



west virginia department of environmental protection

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

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

November 01, 2013

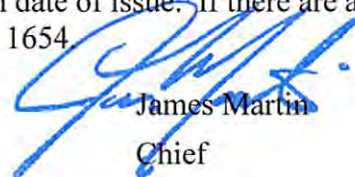
WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-4500470, issued to EQT PRODUCTION COMPANY, is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to all conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. The above named operator will also file, as required in WV Code 22-6-23, an affidavit on form WR-38 by two experienced persons in the operator's employment and the Oil and Gas inspector that the work authorized under this permit was performed and a description given. Failure to abide by all statutory and regulatory provisions governing all duties and operations here under may result in suspensions or revocation of this permit and in addition may result in civil and/or criminal penalties being imposed upon the operator.

This permit will expire in two (2) years from date of issue. If there are any questions, please free to contact me at (304) 926-0499 ext. 1654.



James Martin
Chief

Operator's Well No: WV 023840 PARDEE LAND CO. #

Farm Name: PARDEE MINERALS, LLC

API Well Number: 47-4500470

Permit Type: Plugging

Date Issued: 11/01/2013

Promoting a healthy environment.

11/01/2013

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.

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

Date: October 11, 2013
Operator's Well _____
Well No. 023840 Pardee Land Co #45
API Well No.: 47 045 - 00470

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: 1587' Watershed: Buffalo Creek
Location: Triadelphia 03 County: Logan 45 Quadrangle: Lorado 7.5' 445
District: _____
- 6) Well Operator EQT Production Company 7) Designated Agent: Rex C. Ray
120 Professional Place Address: 120 Professional Place
Address: Bridgeport, WV 26330 Bridgeport, WV 26330
- 8) Oil & Gas Ralph Triplett 9) Plugging Contractor:
Name: 5539 McClellan Hwy Name: HydroCarbon Well Service
Address: Branchland, WV 25506 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.

Received
OCT 17 2013
Office of Oil and Gas
WV Dept. 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

Ralph D. Triplett

Date October 16, 2013

PLUGGING PROGNOSIS

Pardee land Company #45 (023840)

Logan County, W.V.
API # 47-045-00470

BY: Doug Fry

DATE: 3/18/13

CURRENT STATUS:

13 3/8" @ 322' Cmt w/ 63'

10 3/4" @ 506' Cmt w/ 271' cmt (Est TOC @ 235')

8 5/8" @ Cmt w/ 30' cmt

7" @ 2847'

TD 3619'

Fresh Water @ 1485' - 1490' - 650-685' -

Gas shows/ Perfs @ 685'-790' - Slate Gas show, 2585'-2620' Slate Gas show, Shot in Berea 3573'-3609'

Oil Shows @ None Reported

Salt Sand top 1358'

Coal: 25', 255', 444',

Stimulation; Shot in Berea 3573' - 3609'

OK
RDT

1. Notify inspector, Ralph Triplett @ 304-389- 0350 24 hrs prior to commencing operations.
2. TOOH w/ 2" tubing and tally back in hole to confirm depth tubing if any in it.
3. TIH w/ tubing to 2900'; Set 100' C1A Cement Plug @ 2900' to 2800' (7" csg pt, Berea Shot).
4. TOOH w/ tubing, Gel Hole @ 2800' to 2585'.
5. TOOH w/ tubing, Free point 7" casing, cut @ free point, TOOH w/ 7" casing if the hole will not cave in. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf all Salt Sand top, FW, Gas, Oil and Coal shows below the 7" cut. Do not omit any plugs shown below. Pull 7" csg when safe to.
6. TIH w/ tubing to 2585'; Set 264' C1A Cement Plug @ 2585' to 2321' (Slate gas show, 8 5/8" csg pt).
7. TOOH w/ tubing, Gel Hole @ 2321' to 1350'.
8. TOOH w/ tubing, free point 8 5/8" casing, cut @ free point, TOOH w/ 8 5/8" casing if the hole will not cave in. Set a 100' C1A Cement Plug 50' In/Out of cut. Perf all Salt Sand top, FW, Gas, Oil and Coal shows below the 7" cut. Do not omit any plugs shown below Pull 8 5/8" csg when safe.
9. TIH w/ tubing to 1350'; Set ^{1350'} ~~264'~~ C1A Cement Plug @ ^{1250'} ~~2585'~~ to 2321' (~~Slate gas show, 8 5/8" csg pt~~).
10. TOOH w/ tubing, Gel Hole @ 1250' to 735'.
11. TOOH w/ tubing @ ^{560'} ~~100'~~, Set ~~100'~~ C1A Cement plug @ 735' to Surface. (10" csg pt).
Perforate all Coal and FW shows where 10 3/4" casing does not have cement behind pipe.
12. Top off as needed
13. Set monument to WV DEP specs
14. Reclaim Location to WV DEP Specifications.

Received

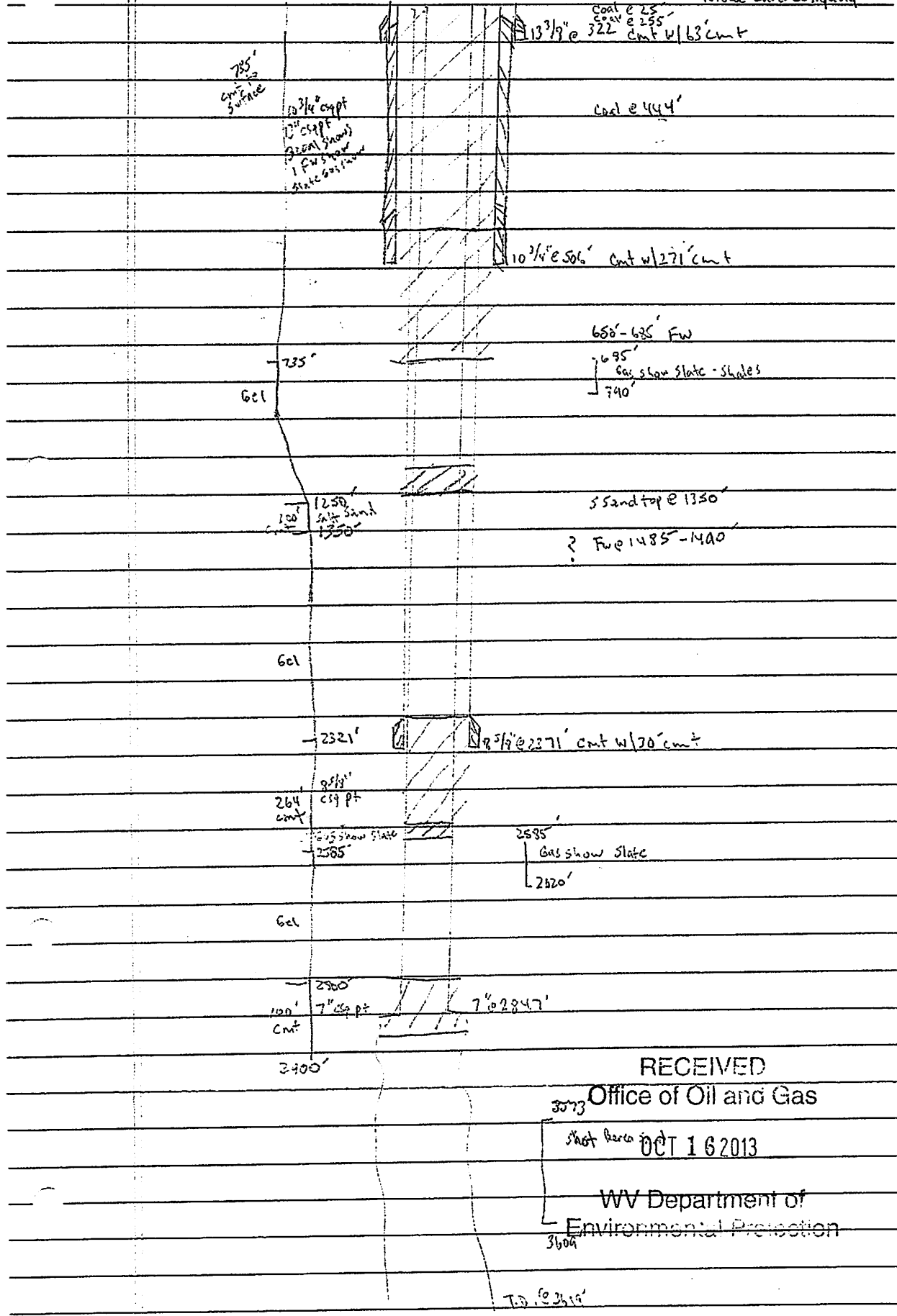
OCT 17 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

11/01/2013

Self sand?

4500470P
Logan C.O. W.V.
023840
47-045-00470
Pardue Land Company #45



RECEIVED
3073 Office of Oil and Gas
Shot here OCT 16 2013
WV Department of
Environmental Protection
3604

T.D. @ 3616'

11/01/2013

4500470 P

11/30/55

STATE OF WEST VIRGINIA DEPARTMENT OF MINES OIL AND GAS DIVISION

RECEIVED

NOV 28 1955

UNITED CARBON CO. GEOLOGICAL DEPT.

2.1 Bald Knob

WELL RECORD

Permit No. LOG-470

Oil or Gas Well Gas (KIND)

Company United Producing Company
Address Box 1913, Charleston 27, W. Va.
Farm Pardee Land Company Acres 22,000
Location (waters) Elsie Branch of Buffalo Creek
Well No. 45 (2384) Elev. 1574.9'DF
District Triadelphia County Logan
The surface of tract is owned in fee by Pardee Land Company,
Rm. 703, 226 So. 16th St., Philadelphia 2, Pa.
Mineral rights are owned by Same
Address
Drilling commenced July 9, 1955
Drilling completed November 2, 1955
Date Shot 11-2-55 From 3573' To 3609'
With 180 qts. nitroglycerine
a Flow 8/10ths Water in 2 Inch
/10ths Merc. in Inch
Volume 119,000 Cu. Ft.
Rock Pressure 600 lbs. 48 hrs.
Oil bbls., 1st 24 hrs.
Fresh water 670-675 feet 1485-1490 feet
Salt water feet feet

Table with columns: Casing and Tubing, Used in Drilling, Left in Well, Packers. Rows include sizes like 16, 13 3/8", 10 3/4", 8 5/8", 6 7/8" OD, 5 3/16, 3, 2 and liner used information.

CASING CEMENTED 13 3/8" SIZE 63' No. Ft. 7-20-55 Da
10 3/4" 271' 7-28-55
8 5/8" 30' 10-3-55
COAL WAS ENCOUNTERED AT 25 FEET 48 INCH
255 FEET 48 INCHES 444 FEET 72 INCH
FWWT INCHES FEET INCH

Main well log table with columns: Formation, Color, Hard or Soft, Top, Bottom, Oil, Gas or Water, Depth Found, Remarks. Lists geological layers from Clay to Red Rock with depths and water/gas findings.

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OCT 16 2013 Water 1485-1490' Hole full

WV Department of Environmental Protection

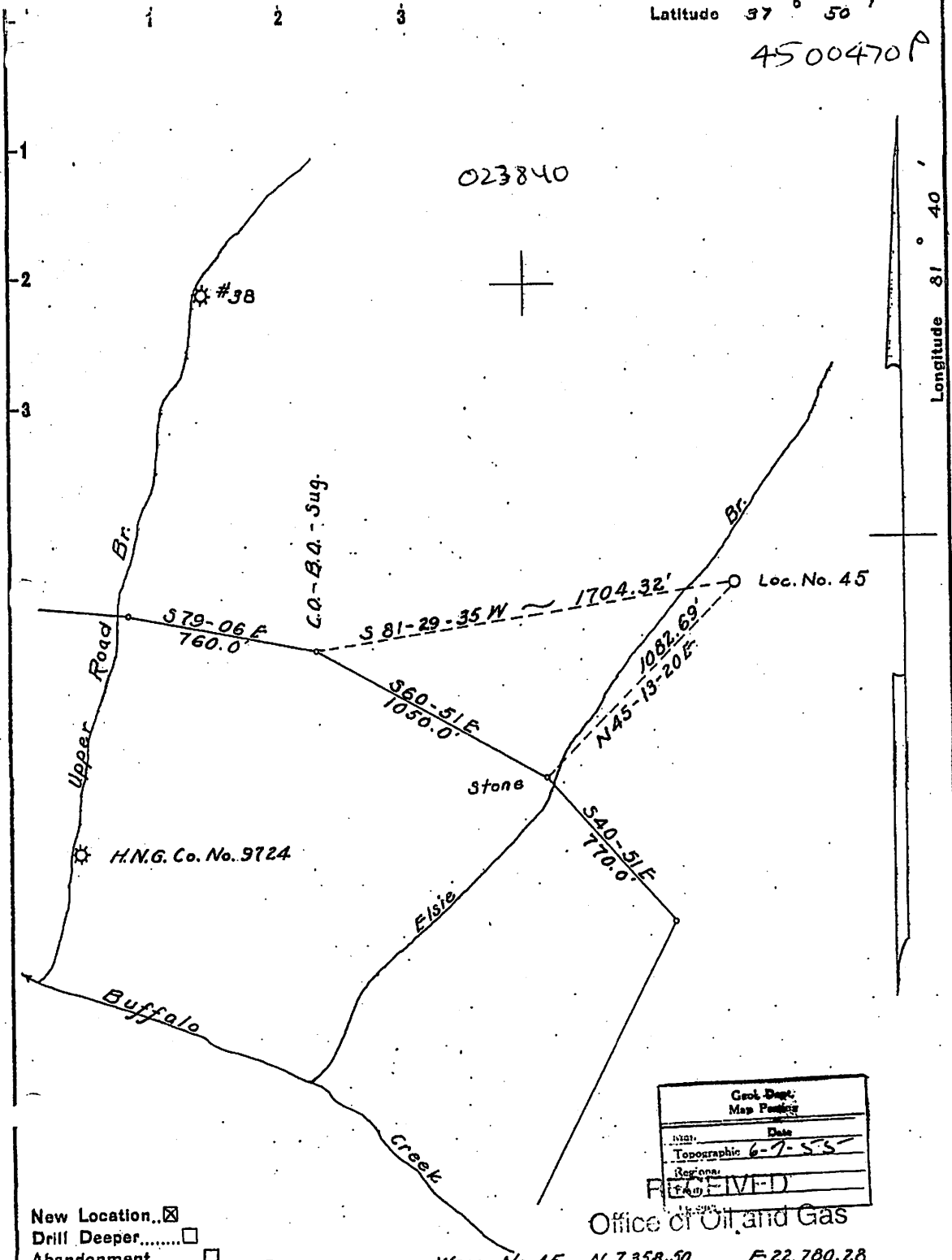
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Formation	Color	Hard or Soft	Top ζ	Bottom	Oil, Gas or Water	Depth Found	Remarks
Lime			2422	2430			
Sand			2430	2501			
Red Rock			2501	2520			
Slate & Shells			2520	2570			
Lime	Red		2570	2585			
Slate			2585	2620	Gas	2590-2593'	show
Lime		Gritty	2620	2641			
Slate			2641	2689			
Little Lime			2689	2709			
Pencil Cave			2709	2725			
Big Lime			2725	3006			
Lime	Red		3006	3011			
Lime	White		3011	3096			
Injun Sand			3096	3145			
Slate & Shells			3145	3557			
Brown Shale			3557	3573			
Berea Sand			3573	3609			
Slate			3609				
TOTAL DEPTH				3619'			

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OCT 16 2013

WV Department of
Environmental Protection

023840



Geol. Dept.	Map Posting
Date	
Topographic	6-7-55
Region	
Station	

New Location...
 Drill Deeper.....
 Abandonment.....

Office of Oil and Gas
 COORDINATES WELL No. 45 N 7,358.50 E 22,780.28

OCT 16 2013

Company UNITED PRODUCING Co. INC.
 Address CHARLESTON, W. VA.
 Farm FARDEE LAND COMPANY
 Tract _____ Acres 22,000 Lease No. 4107
 Well (Farm) No. 45 Serial No. 2384
 Elevation (Spirit Level) 1570.93 = Gr.
 Quadrangle BALD KNOB
 County LOGAN District TRIADELPHIA
 Engineer H. B. Burdette
 Engineer's Registration No. 710
 File No. W. Va. - 1-A Drawing No. _____
 Date MAY 18, 1955 Scale 1" = 500'

STATE OF WEST VIRGINIA
 DEPARTMENT OF MINES
 OIL AND GAS DIVISION
 Environmental Protection
 CHARLESTON

WELL LOCATION MAP
 FILE NO. LOG-470

+ Denotes location of well on United States Topographic Maps, scale 1 to 62,500, latitude and longitude lines being represented by border lines as shown.
 - Denotes one inch spaces on border line of original tracing.

11/01/2013

4500470P

WW-4-A
Revised 6/07

- 1) Date: October 11, 2013
- 2) Operator's Well Number
023840 Pardee Land Co #45
- 3) API Well No.: 47 045 - 00470
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

Check# 16407
\$100.00

4) Surface Owner(s) to be served:

(a) Name Pardee Minerals LLC ✓
 Address 500 Corporate Center Dr.
Scott Depot, WV 25560

(b) Name _____
 Address _____

(c) Name _____
 Address _____

6) Inspector Ralph Triplett ✓
 Address 5539 McClellan Hwy
Branchland, WV 25506
 Telephone 304-389-0350

5) (a) Coal Operator:
 Name None
 Address _____

(b) Coal Owner(s) with Declaration
 Name Pardee Minerals LLC ✓
500 Corporate Center Dr.
 Address Scott Depot, WV 25560

(c) Coal Lessee with Declaration
 Name Penn Virginia Resource Partners ✓
 Address Carbon Center Suite 100
Chesapeake, WV 25315

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:
 By: _____
 Its: _____
 Address: _____
 Telephone: _____

EQT Production Company
Victoria J. Roark
Permitting Supervisor
PO Box 280
Bridgeport, WV 26330
(304) 848-0076

Subscribed and sworn before me this 11th day of October, 2013
Shannon K Cunningham Notary Public
 My Commission Expires: August 21 2022

RECEIVED
 Office of Oil and Gas
 OCT 15 2013
 WV Department of
 Environmental Protection

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.

11/01/2013

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL & GAS
CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name: EQT PRODUCTION COMPANY OP ID: _____
Watershed: Buffalo Creek Quadrangle: Lorado 7.5'
Elevation: 1587' County: Logan District: Triadelphia

Description of anticipated Pit Waste: Formation Fluids

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes ___ No X
Will synthetic liner be used in the pit? Yes Is so, what ml.? 30 ml

Proposed Disposal Method for Treated Pit Wastes:
X Land Application
____ Underground Injection - UIC Permit Number _____
____ Reuse (at API Number) _____
____ Offsite Disposal Permit #. _____
____ Other: Explain _____

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. _____
If oil based, what type? Synthetic, petroleum, etc. _____

Additives to be used? _____

Will closed loop system be used? _____


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? _____

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on August 1, 2005, by the Office of Oil and Gas of the West Virginia Division of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any terms 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 *Victoria Roark*
Company Official (Typed or Printed) Victoria Roark
Company Official Title Permitting Supervisor-WV


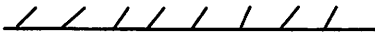




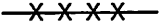



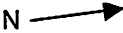

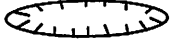





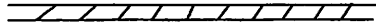

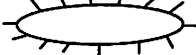
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Office of Oil and Gas
OCT 16 2013

Subscribed and sworn before me this 11th day of October 2013
Shannon K Cunningham
My Commission Expires August 21, 2022

Notary Public

OFFICIAL SEAL
STATE OF WEST VIRGINIA
NOTARY PUBLIC
Shannon K Cunningham
1028 Sassafras Run Road
Weston, WV 26052
My Commission Expires August 21, 2022

OPERATOR'S WELL NO.:
023840 Pardee Land Co #45

LEGEND

Property Boundary 	Diversion 
Road 	Spring 
Planned Fence 	Drain Pipe with size in inches 
Existing Fence 	Stream 
Open Ditch 	Artificial Filter Strip 
North 	Building 
Pit with Cut Walls 	Water well 
	Drill site 
	Rock 
	Wet Spot 
	Water Way 
	Cross Drain 
	Area of Land Application of Pit Waste 
	Pit with Compacted Walls 

Proposed Revegetation Treatment: Acres Disturbed: 1± Prevegetation pH 5.8
 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
KY-31	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	
Annual Rye	15		

Received
OCT 17 2013

ATTACH:

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

Plan approved by: Raquel D. Tripodi

Comments: _____

Title: District Inspector Date: October 16, 2013
 Field Reviewed? Yes No

Office of Oil and Gas
WV Dept. of Environmental Protection

4500 470P

Topo Quad: Lorado

Scale: 1" = 2000'

County: Logan

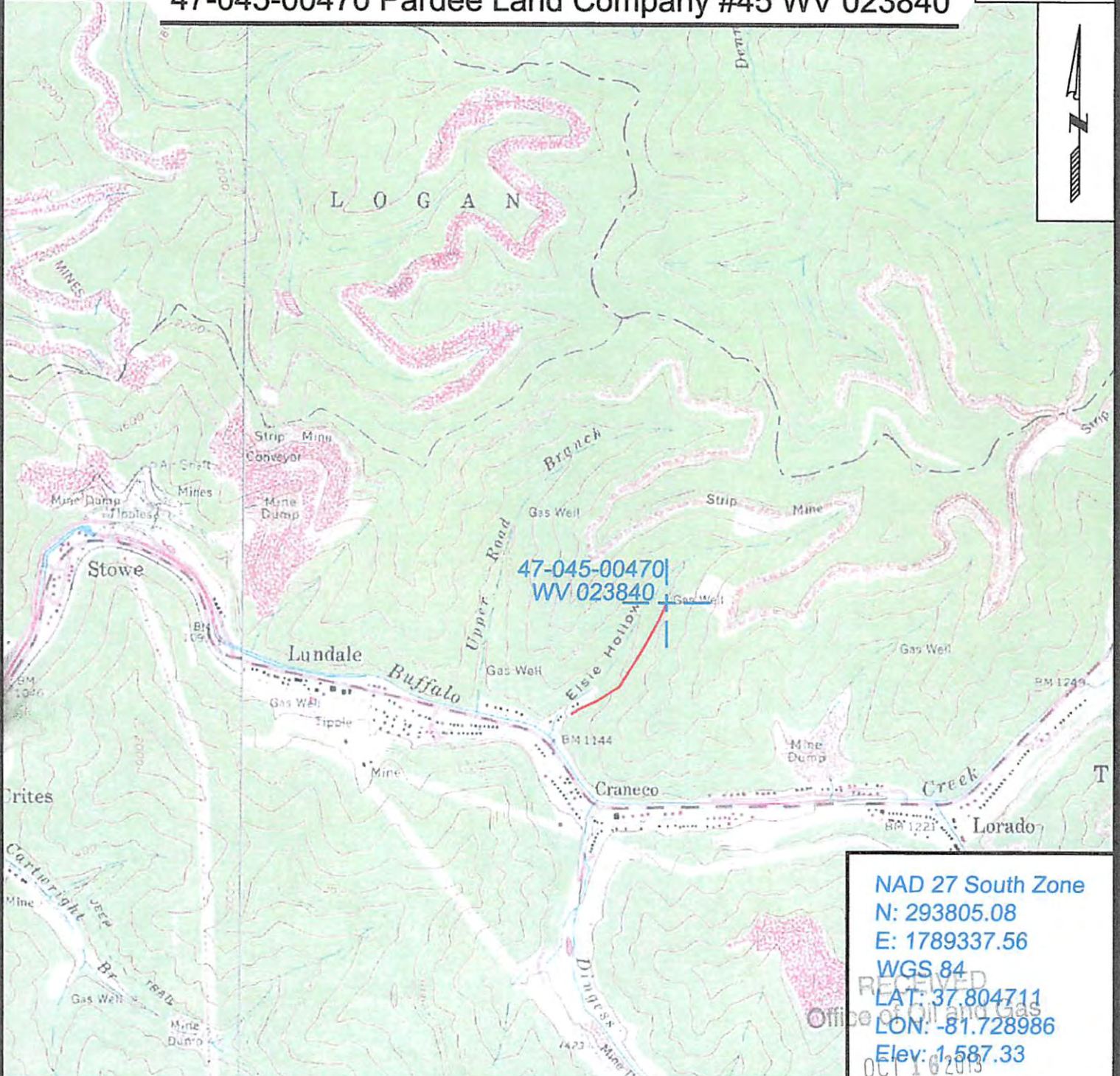
Date: September 30, 2013

District: Triadelphia

Project No: 21-21-00-08

47-045-00470 Pardee Land Company #45 WV 023840

Topo



NAD 27 South Zone
 N: 293805.08
 E: 1789337.56
 WGS 84
 LAT: 37.804711
 LON: -81.728986
 Elev: 1,587.33
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SURVEYING AND MAPPING SERVICES PERFORMED BY:
ALLEGHENY SURVEYS, INC.
 1-800-482-8606
 P.O. BOX 438
 BIRCH RIVER, WV 26610
 PH: (304) 649-8606
 FAX: (304) 649-8608

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

11/01/2013

WW-7
8-30-06



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

API: 47-045-00470 WELL NO.: WV 023840 (Pardee Land Company #45)

FARM NAME: Pardee

RESPONSIBLE PARTY NAME: EQT Production Company

COUNTY: Logan DISTRICT: Triadelphia

QUADRANGLE: Lorado 7.5'

SURFACE OWNER: Pardee Minerals, LLC

ROYALTY OWNER: Pardee Minerals, LLC

UTM GPS NORTHING: 4,184,398

UTM GPS EASTING: 435.827 GPS ELEVATION: 484 m (1587 ft)

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:

- Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
- Accuracy to Datum – 3.05 meters
- Data Collection Method:
Survey grade GPS : Post Processed Differential
Real-Time Differential
Mapping Grade GPS X: Post Processed Differential X
Real-Time Differential
- 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.

Ben B. Singleton
Signature
9/30/13
Date

P.S. 2092
Title
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Office of Oil and Gas
OCT 16 2013
WV Department of Environmental Protection



POTENTIAL WATER SAMPLE DATA SHEET

CLIENT: EQT PRODUCTION COMPANY INC.

LEASE NAME AND WELL No. Pardee Land Company #45 (47-045-00470) WV 023840 .

POTENTIAL SAMPLE LOCATIONS

There appears to be no known water samples within the required 1000' of the existing well WV 023840.

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BIRCH RIVER OFFICE
P.O. Box 438 • 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

CALDWELL OFFICE
212 Cumberland Street
Caldwell, OH 43724
phone: 740-305-5007
fax: 740-305-5126

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