



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

December 08, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-500842, issued to CABOT OIL & GAS CORPORATION, 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: 2-SR-315
Farm Name: LENNING ESTATE
API Well Number: 47-500842
Permit Type: Plugging
Date Issued: 12/08/2014

Promoting a healthy environment.

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.

Lenning Estate #2
API # 47 – 005 – 00842
PLUGGING PROCEDURE

Current Configuration

- ✓ DTD @ 3415'
 - ✓ 13" conductor @ 16'
 - ✓ 10" casing @ 46'
 - ✓ 8 1/4" casing @ 455'
 - ✓ 6 5/8" casing @ 1053'
 - ✓ 3 1/2" tubing @ 1307' w/ Hookwall packer
 - ✓ Coal @ 430' – 434' ?
 - ✓ Fresh water @ 75' & 550'
- Berea & Brown Shale shot from 1484' – 3415'
 Gas shows in Big Lime @ 1112' & 1135', Berea, & Devonian Shale @ 1891' & 2759'

SHOT FROM 1485' TO 3415'

ELEV. 668'

PROCEDURE

1. Contact Danville Office a minimum of 48 hours prior to starting work.
2. Contact State Inspector a minimum of 24 hours prior to starting work. TERRY UNGER 304-549-5915
3. Lay 2" line from wellhead to pit/tank and stake down securely.
4. MIRU service rig and blow down well. Have vacuum truck available to catch any fluids circulated from well.
5. Unpack wellhead.
6. Pull 3 1/2" tubing.
- ✓ 7. TIH with sand line to check TD.
- ✓ 8. TIH with 2 3/8" work string to TD and pump 6% gel to fill shot hole to 1450'.
- ✓ 9. TOOH with 2 3/8" work string.
10. TIH with cast iron bridge plug and set @ 1450'.
11. TIH with 2 3/8" work string to top of bridge plug.
12. MIRU Cement Company and pump 30 bbls 6% gel followed by 40 sks of Class A cement for cement plug 1 from 1450' to 1250'.
13. Displace w/ 5 bbls of 6% Gel.
14. TOOH with work string.
15. Let cement plug set for a minimum of eight hours.
16. Pull all casing strings.
17. Check setting depth of cement plug.
18. TIH with 2 3/8" work string to TOC and pump 70 sks Class A cement for cement plug 2 from 1250' to 950'.
19. Displace w/ 3 1/2 bbls of 6% Gel.
20. Pull work string up to 600' and pump 135 sks of expanding cement (115 sacks Class A cement with 10 % salt added) for Plug 3 from 600' to 300'.
21. Displace w/ 1 bbls of 6% Gel.
22. Pull work string up to 100' and pump 65 sx Class A cement for Plug 4 from 100' to surface.
23. TOOH with work string and lay down.
24. RDMO Cementing Company.
25. Place monument as required by law on top of well bore.
26. Reclaim well site.

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 Office of Oil & Gas

OCT 31 2014

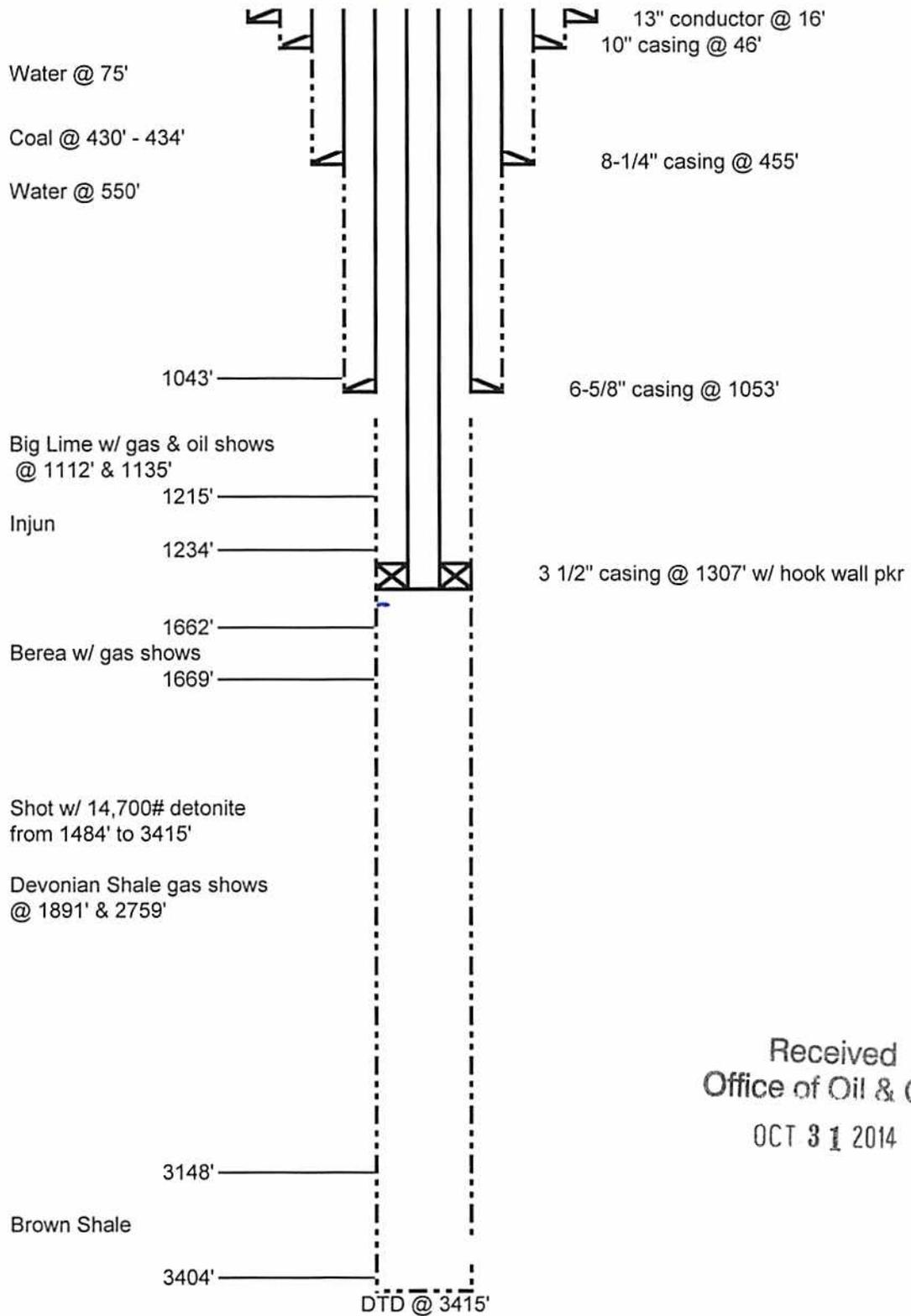
OK

JMM

Lenning Estate #2

API 47-005-00842

★ CURRENT CONFIGURATION



Schematic is not to scale

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T. Ott 04/14/14

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

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

5) Location: Elevation 668' Watershed Big Coal River
District Peytona 2 County Boone Quadrangle Racine sle5

6) Well Operator Cabot Oil & Gas Corporation 7) Designated Agent Whitney Johnson
Address Five Penn Center West, Ste. 401 Address P.O. Box 450
Pittsburgh, PA 15276 Glasgow, WV 25086

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Ross Eller Name Shreve's Well Service
Address 121 Brierhill Drive Address 3473 Triplett Road
Beckley, WV 25801 Spencer, WV 25275

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

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Office of Oil & Gas
OCT 31 2014

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

Work order approved by inspector _____ Date _____



500842P

STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL RECORD

Permit No. Boo-842

Oil or Gas Well Gas
(KIND)

Company OWENS, LIBREY-OWENS GAS DEPARTMENT
 Address P. O. Box 4158, Charleston 4, W. Va.
 Farm Lennig Estate Acres 2585
 Location (waters) _____
 Well No. OLO #315, farm #2 Elev. 667.4
 District Peytona County Boone
 The surface of tract is owned in fee by _____
 Address _____
 Mineral rights are owned by Garner Williams
1309 A Quarrier St. Address Charleston, W. Va.
 Drilling commenced 1-26-28
 Drilling completed 2-27-28
 Date Shot _____ From _____ To _____
 With _____
 Open Flow _____ /10ths Water in _____ Inch
 _____ /10ths Merc. in _____ Inch
 Volume 400 M Cu. Ft.
 Rock Pressure 189 lbs. 24 hrs.
 Oil _____ bbls., 1st 24 hrs.
 Fresh water _____ feet _____ feet
 Salt water _____ feet _____ feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			
16			Kind of Packer _____
13	16'	16'	---
10	46'	46'	Size of _____
8 1/4	455'	455'	
6 3/4	1053'	1053'	Depth set _____
5 3/16			Pkr. at 1075
3			Perf. top _____
2		1234'	Perf. bottom _____
Liners Used			Perf. top _____
			Perf. bottom _____

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
 COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES
 _____ FEET _____ INCHES FEET _____ INCHES
 _____ FEET _____ INCHES FEET _____ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Sand & gravel			0	49			
Sand			49	430	Water	75'	Hole full
Coal			430	434			
Slate			434	480			
Sand			480	615	Water	550'	Hole full
Slate			615	710			
Salt Sand			710	795			
Slate & Shells			795	830			
Red Rock			830	845			
Slate & Shells			845	875			
Red Rock			875	880			
Slate & Shells			880	903			
Maxton Sand			903	955			
Little Lime			955	1003			
Pencil Cave			1003	1009			
Broken Lime			1009	1043			
Big Lime			1043	1215	Oil & gas	1112-1115	Show
Injun Sand			1215	1234	Oil & gas	1135-1140	330 MCF & 10 bbls. oil
Total Depth				1234			

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STATE OF WEST VIRGINIA
DEPARTMENT OF MINES
OIL AND GAS DIVISION

WELL RECORD

Permit No. Boone-842 D

Oil or Gas Well Gas
(KIND)

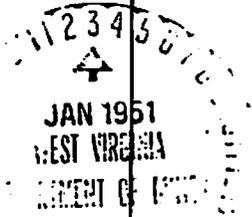
Company OWENS, LIBBEY-OWENS GAS DEPARTMENT
Address P. O. Box 4158, Charleston - 4 - W. Va.
Farm Lennig Estate Acres 2,585
Location (waters)
Well No. 010 #315, farm #2 Elev. 667.4
District Peytona County Boone
The surface of tract is owned in fee by _____
Address _____
Mineral rights are owned by Garner Williams
1309 A Quarrier St. Address Charleston, W. Va.
Drilling commenced 11-13-50
Drilling completed 12-27-50
Date Shot 12-28-50 From 1484 To 3415
With 17,700# Detonite

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			Kind of Packer
16			Spang Hook Wall
13			Size of 3" x 6-5/8" x 16"
10			Depth set 1303 - 1307
8 1/4		1307'	Perf. top
6 1/4			Perf. bottom
6 3/16			Perf. top
3			Perf. bottom
2			
Liners Used			

Open Flow /10ths Water in _____ Inch
After tubing: /10ths Merc. in Line (old gas) _____ Inch
Volume 86 M Berea, Shells & Shale Cu. Ft.
Rock Pressure 131 M Total vs 135#, 64 hrs.
Oil _____ bbls., 1st 24 hrs.
Fresh water _____ feet
Salt water _____ feet

CASING CEMENTED _____ SIZE _____ No. Ft. _____ Date _____
COAL WAS ENCOUNTERED AT _____ FEET _____ INCHES
_____ FEET _____ INCHES _____ FEET _____ INCHES
_____ FEET _____ INCHES _____ FEET _____ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Original Total Depth				1234	11-13-50: Drilling up bailing cups.		
Big Injun	Red	Soft	1232	1232 1240	After cleaned out Oil & water, 8 gal oil & 2 gal water overnight.		
Slate	Dark	Soft	1240	1245	Gas testing	11/10 W 1" 29.3 M	
Lime Shell	Dark	Med.	1245	1256	8 gal. oil & 1 1/2 gal. water overnight.		
Lime Shell	Grey	Med.	1256	1272	Gas testing	1256' 16/10 W 1" 31.3 M	
Lime Shell	Grey	Hard	1272	1284	6 gal. oil & 1 1/2 gal. water overnight.		
Lime	Dark	Med.	1284	1300	Gas	1272 17/10 W 1" 32.3 M	
Shell	Dark	Hard	1300	1325	Test	1284 same	
Lime	Dark	Hard	1325	1337	When starting up after weekend shutdown, about 62 hours, found 30 gal. oil & 30 gal. water.		
Slate & Shells	Light	Med.	1337	1365	Gas testing	17/10 W 1" 32.3 M	
Slate & Shells	Light	Soft	1365	1405	Test	1325 13/10 W 1" 28.2 M	
Slate & Shells	Dark	Soft	1405	1442	Test	1472 14/10 W 1" 29.3 M	
Slate & Shells	Light	Soft	1442	1547	Test	1547 12/10 W 1" 27.1 M	
					Test after 24 Hr. S.D., 3 gal. oil & 1 gal. water, 11-23 to 11-24.		
					Test after 64 Hr. S.D. - 20 gal. oil & 20 gal. water		
					Gas	1580 15/10 W 1" 30.3 M	
					May have been new show		
Slate & Shells	Dark	Med.	1547	1662	Gas	1591 43/10 W 1" 51.4 M	
Berea	Light	Hard	1662	1669	Gas	1653 53/10 W 1" 57 M	
Slate & Shells	Light	Med.	1669	1699	Gas	1662 62/10 W 1" 61.7 M	
Slate & Shells	Dark	Med.	1699	1726	Gas	1669 66/10 W 1" 63.6 M	
Slate & Shells	Light	Med.	1726	1774	Gas	1677 69/10 W 1" 65.1 M	
Slate & Shells	Light	Soft	1774	1814	Gas	1689 78/10 W 1" 69.2 M	
Slate & Shells	Light	Med.	1814	1842	Test	1699 67/10 W 1" 64.1 M	
Slate & Shells	Light	Soft	1842	2717	Test	1709-1726 69/10 W 1" 65.1 M	
					Gas	1750 72/10 W 1" 66.5 M	
					Test	1774 same	
					Test	1783-1814 69/10 W 1" 65.1 M	
					Test	1842-1881 64/10 W 1" 62.7 M	
					Gas	1891 16/10 W 1 1/2" 71 M	
					Test	2028 same	



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(Over)

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
					Test	2060	14/10 W 1 1/2" 66. M
					Test	2521	same
					Test	2594	13/10 W 1 1/2" 64. M
					Test	2717	12/10 W 1 1/2" 61. M
					Test 12-18-50 after 5 gal. water & mud	24 Hr. Shutdown:	in hole
Slate & Shells	Light	Soft	2717	2860	Test	2745	12/10 W 1 1/2" 61. M
Slate & Shells	Dark	Soft	2860	2878	Gas	2759	30/10 W 1 1/2" 97. M
Shell	Dark	Hard	2878	2904	Test	2770	24/10 W 1 1/2" 86. M
Slate & Shells	Light	Soft	2904	2968	Test	2807	same
Shell	Light	Med.	2968	2993	Gas	2820	27/10 W 1 1/2" 92. M
Slate & Shells	Light	Soft	2993	3023	Test	2870	24/10 W 1 1/2" 86. M
Slate & Shells	Light	Med.	3023	3043	Test	2878	22/10 W 1 1/2" 83. M
Slate & Shells	Dark	Soft	3043	3092	Test	2888	23/10 W 1 1/2" 85. M
Slate & Shells	Light	Soft	3092	3148	Gas	2896	24/10 W 1 1/2" 86. M
Brown Shale	Brown	Soft	3148	3168	Test	2914	22/10 W 1 1/2" 83. M
Slate & Shells	Light	Soft	3168	3218	Test	3023	same
Brown Shale	Brown	Soft	3218	3228	Test	3058-3175	20/10 W 1 1/2" 79. M
Slate & Shells	Light	Soft	3228	3256			
Brown Shale	Brown	Soft	3256	3314	Test	3206-3259	19/10 W 1 1/2" 77. M
Slate	Light	Soft	3314	3324	After 24 hr. Shutdown,	5 gal. water in hole.	
Brown Shale	Brown	Soft	3324	3404	Test	3270	14/10 W 1 1/2" 66. M
Slate & Shells	Light	Med.	3404	3415	Test	3404	same
					Test	3415	13/10 W 1 1/2" 64. M
Total Depth				3415			
Did not measure T.D. after shot					Test before shot		64. M
					14 hrs. after shot		133 M

B00-842

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OCT 31 2014

Date January 2, 1951

APPROVED OWENS, LIBBY-OWENS GAS DEPARTMENT, Owner

By A. H. Smith
A. H. Smith (Title) Geologist

500842P

WW-4A
Revised 6-07

1) Date: October 29, 2014
2) Operator's Well Number
Lenning Estate #2
3) API Well No.: 47 - 005 - 00842

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

<p>4) Surface Owner(s) to be served:</p> <p>(a) Name <u>East Enders, LLC</u> ✓ Address <u>P.O. Box 273</u> <u>Julian, WV 25529</u></p> <p>(b) Name <u>Boone East Development Co.</u> Address <u>P.O. Box 271</u> ✓ <u>Julian, WV 25529</u></p> <p>(c) Name <u>William W. Luther & Josephine W. Luther Rev. Trust</u> Address <u>P.O. Box 273</u> ✓ <u>Julian, WV 25529</u></p> <p>6) Inspector <u>Ross Eller</u> ✓ Address <u>121 Brierhill Drive</u> <u>Beckley, WV 25801</u> Telephone <u>(304) 932-6844</u></p>	<p>5) (a) Coal Operator</p> <p>Name <u>Sparton Mining Company dba/Mammoth</u> Address <u>P.O. Box 150</u> ✓ <u>Cannelton, WV 25036</u></p> <p>(b) Coal Owner(s) with Declaration</p> <p>Name <u>East Enders, LLC</u> <u>Boone East Development Co</u> Address <u>P.O. Box 273</u> ✓ <u>P.O. Box 271</u> ✓ <u>Julian, WV 25529</u> <u>Julian, WV 25529</u></p> <p>Name <u>William W. Luther & Josephine W. Luther Rev. Trust</u> Address <u>P.O. Box 273</u> ✓ <u>Julian, WV 25529</u></p> <p>(c) Coal Lessee with Declaration</p> <p>Name <u>Laxare, Inc.</u> ✓ <u>Boone East Development Co</u> Address <u>One Alpha Place</u> <u>P.O. Box 271</u> ✓ <u>Bristol, VA 24202</u> <u>Julian, WV 25529</u></p>
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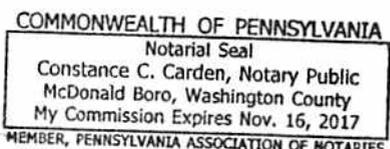
TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

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

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

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

Well Operator Cabot Oil & Gas Corporation
 By: Kenneth L. Marcum *Kenneth L. Marcum*
 Its: Regulatory Supervisor
 Address Five Penn Center West, Suite 401
Pittsburgh, PA 15276
 Telephone (412) 249-3850



Subscribed and sworn before me this 29th day of October, 2014
Constance C. Carden Notary Public
 My Commission Expires November 16, 2017

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Office of Oil & Gas
OCT 31 2014

Oil and Gas Privacy Notice

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

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Sent To: **William W. Luther & Josephine W. Luther Revocable Trust**
 P.O. Box 273
 Julian, WV 25529

Lenning Estate #2 P&A

PS Form 3800, August 2008

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Sent To: **Boone East Development Company**
 P.O. Box 271
 Julian, WV 25529

Pond Fork #6 & Lenning Estate #2 P&A

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Sent To: **Ross Eller**
 121 Brierhill Drive
 Beckley, WV 25801

Pond Fork #6 & Lenning Estate #2 P&A

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Sent To: **Laxare, Inc.**
 One Alpha Place
 Bristol, VA 24202

Lenning Estate #2 P&A

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Total Postage & Fees	\$

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Sent To: **East Enders, LLC**
 P.O. Box 273
 Julian, WV 25529

Lenning Estate #2 P&A

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Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

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Sent To: **Spartan Mining Company
 DBA Mammoth**
 P.O. Box 150
 Cannelton, WV 25036

Pond Fork #6 & Lenning Estate #2 P&A

PS Form 3800, August 2008

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

FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Cabot Oil & Gas Corporation OP Code 08145

Watershed (HUC 10) Big Coal River Quadrangle Racine

Elevation 668' County Boone District Peytona

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

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

If so, please describe anticipated pit waste: _____

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

Proposed Disposal Method For Treated Pit Wastes:

- _____ Land Application
- _____ Underground Injection (UIC Permit Number _____)
- _____ Reuse (at API Number _____)
- _____ Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain No treated pit wastes will be produced)

ANY WELL EFFLUENT MUST BE CONTAINED IN TANKS & DISPOSED OF PROPERLY. gmm 12/6/14

Will closed loop system be used? N/A

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. no drilling proposed

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

Additives to be used in drilling medium? N/A

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. No cuttings produced during plugging operation

-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 Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and/or other applicable law or regulation can lead to enforcement action.

I certify under penalty of law that I have personally examined and am familiar with the information submitted on this application form and all attachments thereto and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment.

Company Official Signature *Kenneth L. Marcum*

Company Official (Typed Name) Kenneth L. Marcum

Company Official Title Regulatory Supervisor

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Subscribed and sworn before me this 29th day of October, 2014

Constance C. Carden Notary Public

My commission expires 11/16/2017

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Constance C. Carden, Notary Public
McDonald Boro, Washington County
My Commission Expires Nov. 16, 2017
MEMBER, PENNSYLVANIA ASSOCIATION OF NOTARIES

Form WW-9

Operator's Well No. Lenning Estate #2

Proposed Revegetation Treatment: Acres Disturbed 0.26 Prevegetation pH 6.5

Lime 2 Tons/acre or to correct to pH 6.5

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

Mulch Pulp Fiber at 1000 to 1500 Tons/acre

Seed Mixtures

Area I			Area II		
Seed Type		lbs/acre	Seed Type		lbs/acre
Grain Rye - 100	Red Clover - 5	Fescue - 40	Grain Rye - 100	Red Clover - 5	Fescue - 40
Annual Rye - 20	White Clover - 5		Annual Rye - 20	White Clover - 5	
Perennial Rye - 10	Alta Sweet Clover - 5		Perennial Rye - 1	Alta Sweet Clover - 5	
Yellow Clover - 5	Birdsfoot Trefoll - 10		Yellow Clover - 5	Birdsfoot Trefo	

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: _____

Comments: _____

Title: _____ Date: _____

Field Reviewed? () Yes () No

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OCT 31 2014

CONTOURS LINES ARE USGS 10' CONTOURS



±2250 LF ACCESS ROAD,
GRADE BETWEEN 0-5%
UNLESS NOTED OTHERWISE

PROPOSED CULVERT;
PLACE DRAIN CULVERTS
AS NEEDED (FOLLOW
REQUIRED WV DEP
OIL & GAS BMP MANUAL
SEE TABLE II-6)

NOTES:

1. ALL ROADS SHOWN HEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH THE WVDEP OIL & GAS BMP MANUAL. ALL CULVERTS SHOWN ON THIS PLAN ARE PROPOSED AND WILL BE A MINIMUM OF 12" IN DIAMETER UNLESS OTHERWISE DESIGNATED AND WILL BE PACKED AS NEEDED AND REQUIRED BY WVDEP OIL AND GAS BMP MANUAL
2. SUPPLEMENTAL DRAINAGE AND/OR SEDIMENT CONTROL MEASURES IN ADDITION TO THOSE SHOWN ON THIS PLAN WILL BE INSTALLED WHEN AND WHERE DEEMED NECESSARY. THE ADDITIONAL MEASURES MAY CONSIST OF STRAW BALES, SILT FENCES, OR OTHER MEASURES AS OUTLINED IN THE EROSION AND SEDIMENT CONTROL FIELD MANUAL
3. SEDIMENT TRAPS ARE TO BE CONSTRUCTED AT ALL CULVERTS AND CROSS DRAIN INLETS AS REQUIRED IN THE WVDEP OIL & GAS BMP MANUAL. FIELD CONDITIONS SUCH AS ROCK OUTCROPS AND BEDROCK MAY PROHIBIT INLET TRAPS BEING INSTALLED, WHEN THESE CONDITIONS EXIST, ADDITIONAL EROSION CONTROL MEASURES SHALL BE EVALUATED AND UTILIZED AS NEEDED.
4. A SEDIMENT BARRIER OF EITHER BRUSH, ~~STRAW BALES~~ OR FILTER FENCE WILL BE MAINTAINED BELOW THE OUT FALL OF ALL PROPOSED CULVERTS AND AT ALL OTHER STORM WATER DISCHARGE POINTS FROM EITHER THE ROADWAY OR THE LOCATION.
5. ENTRANCES AT COUNTY/STATES ROAD SHALL BE MAINTAINED IN ACCORDANCE WITH D.O.T. REGULATIONS; SEPARATE PERMITS MAY BE REQUIRED BY THE WVDOT INSTALLED FOR A MIN. DISTANCE OF 50'.
6. A STABILIZED CONSTRUCTION ENTRANCE WILL BE INSTALLED AS SHOWN UNLESS OTHERWISE DIRECTED BY WVDEP INSPECTOR AND/OR WVDOT.
7. CROSS DRAINS AND/OR WATERBARS WILL BE INSTALLED AS AN INTEGRAL PART OF THE RECLAMATION PROCESS AND SHALL BE SPACED IN ACCORDANCE WITH THE WVDEP CONTROL FIELD MANUAL.

NOTE:
EROSION AND SEDIMENT CONTROLS MUST BE IN PLACE FOR ALL EARTH DISTURBANCE PER THE LATEST WV DEP OIL AND GAS EROSION AND SEDIMENT CONTROL FIELD MANUAL AND WV DEP INSPECTOR.

EXISTING 10' DIRT/GRAVEL
ACCESS ROAD TO BE
WIDENED AS NECESSARY

EXISTING
18" CMP CULVERT

PROPOSED ROCK CONSTRUCTION
ENTRANCE PER THE LATEST WV
DEP OIL AND GAS EROSION AND
SEDIMENT CONTROL FIELD MANUAL

RAILROAD

EXISTING
BUILDING

PEYTONA BRUSHTON RD

RAILROAD
SIGN



SCALE

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**RECLAMATION PLAN
LENNING ESTATES 2**

PEYTONA DISTRICT, BOONE COUNTY, WEST VIRGINIA

CABOT OIL & GAS CORPORATION
FIVE PENN CENTER WEST, SUITE 401
PITTSBURGH, PA 15276-0130
PHONE (304) 369-1771
DATE:2/26/13 DRAWN BY:RTC CHECKED BY:THK

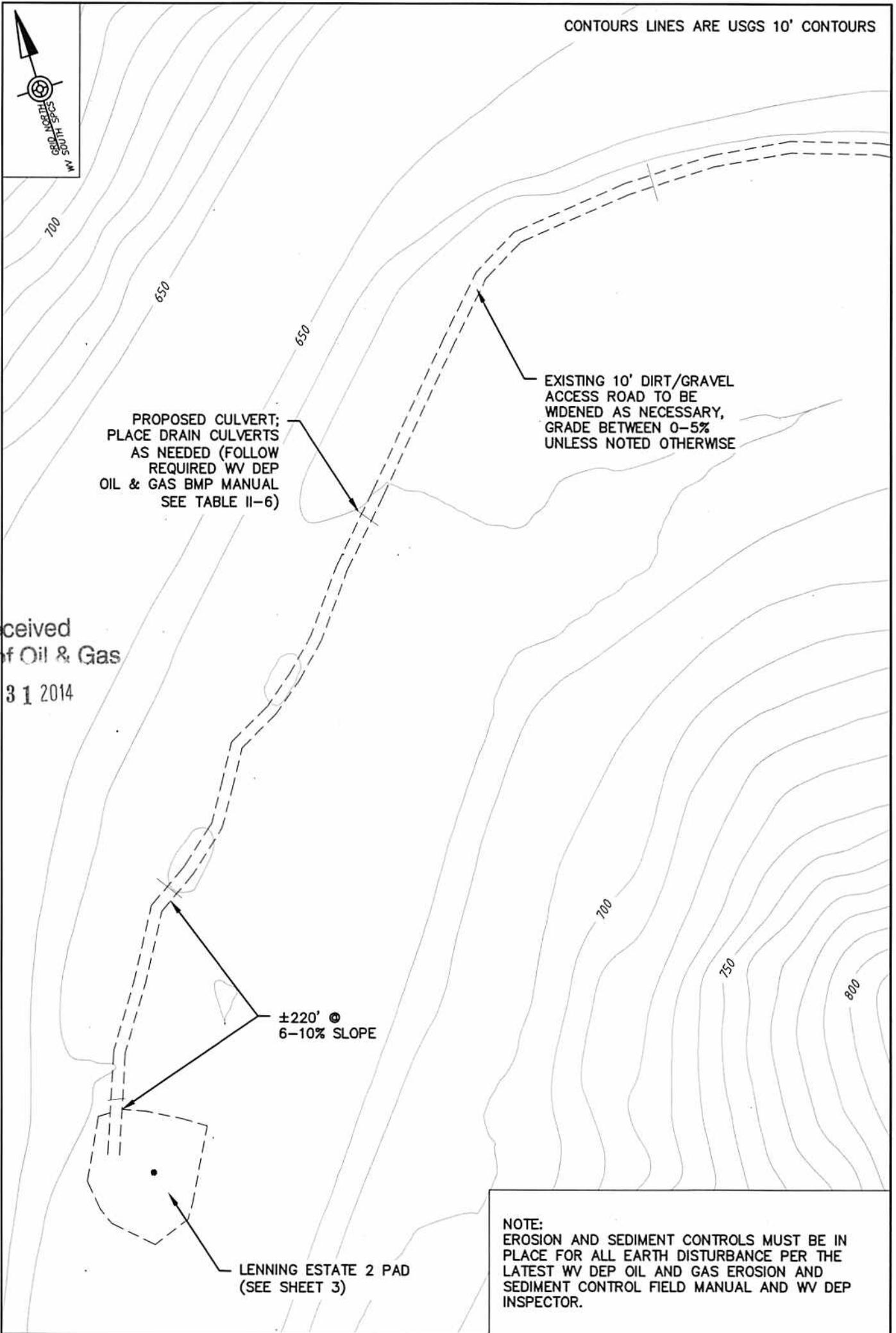
Larson Design Group • Architects Engineers Surveyors
2502 Cranberry Square
Morgantown, WV 26508
PHONE 304.777.2940 TOLL FREE 877.323.6603
FAX 570.323.9902 • www.larsondesigngroup.com



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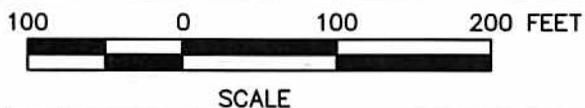
PROJECT NO.:
8744-006
SHEET NO.:
1 of 3

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OCT 31 2014



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Office of Oil & Gas
OCT 31 2014

NOTE:
EROSION AND SEDIMENT CONTROLS MUST BE IN PLACE FOR ALL EARTH DISTURBANCE PER THE LATEST WV DEP OIL AND GAS EROSION AND SEDIMENT CONTROL FIELD MANUAL AND WV DEP INSPECTOR.



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PROJECT NO: 8744-006 SHEET NO: 2 of 3	RECLAMATION PLAN LENNING ESTATES 2 PEYTONA DISTRICT, BOONE COUNTY, WEST VIRGINIA		
	CABOT OIL & GAS CORPORATION FIVE PENN CENTER WEST, SUITE 401 PITTSBURGH, PA 15276-0130 PHONE (304) 369-1771 DATE: 2/26/13 DRAWN BY: RTC CHECKED BY: THK	Larson Design Group • Architects Engineers Surveyors 2502 Cranberry Square Morgantown, WV 26508 PHONE 304.777.2940 TOLL FREE 877.323.6603 FAX 570.323.9902 • www.larsondesigngroup.com	

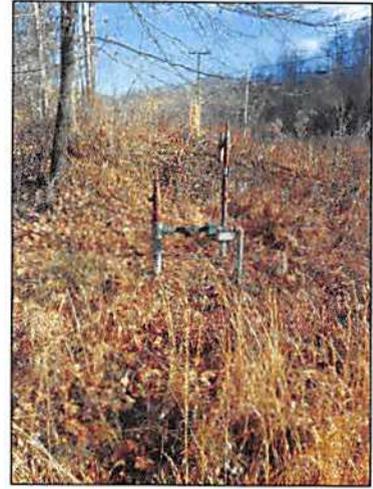
CONTOURS GENERATED FROM SURVEY DATA



~ WOODS ~

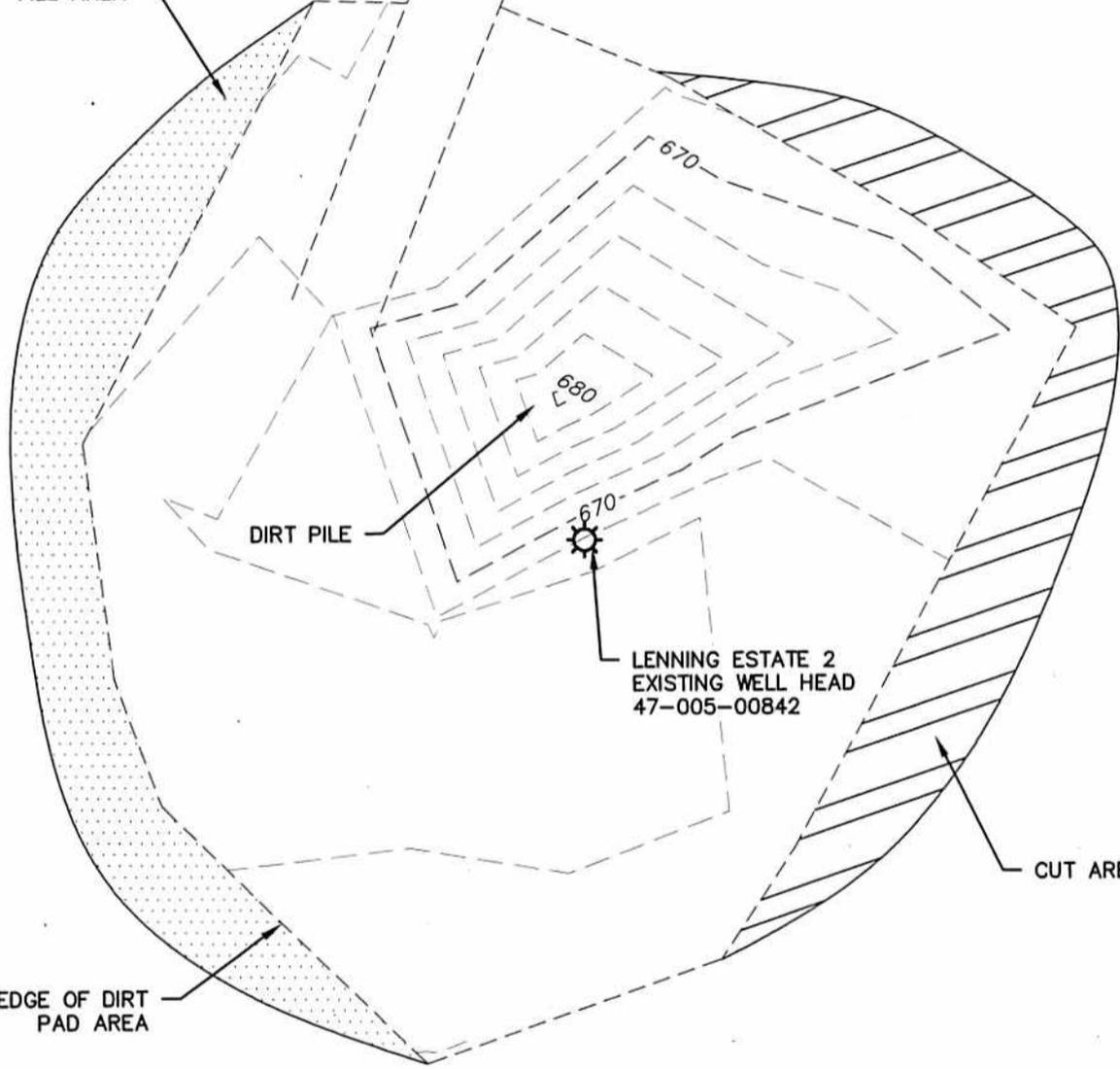
PROPOSED CULVERT;
PLACE DRAIN CULVERTS
AS NEEDED (FOLLOW
REQUIRED WV DEP
OIL & GAS BMP MANUAL
SEE TABLE II-6)

ACCESS ROAD



EXISTING LENNING ESTATE 2 WELL HEAD
PHOTO DATE: 12/19/13

FILL AREA



DIRT PILE

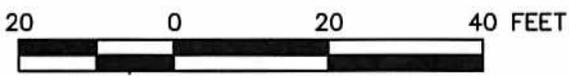
LENNING ESTATE 2
EXISTING WELL HEAD
47-005-00842

CUT AREA

EDGE OF DIRT
PAD AREA

~ WOODS ~

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Office of Oil & Gas
OCT 31 2014



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PROJECT NO.:
8744-006
SHEET NO.:
3 of 3

RECLAMATION PLAN
LENNING ESTATES 2

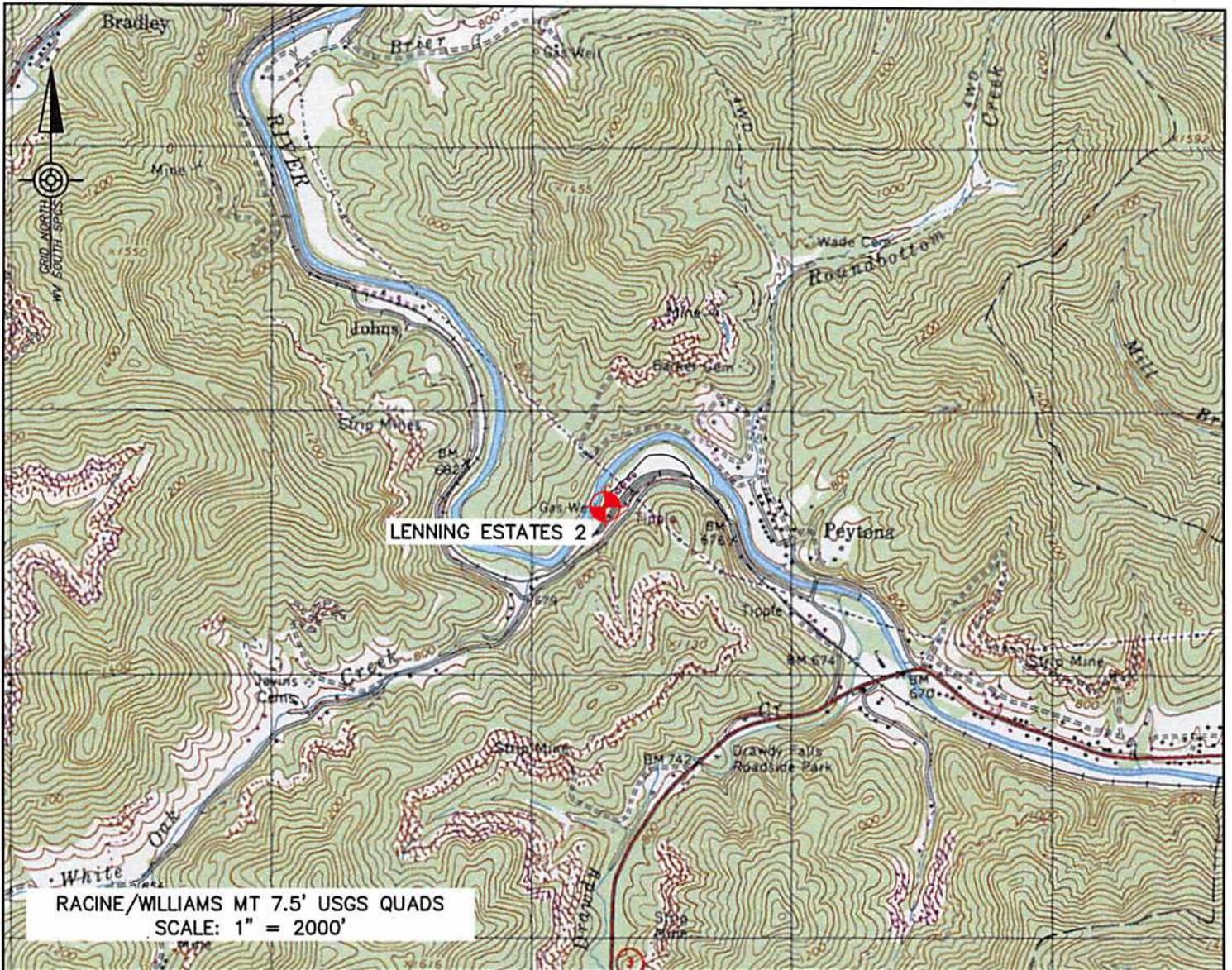
PEYTONA DISTRICT, BOONE COUNTY, WEST VIRGINIA

CABOT OIL & GAS CORPORATION
FIVE PENN CENTER WEST, SUITE 401
PITTSBURGH, PA 15276-0130
PHONE (304) 369-1771
DATE: 2/26/13 DRAWN BY: RTC CHECKED BY: THK

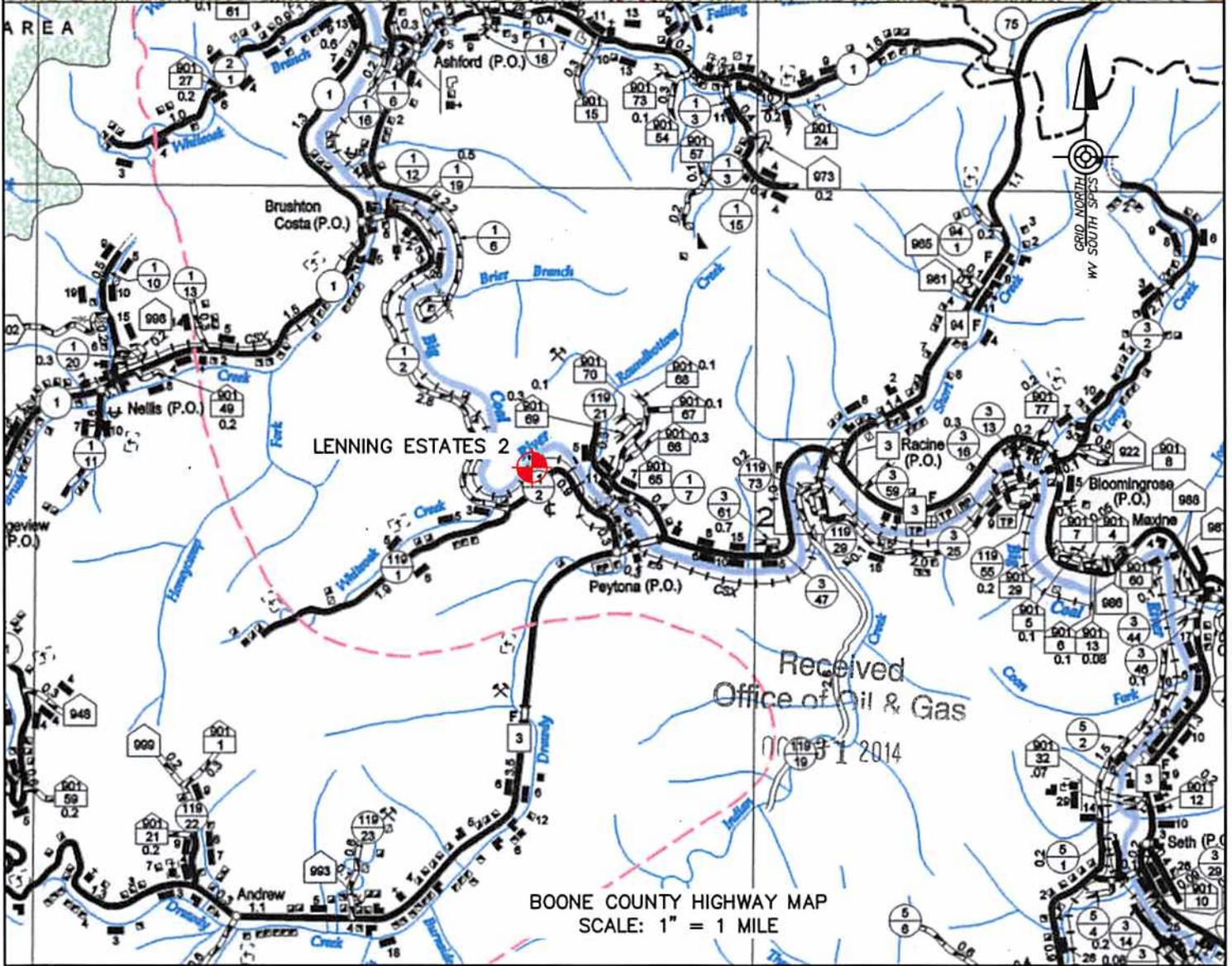
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RACINE/WILLIAMS MT 7.5' USGS QUADS
SCALE: 1" = 2000'



BOONE COUNTY HIGHWAY MAP
SCALE: 1" = 1 MILE

LOCATION MAP LENNING ESTATE 2

PEYTONA DISTRICT, BOONE COUNTY, WEST VIRGINIA

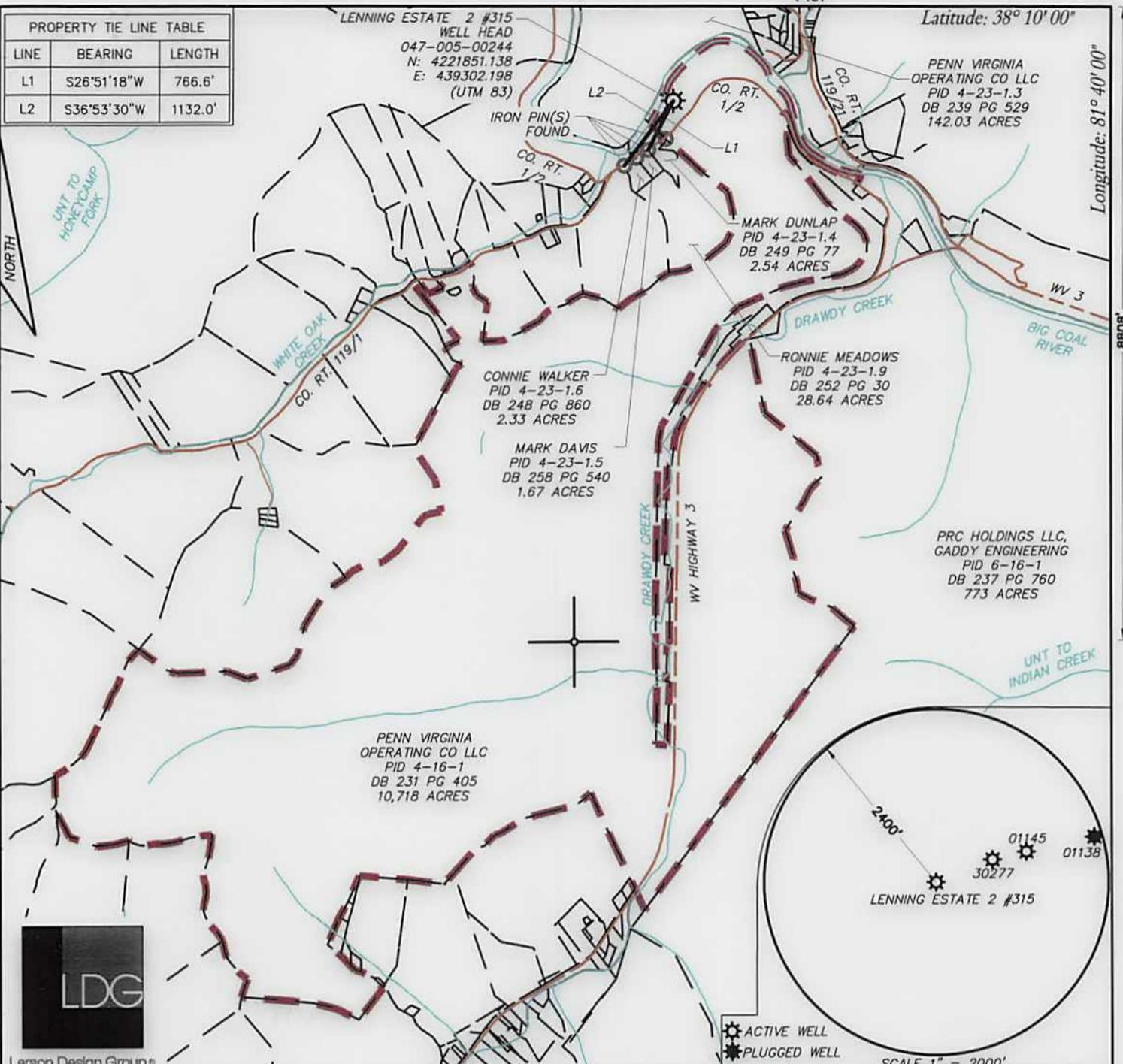
CABOT OIL & GAS CORPORATION
FIVE PENN CENTER WEST, SUITE 401
PITTSBURGH, PA 15276-0130
PHONE
DATE 10/16/14 BY: CHECKED BY:

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PROJECT NO.: 8744-006
SHEET NO.: 1



FILE #: 8744-006
 DRAWING #: 1
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1 in 2500
 PROVEN SOURCE OF ELEVATION: SURVEY GRADE GPS

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 ENVIRONMENTAL PROTECTION.

Signed: *[Signature]*
 R.P.E.: _____ L.L.S.: 1969

TIMOTHY H. KINDER
 LICENSED
 NO. 1969
 STATE OF WEST VIRGINIA
 PROFESSIONAL SURVEYOR

PLACE SEAL HERE

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: BIG COAL RIVER ELEVATION: 668'
 COUNTY/DISTRICT: BOONE/PEYTONA QUADRANGLE: RACINE
 SURFACE OWNER: PENN VIRGINIA OPERATING CO LLC ACREAGE: 10.718
 OIL & GAS ROYALTY OWNER: EAST ENDERS (47-4184) ACREAGE: 1.820
 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____
 TARGET FORMATION: DEVONIAN SHALE ESTIMATED DEPTH: 1851' - 2759'
 WELL OPERATOR CABOT OIL & GAS CORPORATION
 Address FIVE PENN CENTER WEST, SUITE 401
 City PITTSBURGH State PA Zip Code 15276

DATE: JUNE 19, 2014
 OPERATOR'S WELL #: LENNING ESTATE 2 #315
 API WELL #: 47 05 00842-D P
 STATE COUNTY PERMIT

DESIGNATED AGENT WHITNEY JOHNSON
 Address CABOT OIL & GAS CORPORATION, P.O. BOX 450
 City GLASGOW State WV Zip Code 25086

FORM WW-6

500842P



October 29, 2014

Chief
West Virginia Division of Environmental Protection
Office of Oil & Gas
601 57th Street
Charleston, WV 25304

RE: Lenning Estate #~~1~~
Peytona District, Boone County, WV
API # 47-005-00842
Written Application to plug and abandon wellbore

Dear Chief:

In accordance with Article 22-6-23 of the Code of State Regulations regarding oil and gas operations, please find attached a formal application for the plug and abandonment of the subject well.

Notices of our intention to plug this wellbore have been sent to surface owner, coal owner, and coal operators associated with this well. Copies of the certified mail receipts are attached for your records.

If you have any questions or need additional information, I can be reached at 412-249-3850.

Sincerely,



Kenneth L. Marcum
Regulatory Supervisor

Received
Office of Oil & Gas

OCT 31 2014