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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 100  
47-005-01701-00-00

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: 100  
Farm Name: PARDEE LAND CO.  
U.S. WELL NUMBER: 47-005-01701-00-00  
Vertical / Plugging  
Date Issued: 2/21/2018

Promoting a healthy environment.

02/23/2018

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## 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.

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### 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.

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

Date: January 15, 2018  
Operator's Well  
Well No. 214011 Pardee Land #100  
API Well No.: 47 005 - 01701

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

STATE OF WEST VIRGINIA  
DIVISION 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            X   Or Underground storage          Deep          Shallow   X  

5) Elevation: 1959 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: ~~252 Circle Ave~~ 160 Old Church Ln. Name: HydroCarbon Well Service  
Address: ~~Rainelle WV 25962~~ Pipestem WV 25979 Address: PO BOX 995  
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.

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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 *Gary Kennedy* Date 1/22/18

## PLUGGING PROGNOS

214011  
 Pardee Land Co # 100  
 API# 47-005-01701  
 District, Washington  
 Boone County, WV

BY: R Green  
 DATE: 08/23/17

**CCURRENT STATUS:**

**TD @ 6315'**  
**Elevation @ 1959'**

13 3/8" casing @ 30' (Grouted)  
 9 5/8" casing @ 897' (Cemented with 342 cu.ft.)  
 7" casing @ 3065' (Cemented with 578 cu.ft.)  
 4 1/2" casing @ 6307' (Cemented with 471 cu.ft.)

**Fresh Water 210'**

Saltwater @ 1517'

**Gas Show @ 3100', 3210', 3490', 3801', 5016', & 6104'**

**Oil shows @ None reported**

Coal @ 1060'

Perf record, L. Shale, 5691' to 6267', 30 holes.  
 U. Shale, 4110' to 5533', 34 holes.  
 Berea, 3900' to 3928', 20 holes.  
 Big Lime/Weir, 3150' to 3552', 14 holes.

*check Rock Pressure*

1. Notify inspector, Gary Kennedy @ 304-382-8402, 24 hours prior to commencing operations.
2. TIH check TD @ or below **6200'**.
3. Spot 30 hbl. of 6% gelled water, followed by a 600' C1A cement plug, 6200' to 5600', (Lower shale) WOC 8 hrs. Tag TOC, add additional C1A cement if necessary.
4. TOOH to 5550', set 1500' C1A cement plug 5550' to 4050', WOC 8 hrs., Tag TOC add additional C1A cement if necessary. (Upper Shale). **\*Note: Due to large size of this plug, we may need to set it in 2 or 3 stages.**
5. TOOH to 4000', set 200' C1A cement plug 4000' to 3800' (Berea), WOC 8 hrs. Tag TOC, add additional C1A cement if necessary.
6. TOOH to 3600', set 550' C1A cement plug, 3600' to 3050', (Big Lime/ Weir) WOC 8 hrs., Tag TOC, add additional C1A cement if necessary.
7. Free point 4 1/2" casing, cut casing @ free point, TOOH 4 1/2" casing.
8. Set 100' C1A cement plug 50' in/out of casing cut. Perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
9. TOOH to 3115', set 100' C1A cement plug, 3115' to 3015', (7" casing seat).
10. TIH wireline to 1959', perforate 7" casing with 10 holes 1969' to 1949'.
11. Set 100' C1A cement plug 2009' to 1909' (Elevation).
12. Free point 7" casing, cut casing @ free point, TOOH 7" casing.
13. Set 100' C1A cement plug 50' in/out of casing cut. Perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.

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★ *SEE* 4 5/8" CASING WAS CEMENTED WITH ENOUGH CEMENT TO REACH SURFACE, IF NO OPEN MINE. *JJK*

No. 15

gmm

02/23/2018

\* 0 MUST USE EXPANDING CEMENT FROM 1000' TO 700'. *gmm*

14. TOOH to 1000', set 400' C1A cement plug 1200' to 800', (Coal @ 1060', & 9 5/8" casing seat @ 897').
- ★ 15. Free point 9 5/8" casing, cut casing @ free point, TOOH 9 5/8" casing.
16. Set 100' C1A cement plug 50' in/out of casing cut. Perforate all freshwater, saltwater, coal, oil and gas shows below cut. Do not omit any plugs.
17. \* Note, If unable to cut and pull 9 5/8" casing, TIH and perforate 9 5/8" casing with 10 holes each @ 500' 400' 300' 200' 100'.
18. TIH to 500' and set a 500' C1A cement plug 500' to surface.
19. Erect monument with API#, date plugged, company name, and company 6-digit ID#.
20. Reclaim location and road to WV-DEP specifications.

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WR-35

RECEIVED  
Office of Oil & Gas  
Permitting  
SEP 27 1999

29-Apr-99  
API # 47-005-01701

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

Reviewed: AS

WV Division of  
Environmental Protection

Well Operator's Report of Well Work

Farm Name: Pardee Land Co.

Operator Well No.: 100

LOCATION: Elevation: 1,959.00      Quadrangle: Lorado  
District: Washington      County: Boone  
Latitude: 5150 Feet South of 37      Deg. 50 Min. 0 Sec.  
Longitude: 11740 Feet West of 81      Deg. 40 Min. 0 Sec.

Company: BLAZER ENERGY CORPORATION  
P.O. BOX 2347  
CHARLESTON, WV 25328

Agent: Richard Smeltzer

Inspector: Richard Campbell  
Permit Issued: 5/03/99

Well work commenced: 7/6/99  
Well work completed: 8/3/99

Verbal Plugging  
Permission granted on:  
Rotary Rig X Cable Rig \_\_\_\_\_  
Total Depth 6315 feet  
Fresh water depths (ft) 210

Salt water depths (ft) 1517

Is coal being mined in area? \_\_\_\_\_  
Coal Depths (ft): 1060

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
13 3/8"	30'	30'	Grd
9 5/8"	897'	897'	342 Ft <sup>3</sup>
7"	3065'	3065'	578 Ft <sup>3</sup>
4 1/2"	6307'	6307'	471 Ft <sup>3</sup>

OPEN FLOW DATA

Producing formation L Shale, U Shale, Berea, Blg Lime/Weir      Pay Zone Depth (ft): See Attached  
Gas: Initial open flow \_\_\_\_\_ odor MCF/d      Oil: Initial open flow \_\_\_\_\_ Bbl/d  
Final open flow: 1580 MCF/d      Final open flow: \_\_\_\_\_  
Time of open flow between initial and final tests \_\_\_\_\_ Hours  
Static rock pressure 710 psig (surface pressure) after \_\_\_\_\_ 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: \_\_\_\_\_  
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 WELLBOF

For: BLAZER ENERGY CORPORATION

By: [Signature]  
Date: 9-22-99

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2018 JAN 22

**EASTERN STATES OIL & GAS, INC.  
WR-35 COMPLETION REPORT - Attachment  
Well Treatment Summary**

Well: Pardee Land 100

API# 47-005-01701

Date	7-27-99	7-27-99	7-27-99	7-30-99	
Type Frac					
Acid, N <sub>2</sub> , Foam, Water	N <sup>2</sup>	N <sup>2</sup>	N <sup>2</sup>	Acid & N <sup>2</sup>	
Zone Treated	Lower Shale	Upper Shale	Berea	Big Lime, Weir	
# Perfs	30	34	20	14	
From - To:	5691-6267	4110-5533	3900-3928	3150-3552	
BD Pressure @ psi	4068	3092	2570	593	
ATP psi	3527	2371	2250	1750	
Avg. Rate, B=B/M, S= SCF/M	48,230 S	50,488 S	51,500 S	7,330 S	
Max. Treat Press psi	4068	3092	2570	2350	W & C File Office of Oil & Gas Permitting
ISIP psi	3100	2058	1295	250	SEP 27 1999
Frac Gradient	.63	.46	.38	.54	WV Division of Environmental Protection
10 min S-I Pressure	2522	1498	1230	748	
Material Volume					
Sand-sks					
Water-bbl	37		2	2	
SCF N <sub>2</sub>	459,676	1,127,143	400,003	106,447	
Acid-gal	500 gal 7.5%	1134 gal 8%	378 gal 8%	2500 gal 15.4%	
NOTES:					

**Formation Record**

TOP	BOTTOM	FORMATION	Remarks
0	30	Conductor	
30	210	Sand	
210	220	Open Hole	
220	390	Hard	
390	400	Shale	
400	489	Sand	
489	500	Sandy Shale	
500	895	Sand	
895	1060	Sandy Shale	
1060	1064	Coal	
1064	1475	Sandy Shale	
1475	1560	Sand	½" strm wtr @ 1517'
1560	1660	Shale	
1660	2320	Salt Sand	GT @ 2357' - NS
2593	2610	Upper Maxton	GT @ 2949' - NS
2960	2985	Lower Maxton	
3014	3096	Little Lime	
3096	3417	Big Lime	GT @ 3104', 3210' - All odor
3490	3562	Weir	GT @ 3490', 3801' - All odor
3877	3900	Sunbury	
3900	3930	Berea	
3930	4989	Upper Huron	GT @ 4019' - NS
4051		Gordon	
4989	5540	Lower Huron	GT @ 5016' - odor
5540	5697	Java	
5697	5993	Angola	
5993	6310	Rhinstreet	GT @ 6104' - odor
6310		Onondaga	
6315		TD (Drillers)	

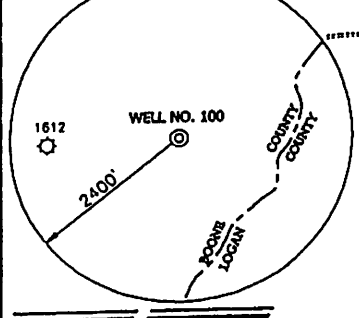
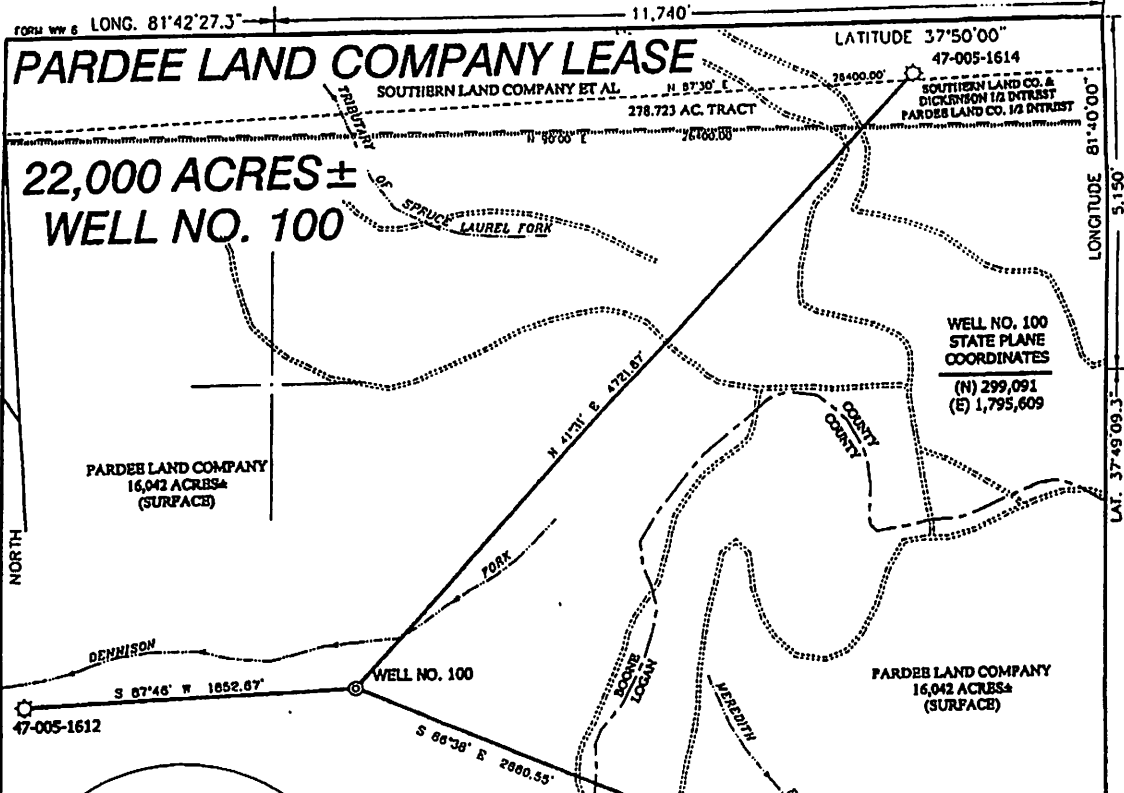
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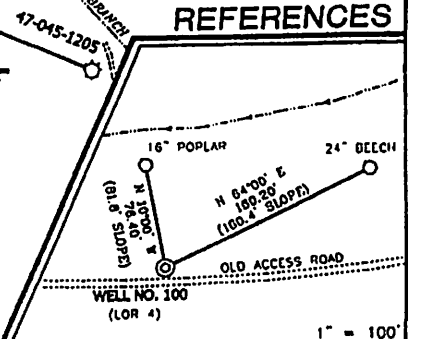
WV Department of  
Environmental Protection

02/23/2018

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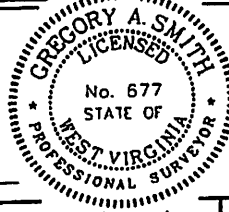


- NOTES ON SURVEY**
1. TIES TO WELLS ARE BASED ON STATE PLANE GRID NORTH WV SOUTH ZONE NAD '27.
  2. TIES TO REFERENCES ARE BASED ON MAGNETIC NORTH 3/19/99.
  3. LEASE BOUNDARY SHOWN HERON TAKEN FROM A PLAT DATED 2/12/94 AS PREPARED BY RONALD L. EASTHAM FOR A.P.I. NO. 47-005-1612.
  4. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF BOONE AND LOGAN COUNTIES IN JANUARY, 1999.
  5. WELL LAT./LONG. ESTABLISHED BY DGPS (SUBMETER MAPPING GRADE).



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 DEPARTMENT OF ENERGY.

P.S. *Gregory A. Smith*  
677



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

DATE MARCH 29, 19 99

OPERATORS WELL NO. PARDEE LAND #100

API WELL NO. 47-005-01701

NO. STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 3906P100 (76-29) SCALE 1" = 800'

PROVEN SOURCE OF ELEVATION TOP OF KNOB ELEVATION 2532'

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

WELL TYPE: OIL \_\_\_ GAS  LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_ IF "GAS" PRODUCTION  STORAGE \_\_\_ DEEP \_\_\_ SHALLOW

LOCATION: ELEVATION 1959' WATERSHED DENNISON FORK OF SPRUCE LAUREL FORK

DISTRICT WASHINGTON COUNTY BOONE QUADRANGLE LORADO 7.5'

SURFACE OWNER PARDEE LAND COMPANY ACREAGE 16,042

ROYALTY OWNER PARDEE LAND COMPANY LEASE ACREAGE 22,000 LEASE NO. \_\_\_\_\_

PROPOSED WORK: DRILL  CONVERT \_\_\_ DRILL DEEPER \_\_\_ REDRILL \_\_\_ FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION \_\_\_ PERFORATE NEW FORMATION \_\_\_ PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_ OTHER \_\_\_

PHYSICAL CHANGE IN WELL (SPECIFY) TARGET FORMATION DEVONIAN SHALE ESTIMATED DEPTH 6400'

WELL OPERATOR BLAZER ENERGY CORPORATION DESIGNATED AGENT RICHARD SMELTZER  
ADDRESS P.O. BOX 2347 CHARLESTON, WV 25328 Office of Oil and Gas

JAN 22 2018 *Lorado 5*



1) Date: January 15, 2018  
2) Operator's Well Number  
214011 Pardee Land #100  
3) API Well No.: 47 005 - 01701  
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**

4) Surface Owner(s) to be served:  
(a) Name Pardee & Curtin Realty LLC  
Address 135 Corporate Center Dr.  
Suite 510  
Scott Depot WV 25560  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Gary Kennedy  
Address 252 Circle A Old Church Ln.  
Rainelle WV 25962 Pipestem WV  
Telephone 304-382-8402 25979

5) (a) Coal Operator:  
Name None  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name None  
Address \_\_\_\_\_

**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.

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

Well Operator: EQT Production Company  
By: Todd Klamer  
Its: Regional Land Manager  
Address: PO Box 280  
Bridgeport, WV 26330  
Telephone: (304) 848-0035

Subscribed and sworn before me this 17<sup>th</sup> day of January, 2018  
Rebecca L. Wanstrey 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).



**SURFACE OWNER WAIVER**

Operator's Well  
Number

PAROEE 100 - 214011

**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,

Signature	Date	Name	<u>PAROEE &amp; CURTIS REALTY LLC</u>
<b>RECEIVED</b>		By	<u>[Signature]</u>
<b>Office of Oil and Gas</b>		Its	<u>VICE PRESIDENT</u>
			Date <u>1-5-2018</u>
		Signature	Date

FEB 14 2018

WV Department of  
Environmental Protection

02/23/2018

Operator's Well Number 214011 PARDEE 100

**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 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  
PARDEE MINERALS LLC  
[Signature]  
Its: SENIOR VICE PRESIDENT

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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.? 20 10-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 \_\_\_\_\_) *JK*

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.

JAN 23 2018

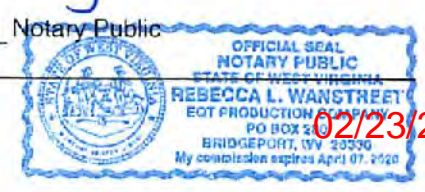
Company Official Signature *Todd Klaner*

Company Official (Typed Name) Todd Klaner

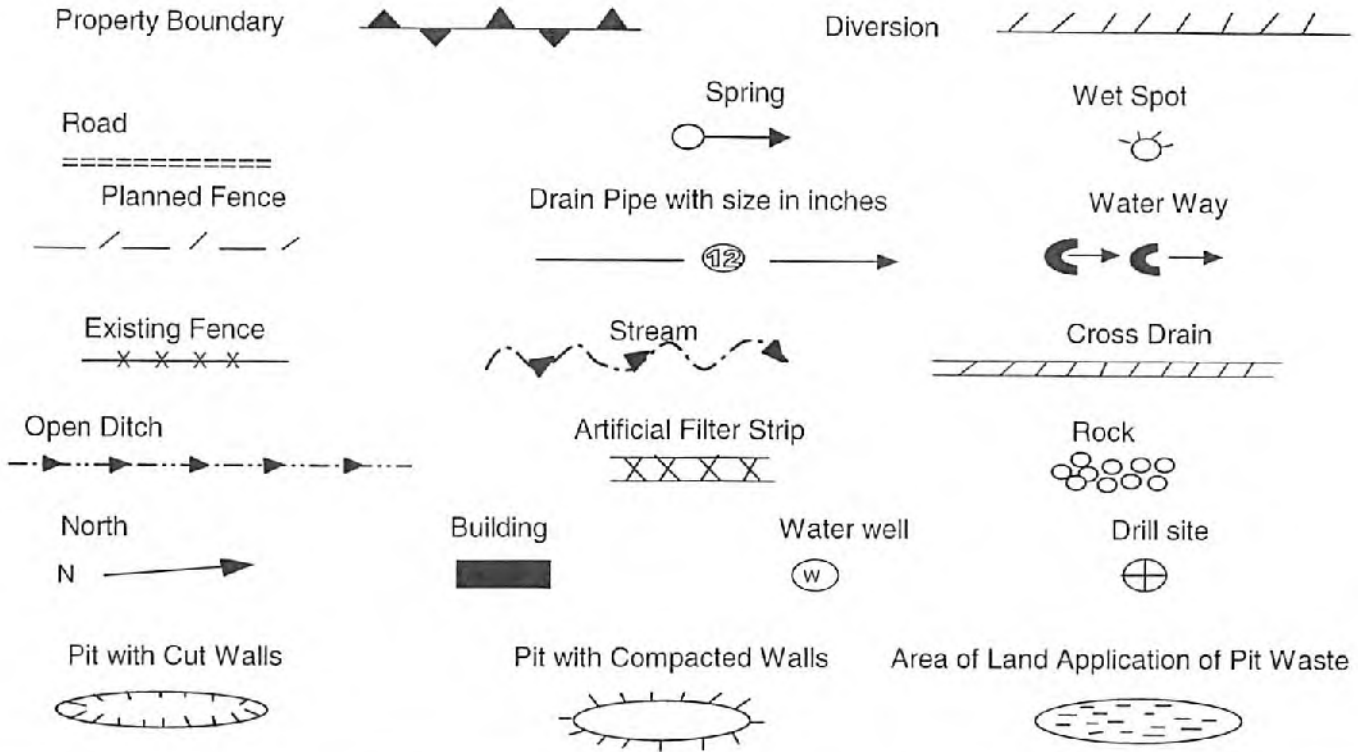
Company Official Title Regional Land Manager

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

Rebecca L. Wanstreet  
My Commission Expires 9-7-2020



**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.

**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		

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**ATTACH:**

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

Plan approved by: *Greg Kennedy*

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

Title: Inspector Date: 1/22/19  
 Field Reviewed?          Yes          No

WV Department of Environmental Protection

5-01701P

**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

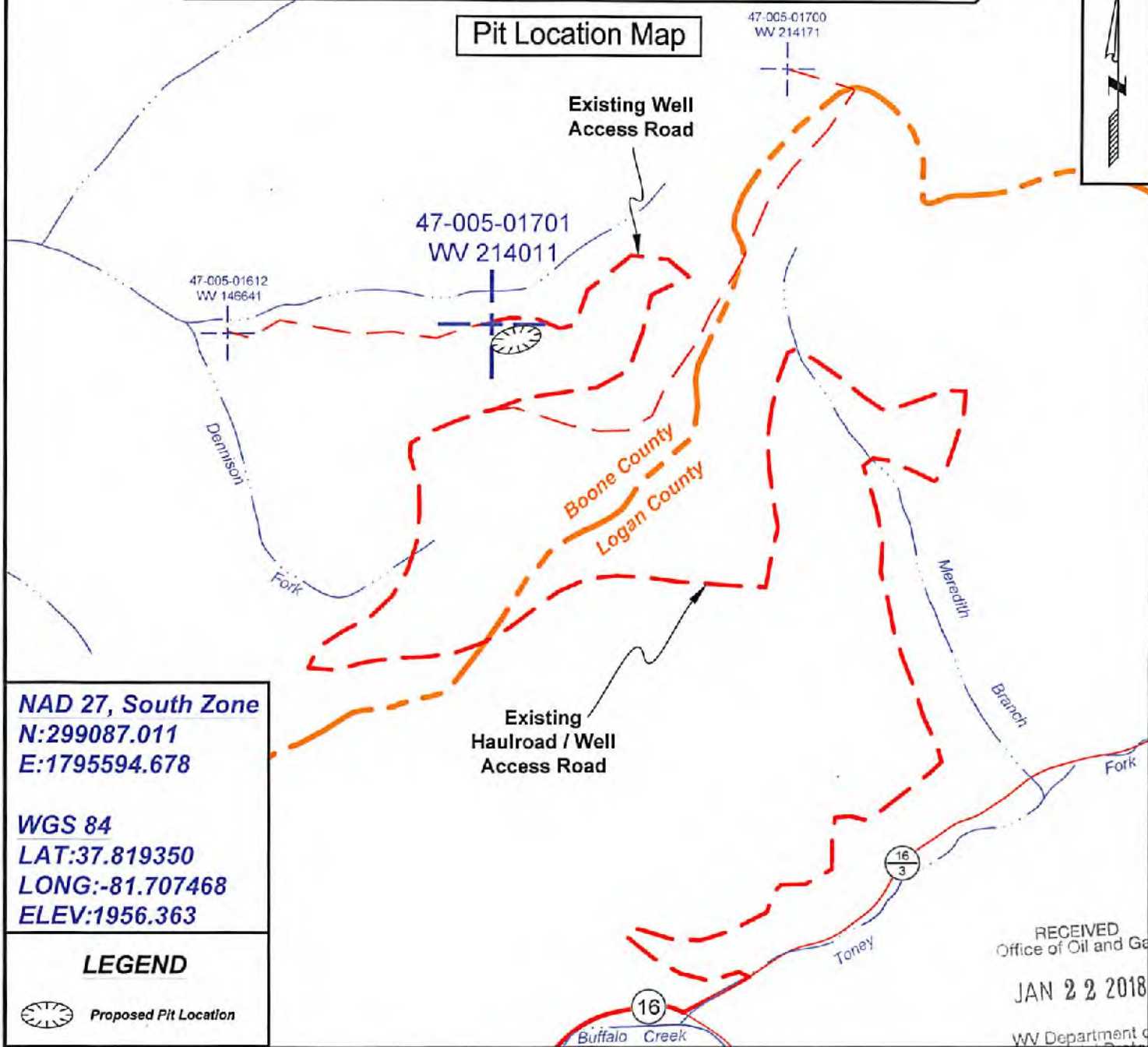
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02/23/2018

Topo Quad: Lorado 7.5'	Scale: 1" = 1000'
County: Boone	Date: January 11, 2018
District: Washington	Project No: 140-16-00-07

Highway **47-005-01701 WV 214011 (Pardee Land #100)**

**Pit Location Map**



**NAD 27, South Zone**  
**N:299087.011**  
**E:1795594.678**

**WGS 84**  
**LAT:37.819350**  
**LONG:-81.707468**  
**ELEV:1956.363**

**LEGEND**

Proposed Pit Location

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Birch River, WV 26610  
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FAX: (304) 649-8608

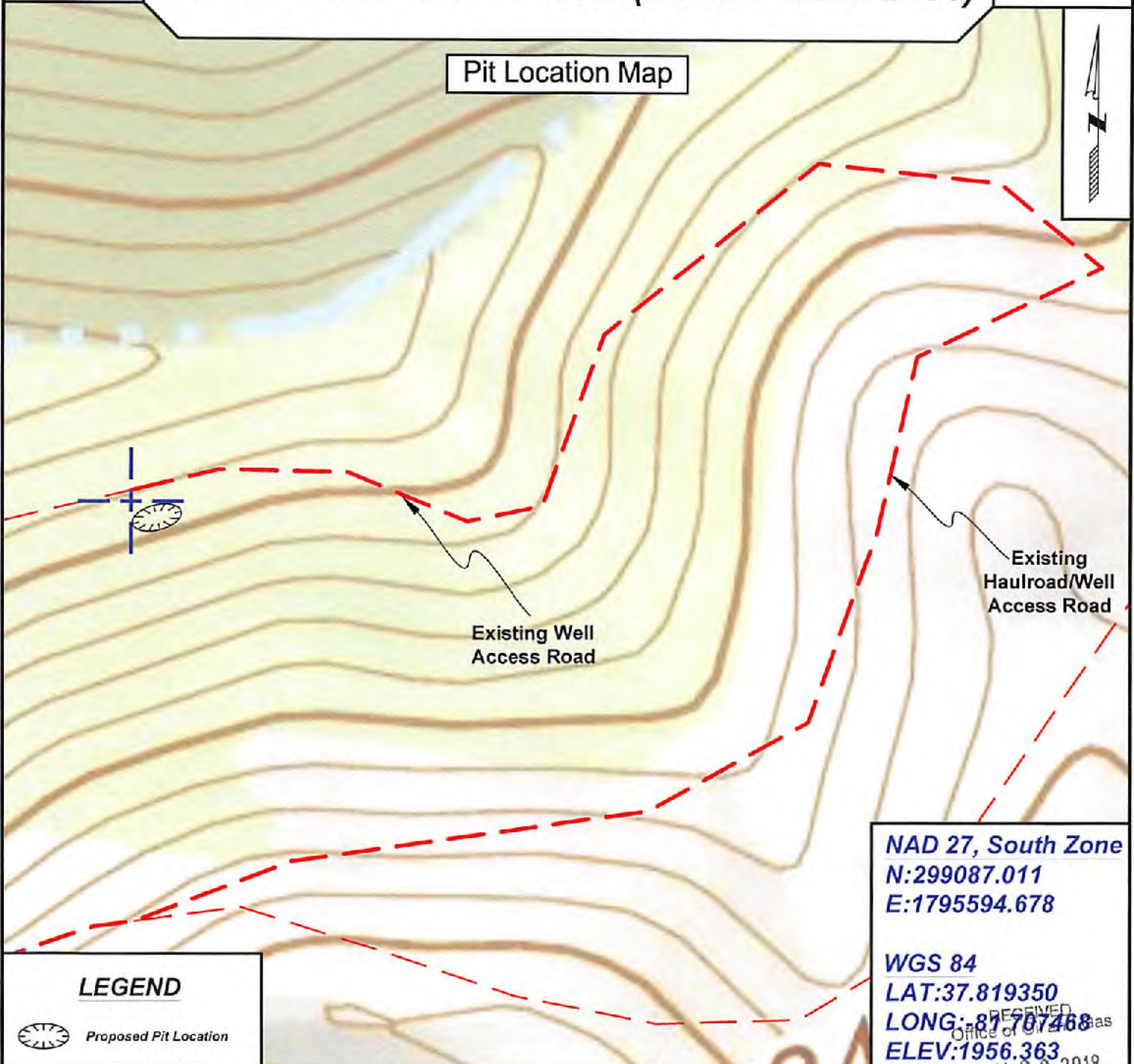
PREPARED FOR:  
**EQT Production Company**  
P.O. Box 280  
Bridgeport, WV 26330

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>

# 47-005-01701 WV 214011 (Pardee Land #100)

Topo


## Pit Location Map



NAD 27, South Zone  
 N:299087.011  
 E:1795594.678

WGS 84  
 LAT:37.819350  
 LONG:81.707468  
 ELEV:1956.363

### LEGEND

 Proposed Pit Location



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 P.O. Box 280  
 Bridgeport, WV 26330

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Topo Quad: Lorado 7.5'

Scale: 1" = 2000'

County: Boone

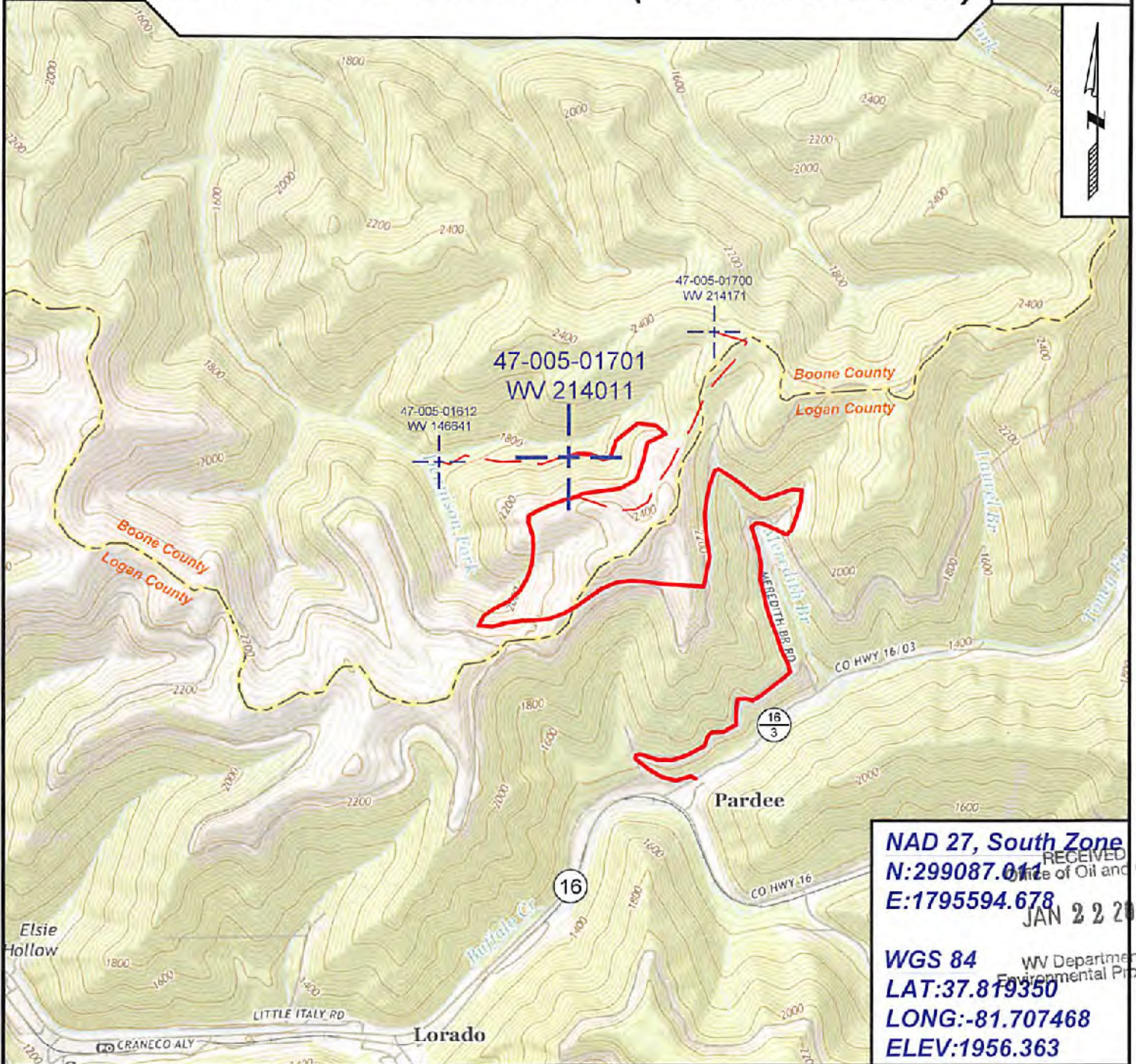
Date: January 11, 2018

District: Washington

Project No: 140-16-00-07

# 47-005-01701 WV 214011 (Pardee Land #100)

Topo



**NAD 27, South Zone**  
**N:299087.012**  
**E:1795594.678**

**WGS 84**  
**LAT:37.819350**  
**LONG:-81.707468**  
**ELEV:1956.363**

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PREPARED FOR:  
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 P.O. Box 280  
 Bridgeport, WV 26330



## POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EOT PRODUCTION COMPANY

LEASE NAME AND WELL No. Pardee Land #100 - WV 214011 - API No. 47-005-01701

### POTENTIAL SAMPLE LOCATIONS

There appears to be no potential water sources within the required 1000 feet of the existing well WV 214011.

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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

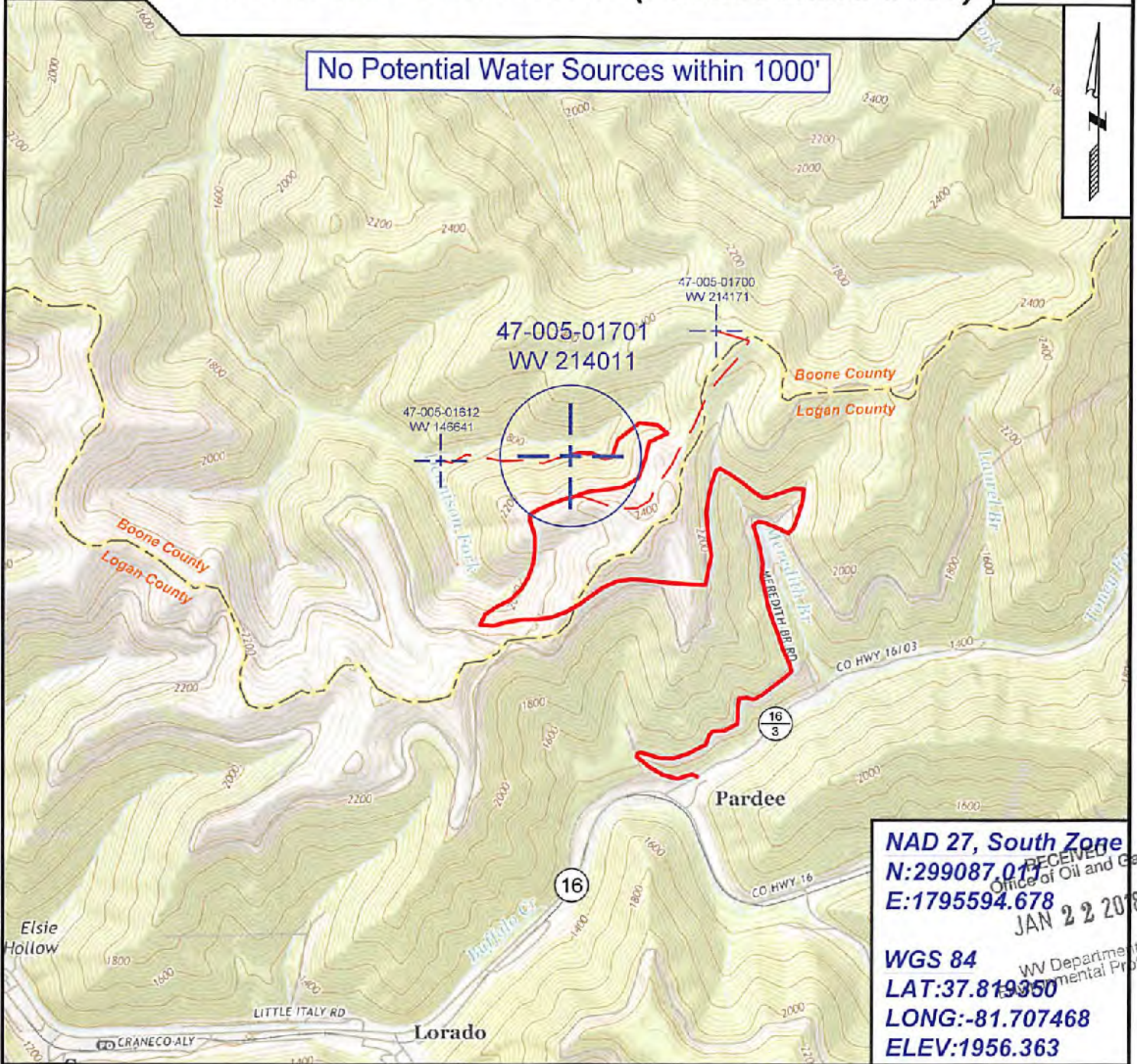
P.O. Box 108 • 1413 Childress Road  
Alum Creek, WV 25003  
phone: 304-756-2949 fax: 304-756-2948

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

Water

# 47-005-01701 WV 214011 (Pardee Land #100)

No Potential Water Sources within 1000'



**NAD 27, South Zone**  
**N:299087.017**  
**E:1795594.678**  
**WGS 84**  
**LAT:37.819950**  
**LONG:-81.707468**  
**ELEV:1956.363**

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 Birch River, WV 26610  
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 FAX: (304) 649-8608

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



**Miss Utility of West Virginia (WV811)  
(Exhibit A)  
Directions to Gas Well No. WV 214011  
API No. 47-005-01701**

- 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 3.72 miles, arriving at Gas Well WV 214011. *(Point No. 3)*

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**BIRCH RIVER OFFICE**

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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 Childs Road  
Alum Creek, WV 25003  
phone: 304-756-2949 fax: 304-756-2948

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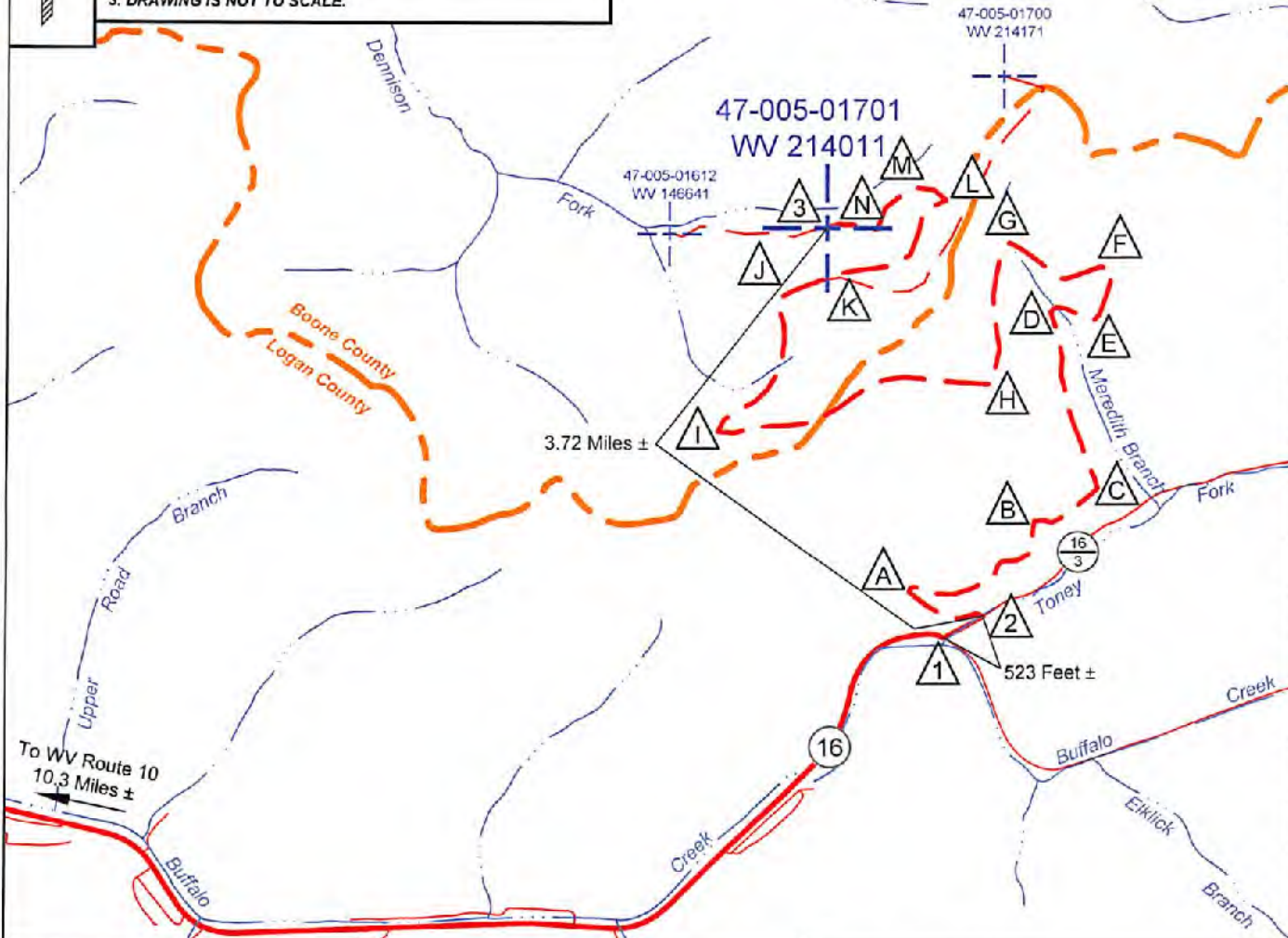
**NOTES**

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 214011  
API NO. 47-005-01701**



SITE	LATITUDE	LONGITUDE
1	37.806282	-81.702708
2	37.806973	-81.701119
3	37.819350	-81.707468
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



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 FAX: (304) 649-8608

County: Boone  
 District: Washington  
 Date: January 11, 2018  
 Project No: 140-16-00-07  
 File Name: 140-07 WV 214011 PARDEE LAND CO

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

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WW-7  
8-30-06



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

API: 47-005-01701 WELL NO.: WV 214011 (Pardee Land #100)

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: Pardee Minerals LLC

UTM GPS NORTHING: 4186008

UTM GPS EASTING: 437734 GPS ELEVATION: 596m (1956ft)

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

PS # 2180  
Title

1/16/2018  
Date

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02/23/2018