

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

Friday, April 17, 2020 **VELL WORK PLUGGING PERMIT** Vertical Plugging

CORE APPALACHIA OPERATING LLC 101 MCOUISTON DRIVE

JACKSON CENTER, PA 16133

Re:

Permit approval for 5665 47-099-00387-00-00

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: 5665

Farm Name: HUNT DEV & GAS MIN.

U.S. WELL NUMBER: 47-099-00387-00-00

Vertical Plugging

Date Issued: 4/17/2020

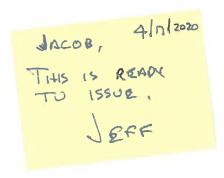
Promoting a healthy environment.

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. <u>Failure to adhere to the specified permit conditions may result in enforcement action.</u>

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 February 10	2020
2)Operator's	20-1
Well No. 805665	
3)API Well No. 47-099	- 00387

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/ Liqui (If "Gas, Production or Un	d injection/ Waste disposal/ derground storage,) Deep/ Shallow
5) Location: Elevation 307.94 m District Stonewall	Watershed Right Fork of Little Lynn Creek County Wayne Quadrangle Nestlow
6) Well Operator Core Appalachia Operating, LLC Address P.O. Box 6070 Charleston, WV 25362	7) Designated Agent Jessica Greathouse Address P.O. Box 6070 Charleston, WV 25362
Oil and Gas Inspector to be notified Name Jeffery L. Smith Address 5349 Karen Circle, Apartment 2101 Cross Lanes, WV 25313	9) Plugging Contractor Name R & J Well Services, Inc. Address P.O. Box 40 Hueysville, KY 41640-0040

SEE ATTACHED SHEET

Notification must be given to the district oil and gas inspector 24 hours before permitted Work order approved by inspector Jeffrey Smith Date 3-19-20

PLUGGING PROGNOSIS

805665 West Virginia, Wayne County API# 47-099-00387

Completed by S.T. Updated 11/14/2019

Casing Schedule

SHOT 2706 - 3186

10" csg @ 33' 8 1/4" csg @ 313' 6 5/8" csg @ 1437' 3" csg @ 1547' Hookwall Packer @ 1547' 1 ½" tbg 2939' 1 ½" Fluid Level 9/18/18 @ 600'

Completion: Shot

Fresh Water: No shows

Gas Shows: Big Lime 1500, Berea 2505, Brown Shale 2865'-3168'

Coal: No shows Elevation: 930'

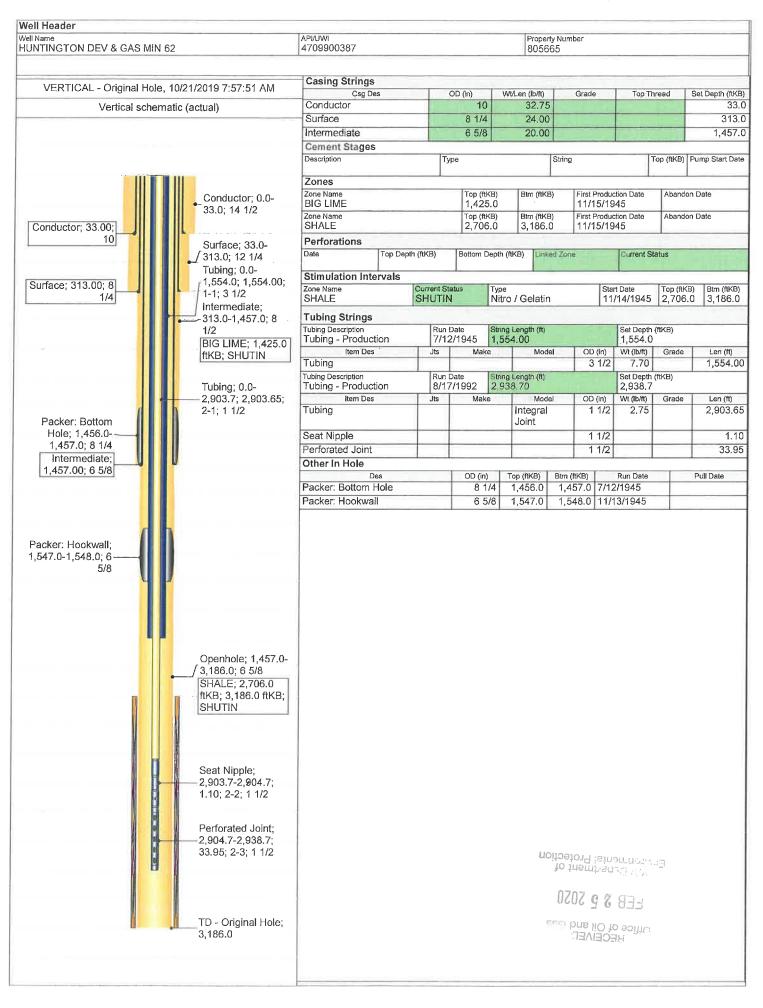
- 1. Notify Inspector, Jeffery Smith @ 681-313-6743, 48 hours prior to commencing operations.
- 2. Check and record pressures on csg.
- 3. Check TD w/ wireline
- 4. TOOH LD 1 1/2" tbg
- 5. TIH w/ tbg to 2865'. Load well as needed w/ 6% bentonite gel. Pump 100' C1A cement plug from 2865'-2765' (Shale Gas Show).
- 6. TOOH w/tbg to 2765'. Pump 6% bentonite gel from 2765'- 2505'.
- 7. TOOH w/ tbg to 2505. Pump 100' C1A cement plug from 2505'- 2405' (Berea Gas Show) WOC, TAG CEMENT
- 8. TOOH w/tbg to 2405'. Pump 6% bentonite gel from 2405'-1597'. TOOH LD Tbg
- 9. Free Point 3 ½" csg. Cut and Pull. Set 100' C1A cement plug across csg Cut. 50' in/out of cut.
- 10. TIH w/ tbg to 1597'. Pump 210' C1A cement plug from 1597'-1387' (Lime Gas Show, 3 ½" cut, 6 5/8" csg st).
- 11. TOOH w/ tbg to 1387'. Pump 6% bentonite gel 1387'-930'. TOOH LD Tbg
- 12. Free Point 6 5/8" csg. Cut and Pull. Set 100' C1A cement plug across csg Cut. 50' in/out of cut. Do not omit any plugs listed below. Perforate as needed.
- 13. TIH w/ tbg to 930'. Pump 100' C1A cement plug from 930'-830' (Elevation).
- 14. TOOH w/tbg to 830'. Pump 6% bentonite gel 830'-363'.
- 15. TOOH w/ tbg to 363'. Pump 100' C1A cement plug from 363'-263' (8 1/4" csg st).
- 16. TOOH w/ tbg to 263'. Pump 6% bentonite gel from 263'-100'. TOOH LD tbg
- 17. Free Point 8 1/4" csg. Cut and pull. Set 100' C1A cement plug across csg Cut. 50' in/out of cut. Do not omit any plugs listed below. Perforate as needed.
 - 18. TIH w/ tbg to 100'. Pump 100' C1A cement plug from 100'-surface (Surface).
 - 19. Erect monument with API#, date plugged, and company name.
 - 20. Reclaim location and road to WV-DEP specifications.

A IF UNABLE TO CUT & PULL 81/4" CASING.
PERFORMTE 81/4" AND FILL U/ CLASS A
CEMENT TO EURFACE.

RECEIVED
Office of Oil and Gas

FEB 2 5 2020

WV Department of Environmental Protection



Ü-5665

099-387

Huntington Dev.& Gas Co.Min.
United Fuel Gas Company
Stonewall District, Wayne County, W.Va.
Map Square 22-47
Commenced 7-12-45
Completed 11-7-45
Elevation

3			
Surface	0		32
Sand	32		37
Mud	37		90
Sand	90		120
Slate	120		155
Sand	155		165
Slate	165		210
Sand	210		285
Slate	285		300
Sand	300		650
Slate	650		918
Gas Sand	918		925
Salt Sand	925	1	.095
Mud	1.095		135
Salt Sand	1135		230
Mud	1.230		250
Red Rock	1250		270
Mud	1270		370
Little Line	1370		400
Pencil Cave	1400		105
Big Lima	1405		422
Break	1422	j	425
Big Line	1425		570
Black Line	1570	j	575
Injun Sand	1575		656
Slate	1656	1	663
Shells	1656 1663	1	.698
Slate & shells	1698	- 2	236
Brown Shale	2156	S 4 2	167
Berea Sand	2167	- 2	220
Clate & shells	2220	2	720
Slate, dark	2720	12	790
Slate	2790	1	365
Brown Shale	2865	3	1172
White Slate	3172		3186
Total	Depth	3186	S.L.H.

	CASING:		
Size	Weight	Point	15
10"	32.75#	331	
8-1/4"	24#	3131	
6-5/8 ⁿ	20#	14371	
34 tub	ing	1547	

PACKER: 3"x6-5/6"x16" hookwall packer set

CONTRACTOR: Bright & Hicks
DRILLERS: H. H. Edwards
A. W. Nida
W. E. Angus
Nido Handley

to 1501 Big Lime gas 1500/18/10 Merc 6-5/8" 20# 6.039 M

Turned Big Lime gas into line and let feed from 8-16-45 to 9-13-45.

Gas test 2505 22/10 W 24 198 W

Shale gas 2865 30/10 W 20 231 H 0 0 3165 32/10 W 20 239 M Test 3167 24/10 W 20 207 M Shale gas 3168 32/10 W 20 239 H

Tost before shot 32/10 W 2" 239 M Shot 11-12 45 with 3100# Gel. 2706-3186. Tost when tubed 11-13-45: 7/10 W 2" 112 M - Shale 12/10 W 2" 146 M - Big I/me

OPEN F10N = 146 M = Big Lime 80% R.P. 112 M = Shale 325% R.P.

Tubed and shit in 11-13-45 in 3" Tubing.

Permit No. Way-387

Office of Oil and gas

FEB 2 5 2020

W Department of Environmental Protestion WW-4A Revised 6-07 Date: February 10, 2020
 Operator's Well Number
 805665

3) API Well No.: 47 -

9 - 00387

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

4) Surface Ow	ner(s) to be served: / 5)	(a) Coal Operator	
(a) Name	Jeffrey and Sharinda Jackson	Name	Lexington Coal Company
Address	798 Tiger Fork Road	Address	P.O. Box 58370
	East Lynn, WV 25512		Charleston, WV 25358-0370
(b) Name	\$	(b) Coal Owi	ner(s) with Declaration
Address		Name	Southern Regional Industrial, Inc.
		Address	Three Commercial Place
			Norfalk, Virginia 25310
(c) Name		Name	
Address		Address	
	:		
6) Inspector	Jeffery L. Smith	(c) Coal Less	see with Declaration
Address	5349 Karen Circle, Apartment #2101	Name	Lexington Coal Company
	Cross Lanes, WV 25313	Address	P.O. Box 58370
Telephone	681-313-6743	-	Charleston, WV 25358-0370
-			

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.

EST VICE	OFFICIAL SEAL NOTARY PUBLIC	Well Operator	Core Appalachia Operating, LLC	m		
	TATE OF WEST VIRGINIA	By:	Jessica Greathouse	2		9
<i></i>	Phyllis A. Copley 144 Willard Circle	Its:	Manager - Environmental, Health, Safety	50		100
EMPT MAN COMM	Hurricane, WV 25528	Address	P.O. Box 6070	m D	00	Q.M
my Cons	nieslon Expires September 16, 2023		Charleston, WV 25362	STE	80	<u>Om</u>
		Telephone	304-353-5240	E.F.	-01	m m
Subscribe	d and sworn before me	this 21st d	ay of February 2020 Notary Public	ent of rotection	020	d Gas

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 depprivacyoffice system.

U.S. Postal Service™ CERTIFIED MAIL® RECEIPT 1050 Domestic Mail Only For delivery information, visit our EAST LYNN WW 25512 54 Certified Mail Fee \$3.55 0523 믬 04 xtra Services & Fees (check bax, Return Receipt (hardcopy) П Return Receipt (electronic) \$0.00 **Postmark** Certified Mail Restricted Delivery **\$0.0**0 Here Adult Signature Required \$0.00 Adult Signature Restricted Delivery \$ 20 \$1.60 7 02/21/2020 \$8.00 7017 805665 P&A Sen Jeffrey & Sharinda Jackson Stre 798 Tiger Fork Road City, East Lynn, WV 25512 U.S. Postal Service™ CERTIFIED MAIL® RECEIPT 528 Domestic Mail Only CHARLESTON 5. Certified Mail Fee 0523 \$3.55 m =0 04 Extra Services & Fees (check box, add fee as appropri П Return Receipt (electronic) \$0.00 **Postmark** Certified Mail Restricted Delivery \$0.00 Here Adult Signature Required \$0.00 Adult Signature Restricted Delivery \$ 1450 Postage \$1.60 02/21/2020 Total Pr \$8.00 805665 P&A 7017 Sent To Lexington Coal Company Street a P.O. Box 58370 Charleston, WV 25358-0370

805665 47-099-00387 P



City, Sta



WW-9 (5/16)

API Number47 - 099-00387 Operator's Well No. 805665

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) Right Fork of Little Lynn Creek (0509010202) Quadrangle Nestlow	
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 No	
If so, please describe anticipated pit waste: Plugging returns/Cement	
Will a synthetic liner be used in the pit? Yes No If so, what ml.?	
Proposed Disposal Method For Treated Pit Wastes:	
X Land Application (if selected provide a completed form WW-9-GPP)	•
Underground Injection (UIC Permit Number	
Off Site Disposal (Supply form WW-9 for disposal location)	
Other (Explain	
Will closed loop systembe 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 West Virginia solid waste facility. The notice shall be provided within 24 hours of rejection and the permittee where it was properly disposed.	
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection provisions of the permit are enforceable by law. Violations of any term or condition of the general permit and or regulation can lead to enforcement action. I certify under penalty of law that I have personally examined and am familiar with the information form and all attachments thereto and that, based on my inquiry of those individuals immediately the information, I believe that the information is true, accurate, and complete. I am aware that there are submitting false information, including the possibility of fine or imprisonment. Company Official Signature Company Official Title Manager - Environmental, Health, Safety	on. I understand that the d/or other applicable law ation submitted on this responsible for a btaining.
not the second	
Subscribed and swom before me this day of the Notary Public Notary Public	RECEIVED Office of Oil and Gas
My commission expires September 16, 2023	FEB 2 5 2020
t .	WW Department of Environmental Protection

Operator's Well No. 805665

Lime 3	tment: Acres Disturbed Tons/acre or to corre	ct to pH 6.5	
Fertilizer type 10	0-20-20 or equivalent		
Fertilizer amount		lbs/acre	
Mulch 2		_Tons/acre	
		Seed Mixtures	
Te	emporary	Perma	ment
Seed Type	lbs/acre	Seed Type	lbs/acre
Red Fescue	40	Red Fescue	15
Alsike	5	Alsike Clover	5
Annual Rye	15		
	pit will be land applied, pro the land application area.	l application (unless engineered plans incluvide water volume, include dimensions (L,	
Maps(s) of road, location, pi provided). If water from the L, W), and area in acres, of Photocopied section of invol	pit will be land applied, prothe land application area. ved 7.5' topographic sheet. Sedine 1 Control		W, D) of the pit, and dir
Maps(s) of road, location, pinorovided). If water from the L, W), and area in acres, of thotocopied section of involution Approved by:	pit will be land applied, prothe land application area. ved 7.5' topographic sheet. Sedine 1 Control	vide water volume, include dimensions (L,	W, D) of the pit, and dir
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WW-9- GPP Rev. 5/16

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API Number 47	- 099	- 00:	387
Operator's Well N	Jo. 805	665	

WV Department of Environmental Protection

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

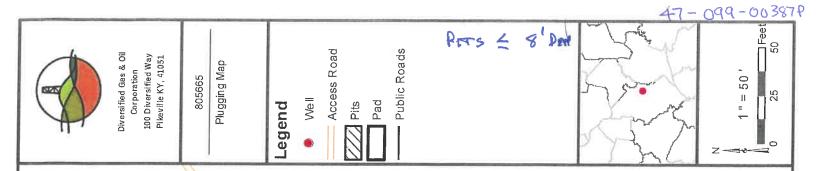
GROUNDWATER PROTECTION PLAN	
Operator Name: Core Appalachia Operating LLC	
Watershed (HUC 10). Right Fork of Little Lynn Creek (0509010202)	Quad: Nestlow
Farm Name: Huntington Development and Gas Mineral #62	
 List the procedures used for the treatment and discharge of fluids. Include a list of all opera groundwater. 	itions that could contaminate th
Treatment of the fluid will include adjusting pH and precipitating out solid be discharged in a manor to eliminate sediment runoff,	
The potential contaminates are class A cement, bentonite gel, and producentaminates are circulated to surface during plugging operations.	uced fluids. These
2. Describe procedures and equipment used to protect groundwater quality from the list of poter	tial contaminant sources above
The contaminants are circulated to surface and drainage controlled into and gel are allowed to settle out in the pit. The produced fluids will then treatable treated and ground applied. Otherwise the produced fluids will commercial injection well.	be tested and if
 List the closest water body, distance to closest water body, and distance from closest We discharge area. 	ll Head Protection Area to the
Closest body of water is Right Fork Little Lynn Creek (1,700'). The disch of the wellhead protection area.	arge area is within 50°
	OF EAST LYNN LAK
. Summarize all activities at your facility that are already regulated for groundwater protection.	
There are no activities at this facility regulated for groundwater protection producing gas well without a tank.	. The facility is a non
	RECEIVED Office of Oil and Gas
Discuss any existing groundwater quality data for your facility or an adjacent property.	FEB 2 5 2020

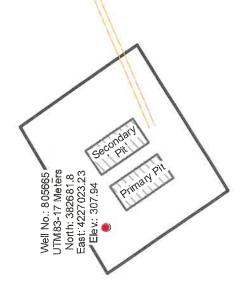
WW-9- GPP Rev. 5/16 Page 2 of 2
API Number 47 - 099 - 00387
Operator's Well No. 805665

There is no existing ground water quality data at this site or adjacent properties
6. Provide a statement that no waste material will be used for deicing or fill material on the property.
No waste material will be used for deicing or fill material on this property.
 Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.
DGOC supervision will manage testing and contract employees on site. DGOC supervision will ensure testing is within all required parameters prior to discharging and utilize silt fencing as needed to eliminate erosion.
Provide provisions and frequency for inspections of all GPP elements and equipment.
A job safety analysis will be completed each day on site to discuss the procedures, safety, and inspect all GPP elements and equipment.
Signature:
Date: 2-10-2020 RECEIVED Office of Oil and Gas

WV Department of Environmental Protection

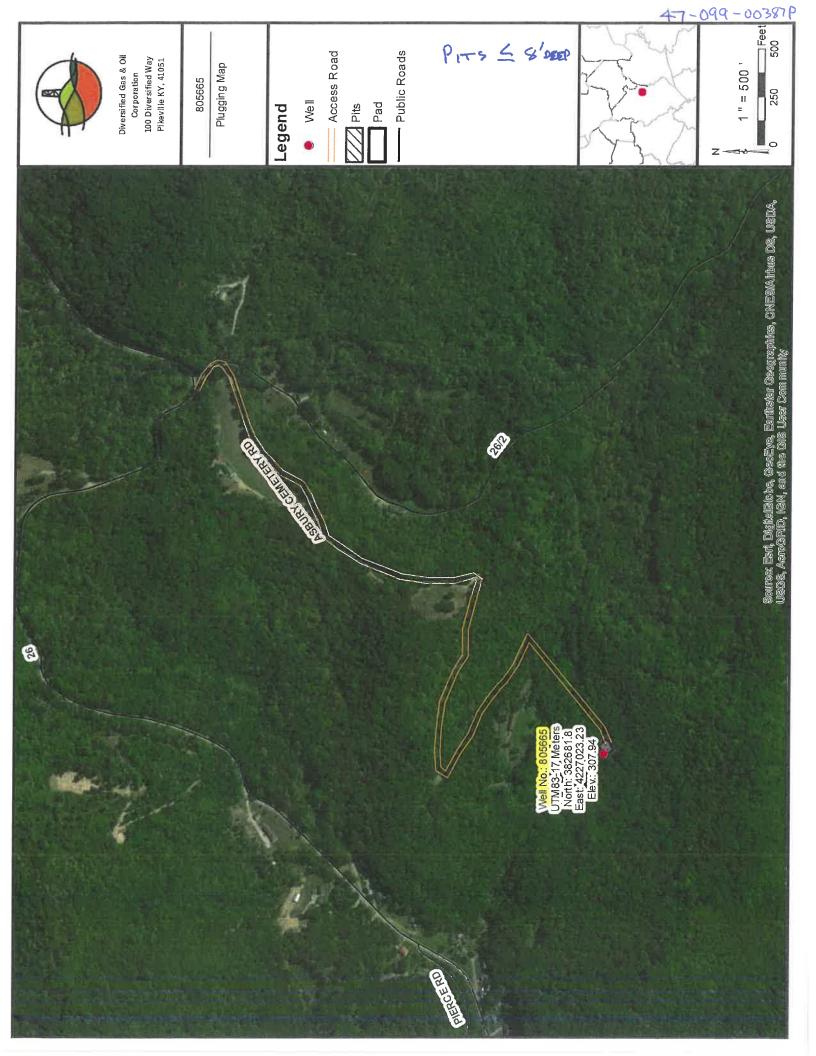
FEB 2 5 2020

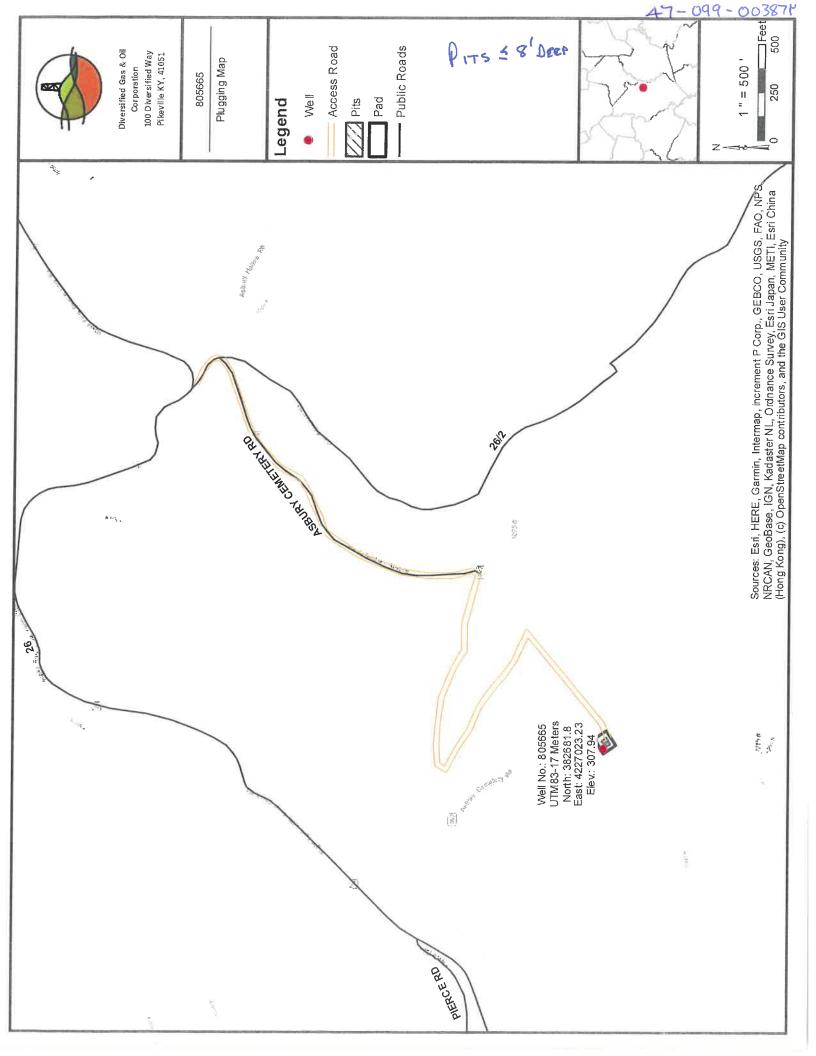


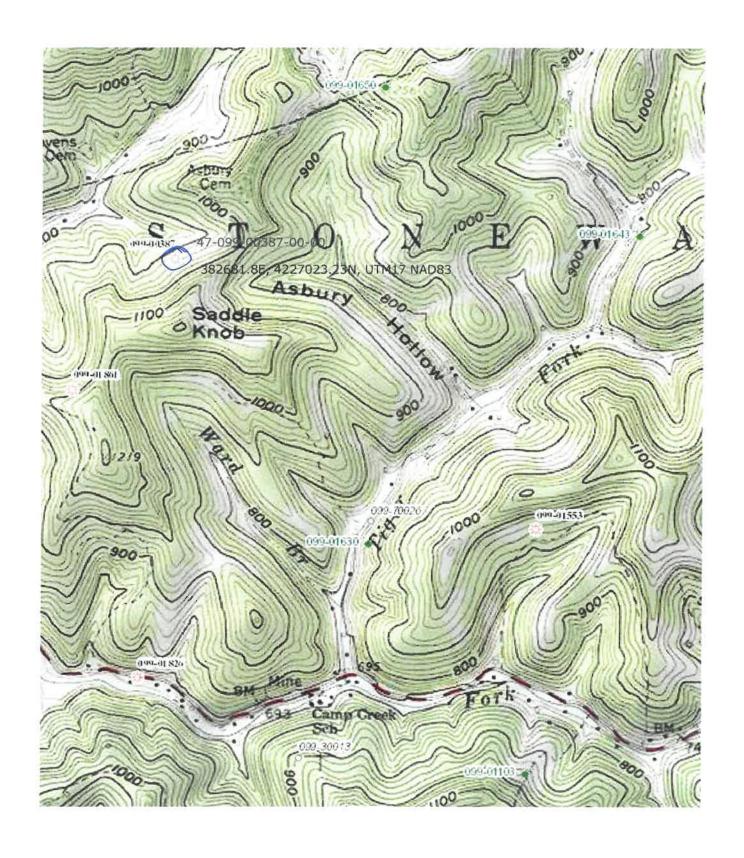


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DECEIVED ON STAND







WW-7 8-30-06



West Virginia Department of Environmental Protection Office of Oil and Gas

WELL LOCATION FORM: GPS

Y Y 3L23L2	L DOCALION FORM.	31.0
_{API:} 47-099 4 0387	WELL N	o.:_805665
FARM NAME: Huntin	gton Development &	Gas Company
	AME: Core Appalachia	
COUNTY: Wayne	DISTRICT:	Stonewall
QUADRANGLE:	Nestlow	
SURFACE OWNER: Jef	frey and Sharinda Ja	ckson
ROYALTY OWNER: CO	re Appalachia	
UTM GPS NORTHING: 3	82,681.8	930.
UTM GPS EASTING: $4,2$	27,023.23 GPS ELEV	_{VATION:} 307.94 m
the following requirements: 1. Datum: NAD 1983 height above mean 2. Accuracy to Datum	and Gas will not accept GPS coord b, Zone: 17 North, Coordinate Units sea level (MSL) – meters. n – 3.05 meters	s: meters, Altitude:
3. Data Collection Me		RECEIVED Office of Oil and Gas
	ost Processed Differential	FEB 2 5 2020
	Real-Time Differential Post Processed Differential	WV Department of Environmental Protection
	Real-Time Differential	
I the undersigned, hereby certi	the topography map showing the fy this data is correct to the best of ation required by law and the reguland Gas.	my knowledge and
1+1	Engineer III	2/7/2020
Signature	Title	Date
5"		