

05/31/2019



west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary
www.dep.wv.gov

Thursday, May 30, 2019
WELL WORK PLUGGING PERMIT
Vertical Plugging

CORE APPALACHIA OPERATING LLC
414 SUMMERS STREET

CHARLESTON, WV 25301

Re: Permit approval for 805701
47-099-00405-00-00

This well work permit 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 any additional specific 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. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

Per 35 CSR 4-5.2.g this permit will expire in two (2) years from the issue date unless permitted well work is commenced. If there are any questions, please feel free to contact me at (304) 926- 0450.

James A. Martin
Chief

A handwritten signature in blue ink, appearing to read "James A. Martin", is written over the printed name and title.

Operator's Well Number: 805701
Farm Name: CABWAYLINGO STATE FORD
U.S. WELL NUMBER: 47-099-00405-00-00
Vertical Plugging
Date Issued: 5/30/2019

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.
4. This well is under a consent order and must be plugged under the terms of that agreement.

1) Date March 13, 2019
2) Operator's Well No. 805701 **05/31/2019**
3) API Well No. 47-099-00405

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 1132.34' Watershed Right Fork of Rich Creek
District Lincoln County Wayne Quadrangle Wilsondale

6) Well Operator Core Appalachia Operating, LLC 7) Designated Agent Jessica Greathouse
Address P.O. Box 6070 Address P.O. Box 6070
Charleston, WV 25362 Charleston, WV 25362

8) Oil and Gas Inspector to be notified 9) Plugging Contractor
Name Allen Flowers Name Precision Drilling (BOSS)
Address 165 Grassy Lick Lane Address 3978 N Elmdale Road
Liberty, WV 25124 Olney, IL 62450

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

SEE ATTACHED SHEET

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

Work order approved by inspector  Date 3-20-2019

PLUGGING PROCEDURE

805701

WAYNE COUNTY, WEST VIRGINIA

API# 47-099-00405

BY: DMC

DATE: 2/25/19

Current Status

10" 32# @ 305'

6 5/8" 20# @ 1699' w/bottom hole Pkr 6 5/8" x 8 1/4"

Shale: Shot 2495-3405'

TD @ 3406'

Fresh Water @ 330'

Salt Water @ 970'

Gas Show @ 1720', 2510-2520', 3325'

Elevation 1100'

3/4/1989 Has Fish of 1 jt of 1 1/2" tbg @ 2442'

4/3/1989 Service Rig TD @ 2442'

4/30/2013 Echometer FL @ 281'

Objective: Plug and abandon

- 1) Prepare road and location.
- 2) MIRU service rig and support equipment.
- 3) Blow well down. Check TD.
- 4) Spot 100' cement plug at TD, ~ 2442 - 2342'.
* TIH TO TOP OF SHOT @ 2440 AND GEL HOLE.
- 5) TIH and tag cement plug. ADD CEMENT IF NEEDED.
- 6) Spot 6% gel from 2342 - 1770'.
- 7) Spot 150' cement plug from 1770 - 1620'
- 8) Attempt to pull 6 5/8" csg. If unsuccessful, cut 6 5/8" at free point and pull. SET 150' CEMENT PLUG ACROSS CUT.
- 9) Spot 6% gel from 1620 - 1150'.
- 10) Spot 100' cement plug from 1150 - 1050'.
- 11) Spot 6% gel from 1050 - 1020'.
- 12) Spot 100' cement plug from 1020 - 920'.
- 13) Spot 6% gel from 920 - 380'.
- 14) Attempt to pull 10" csg. If unsuccessful, shoot or rip holes @ 100'.
- 15) Spot 130' cement plug from 380 - 250'.
- 16) Spot 6% gel from 250 - 100'.
- 17) Spot 100' cement plug from 100' - Surface.
- 18) Pull work string and top off w/cement.
- 19) Erect permanent monument (30" minimum height and 6" minimum diameter pipe) with API # (1/2" height numbering) and reclaim.

WELL NO. 5701

LEASE NO. Pt. 35724

MAP SQUARE 22-33

RECORD OF WELL NO. <u>5701</u> on the		CASING AND TUBING				TEST BEFORE SHOT	
<u>North Fork Coal</u> of <u>5332.65</u> Acres		SIZE	WEIGHT	USED IN DRILLING	LEFT IN WELL	<u>9</u> /10 of Water in <u>2</u> inch	
<u>Lincoln</u> District		<u>10"</u>	<u>32.#</u>	<u>305'3"</u>	<u>305'3"</u>	/10 of Merc. in _____ inch	
<u>Wayne</u> County						Volume <u>127</u> Cu. ft.	
State of: <u>West Virginia</u>						TEST AFTER SHOT	
Field: <u>Branchland</u>		<u>6-5/8"</u>	<u>20.#</u>	<u>1699'</u>	<u>1699'</u>	<u>30</u> /10 of Water in <u>2</u> inch	
Rig Commenced <u>Nov. 4,</u> 1945						/10 of Merc. in _____ inch	
Rig Completed <u>Dec. 1,</u> 1945						Volume <u>231</u> Cu. ft.	
Drilling Commenced <u>Dec. 1,</u> 1945						<u>20</u> Hours After Shot	
Drilling Completed <u>Feb. 4,</u> 1946						Rock Pressure <u>450#-43hrs.</u>	
Drilling to cost <u>2.50</u> per foot						Date Shot <u>2-12-46</u>	
Contractor is: <u>R. W. Ray</u>						Size of Torpedo <u>6400# Gelati</u>	
Address: <u>Hamlin, W. Va.</u>		SHUT IN				Oil Flowed _____ bbls. 1st 24 hrs.	
		Date <u>2-13-45</u>				Oil Pumped _____ bbls. 1st 24 hrs.	
Driller's Name <u>C. P. Pinkerton</u>		<u>6-5/8</u> in.		Casing			
<u>Frank Adkins</u>		Size of Packer <u>6-5/8x8 1/2</u>				Well abandoned and	
		Kind of Packer <u>Bottom Hole</u>				Plugged _____ 194	
		1st. Perf. Set <u>none</u> from _____					
Elevation: <u>1100</u> topo		2nd Perf. Set _____ from _____					

DRILLER'S RECORD

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS
Surface	0	11	11	
Sand	11	60	49	
Slate	60	80	20	
White Sand	80	140	60	
Slate	140	288	148	
Sand	288	350	62	Water at 330'
Slate	350	480	110	
Sand	460	520	60	
Slate	520	680	160	
Sand	680	710	30	
Slate	710	860	150	
Lime Shell	860	870	10	
Slate	870	900	30	
Salt Sand	900	975	75	Hole full water at 970'
Slate	975	1130	155	
Salt Sand	1130	1180	50	

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DIVISION OF OIL & GAS
DEPARTMENT OF ENERGY

RIAL WELL NO. 805701

LEASE NO. Pt. 35724

MAP SQUARE 22-33
05/31/2019

47-099-00405 P

DRILLER'S RECORD

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS
Slate & Shells	1160	1240	80	
Salt Sand	1240	1270	30	
Slate & Shells	1270	1365	95	
Lime Shells	1365	1385	20	Hole Reduced from 10" to 8" at
Slate	1385	1400	15	1375'
Shells	1400	1480	80	Test of gas before drilling Berea
Slate	1480	1565	85	Grit - 1/10 Water 2" opening
Red Rock	1565	1573	8	Test of gas before drilling Brown
White Slate	1573	1577	4	Shale - 1/10 Water 2" opening
Maxon Sand	1577	1610	33	
Slate	1610	1612	2	
Little Lime	1612	1644	32	
Pencil Cave	1644	1646	2	
Big Lime	1646	1839	193	6-5/8" Casing point 1682' SLM
Red Rock	1839	1870	31	gas at 1720' in Big Lime
Injun Sand	1870	1948	78	gas 2510'-2520' Increased to
Slate & Shells	1948	1977'	29	10/10 Water 2" opening
Shell	1977	2027	50	Blew down at 3100' - tested 4/10
Slate & Shells	2027	2129	102	Water 2" opening.
Slate	2129	2238	109	gas at 3325 - increased to
Shell	2238	2263	25	8/10 Water 2" opening.
Slate	2263	2394	131	Well shot 2-12-48 with 6400#
Brown Shale	2394	2408	14	Gelatin - Top of shot 2495'
Berea Sand	2408	2432	24	Bottom of shot 3405' -
White Slate	2432	2434	2	Test before shot 9/10 Water 2"
Berea Sand	2434	2463	29	opening. Well open 24 hours before
White Slate	2463	2490	27	shot - Test 20 hours after shot
Brown Shale	2490	2569	79	30/10 Water 2" opening.
White Slate	2569	2895	328	Well shut in 6-5/8" Casing
Brown Shale	2895	2998	103	
Gray Slate	2998	3100	102	
Brown Shale	3100	3395	295	
Slate	3395	3406	11	
Total Depth		3406'	SLM	

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MAR 18 2019

05/31/2019

WW-4A
Revised 6-07

1) Date: March 13, 2019
2) Operator's Well Number: 805701

3) API Well No.: 47 - 47-099 - 00405

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:
(a) Name: Cabwaylingo State Forest
Address: 4279 Cabwaylingo Park Road, Dunlow, WV 25511
(b) Name: _____
Address: _____
(c) Name: _____
Address: _____
6) Inspector: Allen Flowers
Address: 165 Grassy Lick Lane, Liberty, WV 25124
Telephone: 304-552-8308

5) (a) Coal Operator
Name: None
Address: _____
(b) Coal Owner(s) with Declaration
Name: Pocahontas Land Corporation
Address: P.O. Box 1517, Bluefield, WV 24701
(c) Coal Lessee with Declaration
Name: Argus Energy, LLC
Address: 81 Enterprise Drive, Debord, KY 41214

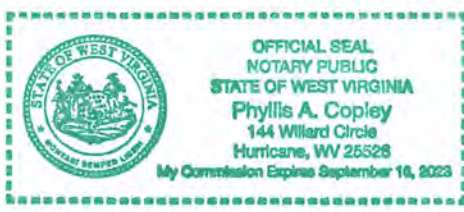
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WV Department of
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TO THE PERSONS NAMED ABOVE: You should have received this Form and the following documents:

- (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: Core Appalachia Operating, LLC
By: Jessica Greathouse
Title: Manager - EHS & Administration Services
Address: P.O. Box 6070, Charleston, WV 25362
Telephone: 304-353-5240

email final approval:
pcopley@odgoc.com
jgreathouse@odgoc.com

Subscribed and sworn before me this 15th day of March 2019
Phyllis A. Copley Notary Public
My Commission Expires September 16, 2023

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
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

Operator Name Core Appalachia Operating, LLC OP Code 494518671

Watershed (HUC 10) West Fork of Twelvepole Quadrangle Wilsondale

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

Will a pit be used? Yes No

If so, please describe anticipated pit waste: Plugging returns/Cement - Will utilize above ground tanks

Will a synthetic liner be used in the pit? Yes No If so, what ml.? 20

Proposed Disposal Method For Treated Pit Wastes:

- Land Application (if selected provide a completed form WW-9-GPP)
- Underground Injection (UIC Permit Number _____)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Any fluid recovered will be hauled to a Core tank battery and disposed of properly)

Will closed loop system be used? If so, describe: _____

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. _____

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

Additives to be used in drilling medium? _____

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

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

-Landfill or offsite name/permit number? _____

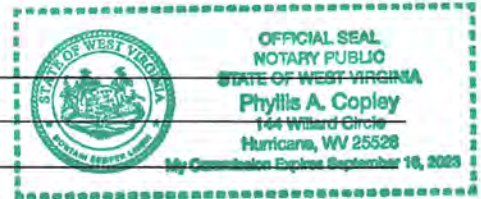
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Permittee shall provide written notice to the Office of Oil and Gas of any load of drill cuttings or associated waste rejected at any West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee shall also disclose where it was properly disposed.

I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, 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 [Signature]
Company Official (Typed Name) Jessica Greathouse
Company Official Title Manager - EHS and Administrative Services



Subscribed and sworn before me this 15th day of March, 2019

Phyllis A. Copley Notary Public

My commission expires September 16, 2023

Proposed Revegetation Treatment: Acres Disturbed 1 +/- Prevegetation pH _____

Lime 3 Tons/acre or to correct to pH 6.5

Fertilizer type 10-20-20 or equivalent

Fertilizer amount _____ lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Red Fescue	40	Red Fescue	15
Alsike	5	Alsike Clover	5
Annual Rye	15		

Attach:
Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: [Signature]

Comments: Site inspected on 3-19-2019.

Title: Inspector Date: 3-20-2019

Field Reviewed? Yes No

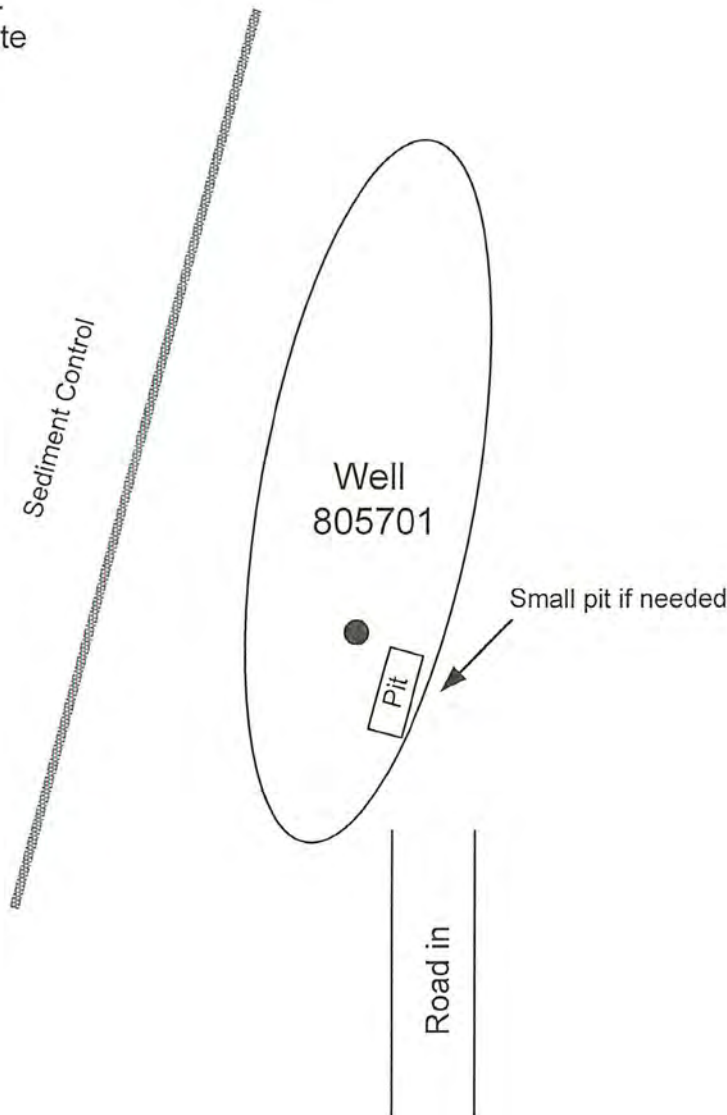
Diagram of Well 805701

API 47-099-00405

Field Office – Kermit

County - Wayne

Surface Owner:
Cabwaylingo State
Forest



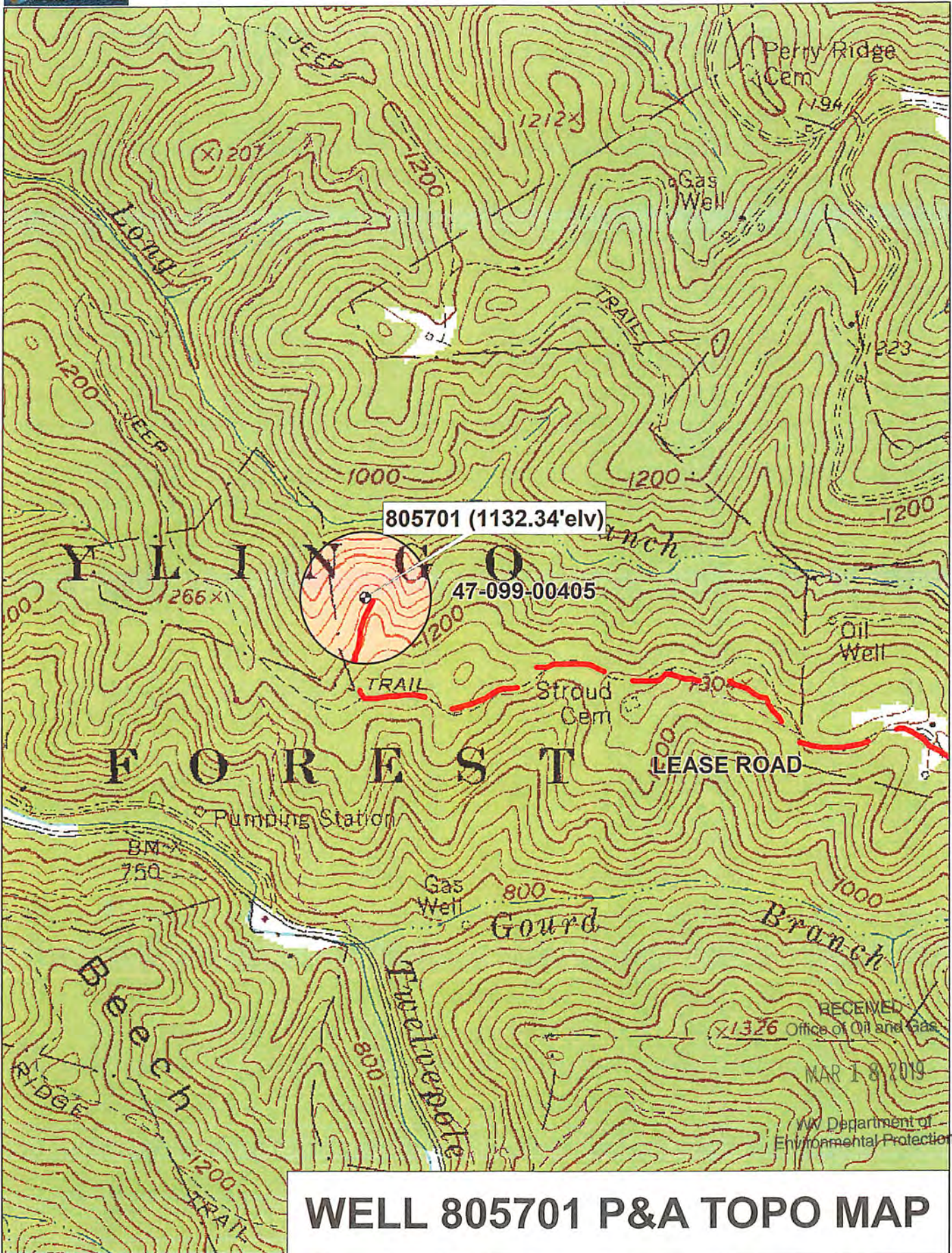
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Note: No Land Application if pit is used

Site Plan



WELL 805701 P&A TOPO MAP

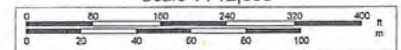
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Scale 1 : 12,000



1" = 227.0 ft

Data Zoom 14-1

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1326 Office of Oil and Gas

MAR 18 2019

TN Department of
Environmental Protection

WW-7
8-30-06



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

API: 47-099-00405 P WELL NO.: 805701
 FARM NAME: North Fork Coal #2
 RESPONSIBLE PARTY NAME: Core Appalachia Operating, LLC
 COUNTY: Wayne DISTRICT: Lincoln
 QUADRANGLE: Wilsondale
 SURFACE OWNER: Cabwaylingo State Forest
 ROYALTY OWNER: Core Appalachia Production, LLC
 UTM GPS NORTHING: 4203541.96m
 UTM GPS EASTING: 382097.99m GPS ELEVATION: 345.14m [1132.34' elv]

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

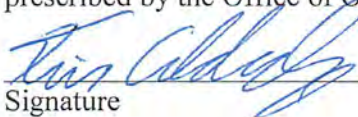
Real-Time Differential

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.


Signature

EHS Specialist

Title

3/8/19

Date