



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

September 09, 2014

WELL WORK PLUGGING PERMIT

Plugging

This permit, API Well Number: 47-10701746, 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.

A blue ink signature of James Martin, Chief, is written over the text.

James Martin
Chief

Operator's Well No: CABOT WOOD #1
Farm Name: WHITLATCH, JOHN & SUCK, RO
API Well Number: 47-10701746
Permit Type: Plugging
Date Issued: 09/09/2014

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.

1) Date August 26, 2014
2) Operator's
Well No. Cabot-Wood #1
3) API Well No. 47-107 - 01746

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 X / Shallow ___

5) Location: Elevation 855' Watershed Badgley Fork of Tygart Creek
District Lubeck County Wood Quadrangle South Parkersburg

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 Name Jamie Stevens
Address 105 Kentuck Road
Kenna, WV 25248
9) Plugging Contractor Name Halliburton
Address 121 Champion Way Ste. 200
Canonsburg, PA 15317

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

Well was plugged on 8/24/14, verbal approval was given by Inspector, Jamie Stevens.

Received

AUG 29 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

OK *gwm*

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

Work order approved by inspector _____ Date _____

09/12/2014

**Cabot Wood #1
API # 47 – 107 – 01746
PLUGGING PROCEDURE**

Current Configuration

DTD @ 8,100' – 8.5" Hole

24" Hole – 24" - 98# casing @ 85' from GL.

22" Hole – 18 5/8" - 87.5# casing @ 302' from GL.

17 1/2" Hole – 13 3/8" 54.5# @ 1,885'

12 1/4" Hole – 9 5/8" - 47# casing @ 6,383'

PROCEDURE

1. Contact WVDEP Office a minimum of 48 hours prior to starting work.
2. Contact State Inspector a minimum of 24 hours prior to starting work.
3. TIH with 548' of 2 7/8" tubing and 5" DP 19.5# to surface.
4. TIH to 6,100' and circulate a bottoms up.
5. Pump first balance plug, 20 bbls water, 42 bbls Shalecem (Class A), 15.6 ppg, 1.2 cu-ft/sxs and displace with 93 bbls mud.
6. POOH to 6,425' and reverse circulate on bottoms up.
7. WOC for 4 hrs.
8. TIH to 6,600' and pump the second balance plug: 20 bbls water, 44 bbls Halcem (Class A), 14.8 ppg, 1.33 cu-ft/sxs and displace with 91 bbls mud.
9. TOOH to 5,523' and WOC for 8 hrs.
10. TIH and confirm cement top.
11. Shut the well in and perform 1,000 psi casing test for 30 minutes
12. TOOH while LDDP.
13. RIH with tubing to 400' and pump 3rd balance plug: 2 bbls fresh water, 15 bbls Halcem (Class A), 15.6 ppg, 1.21 cu-ft/sxs.
14. TOOH and wash out tubing.
15. WOC.
16. ND BOP's and install abandonment cap.
17. Install monument with API number, date, and company name.

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Office of Oil and Gas
WV Dept. of Environmental Protection

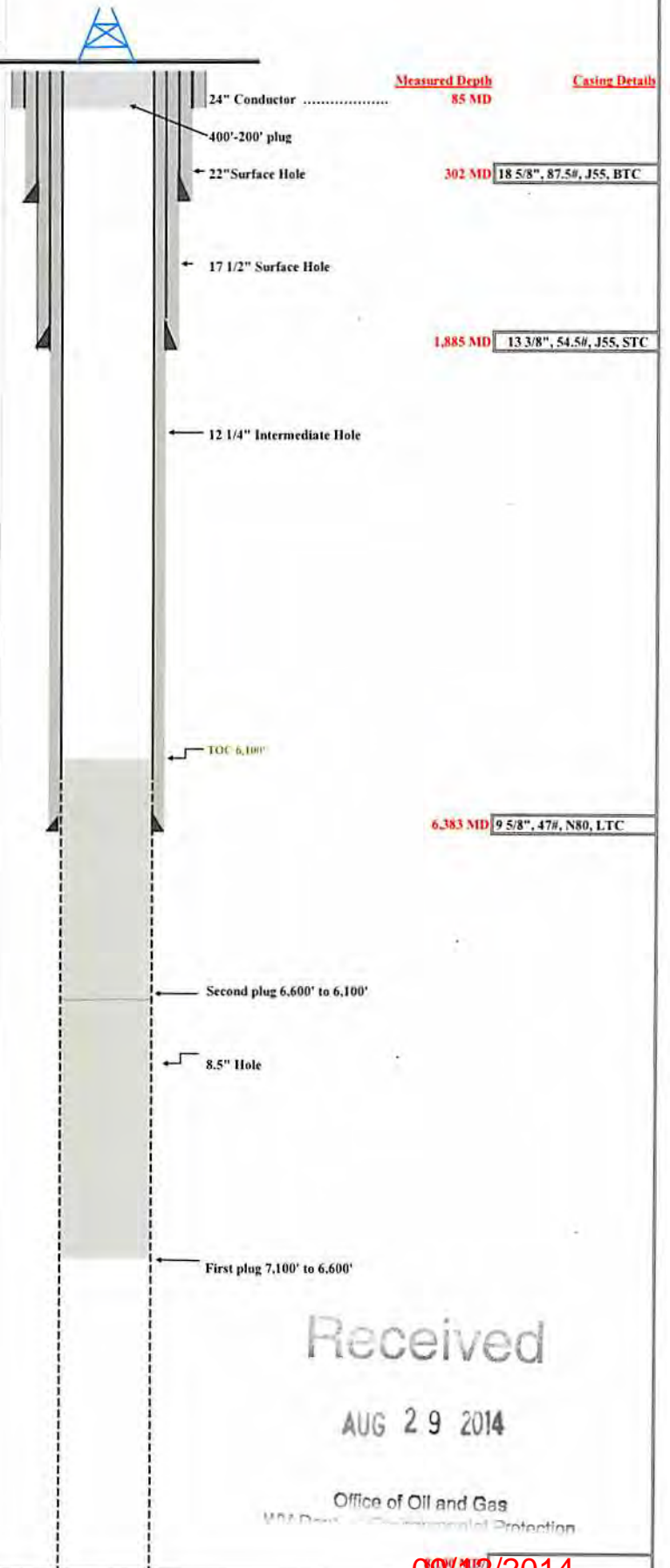
09/12/2014

Cabot O&G
Cabot Wood #1

Comments

RKB: _____ KB = _____
Pad: _____

Formation Tops (TVD)



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AUG 29 2014

Office of Oil and Gas
MDA Dept. of Environmental Protection

09/12/2014

10701746P

WW-4A
Revised 6-07

1) Date: August 26, 2014
2) Operator's Well Number
Cabot-Wood #1
3) API Well No.: 47 - 107 - 01746

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>John H. & Donna K. Whitlatch</u>	Name <u>None</u>
Address <u>2222 Larkmead Road</u>	Address _____
<u>Parkersburg, WV 26101</u>	_____
(b) Name <u>Kathleen A. & Robert D. Suck</u>	(b) Coal Owner(s) with Declaration
Address <u>1586 Larkmead Road</u>	Name <u>John H. & Donna K. Whitlatch</u>
<u>Parkersburg, WV 26101</u>	Address <u>2222 Larkmead Road</u>
(c) Name _____	<u>Parkersburg, WV 26101</u>
Address _____	Name _____
_____	Address _____
6) Inspector <u>Jamie Stevens</u>	(c) Coal Lessee with Declaration
Address <u>105 Kentuck Road</u>	Name <u>None of Record</u>
<u>Kenna, WV 25248</u>	Address _____
Telephone <u>(304) 206-7775</u>	_____

Received
AUG 29 2014

Office of Oil and Gas
WV Dept. of Environmental Protection

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
 Its: Regulatory Supervisor
 Address: Five Penn Center West, Suite 401
Pittsburgh, PA 15276
 Telephone: (412) 249-3850

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

Subscribed and sworn before me this 26th day of August, 2014
Constance C. Carden Notary Public
 My Commission Expires November 16, 2017

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.

09/12/2014

10701746P

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Sent To **Kathleen A. & Robert D. Suck**
 Street, Apt. or PO Box **1586 Larkmead Road**
 City, State **Parkersburg, WV 26101**

PS Form 3800, August 2008 Cabot-Wood #1 P&A Instructions

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Sent To **John H. & Donna K. Whitlatch**
 Street, Apt. or PO Box **2222 Larkmead Road**
 City, State **Parkersburg, WV 26101**

PS Form 3800, August 2008 Cabot-Wood #1 P&A Instructions

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Sent To **Jamie Stevens**
 Street, Apt. or PO Box **105 Kentuck Road**
 City, State **Kenna, WV 25248**

Cabot-Wood # Putnam #35 P&A Instructions

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Office of Oil and Gas
WV Dept. of Environmental Protection

09/12/2014

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 _____

Watershed (HUC 10) Badgley Fork of Tygart Creek Quadrangle South Parkersburg

Elevation 855 County Wood District Lubeck

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes No NO NOT FOR PLUGGING

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

If so, please describe anticipated pit waste: N/A

Will a synthetic liner be used in the pit? Yes _____ No _____ 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 _____)

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WV Dept. of Environmental Protection

Will closed loop system be used? Yes

Drilling medium anticipated for this well? Air, freshwater, oil based, etc. Air and possibly salt system as backup

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

Additives to be used in drilling medium? See Attached Sheet

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. Landfill

-If left in pit and plan to solidify what medium will be used? (cement, lime, sawdust) _____

-Landfill or offsite name/permit number? Tunnel Hill Reclamation, LLC/Ohio Environmental Protection Agency Permit #06-08443

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

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

Subscribed and sworn before me this 17th day of October, 2013

Constance C. Carden Notary Public

My commission expires 11/16/2013

09/12/2014

Form WW-9

Operator's Well No. Cabot-Wood #1

Cabot Oil & Gas Corporation

Proposed Revegetation Treatment: Acres Disturbed 11.77 Prevegetation pH To be tested

Lime 2 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 at 2 Tons/acre

Seed Mixtures

Area I		Area II	
Seed Type	lbs/acre	Seed Type	lbs/acre
Winter Rye	168	Tall Fescue	40
Winter Wheat	180	Birdsfoot Trefoil	10
Annual Ryegrass	40	Redtop	3

See Construction Plans for additional seed mixtures

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

Photocopied section of involved 7.5' topographic sheet.

Received

Plan Approved by: _____ **AUG 29 2014**

Comments: _____
Office of Oil and Gas
WV Dept. of Environmental Protection

James Stevens
Title: _____

Date: 10/22/2013

Field Reviewed? Yes No

WW-9

ADDITIVES TO BE USED IN DRILLING MEDIUM

BARAZAN D PLUS - Viscosifier
Barite (4.1 SG) – Weight Agent
Bicarbonate of Soda
Caustic Soda
DEXTRID LT - Starch
Lime
PAC-L - Filtration Control
Potassium Chloride
Evaporated Salt

Potential Additives:

ALDACIDE G - Microbiocide
BARA-DEFOAM W300 – Defoamer
CLAYSEAL PLUS – Shale Stabilizer
NO-SULF – H₂S Scavenger
OXYGON – Oxygen Scavenger
Soda Ash / Citric Acid
QUIK-THIN – Thinner

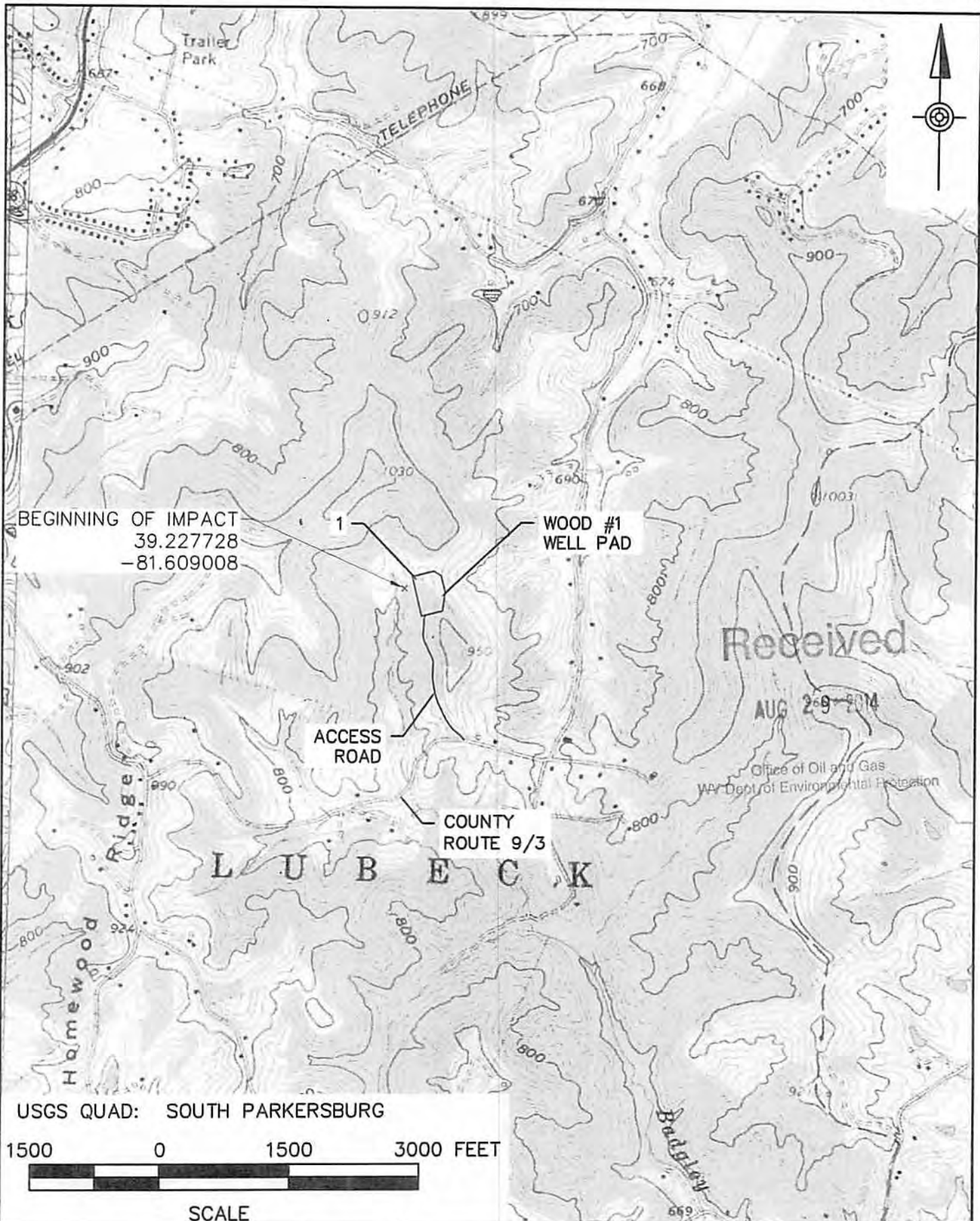
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WV Dept. of Environmental Protection



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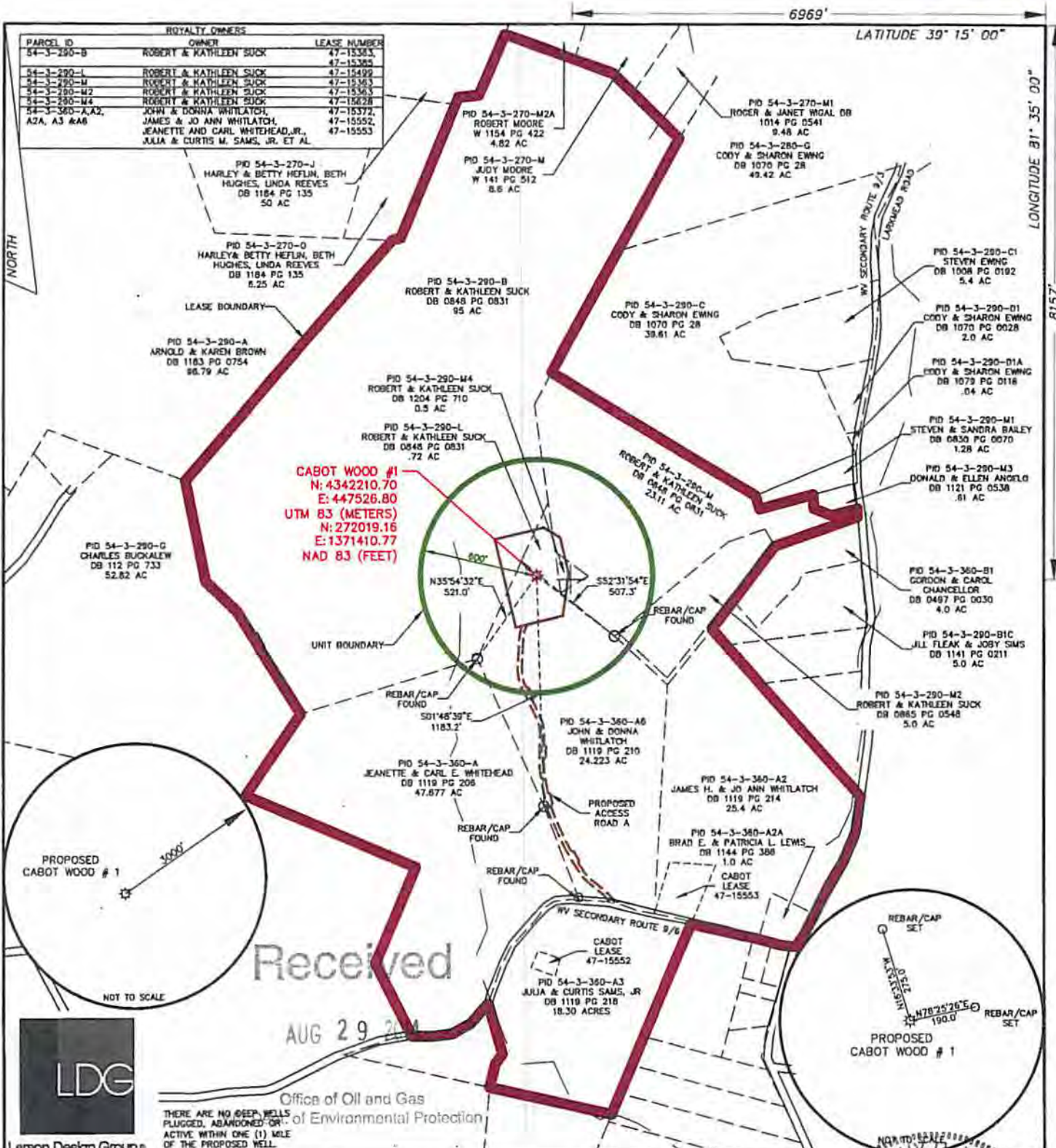


LDG Architects Engineers Surveyors
 2502 Cranberry Square
 Morgantown, WV 26508
 PHONE 304.777.2940
 TOLL FREE 877.323.6603
 FAX 570.323.9902
 Larson Design Group www.larsondesigngroup.com

WOOD WELL PAD #1
PROJECTS LOCATION MAP
 FOR
CABOT OIL & GAS CORPORATION

DATE: 10/03/13
 SHEET NO.: EX-2
 PROJECT NO.: 0912/2014-1
 SCALE:

10701746 P



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Office of Oil and Gas
 Department of Environmental Protection

THERE ARE NO DEEP WELLS PLUGGED, ABANDONED OR ACTIVE WITHIN ONE (1) MILE OF THE PROPOSED WELL.

FILE NO. 8744-003-1
 DRAWING NO. 1
 SCALE 1" = 700'
 MINIMUM DEGREE OF ACCURACY 1 in 2500'
 PROVEN SOURCE OF ELEVATION SURVEY GRADE 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) [Signature]
 R.P.E. _____ I.L.S. 1969



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

DATE OCTOBER 20 13
 OPERATOR'S WELL NO. CABOT WOOD #1
 API WELL NO. 47 107 01746 P
 STATE COUNTY PERMIT

WELL TYPE: OIL GAS X LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS,") PRODUCTION STORAGE DEEP X SHALLOW

LOCATION: ELEVATION 855' WATERSHED BADGLEY FORK OF TYGART CREEK
 DISTRICT LUBECK COUNTY WOOD
 QUADRANGLE SOUTH PARKERSBURG

SURFACE OWNER SEE TABLE ABOVE ACREAGE 24.22 ACRES
 OIL & GAS ROYALTY OWNER SEE TABLE ABOVE LEASE ACREAGE ±240.93 ACRES
 LEASE NO. 47-0015372 09/12/2014

PROPOSED WORK: DRILL X CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE X PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) _____

PLUG AND ABANDON CLEAN OUT AND REPLUG
 TARGET FORMATION POINT PLEASANT ESTIMATED DEPTH TARGET DEPTH 7,828' - 7955' TOTAL DEPTH 8,155'
 WELL OPERATOR CABOT OIL & GAS CORPORATION DESIGNATED AGENT WHITNEY JOHNSON
 ADDRESS FIVE PENN CENTER WEST, SUITE 401 ADDRESS CABOT OIL & GAS CORPORATION
PITTSBURGH, PA 15276-0130 P.O. BOX 450 GLASGOW, WV 25086

FORM WW-8

COUNTY NAME PERMIT



August 26, 2014

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

RE: Cabot-Wood #1
Lubeck District, Wood County, WV
API # 47-107-01746
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.

This well was plugged with verbal approval from the DEP Inspector, Jamie Stevens, on August 24, 2014.

Copies of the permit 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

AUG 29 2014

Office of Oil and Gas
WV Dept. of Environmental Protection