



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

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

Monday, January 9, 2023
WELL WORK PLUGGING PERMIT
Vertical Plugging

COLUMBIA GAS TRANSMISSION, LLC
1700 MACCORKLE AVENUE SE

CHARLESTON, WV 25314

Re: Permit approval for RIPLEY 12410
47-035-02409-00-00

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, written in a cursive style. The signature is positioned to the right of the name and title. Below the signature is a blue ink stamp, which appears to be a circular seal or a similar official mark.

Operator's Well Number:
Farm Name: ADAMS, BILLIE & LOCKHART
U.S. WELL NUMBER: 47-035-02409-00-00
Vertical Plugging
Date Issued: 1/9/2023

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.

CK# 43058
AMA# 100.00 4703502409



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

December 1st, 2022

WV DEP – Office of Oil & Gas
601 57th Street, SE
Charleston, WV 25304-2345

Enclosed is a well plugging permit application for the following Columbia Gas Transmission existing storage well:

Ripley 12410 (API 035-02409)

Please email to address below, and return hardcopies of permits to:

Columbia Gas Transmission
1700 MacCorkle Ave SE
Charleston, WV 25314
Attn: Maria Medvedeva

If you have questions, feel free to call.

Regards,

Maria Medvedeva
Senior Wells Engineer
Well Engineering & Technology
Columbia Gas Transmission, LLC
Mob: 304-410-4313
maria_medvedeva@tcenergy.com

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47 0 3 5 0 2 4 0 9

- 1) Date 11.17, 2022
- 2) Operator's
Well No. Ripley 12410
- 3) API Well No. 47-035 - 02409

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 / Liquid injection / Waste disposal /
(If "Gas, Production or Underground storage) Deep / Shallow
- 5) Location: Elevation 849 ft Watershed Left Fork of Sycamore Creek
District Ripley County Jackson Quadrangle Ripley, WV
- 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 Name Joe Taylor
Address 1478 Claylick Road
Ripley, WV 25271
- 9) Plugging Contractor Name Next Lvl Energy, LLC
Address 736 W Ingomar Rd, Units 268
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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Notification must be given to the district oil and gas inspector 24 hours before permitted work can commence.

Work order approved by inspector

Date

11-30-22

01/13/2023

WELL JOB PLAN				STS Well Engineering & Technology		PAGE 1	DATE JOB PREPARED: 11/11/2022	
Objective: Plug and Abandon						LAST PROFILE UPDATE:		
TITLE: Plug and Abandon						WORK TYPE: GPMC		
FIELD: Ripley		WELL ID: 12410				LEASE #: 52360		
STATE: WV		SHL (Lat/ Long) 38.86058		-81.692133		API: 47-035-02409		
DIST/TWP: Ripley		BHL (Lat/Long) 38.86058		-81.692133		CNTY: Jackson		
EXISTING TUBULAR CONFIGURATION		OD (inches)	WEIGHT (PPF)	GRADE	THREAD	DEPTH (ft)		
						TOP	BOTTOM	
Conductor								
Surface		13-3/8	48.0	H-40		0	273	
Intermediate		9-5/8	36.0	K-55		0	2594	
Intermediate		7	23.0	N-80		0	5427	
Production		4-1/2	11.6	N-80	8rd LT&C	0	5579	
Tubing								
Perforations		5505 - 5516' made 66 perforations in the Oriskany						
		Refer to "Wellbore Diagram" tab						
Wellhead		API 5M, re-used 3M csg head - installed 7" x 4 1/2" 3/5M csg spool, 4" 5M MV, flow cross and 4" 5M SV in 1998. 4-1/2" 8rd connection.						
D.H. EQUIPMENT				TYPE		DEPTH (ft)		
PACKER INFO:		Upper						
		Lower						
NIPPLE PROFILE INFO:		Upper						
		Lower						
SSSV INFO:								
CEMENT INFO						Calc TOC (ft)		
13-3/8	Cemented with 250sx neat to surface, 16 bbls returned					0		
9-5/8	Cemented with 365sx litecrete and 100sx neat to surface per well record					822		
7	Cemented with 35sx litecrete and 70sx neat. SBT shows TOC at -					5370		
4-1/2	Cemented with 203sx class A 15.6 ppg. CBL shows strung out cement to -					3506		
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:		5580	ft TVD	* input				
Top of storage zone:		5498	ft TVD	* input				
Calculated maximum BH pressure at top of zone:		1928	psig	* output Kill Fluid (TOZ)				
Kill fluid density at top of zone @: 200 psi OB		7.44	ppg	* output Kill Fluid (TOZ)				
Proposed depth of BP (N/A):		5498	ft TVD	* input				
Calculated maximum BH pressure at depth of BP:		1928	psig	* output Kill Fluid (BP)				
Kill fluid density at depth of BP @: 200 psi OB		7.44	ppg	* output Kill Fluid (BP)				
Required minimum kill fluid density:		7.5	ppg	* greater of the two				
Current AOF:		16,894	MCF/D					
Top historical AOF:		20,153	MCF/D					
Last MVRT:		None run						
SBT:		11.19.98 Western Atlas SBT on the 7" shows a good TOC of 5370'. 40 bbls of gel placed on top of the cement. No record for the 4.5" casing.						
CBL:		11.05.2013 Weatherford CBL on the 4.5" shows cement strung out up to 3506'.						
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:	11/11/2022	REVIEWED BY:	James Amos					

Refer to "Wellbore Diagram" tab

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WELL JOB PLAN		STS Well Engineering & Technology		PAGE 2	DATE JOB PREPARED: 11/11/2022
Objective: Plug and Abandon				LAST PROFILE UPDATE:	
TITLE: Plug and Abandon			WORK TYPE: GPMC		
FIELD: Ripley	WELL: 12410				
STAT: WV	SHL (Lat/Long):	38.86058	-81.692133	API: 47-035-02409	
TWP: Ripley	BHL (Lat/Long):	38.86058	-81.692133	CNTY: Jackson	

PROCEDURE

- NOTE: Cement used will be API Class A, slurry weight 15.6ppg, slurry yield 1.18 cuft/sk or API 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.
- Directional well - maximum inclination of 47.57 degrees noted at 4700'.

- 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 Disconnect well line.
- 7 Prepare access road and well site. Install ECD's per EM&CP.
- 8 Service all wellhead valves.
- 9 Document and report to WE&T the initial casing and annular pressures.
- 10 Blow down all annuli, replace fittings as needed, and leave annuli open to atmosphere for monitoring.
- 11 Kill well with viscosified fluid.
- 12 Load / top 4-1/2" x 7", 7" x 9-5/8" and 9-5/8" x 13-3/8" annuli with kill fluid. Document volumes. Top off remaining annuli with FW. Document volumes.
- 13 Dig around base of wellhead to uncover casing tops and remove cement if present.
- 14 MIRU service rig.
- 15 NU 7-1/16" Cameron 5K BOPE (blind/shear + pipe + annular) on top of master valve. Need kill and choke outlets below blind/shear.
- 16 Function and pressure test BOPE to low (250 psig) and high (2500 psig).
- 17 TIH w/ 2-3/8" drill pipe workstring with cut-lip shoe and wash to TD.
- 18 Install balanced cement plug from TD to 5300'.
- 19 POOH to above cement, reverse circulate to clean tubulars, pull 10 joints, close pipe rams, and WOC a minimum of 8 hrs.
- 20 RIH and tag cement. If cement top has fallen, then spot a second balanced cmt plug.
- 21 Install 4-1/2" CIBP as close to above the cement top as feasible.
- 22 Top off 4-1/2" with kill fluid and perform 500 psig pressure test to verify integrity of BP.
- 23 Release all annular pressure.
- 24 Perforate through 4-1/2" and 7" casings above the CIBP, attempt to circulate to surface or establish injection.
- 25A 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 to 3000'.
 - > Disengage from retainer, reverse circulate to clean tubulars, and TOH.
 - > WOC 24 hours.
 - > Obtain CBL.
- 25B 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 to 3000'.
 - > Disengage from retainer, reverse circulate to clean tubulars, and TOH.
 - > WOC 24 hours.
 - > Obtain CBL.
- 25C If circulation / injection is not established, perforate (per WE&T engineer) and repeat process above in 100' interval until annular barrier is installed.
 * Note that during steps above cement plugs must be installed across all perf zones, casing shoes, and O/G/W zones.
- 26 Release all annular pressure and top off.
- 27 ND BOPE.
- 28 Weld pulling nipple on 4-1/2" casing, pull seals and slips.
- 29 NU 7" BOPE (blind ram + pipe ram + annular) on top of the casing head. Need kill / choke outlets below blind / shear.
- 30 Function and attempt to pressure test BOPE to low (250 psig) and high (2500 psig). Report results to WE&T engineer.

PREPARED BY: Maria Medvedeva	REVIEWED BY: James Amos	APPROVED: Brent Criser
PREP DATE: 11/11/2022		

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WELL JOB PLAN		STS Well Engineering & Technology		PAGE 3	DATE JOB PREPARED: 11/11/2022
Objective: Plug and Abandon				LAST PROFILE UPDATE:	
TITLE: Plug and Abandon			WORK TYPE: GPMC		
FIELD: Ripley	WELL: 12410				
STAT: WV	SHL (Lat/Long): 38.86058	-81.692133	API: 47-035-02409		
DIST/TWP: Ripley	BHL (Lat/Long): 38.86058	-81.692133	CNTY: Jackson		

PROCEDURE (continued)

- 31 Wireline freepoint 4-1/2" casing. Cut and pull all 4-1/2" casing that is free.
- 32 Obtain CBL inside 7" casing. Provide digital copy of log to WE&T engineer and consult to confirm next steps.
- 33 Install balanced cement plug to 3000'.
- 34 POOH to above cement, reverse circulate to clean tubulars, pull 10 joints, close pipe rams, and WOC a minimum of 6 hrs.
- 35 RIH and tag cement. If cement top has fallen, then spot a second balanced cmt plug.
- 36 Release all annular pressure and top off.
- 37 ND BOPE. Remove casing spool.
- 38 Weld pulling nipple on 7" casing, pull seals and slips.
- 39 NU 11" or 13" BOPE (blind ram + pipe ram + annular) on top of the casing head. Need kill / choke outlets below blind / shear.
- 40 Function and attempt to pressure test BOPE to low (250 psig) and high (1500 psig). Report results to WE&T engineer.
- 41 Wireline freepoint 7" casing. Cut and pull all 7" casing that is free.
- 42 Install balanced cement plug to 2000'.
- 43 POOH to above cement, reverse circulate to clean tubulars, pull 10 joints, close pipe rams, and WOC a minimum of 6 hrs.
- 44 RIH and tag cement. If cement top has fallen, then spot a second balanced cmt plug.
- 45 Obtain CBL inside 9-5/8" casing. Provide digital copy of log to WE&T engineer and consult to confirm next steps.
- 46 Install balanced cement plug to TOC behind 9-5/8" casing. Volumetric calculation shows TOC at 822'.
- 47 POOH to above cement, reverse circulate to clean tubulars, pull 10 joints, close pipe rams, and WOC a minimum of 6 hrs.
- 48 RIH and tag cement. If cement top has fallen, then spot a second balanced cmt plug.
- 49 Release all annular pressure and top off.
- 50 ND BOPE and remove casing head.
- 51 Weld pulling nipple on 9-5/8" casing.
- 52 Optional: If there is any indication that the 9-5/8" x 13-3/8" annulus is not static install a companion flange + spool (with outlets for kill / choke) + 13" annular BOP. Function and attempt to pressure test BOPE to low (250 psig) and high (1500 psig). Report results to WE&T engineer.
- 53 Wireline freepoint 9-5/8" casing. Cut and pull all 9-5/8" casing that is free.
- 54 Obtain CBL inside 13-3/8" casing. Provide digital copy of log to WE&T engineer and consult to confirm next steps.
- 55 Install balanced cement plugs from to surface.
- 56 If applicable, ND BOPE.
- 57 Grout all annuli as deep as possible.
- 58 RDMO service rig.
- 59 Erect monument per state regulations. Reclaim location and lease road.
- 60 P&A complete.
- 61 Notify REG / WE&T / Project controller that project is in-service.

PREPARED BY: Maria Medvedeva	REVIEWED BY: James Amos	APPROVED: Brent Criser
PREP DATE: 11/11/2022		

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01/13/2023

~ not to scale ~

Ripley 12410

Prior to P&A
(as of 11/10/2022)

Sea Level @ 849 ft

No fresh water zones reported

Driller reported well caving in at 338', resolved with mud recondition

Salt Sand 1766' - 1875'

Big Injun Sand 2072' - 2170'

Berea 2522' -2540'

KOP @ 3010' TVD,
max build 7.5 DLS,
max inclination 47.57 deg

Light grey fill indicates cement in place during well construction.

Onondaga 5361' - 5486' MD
4930' - 5040' TVD

Oriskany 5486' - 5552' MD
5040' - 5099' TVD (gas storage)

Helderberg Lime 5552' - 5580' MD /
5099' - 5125' TVD

13-3/8" 48# H-40 casing @ 273'
- Cemented with 250sx neat to surface,
16 bbls returned

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9-5/8" 36# K-55 csg @ 2594'
- Cemented with 365sx litecrete and 100sx
neat to surface per well record
- Volumetric calculations suggest TOC 822'

Based on 11.05.13 Weatherford
CBL log, cement is strung out to a
TOC of 3506'.

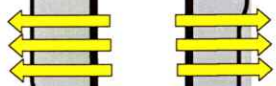
TOC 5370' per 11/19/98 SBT, 40
bbls of gel placed on top of cement

7" 23# N-80 casing @ 5427'
- Cemented with 35sx litecrete and 70sx neat

4-1/2" 11.6# N-80 8rd LT&C casing @ 5579'
- Cemented with 203sx class A 15.6 ppg.
Calculated TOC 3254'

6-1/8" openhole
TD 5580' / 5125' TVD

- Perforated 5505 - 5516' 6 shot/ft 60deg casing 01/18/2023



~ not to scale ~

Ripley 12410

Prior to P&A

(as of 11/10/2022)

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Based on 11.05.13 Weatherford
CBL log, cement is strung out to a
TOC of 3506'.

[Handwritten Signature]
11-30-22

Cement Retainer

Attempts will be made to perf & squeeze 7" csg

TOC 5370' per 11/19/98 SBT, 40
bbls of gel placed on top of cement

7" 23# N-80 casing @ 5427'
- Cemented with 35sx litecrete and 70sx neat

Cast Iron Bridge plug

4-1/2" 11.6# N-80 8rd LT&C casing @ 5579'
- Cemented with 203sx class A 15.6 ppg.
Calculated TOC 3254'

- Perforated 5505 - 5516' 6 shot/ft 60deg phasing

6-1/8" openhole
TD 5580' / 5125 TVD

01/13/2023

WR-35

DATE: API# 47-35-02409 H

State of West Virginia
Division of Environmental Protection
Section of Oil and Gas

Well Operator's Report of Well Work

Farm name: Adams, Hayward Operator Well No.: Ripley 12410

LOCATION: Elevation: 852.00 Quadrangle: Sandyville

District: Ripley County: Jackson

Latitude: 5160 Feet South of 38 Deg. 52 Min. 30 Sec.

Longitude 7340 Feet West of 81 Deg. 41 Min. 0 Sec.

Company: Columbia Gas Transmission

	Casing & Tubing	Used in drilling	Left in well	Cement fill up Cu. Ft.
P. O. Box 1273				
Address: Charleston, WV 25325-1273	13-3/8"	48#	283'	250sx neat to surface
	9-5/8"	36#	2604'	365sx lite, 100sx neat to surface
Agent: Richard L. Coty				
Inspector: Homer Dougherty	7"	23#	5437'	35sx lite, 70sx neat
Date Permit Issued: 04/09/98	2-3/8"	4.7#	5397'	
Date Well Work Commenced: 10/26/98				
Date Well Work Completed: 01/30/99				
Verbal Plugging:				
Date Permission granted on:				
Rotary X Cable Rig				
Total Depth (feet): 5590md				
Fresh Water Depth (ft.): N/A				
Salt Water Depth (ft.): N/A				
Is coal being mined in area (N/Y)? N				
Coal Depths (ft.): N/A				

* See attached for bottom hole location.

OPEN FLOW DATA

Producing formation Oriskany Storage Pay zone depth (ft) 5497'-5590' (MD)

Gas: Initial open flow N/A MCF/d Oil: Initial open flow N/A Bbl/d

Final open flow N/A MCF/d Final open flow N/A Bbl/d

Time of open flow between initial and final tests N/A Hours

Static rock Pressure N/A psig (surface pressure) after N/A Hours

Second producing formation _____ Pay zone depth (ft) _____

Gas: Initial open flow _____ MCF/d Oil: Initial open flow _____ Bbl/d

Final open flow _____ MCF/d Final open flow _____ Bbl/d

Time of open flow between initial and final tests _____ Hours

Static rock Pressure _____ psig (surface pressure) after _____ Hours

NOTE: ON BACK OF THIS FORM PUT THE FOLLOWING: 1). DETAILS OF PERFORATED INTERVALS, FRACTURING OR STIMULATING, PHYSICAL CHANGE, ETC. 2). THE WELL LOG WHICH IS A SYSTEMATIC DETAILED GEOLOGICAL RECORD OF ALL FORMATIONS, INCLUDING COAL ENCOUNTERED BY THE WELLBORE.

Signed:

By: Paul C. Amick Sr. Storage Eng.
Date: May 10, 1999

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4703502409

urvey File: 9890

ate: 11-21-98
ime: 00:28:40

OLUMBIA GAS TRANSMISSION

IPLEY #12410
IPLEY STORAGE FEILD
ARREN RTG #2

YRO SURVEY
11219890
NCOURSE

urvey Reference Point : 200.0
ocal Grid Offset : 6.9

hift Correction Method: Constant Rate from initial to final sighting
urvey Computation Method: Radius of Curvature

arget Direction: 202.00

INAL DATA (INRUN)

Measured Depth (feet)	Course Inclination	Course Direction	Vertical Depth (feet)	Rectangular Coordinates N/S E/W		Vertical Section	Dogleg Severity (per100)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.19	97.01	100.00	-0.02	0.17	-0.05	0.19
200.00	0.40	6.77	200.00	0.30	0.38	-0.42	0.44
300.00	0.42	354.49	300.00	1.01	0.38	-1.08	0.09
400.00	0.30	15.97	399.99	1.63	0.42	-1.67	0.18
500.00	0.20	118.47	499.99	1.80	0.65	-1.91	0.40
600.00	0.64	155.95	599.99	1.20	1.03	-1.50	0.50
700.00	1.16	146.39	699.98	-0.15	1.82	-0.54	0.53
800.00	1.07	121.21	799.96	-1.49	3.21	0.18	0.49
900.00	1.36	103.25	899.93	-2.29	5.17	0.19	0.48
1000.00	1.63	89.03	999.90	-2.57	7.76	-0.52	0.45
1100.00	1.95	76.96	1099.85	-2.19	10.85	-2.03	0.50
1200.00	1.90	78.93	1199.79	-1.49	14.14	-3.92	0.08
1300.00	2.04	83.62	1299.74	-0.97	17.53	-5.67	0.21
1400.00	2.31	79.99	1399.66	-0.43	21.29	-7.58	0.30
1500.00	1.54	73.39	1499.61	0.34	24.55	-9.51	0.80
1600.00	1.13	47.80	1599.58	1.48	26.56	-11.32	0.71
1700.00	0.52	8.77	1699.57	2.59	27.36	-12.65	0.80
1800.00	0.27	320.70	1799.56	3.22	27.28	-13.20	0.39
1900.00	0.00	55.18	1899.56	3.44	27.19	-13.38	0.29
2000.00	0.61	351.25	1999.56	4.00	27.16	-13.88	0.58
2100.00	0.13	279.82	2099.56	4.55	26.97	-14.32	0.58
2200.00	0.52	26.44	2199.56	4.97	27.06	-14.74	0.57
2300.00	0.14	6.48	2299.55	5.50	27.28	-15.32	0.39
2400.00	0.48	48.75	2399.55	5.90	27.60	-15.81	0.38
2500.00	0.10	244.38	2499.55	6.14	27.84	-16.12	0.57
2600.00	0.37	38.57	2599.55	6.36	27.97	-16.37	0.46
2700.00	0.27	61.57	2699.55	6.73	28.38	-16.87	0.16
2800.00	0.24	260.35	2799.55	6.80	28.39	-16.94	0.50
2900.00	0.35	41.76	2899.55	7.00	28.39	-17.13	0.56
3000.00	0.18	242.39	2999.54	7.16	28.46	-17.30	0.53

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Measured Depth (feet)	Course Inclination	Course Direction	Vertical Depth (feet)	Rectangular Coordinates		Vertical Section	Dogleg Severity (per100)
				N/S	E/W		
3100.00	2.29	140.91	3099.50	5.53	29.58	-16.21	2.33
3200.00	5.15	171.90	3199.28	-0.34	32.14	-11.72	3.40
3300.00	8.08	178.83	3298.61	-11.81	33.07	-1.44	3.03
3400.00	9.73	203.83	3397.40	-26.87	30.06	13.65	4.16
3500.00	14.40	214.78	3495.16	-45.06	19.84	34.95	5.19
3600.00	20.84	215.10	3590.42	-69.87	2.51	63.84	6.44
3700.00	24.84	211.30	3682.56	-102.34	-18.73	101.90	4.27
3800.00	30.56	211.58	3771.06	-141.98	-42.97	147.74	5.71
3900.00	35.81	208.50	3854.72	-189.34	-70.35	201.91	5.52
4000.00	43.27	207.30	3931.78	-245.56	-100.12	265.98	7.50
4100.00	45.96	204.82	4002.96	-308.64	-130.98	335.73	3.20
4200.00	45.43	202.10	4072.81	-374.28	-159.47	406.76	2.02
4300.00	45.63	199.75	4142.87	-440.92	-184.95	478.10	1.69
4400.00	46.24	197.97	4212.42	-508.92	-208.17	549.84	1.42
4500.00	46.17	197.49	4281.63	-577.67	-230.15	621.82	0.36
4600.00	46.86	196.86	4350.46	-646.98	-251.57	694.11	0.83
4700.00	47.57	196.70	4418.38	-717.25	-272.76	767.20	0.73
4800.00	47.30	196.32	4486.02	-787.86	-293.69	840.51	0.40
4900.00	46.99	195.86	4554.04	-858.30	-314.00	913.43	0.46
5000.00	41.14	194.38	4625.87	-925.40	-332.13	982.43	5.94
5100.00	34.47	189.23	4704.83	-985.35	-344.66	1042.71	7.37
5200.00	29.43	186.61	4789.66	-1037.70	-351.95	1093.98	5.23
5300.00	27.93	185.81	4877.39	-1085.40	-357.14	1140.15	1.55
5400.00	28.32	184.12	4965.58	-1132.40	-361.22	1185.26	0.89
5500.00	27.98	186.16	5053.75	-1179.40	-365.45	1230.42	1.02
5575.00	26.07	186.03	5120.56	-1213.20	-369.07	1263.12	2.55

Final Closure - Direction: 196.92 degrees
- Distance: 1268.10 feet

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Page ___ of ___

State of West Virginia
Department of Environmental Protection - Office of Oil and Gas
Well Operator's Report of Well Work

API 47 - 035 - 02409 County Jackson District Ripley
Quad Ripley Pad Name _____ Field/Pool Name Ripley Storage
Farm name Adams, Billie & Lockhart K Well Number 12410
Operator (as registered with the OOG) Columbia Gas Transmission, LLC
Address 1700 MacCorkle Ave SE City Charleston State WV Zip 25325-1273

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing _____ Easting _____
Landing Point of Curve Northing _____ Easting _____
Bottom Hole Northing _____ Easting _____

Elevation (ft) 848 GL Type of Well New Existing Type of Report Interim Final
Permit Type Deviated Horizontal Horizontal 6A Vertical Depth Type Deep Shallow
Type of Operation Convert Deepen Drill Plug Back Redrilling Rework Stimulate
Well Type Brine Disposal CBM Gas Oil Secondary Recovery Solution Mining Storage Other _____
Type of Completion Single Multiple Fluids Produced Brine Gas NGL Oil Other _____
Drilled with Cable Rotary

Drilling Media Surface hole Air Mud Fresh Water Intermediate hole Air Mud Fresh Water Brine
Production hole Air Mud Fresh Water Brine

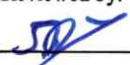
Mud Type(s) and Additive(s)
N/A - existing well and not deepened

Date permit issued 6/10/13 Date drilling commenced _____ Date drilling ceased _____
Date completion activities began _____ Date completion activities ceased 12/12/13
Verbal plugging (Y/N) _____ Date permission granted _____ Granted by _____

Please note: Operator is required to submit a plugging application within 5 days of verbal permission to plug

Freshwater depth(s) ft _____ Open mine(s) (Y/N) depths _____
Salt water depth(s) ft _____ Void(s) encountered (Y/N) depths _____
Coal depth(s) ft _____ Cavern(s) encountered (Y/N) depths _____
Is coal being mined in area (Y/N) _____

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API 47-035 - 02409

Farm name Adams, Billie & Lockhart K

Well number 12410

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade w/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor							
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	6.125	4.5	5589	New	11.6 ppf / N-80	none	N
Tubing							
Packer type and depth set							

Comment Details No existing casing was altered or pulled. New string of 4-1/2" casing installed to serve as flowline.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor							
Surface							
Coal							
Intermediate 1							
Intermediate 2							
Intermediate 3							
Production	Type I	203	15.6	1.18	239	3400	60
Tubing							

Drillers TD (ft) 5580 (obtained when drilled in 1998)

Loggers TD (ft) 5580

Deepest formation penetrated Helderberg

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) N/A

Check all wireline logs run

- caliper density deviated/directional induction
 neutron resistivity gamma ray temperature sonic

Well cored Yes No

Conventional Sidewall

Were cuttings collected Yes No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING

centralizers run on ju 1, 2, 4, 5, 7, 9, 11, and 13

WAS WELL COMPLETED AS SHOT HOLE

Yes No

DETAILS

WAS WELL COMPLETED OPEN HOLE?

Yes No

DETAILS

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WERE TRACERS USED

Yes No

TYPE OF TRACER(S) USED

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API 47- 035 - 02409 Farm name Adams, Billie & Lockhart K Well number 12410

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	11/5/13	5505	5516	66	Oriskany

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	12/6/13	12.5	4146	3610	N/A -	23,200	374	156 MCF N2
					screened	12,700		
					out	thru perfs		

Please insert additional pages as applicable.

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API 47-035-02409 Farm name Adams, Billie & Lockhart K Well number 12116

<u>PRODUCING FORMATION(S)</u>	<u>DEPTHS</u>	
Oriskany (storage)	5044 - 5055 TVD	5505 - 5516 MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface _____ psi Bottom Hole _____ psi DURATION OF TEST _____ hrs

OPEN FLOW Gas _____ mcfpd Oil _____ bpd NGL _____ bpd Water _____ bpd
 GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	0		0		
N/A - no new	borehole drilled	during rework			

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Please insert additional pages as applicable.

Drilling Contractor _____
 Address _____ City _____ State _____ Zip _____
 Logging Company _____
 Address _____ City _____ State _____ Zip _____
 Cementing Company _____
 Address _____ City _____ State _____ Zip _____
 Stimulating Company _____
 Address _____ City _____ State _____ Zip _____

Please insert additional pages as applicable.

Completed by Jim Amos Telephone 304-483-0073
 Signature *Jim E Amos* Title Senior Engineer Date 12/13/13

Submission of Hydraulic Fracturing Chemical Disclosure Information Attach copy of FRACFOCUS Registry

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11.17.2022

WW-4A
Revised 6-07

1) Date: _____
2) Operator's Well Number
Ripley 12410

3) API Well No.: 47 - 035 - 02409

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 Kevin Lockhart and Billie Irene Adams (Dower)	Name Not operated
Address 2866 Parkersburg Road	Address _____
Ripley, WV 25271	_____
(b) Name _____	(b) Coal Owner(s) with Declaration
Address _____	Name _____
_____	Address _____
(c) Name _____	Name _____
Address _____	Address _____
_____	_____
6) Inspector Joe Taylor	(c) Coal Lessee with Declaration
Address 1478 Claylick Road	Name _____
Ripley, WV 25271	Address _____
Telephone 304.380.7469	_____

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.

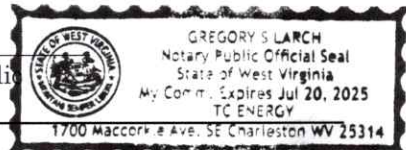
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Well Operator	Columbia Gas Transmission
By:	Maria Medvedeva
Its:	Senior Wells Engineer - Well Engineering and Technology
Address	1700 MacCorkle Ave SE
	Charleston, WV 25314
Telephone	304-410-4313

Subscribed and sworn before me this 17th day of Nov 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.

01/13/2023

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



November 17th, 2022

Kevin Lockhard and Billie Irene Adams (Bower)
 2866 Parkersburg Rd
 Ripley, WV 25271

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 12410 (API 47-035-02409).

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

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www.tcenergy.com

U.S. Postal Service™
CERTIFIED MAIL™ RECEIPT
 (Domestic Mail Only; No Insurance Coverage Provided)

For delivery information visit our website at www.usps.com®

Ripley, WV 25271

OFFICIAL USE

Postage	\$4.00
Certified Fee	\$3.25
Return Receipt Fee (Endorsement Required)	\$0.00
Restricted Delivery Fee (Endorsement Required)	\$0.00
Total Postage & Fees	\$9.90
	\$17.15

0726 04
 Postmark Here
 NOV 17 2022
 11/17/2022

Sent To: Kevin Lockhard & Billie Irene Adams
 Street, Apt. No., or PO Box No. 2866 Parkersburg Rd
 City, State, ZIP+4 Ripley WV 25271 (R12410)

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:
 Kevin Lockhard & Billie Irene Adams
 2866 Parkersburg Rd.
 Ripley, WV 25271

Barcode: 9590 9402 5472 9249 4789 42

2. Article Number (Transfer from service label)
 7003 2260 0006 0199 1196

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

3. Service Type
 Adult Signature
 Adult Signature Restricted Delivery
 Certified Mail®
 Certified Mail Restricted Delivery
 Collect on Delivery
 Collect on Delivery Restricted Delivery
 Mail Restricted Delivery (over \$500)

Priority Mail Express®
 Registered Mail™
 Registered Mail Restricted Delivery
 Return Receipt for Merchandise
 Signature Confirmation™
 Signature Confirmation Restricted Delivery

PS Form 3811, July 2015 PSN 7530-02-000-9053

SURFACE OWNER WAIVER

47 0 3 5 0 2 4 0 9

Operator's Well
Number

Ripley 12410

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 57th St. SE
Charleston, WV 25304
(304) 926-0450

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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

01/13/2023

WW-4B

47 0 3 5 0 2 4 0 9

API No. 47-035-02409

Farm Name _____

Well No. Ripley 12410

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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01/13/2023

WW-9
(5/16)

4703502409

API Number 47 - 035 - 02409
Operator's Well No. Ripley 12410

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) Left Fork of Sycamore Creek Quadrangle Ripley, WV

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.

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

-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

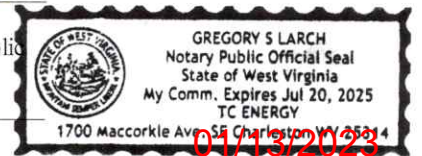
Company Official Title Senior Wells Engineer - Well Engineering and Technology

Gregory S Larch
11-30-22

Subscribed and sworn before me this 17th day of Nov., 20 22

Gregory S Larch 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
<u>Annual Rye</u>	<u>40</u>	<u>Orchard Grass and/or Tall Fescue</u>	<u>29</u>
		<u>Birdsfoot trefoil (empire)</u>	<u>9</u>
		<u>Annual Rye</u>	<u>12</u>

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 Taylor

Comments: _____

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Title: 006 Inspects

Date: 11-30-22

Field Reviewed? (X) Yes () No

4703502409

WW-9- GPP
Rev. 5/16

Page _____ of _____
API Number 47 - 035 - 02409
Operator's Well No. - Ripley 12410

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): Left Fork of Sycamore Creek Quad: Ripley, WV
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.

Left Fork of Sycamore Creek is at a distance of 1.17 miles SW.
WV Baptist Conference Center (WV9918034) is a Well Head Protection Area at a distance of 5.18 miles SW from discharge area.

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

N/A

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

01/13/2023

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: *Maurice*

Date: 11.17.2022

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west virginia department of environmental protection

Office of Oil and Gas
601 57th 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.

Promoting a healthy environment.

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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



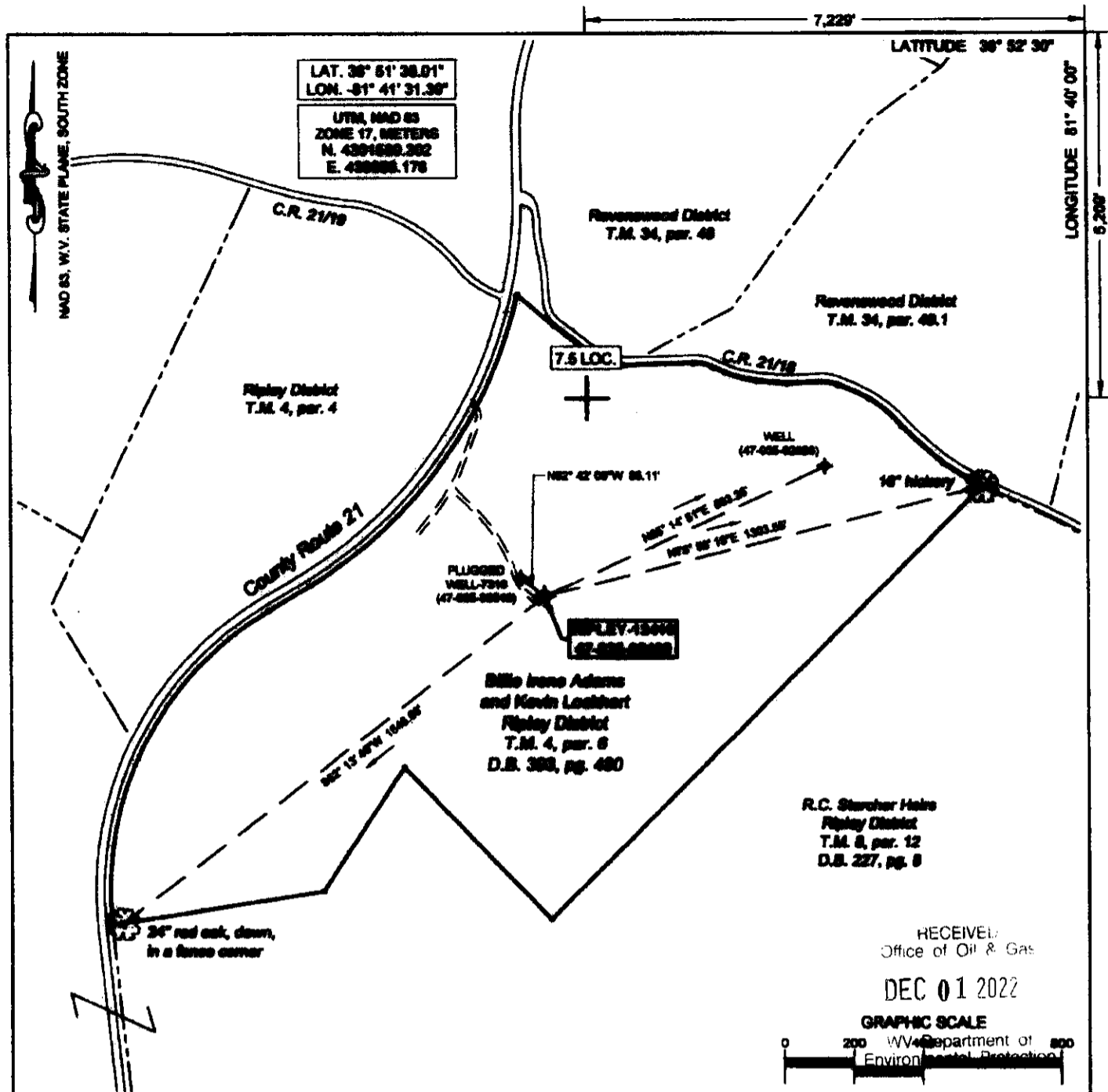
James Martin, Chief
Office of Oil and Gas

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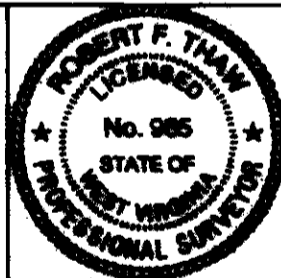


(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE No 2301-2345-001-004
 DRAWING No. RIPLEY-12410
 SCALE 1"=400'
 MINIMUM DEGREE OF ACCURACY 1/200
 PROVEN SOURCE OF ELEVATION TRIPLE R10
SEA LEVEL

I THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE REGULATIONS ISSUED AND PRESCRIBED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

(SIGNED) R.F. Thaw
 ROBERT F. THAW PS #985



STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS
 NITRO, WV



DATE OCTOBER 11 2022
 OPERATOR'S WELL No. 12410
 API WELL No. 47 035 - 02409

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL
 (IF "GAS") PRODUCTION STORAGE DEEP SHALLOW
 LOCATION: ELEVATION 848.0 WATER SHED LEFT BANK OF STEVENS CREEK
 DISTRICT RIPLEY COUNTY JACKSON
 QUADRANGLE RIPLEY, WV

SURFACE OWNER KEVIN LECKHART AND BILLE IRENE ADAMS ACREAGE 53.75 AC. (000)
 OIL & GAS ROYALTY OWNER J.T. THAW, ATTORNEY IN FACT, FOR MARY R. MOORE, VERA DYE, WENDY
 LEASE ACREAGE 61 LEASE NO. 108200

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE
 STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION
 OTHER PHYSICAL CHANGE IN WELL (SPECIFY) 01/13/2023
 PLUG AND ABANDON CLEAN OUT AND REPLUG

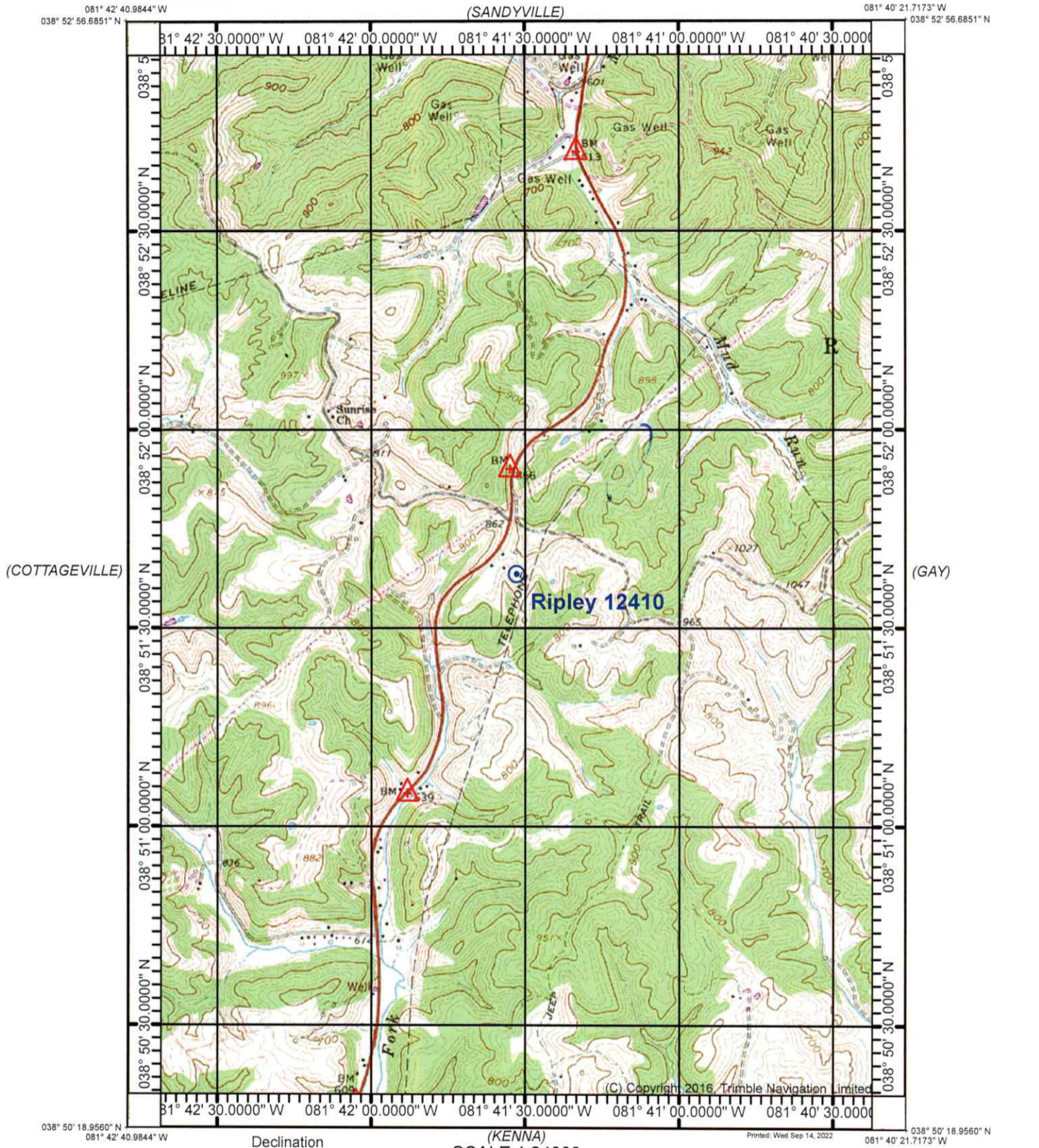
TARGET FORMATION GREYNAVY ESTIMATED DEPTH 5500
 WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT MARIA MEDVEDOVA
 ADDRESS PO BOX 1273 CHARLESTON, WV 25305-1273 ADDRESS 1709 MORGAN AVE., S.E. CHARLESTON, WV 25314

FORM N-6 (8-78)

4703502409

(RAVENSWOOD) 

RIPLEY QUADRANGLE
WEST VIRGINIA
TOPOGRAPHIC SERIES (LIVERPOOL)



(ELMWOOD)

Produced by Trimble Terrain Navigator Pro
Topography based on USGS 1:24,000
Maps

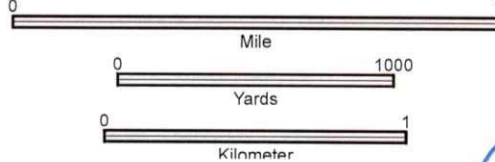
North American 1983 Datum (NAD83)

To place on the predicted North American
1927 move the projection lines 9M N and
13M E

Declination



(KENNA)
SCALE 1:24000



CONTOUR INTERVAL 20 FT

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

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WV DEP Reclamation Plan - Overview

Ripley well 12410 (API 47-035-02409)

- 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 - 12410

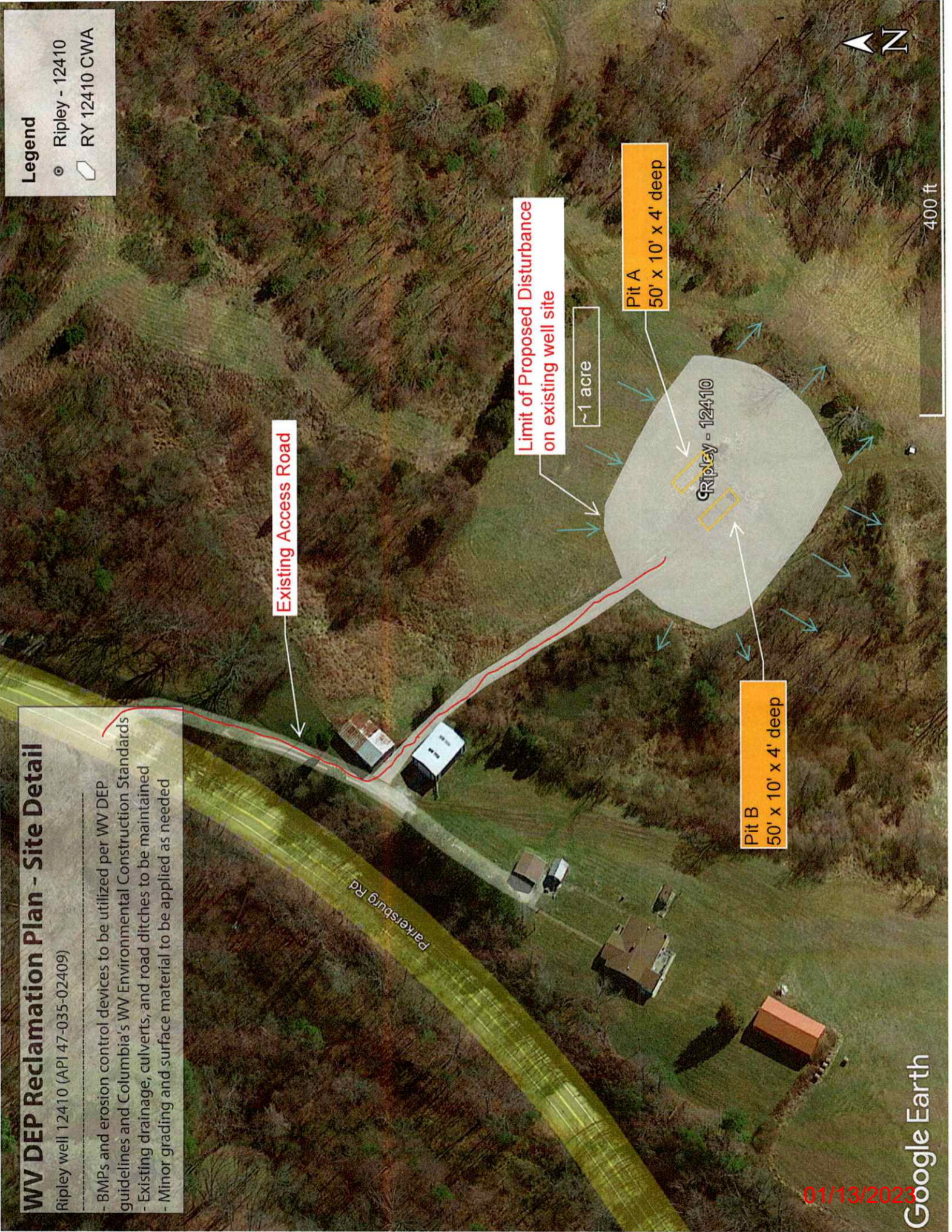
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Google Earth

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WV DEP Reclamation Plan - Site Detail

Ripley well 12410 (API 47-035-02409)

- 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 - 12410
- RY 12410 CWA

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Google Earth



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

plugging permit issued 4703502409

1 message

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


Mon, Jan 9, 2023 at 2:43 PM


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

To whom it may concern a plugging permit has been issued for 4703502409.

James Kennedy WVDEP OOG

2 attachments

 **4703502409.pdf**
6055K

 **IR-8 4703502409.pdf**
120K

01/13/2023