



 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

Wednesday, April 17, 2019
 WELL WORK PLUGGING PERMIT
 Vertical Plugging

CORE APPALACHIA OPERATING LLC
 414 SUMMERS STREET

CHARLESTON, WV 25301

Re: Permit approval for 805627
 47-099-00370-00-00

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

Operator's Well Number: 805627
 Farm Name: WAYNE COUNTY LAND & M
 U.S. WELL NUMBER: 47-099-00370-00-00
 Vertical Plugging
 Date Issued: 4/17/2019

I

47-099-00370P
04/19/2019

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.

JK

47-099-003709

- 1) Date March 11, 2019
- 2) Operator's Well No. 805627
- 3) API Well No. 47-099 - 00370

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 ___ / 04/19/2019
(If "Gas, Production ___ or Underground storage ___) Deep ___ / Shallow X

5) Location: Elevation 963.18' Watershed Jennies Creek
District Lincoln County Wayne Quadrangle Webb

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

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WV Department of
Environmental Protection

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

Work order approved by inspector  Date 3-18-2019

PLUGGING PROCEDURE
805627
WAYNE COUNTY, WEST VIRGINIA
API# 47-099-00370

BY: DMC
DATE: 2/25/19

04/19/2019

Current Status

10" @ 314'
8 1/4" @ 1,216'
6 5/8" @ 1,468'
Shale: Shot 2320-3090'
TD @ 3,100'
Coal @ 498-502'
Salt Water @ 1025'
Gas Shows @ 2830', 3075'
Elevation 1025'
2-19-16 Echometer FL @ 570'

Objective: Plug and abandon

- 1) Prepare road and location.
- 2) MIRU service rig and support equipment.
- 3) Blow well down. Check TD.
- 3a) Gel Hole.
- 4) Spot cement plug at TD, ~ 2300 – 2200'.
- 5) TIH and tag cement plug.
- 6) Spot 6% gel from 2200 – 1518'.
- 7) Attempt to pull 6 5/8" csg. If unsuccessful, cut 6 5/8" at free point.
- 8) Spot 100' cement plug from 1518 – 1418'.
- 9) Attempt to pull 8 1/4" csg. If unsuccessful, cut 8 1/4" at free point.
- 10) Spot 6% gel from 1418 – 1266'.
- 11) Spot 100' cement plug from 1266 – 1166'.
- 12) Spot 6% gel from 1166 – 1075'.
- 13) Spot 100' cement plug from 1075 – 975'.
- 14) Spot 6% gel from 975 – 550'.
- 15) Spot 100' cement plug from 550-450'. ~~COM~~
- 16) Attempt to pull 10" csg. If unsuccessful, shoot or rip holes @ 100'.
- 17) Spot 6% gel from 450 – 370'.
- 18) Spot 100' cement plug from 370-270'.
- 19) Spot 6% gel from 270 – 100'.
- 20) Spot 100' cement plug from 100' – Surface.
- 21) Pull work string and top off w/cement.
- 22) Erect permanent monument (30" minimum height and 6" minimum diameter pipe) with API # (1/2" height numbering) and reclaim.

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WEST VIRGINIA DEPARTMENT OF MINES
OIL & GAS DIVISION
W E L L R E C O R D

805627
47-099-00370 P

Permit No. Way 370
NAUGATUCK Quad.

Gas Well
CASING & TUBING

Company United Fuel Gas Company
Address Charleston, W. Va.
Farm J. L. Caldwell Acres 13,500
Location Jennies Creek
Well No. 5627 Elev. 1025 Topo
District Lincoln Wayne County
Mineral Wayne County Land & Min. Co.
Huntington, W. Va.
Commenced 2-23-46
Completed 4-18-46
Date shut 4-22-46 Depth 2320 to 3090
with 5200# gelatin
Volume
Rock Pressure 360 lbs. 48 hrs.
Salt Water 1025' H.F.

10 314'
8 1/4 1216' 04/19/2019
6 5/8 1468

Coal at 498' 48"

Soil	0	8
Sand	8	65
Slate	65	85
Sand	85	160
Slate	160	175
Sand	175	280
Slate	280	400
Sand	400	420
Slate	420	498
Coal	498	502
Broken Sand	502	560
Slate	560	655
Sand	655	750
Slate & Shells	750	865
Salt Sand	865	1035
Slate	1035	1053
Slate	1053	1205
Red Rock	1205	1209
Slate & Shells	1209	1245
Maxon Sand	1245	1308
Red Rock	1308	1315
Slate & Shells	1315	1426
Black Lime	1426	1458
Big Limo	1458	1658
Injun Sand	1658	1700
Lime Shells	1700	1875
Blue Slate	1875	2180
Brown Shale	2180	2203
Berea	2203	2306
White Slate	2306	2325
Brown Shale	2325	2400
Light Shale	2400	2593
Brown Shale	2593	2750
White Shell	2750	2825
Brown Shale	2825	3086
White Slate	3086	3100
TOTAL DEPTH		3100

Gas 2830 show
Gas 3075 show

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Department of
Surface Water Protection

47-099-00370A

WW-4A
Revised 6-07

1) Date: March 11, 2019
2) Operator's Well Number
805627

3) API Well No.: 47 - 47-099 - 00370

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

04/19/2019

4) Surface Owner(s) to be served:	5) (a) Coal Operator
(a) Name <u>Wayne County Land & Mineral Co.</u>	Name <u>None</u>
Address <u>C/O Gaddy Engineering</u>	Address _____
<u>303 Washington Street, West</u>	_____
(b) Name <u>Charleston, WV 25302</u>	(b) Coal Owner(s) with Declaration
Address _____	Name <u>Wayne County Land & Mineral Co.</u>
_____	Address <u>C/O Gaddy Engineering</u>
(c) Name _____	<u>303 Washington Street, West</u>
Address _____	Charleston, WV 25302
_____	Address _____
6) Inspector <u>Allen Flowers</u>	(c) Coal Lessee with Declaration
Address <u>165 Grassy Lick Lane</u>	Name <u>None</u>
<u>Liberty, WV 25124</u>	Address _____
Telephone <u>304-552-8308</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.



Well Operator Core Appalachia Operating, LLC
 By: [Signature] Jessica Greathouse
 Its: Manager - EHS & Administration Services
 Address P.O. Box 6070
Charleston, WV 25362
 Telephone 304-353-5240

Subscribed and sworn before me this 12th 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.

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WV Department of
Environmental Protection

WW-9
(5/16)

API Number 47 - 099 - 00370
Operator's Well No. 805627

STATE OF WEST VIRGINIA
DEPARTMENT OF ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS
FLUIDS/ CUTTINGS DISPOSAL & RECLAMATION PLAN

04/19/2019

Operator Name Core Appalachia Operating, LLC OP Code 494518671

Watershed (HUC 10) Jennies Creek Quadrangle Webb

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? _____

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

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Subscribed and sworn before me this 12th day of March, 2019

Phyllis A. Copley Notary Public

My commission expires September 16, 2023

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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

04/19/2019

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: _____

Mulch & Reseed per 006, P35.
24 H. max to state inspection pit
to PWS.

Title: INSPECTOR

Date: 3-18-2019

Field Reviewed? Yes No

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Diagram of Well 805627

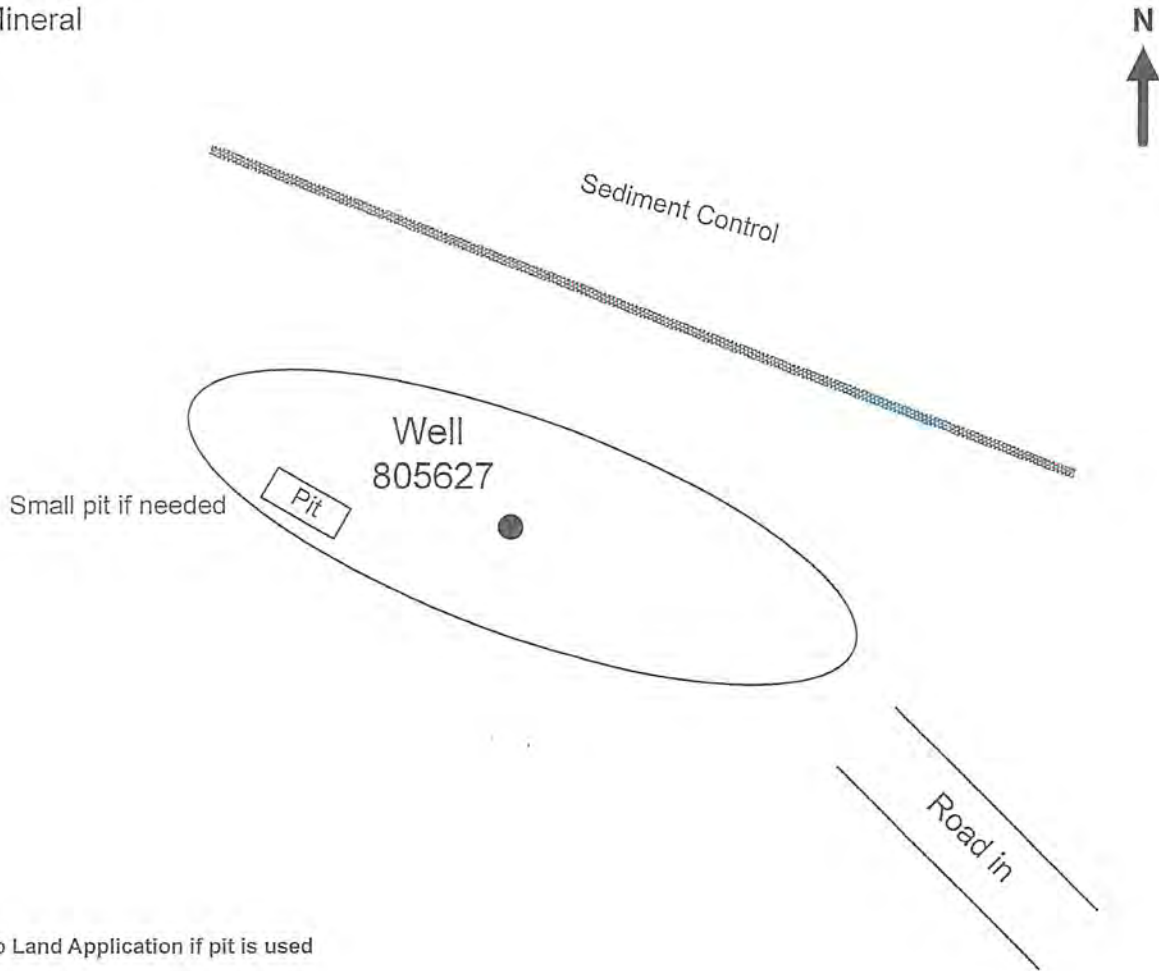
API 47-099-00370

Field Office – Kermit

County - Wayne

04/19/2019

Surface Owner:
Wayne County
Land & Mineral



Note: No Land Application if pit is used

Site Plan

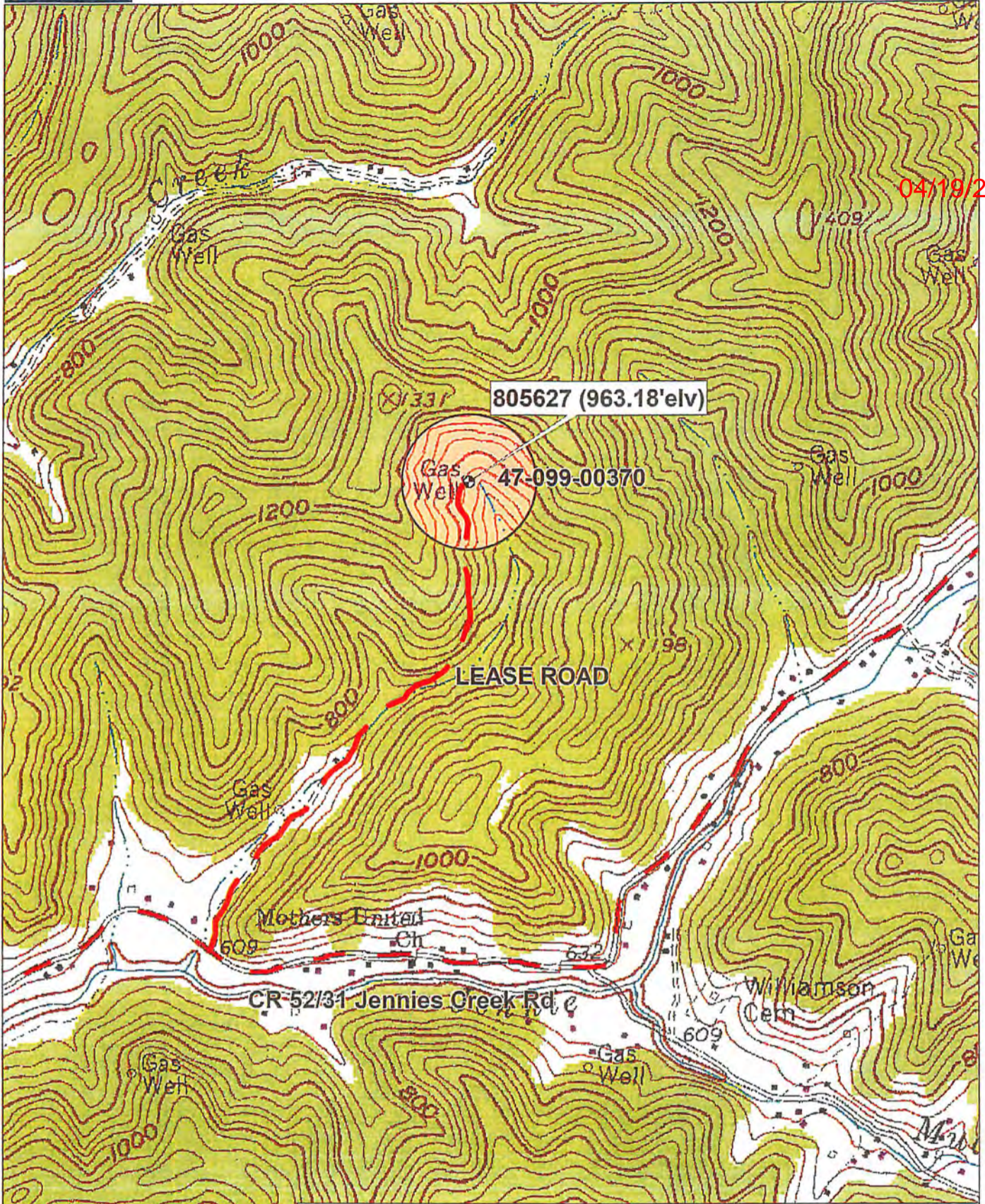
Prepared by: Kris Aldridge
Date: 3/8/2019

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No Scale

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04/19/2019

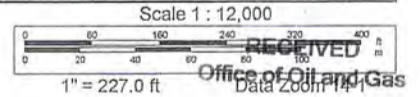
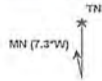


WELL 805627 P&A TOPO MAP

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WV Department of Environmental Protection



West Virginia Department of Environmental Protection
Office of Oil and Gas

04/19/2019

WELL LOCATION FORM: GPS

API: 47-099-00370 WELL NO.: 805627

FARM NAME: J L Caldwell 34

RESPONSIBLE PARTY NAME: Core Appalachia Operating, LLC

COUNTY: Wayne DISTRICT: Lincoln

QUADRANGLE: Webb

SURFACE OWNER: Wayne County Land & Mineral

ROYALTY OWNER: Wayne County Land & Mineral

UTM GPS NORTHING: 4196437.41m

UTM GPS EASTING: 376182.45m GPS ELEVATION: 293.58m (963.18' 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.

Kris Caldwell
Signature

EHS Specialist
Title

3/12/2019
Date

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