



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

May 30, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-3304285, issued to PDC MOUNTAINEER LLC, 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: LOWNDES 4
Farm Name: DOTSON H. CATHER TRUSTEE
API Well Number: 47-3304285
Permit Type: Plugging
Date Issued: 05/30/2014

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.

WW-4B
Rev. 2/01

1) Date April 14, _____, 2014
2) Operator's
Well No. Lowndes #4
3) API Well No. 47-033 - 4265

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 XX / Liquid injection ____ / Waste disposal ____ /
(If "Gas, Production XX or Underground storage ____) Deep ____ / Shallow ____

5) Location: Elevation 316 m (1,036 ft) Watershed Davisson Run
District Clark County Harrison Quadrangle Wolf Summit 7.5'

6) Well Operator PDC Mountaineer, LLC 7) Designated Agent Steven P. Johnson
Address 120 Genesis Blvd. Address 120 Genesis Blvd.
Bridgeport, WV 26201 Bridgeport, WV 26201

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Sam Ward Name TBD
Address P.O. Box 2327 Address _____
Buckhannon, WV 26301

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

- Check TD. Set with C1A cement plug td to 2125'. Tag BHP.
- Remove 5 3/8" at free point. Set plug at cut with C1A cement.
- Remove 6 5/8" at free point. Set plug at cut with C1A cement.
- Set 100' C1A cement plug at elevation.
- Remove 8 1/2" at free point. Set plug at cut with C1A cement.
- Remove 10" at free point. Set plug at cut with C1A cement.
- Set plug with C1A cement from ~~250'~~ ^{320' (lower cone)} to surface. Install monument with a minimum of 6" diameter with a minimum of 10' below surface in well bore, also with a minimum 30" above surface and filled with concrete not cement.

GEL SPACER MUST BE USED BETWEEN CEMENT PLUGS,
All plugs must be 100' minimum length SDW

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

Work order approved by inspector S. D. Warratt Date 4/25/2014
Office of Oil and Gas
WV Dept. of Environmental Protection

GEL SPACER MUST BE FRESH WATER WITH A MINIMUM OF 6% BENTONITE BY WEIGHT.

ENTIRE WELL BORE MUST BE FILLED WITH GEL AND CEMENT

Drilling Commenced: September 15, 1910
 Drilling Completed: October 28, 1910

Day	Conductor	1910	1911	Day	Notes	1910	1911
	Red Rock	18	18		Sand	10	1004
	Lime	17	35		Slate	8	1012
	Slate	20	55		Red Rock	40	1052
	Lime	27	82		Lime	10	1062
16	Water-4 bailers per hr.				Slate	8	1070
	Red Rock	12	94	4	Lime	23	1092
	Lime	34	128		Red Rock	13	1105
	Slate	22	150		Lime	60	1165
	10" Casing				Red Rock	20	1185
	Water				Lime	12	1197
17	Lime	12	162		Red Rock	10	1207
	Coal	3	165		Slate	10	1217
	Slate	27	192	5	Little Lime	16	1239
	Lime	18	210		Pencil Slate	20	1259
	Water-3 bailers per hr.			6	Big Lime	68	1321
19	Pulled 10" Casing				Small showing of Gas in Injun		
	Slate	7	217		1955' steel line measurement		
	10" Casing		221	7	6-5/8" Casing		1368
	Lime	37	254	8	Shut down to set 6" bits repaired.		
20	Slate	36	290	10	Injun	102	1423
	Lime	27	317	12	Lime	20	1443
	Coal	1	318		Slate & Shells	75	1518
	Slate	22	340		Lime	22	1540
	Red Rock	18	358		Slate & Shells	25	1565
	Lime	20	378	13	Lime	27	1592
	Sand	24	402		Slate & Shells	46	1639
21	Shut down for Fair.			14	Lime	22	1660
22	Slate & Shells	42	444		Slate	27	1687
	Lime	27	471		Lime	20	1707
23	Slate & Shells	43	514		Slate	13	1720
	Sand	17	531	15	Berea Grit	24	1744
	Slate	24	555		Slate	10	1754
	Lime	20	575		Lime	8	1762
	Slate	27	602		Slate	12	1774
	Sand	23	625		Lime	8	1782
24	Slate & Shells	28	653	17	50 Foot (Gas at 1811' steel line measurement. 1834		
	Slate	20	673		Slate	10	1834
	Slate & Shells	38	711	18	30 Foot	34	1868
	1st Salt Sand	20	731	19	Slate	16	1894
	Water 4 bailers per hr.				Sand	16	1900
26	Slate & Shells	29	760		Slate	10	1910
	2nd Salt Sand	95	855	20	Sand & Shells	4	1914
27	Showing of Gas				Red Rock	24	1938
	Slate	17	872	21	Lime	12	1950
	Lime	22	894		Red Rock	10	1960
	Slate	10	904		Slate	8	1969
28	8" Casing		928		Sand	8	1977
	Sand	72	976				
29	Broke pin on 8" bit shut down 2 days for repair.						

Received
 MAY - 24 1914
 Office of Oil and Gas
 WV Dept. of Environmental Protection

LOWNDES WELL NO. 4 - Cont'd (3)

23	Red Rock	23	2000
	Sand	27	2027
24	Red Rock & Shells	21	2048
	Sand	7	2055
	Slate	8	2063
25	5-3/16" Casing		2074
26	Sand	58	2121
	Slate	4	2125
	Sand	8	2133
27	Slate	3	2136
	Sand	20	2156
28	Slate & Shells	53	2208
	Top Fifth Sand		2208
	Steel line run		2213-6
	Bottom 5th Sand		2235
	Total Depth		2216 -

5-3/16" Casing 2030 ft.
6-5/8" Casing 1473 ft. 7

Received

MAY - 7 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

WW-4A
Revised 6-07

1) Date: 4/14/2014
2) Operator's Well Number
Lowndes #4

3) API Well No.: 47 - 033 - 4285

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>Dotson H. Cather, Trustee</u> ✓	Name _____
Address <u>315 Spring Street</u>	Address _____
<u>Clarksburg, WV 26301</u>	
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Dotson H. Cather, Trustee</u> ✓
	Address <u>315 Spring Street</u>
	<u>Clarksburg, WV 26301</u>
(c) Name _____	Name <u>Laura Goff Davis</u> ✓
Address _____	Address <u>P.O. Box 707</u>
	<u>Clarksburg, WV 26302</u>
6) Inspector <u>Sam Ward</u>	(c) Coal Lessee with Declaration
Address <u>P.O. Box 2327</u>	Name _____
<u>Buckhannon, WV 26201</u>	Address _____
Telephone _____	

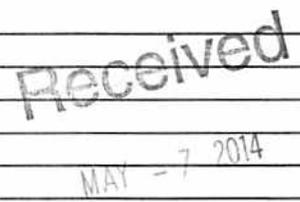
TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (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.

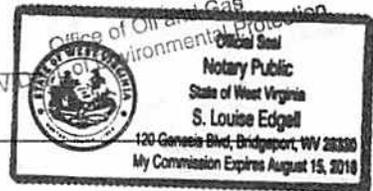
The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

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 PDC Mountaineer, LLC
 By: Steven P. Johnson
 Its: Designated Agent
 Address 120 Genesis Blvd.
Bridgeport, WV 26330
 Telephone 304-842-3597



Subscribed and sworn before me this 23rd day of April, 2014
S. Louise Edgell Notary Public
 My Commission Expires August 15, 2018



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.

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 PDC Mountaineer, LLC OP Code 494494839

Watershed Davisson Run Quadrangle Wolf Summit 7.5'

Elevation 316 m (1,036 ft.) County Harrison District Clark

Description of anticipated Pit Waste: Produced Fluids

Will a synthetic liner be used in the pit? Yes 20 MIL

Proposed Disposal Method For Treated Pit Wastes:

- Land Application
- Underground Injection (UIC Permit Number #2459, Noble County, Ohio)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain _____)

*SDW
4/24/2014*

Proposed Work For Which Pit Will Be Used:

- Drilling
- Workover
- Other (Explain _____)
- Swabbing
- Plugging

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 *Steven P. Johnson*

Company Official (Typed Name) Steven P. Johnson

Company Official Title Designated Agent

Received

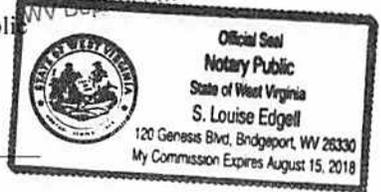
Subscribed and sworn before me this 23rd day of April, 20 14

S. Louise Edgell Notary Public

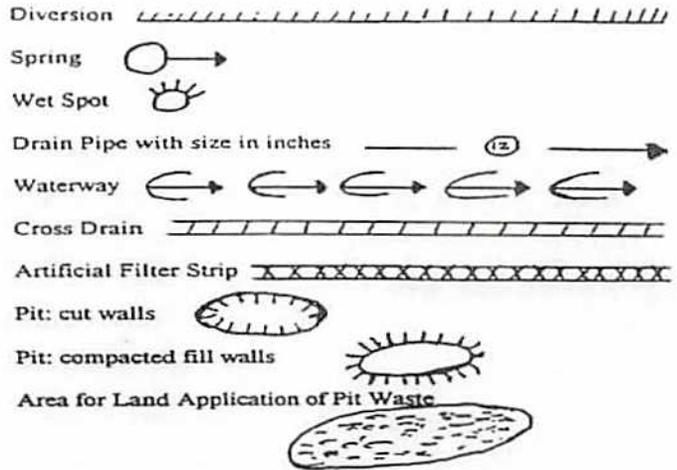
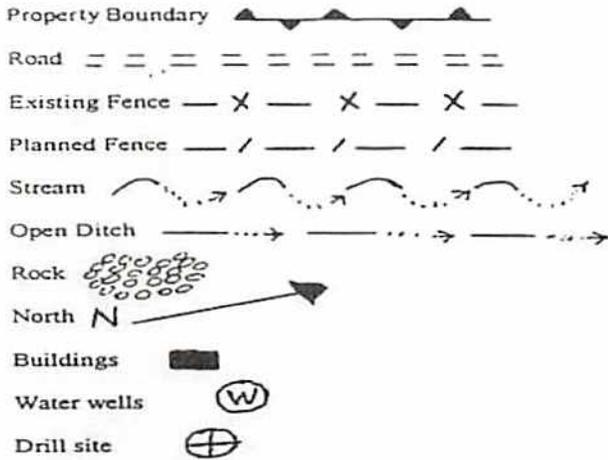
My commission expires August 15, 2018

MAY - 7 2014

Office of Oil and Gas
Department of Environmental Protection



LEGEND



Proposed Revegetation Treatment: Acres Disturbed 1.25 acres +/- Prevegetation pH TBD
 Lime TBD Tons/acre or to correct to pH 6.5
 Fertilizer (10-20-20 or equivalent) 500 lbs/acre (500 lbs minimum)
 Mulch hay or straw Tons/acre

Seed Mixtures

Seed Type	Area I lbs/acre	Seed Type	Area II lbs/acre
Kentucky Bluegrass	40	Orchard Grass	15
Alsike Clover	5	Alsike Clover	5
Annual Rye	1		

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

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: _____

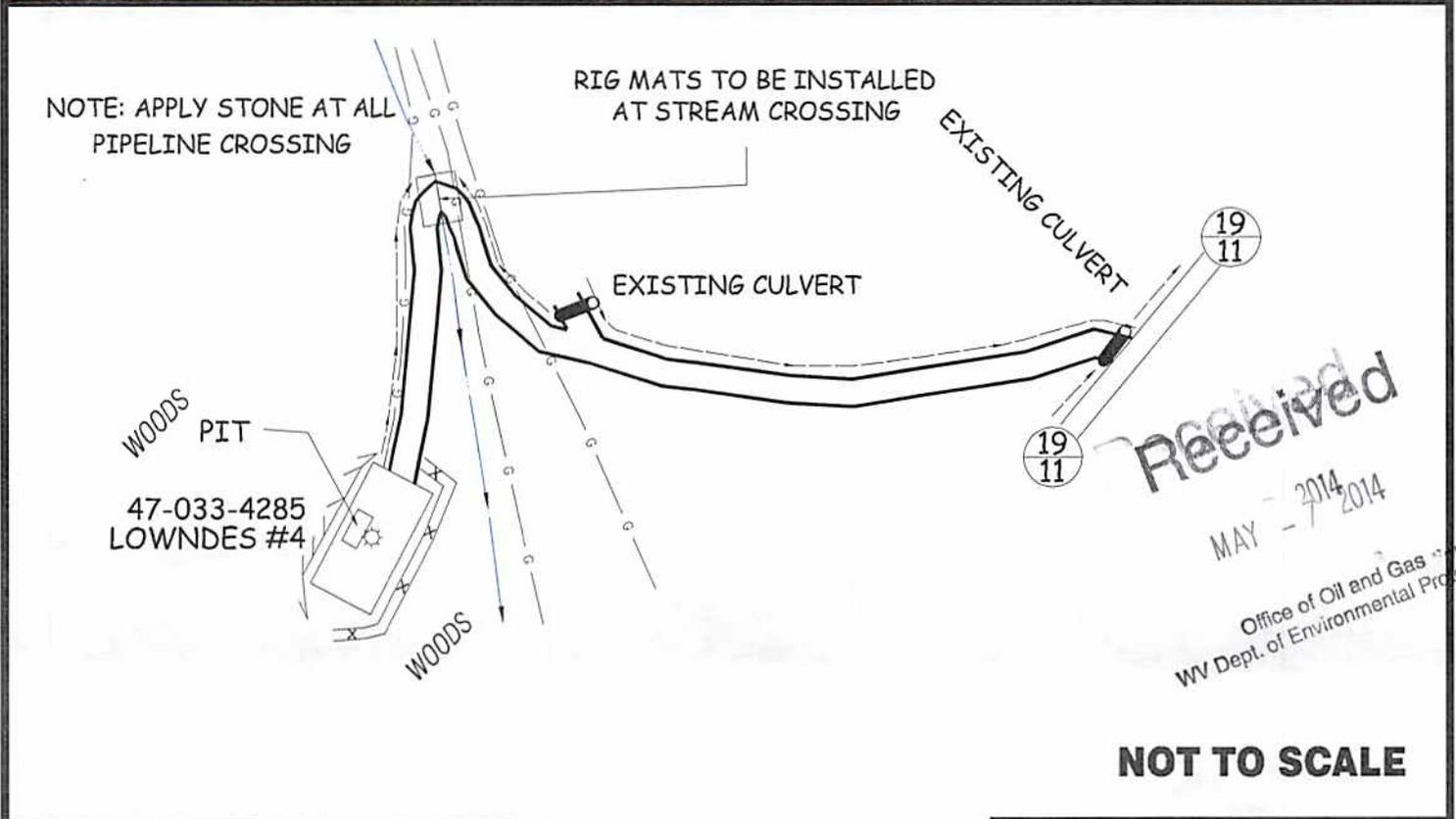
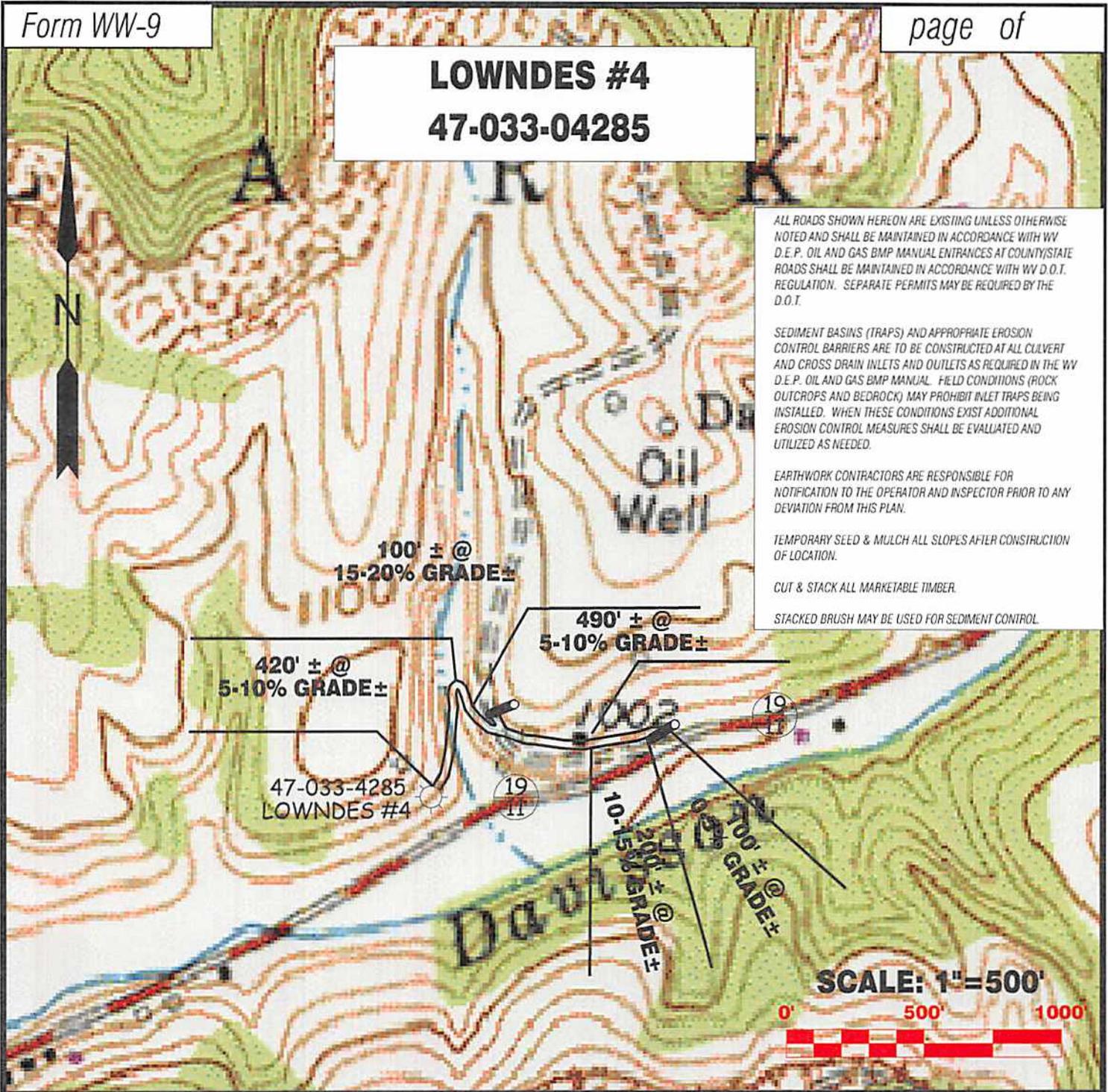
Title: Oil and gas inspector

Date: 4/24/2014

Field Reviewed? () Yes (X) No

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 MAY -7 2014
 Office of Oil and Gas
 Dept. of Environmental Protection

LOWNDES #4 47-033-04285



Professional Energy Consultants
A DIVISION OF SMITH LAND SURVEYING

SURVEYORS PROJECT MGMT. **SLS** ENGINEERS ENVIRONMENTAL

P.O. Box 150
Clarksburg, WV 26301
(304) 462-8634

8062 Clarksburg Road
Martinsburg, WV 26157
(740) 671-9911

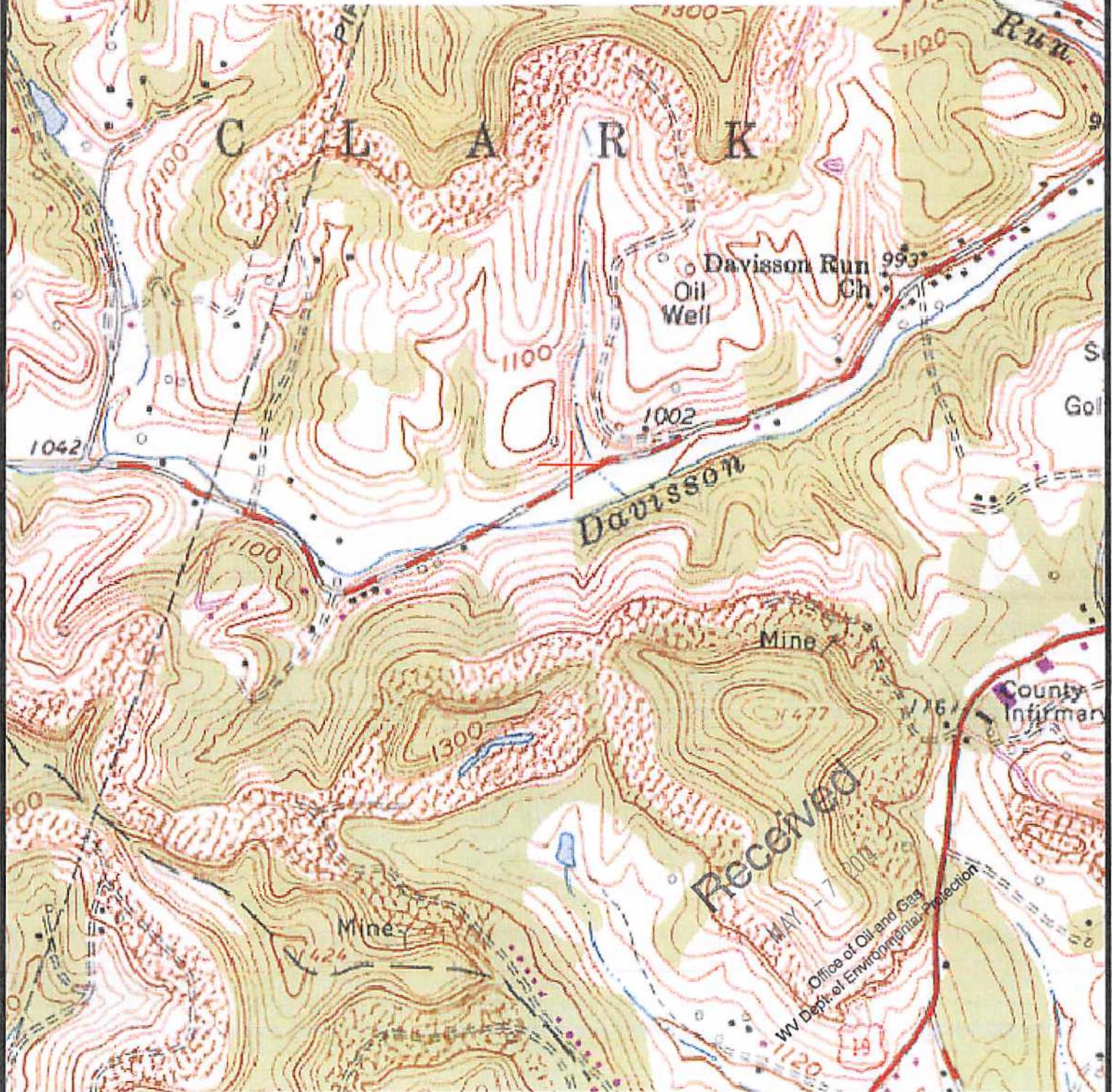
HONESTY. INTEGRITY. QUALITY

DRAWN BY C.P.M.	FILE NO. 8192	DATE 04-03-14	CADD FILE: 8192REC.DWG
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TOPO SECTION OF USGS
WOLF SUMMIT
7.5' QUADRANGLE

PDC MOUNTAINEER

LOWNDES(GOFF) LEASE WELL NO. 4 (A.P.I. 47-033-04285)



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MAY - 7 2014
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WV Dept. of Environmental Protection

Professional Energy Consultants
A DIVISION OF BIRTH LAND SURVEYING

SURVEYORS PROJECT MGMT. **SLS** ENGINEERS ENVIRONMENTAL

P.O. Box 100
Guwaha, WV 26031
(304) 463-9634

8881 Green Bottom Road
Shenandoah, OH 43167
(740) 471-8811

HONESTY. INTEGRITY. QUALITY.

TOPO SECTIONS OF: WOLF SUMMIT 7.5'

FILE NO. 8192

DATE: 03/11/14

SCALE: 1"=1,000'

WW-7
8-30-06



CK 30061
100

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

API: 47-033-4285 WELL NO.: Lowndes #4

FARM NAME: Lowndes (Goff)

RESPONSIBLE PARTY NAME: PDC Mountaineer, LLC

COUNTY: Harrison DISTRICT: Clark

QUADRANGLE: Wolf Summit

SURFACE OWNER: Dotson H. Cather Trustee (TM 326 Parcel 89)

ROYALTY OWNER: Laura Goff Davis et al

UTM GPS NORTHING: 4346077

UTM GPS EASTING: 551787 GPS ELEVATION: 316 m (1036')

The Responsible Party named above has chosen to submit GPS coordinates in lieu of preparing a new well location plat for a plugging permit or assigned API number on the above well. The Office of Oil and Gas will not accept GPS coordinates that do not meet the following requirements:

1. Datum: NAD 1983, Zone: 17 North, Coordinate Units: meters, Altitude: height above mean sea level (MSL) – meters.
2. Accuracy to Datum – 3.05 meters
3. Data Collection Method:

Survey grade GPS : Post Processed Differential

Real-Time Differential

Mapping Grade GPS : Post Processed Differential

Real-Time Differential

4. Letter size copy of the topography map showing the well location.

I the undersigned, hereby certify this data is correct to the best of my knowledge and belief and shows all the information required by law and the regulations issued and prescribed by the Office of Oil and Gas.

Gregory A. Smith, P.S. Agent
Signature Title

3-11-14
Date

Received

MAY - 7 2014

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