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west virginia department of environmental protection

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

Austin Caperton , Cabinet Secretary  
www.dep.wv.gov

Wednesday, February 21, 2018  
WELL WORK PERMIT  
Vertical / Plugging

EQT PRODUCTION COMPANY  
625 LIBERTY AVE., SUITE 1700

PITTSBURGH, PA 15222

Re: Permit approval for 89-S-146641  
47-005-01612-00-00

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: 89-S-146641  
Farm Name: PARDEE LAND COMPANY  
U.S. WELL NUMBER: 47-005-01612-00-00  
Vertical / Plugging  
Date Issued: 2/21/2018

Promoting a healthy environment.

02/23/2018

I

S-01612 P

## 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

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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.

OPEN MINE 257' - 261' FROM IR-26 DATED  
JULY 19, 1995

02/23/2018

5-01612P

Form WW-4 (B)  
Permit Copy  
(Rev 2/01)

Date: January 15, 2018  
Operator's Well  
Well No. 146641 Pardee Land #89  
API Well No.: 47 005 - 01612

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

CK #  
23318  
100<sup>00</sup>

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

4) Well Type: Oil  Gas  Liquid Injection  Waste Disposal   
If Gas, Production  Or Underground storage  Deep  Shallow

5) Elevation: 1686 Watershed: Toney Fork of Buffalo Creek  
Location: Washington County: Boone Quadrangle: Lorado  
District:

6) Well Operator EQT Production Company 7) Designated Agent: Jason Ranson  
Address: 120 Professional Place Address: 120 Professional Place  
Bridgeport, WV 26330 Bridgeport, WV 26330

8) Oil & Gas Gary Kennedy 9) Plugging Contractor:  
Name: HydroCarbon Well Service  
Address: PO BOX 995  
Rainelle WV 25962 Pipestem WV 25979 Buckhannon, WV 26201

10) Work Order: The work order for the manner of plugging this well is as follows:  
**See Attachment for details and procedures.**

RECEIVED  
Office of Oil and Gas  
JAN 23 2018  
WV Department of  
Environmental Protection

OFFICE USE ONLY

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

Work order approved by inspector [Signature] Date 1/22/18

02/23/2018

PLUGGING PROGNOS

146641  
Pardee Land Co # 89  
API# 47-005-01612  
District, Washington  
Boone County, WV

BY: R Green  
DATE: 08/18/17

CCURRENT STATUS:

TD @ 6090'  
Elevation @ 1686'

16" casing @ 38' (Cemented with 4.72 cu.ft.)  
11 3/4" casing @ 135' (Cemented with 100.3 cu.ft.) *CTS*  
8 5/8" casing @ 2159' (Cemented with 675.6 cu.ft.) *ets*  
4 1/2" casing @ 6045' (Cemented with 668.5 cu.ft.)  
2 3/8" tubing @ 5773'

Fresh Water 90'

Saltwater @ 1506'

Oil Show @ None Reported

Gas shows @ None reported

Coal @ None Reported *BUT COAL IS MINED.*

Perf record, Devonian Shale 5759'-5915', 20 holes, 4740' - 5273', 22 holes, 3961' - 4401', 17 holes

" " Berea 3640' to 3664', 22 holes.

" " Big Lime /Pocono, 2892' - 3254' 35 holes.

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Office of Oil and Gas

JAN 23 2018

*check Rock Pressure*

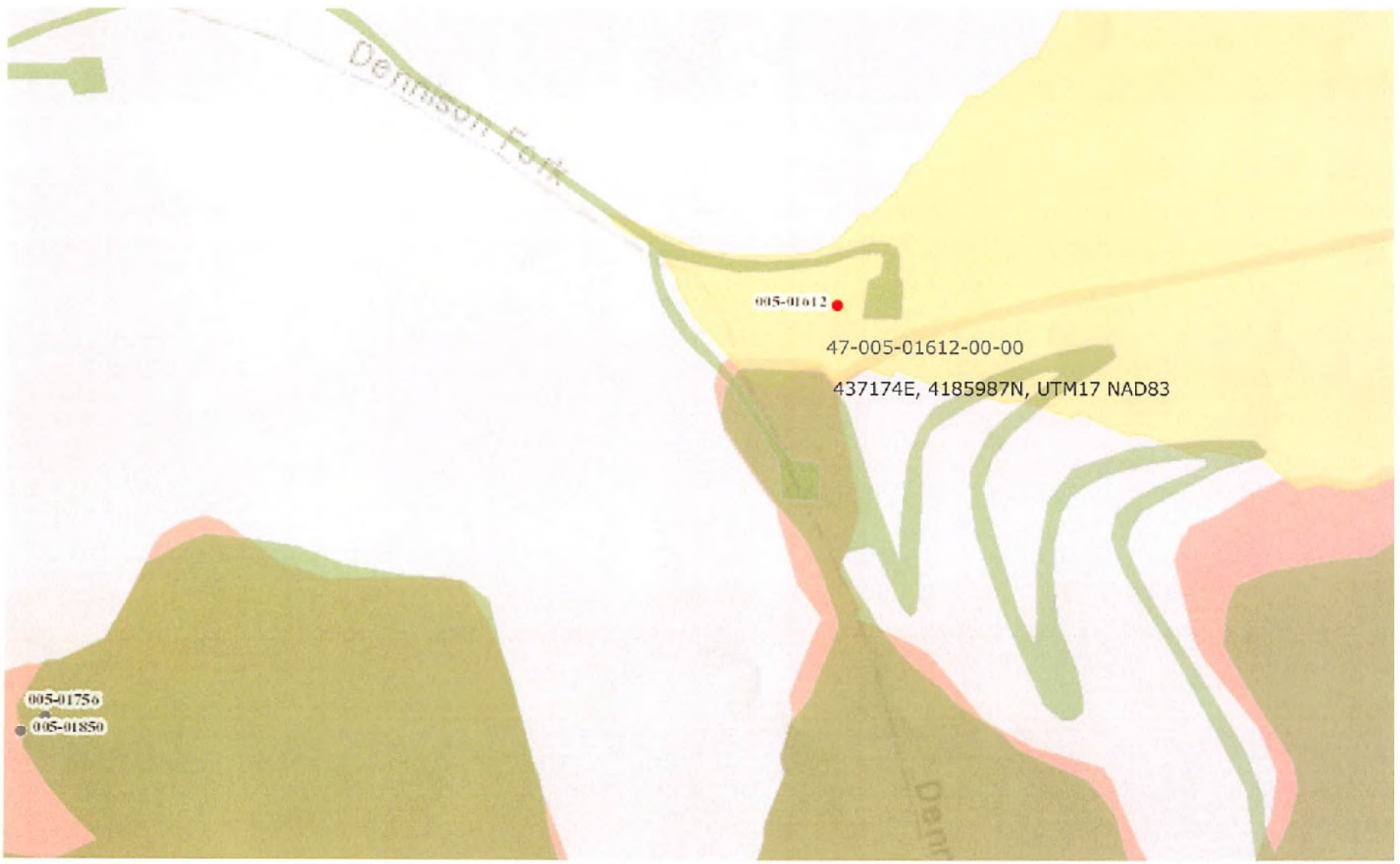
1. Notify inspector, Gary Kennedy @ 304-382-8402, 24 hours prior to commencing operations.
2. TOOH 2 3/8" tubing.
3. Check TD @ or below 5900', spot 40 bbl. of 6% gelled water, followed by a 250' CIA cement plug, 5900' to 5650', (Devonian perms)WOC 4 hrs., Tag TOC, add additional CIA cement if necessary.
4. TOOH to 5300', set 650' CIA cement plug, 5300' to 4650'. (Devonian perms) WOC 4 hrs. Tag TOC, add additional CIA cement if necessary.
5. TOOH to 4500', set 600' CIA cement plug 4500' to 3900', (Devonian perms) WOC 4 hrs. Tag TOC add additional CIA cement if necessary.
6. TOOH to 3700', set 150' CIA cement plug 3700' to 3550', (Berea perms), WOC 4 hrs. Tag TOC, add additional CIA cement if necessary.
7. TOOH to 3350', set 600' CIA cement plug 3350' to 2750', (Big Lime/Pocono perms), WOC 4 hrs. TagTOC add additional CIA cement if necessary.
8. Free point + 1/2" casing, cut casing @ free point, TOOH 4 1/2" casing. *CASING CUT @ 2700'.*
9. Set 100' CIA cement plug 50' in/out of casing cut. Perforate all saltwater, freshwater, coal, oil and gas shows below cut. Do not omit any plugs.
10. TOOH to 2250' set 200' CIA cement plug 2250' to 2050'. (85/8" casing seat)
11. TOOH to 1750', set 400' CIA cement plug, 1750' to 1350'. (Elevation & saltwater @ 1506').
12. TOOH to 1000' set 200' CIA cement plug 1000' to 800'. (Safety plug).
13. TOOH to 400', set 400' CIA cement plug 400' to surface.
14. Erect monument with API#, date plugged, company name, and company 6-digit ID#.
15. Reclaim location and road to WV-DEP specifications.

WV Department of  
Environmental Protection

*MAY SET (1) CIA  
PLUG FROM 5900'  
TO 4650'.  
(1250' CLASS A Plug)*

★ *MUST USE EXPANDING CEMENT FROM 2259' TO 1959'.  
2PM*

5-01612 P



S-01612P



5-01612 P

WR-35

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WV Division of  
Environmental Protection

JAN 23 1995

Permitting  
Office of Oil & Gas

16-Aug-94  
API # 47-005-01612

State of West Virginia  
Division of Environmental Protection  
Section of Oil and Gas

Well Operator's Report of Well Work

Farm Name: PARDEE LAND COMPANY Operator Well No.: 89-S-146641

Location: Elevation: 1,686.07 Quadrangle: LORADO

District: WASHINGTON County: BOONE  
Latitude: 5200 Feet South of 37 Deg. 50 Min. 0 Sec.  
Longitude: 1625 Feet West of 81 Deg. 42 Min. 30 Sec.

Company: ASHLAND EXPLORATION, INC.  
P.O. BOX 391, AT-9  
ASHLAND, KY 41114-0391

Agent: B. E. Widener

Inspector: RICHARD CAMPBELL  
Permit Issued: 08-15-94  
Well Work Commenced: 08-15-94  
Well Work Completed: 05-12-95  
Verbal Plugging \_\_\_\_\_  
Permission granted on: \_\_\_\_\_  
Rotary  Cable \_\_\_\_\_ Rig \_\_\_\_\_  
Total Depth (feet) 6090  
Fresh water depths (ft) 90'

Casing & Tubing	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
Size 16"	38'	38'	4.72
11 3/4"	135'	135'	100.3
8 5/8"	2159'	2159'	675.6
4 1/2"	6045'	6045'	668.5
2 3/8"	5773'	5773'	2892.3254

Salt water depths (ft) 1506'

Is coal being mined in area (Y/N)? N  
Coal Depths (ft): None Reported

JAN 23 2018

WV Department of  
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OPEN FLOW DATA      Dev. Shale      5759-5915, 4740-5273, 3961-4401

                                 Berea      3640-3664

Producing formation      Big Lime/Pocono      Pay zone depth (ft) 2892-3254

Gas: Initial open flow 178      MCF/d Oil: Initial open flow --      Bbl/d

                                 Final open flow 1432      MCF/d      Final open flow --      Bbl/d

                                 Time of open flow between initial and final tests 3      Hours

Static Rock Pressure 665      psig (surface pressure) after 72      Hours

Second producing formation --      Pay zone depth (ft) --

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 --      Hours

Static Rock Pressure --      psig (surface pressure) after --      Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

For: Ashland Exploration, Inc.

By: Daniel L. VanHoose      Daniel L. VanHoose  
Date: 06-16-95

02/23/2018

<u>Formation on Rock Type</u>	<u>Top</u>	<u>Bottom</u>
Sand and Shale	0	1438
Lee Formation	1438	2064
Pennington Fm.	2064	2745
Upper Maxton	2246	2340
Middle Maxton	2418	2570
Lower Maxton	2672	2714
Little Lime	2745	2829
Big Lime	2829	3156
Borden	3156	3619
Upper Weir	3240	3298
Sunbury Shale	3619	3635
Berea	3635	3666
Devonian	3666	6074
U. Shale/Chagrin	3666	4730
Lower Huron	4730	5288
Java	5288	5750
Rhinstreet	5750	6036
Marcellus	6036	6074
Onondaga	6074	6093
TD	6093	

DTD 6091

LTD 6093

Well Treatment

Perf Rhinstreet 3 1/4" HCG SF 1 spf @ 5915, 5900, 5892, 5883, 5874, 5863, 5853, 5848, 5842, 5834, 5821, 5782, 5779, 5771, 5759, 20H total. 250 gal 7 1/2% HCl-Fe acid & N<sub>2</sub> frac Rhinstreet w/852,000 scf N<sub>2</sub>. BD 4140, ATP 4200, ATR 77000 scf/m, MTP 4360, ISIP 3300, TF 6 Bbls.

Perf L. Dev. w/3 1/4" HCG .37 jets SF 1 spf @ 5273, 5234, 5230, 5204, 5202, 5200, 5186, 5146, 5117, 5114, 5086, 5006, 4896, 4816, 4790, 4780, 4778, 4776, 4766, 4761, 4740, 22H total. Pump 500 gal 7 1/2% HCl-Fe acid. N<sub>2</sub> frac L. Dev. w/860,000 scf N<sub>2</sub>. BD 3970, ATP 3250, ATR 81000 scf/m, MTP 3970, ISIP 2670, TF 12 Bbls.

Perf U. Dev. Shale 3 1/4" HSC .37 jets SF @ 4401, 4370, 4364, 4351, 4296, 4280, 4200, 4193, 4172, 4151, 4059, 4036, 4022, 4020, 3977, 3975, 3961, 17H total. Pump 500 gal 7 1/2% HCl-Fe acid. Frac U. Dev. Shale using 618,000 scf N<sub>2</sub>. BD 2870, ATP 2500, ATR 73000 scf/m, MTP 2870, ISIP 1570, TF 12 Bbl.

Perf Berea w/3 1/4" HCG .37 jets under lubricator 9H/3640-3644 and 13H/3658-3664, 22H total. 65Q FF Berea using 500 gal 15% HCl-Fe acid, 92,700# 20/40 sand, and 201,000 scf N<sub>2</sub> @ 67,059 scf/m. BD @ 1611, ATP 1316 @ 20 BPM, MTP 1611, ISIP 1120, TF 183 Bbl.

Perf Big Lime & Pocono using 3 1/4" HCG .37 jets 9H/3252-3254, 4H/3250, 9H/3154-3156 & 13H/2892-2895, 35H total. 75Q foam frac Big Lime/Pocono using 72,900# 20/40 sand, 300,000 scf N<sub>2</sub> @ 9000 scf/m & 1500 gal 15% HCl-Fe acid. BD @ 2058, ATP 1387 @ 20 E/M, MTP 2058, ISIP 1345, TF 168 Bbls.

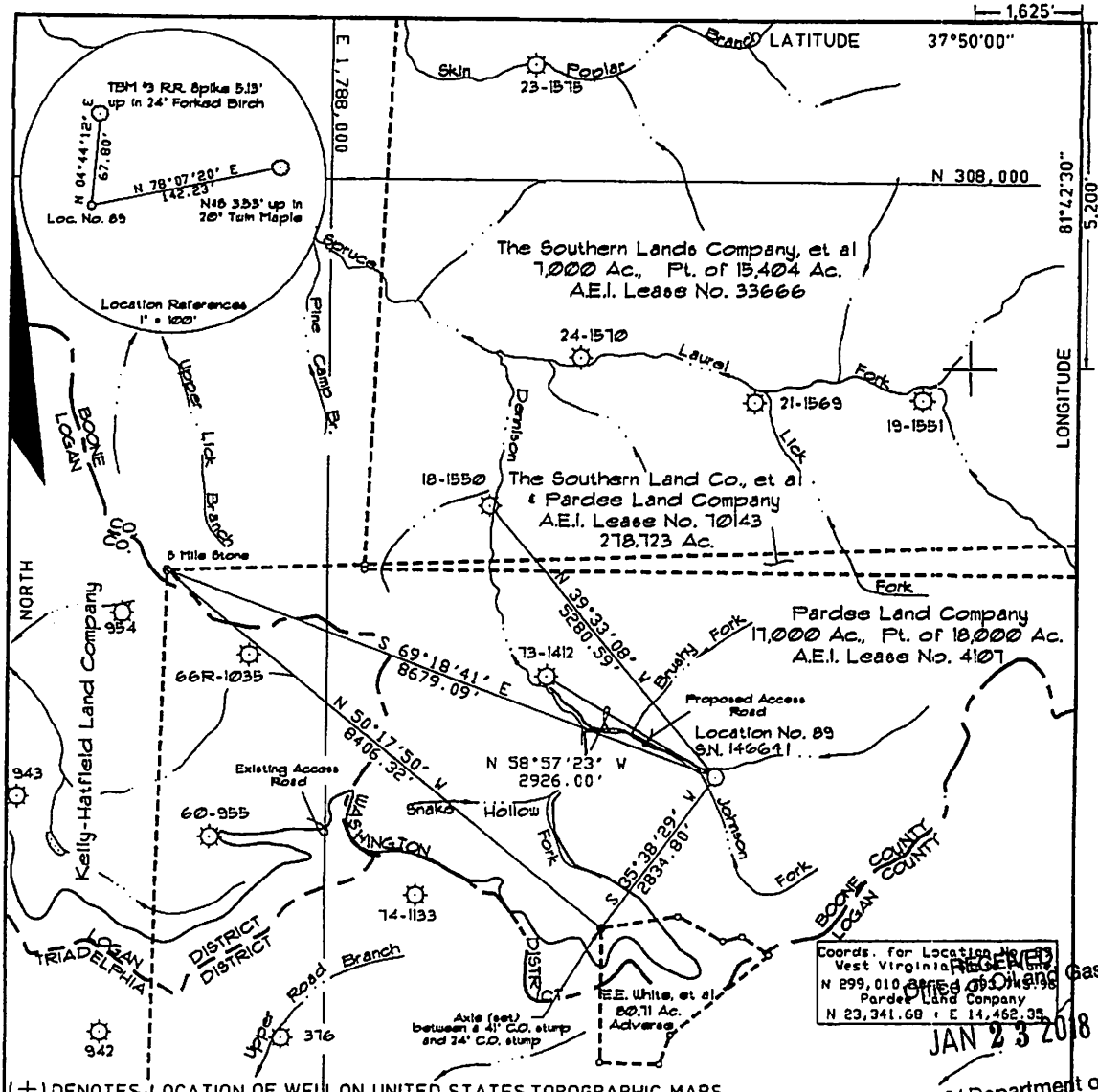
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Office of Oil and Gas

JAN 23 2018

WV Department of  
Environmental Protection

02/23/2018





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

FILE NO. \_\_\_\_\_  
 DRAWING NO. \_\_\_\_\_  
 SCALE 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY 1:365366  
 PROVEN SOURCE OF ELEVATION API Well No. 47-005-1412  
 TBM, RR Spike, Elev. = 1418.21

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 THE LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENERGY  
 (SIGNED) Ronald L. Smith  
 R.P.E. \_\_\_\_\_ L.L.S. 150

WV Department of Environmental Protection  
 Environmental Protection  
 Gas  
 Licensed Professional Engineer  
 RONALD L. SMITH  
 No. 190  
 STATE OF WEST VIRGINIA  
 SURVEYOR  
 PLACE SEAL HERE

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENERGY**  
**OIL AND GAS DIVISION**

DATE February 12, 1994  
 OPERATOR'S WELL NO. Pardee Land Company  
 API WELL NO. No. 89, S.N. 116641

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL   
 (IF "GAS,") PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION 1686.07 WATER SHED Johnson Fork of Denison Fork of Spruce Laurel Fork of the Little Coal River  
 DISTRICT Washington COUNTY Boone  
 QUADRANGLE Lorado

SURFACE OWNER Pardee Land Company ACREAGE 17,000  
 OIL & GAS ROYALTY OWNER Pardee Land Company LEASE ACREAGE 18,000  
 LEASE NO. 4107

PROPOSED WORK: DRILL  CONVERT  DRILL DEEPER  REDRILL  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON  CLEAN OUT AND REPLUG

TARGET FORMATION Devonian Shale ESTIMATED DEPTH 6100' KB  
 WELL OPERATOR Ashland Exploration, Inc. DESIGNATED AGENT Bobby E. Widener  
 ADDRESS P.O. Box 391 Ashland, Ky. 41114 ADDRESS P.O. Box 379 Brenton, W.V. 24818

FORM WV-5

COUNTY NAME

PERMIT

WW-4-A  
Revised 6/07

- 1) Date: January 15, 2018
- 2) Operator's Well Number  
146641 Pardee Land #89
- 3) API Well No.: 47 005 - 01612  
State County Permit

**STATE OF WEST VIRGINIA - BUREAU OF ENVIRONMENT  
DIVISION OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS  
NOTICE AND APPLICATION TO PLUG AND ABANDON WELL**

<p>4) Surface Owner(s) to be served:</p> <p>(a) Name <u>Pardee &amp; Curtin Realty LLC</u> Address <u>135 Corporate Center Dr.</u> <u>Suite 510</u> <u>Scott Depot WV 25560</u></p> <p>(b) Name _____ Address _____</p> <p>(c) Name _____ Address _____</p> <p>6) Inspector <u>Gary Kennedy</u> Address <u>252 Circle Ave 106 Old Church Ln.</u> <u>Rainelle WV 25962 Pipestem WV 25979</u> Telephone <u>304-382-8402</u></p>	<p>5) (a) Coal Operator: Name <u>None</u> Address _____</p> <p>(b) Coal Owner(s) with Declaration Name _____ Address _____</p> <p>(c) Coal Lessee with Declaration Name <u>None</u> Address _____</p>
---	---

**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 Division 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:	<u>EQT Production Company</u>
By:	<u>Todd Klaner</u>
Its:	<u>Regional Land Manager</u>
Address:	<u>PO Box 280</u> <u>Bridgeport, WV 26330</u>
Telephone:	<u>(304) 848-0035</u>

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Office of Oil and Gas  
JAN 22 2018

Subscribed and sworn before me this 17<sup>th</sup> day of January, 2018  
Rebecca L. Wanstreet Notary Public  
My Commission Expires: 4-7-2020

The Office of Oil & Gas processes your personal information, such as name, address and phone number, as 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](mailto:depprivacyofficer@wv.gov).



02/23/2018

**SURFACE OWNER WAIVER**

Operator's Well  
Number

PARDEE 89 - 146641

**INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A**

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (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 57<sup>th</sup> 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 **FIVE (5) 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.

**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 Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

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  
ETC.

FOR EXECUTION BY A CORPORATION,

_____	Date _____	Name <u>PARDEE &amp; CURTIN REALTY LLC</u>
Signature		By <u>[Signature]</u>
		Its <u>VICE PRESIDENT</u>
		Date <u>1-5-2018</u>
		Signature _____
		Date _____

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Office of Oil and Gas

FEB 14 2018

WV Department of  
Environmental Protection

02/23/2018

Operator's Well Number 146641 Pandor 89

**INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE**

The well operator named on the attached page WW-4(B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less than five days after the date on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on the obverse side of this application

Note: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner or Lessee for plugging" prior to the issuance of this plugging permit.

**WAIVER**

The undersigned operator \_\_\_\_\_ / owner X / lessee \_\_\_\_\_ of the coal under this well location has examined this proposed plugging work order. The undersigned has not 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.

Date: 1/11/2018

By: PLC MINERALS LLC  
[Signature]  
Its: SENIOR VICE PRESIDENT

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Office of Oil and Gas  
JAN 23 2018  
WV Department of  
Environmental Protection

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

Operator Name: EQT PRODUCTION COMPANY OP CODE: \_\_\_\_\_

Watershed (HUC 10): Toney Fork of Buffalo Creek Quadrangle: Lorado

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? Yes X No \_\_\_ *work tank - ?*

If so, please describe anticipated pit waste: \_\_\_\_\_ **Formation Fluids**

Will a synthetic liner be used in the pit? Yes X No \_\_\_ Is so, what ml.? 40 ml + 20 ml.

- Proposed Disposal Method for Treated Pit Wastes:
- \_\_\_\_\_ Land Application (if selected provide a completed form WW-9-GPP)
  - \_\_\_\_\_ Underground Injection (UIC Permit Number \_\_\_\_\_)
  - X \_\_\_\_\_ Reuse (at API Number -- Various \_\_\_\_\_)
  - X \_\_\_\_\_ Off Site Disposal Permit (Supply form WW-9 for disposal location. See attachment)
  - \_\_\_\_\_ Other: (Explain \_\_\_\_\_) *sk*

Will closed loop system be used? If so, describe: \_\_\_\_\_

Drilling medium anticipated for this well? (vertical and horizontal)? Air, freshwater, oil based, etc. \_\_\_\_\_  
If oil based, what type? Synthetic, petroleum, etc. \_\_\_\_\_

Additives to be used in drilling medium? \_\_\_\_\_

Drill cuttings disposal method? Leave in pit, landfill, remove offsite, etc. \_\_\_\_\_  
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 the Oil and Gas of any load of drill cuttings or associated waste rejected at a 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 Division 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. 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.

RECEIVED  
Office of Oil and Gas  
JAN 23 2018  
WV Department of Environmental Protection

Company Official Signature *Todd Klaner*

Company Official (Typed Name) Todd Klaner

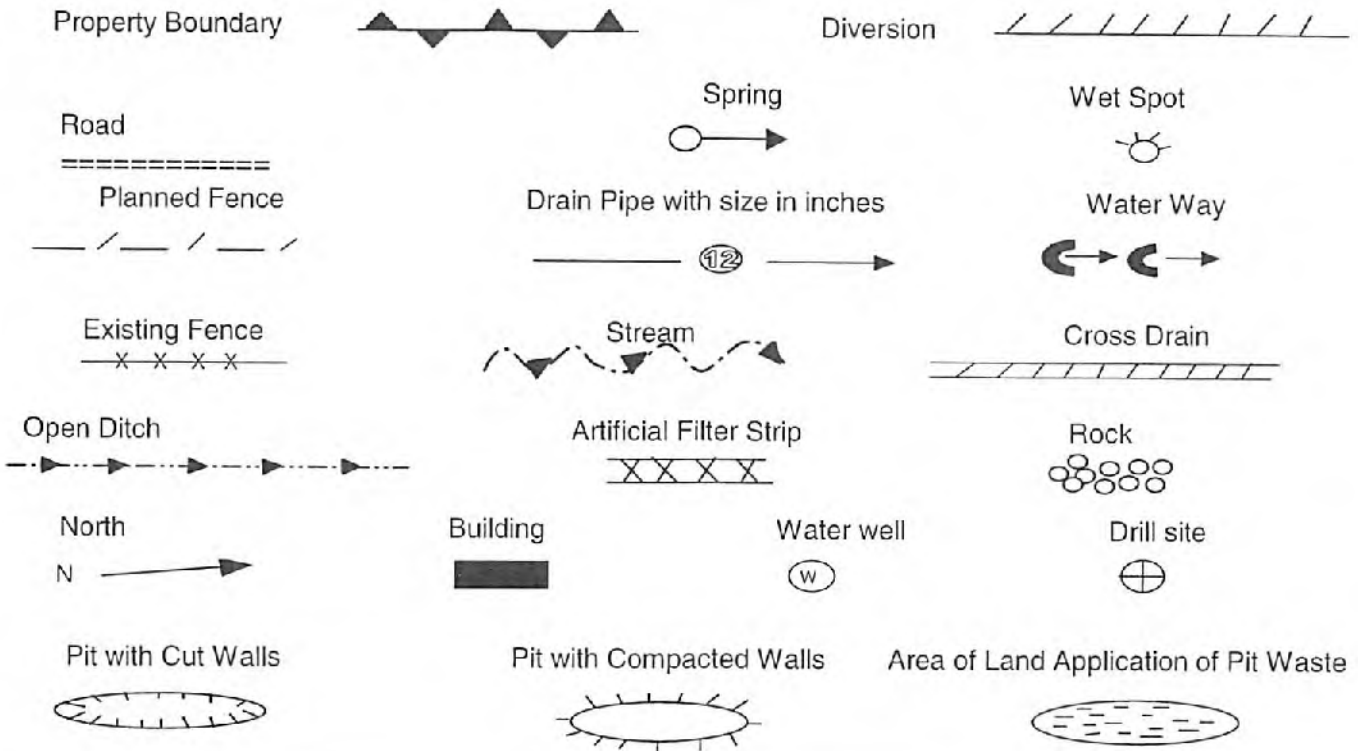
Company Official Title Regional Land Manager

Subscribed and sworn before me this 17<sup>th</sup> day of January, 2018

Rebecca L. Wanstreet Notary Public  
My Commission Expires 4-7-2020



**LEGEND**



Proposed Revegetation Treatment: Acres Disturbed: 1± 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 2 Tons/acre or hydroseed.

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**SEED MIXTURES**

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
Red Fescue	40	Red Fescue	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	15		

**ATTACH:**

Drawing(s) of road, location, pit and proposed area for land application.  
Photocopies section of involved 7.5' topographic sheet.

Plan approved by:

Comments: \_\_\_\_\_

Title: Inspector Date: 1/22/18  
Field Reviewed? Yes  No

**EQT Production Water plan**  
**Offsite disposals**

**Waste Management - Meadowfill Landfill**

Rt. 2, Box 68 Dawson Drive  
Bridgeport, WV 26330  
304-326-6027  
Permit #SWF-1032-98  
Approval #100785WV

**Waste Management - Northwestern Landfill**

512 E. Dry Road  
Parkersburg, WV 26104  
304-428-0602  
Permit #SWF-1025 WV-0109400  
Approval #100833WV

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Topo Quad: Lorado 7.5'

Scale: 1" = 1000'

County: Boone

Date: January 11, 2018

District: Washington

Project No: 140-16-00-07

Highway

**47-005-01612 WV 146641 (Pardee Land #89)**

**Pit Location Map**

47-005-01700  
WV 214171

47-005-01612  
WV 146641

47-005-01701  
WV 214011


Boone County  
Logan County

Existing  
Haulroad / Well  
Access Road

**NAD 27, South Zone**  
N:299020.052  
E:1793758.185

**WGS 84**  
LAT:37.819127  
LONG:-81.713824  
ELEV:1701.67

**LEGEND**

 Proposed Pit Location

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**ALLEGHENY SURVEYS, INC.**

1-800-482-8606  
237 Birch River Road  
Birch River, WV 26610  
PH: (304) 649-8606  
FAX: (304) 649-8608

PREPARED FOR:

**EQT Production Company**

P.O. Box 280  
Bridgeport, WV 26330

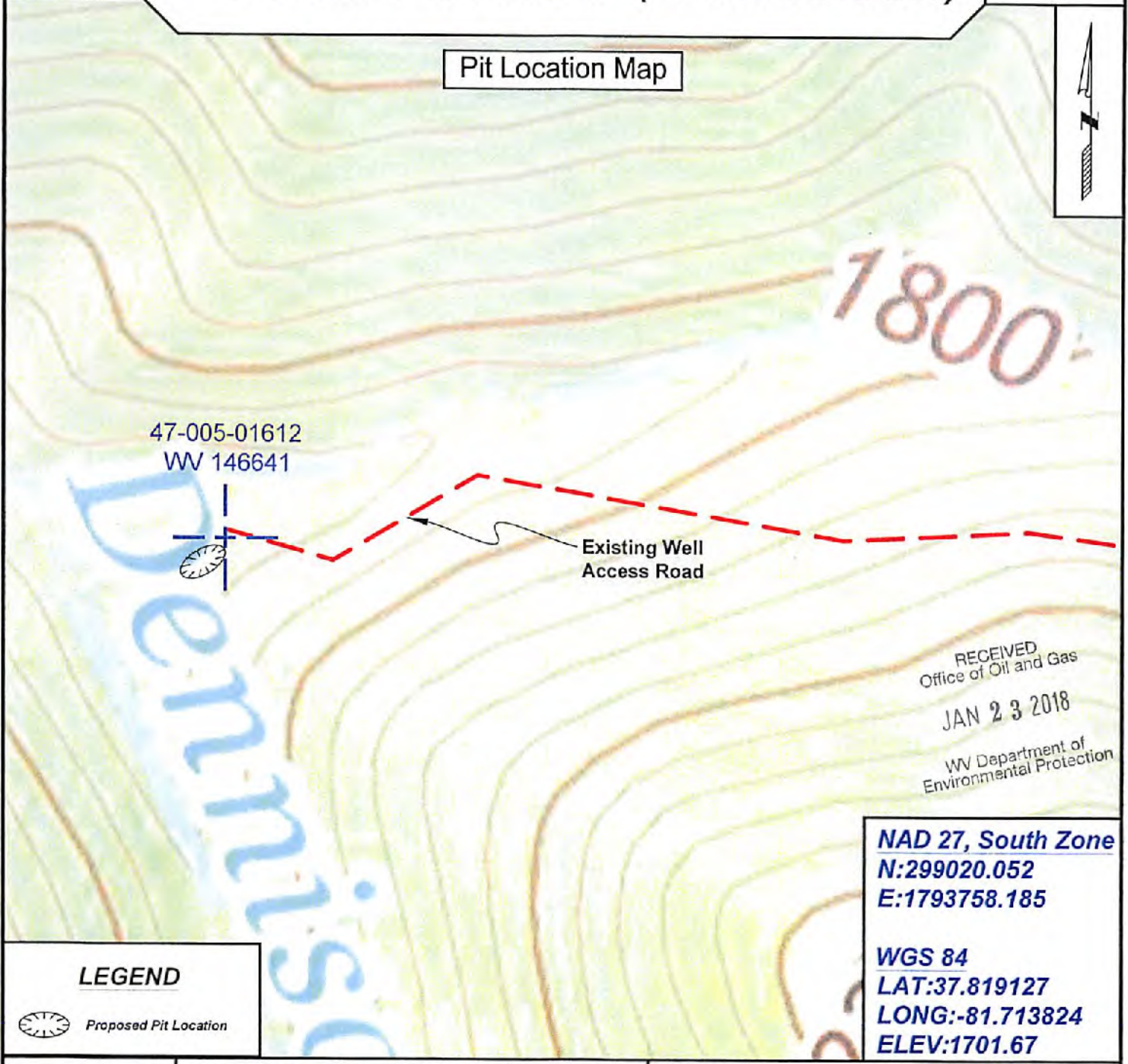


Topo Quad: <u>Lorado 7.5'</u>	Scale: <u>1" = 200'</u>
County: <u>Boone</u>	Date: <u>January 11, 2018</u>
District: <u>Washington</u>	Project No: <u>140-16-00-07</u>

# 47-005-01612 WV 146641 (Pardee Land #89)

Topo

## Pit Location Map



47-005-01612  
WV 146641


Existing Well  
Access Road

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**NAD 27, South Zone**  
**N:299020.052**  
**E:1793758.185**

**WGS 84**  
**LAT:37.819127**  
**LONG:-81.713824**  
**ELEV:1701.67**

### LEGEND

 Proposed Pit Location



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PREPARED FOR:  
**EQT Production Company**  
 P.O. Box 280  
 Bridgeport, WV 26330

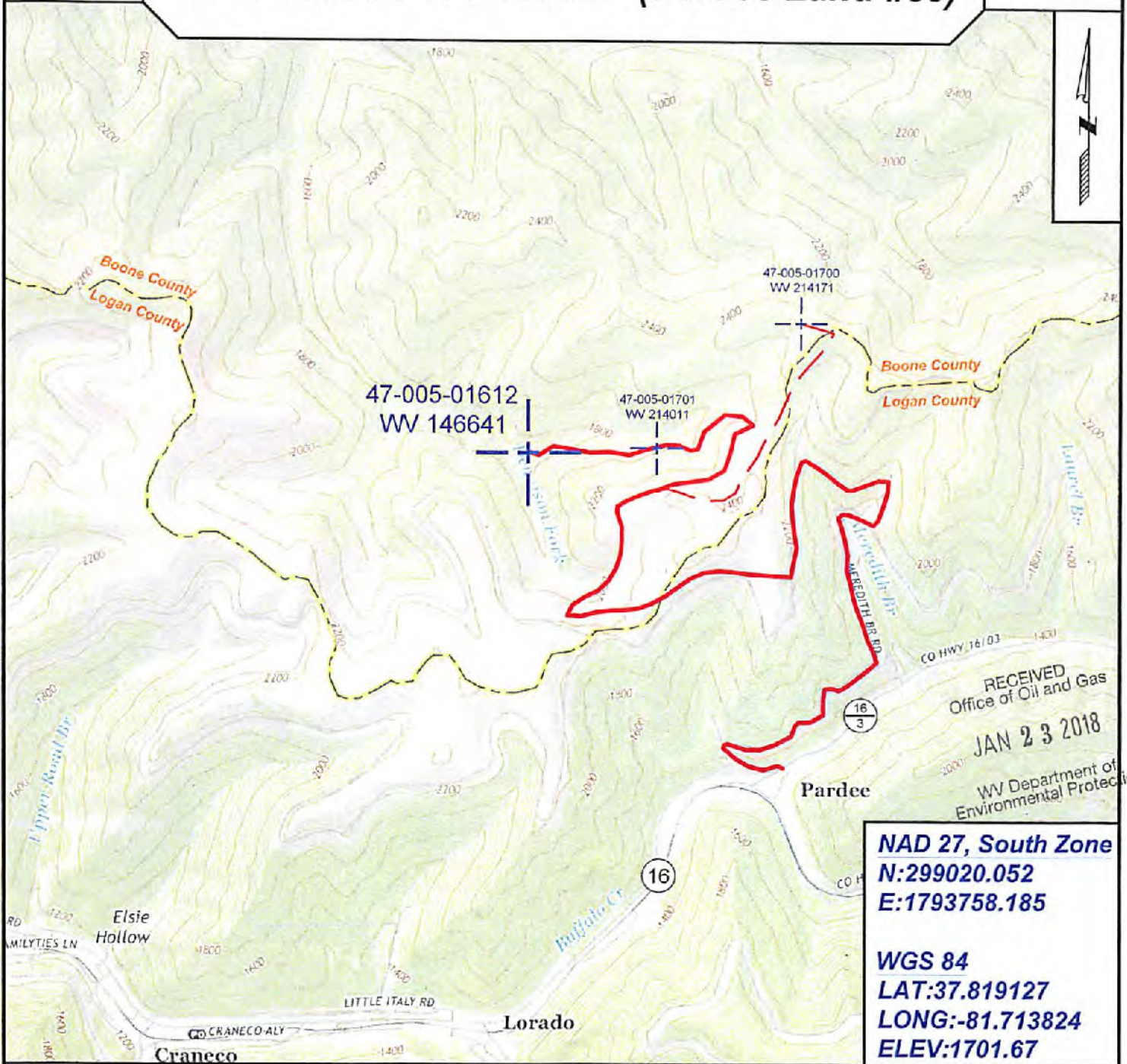
02/23/2018  


5-01612 P

Topo Quad: Lorado 7.5'	Scale: 1" = 2000'
County: Boone	Date: January 11, 2018
District: Washington	Project No: 140-16-00-07

# 47-005-01612 WV 146641 (Pardee Land #89)

Topo



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WV Department of  
Environmental Protection

**NAD 27, South Zone**  
**N:299020.052**  
**E:1793758.185**  
**WGS 84**  
**LAT:37.819127**  
**LONG:-81.713824**  
**ELEV:1701.67**



SURVEYING AND MAPPING SERVICES PERFORMED BY:  
**ALLEGHENY SURVEYS, INC.**

1-800-482-8606  
 237 Birch River Road  
 Birch River, WV 26610  
 PH: (304) 649-8606  
 FAX: (304) 649-8608

PREPARED FOR:

## EQT Production Company

P.O. Box 280  
 Bridgeport, WV 26330

02/23/2018



## POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY  
 LEASE NAME AND WELL No. Pardee Land #89 WV 146641 47-005-01612

### POTENTIAL SAMPLE LOCATIONS

Site: 1 Spacing: 168 +/- Owner: Pardee & Curtin Realty LLC  
 Address: 135 Corporate Center Drive Suite 510, Scott Depot, WV 25560. Phone No. \_\_\_\_\_  
 Comments: Pond

Site: 2 Spacing: 447 +/- Owner: Pardee & Curtin Realty LLC  
 Address: 135 Corporate Center Drive Suite 510, Scott Depot, WV 25560. Phone No. \_\_\_\_\_  
 Comments: Pond

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 WV Department of  
 Environmental Protection

**BIRCH RIVER OFFICE**  
 237 Birch River Road  
 Birch River, WV 26610  
*phone: 304-649-8606 fax: 304-649-8608*

**BRIDGEPORT OFFICE**  
 172 Thompson Drive  
 Bridgeport, WV 26330  
*phone: 304-848-5035 fax: 304-848-5037*

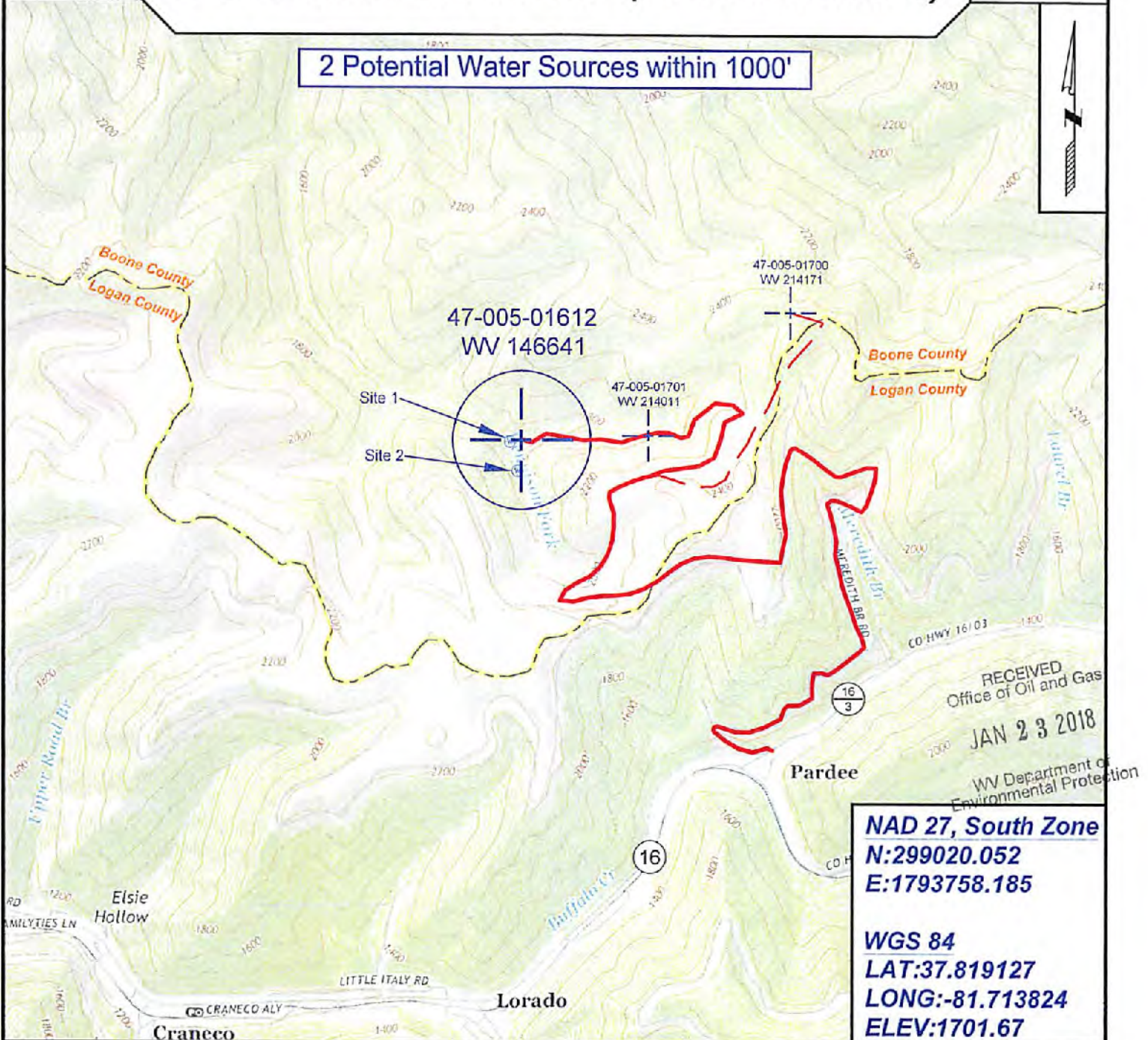
**ALUM CREEK OFFICE**  
 P.O. Box 108 • 1413 Childress Road  
 Alum Creek, WV 25003  
*phone: 304-756-2949 fax: 304-756-2948*

Topo Quad: Lorado 7.5'	Scale: 1" = 2000'
County: Boone	Date: January 11, 2018
District: Washington	Project No: 140-16-00-07

Water

### 47-005-01612 WV 146641 (Pardee Land #89)

2 Potential Water Sources within 1000'



**NAD 27, South Zone**  
**N:299020.052**  
**E:1793758.185**

**WGS 84**  
**LAT:37.819127**  
**LONG:-81.713824**  
**ELEV:1701.67**



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**ALLEGHENY SURVEYS, INC.**  
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 Birch River, WV 26610  
 PH: (304) 649-8606  
 FAX: (304) 649-8608

PREPARED FOR:  
**EQT Production Company**  
 P.O. Box 280  
 Bridgeport, WV 26330

**NOTES**

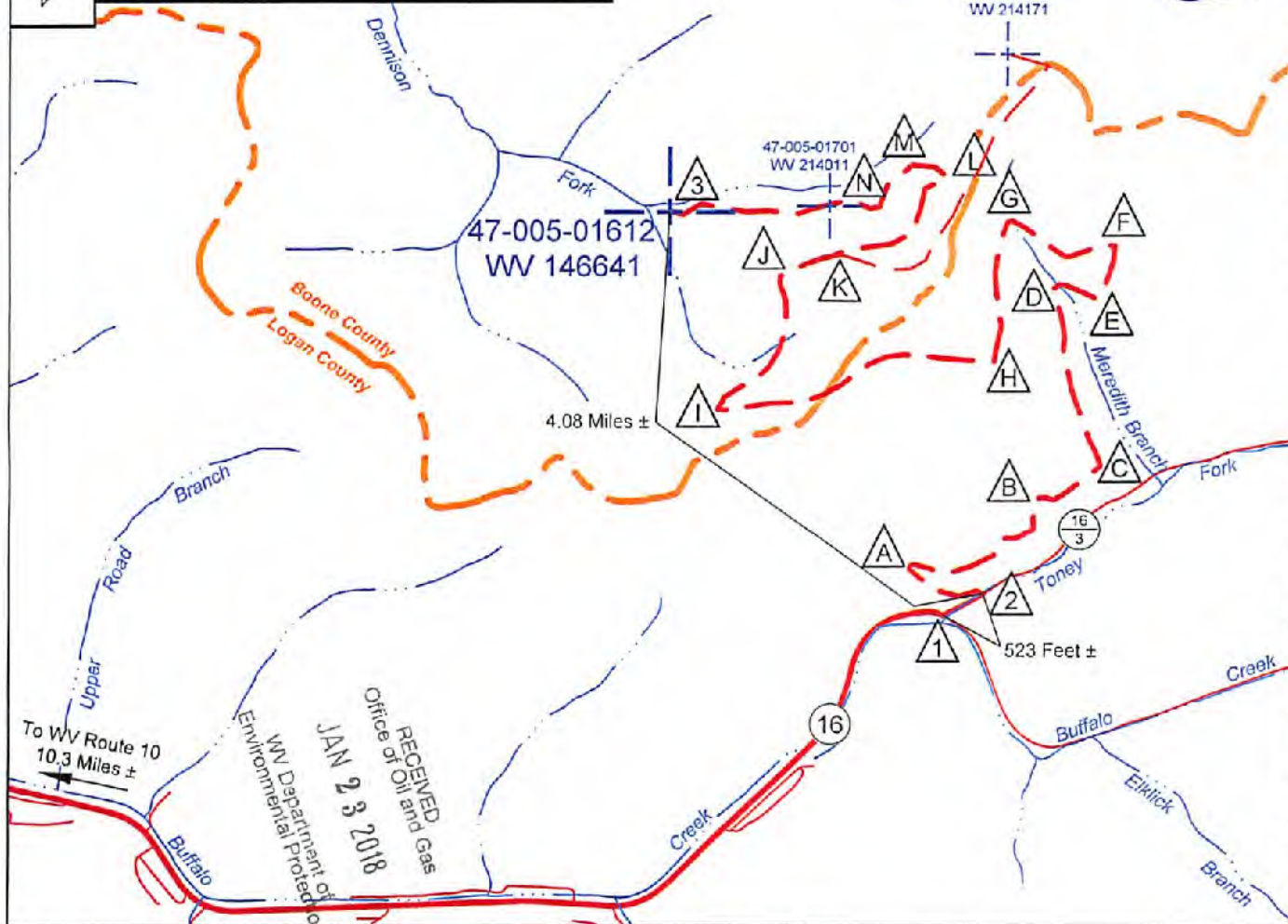
1. ALL ACCESS ROADS SHOWN HEREON ARE EXISTING AND WERE FLAGGED IN PINK AND WHITE MARKING RIBBON.
2. THIS MAP IS PREPARED ONLY FOR THE PARTIES REFERENCED HEREON FOR THE PURPOSE OF NOTIFICATION TO MISS UTILITY OF WEST VIRGINIA (WV 811).
3. DRAWING IS NOT TO SCALE.

**MISS UTILITY OF WEST VIRGINIA (WV 811)**

**(EXHIBIT B)**

**DIRECTIONS TO EXISTING GAS WELL NO. WV 146641**

**API NO. 47-005-01612**



SITE	LATITUDE	LONGITUDE
1	37.806282	-81.702708
2	37.806973	-81.701119
3	37.819127	-81.713824
A	37.807849	-81.704040
B	37.810043	-81.699086
C	37.811109	-81.696538
D	37.816803	-81.698368
E	37.816547	-81.696640
F	37.817952	-81.696056
G	37.818936	-81.700141
H	37.814419	-81.701149
I	37.812815	-81.711812
J	37.816830	-81.709408
K	37.817744	-81.707279
L	37.820286	-81.702728
M	37.820677	-81.704121
N	37.819345	-81.705454



SURVEYING AND MAPPING SERVICES PERFORMED BY:

**ALLEGHENY SURVEYS, INC.**

1-800-482-8606  
 237 Birch River Road  
 Birch River, WV 26610  
 PH: (304) 649-8606  
 FAX: (304) 649-8608

County: Boone  
 District: Washington  
 Date: January 11, 2018  
 Project No: 140-16-00-07  
 File Name: 140-07 WV 146641 PARDEE LAND CO

PREPARED FOR:

**EQT Production Company**

P.O. Box 280  
 Bridgeport, WV 26330

5-01612P



**Miss Utility of West Virginia (WV811)**

**(Exhibit A)**

**Directions to Gas Well No. WV 146641**

**API No. 47-005-01612**

- Beginning at the intersection of US Route 119 and WV State Route 73 (Logan Exit)
- Proceed Southeast along WV State Route 73, for approximately 2.3 miles, to the intersection with WV State Route 44.
- Turn left and continue along WV State Route 73, for approximately 0.6 mile, to the intersection with WV State Route 10.
- Continue straight onto WV State Route 10, for approximately 11.8 miles, to WV County Route 16 on the left.
- Turn left onto WV County Route 16 and proceed Northeast, for approximately 12.6 miles, to WV County Route 16/3 on the left. *(Point No. 1)*
- Turn left onto WV County Route 16/3 and proceed Northeast, for approximately 523 feet, to an existing haulroad and the Well Access Road on the left. *(Point No. 2)*
- Turn left onto the haulroad and Well Access Road and proceed Northwest, for approximately 4.08 miles, arriving at Gas Well WV 146641. *(Point No. 3)*

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**BIRCH RIVER OFFICE**

237 Birch River Road  
Birch River, WV 26610

phone: 304-649-8606 fax: 304-649-8608

**BRIDGEPORT OFFICE**

172 Thompson Drive  
Bridgeport, WV 26330

phone: 304-848-5035 fax: 304-848-5037

**ALUM CREEK OFFICE**

P.O. Box 108 • 1413 Childress Road  
Alum Creek, WV 25003

phone: 304-756-2949 fax: 304-756-2948

WW-7  
8-30-06



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

API: 47-005-01612 WELL NO.: WV 146641 (Pardee Land #89)

FARM NAME: Pardee Land Company

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Boone DISTRICT: Washington

QUADRANGLE: Lorado 7.5'

SURFACE OWNER: Pardee and Curtin Realty LLC

ROYALTY OWNER: Pardec Minerals LLC

UTM GPS NORTHING: 4185987

UTM GPS EASTING: 437174 GPS ELEVATION: 518m (1702ft)

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 X: Post Processed Differential X  
 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.

[Signature]  
Signature

PS# 2180  
Title

1/16/2018  
Date

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