west virginia department of environmental protection

Office of Oil and Gas
601 57th Street SE
Charleston, WV 25304
(304) 926-0450
(304) 926-0452 fax

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
www.dep.wv.gov

March 03, 2015

WELL WORK PERMIT

Vertical Well

This permit, API Well Number: 47-10701747, issued to PENNECO OIL COMPANY, INC., is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Please be advised that form WR-35, Well Operators Report of Well Work is to be submitted to this office within 90 days completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

In addition to the applicable requirements of this permit, and the statutes and rules governing oil and gas activity in WV, this permit may contain specific conditions which must be followed. Permit conditions are attached to this cover letter.

Per 35CSR-4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926-0499 ext. 1654.

James Martin
Chief

Operator's Well No: GENE TOWNSEND #1
Farm Name: TOWNSEND, GENE W.
API Well Number: 47-10701747
Permit Type: Vertical Well
Date Issued: 03/03/2015

Promoting a healthy environment.

10701747

PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

CONDITIONS

1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.

2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.

3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.

4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.

5. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.

6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours

7. Well work activities shall not constitute a hazard to the safety of persons.

8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

west virginia department of environmental protection

Oil and Gas Conservation Commission
601 57th Street, SE Charleston, WV 25304
(304)926-0499, Ext 1656

Earl Ray Tomblin, Governor
Randy C. Huffman, Cabinet Secretary
dep.wv.gov

July 10, 2014

Department of Environmental Protection
Office of Oil and Gas
Charleston, WV 25304

RE: Application for Deep Well Permit – API #47-107-01747

COMPANY: Penneco Oil Company

FARM: Townsend #1

COUNTY Wood DISTRICT: Harris QUAD: Lubeck

The application for the above company is **approved to drill to Rose Hill formation.**

The applicant has complied with the provision of Chapter 22C-9, of the Code of West Virginia, nineteen hundred and thirty-one (1931), as amended, Oil and Gas Conservation Commission as follows:

1. Provided a certified copy of duly acknowledged and recorded consent and easement form from all surface owners; yes

2. Provided a tabulation of all deep wells within one mile of the proposed location, including the API number of all deep wells, well name, and the name and address of the operator; none

3. Provided a plat showing that the proposed location is a distance of 400+ feet from the nearest lease line or **unit boundary** and showing the following wells drilled to or capable of producing from the objective formation within 3,000 feet of the proposed location.

Sincerely,

Cindy Raines

Cindy Raines
Executive Assistant

ck# 17911
$ 800.00

WW - 2B
(Rev. 8/10)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator: Penneco Oil Company

Operator ID	County	District	Quadrangle
494460033	Wood 107	Harris 2	Lubeck 7.5' 449

2) Operator's Well Number: Townsend No. 1 3) Elevation: 868'

4) Well Type: (a) Oil_____ or Gas X

(b) If Gas: Production X / Underground Storage _____

Deep X / Shallow _____

5) Proposed Target Formation(s): Rose Hill Proposed Target Depth: 5,712'
6) Proposed Total Depth: 5,765' Feet Formation at Proposed Total Depth: Rose Hill
7) Approximate fresh water strata depths: 209', 260'
8) Approximate salt water depths: 1248', 1317', 1437'

9) Approximate coal seam depths: None

10) Approximate void depths,(coal, Karst, other): None

11) Does land contain coal seams tributary to active mine? No

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)
Drill and fracture stimulate new deep, conventional gas well.

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	20"	MC-50	81.3 #	30'	30'	CTS
Fresh Water	13 3/8"	H-40	48.0 #	360'	360'	CTS
Coal	9 5/8"	H-40	32.3 #	1520'	1520'	CTS
Intermediate	7"	J-55	23 #	2115'	2115'	CTS
Production	4 1/2"	MAV65	10.5#	5712'	5675'	270 sacks
Tubing						
Liners						

Jayne Stevens 3/11/2014

Received
MAR 31 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

Packers: Kind: _____
Sizes: _____
Depths Set _____

10701747

WW-2A
(Rev. 6-07)

1). Date: _____

2.) Operator's Well Number Townsend No. 1

3.) API Well No.: 47- State _____ County _____ - Permit _____

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE AND APPLICATION FOR A WELL WORK PERMIT

4) Surface Owner(s) to be served:
(a) Name: Gene Townsend
Address: 1805 Lee Creek Road
Belleville, WV 26133
(b) Name: _____
Address: _____
(c) Name: _____
Address: _____

5) (a) Coal Operator
Name: _____
Address: _____
(b) Coal Owner(s) with Declaration
Name: Gene W. Townsend
Address: 1805 Lee Creek Road
Belleville, WV 26133
Name: _____
Address: _____
(c) Coal Lessee with Declaration
Name: _____
Address: _____

6) Inspector: Jamie Stevens
Address: 105 Kentuck Road
Kenna, WV 25248
Telephone: 304-206-7775

TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:

___ Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas

OR

x Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through ___ on the above named parties by:

_____ Personal Service (Affidavit attached)
x Certified Mail (Postmarked postal receipt attached)
_____ Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form 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.

Official Seal
Notary Public, State Of West Virginia
Lois A Brown
1552 Little Sandy Road
Bruceton Mills WV 26525
My commission expires August 22, 2017

Well Operator: Penneco Oil Company
By: Stephen K. Schuman
Its: Designated Agent
Address: 6608 Route 22
Delmont, PA 15626
Telephone: 724-468-8232

Subscribed and sworn before me this 18th day of March, 2014

Lois A. Brown
Notary Public

My Commission Expires August 22, 2017

Received
MAR 21 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

Oil and Gas Privacy Notice

The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at depprivacyofficer@wv.gov

10701747

7013 1710 0001 2370 3949

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
(Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com®

OFFICIAL USE

Postage	$ 1.40
Certified Fee	3.30
Return Receipt Fee (Endorsement Required)	2.70
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	$ 7.40

Postmark Here

Sent To: GENE TOWNSEND
Street, Apt. No.; or PO Box No.: 1805 LEE CREEK ROAD
City, State, ZIP+4: BELLEVILLE, WV 26133

PS Form 3800, August 2006 — See Reverse for Instructions

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

GENE TOWNSEND
1805 LEE CREEK ROAD
BELLEVILLE, WV 26133

COMPLETE THIS SECTION ON DELIVERY

A. Signature
X Betty Jo Townsend ☐ Agent ☐ Addressee

B. Received by (Printed Name) C. Date of Delivery 3/12/14

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☐ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☒ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Transfer from service label) 7013 1710 0001 2370 3949

PS Form 3811, February 2004 — Domestic Return Receipt — 102595-02-M-1540

Received
MAR 31 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

10761747

CERTIFIED MAIL™

7013 1710 0001 2370 3949

UNITED STATES POSTAGE
PITNEY BOWES
02 1P $ 007.40⁰
0003905199 MAR 11 2014
MAILED FROM ZIP CODE 26351

Received
MAR 11 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

SMITH LAND SURVEYING, INC.
P.O. Box 150
Glenville, WV 26351

TO: GENE TOWNSEND
1805 LEE CREEK ROAD
BELLEVILLE, WV 26133

10701747

WW-2A Surface Waiver

SURFACE OWNER WAIVER

County Wood

Operator Penneco Oil Company

Operator well number Townsend No. 1

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.

WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0450

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have **FIFTEEN (15) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

Comments must be in writing. Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

1) The proposed well work will constitute a hazard to the safety of persons.
2) The soil erosion and sediment control plan is not adequate or effective;
3) Damage would occur to publicly owned lands or resources;
4) The proposed well work fails to protect fresh water sources or supplies;
5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation...".

If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.

List of Water Testing Laboratories. The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

VOLUNTARY STATEMENT OF NO OBJECTION

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application for a Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through ___ including a work order on Form WW2-B, a survey plat, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON

Gene W Townsend
Signature

Date 4-4-2014

Gene W Townsend
Print Name

FOR EXECUTION BY A CORPORATION, ETC.

Company Name

By

Its

Date

Signature Date

RECEIVED
Office of Oil and Gas
APR 11 2014
WV Department of
Environmental Protection

RECEIVED APR 0 7 2014

WW-2A Coal Waiver

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County Wood
Operator Penneco Oil Company Operator's Well Number Townsend No. 1

INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE

To the coal operator, owner, or lessee named on page WW2-A. You are hereby notified that any objection you wish to make or are required to make by WV Code 22-6-15, 16 or 17, must be filed with the Chief of the Office of Oil and Gas within fifteen (15) days after the receipt of this application by the Office. Mail objections to:

Chief, Office of Oil and Gas
Department of Environmental Protection
601 57th St. SE
Charleston, WV 25304
(304) 926-0499 extension 1654

WAIVER

The undersigned coal operator _____/ owner _____/ lessee _____/ of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of well location, the well location has been added to the mine map. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

FOR EXECUTION BY A NATURAL PERSON

Gwell Townsend Date _____
Signature

FOR EXECUTION BY A CORPORATION, ETC.

Company Name _____
By _____
Its _____ Date

_____
Signature Date

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Office of Oil and Gas
APR 11 2014
WV Department of
Environmental Protection

CERTIFICATE OF CONSENT AND EASEMENT

We, the undersigned, for valuable considerable, the receipt and sufficiency of which is hereby acknowledged, being all the owners of the surface of that certain lot, tract or parcel of land located in Harris District, Wood County, State of West Virginia, shown on the attached plat or survey, or hereby consent and grant an easement, pursuant to West Virginia Code, Section 22C-9-7 (b) (4) and Operating Rule 4.4 of the Rules and Regulations of the West Virginia Oil and Gas Conservation Commission, to **Penneco Oil Company**, its successors or assigns, for the drilling and operation of a deep well from the production of oil or gas at the location shown on the attached plat or survey. Easement must be passable by two wheel drive vehicle at all times past Candice Fleak's house and garage, except when snow or ice covered.

Executed this 4th day of April, 2014.

Gene Townsend

Betty Jo Townsend

State of West Virginia
County of Wood To-Wit

I, Erica Counts, a Notary Public in and for the aforesaid County and State, do hereby certify that Gene and Betty Townsend, whose name is signed to the writing above, bearing date on the 4th day of April, 2014, has this day acknowledged the same before me, in my said County and State.

Given under my hand this 4th day of April, 2014.

NOTARY PUBLIC OFFICIAL SEAL
ERICA J. COUNTS
STATE OF WEST VIRGINIA
329 8th Street
Parkersburg, WV 26101
My Commission Expires June 23, 2018

Erica J. Counts

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Office of Oil and Gas
APR 11 2014
WV Department of
Environmental Protection

10701747

WW-2A1
(Rev. 1/11)

Operator's Well Number Townsend No. 1

INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE
Chapter 22, Article 6, Section 8(d)
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

(1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;

(2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
Gene W. Townsend	Penneco Oil Company	1/8	Please see attached

Acknowledgement of Possible Permitting/Approval
In Addition to the Office of Oil and Gas

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

Received
MAR 31 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator: Penneco Oil Company
By: Its: Stephen K. Schuman, Designated Agent

10701747

OIL AND GAS LEASE

This **AGREEMENT** is made and entered into this 10th day of March, 2011, by and between Gene W. Townsend and Betty Jo Townsend, husband and wife, whether one or more hereinafter referred to as Lessor, and **Penneco Pipeline Corporation**, a Pennsylvania corporation with its principal office located at 6608 Route 22, Delmont, PA 15626, hereinafter referred to as Lessee.

1. LEASING CLAUSE. In consideration of Ten Dollars ($10.00) cash paid to the Lessor, the receipt of which is hereby acknowledged, and the covenants and agreements herein, Lessor grants, demises, leases and lets exclusively to Lessee for the purposes hereinafter stated all that certain tract of land situate in the District of Harris, County of Wood, State of West Virginia, on or near the waters of Lee Creek, and containing, 111.425 acres which is more fully described in that certain Deed from John S. Cather, Special Commissioner to Gene W. Townsend and Betty Jo Townsend and recorded in said clerk's office in Deed Book 723 at page 084 and and being land depicted by Tax Map 02-410, parcel E, and now or formerly bounded as follows:

On the North by Charles R. Flinn, 02-410-A1;
On the South by Lee Creek Road, small tracts and David M. Kemp;
On the East by Pleasant Hill Church Road, 02-410-C and 02-410-A1; and
On the West by Ralph J. Blair, Blaine Auville.

The foregoing property is hereinafter referred to as the premises, leased premises, leased property or the like.

2. PURPOSES. This lease is granted for the purposes of exploring for, drilling for, producing and operating for, transporting and marketing oil, gas, natural gasoline, coalbed methane, casing-head gas, condensate, related hydrocarbons, and all products produced therewith or therefrom, ("Oil and Gas") by methods now known or hereafter discovered. Lessor hereby grants Lessee the exclusive right to enter in, on and under the premises to: (i) conduct geological and geophysical surveys and explorations, and seismic testing; (ii) drill vertically, directionally, and horizontally, on, under and through the premises, operate for, treat, produce and market Oil and Gas; (ii) inject gas, air, water, and other substances to recover and produce Oil and Gas; (iii) drill wells, deepen, hydraulic fracture, complete, recomplete, treat and recondition drilled, producing and abandoned wells, and re-abandon wells on said land; (iv) transport through the premises Oil and Gas produced from the premises and from other property; (v) construct, use, maintain, operate, change, replace, repair and remove roads, pipelines, drips, tanks, stations, cathodic protection devices, houses for equipment, gates, meters, separators, regulators, electric lines, transformers and facilities, and other facilities; and (vi) all other rights and privileges necessary, incident to, or convenient for the economical operation of said land alone and conjointly with other lands for the exploration, production and transportation of Oil and Gas.

No well shall be drilled by the Lessee within two hundred feet (200') of any dwelling house now on said land except by the consent of the owner of the house.

Lessor agrees that except with the advanced written consent of Lessee, no house, outbuilding, well, or other structure will be construed or erected within two hundred feet (200') of any well, tank, line or other equipment or facility placed on said premises by Lessee.

3. TERM. This lease shall be in force for Five (5) years from an effective date of March 22, 2011 (herein referred to as "primary term"), and as long after the primary term as operations relating to the search or exploration for oil or gas are conducted on the premises or lands pooled therewith, or as long as oil or gas is capable of production therefrom or from lands pooled therewith, or this lease is maintained in force pursuant to any other provision hereof (the "secondary term"). The term "operations" in this lease means drilling of a well, the re-working, deepening or plugging back of a well or hole, completion, recompletion, fracturing, work in preparation for such activity, or other work conducted in an effort to obtain or re-establish production of Oil and Gas. Operations shall be deemed to be commenced when the first material is placed on the leased premises or when the first work, other than surveying, occurs on the premises which is necessary for such operations, and shall be considered to be "continuously prosecuted" if not more than one hundred eighty (180) days shall elapse between the completion or abandonment of one well or hole and the commencement of operations for another well or hole. If Lessee produces Oil and Gas from the premises or lands pooled therewith, drills a well capable of producing oil and gas on the premises, or pools or unitizes the premises with other property on which a well capable of production is situate, then any such well capable of producing Oil and Gas will continue this lease in force until surrendered. If a well is not producing, shut-in payments shall be made as hereinafter provided, and shut-in payments will continue this lease in full force and effect notwithstanding failure to produce a well or market production. The Lessor agrees that the consideration paid at the time of execution of this Lease, and royalty or shut-in royalty as provided herein, is full and adequate consideration for this Lease. There is no obligation to drill on the premises or to pool the premises with other property.

RIGHT TO EXTEND PRIMARY TERM. Lessee may, at its option, extend the primary term for an additional NA year period by the tender before the expiration of the initial primary term provided above, of an amount equal to the amount paid Lessor by Lessee at the execution hereof.

4. OPERATIONS. If, at the expiration of the primary term, a well capable of producing Oil and Gas is not located on the leased premises or on acreage pooled therewith, but Lessee is then engaged in operations or shall have completed a dry hole thereon within the primary term, this lease shall remain in force so long as operations are prosecuted with no cessation of more than ninety (90) consecutive days and, if operations result in a well capable of production of Oil and Gas this lease shall continue thereafter until abandoned. Lessee is granted the right, but does not have an obligation, to conduct operations on the leased premises. Any roadways and/or pipelines installed during the term of this lease, shall extend beyond the termination of this lease upon payment by Lessee to Lessor, as additional consideration for said easement rights, the amount of One ($1.00) Dollar per foot, for any pipeline installed upon said property or the amount of ($2.00) Dollars, per foot, for any road installed upon said property. The aforesaid easement rights shall be extended so long as the same are maintained and utilized by Lessee, its successors and assigns.

5. ROYALTIES. The royalty provided by this Lease is one eighth of the amount sold calculated at the wellhead by subtracting post production expenses from the amount received by Lessee. Lessor shall have the right to take one eighth of production in kind at the wellhead, provided that Lessor does not impede the production of Lessee's Oil and Gas, and Lessor must pay all costs incurred as a result of such election, including all costs to gather, transport, process, and market such production. If Lessor does not elect to take royalty production in kind or impedes Lessee's production, then Lessee will market the royalty production and pay Lessor a royalty as provided herein.

Received
MAR 31 2014
Office of Oil and Gas
WV Dept. of Environmental Protection

If oil or gas is sold as produced at the wellhead, Lessee will pay Lessor an amount equal to one eighth (1/8th) of the price received by Lessee from the sale at the wellhead. The "wellhead" is the place where the well enters the ground at the surface.

If oil or gas is not sold at the wellhead, but transported from the well to another location, then Lessee shall calculate

the price received at the wellhead by deducting from gross sales proceeds all costs and charges of transporting, treating, and processing the gas from the proceeds received at the point of sale.

Costs of Transportation and Marketing are Deducted from Sale Proceeds. In calculating the price received by Lessee from the sale of gas at the wellhead, the Lessor's royalty shall bear one eighth ($1/8^{th}$) portion of transportation and processing costs and other costs incurred between the wellhead and the point of sale. When determining the amount of royalty due the actual and reasonable amounts paid or incurred for the following are deductible and will not be included in volumes sold or proceeds received when royalty is calculated:

(i) Gas Gathering and Transportation. All third party costs, losses and charges in connection with transporting gas from the wellhead to the place where the gas is sold. Some of these deductible amounts are sometimes referred to as firm or interruptible gathering or transportation, compression, fuel, shrink, retainage or lost or unaccounted for; and

(ii) Processing and Dehydration. All costs, losses and charges in connection with processing, removing butanes, ethanes and other liquid hydrocarbons, sulfur, water, hydrogen sulfide, and other substances, or otherwise treating any oil or gas produced from the premises, including costs incurred by Lessee that are paid to third parties; and

(iii) Transporting and Storing Oil. Costs, losses and charges in connection with transporting oil to market (whether by truck or pipeline), and of storing oil off of the leased premises before sale.

In some instances the foregoing deductible charges are assessed as an amount or percentage of natural gas in decatherms or thousand cubic feet (volume deductions).

Royalty Payable on Gas Produced, Saved and Marketed. The royalty will be calculated using the amount of Oil and Gas the Lessee sells and is paid for from the premises but not on free gas, liquids lost, used or retained by the processor in connection with processing, gas used as fuel, or amounts that may be used or lost or unaccounted for and for which sales proceeds are not realized. Royalty will not be due on Oil and Gas injected to enhance recovery.

6. GAS EXCEPTED. Lessor hereby excepts and reserves from any well on said land producing gas ~~Two~~ Three Hundred ~~Fifty~~ Thousand (~~2~~350,000) cubic feet of gas per year, or such part thereof as Lessor requires for his own use in ~~one~~ any B.J.T. dwelling house on said land, at Lessor's own risk; subject, however, to the use, operation, pumping and right of abandonment by Lessee of its wells and pipelines on the premises and the terms of the executed GAS USE RIDER attached hereto and made a part of this lease. In the absence of such GAS USE RIDER, the right to take gas herein shall terminate. Lessor may at his own expense and upon written application, secure such gas by a service line laid to and connected either to any such well on said land or to Lessee's pipeline leading from such well to market, the point of connection to be designated by Lessee.

7. SHUT-IN PAYMENTS. If there is an unplugged Oil and Gas well or wells on the leased premises or on lands pooled therewith and oil and gas is not sold therefrom for any period longer than six months, this lease shall not terminate, but the Lessee shall pay as shut-in royalty for constructive production a sum equal to Fifty Dollars per well per month. Such shut-in royalty shall be due within a reasonable time following the shut-in period.

8. DELAY RENTAL: Lessee covenants and agrees to pay a rental at the rate of $ 40.00 Dollars per acre annually, in advance, until a well producing oil and/or gas is drilled. The first delay rental payment shall be made within sixty (60) days of this Lease. Any rental paid for the time beyond the date of drilling of a well shall be credited upon the first royalty due upon the same. It is agreed that Lessee may drill or not drill on the leased premises, as it may elect, and that the consideration and rentals paid and to be paid, constitute adequate compensation for such privilege.

9. PAYMENTS AND SUBDIVISION: All rental and royalty payments are to be mailed to:

Gene W. Townsend and/or Betty Jo Townsend, 1805 Lee Creek Road, Belleville, WV 26133

who is (are) hereby appointed agent(s) if designated as "Agent", to receive and receipt for the same and to receive notices given by Lessee. Lessee shall not be obligated to make payments or give notices to more parties than the lessor Agents designated in this paragraph. Lessee shall not be obligated to make payments to any individual payee or agent hereunder until such payments equal the sum of One Hundred Dollars ($100.00), and if a lesser amount is due, payments shall be made at least once each calendar year. Lessee shall not be obligated to see to the application of any monies paid to Lessor or to the Agent(s) designated herein. The depositing of payments hereunder in any post office mail addressed as above set forth shall be deemed payment or tender hereunder. Notwithstanding the death of Lessor, payment or tender to the deceased Lessor shall be binding on the heirs, devisees, executors, administrators and personal representatives of Lessor and its successors in interest.

If the leased premises are now or shall hereafter be owned in severalty or in separate tracts, the leased premises nevertheless shall be developed and operated as one (1) lease, and all rentals, royalties and payments provided for shall be treated as an entirety and shall be divided among, and paid to, such separate owners of the Oil and Gas in the proportion that the acreage owned by each such separate owner bears to the entire leased acreage regardless of the location of any well on the premises. Failure to pay or error in paying any rental or other payment due hereunder shall not constitute a ground for forfeiture of this lease and shall not affect the obligation to make such payment, and Lessee shall not be considered in default on account thereof until Lessor has first given Lessee written notice of the non-payment and Lessee shall have failed to make payment for a period of sixty (60) days after receipt of such notice.

10. UNITIZATION. Lessor grants Lessee the right to pool, unitize, or combine all or parts of the premises with other lands, whether contiguous or not contiguous, leased or unleased, whether owned by Lessee, Lessor, or by others, at a time before or after drilling to create drilling or production units either by contract right or pursuant to governmental authorization or order. A well drilled on any land pooled or unitized with land leased hereby shall be considered for all purposes of this lease (excepting only free gas rights, if any) a well drilled on the premises. Where Lessee forms a unit by contract right, it may, at its sole option, place of record a copy of its declaration of unitization. Lessor shall be provided with notice of the formation of unit(s) if required by the appropriate governmental authority. Lessee is granted the right to change the size, shape and conditions of operation or payment of any unit created. Lessor agrees to accept and receive out of the production of the net proceeds realized from the production of such unit, such proportional share of the royalty from each unit well as the number of the lease premises net acres included in the unit bears to the total number of acres in the unit; and for such purposes, Lessee may, at it's option, definitively rely on the acreage calculation of the local property tax assessment authorities. Drilling operations in preparation for drilling, production, or shut-in production from the unit, or payment of royalty or delay rental shall have the same effect upon the term of this lease as if a well were located on the leasehold premises. A well may be drilled on the premises and completed on other property. The rights and obligations of this paragraph are subject to the pooling and spacing orders and provisions of governmental agencies with jurisdiction.

11. SURRENDER. Lessee shall have the right to surrender this lease at any time as to either any part or parts of the premises and with respect to the portion surrendered thereafter shall be released and discharged from all payments, obligations, covenants and conditions herein, and this lease shall be terminated as to the land in respect to which a surrender is made. Recordation of a surrender in the proper county shall be, and be accepted as, full and legal surrender of the Lessee's rights under this lease as to the land in respect to which the surrender is made.

12. TITLE, CONVEYANCE OF PREMISES. Lessor hereby warrants generally and agrees to defend the title to

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the property herein leased. Lessor hereby warrants that (i) the leased premises are not encumbered by any enforceable oil or gas lease of record or otherwise and that (ii) Lessor is not currently receiving any bonus, delay or other rental, production royalty or shut-in royalty or other payment as the result of any prior Oil and Gas lease(s) covering any or all of the subject property, and that (iii) any wells drilled upon the leased premises or upon any lands with which the leased premises have been combined or pooled in a drilling or production unit have been plugged and abandoned. Lessor further covenants and agrees that if Lessor's title to the leased premises shall come into dispute or litigation, or, if, in the judgment of Lessee, there are bona fide adverse claims to the Oil and Gas leased hereby or the rentals or royalties herein, then Lessee, at its option, may withhold the payment of rentals or royalties until final adjudication or other settlement of such dispute, litigation, claims or claim, or institute proceedings to resolve the same. Lessee, at its option, may pay and discharge any taxes, mortgages or other lien or liens existing, levied, assessed or which may hereafter come into existence or be levied or assessed on or against the premises, and, in the event it exercises such option, Lessee shall be subrogated to the lien and any and all rights of any holder or holders thereof, and may reimburse itself by applying to the discharge of any such mortgage, tax, or other lien or liens, any rental or royalty accruing hereunder. Lessor further agrees to notify Lessee in case of notice of any adverse claim or suit filed affecting the title to the leased premises or affecting all or any part of the rentals or royalties hereunder, and in the event suit is not pending, Lessee may file same, and in either event Lessee may hold the rentals and royalties until the ownership is determined by final decree of a court of competent jurisdiction without in anywise affecting its rights hereunder. In case of a conveyance of all or a part of the leased premises, Lessee may continue to make payments to Lessor until furnished with a certified copy of any such deed of conveyance or other documents or proof to enable the Lessee to identify the land conveyed and the parties to whom conveyed; or on written notice of any such conveyance the Lessee may hold all payments until furnished with documents or proof, and in case of any division shall apportion the rental according to acreage.

13. **FEDERAL AND STATE LAWS, FORCE MAJEURE.** All express or implied covenants of this lease shall be subject to all Federal and State Laws, Executive Orders, Rules and Regulations and this lease shall not be terminated, in whole or in part, nor Lessee held liable in damage, for failure to comply herewith, if compliance is prevented by, or if such failure is result of any such law, order, rule or regulation, whether or not subsequently determined to be invalid, or if prevented by an Act of God, of the public enemy, labor disputes, inability to obtain material, failure of transportation, or other cause beyond the control of the Lessee. Lessee's obligations shall be suspended so long as any of the above-mentioned causes persist, and Lessee shall have ninety (90) days after the cessation of such cause in which to resume performance of this lease.

If, during the term of this lease, oil or gas is discovered on the premises, but Lessee is prevented from producing the same by reason of the causes set out in this section, this lease shall nevertheless be considered as producing and shall continue in full force and effect until Lessee is permitted to produce and market the Oil and Gas, and as long thereafter as a well is capable of production, or drilling or re-working operations are continued as elsewhere herein provided.

14. **BREACH OF OBLIGATIONS.** The breach by Lessee of any obligations arising hereunder shall not work a forfeiture or termination of this lease nor cause a termination or reversion of the estate created hereby nor be grounds for cancellation hereof in whole or in part unless Lessor shall notify Lessee in writing of the facts relied upon in claiming a breach hereof, and Lessee, if in default, shall have sixty (60) days after receipt of such notice in which to commence the compliance with the obligations imposed by virtue of this instrument, and if Lessee shall fail to do so, then Lessor shall have grounds for action in arbitration for such remedy to which Lessor may be entitled.

It is agreed that this lease shall never be terminated, forfeited or cancelled for failure to perform in whole or in part any of its implied covenants, conditions or stipulations, until it shall have been first finally judicially determined such failure exists, and after such final determination, Lessee is given a reasonable time therefrom to comply with any such covenants, conditions or stipulations.

15. **OUTSTANDING INTERESTS.** The royalty and rents payable hereunder equals the total royalty and rentals payable to all the owners of all the Oil and Gas in place underlying the entire premises. Should Lessor own a lesser interest than the full and complete ownership of all the Oil and Gas, then Lessor shall receive such portion of the rentals or one eighth royalty as Lessor's interest bears to one hundred percent of the Oil and Gas estate. Lessee shall not be required in any event to increase the rental or royalty payments hereunder by reason of any royalty or interest in said oil or gas that may have been heretofore sold, reserved or conveyed by Lessor or predecessors in title or otherwise; and if the Lessor does not have title to one hundred percent of all of the Oil and Gas underlying the leased premises. Lessor shall refund to Lessee such part of all payments made by the Lessee hereunder, as shall be proportionate to the outstanding title, and payments thereafter to be made shall be reduced.

16. **METERING, USE OF WATER, OIL AND GAS IN PRODUCTION AND MARKETING.** Gas produced from the premises may be measured by a single meter, and that meter need not be on the premises. Gas may be measured by a master meter, and it is not necessary to meter every well on the premises, so long as a reasonable method of allocation is used and the total amount delivered at the master meter is reasonably allocated among all the wells behind the master meter. If a master meter is used and line loss occurs, Lessee may reasonably deduct and allocate line loss, if any, that occurs on or off the premises, to meters behind the master meter and pay royalty on the net amount of gas allocated to the well at the wellhead after allowance for line loss and unaccounted for gas.

Oil and Gas produced from the premises may be used in drilling, producing, compressing, treating, processing, gathering and transporting oil or gas to market on or off the premises, and royalty will not be payable on the amount so used.

Lessee shall have the right to use water on and off the premises in connection with its operations, to construct and use damns and impoundments, and fracture and complete wells.

Lessee shall have the privilege of using Oil and Gas, rock, surface rock from the leased premises to construct roads and run all machinery necessary for drilling and operating for Oil and Gas and the abandoning of any well on said premises, and at any time removing all machinery and fixtures placed on said premises, all without payment therefore. For example, but not by way of limitation, gas may be used for fuel for compression without payment of royalty on the gas used.

17. **ARBITRATION.** Any and all claims in connection with this lease shall be submitted to arbitration with a panel of three arbitrators, and arbitration shall be the exclusive method of resolving all disputes in connection with this lease, and all rights, obligations and operations pursuant thereto. The Lessor will choose one arbitrator, the Lessee will choose a second arbitrator, and the two arbitrators chosen will choose the third arbitrator. In the event any party fails to choose an arbitrator within forty days of demand for arbitration, one or more arbitrators may be appointed by any state or federal court in West Virginia in any jurisdiction in which any portion of the leased premises is situate. Arbitration shall then occur with reasonable dispatch in accordance with the rules of the American Arbitration Association, and in the county seat of the county where a majority of the leased premises is situate.

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18. **ENTIRE CONTRACT.** This lease and ADDENDUM TO OIL AND GAS LEASE embodies the entire contract and agreement between Lessor and Lessee, and no warranties, representations, promises or inducements not herein

10701747

expressed have been made or relied upon by either party. The terms and conditions hereof shall extend to respective heirs, executors, administrators, successors and assigns of the parties hereto.

WITNESS the following signatures and seals the day and year first written.

Witness: _____ Lessor: _____
Gene W. Townsend

_____ _____
Betty Jo Townsend

Attest: _____ PENNECO PIPELINE CORPORATION
_____
Ben L. Wallace

THIS INSTRUMENT PREPARED BY:
Shannon S. Johnson
Whose Address Is:
6608 Route 22
Delmont, PA 15626

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WV Department of Environmental Protection

(West Virginia Acknowledgement – Individual)
STATE OF WEST VIRGINIA §
COUNTY OF WOOD §

The foregoing instrument was acknowledged before me this 10th day of March, 2011, by Gene W. Townsend and Betty Jo Townsend.

Given under my hand and Notary Public Seal, this 10th day of March, A.D. 2011.

(Notary Seal) COMMISSIONER FOR W. VA ★ JARRETT J. BARNHOUSE ★ LOWELL, OH

My Commission Expires: November 20th 2019

COMMONWEALTH OF PENNSYLVANIA)
)
COUNTY OF WESTMORELAND)

On this, the 13th day of May, 2011, before me, a Notary Public, the undersigned officer, personally appeared Ben L. Wallace, who acknowledged himself to be the Chief Operating Officer of Penneco Pipeline Corporation, and that as such Chief Operating Officer, being authorized to do so, executed the foregoing instrument for the purpose therein contained by signing the name of the corporation by himself as Chief Operating Officer.

In witness whereof, I hereunto set my hand and official seal.

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Eileen M. Staub Notary Public
Salem Twp., Westmoreland County
My Commission Expires May 15, 2013
Member, Pennsylvania Association of Notaries

Eileen M. Staub
Notary Public

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ADDENDUM TO OIL AND GAS LEASE

THIS ADDENDUM is attached hereto and made a part of that certain OIL AND GAS LEASE dated the 10th day of March, 2011 by and between Gene W. Townsend and Betty Jo Townsend as LESSOR(S) and **Penneco Pipeline Corporation,** as Lessee.

19.) In the event it is determined by the parties that Lessee's drilling operations have adversely or permanently affected the quality of Lessor's domestic water supply the Lessee shall, at its own expense, use reasonable and customary means to repair or correct such damages.

20.) Any fence or portion thereof, that is removed for access to the leased premises will be replaced by a fence of like quality. If permanent access is deemed necessary a gate will be installed at the point of entry and keys to such gate made available to Lessor.

21.) The surface disturbed areas on the leased premises will be restored as nearly as is practically possible to original contour and condition. Lessee shall maintain all reclaimed areas which were disturbed as a result of Lessee's operations herein in a workmanlike manner consistent with the statutes and regulations then governing such operations.

22.) Lessor and Lessee shall mutually agree to the location of roads drill-sites and pads as well as the location of pipelines and/or flow-lines provided that such approvals from the landowner are not unreasonably withheld.

23.) Lessee agrees to indemnify and hold harmless Lessor from all claims, damages, liabilities, causes of action or demand for personal injury or property damage arising from Lessee's operations on the leased premises excepting such claims that are attributable to Lessor's own intentional conduct or negligence.

24.) In the event of a conflict between the terms of this OIL AND GAS LEASE and the terms of this ADDENDUM TO OIL AND GAS LEASE, the addendum terms shall be deemed to supersede the terms of the OIL AND GAS LEASE.

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24.) This OIL AND GAS LEASE is a Top Lease and is subordinate to two presently existing Oil and Gas Leases dated January 30, 2008 and recorded at Deed Book 1124 at Page 635 and 637 respectively of the Office of the Recorder's at Wood County and State of West Virginia the primary term of which was most recently extended and amended by instruments of extension dated March 21, 2010 and recorded at Deed Book 1150 and Page 026 and Deed Book 1150, Page 027 respectively of the Office of the Recorder's at Wood County and State of West Virginia, the primary term of both of which expires March 21, 2011. Lessors hereby covenant and agree that they will not extend, amend or modify said existing Lease. Upon termination of said Lease and provided said Lease is not held in force beyond said primary term by production, drilling and/or other provisions, Lessee will, within Thirty (30) days of such termination of pre-existing Lease pay Lessors the delay rental amount agreed to.

Witness:

LESSOR:

Gene W Townsend
[redacted]
Gene W. Townsend

Betty Jo Townsend
Betty Jo Townsend

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MAR 31 2014
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10701747

WW-2B1
(5-12)

Well No. Townsend No. 1

West Virginia Department of Environmental Protection
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name Reliance Labs
Sampling Contractor Smith Land Surveying, Inc. - Environmental Division

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MAR 31 2014
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WV Dept. of Environmental Protection

Well Operator Penneco Oil Company
Address 6608 Route 22
Delmont, PA 15626
Telephone 724-468-8230

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

NOTE: There appears to be 11 +/- potable water sources within 1,500', therefore tests will be offered and samples taken as required.

Testing . Jamie Stevens 3/11/2014

10701747

SMITH LAND SURVEYING, INC. P.O. BOX 150, GLENVILLE, WV 26351
(304) 462-5634 • FAX 462-5656

WELL INFORMATION AND POTENTIAL WATER WELL SAMPLE DATA SHEET

OPERATOR: *PENNECO GAS COMPANY*
LEASE NAME AND NUMBER: *Townsend #1 WELL PAD*

COMMENTS

The initial field and/or mapping review of the area surrounding the proposed well site revealed the below listed surface owner(s) that were potentially utilizing groundwater (potable) for Human Consumption or other purposes within 2500' of the proposed well site. (For location of each site see attached area map.)

INDIVIDUAL CONTACTED OR NOTIFIED

Site: *1* Spacing *1170'* Owner/Occupant: *Betty Townsend*
Address: *1805 Lee creek Rd. Belleville, WV 26133* Ph: *(304)-863-6971*
Field Contact Date: *10/28/2014* Located: *Yes* Date Located: *10/28/2014* Source: *Water Well*
If No, declined by who _____ Letter/Notice Date: 1st *10/28/2014* 2nd *10/31/2014* Certified (3rd) *10/24/14*
Comments: *Tax Map 410, Parcels E, F1 and I*
Lat. 39.134824
Long: 81.706256

Site: *2* Spacing *1065'* Owner/Occupant: *Randall Brown*
Address: *1763 Lee creek Rd. Belleville, WV 26133* Ph: *(304)-863-8434*
Field Contact Date: *10/28/2014* Located: *Yes* Date Located: *10/28/2014* Source: *Water Well*
If No, declined by who _____ Letter/Notice Date: 1st *10/28/2014* 2nd *10/31/2014* Certified (3rd) *10/24/14*
Comments: *Tax Map 410, Parcels E2 and E3*
Lat. 39.135010
Long. 81.707161

Site: *3* Spacing *1925'* Owner/Occupant: *Larry Sellers*
Address: *1528 Lee creek Rd. Belleville, WV 26133* Ph: *(304)-863-3806*
Field Contact Date: *10/31/2014* Located: *Yes* Date Located: *10/31/2014* Source: *Water Well*
If No, declined by who _____ Letter/Notice Date: 1st *10/28/2014* 2nd *10/31/2014* Certified (3rd) *10/24/14*
Comments: *Tax Map 330, Parcels F1, F2 and F3*
Lat: 39.133321
Long. 81.710568

Site: *4* Spacing *3560'* Owner/Occupant: *Richard Bonar*
Address: *177 digger Dr. Belleville, WV 26133* Ph: *(304)-300-2918*
Field Contact Date: *11/21/2014* Located: *Yes* Date Located: *11/21/2014* Source: *Water Well*
If No, declined by who _____ Letter/Notice Date: 1st *10/28/2014* 2nd *10/31/2014* Certified (3rd) *10/24/14*
Comments: *Tax Map 330, Parcel Q*
Lat: 39.145352
Long: 81.715434

Site: 5 Spacing: 4540' Owner/Occupant: Richard Bonar
Address: 177 digger Dr. Belleville, WV 26133 Ph: (304)-300-2918
Field Contact Date: 11/21/2014 Located: Yes Date Located: 11/21/2014 Source: Water Well
If No, declined by who _____ Letter/Notice Date: 1st 10/28/2014 2nd 10/31/2014 Certified (3rd) 10/24/14
Comments: Tax Map 330, Parcel Q
Lat: 39.148166
Long: 81.716389

Site: 6 Spacing: 2360' Owner/Occupant: David Kemp
Address: 1868 Lee creek Rd. Belleville, WV 26133 Ph:
Field Contact Date: 12/03/2014 Located: Yes Date Located: 12/03/2014 Source: Water Well
If No, declined by who _____ Letter/Notice Date: 1st 10/28/2014 2nd 10/31/2014 Certified (3rd) 10/24/14
Comments: Tax Map 410, Parcel 15
Lat: 39.131866
Long: 81.704304

Site: 7 Spacing: _____ Owner/Occupant: Eva Smith
Address: 1772 Lee creek Rd. Belleville, WV 26133 Ph:
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
If No, declined by who: Eva Smith Letter/Notice Date: 1st 10/28/2014 2nd 10/31/2014 Certified (3rd) 10/24/14
Comments: Letter of refusal signed: 10-26-2014
Tax Map 410, Parcels I-1 and 14

Site: 8 Spacing: _____ Owner/Occupant: Gary Smith
Address: 1850 Lee creek Rd. Belleville, WV 26133 Ph:
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
If No, declined by who _____ Letter/Notice Date: 1st 10/28/2014 2nd 10/31/2014 Certified (3rd) 10/24/14
Comments: Tax Map 410, Parcels C, G, H, 12, 13 Also Tax Map 460, Parcel F And Tax Map 400, Parcels G, H and I
No response to certified letter as of:

Site: 9 Spacing: _____ Owner/Occupant: George Ahart
Address: 1841 Lee creek Rd. Belleville, WV 26133 Ph:
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
If No, declined by who _____ Letter/Notice Date: 1st 10/28/2014 2nd 10/31/2014 Certified (3rd) 10/24/14
Comments: Tax Map 410, Parcels E1, F and F2
No response to certified letter as of:

Site: 10 Spacing: _____ Owner/Occupant: Chris Waldron
Address: 870 pleasant hill church Rd. Belleville, WV 26133 Ph:
Field Contact Date: N/A Located: No Date Located: N/A Source: Unknown
If No, declined by who _____ Letter/Notice Date: 1st 10/28/2014 2nd 10/31/2014 Certified (3rd) 10/24/14
Comments: Tax Map 330, Parcel T2
No response to certified letter as of:

7657 PENNECO TOWNSEND watertrial, pg 2

Site. 11 Spacing _____ Owner/Occupant. Blaine Auville
Address. 10687 Harris HWY. Belleville, WV 26133 Ph _____
Field Contact Date. N/A Located: No Date Located. N/A Source Unknown
If No, declined by who _____ Letter/Notice Date: 1st 10/28/2014 2nd 10/31/2014 Certified (3rd) 10/24/14
Comments Tax Map 400, Parcels A9 and B
No response to certified letter as of

Site. 12 Spacing _____ Owner/Occupant _____
Address _____ Ph _____
Field Contact Date _____ Located: _____ Date Located _____ Source _____
If No, declined by who _____ Letter/Notice Date: 1st _____ 2nd _____ Certified (3rd) _____
Comments _____

Site 13 Spacing _____ Owner/Occupant _____
Address _____ Ph _____
Field Contact Date _____ Located: _____ Date Located _____ Source _____
If No, declined by who _____ Letter/Notice Date 1st _____ 2nd _____ Certified (3rd) _____
Comments _____

Site. 14 Spacing _____ Owner/Occupant _____
Address _____ Ph _____
Field Contact Date _____ Located _____ Date Located _____ Source _____
If No, declined by who _____ Letter/Notice Date 1st _____ 2nd _____ Certified (3rd) _____
Comments _____

Site 15 Spacing _____ Owner/Occupant _____
Address _____ Ph _____
Field Contact Date _____ Located _____ Date Located _____ Source _____
If No, declined by who _____ Letter/Notice Date: 1st _____ 2nd _____ Certified (3rd) _____
Comments _____

Site. 16 Spacing _____ Owner/Occupant _____
Address _____ Ph _____
Field Contact Date _____ Located _____ Date Located _____ Source _____
If No, declined by who _____ Letter/Notice Date 1st _____ 2nd _____ Certified (3rd) _____
Comments _____

SITE - 1

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304 842 5285 | Fax: 304 842 5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304 596 2084 | Fax: 304 596 2086

Reliance LABORATORIES

Certifications: WV Department of Health #: 00154, 00443 | WV Department of Environmental Protection #: 158, 181
MD Department of Environment #: 330, 337 | US Environmental Protection Agency #: WV00042, WV00061

SMITH LAND SURVEYING, INC
P.O. BOX 150

GLENVILLE WV 26351-

Thursday, November 13, 2014

Lab Number: 221238-2014-DW **Sample ID:** (7659) BETTY TOWNSEND

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: Inorganics								
E. Coli (Chromogenic)	ABSENT		SM9223B-97	10/29/2014	15:51	CP		
Total Coliform (Chromogenic)	ABSENT		SM9223B-97	10/29/2014	15:51	CP		
pH	# 7.45	S.U.	SM4500H+B-00	10/29/2014	15:15	KV		
Total Aluminum	ND	mg/l	EPA 200.8 R5.4	11/6/2014	13:34	MC	0.01	[0.05]
Total Arsenic	ND	mg/l	EPA 200.8 R5.4	11/6/2014	13:34	MC	0.005	0.01
Total Barium	0.119	mg/l	EPA 200.8 R5.4	11/6/2014	13:34	MC	0.01	2
Total Calcium	33.6	mg/l	EPA 200.8 R5.4	11/6/2014	13:34	MC	0.01	
Total Chloride	141	mg/l	EPA 300.0 R2.1	10/31/2014	1:20	KD	0.15	[250]
Total Dissolved Solids	720	mg/l	SM2540C-97	10/31/2014	9:15	CP	10	[500]
Total Iron	ND	mg/l	EPA 200.8 R5.4	11/6/2014	13:34	MC	0.1	[0.3]
Total Manganese	ND	mg/l	EPA 200.8 R5.4	11/6/2014	13:34	MC	0.01	[0.05]
Total Sodium	296	mg/l	EPA 200.8 R5.4	11/12/2014	11:52	TH	0.01	[20]
Total Sulfate	31.1	mg/l	EPA 300.0 R2.1	10/31/2014	1:30	KD	0.5	[250]
Total Surfactant	ND	mg/l	SM5540C-00	10/30/2014	12:35	CT	0.2	[0.5]

Remarks:

Date Sample Collected: 10/29/2014 11:00
Sample Submitted By: D MCKEE
Date Sample Received: 10/29/2014 11:17
Sample temp. upon receipt: 5.2 Deg C

ND = Not Detected at the MDL or MRL
MDL - Minimum Detectable Limit
MRL - Minimum Reporting Limit
MCL - Maximum Contaminant Level, USEPA Regulated
[MCL] = Maximum Contaminant Level, Non-Regulated

*Method Code: STANDARD METHODS 19TH ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by this laboratory for a minimum of 5 years.

NOTE: This sample meets standards set for Total Coliform and E. Coli by the State of West Virginia 64-3-10, Code of State Regulations adopted July 1, 2002 by the Bureau For Public Health. Sample analyzed by Certified Laboratory #00154CM and #00443M

NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve

NOTE: #Holding time exceeded for this analysis

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone 304 842 5285 | Fax 304 842 5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone 304 596 2084 | Fax 304 596 2086

Certifications: WV Department of Health # 00354, 00443 | WV Department of Environmental Protection # 158, 161
MD Department of Environment # 136, 337 | US Environmental Protection Agency # WV00042, WV00001

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P.O. BOX 150

GLENVILLE, WV 26351

Thursday, November 13, 2014

Lab Number: 221238-2014-DW **Sample ID:** (7659) BETTY TOWNSEND

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: Total Petroleum Hydrocarbons								
TPH - DRO	ND	mg/l	SW8015B/3535A	11/6/2014	14:29	MC	1	
TPH - ORO	ND	mg/l	SW8015B/3535A	11/6/2014	14:29	MC	1	
o-Terphenyl (Surrogate)	135	%	SW8015B	11/6/2014	14:29	MC		
Benzene	ND	mg/l	SW8021B/5030B	11/6/2014	14:04	MC	0.0025	0.005
Ethylbenzene	ND	mg/l	SW8021B/5030B	11/6/2014	14:04	MC	0.005	0.70
Toluene	ND	mg/l	SW8021B/5030B	11/6/2014	14:04	MC	0.005	1.0
TPH - GRO	ND	mg/l	SW8015B/5030B	11/6/2014	14:04	MC	0.2	
Xylenes	ND	mg/l	SW8021B/5030B	11/6/2014	14:04	MC	0.005	10
24-Bromochlorobenzene (Surrogate)	110	%	SW8021B	11/6/2014	14:04	MC		

Remarks:

Date Sample Collected: 10/28/2014 13:30
Sample Submitted By: D MCKEE
Date Sample Received: 10/29/2014 11:31
Sample temp. upon receipt: 5.2 Deg C

ND = Not Detected at the MDL or MRL
MDL - Minimum Detectable Limit | **MRL - Minimum Reporting Limit**
MCL - Maximum Contaminant Level, USEPA Regulated | **[MCL] = Maximum Contaminant Level, Non Regulated**

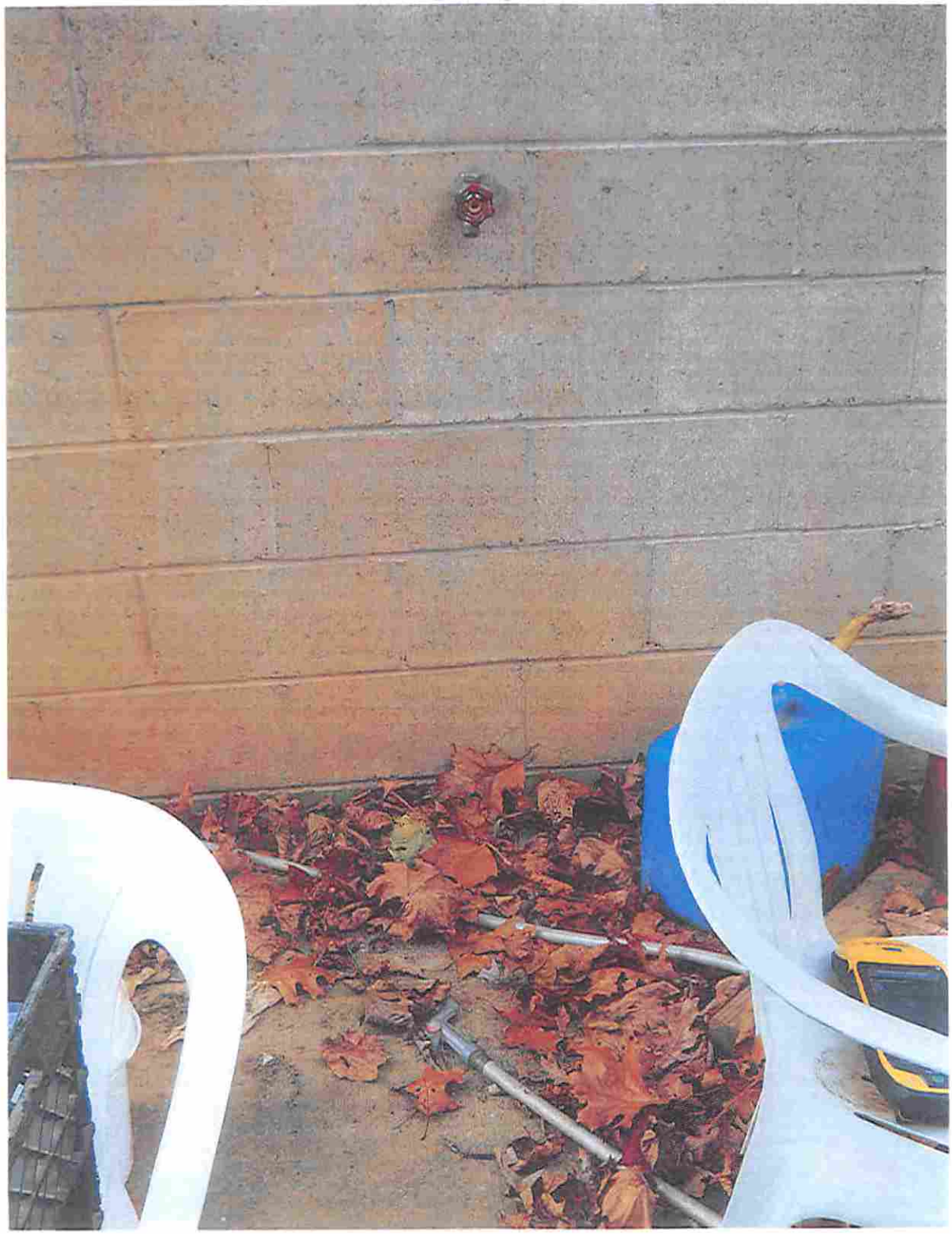
***Method Code: STANDARD METHODS 19TH ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample meets standards set for Total Coliform and E. Coli by the State of West Virginia, 64-3-10, Code of State Regulations adopted July 1, 2002 by the Bureau For Public Health. Sample analyzed by Certified Laboratory #00354CM and #00443M.

NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve.

NOTE: #Holding time exceeded for this analysis.

SITE-2



Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone 304 842 5285 | Fax 304 842 5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone 304 596 2084 | Fax 304 596 2086

Reliance LABORATORIES

Certifications: WV Department of Health # 00354, 00443 | WV Department of Environmental Protection # 150, 151
MD Department of Environment # 336, 337 | US Environmental Protection Agency # WV00042, WV00051

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P.O. BOX 150

GLENVILLE WV 26351

Thursday, November 13, 2014

Lab Number: 221239-2014-DW **Sample ID:** (7659) RANDALL BROWN

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: Inorganics								
E. Coli (Chromogenic)	ABSENT		SM9223B-97	10/29/2014	15:51	CP		
Total Coliform (Chromogenic)	ABSENT		SM9223B-97	10/29/2014	15:51	CP		
pH	#6.78	S.U.	SM4500H+B-00	10/29/2014	15:15	KV		
Total Aluminum	ND	mg/l	EPA 200.8 R5.4	11/6/2014	13:09	MC	0.01	[0.05]
Total Arsenic	ND	mg/l	EPA 200.8 R5.4	11/6/2014	13:09	MC	0.005	0.01
Total Barium	0.132	mg/l	EPA 200.8 R5.4	11/6/2014	13:09	MC	0.01	2
Total Calcium	26.5	mg/l	EPA 200.8 R5.4	11/6/2014	13:09	MC	0.01	
Total Chloride	18.4	mg/l	EPA 300.0 R2.1	10/31/2014	11:55	KD	0.15	[250]
Total Dissolved Solids	452	mg/l	SM2540C-97	10/31/2014	9:15	CP	10	[500]
Total Iron	0.100	mg/l	EPA 200.8 R5.4	11/6/2014	13:09	MC	0.1	[0.3]
Total Manganese	ND	mg/l	EPA 200.8 R5.4	11/6/2014	13:09	MC	0.01	[0.05]
Total Sodium	126	mg/l	EPA 200.8 R5.4	11/12/2014	11:58	TH	0.01	[20]
Total Sulfate	60.5	mg/l	EPA 300.0 R2.1	10/31/2014	11:55	KD	0.5	[250]
Total Surfactant	ND	mg/l	SM5540C-00	10/30/2014	12:35	CT	0.2	[0.5]

Remarks:

Date Sample Collected 10/28/2014 11:30
Sample Submitted By: D.MOYER
Date Sample Received 10/29/2014 11:31
Sample temp. upon receipt 5.2 Deg C

ND = Not Detected at the MDL or MRL
MDL - Minimum Detectable Limit
MRL - Minimum Reporting Limit
MCL - Maximum Contaminant Level, USEPA Regulated
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS 19TH ED, US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83, US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994, TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample meets standards set for Total Coliform and E. Coli by the State of West Virginia 64-3-10, Code of State Regulations, adopted July 1, 2002 by the Bureau For Public Health. Sample analyzed by Certified Laboratory #00354CM and #00443M.
NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve.
NOTE: #Holding time exceeded for this analysis.

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304.842.5285 | Fax: 304.842.5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304.596.2084 | Fax: 304.596.2086

Reliance LABORATORIES

Certifications: WV Department of Health # 00354, 00443 | WV Department of Environmental Protection # 150, 181
MD Department of Environment # 336, 337 | US Environmental Protection Agency # WV00042, WV00401

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Thursday, November 13, 2014

GLENVILLE WV 26351

Lab Number: 221239-2014-DW **Sample ID:** (7659) RANDALL BROWN

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: Total Petroleum Hydrocarbons								
TPH - DRO	ND	mg/l	SW8015B/3535A	11/6/2014	15:26	MC	1	
TPH - ORO	ND	mg/l	SW8015B/3535A	11/6/2014	15:26	MC	1	
o-Terphenyl (Surrogate)	115	%	SW8015B	11/6/2014	15:26	MC		
Benzene	ND	mg/l	SW8021B/5030B	11/6/2014	14:40	MC	0.0025	0.005
Ethylbenzene	ND	mg/l	SW8021B/5030B	11/6/2014	14:40	MC	0.005	0.70
Toluene	ND	mg/l	SW8021B/5030B	11/6/2014	14:40	MC	0.005	1.0
TPH - GRO	ND	mg/l	SW8015B/5030B	11/6/2014	14:40	MC	0.2	
Xylenes	ND	mg/l	SW8021B/5030B	11/6/2014	14:40	MC	0.005	10
24-Bromochlorobenzene (Surrogate)	111	%	SW8021B	11/6/2014	14:40	MC		

Remarks:

Date Sample Collected: 10/29/2014 13:30
Sample Submitted By: D MCKEE
Date Sample Received: 10/29/2014 11:31
Sample temp. upon receipt: 5.2 Deg C
MDL - Minimum Detectable Limit
MCL - Maximum Contaminant Level, USEPA Regulated

ND = Not Detected at the MDL or MRL
MRL - Minimum Reporting Limit
[MCL] = Maximum Contaminant Level, Non-Regulated

*Method Code: STANDARD METHODS 19TH ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.

NOTE: This sample meets standards set for Total Coliform and E. Coli by the State of West Virginia, 64-3-13, Code of State Regulations, adopted July 1, 2002 by the Bureau For Public Health. Sample analyzed by Certified Laboratory #00354CM and #00443M.
NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve.
NOTE: Holding time exceeded for this analysis.

SITE 3

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304 842 5285 | Fax: 304 842 5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304 596 2084 | Fax: 304 596 2086

Reliance LABORATORIES

Certifications: WV Department of Health # 00354, 00443 | WV Department of Environmental Protection # 156, 181
MD Department of Environment # 306, 337 | US Environmental Protection Agency # WV00042, WV00903

SMITH LAND SURVEYING, INC
P.O. BOX 150

GLENVILLE WV 26351

Thursday, November 13, 2014

Lab Number: 221425-2014-DW **Sample ID:** (7659) - LARRY SELLARS (1)

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: Inorganics								
E. Coli (Chromogenic)	ABSENT		SM9223B-97	10/31/2014	16:35	CP		
Total Coliform (Chromogenic)	ABSENT		SM9223B-97	10/31/2014	16:35	CP		
pH	# 7.61	S.U.	SM4500H+B-00	11/4/2014	14:55	KV		
Total Aluminum	ND	mg/l	EPA 200.8 R5.4	11/6/2014	14:34	MC	0.01	[0.05]
Total Arsenic	ND	mg/l	EPA 200.8 R5.4	11/6/2014	14:34	MC	0.005	0.01
Total Barium	0.053	mg/l	EPA 200.8 R5.4	11/6/2014	14:34	MC	0.01	2
Total Calcium	74.3	mg/l	EPA 200.8 R5.4	11/6/2014	14:34	MC	0.01	
Total Chloride	63.5	mg/l	EPA 300.0 R2.1	11/4/2014	16:40	KD	0.15	[250]
Total Dissolved Solids	540	mg/l	SM2540C-97	11/3/2014	11:45	CP	10	[500]
Total Iron	0.349	mg/l	EPA 200.8 R5.4	11/6/2014	14:34	MC	0.1	[0.3]
Total Manganese	ND	mg/l	EPA 200.8 R5.4	11/6/2014	14:34	MC	0.01	[0.05]
Total Sodium	129	mg/l	EPA 200.8 R5.4	11/12/2014	12:04	TH	0.01	[20]
Total Sulfate	76.6	mg/l	EPA 300.0 R2.1	11/4/2014	16:40	KD	0.5	[250]
Total Surfactant	ND	mg/l	SM5540C-00	10/31/2014	16:00	CT	0.2	[0.5]

Remarks:

Date Sample Collected:	10/31/2014	9:30
Sample Submitted By:	D. MCKEE	
Date Sample Received:	10/31/2014	13:20
Sample temp. upon receipt:	8.2 Deg C	

ND = Not Detected at the MDL or MRL
MDL - Minimum Detectable Limit
MRL - Minimum Reporting Limit
MCL - Maximum Contaminant Level, USEPA Regulated
[MCL] = Maximum Contaminant Level, Non-Regulated

*Method Code: STANDARD METHODS 19TH ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.

NOTE: This sample meets standards set for Total Coliform and E. Coli by the State of West Virginia, 64-5-10, Code of State Regulations adopted July 1, 2002 by the Bureau For Public Health. Sample analyzed by Certified Laboratory #00354CM and #00443M.

NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve.

NOTE: Holding time exceeded for this analysis.

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304.842.5265 - Fax: 304.842.5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304.596.2084 | Fax: 304.596.2086

Reliance LABORATORIES

Certifications: WV Department of Health # 00354, 00443 | WV Department of Environmental Protection # 158, 181
MD Department of Environment # 336, 337 | US Environmental Protection Agency # WV00042, WV00901

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P.O. BOX 150

GLENVILLE WV 26351-

Thursday, November 13, 2014

Lab Number: 221425-2014-DW **Sample ID:** (7659) - LARRY SELLARS (1)

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: Total Petroleum Hydrocarbons								
TPH - DRO	ND	mg/l	SW8015B/3535A	11/6/2014	17:31	MC	1	
TPH - ORO	ND	mg/l	SW8015B/3535A	11/6/2014	17:31	MC	1	
o-Terphenyl (Surrogate)	97.5	%	SW8015B	11/6/2014	17:31	MC		
Benzene	ND	mg/l	SW8021B/5030B	11/6/2014	15:40	MC	0.0025	0.005
Ethylbenzene	ND	mg/l	SW8021B/5030B	11/6/2014	15:40	MC	0.005	0.70
Toluene	ND	mg/l	SW8021B/5030B	11/6/2014	15:40	MC	0.005	1.0
TPH - GRO	ND	mg/l	SW8015B/5030B	11/6/2014	15:40	MC	0.2	
Xylenes	ND	mg/l	SW8021B/5030B	11/6/2014	15:40	MC	0.005	10
z4-Bromochlorobenzene (Surrogate)	112	%	SW8021B	11/6/2014	15:40	MC		

Remarks:

Date Sample Collected	10/31/2014	9:30
Sample Submitted By	D. MCKEE	
Date Sample Received	10/31/2014	13:20
Sample temp. upon receipt	8.2 Deg C	

ND = Not Detected at the MDL or MRL
MDL - Minimum Detectable Limit
MRL - Minimum Reporting Limit
MCL - Maximum Contaminant Level, USEPA Regulated
[MCL] = Maximum Contaminant Level, Non-Regulated

*Method Code: STANDARD METHODS 19TH ED, US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED, USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the Laboratory for a minimum of 5 years.

NOTE: This sample meets standards set for Total Coliform and E. Coli by the State of West Virginia, 64-3-10, Code of State Regulations adopted July 1, 2002 by the Bureau For Public Health. Sample analyzed by Certified Laboratory #00354CM and #00443M.

NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve.

NOTE: #holding time exceeded for this analysis.

SITE -4

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304.842.5285 | Fax: 304.842.5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health # 00354, 00443 | WV Department of Environmental Protection # 150, 161
MD Department of Environment # 336, 337 | US Environmental Protection Agency # WV00042, WV00901

SMITH LAND SURVEYING, INC
P.O. BOX 150

GLENVILLE, WV 26351

Monday, December 08, 2014

Lab Number: 222784-2014-DW **Sample ID:** (7659) BOWAR H2O WELL (1)

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: Inorganics								
E. Coli (Chromogenic)	ABSENT		SM9223B-97	11/21/2014	16:36	CP		
Total Coliform (Chromogenic)	ABSENT		SM9223B-97	11/21/2014	16:36	CP		
pH	# 6.84	S.U.	SM4500H+B-00	12/1/2014	13:15	KV		
Total Aluminum	ND	mg/l	EPA 200.8 R5.4	12/1/2014	12:49	TH	0.01	[0.05]
Total Arsenic	ND	mg/l	EPA 200.8 R5.4	12/1/2014	12:49	TH	0.005	0.01
Total Barium	0.104	mg/l	EPA 200.8 R5.4	12/1/2014	12:49	TH	0.01	2
Total Calcium	70.3	mg/l	EPA 200.8 R5.4	12/1/2014	12:49	TH	0.01	
Total Chloride	14.0	mg/l	EPA 300.0 R2.1	11/24/2014	17:27	KD	0.15	[250]
Total Dissolved Solids	444	mg/l	SM2540C-97	11/26/2014	8:45	CP	10	[500]
Total Iron	0.529	mg/l	EPA 200.8 R5.4	12/1/2014	12:49	TH	0.1	[0.3]
Total Manganese	0.105	mg/l	EPA 200.8 R5.4	12/1/2014	12:49	TH	0.01	[0.05]
Total Sodium	31.6	mg/l	EPA 200.8 R5.4	12/1/2014	12:49	TH	0.01	[20]
Total Sulfate	56.4	mg/l	EPA 300.0 R2.1	11/24/2014	17:27	KD	0.5	[250]
Total Surfactant	ND	mg/l	SM5540C-00	11/21/2014	16:30	CT	0.2	[0.5]

Remarks:

Date Sample Collected: 11/21/2014 10:40
Sample Submitted By: G. MCKEE
Date Sample Received: 11/21/2014 13:25
Sample temp. upon receipt: 11.4 Deg C
MDL - Minimum Detectable Limit
MCL - Maximum Contaminant Level, USEPA Regulated

ND = Not Detected at the MDL or MRL
MRL - Minimum Reporting Limit
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS 19TH ED, US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED, USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample meets standards set for Total Coliform and E. Coli by the State of West Virginia, 64-3-10, Code of State Regulations adopted July 1, 2002 by the Bureau For Public Health. Sample analyzed by Certified Laboratory #00354CM and #00443M.

NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve.

NOTE: #Holding time exceeded for this analysis.

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304 842 5285 | Fax: 304 842 5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304 596 2084 | Fax: 304 596 2086

Certifications: WV Department of Health # 00354, 00443 | WV Department of Environmental Protection # 156, 101
MD Department of Environment # 306, 337 | US Environmental Protection Agency # WV00042, WV00401

SMITH LAND SURVEYING, INC
P.O. BOX 150

GLENVILLE WV 26351

Monday, December 08, 2014

Lab Number: 222784-2014-DW **Sample ID:** (7659) BOWAR H2O WELL (1)

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: Total Petroleum Hydrocarbons								
TPH - DRO	ND	mg/l	SW8015B/3535A	12/5/2014	11:55	MC	1	
TPH - ORO	ND	mg/l	SW8015B/3535A	12/5/2014	11:55	MC	1	
o-Terphenyl (Surrogate)	99.0	%	SW8015B	12/5/2014	11:55	MC		
Benzene	ND	mg/l	SW8021B/5030B	11/26/2014	11:07	MC	0.0025	0.005
Ethylbenzene	ND	mg/l	SW8021B/5030B	11/26/2014	11:07	MC	0.005	0.70
Toluene	ND	mg/l	SW8021B/5030B	11/26/2014	11:07	MC	0.005	1.0
TPH - GRO	ND	mg/l	SW8015B/5030B	11/26/2014	11:07	MC	0.2	
Xylenes	ND	mg/l	SW8021B/5030B	11/26/2014	11:07	MC	0.005	10
z4-Bromochlorobenzene (Surrogate)	106	%	SW8021B	11/26/2014	11:07	MC		

Remarks:

Date Sample Collected: 11/21/2014 10:40
Sample Submitted By: D. MCKEE
Date Sample Received: 11/21/2014 11:25
Sample temp. upon receipt: 11.4 Deg C
MDL - Minimum Detectable Limit
MCL - Maximum Contaminant Level, USEPA Regulated

ND = Not Detected at the MDL or MRL
MRL - Minimum Reporting Limit
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS 19TH ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

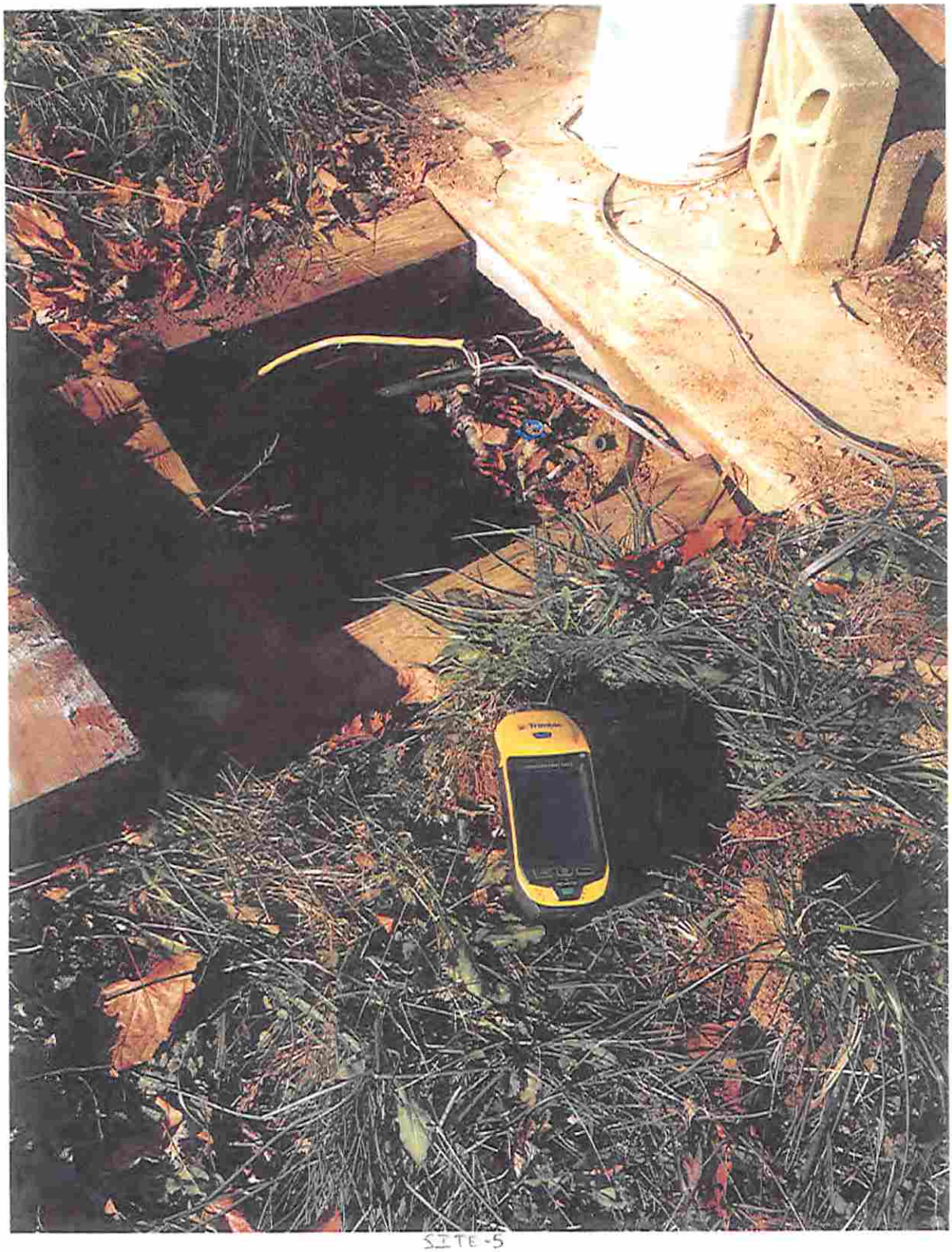
NOTE: This sample meets standards set for Total Coliform and E. Coli by the State of West Virginia, 64-3-19, Code of State Regulations adopted July 1, 2022 by the Bureau For Public Health. Sample analyzed by Certified Laboratory #00354CM and #00443M.

NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve.

NOTE: #Holding time exceeded for this analysis.

REF: YH

10201747



SITE-5

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304.842.5285 | Fax: 304.842.5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health # 00354, 00443 | WV Department of Environmental Protection # 156, 181
MD Department of Environment # 336, 337 | US Environmental Protection Agency # WV00042, WV00501

SMITH LAND SURVEYING, INC
P.O. BOX 150

GLENVILLE WV 26351

Monday, December 08, 2014

Lab Number: 222785-2014-DW **Sample ID:** (7659) BOWAR H2O WELL (2)

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: Inorganics								
E. Coli (Chromogenic)	ABSENT		SM9223B-97	11/21/2014	16:06	CP		
Total Coliform (Chromogenic)	ABSENT		SM9223B-97	11/21/2014	16:06	CP		
pH	#6.93	S.U.	SM4500H+B-00	12/1/2014	13:15	KV		
Total Aluminum	ND	mg/l	EPA 200.8 R5.4	12/1/2014	12:53	TH	0.01	[0.05]
Total Arsenic	0.012	mg/l	EPA 200.8 R5.4	12/1/2014	12:53	TH	0.005	0.01
Total Barium	0.025	mg/l	EPA 200.8 R5.4	12/1/2014	12:53	TH	0.01	2
Total Calcium	124	mg/l	EPA 200.8 R5.4	12/1/2014	12:53	TH	0.01	
Total Chloride	33.0	mg/l	EPA 300.0 R2.1	11/25/2014	1:15	KD	0.15	[250]
Total Dissolved Solids	1084	mg/l	SM2540C-97	11/26/2014	8:45	CP	10	[500]
Total Iron	1.89	mg/l	EPA 200.8 R5.4	12/1/2014	12:53	TH	0.1	[0.3]
Total Manganese	0.869	mg/l	EPA 200.8 R5.4	12/1/2014	12:53	TH	0.01	[0.05]
Total Sodium	115	mg/l	EPA 200.8 R5.4	12/1/2014	12:53	TH	0.01	[20]
Total Sulfate	397	mg/l	EPA 300.0 R2.1	11/25/2014	1:15	KD	0.5	[250]
Total Surfactant	ND	mg/l	SM5540C-00	11/21/2014	16:00	CT	0.2	[0.5]

Remarks:

Date Sample Collected: 11/21/2014 10:55
Sample Submitted By: D. MCKEE
Date Sample Received: 11/21/2014 13:25
Sample temp. upon receipt: 11.4 Deg.C
MDL - Minimum Detectable Limit
MCL - Maximum Contaminant Level, USEPA Regulated

ND = Not Detected at the MDL or MRL
MRL - Minimum Reporting Limit
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS 19TH ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample meets standards set for Total Coliform and E. Coli by the State of West Virginia, 64-3-10, Code of State Regulations adopted July 1, 2002 by the Bureau For Public Health. Sample analyzed by Certified Laboratory #00354CM and #00443M.
NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve.
NOTE: #Holding time exceeded for this analysis.

10701747

Reliance Laboratories, Inc.
2044 Meadowbrook Road | P.O. Box 4657
Bridgeport, WV 26330
Phone: 304.842.5285 | Fax: 304.842.5351

Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304.596.2084 | Fax: 304.596.2086

Certifications: WV Department of Health # 78354, 00443 | WV Department of Environmental Protection # 156, 181
MD Department of Environment # 336, 337 | US Environmental Protection Agency # WV00042, WV00901

SMITH LAND SURVEYING, INC
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GLENVILLE, WV 26351

Monday, December 08, 2014
Page 5 of 5

Lab Number: 222785-2014-DW **Sample ID:** (7659) BOWAR H2O WELL (2)

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: Total Petroleum Hydrocarbons								
TPH - DRO	ND	mg/l	SW8015B/3535A	12/5/2014	12:36	MC	1	
TPH - ORO	ND	mg/l	SW8015B/3535A	12/5/2014	12:36	MC	1	
o-Terphenyl (Surrogate)	111	%	SW8015B	12/5/2014	12:36	MC		
Benzene	ND	mg/l	SW8021B/5030B	11/26/2014	11:44	MC	0.0025	0.005
Ethylbenzene	ND	mg/l	SW8021B/5030B	11/26/2014	11:44	MC	0.005	0.70
Toluene	ND	mg/l	SW8021B/5030B	11/26/2014	11:44	MC	0.005	1.0
TPH - GRO	ND	mg/l	SW8015B/5030B	11/26/2014	11:44	MC	0.2	
Xylenes	ND	mg/l	SW8021B/5030B	11/26/2014	11:44	MC	0.005	10
z4-Bromochlorobenzene (Surrogate)	106	%	SW8021B	11/26/2014	11:44	MC		

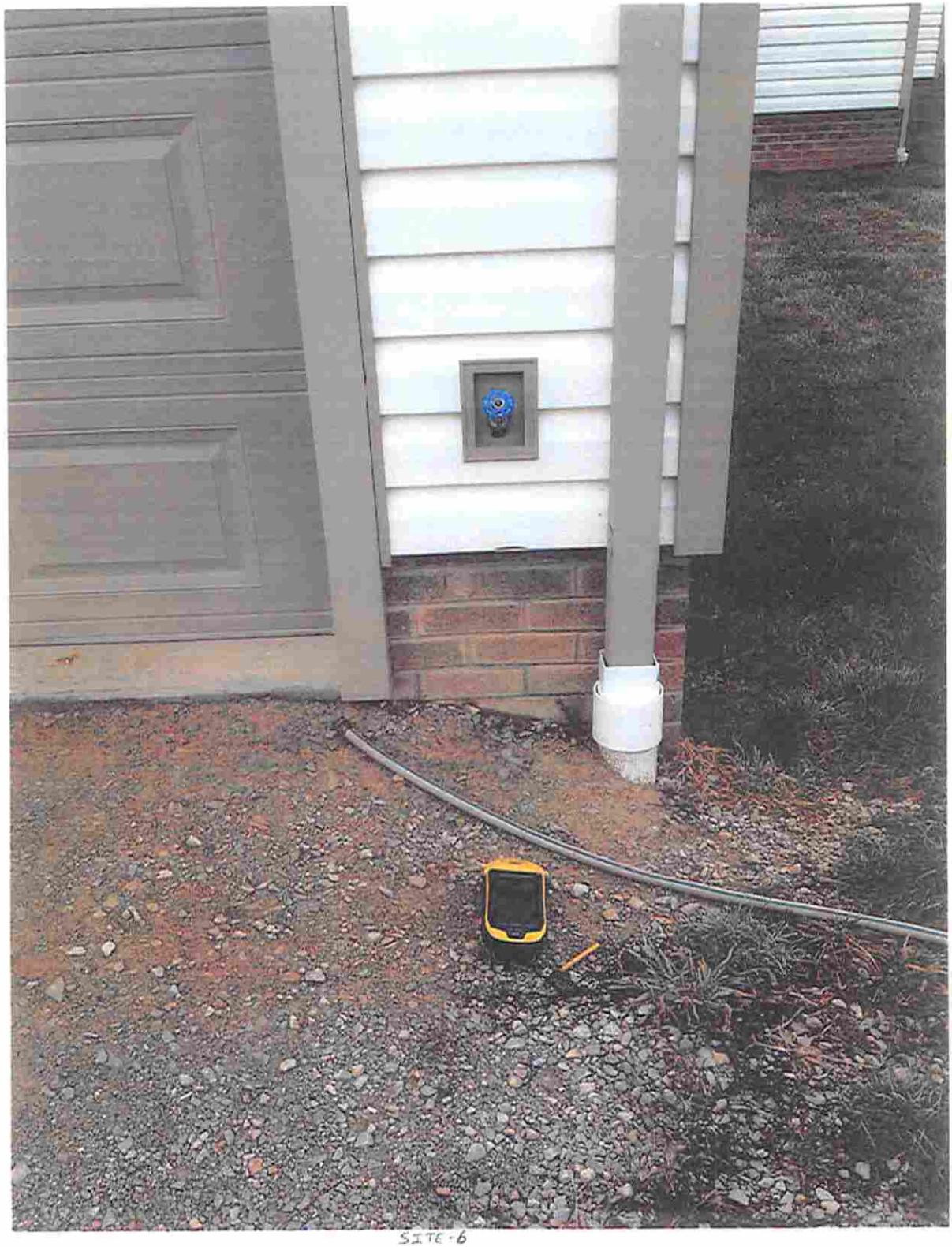
Remarks:

Date Sample Collected: 11/21/2014 10:55
Sample Submitted By: D. MCKEY
Date Sample Received: 11/21/2014 11:25
Sample temp. upon receipt: 11.4 Deg C
MDL - Minimum Detectable Limit
MCL - Maximum Contaminant Level, USEPA Regulated

ND = Not Detected at the MDL or MRL
MRL - Minimum Reporting Limit
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS 19TH ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample meets standards set for Total Coliform and E. Coli by the State of West Virginia, 64-3-10, Code of State Regulations adopted July 1, 2002 by the Bureau For Public Health. Sample analyzed by Certified Laboratory #00354CM and #00443M.
NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve.
NOTE: #holding time exceeded for this analysis.



SITE-6

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Martinsburg Laboratory
Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304 596 2084 | Fax: 304 596 2086

Certifications: WV Department of Health # 00354, 00443 | WV Department of Environmental Protection # 159, 161
MD Department of Environment # 336, 337 | US Environmental Protection Agency # WV00042, WV00501

SMITH LAND SURVEYING, INC
P.O. BOX 150

GLENVILLE, WV 26351-

Monday, December 15, 2014

Lab Number: 223262-2014-DW **Sample ID:** (7659) KEMP H2O WELL

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: Inorganics								
E. Coli (Chromogenic)	ABSENT		SM9223B-97	12/4/2014	13:54	CP		
Total Coliform (Chromogenic)	ABSENT		SM9223B-97	12/4/2014	13:54	CP		
pH	# 7.44	S.U.	SM4500H+B-00	12/4/2014	14:15	KV		
Total Aluminum	ND	mg/l	EPA 200.8 R5.4	12/11/2014	12:53	TH	0.01	[0.05]
Total Arsenic	0.018	mg/l	EPA 200.8 R5.4	12/11/2014	12:53	TH	0.005	0.01
Total Barium	1.17	mg/l	EPA 200.8 R5.4	12/11/2014	12:53	TH	0.01	2
Total Calcium	6.43	mg/l	EPA 200.8 R5.4	12/11/2014	12:53	TH	0.01	
Total Chloride	4.56	mg/l	EPA 300.0 R2.1	12/8/2014	18:52	KD	0.15	[250]
Total Dissolved Solids	298	mg/l	SM2540C-97	12/5/2014	9:00	CP	10	[500]
Total Iron	ND	mg/l	EPA 200.8 R5.4	12/11/2014	12:53	TH	0.1	[0.3]
Total Manganese	ND	mg/l	EPA 200.8 R5.4	12/11/2014	12:53	TH	0.01	[0.05]
Total Sodium	100	mg/l	EPA 200.8 R5.4	12/11/2014	12:53	TH	0.01	[20]
Total Sulfate	4.02	mg/l	EPA 300.0 R2.1	12/8/2014	18:52	KD	0.5	[250]
Total Surfactant	ND	mg/l	SM5540C-00	12/4/2014	15:25	KD	0.2	[0.5]

Remarks:

Date Sample Collected:	12/4/2014	10:00
Sample Submitted By:	D MCKEE	
Date Sample Received:	12/4/2014	12:05
Sample temp. upon receipt:	10.8 Deg C	

ND = Not Detected at the MDL or MRL
MDL - Minimum Detectable Limit **MRL - Minimum Reporting Limit**
MCL - Maximum Contaminant Level, USEPA Regulated **[MCL] = Maximum Contaminant Level, Non-Regulated**

***Method Code: STANDARD METHODS 19TH ED; US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83; US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994; TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED; USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample meets standards set for Total Coliform and E. Coli by the State of West Virginia, 64-3-10, Code of State Regulations adopted July 1, 2002 by the Bureau For Public Health. Sample analyzed by Certified Laboratory #00354CM and #00443M

NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard obtained in preparation of the method calibration curve.

NOTE: #holding time exceeded for this analysis.

Reliance Laboratories, Inc.
2844 Meadowbrook Road | P.O. Box 4957
Bridgeport, WV 26330
Phone: 304 842 5285 | Fax: 304 842 5351

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Ridgefield Business Center | 25 Crimson Circle
Martinsburg, WV 25403
Phone: 304 596 2084 | Fax: 304 596 2086

Certifications: WV Department of Health # 00354, 00443 | WV Department of Environmental Protection # 156, 191
MD Department of Environment # 336, 337 | US Environmental Protection Agency # WV00042, WV00001

SMITH LAND SURVEYING, INC
P.O. BOX 150

GLENVILLE, WV 26351

Monday, December 15, 2014

Lab Number: 223262-2014-DW **Sample ID:** (7659) KEMP H2O WELL

Parameter	Value	Units	Method	Date/Time Analyzed		Analyst	MRL	MCL
Analyte Group: **Total Petroleum Hydrocarbons**								
TPH - DRO	ND	mg/l	SW8015B/3535A	12/10/2014	14:35	MC	1	
TPH - ORO	ND	mg/l	SW8015B/3535A	12/10/2014	14:35	MC	1	
o-Terphenyl (Surrogate)	111	%	SW8015B	12/10/2014	14:35	MC		
Benzene	ND	mg/l	SW8021B/5030B	12/4/2014	15:22	MC	0.0025	0.005
Ethylbenzene	ND	mg/l	SW8021B/5030B	12/4/2014	15:22	MC	0.005	0.70
Toluene	ND	mg/l	SW8021B/5030B	12/4/2014	15:22	MC	0.005	1.0
TPH - GRO	ND	mg/l	SW8015B/5030B	12/4/2014	15:22	MC	0.2	
Xylenes	ND	mg/l	SW8021B/5030B	12/4/2014	15:22	MC	0.005	10
24-Bromochlorobenzene (Surrogate)	87.4	%	SW8021B	12/4/2014	15:22	MC		

Remarks:

Date Sample Collected	12/4/2014	10:00
Sample Submitted By:	D.MCKEE	
Date Sample Received	12/4/2014	12:05
Sample temp. upon receipt	10.8 Deg C	

ND = Not Detected at the MDL or MRL
MDL - Minimum Detectable Limit
MRL - Minimum Reporting Limit
MCL - Maximum Contaminant Level, USEPA Regulated
[MCL] = Maximum Contaminant Level, Non-Regulated

***Method Code: STANDARD METHODS 19TH ED, US EPA METHODS FOR THE CHEMICAL ANALYSIS OF WATER AND WASTES, Rev. 83, US EPA METHODS FOR THE DETERMINATION OF METALS IN ENVIRONMENTAL SAMPLES, May 1994, TEST METHODS FOR EVALUATING SOLID WASTE, SW-846, 3rd ED, USEPA Manual for Certification of Laboratories Analyzing Drinking Water, 5th ED. In accordance with EPA Regulations, all reports, including raw data and quality control data, are maintained by the laboratory for a minimum of 5 years.**

NOTE: This sample meets Standards set for Total Coliform and E. Coli by the State of West Virginia, 64-3-10, Code of State Regulations adopted July 1, 2002 by the Bureau For Public Health. Sample analyzed by Certified Laboratory #00354CM and #00443M

NOTE: ND or Not Detected indicates that the analytical value obtained is below the minimum reportable limit (MRL) which is equivalent to the lowest standard utilized in preparation of the method calibration curve.

NOTE: Reading time exceeded for this analysis

RECEIVED OCT 2 8 2014

SLS SMITH LAND SURVEYING, INC. P.O. BOX 150, GLENVILLE, WV 26351
(304) 462-5634 • FAX 462-5656

To Whom It May Concern:

Smith Land Surveying, Inc. of Glenville, WV has been contracted by:

Penneco Oil Company

To do some preliminary work for a proposed oil and gas well permit application.

Due to 1994 regulations set by the State of West Virginia Division of Environmental Protection, Department of Oil and Gas, operators are required to offer water testing for water wells or other non-public water sources that fall within 1500 feet of the proposed well. The operator is testing within 2000 feet of the well, if they are requested to do so by the resident or owner. This test will only help ensure the water quality control, which in turn benefits you as the resident or landowner.

Since your residence falls within the 2000 foot radius, you are entitled to have your potable water source(s) sampled and analyzed at an independent lab. Your lab analysis results would then be mailed to your home. This is done at no expense to you.

Please notify Smith Land Surveying immediately if you are interested in having your potable water tested. Please have this letter with you at the time of contact so that the client and well number may be referenced.

Thank you for your cooperation in this matter. I look forward to hearing from you at your earliest convenience. If you have any questions, please feel free to contact me at:

Smith Land Surveying, Inc.
PO Box 150
Glenville, WV 26351
(304) 462-5634 (voice)
(304) 462-5656 (fax)
E-Mail DMcKee@slssurveys.com

Date: 10/16/14

Left/sent by: Daniel McKee

Well Number: Townsend Lease Well No. 1

Tax Map / Parcel: 410/11 and 14

Wood County, WV Harris District

*If you do not have a water well or other non-public water source, please make note of it and include your name and address when you return this sheet.

If you do not feel the need to have your Water well/spring/or other non-public water source sampled, please sign on the line below and return to the above address. This will signify that a sample has been offered to the surface owner and has been declined. Please include printed name along with signature.

Signature: Eva M. Smith Date: 10-26-2014

EVA M. Smith

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API Number 47 - _____ - _____
Operator's Well No. Townsend No. 1

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Penneco Oil Company OP Code 494460033

Watershed (HUC 10) South Fork of Lee Creek & Tributary of Middle Fork of Lee Creek Quadrangle Lubeck 7.5'

Elevation 868' County Wood District Harris

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes _____ No X

Will a pit be used for drill cuttings? Yes X No _____

If so, please describe anticipated pit waste: Drill water and various formation cuttings

Will a synthetic liner be used in the pit? Yes X No _____ If so, what ml.? 60

Proposed Disposal Method For Treated Pit Wastes:

X Land Application
_____ Underground Injection (UIC Permit Number_____)
_____ Reuse (at API Number_____)
_____ Off Site Disposal (Supply form WW-9 for disposal location)
■ Other (Explain Solidified with cement and encapsulated and buried

Will closed loop system be used? No

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Air/Water

-If oil based, what type? Synthetic, petroleum, etc._____

Additives to be used in drilling medium? Soap

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Leave in Pit - Encapsulated and buried

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) Cement

-Landfill or offsite name/permit number? _____

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto 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 or imprisonment.

Company Official Signature [signature]

Company Official (Typed Name) Stephen K. Schuman

Company Official Title Designated Agent

Subscribed and sworn before me this 18th day of March, 2014

Lois A. Brown Notary Public

My commission expires August 22, 2017

Official Seal
Notary Public, State Of West Virginia
Lois A Brown
1552 Little Sandy Road
Bruceton Mills WV 26525
My commission expires August 22, 2017

10701747

Form WW-9

Operator's Well No. **Townsend #1**

LEGEND

Property Boundary
Road
Existing Fence
Planned Fence
Stream
Open Ditch
Rock
North N
Buildings
Water wells W
Drill site

Diversion
Spring
Wet Spot
Drain Pipe with size in inches
Waterway
Cross Drain
Artificial Filter Strip
Pit: cut walls
Pit: compacted fill walls
Area for Land Application of Pit Water

Proposed Revegetation Treatment: Acres Disturbed 2.9 ± Prevegetation pH

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer (10-20-20 or equivalent) 1/3 TON lbs/acre (500 lbs minimum)

Mulch HAY 2 Tons/acre

Seed Mixtures

Area I Seed Type	lbs/acre	Area II Seed Type	lbs/acre
KY-31	40	ORCHARD GRASS	15
ALSIKE CLOVER	5	ALSIKE CLOVER	5
ANNUAL RYE	15		

Attach:
Drawing(s) of road, location,pit and proposed area for land application.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: James Stevens

Comments:

Title: Date: 3/11/2014

Field Reviewed? (✓) Yes ( ) No

Re Permitting.

10701747

Form WW-9

Gene Townsend Lease
Well No. 1

page of

ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.E.P. OIL AND GAS BMP MANUAL. ENTRANCES AT COUNTY/STATE ROADS SHALL BE MAINTAINED IN ACCORDANCE WITH WV D.O.T. REGULATIONS. SEPARATE PERMITS MAY BE REQUIRED BY THE D.O.T.

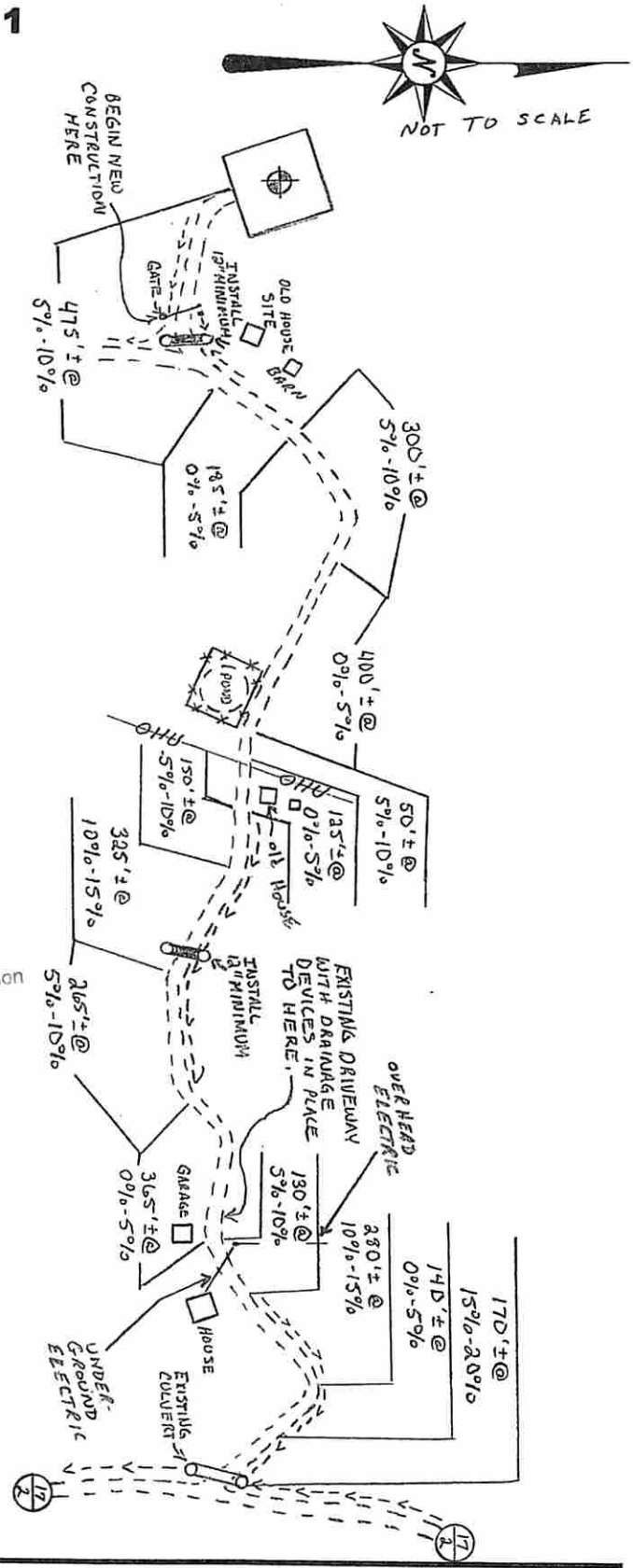
SEDIMENT BASINS(TRAPS) AND APPROPRIATE EROSION CONTROL BARRIERS ARE TO BE CONSTRUCTED AT ALL CULVERT AND CROSS DRAIN INLETS AND OUTLETS AS REQUIRED IN THE WV D.E.P. OIL AND GAS BMP MANUAL. FIELD CONDITIONS(ROCK OUTCROPS AND BEDROCK) MAY PROHIBIT INLET TRAPS BEING INSTALLED. WHEN THESE CONDITIONS EXIST ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED AS NEEDED.

EARTHWORK CONTRACTORS ARE RESPONSIBLE FOR NOTIFICATION TO THE OPERATOR AND INSPECTOR PRIOR TO ANY DEVIATION FROM THIS PLAN.

TEMPORARY SEED & MULCH ALL SLOPES AFTER CONSTRUCTION OF LOCATION.

CUT & STACK ALL MARKETABLE TIMBER.

STACK BRUSH BELOW LOCATION FOR SEDIMENT CONTROL.



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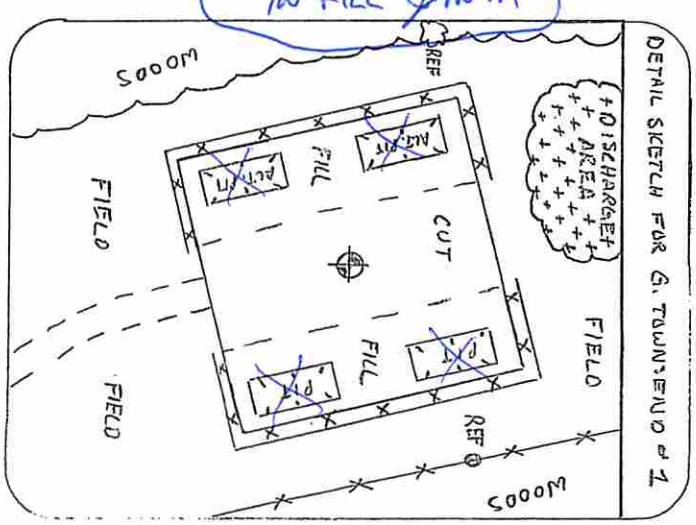
NO PIT IN FILL & NM

3/11/2014



SMITH LAND SURVEYING, INC.
P.O.BOX 150 GLENVILLE, WV. 26351

Phone: (304) 462-5634 Fax: 462-5656 email: sls@slssurveys.com

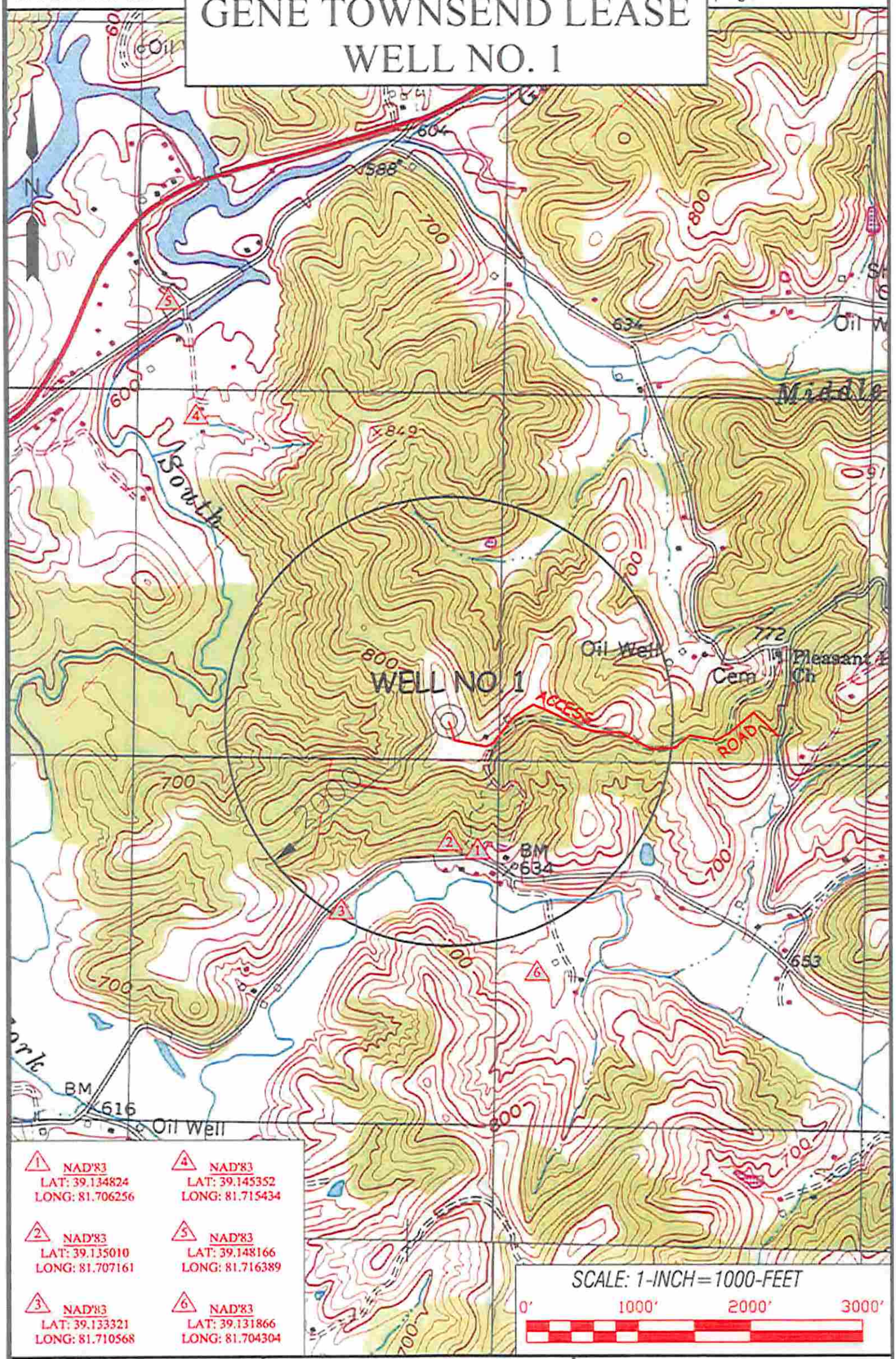
DRAWN BY MJH ORR | REVISED 2-13-14 | DATE 7.8.11 | FILE NO. 7659

10701747

WATER SAMPLES

GENE TOWNSEND LEASE
WELL NO. 1

page of



1 NAD'83 LAT: 39.134824 LONG: 81.706256	4 NAD'83 LAT: 39.145352 LONG: 81.715434
2 NAD'83 LAT: 39.135010 LONG: 81.707161	5 NAD'83 LAT: 39.148166 LONG: 81.716389
3 NAD'83 LAT: 39.133321 LONG: 81.710568	6 NAD'83 LAT: 39.131866 LONG: 81.704304

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A DIVISION OF SMITHLAND SURVEYING, INC.
SLS
SURVEYORS
ENGINEERS
ENVIRONMENTAL
PROJECT MGMT.

DRAWN BY	FILE NO.	DATE	CADD FILE
K.D.W.	7659	12/08/14	7659WELL.dwg

TOPO SECTION OF:
LUBECK, WV 7.5' QUAD

DISTRICT	COUNTY	TAX MAP-PARCEL NO.
HARRIS	WOOD	410-E

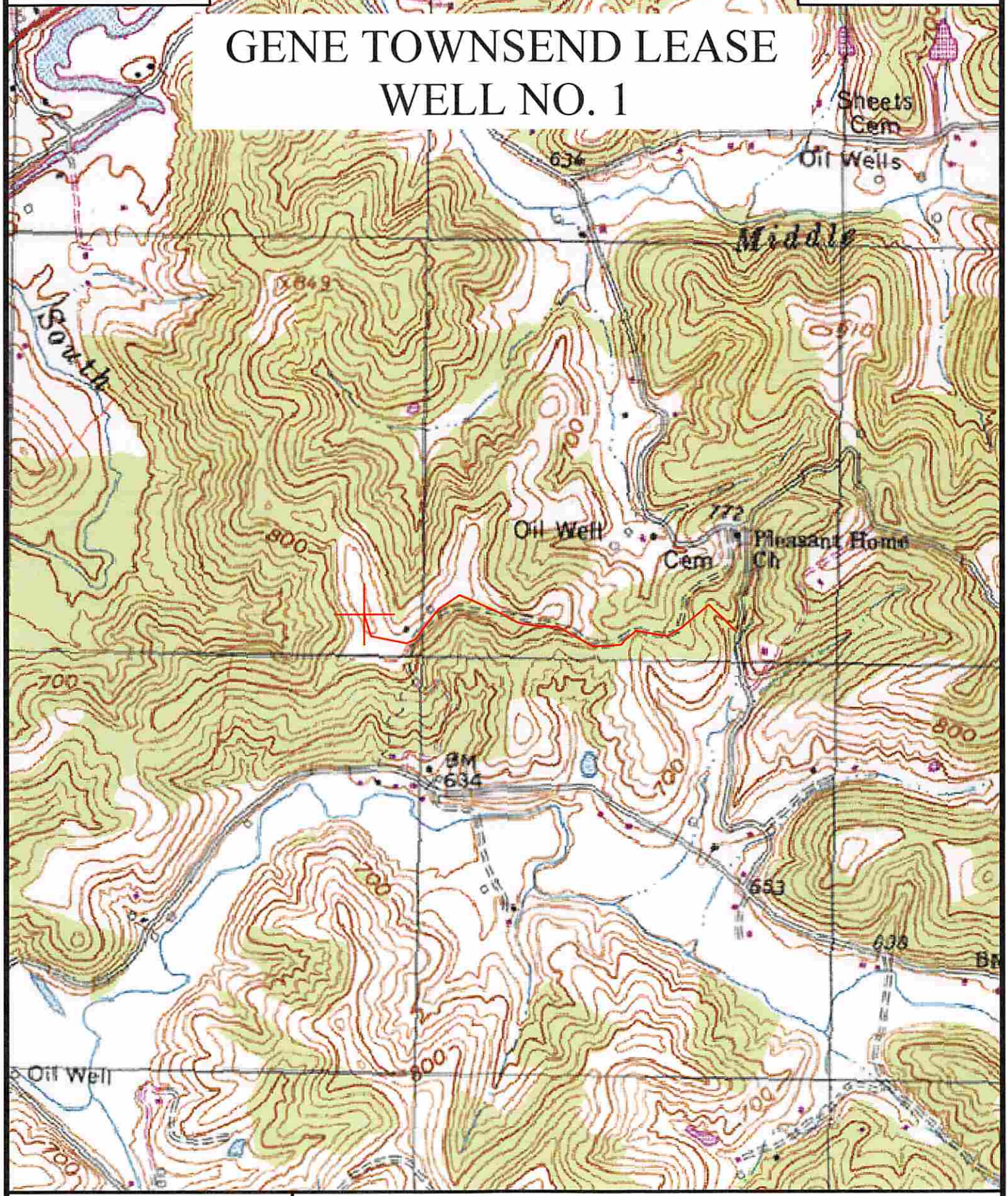
OPERATOR:
PENNECO OIL COMPANY
6608 ROUTE 22
DELMONT, PA 15626

10701747

FORM WW-9

page of

GENE TOWNSEND LEASE
WELL NO. 1



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A DIVISION OF SMITH LAND SURVEYING
SURVEYORS PROJECT MGMT. SLS ENGINEERS ENVIRONMENTAL
P.O. Box 150 Glenville, WV 26351 (304) 462 5634
50065 Dillon Bottom Road Shadyside, OH 43947 (740) 671-9911
HONESTY, INTEGRITY, QUALITY

TOPO SECTIONS OF: LUBECK 7.5'

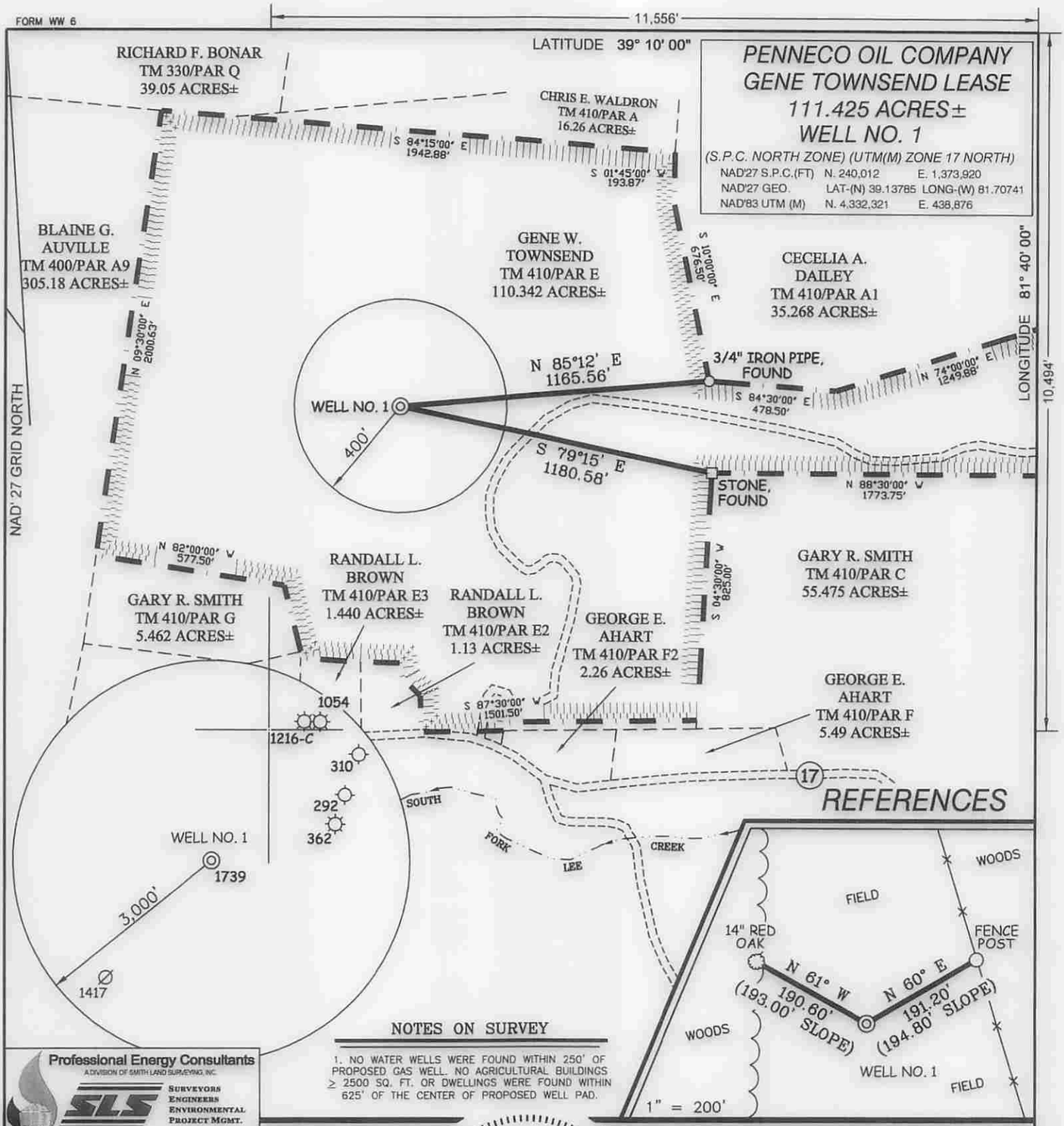
FILE NO. 7659 DATE: 04/03/14 SCALE: 1"=1,000'

FORM WW 6

PENNECO OIL COMPANY
GENE TOWNSEND LEASE
111.425 ACRES±
WELL NO. 1

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 240,012	E. 1,373,920
NAD'27 GEO.	LAT-(N) 39.13785	LONG-(W) 81.70741
NAD'83 UTM (M)	N. 4,332,321	E. 438,876



REFERENCES

NOTES ON SURVEY

1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.

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(304) 462-5634 WWW.SLSSURVEYS.COM

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 677 Gregory A. Smith

GREGORY A. SMITH LICENSED No. 677 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE FEBRUARY 17, 20 14

REVISED _____, 20 _____

OPERATORS WELL NO. GENE TOWNSEND #1

API WELL NO. 47 — 107 — 01747
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 7659P2R

SCALE 1" = 500'

HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (MAPPING GRADE TIE TO CORS NETWORK)

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

WELL TYPE: OIL ____ GAS X LIQUID INJECTION ____ WASTE DISPOSAL ____ IF "GAS" PRODUCTION X STORAGE ____ DEEP X SHALLOW ____

LOCATION:

ELEVATION 868' WATERSHED SOUTH FORK OF LEE CREEK & TRIBUTARY OF MIDDLE FORK OF LEE CREEK

DISTRICT HARRIS COUNTY WOOD QUADRANGLE LUBECK 7.5'

SURFACE OWNER GENE W. TOWNSEND ACREAGE 110.342±

ROYALTY OWNER GENE W. TOWNSEND ACREAGE 111.425±

PROPOSED WORK: LEASE NO. _____

DRILL X CONVERT ____ DRILL DEEPER ____ REDRILL ____ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ____ PERFORATE NEW FORMATION ____ PLUG AND ABANDON ____ CLEAN OUT AND REPLUG ____ OTHER ____

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION ROSE HILL

ESTIMATED DEPTH 5,712'

COUNTY NAME

PERMIT

WELL OPERATOR PENNECO OIL COMPANY DESIGNATED AGENT STEPHEN K. SCHUMAN

ADDRESS 6608 ROUTE 22 ADDRESS P.O. BOX 842

DELMONT, PA 15626 MORGANTOWN, WV 26507

PENNECO
YOUR ENERGY EXPLORATION PARTNER

Rick King
but not others

DEEP WELL DRILLING PROCEDURES AND SITE SAFETY PLAN

Penneco Oil Company

Townsend # 1

API # 47- - 107-01747

Lubeck Quad, Harris District - Wood County, West Virginia

The Following Deep Well Drilling Procedure and Site Safety Plan Approved By:

CRaines
7/10/14

By: _____ **Date:** _____

Title: _____, **Penneco**

By: _____ **Date:** _____

Title: _____, **WVOOG**

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MAR 31 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

TABLE OF CONTENTS

Siting Requirements.....3

Site Safety Plan
- *Pit & Flare Lines*.....4
- *Pre-Spud Meeting: Date, Persons Attended*.....5
- *Access Control Report*.....6
- *Evacuation Plan*.....7-9
- *Schedule of Safety Meetings*.....10
- *List of Nearest Emergency Response Personnel and Phone Numbers*.....11-12

Driving Directions.....13

Casing Requirements
- *Geologic Prognosis*.....15
- *Details on known location of freshwater, saltwater, oil and gas producing, hydrogen sulfide producing, "thief" and high pressure and volume zones*.....17
- *Detailed Casing and Cementing Program*.....14

BOP Requirements
- *List of BOP equipment*.....19-20
- *Procedure and schedule of testing the BOP equipment*.....19
- *Schedule of installation of BOP equipment*.....19
- *List of BOP trained and active certified personnel involved in drilling operations*.....19-20
- *System of maintaining detailed records of significant drilling events*.....20
- *Wellhead Schematic*.....22-23

Well Flaring Operations
- *Flare line installation*.....24-25
- *Burning/Lighting of flare line*.....26
- *Minimum distance of clearing of flammable material*.....26

Well Killing Operations
- *Inventory of all materials that will be used on-site for the mixing of kill weight fluids*.....26
- *Number and type of mixing units*.....26

Hydrogen Sulfide (H_2S) Operations
- *H_2S monitoring equipment*.....27-28
- *H_2S protection equipment*.....27-28
- *H_2S notification method and access control*.....28
- *H_2S training statement*.....28
- *H_2S sensors deep well layout*.....29
- List of Names.....30-31

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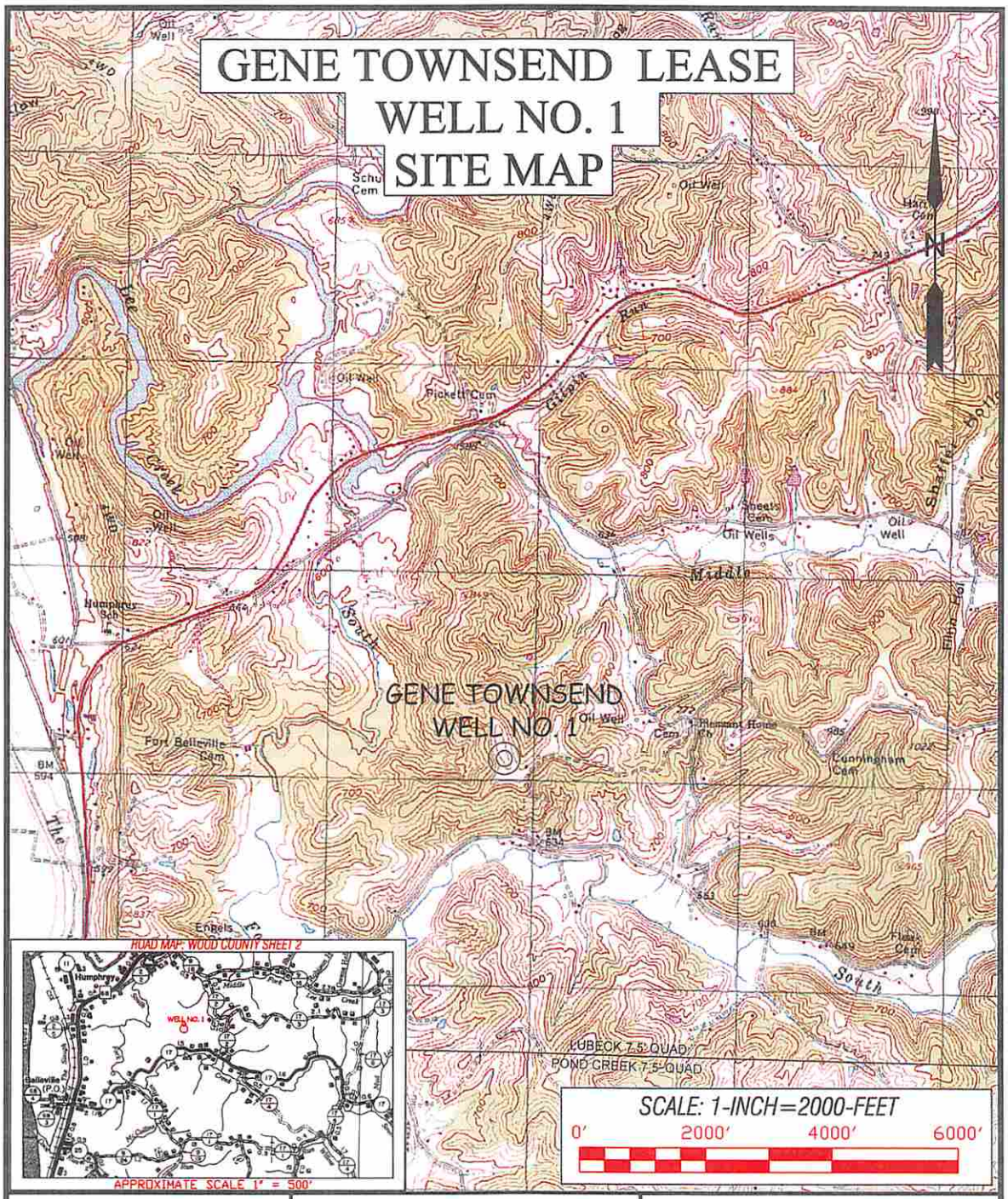
WV Dept. of Environmental Protection

SITE PLAN



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DRAWN BY	FILE NO.	DATE	CADD FILE:
C.J.P.	7659	02/18/11	7659SITEMAPR1.DWG

TOPO SECTION OF:
LUBECK, WV 7.5' QUAD.

COUNTY	DISTRICT	TAX MAP-PARCEL NO.
WOOD	HARRIS	410-E

OPERATOR:
PENNECO OIL COMPANY
6608 ROUTE 22
DELMONT, PA 15626

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Pit and Flare Lines

WW-9
Rev. 5/10

Page _____ of _____
API Number 47 - _____ - _____
Operator's Well No. Gene Townsend #1

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name Penneco Oil Company OP Code 494460033

Watershed South Fork of Lee Creek & Tributary of Middle Fork of Lee Creek Quadrangle Lubeck 7.5'

Elevation 868' County Wood District Harris

Description of anticipated Pit Waste: Drill Water and Various Formation Cuttings

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes _____ No X

Will a synthetic liner be used in the pit? Yes _____. If so, what mil.? 30

Proposed Disposal Method For Treated Pit Wastes:

- _____ Land Application
- _____ Underground Injection (UIC Permit Number _____)
- _____ Reuse (at API Number _____)
- X Off Site Disposal (Supply form WW-9 for disposal location)
- X Other (Explain Solidified with cement and encapsulated and buried)

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Air/Water

-If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used? Soap

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Leave in Pit - Encapsulated and buried

-If left in pit and plan to solidify what medium will be used? Cement, lime, sawdust Cement

-Landfill or offsite name/permit number? AOP/Belmont, WV – Triad Hunter/Macksburg, OH – Danny Webb/Lochnelly, WV

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto 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 or imprisonment.

Company Official Signature _____

Company Official (Typed Name) Ben L. Wallace

Company Official Title Chief Operating Officer

Subscribed and sworn before me this _____ day of _____, 20_____

_____ Notary Public

My commission expires _____

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Office of Oil and Gas
WV Dept. of Environmental Protection

Meeting Date:____________________

Drilling Deeper Meeting

Townsend # 1

NAME	TITLE
	Penneco DRILLING REPRESENTATIVE
	Penneco SITE SUPERVISOR/REPRESENTATIVE
	STATE INSPECTOR
	DRILLING CONTRACTOR REPRESENTATIVE

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WV Dept. of Environmental Protection

Sign In Sheet

Rig / Well County / State WBS

Date	Name (please print)	Company	Time		Were you injured during your visit?		
			In	Out	Initial	NO	Yes

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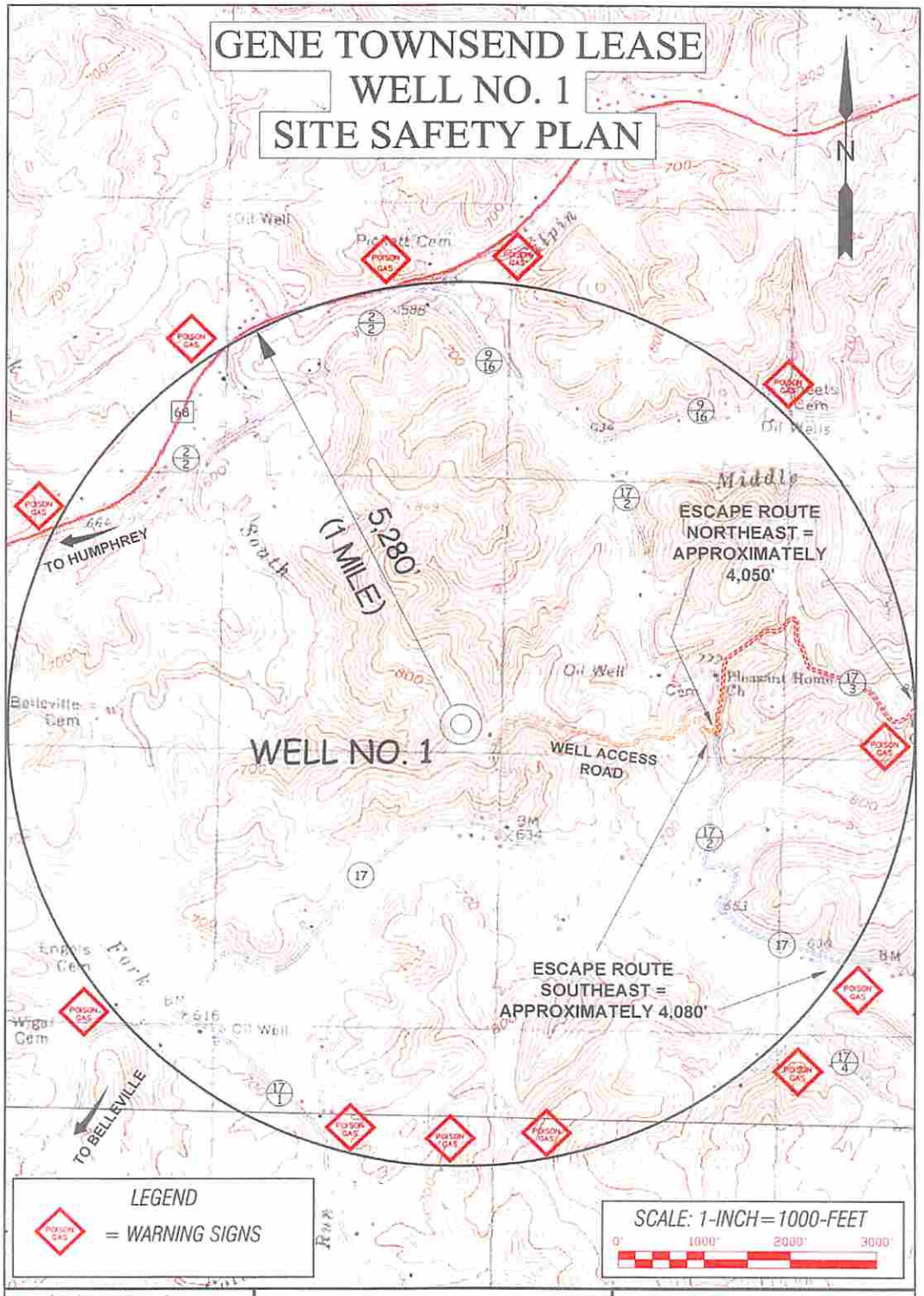
WV Dept. of Environmental Protection

EVACUATION ~~PLAN~~ Route



Professional Energy Consultants	TOPO SECTION OF: LUBECK, WV 7.5' QUAD.			OPERATOR: PENNECO OIL COMPANY 6608 ROUTE 22 DELMONT, PA 15626
	COUNTY	DISTRICT	TAX MAP-PARCEL NO.	
CRAWN BY K.G.M. / FILE NO. 7659 / DATE 02/18/14 / CADD FILE	WOOD	HARRIS	410-E	

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WV Dept. of Environmental Protection

Evacuation of General Public

The procedure to be used in alerting nearby persons in the event of any occurrence that could pose a threat to life or property will be arranged and completed with public officials in detail, prior to drilling into the hydrogen sulfide formations.

In the event of an actual emergency, the following steps will be immediately taken:

1. Penneco Oil Company representative will dispatch sufficient personnel to immediately warn each resident and transient's down-wind within radius of exposure from the well site. Then warn all residents in the radius of exposure. Additional evacuation zones may be necessary as the situation warrants.

2. The Penneco Oil Company's representative will immediately notify proper authorities, including the sheriff's office, highway patrol, and any other public officials as described above and will enlist their assistance in warning residents and transients in the calculated radius of exposure.

3. The Penneco Oil Company's representative will dispatch sufficient personnel to divert traffic in the vicinity away from the potentially dangerous area. A guard to the entrance of the well site will be posted to monitor essential and non-essential traffic.

4. General:

   A. The area included within the radius of exposure is considered to be the zone of maximum potential hazard from a hydrogen sulfide gas escape. Immediate evacuation of public areas, in accordance with the provisions of this contingency plan, is imperative. When it is determined that conditions exist which create an additional area (beyond the initial zone of maximum potential hazard) vulnerable to possible hazard, public areas in the additional hazardous area will be evacuated in accordance with the contingency plan.

   B. In the event of a disaster, after the public areas have been evacuated and traffic stopped, it is expected that local civil authorities will have arrived and within a few hours will have assumed direction of and control of the public, including all public areas. The Penneco Oil Company will cooperate with these authorities to the fullest extent and will exert every effort by careful advice to such authorities to prevent panic or rumors.

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WV Dept. of Environmental Protection

C. Penneco Oil Company will dispatch appropriate management personnel at the disaster site as soon as possible. The company's personnel will cooperate with and provide such information to civil authorities as they might require.

D. One of the products of the combustion of hydrogen sulfide is sulfur dioxide (SO_2). Under certain conditions this gas may be equally as dangerous as H_2S. A pump type detector device, which determines the percent of SO_2 in air through concentrations in ppm, will be available. Although normal air movement is sufficient to dissipate this material to safe levels, the SO_2 detector should be utilized to check concentrations in the proximity of the well once every hour, or as necessary and the situation warrants. Also, if any low areas are suspected of having high concentrations, personnel should be made aware of these areas, and steps should be taken to determine whether or not these low areas are hazardous.

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WV Dept. of Environmental Protection

SAFETY MEETING SCHEDULE

DATE	Number Of Workers Attended	SAFETY TOPIC DISCUSSED – Townsend # 1

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WV Dept. of Environmental Protection

LIST OF EMERGENCY PHONE NUMBERS

Penneco Oil Company

	Office Phone	Cell Phone
Penneco Oil Company **6608 Route 2** **Delmont, PA. 15626**	**(724)-468-8232**	
Penneco Manager: Bill Baughman	**(724)-640-5213**	
Penneco Drill Supervisor: Shannon Johnson	**(412)-784-1927**	**(412)-657-5619**

Drilling Contractor	**Office Phone**	**Cell Phone**
Petty Oilfield Services		
Joseph Petty, Principal	(304)-824-3432	

Hydrogen Sulfide Safety Technicians

Total Safety US, Inc. 2445 West Pike Street Suite 200 Houston, PA 15342	Primary Call #724-745-1919	Phone: 724-745-1919 Fax: 724-745-6088
Total Safety US, Inc. 2445 West Pike Street Suite 200 Houston, PA 15342		Phone: 724-745-1919 Cell: 412-737-3950
H2S RELEASE CALL:	**Derek Kaiser**	Work Cell: 412-737-3950 Cell: 412-737-3950

Hospitals (911)

Camden Clark Memorial Hospital **800 Garfield Avenue** **Parkersburg, WV. 26101**	**Main Phone Number** **(304)-424-2111**	**Phone:** **(304)-424-2111**

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WV Dept. of Environmental Protection

Ambulance Services (911)

Life Ambulance Service 3602 E. 7th Street Parkersburg, WV. 26104	Office Dispatch	(304)-485-5433
St. Josephs Ambulance Service PO Box 33 Parkersburg, WV. 26102	Office Dispatch	(304)-424-4473

State Police – 911
Local Police – 911
Fire Department – 911

West Virginia State Police 3828 Staunton Turnpike Parkersburg, WV. 26104	Office Number (Dispatcher) Emergency	Phone (304)-420-4600 911
Wood County Sheriff Third floor, One Government Square, Parkersburg, WV. 26104	Office Number (Dispatcher) Emergency	Phone (304)-424-1834 911
East Wood Volunteer Fire Department PO Box 6 Davisville, WV. 26142	Office Number Emergency	Phone (304)-422-4410 911

State Agencies

West Virginia – Department of Environmental Protection Oil and Gas Management 601 57th Street, SE Charleston, WV 25304	Customer Service Chief: James Martin	Phone (304) 926-0450 Fax (304) 926-0452
West Virginia Department of Environmental Protection Division of Air Quality 601 57th Street, SE Charleston, WV 25304	Phone Number	(304) 926-0499 Ext. 1227

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WV Dept. of Environmental Protection

Driving Directions

Townsend # 1

LAT / LONG (NAD 27): 39.13785 / 81.70741

DRIVING DIRECTIONS FROM Charleston, WV.

1). Follow signs for I-64 W/I-77 N and merge onto I-64 W/I-77 N, Continue to follow I-77 N, about 47.6 miles.

2). Take exit 146 for W. Virginia 2 (South) toward Silverton/Ravenswood, about 0.2 miles.

3). Turn left onto US-33 W/Co. Rd. 56/1/Old WV. 56 Continue to follow US-33 W. about 2.4 miles.

4). Turn right onto US-33 W/W. Virginia 68 N., continue to follow W. Virginia 68 N., about 15.5 miles

5). Turn right onto Belleville-Rockport/Co Route 1/7, about 2.4 miles.

6). Turn left onto Co. Route 17/2 Pleasant Hill Church, about 0.5 miles.

7). Well road will be on the left, about 3,000 ft. to the well site

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MAR 3 1 2014

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WV Dept. of Environmental Protection

TOWNSEND 1
PROPOSED CASING PLAN AND SETTING DEPTH

	DIAMETER	HOLE SIZE	SETTING DEPTH	GRADE
CONDUCTOR:	**20"**	**24"**	**30'**	**0.375 wall, 81.3#, BTC MC50 1,640# internal yield, 890,000# joint strength, 320# collapse rating**
SURFACE: (FRESH WATER)	**13.375"**	**16.0"**	**360'**	**0.330 wall, 48.0#, ST&C, H40 pipe, H40 cpl., 1,730# int. yield 322,000# joint strength, 740# collapse rating**
COAL PROTECTION: (NO COAL)	**9.625"**	**12.25"**	**1,520'**	**0.312 wall, 32.30#, ST&C, H40 pipe K55 cpl., 2,270# internal yield 254,000# joint strength 1,370# collapse rating**
INTERMEDIATE:	**7.00"**	**8.75"**	**2,115'**	**0.317 wall, 23.0#, ST&C, J55 pipe K55 cpl., 4,360# internal yield 313,000# joint strength, 3,270# collapse rating**
PRODUCTION:	**4.50"**	**6.25"**	**as per orders (+ or - 5,675')**	**0.220 wall, 10.5#, ST&C, MAV65 K55 cpl., 5,560# internal yield 140,000# joint strength, 4,250# collapse ratiug**
TD HOLE:			**5,712'**	

Purpose: To drill and complete in Rose Hill Formation.

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WV Dept. of Environmental Protection

Geologic Prognosis

ESTIMATED LOG
Townsend No. 1, 47-107-0____
Harris District, Wood County, WV

Elevation (Ground): 868', 878' KB

Formation Tops:	Depth	Thickness	Pay/Show
Big Lime	1,392'	45'	-
Big Injun	1,437'	462'	-
Sunbury Shale	2,083'	18'	poss Sg
Berea	2,099'	12'	poss Sg/So
Lo Huron undiff.	2,111'	1,107'	poss Sg/So 3,064', 3,164'
Lower Huron	3,218'	539'	poss Sg 3,609' poss Soil
Java Fm.	3,757'	385'	poss Sg, 3,769'
Rhinestreet Sh.	4,142'	187'	poss Sg
GAS CHECK	4,300'		
Onondaga Ls.	4,329'	93'	poss Sg
Oriskany Ss.	4,422'	36'	poss Sg/pay
Helderberg	4,458'	196'	-
GAS CHECK	4,650'		
Salina	4,654'	535'	-
Newburg Ss.	5,189'	25'	poss Sg/pay
McKenzie	5,214'	298'	poss Sg
GAS CHECK	5,500'		
Big Six Ss.	5,512'	34'	poss Sg
Rose Hill Sh.	5,546'	5,712'	
Total Depth		5,712'	

Possible freshwater flows: 209', 260'
Possible salt water flows: 1,248', 1,317' and 1,437'

Logging Program:

Gamma Ray: TD to Surface
Temperature: TD to csg. seat
Dual Induction: TD to csg. seat
Compensated Density: TD to casing seat
Sidewall Neutron Porosity: TD to casing seat

Note: 2.68 Matrix Density from csg seat to top Onondaga, 2.71 gm/cm3 from Onondaga Top
Fluid Density air filled hole: 1.00

Other: Mud Log: 4,300' to TD
Samples: every 10 feet from 4,300' to 4,500'; 5,100' to TD;

Casing Program:

Conductor: 20", 30' Range 3, 8 round, 81.3 lb., BTC, 0.375 wall Grade MC50 pipe.

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Surface: 13.375", 360' Range 3, 8 round 48.0 lb., ST&C, 0.330 wall Grade H40 pipe, H40 cpl.

Coal Protection: 9 5/8", 1,520' Range 3, 8 round 32.3 lb., ST&C, 0.312 wall Grade H40 pipe, K55 cpl.

Intermediate: 7.00", 2,115, Range 3, 8 round, 23.0 lb., ST&C, 0.317 wall, J-55 pipe, K55 cpl.

Production Casing: 4 1/2", 5,675' Range 3, 8 round, 10.5 lb, ST&C, Grade MAV65 pipe, K55 cpl.

Tubing: As per orders.

SERVICES:

Cement and Cementing:	Universal Well Services:
	Brad Rowley, Engineer Cell: (814) 952-0126 Office: (814) 938-2951
Electric Logging:	Weatherford:
	Dave Sommerville, Sales Engineer Office: (724) 354-3090 Cell: 9724) 388-2577
Pipe and Supplies:	McJunkin-Red Man Corporation:
Buckhannon yard: Indiana Office: Don Hudson; cell	(304) 472-3565 (724) 349-6823 (412) 289-2444
Mud Logging:	Gensearch Logging:
H2S Safety: Derek Kaiser: District Manager	Total Safety (724) 745-1919 Office (412) 737-3950 cell

---

CONTACTS:

Oil and Gas Inspector:	JAMIE STEVENS: (304) 206-7775
Rig Phone:	_____
PENNECO:	Office: (724)-468-8232 Fax: (724) 468-8230
	_____
Geologist:	Shannon Johnson (412) 657-5619 cell (412) 784-1927 home
MOUNTAIN V:	Mike Shaver (304) 842-6320 Office (304) 203-7550 Mobile (304) 987-7550 Pager

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WW - 2B
(Rev. 8/10)

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
WELL WORK PERMIT APPLICATION

1) Well Operator Penneco Oil Company

494460033	Wood	Harris	Lubeck 7.5'
Operator ID	County	District	Quadrangle

2) Operator's Well Number: Gene Townsend #1 3) Elevation: 868'
4) Well Type: (a) Oil_____ or Gas _____

(b) If Gas: Production X / Underground Storage_____

Deep X / Shallow _____

5) Proposed Target Formation(s): Rose Hill Shale Proposed Target Depth: 5712'
6) Proposed Total Depth: 5712 Feet Formation at Proposed Total Depth: Rose Hill Shale
7) Approximate fresh water strata depths: 209' 260'
8) Approximate salt water depths: 1248' 1317' 1437'
9) Approximate coal seam depths: None
10) Approximate void depths,(coal, Karst, other): None
11) Does land contain coal seams tributary to active mine? No
12) Describe proposed well work in detail
To Drill and Complete in the Rose Hill formation.

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS Size	Grade	Weight per ft	FOOTAGE INTERVALS For Drilling	Left in Well	CEMENT Fill -up (Cu. Ft.)
Conductor	20"	MC-50	81.30#	30'	30'	CTS
Fresh Water	13.375"	H-40	48.0#	360'	360'	CTS
Coal	9 .625"	H-40	32.30#	1520"	1520'	CTS
Intermediate	7"	J-55	23.0#	2115'	2115'	CTS
Production	4 ½"	MAV 65	10.5#	5712'	5675'	By Rule 35 CSR 4-11.1
Tubing						
Liners						

Packers: Kind
Sizes
DepthSets

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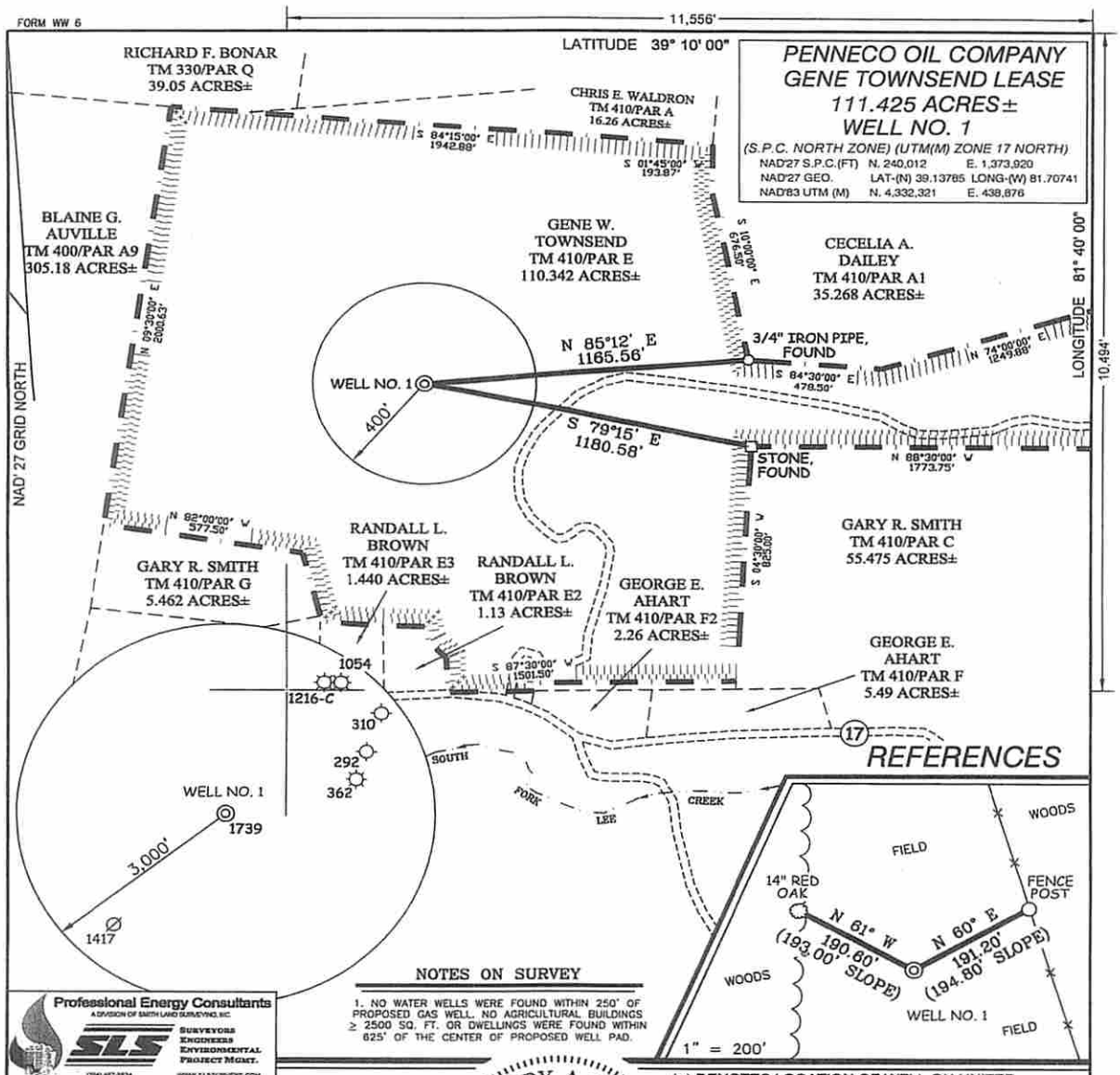
FORM WW 6



NOTES ON SURVEY

1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.

Professional Energy Consultants
A DIVISION OF SMITH LAND SURVEYING, INC.
SLS SURVEYORS ENGINEERS ENVIRONMENTAL PROJECT MGMT.
(304) 462-8834 WWW.SLSSURVEYS.COM

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

P.S. 677 Gregory A. Smith

GREGORY A. SMITH LICENSED No. 677 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.

DATE FEBRUARY 17, 20 14

REVISED _____, 20 ____

OPERATORS WELL NO. GENE TOWNSEND #1

API WELL NO. 47 — —
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 7659P2R

SCALE 1" = 500'

HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (MAPPING GRADE TIE TO CORS NETWORK)

STATE OF WEST VIRGINIA
DIVISION OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

WELL TYPE: OIL ____ GAS X LIQUID INJECTION ____ WASTE DISPOSAL ____ IF "GAS" PRODUCTION X STORAGE ____ DEEP X SHALLOW ____

LOCATION:

ELEVATION 868' WATERSHED SOUTH FORK OF LEE CREEK & TRIBUTARY OF MIDDLE FORK OF LEE CREEK

DISTRICT HARRIS COUNTY WOOD QUADRANGLE LUBECK 7.5'

SURFACE OWNER GENE W. TOWNSEND ACREAGE 110.342±

ROYALTY OWNER GENE W. TOWNSEND ACREAGE 111.425±

PROPOSED WORK: LEASE NO. _____

DRILL X CONVERT ____ DRILL DEEPER ____ REDRILL ____ FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION ____ PERFORATE NEW FORMATION ____ PLUG AND ABANDON ____ CLEAN OUT AND REPLUG ____ OTHER ____

PHYSICAL CHANGE IN WELL (SPECIFY) _____ TARGET FORMATION ROSE HILL

ESTIMATED DEPTH 5,712'

COUNTY NAME

PERMIT

WELL OPERATOR PENNECO OIL COMPANY DESIGNATED AGENT STEPHEN K. SCHUMAN

ADDRESS 6608 ROUTE 22 ADDRESS P.O. BOX 842

DELMONT, PA 15626 MORGANTOWN, WV 26507

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BOP Requirements

Description of BOP's To Be Installed on Each Casing String

Casing String – 20"	Casing String – 13.375"
Rotating Head Only	BOP Type – Annular
Size – 20"	Size – 13.375"
Pressure Rating – 500 psi	Pressure Rating – 5000 psi
BOP Type – Double Rams	BOP Type – Double Rams
Size – 9.625"	Size – 7"
Pressure Rating – 10000 psi	Pressure Rating – 10000 psi

BOP Installation and Pressure Testing

1. The 20" Rotating Head will be installed when nippling up on the 20" casing. It will divert returns to the pit while air drilling this section.

2. The 13.375" BOP stack will be installed when nippling up on the 13.375" casing. The BOP will be pressure tested using a test plug. The BOP will be tested to a pressure of 250 psi low and 5000 psi high and the annular to 250 psi low and 2500 psi high prior to drilling out 9.625" casing.

3. When the 10000 psi BOP stack is in use, a 10000 psi upper and lower Kelly cock will be employed. They will be tested when the BOP stack is tested.

WWD&C Standard Operations Guidelines

1. BOPE configuration and testing will comply with State, Federal, or other governmental regulations and API RP 53 guidelines including accumulator testing for every well.
2. Pressure tests shall be performed to the maximum anticipated load.
3. BOP pressure test shall be five minutes low pressure (200 to 300 psi) followed by five minutes at a higher pressure.
4. Acceptance criteria will be less than 1% pressure loss during test period following stabilization. The rate of change of test pressure must be on a decreasing trend.
5. In offshore operations and where required by regulation or risk, all pressure tests will be recorded on a chart. Information detailing what was tested, time, date, and the authority accepting the test shall be recorded.
6. Gas is not allowed as a pressure testing fluid.
7. The Penneco Oil Company Drilling Supervisor will verify all pressure tests of BOP's, surface lines, seals, casings, and FIT tests. All tests are to be recorded on the IADC and Penneco daily drilling reports.

Pressure tests on the BOPE should be conducted at least:

1. Upon installation or prior to running the BOP subsea (stump test).
2. After disconnection or repair of any pressure containment seal in the BOP stack, choke line, choke manifold, or wellhead assembly, but limited to the affected component.
3. At a frequency defined by regulatory agency, but not to exceed 21 days.
4. Pressure and function tests, and the results of same, will be recorded on the Penneco Daily Report.
5. Deviations to the testing requirements must be approved by the area drilling or completion manager and in compliance with the necessary regulatory procedures for non-conformance.

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BOP Trained Personnel

Penneco Oil Company Representative
Penneco Oil Company Representative – Relief
Rig Supervisor
Rig Supervisor – Relief
Toolpusher
Day Tour Driller
Night Tour Driller
Relief Driller

WWD&C Standard Operations Guidelines

Well Control

1. Drilling Supervisors, Completion Supervisors, MODU OIM's, Drillers, and Tool Pushers (including all personnel that may be acting in these capacities) must hold a valid well control certificate from an accredited IWCF or WellCAP organization.
2. The working pressure and temperature rating of the BOPE and wellhead will exceed the maximum anticipated surface pressure and temperature. (Note: MASP to be based on Modified Chevron Method of calculating gas hydrostatic unless an alternative method is approved through risk assessment.)
3. BOPE rubber goods, studs, and nuts will be inspected prior to initial rig up. API ring gaskets will be inspected anytime API flanged connections are "broken" on onshore operations and always will be replaced with new gaskets on offshore operations.
4. Hole-filling and pit monitoring procedures will be established by site supervision for every rig operation. The established procedures will be documented and approved by Penneco and the D&C Contractor.
5. Circulating trip tanks are required for all drilling operations.
6. Rams must be installed to fit all sizes of drill pipe and work strings in use.
7. A drill string float valve (ported acceptable) will be installed in all drilling bottom hole assemblies (BHA's). Similar valves should be considered for well intervention and completion operations when reverse circulating is not required.
8. A pressure tested full opening safety valve (FOSV) and opening/closing wrench with appropriate threads or crossover subs for all connections will be available on the rig floor at all times.
9. Accumulator controls will always be left in a power position (i.e. open/closed: not neutral).
10. Surface casing, intermediate casing, and liner shoes will have formation integrity tests (FIT) or leak-off tests (LOT) completed unless risk assessment determines that a shoe test is not required.
11. The "hard shut-in procedure" shall be used on all kicks (other than diverter installations).
12. During drilling operations, slow circulating rates (SCR) should be obtained and recorded for each mud pump at least after BHA or mud weight changes and 500 feet of formation drilled.
13. Drilling BOP space-out and tool joint space-out diagrams shall be posted on the rig floor at all times.
14. Flow checks shall be conducted after drilling breaks, prior to tripping, after or during lost circulation events, pumping out, prior to nippling down BOP's, and any other time when anomalous pit volume readings are observed. Minimum flow check duration shall be 15 minutes. Pipe rotation during the flow check is recommended.
15. Diverters will be rigged up to facilitate installation of straight diverter lines.
16. When securing a well overnight when working "daylight only" operations, BOPE should be closed and locked.

Recording of Significant Drilling Events

A detailed record of significant drilling events will be recorded in Penneco Oil Company's well log book. The state inspector will be notified upon any significant drilling events including the encounter of Hydrogen Sulfide Gas.

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Wellhead Assembly

The Christmas tree section is to be designed depending upon the well completion type (i.e., 7", 4 ½", tubing, or combination thereof).

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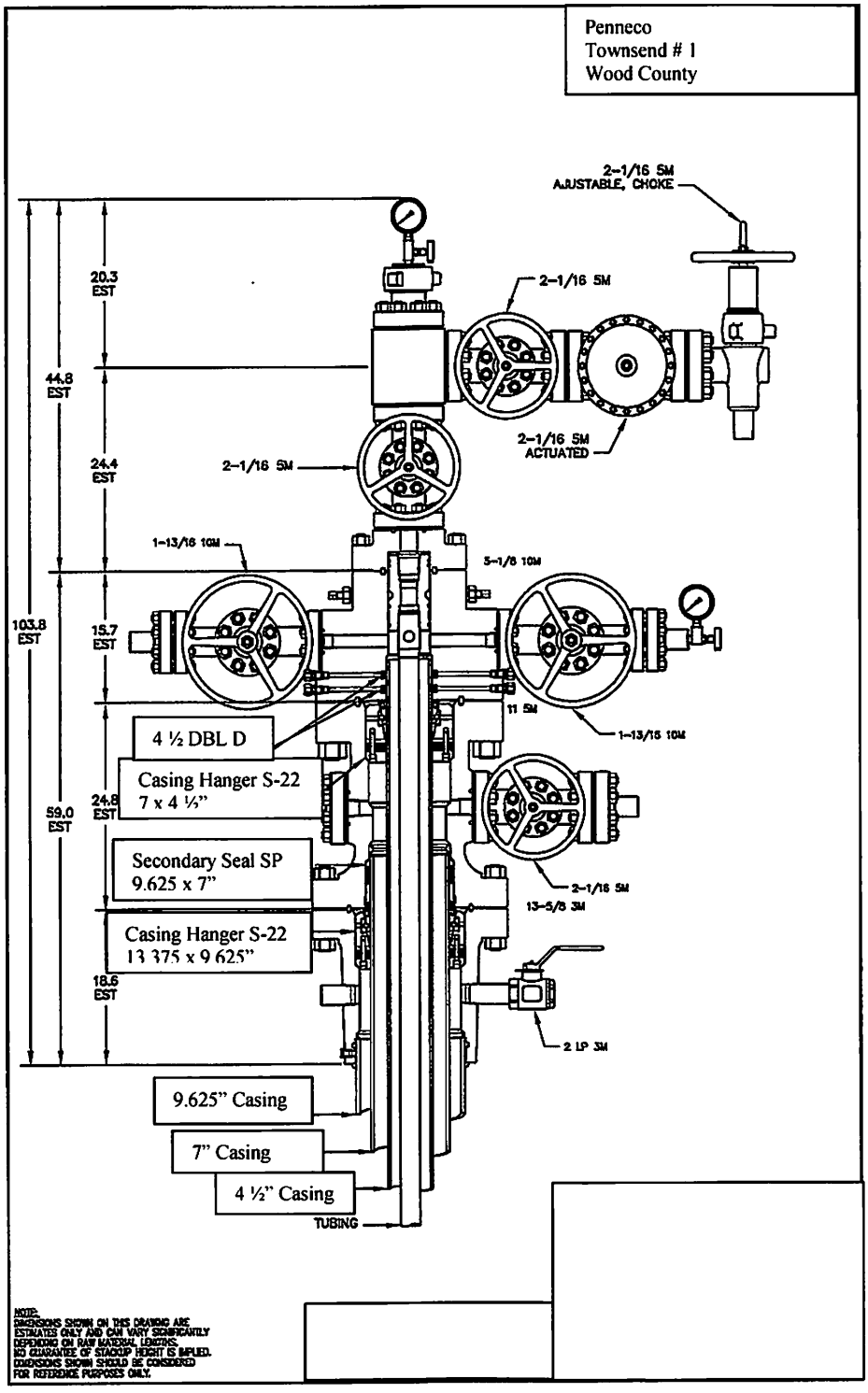
WELLHEAD SCHEMATIC



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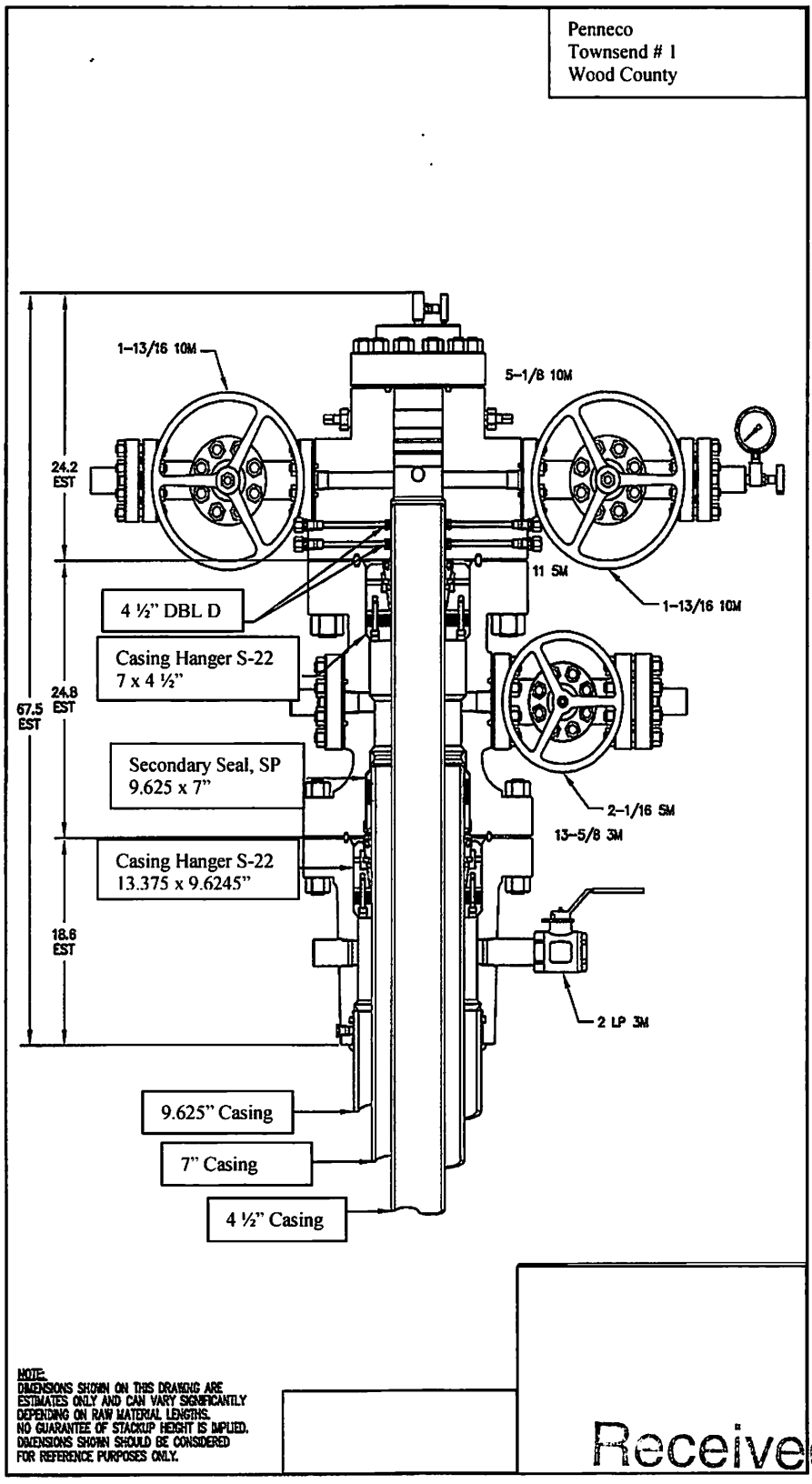

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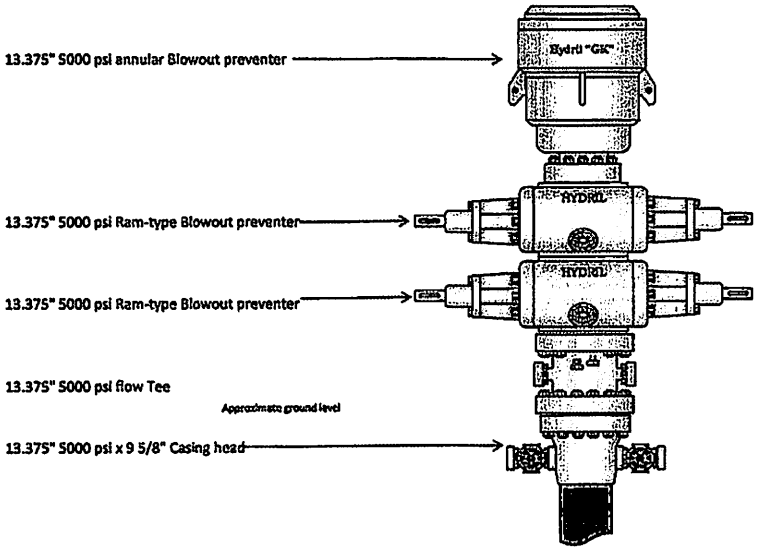
Well Flaring and Killing Operations

Penneco
Proposed Blowout Preventer Schematic
Townsen # 1
Wood County, West Virginia



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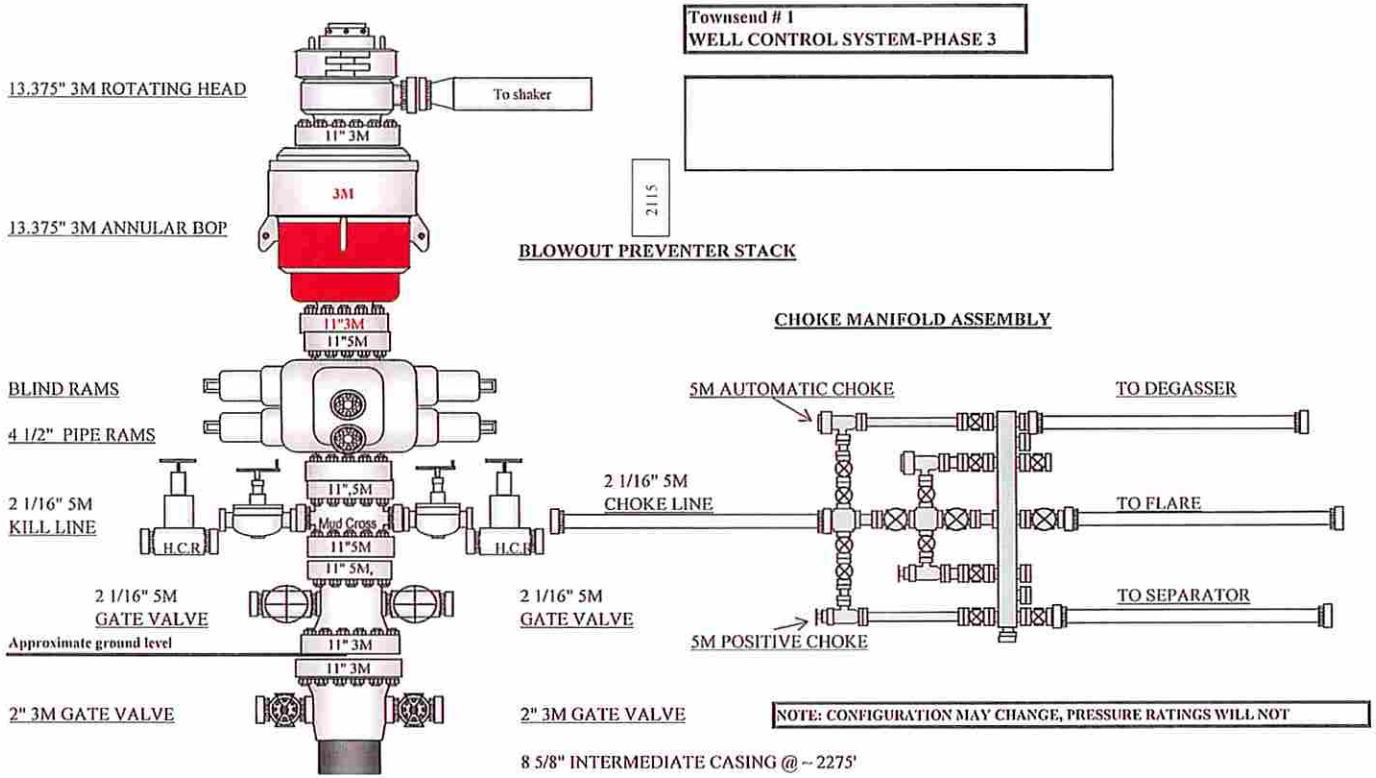
Townsend # 1
WELL CONTROL SYSTEM-PHASE 3



Flare Line Installation

1. The flareline will be 8" flanged pipe, at a minimum length of 100'.

2. 4 1/16" x 3 1/16" 10000 psi double choke manifold will be installed.

Ignition Methods and Notification

1. Primary – electronic igniter and/or propane torch.

2. Backup – Marine flare pistol

3. Notification of a flare will be given to the local fire department, if possible.

The duration of flaring operations shale last no longer than 7 to 10 days maximum.

Minimum Distance of Clearing of Flammable Material

All flammable material within a minimum distance of 50' will be cleared from around the burn pit.

Well Killing Operations

There will be enough dry chemicals on location to mix 1000 bbls of 12.5 ppg mud utilizing 450 bbl premix pit equipped with shear hopper. We anticipate the rig will have a 1000 bbl mud tank capacity.

Number and Type

There will be two centrifugal pumps serving as the primary mixing pumps. The mud pump will serve as the backup mixing pump. These pumps will use a hopper style mixer.

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H_2S Safety Services Equipment List

Hydrogen Sulfide Safety Package – Contained on location in Total Safety H_2S Equipment Trailer, unless otherwise noted:

Respiratory Safety Systems

QTY	DESCRIPTION
1	Trailer with 10 bottle cascade system and associated manifolds.
24	30-minute pressure demand SCBA with Pigtail (4 – Primary safe briefing area, 4 – Secondary Safe Briefing Area, 4 – floor with one of these for derrick man)
9	Hose Line 5-minute Work Unit w/Escape Cylinder (1 in derrick, 6 on drill floor, 1 in mud pit wt area, 1 in shaker area)
1	Breathing air cascade of 8 bottles w/regulator (with hoses and manifolds rigged up to rig floor)
2	Refill lines to refill 30-minute units on location
2	6-man manifold that can be rigged up to work area on floor, if needed
6	25 foot hose lines
2	50 foot hose lines
100	feet of hose line to rig cascade up to 12 man manifold on floor

Detection and Alarm Safety System

1	H_2S Fixed Monitor w/8 channels (Loc determined at rig up) suggested. (Mud pit area, shaker area, bell nipple area, floor/driller area, & outside quarters)
5	H_2S Sensors – located at rig floor, cellar, shakers, drillers console, and pit
3	Explosion Proof Alarms (Light and Siren)
2	Personal H_2S monitors
1	Portable Tri-Gas Hand Held Meter (O_2, LEL, H_2S)
1	Sensidyne/Gastech Manual Pump Type Detector
8	Boxes H_2S Tubes Various Ranges
2	Boxes SO_2 Tubes Various Ranges
1	Calibration Gas
1	Set Paper Work for Records: Training, Cal, Inspection, other
30	H_2S Clip-on personnel monitors (Cricket type or similar)

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Additional Safety Related Equipment

QTY	Description
2	Windsocks with Pole and Bracket
1	Set Well Condition Sign w/Green, Yellow, Red Flags
1	Primary Safe Briefing Area Sign
1	Secondary Safe Briefing Area Sign
6	Operating Condition Signs for Work Areas & Living Quarters
*	MSDS sheets shale be posted in the Supervisors trailer and will be readily available to anyone.

Trailer with Breathing Air Cascade Will Also Include the Following
This equipment will be part of the H_2S equipment stored in the trailer, when on location

1	Oxygen Resuscitator
1	Flare Gun, with 10 cartridges
1	First aid kit
1	Eye wash station
1	Litter
2	Safety Harness w/150' Safety line

H_2S Training Statement

On site personnel will be trained in H_2S safety by independent training contractors. H_2S qualified personnel will be present during the drilling and/or presence of H_2S.

Completion and production activities will include Hydro-Facing.

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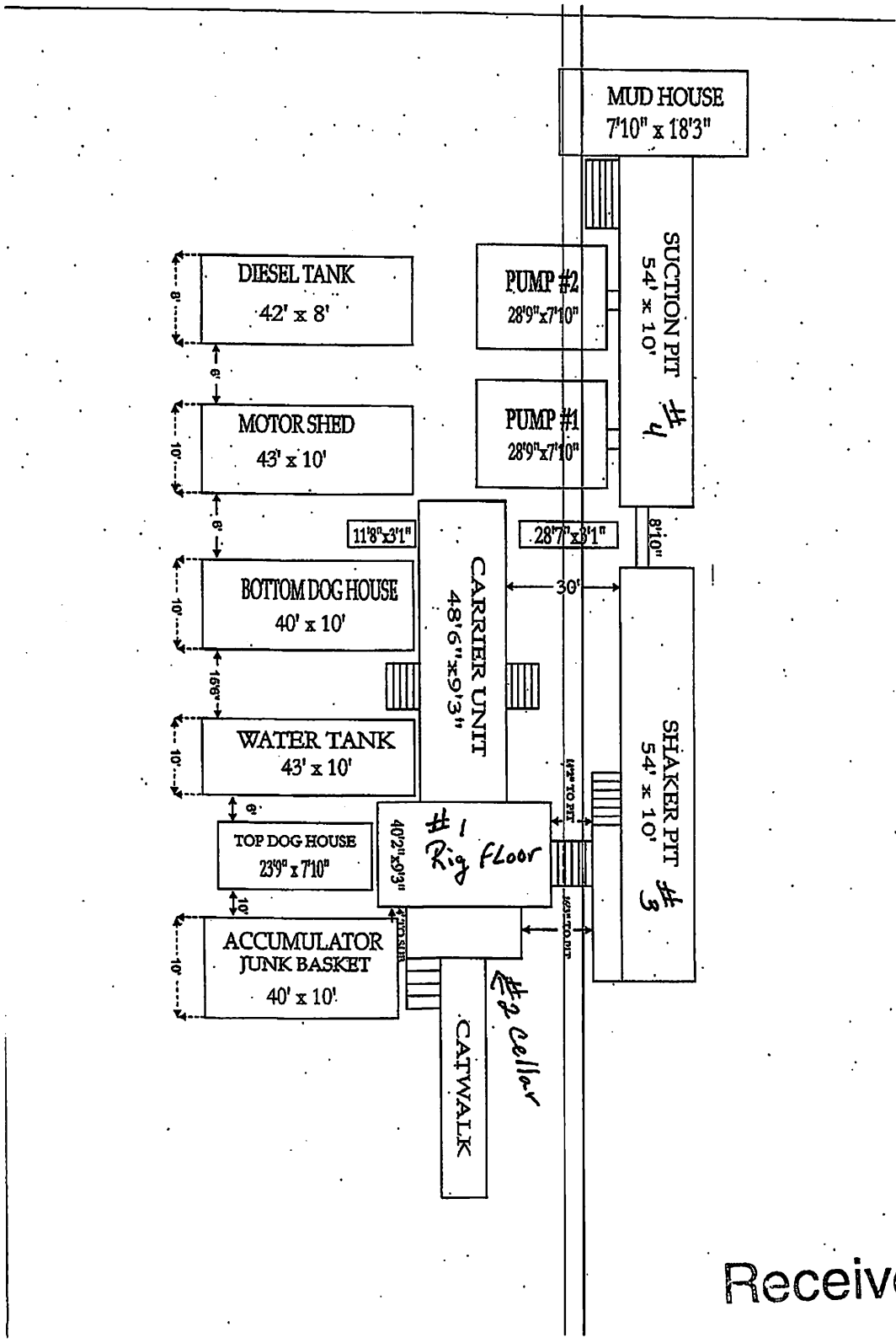
Deep Well Layout



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Listing of Names, Addresses and Telephone Numbers within 1 Mile radius of Proposed well bore

Name:	Address:	Phone Number:
Gary R. & Peggy L. Smith Map 410 Par # C	1850 Lee Creek Rd. Belleville, WV. 26133	(304)-863-5694
Clyde L. Phillips Map 410 Par # D	2280 Lee Creek Rd. Belleville, WV. 26133	(304)-863-5127
Gene W. & Betty J. Townsend Map 410 Par # E	1805 Lee Creek Rd. Belleville, WV. 26133	(304)-863-6972
Randy G. & Barbara A. Townsend Map 410 Par K	230 Oak Valley Rd. Belleville, WV. 26133	(304)-863-6268
Cecelia A. Dailey Map 410 Par # A1	779 Pleasant Hill Church Rd. Belleville, WV. 26133	(304)-863-8635
Eric S. & Candice L. Smith Map 410 Par # C1	2138 Lee Creek Rd. Belleville, WV. 26133	(304)-863-3525
Raymond W. Stout Map 410 Par # C2	2295 Lee Creek Rd. Belleville, WV. 26133	(304)-863-5046
Randall Lee & Sandra Jo Brown Map 410 Par # E2	1763 Lee Creek Rd. Belleville, WV. 26133	(304)-863-8434
Randall L. & Sandra J. Brown Map 410 Par # E3	1763 Lee Creek Rd. Belleville, WV. 26133	(304)-863-8434
George E. & Donna Sue Ahart Map 410 Par # F2	1841 Lee Creek Rd. Belleville, WV. 26133	(304)-863-6842
Eva M. Smith Map 410 Par # I1	1772 Lee Creek Rd. Belleville, WV. 26133	(304)-863-3655
Gary R. & Peggy L. Smith Map 410 Par # I2	1850 Lee Creek Rd. Belleville, WV. 26133	(304)-863-5694
Gary Roger & Peggy L. Smith Map 410 Par # I3	1850 Lee Creek Rd. Belleville, WV. 26133	(304)-863-5694
David M. & Mendy D. Kemp Map 410 Par # I5	1868 Lee Creek Rd. Belleview, WV. 26133	(304)-861-0459
Chris E. & Marcella L. Waldron Map 410 Par # A1A	870 Pleasant Hill Church Rd. Belleville, WV. 26133	(304)-863-0200
Candice J. Fleak Map 410 Par # E4A	467 Pleasant Hill Church Rd. Belleville, WV. 26133	(304)-863-9086
Wanda M. Flinn Map 260 Par # C	4082 Pond Creek Rd. Ravenswood, WV. 26164	No Listing
Mark Douglas & Jill L. Shaffer Map 260 Par # K	10392 Harris Hwy. Belleville, WV. 26133	(304)-863-5908
James G. Persinger Map 260 Par # C5	393 South Fork Ln. Belleville, WV. 26133	(304)-863-5912
Harvey A. Wigal Map 260 Par # G1	10105 Harris Hwy. Belleville, WV. 26133	(304)-863-5436
Jesse C. & Jason J. McKaughan Map 260 Par # G2	219 South Fork Ln. Belleville, WV. 26133	(304)-863-5907 (304)-863-5087
Gary F. & Karen Y. Fox Map 260 Par # G3	10229 Harris Hwy. Belleville, WV. 26133	(304)-863-6337
Robin W. & Amy L. West Map 260 Par # G4	161 S. Fork Ln. Belleville, WV. 26133	(304)-863-0607
Gary F. & Karen Y. Fox Map 260 Par # G5	10229 Harris Hwy. Belleville, WV. 26133	(304)-863-6337
C. Edwin & Barbara A. Huffman Map # 260 Par # K1	10504 Harris Hwy. Belleville, WV. 26133	(304)-863-8556
C. Edwin & Barbara A. Huffman Map # 260 Par # K2	10504 Harris Hwy. Belleville, WV. 26133	(304)-863-8556
Belleville Methodist Church Map 260 Par # G2A	RR # 2 Belleville, WV. 26133	(304)-863-5554

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David K. & Aida L. Davis Map 260 Par # G7A	315 S. Fork Ln. Belleville, WV. 26133	(304)-863-9266
Caroll E. & Wilma L. Map 470 Par # B	423 Mill Race Rd. Granville, OH. 43023	(740)-587-2747
Howard & Donald Bailey Map 470 Par # E	575 East Cummings St. Lake Alfred, FL. 33850	(304)-863-1896
Thomas A. Buckley Map 470 Par # A1	425 S. Pleasant Hill Rd. Belleville, WV. 26133	(304)-863-8514
Greggory L. & Mary A. Knapp Map 470 Par # B4	531 S. Pleasant Hill Rd. Belleville, WV. 26133	(304)-863-3060
Blaine G. Auville Jr. & Libby J. Auville Map 400 Par # A	10687 Harris Hwy. Belleville, WV. 26133	(304)-863-8283
Gary R. & Peggy L. Smith Map 400 Par # H	1850 Lee Creek Rd. Belleville, WV. 26133	(304)-863-5694
Gary R. & Peggy L. Smith Map 400 Par # J	1850 Lee Creek Rd. Belleville, WV. 26133	(304)-863-5694
Anna M. Henrie Map 400 Par # A3	10719 Harris Hwy. Belleville, WV. 26133	(304)-863-6359
Blaine G. & Libby J. Auville Map 400 Par # A9	10687 Harris Hwy. Belleville, WV. 26133	(304)-863-8283
Denzil R. & Sharon K. Drain Map 420 Par # F	376 Pleasant Hill Church Rd. Belleville, WV. 26133	(304)-863-0313
James E. & Linda L. White Map 420 Par # H	102 Pleasant Hill Church Rd. Belleville, WV. 26133	No Listing
Edward L. & Anna M. McComas Map 420 Par # G1	368 Pleasant Hill Church Rd. Belleville, WV. 26133	(304)-863-6991
David S. & Amy Johnson Map 420 Par # H1	60 Pleasant Hill Rd. Belleville, WV. 26133	No Listing
Dwight D. & Nancy Sue Cochran Map 460 Par # C	831 Lee Creek Rd. Belleville, WV. 26133	(304)-863-8193
Jeffrey L. & Carolyn Russell Map 460 Par # D	1 Lubeck Gardens Washington, WV. 26181	No Listing
Ogden K. Buckley Map 460 Par # 14	379 S. Pleasant Hill Rd. Belleville, WV. 26133	(304)-863-8514
Claude W. & Dolores J. Buckley Map 460 Par # E1	12 S. Pleasant Hill Rd. Belleville, WV. 26133	(304)-863-8298
Larry D. & Marilyn A. Sellers Map 460 Par # F1	1528 Lee Creek Rd. Belleville, WV. 26133	(304)-863-3806
Kathleen G. Buckley Map 460 Par # E3B	PO Box 133 Belleville, WV. 26133	No Listing
George & Linda Ahart Map 330 Par # I	326 Middle Fork Rd. Belleville, WV. 26133	(304)-863-8398
Richard & Deborah K. Bonar Map 330 Par # K	177 Differ Dr. Belleville, WV. 26133	(304)-863-8616
John T. Clevenger Map 330 Par # M	1281 Pleasant Hill Church Rd. Belleville, WV. 26133	(304)-863-9496
Richard W. & Belinda J. Greenburg Map 330 Par # N	1262 Pleasant Hill Church Rd. Belleville, WV. 26133	(304)-863-3158
David D. & Connie P. Steele Map 330 Par # O	850 Middle Fork Lee Creek Rd Belleville, WV. 26133	(304)-863-3266
Michael R. Wright, Jr. Map 330 Par # T	791 Pleasant Hill Church Rd. Belleville, WV. 26133	No Listing
Belleville Baptist Church, Inc. Map 330 Par # A1	RR 1 Box 138-B Belleville, WV. 26133	(304)-863-5554
Brian K. & Tina S. Pigott Map 330 Par # A2	298 Log Cabin Dr. Belleville, WV. 26133	(304)-863-8435
Larry W. & Tammy S. Jenkins Map 330 Par # E2	87 Digger Rd. Belleville, WV. 26133	(304)-863-6895

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Mark E. & Debra Buckley Map 330 Par # N1	513 Middle fork Lee Creek Rd. Belleville, WV. 26133	(304)-863-8636
Richard W. & Belinda J. Greenburg Map 330 Par # N2	1262 Pleasant Hill Church Rd. Belleville, WV. 26133	(304)-863-3158
Philip S. & Jami D. Wicker Map 330 Par # O1	696 Middle Fork Lee Creek Rd. Belleville, WV. 26133	(304)-863-9222
Ida L & Kenneth Ankrom Map 330 Par # T1	974 Pleasant Hill Church Rd. Belleville, WV. 26133	(304)-863-8413
Belleville Baptist Church Map 330 Par # A1B	9877 Harris Hwy. Belleville, WV. 26133	(304)-863-0007
Ray Lee & Ellen N. Hofmann Map 340 Par # A	984 Middle Fork Lee Creek Rd. Belleville, WV. 26133	(304)-863-3229
Ray L. & E Nadine Hofmann Map 340 Par # I	984 Middle Fork Lee Creek Rd. Belleville, WV. 26133	(304)-863-3239

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