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west virginia department of environmental protection

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

Harold D. Ward, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Thursday, November 3, 2022  
WELL WORK PLUGGING PERMIT  
Vertical Plugging

COLUMBIA GAS TRANSMISSION, LLC  
1700 MACCORKLE AVENUE SE

CHARLESTON, WV 25314

Re: Permit approval for 7310  
47-035-00466-00-00

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 blue ink signature of James A. Martin, Chief, is written over a circular stamp. The signature is cursive and appears to read 'James A. Martin'. The stamp is partially obscured by the signature.

Operator's Well Number: 7310  
Farm Name: CLARK, MOLLY, ETAL  
U.S. WELL NUMBER: 47-035-00466-00-00  
Vertical Plugging  
Date Issued: 11/3/2022

Promoting a healthy environment.

11/04/2022

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4703500466P

## 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

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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.

11/04/2022

1) Date April 28, 2022  
 2) Operator's  
 Well No. Ripley 7310  
 3) API Well No. 47-035 - 00466

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 X") Deep X / Shallow \_\_\_\_
- 5) Location: Elevation 942 ft Watershed Sycamore Creek  
 District Ripley County Jackson Quadrangle Sandyville
- 6) Well Operator Columbia Gas Transmission LLC 7) Designated Agent Maria Medvedeva  
 Address 1700 MacCorklle SE Address 1700 MacCorklle SE  
Charleston, WV 25314 Charleston, WV 25314
- 8) Oil and Gas Inspector to be notified 9) Plugging Contractor  
 Name Joe Taylor Name Next Lvl Energy, LLC  
 Address 1478 Claylick Road Address 736 W Ingomar Rd, Units 268  
Ripley, WV 25271 Ingomar, PA 15127-6613

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

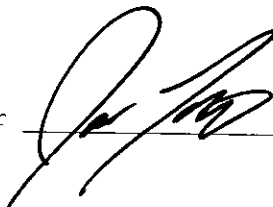
Refer to enclosed:

- 1) Well job plan.
- 2) Prior to P&A wellbore schematic.
- 3) Proposed P&A wellbore schematic.

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 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

9-8-22

11/04/2022

Objective: Plug and Abandon LAST PROFILE UPDATE:

TITLE: Plug and Abandon	WELL ID: 7310 (OB)	WORK TYPE: MOD
FIELD: Ripley	SHL (Lat/ Long): 38.85972	LEASE #: 52248
STATE: WV	BHL (Lat/Long): 38.85972	API: 47-035-00466
DIST/TWP: Ripley		CNTY: Jackson

EXISTING TUBULAR CONFIGURATION	OD (inches)	WEIGHT (PPF)	GRADE	THREAD	DEPTH (ft)		FORMATION: refer to MISC INFORMATION section
					TOP	BOTTOM	
Conductor	16	42.5			0	14	PAY: TD: 5047
Surface	13 3/8				pulled		PBTD: KB-GL:
Intermediate	10 3/4				pulled		CSG DEPTH
Intermediate	8 5/8				pulled		ELEVATIONS
Production	7	24.0			0	4910	TMG: KB-RF: GL: 942
Midgit bottomhole packer	8" x 6.4"				4910	4912	WELLBORE SCHEMATIC
unknown -->	3 1/2	8.7			4953	5047	Refer to "Wellbore Diagram" tab
Tubing / Anchor Clamp	2 3/8	4.0			0	5047	
Perforations	No record						
Wellhead	Threaded Production 2k; 2" 11 1/2-V wellhead connection						

D.H. EQUIPMENT	TYPE	DEPTH (ft)
PACKER INFO: Upper		
Lower		
NIPPLE PROFILE INFO: Upper		
Lower		
SSSV INFO:		

CEMENT INFO	Calc Gel (ft)
7 No record of cement. Ran 60 sacks of Aquagel and 4 bales Fibrotex.	4431

**MISC INFORMATION**

**REFER TO WELL SUMMARY RPT, WELLBORE DIAGRAM, ELOG, ETC. (see spreadsheet tabs below)**

**Kill Fluid Calculation** \* Note that kill fluid calculation tabs are hidden

Maximum calculated bottom-hole pressure (for reference only):	1922	psig	* input
Maximum storage field surface pressure (MAOP):	1675	psig	* input
Well TD:	5047	ft TVD	* input
Top of storage zone (Oriskany):	4963	ft TVD	* input
Calculated maximum BH pressure at top of zone:	1904	psig	* output Kill Fluid (TOZ)
Kill fluid density at top of zone @: 200 psi OB	8.15	ppg	* output Kill Fluid (TOZ)
Proposed depth of BP (N/A):	4963	ft TVD	* input
Calculated maximum BH pressure at depth of BP:	1904	psig	* output Kill Fluid (BP)
Kill fluid density at depth of BP @: 200 psi OB	8.15	ppg	* output Kill Fluid (BP)
<b>Required minimum kill fluid density:</b>	<b>8.2</b>	ppg	* greater of the two

Current AOF:	958 MCF/D
Top historical AOF:	1,273 MCF/D
Last MVRT:	None ran.
CBL:	None ran.

PROPOSED YEAR: 2023	ERCB PERMIT REQD: YES ___ NO_X__	(Internal) PDS Required: YES ___ NO ___
PREPARED BY: Maria Medvedeva	DT. APPLIED: ISSUED:	APPROVED: Brent Criser
PREP DATE: 8/16/2022	REVIEWED BY: James Amos	

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WV Department of Environmental Protection

*James Amos*  
9-8-22

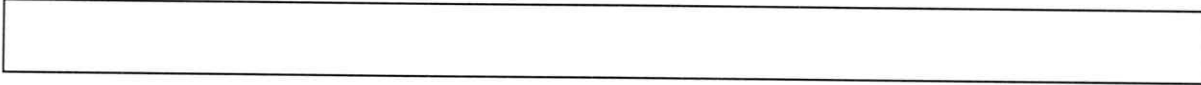
WELL JOB PLAN		STS Well Engineering & Technology		PAGE 2	DATE JOB PREPARED: 9/22/2022
Objective: Plug and Abandon			LAST PROFILE UPDATE:		
TITLE: Plug and Abandon		WORK TYPE: MOD			
FIELD: Ripley	WELL: 7310 (OB)				
STAT: WV	SHL (Lat/Long): 38.85972	-81.66528	API: 47-035-00466		
TWP: Ripley	BHL (Lat/Long): 38.85972	-81.66528	CNTY: Jackson		
PROCEDURE					
<p><b>NOTE: Cement used will be Class A, slurry weight 15.6ppg, slurry yield 1.18 cuft/sk or Class L, slurry weight 15.6ppg, slurry yield 1.14 cuft/sk, as per the approved WVDEP Variance Order No.2022-13. All spacers will be 6% Bentonite gel. Per Schlumberger 06.16.1978 GR log, Driller's TD is noted at 5047' and logger's TD at 4921'; 1997 flow test record indicate max reached TD of 4919' --&gt; possibly the actual top of the 3-1/2" liner.</b></p>					
<ol style="list-style-type: none"> <li>1 Obtain State well work permit, EM&amp;CP, pipeline crossing evaluation, call before you dig, etc. Prepare site specific SPCC.</li> <li>2 Notify landowner.</li> <li>3 Obtain General Work Permit and Wellsite Review &amp; Turnover Form from Operations.</li> <li>4 Notify Reservoir Engineering &amp; Geosciences (REG) of intent to take well out of service.</li> <li>5 Notify environmental inspector prior to beginning work. If required, notify State/Federal regulatory agencies prior to beginning work.</li> <li>6 Prepare access road and well site. Install ECD's per EM&amp;CP.</li> <li>7 Service all wellhead valves.</li> <li>8 Document and report to WE&amp;T the initial tubing, casing and annular pressures.</li> <li>9 Blow down annuli and replace fittings as necessary. Leave open to atmosphere for monitoring.</li> <li>10 Load / top 7" x 16" annuli with kill fluid. Document volumes.</li> <li>11 Kill well with 8.2 ppg viscosified fluid. Monitor well 1 day, verify it's dead.</li> <li>12 Run a gauge ring and Baker Atlas Aperio Electro-Magnetic Defectoscope through 2-7/8" tubing to determine if the 3-1/2" liner is at the bottom of well.</li> <li>13 MIRU service rig.</li> <li>14 Remove tbg head cap, packing, and slips.</li> <li>15 Pull 1 jt of tubing, install packer, re-run 1 jt tubing, and set packer.</li> <li>16 Install 7-1/16" API 5M cross over on top of tubing head.</li> <li>17 NU 7-1/16" Cameron 5K BOPE (blind / shear + pipe + anular). Will need kill and choke outlets below blind / shear.</li> <li>18 Function and pressure test BOPE to low (250 psig) and high (2500 psig).</li> <li>19 Verify no pressure on the tubing. Equalize, unseat packer, pull / remove packer. <i>Optional: if proceeding with installing bottom cement plug, verify tubing integrity by pumping a dye pill surface to surface to confirm no holes in tubing. Top of bottom plug should be at 4870'.</i></li> <li>20 Pull 2-3/8" tubing out of hole.</li> <li>21 RIH and set 7" RBP at ~4900'. Spot junk basket on top of the plug. Pressure test to 500 psig at surface.</li> <li>22 ND BOP. Spin off the tubing spool.</li> <li>23 Run 200' of 9-5/8" 47# N-80 support string and grout it as deep as possible through a 1/2" line. WOC 12 hrs.</li> <li>24 NU 11" Cameron 5K BOPE (blind / shear + pipe + anular). Will need kill and choke outlets below blind / shear.</li> <li>25 Function and pressure test BOPE to low (250 psig) and high (2500 psig).</li> <li>26 Retrieve RBP and junk basket.</li> <li>27 If the Index log in step 12 indicates the 3-1/2" liner is present and has not been removed when POOH 2-3/8" tubing, run an impression block on sandline to determine if 3-1/2" liner is in bottom of well. If so, attempt to fish 3-1/2" liner.</li> <li>28 Install balanced cement plug from TD to 4870'. Reverse circulate to clean tubulars, pull 10 joints, close pipe rams and WOC a minimum 8 hrs.</li> <li>29 RIH and tag cement. If needed, install a second balanced cement plug to have TOC at 4870'.</li> <li>30 Install a CIBP as close to above the cement top as feasible. Per Schlumber 1978 GR log, the collars are at 4846' and 4878'.</li> <li>31 Top off 7" with kill fluid and perform a 500 psig pressure test to verify integrity of the BP barrier.</li> <li>32 Perforate 7" casing as close as feasible to the CIBP and attempt to circulate to surface or establish injection. <b>Consult with WE&amp;T engineer on results.</b></li> <li>33A If circulation to surface established, consult with WE&amp;T engineer for procedure: <ul style="list-style-type: none"> <li>&gt; Circulate kill weight fluid until good kill density fluid is returned.</li> <li>&gt; RIH with sliding-sleeve style cement retainer on work string.</li> <li>&gt; Set retainer above perms.</li> <li>&gt; Establish circulation.</li> <li>&gt; Squeeze cement behind 7" casing with pre-determined cement volume that occupies no more annular volume than that required to place top of cement at ~1600'.</li> <li>&gt; Disengage from retainer, reverse circulate to clean tubulars, and TOH.</li> <li>&gt; WOC 24 hours.</li> <li>&gt; Obtain CBL.</li> </ul> </li> </ol>					
PREPARED BY:	Maria Medvedeva	REVIEWED BY:	James Amos	APPROVED:	Brent Criser
PREP DATE:	9/22/2022				

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Environmental Protection  
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<b>WELL JOB PLAN</b>		<b>STS Well Engineering &amp; Technology</b>		PAGE 3	DATE JOB PREPARED: 8/16/2022
Objective: Plug and Abandon					
TITLE: Plug and Abandon			WORK TYPE: MOD		
FIELD: Ripley	WELL: 7310 (OB)				
STAT: WV	SHL (Lat/Long): 38.85972 -81.66528	API: 47-035-00466			
DIST/TWP: Ripley	BHL (Lat/Long): 38.85972 -81.66528	CNTY: Jackson			

PROCEDURE (continued)



- 33B If no circulation to surface, but injection established, consult with WE&T engineer for procedure:
  - > RIH with sliding-sleeve style cement retainer on work string.
  - > Set retainer above perms.
  - > Establish injection.
  - > Disengage from retainer and spot cement at bottom of work string.
  - > Squeeze cement behind 7" casing with pre-determined cement volume that occupies no more annular volume than that required to place top of cement at ~1600'.
  - > Disengage from retainer, reverse circulate to clean tubulars, and TOH.
  - > WOC 24 hours.
  - > Obtain CBL.
- 33C If circulation / injection not established, perforate (per WE&T engineer) and repeat process above in 100' interval.
  - \* Note that during steps above cement plugs must be installed across all perf zones, casing shoes, and O/G/W zones.
- 34 Release all annular pressure and top off.
- 35 ND BOPE.
- 36 Weld pulling nipple on 7" csg.
- 37 NU 11" Cameron 5K BOPE (blind / shear + pipe + anular). Will need kill and choke outlets below blind / shear.
- 38 Function and attempt to pressure test BOPE to low (250 psig) and high (2500 psig). Report results to WE&T engineer.
- 39 Wireline freepoint and cut / pull 7" casing that is free.
- 40 Install balanced cement plug from CIBP to a minimum 100' above 7" casing stub. WOC and tag.
- 41 ND BOPE and remainder of wellhead.
- 42 Install balanced cement plug to surface.
- 43 Grout all annuli as deep as possible.
- 44 RDMO service rig.
- 45 Erect monument per state regulations. Reclaim location and lease road.
- 46 P&A complete.
- 47 Notify REG / WE&T / Project controller that project is in-service.

*James Amas*  
9-25-22

PREPARED BY: Maria Medvedeva	REVIEWED BY: James Amas	APPROVED: Brent Criser
PREP DATE: 8/16/2022		

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4703500466A

~ not to scale ~

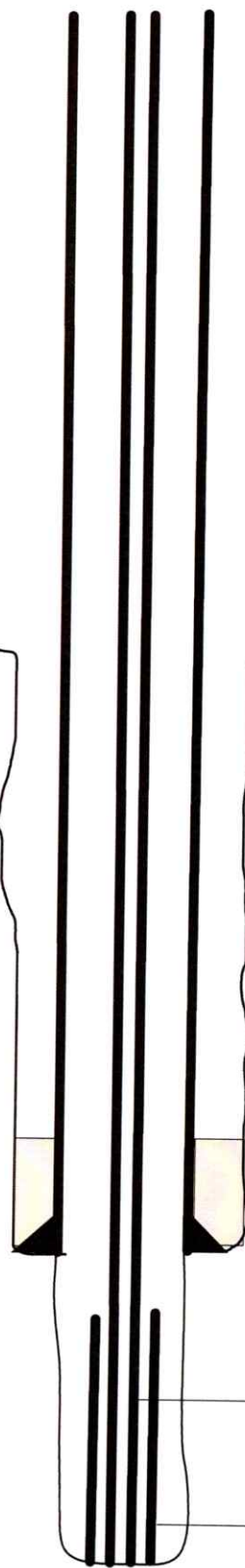
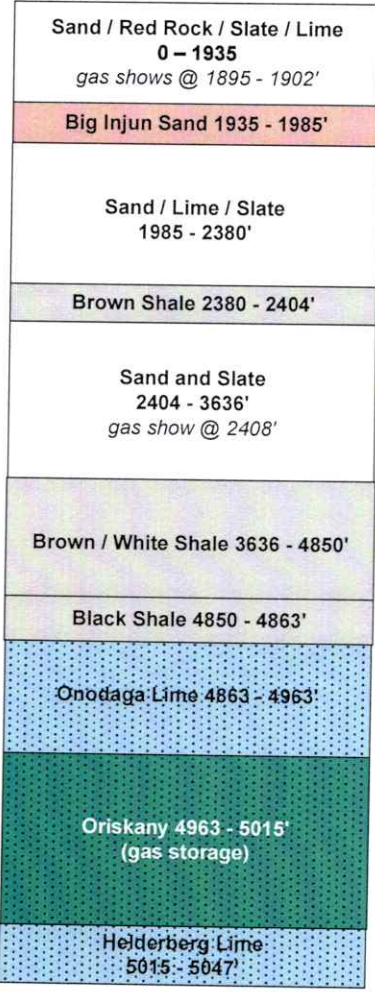
# RIPLEY 7310

Prior to P&A  
(as of 04/21/2022)

Sea Level @ 942 ft

Fresh Water shows in Red Rock @ 25', 275' and 595'

Salt Water shows @ 1350' in Sand and 1740' in Salt Sand



16" 42.5# csg @ 14'  
(no record of cement)

13-3/8" csg ran / pulled  
(casing seat at 628')

10-3/4" csg ran / pulled  
(casing seat at 1186')

8-5/8" csg ran / pulled  
(casing seat at 2056')

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*Handwritten signature*  
9-28-22

7" 24# csg @ 4912'  
- Midgit bottomhole packer 4910 - 4912'  
- No record of cement  
- Ran 60 sacks of Aquagel and 4 bales of Fibrotex, top calculated at 4431'

2-3/8" 4# tubing @ 5047'

3-1/2" 8.7# liner assumed from 4953 - 5047'  
(no record of placement or cement)

TD 5047'

11/04/2022

~ not to scale ~

**RIPLEY 7310**  
**Proposed P&A**  
(as of 08/16/2022)

Sea Level @ 942 ft

Fresh Water shows in Red Rock @ 25', 275' and 595'

Salt Water shows @ 1350' in Sand and 1740' in Salt Sand

16" 42.5# csg @ 14'  
(no record of cement)

To be run - 9-5/8" 47# N-80 casing, grouted as deep as possible for well control during P&A ops

13-3/8" csg ran / pulled  
(casing seat at 628')

10-3/4" csg ran / pulled  
(casing seat at 1186')

8-5/8" csg ran / pulled  
(casing seat at 2056')

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Dark grey fill indicates cement installed during the P&A

Sand / Red Rock / Slate / Lime 0 - 1935 gas shows @ 1895 - 1902'
Big Injun Sand 1935 - 1985'
Sand / Lime / Slate 1985 - 2380'
Brown Shale 2380 - 2404'
Sand and Slate 2404 - 3636' gas show @ 2408'
Brown / White Shale 3636 - 4850'
Black Shale 4850 - 4863'
Onodaga Lime 4863 - 4963'
Oriskany 4963 - 5015' (gas storage)
Heidelberg Lime 5015 - 5047'

Cement Retainer

Attempts will be made to perf and squeeze cement behind 7" csg to ~ 1600'

7" 24# csg @ 4912'  
- Midgit bottomhole packer 4910 - 4912'  
- No record of cement  
- Ran 60 sacks of Aquagel and 4 bales of Fibrotex, top calculated at 4431'

Cast Iron Bridge plug

TD 5047'

11/04/2022





4703500466P

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

WELL RECORD

Permit No. MAC-166

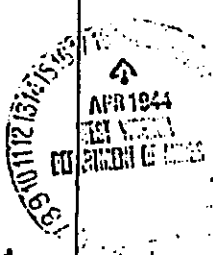
Oil or Gas Well Gas  
(and)

Company Columbian Carbon Company  
Address Box 873, Charleston 23, W. Va.  
Farm Kellie Clark Acres 160  
Location (waters) branch of Sycamore Creek  
Well No. 1-27-732 Elev. 735.0 DF  
District Dixley County Jackson  
The surface of tract is owned in fee by Kellie Clark, etal  
677 Yeater Road, W. Address Barbarton, Ohio  
Mineral rights are owned by Kellie Clark, etal  
(for further addresses contact O.C.C.)  
Drilling commenced 12-21-13  
Drilling completed 1-2-14  
Date Shot 1-2-14 From 5017' SLT 1977' SLT  
With 166-2/5 80% Gelatin  
Open Flow /10ths Water in \_\_\_\_\_ Inch  
/10ths Merc. in \_\_\_\_\_ Inch  
Volume 6,026 Cu. Ft.  
Rock Pressure 2650 lbs. 30 hrs.  
Oil \_\_\_\_\_ bbls, 1st 24 hrs.  
Fresh water 25' 275' 505' feet  
Salt water 1350' - 1710' feet

Casing and Tubing	Used in Drilling	Left in Well	Packers
Size			NONE
16" 12.05'	11'	11'	Kind of Packer
11 3/8" 12'	628' 1"	pulled	
10 3/8" 32' 75'	1186' 5"	pulled	Size of
8 1/8" 21'	2036' 11"	pulled	
6" 21'	1012' 3"	1012' 3"	Depth set
5 1/2" 10'			
3"			Perf. top
2 3/8" 14'	5050'	5050'	Perf. bottom
Liners Used			Perf. top
3 1/2" 8.7'	911'	911'	Perf. bottom

CASING CEMENTED \_\_\_\_\_ SIZE \_\_\_\_\_ No. Ft. \_\_\_\_\_ Date \_\_\_\_\_  
See reverse side  
COAL WAS ENCOUNTERED AT \_\_\_\_\_ FEET \_\_\_\_\_ INCHES  
FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES  
FEET \_\_\_\_\_ INCHES FEET \_\_\_\_\_ INCHES

Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Sand			0	10			
Rod Rock			10	70	F. water	25'	2-16" blr. 1 hr
Slate			70	123			
Rod Rock			123	190			
Sand			190	215			
Rod Rock			215	217			
Slate			217	260			
Rod Rock			260	290	F. Water	275'	1-16" blr. 1 hr.
Sand			290	335			
Slate			335	317			
Rod Rock			317	510			
Sand			510	615	F. water	595'	4-16" blr. 1 hr.
Slate & Shells			615	715			
Rod Rock			715	860			
Sand			860	885			
Slate & Shells			885	975			
Rod Rock			975	1010			
Slate			1010	1060			
Slate & Shells			1060	1214			
Sand			1214	1220			
Slate			1228	1290			
Sand			1250	1315			
Slate			1315	1338			
Sand			1338	1364	S. Water	1350'	1-10" blr. 1 hr
Slate			1364	1415			
Sand			1415	1410			
Slate			1410	1475			
Sand			1475	1495			
Slate			1495	1505			
Sand			1505	1510			
Slate			1510	1685			
Salt Sand			1685	1770	S. Water	1710'	Hole full
Slate			1770	1777			
Limo			1777	1792			
Slate			1792	1795			
Limo			1795	1925	Gas	1095-1902	show
Slate			1925	1935			
Big Injun Sand			1935	1985			



Formation	Color	Hard or Soft	Top	Bottom	Oil, Gas or Water	Depth Found	Remarks
Lime			1985	1993			
Sand			1993	2018			
Lime			2018	2055			
Slate & Shells			2055	2380			
Brown Shale			2380	2404			
Sand			2404	2420	Gas	2408'	show
Slate & Shells				3636			
Brown Shale				3705			
White Shale			3705	3938			
Brown Shale			3938	4205			
White Shale			4205	4625			
Brown Shale			4625	4850			
Black Shale			4850	4863	SLM		
Corniferous Lime			4863	4963	SLM		
Oriskany sand			4963	5015	SLM		
Lime			5015	5017			
Sand			5017	5027			
Lime			5027	5033			
Sand			5033	5045			
Lime			5045	5047	SLM		
			TOTAL DEPTH				
				5047' SLM			
PAYS: 1877, 1891,							
TOTAL DEPTH 5047' SLM							
<b>GRUNT RECORD</b>							
1-3-44	13-3/8" casing. Ran 16 sacks Aquagel and 1 bale Fibrotex. No returns. Circulation while mixing. Delbert Lawson, Cementor, Columbian Carbon Company Crew.						
1-17-44	10-3/4" casing. Ran 21 sacks Aquagel and 1 bale Fibrotex. No returns. Delbert Lawson, Cementor, Columbian Carbon Company Crew.						
2-10-44	8-5/8" casing. Ran 24 sacks Aquagel and 1 bale Fibrotex. Returns 1650'. Circulation while mixing. Delbert Lawson, Cementor, Columbian Carbon Company Crew.						
3-11-44	6-5/8" casing. Ran 60 sacks Aquagel and 1 bale Fibrotex. Circulation and Returns 875'. Delbert Lawson, Cementor, Columbian Carbon Company Crew.						

Date April 20, 1944

APPROVED Columbian Carbon Company, Owner

By O. W. Van Petten, Sup't  
(Title)

WW-4A  
Revised 6-07

*OK# 34695  
100-02*

4703500466P

1) Date: 04/28/2022  
2) Operator's Well Number  
Ripley 7310

3) API Well No.: 47 - 035 - 00466

**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>Heartwood Forestland Fund III</u>	Name <u>Not operated</u>
Address <u>19045 Stone Mountain Rd</u>	Address _____
<u>Abingdon, VA 24210</u>	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector <u>Joe Taylor</u>	(c) Coal Lessee with Declaration
Address <u>1478 Claylick Road</u>	Name _____
<u>Ripley, WV 25271</u>	Address _____
Telephone <u>304.380.7469</u>	_____

**RECEIVED**  
Office of Oil and Gas  
**OCT 05 2022**  
WV Department 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.

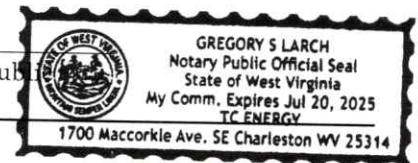
The reason you received these documents is that you have rights regarding the application which are summarized in the instructions on the reverses side. However, you are not required to take any action at all.

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 Columbia Gas Transmission  
 By: Maria Medvedeva  
 Its: Senior Wells Engineer - Well Engineering and Technology  
 Address 1700 MacCorkle Ave SE  
Charleston, WV 25314  
 Telephone 304-410-4313

Subscribed and sworn before me this 21 day of Sept 2022  
My Commission Expires July 20 2025

Notary Public



**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](mailto:depprivacyofficer@wv.gov).

11/04/2022

**SURFACE OWNER WAIVER**

Operator's Well  
Number

Ripley 7310

**INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW4-A**

The well operator named on page WW-4A is applying for a permit from the State to plug and abandon a well. (Note: If the surface tract is owned by more than three persons, then these materials were served on you because your name appeared on the Sheriff's tax ticket on the land or because you actually occupy the surface tract. In either case, you may be the only owner who will actually receive these materials.) See Chapter 22 of the West Virginia Code. Well work permits are valid for 24 months. If you do not own any interest in the surface tract, please forward these materials to the true owner immediately if you know who it is. Also, please notify the well operator and the Office of Oil and Gas.

**NOTE: YOU ARE NOT REQUIRED TO FILE ANY COMMENT.  
WHERE TO FILE COMMENTS AND OBTAIN ADDITIONAL INFORMATION:**

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0450

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WV Department of  
Environmental Protection

**Time Limits and methods for filing comments.** The law requires these materials to be served on or before the date the operator files his Application. You have **FIVE (5) DAYS** after the filing date to file your comments. Comments must be filed in person or received in the mail by the Chief's office by the time stated above. You may call the Chief's office to be sure of the date. Check with your postmaster to ensure adequate delivery time or to arrange special expedited handling. If you have been contacted by the well operator and you have signed a "voluntary statement of no objection" to the planned work described in these materials, then the permit may be issued at any time.

**Comments must be in writing.** Your comments must include your name, address and telephone number, the well operator's name and well number and the approximate location of the proposed well site including district and county from the application. You may add other documents, such as sketches, maps or photographs to support your comments.

The Chief has the power to deny or condition a well work permit based on comments on the following grounds:

- 1) The proposed well work will constitute a hazard to the safety of persons.
- 2) The soil erosion and sediment control plan is not adequate or effective;
- 3) Damage would occur to publicly owned lands or resources;
- 4) The proposed well work fails to protect fresh water sources or supplies;
- 5) The applicant has committed a substantial violation of a previous permit or a substantial violation of one or more of the rules promulgated under Chapter 22, and has failed to abate or seek review of the violation...".

**If you want a copy of the permit as it is issued or a copy of the order denying the permit, you should request a copy from the Chief.**

**VOLUNTARY STATEMENT OF NO OBJECTION**

I hereby state that I have read the instructions to surface owners and that I have received copies of a Notice and Application For A Permit To Plug And Abandon on Forms WW-4A and WW-4B, and a survey plat.

I further state that I have no objection to the planned work described in these materials, and I have no objection to a permit being issued on those materials.

FOR EXECUTION BY A NATURAL PERSON  
ETC.

FOR EXECUTION BY A CORPORATION,

_____	Date	_____	Name
Signature		By	_____
		Its	_____
			Date

Signature

Date 11/04/2022

WW-4B

API No. 47-035-00466 P  
Farm Name \_\_\_\_\_  
Well No. Ripley 7310

Coal not operated

**INSTRUCTIONS TO COAL OPERATORS  
OWNERS AND LESSEE**

The well operator named on the obverse side of WW-4 (B) is about to abandon the well described in the enclosed materials and will commence the work of plugging and abandoning said well on the date the inspector is notified. Which date shall not be less than five days after the day on which this notice and application so mailed is received, or in due course should be received by the Department of Environmental Protection Office of Oil & Gas.

This notice and application is given to you in order that your respective representatives may be present at the plugging and filling of said well. You are further notified that whether you are represented or not the operator will proceed to plug and fill said well in the manner required by Section 24, Article 6, Chapter 22 of the Code and given in detail on obverse side of this application.

NOTE: If you wish this well to be plugged according to 22-6-24(d) then as per Regulation 35CSR4-13.9 you must complete and return to this office on form OB-16 "Request by Coal Operator, Owner, or Lessee for plugging" prior to the issuance of this plugging permit.

**WAIVER**

The undersigned coal operator \_\_\_\_\_ / owner \_\_\_\_\_ / lessee \_\_\_\_\_ / of the coal under this well location has examined this proposed plugging work order. The undersigned has no objection to the work proposed to be done at this location, provided, the well operator has complied with all applicable requirements of the West Virginia Code and the governing regulations.

Date: \_\_\_\_\_

\_\_\_\_\_

By: \_\_\_\_\_

Its \_\_\_\_\_

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11/04/2022

4703500466P

Columbia Gas Transmission, LLC  
1700 MacCorkle Ave., SE, Charleston, WV, USA 25314



September 20, 2022

Heartwood Forestland Fund III  
19045 Stone Mountain Rd  
Abingdon, VA 24210

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WV Department of  
Environmental Protection

Columbia Gas Transmission, LLC is applying for a permit to the WV Department of Environmental Protection – Office of Oil and Gas, to plug and abandon an existing underground natural gas storage well located on property owned by you. As reference, the field and well ID is Ripley 7310 (API 47-035-00466).

As part of the well permitting process, Columbia, the well operator, is required to provide a copy of all applicable permit application forms for your review and record retention.

Regards,

Maria Medvedeva  
Senior Wells Engineer  
Well Engineering & Technology  
Columbia Gas Transmission, LLC

U.S. Postal Service™  
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Domestic Mail Only

For delivery information, visit our website at [www.usps.com](http://www.usps.com)®.

Abingdon VA 24210

**OFFICIAL USE**

Certified Mail Fee	\$4.00	
Extra Services & Fees (check box, add fee as appropriate)	\$3.75	
<input type="checkbox"/> Return Receipt (hardcopy)	\$1.00	
<input type="checkbox"/> Return Receipt (electronic)	\$0.00	
<input type="checkbox"/> Certified Mail Restricted Delivery	\$0.00	
<input type="checkbox"/> Adult Signature Required	\$0.00	
<input type="checkbox"/> Adult Signature Restricted Delivery	\$0.00	
Postage	\$8.95	
Total Postage and Fees	\$16.20	

Sent To: Ripley 7310  
Street and Apt. No., or PO Box No.  
City, State, ZIP+4®

Postmark Here: SEP 21 2022

7022 0410 0002 7183 2250

**SENDER: COMPLETE THIS SECTION**

- Complete items 1, 2, and 3.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:  
Heartwood Forestland Fund III  
19045 Stone Mountain Rd  
Abingdon, VA 24210

2. Article Number (Transfer from service label)  
7022 0410 0002 7183 2250

3. Service Type  
 Adult Signature  
 Adult Signature Restricted Delivery  
 Certified Mail®  
 Certified Mail Restricted Delivery  
 Collect on Delivery  
 Collect on Delivery Restricted Delivery  
 Priority Mail Express®  
 Registered Mail™  
 Registered Mail Restricted Delivery  
 Signature Confirmation®  
 Signature Confirmation Restricted Delivery

**COMPLETE THIS SECTION ON DELIVERY**

A. Signature  
 Agent  
 Addressee

B. Received by (Printed Name)  
C. Date of Delivery

D. Is delivery address different from item 1?  Yes  
 If YES, enter delivery address below:  No

11/04/2022

PS Form 3811, July 2020 PSN 7530-02-000-9053 Domestic Return Receipt

www.tcenergy.com

4703500466P

Columbia Gas Transmission, LLC  
1700 MacCorkle Ave., SE, Charleston, WV, USA 25314



October 14, 2022

Heartwood Forestland Fund III  
19045 Stone Mountain Rd  
Abingdon, VA 24210

Columbia Gas Transmission, LLC has applied for a permit to the WV Department of Environmental Protection – Office of Oil and Gas, to plug and abandon an existing underground natural gas storage well located on property owned by you. The field and well ID is Ripley 7310 (API 47-035-00466).

As part of the well permitting process, Columbia, the well operator, provided you a copy of all applicable permit application forms for review and record retention on 9/23/2022.

Since the initial notification, due to material availability, a different cement material may have to be utilized than originally stated for plugging operations on the reference well. We intend to use API Class A cement to the extent that it is available. If Class A is not available, we will use API Class L cement as per the approved WVDEP Variance Order No.2022-13, attached.

Regards,

Maria Medvedeva  
Senior Wells Engineer  
Well Engineering & Technology  
Columbia Gas Transmission, LLC

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Abingdon, VA 24210

**OFFICIAL USE**

Certified Mail Fee \$4.00  
\$3.25  
Extra Services & Fees (check box, add fees if appropriate)  
 Return Receipt (hardcopy) \$  
 Return Receipt (electronic) \$0.00  
 Certified Mail Restricted Delivery \$0.00  
 Adult Signature Required \$0.00  
 Adult Signature Restricted Delivery \$  
 Postage \$9.90  
 Total Postage and Fees \$17.15

Postmark Here  
25304  
10/14/2022

SENDER: COMPLETE THIS SECTION		COMPLETE THIS SECTION ON DELIVERY	
<ul style="list-style-type: none"> <li>Complete items 1, 2, and 3.</li> <li>Print your name and address on the reverse so that we can return the card to you.</li> <li>Attach this card to the back of the mailpiece, or on the front if space permits.</li> </ul>		<p>A. Signature  <input checked="" type="checkbox"/> <i>John W. ...</i> <input type="checkbox"/> Agent  <input type="checkbox"/> Addressee</p>	
<p>1. Article Addressed to:  <b>Heartwood Forestland Fund III</b>            HEAR045 24210-RFS-1A22 10/17/22            NOTIFY SENDER OF NEW ADDRESS            : HEARTWOOD FORESTLAND FUND LP            PMB 358            448 CUMMINGS ST            ABINGDON VA 24210-3220</p>		<p>B. Received by (Printed Name)  <i>John W. ...</i></p> <p>C. Date of Delivery            11/04/2022</p>	
<p>2. Article Number (Transfer from service label)            7021 1970 0001 1851 2852</p>		<p>D. Is delivery address different from item 1? <input type="checkbox"/> Yes            If YES, enter delivery address below: <input type="checkbox"/> No</p>	

PS Form 3811 July 2020 PSN 7530-02-000-9053

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west virginia department of environmental protection

Office of Oil and Gas  
601 57<sup>th</sup> Street, SE  
Charleston, WV 25304  
Phone (304) 926-0450

Harold D. Ward, Cabinet Secretary  
dep.wv.gov

**BEFORE THE OFFICE OF OIL AND GAS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
STATE OF WEST VIRGINIA**

**IN THE MATTER OF A VARIANCE FROM )  
LEGISLATIVE RULE 35CSR4 )  
SECTION 14.1. AND LEGISLATIVE RULE )  
35CSR8 SECTION 20.1, )  
RELATING TO THE CEMENTING )  
OF OIL AND GAS WELLS )**

**ORDER NO. 2022-13**

**REPORT OF THE OFFICE**

In response to industry requests, the West Virginia Department of Environmental Protection, Office of Oil and Gas has reviewed the proposed use of American Petroleum Institute (API) Class L cement to be used in place of API Class A cement for well plugging.

**FINDINGS OF FACT**

1. On July 28, 2022, Diversified Gas & Oil Co. (DGO) submitted a variance request from Legislative Rule 35CSR4 for the use of API Class L cement in place of API Class A cement, relating to the plugging of conventional wells.
2. Laboratory analysis submitted by DGO on July 28, 2022, indicates API Class L cement is comparable to API Class A cement and thereby satisfies the requirements of the West Virginia Code.
3. Contemporaneously, the Chief of the Office of Oil and Gas also chose to consider a variance to Legislative Rule 35CSR8 Section 20.1., for the use of API Class L cement in place of API Class A cement, relating to the plugging of horizontal wells.

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Promoting a healthy environment.

11/04/2022



4. On August 18, 2022, the Office of Oil and Gas provided public notice of acceptance of public comments on the variance consideration. During the 20-day public comment period, no comments were received.

### CONCLUSIONS OF LAW

Pursuant to Article 6 and Article 6A, Chapter 22 of the Code of West Virginia, the Office of Oil and Gas has jurisdiction over the subject matter, and the persons interested therein, and jurisdiction to promulgate the hereinafter prescribed Order.

Pursuant to Legislative Rule 35CSR4, Section 18 and Legislative Rule 35CSR8, Section 14, the Chief of the Office of Oil and Gas may grant a variance from any requirement of these rules.


### ORDER

It is ordered that the Class L cement product approved and monogrammed by API is approved for use in place of API Class A cement for well plugging subject to the provisions of Legislative Rule 35CSR4 and Legislative Rule 35CSR8.

Dated this, the 13th day of September, 2022.

IN THE NAME OF THE STATE OF WEST VIRGINIA

OFFICE OF OIL AND GAS  
DEPARTMENT OF ENVIRONMENTAL PROTECTION  
OF THE STATE OF WEST VIRGINIA

  
\_\_\_\_\_  
James Martin, Chief  
Office of Oil and Gas

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Environmental Protection

11/04/2022

4703500466P

Objective: Plug and Abandon LAST PROFILE UPDATE:

TITLE: Plug and Abandon		WELL ID: 7310 (OB)		WORK TYPE: MOD	
FIELD: Ripley		SHL (Lat/ Long): 38.85972		LEASE #: 52248	
STATE: WV		BHL (Lat/Long): 38.85972		API: 47-035-00466	
DIST/TWP: Ripley				CNTY: Jackson	
EXISTING TUBULAR CONFIGURATION		OD (inches)		WEIGHT (PPF)	
GRADE		THREAD		DEPTH (ft)	
				TOP	
				BOTTOM	
CONDUCTOR		16		42.5	
Surface		13 3/8			
Intermediate		10 3/4			
Intermediate		8 5/8			
Production		7		24.0	
Midgit bottomhole packer		8" x 6.4"			
unknown -->		3 1/2		8.7	
Tubing / Anchor Clamp		2 3/8		4.0	
Perforations		No record			
Wellhead		Threaded Production 2k; 2" 11 1/2-V wellhead connection			

D.H. EQUIPMENT		TYPE		DEPTH (ft)	
PACKER INFO:		Upper			
		Lower			
NIPPLE PROFILE INFO:		Upper			
		Lower			
SSSV INFO:					
CEMENT INFO				Calc Gel (ft)	
7		No record of cement. Ran 60 sacks of Aquagel and 4 bales Fibrotex.		4431	

MISC INFORMATION

**REFER TO WELL SUMMARY RPT, WELLBORE DIAGRAM, ELOG, ETC. (see spreadsheet tabs below)**

**Kill Fluid Calculation** \* Note that kill fluid calculation tabs are hidden

Maximum calculated bottom-hole pressure (for reference only):	1922	psig	* input
Maximum storage field surface pressure (MAOP):	1675	psig	* input
Well TD:	5047	ft TVD	* input
Top of storage zone (Oriskany):	4963	ft TVD	* input
Calculated maximum BH pressure at top of zone:	1904	psig	* output Kill Fluid (TOZ)
Kill fluid density at top of zone @:	200	psi OB	8.15 ppg * output Kill Fluid (TOZ)
Proposed depth of BP (N/A):	4963	ft TVD	* input
Calculated maximum BH pressure at depth of BP:	1904	psig	* output Kill Fluid (BP)
Kill fluid density at depth of BP @:	200	psi OB	8.15 ppg * output Kill Fluid (BP)
Required minimum kill fluid density:	8.2	ppg	* greater of the two

Current AOF:	958 MCF/D
Top historical AOF:	1,273 MCF/D
Last MVRT:	None ran.
CBL:	None ran.

PROPOSED YEAR: 2023	ERCB PERMIT REQD: YES ___ NO <u>X</u>	(Internal) PDS Required: YES ___ NO ___
PREPARED BY: Maria Medvedeva	DT. APPLIED: ISSUED:	APPROVED: Brent Criser
PREP DATE: 9/22/2022	REVIEWED BY: James Amas	

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WV Department of Environmental Protection  
10/04/2022

<b>WELL JOB PLAN</b>		<b>STS Well Engineering &amp; Technology</b>		PAGE 2	DATE JOB PREPARED: 9/22/2022
Objective: Plug and Abandon					
TITLE: Plug and Abandon			LAST PROFILE UPDATE:		
FIELD: Ripley	WELL: 7310 (OB)		WORK TYPE: MOD		
STAT: WV	SHL (Lat/Long): 38.85972	-81.66528	API: 47-035-00466		
TWP: Ripley	BHL (Lat/Long): 38.85972	-81.66528	CNTY: Jackson		

**PROCEDURE**

**NOTE: Cement used will be Class A, slurry weight 15.6ppg, slurry yield 1.18 cuft/sk or Class L, slurry weight 15.6ppg, slurry yield 1.14 cuft/sk, as per the approved WVDEP Variance Order No.2022-13. All spacers will be 6% Bentonite gel. Per Schlumberger 06.16.1978 GR log, Driller's TD is noted at 5047' and logger's TD at 4921'; 1997 flow test record indicate max reached TD of 4919' -> possibly the actual top of the 3-1/2" liner.**

- 1 Obtain State well work permit, EM&CP, pipeline crossing evaluation, call before you dig, etc. Prepare site specific SPCC.
  - 2 Notify landowner.
  - 3 Obtain General Work Permit and Wellsite Review & Turnover Form from Operations.
  - 4 Notify Reservoir Engineering & Geosciences (REG) of intent to take well out of service.
  - 5 Notify environmental inspector prior to beginning work. If required, notify State/Federal regulatory agencies prior to beginning work.
  - 6 Prepare access road and well site. Install ECD's per EM&CP.
  - 7 Service all wellhead valves.
  - 8 Document and report to WE&T the initial tubing, casing and annular pressures.
  - 9 Blow down annuli and replace fittings as necessary. Leave open to atmosphere for monitoring.
  - 10 Load / top 7" x 16" annuli with kill fluid. Document volumes.
  - 11 Kill well with 8.2 ppg viscosified fluid. Monitor well 1 day, verify it's dead.
  - 12 Run a gauge ring and Baker Atlas Aperio Electro-Magnetic Defectoscope through 2-7/8" tubing to determine if the 3-1/2" liner is at the bottom of well.
  - 13 MIRU service rig.
  - 14 Remove tbq head cap, packing, and slips.
  - 15 Pull 1 jt of tubing, install packer, re-run 1 jt tubing, and set packer.
  - 16 Install 7-1/16" API 5M cross over on top of tubing head.
  - 17 NU 7-1/16" Cameron 5K BOPE (blind / shear + pipe + anular). Will need kill and choke outlets below blind / shear.
  - 18 Function and pressure test BOPE to low (250 psig) and high (2500 psig).
  - 19 Verify no pressure on the tubing. Equalize, unseat packer, pull / remove packer.  
*Optional: if proceeding with installing bottom cement plug, verify tubing integrity by pumping a dye pill surface to surface to confirm no holes in tubing. Top of bottom plug should be at 4870'.*
  - 20 Pull 2-3/8" tubing out of hole.
  - 21 RIH and set 7" RBP at ~4900'. Spot junk basket on top of the plug. Pressure test to 500 psig at surface.
  - 22 ND BOP. Spin off the tubing spool.
  - 23 Run 200' of 9-5/8" 47# N-80 support string and grout it as deep as possible through a 1/2" line. WOC 12 hrs.
  - 24 NU 11" Cameron 5K BOPE (blind / shear + pipe + anular). Will need kill and choke outlets below blind / shear.
  - 25 Function and pressure test BOPE to low (250 psig) and high (2500 psig).
  - 26 Retrieve RBP and junk basket.
  - 27 If the Index log in step 12 indicates the 3-1/2" liner is present and has not been removed when POOH 2-3/8" tubing, run an impression block on sandline to determine if 3-1/2" liner is in bottom of well. If so, attempt to fish 3-1/2" liner.
  - 28 Install balanced cement plug from TD to 4870'. Reverse circulate to clean tubulars, pull 10 joints, close pipe rams and WOC a minimum 8 hrs.
  - 29 RIH and tag cement. If needed, install a second balanced cement plug to have TOC at 4870'.
  - 30 Install a CIBP as close to above the cement top as feasible. Per Schlumber 1978 GR log, the collars are at 4846' and 4878'.
  - 31 Top off 7" with kill fluid and perform a 500 psig pressure test to verify integrity of the BP barrier.
  - 32 Perforate 7" casing as close as feasible to the CIBP and attempt to circulate to surface or establish injection.
- Consult with WE&T engineer on results.**
- 33A If circulation to surface established, consult with WE&T engineer for procedure:
- > Circulate kill weight fluid until good kill density fluid is returned.
  - > RIH with sliding-sleeve style cement retainer on work string.
  - > Set retainer above perfs.
  - > Establish circulation.
  - > Squeeze cement behind 7" casing with pre-determined cement volume that occupies no more annular volume than that required to place top of cement at ~1600'.
  - > Disengage from retainer, reverse circulate to clean tubulars, and TOH.
  - > WOC 24 hours.
  - > Obtain CBL.

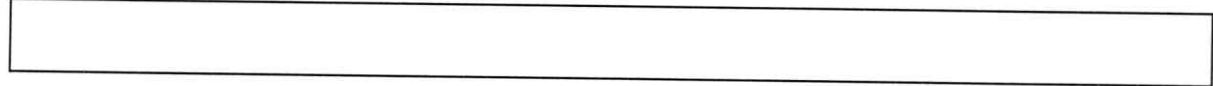
PREPARED BY: Maria Medvedeva	REVIEWED BY: James Amos	APPROVED: Brent Criser
PREP DATE: 9/22/2022		

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<b>WELL JOB PLAN</b>		<b>STS Well Engineering &amp; Technology</b>		PAGE 3	DATE JOB PREPARED: 9/22/2022
Objective: Plug and Abandon					
TITLE: Plug and Abandon				LAST PROFILE UPDATE:	
FIELD: Ripley	WELL: 7310 (OB)			WORK TYPE: MOD	
STAT: WV	SHL (Lat/Long): 38.85972	-81.66528	API: 47-035-00466		
DIST/TWP: Ripley	BHL (Lat/Long): 38.85972	-81.66528	CNTY: Jackson		

**PROCEDURE (continued)**



- 33B If no circulation to surface, but injection established, consult with WE&T engineer for procedure:
  - > RIH with sliding-sleeve style cement retainer on work string.
  - > Set retainer above perfs.
  - > Establish injection.
  - > Disengage from retainer and spot cement at bottom of work string.
  - > Squeeze cement behind 7" casing with pre-determined cement volume that occupies no more annular volume than that required to place top of cement at ~1600'.
  - > Disengage from retainer, reverse circulate to clean tubulars, and TOH.
  - > WOC 24 hours.
  - > Obtain CBL.
- 33C If circulation / injection not established, perforate (per WE&T engineer) and repeat process above in 100' interval.
  - \* Note that during steps above cement plugs must be installed across all perf zones, casing shoes, and O/G/W zones.
- 34 Release all annular pressure and top off.
- 35 ND BOPE.
- 36 Weld pulling nipple on 7" csg.
- 37 NU 11" Cameron 5K BOPE (blind / shear + pipe + anular). Will need kill and choke outlets below blind / shear.
- 38 Function and attempt to pressure test BOPE to low (250 psig) and high (2500 psig). Report results to WE&T engineer.
- 39 Wireline freepoint and cut / pull 7" casing that is free.
- 40 Install balanced cement plug from CIBP to a minimum 100' above 7" casing stub. WOC and tag.
- 41 ND BOPE and remainder of wellhead.
- 42 Install balanced cement plug to surface.
- 43 Grout all annuli as deep as possible.
- 44 RDMO service rig.
- 45 Erect monument per state regulations. Reclaim location and lease road.
- 46 P&A complete.
- 47 Notify REG / WE&T / Project controller that project is in-service.

PREPARED BY: Maria Medvedeva	REVIEWED BY: James Ames	APPROVED: Brent Criser
PREP DATE: 9/22/2022		

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~ not to scale ~

### RIPLEY 7310

Prior to P&A  
(as of 04/21/2022)

Sea Level @ 942 ft

Fresh Water shows in Red Rock @ 25', 275' and 595'

Salt Water shows @ 1350' in Sand and 1740' in Salt Sand

16" 42.5# csg @ 14'  
(no record of cement)

13-3/8" csg ran / pulled  
(casing seat at 628')

10-3/4" csg ran / pulled  
(casing seat at 1186')

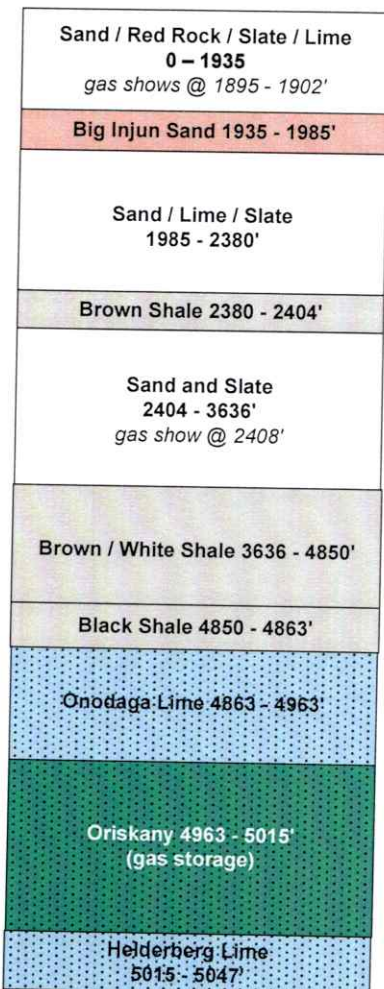
8-5/8" csg ran / pulled  
(casing seat at 2056')

7" 24# csg @ 4912'  
- Midgit bottomhole packer 4910 - 4912'  
- No record of cement  
- Ran 60 sacks of Aquagel and 4 bales of Fibrotex, top calculated at 4431'

2-3/8" 4# tubing @ 5047'

3-1/2" 8.7# liner assumed from 4953 - 5047'  
(no record of placement or cement)

TD 5047'



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~ not to scale ~

# RIPLEY 7310

## Proposed P&A

(as of 08/16/2022)

Sea Level @ 942 ft

Fresh Water shows in Red Rock @ 25', 275' and 595'

Salt Water shows @ 1350' in Sand and 1740' in Salt Sand

16" 42.5# csg @ 14' (no record of cement)

To be run - 9-5/8" 47# N-80 casing, grouted as deep as possible for well control during P&A ops

13-3/8" csg ran / pulled (casing seat at 628')

10-3/4" csg ran / pulled (casing seat at 1186')

8-5/8" csg ran / pulled (casing seat at 2056')

Dark grey fill indicates cement installed during the P&A

Sand / Red Rock / Slate / Lime 0 - 1935 gas shows @ 1895 - 1902'
Big Injun Sand 1935 - 1985'
Sand / Lime / Slate 1985 - 2380'
Brown Shale 2380 - 2404'
Sand and Slate 2404 - 3636' gas show @ 2408'
Brown / White Shale 3636 - 4850'
Black Shale 4850 - 4863'
Onodaga Lime 4863 - 4963'
Oriskany 4963 - 5015' (gas storage)
Heiderberg Lime 5015 - 5047'

Cement Retainer

Attempts will be made to perf and squeeze cement behind 7" csg to ~ 1600'

7" 24# csg @ 4912'  
- Midgit bottomhole packer 4910 - 4912'  
- No record of cement  
- Ran 60 sacks of Aquagel and 4 bales of Fibrotex, top calculated at 4431'

Cast Iron Bridge plug

TD 5047'

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4703500466P

WW-9  
(5/16)

API Number 47 - 035 - 00466  
Operator's Well No. - Ripley 7310

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

Operator Name Columbia Gas Transmission OP Code 307032

Watershed (HUC 10) Sycamore Creek Quadrangle Sandyville

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: fresh water, brine, cement returns, bentonite gel

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 34-167-23862 )
- Reuse (at API Number \_\_\_\_\_)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Mud Master 64054; Reserve Environmental Services (WMGR 123SW008)  
Appalachian Water Services (WMGR 123SW001))

Will closed loop system be used? If so, describe: No

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

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

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Additives to be used in drilling medium? N/A

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A

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

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-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 *Maria Medvedeva*  
Company Official (Typed Name) Maria Medvedeva  
Company Official Title Senior Wells Engineer - Well Engineering and Technology

*SP*

Subscribed and sworn before me this 21 day of Sept, 20 22

*[Signature]*

Notary Public

My commission expires July 20 2025



Proposed Revegetation Treatment: Acres Disturbed <1.0 Prevegetation pH 6 - 7

Lime 2 Tons/acre or to correct to pH 7 - 8

Fertilizer type 10-10-10

Fertilizer amount 600 lbs/acre

Mulch hay or straw @ 2 Tons/acre

Seed Mixtures

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Rye	40	Orchard Grass and/or Tall Fescue	29
		Birdsfoot trefoil (empire)	9
		Annual Rye	12

For wetland areas: Annual Rye (40 lbs/acre) until indigenous plants re-establish cover.

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: See Table

Comments: \_\_\_\_\_

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Title: OCG Inspector Date: 9-26-22

Field Reviewed?  Yes  No



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

Operator Name: Columbia Gas Transmission LLC  
Watershed (HUC 10): Sycamore Creek Quad: Sandyville  
Farm Name: \_\_\_\_\_

1. List the procedures used for the treatment and discharge of fluids. Include a list of all operations that could contaminate the groundwater.

- No fluids planned to be discharged.  
- No fertilizer will be stored on site. Small quantities of fuel, oil, and lubrications will be stored on site, but located within secondary containment.  
- Accidental release from well fluids and spills from construction equipment are the only sources of contaminants to groundwater.  
- All accumulated fluids to be hauled off site to UIC disposal facility.

2. Describe procedures and equipment used to protect groundwater quality from the list of potential contaminant sources above.

All construction and well servicing equipment will be monitored and inspected daily for leaks. Spill kits will be on site.

3. List the closest water body, distance to closest water body, and distance from closest Well Head Protection Area to the discharge area.

Sycamore Creek is at a distance of 0.95 miles SE.  
The well is located within the Mason Co PSD-Letart (WV3302713c) Well Head Protection Area. Roane-Jackson Technical Center (WV9918002) is a Well Head Protection Area at a distance of 5.79 miles SE from discharge area. The Ravenswood Municipal Water Works is at a distance of 7.54 miles NW from discharge area.

4. Summarize all activities at your facility that are already regulated for groundwater protection.

N/A

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5. Discuss any existing groundwater quality data for your facility or an adjacent property.

N/A

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 the property.

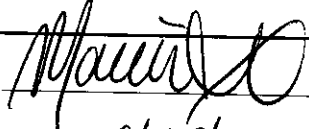
7. Describe the groundwater protection instruction and training to be provided to the employees. Job procedures shall provide direction on how to prevent groundwater contamination.

During routine tailgate meetings, groundwater protection will be a topic of discussion.

8. Provide provisions and frequency for inspections of all GPP elements and equipment.

No fertilizer will be stored on site. Small quantities of fuel, oil, and lubricants will be stored on site, but located within secondary containment. Accidental release from well fluids and spills from construction equipment are the only sources of contaminants to groundwater.

All construction and well servicing equipment will be monitored and inspected daily for leaks or spills.

Signature:   
Date: 09/20/2022



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### WV DEP Reclamation Plan - Overview

Ripley well 7310 (API 47-035-00540)

- BMPs and erosion control devices to be utilized per WV DEP guidelines and Columbia's WV Environmental Construction Standards
- Existing drainage, culverts, and road ditches to be maintained
- Minor grading and surface material to be applied as needed



**Legend**

 Ripley - 07310

11/04/2022

Google Earth

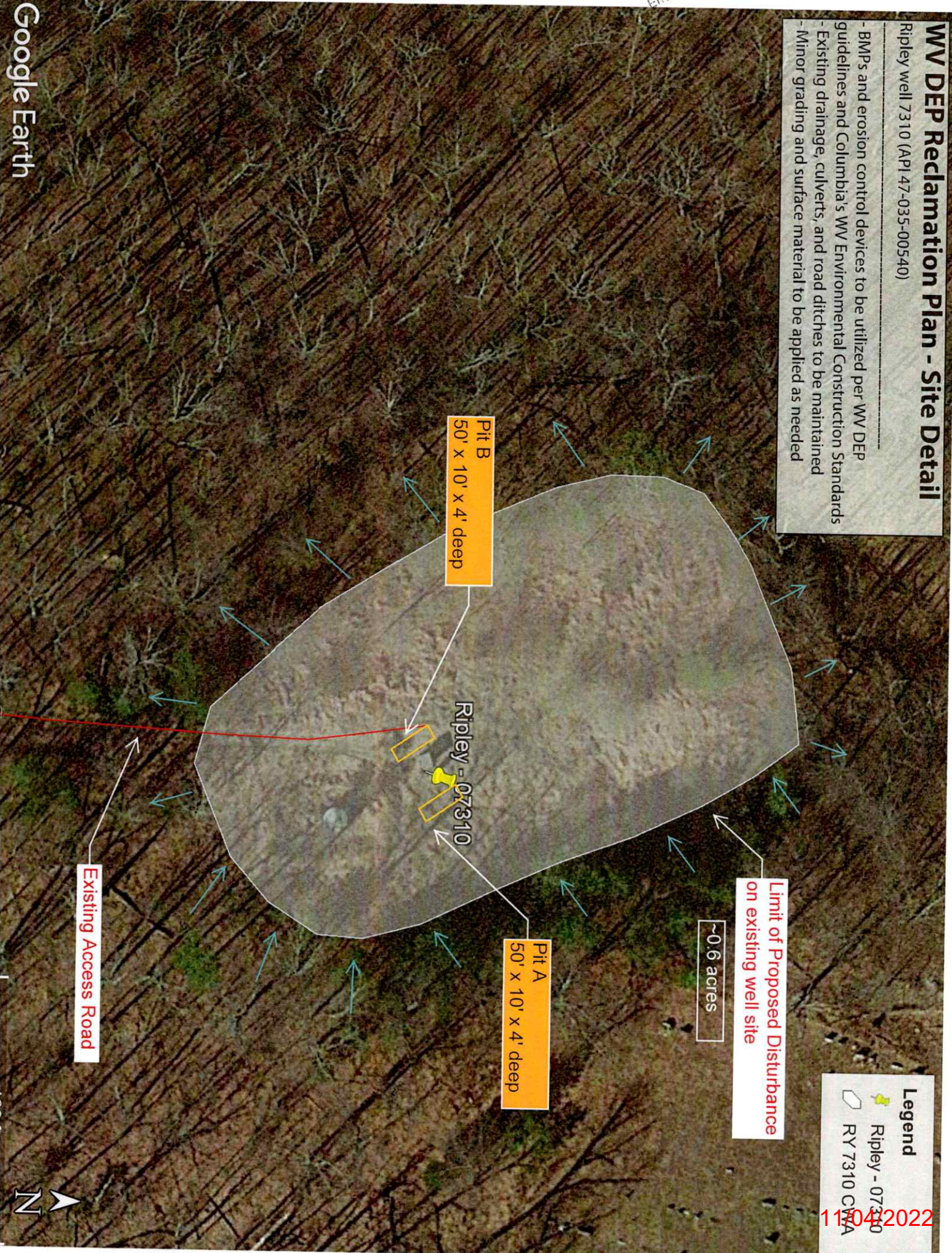
*Handwritten signature*

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### WV DEP Reclamation Plan - Site Detail

Ripley well 7310 (API 47-035-00540)

- BMPs and erosion control devices to be utilized per WV DEP guidelines and Columbia's WV Environmental Construction Standards
- Existing drainage, culverts, and road ditches to be maintained
- Minor grading and surface material to be applied as needed



**Legend**

- Ripley - 07310
- RY 7310 CWA

11/04/2022

*[Handwritten signature]*

Google Earth

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WW-7  
8-30-06



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

API: 47-035-00466 WELL NO.: Ripley 7310

FARM NAME: W. C. Foglesong, Et Al

RESPONSIBLE PARTY NAME: Columbia Gas Transmission, LLC

COUNTY: Jackson DISTRICT: Ripley

QUADRANGLE: ~~Sandyville~~ Ripley

SURFACE OWNER: Heartwood Forestland Fund III

ROYALTY OWNER: Lease #1052248-000, W.C. Foglesong, et al.

UTM GPS NORTHING: 4301482.87 (7355')

UTM GPS EASTING: 442363.02 GPS ELEVATION: 224.237m

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

Wells Engineer STS

Title

09/26/2022  
Date

11/04/2022

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 Office of Oil & Gas  
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 Environmental Protection

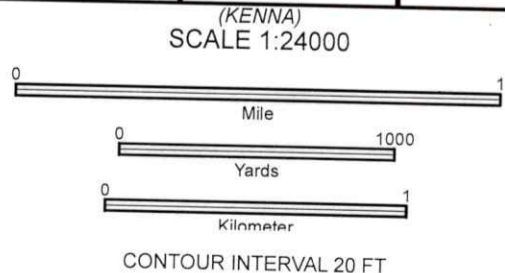
(RAVENSWOOD) 

RIPLEY QUADRANGLE  
 WEST VIRGINIA  
 TOPOGRAPHIC SERIES (LIVERPOOL)



Produced by Trimble Terrain Navigator Pro  
 Topography based on USGS 1:24,000  
 Maps  
 North American 1983 Datum (NAD83)  
 To place on the predicted North American  
 1927 move the projection lines 9M N and  
 13M E

Declination  
 MN  
 GN 0.41° W  
 MN 7.82° W



38081-G5-TM-024  
 RIPLEY, WV  
 JAN 1, 1975

11/04/2022

*Handwritten signature and date: 9-28-22*



Kennedy, James P <james.p.kennedy@wv.gov>

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## plugging permit issued 4703500466

1 message

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**Kennedy, James P** <james.p.kennedy@wv.gov>

Thu, Nov 3, 2022 at 2:50 PM

To: Joseph D Taylor <joseph.d.taylor@wv.gov>, maria\_medvedeva@tcenergy.com, Brian Thomas <bkthomas@jacksoncountywv.com>, Lisa.Myers@jacksoncountywv.com


To whom it may concern, a plugging permit has been issued for 4703500466.


James Kennedy

WVDEP OOG

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### 2 attachments

 **IR-8 4703500466.pdf**  
12K

 **4703500466.pdf**  
5878K

11/04/2022