



west virginia department of environmental protection

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

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

Tuesday, September 20, 2016
WELL WORK PERMIT
Vertical / Plugging

JACK, LOIS
2364 OVERBROOK AVE

WHEELING, WV 26003

Re: Permit approval for 20779-TPI
47-069-00038-00-00

This well work permit 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 any additional specific 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 of 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.

Per 35 CSR 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- 0450.

James A. Martin
Chief

Operator's Well Number: 20779-TPI
Farm Name: JACK, EUGENE C., SR.
U.S. WELL NUMBER: 47-069-00038-00-00
Vertical / Plugging
Date Issued: 9/20/2016

Promoting a healthy environment.

09/23/2016

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. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. 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.
3. Well work activities shall not constitute a hazard to the safety of persons.

1) Date August 29, 2016
2) Operator's
Well No. 207-79-T
3) API Well No. 47-069 - 00038

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil / Gas X / Liquid injection / Waste disposal /
(If "Gas, Production or Underground storage) Deep / Shallow

5) Location: Elevation 1304.64' Watershed Wheeling Creek
District 6-Triadelphia County Ohio Quadrangle Valley Grove

6) Well Operator Lois Jack 7) Designated Agent Edward Shultz
Address 23 Lois Lane Address 2364 Overbrook Avenue
Triadelphia, WV 26059 Wheeling, WV 26003

8) Oil and Gas Inspector to be notified Name Eric Blend
Address P.O. Box 2115
Wheeling, WV 26003
9) Plugging Contractor Name Coastal Drilling
Address 130 Meadow Ridge Road
Mt. Morris, PA 15349

10) Work Order: The work order for the manner of plugging this well is as follows:
See attached.

PLUGGING PLAN.

OK jwm *ERIC BLEND APPROVED BY PHONE*
9/22/16 *9/22/16*

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Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

WV Department of
Environmental Protection

Work order approved by inspector _____ Date _____

09/23/2016



Coastal Drilling East LLC • 130 Meadow Ridge Road, Mt. Morris, PA 15349

Phone 304-291-0175 Fax 304-413-0061

"A Shaft Drillers International Company"

5/27/2016

Mr. Jeff McLaughlin
 Technical Analyst
 WV Department of Environmental Protection
 601 57th Street, SE
 Charleston, WV 25304

Mr. McLaughlin,

Mr. Eric Jack owns an old Columbia Gas Transmission well located near Triadelphia, WV. The well number is 20779 and the API number is 47-069-00038. Mr. Jack sold the property to another party and part of his agreement with the buyer is to plug the well back to surface. Mr. Jack has asked me to prepare an estimate to plug the well back to surface per WV DEP Regulations. In order for me to give him an accurate estimate I have prepared a plugging plan for your review and approval. The plugging plan is based on my interpretation of the current WV DEP standards for plugging a well back to surface. Please review the plan below at your convenience and contact me if you have any questions or concerns.

Plugging Plan

- Move to site, rig up. PB TD \approx 6818'
- Check total depth (7,140') with wireline truck. Run cement bond SPOT GEL. log on 4 1/2" casing to find top of cement. Set permanent bridge plug at 6,400'.
- Set 100' Class A Cement Plug on top of permanent bridge plug at 6,400' to 6,300'. Tag cement plug. Fill hole from 6,300' to approximately 5400' with 6% gel
- Wireline cut 4 1/2" casing at a depth based on reading from cement bond log
- Lay down 4 1/2" casing (approximately 5,350')

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 Environmental Protection

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- Set 100' Class A Cement Plug across cut in 4 1/2" casing at approximately 5,350'.
- Fill hole with 6% gel from 5,300 to 3,330'.
- Set 100' Class A cement plug from 3,330' to 3,230'.
- Fill hole with 6% gel from 3,230' to 2,550'.
- Set 100' Class A Cement Plug from 2,550' to 2,450'.
- Fill hole with 6% gel from 2,450' to 1,350'.
- Set 100' Class A Cement Plug from 1,350' to 1,250' (across elevation).
- Fill hole with 6% gel from 1250' to 50' below workable coal seam. (coal depth not indicated on well record). *~660'*
- Set 100' Class A Cement Plug from 50' below workable coal seam to 50' above workable coal seam (coal depth not indicated on well record). *~660'*
- Fill hole with 6% gel from 50' above workable coal seam to 250'. *gwm*
- Set 250' Class A cement plug from 250' to surface.
- Rig down and install monument per DEP Regulations
- SET 100' CLASS A CEMENT PLUG FROM 835' - 735' ACROSS 1 3/4" CASING SEAM IF NOT COVERED BY COAL CEMENT PLUG. *gwm*

Respectfully submitted,

Coastal Drilling East, LLC.

Kevin Wright

Kevin Wright

Well Service Division Manager

*COAL ~ 660'
ACCORDING TO OFFSET
WELL 47-069-00161*

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WV Department of
Environment & Natural Resources
COASTAL
DRILLING - EAST

09/23/2016



IV-35
(Rev 8-81)

Date November 17, 1983

Operator's
Well No. 20779

RECEIVED State of West Virginia
NOV 21 1983 Department of Mines
Oil and Gas Division

Farm Eugene C. Jack, Sr.
API No. 47-069-003E

069-0038

OIL & GAS DIVISION
DEPT. OF MINES WELL OPERATOR'S REPORT
OF
DRILLING, FRACTURING AND/OR STIMULATING, OR PHYSICAL CHANGE

WELL TYPE: Oil / Gas / Liquid Injection / Waste Disposal
(If "Gas," Production / Underground Storage / Deep / Shallow)

LOCATION: Elevation: 1300 Watershed Marlow Run
District: Triadelphia County Ohio Quadrangle Valley Grove

COMPANY Columbia Gas Transmission Corp.

ADDRESS P. O. Box 1273, Charleston, WV

DESIGNATED AGENT J. W. Weekley

ADDRESS P. O. Box 1273, Charleston, WV

SURFACE OWNER Eugene C. Jack Sr.

ADDRESS R. D. 1 Box 237, Triadelphia, WV

MINERAL RIGHTS OWNER same as surface owner

ADDRESS _____

OIL AND GAS INSPECTOR FOR THIS WORK Robert

Lowther ADDRESS _____

PERMIT ISSUED 12/16/81

DRILLING COMMENCED 3/29/82

DRILLING COMPLETED 4/8/82

IF APPLICABLE: FLUGGING OF DRY HOLE ON
CONTINUOUS PROGRESSION FROM DRILLING OR
REWORKING. VERBAL PERMISSION OBTAINED
ON _____

Casing Tubing Size	Used in Drilling	Left in Wall	Cement Fill up Cu. ft.
20-16 Cord.	60'	60'	75 sack
11-3/4" 1300'	785'	785'	300 sack
9 5/8			
8 5/8	2510'	2510'	600 sack
7			
5 1/2			
4 1/2	6858	6858	290 sack
3			
2			
Liners used			

GEOLOGICAL TARGET FORMATION Oriskany Sandstone Depth 6762 feet

Depth of completed well 7140 feet Rotary / Cable Tools _____

Water strata depth: Fresh --- feet; Salt --- feet

Coal seam depths: --- Is coal being mined in the area? No

OPEN FLOW DATA

Producing formation Oriskany Sandstone Pay zone depth 6762 feet

Gas: Initial open flow --- Mcf/d Oil: Initial open flow --- Bbl/d

Final open flow --- Mcf/d Final open flow --- Bbl/d

Time of open flow between initial and final tests 0 hours

Static rock pressure 1300 psig (surface measurement) after 72 hours shut in

(If applicable due to multiple completion--)

Second producing formation Huntersville Chert Pay zone depth 6581-6646 feet

Gas: Initial open flow --- Mcf/d Oil: Initial open flow --- Bbl/d

Final open flow 47 Mcf/d Oil: Final open flow --- Bbl/d

Time of open flow between initial and final tests 0 hours

Static rock pressure 550 psig (surface measurement) after 120 hours shut in

DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC.

Set Bridge Plug in 4-1/2" casing @6700'

Perforate 4-1/2" casing: 6581' - 6584' - 4 holes
 6600' - 6605' - 6 holes
 6637' - 6646' - 5 holes

Fracture w/32,500 gals. gelled 5% HCL water & 25,000#
 of 20/40 mesh sand w/83,000 SCF nitrogen.

WELL LOG

FORMATION	COLOR	HARD OR SOFT	TOP FEET	BOTTOM FEET	REMARKS
					Including indication of all f and salt water, coal, oil and
Subsurface			0	800	
Shale			800	820	
Sandy Shale			820	1020	
Shale			1020	1116	
Sand			1116	1160	
Shale			1160	1190	
Sand & Shale			1190	1360	
Sand			1360	1400	
Shale			1400	1564	
Maxton			1564	1747	
Big Lime			1747	1807	
Big Injun			1807	2009	
Shale			2009	2370	
Berea			2370	2412	
Shale			2412	3298	
Warren			3298	3330	
Sandstone			3330	6533	
Onondaga			6533	6576	
Huntersville Chert			6576	6742	
Needmore			6742	6758	
Oriskany			6758	6848	
Helderberg			6848	7002	
Corriganville			7002	7046	
Keyser			7046	7140	T.D.

(Attach separate sheets as necessary)

Columbia Gas Transmission Corporation
 Well Operator

By: *[Signature]*
 Date: November 17, 1983

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Note: Regulation 2.02(i) provides as follows:
 "The term 'log' or 'well log' shall mean a systematic detailed geological record of all formations, including coal, encountered in the drilling of a well."

WV Department of Environmental Protection

09/23/2016

WW-4A
Revised 6-07

1) Date: August 29, 2016
2) Operator's Well Number 207-79-T
3) API Well No.: 47 - 069 - 00038

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS
NOTICE OF APPLICATION TO PLUG AND ABANDON A WELL

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>AB Holdings DE, LLC</u>	Name <u>Tunnel Ridge, LLC</u>
Address <u>5521 Ohio River Rd.</u>	Address <u>2596 Battle Run Road</u>
<u>Point Pleasant, WV. 25550</u>	<u>Triadelphia, WV 26059</u>
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Tunnel Ridge, LLC</u>
(c) Name _____	Address <u>2596 Battle Run Road</u>
Address _____	<u>Triadelphia, WV 26059</u>
6) Inspector	(c) Coal Lessee with Declaration
Address _____	Name <u>Tunnel Ridge, LLC</u>
Telephone _____	Address <u>2596 Battle Run Road</u>
	<u>Triadelphia, WV 26059</u>

TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (1) The application to Plug and Abandon a Well on Form WW-4B, which sets out the parties involved in the work and describes the well its and the plugging work order; and
- (2) The plat (surveyor's map) showing the well location on Form WW-6.

The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

Take notice that under Chapter 22-6 of the West Virginia Code, the undersigned well operator proposes to file or has filed this Notice and Application and accompanying documents for a permit to plug and abandon a well with the Chief of the Office of Oil and Gas, West Virginia Department of Environmental Protection, with respect to the well at the location described on the attached Application and depicted on the attached Form WW-6. Copies of this Notice, the Application, and the plat have been mailed by registered or certified mail or delivered by hand to the person(s) named above (or by publication in certain circumstances) on or before the day of mailing or delivery to the Chief.



Well Operator Lois Jack
 By: Edward Shultz
 As: Designated Agent
 Address 2364 Overbrook Avenue
Wheeling, WV 26003
 Telephone 304-242-0888

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Office of Oil and Gas

Subscribed and sworn before me this 29th day of August 2016
Sharon R Drain Notary Public

My Commission Expires _____

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.

09/23/2016

WW-9
(5/16)

API Number 47 - 069 - 00038
Operator's Well No. 207-79-T

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Lois Jack OP Code _____

Watershed (HUC 10) Wheeling Creek Quadrangle Valley Grove

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: N/A

Will a synthetic liner be used in the pit? Yes No If so, what ml.? N/A

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number Ohio DNR 2016-263)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

Will closed loop system be used? If so, describe: Closed loop system utilized to tank for storage.

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. N/A

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

Additives to be used in drilling medium? N/A

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Hauled off site for disposal.

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

-Landfill or offsite name/permit number? _____

Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, 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 Jeffrey A. Musgrave
Company Official (Typed Name) JEFFREY A. MUSGRAVE
Company Official Title WELL PERMITTING MANAGER



Subscribed and sworn before me this 29th day of AUGUST, 20 16 SEP 06 2016

Sharon R Drain Notary Public

My commission expires _____

09/23/2016

Proposed Revegetation Treatment: Acres Disturbed Less than 1 acre Prevegetation pH _____

Lime 2-3 Tons/acre or to correct to pH _____

Fertilizer type 10-20-20 or equivalent

Fertilizer amount 500 lbs/acre

Mulch hay or straw 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
<u>Tall Fescue</u>	<u>40</u>	<u>Tall Fescue</u>	<u>40</u>
<u>Landino Clover</u>	<u>5</u>	<u>Landino Clover</u>	<u>5</u>
_____	_____	_____	_____

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

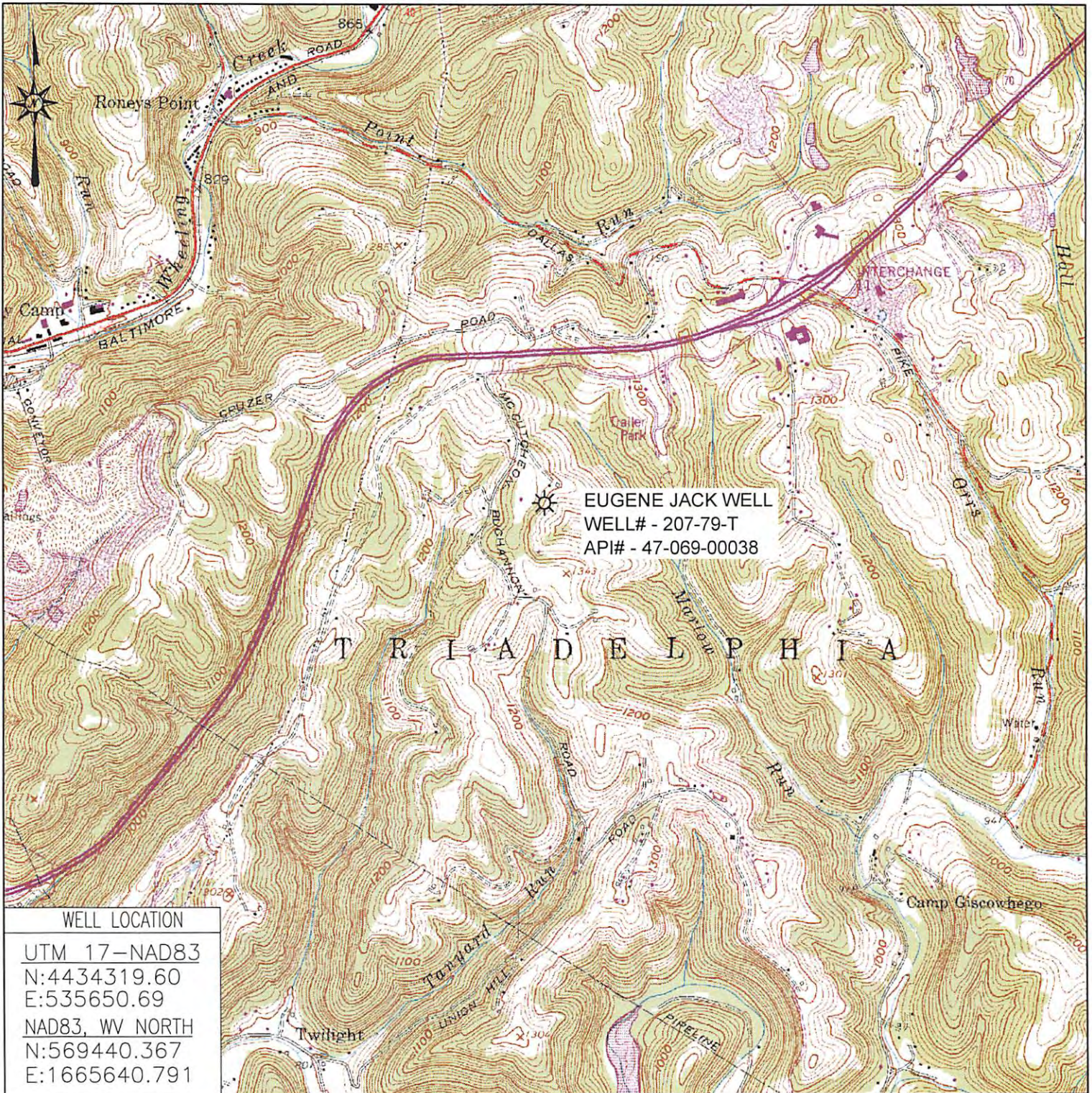
Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

Comments: _____

Title: _____ Date: _____


Field Reviewed? () Yes () No



WELL LOCATION
UTM 17-NAD83
N:4434319.60
E:535650.69
NAD83, WV NORTH
N:569440.367
E:1665640.791

PREPARED FOR:
 EDWARD SHULTZ
 2364 OVERBROOK AVENUE
 WHEELING, WV 26003

EUGENE JACK WELL
WELL LOCATION MAP
OHIO COUNTY
TRIADELPHIA DISTRICT
WEST VIRGINIA

LEGEND
 - WELL LOCATION

TOPO QUAD: VALLEY GROVE, WV
 SCALE: 1" = 2000'
 DATE: AUGUST 29, 2016



69 00038P

WW-7
8-30-06



West Virginia Department of Environmental Protection
Office of Oil and Gas
WELL LOCATION FORM: GPS

API: 47-069-00038 WELL NO.: 207-79-T

FARM NAME: Jack

RESPONSIBLE PARTY NAME: Edward Shultz

COUNTY: Ohio DISTRICT: 6-Triadelphia

QUADRANGLE: Valley Grove

SURFACE OWNER: AB Holding DE, LLC.

ROYALTY OWNER: Lois Jack

UTM GPS NORTHING: 4434319.60m

UTM GPS EASTING: 535650.69m GPS ELEVATION: 397.65m

(1304.3')

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS : Post Processed Differential _____

Real-Time Differential

Mapping Grade GPS _____ : Post Processed Differential _____

Real-Time Differential _____

4. **Letter size copy of the topography map showing the well location.**

I the undersigned, hereby certify this data 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 Office of Oil and Gas.

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SEP 06 2016

West Virginia Department of
Environmental Protection

Jeffery A. Musgrove
Signature

WELL PERMITTING MANAGER 29 AUG 2016
Title Date

09/23/2016