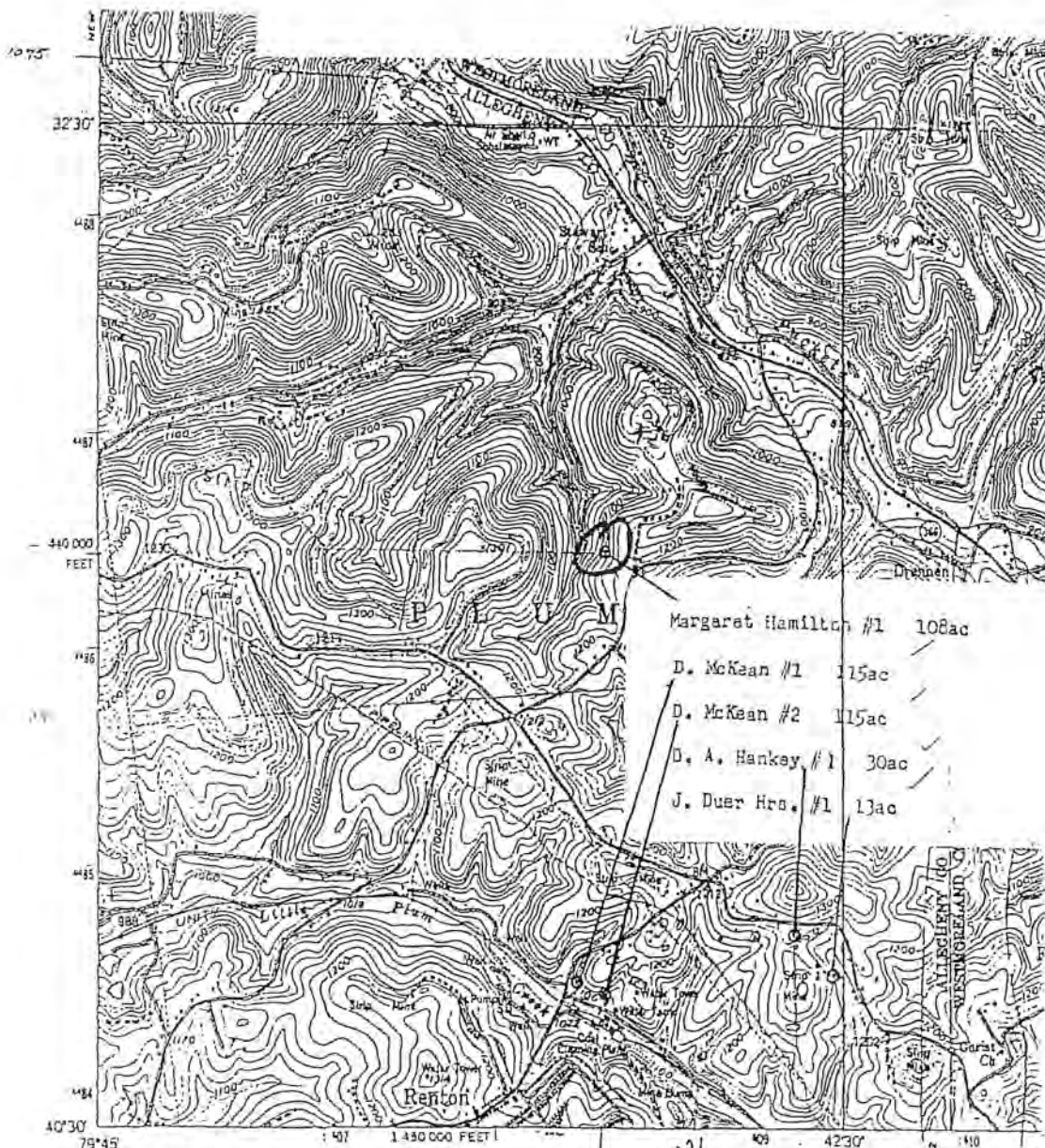
Date 5-2-08

Scale 1" = 600 FEET Tract N/A
Acres 108

List & Long Metadata Method ITPMP Accuracy 0.20" ft. Datum NAD 1927		Elevation Metadata Method TOPO Accuracy +/- 20' ft. Datum NAD 27		Survey Date 5-1-08	
Applicant / Well Owner Name P C EXPLORATION INC.		Well(Farm) Name MARGARET HAMILTON		Sheet 1	
Address 502 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'		Independed Total Depth 5000	
W-58 ANNA ASPDEN		Owner, Lessee, or Operator of Workable Coal Seam NO WORKABLE COAL SEAMS		Name of Coal Seam Owned, Leased, or Operated	
		60B		Up - Freeport	

Att-00674
003

6400' W
3700' (G)



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 1969 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

THIS IS
FOR SALE
A FOLDER DESCR

003-60674

003-00674

Well No. 1, on Margaret L. Harrison Farm, Plum Township, Allegheny Co., Pa.
Operations commenced May 9, 1938. Drilling started May 29, 1938. Drilling stopped Aug. 27, 1938.
Driller on morning tour, W. H. Neill. Tool dresser on morning tour, H. L. Hile.
Driller on morning tour, Tool dresser on morning tour.
Driller on afternoon tour, H. E. Bussard. Tool dresser on afternoon tour, J. B. Holliday.
Driller on afternoon tour, W. E. Dutton. Tool dresser on afternoon tour.
Total depth of well 272 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



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

GEO COPY 003-00674

DEP USE ONLY	
Auth # 785717	APS # 688827
Site # 5126	Primary Facility #
eFACTS Client # 60451	Sub-fac #

Notice of Intention by Well Operator to Plug a Well

☒ Well Operator ☐ Coal Operator		DEP ID# 52451	Well API # (Permit / Reg) 37-003-00674	Date Drilled (If Known) 8/27/1938
PC Exploration, Inc.				
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 #
☐ 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 ☐ Operator ☐ Owner ☐ Lessee	Coal ☐ Operator ☐ Owner ☐ Lessee	Coal ☐ Operator ☐ Owner ☐ Lessee
Address "Non-Coal" area	Address	Address
City, State, Zip	City, State, Zip	City, State, Zip
Phone	Phone	Phone
Notified? ☐ Yes ☐ No	Notified? ☐ Yes ☐ No	Notified? ☐ Yes ☐ 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.	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.	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:	Signature:	Signature:

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

Checklist and Additional Attached Information

- ☒ Location Plat
☐ Current Well Record
☒ Available Well Record
☐ Application for Approval of Alternate Method of Plugging
☐ Other, describe:

Signature of Applicant (Operator or Agent)

Signature *[Signature]* Date 3/17/09
 Print or Type Signer's Name and Title
 Gary A. Clark Vice President of Operations

NonCoal GOB - Up. Frequent

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: <i>[Signature]</i> Date: 4/14/09 (Print Name) Alan Eichler Geologist: <i>[Signature]</i> 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 Name MICHAEL ARCH Address 400 WATERFRONT DRIVE City, State, Zip PITTSBURGH PA 15222-4745 Phone 412-442-4010	DEP Mine Inspector MID # 7 Name RICHARD MURPHY Address 3122 PARK DRIVE City, State, Zip CLARKSBURG PA 15725 Phone 724-726-9516
Rec'd in DEP Reg. Ofc. Plugging must begin within 30 days of: RECEIVED MAR 18 2009 DEP. SOUTHWEST REGION OIL & GAS	

GA. DOW = 5/16/09



RECEIVED

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

003-00674

MAY 04 2009

Certificate of Well Plugging

DEP USE ONLY	
Site ID#	Primary Facility ID#
eFACTS Client #	Sub-facility ID#
Bonded Well?	Bond Agreement #
☐ Yes ☒ 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		Well Form Name Margaret Hamilton (108ac)	Well # 1	Serial #	
City Warrendale	State PA	Zip Code 15086	County Allegheny	Municipality Plum Borough	
Phone 724-772-3500	Fax 724-772-3505	Complete the next section (coal) if applicable.			
Coal ☐ Operator ☐ Owner ☐ Lessee		Coal ☐ Operator ☐ Owner ☐ Lessee		Coal ☐ Operator ☐ Owner ☐ 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'			

Signature of Participants		
Signature - Well Operator 	Signature - Qualified Participant 	Signature - Qualified Participant
Print or Type Signer's Name and Title Gary A. Clark Vice President of Operations	Print or Type Signer's Name, Title & Co Frank R. Bracius RIG OPERATOR - WHIPSTOCK	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		
☒ Approved	☐ Denied	Plug Inspector
DEP Rep	Date 3-15-10	Site Restoration (WQS)
		Date
		Bond Rel # ☐ Yes ☐ 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

Certificate of Well Plugging

003-00674

RECEIVED

MAY 04 2009

DEP, SOUTHWEST REGION
OIL & GAS

DEP USE ONLY	
Site ID#	Primary Facility ID#
eFACTS Client#	Sub-facility ID#
Bonded Well?	Bond Agreement #
☐ Yes ☐ 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		Well Farm Name Margaret Hamilton (108ac)	Well # 1	Send #
City Warrendale	State PA	County Allegheny	Municipality Plum Borough	
Phone 724-772-3500	Fax 724-772-3505	Complete the next section (coal) if applicable.		

Coal ☐ Operator ☐ Owner ☐ Lessee	Coal ☐ Operator ☐ Owner ☐ Lessee	Coal ☐ Operator ☐ Owner ☐ 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
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 RIG OPERATOR - WHIPSTOCK	Signature - Qualified Participant <i>[Signature]</i> Print or Type Signer's Name, Title, & Co Shawn Landman UNIVERSAL WELL SERVICES CEMENT SUPERVISOR

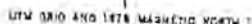
Signers certify that the work of plugging this well was completed on (date) April 20, 2009 and that the information above is true and accurate	<table border="1"> <tr> <td colspan="2">DEP USE ONLY</td> </tr> <tr> <td>☒ Approved</td> <td>☐ Denied</td> </tr> <tr> <td>DEP Rep <i>[Signature]</i></td> <td>Date 3-15-10</td> </tr> </table>	DEP USE ONLY		☒ Approved	☐ Denied	DEP Rep <i>[Signature]</i>	Date 3-15-10	<table border="1"> <tr> <td>Plug Inspector</td> <td>Site Restoration (WQS)</td> <td>Bond Rel 2</td> </tr> <tr> <td></td> <td></td> <td>☐ Yes ☐ No</td> </tr> <tr> <td>Date</td> <td>Date</td> <td></td> </tr> </table>	Plug Inspector	Site Restoration (WQS)	Bond Rel 2			☐ Yes ☐ No	Date	Date	
DEP USE ONLY																	
☒ Approved	☐ Denied																
DEP Rep <i>[Signature]</i>	Date 3-15-10																
Plug Inspector	Site Restoration (WQS)	Bond Rel 2															
		☐ Yes ☐ No															
Date	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
Meadville, PA 16335-3481

Dept of Environmental Protection
SW Regional Office - Oil & Gas
400 Waterfront Drive
Pittsburgh, PA 15222-4745

OG 3
00207



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.

DEN USE ONLY

Code	
911ZM	3-20-86

Lines

19

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

Telephone

Project # If previously assigned by Dept

County ALLEGHENY

FM. TD BRADFORD GROUP.
PROD. FM. VENTNIG & 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 8"-897 6 5/8"-1924		6 5/8" X 3 HW 2196	5th SPECCHLEY 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
3	NOAH SHAFFER	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 NE1/2
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 SEN SE1
	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' PSH NE2
	KATHERINE KRON	3296		1944	GAS	2811	7 1/4"-Cased 6 5/8"-2249 10"-132' 8 1/4"-1315'			BARVARD GB NW1
	AGNES SHARP	3303		1944	GAS	4103	13"-105' 6 5/8"-2170' 10"-386' 8 1/4"-1199'			Bradford PGH NE2

File map or other description to enable the Department to find the well sits on the ground

Blanket bond ☐ Alternate fees in lieu of bond

☐ Driller's log (if available)

☐ 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.

[illegible][illegible]

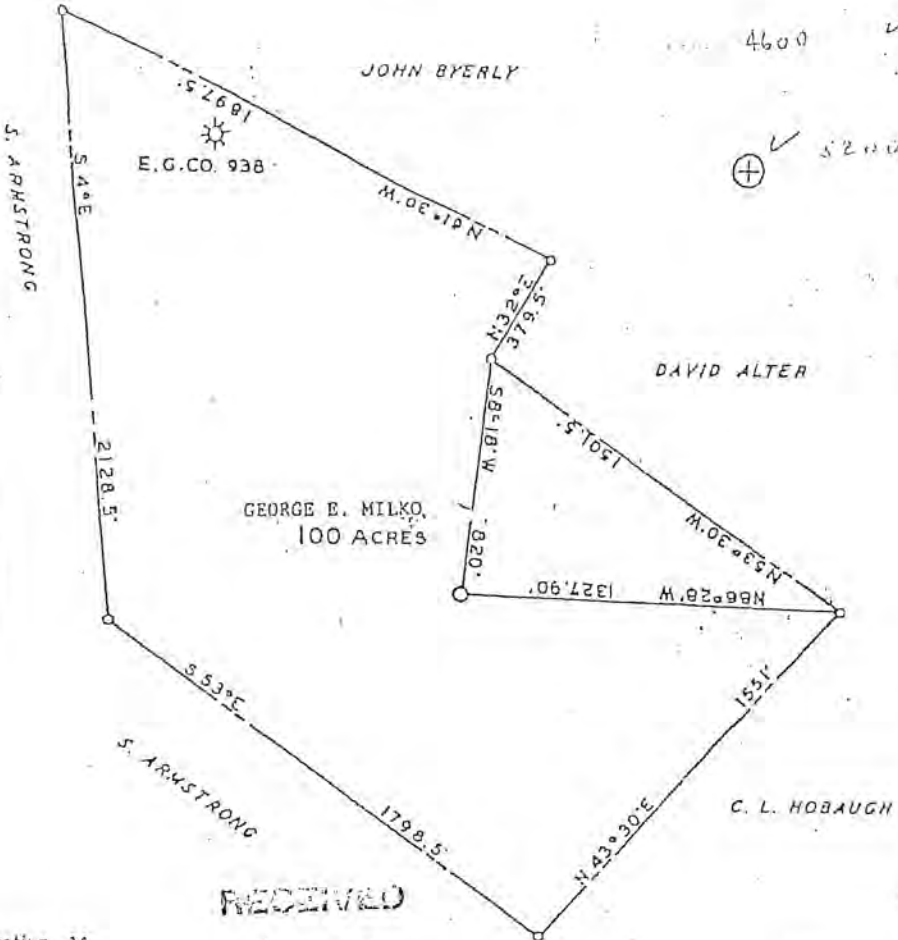
DAILY VOLUME FACTOR 17.95

DATE 9-2-30
TIME 3:30
BY J. J. J.
P. J. J.

LATITUDE 40° 32' 30"

003-20903

LONGITUDE 79° 22' 30"



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

Company FOX OIL AND GAS INC.
Address 1725 WASHINGTON ROAD
PITTSBURGH PENNA 15241
Farm GEORGE E. MILKO
Tract Acres 100 Lease No PI2379
Well Name 3 Co. Serial No.
Angle of Deviation, if any NONE
Elevation 1230 TOPO Quadrangle NFW. KEN. EAST
County ALLEGHENY Township PLUM BORO
Engineer William H. 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' ☒
WORKABLE COAL SEAMS TO BE PENETRATED
NAME OF SEAM OWN. OF SEAM
Freeport series Alleghenian 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

PERMIT NO. 003-20903

PROJECT NO. _____

TYPE OF WELL _____

Gas

Plum Township
Renton Field

WELL RECORD
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 KEN EAST

X

7 1/2'

15'

CASING AND TUBING RECORD

Pipe Size	Amount In Well	Material Behind Pipe Cement (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	W/3% CACL 2 250 SKS Neat	None	None	None	None	12/31/76																
7"	2122.00	W/3% CACL 2 50 SKS Neat	None	None	None	None	1/5/77																
<table border="1"> <tr> <td>D.</td><td>D.D.</td><td>J.P.L.</td><td>Class</td><td>O.G.</td><td>Lease</td><td></td><td></td></tr> <tr> <td>3792</td><td>X</td><td>5006</td><td>D</td><td>X</td><td>X</td><td></td><td></td></tr> </table>								D.	D.D.	J.P.L.	Class	O.G.	Lease			3792	X	5006	D	X	X		
D.	D.D.	J.P.L.	Class	O.G.	Lease																		
3792	X	5006	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 60 PSI, 3 hrs.

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

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 LA Jos

By Pos
Title

7-06-4-71



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 released as ALL-20902
PROJECT NO. 069-21020

TYPE OF WELL Gas

WELL RECORD

OWN

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	FREEPORT New Ken. East
			☒ 7 1/2' ☐ 15'

CASING AND TUBING RECORD

Pipe Size	Amount In Well	Cement	Material Behind Pipe (Sks.)	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

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

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 on permit number

003-20903

003-20903

FORMATIONS

NAME	TOP	BOTTOM	GAS AT	OIL AT	RATE AT WATER	SOURCE OF DATA
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				
SAND & SHALE	2280	2310			GAS SHOW @ 3006'	
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 Diane McNea of Fox Oil & Gas on 9-10-81 <i>Frank E. Mackey</i>				

Date August 24, 19 81

APPROVED

By

Title

DER-166
1981 AUG 25 PM 2:50
DIVISION OF OIL
AND GAS REGULATION
1000

1981 AUG 25 PM 2:50

DER-166

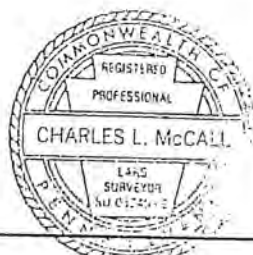
003-21165

LATITUDE 40°32'30"



LONGITUDE 79°42'30"

- New Location ☐
 Drill Deeper ☐
 Abandonment ☐
 Re-Drill ☒

Company T. W. PHILLIPS GAS AND OIL CO.Address 205 N. Main St., Butler, Pa. 16001Farm Alexander J. Serakowski, et ux
Fmly Henry L. WaldsmithTract 1 Acres 24 Lease No. 56Well (Farm) No. 1 Co. Serial No. _____

Angle of Deviation, if any _____

Elevation 1182' Quadrangle New Kensington EastTownship Plum Borg County AlleghenyEngineer or Surveyor Charles L. McCallRegistration No. SW-C32493-E

File No. _____ Drawing No. _____

Date March 20, 1981Scale 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)

12913

NEW KENSINGTON EAST

003-21165

DER Office Use Only

Code

CP

Oil & Gas Inspector

Date Approved _____

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

155 MAR 21 AM 11:14

1923年5月

Type of Well: Gas []

Name of Well Operator T. W. Phillips Gas and Oil Co.

Oil
205 N. Main St., Butler, PA 16001

march 10

19 86

Date _____

Plum Boro

Political Subdivision, Borough, City or Township

Allegheny

County

Alexander J. Serakowski, et ux. County

Farm fmly. Henry L. Waldsmith

Wall (Farm) No. 1 Serial No. _____

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"		
			x2" 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)

PERMIT/REGISTRATION NO. ALL-21165-D

PROJECT NO. _____

Gas Well (Qualified Participant)
Maintenance Technician

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.

ONE

4-28-PC

Lead

RECEIVED

JUL 12 1988

PA GEOLOGICAL SURVEY
(Min. & Enr. Geology Division)

BBJ - 021165-P

003-21165-1

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

all - 21165-P

DEM-TGS
REC-100-100-100

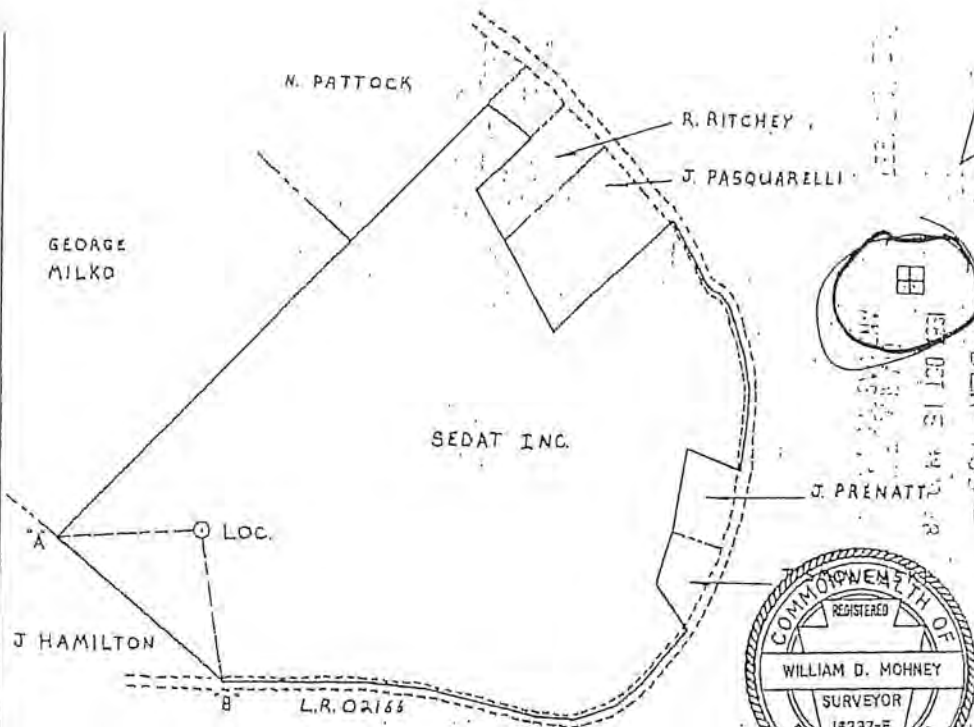
The above record was NOT copied by me until it had been O. K'd or approved on the 18 day of Oct 1920.

y Supt. R. A. B.

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 # 32-003-21210-00

Project #

Well Operator Penneco Oil Company Inc.	Revision Re-issue Alteration Storage Recondition New Location Drill Deeper Abandonment Registration Plugging	Surveyor/Engineer W.D. Mohney
Address U.S. Route #22		Drawing Number S-1
Delmont, PA 15626		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		Approximate course and distance to water supply
Firm Name Sedat	Frank Choltko	S 45° E 850'
Well No. #1	Ferdinand Palombo	S 55° W
Serial No. PS-7		
Ground Elevation 1260'		
Acres 69.5		
Topo Quadrangle New Kensington East		
County Allegheny		
Angle of Deviation None		
Political Subdivision Pitt		
Anticipated To 3,500'		
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management	Owner/Operator Villa Coal Company Sedat Inc.	Workable Coal Seams Name of Seam Upper Freeport All others

RECEIVED

DEC 31 1986

RENTON MINE

10-21-87

5950' S 40° 32' 30"
2380' W 79° 42' 30"
(4)

ER-00-4; Rev. 8/84

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

NEW KENSINGTON EAST

003-21210

Office Use Only

WELL RECORD

PERMIT NO. 37-003-21210-00

PROJECT NO.

FIBER-RENTON-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

Sedat #1A

FARM NO.

SERIAL NO.

ACRES

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' ☐ 15'

CASING AND TUBING RECORD

PIPE SIZE	AMOUNT IN WELL	MATERIAL BEHIND PIPE		PACKER			DATE RUN
		CEMENT (SKS.)	GEL (SKS.)	TYPE	SIZE	DEPTH	
15"	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#	33.38BPM
3-22-88	3237	3243	3-22-88	3237-3243	10,000	13,000#	30.08BPM
3-22-88	2406	2408	3-22-88	2406-2488	11,000	8,500#	16.83BPM
	2420	2421					
	2468	2488					

T.D.	D.D.	D.P.I.	Class	O	G	Lease
3522		3352	D		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 TO - BRALLIER

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

RECEIVED
(FORMAT AND REVISIONS)

NOV 22 1988

PA GEOLOGICAL SURVEY
(Oil & Gas Geology Division)

NOV 24 1988
PITTSBURGH REGION
DER-BOGH
9:55 AM 10:34

003-21210

CO-1

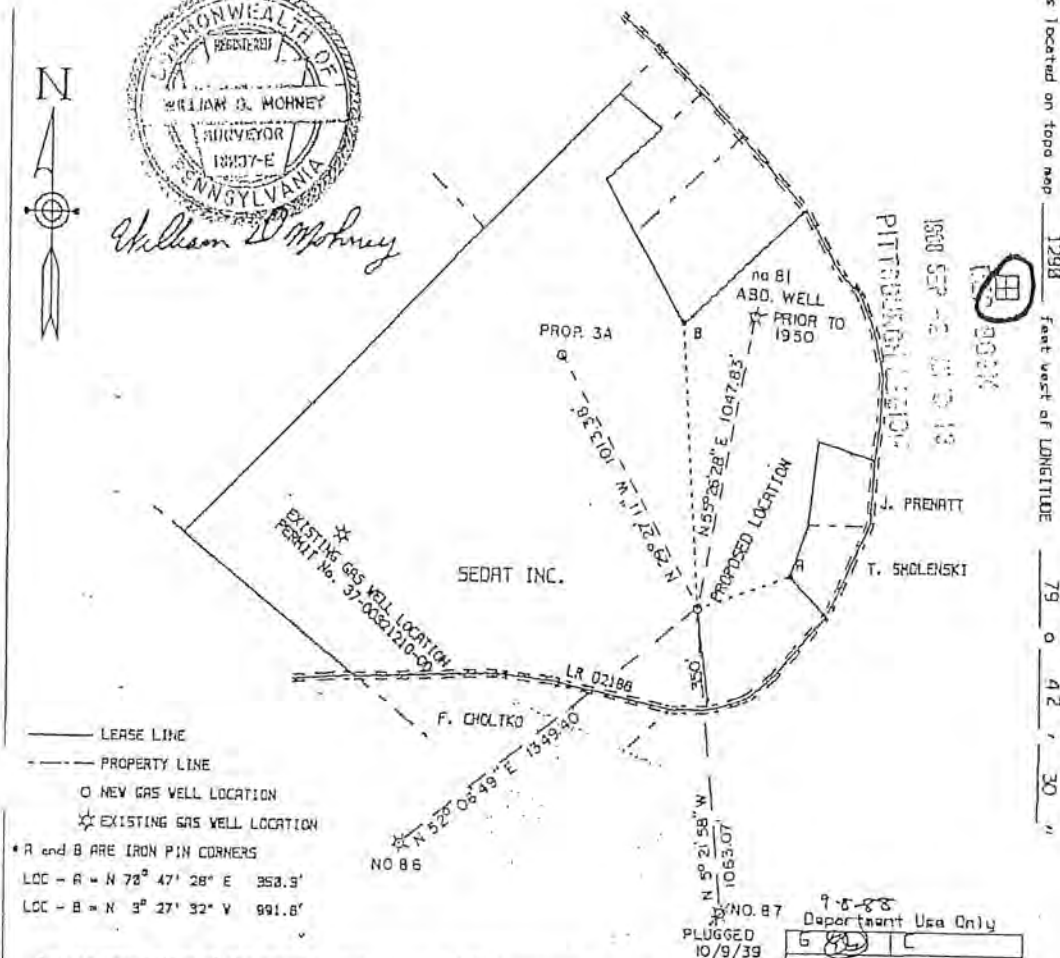
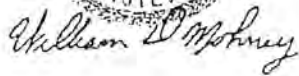
FORMATIONS						
NAME	TOP	BOTTOM	GAS AT	OIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA
Sub	0	10				Driller's Log
Fill	10	70				
Sand	70	100				
Red Rock	100	125				
Sand	125	135				
Red rock	135	150				
Sand	150	160				
Red rock	160	175			155 ± stream	
Sand and Shale	175	245				
Red Rock	245	255				
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				1" - 2,000 Ft.
Shale	485	502				
Sand and Shale	502	697				
Coal	697	700				
Sand	700	755				
Sand and Shale	755	815				
Shale	815	850				
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				Geophysical Log Data
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	2245				
Red Rock	2245	2250				
Sand	2250	2500				
Sand and Shale	2500	2565				
Shale	2565	2645				
Sand and Shale	2645	2740				
Sand	2740	2985				
Shale	2985	3095				
Sand and shale	3095	3145				Fourth Fifth Speechley Stray Speechley
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.	3522					

BRALLIER

July 28 1988
DATE
APPROVED BY
Vice President
TITLE

003-21222

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

Well 15 located on topo map 1298 feet west of LONGITUDE 79 ° 42 ' 30 '

10/9/39

Include description of the property and course and distance of the well(s) location to two or more permanent identifiable points or land markers, all buildings and water supplies within 200', all springs, badis of water and streams within 100' identified on the most current 7 1/2 topographic map and wetlands within 100'.
Reference to buildings, springs, badis 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. 51-003-21212-00 Project No. _____

PENNECOIL OIL COMPANY INC.		Revision		☐	W. D. MOHNEY	
Well Permittee/Registrator		Alteration		☐	Surveyor/Engineer 16237-E	
200 U.S. ROUTE 22		Storage Recondition		☐	S-2A	
Address		New Location		☒	Drawing Number	
DELMONT PA 15626		Drill Deepen		☐	7-12-88, B. 29-BB	
		Abandonment		☐	Date	
SEDAT INC.		Registration		☐	1" = 500'	
Surface Owner		Plugging		☐	Scale	
N/A						
Surface Lessee (if any)		Surface landowner and water purveyor with water supply within 1,000'			Approximate course and distance to water supply	
SEDAT						
Firm Name		J. PREVATT		N 88° E 625'		
2A		T. SMOLENSKI		N 81° E 935'		
Well No.		F. CHOLKO		S 49° W 551'		
Tract						
69.5						
Acres						
NONE						
Angle of Deviation (Drilling)						
ALLEGHENY						
County						
EV KENSINGTON EAST						
300 Quadrangle						

PS - 8		Ground Elevation		Anticipated TO	
1162		3420'			
- PLUM BORO		Municipality			
G		Section			

Owner/Operator/Lessee	Verifiable Coal Seam	Name of Seam
VILLA COAL COMPANY	UPPER FREEPORT	
SEDAT INC.	ALL OTHERS	
CONSOLIDATION COAL CO.	UPPER FREEPORT	

SEP 26 1988
PA GEOLOGICAL SURVEY
 PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES

003-21222

pg. 2

FORMATIONS						
NAME	TOP	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				
Sand and Shale	105	460			Damp @ 60'	
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					
REMOVED FROM LOG GEOPHYSICAL LOG DATA						
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 5210 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 1500 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'

9-8-88
 Department Use Only
 692 LC

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. 37-003-21223-00 Project No.

PENNCO OIL COMPANY, INC.		Revision		W. D. MOHNEY	
Well Permittee/Registrant		Alteration		Surveyor/Engineer 16237-E	
220 U.S. ROUTE 22		Storage Recondition		5 - 3A	
Address		New Location		Drawing Number	
DELMONT, PA 15626		Drill Deeper		7-12-88, 8-29-88	
SEDAT INC.		Abandonment		Date	
Surface Owner		Regulation		1" = 500'	
N/A		Plugging		Scale	
Surface Lessor (if any)		Surface landowner and water purveyor with water supply within 1,000'		Approximate course and distance to water supply	
SEDAT		NONE		RECEIVED	
Form Name				SEP 26 1988	
3A				PA GEOLOGICAL SURVEY	
Well No. Tract				Office of Gas Geology Division	
69.5 PS - 46				VARIABLE Coal Seam	
Serial No.				Name of Seam	
1186				VILLA COAL COMPANY	
Ground Elevation				SEDAT INC.	
NONE 9350'				CONSOLIDATION COAL CO.	
Angle of Deviation (Drilling)				UPPER FREEPORT	
ALLEGHENY				ALL OTHERS	
County				UPPER FREEPORT?	
NEW KENSINGTON EAST					
Topo Quadrangle					
Municipality					
PLUM BORO					
Section					
G (7)					
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management					

003-21223

5310' S 40° 33' 30" W
1961 8/17/42 5.0
(G)
B# 39241
39242

ER-00-4: Rev. 6/84
RE

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

NEW KENSINGTON EAST
21223
Office Use Only
003-21223

WELL RECORD

PERMIT NO. 37-003-21223-00 PROJECT NO. TYPE OF WELL Gas and Oil
WELL OPERATOR RENTON FIELD Penneco Energy Corporation 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 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"	16-1/2	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
2-8-89	3242	3276					
2-8-89	3102	3104					
2-8-89	3166	3169					

T.D.	D.D.	D.P.I.	Class	O.G.	Lease
4320		3893	8	1	1

NATURAL OPEN FLOW 29 MCF	NATURAL ROCK PRESSURE Not Taken	HRS. DAYS
AFTER TREATMENT OPEN FLOW 287 MCF	AFTER TREATMENT ROCK PRESSURE 720#	89 72 HRS. DAYS

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

RECEIVED (SIDE)
JUN 2 1989
PA. GEOLOGICAL SURVEY
(Oil & Gas Geology Division)

003-21223

19 2

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					
Sand and Shale	48	475			Hole damp @ 48'		
Shale	475	669			2" @ 220 ft.		
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				
BRUNER							
GEOPHYSICAL LOG DATA							
Speechley Stray				3099-3172			
Speechley				3240-3280			
2nd Balltown				3556-3562			
2nd Bradford				3868-3892			
[REDACTED]							

March 17, 1989
DATE

APPROVED BY

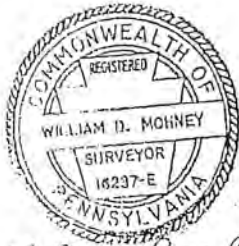
Vice-President

TITLE

WELL LOCATION PLAT

003-21225

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



William D. Mohney



BEN DZIUBAN

PROPOSED LOCATION

DRENNEN ROAD

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

— LEASE LINE
- - - PROPERTY LINE

A and B ARE PROPERTY CORNERS

LOC - A = N 8° 02' 51" W 372.1'

LOC - B = S 85° 09' 35" E 898.4'

9-21-88
Department Use Only

6	99	1	C
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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. 37-003-21225-05 Project No.

PENNECO OIL COMPANY, INC.		Revision	☐	WILLIAM D. MOHNEY
Well Permittee/Registrant		Alteration	☐	Surveyor/Engineer 16237-E
200 U.S. ROUTE 22		Storage Recondition	☐	DZ-1
Address		Nav Location	☒	Drilling Number
DELMONT, PA 15626		Drill Deeper	☐	B-12-88
BEN DZIUBAN		Abandonment	☐	Date
Surface Owner		Registration	☐	1" = 40'
NONE		Plugging	☐	Scale
Surface Lessor (if any)		Surface landowner and water purveyor with water supply within 1,000'		Approximate location and distance to water supply
DZIUBAN				OCT 19 1988
Form Name				PA GEOLOGICAL SURVEY
1	PD 73	BEN DZIUBAN		N 84° E 602' 1" Gas Geology Division
Well No.	Tract	Serial No.	SPR DZIUBAN	N 72° E 988'
60.5		1038	RICHARD OSKIN SR	N 57° E 988'
Acres	Ground Elevation		STEVE BOBIK	N 51° E 843'
NONE	3680'		RANDY BOBIK	N 37° E 813'
Angle of Deviation (Drilling)	Anticipated TD		JOHN DZIUBAN	N 12° E 613'
ALLEGHENY	PLUM BORO			
County	Municipality	Owner/Operator/Lessor		
EV KENSINGTON EAST 1408	B	VILLA COAL COMPANY		
Topo Quadrangle	Section	BEN DZIUBAN		
		WATER PLAYVEYOR :		
		Wollie Crooks		
		Consolidation Coal Co.		
		RENTON MINE		

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

6700' S 40° 33' 30"
11150' W 74° 43' 00"
RE 37252 239253 (4) (X)

ER-OQ-4: Rev. 6/84

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

NEW KENSINGTON EAST

WELL RECORD

Office Use Only
003-21225

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

RENTON FIELD

WELL OPERATOR Pennaco Energy Corporation ADDRESS 200 Route 22, Delmont, PA 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	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

I.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)

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				
Sand and Shale	430	600			Damp @ 90'	
Coal	600	602			1" @ 430'	
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>						
<u>GEOPHYSICAL LOG DATA</u>						
Fifth					2270-2290	
Speechley Stray					3018-3024	
Speechley					3092-3126	
2nd Balltown					3404-3412	
2nd Bradford					3710-3740	
1000 1000						

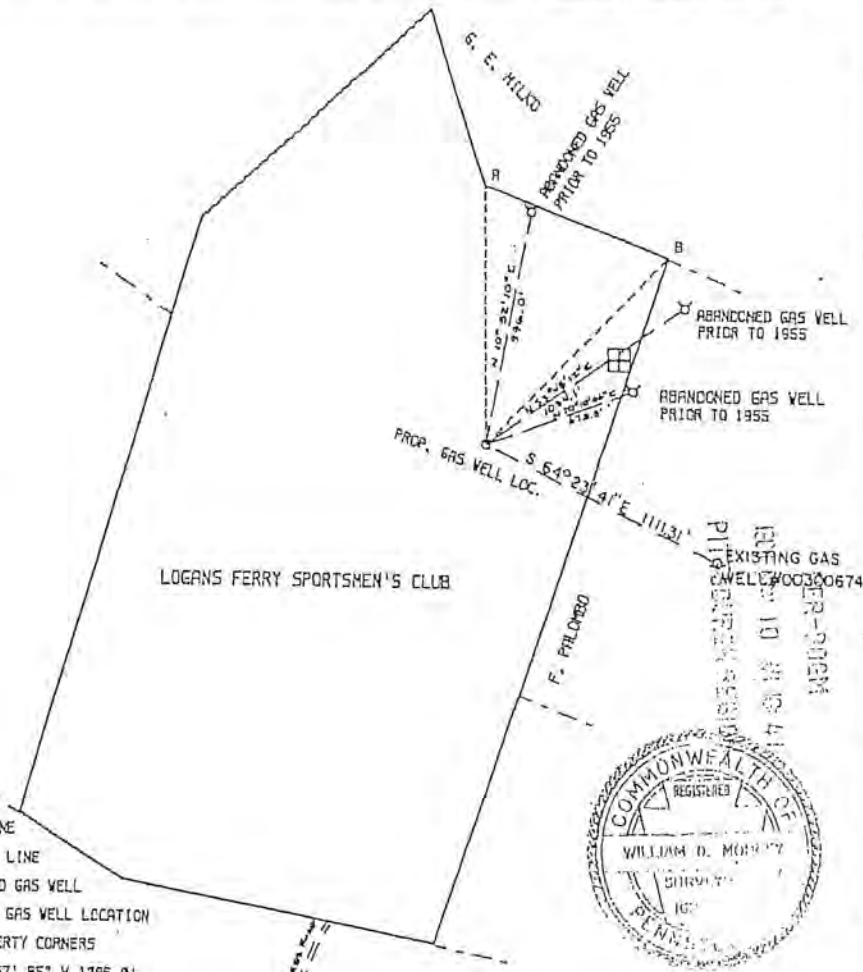
March 31, 1989
 DATE
[Signature]
 APPROVED BY
 Vice-President
 TITLE

WELL LOCATION PLAT

003-21224

Well is located on topo map 5820 feet south of LATITUDE 40 0 32 30 "

Well is located on topo map 4500 feet west of LONGITUDE 79 0 42 30 "



- LEASE LINE
- - - PROPERTY LINE
- ⊙ ABANDONED GAS WELL
- PROPOSED GAS WELL LOCATION

A and B ARE PROPERTY CORNERS
 LOC - A = N 88° 57' 55" W 1265.8'
 LOC - B = N 44° 36' 38" E 1111.4'



Department Use Only

6	C
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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. 37-003-21224-00 Project No.

PENNECO OIL COMPANY, INC.		Revision	☐	W. D. MOHNEY
Well Permittee/Registrant		Alteration	☐	Surveyor/Engineer 16237-E
200 U.S. ROUTE 22		Storage Recondition	☐	5 - 1
Address		New Location	☒	Drawing Number
DELMONT, PA 15626		Drill Deeper	☐	10-13-88 11-4-88
LOGANS FERRY SPORTSMEN'S CLUB		Abandonment	☐	Date
Surface Owner		Registration	☐	1" = 600'
N/A		Plugging	☐	Scale
Surface Lessor (if any)		Surface landowner and water purveyor with water supply within 1,000'		Approximate course and distance to water supply
SPORTSMEN'S CLUB				
Form Name				
1				
Well No.	Tract	Serial No.		
142.323		1064		
Acres		Ground Elevation		
NONE		3700		
Angle of Deviation (Drilling)		Anticipated JO		
ALLEGHENY		PLUM BORO		
County		Municipality		
EV KENSINGTON EAST		7		
Topo Quadrangle		Section		
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		PA GEOLOGICAL SURVEY PA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF OIL AND GAS MANAGEMENT 1000 Locust Street Harrisburg, PA 17104 Name of Seam VILLA COAL CO AND CONSOLIDATION COAL CO ALL SEAMS FEB 11/72/86		

5800' S 40'33'50"
4500' W 79'49'30"
RE (6)

003-21226

EH-DQ-4: Rev. 8/84

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF OIL AND GAS REGULATION
PITTSBURGH, PENNSYLVANIA 15208-2998

WELL RECORD PITTSBURGH REGION

NEW KENSINGTON EAST

21226

Office Use Only

003-21226

PERMIT NO. 37-003-21226-00

PROJECT NO.

TYPE OF WELL

Gas and

WELL OPERATOR

Penneco Energy Corporation

TELEPHONE NO.

412-468-8232

ADDRESS

200 Route 22, Delmont, PA

ZIP

15626

FARM NAME

Logans Ferry Sportsman's Club #1

FARM NO.

SERIAL NO.

ACRES

PL-79

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" 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"	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

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.

VENNOC - PROD FM

BRALLIER - FM TD

RECEIVED
(FORMATION ON REVERSE SIDE)

JUL 31 1989

PA GEOLOGICAL SURVEY
(Oil & Gas Geology Division)

003-21226

P5 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				2100'	
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						
GEOPHYSICAL LOG DATA							
Fourth					2278-2292		
Fifth					2344-2372		
Speechley Sray					3124-3132		
Speechley					3194-3238		
2nd Balltown					3515-3621		
2nd Bradford					3835-3837		

March 22

DATE

19 89

APPROVED BY

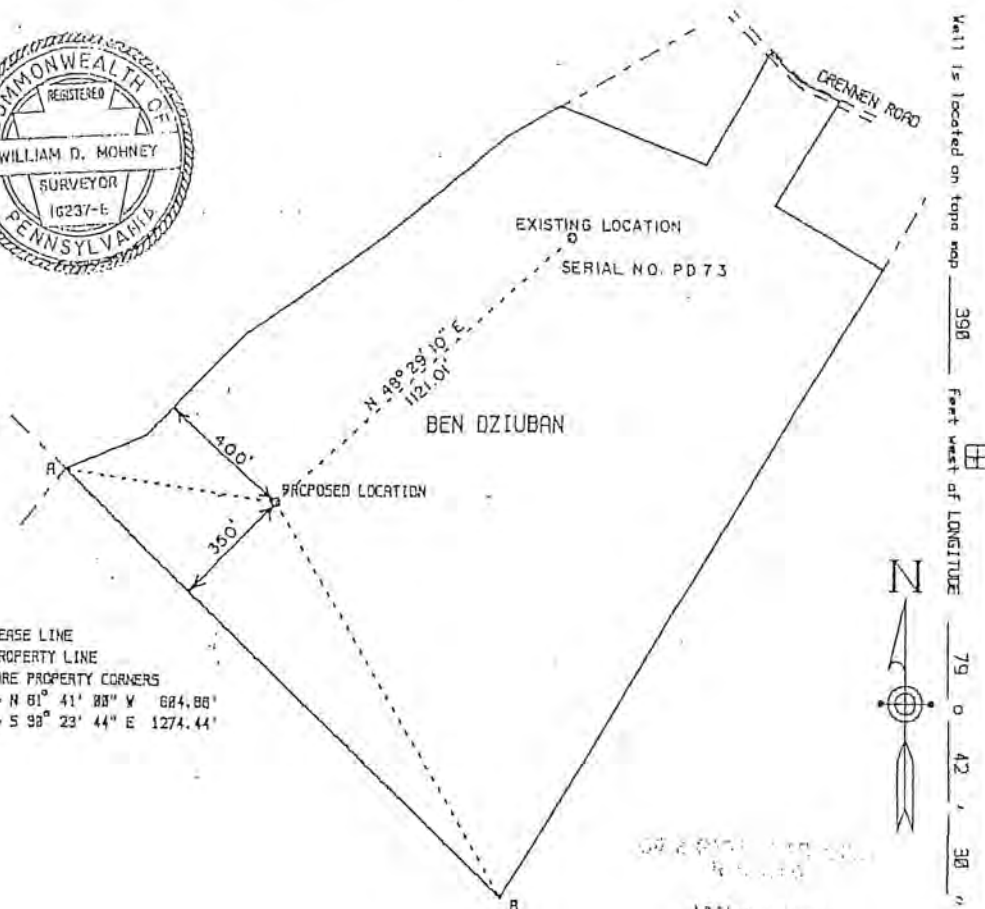
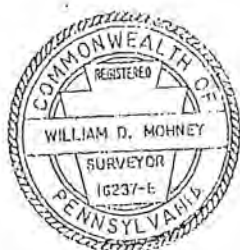
Vice-President

TITLE

WELL LOCATION PLAT

003-21228

Well is located on topo map 7500 feet south of LATITUDE 40 0 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	C
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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.

PENNCO OIL COMPANY, INC.		Revision	☐	V. D. MOHNEY
Well Permittee/Registrant		Alteration	☐	Surveyor/Engineer 16237-E
280 U.S. ROUTE 22		Storage Recodition	☐	DZ - 2
Address		New Location	☒	Drawing Number
DELMONT, PA 15626		Drill Deeper	☐	1-5-89
BEN DZIUBAN		Abandonment	☐	Date
Surface Owner		Registration	☐	1" = 400'
NONE		Plugging	☐	Scale
Surface Lessor (if any)		Approximate course and distance to water supply within 1,000'		
DZIUBAN		RECEIVED		
Farm Name		521 E 1000'		
2		FEB 24 1989		
Well No. Tract		PA GEOLOGICAL SURVEY		
60.5 1818		(Oil & Gas Geology Division)		
Ground Elevation		DZ - 2		
3600		UPPER FREEPORT		
Angle of Deviation (Drilling)		U. FREEPORT		
ALLEGHENY		ALL OTHERS		
County Municipality		RENTON MINE		
NEW KENSINGTON EAST 1408				
Topo Quadrangle				
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management				

7500' S 4034' 30"
390' W 79' 43' 30"
1E (a)

EN-OG-4: Rev. 8/84

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF OIL AND GAS REGULATION
PITTSBURGH, PENNSYLVANIA 15208-8998

DER-BOGM

NEW KENSINGTON EAST

JUN -6 PM 48

Office Use Only

WELL RECORD PITTSBURGH REGION

PERMIT NO. 37-003-21228-00
PROJECT NO. 1142
TYPE OF WELL GAS
WELL OPERATOR
Penneco Energy Corporation
ADDRESS
200 Route 22, Delmont, PA
FARM NAME
Ben Dziuban #2
TOWNSHIP
Plum Borough
COUNTY
Allegheny
DRILLING COMMENCED
3-21-89
DRILLING COMPLETED
3-28-89
ELEVATION
2010'
QUADRANGLE
New Kensington East 7' 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"	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.	Circ	O G	Logs
		4301		3750	0	1	1

PERFORATION RECORD

STIMULATION RECORD

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

RECEIVED

(FORMATION ON REVERSE SIDE)

JUL 3 1 1989

PA GEOLOGICAL SURVEY
(Oil & Gas Geology Division)

003-21228

P 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				
Gob	465	475				
Shale	475	520				
Shale	520	590			1/2" @ 540'	
Sand and Shale	590	805				1" @ 1750'
Shale	805	1005				
Sand	1005	1110				
Sand and Shale	1110	1250				
Shale and Sand	1250	1600				
Sand and Shale	1600	1720				
Sand	1720	1890				
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	

April 28

89

DATE

APPROVED BY

Vice-President

TITLE

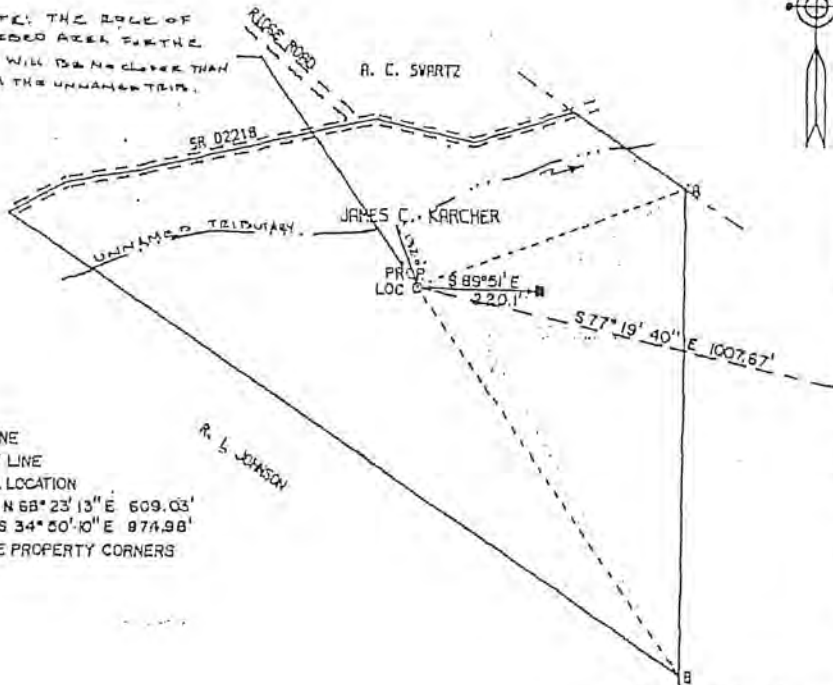
WELL LOCATION PLAT

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

003-21232



NOTE: THE ROLE OF THE DISTRICTED AREA FURTHER LOCATION WILL BE NO CLOSER THAN 100' FROM THE UNNAMED TRIBUTARY.



LEASE LINE
PROPERTY LINE
GAS WELL LOCATION
LOC - A = N 68° 23' 13" E 609.03'
LOC - B = S 34° 50' 10" E 874.98'
A and B ARE PROPERTY CORNERS

Department Use Only
G I 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. 37-043-21232-00 Project No.

PENNCO OIL COMPANY, INC. 13825		Revision	☐	W. D. MOHNEY
Well Permittee/Registrant		Alteration	☐	Surveyor/Engineer 16237-E
200 U.S. ROUTE 22		Storage Recondition	☐	K - 1
Address		New Location	☒	Drawing Number
DELMONT, PA 15626		Drill Casper	☐	9-6-88 2-3-89 2-15-89
JAMES KARCHER		Abandonment	☐	Date
Surface Owner		Registration	☐	1" = 300'
N/A		Plugging	☐	Scale
Surface Lessor (if any)		Approximate course and distance to water supply		
KARCHER		within 1,000'		
Park Name		James C. Karcher S 42° 42' E 235.7'		
1 PK 78		Richard S. Borowski N 61° 00' E 910'		
Well No. Tract		S. A. Borowski N 61° 30' E 980'		
20 898		Walter Hummel N 65° 30' E 690'		
Acres				
NONE				
Ground Elevation				
3500'				
Angle of Deviation (Drilling)				
ALLEGHENY				
County				
EV KENSINGTON EAST				
Topo Quadrangle				
Section				
Commonwealth of Pennsylvania		Yorkshire Coal Seam Name of Seam 1989		
Department of Environmental Resources		Vaughnigheny & Ohio Coal U. MAY 31 1989		
Bureau of Oil and Gas Management		James C. Karcher all seams except U.F.		
		PA GEOLOGICAL SURVEY		
		1011 & Gas Geology Division		
		FSD 3/31/89		

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	LOGICAL SURVEY	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					
Brillie						
GEOPHYSICAL LOG DATA						
Fifth					2099-2130	
Third Warren					2817-2834	
Speechley					2954-3001	
2nd Balltown					3272-3281	
Bradford					3628-3631	

BY:

Operator's Signature

Vice-President

Title

11-22-89

Date

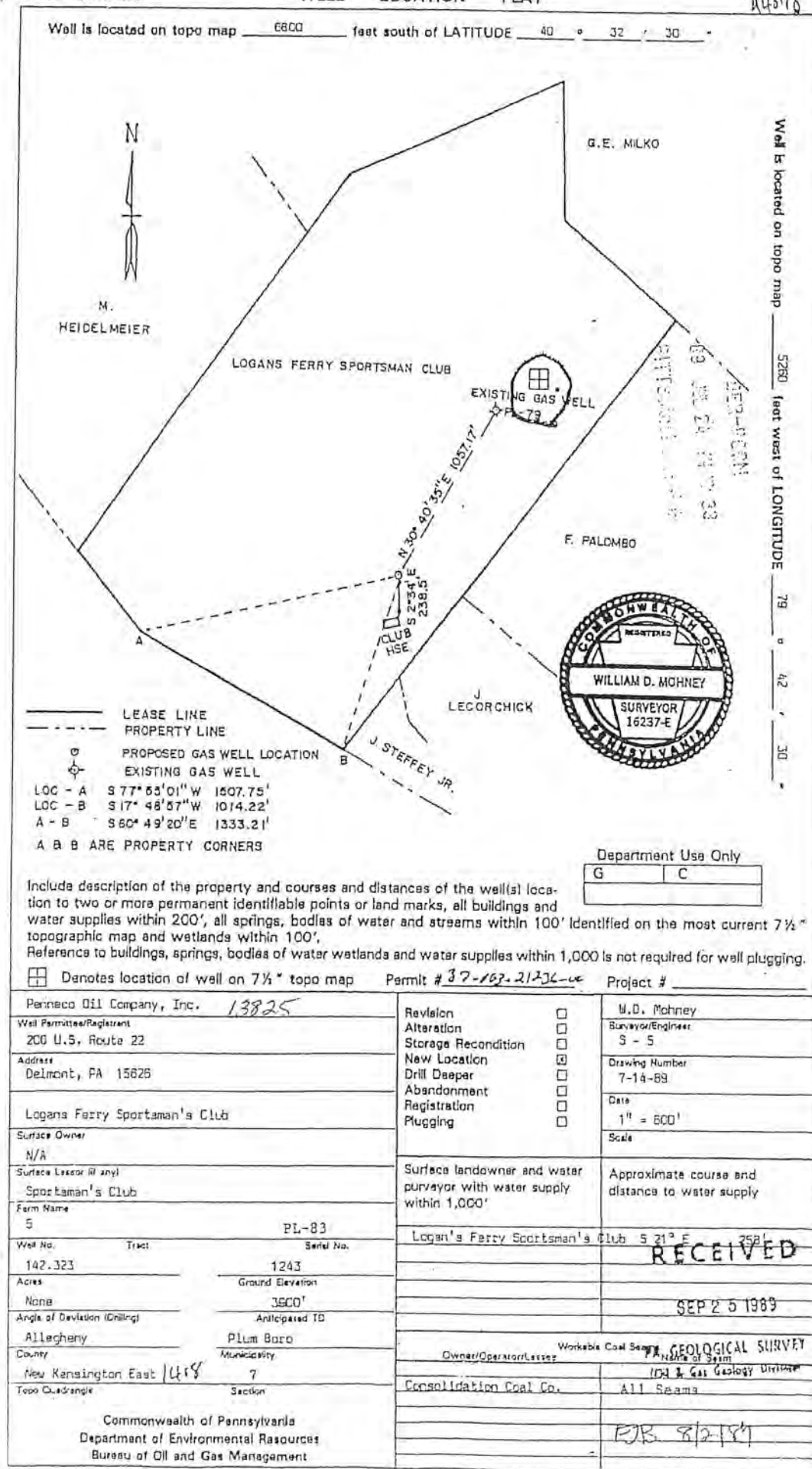
FOR OFFICIAL USE ONLY

Reviewed By William H. Evans 1/25/90

Date

Comments

44078



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 Management4800' 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 37-003-21236-00		Project Number	
Farm Name Logans Ferry Sportsman's Club #5	Farm Number	Serial Number PL-83	Acres 142
Township Blum Boro		County Allegheny	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method Rotary (Air ☒ Mud ☐ Cable Tool ☐ Other ☐ (Specify)		Date Drilling Started 11-2-89	Date Drilling Completed 11-9-89
Elevation 1243'	Total Depth 4517'	7 1/2' 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

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

Name, Address, and Telephone Number of Well Service Companies	PA GEOLOGICAL SURVEY
F. D. Hill Drilling Co.	Rte. 321 South, Kane, PA 17830 814-837-6612
Dowell Schlumberger	P. O. Box 437, Blacklick, PA 15716 412-429-2700
Allegheny Nuclear Surveys, Inc.	Elderton, PA 15736 412-534-3090

003-21236

PS 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	

PENNCO ENERGY CORPORATION

BY: [Signature]
Operator's SignatureVice-President
TitleDecember 9, 1989
Date

FOR OFFICIAL USE ONLY

Reviewed By [Signature] 11/25/90
Date

Comments _____

WELL LOCATION PLAT

003-21237
44077

Well is located on topo map 4830 feet south of LATITUDE 40° 32' 30"



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.		Revision	☐	W.D. Mohney
Well Permits/Registrant		Alteration	☐	Surveyor/Engineer 16237-E
200 U.S. Route 22		Storage Recondition	☐	S-2
Address		New Location	☒	Drawing Number
Delmont, PA 15626		Drill Deeper	☐	B-27-89
Logans Ferry Sportsmen's Club		Abandonment	☐	Date
Surface Owner		Registration	☐	1" = 600'
N/A		Plugging	☐	Scale
Surface Lessor (if any)		Surface landowner and water purveyor with water supply within 1,000'		Approximate course and distance to water supply
Sportsmen's Club				RECEIVED
Prime Name		None		SEP 25 1989
2		PL-80		PA GEOLOGICAL SURVEY
Well No.		Serial No.		(Oil & Gas Geology Division)
142,323		1105		Workable Coal Seams
Acres		3700'		Owner/Operator/Lessor
None		Anticipated TD		Name of Seam
Angle of Deviation (Drilling)		Plum Bore		Consolidation Coal Co.
Allegheny		Municipality		All Seams
County		7		
New Kensington East 1405		Section		
Topo Quadrangle				
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management				



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		State PA	Zip Code 15626	Well # 2	Sanol # PL-80
City Delmont		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 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

Perforation Record			Stimulation Record			
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type	Propping Agent Type
6/27/05	3173	3213	6/27/05	3173 - 3213	Water	Sand

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

DEC 12 2005

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				
Sand & Shale	380	550			1/2" @ 100'	
Coal	550	555			1/2" @ 490'	
Shale & Sand	555	581			6" @ 550'	
Sand & Shale	581	920				
Shale & Sand	920	1320			1/2" @ 710'	
Sand & Shale	1320	1667				
Sand & Shale	1667	1925			2" @ 1805'	
Sand & Shale	1925	2390			2" @ 1850'	
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	Date	Reviewed by	Date
Vice President	12/7/05	mt	1/23/08
		Comments	



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.		DEF 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 complete Log or Formations on back (pages 2-4)

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	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			

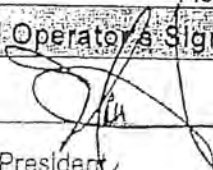
DEC 12 2005

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			1/2" @ 100'	
Sand & Shale	380	550			1/2" @ 490'	
Coal	550	555			6" @ 550'	
Shale & Sand	555	581				
Sand & Shale	581	920			1/2" @ 710'	
Shale & Sand	920	1320				
Sand & Shale	1320	1667				
Sand & Shale	1667	1925			2" @ 1805'	
Sand & Shale	1925	2390			2" @ 1850'	
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's Signature: 	DEP USE ONLY
Title: Vice President	Reviewed by: _____ Date: _____
Date: 12/7/05	Comments: _____

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 Management48°30'34" 40°32'30"
51°30'42" 79°42'30"

(Q)

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

DER-BOGM

PITTSBURGH REGION

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 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 Sportsman's Club #3	Farm Number	Serial Number PL-80	Acres 142
Township Plum Boro		County Allegheny	
Type of Well ☒ Oil ☐ Gas ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method Rotary (Air ☒ Mud ☐ Cable Tool ☐ Other ☐ (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												
<table border="1"> <tr> <td>T.D.</td> <td>D.D.</td> <td>D.P.I.</td> <td>Class</td> <td>O'G</td> <td>Lease</td> </tr> <tr> <td>4520</td> <td></td> <td>2387</td> <td>D</td> <td>I</td> <td>I</td> </tr> </table>								T.D.	D.D.	D.P.I.	Class	O'G	Lease	4520		2387	D	I	I
T.D.	D.D.	D.P.I.	Class	O'G	Lease														
4520		2387	D	I	I														

Cement return on surface casing? ☒ yes ☐ no

COMPLETION REPORT

PROP FM - Venango (Bayard?)
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 504	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	412-837-6612
Dowell Schlumberger	P. O. Box 437, Blacklick, PA 15716	Oil & Gas Geology Division	412-459-7900
Allegheny Nuclear Surveys, Inc.	Elderton, PA 15736		412-354-3090

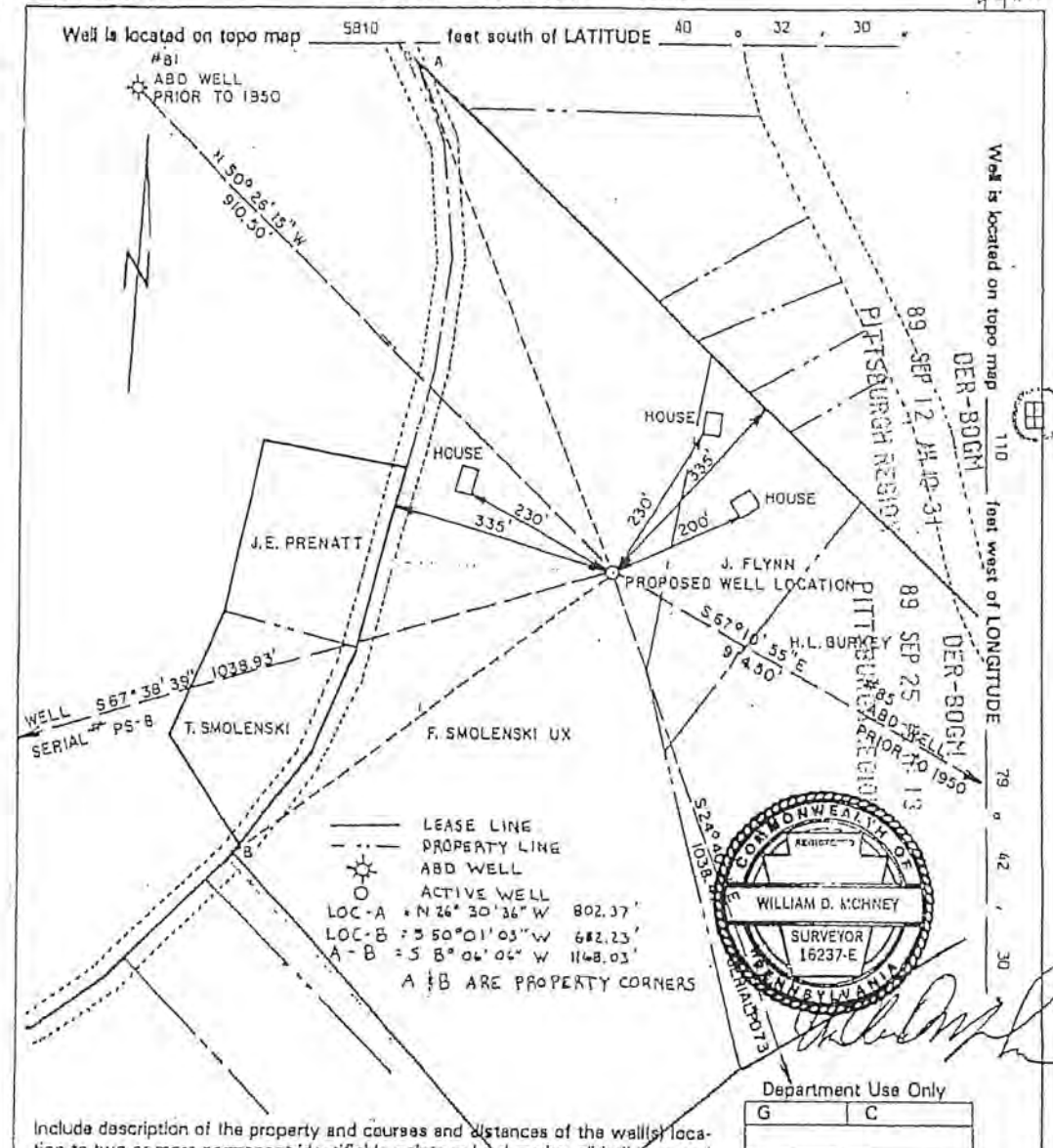
203-21237

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" @ 100'		
Shale and Sand	380	550			1" @ 490'		
Coal	550	555			6"		
Shale and Sand	555	581					
Sand and Shale	581	920			1" @ 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						
Buller							
GEOPHYSICAL LOG DATA							
Fifth					2318-2349		
Third Warren					3035-3041		
Speechley Stray					3108-3110		
Speechley					3169-3215		

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

FOR OFFICIAL USE ONLY
Reviewed By [Signature] 11/22/89 Date
Comments _____

WELL	LOCATION	PLAT
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Include description of the property and courses and distances of the wall(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 # 37-003-21238-0

Project #

Pennaco Oil Company, Inc.		13825 7		Revision		☐		W.D. McHenry	
Well Permits/Registrations				Alteration		☐		Surveyor/Engineer	
200 U.S. Route 22				Storage Recondition		☐		S-1	
Address				New Location		☒		Drawing Number	
Delmont, PA 15626				Drill Deeper		☐		8-15-89	
				Abandonment		☐		Date	
F. Smolenski				Registration		☐		1" = 200'	
Surface Owner				Plugging		☐		Scale	
N/A								PA GEOLOGICAL SURVEY	
Surface Lessor (if any)				Surface landowner and water purveyor with water supply within 1,000'				Approximate course and distance to water supply	
Smolenski				E. Taylor N4° W 940'				C.J. Flynn N58°E 231'	
Farm Name				J. Prenatt S84° W 450'				D. Maloney N35°E 550'	
1		PS-75		T. Smolenski S71° W 520'				J. Smith N49°E 600'	
Well No.		Tract		F. Chalkley S45° W 810'				W. Bursley S75°E 550'	
14.58		975		W. Barker N66° E 800'				J. Hovey S71°E 700'	
Acres		Ground Elevation		Walter Barker N66°E 800'				R. Dzublan S62°E 910'	
None		4250		D. Amuskiewicz 780'				F. Smolenski N27°E 310'	
Angle of Deviation (Down)		Anticipated TD						A. Smolenski N3°E 255'	
Allagheny		Plum Brook							
County		Municipality		Owner/Operator/Leasee		Workable		Name of Seam	
New Kensington East 1488		7						Upper Freeport	
Topo Quadrangle		Section		Consolidation/Chemical Co.					
				F. Smolenski				All Others	
								FOS 10/2/89	

5810' 3 40° 32' 30"
110' 16 79° 42' 30"

(G)

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

NEW KENSINGTON EAST

21238

003-21238

WELL RECORD AND COMPLETION REPORT

FIELD- RENTON - DEV

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 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	
Firm Name Smolenski #1	Firm Number	Serial Number PS-75	Acres 14
Township Plum Boro		County Allegheny	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method Rotary (Air ☒ Mud ☐ Cable Tool ☐ Other ☐ (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

FRYD-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"	3,046	N/A	N/A	N/A	N/A	11-10-89

Cement return on surface casing? ☒ Yes

T.D.	D.D.	D.P.I.	Class	O.G.	Lease
4264		3666	D	FI	

COMPLETION REPORT

PENN- 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
Dowell 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					
Sand and Shale	250	425			1" @ 90'		
Coal	425	428					
Sand and shale	428	459					
Sand and Shale	459	950			1" @ 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							
GEOPHYSICAL LOG DATA							
Hundred Foot				1171-1835			
Gordon				2018-2034			
Fourth				2120-2171			
Fifth				2177-2228			
Speechley Stray				2955-2965			
Speechley				3032-3072			

PENNERO ENERGY CORPORATION

BY:

Operator's Signature

Vice-President

Title

12-17-89

Date

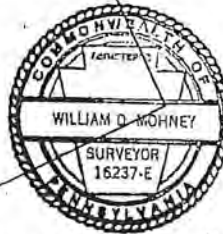
FOR OFFICIAL USE ONLY

Reviewed By William P. ... 3. 4. 70

Date

Comments

003-21240



William D. Morrey

G	C

Include description of the property and courses and distances of the wall(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 # 37-603-21246-00

Project #

[illegible]

10060' S 40° 32' 30"
400' W 79° 42' 30"
(G) 4

NEW KENSINGTON EAST

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

21240
003-21240
L

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 Panneco Energy Corporation		Telephone Number 412-468-8232	
Address 200 Route 22, Delmont, PA		Zip 15626	
Permit Number 37-003-21240-00		Project Number	
Firm Name Hankey #1	Firm Number	Serial Number PH-84	Acres 162
Township Plum Borough		County Allegheny	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

WELL RECORD

(Include Driller's Log on Reverse Side)

Drilling Method Rotary (Air) ☒ Mud ☐ Cable Tool ☐		Date Drilling Started 12-5-89	Date Drilling Completed 12-15-89
Other ☐ (Specify)			
Elevation 1250'	Total Depth 4530'	7 1/2' Quadrangle New Kensington East	

FMTD - BRAULIER

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"	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

Q.D.	D.D.	D.P.I.	Class	O.G.	Leak
4530		3958	D		

COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated		Date	Interval Treated	Fluid		Propping Agent		Average Injection Rate
	From	To			Type	Amount	Type	Amount	
12-20	3,936	3,958	12-20	3936-3958	Water	16,500	Sand	21,000#	29BPM
12-20	3,939	3,951	12-20	3939-3951	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 06
After Treatment Open Flow 300 MCF	After Treatment Rock Pressure 850#	Hours 24	Days 07

MAY 21 1990

Name, Address, and Telephone Number of Well Service Companies	PA GEOLOGICAL SURVEY
F. D. Hill Drilling Co.	Rte. 321 South, Kane, PA 16803
Dowell Schlumberger	P. O. Box 437, Blacklick, PA 15716
Allegheny Nuclear Surveys, Inc.	Elderton, PA 15736

003-21240

PS 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						
Brillier							
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		

PENNCO ENERGY CORPORATION

BY:

Operator's Signature

Vice-President

Title

1-15-90

Date

FOR OFFICIAL USE ONLY

Reviewed By

3-6-90

Date

Comments

GEO COPY

WELL LOCATION PLAT

C-45349

003-21253

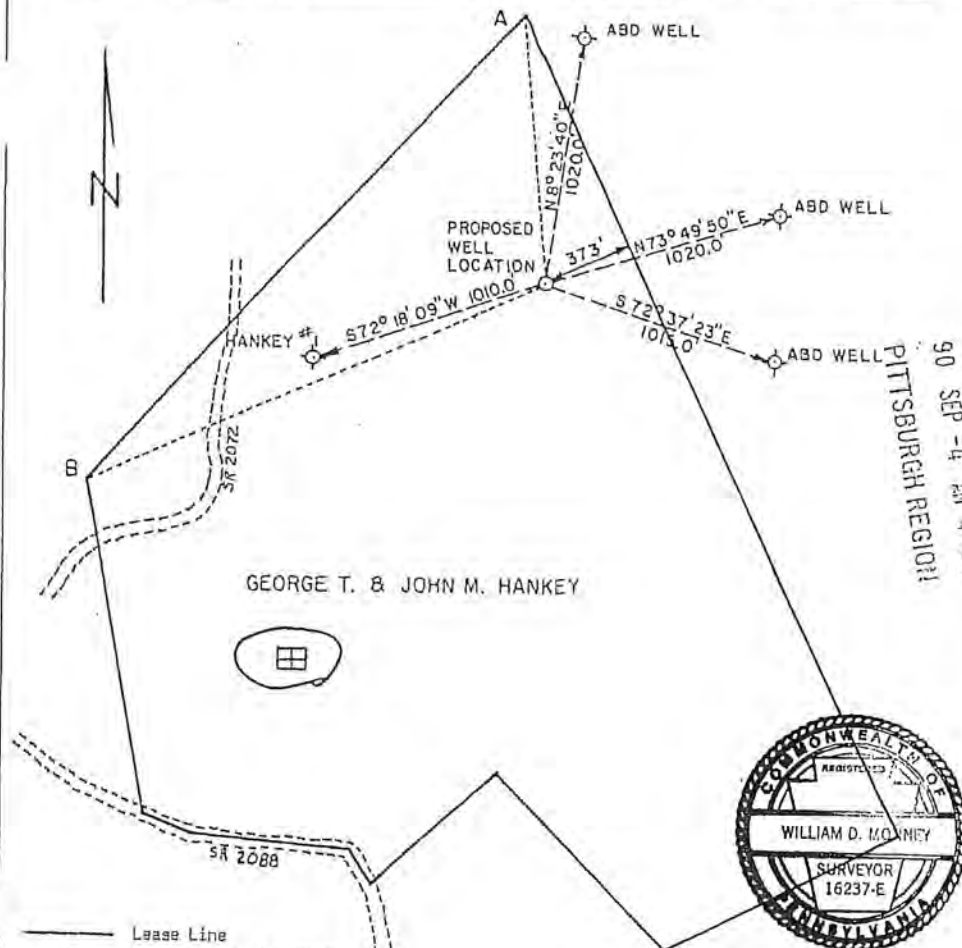
Well is located on topo map 9710 feet south of LATITUDE 40 0 32 30

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

DER-B06M

90 SEP -4 AM 4:00

PITTSBURGH REGION



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

William D. Mohney

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 # 37-202-21253-0 Project # _____

Penneco Oil Company, Inc.		Revision ☐		W.D. Mohney	
Well Permittee/Registrant 200 U.S. Route 22		Alteration ☐		Surveyor/Engineer H-2	
Address Delmont, PA 15625		Storage Recondition ☐		Drawing Number 8-7-89	
George T. & John M. Hankey		New Location ☒		Date 1" = 600'	
Surface Owner N/A		Drill Deeper ☐		Scale	
Surface Lessor (if any) Hankey		Abandonment ☐		Approximate course and distance to water supply	
Farm Name 2 PH-85		Registration ☐		RECEIVED	
Well No. Tract Serial No. 162,95 1125		Plugging ☐		OCT 5 1990	
Acres None		Surface landowner and water purveyor with water supply within 1,000'		PA GEOLOGICAL SURVEY	
Angle of Deviation (Drilling) Allegheny County		None		(OH & Gas Geology Division)	
Municipality Plum Boro		None		WORKABLE COAL SEAMS	
County New Kensington East 1408		None		Owner/Operator/Lessor Consolidated Coal Co.	
Topo Quadrangle Section		None		Name of Seams Upper Freeport	
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		None		G.T. & J.M. Hankey	
		None		All others	
		None		cum 9/19/90	

NEW KENSINGTON EAST
003-21253

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

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

9710' 3 40 32' 30"
11010' 1 37 40' 00"
(H)

WELL RECORD AND COMPLETION REPORT

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 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).

RENTON - DEV

Well Operator Penneco Energy Corporation		Telephone Number 412-468-8232	
Address 200 U.S. Route 22, Delmont, PA			
Permit Number 37-003-21253-00		Project Number	
Farm Name Hankey #2	Farm Number	Serial Number PH-85	Acres 162.95
Township Plum Borough		County Allegheny Co.	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method Rotary (Air ☒ Mud ☐ Cable Tool ☐ 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

BRADLEY

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"	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												
<table border="1"> <tr> <td>T.D.</td> <td>D.D.</td> <td>D.P.I.</td> <td>Class</td> <td>O.G.</td> <td>Lease</td> </tr> <tr> <td>4038</td> <td></td> <td>2385</td> <td>D</td> <td></td> <td></td> </tr> </table>								T.D.	D.D.	D.P.I.	Class	O.G.	Lease	4038		2385	D		
T.D.	D.D.	D.P.I.	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		Overall 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

003-21253

DRILLER'S LOG OF FORMATIONS

Name	Top f	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					

Operator's Signature

Title

Date

FOR OFFICIAL USE ONLY

Reviewed By

Date

Comments

GEO COPY

WELL LOCATION PLAT

C-4576 003-21254

Well is located on topo map 2100 feet south of LATITUDE 40° 32' 30"

Well is located on topo map 4300 feet west of LONGITUDE 79° 04' 30"



William D. Mohney

Lease Line
Property Line
Proposed Well Location
Loc - A = S 78° 19' 24" W 436.11'
Loc - B = S 7° 56' 51" W 462.83'
A - B = S 44° 27' 04" E 518.48'
A & B are property corners

FRANK, PETER & GEORGE STONIS

PITTSBURGH REGION
90 AUG 17 AM 7:35
DER-806M

HOUSE

PROPOSED WELL LOCATION

BARN

HOUSE

SR 2090

WEBSTER ROAD

Department Use Only

G C *DER*

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 # *37-003-21254-01* Project #

Pernco Oil Company, Inc.		Revision	☐	W.D. Mohney
Well Permit/Registration		Alteration	☐	Surveyor/Engineer
200 U.S. Route 22		Storage Recondition	☐	S-1
Address		New Location	☒	Drawing Number
Delmont, PA 15626		Drill Deeper	☐	7-17-90
Frank, Peter and George Stonis		Abandonment	☐	Date
Surface Owner:		Registration	☐	1" = 300' OCT 5 1990
N/A		Plugging	☐	Scale
Surface Lessor (if any)		P4 GEOLOGICAL SURVEY		
Stonis		Approximate course and distance to water supply		
Firm Name		Within 1,000' Richard Borowski S 20° 00' E 600'		
1		John Schech S 82° 30' E 950'		
Well No.	Tract	PS-90	Walter Hummel	S 1° 00' E 750'
50.0		940	Stan Borowski	S 25° 00' E 550'
Acres	Ground Elevation		Charles Memphis	S 39° 00' E 600'
None	3550		Richard Ambrose	S 67° 10' E 800'
Angle of Deviation (Grading)	Anticipated TD		Walter Casella	N 74° 30' E 910'
Allegheny Co.	Plum Boro		Ed Rockwell	S 75° 00' E 1000'
County	Municipality		Ed Rockwell	S 75° 00' E 900'
New Kensington East 1408	7		Owner/Operator/Lessor Name of Seam	
Topo Quadrangle	Section		Allegheny & Ohio Coal Co. Upper Freeport	
Commonwealth of Pennsylvania		Frank Stonis et al All others		
Department of Environmental Resources		Cum 9/28/90		
Bureau of Oil and Gas Management				

RECEIVED

MA 3-19-71

003-21254

DRILLER'S LOG OF FORMATIONS

PS 2

Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Fill	0	15				Driller's Log
Shale and Sand	15	48				
Shale and Sand	48	105			1" @ 60'	
Sand and Shale	105	270			3" @ 215'	
Coal	270	273				
Sand and Shale	273	380			3 1/2" @ 320'	
Mine	380	385				
Sand and Shale	385	428				
Sand and Shale	428	970			1" @ 725'	
Shale and Sand	970	1280				
Sand and Shale	1280	1670			3" @ 1630'	
Sand and Shale	1670	1785			2" @ 1650'	
Sand and Shale	1785	1900				
Sand, Red Rock & Shale	1900	2470				
Shale and Sand	2470	3100				
Sand and Shale	3100	3750				
Sand and Shale	3750	4110				
T.D.	4110					

PENNCO ENERGY CORPORATION

BY:

Operator's Signature

Vice President

Title

11-20-90

Date

FOR OFFICIAL USE ONLY

Reviewed By

Date

Comments

Well is located on topo map 9500 feet south of LATITUDE 40° 32' 30"

Well is located on PIER N @ CM 1420 feet west of LONGITUDE 79° 0' 42" 30"

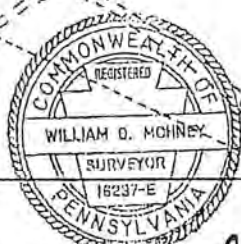
91 FEB -5 PM 3:06

PITTSBURGH REGION

A.R. MILLER

MICHAEL A. BALENO

PROPOSED WELL LOCATION



HANKEY 1 W

William D. Mohney

- Lease Line
 - - - Property Line
 ⊙ Proposed Well Location
 ⊕ Existing Well Location

Loc-A = S 10° 01' 06" W 1529.2'
 Loc-B = N 66° 57' 16" E 1915.6'
 A - B = N 41° 58' 00" E 3033.85'

Department Use Only

G	C
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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 #37-003-21266-00

Project #

Penneco Oil Company, Inc.		Revision	☒	W.D. Mohney
Well Permittee/Registrant		Alteration	☐	Surveyor/Engineer
200 U.S. Route 22		Storage Recondition	☐	PB-2
Address		New Location	☐	Drawing Number
Delmont, PA 15626		Drill Deeper	☐	Revised
		Abandonment	☐	1-2-91 02-05-91
		Registration	☐	Date
		Plugging	☐	1" = 500'
Michael A. Baleno		Scale		
Surface Owner		Approximate course and distance to water supply		
N/A		N 62° 51' E 850'		
Surface Lessor (if any)		Surface landowner and water purveyor with water supply within 1,000'		
Burton		M.A. Baleno		
Farm Name		Name of Farm		
L		Ranton Mine		
Well No.		Name of Coal Co.		
107.3		Sealed		
Tract		Worksable Coal Seams		
1120		Consolidated Coal Co.		
Acres		M.A. Baleno		
None		All Others		
Angle of Deviation (Drilling)		Cum 2/7/91		
Allegheny				
County				
New Kensington East				
Topo Quadrangle				

RE

75° 54' 32" 30"
142° W 79° 42' 30"NEW KENSINGTON EAST
003-21266

ER-QG-4: Rev. 3/89

(4)

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

DE 41072

41073

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 filled with the Completion Report (see ER-QG-75).

RENTON-DEL

Well Operator Pennaco Energy Corporation		Telephone Number 412-468-8232	
Address 200 Route 22, P. O. Box 300, Delmont, PA 15626-1634			
Permit Number 17-001-21266-00		Project Number	
Firm Name Burton #1	Firm Number	Serial Number PB-92	Acres 107
Township Plum Borough		County Allegheny	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

WELL RECORD

(Include Driller's Log on Reverse Side)

Drilling Method Rotary (Air Dr) ☒ Mud ☐ Cable Tool ☐ Other ☐ (Specify)	Date Drilling Started 2-22-91	Date Drilling Completed 3-1-91
Elevation 1,120'	Total Depth 4,025'	7 1/2' Quadrangle New Kensington East

BRANER

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"	35	Sanded In	N/A	N/A	N/A	2-21-91												
12-1/4"	9-5/8"	612	Cement - 150 Sacks	Float shoe	9-5/8"	612	2-25-91												
8-3/4"	7"	1,987	Cement - 275 Sacks	Float shoe	7"	1,995	2-27-91												
6-1/4"	4-1/2"	3,959	Cement - 170 Sacks	Float shoe	4-1/2"	3,967	3-3-91												
<table border="1"> <tr> <td>T.D.</td> <td>D.D.</td> <td>D.P.I.</td> <td>Class</td> <td>O.G.</td> <td>Loss</td> </tr> <tr> <td>4025</td> <td></td> <td>3870</td> <td>D</td> <td>1</td> <td>1</td> </tr> </table>								T.D.	D.D.	D.P.I.	Class	O.G.	Loss	4025		3870	D	1	1
T.D.	D.D.	D.P.I.	Class	O.G.	Loss														
4025		3870	D	1	1														
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	
3-11	3,845	3,870	3-11	3845-3870 25	Water	12,500	Sand	15,000	31 BPM
3-11	3,406	3,443	3-11	3406-3443 37	Water	10,500	Sand	13,000	25 BPM
3-11	3,228	3,256	3-11	3228-3256 29	Water	33,000	Sand	68,000	34 BPM
3-11	3,146	3,150	3-11	3146-3150 4	Water	10,500	Sand	13,000	23 BPM
Natural Open Flow			Natural Rock Pressure						
After Treatment Open Flow			After Treatment Rock Pressure						
250 MCF			650#						

Hours 11:17

Days 24

JUL 21 1992

Name, Address, and Telephone Number of Well Service Companies

F. D. Hill Drilling Co.

Rte. 321 South, Kane, PA

16735-837-6611

Universal Well Services

P. O. Box 305, Punxsutawney, PA 15767

814-938-2051

Allegheny Nuclear Surveys, Inc.

Elderton, PA 15736

412-354-3095

003-21266

DRILLER'S LOG OF FORMATIONS

Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Fill	0	3				Driller's Log
Shale	3	25				
Sand	25	35				
Sand and Red Bed	35	48				
Redbed, Sand & Shale	48	560			1" @ 98'	
Sand and Shale	560	585				
Open Mine	585	613				
Sand and Shale	613	700				
Sand and Shale	700	1150				
Sand and shale	1150	1510				
Shale and Sand	1510	1930			2" @ 1850'	
Sand and Shale	1930	2022				
Sand	2022	2095				
Redrock, Sand & Shale	2095	2220				
Sand and Shale	2220	2750				
Sand and Shale	2750	3280				
Shale and Sand	3280	4025				
TD	4025					

PENNECO ENERGY CORPORATION

BY:

Vice-President

6-5-91

Operator's Signature

Title

Date

FOR OFFICIAL USE ONLY

Reviewed By

Date

Comments

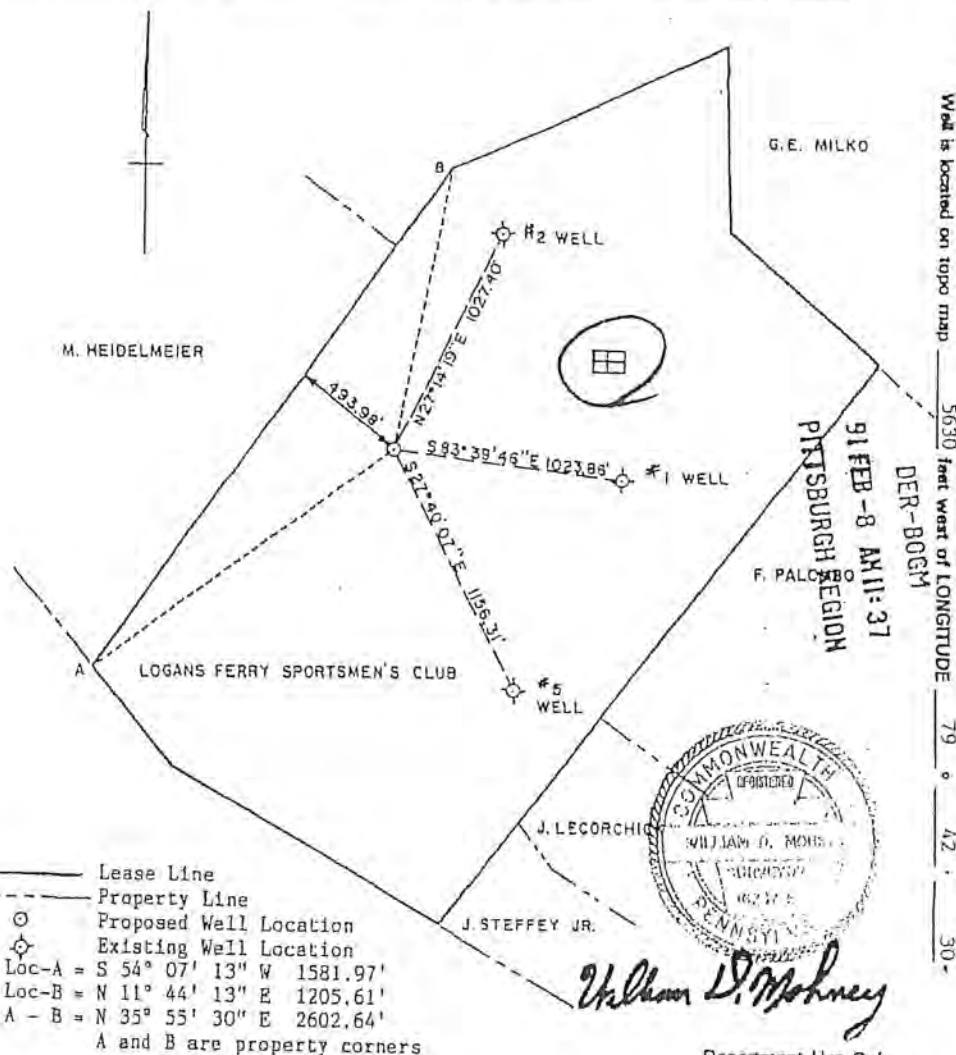
GEO COPY

WELL LOCATION PLAT

003-21267

C-10997

Well is located on topo map 5790 feet south of LATITUDE 40 ° 32 ' 30 "



Well is located on topo map 5630 feet west of LONGITUDE 79 ° 42 ' 30 "

- Lease Line
 - - - - - Property Line
 ○ Proposed Well Location
 ● Existing Well Location
 Loc-A = S 54° 07' 13" W 1581.97'
 Loc-B = N 11° 44' 13" E 1205.61'
 A - B = N 35° 55' 30" E 2602.64'
 A and B are property corners



William D. Mohney

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 #37-003-21267-00 Project #

Penneco Oil Company, Inc.		Revision		W.D. Mohney	
Well Permittee/Registrant		Alteration		Surveyor/Engineer	
200 U.S. Route 22		Storage Recondition		S-3	
Address		New Location		Drawing Number	
Delmont, PA 15626		Drill Deeper		1-29-91	
Logans Ferry Sportsman's Club		Abandonment		Date	
Surface Owner		Registration		1" = 600'	
N/A		Plugging		Scale	
Surface Lessor (if any)		Surface landowner and water purveyor with water supply within 1,000'		Approximate course and distance to water supply	
Sportsman's Club		None			
Farm Name					
3					
Well No.		Tract		Serial No.	
142,32		1220		21267	
Acres		Ground Elevation			
None		4300			
Angle of Deviation (Drilling)		Anticipated TD			
Allegheny		Plum Boro			
County		Municipality			
New Kensington East		7			
Topo Quadrangle		Section			
Commonwealth of Pennsylvania		Department of Environmental Resources		Bureau of Oil and Gas Management	
		Owner/Operator/Lessor		Workable Coal Seams	
		Lesone Enterprise Inc		All Seams	
				Seam 2/21/91	
				Within Renton Mine	
				Villa Coal Co.	
				Seated	

RECEIVED
FEB 20 1991
BY GEOLOGICAL SURVEY
OF PENNSYLVANIA

RED# 41128
41729

NEW KENSINGTON EAST
003-21267

2

EH-OG-4: Rev. 3/89

5790.5 40° 32' 30"
5630.0 79° 42' 30"

(9)

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

WELL RECORD AND COMPLETION REPORT

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 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).

RENTAN-DEV

Well Operator Penneco Energy Corporation		Telephone Number 412-468-8232	
Address 200 U.S. Route 22 - Delmont, PA 15626			
Permit Number 37-001-21267-00		Project Number	
Farm Name Sportsmen's Club #1		Farm Number	Serial Number
Township Plum Boro		County Allegheny	Area 1A2 37
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method Rotary ☒ Mud ☐ Cable Tool ☐ Other ☐ (Specify)		Date Drilling Started 3/13/91	Date Drilling Completed 3/22/91
Elevation 1220	Total Depth 4428	7K' Quadrangle New Kensington East	

BRALHER

CASING AND TUBING RECORD

Hole Size	Pipe Size	Amount In Well	Material Behind Pipe Type and Amount	Packer/Hardware		Date Run												
				Type	Size													
15"	13-3/8"	34.30'	Sanded in	N/A	N/A	3/13/91												
12-1/4"	9-5/8"	749.0'	Cement - 200 Sacks	Flange	9-5/8"	3/19/91												
8-3/4"	7"	2201.30	Cement - 355 Sacks	Flange	7"	3/21/91												
<table border="1"> <tr> <td>T.D.</td> <td>D.D.</td> <td>D.P.I.</td> <td>Class</td> <td>O.G.</td> <td>Lease</td> </tr> <tr> <td>4428</td> <td></td> <td>2490</td> <td>D</td> <td></td> <td></td> </tr> </table>							T.D.	D.D.	D.P.I.	Class	O.G.	Lease	4428		2490	D		
T.D.	D.D.	D.P.I.	Class	O.G.	Lease													
4428		2490	D															

Cement return on surface casing? ☒ yes ☐ no

COMPLETION REPORT

BRAP

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 875 MCF	Natural Rock Pressure 408	Hours	Days
After Treatment Open Flow N/A	After Treatment Rock Pressure N/A	Hours	Days

Name, Address, and Telephone Number of Well Service Companies	
F.D. Hill Drilling Co., Rt. 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	412-354-3090

RECEIVED

JUL 27 1992

cell 2/10

003-21267

DRILLER'S LOG OF FORMATIONS

Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Bony	0	20				Drillers Log
Shale	20	30				
Sand	30	48				
Sand & Shale	48	193				
Sand & Shale	193	220			Damp @ 50	
Red Rock & Shale	220	600			1" @ 220'	
Sand & Shale	600	690				
Mine	690	695				
Sand & Shale	695	780				
Sand & Shale	780	1125				
Sand & Shale	1125	1220				
Sand & Shale	1220	1600				
Sand & Shale	1600	2000				
Sand & Shale	2000	2225			2" @ 1950'	
Red Rock, Sand & Shale	2225	2340				
Shale & Sand	2340	2900	2470'			
Shale & Sand	2900	3400				
Sand & Shale	3400	3975				
Sand & Shale	3975	4428				
T.D.	4428					

Operator's Signature

Title

Date

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Reviewed By

Date

Comments

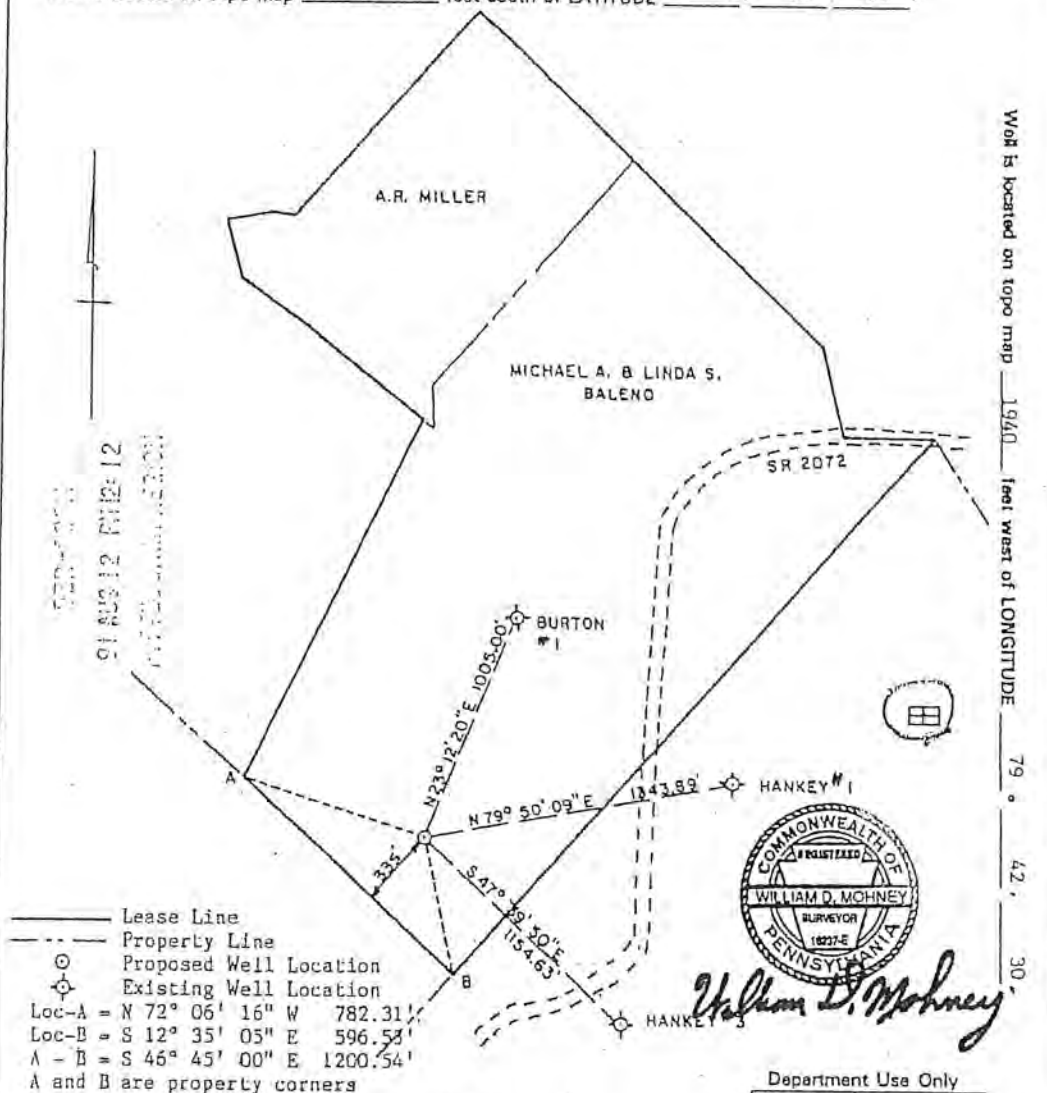
GEO COPY

003-21285

WELL LOCATION PLAT

Well is located on topo map 10,360 feet south of LATITUDE 40, 32, 30

Well is located on topo map 1960 feet west of LONGITUDE 79, 42, 30



Penneco Oil Company, Inc.

13825

Well Permittee/Registrant

200 U.S. Route 22

Address

Delmont, PA 15626

Michael A. and Linda S. Baleno

Surface Owner

N/A

Surface Lessor (if any)

Burton

Farm Name

2

Well No.

Tract

Serial No.

107.3

1200

Acres

Ground Elevation

None

4250

Angle of Deviation (Drilling)

Anticipated TD

Allegheny

Plum Boro

County

Municipality

New Kensington East

7

Topo Quadrangle

Section

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

 Revision ☐
 Alteration ☐
 Storage Recondition ☐
 New Location ☐
 Drill Deeper ☐
 Abandonment ☐
 Registration ☐
 Plugging ☐

 Surface landowner and water purveyor with water supply within 1,000'
 Gen^e Machusko
 Mike Scher

All other homes within 1000' use city water supply

 Owner/Operator/Lessor
 Workable Coal Seams Name of Seam

 Tazone Enterprises Inc.
 M.A. Baleno
 Upper Freeport
 All Others

 Within Renton Mine
 Villa Coal Co.
 (Sealed)

 W.D. Mohney
 Surveyor/Engineer
 PB-3
 Drawing Number SEP. 10 1991
 3-21-91
 Date
 1" GEOTECHNICAL SURVEY
 Scale

 Approximate distance to water supply
 S 59° E 200'
 S 46° E 200'

1000' use city water

4240 2

1940-1942-30 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 26 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 Oil Company, Inc.		Telephone Number (712) 468-8232	
Address 200 Rt 22, P.O. Box 300 Delmont, PA 15626			
Permit Number 37-003-21285-00		Project Number	
Farm Name Burton		Farm Number 2	Serial Number PB-93
Township Plum Borough		County Allegheny County	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

Drilling Method Rotary (Air ☒ Mud ☐ Cable Tool ☐ Other ☐ (Specify)		Date Drilling Started 10-18-91	Date Drilling Completed 10-24-91
Elevation 1184	Total Depth 4060	7 1/2" Quadrangle New Kensington East	

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'	Sanded in	N/A	N/A	N/A	10-18-91
1 1/4"	Reduced	to 8 3/4"	at 698'				
8 3/4"	7"	2034	Cement - 625 sacks	Float shoe	7"	2043	10-22-91
6 1/4"	4 1/2"	4014	Cement - 170 sacks	Float shoe	4 1/2"	4021	10-25-91

COMPLETION REPORT

Perforation Record			Stimulation Record							
Date	Interval Perforated		Date	Interval Treated	Fluid		Propping Agent		Average Injection Rate BPM	
	From	To			Type	Amount	Type	Amount		
10-30	3091'	3074'	10-30	3091-3074	Water	12,000gal	Sand	21,000#	26.7 BPM	
10-30	3562'	3431'	10-30	3562-3431	Water	10,000gal	Sand	13,000#	20.4 BPM	
10-30	3250'	3202'	10-30	3250-3202	Water	14,000gal	Sand	68,000#	26.3 BPM	
10-30	3175'	3175'	10-30	3171-3175	Water	10,000gal	Sand	18,000#	19.6 BPM	
				D.P.I.	Glass	O	G	Lease		
				3891'	D G		I	I		
Natural Open Flow 155 MCF B			Natural Rock Pressure B Hours Days							
After Treatment Open Flow 335 MCF			After Treatment Rock Pressure 760 psig HOURS 26 1993 Hours Days							

216-264-0885

112-3572-3E100

003 21285

PS 2

DRILLER'S LOG OF FORMATIONS

Name	Top	Bottom	Gas At	Oil At	Water At (Feet or Below)	Source of Data
White Sand	0	4				Drillers Log
Shale & Sand	4	9				
Shale & Sand	9	30				
Sand & Sand	30	40			1/2" @ 40'	
Shale	40	130				
Red Bed	130	150				
Shale	150	200				
Red Rock	200	210				
Shale	210	260				
Red Rock	260	285				
Shale	285	300				
Red Rock	300	315				
Shale & Sand	315	525				
Sand & Shale	525	605				
Coal & Shale	605	612				
Sand & Shale	612	698				
Shale	698	775				
Sand & Shale	775	1330				
Shale	1330	1370				
Sand & Shale	1370	1630				
Shale & Sand	1630	1910			3" @ 1870	
Sand	1910	2060		1980		
Shale & Sand	2060	2120				
Red Rock	2120	2150				
Shale, Sand, Red Rock	2150	2400				
Shale	2400	2550				
Sand & Shale	2550	3160	show of			
Sand	3160	3165				
Sand & Shale	3165	3260				
Sand	3260	3265				
Shale & Sand	3265	3510				
Shale & Sand	3510	4060				

Operator's Signature

Title

Date

FOR OFFICIAL USE ONLY

Reviewed By

Date

Comments

REVISION ALTERATION STORAGE RECONSTRUCTION NEW LOCATION DRILL DEEPER ABANDONMENT REGISTRATION PLUGGING	□ □ X □ □ □ □ □ □	W.D. MOHNEY & ASSOC. Surveyor/Engineer 1/1 Drawing Number 7-17-01 Date 1 INCH = 300 FEET Scale
SURFACE LANDOWNER AND WATER PURVEYOR WITH WATER SUPPLY WITHIN 1000'		APPROXIMATE COURSE AND DISTANCE TO WATER SUPPLY
E.L. PATTOCK		N 88°55'E 800'
D.A. PLANCE		S 80°00'E 1000'
GEORGE SZITAS		N 48°10'E 1000'
VIRGINIA D. MITCHELL		N 21°40'E 850'
ROBERT MATT		N 35°30'E 750'
Owner/Operator/Lessor:		Name of Company:
TESOME ENTERPRISES, INC. THOMAS G. & BARBARA HOWARD KENNETH & SUSAN L. HOWARD		SEP 10 1991 FREIGHT ALL OTHERS GEOLOGICAL SURVEY WITHIN REVISION Sealed
cum 2/29/91		

42179 03-21287

4200' S 40° 32' 30"
2190 W 79° 42' 30"
(G)

(G)

In accordance with 26 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 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).

RENTON FIELD

Well Operator Penneco Oil Company, Inc.		Telephone Number 412-468-8232	
Address 200 Rt 22, P.O. Box 300 Delmont, PA		15626 Zip	
Permit Number 37-003-21287-00		Project Number	
Firm Name Howard	Firm Number 1	Serial Number PH - 96	Accession 331.23
Township Plum Borough		County Allegheny County	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method	Rotary ☒ (Air ☐)	Mud ☐	Cable Tool ☐	Date Drilling Started	Date Drilling Completed
Other ☐ (Specify)				09-24-91	10-01-91
Elevation	1075	Total Depth	4121	7 1/2' Quadrangle	New Kensington East

CASING AND TUBING RECORD

Hole Size	Pipe Size	Amount In Wall	Material Behind Pipe	Packer/Hardware			Date Run
			Type and Amount	Type	Size	Depth	
15"	13 3/8"	34'	Sanded in	N/A	N/A	N/A	9-24-91
2 1/4"	9 5/8"	574'	Cement - 200 sacks	Float Shoe	9 5/8"	574	9-25-91
8 3/4"	7"	1993'	Cement - 305 sacks	Float Shoe	7"	2009	9-27-91
6 1/4"			NO PIPE INSTALLED				

Cement return on surface casing? ☒ yes ☐ no

COMPLETION REPORT

[illegible]

Natural Open Flow	349 MCF	Natural Rock Pressure	48 psig	Hours	Days
After Treatment Open Flow		After Treatment Rock Pressure	RECEIVED	Hours	Days

Name, Address, and Telephone Number of Well Service Companies

JUN 28 1993

JUN 26 1993

PA GEORGE KE SHERIDAN

F.D. Hill Drilling Company - Rt 321 South - Kane, PA 16735 Tel: 814-837-5212

Nowco Well Service - 3000 Old Airport Road - Wooster, OH 44691 216-364-1800

Allegheny Nuclear Surveys, Inc. - Elderton, PA 15736 412-354-3090

003-21287

DRILLER'S LOG OF FORMATIONS

Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Clay	0	10				Drillers Log
Red Bed & Shale	10	28				
Sand	28	34				
Shale & Sand	34	79			Damp @60'	
Sand & Shale	79	150				
Red Rock	150	165				
Sand & Shale	165	185				
Red Rock	185	205				
Sand & Shale	205	295				
Shale	295	315				
Sand & Shale	315	515			1" @ 430'	
Mine (Gdb)	515	525				
Sand & Shale	525	685				
Shale	685	745				
Sand & Shale	745	760				
Shale	760	880				
Sand & Shale	880	940			1/2" @ 880'	
Shale	940	1000				
Sand & Shale	1000	1045				
Sand	1045	1100				
Sand & Shale	1100	1290				
Shale & Sand	1290	1700				
Shale	1700	1780				
Sand & Shale	1780	1810			2" @ 1790'	
Sand	1810	1840				
Sand & Shale	1840	1885			1" @ 1885	
Sand	1885	1935				
Sand & Shale	1935	1940				
Shale	1940	1950				
Sand & Shale	1950	2015				
Shale	2015	2060				
Red Rock & Sand	2060	2200				
Sand & Shale	2200	2313	2300			
Shale & Sand	2313	2500				
Sand & Shale	2500	3100				
Sand & Shale	3100	3600				
Shale	3600	3900				
Sand & Shale	3900	3920				
Shale	3920	4121				

Operator's Signature

Title

Date

FOR OFFICIAL USE ONLY

Reviewed By

Date

Comments

WELL LOCATION PLAT

C.47278

GEO COPY

Well is located on topo map 8490' Feet south of LATITUDE 40 - 32 - 30

003-21300

Well is located on topo map 1145' feet west of LONGITUDE 78 - 42 - 30



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 1000' IS NOT REQUIRED FOR WELL PLUGGING.



DENOTES LOCATION OF WELL ON 7 1/2" TOPO MAP

PERMIT NO. 37-003-21300-01

PROJECT NO.

PENNECO OIL COMPANY, INC. 13825		REVISION ALTERATION STORAGE RECONDITION NEW LOCATION DRILL DEEPER ABANDONMENT REGISTRATION PLUGGING	W.D. MOHNEY & ASSOC. Surveyor/Engineer B-3 Drawing Number 1-11-92 Date 1 INCH = 600' Scale
Well Permittee/Registrant P.O. BOX 300, 200 U.S. ROUTE 22			
Address DELMONT, PA 15826			
MICHAEL A. AND LINDA S. BALENO			
Surface Owner N/A		SURFACE LANDOWNER AND WATER PURVEYOR WITH WATER SUPPLY WITHIN 1000'	APPROXIMATE COURSE AND DISTANCE TO WATER SUPPLY
Surface Lessor (if any) BURTON			
Farm Name 3			
Well No. 107.30			
Tract		MICHAEL A. & LINDA S.	
Serial No. 1120'		BALENO	
Acres NONE		LaDorria H. Fuge	
Ground Elevation 4000'			
Anticipated TO PLUM BORO			
Municipality NEW KENSINGTON, EAST			
Topo Quadrangle			
Section			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF OIL AND GAS MANAGEMENT		WORKABLE COAL SEAMS NONE UPPER FREEPORT 1 1392 ALL OTHERS SURVEY	

NEW KENSINGTON EAST

003-21300

8490' 5 40° 32' 30"

145° 43' 79" 42 30" WELL RECORD AND COMPLETION REPORT

(4)

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 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-7B).

RENTON FIELD

Well Operator Penneco Oil Company, Inc.		Telephone Number 412-468-8232	
Address 200 Route 22, P.O. Box 300 Delmont, PA		Zip 15626	
Permit Number 37-003-21300-00		Project Number	
Firm Name Burton #3	Firm Number	Serial Number PB-94	Acres 107.3
Township Plum Borough		County Allegheny County	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method Notary (A) ☒ Mud ☐ Cable Tool ☐ Other (Specify)	Date Drilling Started 03-09-92	Date Drilling Completed 03-16-92
Elevation 1197	Total Depth 4018	7 1/2' Quadrangle New Kensington East

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'	Sanded in	N/A	N/A	N/A	03-09-92															
2 1/4"	9 5/8"	648'	Cement - 215 sacks	Float Shoe	9 5/8"	648	03-10-92															
8 3/4"	7"	2035	Cement - 350 sacks	Float Shoe	7"	2043	03-12-92															
6 1/4"	4 1/2"	3952	Cement - 165 sacks	Float Shoe	4 1/2"	3960	03-16-92															
<table><tr><td>TD</td><td>DD</td><td>DPI</td><td>Class</td><td>0</td><td>G</td><td>Lease</td></tr><tr><td>4018</td><td></td><td>3862</td><td>D G</td><td>1</td><td>1</td><td></td></tr></table>								TD	DD	DPI	Class	0	G	Lease	4018		3862	D G	1	1		
TD	DD	DPI	Class	0	G	Lease																
4018		3862	D G	1	1																	
Cement return on surface casing? ☒ yes ☐ no																						

COMPLETION REPORT

Perforation Record			Stimulation Record						Average Completion Rate
Date	Interval Perforated		Date	Interval Treated	Fluid		Propping Agent		
	From	To			Type	Amount	Type	Amount	
03-25-92	3844	3850	3-25	3844-3850					
03-25-92	3860	3862	3-25	3860-3862	Water	12,000gal	Sand	15,000#	31.3 BPM
03-25-92	3535	3539	3-25	3535-3539	Water	10,000gal	Sand	13,000#	23.0 BPM
03-25-92	3225	3232	3-25	3225-3232	Water				
03-25-92	3238	3252	3-25	3238-3252	Water	32,000gal	Sand	68,000#	34.4 BPM

Natural Open Flow 69 MCFPD	Natural Rock Pressure 775 PSIG	Days
After Treatment Open Flow 380 MCFPD	After Treatment Rock Pressure 775 PSIG	Days

Name, Address, and Telephone Number of Well Service Companies

P.D. Hill Drilling Co., Rt. 321 South, Kane, PA 16735	814-877-6612
Universal Well Services, P.O. Box 305, Punxsutawney, PA 15767	814-938-2051
Allegheny Nuclear Surveys, Inc., Elderton, PA 15736	412-354-3090

DRILLER'S LOG OF FORMATIONS

003-21300

Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Shale	0	10				Drillers Log
Sand	10	14				
Red Bed & Shale	14	30				
Sand	30	34				
Shale & Sand	34	48				
Sand & Shale	48	580			1" @ 100'	
Mine	580	588				
Shale	588	655				
Sand & Shale	655	1579				
Shale & Sand	1579	1830				
Murrysville	1830	1942			1" @ 1840	
100' Sand	1942	2015			3" @ 1900	
Sand & Shale	2015	2051				
Sand, Shale & Red Rock	2051	2165				
Red Rock, Sand & Shale	2165	2605				
Sand & Shale	2605	3013				
Shale	3013	3045				
Sand & Shale	3045	3170				
Shale & Sand	3170	3570				
Sand & Shale	3570	4018				

A 2

Operator's Signature

Vice President
Title

Date

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Reviewed By

Date

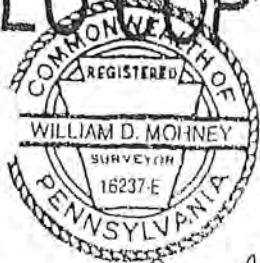
Comments

WELL LOCATION PLAT

GEO COPY

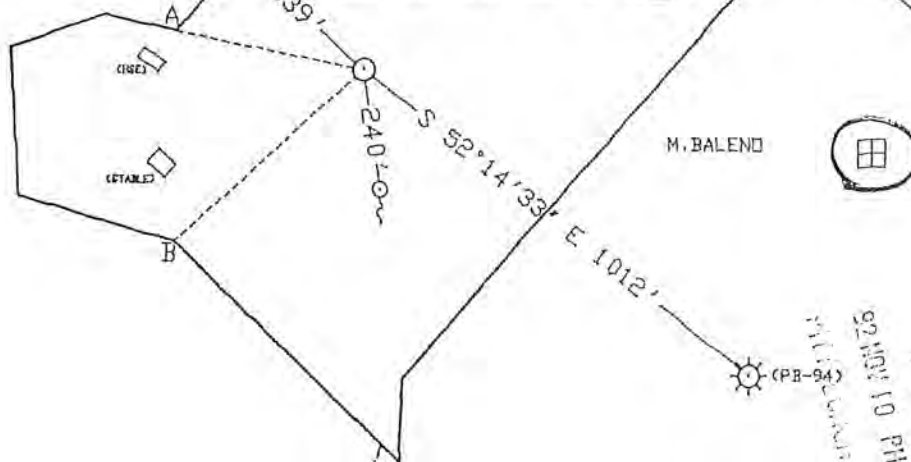
Well is located on topo map 7920' feet south of LATITUDE 40° 32' 30"

003-21317



William D. Mohney

LaDonna H. Fuge



Well is located on topo map 2100' feet west of LONGITUDE 79° 42' 30"

LEASE LINE
PROPERTY LINE
PROPOSED WELL LOCATION
EXISTING WELL

WATER SUPPLY (SPRING)
LOC-A = N 78°41'23" W 394.77'
LOC-B = S 48°10'06" W 528.93'

PROPERTY CORNERS A-B = S 00°56'20" W 430.29'

DEPARTMENT USE ONLY

G	C	db
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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 1000' IS NOT REQUIRED FOR WELL PLUGGING.



DENOTES LOCATION OF WELL ON 7 1/2" TOPO MAP

PERMIT NO. 37-003-21317-00

PROJECT NO.

PENNECO OIL COMPANY, INC. 13825		REVISION ALTERATION STORAGE RECONDITION NEW LOCATION DRILL DEEPER ABANDONMENT REGISTRATION PLUGGING		☐ ☐ ☐ ☒ ☐ ☐ ☐ ☐		W.D. MOHNEY & ASSOC. Surveyor/Engineer PM-1	
Well Permittee/Registrant BOX 300, 200 U.S. ROUTE 22				Drawing Number 10-28-92		Date 1 INCH = 300 FEET	
Address DELMONT, PA 15626				Scale			
LaDonna H. Fuge		SURFACE LANDOWNER AND WATER PURVEYOR WITH WATER SUPPLY WITHIN 1000'		APPROXIMATE COURSE AND DISTANCE TO WATER SUPPLY			
Surface Owner N/A		L. H. FUGE		S 08°48'11" E 240'			
Surface Lessor (if any) MILLER		LINDA & RICHARD KAZIMER		S 86°00' W 750'			
Farm Name 1		K. J. FRYNCKO		S 74°00' W 1000'			
Well No. 28.12		J. E. WILLIAMS		S 48°00' W 1000'			
Tract		R. G. DEPEW		S 60°00' W 900'			
Acres NONE		Ground Elevation 3900'		Workable Coal Seams			
Angle of Deviation (Drilling) ALLEGHENY		Anticipated To PLUM BORO		Owner/Operator/Lessee		Name of Seams	
County NEW KENSINGTON, EAST		Municipality 7		TESONE LAND COMPANY		FREEPORT SEAMS	
Topo Quadrangle		Section		LaDONNA H. FUGE		ALL OTHERS	
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF OIL AND GAS MANAGEMENT		Gob (Upper Freeport)		11-24-92		CRV	

NEW KENSINGTON EAST

003-21317

79°20'34" 40°32'30"
125°26'39" 42°30"

WELL RECORD AND COMPLETION REPORT

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 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).

RENTON FIELD

Well Operator Penneco Oil Company, Inc.		Telephone Number 412-468-8232	
Address 200 Rt 22, P.O. Box 300 Delmont, PA 15626			
Permit Number 37-003-21317-00		Project Number	
Farm Name Miller #1	Farm Number	Serial Number PM-95	Area 28.12
Township Plum Borough		County Allegheny Co.	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method Rotary (Air ☒ Mud ☐ Cable Tool ☐ Other (Specify)	Date Drilling Started 12-31-92	Date Drilling Complete 2-16-93
Elevation 1100'	Total Depth 4062'	7K' Quadrangle New Kensington East

PITTSBURGH
REGION
93 MAY 24 AM 10:29
DER-BOR-M

CASING AND TUBING RECORD

Hole Size	Pipe Size	Amount In Well	Material Behind Pipe	Packer/Hardware			Date Run
			Type and Amount	Type	Size	Depth	
"	16"	8.5'	Sanded in	N/A	N/A	N/A	12/31/92
"	13"	34'	Sanded in	N/A	N/A	N/A	2/9/93
12 1/4"	9 5/8"	600'	Cement - 275 sacks	Float Shoe	9 5/8"	608'	2/10/93
8 3/4"	7"	2020'	Cement - 330 sacks	Float Shoe	7"	2028'	2/11/93
6 1/4"	4 1/2"	4002'	Cement - 160 sacks	Float Shoe	4 1/2"	4010'	3/2/93

Cement return on surface casing? ☒ Yes ☐ No T.D. D.D. D.P.I. Class O G Lease

4062' - 3818' D G - 1

BR COMPLETION REPORT B

B

Perforation Record			Stimulation Record						
Date	Interval Perforated		Date	Interval Treated	Fluid		Propping Agent		Average Injection Rate
	From	To	Type		Amount	Type	Amount		
5-18-93	3815	3818	5-18	3815-3818					
5-18-93	3822	3827	5-18	3822-3827	Water	14,000gal	Sand	21,000#	
5-18-93	3833	3835	5-18	3833-3835					
5-18-93	3202	3205	5-18	3202-3205					
5-18-93	3210	3228	5-18	3210-3228	Water	27,000gal	Sand	74,000#	
5-18-93	3116	3119	5-18	3116-3119	Water	11,000 gal	Sand	3,000#	19.5 BPM
Natural Open Flow			Natural Rock Pressure		Hours Days				
After Treatment Open Flow 240 MCFPD			After Treatment Rock Pressure 550 psi		Hours Days				

Name, Address, and Telephone Number of Well Service Companies

JUN 1 1993

F.D. Hill Drilling Company - Rt 321 South - Kane, PA 16735 PA GEOLOGICAL SURVEY 814-838-6612
 Nowco Well Service - 3000 Old Airport Road - Wooster, OH 44691 OH 614-592-1111
 Allegheny Nuclear Surveys, Inc. - Elderton, PA 15736 412-354-3090

DRILLER'S LOG OF FORMATIONS

003-21317

154

Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Clay	0	7				Drillers Log
Shale	7	8				
Clay & Shale	8	20			Damp @ 70	
Red Bed & Shale	20	30				
Sand & Shale	30	150				
Shale & Sand	150	319			1" @ 220'	
Sand & Shale	319	562				
Open Mine	562	567				
Sand & Shale	567	611				
Shale & Sand	611	775				
Sand & Shale	775	866				
Shale & Sand	866	910				
Sand & Shale	910	922				
Shale & Sand	922	1196			1/2" @ 1020'	
Sand & Shale Red Rock	1196	1650				
Shale & Sand	1650	1800			1" @ 1830	
Murrysville Sand	1800	1930				
100' Sand	1930	2010				
Sand & Shale	2010	2041				
Shale, Sand, Red Rock	2041	2280				
Shale, Sand	2280	2780				
Sand & Shale	2780	3405				
Shale & Sand	3405	3690				
Sand & Shale	3690	4062				

Operator's Signature

Vice-President
Title

Date

FOR OFFICIAL USE ONLY

Reviewed By

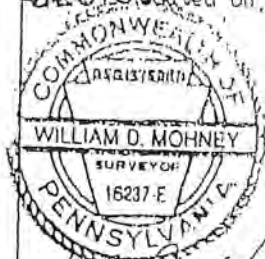
Date

Comments

003-21334

GEO CORP.

Based on topo map 9800' feet south of LATITUDE 40 • 32 • 30 ,



8/2/93

CHARLES D. BONSAI &
SANDRA A. BONSAIPITTSBURGH REGION
93 SEP 15 PM 2:44
DER-000MPITTSBURGH REGION
93 AUG 20 PM 2:10
DER-000M

Well is located on topo map 3500' feet west of LONGITUDE 79 • 42 • 30 ,

- LEASE LINE
— PROPERTY LINE
— ROADS
⊙ PROPOSED WELL LOCATION

LOC-A = S 26°19'42" W 993.67'

LOC-B = S 88°58'10" E 473.76'

PROPERTY CORNERS A-B = N 46°0'50" E 1270.50'

DEPARTMENT USE ONLY

G930-93C 1A
CPT

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 1000' IS NOT REQUIRED FOR WELL PLUGGING.



DENOTES LOCATION OF WELL ON 7 1/2' TOPO MAP PERMIT NO. 37-003-21334-u. PROJECT NO.

PENNECO OIL COMPANY, INC. 13825		REVISION ALTERATION STORAGE RECONITION NEW LOCATION DRILL DEEPER ABANDONMENT REGISTRATION PLUGGING	☐ ☐ ☐ ☐ ☐ ☐ ☐	W.D. MOHNEY & ASSOC.	
Well Permittee/Registrant P.O. BOX 300, 200 U.S. ROUTE 22				Surveyor/Engineer PB-1	
Address DELMONT, PA 15626 - 0300				Drawing Number 7-12-93	
CHARLES D. BONSAI & SANDRA A. BONSAI				Date 1 INCH = 400 FEET	
Surface Owner N/A		SURFACE LANDOWNER AND WATER PURVEYOR WITH WATER SUPPLY WITHIN 1000'	☐ ☐ ☐ ☐ ☐ ☐ ☐	APPROXIMATE COURSE AND DISTANCE TO WATER SUPPLY	
Surface Lessor (if any) BONSAI				N 24°00' E 1000' N 55°30' E 950'	
Form Name 1		RUDOLPH D. DYKE		DEC 7 1993	
Well No. 43.78	Tract PB-108	Serial No. 1100'		PA GEOLOGICAL SURVEY	
Acres NONE	Ground Elevation 3800'	Anticipated TD PLUM		Workable Coal 20% of UPPER FREEPORT	
County ALLEGHENY	Municipality 7			Name of Tenant	
Topo Quadrangle		Section		JESONE LAND COMPANY NATIONAL STEEL CORP.	
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF OIL AND GAS MANAGEMENT				80% of UPPER FREEPORT 40% of UPPER FREEPORT	
		CHARLES D. BONSAI & SANDRA A. BONSAI		ALL OTHERS	

GOB (top) Freeport

NEW KENSINGTON EAST

003-21334

9800' S 40° 32' 30"
3500' W 79° 45' 30"

WELL RECORD AND COMPLETION REPORT

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 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-76).

RENTON FIELD

Well Operator Pennaco Oil Company, Inc.		Telephone Number 412-468-8232	
Address 200 Route 22, P. O. Box 300, Delmont, PA		15626-0300	
Permit Number 37-003-21334		Project Number	
Farm Name Bonsall #1	Farm Number	Serial Number PB-198	Acres 43.78
Township Butte Borough		County Allegheny County	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

WELL RECORD

(Include Driller's Log on Reverse Side)

Drilling Method Rotary (A) ☒ Mud ☐ Cable Tool ☐	Date Drilling Started 11/09/93	Date Drilling Completed 11/16/93
Other ☐ (Specify)		
Elevation 1100	Total Depth 3938	7X Quadrangle New Kensington East

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'	Sanded in		N/A	N/A	11/09/93
12 1/4"	9 5/8"	567'	Cement - 228 sacks	Float Shoe	9 5/8"	567'	11/10/93
8 3/4"	7"	1962'	Cement - 320 sacks	Float Shoe	7"	1970'	11/11/93
6 1/4"			No Pipe was installed				

Cement return on surface casing? ☒ yes ☐ no

COMPLETION REPORT

[illegible]

Natural Open Flow 138.583 <i>2400F</i>	Natural Rock Pressure 475 psi	Hours 72	Days 3
After Treatment Open Flow	After Treatment Rock Pressure	Hours	Days

SEP 9 1994

Name, Address, and Telephone Number of Well Service Companies	
F.D. Hill Drilling Company - Rt 321 South - Kane, PA 16735	814-837-6612
Nowaco Well Service - 3000 Old Airport Road - Wooster, OH 44691	216-264-8885
Allegheny Nuclear Surveys, Inc. - Elderton, PA 15736	412-354-3090

03-21334

ps 2

DRILLER'S LOG OF FORMATIONS						
Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Fill	0	5				Drillers Log
Clay, Red Bed	5	30				
Shale	30	34				
Sand	34	36				
Red Rock, Shale, Sand	36	513			Damp @ 47'	
Open Mine	513	527			1/2" @ 90	
Sand and Shale	537	565				
Shale and Sand	565	1115				
Sand and Shale	1115	1530				
Shale and Sand	1530	1990			1" @ 1772	
Shale and Sand	1990	2280			2" @ 1795	
Sand and Shale	2280	2750		2" @ 1887		
Shale and Sand	2750	3250				
Sand and Shale	3250	3660	138 MCF @ 3190			
Sand and Shale	3660	3938				

Operator's Signature

Vice President
Title

Date

6-9-94

FOR OFFICIAL USE ONLY

Reviewed By

Date

Comments

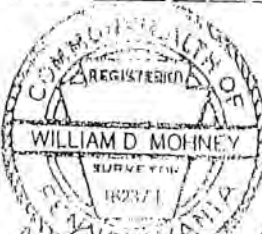
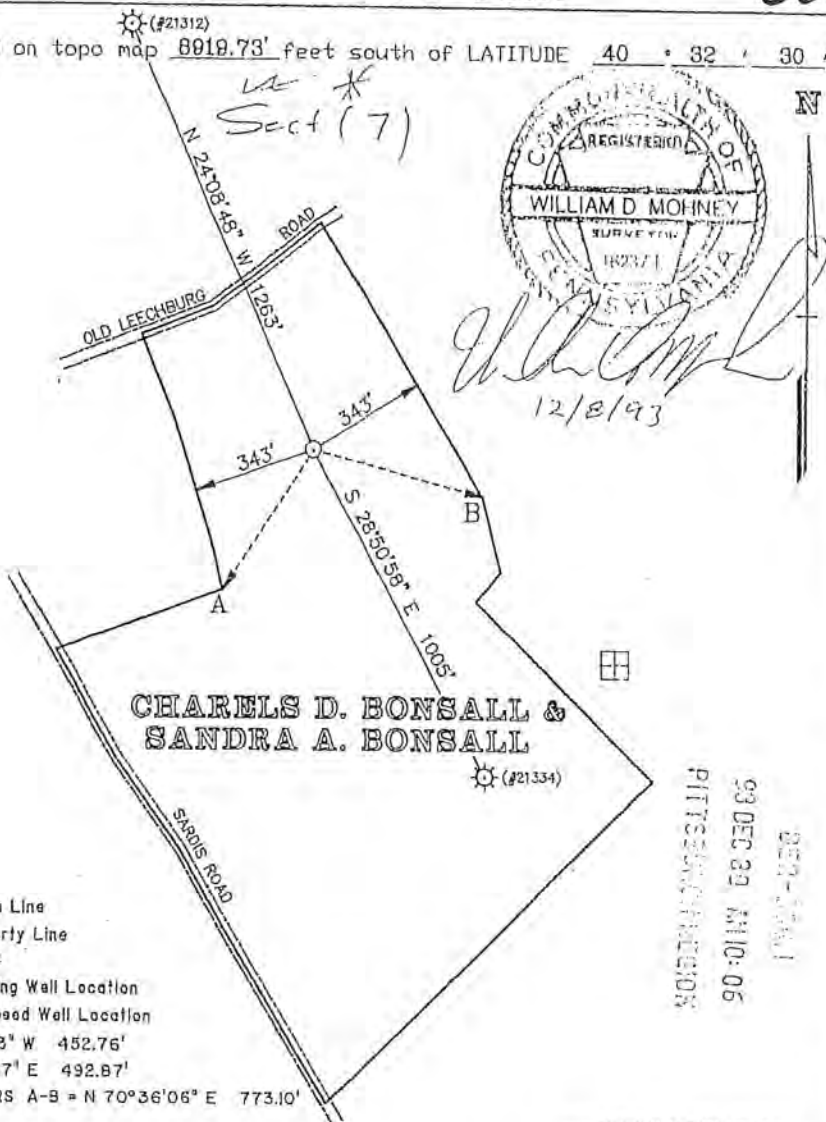
WAF 8-5-94

FR - PG - 20 Rev. 1/76
GEO COPY

WELL LOCATION PLAT

003-21341

Well is located on topo map 8918.73' feet south of LATITUDE 40 • 32 • 30 •



W.D. Mohney
12/8/93

Well is located on topo map 3984.90' feet west of LONGITUDE 79 • 42 • 30 •

CHARELS D. BONSALL &
SANDRA A. BONSALL

DEC-20-91
93 DEC 22 AM 10:06
PITTSBURGH, PENNSYLVANIA

- Lease Line
- Property Line
- Roads
- ☀ Existing Well Location
- ⊙ Proposed Well Location

LOC-A = S 33°41'33" W 452.76'
LOC-B = S 75°54'57" E 492.87'
PROPERTY CORNERS A-B = N 70°36'06" E 773.10'

DEPARTMENT USE ONLY

G	25	C	024
1/27/94			

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 NO. 37-003-21341-01 PROJECT NO.

PENNECO OIL COMPANY, INC. 13825 Well Permittee/Registrant P.O. BOX 300, 200 U.S. ROUTE 22 Address DELMONT, PA 15626 CHARLES D. BONSALL & SANDRA A. BONSALL Surface Owner N/A Surface Lessor (if any) BONSALL Farm Name 2 PB-199 Well No. 43.78 Tract Acres NONE Angle of Deviation (Drilling) ALLEGHENY County NEW KENSINGTON, EAST Topo Quadrangle COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF OIL AND GAS MANAGEMENT		REVISION ALTERATION STORAGE RECONDITION LOCATION DEEPER ABANDONMENT REGISTRATION PLUGGING SURFACE LANDOWNER AND WATER PURVEYOR WITH WATER SUPPLY WITHIN 1,000' Harold Henson Thomas Brown Ronald DesLauriers Alexander J. Serakowski WORKABLE COAL SEAMS Owner/Operator/Lessee TESONE LAND COMPANY, INC. NATIONAL STEEL CORP. CHARLES D. BONSALL & SANDRA A. BONSALL GAB V. PUGH	W.D. MOHNEY & ASSOC. Surveyor/Engineer PB-2 Drawing Number 12-04-93 Date 1 INCH = 400 FEET Scale APPROXIMATE COURSE AND DISTANCE TO WATER SUPPLY N 13°00' E 1000' N 08°00' E 900' N 00°30' E 750' N 01° E 500' Name of Seam 60% of UPPER FREEPORT 40% of UPPER FREEPORT ALL OTHERS
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* Set (7)

003-21341

WELL RECORD AND COMPLETION REPORT

Penton Field

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 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 OIL COMPANY, INC.		Telephone Number (412) 468-8232	
Address 200 Route 22, P.O. Box 300, Delmont, PA		Zip 15626-0300	
Permit Number 37-003-21341-00		Project Number	
Farm Name Bonsall #2	Farm Number	Serial Number PB-199	Acres 43.78
Township Plum Borough		County Allegheny County	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method Rotary (Air) ☒ Mud ☐ Cable Tool ☐ Other ☐ (Specify)	Date Drilling Started 03-04-94	Date Drilling Completed 03-11-94
Elevation 1155	Total Depth 3994	7 1/2' Quadrangle New Kensington East

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'	Sanded in	N/A	N/A	N/A	03-04-94
12 1/4"	9 5/8"	604'	Cement-250 sacks, Class A Reg 3% CaCl ₂ + 1/4 # flake/sack	Float Shoe	9 5/8"	611'	03-07-94
8 3/4"	7"	2025'	Cement-315 sacks, Class A Reg 3% CaCl ₂ + 1/4 # flake/sack	Float Shoe	7"	2033'	03-10-94
6 1/2"			No pipe was installed				

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	
				WELL WAS NOT TREATED					
				WELL WAS NOT TREATED					

Natural Open Flow 159,940 cfpd	Natural Rock Pressure 362 #	Hours 5	Days 6
After Treatment Open Flow	After Treatment Rock Pressure	Hours	Days

RECEIVED

NOV 22 1995

Name, Address, and Telephone Number of Well Service Companies

F. D. Hill Drilling Company-Route 321 South - Kane, PA 16735	PA GEOLOGICAL SURVEY Oil & Gas Geology Division 814-837-6612
Newsco Well Service - 3000 Old Airport Road - Wooster, OH 44691	216-264-0885
Milliburton Logging Service - P. O. Box 427 - Indiana, PA 15701	412-479-9046

DRILLER'S LOG OF FORMATIONS

Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Oil shale	0'	0'				Driller's Log
Shale	10'	20'				
Red Bed	20'	25'			Damp @ 60'	
Shale	25'	30'				
Sand	30'	34'				
Sand, Shale, Red Bed	34'	290'				
Sand & Shale	290'	585'				
Clay	585'	592'				
Sand & Shale	592'	613'				
Sand & Shale	613'	900'				
Shale & Sand	900'	1260'			2" Brine @ 1875'	
Shale & Sand	1260'	1550'				
Sand & Shale	1550'	1935'				
Sand & Shale	1935'	1950'				
100' Sand	1950'	2020'		1965'		
Shale	2020'	2045'				
Sand & Shale	2045'	2525'	160 MCF @ 2385'			
Shale & Sand	2525'	2990'				
Sand & Shale	2990'	3400'				
Sand & Shale	3400'	3872'				
Shale & Sand	3872'	3994'				

003-21341

PS 2

Operator's Signature

Vice President
Title

Date

4/12/95

FOR OFFICIAL USE ONLY

Reviewed By

Date

Comments

GEO COPY

WELL LOCATION PLAT

603-21344

Well is located on topo map 8910 feet south of LATITUDE 40° 32' 30"

Well is located on topo map 2330 feet west of LONGITUDE 79° 42' 30"

COMMONWEALTH OF PENNSYLVANIA
REGISTERED
WILLIAM D. MOHNEY
SURVEYOR
16237-E

A. SERAKOWSKI

J. WILLIAMS

K. FRYNCKO

OLD HOUSE

RUDOLPH D. DYKE & ANNIE R. DYKE

C. BONBALL

M. BALEND

TO WELL (21266)

LOC-A = N 67° 58' 09" E 606.66'
LOC-B = S 09° 54' 26" W 1247.02'
PROPERTY CORNERS A-B = S 26° 21' 42" W 1689.18'

Department Use Only

G	135	C	201
3/5/94			

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 # 37-013-21344-1

Project #

PENNECO OIL COMPANY, INC. 13825		Revision	☐	W. D. MOHNEY & ASSOC.
200 ROUTE 22, P. O. BOX 300		Alteration	☐	Surveyor/Engineer
Address		Storage Recondition	☐	PD-1
DELMONT, PA 15626-0300		New Location	☐	Drawing Number
RUDOLPH D. DYKE & ANNIE R. DYKE		Drill Deeper	☐	02-09-94
Surface Owner		Abandonment	☐	Date
N/A		Registration	☐	1" = 300'
Surface Lessor (if any)		Plugging	☐	Scale
DYKE		Surface landowner and water purveyor with water supply within 1,000'		
Farm Name		L. H. FUGE		
PD-228		K. J. FRYNCKO		
Well No.		J. E. WILLIAMS		
37.09		R. KAZIMER		
Tract		R. D. & A. R. DYKE		
Serial No.		N 32° E 1,000'		
1160		N 36° 30' W 950'		
Acres		N 43° W 600'		
None		N 21° W 1,000'		
Ground Elevation		S 84° W 600'		
3800'				
Angle of Deviation (Grading)				
ALLEGHENY				
Anticipated TD				
PLUM BOROUGH				
County				
NEW KENSINGTON EAST				
Municipality				
7				
Topo Quadrangle				
Section				
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management				

Plat
Sect (7)

WELL RECORD AND COMPLETION REPORT

Renton Field

003-21344

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 topsoil water and disposal of residual waste (including contaminated drill cuttings) in a pit is to be filed with the Completion Report (see ER-00-76).

Well Operator PENNECO OIL COMPANY, INC.		Telephone Number 412-468-8232	
Address 200 Rt. 22, P.O. Box 300, Delmont, PA 15626			
Permit Number 37-003-21344		Project Number	
Farm Name Dyke #1	Farm Number	Serial Number PD-228	Acres 37.09
Township Plum Borough		County Allegheny County	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method Rotary (Air ☒ Mud ☐ Cable Tool ☐ Other ☐ (Specify)	Date Drilling Started 05-11-94	Date Drilling Completed 05-18-94
Elevation 1060	Total Depth 3960	7 1/2' Quadrangle New Kensington East

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'	Sanded in	N/A	N/A	N/A	05-11-94
12 1/2"	9 5/8"	542'	Cement-220 sacks-Class A Reg. 3/4" Cas 12 + 1/4" Cel for lake/sack	Float Shoe	9 5/8"	550'	05-12-94
8 3/4"	7"	1938'	Cement-290 sacks-Class A Reg. 3/4" Cas 12 + 1/4" Cel for lake/sack	Float Shoe	7"	1938'	05-17-94
6 1/2"			No Pipe Was Installed				

Cement return on surface casing? ☒ yes ☐ no

COMPLETION REPORT

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

Natural Open Flow 265 MCF/D	Natural Rock Pressure 530 PSI	Hours 72	Days
After Treatment Open Flow	After Treatment Rock Pressure	Hours	Days

RECEIVED

NOV 22 1995

Name, Address, and Telephone Number of Well Service Company	PA GEOLOGICAL SURVEY Oil & Gas Geology Division
F.D. Hill Drilling Company - Route 321 South - Kane, PA. 16735	814-837-6612
Nowco Well Service - 3000 Old Airport Road - Wooster, OH 44691	216-254-8885
Allegheny Nuclear Surveys, Inc. - Elderton, PA. 15736	412-354-3090

DRILLER'S LOG OF FORMATIONS

Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
lay	0	15				Drillers Log
shale & Red Bed	15	30				
sand	30	34				
red Bed, Sand, Shale	34	110			Damp @ 60'	
sand & Shale	110	500				
sub	500	510				
Sand & Shale	510	550				
shale & Sand	550	690				
sand & Shale	690	1081				
shale & Sand	1081	1425				
sand & Shale	1425	1770			3" Brine @ 1760	
sand & Shale	1770	1962				
sand & Shale	1962	2000		1895 100 AT		
red Rock, Shale, Sand	2000	2180				
Sand, Shale	2180	2580				
Shale & Sand	2580	3120	3184			
Sand & Shale	3120	3560				
Sand & Shale	3560	3960				

003-21344

P5 2

Operator's Signature

PRESIDENT
Title

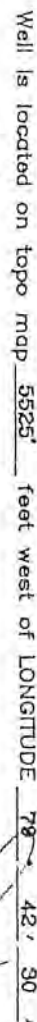
5/18/95
Date

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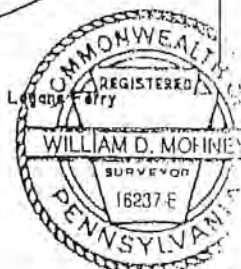
Reviewed By MA 1023-25 Date

Comments

Well is located on topo map 3880' feet south of LATITUDE 40 • 32 ' 30 ,



LOC-A = N 66°45'24" W 1348.65'
LOC-B = S 08°59'40" W 1048.77'
PROPERTY CORNERS A-B = S 34°30'00" E 1899.15'



DEPARTMENT USE ONLY

G	DS	C	DL+
9/27/94			

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 1000' IS NOT REQUIRED FOR WELL PLUGGING

 DENOTES LOCATION OF WELL ON 7 1/2" TOPO MAP PERMIT NO. 37-013-21357-00 ²¹³⁵⁷

PENNECO OIL COMPANY, INC. 13825 Well Permittee / Registrant P.O. BOX 300, 200 U.S. ROUTE 22 Address DELMONT, PA 15628 JOSEPH CARUSO & DEBORAH CARUSO Surface Owner N/A Surface Lessor (if any) CARUSO Farm Name 1 PC-238 Well No. 66.75 Tract Serial No. 1042' Acres NONE Ground Elevation 3800 Angle of Deviation (Drilling) ALLEGHENY Anticipated TD PLUM BOROUGH County NEW KENSINGTON, EAST Top Quadrangle Section COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF OIL AND GAS MANAGEMENT		REVISION ALTERATION STORAGE RECONDITION NEW LOCATION DRILL DEEPER ABANDONMENT REGISTRATION PLUGGING SURFACE LANDOWNER AND WATER PURVEYOR WITH WATER SUPPLY WITHIN 1,000' No Water Supplies Within 1000' Workable Coal Seams Owner / Operator / Lessee Youghiogheny & Ohio Coal Co. J. & D. Caruso Upper Freeport All Others Date of Survey 8/10/84 Scale 1 INCH = 400 FEET APPROXIMATE COURSE AND DISTANCE TO WATER SUPPLY W.D. MOHNEY & ASSOC. Surveyor / Engineer PC-1 Drawing Number 08/10/84 Date 1 INCH = 400 FEET Scale	
---	--	--	--

3003-21357

WELL RECORD AND COMPLETION REPORT

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 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).

RENTON FIELD

Well Operator Penneco Oil Company, Inc.		Telephone Number 412-468-8232	
Address 200 RT 22, PO Box 300, Delmont, PA 15626			
Permit Number 37-003-21357-00		Project Number	
Farm Name Caruso	Farm Number 1	Serial Number PC-236	Acres 55.75
Township Plum Borough		County Allegheny County	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method Rotary (Air ☒ Mud ☐ Cable Tool ☐ Other ☐ (Specify)	Date Drilling Started 10-21-94	Date Drilling Completed 10-27-94
Elevation 1042	Total Depth 3295'	7 1/2' Quadrangle New Kensington East

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"	35'	Sanded In	N/A	N/A	N/A	10-21-94
12 1/4"	9 5/8"	529'	Cement-185 Sacks-Class A Reg 3% CaCl ₂ +1/4# Celloflake/Sack	Float Shoe	9-5/8"	537'	10-24-94
8 3/4"	7"	1918'	Cement-300 Sacks, Class A Reg 3% CaCl ₂ +1/4# Celloflake/sack				
6 1/4"			NO PIPE WAS INSTALLED				

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	

WELL WAS NOT TREATED

Natural Open Flow 103 MCFPD	Natural Rock Pressure 25 PSIG	Hours 72	Days
After Treatment Open Flow Not Treated	After Treatment Rock Pressure Not Treated	Hours	Days

Name, Address, and Telephone Number of Well Service Companies

F.D. Hill Drilling Company	Route 321 South-Kane, PA 16735	814-837-6512
Nowco Well Service	3000 Old Airport Road, Wooster, OH 44691	216-264-8885
Allegheny Nuclear Surverys, Inc.	Elderton, PA 15736	412-354-3090

003-21357

DRILLER'S LOG OF FORMATIONS

Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Fill	0'	8'				Drillers Log
Shale	8'	20'				
Red Bed & Shale	20'	30'				
Sand	30'	35'				
Sand & Shale	35'	48'				
Sand	48'	70'				
Sand & Shale	70'	135'				
Red Bed, Sand, Shale	135'	215'			1 1/2" Fresh @ 130'	
Sand & Shale	215'	390'				
Shale & Sand	390'	484'				
Gob (Mine)	484'	490'			3" Fresh in mine	
Sand & Shale	490'	538'				
Shale & Sand	538'	783'			2" Brine @ 1735'	
Sand & Shale	783'	1250'				
Sand & Shale	1250'	1600'			2" Brine @ 1780'	
Sand & Shale	1600'	1947'				
Shale & Sand	1947'	2009'				
Shale, Sand, Red Rock	2009'	2471'	2249			
Red Rock, Sand, Shale	2471'	2550'				
Shale & Sand	2550'	3100'				
Sand	3100'	3144'				
Shale & Sand	3144'	3295'				

PS 2

Operator's Signature

Title

Date

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Reviewed By

Date

Comments

GEO COPY

003-21438

5500-PM-OG0002 Rev 3/97



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

DEP USE ONE	DEP Application Tracking # 37-003-21438-00 Project #	C. 12/28/98
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Well is located on topo map 4745 feet south of latitude 40° 32' 30"

☐	Denotes location of well on topo map.
True Latitude: NORTH <u>40° 31' 43"</u>	
True Longitude: WEST <u>79° 42' 32.5"</u>	

NOTE: CONSOLIDATION COAL COMPANY OWNS THE OIL AND GAS UNDER ALL THE TRACTS LOCATED WITHIN THE LEASED AREA



NOTE: THE LOCATIONS OF THE ABANDONED GAS WELL No. 81 HAVE BEEN LOCATED ON THE MAPS FROM THE OLD RENTON MINE MAPS DUE TO THE ABSENCE OF ANY EVIDENCE IN THE FIELD.

Surveyor of Engineers
W.D. MOHNEY AND ASSOCIATES

Dwg # PCL-8

Date 12-14-98

Scale 1" = 500' Tract Acreage 57

Applicant / Well Operator Name PENNECO OIL COMPANY		DEP ID# 7674	Well (Farm) Name CONSOLIDATION COAL COMPANY		Well # 8	Serial # PC-393
Address P O BOX 300, 200 US RTE 22, DELMONT, PA 15826		County - Code ALLEGHENY 02		Municipality PLUM BOROUGH		
Surface Owner MATHEW & SUSAN PODOBNIK		USGS 7 1/2 Quadrangle Map Name NEW KENSINGTON EAST		Map Section 7		
Surface Lessor N/A		Angle & Course of Deviation (Drilling) NONE		Surface Elevation 940 ft	Anticipated Total Depth 3800 ft	
Surface Owner of Water Surrounding Well SEE ATTACHED LIST		Approximate Course and Distance to Water Supply		Name of Coal Seam Owned, Leased, or Operated		
60% (Barton Mine)		TESONE LAND CO. INC		60% UF		
10% (Frederick)		NATIONAL STEEL CORP		40% UF		
		CONSOLIDATION COAL CO.		ALL OTHERS		

Water Supplies Within 1000'

003-21438

Gerald Greiner 1520 Menk Road New Kensington, PA 15068	N 30° E	1000'
Lenora Greiner 1510 Menk Road New Kensington, PA 15068	N 30° E	1000'
Louis Trzeciak 203 Menk Road New Kensington, PA 15068	N 60° E	900'
Edward Taylor R.D.#2, Old Leechburg Road New Kensington, PA 15068	S 70° W	300'
Frank Smolenski R.D.#2, Box 325A New Kensington, PA 15068	S 05° W	800'
Raymond Smolenski R D.#2, Old Leechburg Road New Kensington, PA 15068	S 02° W	900'
James R. Flynn 504 Clarendon Road Pittsburgh, PA 15238	S 10° E	1000'
David Maloney 1927 Drennen Road New Kensington, PA 15068	S 40° E	600'
James Smith 1931 Drennen Road New Kensington, PA 15068	S 30° E	850'

RECEIVED

DEC 28 1998

PA GEOLOGICAL SURVEY
Oil & Gas Geology Division



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Oil & Gas Management Program

003-21438

DEP USE ONLY	
Auth #	APS #
Site #	Facility #
FLX Client #	Sub fac #

WELL RECORD AND COMPLETION REPORT

Well Operator Penneco Oil Company, Inc	DEP ID# 7674	Well API # (Permit / Reg) 37-003-21438-00	Project Number	Acres 57
Address 200 Rt 22, P O Box 300	Well Farm Name Consolidation Coal Company	Well # 8	Serial # PC-393	
City Delmont	State PA	Zip Code 15626-0300	County Allegheny	Municipality Plum Boro
Phone 724-468-8232	Fax 724-468-8230	USGS 7.5 min quadrangle map New Kensington East		

WELL RECORD Also complete Log of Formations on back (page 2)

Well Type	☒ Gas	☐ Oil	☐ Combination Oil & Gas	☐ Injection	☐ Storage	☐ Disposal
Drilling Method	☒ Rotary - Air	☐ Rotary - Mud	☐ Cable Tool			
Date Drilling Started 01-04-99	Date Drilling Completed 01-12-99	Surface Elevation 940 Ft.	Total Depth - Driller 3773' Ft	Total Depth - Logger 3766 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 3/8"	N/A	Thread	35'	Sanded in with drill cuttings	N/A	N/A	N/A	01-04-99
12 1/4"	9 5/8"	26#	Thread	434'	Cement - 160 Sacks Class A Reg	Float Shoe	9 5/8"	442'	01-05-99
9 3/4"	7"	17#	Thread	1801'	Cement - 300 Sacks Class A Reg	Float Shoe	7"	1809'	01-07-99
1/4"					No Pipe Was Installed				

COMPLETION REPORT

Perforation Record			Stimulation Record				
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type	Propping Agent Type	Average Injection Rate
				Well was not treated			

AUG 17 2000

Natural Open Flow	198 MCFPD	Natural Rock Pressure	505#	PA GEOLOGICAL SURVEY Subsurface Geology Section
After Treatment Open Flow	Well was not treated	After Treatment Rock Pressure	Well was not treated	

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

Name Hill Drilling Company	Name Superior Well Services	Name
Address Route 321 South	Address P.O. Box 458	Address
City - State - Zip Kane, Pa 16735	City - State - Zip Blacklick, Pa 15716	City - State - Zip
Phone 714-837-6612	Phone 724-248-1001	Phone

LOG OF FORMATIONS

Well API# 37-003-21438-00

Formation Name	Top	Bottom	Gas at	Oil at	Water at (Fresh or Brine)	Source of Data
Shale	0	10				Drillers Log
Sand	10'	15'				
Shale	15'	32'				
Sand	32'	34'				
Sand, Red Bed & Shale	34'	109'				
Sand & Shale	109'	373'			Damp & 55'	
Open Mine	373'	385'			1" Fresh	
Sand & Shale	385'	435'			& 230'	
Sand & Shale	435'	780'				
Shale & Sand	780'	1200'				
Sand & Shale	1200'	1620'				
Shale	1620'	1750'				
100' Sand	1750'	1800'			2" Brine	
Shale	1800'	1817'			& 1620'	
Sand & Shale	1817'	1980'				
Shale & Sand	1980'	2450'	2264'			
Sand & Shale	2450'	2950'				
Shale & Sand	2950'	3550'	3010'			
Sand & Shale	3550'	3773'				

(PC users: Please delete empty rows above as necessary to make all of page 2 fit on one page, if possible. You will need to "unprotect" the form first.)

Well Operator's Signature.

Title
President

Date

8/5/99

DEP USE ONLY

Reviewed by

Date

Comments



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

003-21644

DEP Application Tracking #	537645	G.	RB
Permit #	37-003-21644-00	C.	CB
Project #			

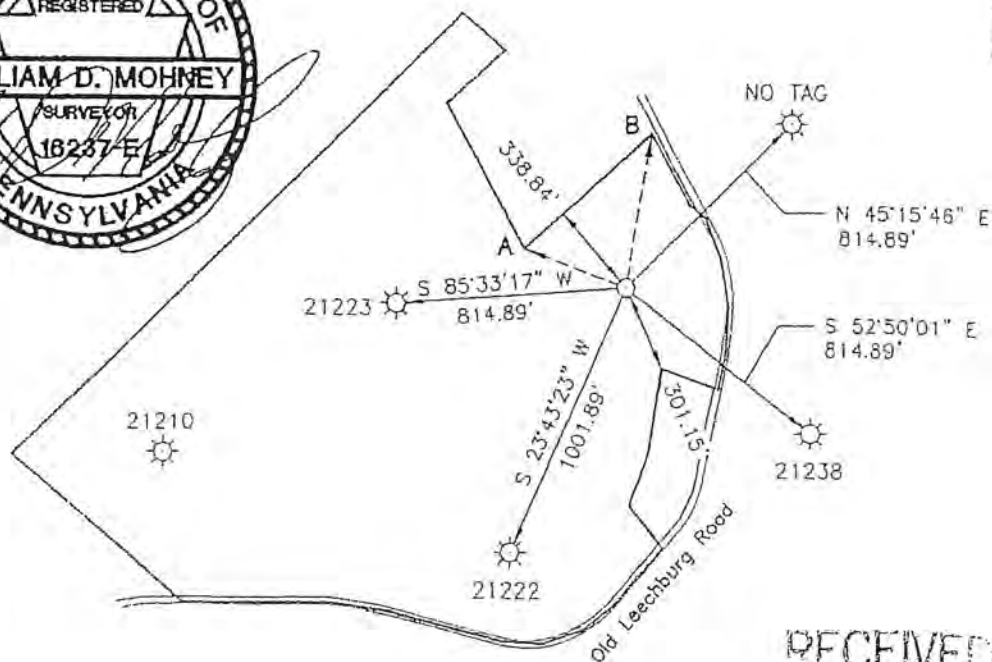
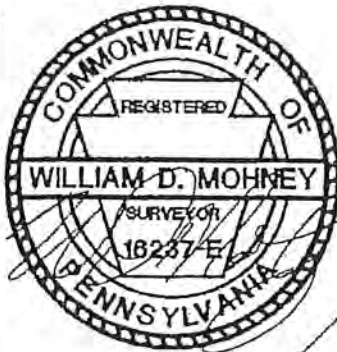
Well is located on topo map 5366.42 feet south of latitude 40 . 32 . 30 "

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

Loc-A N 70°03'58" W 384.91'
Loc-B N 09°11'04" E 537.82'
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 "

RECEIVED

APR 02 2004

DEP
Southwest Regional Office

Surveyor of
Engineer: W.D. Mohney
& Associates

Dwg. #
sedatplum

Date:
December 15, 2003

Scale:
1" = 600'

Treat
Acres: 69.54 Acres

Applicant / Well Operator Name Pennaco Oil Company, Inc.	DEP ID# 7674	Well (Form) 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		
Surface Lessor n/a		Angle & Course of Deviation (Drilling) None	Surface Elevation 1068 ft	Anticipated Total Depth 3800' ft
Surface Owners or Water Purveyor n/a		Approximate Course and Distance to Water Supply		
See Attached Sheet		Noncoal Area	N/A	
		GOB Upper Leechburg Area		

003-21644

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'

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APR 02 2004

DEP
Southwest Regional Office



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

Client Id

Sub-facility Id

003-21644

WELL RECORD AND COMPLETION REPORT

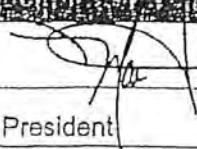
Well Operator Penneco Oil Company, Inc.		DEP ID# 7674	Well API # (Permit / Reg) 37-003-21644-00		Project Number		Acres 69.54		
Address 200 Rt. 22, PO Box 300		AUG 20 2004		Well Farm Name Sedal		Well # 4A	Serial # PS-748		
City Delmont	State PA	Zip Code 15626	County Allegheny		Municipality Plum Borough				
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									
Well Type		☒ Gas ☐ Oil ☐ Combination Oil & Gas ☐ Injection ☐ Storage ☐ Disposal							
Drilling Method		☒ Rotary - Air ☐ Rotary - Mud ☐ Cable Tool							
Date Drilling Started 06/21/04		Date Drilling Completed 06/24/04		Surface Elevation 1068 ft.		Total Depth - Driller 3925 ft.		Total Depth - Logger 3925 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	
17"	16"	N/A	N/A	31	sanded in with cuttings	N/A	N/A	31	6/21/04
15"	13 3/8"	48#	thread	302	105 sks Class A Regular	Float Shoe	13 3/8"	302	6/21/04
12"	9 5/8"	29.3#	thread	564	100 sks Class A Regular	Float Shoe	9 5/8"	564	6/22/04
8 3/4"	7"	19.41#	thread	1906	130 sks Class A Regular	Float Shoe	7"	1906	6/24/04
6 1/4"	4 1/2"	9.5#	thread	3886	80 sks Completion Blend Cement	Float Shoe	4 1/2"	3886	6/24/04
COMPLETION REPORT									
Perforation Record				Stimulation Record					
Date	Interval Perforated From To		Date	Interval Treated	Fluid Type	Amount	Propping Agent Type	Amount	Average Injection Rate
7/19/04	3054	3767	7/19/04	3054-3767	Water	11,634 gal	Sand	10,000#	28.4
7/19/04	3445	3452	7/19/04	3445-3452	Water	15,918 gal	Sand	11,000#	28.4
7/19/04	3132	3163	7/19/04	3132-3163	Water	36,456 gal	Sand	50,200#	26.7
7/19/04	3054	3064	7/19/04	3054-3064	Water	15,246 gal	Sand	15,200#	27.7
PENDING APPROVAL									
Natural Open Flow Not Taken			Natural Rock Pressure Not Taken						
After Treatment Open Flow 581 MCFPD			After Treatment Rock Pressure 500 PSI						
			Hours 72 Hours						
			Days						
Well Service Companies -- Provide the name, address, and phone number of all well service companies involved.									
Name Hill Drilling			Name BJ Services Company			Name			
Address P.O. Box 309			Address Route 2, Box 506			Address			
City - State - Zip Bradford, PA 16701			City - State - Zip Clarksburg, WV 26301			City - State - Zip			
Phone 814-368-3831			Phone 304-624-9802			Phone			

LOG OF FORMATIONS

Well API#: 37-003-21644

Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Clay	0	6				Drillers Log
Shale - R bed	6	30				
Sand	30	34				
Sand & Shale	34	50				
Sand & Shale	50	100			Damp @ 100	
Shale & Sand	100	330				
Shale & Sand	330	440			1" @ 440	
Shale	440	510			3" @ 510	
Mine	510	520				
Shale & Sand	520	577				
Shale	577	760				
Sand & Shale	760	940				
Shale	940	1030				
Sand	1030	1150				
Sand & Shale	1150	1775				
Murrysville	1775	1870			2" @ 1789'	
Shale	1870	1900				
100'	1900	1922				
Sand 100'	1922	1935				
Sand & Shale	1935	2240				
Sand	2240	2245				
Shale & Sand	2245	2300				
5 th Sand	2300	2330				
Shale	2330	2700	Show @ 2335			
Shale	2700	3000				
Sand & Shale	3000	3925				

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

		DEP USE ONLY	
Title: Vice President		Date: 8/19/04	
Comments:			



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

Client Id

Sub-facility Id

WELL RECORD AND COMPLETION REPORT

003-21644

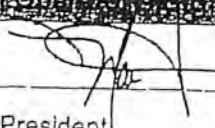
Well Operator Penneco Oil Company, Inc.		DEP ID# 7674	Well API # (Permit / Reg) 37-003-21644-00		Project Number		Acres 69.54			
Address 200 Rt. 22, PO Box 300		AUG 20 2004		Well Farm Name Sedat		Well # 4A	Serial # PS-748			
City Delmont	State PA	Zip Code 15626	County Allegheny		Municipality Plum Borough					
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 Type ☒ Gas ☐ Oil ☐ Combination Oil & Gas ☐ Injection ☐ Storage ☐ Disposal										
Drilling Method ☒ Rotary - Air ☐ Rotary - Mud ☐ Cable Tool										
Date Drilling Started 06/21/04		Date Drilling Completed 06/24/04		Surface Elevation 1068 ft.		Total Depth - Driller 3925 ft.		Total Depth - Logger 3925 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	
17"	16"	N/A	N/A	31	sanded in with cuttings		N/A	N/A	31	6/21/04
15"	13 3/8"	48#	thread	302	105 sks Class A Regular		Float Shoe	13 3/8"	302	6/21/04
12"	9 5/8"	29.3#	thread	564	100 sks Class A Regular		Float Shoe	9 5/8"	564	6/22/04
8 3/4"	7"	19.41#	thread	1906	130 sks Class A Regular		Float Shoe	7"	1906	6/24/04
6 1/4"	4 1/2"	9.5#	thread	3886	80 sks Completion Blend Cement		Float Shoe	4 1/2"	3886	6/24/04
COMPLETION REPORT										
Perforation Record					Stimulation Record					
Date	Interval Perforated From To		Date	Interval Treated	Fluid Type Amount		Propping Agent Type Amount		Average Injection Rate	
7/19/04	3054	3767	7/19/04	3054-3767	Water	11,634 gal	Sand	10,000#	28.4	
7/19/04	3445	3452	7/19/04	3445-3452	Water	15,918 gal	Sand	11,000#	28.4	
7/19/04	3132	3163	7/19/04	3132-3163	Water	36,456 gal	Sand	50,200#	26.7	
7/19/04	3054	3064	7/19/04	3054-3064	Water	15,246 gal	Sand	15,200#	27.7	
							JAN 29 2008			
Natural Open Flow Not Taken			Natural Rock Pressure Not Taken		DEP, SOUTHWEST REGION					
After Treatment Open Flow 581 MCFPD			After Treatment Rock Pressure 500 PSI		72 Hours Days					
Well Service Companies -- Provide the name, address, and phone number of all well service companies involved.										
Name Hill Drilling			Name BJ Services Company			Name				
Address P.O. Box 309			Address Route 2, Box 506			Address				
City - State - Zip Bradford, PA 16701			City - State - Zip Clarksburg, WV 26301			City - State - Zip				
Phone 814-368-3831			Phone 304-624-9802			Phone				

LOG OF FORMATIONS

Well API#: 37-003-21644

Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Clay	0	6				Drillers Log
Shale - R bed	6	30				
Sand	30	34				
Sand & Shale	34	50				
Sand & Shale	50	100				
Shale & Sand	100	330			Damp @ 100	
Shale & Sand	330	440				
Shale	440	510			1" @ 440	
Mine	510	520			3" @ 510	
Shale & Sand	520	577				
Shale	577	760				
Sand & Shale	760	940				
Shale	940	1030				
Sand	1030	1150				
Sand & Shale	1150	1775				
Murrysville	1775	1870				
Shale	1870	1900			2" @ 1789'	
100'	1900	1922				
Sand 100'	1922	1935				
Sand & Shale	1935	2240				
Sand	2240	2245				
Shale & Sand	2245	2300				
5 th Sand	2300	2330				
Shale	2330	2700	Show @ 2335			
Shale	2700	3000				
Sand & Shale	3000	3925				

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

Title:  Vice President		Date: 8/19/04		DEP USE ONLY	
Reviewed by: 		Date: 1/24/08		Comments:	

003-21644

PENNECO OIL COMPANY, INC.
Pre-drill Survey

Name John R + Martha J. Slack
Address 2008 Old Leechburg Road
City, State, Zip New Kensington, PA 15068-8324
Day Phone # 724-337-3069 Evening Phone # 724-337-3069

Primary Water Supply

Well ☒ (Drilled ☒ or Dug ☐)

Spring ☐

Public ☒

Other

Municipal Water Authority of New Kensington

Well Information

Depth 65 ft. Age 50 yrs. Casing Size & Depth ? Don't Know.

Location from house (Example: 20' NW) 18' SE

Spring Information

Flow _____ Developed ☐ Undeveloped ☐

Secondary Water Supply

See below

Treatment System

Yes ☐ No ☐ If yes, what type(s)? _____

Any other water supply information?

Yes ☐ No ☒

If yes, what type(s)? (Pond or lake for livestock, etc.) _____

Any water abnormality worth noting? Tank in cellar not used - leaked. Intended to use it but illness prevented repair of tank.

Yes ☐ No ☒ If yes, please describe.

Even in driest weather well never ran dry. Soft water

Thank you for your help in determining the quality and quantity of your water supply.

Martha J. Slack
Signature of Property Owner

2/10/04
Date

PENNECO OIL COMPANY, INC.
Pre-drill Survey

003-21644

Name VIRGINIA SMOLEWSKI
Address 1835 Old Leeckburg Rd
City, State, Zip NEW KENSINGTON PA 15068
Day Phone # 724 339-0007 Evening Phone # 724 339-0007

Primary Water Supply

Well ☒ (Drilled ☒ or Dug ☐
Spring ☐
Public ☐
Other _____

Well Information

Depth 240' Age 30 Casing Size & Depth 8" ?

Location from house (Example: 20' NW) 30' NW

Spring Information

Flow _____ Developed ☐ Undeveloped ☐

Secondary Water Supply

Treatment System

Yes ☐ No ☒ If yes, what type(s)? _____

Any other water supply information?

Yes ☐ No ☒

If yes, what type(s)? (Pond or lake for livestock, etc.) _____

Any water abnormality worth noting?

Yes ☐ No ☒ If yes, please describe. _____

Thank you for your help in determining the quality and quantity of your water supply.

Virginia M Smolewski
Signature of Property Owner

2/10/04
Date

PENNECO OIL COMPANY, INC.
Pre-drill Survey

003-21644

Name Frank Smolenski
Address 1900 Old Leechburg Rd
City, State, Zip New Kensington Pa 15068
Day Phone # 412 824-0021 Evening Phone # 724 335-8863

Primary Water Supply

Well ☐ (Drilled ☐ or Dug ☐
Spring ☒
Public ☐
Other _____

Well Information

Depth _____ Age _____ Casing Size & Depth _____

Location from house (Example: 20' NW) 275' NE

Spring Information

Flow 6-8 Gal per min. Developed ☒ Undeveloped ☐

Secondary Water Supply

Treatment System

Yes ☐ No ☒ If yes, what type(s)? _____

Any other water supply information?

Yes ☒ No ☐

If yes, what type(s)? (Pond or lake for livestock, etc.) Hand dug well + spring

Any water abnormality worth noting?

Yes ☐ No ☒ If yes, please describe.

Thank you for your help in determining the quality and quantity of your water supply.

Frank Smolenski
Signature of Property Owner

2/10/04
Date

003-21644

PENNECO OIL COMPANY, INC.
Pre-drill Survey

Name Mary C. Schwartz
Address 4198 Brittany Drive
City, State, Zip Ellicott City MD 21043-6014
Day Phone # (410) 465-5963 Evening Phone # _____

Primary Water Supply

Well ☐ * (Drilled ☐ * or ~~Other~~)
Spring ☐
Public ☒
Other _____

for property at:
2000 Old Leechburg Rd
New Kensington PA

15068-8324

→ There is a well head on the property, but it has not been used for approx. 20 years

Well Information

Depth ? Age 1950? Casing Size & Depth ?

Location from house (Example: 20' NW) 10 feet off long kitchen window-access in basement,

Spring Information

Flow ? Developed ☐ Undeveloped ☒

Per conversation with Mr. Smail I mention several springs that come out on the Greensburg Rd (Rt 366) from the back of my property. They are used by the general public.

Secondary Water Supply

None

Treatment System

Yes ☐ No ☒ If yes, what type(s)? _____

Any other water supply information?

Yes ☐ No ☒

If yes, what type(s)? (Pond or lake for livestock, etc.) _____

Any water abnormality worth noting?

Yes ☐ No ☒ If yes, please describe. _____

Thank you for your help in determining the quality and quantity of your water supply.

Mary C. Schwartz
Signature of Property Owner

2/13/04
Date

003-21644

5500-PM-OG001 Rev. 4/97



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

PERMIT APPLICATION FOR DRILLING OR ALTERING A WELL
Page 2 — Record of Notification / Written Consent

Farm Name - Well # Sedal #4A	
Applicant Name Panneco Oil Company	DEP ID# 7674
DEP USE ONLY	Application Tracking #

List the following: surface landowner; all landowners or water purveyors whose water supplies are within 1,000 feet of this proposed well location; gas storage operator if within 2,000 feet; all coal owners and lessees of all underlying workable coal seams; operators of underground coal mines at the proposed location; and coal operators with a deep mine within 1,000 feet. Mark the boxes, "X", which show the parties' interests. Use additional forms if you need more space. You are required to notify each of these parties.

Name	Address	Surface Landowner	Coal Owner	Coal Lessee	Coal Mine Operator	Gas Storage Operator	Within 1,000 feet			Notification			
							Surf Owner with water	Water Purveyor	Coal Mine Operator	Certified Mail Dates		Address Ack'd	Written Consent
Name: Sedal, Inc.	Address: P.O. Box 300 Delmont, PA 15626-0300	X								Sent	Return Rec'd		X
Name: John & Martin Slack City Water	Address: 2008 Old Leechburg Rd. New Kensington, PA 15068						X			02/06/04	02/04/04		
Name: Mary C. Schwartz - Please Note Survey	Address: 4198 Brittany Drive Ellicott City, MD 21043						X			02/06/04	02/09/04		
Name: Matthew W. Podobnik 724-335-9042	Address: 1932 Old Leechburg Rd. New Kensington, PA 15068						X			02/06/04		X	
Name: Edward Taylor U.L.	Address: 323 Old Leechburg Rd. New Kensington, PA 15068						X			02/06/04	02/10/04		
Name: Beverly Siskos 724-468-3410	Address: 275 Rock Springs Rd. Delmont, PA 15626						X			02/06/04	02/10/04		
Name: Ralph & Ethelyn Ankrom 412-276-0221 or 412-278-0685	Address: 38 Terrace Rd. Carnegie, PA 15106-1053						X			02/06/04	02/07/04		

Optional: Signature below indicates the party's approval of the well location, and waives the 15-day objection period.				Signature below indicates written consent.	
Water Purveyor or Landowner with water supply within 1,000 ft.	Date	Coal Operator, Owner, or Lessee	Date	Owner of water well or building within 200 feet	Date
Water Purveyor or Landowner with water supply within 1,000 ft.	Date	Coal Operator, Owner, or Lessee	Date	Address (of above)	
Water Purveyor or Landowner with water supply within 1,000 ft.	Date	Coal Operator, Owner, or Lessee	Date	200 Route 22, P.O. Box 300	
Water Purveyor or Landowner with water supply within 1,000 ft.	Date	Coal Operator, Owner, or Lessee	Date	Delmont, PA 15626-0300	
Surface Landowner at proposed location	Date	Coal Operator within 1,000 feet of proposed location	Date	Owner of water well or building within 200 feet	Date
Surface Landowner at proposed location	Date	Gas Storage Operator within 2,000 feet	Date	Address (of above)	

003-21644



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

PERMIT APPLICATION FOR DRILLING OR ALTERING A WELL
Page 2 — Record of Notification / Written Consent

Farm Name - Well #	
Sadrat #4A	
Applicant Name	
Pennaco Oil Company	DEP ID# 7674
DEP USE ONLY	Application Tracking #

List the following: surface landowner; all landowners or water purveyors whose water supplies are within 1,000 feet of this proposed well location; gas storage operator if within 2,000 feet; all coal owners and lessees of all underlying workable coal seams; operators of underground coal mines at the proposed location; and coal operators with a deep mine within 1,000 feet. Mark the boxes, "X", which show the parties' interests. Use additional forms if you need more space. You are required to notify each of these parties.

Name	Address	Surface Landowner	Coal Owner	Coal Lessee	Coal Mine Operator	Gas Storage Operator	Within 1,000 feet			Notification			
							Surf Owner with water	Water Purveyor	Coal Mine Operator	Note the means and attach proof.			
										Certified Mail Sent	Return Receipt	Address Affidavit	Written Consent
Name: Herman & Irene Vanhorn U.L.	Address: 1920 Drennen Rd. New Kensington, PA 15068						X			02/06/04	02/09/04		
Name: Earl & Jean Wilkerson 724-339-2560 ?	Address: 1000 Wright Rd. New Kensington, PA 15068						X			02/06/04	02/09/04		
Name: Frank & Marla Smolenski Survey	Address: 1900 Old Leechburg Rd. New Kensington, PA 15068						X			02/06/04	02/09/04		
Name: Theodore & Virginia Smolenski Survey	Address: 1835 Old Leechburg Rd. New Kensington, PA 15068						X			02/06/04	02/07/04		
Name: Janet & Russell Mitchell U.L.	Address: 504 Clarendon Street Pittsburgh, PA 15238						X			02/06/04	02/07/04		
Name:	Address:												
Name:	Address:												

Optional: Signature below indicates the party's approval of the well location, and waives the 15-day objection period.				Signature below indicates written consent.	
Water Purveyor or Landowner with water supply within 1,000 ft.	Date	Coal Operator, Owner, or Lessee	Date	Owner of water well or building within 300 feet	Date
Water Purveyor or Landowner with water supply within 1,000 ft.	Date	Coal Operator, Owner, or Lessee	Date	Address (of above)	
Water Purveyor or Landowner with water supply within 1,000 ft.	Date	Coal Operator, Owner, or Lessee	Date		
Water Purveyor or Landowner with water supply within 1,000 ft.	Date	Coal Operator, Owner, or Lessee	Date	Owner of water well or building within 200 feet	Date
Surface Landowner at proposed location	Date	Coal Operator within 1,000 feet of proposed location	Date	Address (of above)	
Surface Landowner at proposed location	Date	Gas Storage Operator within 2,000 feet	Date		



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

003-21712

DEP Application Tracking #	NC-585600	G:	
USE Permit #	37-003-21712-00	C:	
ONLY Project #			

ra1

Denotes location of well on topo map.

True Latitude: NORTH

40 ° 31 ' 17.31 "

True Longitude: WEST

79 ° 43 ' 20.38 "

Well is located on topo map 7356 feet south of latitude 40 ° 32 ' 30 "

LOC - A S 26°-52' E - 596.16'

LOC - B S 73°-00' E - 1498.49'

A - B = N 85°-24' E - 1167.32'

A = CL ROAD & PROPERTY LINE

B = PROPERTY CORNER

Well is located on topo map

3890

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 or Engineer Jesse H. Hickman
SU - 53654

Phone # 412-549-0733 Dwg. #

BK 4 PG 43

Date 2-10-05

Scale 1" = 600 FEET

Tract N/A
Acreage 108

MHAMILTON-B.DWG

Lal. & Long Metadata
Method ITPMP Accuracy 0.20" ft. Datum NAD 1927

Applicant / Well Operator Name
P C EXPLORATION INC.

Address
502 KEYSTONE DRIVE WARRENDALE, PA. 15088

Surface Landowner
ANTOINETTE CARDINALE

Surface Lessor
N/A

Surface Owner or Water Purveyor
with a Water Supply within 1,000 ft.

Approximate Course and
Distance to Water Supply

Elevation Metadata
Method TOPO Accuracy +/- 20' ft. Datum NAD 27

Well(Farm) Name
MARGARET HAMILTON

County - Code
ALLEGHENY-02

USGS 7 1/2 Quadrangle
1408 NEW KENSINGTON EAST

Angle & Course of Deviation (Chiling)

Owner, Lessee, or Operator of
Workable Coal Seam

NON COAL AREA

Survey Date
1-10-05

Well # 2 Serial # N/A

Municipality
133 PLUM BOROUGH

Map Section
7

Surface Elevation
1148

Anticipated Total Depth
5000

Name of Coal Seam
Owned, Leased, or Operated

E ATTACHED SHEET

N/A

GoB (Villa Coal Co.
Kenton Mine / Upper Freeport)



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

JAN 27 2006

003-21712

DEP USE ONLY	
Site Id	Primary Facility Id
Client Id	Sub-facility Id

WELL RECORD AND COMPLETION REPORT

Well Operator PC Exploration, Inc.		DEP ID# 52451	Well API # (Permit / Reg) 37-003-21712	Project Number	Acres 108
Address 502 Keystone Drive			Well Form Name Margaret Hamilton	Well # 2	Serial #
City Warrendale	State PA	Zip Code 15086	County Allegheny	Municipality Plum Borough	
Phone 724-772-3500	Fax 724-772-3505	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 complete Log of Formations on back (page 2)

Well Type	☒ Gas ☐ Oil ☐ Combination Oil & Gas ☐ Injection ☐ Storage ☐ Disposal						
Drilling Method	☒ Rotary - Air ☐ Rotary - Mud ☐ Cable Tool						
Date Drilling Started 12/30/05	Date Drilling Completed 1/6/06	Surface Elevation 1148 ft.	Total Depth - Driller 3741 ft.	Total Depth - Logger 3742 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	Date Run
15 1/2"	13 3/4"	37 #	Thrd.	36	Sanded In		12/30/05
12 1/4"	9 1/2"	26 #	Thrd.	622	260 Sacks cement standard	G shoe/Bsk 9 1/2" 622/578	1/3/06
8 3/4"	7"	20 #	Thrd.	1995	460 Sacks cement standard	F shoe/Bsk 7" 1995/88	1/5/06
6 1/4"	4 1/2"	10.5#	Thrd.	3672	165 Sacks cement standard	F shoe 4 1/2" 3672	1/7/06

COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type	Amount	Propping Agent Type	Amount	Average Injection
1/17/06	3519	3524	1/17/06	Sheffield	Water	11340	Sand	23000	36.6
1/17/06	3203	3243	1/17/06	Speechley	Water	20748	Sand	42000	40.6
1/17/06	3066	3132	1/17/06	Upper Speechley/ Stray	Water	8862	Sand	18000	35.3
Natural Open Flow 37,520 cu ft			Natural Rock Pressure 24 Hours - 3Day -						
After Treatment Open Flow 184,320 cu ft			After Treatment Rock Pressure 24 Hours-C390/490 3Day-C415/T515						

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

Name Titan Wireline Service Address P.O. Box 286 City - State - Zip Elderton, PA 15736 Phone 724-354-2629	Name LK Drilling Corp., Inc. Address 655 Philadelphia St City - State - Zip Indiana, PA 15701 Phone 724-465-9130	Name Allegheny Wireline Address PO Box 129 City - State - Zip Elderton, PA 15736 Phone 724-354-3090	Name BJ Services Address P.O. Box 144A City - State - Zip Fairmont City, PA 16224 Phone 814-365-2003
--	---	--	---

003-21712

LOG OF FORMATIONS						Well API#: 37-003-21712
Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Fill	0	3				Drillers Log
Brown Sand	3	12				
Red Shale	12	21				
Gray Shale	21	580				
Open	580	585				
Gray Sand	585	657			Damp @ 655'	
Gray Sand/Shale	657	3741			80-100gpm @ 1849' Brine	Drillers TD
5 th Sand	2285	2340				Wireline Log
5 th Stray	2347	2384	2350			
Bayard	2387	2408				
Upper Speechley	3058	3080				
Speechley Stray	3122	3134				
Speechley	3200	3246				
Sheffield	3514	3530				
Shale	3530	3742				Log TD
Please delete empty rows if necessary to make all of page 2 fit on one page.						
Well Operator's Signature:			DEP USE ONLY			
Title: <i>gced</i> 1/26/06 Assistant Vice President of Operations 1/26/06			Reviewed by: _____ Date: _____ Comments: _____			



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

003-21868

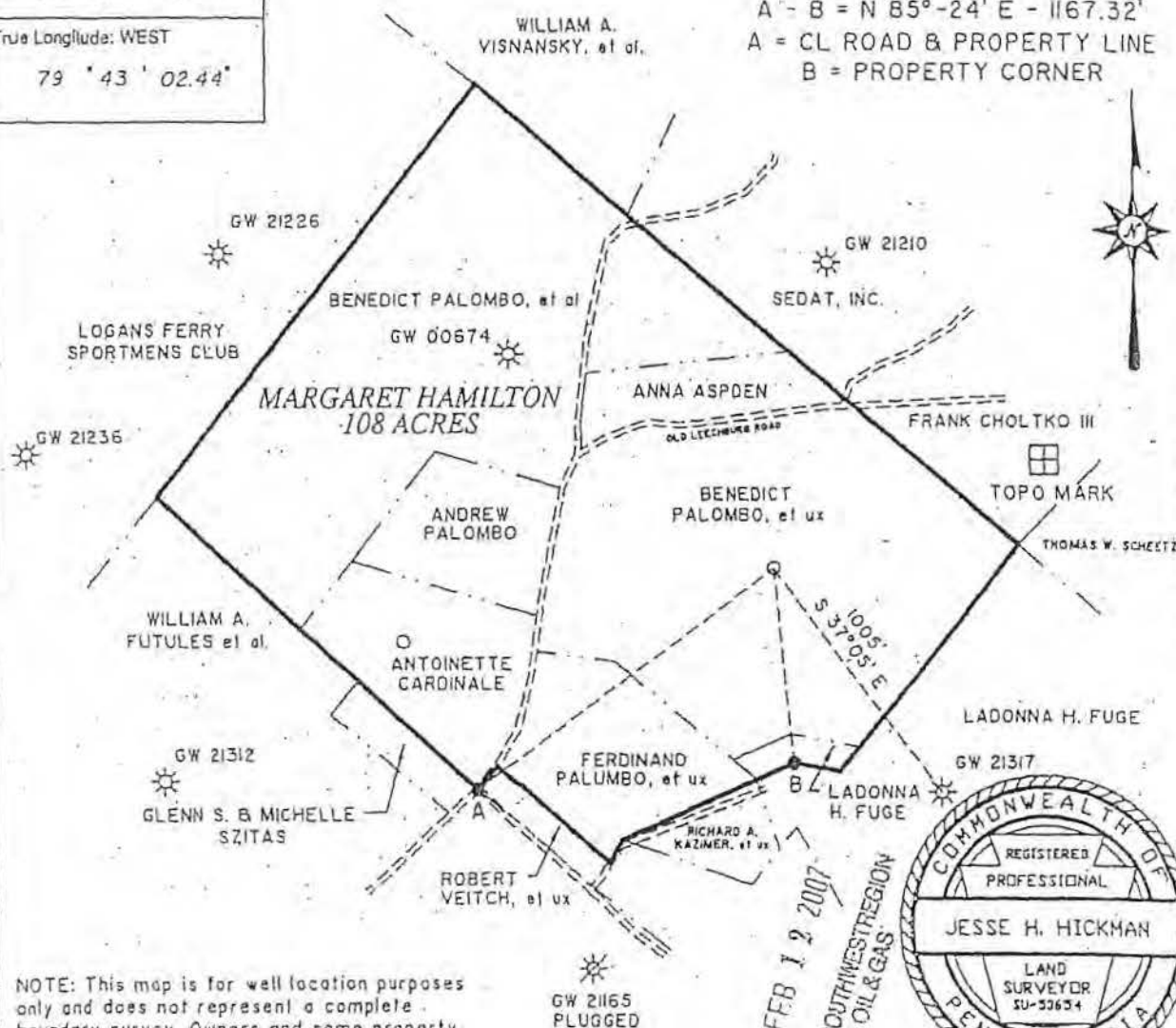
DEP Application Tracking # NC-664689	G
USE ONLY	C
Project # 37-003-21868-00	RAL

Denotes location of well on topo map.
True Latitude: NORTH 40° 31' 20.33"
True Longitude: WEST 79° 43' 02.44"

Well is located on topo map 7050 feet south of latitude 40° 32' 30"

LOC - A S 54°-06' W - 1350.42'
LOC - B S 05°-42' E - 701.70'
A - B = N 85°-24' E - 1167.32'
A = CL ROAD & PROPERTY LINE
B = PROPERTY CORNER

Well is located on topo map 2505 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: Jesse H. Hickman
Engineer: SU - 53654

Phone: 412-549-0733

Dwg. # BK 4 PG 43

Date: 2-10-05

MHAMILTON-A.DWG

Scale: 1" = 600 FEET
Tract: N/A
Acres: 108

Loc. & Log Method Method ITPMP Accuracy 0.20" A. Datum NAD 1927				Elevation Method Method TOPO Accuracy +/- 20' A. Datum NAD 27				Survey Date 1-10-05	
Applicant/ Well Operator Name P C EXPLORATION INC.				Well(Farm) Name MARGARET HAMILTON			HWS 3	Serial # N/A	
Address 502 KEYSTONE DRIVE WARRENDALE, PA. 15086				County - Code ALLEGHENY-02		Municipality 153 PLUM BOROUGH			
Surface Landowner BENEDICT PALUMBO, et ux.				USGS 7 1/2 Quadrangle Map Name 1408 NEW KENSINGTON EAST			Map Section 7		
Surface Lessor N/A				Angle & Course of Deviation (Drilling) 0			Surface Elevation 1090		Anticipated Total Depth 5000
Surface Owner or Water Purveyor with a Water Supply within 1,000 ft.		Approximate Course and Distance to Water Supply		Owner, Lessee, or Operator of Workable Coal Seam			Name of Coal Seam Owned, Leased, or Operated		
58 ANNA ASPDEN		N 54-02 W 845'		NON COAL AREA			N/A		
77 RICHARD KAZIMER		S 22-43 W 998'							

GOB (Villal Coal Company) / Benton Mine / Upper Freeport Seam



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

003-21868

DEP USE ONLY	
Site Id	Primary Facility Id
Client Id	Sub-facility Id

WELL RECORD AND COMPLETION REPORT

Well Operator PC Exploration, Inc.	DEP ID# 52451	Well API # (Perm / Rag) 37-003-21868	Project Number	Acres 108
Address 502 Keystone Drive		Well Form Name Margaret Hamilton	Well # 3	Serial #
City Warrendale	State PA	Zip Code 15086	County Allegheny	Municipality Plum
Phone 724-772-3500	Fax 724-772-3505	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 complete Log of Formations on Back (page 2)

Well Type	☒ Gas	☐ Oil	☐ Combination Oil & Gas	☐ Injection	☐ Storage	☐ Disposal	
Drilling Method	☒ Rotary - Air	☐ Rotary - Mud	☐ Cable Tool				
Date Drilling Started 12/3/07	Date Drilling Completed 12/10/07	Surface Elevation 1090 ft.	Total Depth - Driller 3676 ft.	Total Depth - Logger 3679 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	Date Run
15 1/2"	13 1/4"	37 #	Thrd.	77	Sanded In		12/3/07
12 1/4"	9 1/4"	26 #	Thrd.	573	230 Sacks cement standard	G shoe/Bsk 9 1/4" 573/88	12/4/07
8 1/2"	7"	20 #	Thrd.	2051	365 Sacks cement standard	F shoe/Bsk 7" 2051/80	12/6/07
6 1/4"	4 1/2"	10.5#	Thrd.	3626	115 Sacks cement standard	F shoe 4 1/2" 3626	12/10/07

COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type	Amount	Propping Agent Type	Amount	Average Injection
12/14/07	3474	3482	12/14/07	Sheffield	Water	9652	Sand	17500	32.3
12/14/07	3350	3354	12/14/07	Balltown	Water	5926	Sand	12000	30.8
12/14/07	3160	3197	12/14/07	Speechley	Water	16527	Sand	34000	37.2

Natural Open Flow	10,000 cu ft	Natural Rock Pressure	24 Hours -	30day -
After Treatment Open Flow	118,000 cu ft	After Treatment Rock Pressure	24 Hours-560C/440T	30day- 566C/678T

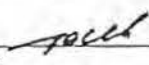
Well Service Companies -- Provide the name, address, and phone number of all well service companies involved.

Name	Name	Name	Name
Titan Wireline Service	Phillips Drilling Company	Weatherford	BJ Services
Address P.O. Box 286	Address 799 Old Rt 119N	Address PO Box 129	Address P.O. Box 144A
City - State - Zip Elderton, PA 15736	City - State - Zip Indiana, PA 15701	City - State - Zip Elderton, PA 15736	City - State - Zip Fairmont City, PA 16224
Phone 724-354-2629	Phone 724-465-9130	Phone 724-354-3090	Phone 814-365-2003

003-21868

LOG OF FORMATIONS						Well API#: 37-003-21868
Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Brown Clay	0	5				Drillers Log
Brown Sandy Shale	5	15				
Gray Shale	15	30				
Red Rock	30	55				
Gray Sandy Shale	55	60				
Red Rock/Gray Shale	60	105			3gpm @ 95' Fresh	
Gray Sandy Shale	105	170				
Red Rock	170	195				
Gray Sandstone	195	310				
Coal	310	313				
Gray Shale	313	350				
White Sandstone	350	425				
Gray Sandy Shale	425	495				
Subsidence(mine)	495	537				
Gray Sand/Shale	537	1500				
Coal/Red Rock	1500	1515				
Gray Sandy Shale	1515	1630			5gpm @ 1570'	
Gray Sandstone	1630	1980			20gpm @ 1735'	
Gray Sand/Shale	1980	3676				Drillers TD
5 th Sand	2247	2264				Wireline Log
5 th Stray	2302	2337	2314			
Bayard	2346	2364				
Upper Speechley	3024	3028				
Speechley	3158	3198				
Balltown	3352	3355				
Sheffield	3473	3484				
Shale	3484	3674				Log TD

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

Well Operator's Signature:		DEP USE ONLY	
 Title: Vice President of Operations Date: 1/3/08		Reviewed by: _____ Date: _____ Comments: _____	



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

003-21868

WELL RECORD AND COMPLETION REPORT

DEP USE ONLY	
Site Id	Primary Facility Id
Client Id	Sub-facility Id

Well Operator PC Exploration, Inc.		DEP ID# 52451	37-003-21868		Acres 108
Address 502 Keystone Drive			Well Farm Name Margaret Hamilton		Well # 3
City Warrendale	State PA	Zip Code 15086	County Allegheny		Municipality Plum
Phone 724-772-3500	Fax 724-772-3505	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 12/3/07	Date Drilling Completed 12/10/07	Surface Elevation 1090 ft.	Total Depth - Driller 3676 ft.	Total Depth - Logger 3679 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		Date Run
15 1/2"	13 1/4"	37 #	Thrd.	77	Sanded In			12/3/07
12 1/4"	9 5/8"	26 #	Thrd.	573	230 Sacks cement standard	G shoe/Bsk	9 5/8" 573/88	12/4/07
8 3/4"	7"	20 #	Thrd.	2051	365 Sacks cement standard	F shoe/Bsk	7" 2051/80	12/6/07
6 1/4"	4 1/2"	10.5#	Thrd.	3626	115 Sacks cement standard	F shoe	4 1/2" 3626	12/10/07

COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type	Amount	Propping Agent Type	Amount	Average Injection
12/14/07	3474	3482	12/14/07	Sheffield	Water	9652	Sand	17500	32.3
12/14/07	3350	3354	12/14/07	Balltown	Water	5926	Sand	12000	30.8
12/14/07	3160	3197	12/14/07	Speechley	Water	16527	Sand	34000	37.2

Natural Open Flow	10,000 cu ft	24 Hours -	3Day -
After Treatment Open Flow	118,000 cu ft	24 Hours-560C/440T	3Day- 566C/678T

Well Service Companies -- Provide the name, address, and phone number of all well service companies involved.			
Name Tilton Wireline Service	Name Phillips Drilling Company	Name Weatherford	Name BJ Services
Address P.O. Box 286	Address 799 Old Rt 119N	Address PO Box 129	Address P.O. Box 144A
City - State - Zip Elderton, PA 15736	City - State - Zip Indiana, PA 15701	City - State - Zip Elderton, PA 15736	City - State - Zip Fairmont City, PA 16224
Phone 724-354-2629	Phone 724-465-9130	Phone 724-354-3690	Phone 814-365-2003

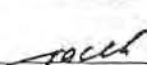
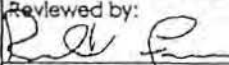
~~603-21686~~

LOG OF FORMATIONS

Well API#: 37-003-21866

Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Brown Clay	0	5				Drillers Log
Brown Sandy Shale	5	15				
Gray Shale	15	30				
Red Rock	30	55				
Gray Sandy Shale	55	60				
Red Rock/Gray Shale	60	105			3gpm @ 95' Fresh	
Gray Sandy Shale	105	170				
Red Rock	170	195				
Gray Sandstone	195	310				
Coal	310	313				
Gray Shale	313	350				
White Sandstone	350	425				
Gray Sandy Shale	425	495				
Subsidence(mine)	495	537				
Gray Sand/Shale	537	1500				
Coal/Red Rock	1500	1515				
Gray Sandy Shale	1515	1630			5gpm @ 1570'	
Gray Sandstone	1630	1980			20gpm @ 1735'	
Gray Sand/Shale	1980	3676				Drillers TD
5 th Sand	2247	2264				Wireline Log
5 th Stray	2302	2337	2314			
Bayard	2346	2364				
Upper Speechley	3024	3028				
Speechley	3158	3198				
Balltown	3352	3355				
Sheffield	3473	3484				
Shale	3484	3674				Log TD

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

Well Operator's Signature		DEP USE ONLY	
		Reviewed by: 	
Title: Vice President of Operations		Date: 3-17-18	
Date: 1/3/08		Comments:	



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

GEO COPY

003-21843

DEP Application Tracking #	C-730386	G	RS
USE ONLY	57-003-21963-00	C	7/2/08
Project #			RAL

☐ Denotes location of well on topo map

True Latitude NORTH

40° 31' 11.54"

True Longitude WEST

79° 43' 11.32"

Well is located on topo map 7940 feet south of latitude 40° 32' 30"



Well is located on topo map

3190

feet west of longitude

79°

42'

30"



DEP, SOUTHWEST REGION
OIL & GAS

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 4
Engineer SU - 53654

MHAMILTON-D.DWG

Date 5-19-08

Scale 1" = 600 FEET Tract N/A
Acreage 108

LOC - A N 79°-50' W - 425.52'
LOC - B N 77°-13' E - 763.59'
A - B = N 85°-24' E - 1167.32'
A = CL ROAD & PROPERTY LINE
B = PROPERTY CORNER

Lat & Long Metadata Method ITPMP Accuracy 0.20" ft Datum NAD 1927		Elevation Metadata Method TOPO Accuracy +/- 20' ft Datum NAD 27 Survey Date 5-6-08	
Applicant / Well Operator Name P C EXPLORATION INC.		Well (Farm) Name MARGARET HAMILTON	
Address 502 KEYSTONE DRIVE WARRENDALE, PA. 15088		County - Code ALLEGHENY-02	Municipality 133 PLUM BOROUGH
Surface Landowner FERDINAND PALOMBO, et ux.		USGS 7 1/2 Quadrangle Map Name NEW KENSINGTON EAST 14036 7	
Surface Lessor N/A		Angle & Course of Deviation (Drilling) 0	Surface Elevation 1162
Surface Owner or Water Purveyor with a Water Supply within 1,000 ft		Anticipated Total Depth 5000	
Approximate Course and Distance to Water Supply W-77 RICHARD KAZIMER S 72-21 E 288'		Owner, Lessee, or Operator of Workable Coal Seam NO WORKABLE COAL SEAMS	
		Name of Coal Seam Owned, Leased, or Operated	



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

003-21963

WELL RECORD AND COMPLETION REPORT

DEP USE ONLY	
Site Id	Primary Facility Id
Client Id	Sub-facility Id

Well Operator PC Exploration, Inc.	DEP ID# 52451	Well API # (Permit / Reg) 37-003-21963	Project Number	Acres 108
Address 502 Keystone Drive	Well Farm Name Margaret Hamilton	Well # 4	Serial #	
City Warrendale	State PA	Zip Code 15086	County Allegheny	Municipality Plum
Phone 724-772-3500	Fax 724-772-3505	USGS 7.5 min. quadrangle map New Kensington		

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

WELL RECORD Also complete Log of Formations on back (page 2)

Well Type	☒ Gas ☐ Oil ☐ Combination Oil & Gas ☐ Injection ☐ Storage ☐ Disposal						
Drilling Method	☒ Rotary - Air ☐ Rotary - Mud ☐ Cable Tool						
Date Drilling Started 11/13/08	Date Drilling Completed 11/21/08	Surface Elevation 1162 ft.	Total Depth - Driller 4005 ft.	Total Depth - Logger 4016 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	Date Run
20"				14	Sanded In	14	11/13/08
15 1/2"	13 3/4"	37 #	Thrd.	169	135 Sacks cement standard	F shoe/Bsk	169/160 11/14/08
12 1/4"	9 5/8"	26 #	Thrd.	673	245 Sacks cement standard	G shoe 9 5/8"	673/160 11/18/08
8 3/4"	7"	20 #	Thrd.	2150	435 Sacks cement standard	F shoe/Bsk 7"	2150/160 11/20/08
6 1/2"	4 1/2"	10.5#	Thrd.	3987	145 Sacks cement standard	F shoe 4 1/2"	3987 11/24/08

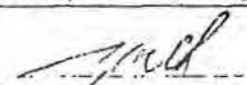
COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type	Amount	Propping Agent Type	Amount	Average Injection
12/6/08	3870	3882	12/6/08	2 nd Bradford	Water	16025	Sand	28000	38.9
12/6/08	3556	3563	12/6/08	Balltown	Water	17809	Sand	28000	38.8
12/6/08	3242	3282	12/6/08	Speechley	Water	23950		40000	39.0
RECEIVED DEC 22 2008 DEP, SOUTHWEST REGION OIL & GAS									
Natural Open Flow 5,000 cu ft			Natural Rock Pressure 24 Hours - 0 3Day - 0						
After Treatment Open Flow 213,120 cu ft			After Treatment Rock Pressure 24 Hours- C385/T90 3Day- C387/T197						

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

Name Titan Wireline Service	Name Phillips Drilling Company	Name Weatherford	Name Universal Well Service
Address P.O. Box 286	Address 799 Old Rt 119 N	Address PO Box 129	Address Rte. 436, Box 305
City - State - Zip Elderton, PA 15736	City - State - Zip Indiana, PA 15701	City - State - Zip Elderton, PA 15736	City - State - Zip Punxsutawney, PA 15767
Phone 724-354-2629	Phone 724-465-9130	Phone 724-354-3090	Phone 814-938-2051

603-21963

LOG OF FORMATIONS						Well API#: 37-003-21963
Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Clay/Shale	0	3				Drillers Log
Brown Shale	3	13				
Gray Sandstone	13	100				
Red Rock/Limestone	100	370			5gpm @ 200' FW	
Gray White Sandstone	370	604				
Coal	604	608				
Shale	608	650				
Sandstone	650	700				
Coal	700	708				
Sandstone	708	770				
Shale/Limestone	770	950				
Gray White Sandstone	950	1040				
Coal	1040	1043			5gpm @ 1040'	
Black Shale	1043	1125			10gpm @ 1120'	
White Sandstone	1125	1225				
Gray Sandstone	1225	1830				
Shale	1830	1880			50gpm @ 1880'	
Limestone	1880	2000				
Red Rock/Limestone	2000	2330				
Sandstone/Shale	2330	2445				
Shale	2445	2500				
Sandstone	2500	4005				Drillers TD
5 th Sand	2326	2344				Wireline Log
5 th Stray	2382	2411				
Bayard	2421	2448				
Speechley	3240	3282				
Balltown	3555	3566				
1 st Bradford	3776	3781				
2 nd Bradford	3868	3886				
Shale	3886	4016				Log TD
Please delete empty rows if necessary to make all of page 2 fit on one page.						
Well Operator's Signature:			DEP USE ONLY			
			Reviewed by:		Date:	
Title Vice President of Operations			Date: 12/12/08		Comments:	



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

003-21963

DEP USE ONLY	
Site Id	Primary Facility Id
Client Id	Sub-facility Id

WELL RECORD AND COMPLETION REPORT

Well Operator PC Exploration, Inc.	DEP ID# 52451	Well API # (Permit / Reg) 37-003-21963	Project Number	Acres 108
Address 502 Keystone Drive		Well Form Name Margaret Hamilton	Well # 4	Serial #
City Warrendale	State PA	Zip Code 15086	County Allegheny	Municipality Plum
Phone 724-772-3500	Fax 724-772-3505	USGS 7.5 min. quadrangle map New Kensington		

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

WELL RECORD Also complete Log of Formations on back (page 2)

Well Type	☒ Gas ☐ Oil ☐ Combination Oil & Gas ☐ Injection ☐ Storage ☐ Disposal						
Drilling Method	☒ Rotary - Air ☐ Rotary - Mud ☐ Cable Tool						
Date Drilling Started 11/13/08	Date Drilling Completed 11/21/08	Surface Elevation 1162 ft.	Total Depth - Driller 4005 ft.	Total Depth - Logger 4016 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	Date Run
	20"			14	Sanded In		11/13/08
15 1/2"	13 3/4"	37 #	Thrd.	169	135 Sacks cement standard	F shoe/Bsk	11/14/08
12 1/4"	9 3/4"	26 #	Thrd.	673	245 Sacks cement standard	G shoe	11/18/08
8 3/4"	7"	20 #	Thrd.	2150	435 Sacks cement standard	F shoe/Bsk	11/20/08
6 1/4"	4 1/2"	10.5#	Thrd.	3987	145 Sacks cement standard	F shoe	11/24/08

COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type	Amount	Propping Agent Type	Amount	Average Injection
12/6/08	3870	3882	12/6/08	2 nd Bradford	Water	16025	Sand	28000	38.9
12/6/08	3556	3563	12/6/08	Balltown	Water	17809	Sand	28000	38.8
12/6/08	3242	3282	12/6/08	Speechley	Water	23400	Sand	40000	39.0

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DEC 22 2008
MAR 02 2010
DEP, SOUTHWEST REGION
OIL & GAS
DEP, SOUTHWEST REGION
OIL & GAS

Natural Open Flow	5,000 cu ft	Natural Rock Pressure	24 Hours - 0	3Day - 0
After Treatment Open Flow	213,120 cu ft	After Treatment Rock Pressure	24 Hours - C385/T190	3Day - C387/T197

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

Name Titan Wireline Service	Name Phillips Drilling Company	Name Weatherford	Name Universal Well Service
Address P.O. Box 286	Address 799 Old Rt 119 N	Address PO Box 129	Address Rte. 436, Box 305
City - State - Zip Elderton, PA 15736	City - State - Zip Indiana, PA 15701	City - State - Zip Elderton, PA 15736	City - State - Zip Punxsutawney, PA 15767
Phone 724-354-2629	Phone 724-465-9130	Phone 724-354-3090	Phone 814-938-2051

003-21963

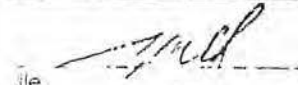
LOG OF FORMATIONS

Well API#: 37-003-21963

Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Gray/Shale	0	3				Drillers Log
Brown Shale	3	13				
Gray Sandstone	13	100				
Red Rock/Limestone	100	370			5gpm @ 200' FW	
Gray White Sandstone	370	604				
Coal	604	608				
Shale	608	650				
Sandstone	650	700				
Coal	700	708				
Sandstone	708	770				
Shale/Limestone	770	950				
Gray White Sandstone	950	1040				
Coal	1040	1043			5gpm @ 1040'	
Black Shale	1043	1125			10gpm @ 1120'	
White Sandstone	1125	1225				
Gray Sandstone	1225	1830				
Shale	1830	1880			50gpm @ 1880'	
Limestone	1880	2000				
Red Rock/Limestone	2000	2330				
Sandstone/Shale	2330	2445				
Shale	2445	2500				
Sandstone	2500	4005				Drillers TD
5 th Sand	2326	2344				Wireline Log
5 th Stray	2382	2411				
Bayard	2421	2448				
Speechley	3240	3282				
Balltown	3555	3566				
1 st Bradford	3776	3781				
2 nd Bradford	3868	3886				
Shale	3886	4016				Log TD

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

Well Operator's Signature:


 Vice President of Operations

 Date:
 12/12/08

DEP USE ONLY

Reviewed by:

Comments:

Date:

1-19-10



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

003-21944 7-8-08

DEP Application Tracking #	NC-730995	G	EAB
USE ONLY	Project # 37-003-21964-00	C	RAL

Denotes location of well on topo map

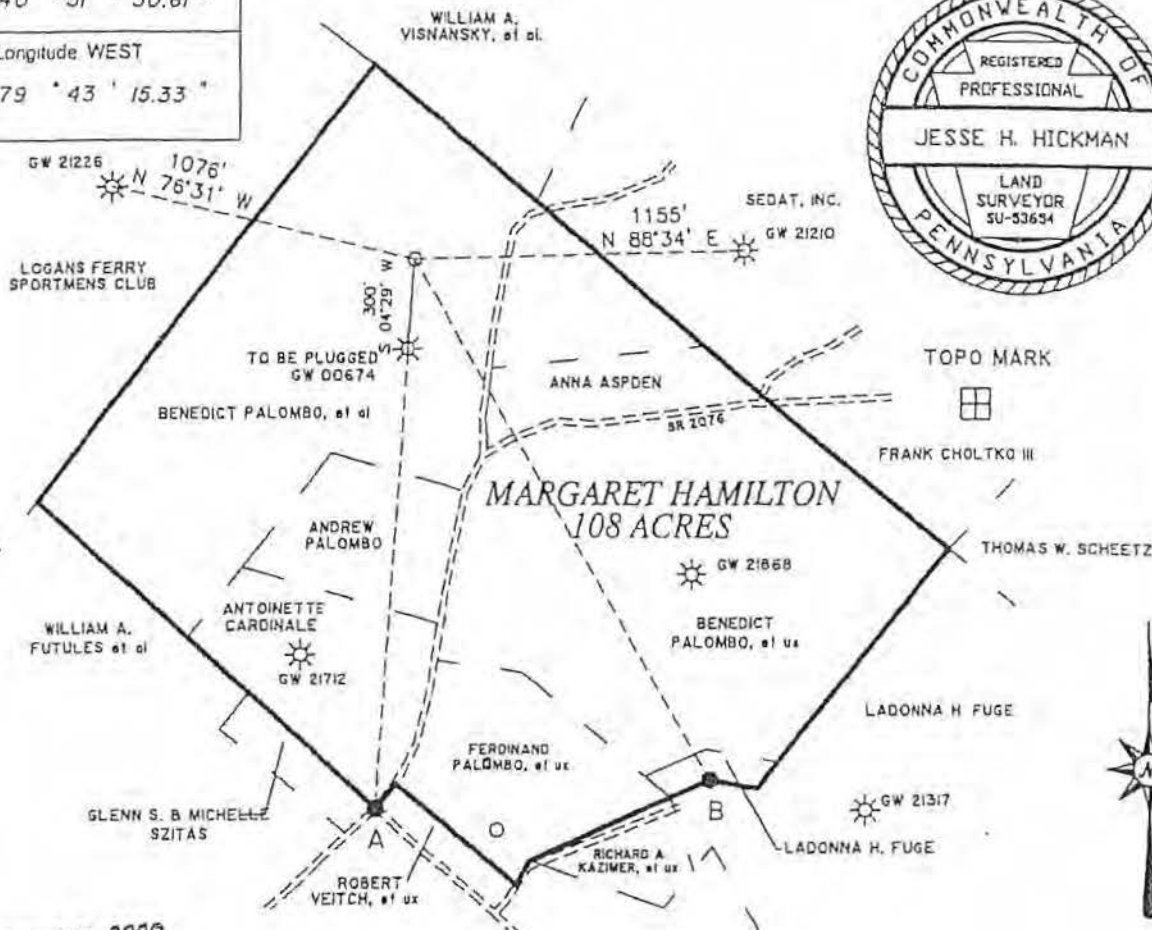
True Latitude NORTH

40° 31' 30.61"

True Longitude WEST

79° 43' 15.33"

Well is located on topo map 5010 feet south of latitude 40° 32' 30"



Well is located on topo map

3500

feet west of longitude

79°

42'

30"

JUN 16 2008

DEP, SOUTHWEST REGION
OIL & GAS

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: Jesse H. Hickman Phone # 412-549-0733 Cwp # BK 18 PG 4
Engineer: SU - 53654

MHAMILTON-C.DWG

Date 5-19-08

Scale 1" = 600 FEET Tract: N/A Acreage 108

LOC - A S 04°-16' W - 1555.97'
LOC - B S 30°-16' E - 2034.24'
A - B = N 85°-24' E - 1167.32'
A = CL ROAD & PROPERTY LINE
B = PROPERTY CORNER

Lat & Long Metadata Method ITPMP Accuracy 0.20" ft Datum NAD 1927	Elevation Metadata Method TOPO Accuracy +/- 20' ft Datum NAD 27	Survey Date 5-6-08
Applicant / Well Operator Name P C EXPLORATION INC.	Well (Farm) Name MARGARET HAMILTON	Well # 5
Address 602 KEYSTONE DRIVE WARRENDALE, PA. 15086	County Code ALLEGHENY-02	Municipality 133 PLUM BOROUGH
Surface Landowner BENEDICT PALOMBO, et al	USGS 71/2 Quadrangle Map Name 1408 NEW KENSINGTON EAST	Map Section 7
Surface Lessor N/A	Angle & Course of Deviation (Degrees) 0	Surface Elevation 180
Surface Owner or Water Purveyor with a Water Supply within 1,000 ft	Approximate Course and Distance to Water Supply S 25-45 E 625'	Owner, Lessee, or Operator of Workable Coal Seams NO WORKABLE COAL SEAMS
W-58 ANNA ASPDEN		Name of Coal Seam Owned, Leased, or Operated

GUB UPPER FREEPORT RANTON MINE



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DEP, SOUTHWEST REGION
OIL & GAS

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

WELL RECORD AND COMPLETION REPORT

003-21964

DEP USE ONLY	
Site Id	Primary Facility Id
Client Id	Sub-facility Id

Well Operator Phillips Exploration, Inc.		DEP ID# 52451	Well API # (Permit / Reg) 37-003-21964	Project Number	Acres 108
Address 502 Keystone Drive		Well Farm Name Margaret Hamilton		Well # 5	Serial #
City Warrendale	State PA	Zip Code 15086	County Allegheny	Municipality Plum	
Phone 724-772-3500	Fax 724-772-3505	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 complete Log of Formations on back (page 2)

Well Type	☒ Gas ☐ Oil ☐ Combination Oil & Gas ☐ Injection ☐ Storage ☐ Disposal						
Drilling Method	☒ Rotary - Air ☐ Rotary - Mud ☐ Cable Tool						
Date Drilling Started 6-23-2009	Date Drilling Completed 7-1-2009	Surface Elevation 1180 ft.	Total Depth - Driller 4050 ft.	Total Depth - Logger 4052 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	Date Run
15 1/2"	13 1/2"	37 #	Thrd.	22	Sanded In		6-23-2009
12 1/4"	9 1/2"	26 #	Thrd.	648	275 Sacks cement standard	G shoe/Bsk 9 1/2" 648/547	6-24-2009
8 1/4"	7"	20 #	Thrd.	2194.7	510 Sacks cement standard	G shoe/Bsk 7" 2195/84	6-29-2009
6 1/4"	4 1/2"	10.5#	Thrd.	4000.15	170 Sacks cement standard	F shoe 4 1/2" 4000	7-1-2009

COMPLETION REPORT

Perforation Record			Stimulation Record						
Date	Interval Perforated From	To	Date	Interval Treated	Fluid Type	Amount	Propping Agent Type	Amount	Average Injection
7-7-2009	3872	3884	7-10-2009	2 nd Bradford	Water	9,802	Sand	12,000	30.0
7-10-2009	3554	3562	7-10-2009	Balltown	Water	15,158	Sand	24,000	36.9
7-10-2009	3237	3279	7-10-2009	Speechley	Water	26,452	Sand	42,000	36.5
7-10-2009	3164	3168	7-10-2009	Upper Speechley	Water	13,418	Sand	20,000	34.4
					Water		Sand		
					Water		Sand		
Natural Open Flow 65,160 cu ft			Natural Rock Pressure		24 Hours - 0		3Day - 0		
After Treatment Open Flow 103,000 cu ft			After Treatment Rock Pressure		24 Hours - 530c/64f		3Day - 520c/65f		

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

Name	Name	Name	Name
Phillips Drilling Company	Superior Well Services	Weatherford	
Address 799 Old RT 119 N	Address PO Box 360469	Address PO Box 129	
City - State - Zip Indiana, PA 15701	City - State - Zip Pittsburgh, PA 15251	City - State - Zip Elderton, PA 15736	
Phone 724-465-9130	Phone 724-248-1001	Phone 724-354-3090	

003-21964

LOG OF FORMATIONS						Well API#: 37-003-21964
Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Clay	0	10				Drillers log
Sand shale	10	180				
Sandstone	180	215				
Shale	215	226				
Coal	226	230				
Shale, sand	230	575			10 GPM @ 325' FW	
Sandstone	575	705			30 GPM @ 540' FW	
Coal	705	709				
Shale	709	765				
Coal	765	771				
Shale, sand	771	1970			5 GPM @ 835' BW	
Sand	1970	2095			5 GPM @ 975' BW	
Shale	2095	4050			100+GPM@1900' BW	Drillers TD
5 th sand	2332	2344				
5 th stray	2390	2400	2390			Wireline log
Bayard	2404	2412				
Warren	2985	3000				
Upper speechley	3160	3170	3165			
Speechley	3234	3280	3278			
Balltown	3550	3564	3558			
2 nd Bradford	3872	3884				
Shale	3884	4052				Wireline TD
RECEIVED JUL 27 2009 DEP, SOUTHWEST REGION OIL & GAS						
Please delete empty rows if necessary to make all of page 2 fit on one page.						
Well Operator's Signature:			DEP USE ONLY			
<i>[Signature]</i> 7/20/09 Title: Vice President of Operations Date: 7/16/09			Reviewed by: _____ Date: _____ Comments: _____			



REV.

JUL 27 2009

DEP, SOUTHWEST REGION
OIL & GASCOMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS MANAGEMENT PROGRAM

WELL RECORD AND COMPLETION REPORT

003-21964

DEP USE ONLY	
Site Id	Primary Facility Id
Client Id	Sub-facility Id

Well Operator Phillips Exploration, Inc.	DEP ID# 52451	Well API # (Perm / Reg) 37-003-21964	Project Number	Acres 108
Address 502 Keystone Drive	Well Form Name Margaret Hamilton	Well # 5	Serial #	
City Warrendale	State PA	Zip Code 15086	County Allegheny	Municipality Plum
Phone 724-772-3500	Fax 724-772-3505	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 complete Log of Formations on back (page 2)

Well Type	☒ Gas ☐ Oil ☐ Combination Oil & Gas ☐ Injection ☐ Storage ☐ Disposal			
Drilling Method	☒ Rotary - Air ☐ Rotary - Mud ☐ Cable Tool			
Date Drilling Started 6-23-2009	Date Drilling Completed 7-1-2009	Surface Elevation 1180 ft.	Total Depth - Driller 4050 ft.	Total Depth - Logger 4052 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	Date Run
15 1/2"	13 3/4"	37 #	Thrd.	22	Sanded In		6-23-2009
12 1/4"	9 3/4"	26 #	Thrd.	648	275 Sacks cement standard	G shoe/Bsk 9 3/4" 648/547	6-24-2009
8 3/4"	7"	20 #	Thrd.	2194.7	510 Sacks cement standard	G shoe/Bsk 7" 2195/84	6-29-2009
6 1/4"	4 1/2"	10.5#	Thrd.	4000.15	170 Sacks cement standard	F shoe 4 1/2" 4000	7-1-2009

COMPLETION REPORT

Perforation Record				Stimulation Record					
Date	Interval Perforated From	To		Date	Interval Treated	Fluid Type	Amount	Propping Agent Type	Average Injection
7-7-2009	3872	3884		7-10-2009	2 nd Bradford	Water	9,802	Sand 12,000	30.0
7-10-2009	3554	3562		7-10-2009	Balltown	Water	15,158	Sand 24,000	36.9
7-10-2009	3237	3279		7-10-2009	Speechley	Water	26,452	Sand 42,000	36.5
7-10-2009	3164	3168		7-10-2009	Upper Speechley	Water	13,418	Sand 20,000	34.4
						Water		Sand	
						Water		Sand	

MAR 30 2010

DEP, SOUTHWEST REGION
OIL & GAS

Natural Open Flow	65,160 cu ft	Natural Rock Pressure	24 Hours - 0	3Day - 0
After Treatment Open Flow	103,000 cu ft	After Treatment Rock Pressure	24 Hours - 530c/641	3Day - 520c/651

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

Name	Name	Name	Name
Phillips Drilling Company	Superior Well Services	Weatherford	
Address 799 Old RT 119 N	Address PO Box 360469	Address PO Box 129	
City - State - Zip Indiana, PA 15701	City - State - Zip Pittsburgh, PA 15251	City - State - Zip Elderton, PA 15736	
Phone 724-465-9130	Phone 724-248-1001	Phone 724-354-3090	

003-21964

LOG OF FORMATIONS

Well API#: 37-003-21964

Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Clay	0	10				Drillers log
Sand shale	10	180				
Sandstone	180	215				
Shale	215	226				
Coal	226	230				
Shale, sand	230	575			10 GPM @ 325' FW	
Sandstone	575	705			30 GPM @ 540' FW	
Coal	705	709				
Shale	709	765				
Coal	765	771				
Shale, sand	771	1970			5 GPM @ 835' BW	
Sand	1970	2095			5 GPM @ 975' BW	Drillers TD
Shale	2095	4050			100+GPM@1900'BW	
5 th sand	2332	2344				Wireline log
5 th stray	2390	2400	2390			
Bayard	2404	2412				
Warren	2985	3000				
Upper speechley	3160	3170	3165			
Speechley	3234	3280	3278			Wireline TD
Balltown	3550	3564	3558			
2 nd Bradford	3872	3884				
Shale	3884	4052				

RECEIVED

JUL 27 2009

DEP, SOUTHWEST REGION
OIL & GAS

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

Well Operator's Signature:

DEP USE ONLY

Reviewed by:

Date:

Title:

Vice President of Operations

Date:

7/18/09

Comments:

3-2-10

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS MANAGEMENT PROGRAM
WELL LOCATION PLAT



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

Auth. No. C-876833	TF 5-12-11
Permit No. CO3-22187	
Project No. RD	

☐	Denotes location of well on topo map.
True Latitude:	NORTH
40° 30' 51.6"	
True Longitude:	WEST
79° 42' 23.0"	

Well is located on topo map 9,983 feet south of latitude 40° 32' 30"

Top & Bottom Hole Locations (NAD 27 - For Applicant's Use)		
	Lat.	Lon.
Top	40°30'51.35"	79°42'23.84"
Bottom	40°31'13.41"	79°42'43.14"

Bottom Hole Location NAD 83		
	Lat.	Lon.
Bottom	40°31'13.66"	79°42'42.30"

UNIT

Reeger 1028.29' = 38.3%

Baleno 1656.71' = 61.7%

Total 2685.00' = 100%

Loc - A N 08°38'09" W 1376.08'
Loc - B S 40°57'04" E 2496.37'
A - B S 29°35'04" E 3732.53'

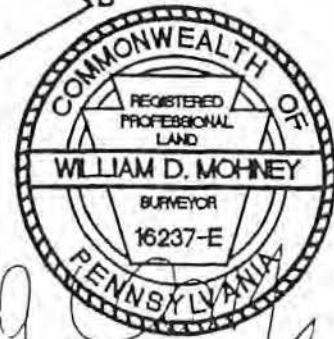
Legend

- Lease Tract Boundary
- - - Surface Tract
- == Roads
- - - Streams/Water
- Bottom Hole
- Water Well or Spring
- Proposed Well Location
- ☼ Existing Well
- ☼ Plugged Well

S.R. 2088

APR 21 2011

DEP, SOUTHWEST REGION
OIL & GAS



Surveyor or Engineer: W.D. Mohney & Associates (724) 543-1023	Phone #: (724) 543-1023	Day #: bonsall	Date: April 15, 2011	Scale: 1" = 1000'	Tract Acreage: 268 ±
Lat & Long Method: GPS-Code Based	Accuracy: 10 ±	Datum: NAD 83	Elevation Method: U.S.G.S. Plotted	Accuracy: 30 ±	Datum: NGVD29
Method: GPS-Code Based	Accuracy: 10 ±	Datum: NAD 83	Method: U.S.G.S. Plotted	Accuracy: 30 ±	Datum: NGVD29
Applicant / Well Operator Name: Penneco Oil Company	DEP ID#: 7674	Well (Farm) Name: Hankey Unit	Well #: 6H	Serial #: PH-1670	
Address: 6608 US Route 22, Delmont, PA. 15626	County: Allegheny	Municipality: Plum Borough	Well Type: New Oil Well		
Surface Landowner / Lessor: Thomas L. Reeger	USGS 7 "Quadrangle Map Name: New Kensington East - 1408	Map Section: 8	Surface Elevation: 1180 ±		
Target Formation(s): Speechley	Angle & Course of Deviation (Drilling): N 32°26'53" W -2,685'	Anticipated Total Depth ft.: TVD 3,270	TMD: 5,100		
Surface Owner or Water Purveyor: Thomas L. Reeger	Approximate Course and Distance to Water Supply: S 58° W - 950'	Owner, Lease, or Operator of Workable Coal Seam: Consolidation Coal Company	Name of Coal Seam: Upper Freeport		
		Thomas L. Reeger	All Others		

Gob - upper Freeport Coal Seam

Well is located on topo map 11,107 feet west of longitude 79° 40' 00"



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

Well Record

DEP USE ONLY	
Site ID	Primary Fac ID
Client Id	Subfacility Id

WELL INFORMATION

Well Operator Panneco Oil Company		DEP ID# 7674	Well API # (Permit / Reg) 37-003-22187-00		Project Number	Acres 268
Address 6608 Route 22			Well Farm Name Hankey Unit		Well # 6H	Serial # PH-1670
City Dalmont	State PA	Zip Code 15626	County Allegheny		Municipality Plum Borough	
Phone (724) 468-8232	Fax (724) 468-8230	Email penneco@penneco.com		USGS 7.5 min. quadrangle map New Kensington East, PA		

Check the appropriate Submission:

☒ Original Well Record☐ Amended Well Record

Well Type	☒ Gas	☐ Oil	☐ Combination Oil & Gas	☐ Injection	☐ Storage	☐ Disposal
Well Orientation	☐ Vertical ☒ Deviated from Vertical (Side view and Deviated Survey must be attached)					
Drilling Method	☒ Rotary - Air ☐ Rotary - Mud ☐ Cable Tool					
Date Drilling Started 06/13/11	Date Drilling Completed 08/02/11	Surface Elevation 1180 ft.	Total Depth - Driller 4805 ft.	Total Depth - Logger 4805 ft.	Depth of Deepest Fresh Groundwater N/A	

CEMENT

Cement returned on surface casing?	☒ Yes ☐ No	If No, provide top of cement and method used to determine:
Cement returned on coal protective casing?	☒ Yes ☐ No	If No, provide top of cement and method used to determine: ☐ N/A
Cement returned on intermediate casing?	☒ Yes ☐ No	If No, provide top of cement and method used to determine: ☐ N/A

Casing String	Type of Cement	Amount of Cement	Gas Block (or equivalent) Used
Surface	CLA A, 3%cc 1/4# flake	50 sks	
Conductor	CLA A, 3%cc 1/4# flake	110 sks	☐ Yes ☒ No ☐ N/A
Coal Protective	CLA A, 3%cc 1/4# flake	565 sks	☐ Yes ☒ No ☐ N/A
Intermediate	CLA A, 3%cc 1/4# flake	900 sks	☐ Yes ☒ No ☐ N/A
Production	UFL	1131 sks	☐ Yes ☒ No ☐ N/A
			☐ Yes ☐ No ☐ N/A
			☐ Yes ☐ No ☐ N/A
			☐ Yes ☐ No ☐ N/A

CASING AND TUBING

Hole Size	Pipe Size	Wt.	Thread / Weld	Casing / Tubing Type	Amount in Well (ft.)	Packer / Hardware / Centralizers			Date Run
						Type	Size	Depth	
28"	26"	77.26 #	N/A	Structural SRL	33	N/A	N/A	N/A	06/13/11
22"	20"	81.30 #	N/A	R-3 MC-50	210	guide shoe	20"	210	06/15/11
17 1/2"	13 3/8"	54.50 #	N/A	R-3 MC-50	714	guide shoe	13 3/8"	714	06/17/11
12 3/8"	9 5/8"	40.00 #	N/A	R-3 MC-50	2490	guide shoe	9 5/8"	2490	06/23/11
6 1/2"	4 1/2"	11.60 #	thread	R-3 N-80	4754	float shoe	4 1/2"	4754	08/02/11

any casing is welded, provide the name of the welder:

Also complete the Log of Formations on back (page 2)

DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL & GAS

003-22187

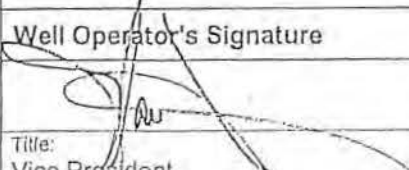
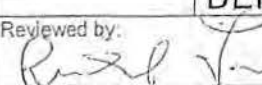
LOG OF FORMATIONS

Well API#: 37-003-22187-00

(If you will need more space than this page, please photocopy the blank form before filling it in.)

Formation Name or Type	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Let Down	0	33				Driller's Log (Vertical Borehole)
Sand	33	85				
Sand / Shale	85	115				
Red Rock	115	125				
Shale	125	190				
Red Rock	190	205				
Red Rock	205	300				
Sand	300	382				
Sandy Shale	382	450				
Sandy Shale / Sand	450	642				
Coal	642	647				
Sand	647	712				
Sandy Shale	712	1044				
Sand	1044	1134				
Sandy Shale	1134	1270				
Sand Stone	1270	1300				
Sand / Shale	1300	1370				
Sand / Shale	1370	1430				
Sand	1430	1494				
Sand	1494	1550				
Sandy Shale	1550	2184			1" brine @ 1874	
Red Rock	2184	2214			1" brine @ 1914	
Sand	2214	2274				
Red Rock	2274	2610				
Sand	2610	2700				
Sand / Shale	2700	2805				
Sand / Shale	2805	2820				
Shale	2820	2950				
Sand / Shale	2950	3240				
Shale	3240	3300				
Cement	2546	2608				Driller's Log (Horizontal Borehole)
Sand & Shale	2608	2705				
Shale	2705	2831				
Sand & Shale	2831	3210				
Sand	3210	3270				
Shale	3270	3420				
Sand	3420	3520				
Shale	3520	3870				
Sand	3870	4805				

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator's Signature		DER USE ONLY	
		Reviewed by:	Date:
Title: Vice President			2-14-12
Date: 8/31/11		Comments:	

003-22187



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

Completion Report

DEP USE ONLY	
Site ID	Primary Fac ID
Client	Subfacility Id

Well Information

If you are submitting this Completion Report attached to the Well Record, you only need to enter the well API # in this section.

Well Operator Penneco Oil Company		DEP ID# 7674	Well API # (Permit / Reg) 37-003-22187-00		Project Number	Acres 268
Address 6608 Route 22			Well Farm Name Hankey Unit		Well # 6H	Serial # PH-1670
City Delmont	State PA	Zip Code 15626	County Allegheny		Municipality Plum Borough	
Phone (724) 468-8232	Fax (724) 468-8230	Email penneco@penneco.com		USGS 7.5 min. quadrangle map New Kensington East, PA		

Check the appropriate submission: ☒ Original Completion Report ☐ Amended Completion Report

STIMULATION BASE FLUID

List Water Management Plan Approved Water Source(s) that were used	Water Management Plan ID No.	Volume (Gallons)
1. Not Applicable		
2.		
3.		
4.		
5.		
6.		
Recycled Water Used		
Other Base Fluid(s)/Components Used		
1.		
2.		
Total Base Fluid(s)/Components Used		

PERFORATION RECORD

Stage No.	Perforation Date	Stage Perforated From	Stage Perforated To	Perf. Orientation (Vertical, Horizontal, Radial)	Formation
1	08/16/11	4670	4730	Radial	Speechley
2	08/18/11	4570	4630	Radial	Speechley
3	08/18/11	4470	4530	Radial	Speechley
4	08/18/11	4370	4430	Radial	Speechley
5	08/18/11	4270	4330	Radial	Speechley
6	08/18/11	4170	4230	Radial	Speechley
7	08/18/11	4070	4130	Radial	Speechley
8	08/18/11	3970	4030	Radial	Speechley
9	08/18/11	3870	3930	Radial	Speechley
10	08/18/11	3430	3520	Radial	Speechley
11	08/18/11	3216	3266	Radial	Speechley Stray

SEP 13 2011
DEP, SOUTHWEST REGION
DL 8346

003-22187

Well AP# 37-005-22107-88

STIMULATION FLUID ADDITIVES

a: Trade secret or confidential proprietary information should be clearly identified as such and should be submitted on a separate sheet attached to this report.

Descriptive Additive Type	Chemical Component(s) listed on Material Safety Data Sheet of the Additive	CAS No. of Chemical Component	Chemical Component % By Volume in Additive	Chemical Component % By Volume used in Each Stage										
				Stage No. 1	Stage No. 2	Stage No. 3	Stage No. 4	Stage No. 5	Stage No. 6	Stage No. 7	Stage No. 8	Stage No. 9	Stage No. 10	Stage No. 11
ALPHA 3385	Solvent Naptha (Petroleum), petroleum aromatic	64742-94-5	65 - 100%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.08%	0.10%	0.08%
ALPHA 3385	Poly(oxy- 1,2- ethanediyl), a(nonylphenyl)-w- hydroxy- phosphate	51811-79-1	30 - 60%	0.04%	0.04%	0.04%	0.04%	0.04%	0.05%	0.05%	0.05%	0.05%	0.06%	0.05%
ALPHA 3385	Naphthalene	91-20-3	3 - 7%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.01%	0.00%
CLA CHEK LP	Ethylene Glycol	107-21-1	30 - 60%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%	0.03%
Flomax 50	Isopropanol	67-63-0	1 - 15%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
Flomax 50	Citrus Terpenes	94266-47-4	1 - 15%	0.01%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Hydrochloric Acid	Hydrochloric Acid	7647-01-0	31 - 33%	0.25%	0.25%	0.25%	0.25%	0.25%	0.26%	0.26%	0.26%	0.26%	0.18%	0.26%
IRON STA II C	Ethylene Glycol	107-21-1	10 - 30%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
NE-90	Methanol	67-56-1	30 - 60%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%
NE-90	Isopropanol	67-63-0	5.0 - 10.0%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
NE-90	Heavy Aromatic Naptha	64742-94-5	1.0 - 5.0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NE-90	Polyethylene Glycol	25322-68-3	1.0 - 5.0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NE-90	EO-C7-9-iso, C8-rich alcohols	78330-19-5	1.0 - 5.0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NE-90	EO-C9-11-iso, C10-rich alcohols	78330-20-8	1.0 - 5.0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
NE-90	2-Ethylhexanol	104-76-7	5.0 - 10.0%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%	0.01%
NE-90	Napthalene	91-20-3	0.1 - 1.0%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Sand	Crystalline Silica in the form of Quartz	14808-60-7	67 - 99.9%	6.48%	7.66%	7.10%	7.12%	7.12%	7.15%	7.17%	7.18%	7.37%	7.70%	7.31%
IPER SURF	Methanol	67-56-1	30 - 60%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%	0.02%
igel 5F	Guar Gum	N/A	>95%	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	0.09%	0.10%	0.10%

Please insert additional copies of this page if additional rows/stages are needed.

STIMULATION INFORMATION (WELL)

Open Flow Production: Still Testing	24 Hr. Open Flow Production: Still Testing	24 Hr. Shut-In Pressure: 660 PSI	Flow Back Date: 08/18/11
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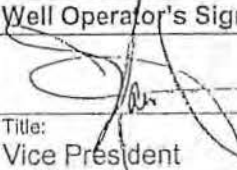
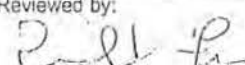
STIMULATION INFORMATION (STAGE)

Complete a separate record for each stimulation stage. (Please insert additional copies of this page for additional stages).

Stage No.: 1	Stimulation Date: 08/18/11	Pump Rate: 41.0 BPM
Pressure (psi): 3500	Shut-In Surface Pressure: 2300	5 Minute Shut-In Surface Pressure: Not Measured
Propping Agent Type: White Sand	Propping Agent Amount: 27,500 #	Propping Agent Size: 20/40
Stage No.: 2	Stimulation Date: 08/18/11	Pump Rate: 44.0 BPM
Pressure (psi): 3390	Shut-In Surface Pressure: 2440	5 Minute Shut-In Surface Pressure: Not Measured
Propping Agent Type: White Sand	Propping Agent Amount: 32,500 #	Propping Agent Size: 20/40
Stage No.: 3	Stimulation Date: 08/18/11	Pump Rate: 40.0 BPM
Pressure (psi): 3350	Shut-In Surface Pressure: 2070	5 Minute Shut-In Surface Pressure: Not Measured
Propping Agent Type: White Sand	Propping Agent Amount: 30,000 #	Propping Agent Size: 20/40
Stage No.: 4	Stimulation Date: 08/18/11	Pump Rate: 40.0 BPM
Pressure (psi): 3600	Shut-In Surface Pressure: 2260	5 Minute Shut-In Surface Pressure: Not Measured
Propping Agent Type: White Sand	Propping Agent Amount: 30,000 #	Propping Agent Size: 20/40
Stage No.: 5	Stimulation Date: 08/18/11	Pump Rate: 40.0 BPM
Pressure (psi): 3600	Shut-In Surface Pressure: 2300	5 Minute Shut-In Surface Pressure: Not Measured
Propping Agent Type: White Sand	Propping Agent Amount: 30,000 #	Propping Agent Size: 20/40
Stage No.: 6	Stimulation Date: 08/18/11	Pump Rate: 40.0 BPM
Pressure (psi): 3600	Shut-In Surface Pressure: 2250	5 Minute Shut-In Surface Pressure: Not Measured
Propping Agent Type: White Sand	Propping Agent Amount: 30,000	Propping Agent Size: 20/40
Stage No.: 7	Stimulation Date: 08/18/11	Pump Rate: 40.0 BPM
Pressure (psi): 3500	Shut-In Surface Pressure: 2430	5 Minute Shut-In Surface Pressure: Not Measured
Propping Agent Type: White Sand	Propping Agent Amount: 30,000 #	Propping Agent Size: 20/40
Stage No.: 8	Stimulation Date: 08/18/11	Pump Rate: 41.0 BPM
Pressure (psi): 3300	Shut-In Surface Pressure: 2280	5 Minute Shut-In Surface Pressure: Not Measured
Propping Agent Type: White Sand	Propping Agent Amount: 30,000 #	Propping Agent Size: 20/40
Stage No.: 9	Stimulation Date: 08/18/11	Pump Rate: 40.0 BPM
Pressure (psi): 3500	Shut-In Surface Pressure: 2270	5 Minute Shut-In Surface Pressure: Not Measured
Propping Agent Type: White Sand	Propping Agent Amount: 30,000 #	Propping Agent Size: 20/40
Stage No.: 10	Stimulation Date: 08/18/11	Pump Rate: 48.0 BPM
Pressure (psi): 3200	Shut-In Surface Pressure: 2300	5 Minute Shut-In Surface Pressure: Not Measured
Propping Agent Type: White Sand	Propping Agent Amount: 45,000 #	Propping Agent Size: 20/40
Stage No.: 11	Stimulation Date: 08/18/11	Pump Rate: 40.0 BPM
Pressure (psi): 80	Shut-In Surface Pressure: 1920	5 Minute Shut-In Surface Pressure: Not Measured
Propping Agent Type: White Sand	Propping Agent Amount: 30,000 #	Propping Agent Size: 20/40

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

003-22127

Name U.S. Energy	Name Universal Well Services	Name Geosearch Logging Inc.
Address P.O. Box 237	Address 114 Universal Drive	Address 101 Bradford Rd # 212
City - State - Zip Rural Valley, PA 16249	City - State - Zip Punxsutawney, PA 15767	City - State - Zip Wexford, PA 15090-6909
Phone (724)783-7624	Phone (814) 938-2051	Phone (412) 719-2158
<i>I do hereby certify to the best of my knowledge, information and belief that the information contained on this Completion Report is true and correct. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.</i>		
Well Operator's Signature	Reviewed by:	DEP USE ONLY
		Date: 2-11-11
Title: Vice President	Date: 8/31/11	Comments:

003-22187

Hankey Unit #6H Plugback Procedure

In order to establish local depth control for the Speechley sand, Hankey Unit #6H was drilled vertically to a depth of 3390' and plugged back to accommodate DEP regulations as well as requirements for directional kick-off equipment. This pilot wellbore was drilled according to the sequence of a typical vertical well with 26" casing to 33', 20" casing to 210', 13 3/8" casing to 714', and 9 5/8" casing to 2490'. 7 7/8" air-rotary drilling was utilized to complete the pilot boring from 2490' to 3390'. Once logged, the pilot wellbore was plugged back to a depth of 2608' using 305 sks of Class A cement. The wet cement was pumped through drill steel lowered to the bottom of the pilot well bore, and then pulled back to the desired plugback depth of 2546' and washed off. The cement was allowed to harden for 43 hours. During this time, a cement bond log (CBL) was run to verify that cement had adequately filled the annulus for the 9 5/8" casing and tagged the top of the cement plug at 2546'. Following the CBL, Phoenix Technology Services and U.S. Energy ran in with directional drilling equipment to kick out of the vertical wellbore. Using the tag method before drill string, the top of the cement plug was confirmed at 2546'. Given a minimum requirement of 30' of hard cement to ensure proper functionality of the directional tools, a plan was established to kick off no higher than 2576'.

FILED 1 - 2017

DEPT. SOUTHWEST REGION
OIL & GAS

SEP 6 - 2011

DEPT. SOUTHWEST REGION
OIL & GAS

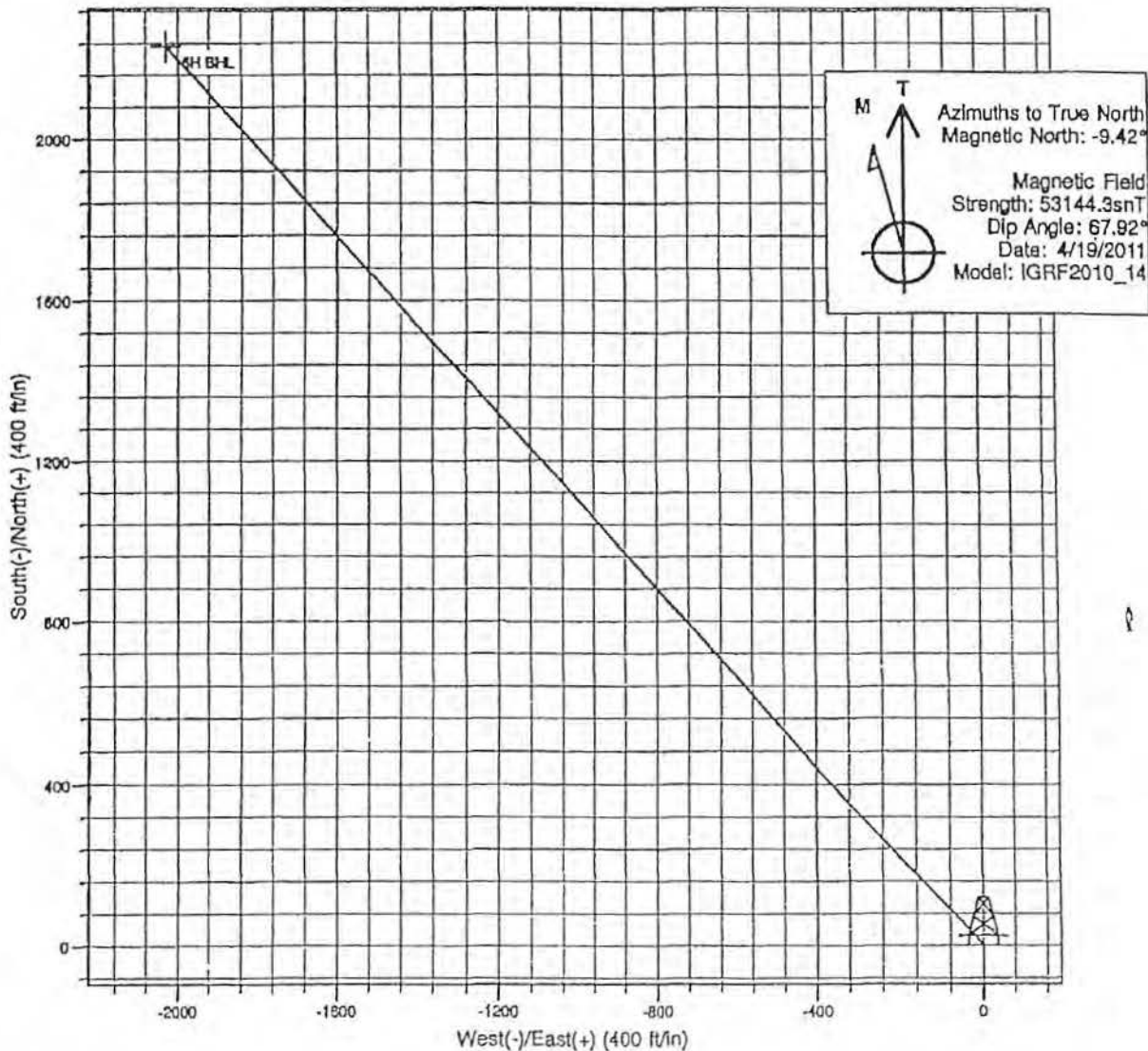
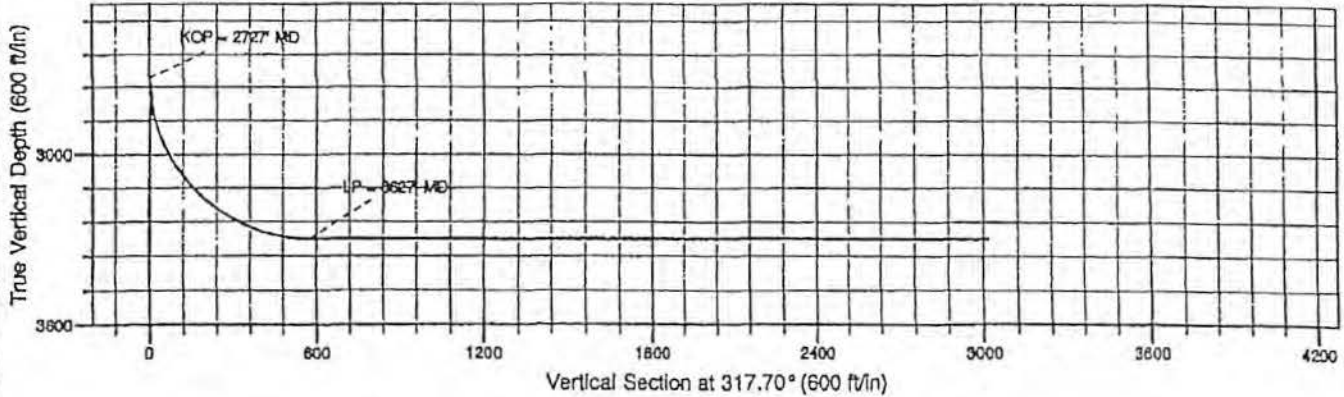
003-22187



PHOENIX
TECHNOLOGY SERVICES USA INC.

Penneco Oil Company

Project: Allegheny County, PA
Site: Plum Borough #6H
Well: Hankey Unit 6H
Wellbore: Main Wellbore
Design: Plan 1



MAY 05 2011

DEP, SOUTHWEST REGION
OIL & GAS

GEO COPY

003-22200

5500-PM-0G0002 Rev. 9/2008



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

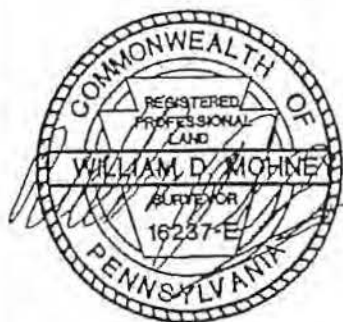
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OIL AND GAS MANAGEMENT PROGRAM
WELL LOCATION PLAT

DEP	Auth ID	NC-90104	TF
USE	Permit #	003-22200	12-11
ONLY	Project #		

Denotes location of well
on topo map.

True Latitude: NORTH
40° 31' 31.75"
True Longitude: WEST
79° 42' 43.98"

Well is located on topo map 5,894 feet south of latitude 40° 32' 30"



UNIT BREAKDOWN

Sedat Inc. 1331.84' = 76.4%
Kenneth Howard et al 411.01' = 23.6%
Total Horizontal 1742.85' = 100%

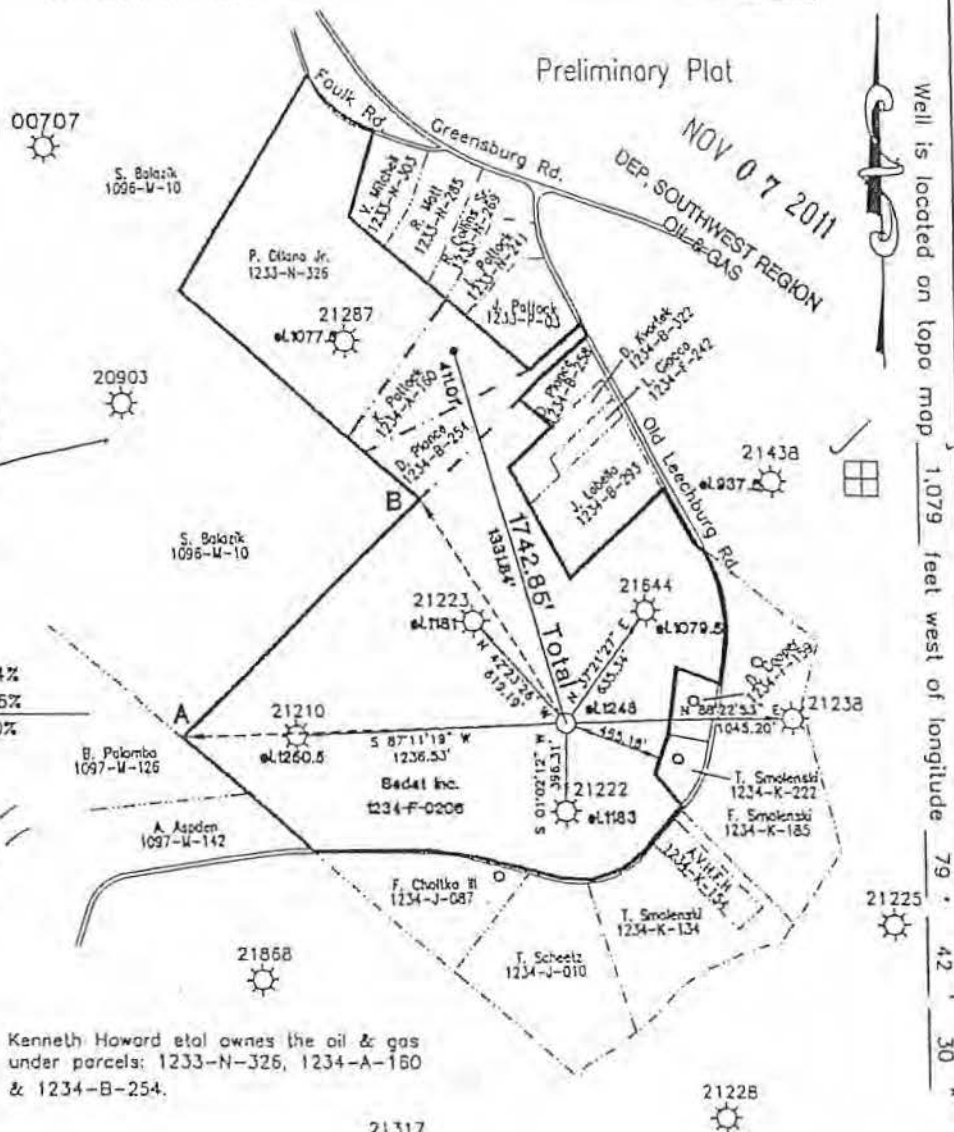
Loc - A S 87°42'00" W 1762.08'
Loc - B N 32°48'56" W 1200.45'
A - B N 45°47'53" E 1548.50'

Legend

- Lease Tract Boundary
- - - Surface Tract
- == Roads
- Streams/Water
- Bottom Hole Location
- Proposed Well Location
- ☀ Existing Well
- ☀ Plugged Well
- Water Well +-

Kenneth Howard et al owns the oil & gas
under parcels: 1233-N-326, 1234-A-160
& 1234-B-254.

Surveyor or Engineer: W.D. Mohney & Associates (724) 543-1023	Phone #:	Dwg #	Date: October 19, 2011	Scale: 1" = 800'	Tract Acres: 101 ±
Lat & Long Method Method GPS-Code Based Accuracy 10 ± ft. Datum NAD 83		Elevation Method Method U.S.G.S. Plotted Accuracy 30 ± ft. Datum NGVD29		Survey Date Various Dates	
Applicant / Well Operator Name Penneco Oil Company		Well (Farm) Name SEDAT		Well Serial 5H - PS-1753	
Address 6608 US Route 22, Delmont, PA, 15626		County Allegheny		Municipality Plum Borough	
Surface Landowner / Lessor Sedat Inc.		USGS 7 1/2' Quadrangle Map Name New Kensington East, PA. - 1408		Map Section 7	
Target Formation(s) Speechley		Angle & Course of Deviation (Drilling) NONE		Anticipated Total Depth ft. TWD 3340'	
Surface Owner or Water Purveyor Approximate Course and Distance to Water Supply		Owner, Lessee, or Operator of Workable Coal Seam		Name of Coal Seam Owner, Leased, or Operated	
Frank I. & Marcia M. Smolenski Theodore & Virginia Smolenski		NON-COAL AREA			
Frank Chalko, III Daniel Cooper		GOB - Renton Mine, Upper Freeport Coal Seam			



Well is located on topo map 1,079 feet west of longitude 79° 42' 30"

003-22200



PHOENIX

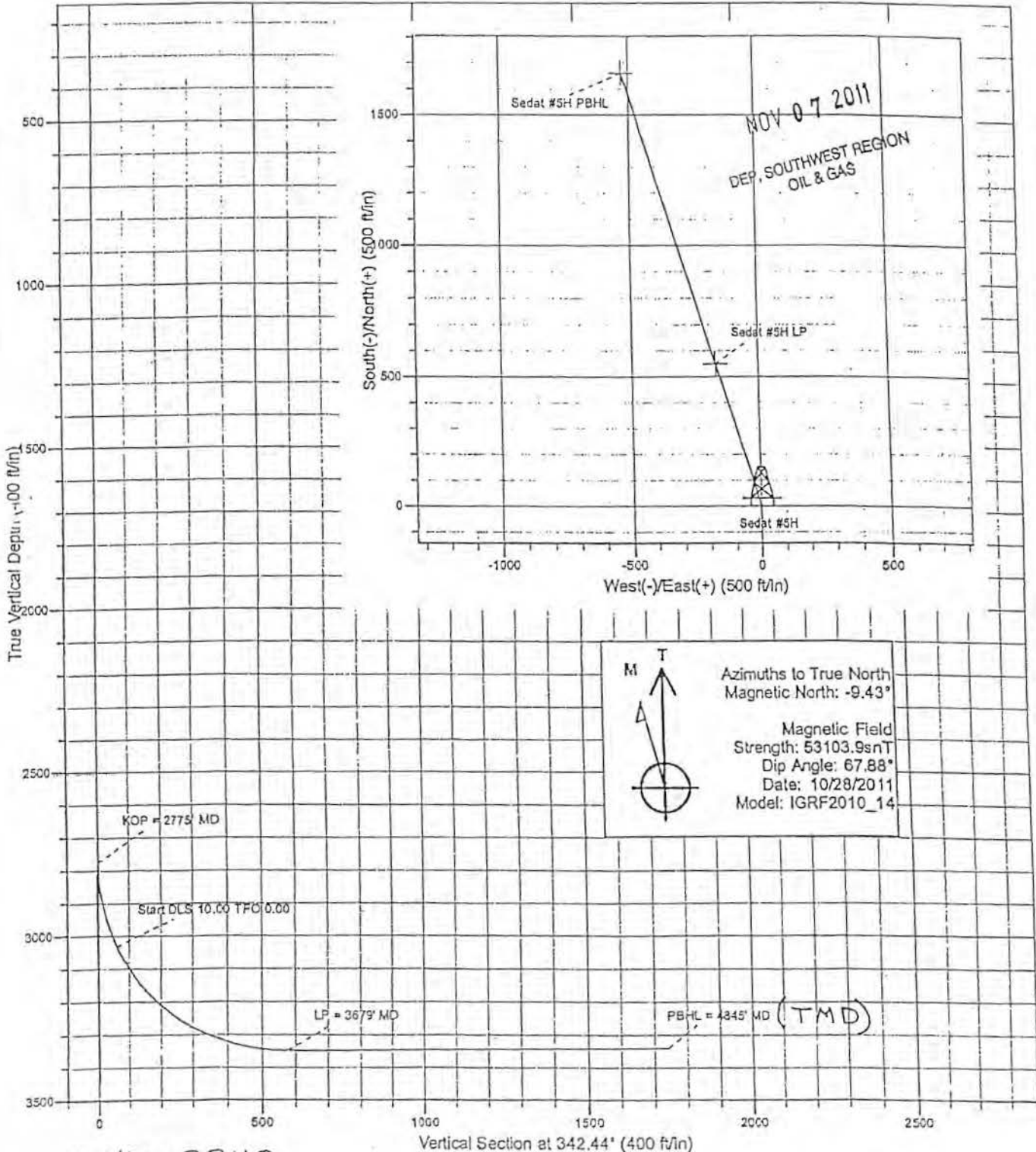
TECHNOLOGY SERVICES USA INC.

OCT 31 2011

Penneco Oil Company

DEP, SOUTHWEST REGION
OIL & GAS

Project: Allegheny County, PA
Site: Plum Borough #5H
Well: Sedat #5H
Wellbore: Main Wellbore
Design: Plan 1



TVD = 3340

Bottom of Pilot Hole = 3450

003-222 00

Penneco Oil Company

Allegeny County, PA
Plum Borough #5H
Sedat #5H

Main Wellbore

Plan: Plan 1

Standard Planning Report

28 October, 2011

OCT 31 2011

DEP, SOUTHWEST REGION
OIL & GAS

003-222 00

Phoenix Technology Services Planning Report

Database: NER DB
Company: Penneco Oil Company
Project: Allegeny County, PA
Site: Plum Borough #5H
Well: Sedat #5H
Wellbore: Main Wellbore
Design: Plan 1

Local Co-ordinate Reference:
TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Site Plum Borough #5H
WELL @ 1256.80ft (Original Well Elev)
WELL @ 1256.80ft (Original Well Elev)
True
Minimum Curvature

Project	Allegeny County, PA		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Pennsylvania Southern Zone		

Site	Plum Borough #5H		
Site Position:	Northings:	440,348.19 ft	Latitude: 40° 31' 31.750 N
From: Lat/Long	Easting:	1,423,066.00 ft	Longitude: 79° 42' 43.980 W
Position Uncertainty:	0.00 ft	Spot Radius: 13.200 in	Grid Convergence: -1.27 °

Well	Sedat #5H		
Well Position	+N-S	0.00 ft	Northings: 440,348.19 ft
	+E-W	0.00 ft	Easting: 1,423,066.00 ft
Position Uncertainty	0.00 ft	Wellhead Elevation:	Ground Level: 1,248.00 ft

Wellbore	Main Wellbore		
Magnetics	Model Name	Sample Date	Declination
	IGRF2010_14	10/28/2011	-9.43
			Dip Angle 67.88
			Field Strength 53,104

Design	Plan 1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth: 0.00
Vertical Section:	Depth From (TVD)	+N-S	+E-W
	(ft)	(ft)	(ft)
	0.00	0.00	0.00
			Direction 342.44

Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	+N-S (m)	+E-W (m)	Dogleg Rate (1/1000)	Build Rate (1/1000)	Turn Rate (1/1000)	True TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,775.80	0.00	0.00	2,775.80	0.00	0.00	0.00	0.00	0.00	0.00	
3,040.13	26.43	342.44	3,030.85	57.10	-18.07	10.00	10.00	0.00	342.44	
3,879.81	90.39	342.44	3,348.80	550.05	-174.07	10.00	10.00	0.00	0.00	Sedat #5H LP
4,845.76	90.39	342.44	3,340.80	1,681.64	-525.83	0.00	0.00	0.00	0.00	Sedat #5H PBHL

OCT 31 2011

DEP, SOUTHWEST REGION
OIL & GAS

003-22200

OCT 8 1 2011

Phoenix Technology Services

Planning Report

DEP, SOUTHWEST REGION
OIL & GAS

Database: NER DB
 Company: Penneco Oil Company
 Project: Allegheny County, PA
 Site: Plum Borough #5H
 Well: Sedat #5H
 Wellbore: Main Wellbore
 Design: Plan 1

Local Co-ordinate Reference: Site Plum Borough #5H
 TVD Reference: WELL @ 1256.80ft (Original Well Elev)
 MD Reference: WELL @ 1256.80ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	+N/-S (m)	+E/-W (m)	Vertical Section (m)	Doping Rate (°/100m)	Build Rate (°/100m)	Turn Rate (°/100m)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
2,600.00	0.00	0.00	2,600.00	0.00	0.00	0.00	0.00	0.00	0.00
2,700.00	0.00	0.00	2,700.00	0.00	0.00	0.00	0.00	0.00	0.00
2,775.80	0.00	0.00	2,775.80	0.00	0.00	0.00	0.00	0.00	0.00
KOP = 2775' MD									
2,800.00	2.42	342.44	2,799.99	0.43	-0.15	0.51	10.00	10.00	0.00
2,900.00	12.42	342.44	2,899.03	12.78	-4.05	13.41	10.00	10.00	0.00
3,000.00	22.42	342.44	2,894.32	41.29	-13.07	43.31	10.00	10.00	0.00
3,040.13	26.43	342.44	3,030.85	57.10	-18.07	59.89	10.00	10.00	0.00
3,041.79	26.60	342.44	3,032.34	57.81	-18.30	60.84	10.00	10.00	0.00
Start DLS 10.00 TFO 0.00									
3,100.00	32.42	342.44	3,082.88	85.13	-26.94	89.29	10.00	10.00	0.00
3,200.00	42.42	342.44	3,182.30	142.99	-45.25	149.98	10.00	10.00	0.00
3,300.00	52.42	342.44	3,229.88	213.10	-67.44	223.51	10.00	10.00	0.00
3,400.00	62.41	342.44	3,283.87	293.33	-92.83	307.87	10.00	10.00	0.00
3,500.00	72.41	342.44	3,322.03	381.25	-120.85	399.88	10.00	10.00	0.00
3,600.00	82.41	342.44	3,343.79	474.18	-150.06	497.35	10.00	10.00	0.00
3,679.72	90.39	342.44	3,348.79	550.04	-174.07	576.92	10.00	10.00	0.00
LP = 3679' MD									
3,679.81	90.39	342.44	3,348.80	550.05	-174.07	576.94	10.00	10.00	0.00
3,700.00	90.39	342.44	3,348.86	569.30	-180.16	597.12	0.00	0.00	0.00
3,800.00	90.39	342.44	3,347.98	684.84	-210.33	697.12	0.00	0.00	0.00
3,900.00	90.39	342.44	3,347.29	759.97	-240.50	797.12	0.00	0.00	0.00
4,000.00	90.39	342.44	3,346.80	855.31	-270.67	897.12	0.00	0.00	0.00
4,100.00	90.39	342.44	3,345.92	950.85	-300.84	997.12	0.00	0.00	0.00
4,200.00	90.39	342.44	3,345.23	1,045.99	-331.01	1,097.11	0.00	0.00	0.00
4,300.00	90.39	342.44	3,344.54	1,141.32	-361.18	1,197.11	0.00	0.00	0.00
4,400.00	90.39	342.44	3,343.86	1,236.68	-391.35	1,297.11	0.00	0.00	0.00

003-22200

Phoenix Technology Services
Planning Report

Database: NER DB
Company: Penneco Oil Company
Project: Allegany County, PA
Site: Plum Borough #5H
Well: Sedat #5H
Wellbore: Main Wellbore
Design: Plan 1

Local Co-ordinate Reference: Site Plum Borough #5H
TVD Reference: WELL @ 1256.80ft (Original Well Elev)
MD Reference: WELL @ 1256.80ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey									
Measured Depth (m)	Inclination (°)	Azimuth (°)	Vertical Depth (m)	+N-S (m)	+E-W (m)	Vertical Section (m)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,500.00	90.39	342.44	3,343.17	1,332.00	-421.52	1,397.11	0.00	0.00	0.00
4,800.00	90.39	342.44	3,342.49	1,427.34	-451.69	1,497.10	0.00	0.00	0.00
4,700.00	90.39	342.44	3,341.80	1,522.88	-481.86	1,597.10	0.00	0.00	0.00
4,800.00	90.39	342.44	3,341.11	1,618.01	-512.03	1,697.10	0.00	0.00	0.00
4,845.76	90.39	342.44	3,340.80	1,661.64	-525.83	1,742.86	0.00	0.00	0.00
PBHL = 4845' MD									

Design Targets									
Target Name	Dip Angle (°)	Dip Dir (°)	TVD (m)	+N-S (m)	+E-W (m)	Northing (m)	Easting (m)	Latitude	Longitude
Sedat #5H PBHL - plan hits target center - Point	0.00	0.00	3,340.80	1,661.64	-525.83	442,021.11	1,422,577.22	40° 31' 48.170 N	79° 42' 50.790 W
Sedat #5H LP - plan hits target center - Point	0.00	0.00	3,348.80	550.05	-174.07	440,901.98	1,422,904.20	40° 31' 37.185 N	79° 42' 46.234 W

Plan Annotations				
Measured Depth (m)	Vertical Depth (m)	+N-S (m)	+E-W (m)	Comment
2,775.80	2,775.80	0.00	0.00	KOP = 2775' MD
3,041.79	3,032.34	57.81	-18.30	Start DLS 10.00 TFO 0.00
3,679.79	3,348.80	550.03	-174.06	LP = 3679' MD
4,845.77	3,340.80	1,661.64	-525.83	PBHL = 4845' MD

OCT 8 1 2011

DEP, SOUTHWEST REGION
OIL & GAS



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Oil & Gas Management Program

DEP USE ONLY
Application Tracking #

Proposed Alternate Method or Material for
Casing, Plugging, Venting or Equipping a Well

Well Operator Penneco Oil Company	DEP ID# 7674	Well Permit or Registration Number 003-22200-00
Address 6608 Route 22		Well Form Name Sedat
City Delmont	State PA	Well # #5H
Phone 724-468-8232	Zip Code 15626-2408	Serial # PS-1753
	Fax 724-468-8230	County Allegheny
		Municipality Plum Borough

A proposed alternate method is subject to provisions in Section 211 of the Oil and Gas Act, Section 13 of the Coal and Gas Resource Coordination Act, and 25 PA Code §78.75 Alternate Methods. Attach proof of notification of coal operator(s).

Describe in reasonable detail using a written description and / or diagram:

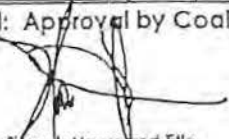
1. the proposed alternate method or materials, and
2. the manner in which the alternative will satisfy the goals of the laws and regulations.

The purpose of this submission is to account for the proximity of the referenced well to the documented boundary of an abandoned deep mine and to offer an alternative casing scenario should the coal isolation segment of the well realize a mine void.

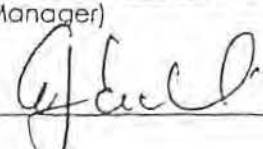
In the event that the construction of the above referenced well were interrupted by a mine void encounter rather than the anticipated stump or solid coal, the drilling contractor will continue drilling another 50 feet below the mine floor (ream if necessary), install the requisite isolation string of casing (basket set above mine ceiling), and cement using the balance and grout method.

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Optional: Approval by Coal Owner or Operator Signature  Date 10/28/11 Print or Type Signer's Name and Title D. Marc Jacobs	Signature of Applicant / Well Operator Signature _____ Date _____ Print or Type Signer's Name and Title D. Marc Jacobs, Jr., Senior Vice President
---	---

If optional approval is signed by coal owner or operator, the 15-day objection period may be waived.

DEP USE ONLY		
Approved by: (DEP Manager) 	Conditions: ☐ YES, See Attached ☒ NO	Date 12/9/11



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OFFICE OF OIL AND GAS MANAGEMENT

Well Record

003-22200CF

DEP USE ONLY	
Site ID	Client ID
Client ID	Sub Facility ID

WELL INFORMATION							
Well Operator Penneco Oil Company		DEP ID# 7674	Well API# 37-003-22200-00		Well Farm Name Sedat	Well # 5H	
Address 6608 Route 22			LAT 40°31' 31.7500" LONG - 79°42' 43.9800"		NAD 83	Project Number	Serial # PS-1753
City Delmont	State PA	Zip 15626-2408	Municipality Plum		County Allegheny		
Phone (724)468-8232	Fax (724)468-8230	Email penneco@penneco.com		USGS 7.5 min. quadrangle map New Kensington East		Section 7	
Check the appropriate Submission: ☒ Original Well Record ☐ Amended Well Record							
Well Type	☐ Gas ☒ Oil ☐ Combination Oil & Gas ☐ CBM ☐ Injection ☐ Disposal ☐ Storage						
Well Orientation	☐ Vertical ☒ Deviated from Vertical (Top & Side views & Deviation Survey must be attached)						
Drill Method(s)	☒ Rotary - Air 3450' ☒ Rotary - Mud 4850' ☐ Cable Tool ☐ Other						
Drilling Started	01/12/12	Surface Elev.	1248 ft.	GW Depth	700 ft.		
Drilling Complete	03/17/12	True Vertical Depth	3343 ft.	Depth of DFGW	700 ft.		
Date Well Completed	03/17/12	Total Measured Depth	4850 ft.	DFGW decided by	1		

CEMENT							
Cement returned on surface casing?		☒ Yes ☐ No		If No, provide depth to top of cement and method used to determine:			
Cement returned on coal protective casing?		☒ Yes ☐ No		If No, provide depth to top of cement and method used to determine: ☐ NA			
Cement returned on intermediate casing?		☒ Yes ☐ No		If No, provide depth to top of cement and method used to determine: ☐ NA			
Casing String	Type/Class of Cement (Lead/Tail)	Slurry Temp F*	Amount of Cement (sks) (Lead/Tail/Total)	WOC hrs	WT PPG	Yld #/3 bbl	Gas Migration Controls Used
Conductor	CLA A, 3%cc 1/4# flake	40 °	25 / 0 / 25	8	15.6	1.18	Gas Block for Intermediate string cement
Surface	CLA A, 3%cc 1/4# flake	40 °	450 / 0 / 450	8	15.6	1.18	
Coal Protective	CLA A, 3%cc 1/4# flake	34 °	650 / 0 / 650	8	15.6	1.18	
Intermediate	Gas Block	40 °	835 / 0 / 835	8	15.7	1.30	
Production	50% TYPE 1, 50% FLYASH, 0.75% CFL-2, 10% SALT, 0.2% FCP	71 °	1264 / 0 / 1264	8	14.2	1.30	
If additional strings attach form(s)			Total	3224			

CASING AND TUBING									
Hole Size	Pipe Size	Wt. #/ft.	Grade Casing / Tubing Type	Thread / Weld - New/ Used	Amount In Well (ft.)	Hardware - Baskets / Packer / Centralizers (Total/String)			Date Run
						Type	Size	Depth	
28"	26"	77.26	PE	T - N	35	N/A	N/A	N/A	01/13/12
22"	20"	94.00	J-55	T - N	423	guide shoe	20"	423	01/17/12
17 1/2"	13 3/8"	54.50	MC-50	T - N	786	guide shoe	13 3/8"	786	01/19/12
12 3/8"	9 5/8"	40.00	MC-50	T - N	2510	guide shoe	9 5/8"	2510	01/26/12
8 1/2"	4 1/2"	11.60	WT-80	T - N	4817	float shoe	4 1/2"	4817	03/17/12

If any casing is welded, provide the name(s) of the welder(s):

PLUG-BACK/WELLBORE ALTERATION						
Fill Material & Plugs	Depth		Date	Casing & Tubing		
	From	To		Size	Pulled	Left
Cement Kick Plug / 320 sks - CLA A, 3%cc 1/4# flake	3450	2525	01/30/12	N/A	N/A	N/A
			JUN 11 2012			

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OIL & GAS

MAY 09 2012

DEP SOUTHWEST REGION
OIL & GAS

003-22200

LOG OF FORMATIONS

Well API#: 37-003-22200-00

(If you will need more space than this page, please photocopy the blank form before filling it in.)

Formation Name or Lithology	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine, ft.)	Source of Data
Fill	0	5				Driller's Log
Shale	5	35				
Sand	35	55				
Red Rock	55	400				
Gray Shale / Sand	400	520				
Coal	520	525				
Sand / Shale	525	712			F 700	
Sand / Shale	712	802				
Shale	802	1042				
Sandy Shale	1042	1322				
Shale	1322	1452				
Sandy Shale	1452	1882				
Sand	1882	1912				
Shale	1912	2002			B 1972	
Sand	2002	2300			B 2042	
Red Rock	2300	2420				
Sandy Shale	2420	3450				

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OIL & GAS

If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Casing Source	Cementing Company	Hardware Supplier	Logging Company
Name McJunkin Redman Corporation	Name Universal Well Services, Inc.	Name Ken Miller Supply, Inc.	Name Weatherford International
Address 480 Geesey Road	Address 324 Meter St.	Address 5484 Route 286 Hwy. E.	Address 124 Windy Ridge Lane
City - State - Zip Indiana PA 15701	City - State - Zip Punxsutawney PA 15767	City - State - Zip Indiana PA 15701	City - State - Zip Elderton PA 15736
Phone (724)349-8823	Phone (814)938-5327	Phone (724)465-8875	Phone (724)354-3090

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller		Well Operator's Signature		DEP USE ONLY	
Name U. S. Energy	Rig 4 / 8	 Printed Name / Title: Marc Jacobs / Vice President		Reviewed by:	
Address P.O. Box 237				 Comments:	
City - State - Zip Rural Valley PA 16249					
Phone (724)783-7624		Date: 5/8/12			

003-22200

LOG OF FORMATIONS

Well API#: 37-003-22200-00

(If you will need more space than this page, please photocopy the blank form before filling it in.)

Formation Name or Lithology	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Fill	0	5				Driller's Log
Shale	5	35				
Sand	35	55				
Red Rock	55	400				
Gray Shale / Sand	400	520				
Coal	520	525				
Sand / Shale	525	712			F 700	
Sand / Shale	712	802				
Shale	802	1042				
Sandy Shale	1042	1322				
Shale	1322	1452				
Sandy Shale	1452	1882				
Sand	1882	1912				
Shale	1912	2002			B 1972	
Sand	2002	2300			B 2042	
Red Rock	2300	2420				
Sandy Shale	2420	3450				

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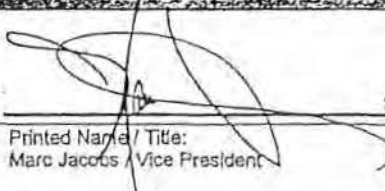
DEP, SOUTHWEST REGION
OIL & GAS

If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES: Provide the name, address and telephone number of all well service companies involved.

Casing Source	Cementing Company	Hardware Supplier	Logging Company
Name McJunkin Redman Corporation	Name Universal Well Services, Inc.	Name Ken Miller Supply, Inc.	Name Weatherford International
Address 480 Geesay Road	Address 324 Meter St.	Address 5484 Route 286 Hwy. E.	Address 124 Windy Ridge Lane
City - State - Zip Indiana PA 15701	City - State - Zip Punxsutawney PA 15767	City - State - Zip Indiana PA 15701	City - State - Zip Elderton PA 15736
Phone (724)349-6823	Phone (814)938-5327	Phone (724)465-8875	Phone (724)354-3090

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller		Well Operator's Signature		DEP USE ONLY	
Name U. S. Energy	Rig 4 / 8	 Printed Name / Title: Marc Jacobs / Vice President		Reviewed by:	
Address P.O. Box 237				Comments:	
City - State - Zip Rural Valley PA 16249					
Phone (724)783-7624					
		Date: 5/8/12			



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DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS MANAGEMENT

Completion Report

003-22200 CF

DEP USE ONLY	
Site ID	Primary Facility ID
Client ID	Sub Facility ID

Graph +
Standard Survey Report

Well Information							
Well Operator Penneco Oil Company		DEP ID# 7674	Well API # 37-003-22200-00		Well Farm Name Sedal		Well # 5H
Address 8608 Route 22		LAT - 40° 31' 31.7500"		NAD 83	Project Number		Serial # PS-1753
City Delmont		State PA	Zip Code 15626	Municipality Plum		County Allegheny	
Phone (724)468-8232	Fax (724)468-8230	Email penneco@penneco.com		USGS 7.5 min. quadrangle map New Kensington East			Section 7
Check the appropriate submission: ☒ Original Completion Report ☐ Amended Completion Report							
STIMULATION BASE FLUID							
List Water Management Plan Source(s)			Water Management Plan ID		Volume (Gallons)		
1. Not Applicable							
2.							
3.							
4.							
5.							
6.							
			DEP Biologist Review/Date	Total Gallons of Water Used	Water	Recycled	
Other Base Fluid(s) Used					Quantity and /UOM		
1.					/		
2.					/		
Total Quantity all Fluid(s)					/		
STIMULATION/PRODUCTION INFORMATION (WELL)							
Radioactive tracers used? ☐ Specify Tracer		24 Hr. Open-Flow (MCF/Day) / Data Still Testing / --		24 Hr. Shut-in Pressure / Date Still Testing / --		Completion Date: 04/25/12	
Well Products: ☒ Gas Btu 1050 (Expected)		☒ Oil API G 39 (Expected)		☐ Condensate API G		☐ Other	
						☐ GOR Still Testing	
WELL SERVICE COMPANIES							
Perforation Company		Frac Company		Plug Drill Out/Flow Back Company			
Name Titan Wireline Services		Name Universal Well Services, Inc.		Name Multi Production Systems Inc.			
Address 717 Pennsylvania 210		Address 324 Meter St.		Address 314 Mill Run Drive			
City - State - Zip Shelock PA 15774		City - State - Zip Punxsutawney PA 15767		City - State - Zip Indiana PA 15701			
Phone (724)354-2629		Phone (814)938-5327		Phone (724)465-6663			
I do hereby certify to the best of my knowledge, information and belief that the information contained on this Completion Report is true and correct. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.							
Well Operator's Signature				DEP USE ONLY			
				Reviewed by:			
5/8/12				Date: 6-6-12			
Printed Name / Title: Marc Jacobs / Vice President				Comments:			

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DEP SOUTHWEST REGION
OIL & GAS

Page 1 of 5

DEP SOUTHWEST REGION
OIL & GAS

003-22200

Well API# 37-003-22200-00

STIMULATION FLUID ADDITIVES

Note: Information designated as Trade Secret or Confidential proprietary information must be clearly identified as such and should be submitted on the "Confidential Stimulation Fluid Additives" form.

Trade Name	Supplier	Purpose	Ingredients	CAS # of Chemical Component	Max. Component % Mass in Additive	Chemical Component % Mass used in Total Base Fluid (Pg 1)	Comment
ALPHA 338S	Clearwater International LLC	Corrosion Inhibitor	Solvent Naptha (Petroleum), petroleum aromatic	64742-84-5	65 - 100%	0.074%	
ALPHA 338S	Clearwater International LLC	Corrosion Inhibitor	Poly(oxy-1,2-ethanedyl), s(nonylphenyl)-w-hydroxy-phosphate	51811-79-1	30 - 80%	0.043%	
ALPHA 338S	Clearwater International LLC	Corrosion Inhibitor	Naphthalene	91-20-3	3 - 7%	0.005%	
CLA CHEK LP	Clearwater International LLC	Clay Control	Ethylene Glycol	107-21-1	30 - 80%	0.024%	
EC8118A	Nalco Company	Biocide	Dibromooctanediol	3252-43-5	1.0 - 5.0%	0.001%	
EC8118A	Nalco Company	Biocide	2,2-Dibromo-3-nitroisopropionamide	10222-01-2	10.0 - 30.0%	0.004%	
EC8118A	Nalco Company	Biocide	Polyethylene Glycol	25322-68-3	30.0 - 90.0%	0.009%	
Flomax 50	CESI Chemical	Flow Control	Isopropanol	67-63-0	1 - 15%	0.008%	
Flomax 50	CESI Chemical	Flow Control	Citrus Terpenes	94268-47-4	1 - 15%	0.000%	
Hydrochloric Acid	Niacet Corporation	Formation Breaker	Hydrochloric Acid	7647-01-0	21 - 33%	0.325%	
IRON STA II C	Clearwater International LLC	Iron Control Agent	Ethylene Glycol	107-21-1	10 - 30%	0.011%	
LEB 10X	Clearwater International LLC	Gel Breaker	Ethylene Glycol	107-21-1	30 - 80%	0.001%	
NE-90	Universal Well Services, Inc.	Flow Control	Methanol	67-56-1	30 - 80%	0.037%	
NE-90	Universal Well Services, Inc.	Flow Control	Isopropanol	67-63-0	5.0 - 10.0%	0.006%	
NE-90	Universal Well Services, Inc.	Flow Control	Heavy Aromatic Naptha	64742-84-5	1.0 - 5.0%	0.002%	
NE-90	Universal Well Services, Inc.	Flow Control	Polyethylene Glycol	25322-68-3	1.0 - 5.0%	0.002%	
NE-90	Universal Well Services, Inc.	Flow Control	EO-C7-9-iso, C8-rich alcohols	78330-19-5	1.0 - 5.0%	0.002%	
NE-90	Universal Well Services, Inc.	Flow Control	EO-C9-11-iso, C10-rich alcohols	78330-20-8	1.0 - 5.0%	0.002%	
NE-90	Universal Well Services, Inc.	Flow Control	2-Ethylhexanol	104-76-7	5.0 - 10.0%	0.006%	
NE-90	Universal Well Services, Inc.	Flow Control	Napthalene	91-20-3	0.1 - 1.0%	0.000%	
Sand	Unimin Corporation	Proppant	Crystalline Silica in the form of Quartz	14808-60-7	87 - 99.9%	5.796%	
SUPER SURF	Clearwater International LLC	Surface Tension Reducer	Methanol	67-56-1	30 - 80%	0.021%	
Unigel 5F	Clearwater International LLC	Gelling Agent	Gum Gum	N/A	>85%	0.077%	

Please insert additional copies of this page if additional rows are needed.

OIL & GAS

003-22200

Well API# 37 -003-22200-00

STIMULATION INFORMATION / STAGE

Complete a separate record for each stimulation stage. (Please insert additional lines for additional stages or additional pages as applicable).

Stg #	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Proppant Type	Proppant Mesh Size(s)
1	04/23/12	40.0	3,727	4,200	1,800	White Sand	20/40
2	04/23/12	40.0	4,225	4,870	2,000	White Sand	20/40
3	04/23/12	40.0	3,790	3,400	2,000	White Sand	20/40
4	04/23/12	40.0	4,080	5,100	1,800	White Sand	20/40
5	04/23/12	40.0	4,526	4,300	1,900	White Sand	20/40
6	04/24/12	40.0	3,704	4,200	2,100	White Sand	20/40
7	04/24/12	40.0	3,505	4,300	2,100	White Sand	20/40
8	04/24/12	40.0	3,514	4,300	2,200	White Sand	20/40
9	04/24/12	40.0	3,600	4,610	2,100	White Sand	20/40
10	04/24/12	40.0	4,045	5,160	2,050	White Sand	20/40
11	04/24/12	42.0	4,080	4,320	2,050	White Sand	20/40
12	04/25/12	25.0	3,145	5,130	2,100	White Sand	20/40
13	04/25/12	25.0	3,002	5,080	2,000	White Sand	20/40
14	04/25/12	25.0	2,725	4,090	2,100	White Sand	20/40
15	04/25/12	25.0	2,618	3,020	2,000	White Sand	20/40
16							
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603-22200

Note: Additives designated on the "Stimulation Fluid Additives" as Trade Secret or Confidential proprietary information must be clearly identified as such and should be submitted on this or similarly identified sheet as confidential to this report.

[illegible]

The Department will prevent disclosure of the designated confidential information to the extent permitted under the Right-to-know Law (85 P.S. §67.101-67.103).
Use additional pages as needed.

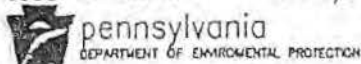
Name/Title	
Address	
City - State - Zip	
Phone	Signature

JUN 11 2012
DEP. SOUTHWEST REGION
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5500-PM-OG0002

Rev. 9/2008



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COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION OIL AND GAS MANAGEMENT PROGRAM WELL LOCATION PLAT

DEP	Auto-ID #	7F
USE	Permit #	1-10-12
ONLY	Project #	RP

Denotes location of well on topo map.		
True Latitude: NORTH		
40°	30'	48.09"
True Longitude: WEST		
79°	42'	54.05"

NOTE:

Parcels 1098-H-100 & 1098-H-028 are subject to the Rudolph D. Dyke lease. Parcels 1235-K-276 and 1098-O-277 are subject to the James E. Burton Lease.

Well is located on topo map 10,312 feet south of latitude 40° 32' 30"

Bottom Hole NAD 83

 LAT: 40° 31' 07.72"
 LON: 79° 42' 52.58"

Well is located on topo map 1,857 feet west of longitude 79° 42' 30"

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DEP, SOUTHWEST REGION
OIL & GAS
 Loc - A N 57°02'10" W 1917.15'
 Loc - B S 24°42'09" E 727.59'
 A - B S 48°17'53" E 2561.65'
Legend

- Lease Tract Boundary
- - - Surface Tract
- == Roads
- Streams/Water
- Bottom Hole Location
- Proposed Well Location
- ⊙ Existing Well
- ⊙ Plugged Well
- Water Well +-

UNIT BREAKDOWN

Rudolph D. Dyke (A.L.V.) - 38.4 sq.ft. = 0.02%
 James E. Burton (Balena) - 176002.4 sq.ft. = 88.47%
 Alvin R. & Diane E. Miller (Fuge) - 22667.1 sq.ft. = 11.51%
 Unit Area - 198927.9 sq.ft. = 100%



Surveyor or Engineer: W.D. Mohney & Associates (724) 543-1023 sedat area Date: November 16, 2011 Scale: 1" = 1000' Tract acreage: 171 ±

Lot & Long Methodology		Elevation Methodology		Survey Data	
Method GPS-Code Based Accuracy 10 ± ft. Datum NAD 83		Method PA. LIDAR Accuracy 20 ± ft. Datum NGVD29		Various Dates	
Applicant / Well Operator Name Penneco Oil Company		Well (Form) Name Burton Unit		Well # 4H	Serial / PB-1752
Address 6608 US Route 22, Delmont, PA. 15626		County Allegheny	Municipality Plum Borough	Well Type Horizontal Oil	
Surface Landowner / Lessor Michael A. & Linda S. Baleno		USGS 7 1/2" Quadrangle Map Name New Kensington East, PA. - 1408		Map Section 7	Surface Elevation 1168 ft.
Target Formation(s) Speechley		Angle & Course of Deviation (Drilling) N 04°33'14" E - 1989.26'		Anticipated Total Depth ft. TMD 3280-3370 TMD 5023'	
Surface Owner or Water Purveyor Approximate Course and with a Water Supply within 1000' Distance to Water Supply		Owner, Lessee, or Operator of Workable Coal Seam Consolidation Coal Company		Name of Coal Seam Upper Freeport Seam	
NONE		Michael A. & Linda S. Baleno		All Others	

Gob-Upper Freeport Seam

003-22208



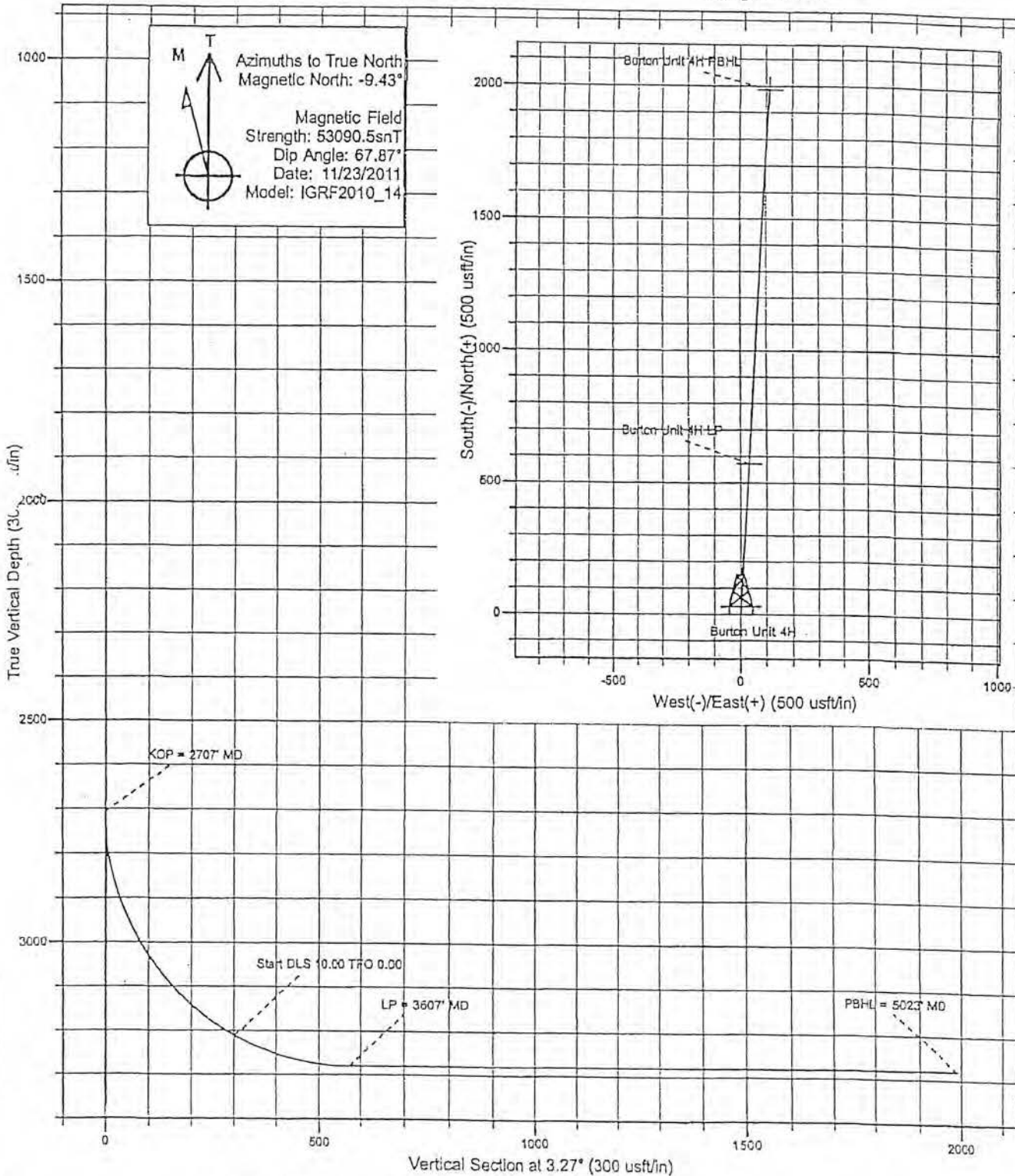
PHOENIX
TECHNOLOGY SERVICES USA INC.

DEC 08 2011

Penneco Oil Company

DEP, SOUTHWEST REGION
OIL & GAS

Project: Allegheny County, PA
Site: Plum Borough 4H
Well: Burton Unit 4H
Wellbore: Main Wellbore
Design: Plan 1



TVD=3280'

003-22203-

Penneco Oil Company

Allegheny County, PA
Plum Borough 4H
Burton Unit 4H

Main Wellbore

Plan: Plan 1

Standard Planning Report

23 November, 2011

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DER, SOUTHWEST REGION
OIL & GAS

Phoenix Technology Services
Planning Report

003-22205

Database: NER DB v5000
Company: Pennco Oil Company
Project: Allegheny County, PA
Site: Plum Borough 4H
Well: Burton Unit 4H
Wellbore: Main Wellbore
Design: Plan 1

Local Co-ordinate Reference: Site Plum Borough 4H
TVD Reference: WELL @ 1168.0usft (Original Well Elev)
MD Reference: WELL @ 1168.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project	Allegheny County, PA		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Pennsylvania Southern Zone		

Site	Plum Borough 4H				
Site Position:		Northing:	435,947.49 usft	Latitude:	40° 30' 48.090 N
From:	Lat/Long	Easting:	1,422,187.44 usft	Longitude:	79° 42' 54.050 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16"	Grid Convergence:	-1.27"

Well	Burton Unit 4H					
Well Position	+N/-S	0.0 usft	Northing:	435,947.49 usft	Latitude:	40° 30' 48.090 N
	+E/-W	0.0 usft	Easting:	1,422,187.44 usft	Longitude:	79° 42' 54.050 W
Position Uncertainty		0.0 usft	Wellhead Elevation:		Ground Level:	1,168.0 usft

Wellbore	Main Wellbore				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010_14	11/23/2011	-9.43	67.87	53,090

Design	Plan 1			
Audit Notes:				
Version:	Phase:	PROTOTYPE	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	3.27

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,707.0	0.00	0.00	2,707.0	0.0	0.0	0.00	0.00	0.00	0.00	
3,323.6	61.66	3.27	3,211.3	300.5	17.2	10.00	10.00	0.00	3.27	
3,607.1	90.00	3.27	3,290.0	572.1	32.7	10.00	10.00	0.00	0.00	Burton Unit 4H LP
5,023.8	90.00	3.27	3,280.0	1,986.5	113.5	0.00	0.00	0.00	0.00	Burton Unit 4H PBHL

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DEP, SOUTHWEST REGION
OIL & GAS

Phoenix Technology Services
Planning Report

003-22205

Database: NER DB v5000
Company: Pennco Oil Company
Project: Allegany County, PA
Site: Plum Borough 4H
Well: Burton Unit 4H
Wellbore: Main Wellbore
Design: Plan 1

Local Co-ordinate Reference: Site Plum Borough 4H
TVD Reference: WELL @ 1168.0usft (Original Well Elev)
MD Reference: WELL @ 1168.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
100.0	0.00	0.00	100.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
300.0	0.00	0.00	300.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
500.0	0.00	0.00	500.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
700.0	0.00	0.00	700.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
900.0	0.00	0.00	900.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,100.0	0.00	0.00	1,100.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,300.0	0.00	0.00	1,300.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,500.0	0.00	0.00	1,500.0	0.0	0.0	0.0	0.00	0.00	0.00
1,600.0	0.00	0.00	1,600.0	0.0	0.0	0.0	0.00	0.00	0.00
1,700.0	0.00	0.00	1,700.0	0.0	0.0	0.0	0.00	0.00	0.00
1,800.0	0.00	0.00	1,800.0	0.0	0.0	0.0	0.00	0.00	0.00
1,900.0	0.00	0.00	1,900.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,100.0	0.00	0.00	2,100.0	0.0	0.0	0.0	0.00	0.00	0.00
2,200.0	0.00	0.00	2,200.0	0.0	0.0	0.0	0.00	0.00	0.00
2,300.0	0.00	0.00	2,300.0	0.0	0.0	0.0	0.00	0.00	0.00
2,400.0	0.00	0.00	2,400.0	0.0	0.0	0.0	0.00	0.00	0.00
2,500.0	0.00	0.00	2,500.0	0.0	0.0	0.0	0.00	0.00	0.00
2,600.0	0.00	0.00	2,600.0	0.0	0.0	0.0	0.00	0.00	0.00
2,700.0	0.00	0.00	2,700.0	0.0	0.0	0.0	0.00	0.00	0.00
2,707.0	0.00	0.00	2,707.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP = 2707' MD									
2,800.0	9.30	3.27	2,799.6	7.5	0.4	7.5	10.00	10.00	0.00
2,900.0	19.30	3.27	2,896.4	32.1	1.8	32.2	10.00	10.00	0.00
3,000.0	29.30	3.27	2,987.4	73.2	4.2	73.3	10.00	10.00	0.00
3,100.0	39.30	3.27	3,069.9	129.4	7.4	129.6	10.00	10.00	0.00
3,200.0	49.30	3.27	3,141.4	199.0	11.4	199.3	10.00	10.00	0.00
3,300.0	59.30	3.27	3,199.7	280.0	16.0	280.4	10.00	10.00	0.00
3,323.6	61.86	3.27	3,211.3	300.5	17.2	301.0	10.00	10.00	0.00
Start DLS 10.00 TFO 0.00									
3,400.0	69.30	3.27	3,243.0	369.8	21.1	370.4	10.00	10.00	0.00
3,500.0	79.29	3.27	3,270.0	465.3	26.6	466.6	10.00	10.00	0.00
3,600.0	89.29	3.27	3,279.9	565.0	32.3	566.0	10.00	10.00	0.00
3,607.1	90.00	3.27	3,280.0	572.1	32.7	573.0	10.00	10.00	0.00
LP = 3607' MD									
3,700.0	90.00	3.27	3,280.0	664.9	38.0	665.9	0.00	0.00	0.00
3,800.0	90.00	3.27	3,280.0	764.7	43.7	765.9	0.00	0.00	0.00
3,900.0	90.00	3.27	3,280.0	864.5	49.4	865.9	0.00	0.00	0.00
4,000.0	90.00	3.27	3,280.0	964.4	55.1	965.9	0.00	0.00	0.00
4,100.0	90.00	3.27	3,280.0	1,064.2	60.8	1,065.9	0.00	0.00	0.00
4,200.0	90.00	3.27	3,280.0	1,164.0	66.5	1,165.9	0.00	0.00	0.00
4,300.0	90.00	3.27	3,280.0	1,263.9	72.2	1,265.9	0.00	0.00	0.00
4,400.0	90.00	3.27	3,280.0	1,363.7	77.9	1,365.9	0.00	0.00	0.00
4,500.0	90.00	3.27	3,280.0	1,463.6	83.8	1,465.9	0.00	0.00	0.00
4,600.0	90.00	3.27	3,280.0	1,563.4	89.3	1,565.9	0.00	0.00	0.00

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Phoenix Technology Services
Planning Report

003-22205

Database: NER DB v5000
Company: Penneco Oil Company
Project: Allegany County, PA
Site: Plum Borough 4H
Well: Burton Unit 4H
Wellbore: Main Wellbore
Design: Plan 1

Local Co-ordinate Reference: Site Plum Borough 4H
TVD Reference: WELL @ 1168.0usft (Original Well Elev)
MD Reference: WELL @ 1168.0usft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,700.0	90.00	3.27	3,280.0	1,663.2	95.1	1,665.9	0.00	0.00	0.00
4,800.0	90.00	3.27	3,280.0	1,763.1	100.8	1,765.9	0.00	0.00	0.00
4,900.0	90.00	3.27	3,280.0	1,862.9	106.5	1,865.9	0.00	0.00	0.00
5,000.0	90.00	3.27	3,280.0	1,962.7	112.2	1,965.9	0.00	0.00	0.00
5,023.8	90.00	3.27	3,280.0	1,986.5	113.5	1,989.7	0.00	0.00	0.00

PBHL = 5023' MD

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Eastng (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Burton Unit 4H LP	0.00	0.00	3,280.0	572.1	32.7	436,518.72	1,422,232.86	40° 30' 53.743 N	79° 42' 53.827 W
- plan hits target center									
- Point									
Burton Unit 4H PBHL	0.00	0.00	3,280.0	1,986.5	113.5	437,930.95	1,422,345.13	40° 31' 7.720 N	79° 42' 52.580 W
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
2,707.0	2,707.0	0.0	0.0	KOP = 2707' MD
3,323.6	3,211.3	300.5	17.2	Start OLS 10.00 TFO 0.00
3,607.1	3,280.0	572.1	32.7	LP = 3607' MD
5,023.8	3,280.0	1,986.5	113.5	PBHL = 5023' MD

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DER. SOUTHWEST REGION
OIL & GAS



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Oil & Gas Management Program

003-22205

DEP USE ONLY
Application Tracking #

Proposed Alternate Method or Material for
Casing, Plugging, Venting or Equipping a Well

Well Operator Penneco Oil Company	DEP ID# 7674	Well Permit or Registration Number 003-22205-00,01
Address 6608 Route 22		Well Farm Name Burton Unit
City Delmont	State PA	Well # #4H
Phone 724-468-8232	Zip Code 15626-2408	Serial # PB-1752
Fax 724-468-8230		County Allegheny
		Municipality Plum Borough

A proposed alternate method is subject to provisions in Section 211 of the Oil and Gas Act, Section 13 of the Coal and Gas Resource Coordination Act, and 25 PA Code §78.75 Alternate Methods. Attach proof of notification of coal operator(s).

Describe in reasonable detail using a written description and / or diagram:

1. the proposed alternate method or materials, and
2. the manner in which the alternative will satisfy the goals of the laws and regulations.

The purpose of this submission is to account for the proximity of the referenced well to the documented boundary of an abandoned deep mine and to offer an alternative casing scenario should the coal isolation segment of the well realize a mine void.

In the event that the construction of the above referenced well were interrupted by a mine void encounter rather than the anticipated stump or solid coal, the drilling contractor will continue drilling another 50 feet below the mine floor (ream if necessary), install the requisite isolation string of casing (basket set above mine ceiling), and cement using the balance and grout method.

Optional: Approval by Coal Owner or Operator	Signature of Applicant / Well Operator
Signature	Signature
Date	Date 12/1/11
Print or Type Signer's Name and Title	Print or Type Signer's Name and Title D. Marc Jacobs, Sr. - Senior Vice President

If optional approval is signed by coal owner or operator, the 15-day objection period may be waived.

DEP USE ONLY	
Approved by: (DEP Manager) <i>Matthew Holme</i>	Conditions: ☒ YES, See Attached ☐ NO
Date <i>for Alan Eichele</i>	Date 1/11/12

003-22205

CF

8000-FM-OOGM0004a 2/2012

pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTIONGraph T Standard
Survey ReportCOMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS MANAGEMENT

Well Record

DEP USE ONLY	
Site ID	Client Id
Client Id	Sub Facility Id

WELL INFORMATION

Well Operator Penneco Oil Company	DEP ID# 7674	Well API # 37-003-22205-00-01	Well Farm Name Burton Unit	Well # 4H
Address 6608 Route 22		LAT 40°30' 48.0900" LONG - 79°42' 54.0500"	Project Number	Serial # PB-1752
City Delmont	State PA	Zip 15626-2408	County Allegheny	
Phone (724)468-8232	Fax (724)468-8230	Email penneco@penneco.com	USGS 7.5 min. quadrangle map New Kensington East	Section 7

Check the appropriate Submission: ☒ Original Well Record ☐ Amended Well Record

Well Type	☐ Gas ☒ Oil ☐ Combination Oil & Gas ☐ CBM ☐ Injection ☐ Disposal ☐ Storage	Wellbore Conditioning:
Well Orientation	☐ Vertical ☒ Deviated from Vertical (Top & Side views & Deviation Survey must be attached)	String Time / Volume / Rate / Material
Drill Method(s)	☒ Rotary - Air 3370' ☒ Rotary - Mud 5006' ☐ Cable Tool ☐ Other	26" Grout (No Conditioning)
Drilling Started	02/12/12 Surface Elev. 1168 ft. GW Depth 870 ft.	20" 5 min / 15 BBL / 3.5 BPM / Gel-Bar
Drilling Complete	06/23/12 True Vertical Depth 3275 ft. Depth of DFGW 870 ft.	13 3/8" Grout (No Conditioning)
Date Well Completed	06/24/12 Total Measured Depth 5006 ft. DFGW/decided by 1	9 5/8" 15 min / 70 BBL / 3.5 BPM / Gel
		4 1/2" 5 min / 20 BBL / 3.5 BPM / SAPP
		4 1/2" 5 min / 20 BBL / 3.5 BPM / Gel

CEMENT

Cement returned on surface casing?	☒ Yes ☐ No	If No, provide depth to top of cement and method used to determine:					
Cement returned on coal protective casing?	☐ Yes ☒ No	If No, provide depth to top of cement and method used to determine:	810' - Wireline Basket @ 560' ☒ NA				
Cement returned on intermediate casing?	☒ Yes ☐ No	If No, provide depth to top of cement and method used to determine:	☐ NA				
Casing String	Type/Class of Cement (Lead/Tail)	Slurry Temp F°	Amount of Cement (sks) (Lead/Tail/Total)	WOC hrs	WT PPG	Yd / ft³	Gas Migration Controls Used
Conductor	CLA A, 3%cc 1/2 flake	37 °	40 / 0 / 40	8	15.6	1.18	What controls were used if any (additional hardware. Specify type and depth applicable): Gas Block for intermediate string cement
Surface	CLA A, 3%cc 1/2 flake	37 °	310 / 0 / 310	8	15.6	1.18	
Coal Protective	CLA A, 3%cc 1/2 flake	37 °	45 / 430 / 475	8	15.6	1.18	
Intermediate	Gas Block	40 °	680 / 0 / 680	8	15.6	1.29	
Production	UFL	76 °	1328 / 0 / 1328	8	14.3	1.29	
If additional strings attach form(s)			Total	2833			

CASING AND TUBING

Hole Size	Pipe Size	Wt. #/ft.	Grade Casing / Tubing Type	Thread / Weld - New/ Used	Amount In Well (ft.)	Hardware - Baskets / Packer / Centralizers (Total/String)	Type	Size	Depth	Date Run
28"	26"	77.26	PE	- - N	39	N/A	N/A	N/A	N/A	02/13/12
22"	20"	94.00	J-55	T - N	214	guide shoe	20"	214	02/14/12	
17 1/2"	13 3/8"	54.50	MC-50	T - N	640	guide shoe	13 3/8"	640	02/16/12	
12 3/8"	9 5/8"	40.00	MC-40	T - N	2044	guide shoe	9 5/8"	2044	02/21/12	
8 1/2"	4 1/2"	11.60	WT-80	T - N	4982	float shoe	4 1/2"	4982	06/24/12	

If any casing is welded, provide the name(s) of the welder(s):

PLUG-BACK/WELLBORE ALTERATION

Fill Material & Plugs	Depth		Date	Casing & Tubing		
	From	To		Size	Pulled	Left
Kick Plug - 438 sks - Kick Plug Cement	2074	3370	02/24/12	N/A	N/A	N/A

DEP SOUTHWEST REGION
OIL & GASDEP SOUTHWEST REGION
OIL & GAS

003-22203

8000-FM-OOGM0004a 2/2012

LOG OF FORMATIONS

Well API#: 37-003-22205-00-01

(If you will need more space than this page, please photocopy the blank form before filling it in.)

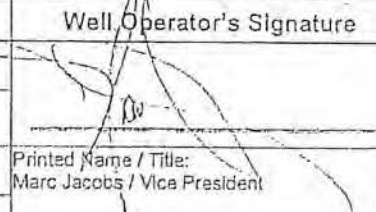
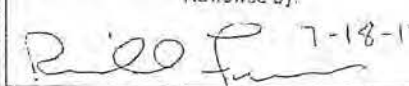
Formation Name or Lithology	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Let Down	0	5				Driller's Log
Shale	5	35				
Sand	35	46				
Shale	46	90				
Red Rock	90	120			F 90	
Sand / Shale	120	250				
Shale	250	300				
Coal	300	304				
Sand / Shale	304	400				
Shale	400	450				
Sand / Shale	450	520				
Coal	520	525				
Sand / Shale	525	600				
Open Mine	600	610				
Sand / Shale	610	774				
Coal	774	778				
Sand / Shale	778	930			F 870	
Sand	930	1050				
Sand / Shale	1050	1200			B 1150	
Sand	1200	1450				
Sand / Shale	1450	1600				
Sand	1600	1830				
Shale	1830	1900				
Sand / Shale	1900	2065			B 1890	JUL 11 2012 DEP SOUTHWEST REGION OIL & GAS
Sand / Shale	2065	2350			B 1920	
Red Rock	2350	2450				
Shale	2450	2500				
Sand	2500	2600				
Sand / Shale	2600	2750				
Sand	2750	2900				
Sand / Shale	2900	3370	3171	3171		

If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Casing Source	Cementing Company	Hardware Supplier	Logging Company
Name McJunkin Redman Corporation	Name Universal Well Services, Inc.	Name Ken Miller Supply, Inc.	Name Weatherford International
Address 480 Geesey Road	Address 324 Meter St.	Address 5484 Route 286 Hwy. E.	Address 124 Windy Ridge Lane
City - State - Zip Indiana PA 15701	City - State - Zip Punxsutawney PA 15767	City - State - Zip Indiana PA 15701	City - State - Zip Elderton PA 15736
Phone (724)349-6823	Phone (814)938-5327	Phone (724)465-8875	Phone (724)354-3090

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller(s)				Well Operator's Signature		DEP USE ONLY	
Name U.S. Energy	Rig 4	Name Les Wilson Inc.	Rig 25	 Printed Name / Title: Marc Jacobs / Vice President		Reviewed by:	
Address P.O. Box 237		Address P.O. Box 331				 7-18-12 Comments:	
City - State - Zip Central Valley PA 18249		City - State - Zip Carmi IL 62821					
Phone (724)783-7624		Phone (618)382-4867					



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

Completion Report

DEP USE ONLY	
Site ID	Primary Facility ID
Client ID	Sub Facility ID

Well Information							
Well Operator Penneco Oil Company		DEP ID# 7674		Well API # 37-003-22205-00-01		Well Farm Name Burton Unit	
Address 6608 Route 22		LAT - 40° 30' 48.0900"		NAD 83		Project Number	
City Delmont		State PA		Zip Code 15626		Serial # PB-1752	
Municipality Plum		County Allegheny		USGS 7.5 min. quadrangle map New Kensington East		Section 7	
Phone (724)468-8232		Fax (724)468-8230		Email penneco@penneco.com			
Check the appropriate submission: ☒ Original Completion Report ☐ Amended Completion Report							
STIMULATION BASE FLUID							
List Water Management Plan Source(s)				Water Management Plan ID		Volume (Gallons)	
1. Not Applicable							
2.							
3.							
4.							
5.							
6.							
				DEP Biologist Review/Date		Total Gallons of Water Used	
Other Base Fluid(s) Used						Water Recycled	
1.						Quantity and /UOM	
2.						/	
						/	
Total Quantity all Fluid(s)						/	
STIMULATION/PRODUCTION INFORMATION (WELL)							
Radioactive tracers used? ☐		24 Hr. Open-Flow (MCF/Day) / Date Still Testing / --		24 Hr. Shut-in Pressure / Date Still Testing / --		Completion Date: 07/24/12	
Specify Tracer		☒ Gas Btu 1050 (Expected)		☒ Oil API G 39 (Expected)		☐ Condensate API G	
Well Products:		☐ Other		☐ GOR Still Testing			
WELL SERVICE COMPANIES							
Perforation Company		Frac Company		Plug Drill Out/Flow Back Company			
Name Titan Wireline Services		Name Universal Well Services, Inc.		Name Multi Production Systems Inc.			
Address 717 Pennsylvania 210		Address 324 Meter St.		Address 314 Mill Run Drive			
City - State - Zip Shelock PA 15774		City - State - Zip Punxsutawney PA 15767		City - State - Zip Indiana PA 15701			
Phone (724)354-2629		Phone (814)938-5327		Phone (724)465-6663			
I do hereby certify to the best of my knowledge, information and belief that the information contained on this Completion Report is true and correct. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.							
Well Operator's Signature				DEP USE ONLY			
				Reviewed by:			
Date: 8/8/12				Date: 8-28-12			
Printed Name / Title: Marc Jacobs / Vice President				Comments:			

SEP 16 2012

DEP, SOUTHWEST REGION
Page 1 of 1 GAS

AUG 13 2012

DEP, SOUTHWEST REGION
Page 1 of 1 GAS

Well API# 37-003-22205-00-01

[illegible]

003-22205

Well API# 37-003-22205-00-01

STIMULATION FLUID ADDITIVES

Note: Information designated as Trade Secret or Confidential proprietary information must be clearly identified as such and should be submitted on the "Confidential Stimulation Fluid Additives" form.

Trade Name	Supplier	Purpose	Ingredients	CAS # of Chemical Component	Max. Component % Mass in Additive	Chemical Component % Mass used in Total Base Fluid (Pg 1)	Comment
ALPHA 3335	Clearwater International LLC	Corrosion Inhibitor	Solvent Naptha (Petroleum), petroleum aromatic	84742-94-5	65 - 100%	0.069%	
ALPHA 3335	Clearwater International LLC	Corrosion Inhibitor	Poly(oxy- 1,2- ethanediyl), a(nonylphenyl)- w- hydroxy- phosphate	51811-79-1	30 - 60%	0.040%	
ALPHA 3335	Clearwater International LLC	Corrosion Inhibitor	Naphthalene	91-20-3	3 - 7%	0.004%	
CLA CHEK LP	Clearwater International LLC	Clay Control	Ethylene Glycol	107-21-1	30 - 60%	0.023%	
EC8116A	Nalco Company	Biocide	Dibromosetonitrile	3252-43-5	1.0 - 5.0%	0.000%	
EC8116A	Nalco Company	Biocide	2,2-Dibromo-3-nitropropionamide	10222-01-2	10.0 - 30.0%	0.003%	
EC8116A	Nalco Company	Biocide	Polyethylene Glycol	25322-68-3	30.0 - 60.0%	0.007%	
Flomax 50	CESI Chemical	Flow Control	Isopropanol	67-63-0	1 - 15%	0.009%	
Flomax 50	CESI Chemical	Flow Control	Citrus Terpenes	94256-47-4	1 - 15%	0.000%	
Hydrochloric Acid	Niacet Corporation	Formation Breaker	Hydrochloric Acid	7647-01-0	31 - 33%	0.445%	
IRON STA II C	Clearwater International LLC	Iron Control Agent	Ethylene Glycol	107-21-1	10 - 30%	0.010%	
LEB 10X	Clearwater International LLC	Gel Breaker	Ethylene Glycol	107-21-1	30 - 60%	0.001%	
NE-90	Universal Well Services, Inc.	Flow Control	Methanol	67-56-1	30 - 60%	0.023%	
NE-90	Universal Well Services, Inc.	Flow Control	Isopropanol	67-63-0	5.0 - 10.0%	0.004%	
NE-90	Universal Well Services, Inc.	Flow Control	Heavy Aromatic Naptha	64742-94-5	1.0 - 5.0%	0.002%	
NE-90	Universal Well Services, Inc.	Flow Control	Polyethylene Glycol	25322-68-3	1.0 - 5.0%	0.002%	
NE-90	Universal Well Services, Inc.	Flow Control	EO-C7-9-iso, C8-rich alcohols	78330-19-5	1.0 - 5.0%	0.002%	
NE-90	Universal Well Services, Inc.	Flow Control	EO-C9-11-iso, C10-rich alcohols	78330-20-8	1.0 - 5.0%	0.002%	
NE-90	Universal Well Services, Inc.	Flow Control	2-Ethylhexanol	104-78-7	5.0 - 10.0%	0.004%	
NE-90	Universal Well Services, Inc.	Flow Control	Naphthalene	91-20-3	0.1 - 1.0%	0.000%	
Sand	Unimin Corporation	Proppant	Crystalline Silica in the form of Quartz	14808-80-7	87 - 99.9%	6.274%	
SUPER SURF	Clearwater International LLC	Surface Tension Reducer	Methanol	67-56-1	30 - 60%	0.023%	
Unigel 5F	Clearwater International LLC	Gelling Agent	Guar Gum	N/A	>95%	0.084%	

Please insert additional copies of this page if additional rows are needed.

SEP 10 2013
DEP. SOUTHWEST REGION

003-22205

Well API# 37 -003-22205-00-01

STIMULATION INFORMATION / STAGE

Complete a separate record for each stimulation stage. (Please Insert additional lines for additional stages or additional pages as applicable).

Slg #	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Proppant Type	Proppant Mesh Size(s)
1	07/24/12	38.0	4,230	3,013	1,800	White Sand	20/40
2	07/24/12	40.0	4,137	3,760	1,900	White Sand	20/40
3	07/24/12	40.0	3,882	5,012	1,850	White Sand	20/40
4	07/24/12	40.0	3,926	5,060	2,000	White Sand	20/40
5	07/24/12	31.0	4,375	4,620	2,000	White Sand	20/40
6	07/24/12	23.0	4,600	5,060	1,950	White Sand	20/40
7	07/24/12	19.0	4,724	4,750	1,900	White Sand	20/40
8	07/25/12	40.0	3,660	5,310	1,950	White Sand	20/40
9	07/25/12	40.0	4,130	5,600	2,000	White Sand	20/40
10	07/25/12	40.0	3,552	5,610	1,950	White Sand	20/40
11	07/25/12	40.0	3,926	5,620	2,100	White Sand	20/40
12	07/25/12	40.0	3,691	6,000	2,100	White Sand	20/40
13	07/25/12	40.0	3,530	5,610	2,000	White Sand	20/40
14	07/25/12	40.0	4,370	5,620	2,000	White Sand	20/40
15	07/25/12	40.0	3,904	5,600	2,100	White Sand	20/40
16	07/25/12	40.0	3,505	5,460	1,900	White Sand	20/40
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AUG 13 2012

DLP SOUTHWEST REGION
Oil & Gas

5500-PM-OG0002

Rev. 9/2008

COMMONWEALTH OF PENNSYLVANIA

DEPARTMENT OF ENVIRONMENTAL PROTECTION OIL AND GAS MANAGEMENT PROGRAM WELL LOCATION PLAT

003-22215

DEP	Auth	NC-908188	TF
USE	Permit	003-22215	1-18-12
ONLY	Project		

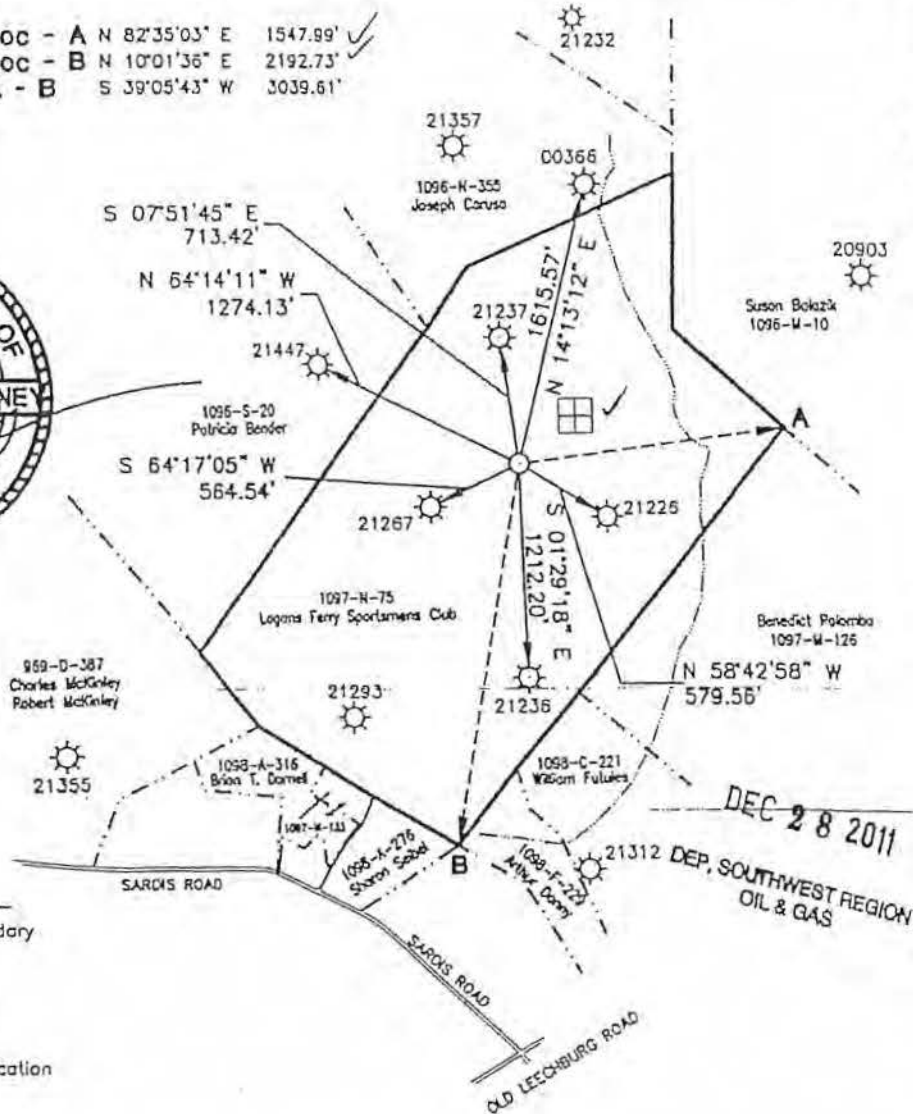


Denotes location of well on topo map.

True Latitude: NORTH
40° 31' 34.52"
True Longitude: WEST
79° 43' 36.08"

Well is located on topo map 5,614 feet south of latitude 40° 32' 30"

Loc - A N 82°35'03" E 1547.99' ✓
Loc - B N 10°01'36" E 2192.73' ✓
A - B S 39°05'43" W 3039.61'



Legend

- Lease Tract Boundary
- - - Surface Tract
- == Roads
- Streams/Water
- Proposed Well Location
- ☼ Existing Well
- ⊗ Plugged Well

Surveyor or Engineer: W.D. Mohney & Associates (724) 543-1023		Phone #:	Day:	Date:	Scale:	Tract Acreage:
Lat & Long Method: GPS-Code Based Accuracy 10 ± ft. Datum NAD 83		Elevation Method: PASDA LIDAR Accuracy 30 ± ft. Datum NGVD29		Survey Date: Various Dates		
Applicant / Well Operator Name: Penneca Oil Company ✓		Well (Form) Name: Logans Ferry Sportsman's Club ✓		Well #:		Serial: PL-1801
Address: 6608 US Route 22, Delmont, PA. 15626 ✓		County: Allegheny ✓		Municipality: Plum Borough ✓		Well Type: New Gas Well
Surface Landowner / Lessor: Logans Ferry Sportsman's Club ✓		USGS 7 1/2" Quadrangle Map Name: New Kensington East, PA. - 1408		Map Section: 7 ✓		Surface Elevation: 1085 ft.
Target Formation(s): Speechley		Angle & Course of Deviation (Drilling): None		Anticipated Total Depth ft.: TWO 3800'		TWO 3800'
Surface Owner or Water Purveyor Approximate Course and Distance to Water Supply: NONE						
Owner Leases to Operator of Coal Seam: Non-Coal Area						
Name of Coal Seam: GOB - Upper Freeport Coal						



COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Oil & Gas Management Program

003-22215

DEP USE ONLY
Application Tracking # NC-908168

**Proposed Alternate Method or Material for
Casing, Plugging, Venting or Equipping a Well**

Well Operator Penneco Oil Company	DEP ID# 7674	Well Permit or Registration Number 003-22215-00
Address 6608 Route 22		Well Form Name Logans Ferry Sportsman's Club
City Delmont	State PA	Well # #6
Phone 724-468-8232	Zip Code 15626-2408	Serial # PL-1801
Fax 724-468-8230		County Allegheny
		Municipality Plum Borough

A proposed alternate method is subject to provisions in Section 211 of the Oil and Gas Act, Section 13 of the Coal and Gas Resource Coordination Act, and 25 PA Code §78.75 Alternate Methods. Attach proof of notification of coal operator(s).

Describe in reasonable detail using a written description and / or diagram:

1. the proposed alternate method or materials, and
2. the manner in which the alternative will satisfy the goals of the laws and regulations.

The purpose of this submission is to account for the proximity of the referenced well to the documented boundary of an abandoned deep mine and to offer an alternative casing scenario should the coal isolation segment of the well realize a mine void.

In the event that the construction of the above referenced well were interrupted by a mine void encounter rather than the anticipated stump or solid coal, the drilling contractor will continue drilling another 50 feet below the mine floor (ream if necessary), install the requisite isolation string of casing (basket set above mine ceiling), and cement using the balance and grout method.

DEC 28 2011

DEP, SOUTHWEST REGION
OIL & GAS

Optional: Approval by Coal Owner or Operator	Signature of Applicant / Well Operator
Signature _____ Date _____	Signature Date 12/27/11
Print or Type Signer's Name and Title _____	Print or Type Signer's Name and Title D. Marc Jacobs, Jr. Senior Vice President

If optional approval is signed by coal owner or operator, the 15-day objection period may be waived.

DEP USE ONLY		
Approved by: (DEP Manager) 	Conditions: ☒ YES, See Attached ☐ NO	Date 1/23/12

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003-22215

CF

3000-FM-OOGM0004a 2/2012



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

Well Record

DEP USE ONLY	
Site ID	Client ID
Client ID	Sub Facility ID

WELL INFORMATION							
Well Operator Penneco Oil Company		DEP ID# 7674	Well API # 37-003-22215-00		Well Farm Name Logans Ferry Sportsmans Club	Well # 6	
Address 6608 Route 22		LAT 40°31' 34.5200"		NAD 83	Project Number	Serial # PL-1801	
City Delmont		State PA	Zip 15626-2408	Municipality Plum	County Allegheny		
Phone (724)468-8232	Fax (724)468-8230	Email penneco@penneco.com			USGS 7.5 min. quadrangle map New Kensington East	Section 7	
Check the appropriate Submission: ☒ Original Well Record ☐ Amended Well Record							
Well Type	☒ Gas ☐ Oil ☐ Combination Oil & Gas ☐ CBM ☐ Injection ☐ Disposal ☐ Storage						
Well Orientation	☒ Vertical ☐ Deviated from Vertical (Top & Side views & Deviation Survey must be attached)						
Drill Method(s)	☒ Rotary - Air 3410' ☐ Rotary - Mud ☐ Cable Tool ☐ Other						
Drilling Started	04/01/12	Surface Elev.	1085 ft.	GW Depth	545 ft.		
Drilling Complete	04/10/12	True Vertical Depth	3410 ft.	Depth of DFGW	545 ft.		
Date Well Completed	04/10/12	Total Measured Depth	3410 ft.	DFGW decided by	1		

CEMENT								
Cement returned on surface casing?		☒ Yes ☐ No		If No, provide depth to top of cement and method used to determine:				
Cement returned on coal protective casing?		☒ Yes ☐ No		If No, provide depth to top of cement and method used to determine: ☐ NA				
Cement returned on intermediate casing?		☒ Yes ☐ No		If No, provide depth to top of cement and method used to determine: ☐ NA				
Casing String	Type/Class of Cement (Lead/Tail)	Slurry Temp F°	Amount of Cement (sks) (Lead/Tail/Total)	WOC hrs	WT PPG	Yd sks	Gas Migration Controls Used	
Conductor	CLA A, 3%cc Y# flake	50 °	10 / 0 / 10	8	15.6	1.18	Gas Block for coal protective string cement	
Surface	CLA A, 3%cc Y# flake	50 °	385 / 0 / 385	8	15.6	1.18		
Coal Protective	Gas Block	50 °	375 / 0 / 375	8	15.7	1.3		
Intermediate		*	/ /					
Production	Unipro 171	50 °	51 / 0 / 51	8	13.6	1.71		
If additional strings attach form(s)			Total 821					

CASING AND TUBING								
Hole Size	Pipe Size	Wt. #/ft.	Grade Casing / Tubing Type	Thread / Weld - New/ Used	Amount In Well (ft.)	Hardware - Baskets / Packer / Centralizers (Total/String)	Type	Date Run
17 1/2"	13 3/8"	37.00	L/S R-3	T - N	74	guide shoe	13 3/8"	04/01/12
12 3/8"	9 5/8"	26.00	250W R-3	T - N	640	guide shoe	9 5/8"	04/02/12
8 7/8"	7"	19.00	250W R-3	T - N	2002	guide shoe	7"	04/05/12
6 1/4"	4 1/2"	10.50	65 Grade	T - N	3317	float shoe	4 1/2"	04/10/12

If any casing is welded, provide the name(s) of the welder(s):

PLUG BACK WELLBORE ALTERATION						
Fill Material & Plugs	Depth		Date	Casing & Tubing		
	From	To		Size	Pulled	Left
MAY 22 2012						
DEP, SOUTHWEST REGION OIL & GAS						

003-22215

LOG OF FORMATIONS

Well API#: 37-003-22215-00

(If you will need more space than this page, please photocopy the blank form before filling it in.)

Formation Name or Lithology	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Fill	0	5				Driller's Log
Red Rock	5	70				
Sand	70	120				
Sandy Shale	120	180				
Red Rock	180	330				
Sandy Shale	330	420				
Coal	420	423			F 545	
Sand	423	535				
Coal	535	545				
Shale	545	600				
Sand / Shale	600	664				
Shale	664	715				
Coal	715	720				
Sand	720	870				
Sand / Shale	870	1170				
Sandy Shale	1170	1620			B 1200	
Sand / Shale	1620	2010			B 1810	
Sand	2010	2400				
Sandy Shale	2400	2700				
Sand / Sandy Shale	2700	3300				
Shale	3300	3410				

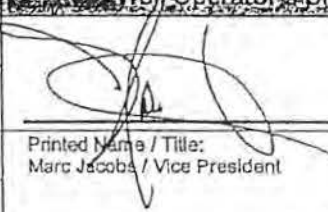
MAY 22 2012
DEPT. OF ENVIRONMENT
OIL & GAS

If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Casing Source	Cementing Company	Hardware Supplier	Logging Company
Name McJunkin Redman Corporation	Name Universal Well Services, Inc.	Name Ken Miller Supply, Inc.	Name Weatherford International
Address 480 Geesey Road	Address 324 Meter St.	Address 5484 Route 286 Hwy. E.	Address 124 Windy Ridge Lane
City - State - Zip Indiana PA 15701	City - State - Zip Punxsutawney PA 15767	City - State - Zip Indiana PA 15701	City - State - Zip Elderton PA 15736
Phone (724)349-8823	Phone (814)938-5327	Phone (724)465-8875	Phone (724)354-3080

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller		Well Operator's Signature		DEPT. USE ONLY	
Name U. S. Energy	Reg 4	 Printed Name / Title: Marc Jacobs / Vice President		Reviewed by:	
Address P.O. Box 237				Comments:	
City - State - Zip Rural Valley PA 16249					
Phone (724)783-7624		Date: 5/18/12			



pennsylvania
DEPARTMENT OF ENVIRONMENTAL PROTECTION

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

Completion Report

DEP USE ONLY	
Site ID	Primary Facility ID
Client ID	Sub Facility ID

Well Information					
Well Operator Penneco Oil Company		DEP ID# 7674	Well API # 37-003-22215-00		Well Farm Name Logans Ferry Sportsmans Club
Address 6608 Route 22			LAT - 40° 31' 34.5200"	NAD 83	Well # 6
City Dalmont		State PA	Zip Code 15626	Project Number	Serial # PL-1801
Municipality Plum		County Allegheny			
Phone (724)468-8232	Fax (724)468-8230	Email penneco@penneco.com		USGS 7.5 min. quadrangle map New Kensington East	Section 7
Check the appropriate submission: ☒ Original Completion Report ☐ Amended Completion Report					

STIMULATION BASE FLUID			
List Water Management Plan Source(s)	Water Management Plan ID	Volume (Gallons)	
1. Not Applicable			
2.			
3.			
4.			
5.			
6.			
DEP Biologist Review/Date		Total Gallons of Water Used	Water Recycled
Other Base Fluid(s) Used		Quantity and UOM	
1.		/	
2.		/	
Total Quantity all Fluid(s)		/	

STIMULATION/PRODUCTION INFORMATION (WELL)			
Radioactive tracers used? ☐ Specify Tracer	24 Hr. Open-Flow (MCF/Day) / Date 119 MCFD / 05/02/12	24 Hr. Shut-In Pressure / Date 440 PSI / 05/02/12	Completion Date: 05/02/12
Well Products: ☒ Gas Btu 1050 (Expected)	☐ Oil API G	☐ Condensate API G	☐ Other
☐ GOR Still Testing			

WELL SERVICE COMPANIES		
Perforation Company	Frac. Company	Prod. Drill Out/Flow Back Company
Name Titan Wireline Services	Name Universal Well Services, Inc.	Name Multi Production Systems Inc.
Address 717 Pennsylvania 210	Address 324 Meter St.	Address 314 Mill Run Drive
City - State - Zip Shelock PA 15774	City - State - Zip Punxsutawney PA 15767	City - State - Zip Indiana PA 15701
Phone (724)354-2629	Phone (814)938-5327	Phone (724)465-6683

I do hereby certify to the best of my knowledge, information and belief that the information contained on this Completion Report is true and correct. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator's Signature	DEP USE ONLY
 Printed Name / Title: Marc Jacobs / Vice President	Reviewed by: _____ Date: _____ Comments: _____

5/18/12

MAY 22 2012

DEP, SOUTHWEST REGION
OIL & GAS

Well API# 37-003-22215-00

[illegible]

Well API# 37 -003-22215-00

003-22215

STIMULATION INFORMATION / STAGE

Complete a separate record for each stimulation stage. (Please insert additional lines for additional stages or additional pages as applicable).

Stg #	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Proppant Type	Proppant Mesh Size(s)
1	05/02/12	35.0	3,485	3,675	1,900	White Sand	20/40
2	05/02/12	26.0	2,475	3,730	1,850	White Sand	20/40
3							
4							
5							
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MAY 22 2012

DEP, SOUTHWEST REGION
OIL & GAS

✓

Well Record

DEP USE ONLY	
Site ID	Client Id
Client Id	Sub Facility Id

WELL INFORMATION									
Well Operator Pennaco Oil Company			DEPID# 7674	Well API # 37-003-22215-00			Well Farm Name Logans Ferry Sportsmans Club		Well # 6
Address 6608 Route 22			LAT 40°31' 34.5200"		NAD 83		Project Number		Serial # PL-1801
City Delmont		State PA	Zip 15626-2408	Municipality Plum		County Allegheny			
Phone (724)468-8232		Fax (724)468-8230		Email pennaco@pennaco.com			USGS 7.5 min. quadrangle map New Kensington East		Section 7
Check the appropriate Submission: ☒ Original Well Record ☐ Amended Well Record									
Well Type	☒ Gas ☐ Oil ☐ Combination Oil & Gas ☐ CBM ☐ Injection ☐ Disposal ☐ Storage								
Well Orientation	☒ Vertical ☐ Deviated from Vertical (Top & Side views & Deviation Survey must be attached)								
Drill Method(s)	☒ Rotary - Air 3410' ☐ Rotary - Mud ☐ Cable Tool ☐ Other								
Drilling Started	04/01/12	Surface Elev.	1085 ft.	GW Depth	545 ft.				
Drilling Complete	04/10/12	True Vertical Depth	3410 ft.	Depth of DFGW	545 ft.				
Date Well Completed	04/10/12	Total Measured Depth	3410 ft.	DFGW decided by	1				
Wellbore Conditioning:									
String	13 3/8"	Time / Volume / Rate / Material	Grout (No Conditioning)						
5 5/8"	10 min / 4.5 BBL / 3-5 BPM / Gal								
7"	5 min / 25 BBL / 3-5 BPM / Gal and Barocel								
4 1/2"	4 min / 35 BBL / 4 BPM / Gal								

CEMENT

Cement returned on surface casing? ☒ Yes ☐ No			If No, provide depth to top of cement and method used to determine:				
Cement returned on coal protective casing? ☒ Yes ☐ No			If No, provide depth to top of cement and method used to determine: ☐ NA				
Cement returned on intermediate casing? ☒ Yes ☐ No			If No, provide depth to top of cement and method used to determine: ☐ NA				
Casing String	Type/Class of Cement (Lead/Tail)	Slurry Temp F*	Amount of Cement (sks) (Lead/Tail/Total)	WOC hrs	WT PPG	Yd / sk	Gas Migration Controls Used
Conductor	CLAA, 3%cc 1/2 sacks	50 °	10 / 0 / 10	8	15.8	1.18	If any cement was used in any (additional) annulus, specify type and depth. Gas Block for coal protective string cement
Surface	CLAA, 3%cc 1/2 sacks	50 °	385 / 0 / 385	8	15.8	1.18	
Coal Protective	Gas Block	50 °	375 / 0 / 375	8	15.7	1.3	
Intermediate		"	/ /				
Production	Unipro 171	50 °	51 / 0 / 51	8	13.8	1.71	
If additional strings attach form(s)			Total 821				

CASING AND TUBING

Hole Size	Pipe Size	Wt. #/ft.	Grade Casing / Tubing Type	Thread / Weld - New/ Used	Amount In Well (ft.)	Hardware - Baskets / Packer / Centralizers (Total/String)			Date Run
						Type	Size	Depth	
17 1/2"	13 3/8"	37.00	L/S R-3	T - N	74	guide shoe	13 3/8"	74	04/01/12
12 3/8"	9 5/8"	26.00	.250W R-3	T - N	640	guide shoe	9 5/8"	640	04/02/12
8 7/8"	7"	19.00	.250W R-3	T - N	2002	guide shoe	7"	2002	04/05/12
6 1/4"	4 1/2"	10.50	65 Grade	T - N	3317	float shoe	4 1/2"	3317	04/10/12
				-					

If any casing is welded, provide the name(s) of the welder(s):

PLUG-BACKWELLBORE ALTERATION

Fill Material & Plugs	Depth		Date	Casing & Tubing		
	From	To		Size	Pulled	Left
MAY 28 2012						
DER, SOUTHWEST REGION OIL & GAS				JUN 27 2012		
				DER, SOUTHWEST REGION OIL & GAS		

003-22215

LOG OF FORMATIONS

Well API#: 37-003-22215-00

(If you will need more space than this page, please photocopy the blank form before filling it in.)

Formation Name or Lithology	Top (feet)	Bottom (feet)	Gas at (feet)	Oil at (feet)	Water at (fresh / brine; ft.)	Source of Data
Fill	0	5				Driller's Log
Red Rock	5	70				
Sand	70	120				
Sandy Shale	120	180				
Red Rock	180	330				
Sandy Shale	330	420				
Coal	420	423			F 545	
Sand	423	535				
Coal	535	545				
Shale	545	600				
Sand / Shale	600	664				
Shale	664	715				
Coal	715	720				
Sand	720	870				
Sand / Shale	870	1170				
Sandy Shale	1170	1620			B 1200	
Sand / Shale	1620	2010			B 1810	
Sand	2010	2400				
Sandy Shale	2400	2700				
Sand / Sandy Shale	2700	3300				
Shale	3300	3410				

JUN 11 2012
DEP. SOUTHWEST REGION
OIL & GAS

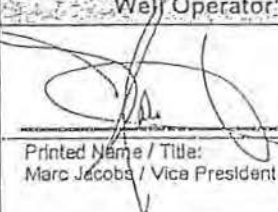
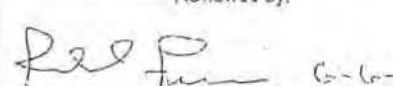
MAY 22 2012
DEP. SOUTHWEST REGION
OIL & GAS

If no show of oil, gas or water, explain why:

WELL SERVICE COMPANIES (Provide the name, address, and telephone number of all well service companies involved.)

Casing Source	Cementing Company	Hardware Supplier	Logging Company
Name McJunkin Redman Corporation	Name Universal Well Services, Inc.	Name Ken Miller Supply, Inc.	Name Weatherford International
Address 480 Geesey Road	Address 324 Meter St.	Address 5484 Route 286 Hwy. E.	Address 124 Windy Ridge Lane
City - State - Zip Indiana PA 15701	City - State - Zip Punxsutawney PA 15767	City - State - Zip Indiana PA 15701	City - State - Zip Elderton PA 15736
Phone (724)349-8823	Phone (814)938-5327	Phone (724)465-8875	Phone (724)354-3090

I do hereby certify to the best of my knowledge, information and belief that the well identified on this Well Record has been properly cased and cemented in accordance with the requirements of 25 Pa. Code Chapter 78 and any conditions contained in the permit for this well. In addition, I do hereby certify that any casing which is attached to a blow-out preventer with a pressure rating greater than 3,000 psi has passed a pressure test in accordance with 25 Pa. Code §78.84(f). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Driller		Well Operator's Signature		DEP-USE ONLY	
Name U. S. Energy	Rtg 4	 Printed Name / Title: Marc Jacobs / Vice President		Reviewed by:	
Address P.O. Box 237				 Comments:	
City - State - Zip Central Valley PA 16249					
Phone (724)783-7624		Date: 5/18/12			



pennsylvania

DEPARTMENT OF ENVIRONMENTAL PROTECTION

GEO COPY

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

Completion Report

003-22215

CF

DEP USE ONLY	
Site ID	Primary Facility ID
Client ID	Sub Facility ID

Well Information							
Well Operator Pennaco Oil Company		DEP ID# 7874	Well API # 37-003-22215-00		Well Farm Name Logans Ferry Sportmans Club	Well # 6	
Address 8608 Route 22		LAT - 40° 31' 34.5200"		NAD 83	Project Number		Serial # PL-1801
City Delmont		State PA	Zip Code 15626	Municipality Plum		County Allegheny	
Phone (724)468-8232	Fax (724)468-8230	Email pennaco@pennaco.com		USGS 7.5 min. quadrangle map New Kensington East		Section 7	
Check the appropriate submission: ☒ Original Completion Report ☐ Amended Completion Report							
STIMULATION BASE FLUID							
List Water Management Plan Source(s)				Water Management Plan ID		Volume (Gallons)	
1. Not Applicable							
2.							
3.							
4.							
5.							
6.							
				DEP Biologist Review/Date	Total Gallons of Water Used	Water	Recycled
Other Base Fluid(s) Used				Quantity and UOM			
1.				/			
2.				/			
Total Quantity all Fluid(s)				/			
STIMULATION/PRODUCTION INFORMATION (WELL)							
Radioactive tracers used? ☐ Specify Tracer		24 Hr. Open-Flow (MCF/Day) / Date 119 MCFD / 05/02/12		24 Hr. Shut-in Pressure / Date 440 PSI / 05/02/12		Completion Date: 05/02/12	
Well Products: ☒ Gas Btu 1050 (Expected)		☐ Oil API G		☐ Condensate API G		☐ Other	
						☐ GOR Still Testing	
WELL SERVICE COMPANIES							
Perforation Company		Frac Company		Plug-Drill Out/Flow Back Company			
Name Titan Wireline Services		Name Universal Well Services, Inc.		Name Multi Production Systems Inc.			
Address 717 Pennsylvania 210		Address 324 Meter St.		Address 314 Mill Run Drive			
City - State - Zip Shelock PA 15774		City - State - Zip Punxsutawney PA 15767		City - State - Zip Indiana PA 15701			
Phone (724)354-2629		Phone (814)938-5327		Phone (724)465-6663			
I do hereby certify to the best of my knowledge, information and belief that the information contained on this Completion Report is true and correct. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.							
Well Operator's Signature				DEP USE ONLY			
				Reviewed by: Date: 6-6-12			
Printed Name / Title: Marc Jacobs / Vice President				Comments:			
Date: 5/18/12							

JUN 11 2012

MAY 22 2012

003-22215

Well API# 37 -003-22215-00

STIMULATION INFORMATION / STAGE

Complete a separate record for each stimulation stage. (Please Insert additional lines for additional stages or additional pages as applicable).

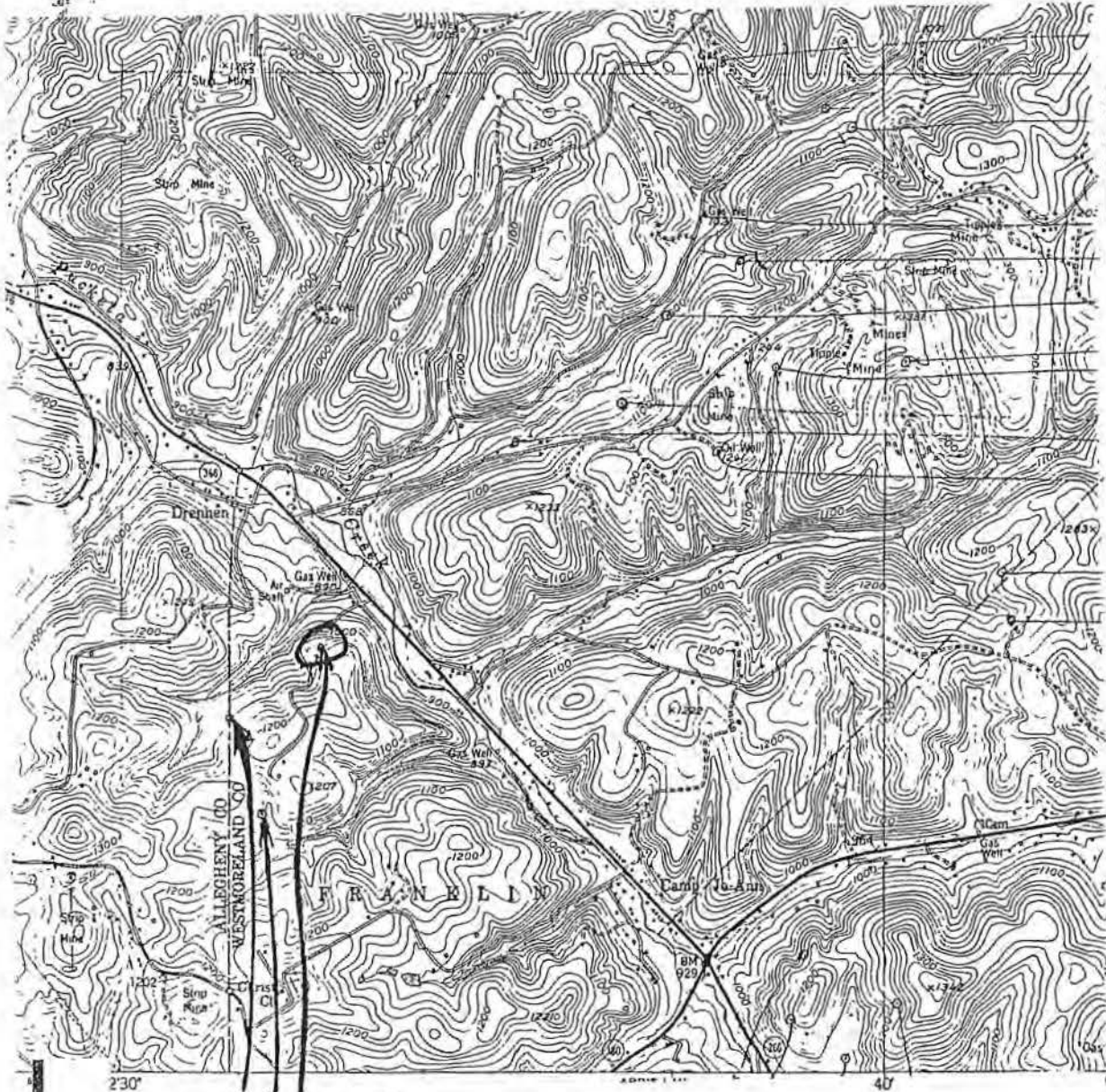
Stg #	Stimulation Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Proppant Type	Proppant Mesh Size(s)
1	05/02/12	35.0	3,485	3,675	1,900	White Sand	20/40
2	05/02/12	26.0	2,475	3,730	1,850	White Sand	20/40
3							
4							
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39							
40							

JUN 11 2012
 DEP. SOUTHWEST REGION
 OIL & GAS

MAY 22 2012

DEP. SOUTHWEST REGION
 OIL & GAS

8700' S
8500' W



129-00136

Frank Beighley #2-134 A
Frank Beighley #1-134 A
Lysie Hall #2-95 A

FRANKLIN TWP.

NEW KENSINGTON EAST
7.5' QUAD.

129-00136

ICY STANDARDS
NGTON, D C 20242
S AVAILABLE ON REQUEST

QUADRANGLE LOCATI

WELL REGISTRATION FORM

Page 2

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.

T. W. Phillips Gas & Oil Co.

Operator Name
83 N. 1st St.
Address
Butler, Pa 16001
412-287-2751
Telephone #

Agent _____ Signature _____
Address _____
Telephone # _____

Project # _____
If previously assigned by Dept
County WESTMORELAND
129

Code	
10-8-85	10-8-85

8700' S 40° 32' 30"
8500' W 79° 40' 00"
(N)
New Kensington East
7 1/2 miles

For Department Use Only	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
	129-00134	Upper Burrell Twp.	W.J. Bescom 63 A	1		1928	Gas	3825'	10"-21' & 8 1/2"-195' 6 1/2" Pulled & 4-3/4"-975' 3" 3825'		3" Anchor 3145'	3725'-3745'
	00135	Upper Burrell Twp.	J.J. Becker 86 A	1		1920	Gas	2491'	10"-40' & 6 1/2" Pulled 4-7/8" 2141' 3" 2184'		3" Wall 2184'	2182'-2213'
	00136	Franklin Township	Lizzie Hall 95 A	2		1918	Gas	3824'	8 1/2"-237' & 6 1/2"-940' 4-3/4" 1964' 3" 3824'		3" Anchor 2310'	3050'-3062' 3125'-3168' 3724'-3740'
	00137	Upper Burrell Twp.	J. P. Hamilton 81A	1		1922	Gas	3820'	8 1/2"-200' & 6 1/2" Pulled 4-3/4" 1975' 3" 3820'		3" Anchor 2125'	3035'-3045' 3110'-3155' 3708'-3730'
	00138	Upper Burrell Twp.	J.P. Hamilton 81 A	2		1923	Gas	3770'	8 1/2"-150' & 6 1/2" Pulled 4-3/4" 1885' 3" 3770'		3" Anchor 1930'	3040'-3088' 3230'-3235' 3630'-3640' 3650'-3665'
	00139	Upper Burrell Twp.	A.T. Miller 90 A	1		1915	Gas	3753'	6 1/2" 775' 4-3/4" 1766' 3" 3753'		3" Anchor 2145'	2200'-2240' 3660'-3674'
	00140	Upper Burrell Twp.	J. McCrady, Sr 84 A	1		1917	Gas	3976'	6 1/2" Pulled 4-3/4" 2105' 3" 3976'		3" Anchor 2345'	2435'-2485' 3190'-3205' 3875'-3890'

Attachments Needed:

- ☒ 7 1/2 minute topographic map or other description to enable the Department to find the well site on the ground
☒ Proof of bond or blanket bond ☐ Alternate fees in lieu of bond

☒ Driller's log (if available)

☒ 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.

129-00136
WES-00736

DRILLERS' RECORD 129-00136

Well No. 2 Mr. Lizzie Hall Farm of 95 acres in Burrill Twp. Hastings County,
 Monmouth North by Eliza L. Brooks Mrs. East by Baxter Walker
 th by Frankie Beighley West by John Hamilton
 well is located about 350 feet from the South line and about 300 feet from the West line of the farm
 d for the J. H. Phillips Land Co. Company and completed in the month of October 1918
 d with 237 feet of 8 1/2 inch casing set in on packer
 Cased with 946 feet of 4 3/4 inch casing set in on packer
 Coal veins 47.5 - 48.2 - 7 ft. Location card filed in Franklin Twp
 Well is located in " " "
 Limestone 750 - 760 - 10 ft.

Kind of formation Sand or Slate, etc.	Top	Bottom	Thick-ness	Dist. from top of H.P.	If Sand give name	Description	If it contains gas, oil or water, state quantity and where in the sand found.
Sand	800	860	60		60 ft.		
"	877	935	58		40 ft.		
"	1025	1140	115		70 ft.		
"	1725	1830	105		Gas	White	Water at 1740.
"	1850	1964	114		150 ft.	"	Gas at 1899
"	1985	2010	25		30 ft.	"	
"	2100	2130	30		Boulder		
"	2150	2175	25		Thin		
"	2210	2220	10		Fourth		
"	2252	2340	88		Fifth		
"	3050	3062	12		Speechley		Gas at 3050 High
"	3125	3168	43		Speechley		Gas at 3131, 3141 and 3145
"	3427	3444	17		Sheffield Chocolate		
"	3724	3740	16		Bradford	"	Gas at 3724 to 3728 blew drillings up 50

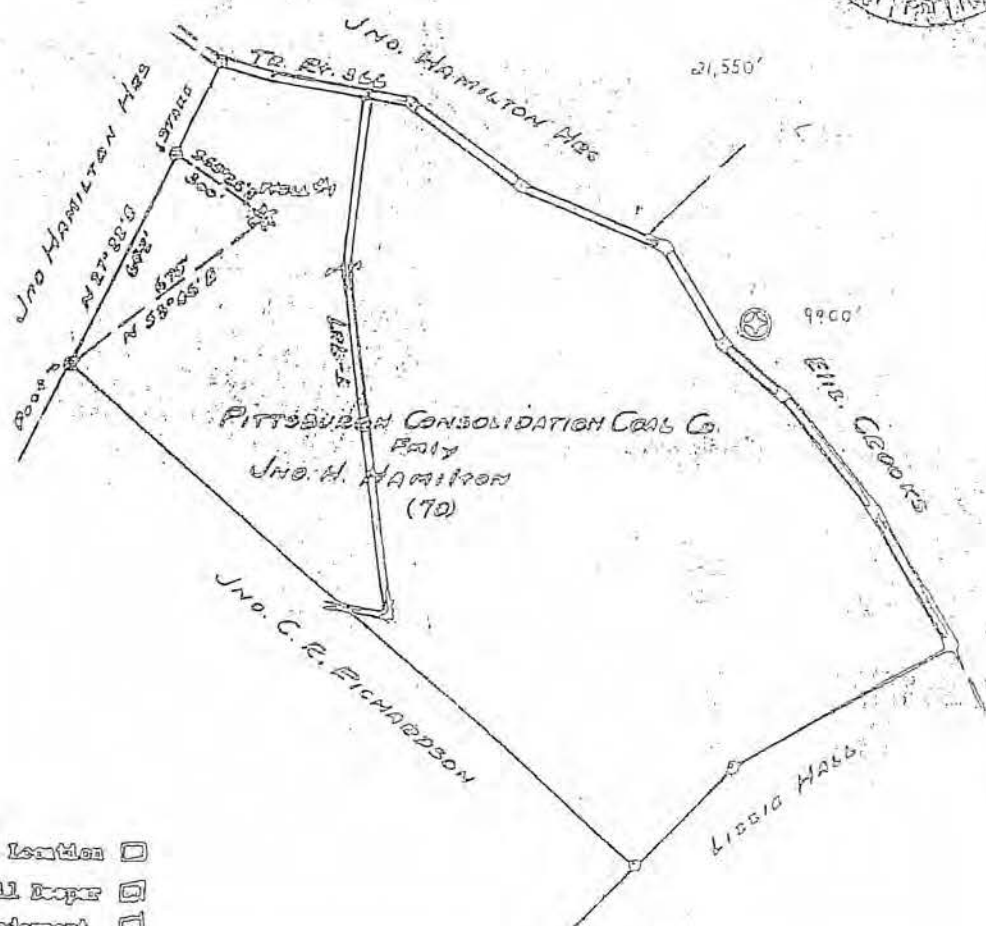
Remarks

Shot with 60gts Oct 18, 1918. 180⁵⁰

The above record was copied by me until it had been O. K'd or approved on the 20 day of Nov 1918
 by Supt. R. B. B.

129-20294

129-20294



- New Location ☐
 Drill Log ☐
 Amendment ☐
 Re-drill ☐

Company P. L. PHILLIPS GAS & OIL COMPANY

Address 205 N. Erie St., Butler, Pa.

From Jno. Consolidation Coal Co. Jno. H. Hamilton

Tract 1 Acres 70 Less No. 1

Well (Face) No. 1 Co. Serial No. 1

Angle of Deviation, if any

Elevation 940' Quadrangle

County Westmoreland Township Franklin

Engineer Myron B. Beyer

Engineer's Registration No. 703151

File No. Drawing No.

Date Recd. 15, 1961 Scale 1"=400'

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF MINES

Oil and Gas Division
HARRISBURG

WELL LOCATION MAP
Dept. File No. 129-20294

⊕ Denotes location of well on United
States Topographic Map.

Scale 1" = 400'

WORKABLE COAL SEAMS TO BE MINED

Name of Seam

All North

129-20294

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF MINES AND MINERAL INDUSTRIES
OIL AND GAS DIVISION

68°00'54"00"32'30"
98°00'W 79°40'00"

(8) ✓

NEW KENSINGTON EAST
QUADRANGLE: ~~Butler~~ Butler 72 10 2240 54035
MAP REFERENCE: NEW KENSINGTON EAST (H)
WELL RECORD
PERMIT NO. 189-20294
KIND OF WELL: Oil
(Oil, Gas, Other)

COMPANY:	Size of Casing and Tubing	Used in Drilling	Left in Well	Packers: Type, Size and Depth
<u>T. W. Phillips Gas and Oil Company</u>	<u>8-3/4"</u>	<u>222'</u>	<u>222'</u>	<u>4-3/4" x 2" Anchor</u>
ADDRESS: <u>205 E. Main Street, Butler, Pa.</u>				
<u>Fgh. Consolidation Coal Co.</u>	<u>4-9/16"</u>	<u>1840'</u>	<u>1840'</u>	<u>at 3665'</u>
FARM <u>Especially John H. Hamilton ACRE</u> <u>70</u>				
WELL (FARM) NO. <u>2</u> CO. SERIAL NO.	<u>3"</u>	<u>2035'</u>	<u>2035'</u>	
ELEVATION: <u>940'</u> LEASE:	<u>2"</u>	<u>3642'</u>	<u>3642'</u>	
TOWNSHIP: <u>Farmville</u> COUNTY: <u>Westmoreland</u>				
DRILLING COMMENCED: <u>1-8-1962</u> COMPLETED: <u>1-19-1962</u>				
PRODUCTION: <u>Oil, Gas, and Water</u>				PERFORATIONS AT:
ROCK PRESSURE: <u>2264</u> psig <u>24</u> hrs.				<u>3642' - 3600'</u>
WELL TREATMENT: (Shooting, Acidizing, Fracturing Etc.) <u>Hydrofractured</u>				
Cementing Data (Steel Pipe, Depth, No. Joints, Etc.) <u>2" 3600' - 3516', 10 Bags Cement, 1-23-1962</u>				
RESULTS AFTER TREATMENT: <u>Open Flow</u> <u>175,000 Cu. Ft.</u>				
ROCK PRESSURE AFTER TREATMENT: <u>2700' - 24 Hrs.</u>				
REMARKS:				

Drilled 1917

FORMATION	DEPTH	LOGGING	GAS AT	OIL AT	WATER AT (Fresh or Salt Water)	REMARKS
Sand	865	935				
"	1640	1720				
"	1740	1840				
"	1890	1910				
"	1965	1995				
"	2080	2111				
"	2145	2193	2172			
"	2925	2980				
"	3518	3616	3620			
Total Depth		3642'				



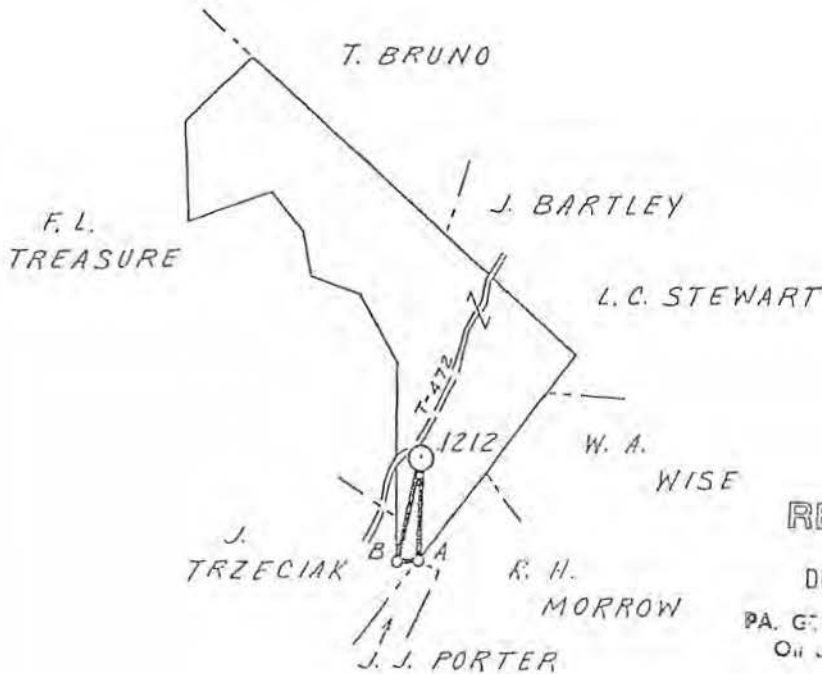
A - W. OAK COR.
 A-WELL = N 00° 49' E 924.48'
 WELL-B = S 12° 47' W 956.79'
 B - COR STONE
 B-A = N 87° 29' E 198.61'

⊕ TOPO.
 REF.

3,650' SOUTH OF LATITUDE 40° 32' 30"

8650 WEST OF LONGITUDE 79° 40'

129-21590



RECEIVED

DEC 10 1979

PA. GEOL. & NAT. HIST. SURV.
 Oil & Gas Div.

3,600

☐ NEW LOCATION ☐ REVISED LOCATION ☐ DRILL DEEPER ☐ ABANDONMENT ☒ RE-DRILL ☐ REPAIRS	DIVISION NORTHERN		SURVEYED BY KUNCHEFF		MAP NK 10 EH 6		
	LOC. MADE (Date) 11 / 28 / 78		BOOK 1858	PAGE 20-21	EL. BOOK 1858	PAGE 19	
	APPROVED E. O. Campbell					DATE 11 / 20 / 79	

THE PEOPLES NATURAL GAS COMPANY TWO GATEWAY CENTER, PITTSBURGH, PENNSYLVANIA 15222			COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BX-C 12-6-79 DIVISION OF OIL AND GAS PITTSBURGH WELL LOCATION MAP 129-21590 DEPT. FILE NO WES-21590-R		
FARM WM. F. & R. N. CROOKS					
TRACT 1	ACRES 120	LEASE NO. 8649			
WELL (FARM) NO. 1	CO. SERIAL NO. 1212				
ELEVATION 901'	QUADRANGLE NEW KENSINGTON E.				
COUNTY WESTMORELAND					
WORKABLE COAL SEAMS, IF ANY ☐ SOLID ☐ COB NAME OF SEAM ALL SEAMS OWNER OF SEAM CONSOLIDATION COAL CO.					
DATE 11-21-79					

DR. BY ASK / PCK	DATE 12 / 5 / 79
----------------------------	----------------------------

129-21590

FORMATIONS						
NAME	TOP	BOTTOM	GAS AT	OIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA
Coal	320					Drillers Log
Sand	725	780				
Sand	820	990				
Sand	1530	1640				
Sand	1640	1770	1701			
Sand	2060	2161				
Sand	2871	2900				
Sand	2956	2982				
Sand	3265	3280				
Sand	3561	3579	3563			
Total depth		3609				

DEW-TGS
129-21590

February 27, 19 81

DATE

E. O. Campbell

APPROVED BY E. O. Campbell

Manager, Production & Storage

TITLE

129-22777

N/F WILLIAM CROOKS

Well is located on top of map 2150 foot west of LONGITUDE 79° 30' 00"

DER-TGS
1985 NOV 27 AM 11:08
DIVISION OF OT
AND GAS IN FUEL

N/F WILLIAM BEACOM

HAROLD
MORROW

M/F ROBERT McVAY

W/P MARGARET
MORROW

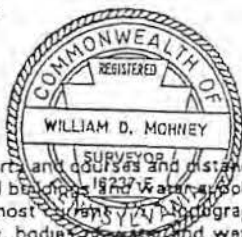
N/E WILLIAM
CROOKS

LOC TO A 583°11'56"W 486.04'
LOC TO B 508°56'31"W 1391.20'

A: IRON PIN ON CORNER
B: IRON PIN ON CORNER

PROPERTY LINE
LIMIT OF LEASE

SCALE 1" = 500



Include description of the property and distances of the well(s) location to two or more permanent identifiable points or land marks, all buildings and water bodies within 200', all springs, bodies of water and streams within 100' identified on the most recent 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 # 37-129-22777-10 Project # _____

Well Operator Penneco Oil Company, Inc.	Revised Re-issue Alteration Storage Recondition New Location Drill Deeper Abandonment Registration Plugging	Surveyor/Engineer William D. Mahoney
Address U.S. Route 22	RECEIVED	Drawing Number 48
Delmont, PA 15626		Date 10/30/85
Surface Owner Harold V. Murrow	JAN 6 1986	Date
Surface Lessee (if any)	PA GEOLOGICAL SURVEY (Oil & Gas Geology Division)	Approximate course and distance to water supply
Form Name Murrow	Surface landowner and water purveyor with water supply within 1,000'	William Venter 43° 30' W 950'
Well No #1	Serial No PM-37	William Wise S 81° E 875'
Acres 71.83	Ground Elevation 1145	
Topo Quadrangle New Kensington East	Section 8	
County Westmoreland	Political Subdivision Upper Burrell	Owner/Operator Consolidation Coal Co.
Angle of Deviation None	Anticipated TD 4,000	Name of Seam Upper Freeport
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		Upper Freeport
TRENTON MWE		12-10-85

CHE
4-25-86
LE 1

28-22777

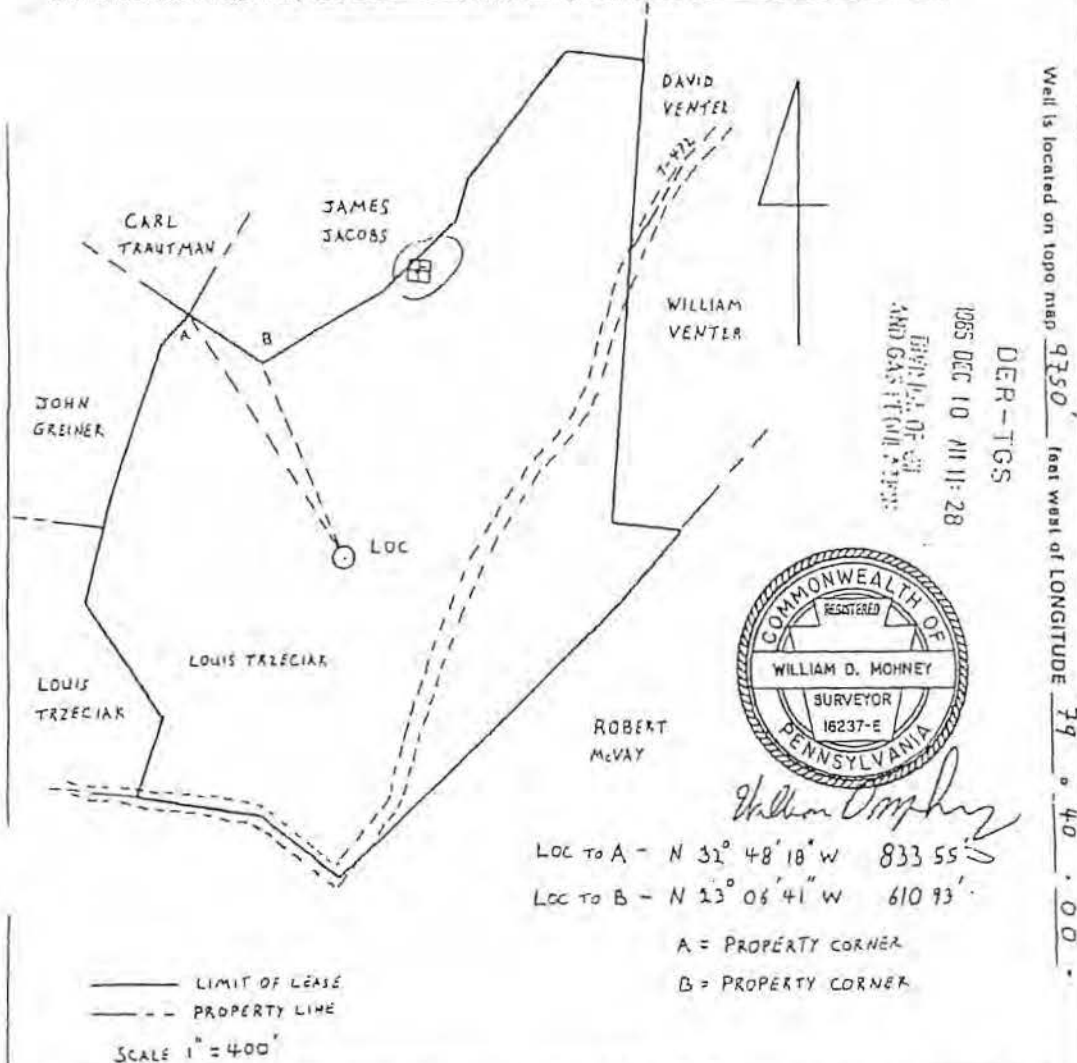
500-885

FORMATIONS						
NAME	TOP	BOTTOM	GAS AT	DIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA
Clay	0	10				Driller's Log
Clay	10	15				
Shale	15	25				
Red Rock	25	35				
Shale	35	55				
Red rock	55	60				
Shale	60	80				
Sandy Shale	80	95			65' - Fresh	
Red Rock	95	115				
Shale	115	175				
Sand	175	220				
Shale	220	230				
Red Rock	230	235				
Shale	235	245				
Red Rock	245	250				
Shale	250	260				
Red Rock	260	275				
Shale	275	290				
Red Rock	290	295				
Coal And Shale	295	299				
Sandy Shale	299	305			300' - Fresh	GEOPHYSICAL LOT DATA
Sand	305	355				
Sandy Shale	355	390				
Sand	390	465				
Shale	465	480			470' - Fresh	
Sandy Shale	480	502				
Shale	502	545				
Sand	545	582				
Coal	582	589				
Shale	589	630				
Sandy Shale	630	870				
Coal	870	875				
Shale	875	930				
Sandy Shale	930	965				
Shale	965	1000				
Sandy Shale	1000	1070				
Shale	1070	1110				
Sandy Shale	1110	1130				
Sand	1130	1190				
Red Rock	1190	1200				GEOPHYSICAL LOT DATA
Sand	1200	1255				
Sandy Shale	1255	1295				
Black Shale	1295	1305				
Shale	1305	1325				
Sand	1325	1410				
Shale	1410	1495				
Red Rock	1495	1500				
Sandy Shale	1500	1570				
Shale	1570	1735				
Sandy Shale	1735	1760				
Shale	1760	1825				
Sandy Shale	1825	1850				
Sand	1850	1910				
Sandy Shale	1910	2070				
Shale	2070	2120				
Red Rock	2120	2360				
Sandy Shale	2360	2540				
Sand	2540	2730				
Sandy Shale	2730	2800				
Sand	2800	2880				
Sandy Shale	2880	2975				
Shale	2975	3005				
Sandy Shale	3005	3040				
Shale	3040	3185				
Sandy Shale	3185	3210				
Sand	3210	3225				
Shale	3225	3290				
Sandy Shale	3290	3380				
T.D.	3380					

March 26, 1986
DATE
[Signature]
APPROVED BY
Vice President
TITLE

129-22783

Well is located on topo map 4525 feet south of LATITUDE 40° 32' 30"



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 # 37-129-22783-00 Project #

Well Operator Pennaco Oil Company, Inc.	Revision Re-Issue Alteration Storage Recondition New Location Drill Deeper Abandonment Registration Plugging	Surveyor/Engineer William D. Mohney
Address U.S. Route 22		Drawing Number 41
Delaware, PA 15626		Date 10/22/85
Surface Owner Louis Trzeciak, Jr. & Cynthia Louise Trzeciak		Date
Surface Lessor (if any) None	Surface landowner and water purveyor with water supply within 1,000'	Approximate course and distance to water supply
Farm Name Trzeciak	Michael Trzeciak	S 43° W 800'
Well No. #1	Serial No. P1-111	RECEIVED
Acres 443	Ground Elevation 1000'	JAN 8 1996
Topo Quadrangle New Kensington East	Section H 8	PA GEOLOGICAL SURVEY
County Stairland	Political Subdivision Upper Merion	Office of Geology Division
Age of Drilling None	Anticipated TO 4,000	Upper Freeport
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		

ER-004; Rev. 10/82

4525' S 40° 32' 30" W
79° 40' 00" E

(8)

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

NEW KENSINGTON CO.

129-22783

34827
34878
34879

WELL RECORD

PERMIT NO. 37-129-22783-00

PROJECT NO. PINE RUN-DEV

TYPE OF WELL Gas

WELL OPERATOR Penneco Energy Corporation TELEPHONE NO. 412-488-8232

ADDRESS U. S. Route #22, Delmont, PA 15626 ZIP

FARM NAME Louis Trzeciak, Jr. FARM NO. SERIAL NO. PT-36 ACRES 49.3

TOWNSHIP Upper Burrell COUNTY Westmoreland

DRILLING COMMENCED 6-2-86 DRILLING COMPLETED 6-9-86

ELEVATION 1000' 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															
11-3/4"	38	Cuttings	None	N/A	N/A	N/A	6/2/86														
8-5/8"	1,718	350	10	Float Shoe	8-5/8"	1,728	6/7/86														
4-1/2"	3,142	265	5	Float Shoe	4-1/2"	3,152	6/9/86														
1-1/2"	3,060	N/A	N/A	N/A	N/A	3,060	6/18/86														
		<table><tr><td>TD</td><td>DD</td><td>D.P.I.</td><td>Class</td><td>O</td><td>G</td><td>Lease</td></tr><tr><td>3184</td><td></td><td>3116</td><td>D</td><td></td><td>2</td><td>1</td></tr></table>						TD	DD	D.P.I.	Class	O	G	Lease	3184		3116	D		2	1
TD	DD	D.P.I.	Class	O	G	Lease															
3184		3116	D		2	1															

PERFORATION RECORD

STIMULATION RECORD

DATE	INTERVAL PERFORATED FROM TO		DATE	INTERVAL TREATED	AMOUNT FLUID	AMOUNT SAND	INJECTION RATE
6-18-86	3,082	3,116	6-2-86	3082-3116	40,000	75,000#	33.0BPM
6-18-86	2,270	2,276	6-2-86	2270-2276	17,200	18,700#	17.8BPM

NATURAL OPEN FLOW 100 MCF	NATURAL ROCK PRESSURE Not Taken	HRS. DAYS
AFTER TREATMENT OPEN FLOW 237 MCF	AFTER TREATMENT ROCK PRESSURE 700#	72 HRS. DAYS

REMARKS: Good cement returned to surface after setting 8-5/8" casing.

U. S. Energy

Bradford

CHE
9-24-86
led

(FORMATION ON REVERSE SIDE)

NOV 5 1986

PA GEOLOGICAL SURVEY
(Oil & Gas Geology Division)

129-22783

FORMATIONS						
NAME	TOP	BOTTOM	GAS AT	OIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA
Clay	0	10				Driller's Log
Clay	10	15				
Shale	15	80			30' - Fresh	
Red rock	80	110				
Sand and Shale	110	120				
Red Rock	120	145				
Shale	145	200				
Sand and Shale	200	230			200' - Fresh	
Shale	230	280				
Sand and Shale	280	365				
Shale	365	450				
Coal	450	455				
Shale	455	545				
Sand and Shale	545	580				
Shale	580	625				
Sand and Shale	625	675				
Black Shale and Sand	675	700				
Sand and Shale	700	795				
White Sand	795	815				
Black Shale and Sand	815	845				
Sand and Shale	845	860				
White Sand	860	880				
Sand and Shale	880	995				
Sand	995	1310				
Shale	1310	1360				
Sand and Shale	1360	1420			1,360 - Salt	
Red Rock Shale	1420	1450				
Sand and Shale	1450	1580				
Shale	1580	1620				
Sand and Shale	1620	1640				
Shale	1640	1780			1,750 - Salt	
Sand	1780	1820				
Sand and Shale	1820	1895				
Shale	1895	1985				
Red Rock	1985	2010				
Shale	2010	2020				
Red Rock	2020	2069				
Shale	2069	2080				
Sand and Shale	2080	2100				
Red Rock and Shale	2100	2175				
Sand, Shale and Red Rock	2175	2240				
White Sand and Shale	2240	2270				
Sand, Shale and Red Rock	2270	2290				
Sand and Shale	2290	2300				
Shale	2300	2375				
Sand and Shale	2375	2975				
Shale	2975	3020	3,020	3,020		
Sand and Shale	3,020	3120				
Shale	3120	3184				
T.D.	3184					
BRAD						
			GEOPHYSICAL LOG DATA			
			Fifth Speedley		2238-2276 3080-3120	

DATE Dec 11, 1982

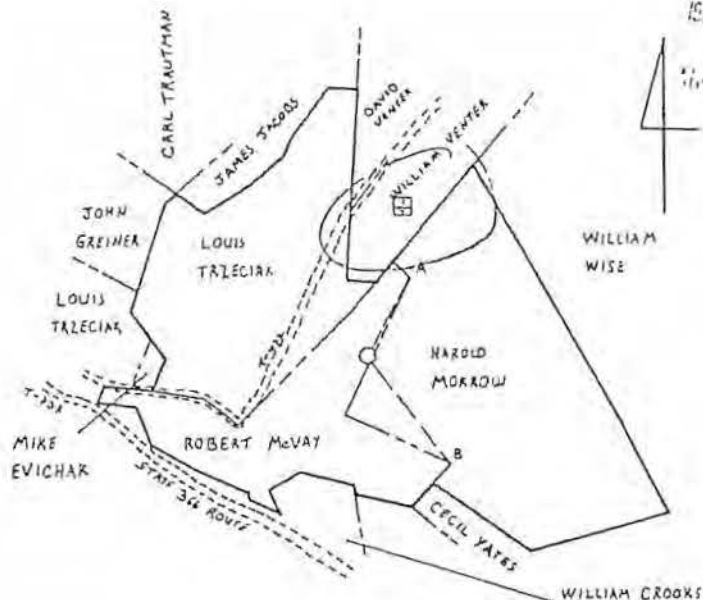
APPROVED BY W. A. [Signature]

TITLE

WELL LOCATION PLAT

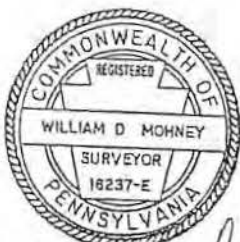
Well is located on topo map 4725 feet south of LATITUDE 40° 32' 30"

129-22830

Well is located on topo map 8280 feet west of LONGITUDE 79° 0' 00"

— LIMIT OF LEASE
 --- PROPERTY LINE

SCALE 1" = 1000'



LOC TO A N 29° 12' 38" E 64.71'
 LOC TO B S 37° 37' 25" E 95.05'

A - IRON PIN ON PROPERTY CORNER
 B - IRON PIN ON PROPERTY 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 # 25730
129-22830-22820

Project #

Well Operator <u>Princeton Oil Company, Inc.</u>	Revision ☐ Re Issue ☐ Alteration ☐ Storage Recondition ☐ New Location ☒ Drill Deeper ☐ Abandonment ☐ Registration ☐ Plugging	Surveyor/Engineer <u>William D. Moliney</u> Drawing Number Date <u>11/1/85</u> Date
Address <u>65 Route 22</u>	Surface landowner and water purveyor with water supply within 1000' <u>N/A</u>	Approximate course and distance to water supply <u>N/A</u>
Delmont, PA 15626		RECEIVED
Surface Owner <u>Robert D & Joyce S. McVay</u>		<u>JUN 30 1985</u>
Surface Lessor (if any) <u>None</u>		
Farm Name <u>McVay</u>		
Well No. <u>#1</u>	Serial No. <u>PM-6</u>	
Acres <u>40.3</u>	Ground Elevation <u>1040</u>	
Topo Quadrangle <u>New Amintion east</u>	Section <u>8</u>	
County <u>Westmoreland</u>	Political Jurisdiction <u>Upper Burrell Twp</u>	Owner/Operator <u>Wills Coal Co</u>
Angle of Deviation <u>None</u>	Anticipated TD <u>4,000</u>	Workable Coal <u>Upper Freeport</u>
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		<u>3-17-86</u> RECEIVED <u>MIWE</u>

R-OG-4: Rev. 10/82

36184
36185
36186

49° 75' S 40° 32' 30" W
8,730' W 79° 40' 00" E
(8)
COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF OIL AND GAS REGULATION
PITTSBURGH, PENNSYLVANIA 15222

NEW KENSINGTON EAST

12-22830

Office Use Only

WELL RECORD

PERMIT NO. 37-129-22830-00

PROJECT NO.

TYPE OF WELL

Gas

PINE RUN-DEV

WELL OPERATOR

Penneco Energy Corporation

TELEPHONE NO.

412-468-8232

ADDRESS

U. S. Route 122, Delmont, PA

ZIP 15626

FARM NAME

Robert D. McVey

FARM NO.

SERIAL NO.

PM-6

ACRES

49

TOWNSHIP

Upper Burrell

COUNTY

Westmoreland

DRILLING COMMENCED

1-26-87

DRILLING COMPLETED

1-30-87

ELEVATION

1040'

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	
11-3/4"	41	Cuttings	None	N/A	N/A	N/A	1-26-87
8-5/8"	1,966	275	10	Float Shoe	8-5/8"	1,976	1-28-87
4-1/2"	3,294	255	5	Float shoe	4-1/2"	3,304	1-30-87
1-1/2"	3,089	N/A	N/A	N/A	N/A	3,089	2- 7-87

PERFORATION RECORD

STIMULATION RECORD

DATE	INTERVAL PERFORATED		DATE	INTERVAL TREATED	AMOUNT FLUID	AMOUNT SAND	INJECTION RATE
	FROM	TO					
2-5-87	3,086	3,115	2-5-87	3086-3115	30,600	50,000#	34.8BPM
2-5-87	3,014 3,019	3,015 3,022	2-5-87	3014-3022	8,500	12,000#	24.0BPM
2-5-87	2,262	2,274	2-5-87	2262-2274	23,750	29,600#	31.6BPM

NATURAL OPEN FLOW

Not Taken

NATURAL ROCK PRESSURE

Not Taken

HRS.

DAYS

AFTER TREATMENT OPEN FLOW

411 MCF

AFTER TREATMENT ROCK PRESSURE

800#

72

HRS.

DAYS

REMARKS:

Good cement returned to surface after setting 8-5/8" casing

VENGO

BRAD

RECEIVED
(FORMATION ON REVERSE SIDE)

JUL 20 1987

PA GEOLOGICAL SURVEY
(Oil & Gas Geology Division)

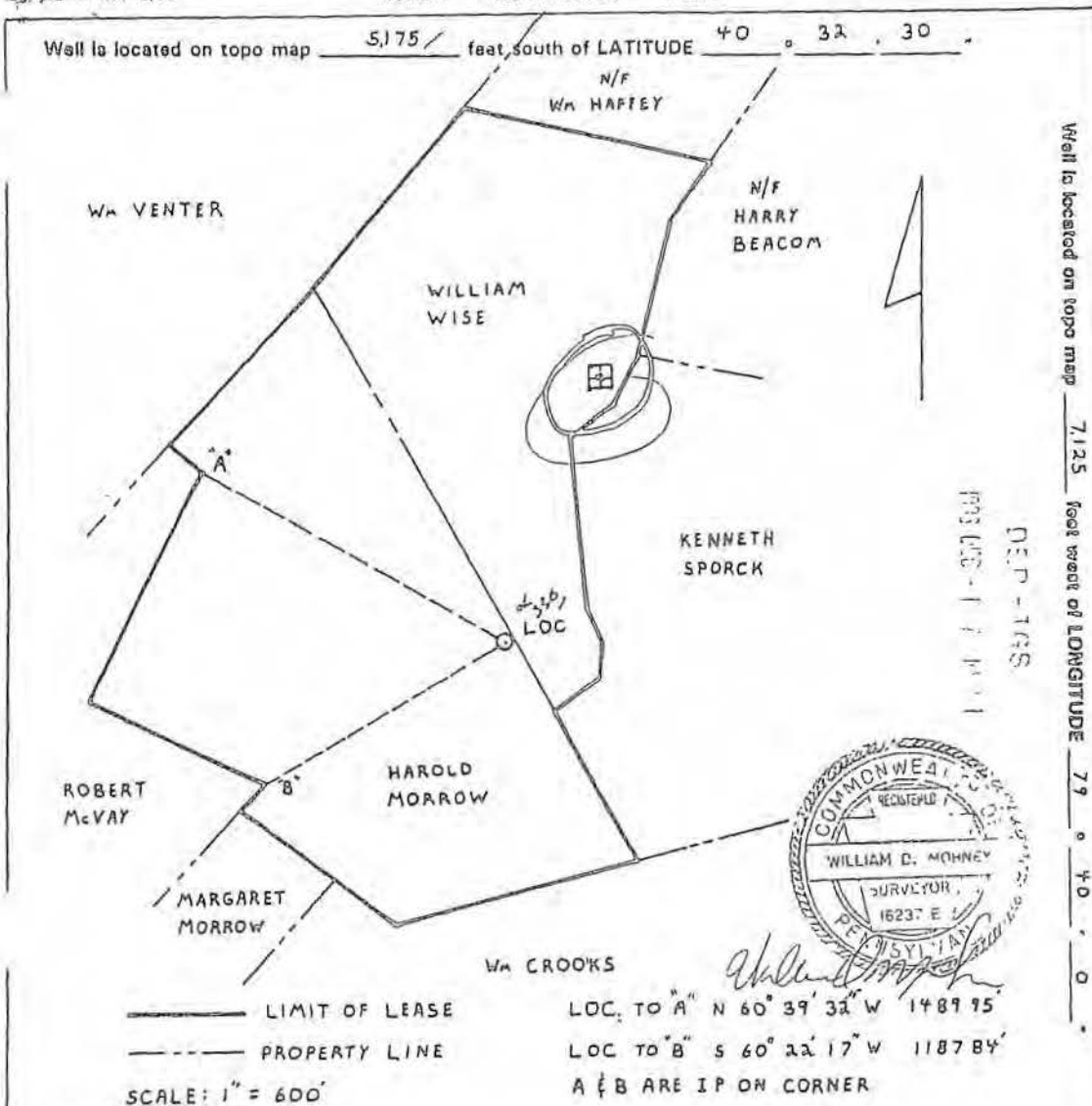
csc
5-26-87
Lcd

129-22836.

FORMATIONS						
NAME	TOP	BOTTOM	GAS AT	OIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA
Sub	0	10				Driller's Log
Shale	10	85				
Red Rock	85	135				
Shale	135	225			225' Fresh	
Sand	225	280				
Sand and Shale	280	335				
Shale	335	390				
Coal	390	393				
Shale	393	415				
Sand and Shale	415	440				
Shale	440	535				
Sand	535	595				
Shale	595	680				
Coal	680	683				
Shale	683	730				
Sand and Shale	730	765				
Shale	765	975				
Sand	975	1040				
Shale	1040	1105				
Sandy Shale	1105	1195				
Sand	1195	1230				
Shale	1230	1265				
Sand	1265	1290				
Shale	1290	1385				
Sandy Shale	1385	1490				
Shale	1490	1695				
Sand and Shale	1695	1775				
Sand	1775	1840				
Red Rock	1840	1850				
Sand	1850	1980	1855'			
Red Rock	1980	2050				
Shale	2050	2100				
Red Rock	2100	2175				
Shale	2175	2310				
Sand	2310	2520				
Shale	2520	2685				
Sandy Shale	2685	2850				
Sand	2850	3015				
Shale	3015	3185				
Sand	3185	3277				
T.D.	3277					
GEOPHYSICAL LOG DATA						
Speechley			3,080	3,118		
Speechley Stray			3,004	3,024		
Fifth			2,260	2,276		

Mark 17, 1987
DATE
APPROVED BY
TITLE

WELL LOCATION PLAT



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 # 31-129-22913-00 Project # _____

Well Operator Penneco Oil Company, Inc.	Revision Re-Issue ☐ Alteration ☐ Storage Recondition ☒ New Location ☐ Drill Deeper ☐ Abandonment ☐ Registration ☐ Plugging ☐	Survivor/Engineer W.D. Mohnhey Drawing Number PM - 2 Date 11/18/86 Date
Address U.S. Route #22 Delmont, PA 15626	Surface landowner and water purveyor with water supply within 1,000'	Approximate course and distance to water supply
Surface Owner Harold V. Morrow	Kenneth Sporck	N 75° E 800'
Surface Lessor (if any) N/A	Ronald Brennan	S 70° E 700'
Farm Name Morrow		
Well No #2		
Acres 71.83	Ground Elevation 1160	
Quadrangle New Kensington East	Section 8	
County Westmoreland	Political Subdivision Upper Burrell	
Anticipated TD None	Anticipated TD 3,500'	
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		RECEIVED DEC 16 1986 PA GEOLOGICAL SURVEY Office of Oil and Gas (Geology Division)
Villa Coal Co.		Upper Burrell
RENTON		12-3-86

CHE
10-25-88

FORMATIONS

NAME	TOP	BOTTOM	GAS AT	OIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA	
Sub	0	10				Driller's Log	
Shale	10	40					
Sand	40	85					
Shale	85	165					
Red Rock	165	180					
Shale	180	245					
Sand	245	290					
Sand and Shale	290	330					
Shale	330	375					
Coal	375	378					
Shale	378	565					
Sand	565	640					
Coal	640	643					
Shale	643	820					
Sand	820	835					
Shale	835	885					
Sand	885	925					
Shale	925	1000					
Sand	1000	1080					
Sand and Shale	1080	1105					
Shale	1105	1150					
Sand	1150	1310					
Sand and Shale	1310	1350					
Sand	1350	1440					
Sand and Shale	1440	1580					
Sand	1580	1640					
Shale	1640	1760					
Sand and Shale	1760	1810					
Sand	1810	1880					
Shale	1880	2085					
Red Rock	2085	2100					
Shale	2100	2170					
Red Rock	2170	2240					
Shale	2240	2415					
Sand	2415	2620					
Sandy Shale	2620	2785					
Shale	2785	2940					
Sandy Shale	2940	3100					
Sand	3100	3260					
Shale	3260	3400					
TD	3400						
BRUNSON							
GEOPHYSICAL LOG DATA							
Speechley	-	3120 - 3148					
Speechley Stray	-	3040 - 3044					
Fifth	-	2270 - 2312					
Fourth	-	2206 - 2230					

DATE March 17, 1987
John V. Vincent

42383

129-23073

Well is located on topo map 5700 feet south of LATITUDE 40 ° 32 ' 30 "



NOTE: Well location is located at a minimum of 330 feet from the lease line and a minimum of 1000 feet from any existing gas wells.

Well is located on topo map 8060 feet west of LONGITUDE 79 ° 40 ' 00 "

Limit of Lease

Property Line

Scale = 1" = 1000'

Loc. to "A" S 75° 02' 45" W 123.19'

Loc. to "B" S 75° 04' 40" E 1523.62'

"A" and "B" are iron pins on property corners.

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 # 37-129-23073-00 Project #

Well Operator Penneco Oil Company, Inc.	Revision ☐ Re-issue ☐ Alteration ☐ Storage Recondition ☐ New Location ☐ Drill Deeper ☐ Abandonment ☐ Registration ☐ Plugging	Surveyor/Engineer W.D. Mohney & Associates Drawing Number 10/23/87 DEC 81307 Date 12/2/87
Address U.S. Route 22 Dalmont, PA 15626	Surface landowner and water purveyor with water supply within 1,000'	Approximate distance to nearest survey point 1000.0'
Surface Owner Harold Morrow	Cecil H. Yates William F. Crooks William F. Crooks Harold Morrow Fred C. Vanderhevel George Wilson	S 0° 32' 00" W 575' S 8° 30' 00" W 701.5' S 25° 34' 30" E 945.0' S 65° 08' 00" E 415.0' S 69° 00' 30" W 948.5' S 57° 30' 00" W 1000.0'
Surface Lessor (if any) None	Owner/Operator Harold Morrow Villa Coal Co.	Workable Coal Seams All Other Seams Upper Freeport
Farm Name Morrow	Anticipated TD 4,000	12-4-87
Well No 3	Serial No PM 40	
Acres 71.83	Ground Elevation 1020	
Quadrangle Kensington East	Section 7	
City Jostmoreland	Political Subdivision Upper Burrell Twp.	
Angle of Deviation None		
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		

5700' S 40° 32' 30"
8060' W 79° 40' 00"

(8)

NEW KENSINGTON EAST

ER-OG-4: Rev. 6/84

H 38215
38216
38217

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

129-23073



129-23073

WELL RECORD

PERMIT NO.	07-129-23073-00	PROJECT NO.	PINE RUN-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 Harrow #3	FARM NO. 3	SERIAL NO. PH-40	ACRES 72		
TOWNSHIP Upper Burrell		COUNTY Westmoreland			
DRILLING COMMENCED 2-19-88		DRILLING COMPLETED 2-23-88			
ELEVATION 1020'		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	
16"	22	Cuttings	None	N/A	N/A	22	2-19-88
11-3/4"	110	Cuttings	None	N/A	N/A	110	2-19-88
8-5/8"	1,835	350	12	Float Shoe	8-5/8"	1,845	2-19-88
4-1/2"	3,205	325	5	Float Shoe	4-1/2"	3,215	2-23-88
1-1/2"	3,078	N/A	N/A	N/A	N/A	3,078	3-8-88

PERFORATION RECORD

DATE	INTERVAL PERFORATED FROM	TO
3-8-88	3072	3107
	2998	3003
3-8-88	3006	3008
	2234	2236
3-8-88	2246	2258
	2266	2268

STIMULATION RECORD

DATE	INTERVAL TREATED	AMOUNT FLUID	AMOUNT SAND	INJECTION RATE
3-8-88	3072-3107	30,000	47,500	32.4BPM
3-8-88	2998-3008	8,000	13,000	29.5BPM
3-8-88	2234-2268	16,000	27,000	32.5BPM

T.D.	D.D.	D.P.I.	Check	O.G.	Lease
3255		3167	D	2	1

NATURAL OPEN FLOW	Not Taken	NATURAL ROCK PRESSURE	Not Taken	HRS. DAYS
AFTER TREATMENT OPEN FLOW	375 MCF	AFTER TREATMENT ROCK PRESSURE	620#	72 HRS DAYS

REMARKS:

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

VENANGO

BRADFOOD

CSE

11-13-88

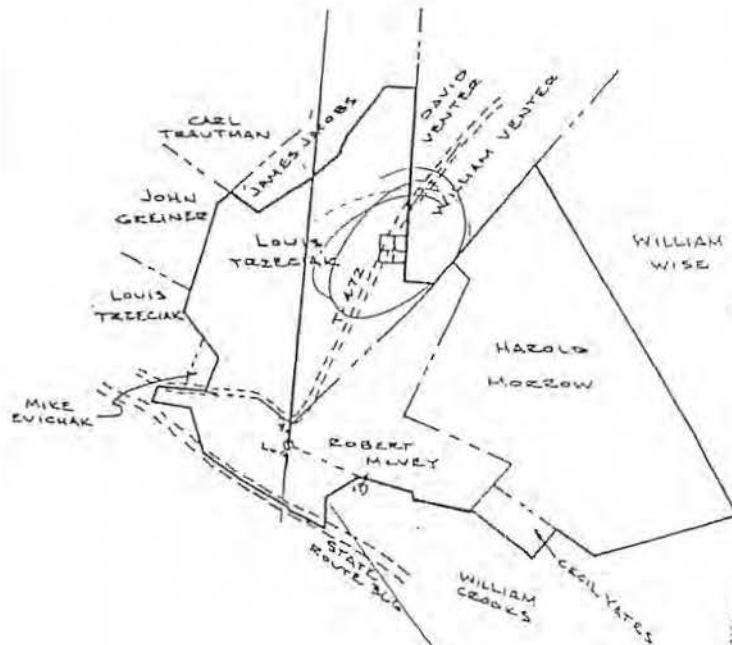
FORMATIONS

129-23073

FORMATIONS						129-2
NAME	TOP	BOTTOM	GAS AT	OIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA
Sub	0	10				Driller's Log
Fill	10	32				
Shale	32	60				
Red rock	60	105				
Sand	105	125				
Shale	125	260				
Sand	260	340				
Shale	340	390				
Sand	390	465				
Coal	465	468				
Shale	468	515				
Sandy Shale	515	565				
Shale	565	655				
Sandy shale	655	745				
Shale	745	840				
Sandy shale	840	885				
Shale	885	970				
Sand	970	1030				
Sand and Shale	1030	1190				
Sand	1190	1280				
Sand and Shale	1280	1375				
Sand	1375	1455				
Shale	1455	1480				
Sandy Shale	1480	1505				
Shale	1505	1575				
Sandy Shale	1575	1645				
Shale	1645	1755			1755	
d	1755	1785			1 1/2 - 2" Fresh	
rock	1785	1790				
nd and Shale	1790	1980				
Red Rock	1980	2005				
Sand and Shale	2005	2035				
Red Rock	2035	2060				
Sand and Shale	2060	2290				
Shale	2290	2410				
Sand and Shale	2410	2860				
Sand	2860	2910				
Shale	2910	3060				
Sand	3060	3095	3000			
Sandy Shale	3095	3180				
Sand	3180	3255				
BRADFORD						
GEOPHYSICAL LOG DATA						
Fifehead					2228 - 2280	
Speechley Stray					2996 - 3010	
Speechley					3070 - 3108	

DATE July 26 19 88
APPROVED BY 
TITLE Vice-President

Well is located on topo map 5,590 feet south of LATITUDE 40° 32' 30"



NOTE: Well location is located at a minimum of 330 feet from the lease line and a minimum of 1000 feet from any existing gas wells.

— LIMIT OF LEASE
— PROPERTY LINE
SCALE = 1" = 1000'

Loc. To A N 7° 30' 34" W 156.14'
Loc. To B S 69° 35' 16" E 535.38'
A and B are Voch iron pins

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 # 57-129-23085-00 Project #

Well Operator Penneco Oil Company, Inc.	Revision Re-Issue Alteration Storage Recondition New Location Drill Deeper Abandonment Registration Plugging	Surveyor/Engineer W.D. Mohnsey & Associates Drawing Number Date 10/22/87 Date
Address U.S. Route 22 Delmont, PA 15626	Surface landowner and water purveyor with water supply within 1,000'	Approximate course and distance to water supply
Surface Owner Robert D. & Joyce S. McVey	See Attached Sheet	
Surface Lessor (if any) None		
Farm Name McVey		
Well No. #2	Serial No. PM-41	
Acres 49.2	Ground Elevation 858	
Quadrangle 1908 Kensington East	Section 8	
County Westmoreland	Political Subdivision Upper Burrell Twp.	Anticipated TD 4,000'
Angle of Deviation None	Commonwealth of Pennsylvania Department of Environmental Resources	
Owner/Operator Robert D. McVey	Workable Coal Seams Name of Seam All seams except U.F. Villa Coal Co. Upper Freeport	
	Routon Mine	1-4-88

5590' S 41° 32' 30"
9710' W 29° 40' 00"

(8)

CR-DG-4, Rev. 6/84

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF ENVIRONMENTAL RESOURCES
BUREAU OF OIL AND GAS REGULATION
PITTSBURGH, PENNSYLVANIA 15205-2988

NEW KENSINGTON EAST

129-23085

Office Use Only

129-23085

WELL RECORD

PERMIT NO. 37-129-23085-00 PINE RUN FIELD	PROJECT NO. 	TYPE OF WELL DEV Gas
WELL OPERATOR Penneco Energy Corporation		TELEPHONE NO. 412-468-8232
ADDRESS 200 Route 22, Delmont, PA		ZIP 15626
FARM NAME Robert D. McVey #2	FARM NO. 	SERIAL NO. PM-41
TOWNSHIP Upper Burrell	COUNTY Westmoreland	
DRILLING COMMENCED 11-5-88	DRILLING COMPLETED 11-10-88	
ELEVATION 858'	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	
9-5/8"	32	Cuttings	None	N/A	N/A	N/A	11-5-88
7"	1,755	240	12	Float Shoe	7"	1,765	11-8-88
4-1/2"	3,652	165	12	Float Shoe	4-1/2"	3,662	11-10-88
1-1/2"	3,531	N/A	N/A	N/A	N/A	3,531	11-19-88
T.D. D.D. D.P.I. Class O G Leno							
3805 3546 1 1							

PERFORATION RECORD

STIMULATION RECORD

DATE	INTERVAL PERFORATED FROM	TO	DATE	INTERVAL TREATED	AMOUNT FLUID	AMOUNT SAND	INJECTION RATE
11-17-88	2826	2836	11-17-88	2826-2836	13,000	12,000#	30BPM
11-17-88	2902	2932	11-17-88	2902-2932	33,500	38,000#	34BPM
11-17-88	3214	3220	11-17-88	3214-3220	9,000	7,200#	25BPM
11-17-88	3522	3526					
	3534	3536	11-17-88	3522-3546	10,500	12,000#	30BPM
	3546	3546					

NATURAL OPEN FLOW 66 MCF	NATURAL ROCK PRESSURE Not Taken	HRS. DAYS
AFTER TREATMENT OPEN FLOW 350 MCF	AFTER TREATMENT ROCK PRESSURE 640#	72 HRS. DAYS

REMARKS:

Good cement returned to surface after setting 7" casing.

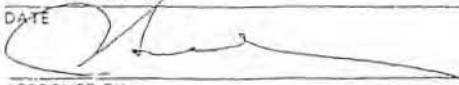
BRADFORD

(FORMATION ON REVERSE SIDE)

CHE
5-23-89
led

129-23085

193-578		FORMATIONS					
NAME	TOP	BOTTOM	GAS AT	OIL AT	WATER AT (FRESH OR SALT WATER)	SOURCE OF DATA	
Sand	0	5				Driller's Log	
Shale	5	15					
Sand and Shale	15	32					
Sand and Shale	32	120			1/2" @ 100'		
Sand and Shale	120	285					
Coal	285	290					
Shale	290	505			1/2" @ 505'		
Coal	505	509					
Shale	509	560					
Sand and Shale	560	1060					
Sand and Shale	1060	1430					
Sand and Shale	1430	1793			1/2" @ 1630'		
Red Rock, Sand & Shale	1793	2090					
Sand and Shale	2090	2550					
Sand and Shale	2550	3130	2800'				
Sand and Shale	3130	3680					
Shale	3680	3805					
BRADFORD							
GEOPHYSICAL LOG DATA							
Fifth					2053-2090		
Bayard					2146-2150		
Speechley Stray					2826-2836		
Speechley					2900-2934		
2nd Balltown					3214-3222		
2nd Bradford					3522-3546		

March 31, 1989
DATE

APPROVED BY
Vice-President
TITLE

129-2334 E



G	C <i>DLT</i>
---	--------------

 - Denotes location of well on 7 1/2" topo map

Permit # 37-129-27748-0

Project #

[illegible]

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 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).

DEV.

Well Operator Penneco Energy Corporation		Telephone Number 412-468-8232	
Address 200 U.S. Route 22, P. O. Box 300, Delmont, PA 15626			
Permit Number 37-129-23348		Project Number	
Farm Name Greiner	Farm Number 1	Serial Number PG-33	Acres 24.23
Township Upper Burrell		County Westmoreland County	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

Drilling Method Rotary (Air) ☒ Mud ☐ Cable Tool ☐		Date Drilling Started	Date Drilling Completed
Other ☐ (Specify)		7/26/91	8/6/91
Elevation	Total Depth	7 1/2" Quadrangle	
920	4214 B	New Kensington East	

Hole Size	Pipe Size	Amount in Well	Material Behind Pipe	Packer/Hardware			Date Run
			Type and Amount	Type	Size	Depth	
15"	13-3/8"	23'	Sanded In	N/A	N/A	N/A	7-29-91
2-1/4"	9-5/8"	393'	Cement - 114 sacks	Float Shoe	9-5/8"	393'	7-30-91
8-3/4"	7"	1827	Cement - 290 sacks	Float Shoe	7"	1840	8-1-91
6-1/4"	4-1/2"	3830	Cement - 165 sacks	Float Shoe	4-1/2"	3838	8-6-91

Cement return on surface casing? ☒ yes ☐ no

Perforation Record			Stimulation Record						
Date	Interval Perforated		Date	Interval Treated	Fluid		Propping Agent		Average Injection Rate
	From	To			Type	Amount	Type	Amount	
8-12	3595	3600	8-12	3595 - 3600	Water	12,000 gal	Sand	21,000 gal	25 BPM
8-12	3281	3286	8-12	3281 - 3286	Water	12,000 gal	Sand	20,000 gal	23.8 BPM
8-12	2966	3000	8-12	2966 - 3000	Water	34,000 gal	Sand	68,000 gal	53 BPM
8-12	2889	2908	8-12	2889 - 2908	Water	12,000 gal	Sand	20,000 gal	23.8 BPM
		T.D.		D.D.	D.P.L.	Class	C/G	Leak	
		4214			3600	D	/	/	

Natural Open Flow 125 MGPD	Natural Rock Pressure	Hours	Days
		N/A	0
After Treatment Open Flow 411 MGPD	After Treatment Rock Pressure 940 psig	Hours 72	Days 3

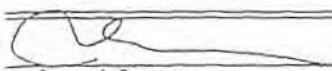
BRADFORD

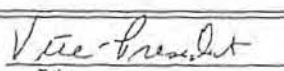
MAR 10 1992

Name, Address, and Telephone Number of Well Service Companies		
D. Hill Drilling Company - Rt 321 South - Kane, PA 16735	814-837-6612	
Nowco Well Service - 3000 Old Airport Road - Wooster, OH 44691	216-264-8885	
Allegheny Nuclear Surveys, Inc. - Elderton, PA 15736	412-354-3090	

129-23748

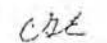
DRILLER'S LOG OF FORMATIONS						
Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Clay	0	5				Drillers Log
Red Bed	5	15				
Shale	15	30				
Sand	30	34				
Sand & Shale	34	345			1/2" @ 65'	
Mine	345	355				
Sand & Shale	355	890			1" @ 890'	
Sand & Shale	890	1,290				
Shale & Sand	1,290	1,670			1" @ 1,665'	
Sand & Shale	1,670	1,860			1" @ 1,790'	
Sand, Red Rock & Shale	1,860	2,475				
Shale & Sand	2,475	3,100	2,875'			
Sand & Shale	3,100	3,650				
Sand & Shale	3,650	4,214				


Operator's Signature


Title

10/31/91
Date

FOR OFFICIAL USE ONLY


Reviewed By

3/12/92
Date

Comments

GEO COPY

Well is located on topo map 3085' feet south of LATITUDE 40° 32' 30"

29-23430

H. A. BIONDI, AGENT

CARL L. TROUTMAN



William D. Mohney

Well is located on topo map 10200' feet west of LONGITUDE 79° 40' 00"

91 SEP -3 AM 11:26
PITTSBURGH REGIONPROPOSED
GAS WELL

GAS WELL

GERALD GREINER

LEASE LINE
PROPERTY LINE
PROPOSED WELL LOCATION
EXISTING GAS WELL

LDC-A = S 2°13'08"W 750'
LDC-B = N 48°17'05"E 550'

P. CORN. A-B = N 21°30'34"E 1198.92'

DEPARTMENT USE ONLY

G IC

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 1000' IS NOT REQUIRED FOR WELL PLUGGING



DENOTES LOCATION OF WELL ON 7 1/2" TOPO MAP

PERMIT NO. 37-29-23430-0

PROJECT NO.

PENNCO OIL COMPANY, INC		REVISION ALTERATION STORAGE RECONDITION NEW LOCATION DRILL DEEPER ABANDONMENT REGISTRATION PLUGGING	W.D. MOHNEY & ASSOC Surveyor/Engineer W-1 Drawing Number 0-30-91 Date 1 = 500' Scale
Well Permittee/Registrant 200 U.S. ROUTE 22			
Address DELMONT PA. 15626			
CARL L. TROUTMAN			
Surface Owner N/A		SURFACE LANDOWNER AND WATER PURVEYOR WITH WATER SUPPLY WITHIN 1000'	APPROXIMATE COURSE AND DISTANCE TO WATER SUPPLY
Surface Lessor (if any) TROUTMAN			
Farm Name 2			
Well No. Tract Serial No 82 1080.00			
Acres NONE		NONE	DEPT. 7.0 1021
Ground Elevation 4000			
Angle of Deviation (Drilling) WESTMORELAND CO UPPER BURREL TWP			
Anticipated TD Municipality NEW KENSINGTON, EAST 8			
Topo Quadrangle Section		Workable Coal (Steps) TESOME-LAND CO. INC CARL TROUTMAN UPPER FREEPORT ALL OTHERS	Within Renton Mine (Sealed)
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF OIL AND GAS MANAGEMENT			
Date 9/4/91			

11-OG-4 Rev. 3/89

3695' 540° 32' 30"
10200' 6379° 40' 20"

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

NEW KENSINGTON 1077
23430.

129-23430

#2

WELL RECORD AND COMPLETION REPORT

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 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).

PINE RUN-DEV

Well Operator	Penneco Energy Corporation			Telephone Number	412-488-8232	
Address	200 Rt 22 P.O. Box 300 Delmont, PA					Zip 15626
Permit Number	37-129-23430-00			Project Number		
Firm Name	Troutman		Firm Number	2	Serial Number	PT - 122
Township	Upper Burrell Twp			County	Westmoreland Co	
Type of Well	☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)					

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

Drilling Method Rotary (Air ☒) Mud ☐ Cable Tool ☐		Date Drilling Started 09-06-91	Date Drilling Completed 09-13-91
Other ☐ (Specify)		Elevation 52 AN	
Elevation 1060	Total Depth 4028	7 1/2' Quadrangle New Kensington East	

CASING AND TUBING RECORD

Hole	Pipe Size	Amount In Well	Material Behind Pipe	Packet/Hardware			Date
			Type and Amount	Type	Size	Depth	
	13 3/8"	34'	Sanded in	N/A	N/A	N/A	9-8-91
12 1/4"	9 5/8"	532'	Cement - 75 sacks	Float Shoe	9 5/8"	539	9-9-91
8 3/4"	7"	1991'	Cement - 320 sacks	Float Shoe	7"	2009	9-11-91
6 1/4"	4 1/2"	3986'	Cement - 165 sacks	Float Shoe	4 1/2"	3993	9-13-91
							92 APR 2
Cement return on surface casing? ☒ yes ☐ no							

COMPLETION REPORT

BRAP

Perforation Record			Stimulation Record																				
Date	Interval Perforated		Date	Interval Treated	Fluid		Propping Agent		Average Injection Rate														
	From	To			Type	Amount	Type	Amount															
9-23	3772	3789	9-23	3772-3789	Water	10,000gal	Sand	20,000#	21.2 BPM														
9-23	3457	3463	9-23	3457-3463	Water	11,000gal	Sand	15,000#	23.8 BPM														
9-23	3146	3178	9-23	3146-3178	Water	33,940gal	Sand	67,700#	23.7 BPM														
<table border="1" style="border-collapse: collapse;"> <tr> <td style="padding: 2px 10px;">T.D.</td> <td style="padding: 2px 10px;">D.D.</td> <td style="padding: 2px 10px;">D.P.I.</td> <td style="padding: 2px 10px;">Glass</td> <td style="padding: 2px 10px;">O</td> <td style="padding: 2px 10px;">G</td> <td style="padding: 2px 10px;">Lease</td> </tr> <tr> <td style="padding: 2px 10px;">4028</td> <td style="padding: 2px 10px;"></td> <td style="padding: 2px 10px;">3789</td> <td style="padding: 2px 10px;">D</td> <td style="padding: 2px 10px;"></td> <td style="padding: 2px 10px;">1</td> <td style="padding: 2px 10px;">1</td> </tr> </table>										T.D.	D.D.	D.P.I.	Glass	O	G	Lease	4028		3789	D		1	1
T.D.	D.D.	D.P.I.	Glass	O	G	Lease																	
4028		3789	D		1	1																	

Natural Open Flow 44,344 mcf	Natural Rock Pressure	Hours	Days
After Treatment Open Flow 300 mcfpd	After Treatment Rock Pressure 880 psig	Hours 72	Days 8

RECEIVED

10. Address, and Telephone Number of Well Service Companies

MAY 15 1992

F.D. Hill Drilling Company - Rt 321 South - Kane - PA 16735	814-837-6612	PA 16735-0001	2277
Howso Well Service - 3000 Old Airport Road - Wooster, OH 44691	216-264-8885	OH 44691-0001	2278
Allegheny Nuclear Surveys, Inc. - Elderton, PA 15736	412-354-3090	PA 15736-0001	2279

125-23430

477 - 782- DRILLER'S LOG OF FORMATIONS						
Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Fill	0	10				Drillers Log
Red Clay	10	15				
Shale & Clay	15	30				
Sand	30	34				
Sand & Shale	34	188				
Pitt Red Bed	188	198				
Shale & Sand	198	220				
Sand & Shale	220	510				
Mine	510	515				
Shale	515	540				
Sand & Shale	540	950				
Shale	950	1000				
Sand & Shale	1000	1080				
Sand	1080	1125				
Sand & Shale	1125	1325				
Shale & Sand	1325	1700				
Sand & Shale	1700	2600			1" @ 1830	
Shale	2600	2800			1/2" @ 1950	
Sand & Shale	2800	3060				
Sand	3060	3070	Show of gas @ 3065			
Sand & Shale	3070	3700				
Shale	3700	4028				

	Vice President	12-23-91
Operator's Signature	Title	Date

FOR OFFICIAL USE ONLY

	4/27/92	Comments
Reviewed By	Date	

GEO COPY

WELL LOCATION PLAT

129-23501

Well is located on topo map 1010 feet south of LATITUDE 40 32 30

Well is located on topo map 11,050 feet west of LONGITUDE 79 00 00

H.A. BIONDI, AGENT

PROPOSED
WELL
LOCATION

CARL L. TROUTMAN

GERALD GREINER



William D. Mohney

Department Use Only

G C Trout

- LEASE LINE
 --- PROPERTY LINE
 ○ PROPOSED WELL LOCATION
 LOC-A = N 19° 00' 00" E 453.86'
 LOC-B = S 71° 48' 13" E 505.48'
 A - B = S 29° 30' 00" E 674.85'
 A & B ARE PROPERTY CORNERS

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 # 37-129-23501-06

Project #

Pennaco Oil Company, Inc. 13825		Revision	☐	W.D. Mohney
Well Permittee/Registrant		Alteration	☐	Surveyor/Engineer
200 U.S. Route 22		Storage Recondition	☐	T-1
Address		New Location	☒	Drawing Number
Delmont, PA 15626		Drill Deeper	☐	12-4-90
Carl L. Troutman		Abandonment	☐	Date
Surface Owner		Registration	☐	1" = 500'
N/A		Plugging	☐	Scale
Surface Lessor (if any)		Surface landowner and water purveyor with water supply within 1,000'		Approximate course and distance to water supply
Troutman		Carl Troutman		S 25° 30' W 850'
Farm Name				
1 PT-121				
Well No.	Tract	Serial No.		
82		1265		
Area		Ground Elevation		
None		435(1)		
Angle of Deviation (Grading)		Anticipated TD		
Westmoreland Co.	Upper Burrell Twp.			
County	Municipality			
New Kensington East	8			
Topo Quadrangle	Section			
Commonwealth of Pennsylvania Department of Environmental Resources Bureau of Oil and Gas Management		Workable Coal Seams Owner/Operator/Registrant Name of Seam Tesoro Land Co., Inc. Upper Freeport Carl Troutman All Others T.F. 4-8-92		

NEW KENSINGTON EST.
129-23501

ЕП-ОГ-4: Пау 3/89

RG 43123

43176

WELL RECORD AND COMPLETION REPORT

$1810^{\circ} 3' 40'' = 32^{\circ} 30'$
 $11060^{\circ} 6' 79'' = 40^{\circ} 00''$ (8) ✓
 (H)

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 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-76).

PINE RUN FIELD

Well Operator Pennaco Oil Company, Inc.		Telephone Number 412-468-8232	
Address 200 Rt 22, P.O. Box 300 Delmont, PA		Zip 15626	
Permit Number 37-129-23501		Project Number	
Farm Name Troutman #1	Farm Number	Serial Number PT - 121	Acres 82
Township Upper Burrell Township		County Westmoreland County	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method Rotary ☒ Air ☐ Mud ☐ Cable Tool ☐		Date Drilling Started 5-14-92	Date Drilling Completed 5-21-92
Other ☐ (Specify)			
Elevation 1265	Total Depth 4307	7 1/2' Quadrangle	New Kensington East

CASING AND TUBING RECORD

Hole Size	Pipe Size	Amount in Wall	Material Behind Pipe		Packer/ hardware			Date Run	
			Type	Amount	Type	Size	Depth		
15"	13 3/8"	35'	Sanded in		N/A	N/A	N/A	5-14-92	
12 1/4"			Reduced to 8 3/4" at 750						
8 3/4"	7"	1212	Cement - 460 sacks		Float 31w	7"	1219	5-19-92	
			T.D.	D.O.	D.P.I.	Class	O	G	Lease
			4307	—	3310	D	G	-	1

Cement return on surface casing? ☒ yes ☐ no **B** **B**

COMPLETION REPORT

[illegible]

Natural Open Flow	Natural Rock Pressure	Hours	Days
1,107 MCF	940 psig	72	
After Treatment Open Flow	After Treatment Rock Pressure	Hours	Days

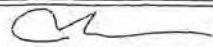
Name, Address, and Telephone Number of Well Service Companies

JUN 11 1993

F. D. Hall Drilling Company - Rt. 321 South - Kore, PA 16735	814-837-6612	PA GEOLOGICAL SURVEY
Halliburton Services, Inc. - P.O. Box 427 - Indiana, PA 15701	412-479-9046	Coal & Gas Geology District
Allegheny Nuclear Surveyors, Inc. Elderton, PA 15736	412-354-3090	

129-23501

DRILLER'S LOG OF FORMATIONS						
Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Bony	0	35				Drillers Log
Sand	35	90				
Red Bed	90	100				
Sand & Shale	100	300			1/2'@100'	
Sand & Shale	300	870				
Shale	870	970				
Sand & Shale	970	1020				
Shale & Sand	1020	1400				
Sand & Shale	1400	1775				
Sand & Shale	1775	1920				
Murrysville	1920	2030			5" @ 1980	
Sand & Shale	2030	2065				
100' Sand	2065	2205		2160		
Sand & Shale	2205	2216				
Shale & Sand	2216	2235				
Red Rock	2235	2275				
Sand & Shale	2275	2675				
Shale & Sand	2675	3130				
Sand & Shale	3130	3630	3310			
Sand & Shale	3630	3735				
Sand	3735	3745				
Sand & Shale	3745	4100				
Shale & Shells	4100	4307				



Operator's Signature

Vice President
Title11/20/92
Date

FOR OFFICIAL USE ONLY

WA 5-25-93

Reviewed By

Date

Comments

Well is located on topo map 2150' feet south of LATITUDE 40° 32' 30"

H. A. BIONDI, AGENT

B

(PT-121)

(PT-123)

CARL L. TROUTMAN



LEASE LINE

PROPERTY LINE

PROPOSED WELL LOCATION

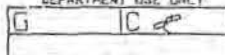
EXISTING WELL

LOC-A = N 82°05'22" W 684.95'

LOC-B = N 53°52'42" E 1472.20'

PROPERTY CORNERS A-B = N 67°30'00" E 2021.50'

DEPARTMENT USE ONLY



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 1000' IS NOT REQUIRED FOR WELL PLUGGING.

DENOTES LOCATION OF WELL ON 7 1/2' TOPO MAP PERMIT NO. 37-129 23506-4

PROJECT NO. _____

PENNECO OIL COMPANY, INC. <u>13825</u>		☐ REVISION ☐ ALTERATION ☐ STORAGE RECONDITION ☐ NEW LOCATION ☐ DRILL DEEPER ☐ ABANDONMENT ☐ REGISTRATION ☐ PLUGGING	W.D. MOHNEY & ASSOC.
Well Permittee/Registrant P.O. BOX 300, 200 U.S. ROUTE 22			Surveyor/Engineer T-1
Address DELMONT PA. 15626			Drawing Number 4-8-92
CARL L. TROUTMAN			Date = 500'
Surface Owner N/A			Scale
Surface Lessor (if any) TROUTMAN		SURFACE LANDOWNER AND WATER PURVEYOR WITH WATER SUPPLY WITHIN 1000'	APPROXIMATE COURSE AND DISTANCE TO WATER SUPPLY RECEIVED
Farm Name 3	PT-123	CARL TROUTMAN	S 34°48' E 343'
Well No. 82	Tract Serial No. 1136'		JUN 21 1992
Acres NONE	Ground Elevation 4200'		<i>12/21/92</i>
Angle of Deviation (drilling) WESTMORELAND CO.	Anticipated TD UPPER BURREL TWP		<i>12/21/92</i>
County NEW KENSINGTON, EAST	Municipality	Owner/Operator/Lessor TESONE-LAND CO. INC.	Workable Coal Seams Name of Seam UPPER FREEPORT
Topo Quadrangle	Section	CARL TROUTMAN	ALL OTHERS
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF OIL AND GAS MANAGEMENT		GUS RENTON MINE	
		<i>June 5/11/92</i>	

2150' S 40° 32' 30" ✓
520' W 79° 42' 30" ✓
(6) (7)

- PINE RUN FIELD

Well Operator	Penneco Oil Company, Inc.	Telephone Number	412-468-8232
Address	200 Rt 22 P.O. Box 300 Delmont, PA	Zip	15626
Permit Number	37-129-23506-00	Project Number	
Farm Name	Troutman #3	Farm Number	
		Serial Number	PT-123
		Acres	82
Township	Upper Burrell Township	County	Westmoreland County
Type of Well	☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)		

Drilling Method Rotary (Air ☒) Mud ☐ Cable Tool ☐		Date Drilling Started	Date Drilling Completed
Other ☐ (Specify)		8-3-92	8-7-92
Elevation	Total Depth	7 1/2' Quadrangle	
1135	4092	New Kensington East	

CASING AND TUBING RECORD							
Hole Size	Pipe Size	Amount In Well	Material Behind Pipe	Packer/Hardwars			Date Run
			Type and Amount	Type	Size	Depth	
5"	13 3/8"	34'	Sanded in	N/A	N/A	N/A	8-3-92
2 1/4"	9 5/8"	620	Cement - 250 sacks	Float Shoe	9 5/8"	628	8-4-92
8 3/4"	7"	2038	Cement - 325 sacks	Float Shoe	7"	2046	8-6-92
6 1/4"	4 1/2"	3981	Cement - 160 sacks	Float Shoe	4 1/2"	3989	8-10-92

PITTSBURGH

93 MAY 2

PER

Cement return on surface casing? ☒ yes ☐ no

[illegible]

Name, Address, and Telephone Number of Wall Service Companies

~~JUN 1 1933~~

F.D. Hill Drilling Company - Rt 321 South - Kane, PA 16735 814-837-6612

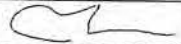
Nowco Well Service - 3000 Old Airport Road - Wooster, OH 44691 216-264-8885

Allegheny Nuclear Surveys, Inc. - ElderCon, PA 15736 412-354-3090

129-23506

PS 2 ✓

DRILLER'S LOG OF FORMATIONS						
Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Shale	0	5				Drillers Log
Red Clay	5	10				
Shale	10	20				
Red Bed	20	25				
Sand & Shale	25	45			Damp @45'	
Red Bed & Shale	45	140				
Shale	140	200				
Sand & Shale	200	319			1" @210'	
Shale	319	359				
Sand & Shale	359	554				
Mine	554	562				
Sand & Shale	562	1030				
Shale	1030	1175				
Sand & Shale	1175	1450				
Shale & Sand	1450	1820				
Sand	1820	1910			1" @1840	
Shale & Sand	1910	2058			3" @1870	
Sand & Shale	2058	2200				
Red Rock, Shale & Sand	2200	2385				
Sand & Shale	2385	3545				
Sand & Shale	3545	4092				


Vice-President
12/15/92
 Operator's Signature Title Date

FOR OFFICIAL USE ONLY

MA 5.25.93
 Reviewed By Date Comments

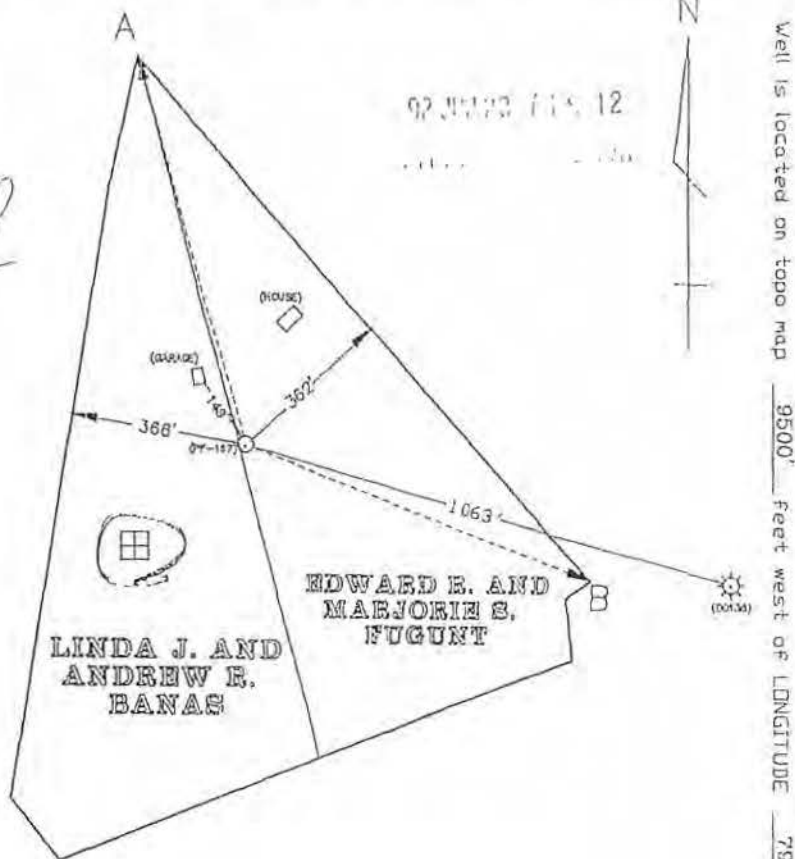
WELL LOCATION PLAN

Well(s) located on topo map 8500' feet south of LATITUDE 40° 32' 30"

129-23574



William D. Mohney
6/19/92



Well is located on topo map 9500' feet west of LONGITUDE 79° 40' 00"

- LEASE LINE
- - - PROPERTY LINE
○ PROPOSED WELL LOCATION
⊙ EXISTING WELL

LOC-A = N 16°00'05" W 625.73'

LOC-B = S 69°47'07" E 783.14'

PROPERTY CORNERS A-B = S 42°07'27" E 1435.02'

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 1000' IS NOT REQUIRED FOR WELL PLUGGING



DENOTES LOCATION OF WELL ON 7 1/2" TOPO MAP PERMIT NO. 37-69-23574-00 PROJECT NO.

13830		REVISION ALTERATION STORAGE RECONDITION NEW LOCATION DRILL DEEPER ABANDONMENT REGISTRATION PLUGGING	W D MOHNEY & ASSOC Surveyor/Engineer PF-1 Drawing Number 6-04-92 Date 1 INCH = 300 FEET Scale
PENNECO OIL COMPANY, INC.		JUL 18 1992	APPROXIMATE COURSE AND DISTANCE TO WATER SUPPLY
Well Permittee/Registrant P.O. BOX 300, 200 U.S. ROUTE 22			
Address DELMONT, PA 15628			
EDWARD R. AND MARJORIE S. FUGUNT LINDA J. AND ANDREW R. BANAS			
Surface Owner N/A		LINDA AND ANDREW BANAS	N 24°00' W 225'
Surface Lessor (if any) FUGUNT		EDWARD AND MARJORIE FUGUNT	N 08°30' E 262'
Farm Name 1		STEVE AND CATHERINE VENUS	S 62°00' E 950'
Well No. 22.00		ALBERT AND BETTY SCHALLER	S 53°00' E 800'
Acres NONE		FRED AND MARY SNYDER	S 70°00' E 1000'
Ground Elevation 4000'			
Anticipated TD MURRYSVILLE			
County NEW KENSINGTON, EAST			
Topo Quadrangle Section			
COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES BUREAU OF OIL AND GAS MANAGEMENT			

Gob 6.24.92 681

RE 43675 New sh.
43676 Blad
43677

WELL RECORD AND COMPLETION REPORT

8500' 3 40" 82' 30"
9500' 3 40" 82' 30"
(H) (8)

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 topsoil water and disposal of residual waste (including contaminated drill cuttings) in a pit is to be filed with the Completion Report (see EN-OG-75).

PINE RUN FIELD

Well Operator Penneco Oil Company, Inc.		Telephone Number 412-468-8232	
Address 200 Rt 22 P.O. Box 300 Delmont, PA 15626-0300		Zip	
Permit Number 37-129-23514-00		Project Number	
Farm Name Fugant #1	Farm Number	Serial Number PF - 167	Acres 22.00
Township Municipality of Murrysburg		County Westmoreland County	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method ☒ Rotary (Air) ☐ Mud ☐ Cable Tool ☐ Other ☐ (Specify)	Date Drilling Started 7-7-92	Date Drilling Completed 7-16-92
Elevation 1040	Total Depth 3925	7 1/2' Quadrangle New Kensington East

CASING AND TUBING RECORD

CASING AND TUBING RECORD								
Hole Size	Pipe Size	Amount In Well	Material Behind Pipe	Packer/Hardware			Date Run	
			Type and Amount	Type	Size	Depth		
	13 3/8"	34'	Sanded in	N/A	N/A	N/A	7-9-92	
1 1/4"	9 5/8"	488	Cement - 133 sacks	Float Shoe	9 5/8"	495	7-10-92	
8 3/4"	7"	1940	Cement - 305 sacks	Float Shoe	7"	1948	7-14-92	
6 1/4"	4 1/2"	3866	Cement - 150 sacks	Float Shoe	4 1/2"	3874	7-16-92	
		T.D.	D.D.	D.P.L.	Class	O	G	Lease
		3925	—	3720	D	G	—	1
Cement return on surface casing: ☒ yes ☐ no								

Cement return on surface casing ☒ Yes ☐ No

B

B

B

COMPLETION REPORT

Perforation Record			Stimulation Record				
Date	Interval Perforated		Date	Interval Treated	Fluid	Prepping Agent	
	From	To			Type	Amount	Type
8-3-92	3717	3720	8-3	3717-3720			
8-3-92	3730	3732	8-3	3730-3732	Water	11,000	Sand
8-3-92	3408	3412	8-3	3408-3412			
8-3-92	3108	3126	8-3	3108-3126	Water	27,000 gal	Sand
8-3-92	3026	3030	8-3	3026 - 3030	Water	10,000 gal	Sand
Natural Open Flow			Natural Rock Pressure				
After Treatment Open Flow 250 MFP			After Treatment Rock Pressure 800 psi				

REC-003
 93 MAY -5 AM 5:47
 PITTSBURGH REGION
 REC-003
 93 MAY -5 AM 5:47
 REC-003
 93 MAY -5 AM 5:47

1. Address, and Telephone Number of Well Service Companies

MAY 24 1993

F.D. Hill Drilling Company - Rt 321 South - Kane, PA 16735

414-837-6612

PA GEOLOGICAL SURVEY

NOVSCO Well Service - 3000 Old Airport Road - Wooster, OH 44691

216-264-0005

Oil & Gas Division, Erie

Allegheny Nuclear Surveys, Inc. - Eldersburg, PA 15716

412-354-1000

129-23514

DRILLER'S LOG OF FORMATIONS

Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
ile	0	5				Drillers Log
Sand	5	50			Damp @ 50'	
Shale	50	90				
Sand	90	100				
Red Rock	100	110				
Sand & Shale	110	175				
Sand	175	275			1/2" @ 45'	
Sand & Shale	275	440				
Mine	440	450				
Shale & Sand	450	497				
Sand and Shale	497	700				
Shale	700	870				
Sand & Shale	870	1170				
Shale & Sand	1170	1585			1/2" @ 1210	
Sand & Shale	1585	1966			3" @ 1760	
Red Rock, Sand & Shale	1966	2450				
Sand & Shale	2450	3000				
Sand & Shale	3000	3570				
Shale & Sand	3570	3925				


 Director's Signature

 Vice-President
 Title

 5-3-93
 Date

FOR OFFICIAL USE ONLY

 MA 5-20-93
 Reviewed By

Date

Comments

NEW KENSINGTON EAST
129-23525

WELL RECORD AND COMPLETION REPORT

1160' S 40° 32' 30"
320' W 79° 42' 30" (7) ✓

- 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 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-75).

PINE RUN FIELD

Well Operator	Penneco Oil Company, Inc.			Telephone Number	412-468-8232
Address	200 Rt 22 P.O. Box 300 Delmont, PA 15626			Zip	
Permit Number	37-129-23525-00		Project Number		
Farm Name	Blondt #3	Farm Number		Serial Number	PU-49
Township	Upper Burrell Township		County	Westmoreland	
Type of Well	☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)				
Acres	162				

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

Drilling Method	Rotary (Air ☒ Mud ☐ Cable Tool ☐	Date Drilling Started	8-11-92	Date Drilling Completed	8-15-92
Other ☐ (Specify)		Elevation	1030	Total Depth	3960
		7K' Quadrangle	New Kensington East		

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'	Sanded in	N/A	N/A	N/A	8-11-92															
8 3/4"	7"	1966'	Cement - 565 sacks	Float Shoe	7"	1974'	8-13-92															
6 1/4"	4 1/2"	3598'	Cement - 125 sacks	Float Shoe	4 1/2"	3605'	8-17-92															
<table border="1"> <tr> <td>T.D.</td> <td>D.D.</td> <td>D.P.I.</td> <td>Class</td> <td>O</td> <td>G</td> <td>Lease</td> </tr> <tr> <td>3960</td> <td></td> <td>3433</td> <td>D G</td> <td>-</td> <td>1</td> <td>1</td> </tr> </table>								T.D.	D.D.	D.P.I.	Class	O	G	Lease	3960		3433	D G	-	1	1	
T.D.	D.D.	D.P.I.	Class	O	G	Lease																
3960		3433	D G	-	1	1																
Cement return B 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	
8-27	3427	3433	8-27	3427-3433	Water	9,000gal	Sand	20,000	26.4 BPM
8-27	3116	3141	8-27	3116-3141	Water	23,000gal	Sand	68,000	29.4 BPM
Natural Open Flow			Natural Rock Pressure			Hours Days			
After Treatment Open Flow			After Treatment Rock Pressure			Hours Days			
411 MCFPD			960 PSI			72			

Name, Address, and Telephone Number of Well Service Companies

JUN 11 1993

F.D. Hill Drilling Company	- Rt 321 South - Kane, PA 16735	814-837-6612	LOGICAL SURVEY
Halliburton Services, Inc.	- P.O. Box 427 Indiana, PA 15701	412-479-0745	Gas Geology Division
Allegheny Nuclear Surveys, Inc.	Elderton, PA 15736	412-354-3090	

DRILLER'S LOG OF FORMATIONS						
Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Clay	0	10				Drillers Log
Red Bed & Shale	10	30				
Sand	30	48				
Shale & Sand	48	475			Damp@60'	
Coal	475	480				
Shale	480	499				
Sand & Shale	499	605				
Shale	605	655				
Coal	655	658				
Shale	658	670				
Sand & Shale	670	690				
Shale & Sand	690	1170				
Sand & Shale	1170	1710				
Shale	1710	1740				
Sand & Shale	1740	2100			7" @ 1760	
Red Rock, Sand, Shale	2100	2690				
Shale & Sand	2690	3230				
Sand & Shale	3230	3960				

129-23525

P12

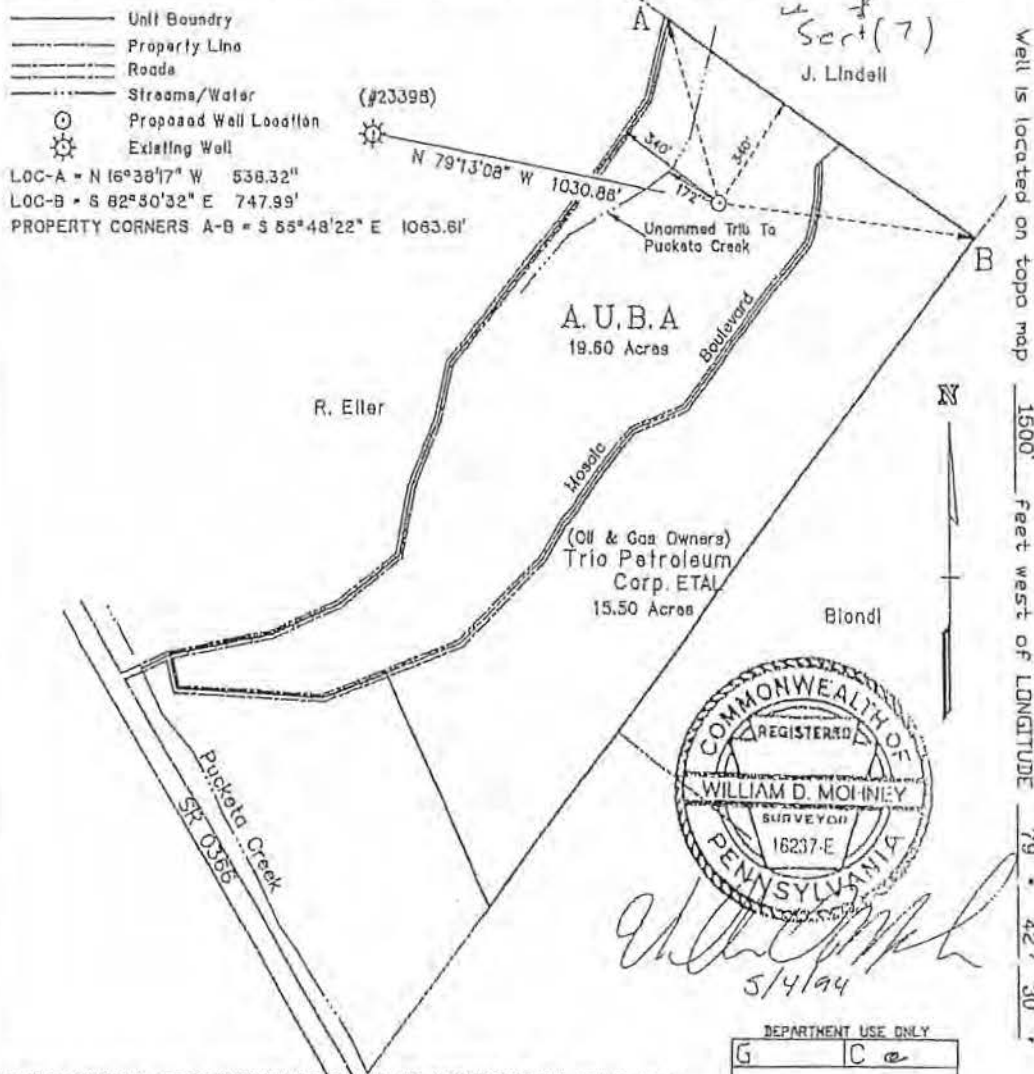
	Vice-President	12/15/92
Operator's Signature	Title	Date

FOR OFFICIAL USE ONLY

MA 5-25-93	Comments
Reviewed By	Date

Well is located on topo map 335' feet south of LATITUDE 40° 32' 30".

129-23728



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 1000' IS NOT REQUIRED FOR WELL PLUGGING.



DENOTES LOCATION OF WELL ON 7 1/2' TOPO MAP PERMIT NO. 37-127-23723-00 PROJECT NO.

[illegible]

Pine Run Field WELL RECORD AND COMPLETION REPORT

129-23728

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 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 Pennaco Oil Company, Inc.		Telephone Number 412-468-8232	
Address 200 Rt 22, P.O. Box 300 Delmont, PA 15626-0300			
Permits Number 37-129-23728-00		Project Number	
Farm Name A. U. B. A. Unit	Farm Number #1	Serial Number PA-209	Acres 35.10
Township Upper Burrell Township		County Westmoreland County	
Type of Well ☒ Gas ☐ Oil ☐ Injection ☐ Storage ☐ Disposal ☐ Other (Specify)			

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

Drilling Method Rotary (Air ☒ Mud ☐ Cable Tool ☐ Other ☐ (Specify)		Date Drilling Started 08-11-94	Date Drilling Completed 08-17-94
Elevation 930	Total Depth 3509	7 1/2' Quadrangle New Kensington East	

CASING AND TUBING RECORD

Hole Size	Pipe Size	Amount In Well	Material Behind Pipe	Packer/Hardware			Date Run
			Type and Amount	Type	Size	Depth	
18"	16"	8'	Sanded in	N/A	N/A	N/A	08-11-94
15"	13 3/8"	34'	Sanded in	N/A	N/A	N/A	08-11-94
12 1/4"	9 5/8"	412'	Cement - 145 sacks Class A Reg 3% CaCl ₂ + 1/2# seal/sack	Float Shoe	9 5/8"	420'	08-12-94
8 3/4"	7"	1810'	Cement - 300 sacks, Class A Reg. 3% CaCl ₂ + 1/2# seal/sack	Float Shoe	7"	1818'	08-16-94
6 1/4"	4 1/2"	3411'	Cement - 120 sacks, Class A Reg 4% CaCl ₂ 0.5% FLA-1 3/8#D-Air	Float Shoe	4 1/2"	3419'	08-18-94
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		
9-7-94	3291	3294	9-7	3291-3294	water	7523 gal	sand	13,500#	21.06 BPM
9-7-94	2988	3008	9-7	2988-3008	water	20,730 gal	Sand	69,000#	27.55 BPM
Natural Open Flow Not equipped to measure			Natural Rock Pressure Not Taken			Hours	Days		
After Treatment Open Flow 211 MCFPD			After Treatment Rock Pressure 850 PSI			Hours	Days		

JUL 20 1995

Name, Address, and Telephone Number of Well Service Companies

PA GEOLOGICAL SURVEY Oil & Gas Geology Division			
F. D. Hill Drilling Company - Route 321 South - Kane, PA 16735	412-837-6612		
Halliburton Energy Services, Inc. P.O. Box 427 Indiana, PA 15701	412-479-9046		
Allegheny Nuclear Surveys, Inc. - Elderton, PA 15736	412-354-3090		

DRILLER'S LOG OF FORMATIONS

Name	Top	Bottom	Gas At	Oil At	Water At (Fresh or Brine)	Source of Data
Fill	0'	8'				Driller's Log
Sand & Shale	8'	32'				
Sand	32'	34'				
Sand, Shale, Red Bed	34'	290'			Damp @ 60'	
Shale & Sand	290'	358'			2" fresh @ 260'	
Coal	358'	359'				
Gob	359'	365'			3" fresh @ 360'	
Sand & Shale	365'	840'				
Shale & Sand	840'	1250'			1" fresh @ 460'	
Sand & Shale	1250'	1695'			2" brine @ 1610'	
Shale & Sand	1695'	1725'				
100' Sand	1725'	1785'				
Sand & Shale	1785'	1830'				
Shale & Sand	1830'	2030'				
Sand, Shale, Red Rock	2030'	2150'				
Sand & Shale	2150'	2530'				
Shale & Sand	2530'	3040'				
& Shale	3040'	3509'				

125-
23728°
09 2

Operator's Signature

President
Title

Date

5/16/95

FOR OFFICIAL USE ONLY

Reviewed By

Date

Comments

W. J. L. 6-28-95

PIN_Long	COUNTY	MUNICIPALITY
1233-P-00036	Allegheny	Plum
1234-G-00148	Allegheny	Plum
1234-G-00155	Allegheny	Plum
1234-G-00219	Allegheny	Plum
1234-G-00230	Allegheny	Plum
1234-L-00142	Allegheny	Plum
1234-L-00184	Allegheny	Plum
1234-M-00208	Allegheny	Plum
1234-M-00208	Allegheny	Plum
1234-M-00211	Allegheny	Plum
1234-M-00237	Allegheny	Plum
1234-M-00263	Allegheny	Plum
62-80-00-0-001	Westmoreland	Upper Burrell
1233-P-00003	Allegheny	Plum
1234-A-00160	Allegheny	Plum
1234-F-00085	Allegheny	Plum
1096-M-00010	Allegheny	Plum
1097-M-00126	Allegheny	Plum
1098-D-00277	Allegheny	Plum
1233-N-00269	Allegheny	Plum
1233-N-00285	Allegheny	Plum
1233-N-00303	Allegheny	Plum
1233-N-00326	Allegheny	Plum
1233-N-00362	Allegheny	Plum
1233-N-00375	Allegheny	Plum
1233-N-00384	Allegheny	Plum
1233-P-00069	Allegheny	Plum
1233-P-00109	Allegheny	Plum
1233-P-00129	Allegheny	Plum
1234-B-00160	Allegheny	Plum
1234-B-00198	Allegheny	Plum
1234-B-00217	Allegheny	Plum

1234-B-00227	Allegheny	Plum
1234-B-00293	Allegheny	Plum
1234-B-00322	Allegheny	Plum
1234-F-00242	Allegheny	Plum
1234-G-00071	Allegheny	Plum
1234-G-00098	Allegheny	Plum
1234-H-00270	Allegheny	Plum
1234-J-00010	Allegheny	Plum
1234-L-00073	Allegheny	Plum
1234-L-00165	Allegheny	Plum
1234-M-00133	Allegheny	Plum
1234-M-00192	Allegheny	Plum
1234-M-00221	Allegheny	Plum
1234-M-00251	Allegheny	Plum
1234-M-00274	Allegheny	Plum
62-07-00-0-014	Westmoreland	Upper Burrell
62-08-00-0-010	Westmoreland	Upper Burrell
1097-M-00142	Allegheny	Plum
62-08-00-0-006	Westmoreland	Upper Burrell
62-08-00-0-008	Westmoreland	Upper Burrell
1096-H-00355	Allegheny	Plum
1096-M-00016	Allegheny	Plum
1097-S-00348	Allegheny	Plum
1098-D-00128	Allegheny	Plum
1233-J-00342	Allegheny	Plum
1233-N-00346	Allegheny	Plum
1233-P-00044	Allegheny	Plum
1234-C-00347	Allegheny	Plum
1234-C-00377	Allegheny	Plum
1234-F-00206	Allegheny	Plum
1234-G-00077	Allegheny	Plum
1234-G-00126	Allegheny	Plum
1234-K-00134	Allegheny	Plum
1234-K-00154	Allegheny	Plum
1234-L-00106	Allegheny	Plum
1234-M-00379	Allegheny	Plum
62-07-00-0-015	Westmoreland	Upper Burrell

62-08-00-0-007	Westmoreland	Upper Burrell
62-08-00-0-009	Westmoreland	Upper Burrell
62-08-00-0-086	Westmoreland	Upper Burrell
1234-G-00086	Allegheny	Plum
1234-M-00154	Allegheny	Plum
1234-G-00026	Allegheny	Plum
1233-N-00241	Allegheny	Plum
1233-P-00086	Allegheny	Plum
1233-P-00198	Allegheny	Plum
1233-P-00215	Allegheny	Plum
1233-P-00227	Allegheny	Plum
1233-P-00245	Allegheny	Plum
1233-P-00258	Allegheny	Plum
1233-P-00262	Allegheny	Plum
1234-B-00254	Allegheny	Plum
1234-B-00258	Allegheny	Plum
1234-F-00159	Allegheny	Plum
1234-G-00164	Allegheny	Plum
1234-G-00204	Allegheny	Plum
1234-J-00087	Allegheny	Plum
1234-K-00185	Allegheny	Plum
1234-K-00222	Allegheny	Plum
62-07-00-0-015	Westmoreland	Upper Burrell
62-07-00-0-030	Westmoreland	Upper Burrell
62-08-00-0-086	Westmoreland	Upper Burrell
1233-N-00354	Allegheny	Plum

SEDAT #4A WATER SUPPLY SURVEY

OWNER	Well_Detail	DateVerify
ROSENBERG NANCY	Certified Mail Delivered, no reply assum	2/7/2019
SPROUSE SHIRLEY ANN & EDDIE LION (H)	Certified Mail Delivered, no reply assum	2/7/2019
SMITH JAMES & SHIRLEY (W)	Certified Mail Delivered, no reply assum	2/7/2019
KOZUCH ROMAINE E	Certified Mail Delivered, no reply assum	2/7/2019
KOZUCH ROMAINE E	Certified Mail Delivered, no reply assum	2/7/2019
DZIUBAN ROBERT J & MARY LEE	Certified Mail Delivered, no reply assum	2/7/2019
OSWALT LARA BETH ROBINSON	Certified Mail Delivered, no reply assum	2/7/2019
BOBICK RANDALL D & TERRI LYNN (W)	Certified Mail Delivered, no reply assum	2/7/2019
BOBICK STEPHEN C	Certified Mail Delivered, no reply assum	2/7/2019
BOBICK STEPHEN C	Certified Mail Delivered, no reply assum	2/7/2019
TWIDWELL ROBERT L	Certified Mail Delivered, no reply assum	2/7/2019
BABINSACK VICTOR K & KATHLEEN E (W)	Certified Mail Delivered, no reply assum	2/7/2019
CALLENDER JESSALIN M	Public	2/7/2019
PATTOCK JAMES D & SUZANNE (W)	Public	2/7/2019
PATTOCK KIRT E & LISA M (W)	Public	2/7/2019
BUCHHOLZ BENJAMIN F	Public	2/7/2019
VISNANSKY A WILLIAM BALAZIK SUSAN M MILKO JEAN A	Public	2/7/2019
PALOMBO BENEDICT PALOMBO FERDINAND PALOMBO ANDREW	Public	2/7/2019
JOYCE PETER R	Public	2/7/2019
ROSALYN CHRISTOPHERSON	Public	2/7/2019
MATT ROBERT W & BARBARA L (W)	Public	2/7/2019
NATHAN KOSOWSKI	Public	2/7/2019
OTLANO PHILLIP JR & ALLENE C (W)	Public	2/7/2019
WILLIAMS MARVIN H	Public	2/7/2019
STRANO ANDREW R & LINDA E (W)	Public	2/7/2019
DAUGHERTY JENNIE E & LOUIS R DAUGHERTY	Public	2/7/2019
PARK LOTTIE E PHILLIPS ARTHUR D PHILLIPS ANNA	Public	2/7/2019
SWEENY MARK M & JUDITH ANN BLACK SWEENY (W)	Public	2/7/2019
JOHN L PATER	Public	2/7/2019
PODOBNIK MATTHEW W	Public	2/7/2019
SCHWARTZ MARY C	Public	2/7/2019
LARIS GEORGE	Public	2/7/2019

LARIS GEORGE	Public	2/7/2019
LABELLA JOHN R & MARGARET J (W)	Public	2/7/2019
HUSKA PAUL JR	Public	2/7/2019
GIACCO LEWIS R	Public	2/7/2019
ANKROM RALPH & ETHELYN (W)	Public	2/7/2019
PODOBNIK MATTHEW W	Public	2/7/2019
HIPPLE JOSHUA	Public	2/7/2019
SCHEETZ THOMAS W	Public	2/7/2019
FAVERO SHAWN L & MELISSA A (W)	Public	2/7/2019
HOEY JAMES J & DONNA J (W)	Public	2/7/2019
DEMAO RAYMOND LEONARD BARTLETT KELLY MARIE	Public	2/7/2019
FAVERO DAVID L & KATHLEEN L (W)	Public	2/7/2019
THE RICHARD F OSKIN FAMILY TRUST (RICHARD F OSKIN (TRUSTEE)	Public	2/7/2019
PASTUCHA JOANN G	Public	3/29/2019
LUCIANA JONATHAN R	Public	2/7/2019
HOUSEHOLDER DWIGHT E II+KENNA	Public	2/7/2019
MCVEY JEFFREY	Public	3/21/2019
ASPDEN ANNA	Spring	2/7/2019
CRAFT CLINT W.	Spring	2/27/2019
RESNIK MATTHEW R	Spring	2/7/2019
CHAMBERS CLARENCE	Vacant Land - None	2/7/2019
HARRIS MABLE	Vacant Land - None	2/7/2019
PALOMBO BENEDICT & KATHY ANN (W)	Vacant Land - None	2/7/2019
MILLER ALVIN R III & DIANE ELIZABETH (W)	Vacant Land - None	2/7/2019
MILLER ANNA LOUISE COSTA KATHLEEN	Vacant Land - None	2/7/2019
MILLER ANNA LOUISE & KATHLEEN COSTA	Vacant Land - None	2/7/2019
MACRO KLINT L & JENNIFER S (W)	Vacant Land - None	2/7/2019
FRERE LUCILLE CHRISTINA FRERE RAYMOND ARMOUL LOGAN FRERE	Vacant Land - None	2/7/2019
HALL LUKE	Vacant Land - None	2/7/2019
SEDAT INC	Vacant Land - None	2/7/2019
TTMAR INC	Vacant Land - None	2/7/2019
VAGLIA JOSEPH & MICHELLE (W)	Vacant Land - None	2/7/2019
SMOLENSKI THEODORE & VIRGINIA	Vacant Land - None	2/7/2019
SMOLENSKI THEODORE & VIRGINIA	Vacant Land - None	2/7/2019
ZEBRAK JOSHUA F	Vacant Land - None	2/7/2019
HAMILTON JOHN	Vacant Land - None	2/7/2019
LOMBARDO LOUIS ANTHONY & SANDY	Vacant Land - None	2/7/2019

TRZECIAK LOUIS JR CYNTHIA LOU	Vacant Land - None	2/7/2019
SANTUCCI JOSEPH & PAMELA	Vacant Land - None	2/7/2019
TRZECIAK LOUIS CYNTHIA LOUISE	Vacant Land - None	2/7/2019
VANHORN HERMAN E & IRENE B	Vacant per USPS	2/7/2019
DZIUBAN BENEDICT J	Vacant per USPS	2/7/2019
MITCHELL JANET ANN & RUSSELL WILLIAM MITCHELL	Well	2/7/2019
TEORSKY ROBERT M	Well	2/7/2019
MACRO KLINT L & JENNIFER S (W)	Well	2/7/2019
HASSON LEONARD J & NINA E (W)	Well	2/7/2019
MARTIN RICHARD A & MARY JANE (W)	Well	2/7/2019
DAUGHERTY LOUIS R & PAMELA E (W)	Well	2/7/2019
DAUGHERTY LOUIS R	Well	2/7/2019
DAUGHERTY DAVID R	Well	2/7/2019
DAUGHERTY DAVID R	Well	2/7/2019
PLANCE DAVID A & STEPHANIE (W)	Well	2/7/2019
PLANCE DAVID A & STEPHANIE (W)	Well	2/7/2019
COOPER DANIEL S	Well	2/7/2019
CARUSO DEBORAH	Well	2/7/2019
ANUSKIEWICZ DONALD J & FLORENCE M (W)	Well	2/7/2019
CHOLTKO FRANK III	Well	2/7/2019
SMOLENSKI FRANK T & MARCIA MARIE (W)	Well	2/7/2019
SMOLENSKI THEODORE & VIRGINIA	Well	2/7/2019
LOMBARDO LOUIS ANTHONY & SANDY	Well	2/7/2019
MILLER SHANE	Well	3/5/2019
TRZECIAK LOUIS CYNTHIA LOUISE	Well	2/7/2019
Combined with other parcel.		2/7/2019

[illegible]

Y
N
Y
N
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Y
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Y
Y
N
N

[illegible]

SEDAT 4A WATER SUPPLY INVENTORY	
OWNER	Phone
BUCHHOLZ BENJAMIN F	412-779-9610
DZIUBAN ROBERT J & MARY LEE	
KOZUCH ROMAINE E	
KOZUCH ROMAINE E	
MITCHELL JANET ANN & RUSSELL WILLIAM MITCHELL	
OSWALT LARA BETH ROBINSON	
PATTOCK JAMES D & SUZANNE (W)	
PATTOCK KIRT E & LISA M (W)	
ROSENBERG NANCY	
SMITH JAMES & SHIRLEY (W)	724-212-3890 724-335-0231 724-339-6926
SPROUSE SHIRLEY ANN & EDDIE LION (H)	
BABINSACK VICTOR K & KATHLEEN E (W)	
BOBICK RANDALL D & TERRI LYNN (W)	
BOBICK STEPHEN C	
BOBICK STEPHEN C	
CALLENDER JESSALIN M	
PASTUCHA JOANN G	
TWIDWELL ROBERT L	
CHAMBERS CLARENCE	724-335-7490 724-335-4512 won't give information over the phone 724-337-6945 724-337-6945 724-472-3421 - message 2-14-19, 2-18-19 412-828-2183 - bad no good number
FRERE LUCILLE CHRISTINA FRERE RAYMOND ARMOUL LOGAN FRERE	
HALL LUKE	
HAMILTON JOHN	
HARRIS MABLE	
LOMBARDO LOUIS ANTHONY & SANDY	
MACRO KLINT L & JENNIFER S (W)	
MILLER ALVIN R III & DIANE ELIZABETH (W)	
MILLER ANNA LOUISE & KATHLEEN COSTA	
MILLER ANNA LOUISE COSTA KATHLEEN	Vacant Land Per Tax Assessment
PALOMBO BENEDICT & KATHY ANN (W)	
SANTUCCI JOSEPH & PAMELA	
SEDAT INC	
SMOLENSKI THEODORE & VIRGINIA	
SMOLENSKI THEODORE & VIRGINIA	
TRZECIAK LOUIS CYNTHIA LOUISE	
TRZECIAK LOUIS JR CYNTHIA LOU	
TTMAR INC	
VAGLIA JOSEPH & MICHELLE (W)	724-422-9484 - message 2-14-19 Verified by M. Resnik that it is only a car port
ZEBRAK JOSHUA F	

ANKROM RALPH & ETHELYN (W)	
DAUGHERTY JENNIE E & LOUIS R DAUGHERTY	
DEMAO RAYMOND LEONARD BARTLETT KELLY MARIE	724-351-2232 2-7-19 confirmed Public Water
FAVERO DAVID L & KATHLEEN L (W)	412-418-1443 verified Public by Kathleen 2-18-19
FAVERO SHAWN L & MELISSA A (W)	412-418-1443 verified Public by Kathleen 2-18-19
GIACCO LEWIS R	
HIPPLE JOSHUA	
HOEY JAMES J & DONNA J (W)	Verified by Shawn Favero that the water line from the city is hooked in.
HOUSEHOLDER DWIGHT E II+KENNA	
HUSKA PAUL JR	
JOHN L PATER	
JOYCE PETER R	
LABELLA JOHN R & MARGARET J (W)	
LARIS GEORGE	
LARIS GEORGE	
LUCIANA JONATHAN R	724-831-7061 verified Public 2-18-19
MATT ROBERT W & BARBARA L (W)	
MCVEY JEFFREY	724-339-0699
NATHAN KOSOWSKI	
OTLANO PHILLIP JR & ALLENE C (W)	
PALOMBO BENEDICT PALOMBO FERDINAND PALOMBO ANDREW	
PARK LOTTIE E PHILLIPS ARTHUR D PHILLIPS ANNA	
PODOBNIK MATTHEW W	
PODOBNIK MATTHEW W	
ROSALYN CHRISTOPHERSON	
SCHEETZ THOMAS W	
SCHWARTZ MARY C	
STRANO ANDREW R & LINDA E (W)	
SWEENY MARK M & JUDITH ANN BLACK SWEENY (W)	724-337-8776 Judith Sweeny verified Public Water, well is unhooked.
THE RICHARD F OSKIN FAMILY TRUST (RICHARD F OSKIN (TRUSTEE)	724-337-4087 Public water per Richard
VISNANSKY A WILLIAM BALAZIK SUSAN M MILKO JEAN A	
WILLIAMS MARVIN H	
ASPDEN ANNA	
CRAFT CLINT W.	
RESNIK MATTHEW R	412-266-4176 - Verified by phone 2-14-19
DZIUBAN BENEDICT J	no good number
VANHORN HERMAN E & IRENE B	
ANUSKIEWICZ DONALD J & FLORENCE M (W)	
CARUSO DEBORAH	
CHOLTKO FRANK III	
COOPER DANIEL S	

DAUGHERTY DAVID R	
DAUGHERTY DAVID R	
DAUGHERTY LOUIS R	
DAUGHERTY LOUIS R & PAMELA E (W)	
HASSON LEONARD J & NINA E (W)	
LOMBARDO LOUIS ANTHONY & SANDY	
MACRO KLINT L & JENNIFER S (W)	
MARTIN RICHARD A & MARY JANE (W)	
MILLER SHANE	412-848-6309 via mailout
PLANCE DAVID A & STEPHANIE (W)	
PLANCE DAVID A & STEPHANIE (W)	
SMOLENSKI FRANK T & MARCIA MARIE (W)	
SMOLENSKI THEODORE & VIRGINIA	
TEORSKY ROBERT M	
TRZECIAK LOUIS CYNTHIA LOUISE	
Combined with other parcel.	

Well_Detai	DateVerify	Change Y/N
Mailed before and never replied.	2/7/2019	N
Mailed before and never replied.	2/7/2019	N
Mailed before and never replied.	2/7/2019	N
Mailed before and never replied.	2/7/2019	N
Mailed before and never replied.	2/7/2019	N
Mailed before and never replied.	2/7/2019	Y
Mailed before and never replied.	2/7/2019	N
Mailed before and never replied.	2/7/2019	N
Mailed before and never replied.	2/7/2019	N
Mailed before and never replied.	2/7/2019	N
Mailed before and never replied.	2/7/2019	N
NEW	2/7/2019	N
NEW	2/7/2019	N
NEW	2/7/2019	N
NEW	2/7/2019	N
NEW	2/7/2019	N
NEW	2/7/2019	Y
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None	2/7/2019	Y
None	2/7/2019	N
None	2/7/2019	N
None	2/7/2019	N
None	2/7/2019	N
None	2/7/2019	Y

Public	2/7/2019	N
Public	2/7/2019	N
Public	2/7/2019	N
Public	2/7/2019	N
Public	2/7/2019	N
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Public	2/7/2019	N
Public	2/7/2019	N
Public	2/7/2019	N
Spring	2/7/2019	N
Spring	2/27/2019	Y
Spring	2/7/2019	Y
Vacant per USPS	2/7/2019	N
Vacant per USPS	2/7/2019	N
Well	2/7/2019	N
Well	2/7/2019	Y
Well	2/7/2019	N
Well	2/7/2019	N

[illegible]

SEDAT 4A WATER SUPPLY PROOF OF NOTIFICATION

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9830 56](#) (Sequence Number 1 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: VICTOR K BABINSACK
1985 DRENNEN RD
NEW KENSINGTON PA 15068-1804

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9830 94](#) (Sequence Number 4 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: RUSSELL W MITCHELL
504 CLARENDON ST
PITTSBURGH PA 15238-3612

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9831 17](#) (Sequence Number 5 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: LARA BETH OSWALT
1942 DRENNEN RD
NEW KENSINGTON PA 15068-1805

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9831 24](#) (Sequence Number 6 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: JAMES D PATTOCK
2029 OLD LEECHBURG RD
NEW KENSINGTON PA 15068-8325

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9831 31](#) (Sequence Number 7 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: KIRT E PATTOCK
2029 OLD LEECHBURG RD
NEW KENSINGTON PA 15068-8325

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9831 48](#) (Sequence Number 8 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: RANDALL D BOBICK
1965 DRENNEN RD
NEW KENSINGTON PA 15068-1804

SEDAT 4A WATER SUPPLY PROOF OF NOTIFICATION

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9831 55](#) (Sequence Number 9 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: STEPHEN C BOBICK
1965 1/2 DRENNEN RD
NEW KENSINGTON PA 15068-1850

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9831 62](#) (Sequence Number 10 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: STEPHEN C BOBICK
1965 1/2 DRENNEN RD
NEW KENSINGTON PA 15068-1850

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9831 79](#) (Sequence Number 11 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: BENJAMIN F BUCHHOLZ
1924 OLD LEECHBURG RD
NEW KENSINGTON PA 15068-8318

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9831 93](#) (Sequence Number 12 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: JESSALIN M CALLENDER
1920 GREENSBURG RD
NEW KENSINGTON PA 15068-1800

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9832 16](#) (Sequence Number 14 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: ROBERT J DZIUBAN
1950 DRENNEN RD
NEW KENSINGTON PA 15068-1805

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9832 23](#) (Sequence Number 15 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: ROMAINE E KOZUCH
229 5TH AVE
NEW KENSINGTON PA 15068-6618

SEDAT 4A WATER SUPPLY PROOF OF NOTIFICATION

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9832 47](#) (Sequence Number 16 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: ROMAIN E KOZUCH
229 5TH AVE
NEW KENSINGTON PA 15068-6618

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9832 54](#) (Sequence Number 17 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: JOANN G PATUCHA
1981 DRENNEN RD
NEW KENSINGTON PA 15068-1804

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9832 61](#) (Sequence Number 18 of 18)

Scheduled Delivery Date: 02/28/2019

Shipped to: NANCY ROSENBERG
2032 OLD LEECHBURG RD
NEW KENSINGTON PA 15068-8324

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9921 33](#) (Sequence Number 1 of 4)

Scheduled Delivery Date: 02/28/2019

Shipped to: ROBERT L TWIDWELL
1977 DRENNEN RD
NEW KENSINGTON PA 15068-1804

Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9921 57](#) (Sequence Number 2 of 4)

Scheduled Delivery Date: 02/28/2019

Shipped to: JAMES SMITH
1933 DRENNEN RD
NEW KENSINGTON PA 15068-1804

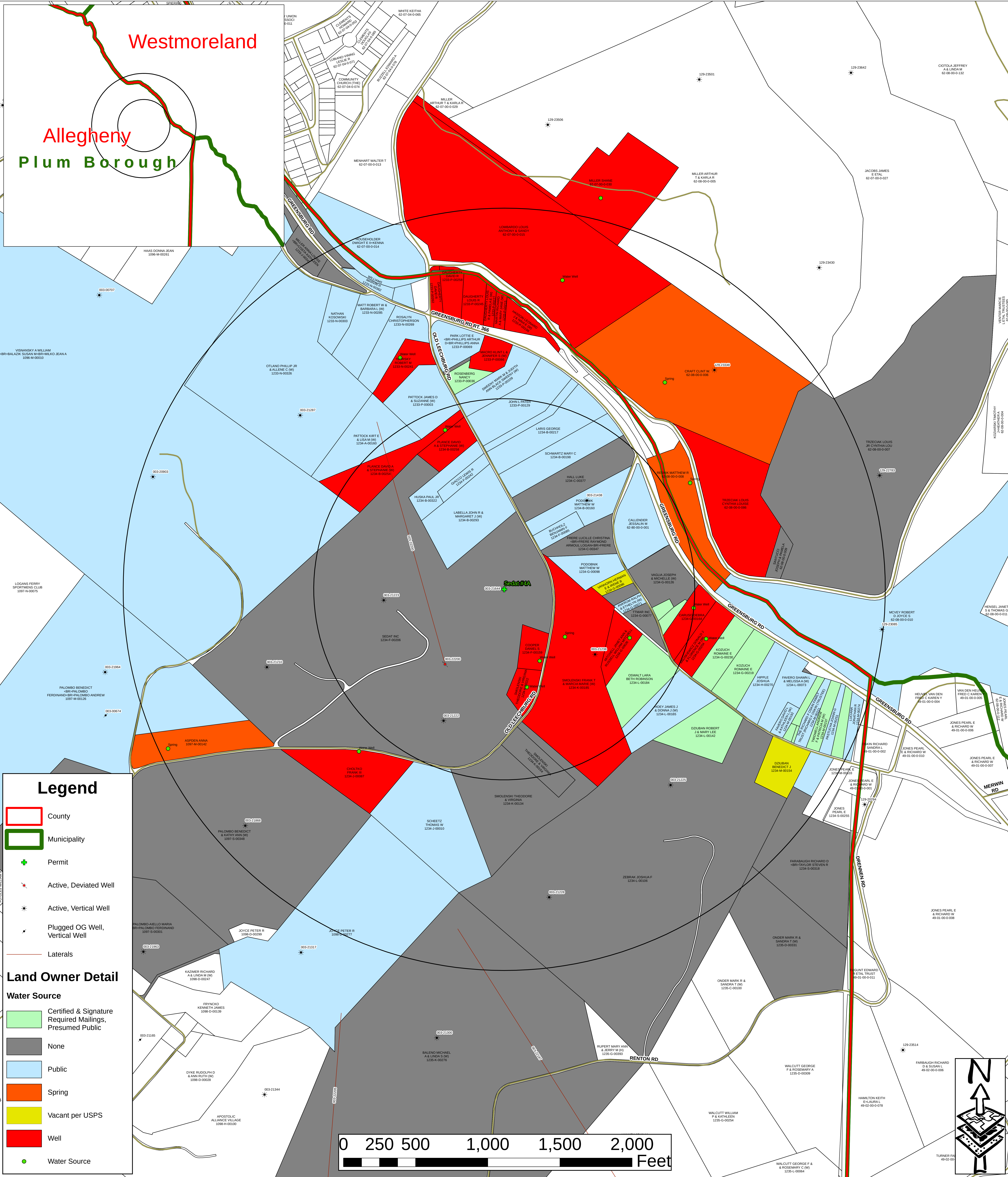
Priority Mail® 1-Day

Flat Rate Envelope

[9405 5036 9930 0431 9921 88](#) (Sequence Number 3 of 4)

Scheduled Delivery Date: 02/28/2019

Shipped to: EDDIE L SPROUSE
1927 DRENNEN RD
NEW KENSINGTON PA 15068-1804



BY: MEC

DATE: 4/29/2019

Scale: 1" = 200'

FILE: Sedat #4A Water Purveyor Map 2-7-19

JOB NO: 677415

SHEET: 1 of 2

WATER SUPPLY SURVEY

FOR

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

REVISIONS:

4/10/2019 - Updated Water Purveyor Data

4/12/2019 - Updated Water Purveyor Data

4/29/2019 - Updated Water Purveyor Data

ATTACHMENT "C"
Corrective Action Plan and Well Data

Attachment C
Corrective Action Plan and Well Data
Sedat #4A Injection Well

If any upward fluid migration should occur through the well bore of any known or unknown well or any improperly plugged well due to the injection of permitted fluids, injection will be stopped until the situation can be remedied. Should any problem develop with the casing of the injection well, injection will be stopped until repairs can be completed to the casing. Injection will be stopped in the event of any mechanical integrity failure or some other major failure and the Pennsylvania DEP and the EPA will be notified of the problem.

In addition to the proposed injection well there are five (5) wells in the ¼ mile AOR that penetrate the injection and are shown in the table below. Well records for the wells and a map showing their location are in Attachment B. Well permit # 003-21222 will be converted into an observation well.

Tabulation of Wells Penetrating the Injection Zone

Well Permit #	Well Type	Construction	Date Drilled	Location *	Total Depth	Completion
003-21238	Gas	Rotary/Air	11/13/89	South West	4,264'	Cased
003-22200**	Gas /Oil	Rotary/Air & Mud	1/12/12	South West	3,343' True VD	Cased
003-21222	Gas	Rotary/Air	1/12/89	South	4,323'	Cased
003-21223	Class IID	Rotary/Air	1/25/89	South West	1,940'	Cased
003-21438	Gas	Rotary/Air	1/4/99	North West	3,773'	Plugged

Well records and completion reports are included in Attachment B of the application.

*Location given in reference to proposed injection well Permit #003-21644

**Horizontal Well, lateral drilled to NW, for more information see well record in Attachment B and AOR map.

ATTACHMENT "E"
Name and Depth of USWD's



UIC Permit Application

SEDAT #4A

Plum Borough

Allegheny County

Pennsylvania

Binder 2

Attachment E

USDWs for Sedat #4A Injection Well

The Sedat #4A AOR is located in the Pittsburgh Low Plateau Section of the Appalachian Plateau physiographic province (refer to map at the end of this attachment). Underlying rock types are shale, siltstone, sandstone, limestone and coal. Aquifers in the AOR are mainly sandstones of the Conemaugh Group and the Allegheny Group. The Pottsville Group and the Mauch Chunk Formation, identified as USDWs in some areas of Pennsylvania lie at too great a depth to serve as aquifers in the AOR or are absent due to non deposition or erosion as is the case for the Mauch Chunk. See the table on the following pages listing USDWs in Pennsylvania. The thickness of the section from the Conemaugh Group through the Allegheny Group runs in the range of 800 feet depending on surface elevation. A review of the well records shows water production as deep as 1,700 feet. However reports of water production by the driller on their driller's logs are highly unreliable, the quantity and quality of the water is not measured by instrument. The quantity is estimated by site and the water quality which is often measured by taste, is a commingled sample from all formations open to the bore hole at the time of sampling. Additionally, Pennsylvania Geological Survey Water Resource Reports #35 and #37 state water quality is extremely poor beyond 500 feet in depth because of moderate to high mineralization of the waters (high dissolved solids and brine).

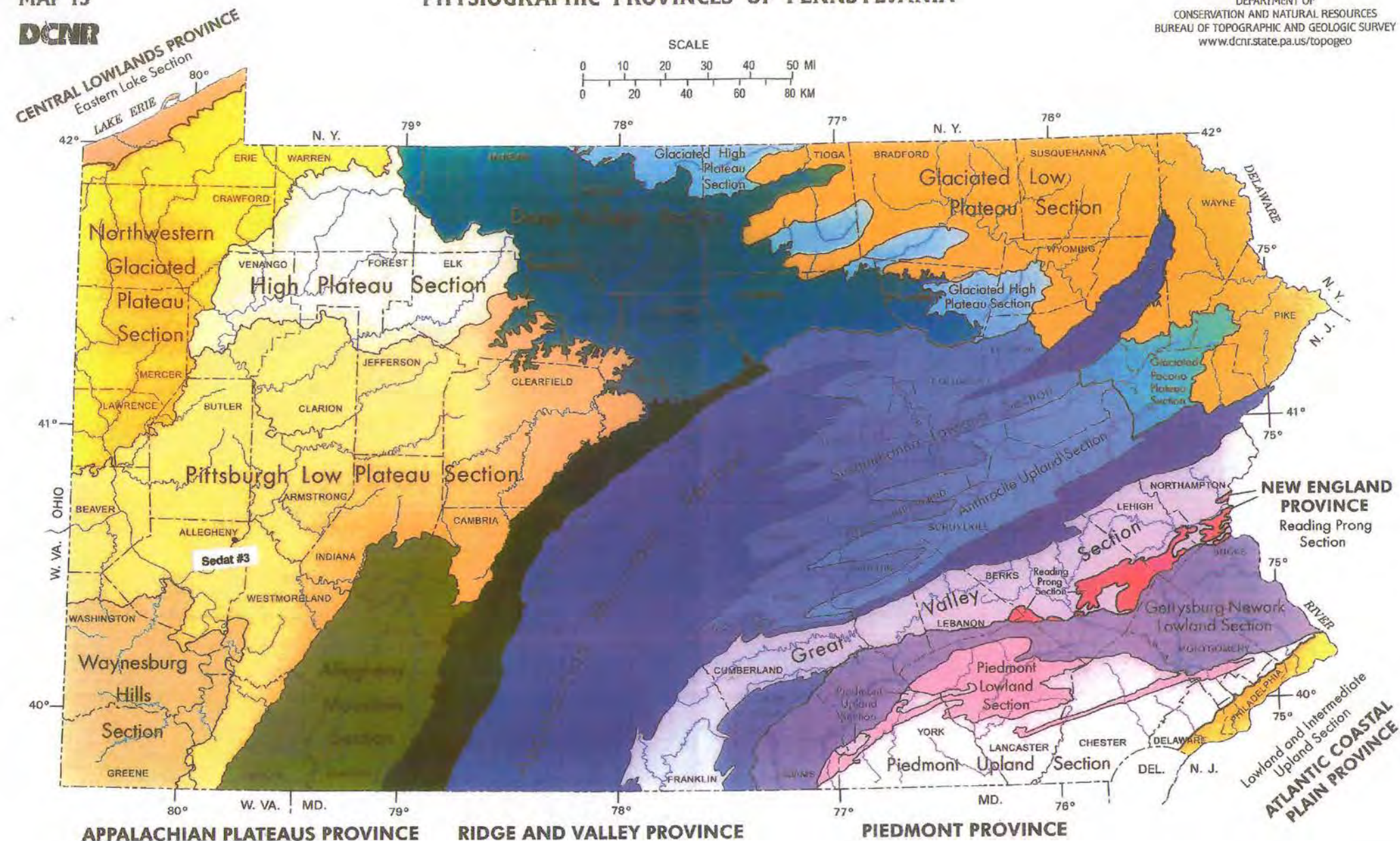
Description of USDWs in AOR

Rock members of the Conemaugh Group predominate at the surface in the AOR: see the section of the geologic map of Pennsylvania at the end of the attachment. The Casselman and Glenshaw Formations make up the Conemaugh Group, and consist of shale, red shale, sandstone and coals.

The Allegheny Group consists of shale, sandstone, thin beds of limestone and coals. The Freeport Formation, Kittanning Formation, Vanport Limestone, and Clarion Formation make up the Allegheny Group.

The established lowermost USDW for the Sedat 3A well (PAS2D701BALL), as detailed in its EPA Statement of Basis, is approximately 450'. Taking the elevation difference between Sedat 3A and Sedat 4A into account (-38'), the lowermost USDW at Sedat 4A is calculated at approximately 412'.

COMMONWEALTH OF PENNSYLVANIA
DEPARTMENT OF
CONSERVATION AND NATURAL RESOURCES
BUREAU OF TOPOGRAPHIC AND GEOLOGIC SURVEY
www.dcnr.state.pa.us/topogeo



CENTRAL
LOWLANDS
PROVINCE



Eastern
Lake
Section

Northwestern Glaciated Plateau Section	High Plateau Section	Pittsburgh Low Plateau Section	Waynes- burg Hills Section	Allegheny Mountain Section	Allegheny Front Section	Deep Valleys Section	Glaciated High Plateau Section	Glaciated Low Plateau Section	Glaciated Pocono Plateau Section

Reading
Prong
Section

Gettysburg-Newark Lowland Section Piedmont Lowland Section Piedmont Upland Section

ATLANTIC
COASTAL
PLAIN
PROVINCE

Lowland and
Intermediate
Upland
Section

Approximate boundary between physiographic provinces

Approximate boundary between physiographic sections

Figure 89. The principal aquifers in the Appalachian Plateaus Province in Segment 11 are sandstones in the geologic units shown in yellow and limestone shown in blue. Where fractured, rocks of the Greenbrier, the Catskill, and the Brallier Formations locally yield water. The gray areas represent missing rocks.

System	Pennsylvania	Maryland	West Virginia	Virginia
Permian	Dunkard Group		Dunkard Group	
Pennsylvanian	Monongahela Group	Monongahela Formation	Monongahela Group	
	Conemaugh Group	Conemaugh Formation	Conemaugh Group	
	Allegheny Group	Allegheny Formation	Allegheny Formation	
	Pottsville Group	Pottsville Formation	Pottsville Group	Horizon Formation
				Wise Formation
Mississippian				Norton Formation
				Lee Formation
	Mauch Chunk Formation	Mauch Chunk Formation	Mauch Chunk Group	Bluestone Formation
				Hinton Formation
				Bluestfield Formation
				Greenbrier Limestone
				Maecrady Shale
Devonian	Pocono Formation	Pocono Formation	Pocono Group	Price Formation
	Huntley Mountain Formation			
	Catskill Formation ¹	Hampshire Formation	Hampshire Formation	Chattanooga Shale
		Chemung Formation	Chemung Formation	
	Timmons Fork Formation	Brallier Formation ¹	Brallier Formation ¹	
	Harel Formation	Harel Shale	Harel Shale	

¹Locally water-yielding

Modified from:

Patchen, D.G., and others, 1985a, Correlation of stratigraphic units of North America (COSUNA) Project, southern Appalachian region: American Association of Petroleum Geologists, 1 sheet.

_____, 1985b, Correlation of stratigraphic units of North America (COSUNA) Project, northern Appalachian region: American Association of Petroleum Geologists, 1 sheet.