



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

July 12, 2013

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-10901121, 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: POCA LAND B-31
Farm Name: POCAHONTAS LAND CORP.
API Well Number: 47-10901121
Permit Type: Plugging
Date Issued: 07/12/2013

10901121P

WW-4B
Rev. 2/01

- 1) Date June 25, 2013
- 2) Operator's
Well No. Pocahontas Land B-31
- 3) API Well No. 47-109-01121

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

APPLICATION FOR A PERMIT TO PLUG AND ABANDON

- 4) Well Type: Oil ___/ Gas X/ Liquid injection ___/ Waste disposal ___/
(If "Gas, Production ___ or Underground storage ___) Deep ___/ Shallow X
- 5) Location: Elevation 2,031.37' Watershed Unnamed Tributary of Cabin Creek
District Center County Wyoming Quadrangle Mullens
- 6) Well Operator Cabot Oil & Gas Corporation 7) Designated Agent Brian D. Hall
Address Five Penn Center West, Ste. 401 Address 6804 Lick Creek Road
Pittsburgh, PA 15276 Danville, WV 25053
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Barry Stollings Name Francis Brothers, LLC
Address P.O. Box 1228 Address 622 Church St., N.
Chapmanville, WV 25508 Ripley, WV 25271

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

See Attached Sheet.

JWM OK

Received

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

JUL 1 2013

Work order approved by inspector _____ Date _____

Office of Oil and Gas
WV Dept. of Environmental Protection

07/12/2013

POCAHONTAS LAND B-31
API # 47 - 109 - 01121
PLUGGING PROCEDURE

Current Configuration

DTD @ 3737'

16 conductor @ 43' KB, not cemented

8 ⁵/₈" – 24# J-55 casing @ 1155' KB, cemented & grouted to surface

4 ¹/₂" – 10.5# - J-55 casing @ 3722' KB w/ TOC @ 2090'

2-3/8" – EUE tubing @ 3517' KB

Weir perforations: 3630' – 3656'

Big Lime perforations: 2942' – 2950', 3130' – 3140', & 3295' – 3302'

Little Lime perforations: 2763' – 2773'

Maxton formation: 2550' – 2630' (not perforated)

Ravencliff formation: 1700' – 1720' (not perforated)

Coal @ 290' – 293', 610' – 612', 894' – 897', & 1000' – 1003'

Fresh water @ 110' & 989'

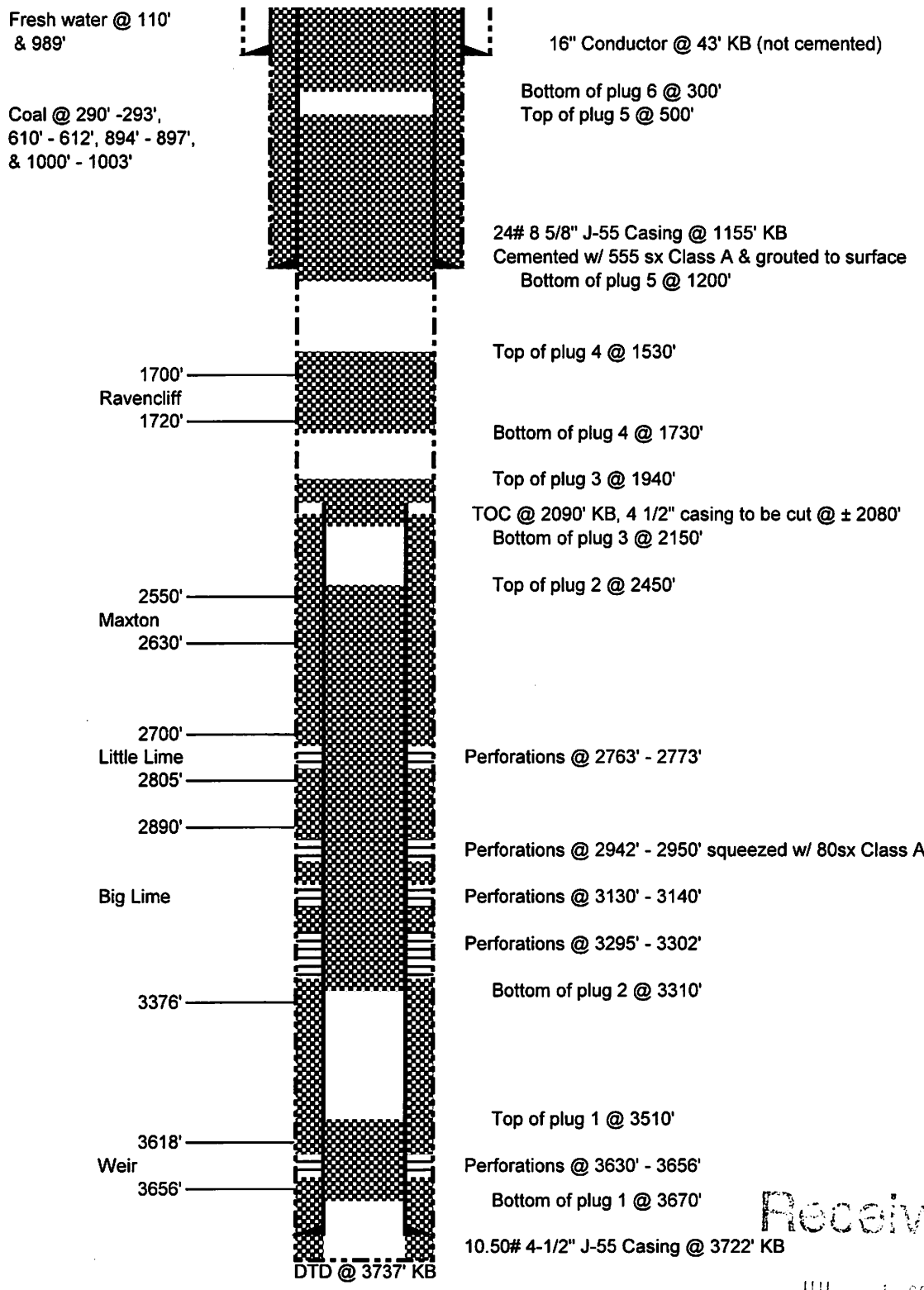
PROCEDURE

1. Contact Pineville District Office a minimum of 48 hours prior to starting work
2. Contact state inspector a minimum of 24 hours prior to starting work.
3. MIRU service rig and blow down well.
4. Lay 2" line from wellhead to pit/tank and stake down securely. Vent 4-1/2" x 8-5/8" annulus.
5. Unpack wellhead and ensure tubing is free and can be pulled.
6. Run rig tools to determine well TD and note any fluid level.
7. Lower tubing to approximately 3670' with five joints of tubing.
8. MIRU Cementing Company.
9. Pump 10 barrels of 6% Gel.
10. Pump 12 sacks of Class A cement for Cement Plug 1 from 3670' to 3510'.
11. Displace with 13 bbls of 6% Gel.
12. Pull tubing to 3310' and pump 65 sacks of Class A cement for Cement Plug 2 from 3310' to 2450'.
13. Displace with 9 bbls of 6% Gel.
14. POOH with tubing and let cement plug set for a minimum of eight hours.
15. Run freepoint and cut 4 1/2" casing where free. Estimate ±2080'. Pick up casing 1 jt and pump 15 bbls 6% gel.
16. POOH with casing.
17. TIH with tubing to 2150' and pump 45 sacks Class A cement for Cement Plug 3 from 2150' to 1940'.
18. Displace with 7 bbls of 6% Gel.
19. Pull tubing up to 1730' and pump 57 sacks of Class A cement for Cement Plug 4 from 1730' to 1530'.
20. Displace with 6 bbls of 6% Gel.
21. Pull tubing up to 1200' and pump 210 sacks of Class A cement for Cement Plug 5 from 1200' to 500'.
22. Displace with 2 bbls of 6% Gel.
23. Pull tubing up to 300' and pump 90 sacks of Class A cement for Cement Plug 6 from 300' to surface.
24. TOOH with tubing and lay down.
25. RDMO Cement company
26. Erect Monument according to Law.
27. RDMO.

Received

JUL 1 2013

Pocahontas Land B-31
API 47-109-01121
PROPOSED CONFIGURATION



Schematic is not to scale

Received

JUL 1 2013
T. On 02/04/13

10901121F

REVISED

WR-35

Date June 27, 2005
API # 47-084-01121F

109-01121F *for*

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas
Well Operator's Report of Well Work

Farm Name: Pocahontas Land Corp. Operator Well No.: Poca Land B-31 Workover

LOCATION: Elevation: 2022' Quadrangle: Mullens
District: Center County: Raleigh
Latitude: 9880' feet South of 37° DEG. 37' MIN. 30" SEC.
Longitude: 3910' feet West of 81° DEG. 27' MIN. 30" SEC.

Company: Cabot Oil & Gas Corporation
900 Lee Street East, Suite 500
Charleston, WV 25301

Agent: Thomas S. Liberatore
Inspector: Barry Stollings
Permit Issued: 1/14/2004

Well Work Commenced: February 19, 2004
Well Work Completed: March 3, 2004
Verbal Plugging: _____
Permission granted on:
Rotary X Cable _____
Total Depth (feet) 3722
Fresh Water Depths (ft) See Original Completion Report
Salt Water Depths (ft) See Original Completion Report
Is coal being mined in area (Y/N)? Y
Coal Depths (ft) See Original Completion Report

Casing & Tubing Size	Used in Drilling	Left In Well	Cement Fill Up Cu. Ft.
16"	43'	43'	Existing
8 5/8"	1155'	1155'	Existing
4 1/2"		3722'	Existing
Squeeze into perms @ 2922			95
2 3/8"		3122'	N/A

OPEN FLOW DATA

Producing Formation Big Lime Pay Zone 3130-3140
Depth (ft) 2763-2773
Gas: Initial Open Flow Not Reported MCF/d Oil: Initial Open Flow 0 Bbl/d
Final Open Flow 103 MCF/d Final Open Flow 0 Bbl/d
Time of open flow between initial and final tests 8 Hours
Static rock pressure 110 psig surface pressure after 2 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 SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE

For: CABOT OIL & GAS CORPORATION

By: W. A. [Signature] Drilling Superintendent
Date: 6/28/05

RECEIVED
Office of Oil & Gas
Office of Chief
JUL 05 2005
WV Department of
Environmental Protection

Receive 07/12/2013

JUL 1 2005

Mullens Office of Oil and Gas
WV Dept. of Environmental

109 01121F

109-1121F

STAGE	PERFS	ACID 15% HCl	FOAM	SAND (lbs)	NITROGEN (scf)	BDP	ATP	MTP	ISIP
1-Big Lime	3130-3140 (40)	250 gal	75Q	29225	443,000		2900	3581	2725
2-Big Lime	2763-2773 (40)	250 gal	75Q	30413	391,290		2422	2471	2131

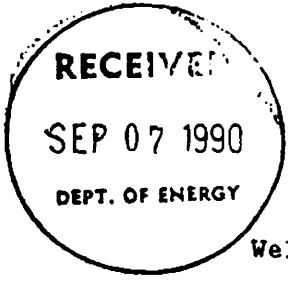
FORMATION	TOP	BOTTOM	REMARKS
Surface Rock	Surface	750	
Sandstone	750	1155	
Shale	1155	1220	
Sandstone	1220	1445	
Shale	1445	1700	
Ravenclyff	1700	1720	
Shale	1720	1765	
Avis	1765	1815	
Shale w/ Siltstone	1815	2550	
Sandstone	2550	2630	
Shale	2630	2700	
Little Lime	2700	2805	
Pencil Cave	2805	2890	
Big Lime	2890	3376	
Shale	3376	3618	
Weir	3618	3658	
Shale	3658	3722	TD

07/12/2013

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JUL 1 2013

WR-35



03-Nov-89
API # 47-109-01121

State of West Virginia
DEPARTMENT OF ENERGY
Division of Oil and Gas
Well Operator's Report of Well Work

Farm name: POCAHONTAS LAND CORP.
Location: Elevation: 2027.86

Operator Well No.: POCAHONTAS B-31
Quadrangle: MULLENS

District: CENTER
Latitude: 9900 Feet South of 37 Deg. 37 Min. 30 Sec.
Longitude: 3800 Feet West of 81 Deg. 27 Min. 30 Sec.

Company: CABOT OIL & GAS CORPORATION
P. O. Box 1473
Charleston, WV 25325

Agent: DAVID G. MCCLUSKEY

Inspector: RODNEY G. DILLON
Permit Issued: 11/3/89
Well Work Commenced: 12/6/89
Well Work Completed: 12/13/89
Verbal Plugging
Permission granted on:
Rotary X Cable _____ Rig _____
Total Depth (feet) 3737
Fresh water depths (ft) 110, 989
Salt water depths (ft) N/A
Is coal being mined in area (Y/N): Y
Coal Depths (ft): 290-293, 610-612, 894-897, 1000-1003

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
16"	43'	43'	
8-5/8"	1155.45'	1155.45'	605 sks CL-A w/ 3% CC
4-1/2"	3722'	3722'	190 sks CL-A w/ 2% gel, 1% CC
1-1/2"		3636'	

OPEN FLOW DATA

Producing formation Berea Pay zone depth (ft) 3630-3656
Big Lime Pay zone depth (ft) 2942-3302
Gas: Initial open flow SSG MCF/d Oil: Initial open flow 0 Bbl/d
Final open flow 1254 MCF/d Final open flow 0 Bbl/d
Time of open flow between initial and final tests 240 Hours
Static rock Pressure 740 psig (surface pressure) after 0 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: CABOT OIL & GAS CORPORATION
By: David G McCluskey
Date: 9-6-90

07/12/2013

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JUL 1 2013

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

Perforate Berea 3630'-3656' 1 SP2F (14 holes). Break down Weir w/ 500 gal 15% HCl. BDP 1406 psi. ISIP 1347 psi. Treated w/ 70,000 lbs sand & 461,570 scf N₂ in 75Q foam. Perforate Big Lime 2942'-2950' 1 SPF (9 holes), 3130'-3140' 1 SPF (11 holes) & 3295'-3302' 1 SPF (8 holes). Break down Big Lime w/ 500 gal 15% HCl w/ frac ball. BDP 1673 psi. ISIP 1864 psi. Treated w/ 103 bbls acid.

FORMATION	TOP	BOTTOM
Surface Rock	0	
Sandstone	750	750
Shale	1155	1155
Sandstone	1220	1220
Shale	1445	1445
Ravencliff	1700	1700
Shale	1720	1720
Avis	1765	1765
Shale w/ Siltstone	1815	1815
Sandstone	2550	2550
Shale	2630	2630
Little Lime	2700	2700
Pencil Cave	2805	2805
Big Lime	2890	2890
Shale	3376	3376
Weir	3618	3618
Shale	3658	3658
		TD

9736

Received

07/12/2013

JUL 1 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

109 01121

WW-4A
Revised 6-07

1) Date: June 25, 2013
2) Operator's Well Number
Pocahontas Land B-31
3) API Well No.: 47 - 109 - 01121

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

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Pocahontas Land Corporation</u> ✓	Name <u>See Attached Sheet</u>
Address <u>P.O. Box 1517</u>	Address _____
<u>Bluefield, WV 24701</u>	_____
(b) Name <u>Anthony R. Flaim & Donna S. Flaim</u> ✓	(b) Coal Owner(s) with Declaration
Address <u>P.O. Box 944</u>	Name <u>Pocahontas Land Corporation</u> ✓
<u>Pineville, WV 24874</u>	Address <u>P.O. Box 1517</u>
(c) Name _____	<u>Bluefield, WV 24874</u>
Address _____	Name _____
_____	Address _____
6) Inspector <u>Barry Stollings</u> ✓	(c) Coal Lessee with Declaration
Address <u>P.O. Box 1228</u>	Name <u>Consolidation Coal Co.</u> ✓ <u>Riverside Energy Co.</u> ✓
<u>Chapmanville, WV 25508</u>	Address <u>1800 Washington Rd. c/o Brooks Run Mining</u>
Telephone <u>(304) 552-4194</u>	<u>Pittsburgh, PA 15241</u> <u>208 Business St., Beckley, WV 25801</u>

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

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

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

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

COMMONWEALTH OF PENNSYLVANIA
 Notarial Seal
 Constance C. Carden, Notary Public
 McDonald Boro, Washington County
 My Commission Expires Nov. 16, 2013
 Member, Pennsylvania Association of Notaries

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 25th day of June, 2013
Constance C. Carden Notary Public
 My Commission Expires November 16, 2013

Received

Oil and Gas Privacy Notice

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

Office of Oil and Gas
WV Dept. of Environmental Protection

07/12/2013

**COAL OPERATOR
POCAHONTAS LAND B-31**

47-109-01121

Chief Mining, Inc. ✓
P.O. Box 446
Glen Daniel, WV 25844

Baylor Mining, Inc. ✓
P.O. Box 577
Mabscott, WV 25871

Brooks Run Mining Company, LLC ✓
208 Business Street
Beckley, Wv 25801

Pinnacle Mining Co., LLC ✓
P.O. Box 338
Pineville, WV 24874

Lo Down Energy, Inc. ✓
P.O. Box 421
Hurley, VA 24620

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JUL 1 2013

Office of Oil and Gas
WV Dept. of Environmental Protection

07/12/2013

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

CONSTRUCTION AND RECLAMATION PLAN AND SITE REGISTRATION APPLICATION FORM
GENERAL PERMIT FOR OIL AND GAS PIT WASTE DISCHARGE

Operator Name Cabot Oil & Gas Corporation OP Code

Watershed Unnamed Tributary of Cabin Creek Quadrangle Mullens *49B*

Elevation 2,031.37' County Wyoming *109* District Center *03*

Description of anticipated Pit Waste: None - no cuttings produced during plugging operation

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

Will a synthetic liner be used in the pit? N/A . If so, what mil.?

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)
- XX** Other (Explain **no treated pit wastes will be produced**)

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?

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

Subscribed and sworn before me this 25th day of June, 2013

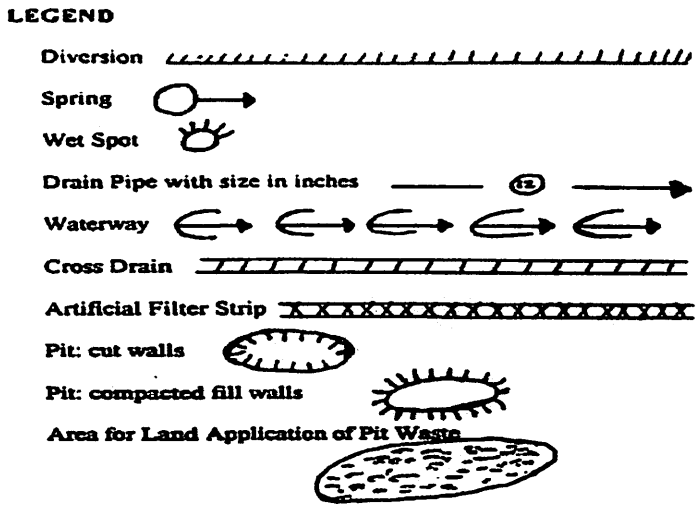
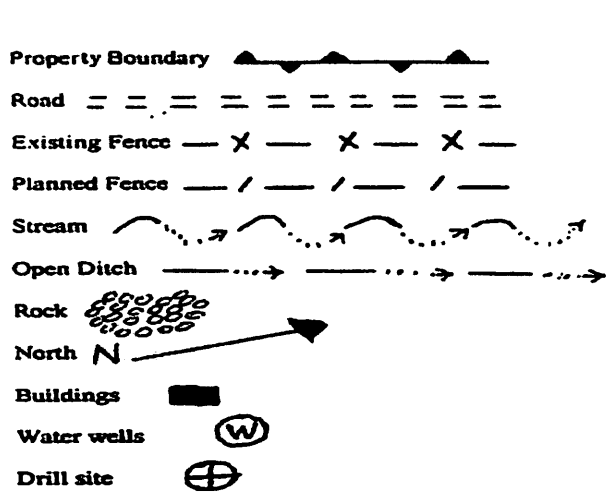
Constance C. Carden Notary Public

Received

My commission expires November 16, 2013

COMMONWEALTH OF PENNSYLVANIA
Notarial Seal
Constance C. Carden, Notary Public
McDonald Boro, Washington County
My Commission Expires Nov. 16, 2013
Member, Pennsylvania Association of Notaries

07/12/2013



Proposed Revegetation Treatment: Acres Disturbed _____ 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 Trefoil - 10		Yellow Clover - 5	Birdsfoot Trefoil - 10	

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: _____

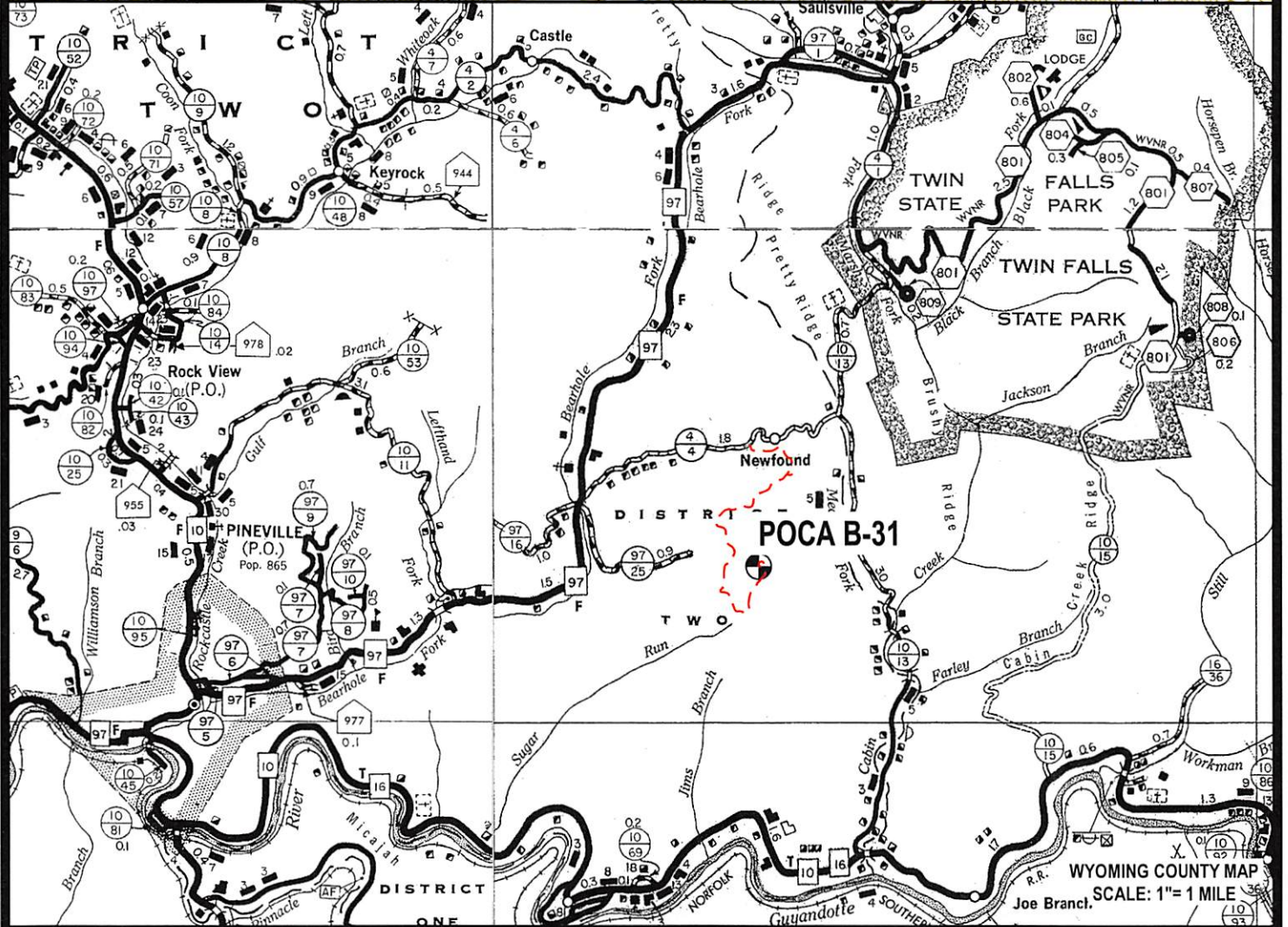
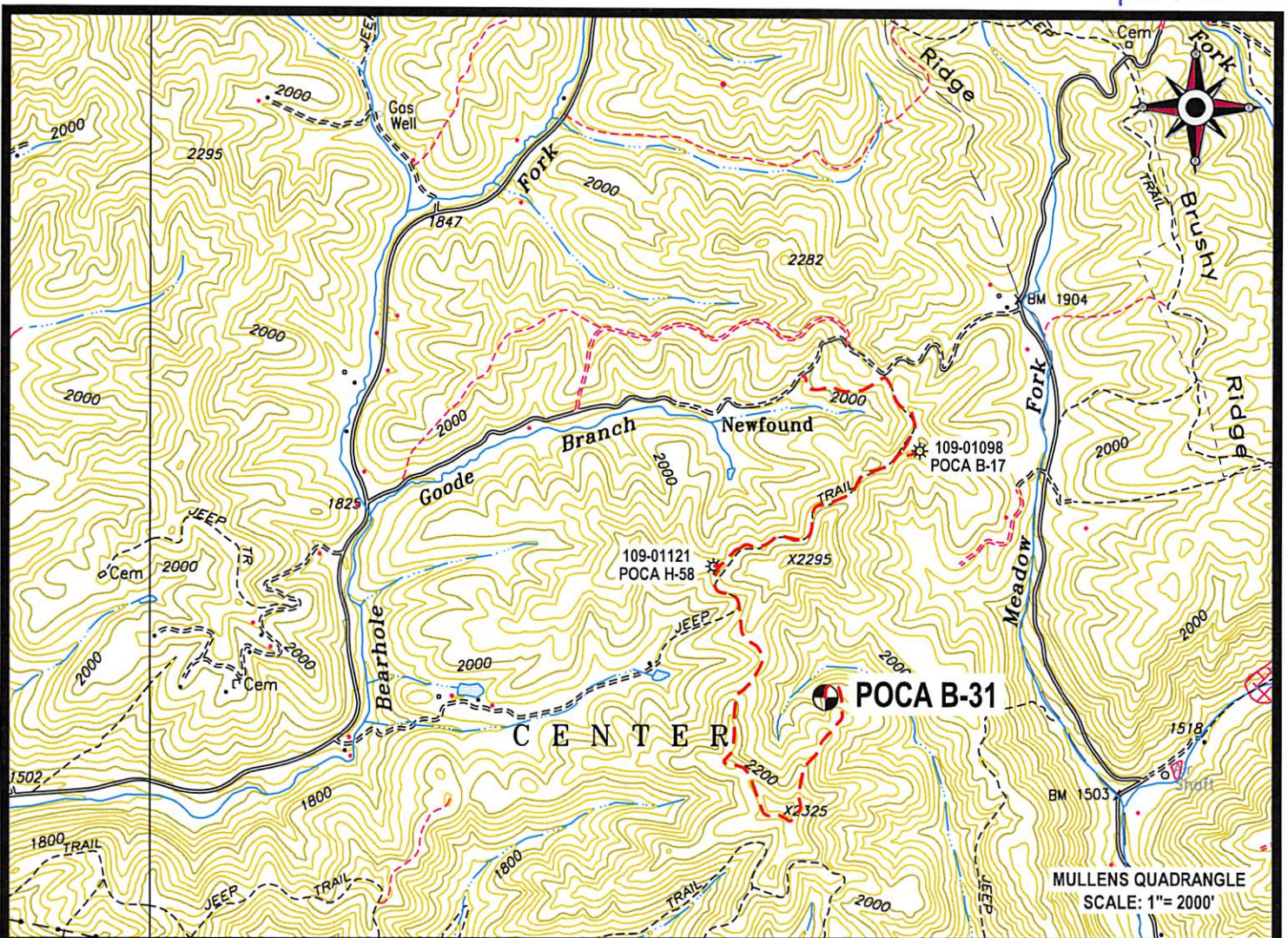
Received

JUL 1 2013

Title: _____ Date: _____

Field Reviewed? () Yes () No

Office of Oil and Gas
WV Dept. of Environmental Protection



 Cabot Oil & Gas Corporation

POCA B-31

LOCATION MAP

07/12/2013



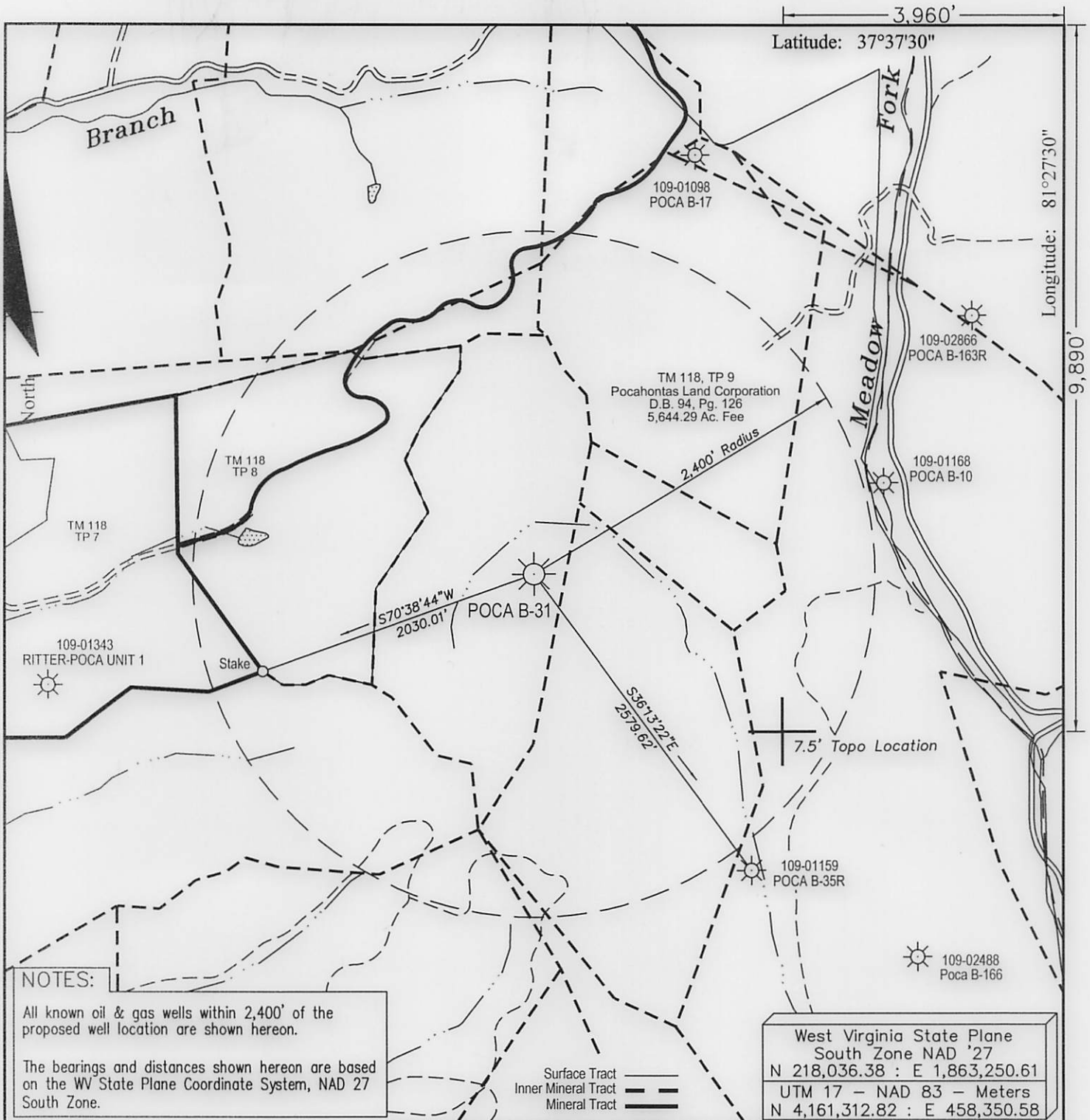
CUNNINGHAM

LAND SURVEYING & MAPPING SERVICES, LLC

- 5213 STEPHEN WAY •
- CROSS LANES, WEST VIRGINIA 25313 •
- VOICE (304) 561-4129 • FAX (304) 776-0703 •
- E-MAIL ADDRESS • DKCUNNINGHAM@SUDDENLINK.NET •

LOCATED ON THE WATERS OF GOODE BRANCH
OF BEARHOLE FORK
CENTER DISTRICT, WYOMING COUNTY, W.VA
MULLENS QUADRANGLE

PROJECT NO. CABOT	DWG. NO. POCA B-31 LOC.DWG
DATE: 05/13/13	SCALE: AS NOTED
DRAWN BY: G. PERKINS	CHK'D BY: D.K.C.
FILE: C:\PROJECT FOLDER\CABOT	



NOTES:

All known oil & gas wells within 2,400' of the proposed well location are shown hereon.

The bearings and distances shown hereon are based on the WV State Plane Coordinate System, NAD 27 South Zone.

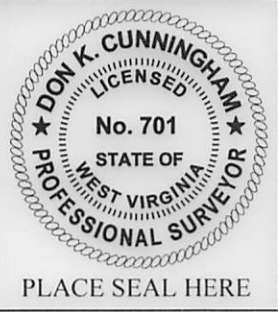
Surface Tract ———
 Inner Mineral Tract - - -
 Mineral Tract = = =

West Virginia State Plane
 South Zone NAD '27
 N 218,036.38 : E 1,863,250.61
 UTM 17 - NAD 83 - Meters
 N 4,161,312.82 : E 458,350.58

FILE #: _____
 DRAWING #: Poca B-31 ww6
 SCALE: 1" = 1000'
 MINIMUM DEGREE OF ACCURACY: 1 : 12,729
 PROVEN SOURCE OF ELEVATION: Global Positioning System (GPS)

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 ENVIRONMENTAL PROTECTION.

Signed: Don K. Cunningham
 R.P.E.: _____ L.L.S.: 701



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



DATE: March 23, 2013
 OPERATOR'S WELL #: Poca B-31
 API WELL #: 47 109 01121P
 STATE COUNTY PERMIT

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

WATERSHED: Unnamed Tributary of Cabin Creek ELEVATION: 2,031.37'

COUNTY/DISTRICT: Wyoming / Center QUADRANGLE: Mullens

SURFACE OWNER: Pocahontas Land Corporation ACREAGE: 5,644.29

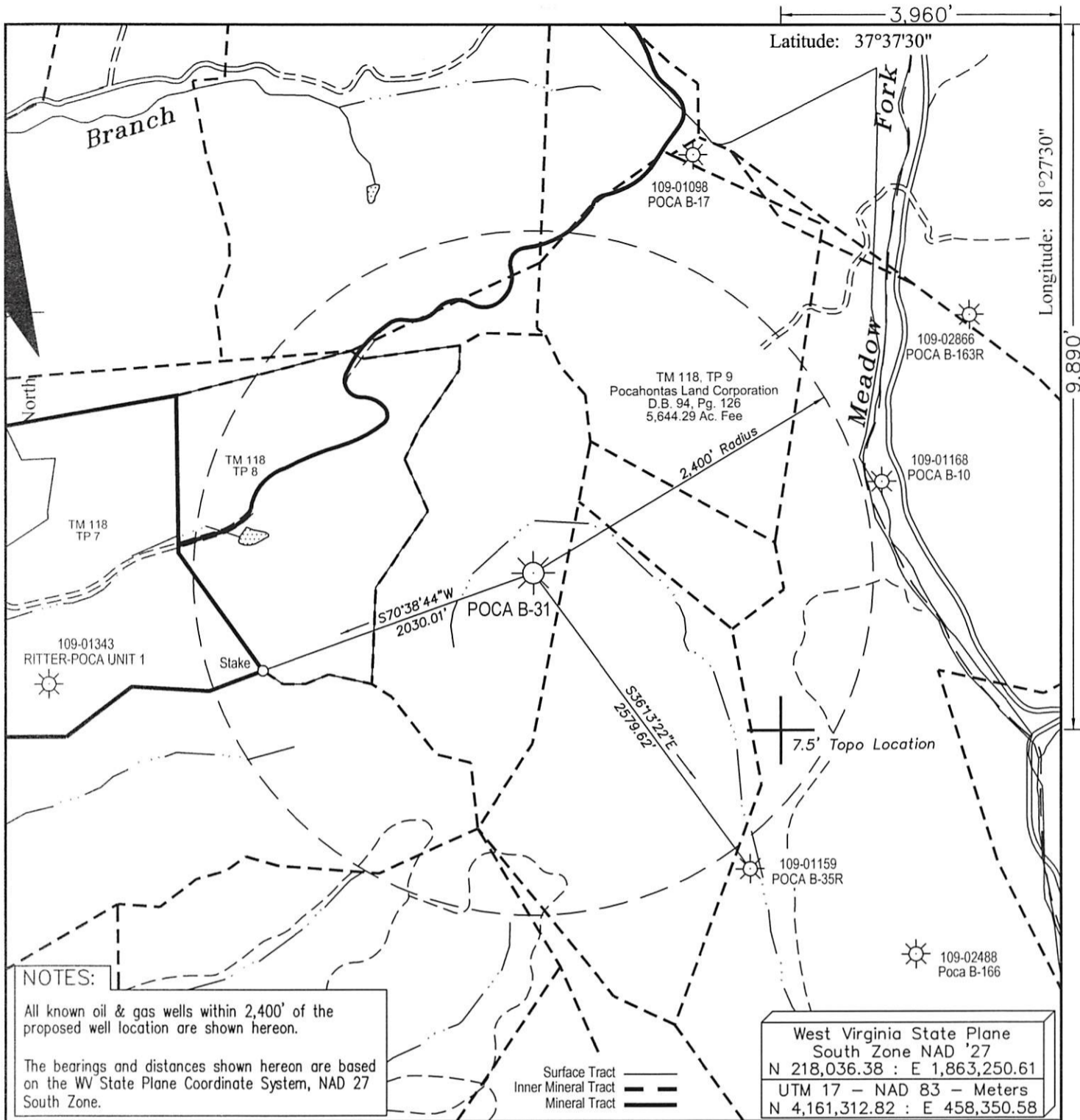
OIL & GAS ROYALTY OWNER: Penn Virginia Oil & Gas Corporation ACREAGE: 5,485.0

LEASE #: 47-0480 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: _____ ESTIMATED DEPTH: _____

WELL OPERATOR Cabot Oil & Gas Corp. DESIGNATED AGENT Brian Hall
 Address Five Penn Center West, Suite 401 Address P.O. Box 260
 City Pittsburgh State PA Zip Code 15276 City Danville State WV Zip Code 25053

07/12/2013



NOTES:

All known oil & gas wells within 2,400' of the proposed well location are shown hereon.

The bearings and distances shown hereon are based on the WV State Plane Coordinate System, NAD 27 South Zone.

Surface Tract Inner Mineral Tract Mineral Tract

West Virginia State Plane
South Zone NAD '27
N 218,036.38 : E 1,863,250.61
UTM 17 - NAD 83 - Meters
N 4,161,312.82 : E 458,350.58

FILE #: _____
DRAWING #: Poca B-31 ww6
SCALE: 1" = 1000'
MINIMUM DEGREE OF ACCURACY: 1 : 12,729
PROVEN SOURCE OF ELEVATION: Global Positioning System (GPS)

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 ENVIRONMENTAL PROTECTION.

Signed: Don K. Cunningham
R.P.E.: _____ L.L.S.: 701



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



DATE: March 23, 2013
OPERATOR'S WELL #: Poca B-31
API WELL #: 47 109 01121P
STATE COUNTY PERMIT

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

WATERSHED: Unnamed Tributary of Cabin Creek ELEVATION: 2,031.37'

COUNTY/DISTRICT: Wyoming / Center QUADRANGLE: Mullens

SURFACE OWNER: Pocahontas Land Corporation ACREAGE: 5,644.29

OIL & GAS ROYALTY OWNER: Penn Virginia Oil & Gas Corporation ACREAGE: 5,485.0

LEASE #: 47-0480 DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATED
PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: _____ ESTIMATED DEPTH: _____

WELL OPERATOR Cabot Oil & Gas Corp. DESIGNATED AGENT Brian Hall
Address Five Penn Center West, Suite 401 Address P.O. Box 260
City Pittsburgh State PA Zip Code 15276 City Danville State WV Zip Code 25053

07/12/2013
Office of Oil and Gas
WV Dept. of Environmental Protection

Received

GENERAL NOTES:

THIS DRAWING REPRESENTS A SCHEMATIC REPRESENTATION OF THE PROPOSED WELL SITE AND ACCESS ROAD. PROPOSED STRUCTURES SUCH AS THE DRILLING PIT, ROADWAY, CULVERTS, SEDIMENT BARRIERS, ETC. ARE SHOWN IN THEIR APPROXIMATE PREPLANNING CONFIGURATION. GIVEN UNFORESEEN CIRCUMSTANCES, THE AS-BUILT LOCATION OF THESE STRUCTURES MAY VARY SLIGHTLY FROM THE LOCATION SHOWN ON THE ATTACHED DRAWINGS.

ALL ROADS SHOWN THEREON ARE EXISTING UNLESS OTHERWISE NOTED AND SHALL BE MAINTAINED IN ACCORDANCE WITH GUIDELINES AND REQUIREMENTS OF WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL MANUAL.

ALL CULVERTS SHOWN ON THIS DRAWING ARE PROPOSED AND WILL BE A MINIMUM OF 15" IN DIAMETER UNLESS OTHERWISE NOTED.

DITCH LINES AND CULVERTS WILL BE INSTALLED WHENEVER PRACTICAL. HOWEVER PORTIONS OF THE EXISTING/ PROPOSED ROADS WHICH ARE LOCATED IN SOLID ROCK SHALL NOT REQUIRE DITCHES OR CROSS DRAINS, UNLESS OTHERWISE WARRANTED BY FIELD CIRCUMSTANCES.

SUPPLEMENTAL DRAINAGE AND/OR SEDIMENT CONTROL STRUCTURES MEASURES IN ADDITION TO THOSE SHOWN ON THE ATTACHED DRAWINGS WILL BE INSTALLED WHEN AND WHERE DEEMED NECESSARY. SUCH ADDITIONAL MEASURES MAY CONSIST OF EITHER STRAW BALES, SILT FENCES OR OTHER MEASURES OUTLINED IN THE WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL FIELD MANUAL.

SEDIMENT BASINS (TRAPS) WILL BE CONSTRUCTED AT ALL CULVERTS AND CROSS DRAINS INLETS AS REQUIRED IN THE WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL 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.

A SEDIMENT BARRIERS OF EITHER BRUSH, STRAW BALES, FILTER FENCE, ETC. WILL BE INSTALLED AND MAINTAINED BELOW THE OUT FALL OF ALL PROPOSED CULVERTS AND AT ALL OTHER STORM WATER DRAINAGE POINTS FROM EITHER THE ROADWAY OR THE LOCATION.

ALL NECESSARY TIMBER OR BRUSH WILL BE REMOVED FROM ROUTE OF THE ROADWAY AND LOCATION BY CLEANING AND GRUBBING ACTIVITIES. ANY SALVAGEABLE TIMBER WILL BE CUT AND STACKED TO THE SIDE OF THE ROADWAY OR REMOVED TO A STOCKPILE AREA. THE REMAINING TIMBER OR BRUSH WILL BE CUTUP AND WIND ROWED BELOW THE OUTSLOPE OF THE CONSTRUCTION AREAS TO BE UTILIZED AS A SEDIMENT BARRIER.

SEPARATE PERMITS WILL BE OBTAINED FROM THE WEST VIRGINIA DEPARTMENT OF TRANSPORTATION FOR ALL POINTS OF INGRESS AND EGRESS FROM COUNTY AND STATE ROADS. THESE INGRESS AND EGRESS POINTS WILL BE MAINTAINED IN ACCORDANCE WITH CURRENT WEST VIRGINIA DEPARTMENT OF TRANSPORTATION REGULATIONS. A STABILIZED CONSTRUCTION ENTRANCE CONSISTING OF 8" OF CRUSHED STONE WILL BE CONSTRUCTED FOR A MINIMUM DISTANCE OF 50' FROM THE INGRESS AND EGRESS POINTS OF ALL PUBLIC ROADWAYS IN ACCORDANCE WITH CURRENT WEST VIRGINIA DEPARTMENT OF TRANSPORTATION REGULATIONS.

ALL CULVERTS SHOWN ON THE ATTACHED DRAWINGS ARE TO BE CONSIDERED PERMANENT AND WILL REMAIN IN PLACE AFTER COMPLETION OF CONSTRUCTION ACTIVITIES UNLESS NOTED OTHERWISE. A STABILIZED OUTLET CONTROL DEVICE SUCH AS RIP RAP, NATURAL STONE, BRUSH, ETC. WILL BE INSTALLED BELOW THE OUT FALL OF ANY ROADWAY CULVERT(S) WHICH ARE NOT LOCATED IN A STREAM OR CREEK.

PERMANENT CROSS DRAINS OR WATER BARS WILL BE INSTALLED AS AN INTEGRAL PART OF THE RECLAMATION PROCESS AND SHALL BE SPACED IN ACCORDANCE WITH AS-BUILT ROADWAY SLOPES AND TABLE 11-4 OF THE WEST VIRGINIA DEPARTMENT OF OIL AND GAS EROSION AND SEDIMENT CONTROL FIELD MANUAL.

TEMPORARY SEEDING AND MULCHING WILL BE UTILIZED TO PROVIDE A VEGETATIVE COVER ON ALL DISTURBED AREAS I.E. ROADWAYS, LOCATION, ROAD/LOCATION SLOPES AND ANY OTHER AREAS THAT ARE DISTURBED BY CONSTRUCTION ACTIVITIES.

THE LOCATION OF DRILLING PIT(S) MAY BE ADJUSTED TO THE MOST ENVIRONMENTAL SAFE SITE TO MEET THE REQUIREMENTS OF THE WVDEP.

CONTRACTORS NOTE:

IT IS THE RESPONSIBILITY OF THE CONSTRUCTION CONTRACTOR TO FIELD VERIFY THE EXACT LOCATION AND CONDITION OF ALL UNDERGROUND UTILITIES, SANITARY SEWERS, STORM SEWERS, ETC. PRIOR TO THE COMMENCEMENT OF ANY/OR CONSTRUCTION ACTIVITIES. DIG WITH C.A.R.E. CALL MISS UTILITY 1-800-245-4848.

ROAD GRADE (%)	DISTANCE (FT)
1	400
2	250
5	135
10	80
15	60
20	45

ROAD GRADE (%)	DISTANCE (FT)
2-5	500-300
6-10	300-200
11-15	200-100
16-20	100



1-800-245-4848

DRAWING LEGEND

- PROPOSED ROAD -----
- EXISTING ROAD - - - - -
- STRAW BALES [Symbol]
- SILT FENCE [Symbol]
- BRUSH BARRIER [Symbol]
- TREE LINE [Symbol]
- ROCK RIP RAP [Symbol]
- CROSS DRAIN [Symbol]
- CULVERT [Symbol]
- DRILLING PIT [Symbol]
- ROAD DITCH [Symbol]
- GAS LINE [Symbol]
- FENCE LINE [Symbol]
- ROCK OUTCROP [Symbol]
- WATER WELL [Symbol]
- HOUSE/STRUCTURE [Symbol]
- UTILITY POLE [Symbol]
- SPRING [Symbol]
- WET SPOT [Symbol]
- PIT WASTE APP. AREA [Symbol]

DRIVING DIRECTIONS FOR POCA #B-31

- 1.) FROM CABOT'S DISTRICT OFFICE IN PINEVILLE, W.VA DRIVE NORTH ON STATE ROUTE 10 FOR 1.2 MILES± TO STATE ROUTE 97.
- 2.) TURN RIGHT ONTO STATE ROUTE 97 AND GO EASTERLY FOR 3.0 MILES± TO SECONDARY ROUTE 4/4.
- 3.) TURN RIGHT ONTO SECONDARY ROUTE 4/4 AND GO EASTERLY FOR 1.1 MILES± TO THE BEGINNING OF AN EXISTING ACCESS ROAD FOR POCA B-31, LOCATED ON THE RIGHT-HAND SIDE OF THE ROAD.
- 4.) TURN RIGHT ONTO THE EXISTING ACCESS ROAD AND GO SOUTHERLY FOR 1.9 MILES± TO THE PROPOSED WELL SITE FLAGGED IN THE FIELD AS SHOWN ON THE "CONSTRUCTION AND RECLAMATION PLAN".

Received

JUL 1 2013

07/12/2013

Office of Oil and Gas
WV Dept. of Environmental Protection

1090121P



DRAWING LEGEND			
PROPOSED ROAD		ROAD DITCH	
EXISTING ROAD		GAS LINE	
STRAW BALES		FENCE LINE	
SILT FENCE		ROCK OUTCROP	
BRUSH BARRIER		WATER WELL	
TREE LINE		HOUSE/STRUCTURE	
ROCK RIP RAP		UTILITY POLE	
CROSS DRAIN		SPRING	
CULVERT		WET SPOT	
DRILLING PIT		PIT WASTE APP. AREA	

TM 136, TP 1
Pocahontas Land Corporation
D.B. 94, Pg. 126
5,644.29 Ac. Fee

TM 118, TP 9
Pocahontas Land Corporation
D.B. 94, Pg. 126
5,644.29 Ac. Fee

NOTE:
Apply all culverts as needed.

15" C.P.P.
EXISTING ROAD
+3% TO +6%
370'±
15" C.P.P.

2000
MATCH LINE SHEET 2



POCA B-31				
CONSTRUCTION & RECLAMATION SITE PLAN				
SITUATED ON THE WATERS OF UNAMED TRIBUTARY OF CABIN CREEK CENTER DISTRICT, WYOMING COUNTY, W.VA MULLENS QUADRANGLE				
SHEET NUMBER	SCALE:	DRAWN BY:	DATE:	CHK'D. BY:
1 OF 5	1"=200'	J.M.JONES	05/21/13	DKC

1090121P

DRAWING LEGEND		
PROPOSED ROAD	ROAD DITCH	
EXISTING ROAD	GAS LINE	
STRAW BALES	FENCE LINE	
SILT FENCE	ROCK OUTCROP	
BRUSH BARRIER	WATER WELL	
TREE LINE	HOUSE/STRUCTURE	
ROCK RIP RAP	UTILITY POLE	
CROSS DRAIN	SPRING	
CULVERT	WET SPOT	
DRILLING PIT	PIT WASTE APP. AREA	

MATCH LINE SHEET 1



TM 118, TP 9
Pocahontas Land Corporation
D.B. 94, Pg. 126
5,644.29 Ac. Fee

TM 118, TP 9
Pocahontas Land Corporation
D.B. 94, Pg. 126
5,644.29 Ac. Fee

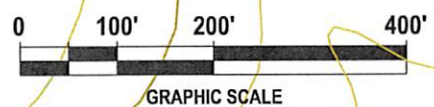
NOTE:
Apply all culverts as needed.

Received

JUL 1 2013

Office of Oil and Gas
West Virginia Dept. of Environmental Protection

POCA B-31				
CONSTRUCTION & RECLAMATION SITE PLAN				
SITUATED ON THE WATERS OF UNAMED TRIBUTARY OF CABIN CREEK CENTER DISTRICT, WYOMING COUNTY, W.VA MULLENS QUADRANGLE				
SHEET NUMBER	SCALE:	DRAWN BY:	DATE:	CHK'D. BY:
2 OF 5	1"=200'	J.M.JONES	05/21/13	DKC



MATCH LINE SHEET 3

EXISTING ROAD
+1% TO +3%
460'±

15" C.P.P.

EXISTING ROAD
-1% TO -3%
390'±

EXISTING ROAD
+15% TO +18%
390'±

EXISTING ROAD
-1% TO -3%
345'±

109-01098
POCA B-17

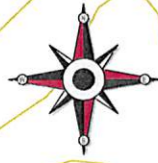
EXISTING ROAD
-1% TO -3%
280'±

15" C.P.P.

15" C.P.P.

15" C.P.P.

1090121/P

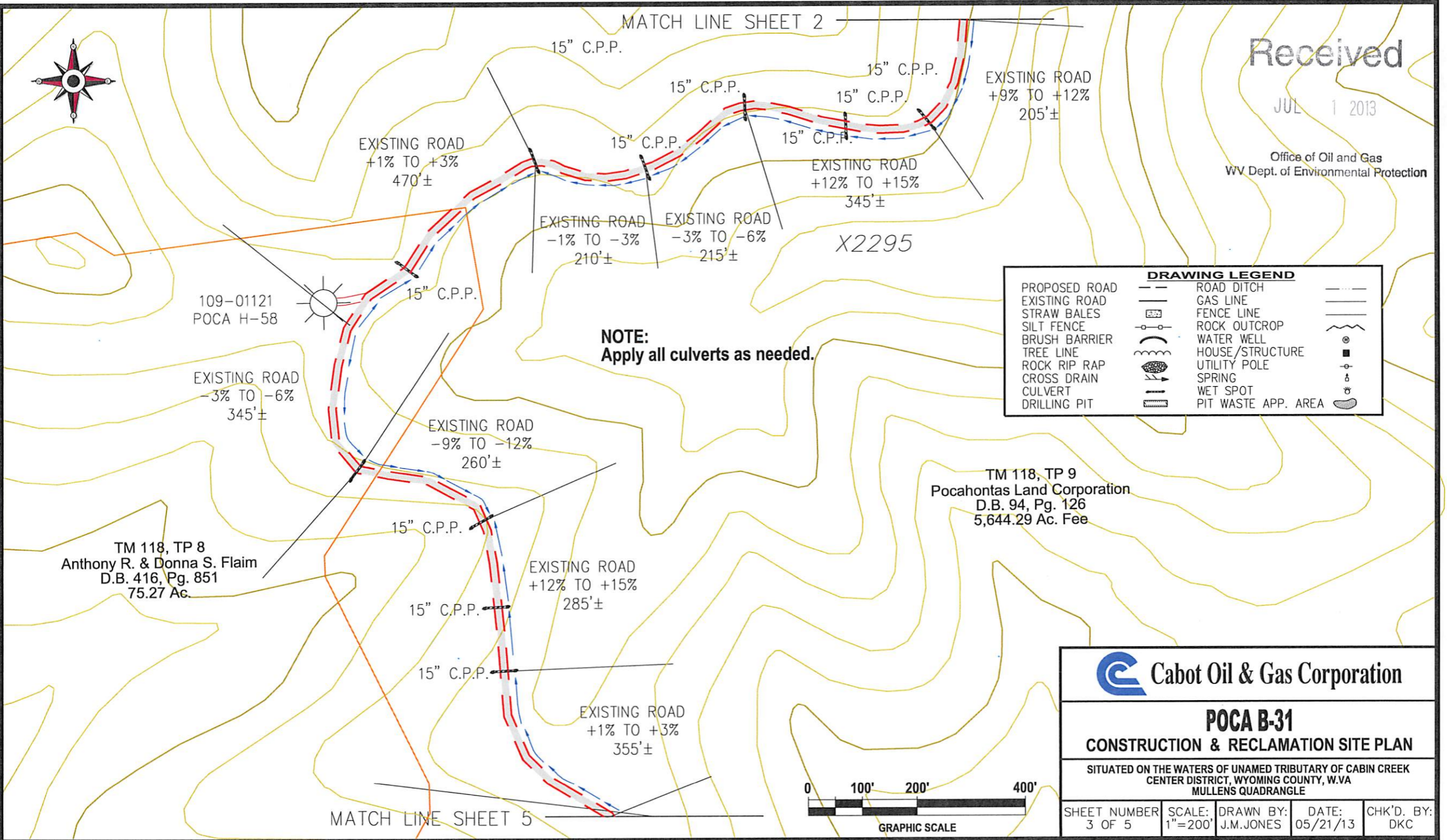


MATCH LINE SHEET 2

Received

JUL 1 2013

Office of Oil and Gas
WV Dept. of Environmental Protection



EXISTING ROAD
+1% TO +3%
470'±

15" C.P.P.

15" C.P.P.

15" C.P.P.

EXISTING ROAD
+9% TO +12%
205'±

15" C.P.P.

EXISTING ROAD
+12% TO +15%
345'±

EXISTING ROAD
-1% TO -3%
210'±

EXISTING ROAD
-3% TO -6%
215'±

X2295

109-01121
POCA H-58

15" C.P.P.

NOTE:
Apply all culverts as needed.

EXISTING ROAD
-3% TO -6%
345'±

EXISTING ROAD
-9% TO -12%
260'±

TM 118, TP 9
Pocahontas Land Corporation
D.B. 94, Pg. 126
5,644.29 Ac. Fee

TM 118, TP 8
Anthony R. & Donna S. Flaim
D.B. 416, Pg. 851
75.27 Ac.

15" C.P.P.

EXISTING ROAD
+12% TO +15%
285'±

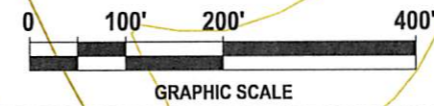
15" C.P.P.

15" C.P.P.

EXISTING ROAD
+1% TO +3%
355'±

MATCH LINE SHEET 5

DRAWING LEGEND			
PROPOSED ROAD		ROAD DITCH	
EXISTING ROAD		GAS LINE	
STRAW BALES		FENCE LINE	
SILT FENCE		ROCK OUTCROP	
BRUSH BARRIER		WATER WELL	
TREE LINE		HOUSE/STRUCTURE	
ROCK RIP RAP		UTILITY POLE	
CROSS DRAIN		SPRING	
CULVERT		WET SPOT	
DRILLING PIT		PIT WASTE APP. AREA	



Cabot Oil & Gas Corporation

POCA B-31
CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF UNAMED TRIBUTARY OF CABIN CREEK
CENTER DISTRICT, WYOMING COUNTY, W.VA
MULLENS QUADRANGLE

SHEET NUMBER 3 OF 5	SCALE: 1"=200'	DRAWN BY: J.M.JONES	DATE: 05/21/13	CHK'D. BY: DKC
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1090121A

MATCH LINE SHEET 5

MATCH LINE SHEET 5



DRAWING LEGEND			
PROPOSED ROAD		ROAD DITCH	
EXISTING ROAD		GAS LINE	
STRAW BALES		FENCE LINE	
SILT FENCE		ROCK OUTCROP	
BRUSH BARRIER		WATER WELL	
TREE LINE		HOUSE/STRUCTURE	
ROCK RIP RAP		UTILITY POLE	
CROSS DRAIN		SPRING	
CULVERT		WET SPOT	
DRILLING PIT		PIT WASTE APP. AREA	

NOTE:
Apply all culverts as needed.

EXISTING ROAD
+6% TO +9%
370'±

EXISTING ROAD
-1% TO -3%
280'±

EXISTING ROAD
+1% TO +3%
355'±

EXISTING ROAD
+1% TO +3%
300'±

EXISTING ROAD
-17% TO -20%
425'±

TM 118, TP 9
Pocahontas Land Corporation
D.B. 94, Pg. 126
5,644.29 Ac. Fee

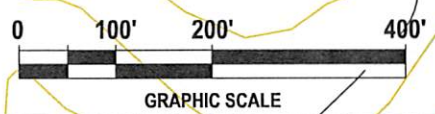
X2325

2200

2200

2200

2000



Cabot Oil & Gas Corporation

POCA B-31
CONSTRUCTION & RECLAMATION SITE PLAN

SITUATED ON THE WATERS OF UNAMED TRIBUTARY OF CABIN CREEK
CENTER DISTRICT, WYOMING COUNTY, W.VA
MULLENS QUADRANGLE

SHEET NUMBER	SCALE:	DRAWN BY:	DATE:	CHK'D. BY:
4 OF 5	1"=200'	J.M.JONES	05/21/13	DKC

1096121P



TM 118, TP 8
Anthony R. & Donna S. Flam
D.B. 416, Pg. 851
75.27 Ac.

MATCH LINE SHEET 3

Note:
Tanks will be used instead of drilling pit(s),
and may be adjusted to the most
environmental safe site to meet the
requirements of the WVDEP.

DRAWING LEGEND			
PROPOSED ROAD		ROAD DITCH	
EXISTING ROAD		GAS LINE	
STRAW BALES		FENCE LINE	
SILT FENCE		ROCK OUTCROP	
BRUSH BARRIER		WATER WELL	
TREE LINE		HOUSE/STRUCTURE	
ROCK RIP RAP		UTILITY POLE	
CROSS DRAIN		SPRING	
CULVERT		WET SPOT	
DRILLING PIT		PIT WASTE APP. AREA	

EXISTING ROAD
-3% TO -6%
200'±
15" C.P.P.

EXISTING ROAD
-3% TO -6%
205'±
15" C.P.P.

EXISTING ROAD
+12% TO +15%
450'±
15" C.P.P.

15" C.P.P.

NOTE:
Apply all culverts as needed.

EXISTING ROAD
-12% TO -15%
140'±
15" C.P.P.

FILL

POCA B-31
API #47-109-01121

CUT

EXISTING ROAD
-12% TO -15%
240'±
15" C.P.P.

EXISTING ROAD
+3% TO +6%
400'±
15" C.P.P.

15" C.P.P.

TM 118, TP 9
Pocahontas Land Corporation
D.B. 94, Pg. 126
5,644.29 Ac. Fee

EXISTING ROAD
-12% TO -15%
445'±
15" C.P.P.

15" C.P.P.

EXISTING ROAD
-6% TO -9%
295'±
15" C.P.P.

EXISTING ROAD
+1% TO +3%
420'±
15" C.P.P.

EXISTING ROAD
-3% TO -6%
150'±
15" C.P.P.



Received

JUL 1 2010
Office of Oil and Gas
Department of Environmental Protection

Cabot Oil & Gas Corporation

**POCA B-31
CONSTRUCTION & RECLAMATION SITE PLAN**

SITUATED ON THE WATERS OF UNAMED TRIBUTARY OF CABIN CREEK
CENTER DISTRICT, WYOMING COUNTY, W.VA
MULLENS QUADRANGLE

SHEET NUMBER 5 OF 5	SCALE: 1"=200'	DRAWN BY: J.M.JONES	DATE: 05/21/13	CHK'D. BY: DKC
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MATCH LINE SHEET 2

MATCH LINE SHEET 2



North Region
June 25, 2013

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

RE: Pocahonas Land B-31
Center District, Wyoming County, WV
API # 47-109-01121
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,

A handwritten signature in blue ink that reads "Kenneth L. Marcum".

Kenneth L. Marcum
Regulatory Supervisor

Received

JUL 1 2013

Office of Oil and Gas
WV Dept. of Environmental Protection