



west virginia department of environmental protection

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

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

Friday, July 17, 2020

WELL WORK PLUGGING PERMIT
Vertical Plugging

COLUMBIA GAS TRANSMISSION, LLC
STORAGE TECHNICAL SERVICES - 6TH FLOOR
1700 MACCORKLE AVE. SE.
CHARLESTON, WV 25314

Re: Permit approval for RIPLEY 7307
47-035-00537-00-00

This well work permit is evidence of permission granted to perform the specified well work at the location described on the attached pages and located on the attached plat, subject to the provisions of Chapter 22 of the West Virginia Code of 1931, as amended, and all rules and regulations promulgated thereunder, and to any additional specific conditions and provisions outlined in the pages attached hereto. Notification shall be given by the operator to the Oil and Gas Inspector at least 24 hours prior to the construction of roads, locations, and/or pits for any permitted work. In addition, the well operator shall notify the same inspector 24 hours before any actual well work is commenced and prior to running and cementing casing. Spills or emergency discharges must be promptly reported by the operator to 1-800-642-3074 and to the Oil and Gas Inspector.

Upon completion of the plugging well work, the above named operator will reclaim the site according to the provisions of WV Code 22-6-30. Please be advised that form WR-38, Affidavit of Plugging and Filling Well, is to be submitted to this office within 90 days of completion of permitted well work, as should form WR-34 Discharge Monitoring Report within 30 days of discharge of pits, if applicable. Failure to abide by all statutory and regulatory provisions governing all duties and operations hereunder may result in suspension or revocation of this permit and, in addition, may result in civil and/or criminal penalties being imposed upon the operators.

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

James A. Martin
Chief

Operator's Well Number: RIPLEY 7307
Farm Name: ADKINS, BOBBY KEITH
U.S. WELL NUMBER: 47-035-00537-00-00
Vertical Plugging
Date Issued: 7/17/2020

I

47-035-00537P

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.

WW-4B
Rev. 2/01

- 1) Date 5/13, 2020
- 2) Operator's
Well No. Ripley storage well 7307
- 3) API Well No. 47-035 - 00537 P

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 827.0 ft Watershed Left Fork of Mill Creek
District Ripley County Jackson Quadrangle Ripley, WV

- 6) Well Operator Columbia Gas Transmission, LLC 7) Designated Agent James Amos
Address 1700 MacCorkle Ave SE Address 48 Columbia Gas Rd
Charleston, WV 25325 Sandyville, WV 25275

- 8) Oil and Gas Inspector to be notified Name Joe Taylor
Address 1478 Claylick Road
Ripley, WV 25271
- 9) Plugging Contractor Name Contractor Services Inc
Address 929 Charleston Rd
Spencer, WV 25276

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.

RECEIVED
Office of Oil and Gas
JUN 10 2020
WV Department of
Environmental Protection

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

Work order approved by inspector  Date 6-4-2020

Objective: Plug and Abandon LAST PROFILE UPDATE:

TITLE: Plug and Abandon WORK TYPE: WR

FIELD: Ripley WELL: 7307

STATE: WV SHL (Lat/ Long) API: 47-035-00537-00-00

DIST: BHL (Lat/Long) CNTY: Jackson

EXISTING TUBULAR CONFIGURATION OD (inches) WEIGHT (PPF) GRADE THREAD DEPTH (ft) TOP BOTTOM FORMATION: Oriskany

DEPTH: See below.

Conductor PAY: 5014' ELEVATIONS

Surface TD: 5014' TMG:

Intermediate1 PBTB: KB-RF:

Intermediate2 KB-GL: GL: 827

Production CSG DEPTH WELLBORE SCHEMATIC

Tubing

Perforations

Perforations

Perforations

Wellhead

D.H. EQUIPMENT TYPE DEPTH (ft)

PACKER INFO: Upper none

Lower none

NIPPLE PROFILE INFO: Upper none

Lower none

SSSV INFO: none

CEMENT INFO TOC (ft)

MISC INFORMATION


REFER TO WELL SUMMARY REPORT and WELLBORE DIAGRAM

Max Rock Pressure: 1675
Max Pore Pressure: 1910

Most current AOF: 88 MMCFD
Historical best AOF: 90 MMCFD

RECEIVED
Office of Oil and Gas
JUN 10 2020
WV Department of
Environmental Protection

PROPOSED YEAR: 2020 ERCB PERMIT REQD: YES ___ NO X (Internal) PDS Required: YES ___ NO ___

PREPARED BY: Jim Amos DT. APPLIED: ISSUED: REVIEWED BY: APPROVED: 

PREP DATE: 4/16/2020 James Amos Principal Engineer



WELL JOB PLAN		Well Engineering & Technology		PAGE 3	DATE JOB PREPARED: 4/16/2020
Objective: Plug and Abandon				LAST PROFILE UPDATE:	
TITLE: Plug and Abandon		WELL: 7307		WORK TYPE: WR	
FIELD: Ripley				API: 47-035-00537-00-00	
STAT: WV	SHL (Lat/Long): 0 0				CNTY: Jackson
TWP: 0	BHL (Lat/Long): 0 0				

PROCEDURE

- 1 Obtain State plugging permit, FERC authorization, 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 environmental inspector prior to beginning work.
- 5 Notify State O&G inspector prior to beginning work.
- 6 Obtain Schlumberger CBL from 4000 ft to surface - keep hole full to obtain data to surface.
* Depending on results of CBL, the following procedure may be modified.
- 7 Disconnect well line.
- 8 Install ECD's per EM&CP.
- 9 Prepare access road and well site. Dig around base of wellhead to uncover casing tops and remove cement if present.
- 10 Document casing and annular pressures.
- 11 MIRU service rig.
- 12 NU BOPs and pressure test to 2500 psig.
- 13 TIH with drill pipe and clean to TD. TOOH.
- 14 TIH open-ended and spot balanced cement plug from TD to 4700 ft.
- 15 WOC, tag, and TOOH.
- 16 Install cast iron DBP at +/- 4675 ft.
- 17 Perforate 4650 - 52 ft with 4 SPF, using adequate charges to penetrate both the 4-1/2" and 7" casing.
- 18 Perform injection test.
- 19 If circulation to surface established, circulate annulus clean, and cement to surface (follow cement with 5 bbls heavy gel spacer and displace cement to 4400 ft). WOC, obtain CBL, and consult with WET engineer. If CBL indicates cement seal then **proceed to LAST STEP**. *TOC INSIDE 4 1/2" WILL BE 4400'*
- 20 If no circulation, TIH open-ended, spot balanced cement plug(s) from DBP to 3000 ft, pull up to 3000 ft, reverse circulate 1 hole volume or until clean returns, pull 3 jts, and squeeze cement thru perfs. Leave pressure on well while cement cures. WOC, tag top of cement, report tag depth to WET engineer, and TOOH.
- 21 Perforate 2930 - 32 ft w/ 4 SPF and perform injection/circulation test.
- 22 If circulation to surface established, circulate annulus clean, and cement to surface (follow cement with 5 bbls heavy gel spacer and displace cement to 2700 ft). WOC, obtain CBL, and consult with WET engineer. If CBL indicates cement seal then **proceed to LAST STEP**. *TOC INSIDE 4 1/2" WILL BE 2700'*
- 23 If no circulation, perforate 350 - 52 ft w/ 4 SPF, TIH with packer, set at 400 ft, and perform perf-to-perf circulation test.
- 24 If circulation established, circulate to clean annulus, TOOH, install cement retainer at 2890 ft, TIH, engage retainer, establish circulation again, squeeze cement (note that cement blend must be retarded to allow adequate time to TOOH), disengage retainer, circulate hole clean long way (2 hole volumes), and TOOH. WOC. TIH w/ bit, clean to 500 ft, TOOH, obtain CBL, and consult with WET engineer. If CBL indicates adequate sealing cement then **proceed to LAST STEP**.
- 25 If circulation not established, TIH open-ended, spot balanced cement plug(s) from 3000 ft to 2000 ft, pull up to 2000 ft, reverse circulate 1 hole volume or until clean returns, pull 3 jts, and squeeze cement thru perfs. Leave pressure on well while cement cures. WOC, tag, report to WET engineer, and TOOH.
- 26 Perforate 1900 - 02 ft w/ 4 SPF, TIH with packer, set at 400 ft, and perform perf-to-perf circulation test.
- 27 If circulation established, circulate to clean annulus, TOOH, install cement retainer at 1860 ft, TIH, engage retainer, establish circulation again, squeeze cement (note that cement blend must be retarded to allow adequate time to TOOH), disengage retainer, circulate hole clean long way (2 hole volumes), and TOOH. WOC. TIH w/ bit, clean to 500 ft, TOOH, obtain CBL, and consult with WET engineer. If CBL indicates adequate sealing cement then **proceed to LAST STEP**.
- 28 If circulation not established, TIH open-ended, spot balanced cement plug(s) from 2000 ft to 1400 ft, pull up to 1400 ft, reverse circulate 1 hole volume or until clean returns, pull 3 jts, and squeeze cement thru perfs. Leave pressure on well while cement cures. WOC, tag, report to WET engineer, and TOOH.
- 29 Perforate 1250 - 52 ft w/ 4 SPF, TIH with packer, set at 400 ft, and perform perf-to-perf circulation test.
- 30 If circulation established, circulate to clean annulus, TOOH, install cement retainer at 1210 ft, TIH, engage retainer, establish circulation again, squeeze cement (note that cement blend must be retarded to allow adequate time to TOOH), disengage retainer, circulate hole clean long way (2 hole volumes), and TOOH. WOC. TIH w/ bit, clean to 500 ft, TOOH, obtain CBL, and consult with WET engineer. If CBL indicates adequate sealing cement then **proceed to LAST STEP**.
- 31 If circulation not established, TIH open-ended, spot balanced cement plug(s) from 1400 ft to 800 ft, pull up to 800 ft, reverse circulate 1 hole volume or until clean returns, pull 3 jts, and squeeze cement thru perfs. Leave pressure on well while cement cures. WOC, tag, report to WET engineer, and TOOH.
- 32 Perforate 700 - 02 ft w/ 4 SPF (above the bottom of 15" hole), TIH with packer, set at 400 ft, and perform perf-to-perf circulation test.
- 33 If circulation established, circulate to clean annulus, TOOH, install cement retainer at 660 ft, TIH, engage retainer, establish circulation again, squeeze cement (note that cement blend must be retarded to allow adequate time to TOOH), disengage retainer, circulate hole clean long way (2 hole volumes), and TOOH. WOC. TIH w/ bit, clean to retainer, TOOH, obtain CBL, and consult with WET engineer. If CBL indicates adequate sealing cement then **proceed to LAST STEP**.
- 34 If circulation not established, ND BOPs, remove DSPA, weld on pulling nipple on 4-1/2" csg, unset slips, remove A-section, weld on pulling nipple on 7" cag and work 4-1/2" and 7" up and down in attempt to free up.
- 35 If 7" csg indicates may be free down to 700 ft, TIH with packer, set at 400 ft, and perform perf-to-perf circulation test.

PREPARED BY: Jim Amos	REVIEWED BY:	APPROVED:
PREP DATE: 4/16/2020		

RECEIVED
Office of Oil and Gas

JUN 10 2020

WV Department of
Environmental Protection

[Handwritten Signature]
6-4-2020

47-035-00537 P

WELL JOB PLAN		Well Engineering & Technology		PAGE 4	DATE JOB PREPARED: 4/16/2020
Objective: Plug and Abandon				LAST PROFILE UPDATE:	
TITLE: Plug and Abandon				WORK TYPE: WR	
FIELD: Ripley	WELL: 7307			API: 47-035-00537-00-00	
STAT: WV	SHL (Lat/Long): 0 0			CNTY: Jackson	
TWP: 0	BHL (Lat/Long): 0 0				

PROCEDURE CONTINUED

- 36 If circulation established, circulate to clean annulus, TOOH, install cement retainer at 660 ft, TIH, engage retainer, establish circulation again, squeeze cement (note that cement blend must be retarded to allow adequate time to TOOH), disengage retainer, circulate hole clean long way (2 hole volumes), and TOOH. WOC. TIH w/ bit, clean to retainer, TOOH, obtain CBL, and consult with WET engineer. If CBL indicates adequate sealing cement then **proceed to LAST STEP**.
- 37 If circulation not established, TIH open-ended, spot balanced cement plug from 800 ft to 500 ft, pull up to 500 ft, reverse circulate 1 hole volume or until clean returns, pull 3 jts, and squeeze cement thru perms. Leave pressure on well while cement cures. WOC, tag, report to WET engineer, and TOOH.
- 38 If WET engineer has confirmed this is next step, cut/pull all 4-1/2" csg that is free.
- 39 Work 7" csg and obtain free-point. Report results to WET engineer.
- 40 If 4-1/2" csg was cut/pulled below 450 ft, and 7" csg free-point is below 450 ft, then cut/pull all 7" csg that is free. **Proceed to LAST STEP**.
- 41 If previous step not performed, perforate 476 - 80 ft, 456 - 60 ft, 436 - 40 ft, 416 - 20 ft w/ 4 SPF, TIH open-ended, spot balanced cement plug from 500 ft to surface, and squeeze cement thru perms. Leave pressure on well while cement cures. Top off all casing and annuli.

LAST STEP TIH open-ended to PBTD and spot cement plugs to 300 ft. WOC and tag. ND BOPs, pull all pipe that is free except for the 16" casing, spot cement from top of last cement plug to surface, and top off all annuli with cement.

SET MONUMENT PER WV STATE CODE. *gwm*

[Signature]
6-4-2020

RECEIVED
Office of Oil and Gas

PREPARED BY: Jim Amos	REVIEWED BY:	APPROVED:	JUN 10 2020
PREP DATE: 4/16/2020			

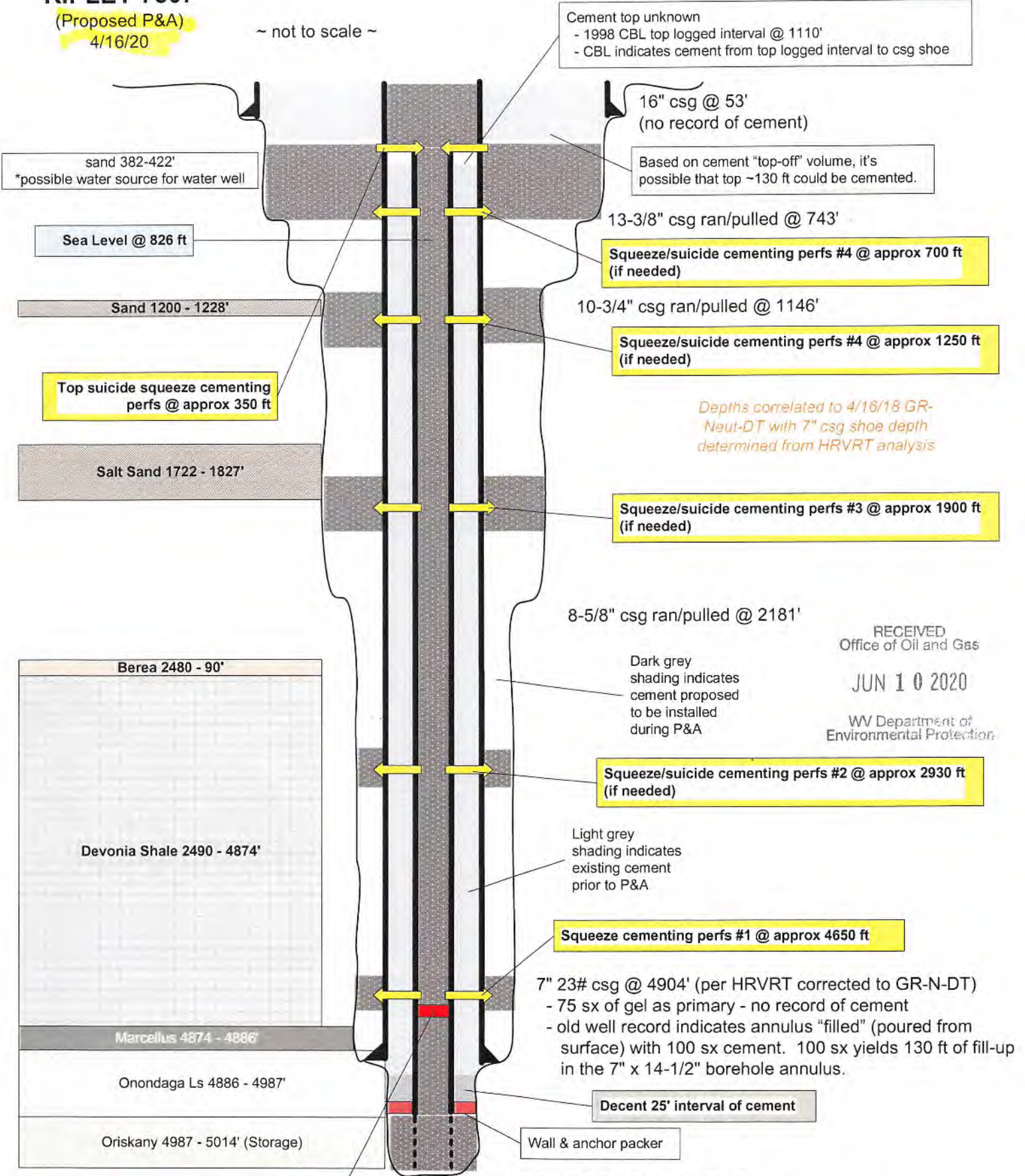
WV Department of
Environmental Protection

RIPLEY 7307

(Proposed P&A)
4/16/20

47-035-00537P

~ not to scale ~



Cement top unknown
 - 1998 CBL top logged interval @ 1110'
 - CBL indicates cement from top logged interval to csg shoe

16" csg @ 53'
 (no record of cement)

Based on cement "top-off" volume, it's possible that top ~130 ft could be cemented.

13-3/8" csg ran/pulled @ 743'
Squeeze/suicide cementing perfs #4 @ approx 700 ft (if needed)

10-3/4" csg ran/pulled @ 1146'
Squeeze/suicide cementing perfs #4 @ approx 1250 ft (if needed)

Depths correlated to 4/16/18 GR-Neut-DT with 7" csg shoe depth determined from HRVRT analysis

Squeeze/suicide cementing perfs #3 @ approx 1900 ft (if needed)

8-5/8" csg ran/pulled @ 2181'

Dark grey shading indicates cement proposed to be installed during P&A

RECEIVED
Office of Oil and Gas

JUN 10 2020

WV Department of Environmental Protection

Squeeze/suicide cementing perfs #2 @ approx 2930 ft (if needed)

Light grey shading indicates existing cement prior to P&A

Squeeze cementing perfs #1 @ approx 4650 ft

7" 23# csg @ 4904' (per HRVRT corrected to GR-N-DT)
 - 75 sx of gel as primary - no record of cement
 - old well record indicates annulus "filled" (poured from surface) with 100 sx cement. 100 sx yields 130 ft of fill-up in the 7" x 14-1/2" borehole annulus.

Decent 25' interval of cement

Wall & anchor packer

4-1/2" 11.60/12.60# csg @ 5014'
 - packer @ 4973' w/ slotted anchor below packer
 - no record of primary cement job
 - old well record states "filled with 355 sx cement" in 7 trips to well - likely poured down annulus - note that annular space would occupy ~460 sx

Install Bridge Plug @ ~4675 ft

Handwritten signature and date: 6-4-2020

TD 5014'

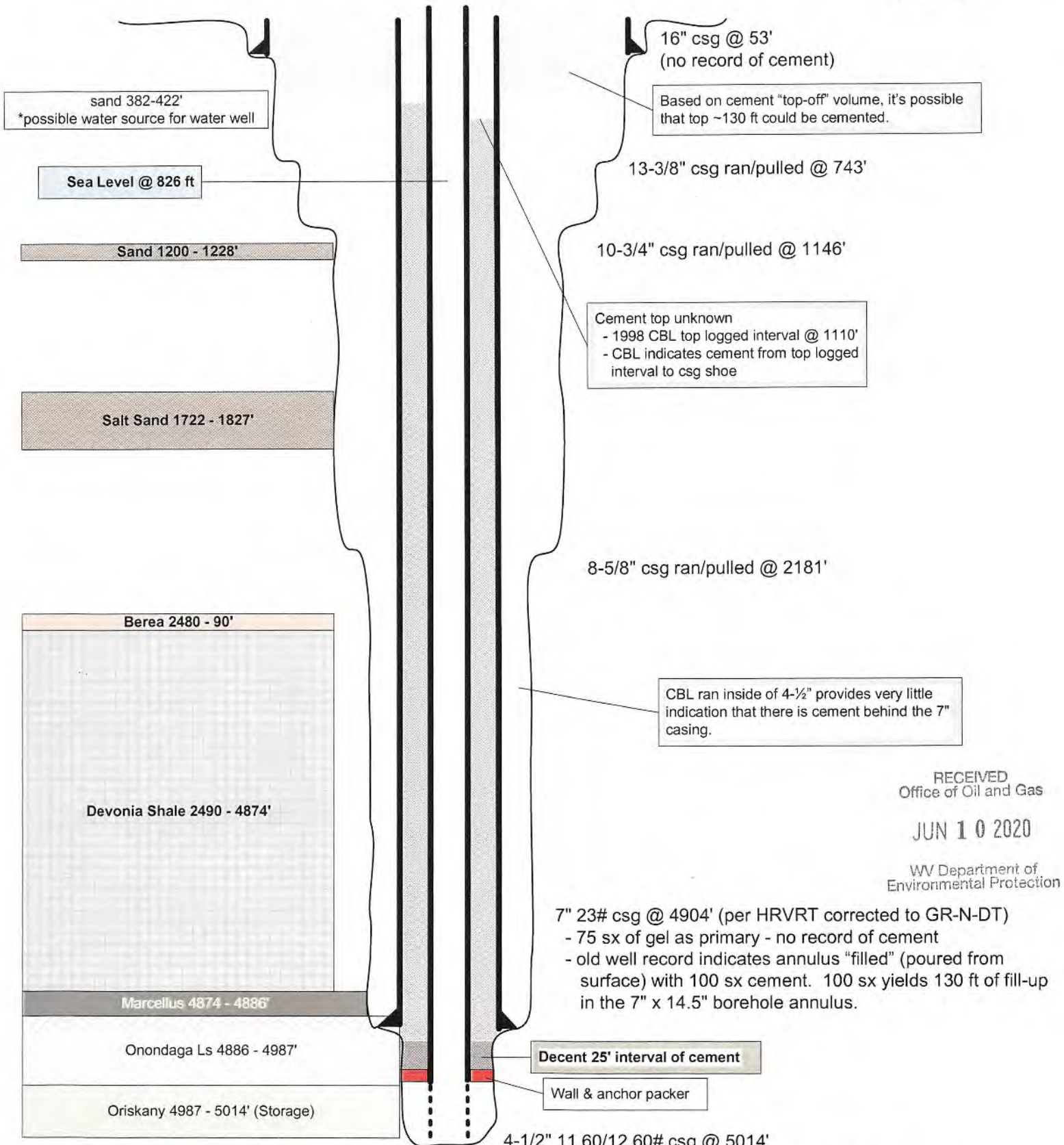
RIPLEY 7307

(Prior to P&A)

12/4/19

47-035-00537P
Depths correlated to 4/16/18 GR-Neut-DT with 7" csg shoe depth determined from HRVRT analysis

~ not to scale ~



RECEIVED
Office of Oil and Gas

JUN 10 2020

WV Department of
Environmental Protection

TD 5014'

John
6-4-2020

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

RECEIVED
Office of Oil and Gas

Well Operator's Report of Well Work

JUN 10 2020

Farm name: PURSLEY, WILLIAM

Operator Well No.: 7307 WV Department of Environmental Protection

LOCATION: Elevation: 831.00 Quadrangle: RIPLEY

District: RIPLEY County: JACKSON
Latitude: 3000 Feet South of 38 Deg. 52Min. 30 Sec.
Longitude 10550 Feet West of 81 Deg. 40 Min. 0 Sec.

Company: COLUMBIA GAS TRANSMISSION
P. O. BOX 1273
CHARLESTON, WV 25325-1273

Agent: RICHARD L. COTY

Inspector: HOMER DOUGHERTY
Permit Issued: 03/05/98
Well work Commenced: 07/22/98
Well work Completed: 08/14/98
Verbal Plugging
Permission granted on: _____
Rotary Cable Rig
Total Depth (feet) 5014'
Fresh water depths (ft) 390'; 660'

Salt water depths (ft) 780'; 1245';
1769'

Is coal being mined in area (Y/N)? N
Coal Depths (ft): N/A

Casing & Tubing Size	Used in Drilling	Left in Well	Cement Fill Up Cu. Ft.
16"		53'	
7"		4946'	100 sx
4-1/2"		5014'	355 sx

OPEN FLOW DATA

Producing formation Oriskany Storage Pay zone depth (ft) 5002' - 5014'
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.

For: COLUMBIA GAS TRANSMISSION CORP.

By: [Signature]
Date: 2/22/99

[Signature]
6-4-2020

47-035-00537 P

8/12/98 Attempted to acidize Oriskany. Could not get acid in formation.

RECEIVED
Office of Oil and Gas

JUN 10 2020

WV Department of
Environmental Protection

Completion or
Recondition 2-22-47 O.F.-Mcf 5,732 @PSIG 650-24hr

Field Ripley Well No. 7307
 Sect/Lot/M.S. 59-95 Tract/Dist. Ripley
 County Jackson State WVa
 Farm Name W.M. Riley
 Lease No. _____ Acreage _____ Elev. 8316

Sketch Horizontal (1 Block = 1 inch)

Casing & Tubing:

Year	Size	Wt.	Ft.	Cement & Remarks
<u>47</u>	<u>16</u>	<u>-</u>	<u>53</u>	
	<u>13 3/4</u>	<u>-</u>	<u>743</u>	<u>Pulled</u>
	<u>10 3/4</u>	<u>-</u>	<u>1146</u>	<u>Pulled</u>
	<u>8 5/8</u>	<u>-</u>	<u>2181</u>	<u>Pulled</u>
	<u>7</u>	<u>-</u>	<u>4945</u>	
<u>54</u>	<u>2 3/8</u>	<u>-</u>	<u>5033</u>	<u>Pulled</u>
<u>54</u>				<u>Set on 4A Packer</u>
				<u>30' off bottom</u>
				<u>(1 Joint skid)</u>

Perforations & Remarks: All csg floated in with
Acrygel & Fibretex 100 bags between 7" & 13" -
355 bags between 4" & 7"

Completion:

Natural Shot _____ Acidized _____
 Fractured _____

Date & Detail _____ RECEIVED
 Office of Oil and Gas

JUN 10 2020

WV Department of
 Environmental Protection

Plug Back & D. D.

Oriskany 5002-5014

Logs: (Type, Date & Detail)

No Logs

JP

12-5135-54
1-5135-55

WORK ORDER

REQUEST NO. 4443 BUDGET NO. 764 WORK ORDER NO. 7717
DATE July 13, 19 54 DATE ISSUED 7-28 19 54

COMPANY United Fuel Gas Company DEPT. Storage DIVISION Clendenin
PROPOSED WORK Recondition Well X-59-7307 and Install Heavier Equipment

KNOWN AS Well X-59-7307 - Additions NO. _____ ORIGINAL INSTALLATION DATE _____
PURPOSE AND NECESSITY To clean well out and install heavier equipment due to well being purchased for storage in pool X-59.

LOCATION: Well X-59-7307
IN Ripley Rural Jackson West Virginia
DISTRIBUTION PLANT MAGISTERIAL DISTRICT TAXING DISTRICT COUNTY STATE

RELATED PROJECT WORK ORDER NO. 6800 FOR Well X-59-7307 Exchange of Material
APPROVED BY J. W. Graham APPROVED BY J. H. Kime

DETAIL OF EXPENDITURES							
MATERIAL TO BE INSTALLED	UNIT PRICE	SIZE	ESTIMATE		ACTUAL		VARIATION
			QUANTITY	AMOUNT	QUANTITY	AMOUNT	
Steel Tubing 12.6#	1.06	4-1/2"	5,014'	5,315.00	5,057'	6,860.49	1,545.49
Wall and Anchor Packer		4"x7"	1	175.00	1	182.40	7.40
Orbit Gate Valve		4"	1	510.00	1	399.30	(110.70)
Nord Fig. 2349 Plug Valve		4"	1	365.00	1	372.44	7.44
Welded Tee		4"	1	13.00	-	-	(13.00)
W/N Flanges Ser. 90	25.00	4"	8	200.00	8	259.21	59.21
Centralizers Casing	28.00	4"x7"	6	168.00	-	-	(168.00)
Anchor Clamps Tubing		4"	1	20.00	1	23.06	3.06
Turnbuckles 1 1/2" x 12"		4"	1	28.00	2	22.26	(5.74)
Fittings				40.00		30.60	(9.40)
Insulation Flange		4"	-	-	1	11.62	11.62
TOTAL MATERIAL				6,834.00		8,161.38	1,327.38
INSTALLATION AND GENERAL COST							
Direct Labor				2,500.00		1,749.18	(750.82)
Interest				71.00		24.11	(46.89)
Use of Auto and Hauling				1,500.00		980.35	(519.65)
Tools, Supplies and Misc. Exp.				35.00		118.89	83.89
Hauling, Erecting and Dismantling Spudder				350.00		-*	(350.00)
Cement and Services				2,000.00		1,290.39	(709.61)
Fuel				35.00		40.00	5.00
Torpedo Service				160.00		160.00	-
Laying W.G. Line - Jackson P.L.C. Co.				-		69.70	69.70
Stores Expense and Freight				738.00		862.27	124.27
Labor Benefits and Non-Productive Time				468.00		322.52	(145.48)
Administrative and General Labor Overheads				64.00		60.13	(3.87)
TOTAL INSTALLATION AND GENERAL COST				7,921.00		5,677.54	(2,243.46)
TOTAL ESTIMATE				14,755.00		13,838.92	(916.08)

INDICATE NORTH SKETCH (CORRECT TO ACTUAL) INVENTORY MAP NO. None
Map Square - 58-95
GOMP. 6

Note: Move in Bucyrus Erie Spudder and String of Cleaning Out Tools. Clean well out and run string of 4-1/2" tubing on wall and anchor packer. Cement between all strings of casing and 4-1/2" tubing to surface. Install heavy well fittings and report results.

RECEIVED
Office of Oil and Gas
JUN 10 2020
WV Department of Environmental Protection

* Included in Direct Labor and Use of Automobile.

2-764-7717

[Handwritten signature]

COMPLETION REPORT

MAKE NECESSARY REVISIONS ON SKETCH TO SHOW WORK ACTUALLY PERFORMED. INDICATING LOCATION AND DIMENSIONS OF SPECIAL CONSTRUCTION.

FOR LINE WORK ON ESTABLISHED STREET OR HIGHWAY. INDICATE ON SKETCH THE DISTANCE OF LINE FROM ADJOINING PROPERTY, ALSO PORTION UNDER PAVING.

WHEN LINE EXTENDS INTO TWO OR MORE TAX DISTRICTS. LIST BELOW PORTION INSTALLED OR RETIRED. IN EACH

_____ FT. OF _____	SIZE _____	KIND _____	TOWN _____	DIST. _____	COUNTY _____
_____ FT. OF _____	SIZE _____	KIND _____	TOWN _____	DIST. _____	COUNTY _____
_____ FT. OF _____	SIZE _____	KIND _____	TOWN _____	DIST. _____	COUNTY _____
_____ FT. OF _____	SIZE _____	KIND _____	TOWN _____	DIST. _____	COUNTY _____

MATERIAL INSTALLED OR RETIRED			MATERIAL INSTALLED OR RETIRED		
QUANTITY	SIZE	DESCRIPTION	QUANTITY	SIZE	DESCRIPTION
5026'	4 1/2" OD.	12.6# Hydril, Gr. J-55 Tubing			
31'	4 1/2" OD.	12.6# Gr. J-55 Steel Tubing			
1	4 1/2" OD x 7" OD.	x 24" Comb. Wall & Anc. Packer			
1	4"	Nord. Flg. Plug Valve # 2349			
1	4"	Orbit Flg. Plug Valve 2000#			
1	4"	Steel Bull Plug			
8	4"	Ser. 90 W/N. Flanges			
2	1 1/2" x 12"	Turnbuckles			
5	4"	Oval Steel Ring Gaskets			
1	1/2"	M. & F. Steel Needle Valve 3000#			
1	4"	Gr. "B" Welded Tee			
18	1-1/8" x 7"	Bolts, All Thread			
2	1 1/2" x 24"	Hair Pin Bolts			
1	4"	Anchor Clamp			
1	4"	Insulation Flange Ser. 90			
2 1/2		Yards Ready Mix Concrete			
10#		National Pipe Thread Lubricant			
465		Sks. Cement			
5		Sks. Aquagel			

RECEIVED
Office of Oil and Gas
JUN 10 2020
WV Department of
Environmental Protection

MATERIAL TRANSFER NUMBERS: July # 256-Aug.#181-Sept.#11-24-Nov.#14-41-48-N-22.

P.O.# 34707-32247-32973-32352-32354-

PIPE COATING			ORIGINAL INSTALLATION DATES OF PROPERTY RETIRED		
QUANTITY	KIND	FT. OF PIPE	QUANTITY	KIND	DATE

TYPE OF JOINTS _____ EXCAVATION: BY HAND _____ FT. MACHINE _____ FT. WIDTH OF TRENCH _____ FT. AVG. DEPTH _____ FT. TYPE OF PAVING _____ PAVING CUT: WIDTH _____ FT. LENGTH _____ FT. DESCRIBE NATURE OF SOIL: <u>Gas Well</u> REPORT UNUSUAL CONDITIONS ENCOUNTERED IN CONSTRUCTION: _____ _____ _____	INFORMATION TO BE FURNISHED FOR SMALL STRUCTURES: OUTSIDE DIM. LENGTH _____ WIDTH _____ HEIGHT TO EAVES _____ HEIGHT TO RIDGE _____ FOUNDATION: KIND _____ FOUNDATION: THICKNESS _____ HEIGHT ABOVE GROUND _____ DEPTH BELOW GROUND _____ FLOOR: KIND _____ THICKNESS _____ WALL: KIND _____ THICKNESS _____ ROOF: TYPE _____ KIND _____ DOORS: NO. _____ SIZE _____ KIND _____ WINDOWS: NO. _____ SIZE _____ KIND _____ PAINTING _____ MISCELLANEOUS _____
--	--

REASON FOR OVERRUN - UNDERRUN: Direct Labor, Use of Auto and Cement and Services underrun our estimates, based upon similiar work performed in other storage pools, due to the experience gained in reconditioning wells in these other storage pools.

DATE WORK STARTED <u>July 12, 1954</u> 19	DATE WORK COMPLETED <u>August 18, 1954</u> 19
COMPILED BY <u>P.W. Strickland</u> DATE <u>10/28/54</u> 19	APPROVED BY <u>[Signature]</u> DATE <u>Oct 28, 1954</u>

SD

JUN 10 2020

WV Department of
Environmental Protection

11-5174-1954

FORM U 387-R-P C 8 D

WELL WORK ORDER

DATE ISSUED 5-5- 19 54 BUDGET NO. 764 WORK ORDER NO. 6809
 COMPANY United Fuel Gas Company FIELD Clendenin
 FARM W. M. Riley #1-A LEASE NO. _____ ACRES _____
 WELL NO. X-59-7307 (F-20872) DISTRICT Ripley COUNTY Jackson STATE W. Va.
 ON WATERS Sycamore Creek MAP SQUARE 58-95
 LOCATION MADE BY Columbian Carbon Co. DATE October 19 46 NOTE BOOK _____ PAGE _____
 COAL _____ NO BUILDINGS WITHIN _____ FEET _____
 LEASE EXPIRES Operated 19 _____ CLASS OF LOCATION _____
 PURPOSE AND NECESSITY To purchase well from Columbian Carbon Co. for storage in Pool X-59.
 RELATED WORK ORDER NOS. _____ FOR _____

DATA AND APPROVALS

CHECK TYPE OF WORK	CHECK PERMITS OR SERVICES REQUIRED
PURCHASE NEW WELL <input checked="" type="checkbox"/>	RIGHT OF WAY FOR ROAD <input type="checkbox"/> DRILLING PERMIT <input type="checkbox"/>
DRILL WELL DEEPER <input type="checkbox"/>	WELL LINE <input type="checkbox"/> ABANDONMENT PERMIT <input type="checkbox"/>
ABANDON WELL <input type="checkbox"/>	INSTALL MEASURING EQUIPMENT <input type="checkbox"/>
	SURVEY FOR W. G. LINE <input type="checkbox"/>

ESTIMATED DEPTH 5014 FEET. SAND Oriskany DRILLING CONTRACTOR _____
 COMPANY WILL FURNISH: RIG: YES NO WATER: YES NO FUEL: YES NO

APPROVALS

SUPT. John C. Martin DATE 4-14- 19 54 DATE _____ 19 _____
 DIVISION SUPT. J. A. Seese DATE 4-21- 19 54 PROD. MGR. H. C. Mefford, Jr. DATE 5-5- 19 54
 ENGINEER S. R. Ferrell DATE 4-27- 19 54 GENERAL SUPT. _____ DATE _____ 19 _____
 ASST. GEN. MANAGER _____ DATE _____ 19 _____ VICE PRESIDENT _____ DATE _____ 19 _____

DETAIL OF ESTIMATED COST

DETAIL OF ACTUAL COST

MATERIAL TO BE USED	SIZE	QUANTITY	PRICE	AMOUNT	SIZE	QUANTITY	PRICE	AMOUNT	VARIATION	
Original Purchased										
CASING	WEIGHT 69.50#	16"	53'	2.09	111.00	16"	53'	4.12	218.36	107.36
"	" 23#	7" OD	4946'	1.11	5,490.00	7"	4946'	1.10	5,440.60	(49.40)
TUBING	WEIGHT									
FITTINGS										
Midget Bottom Hole Packer	7"	1		59.00	7"	1		59.00	-	
TOTAL MATERIAL	Purchased			5,660.00				5,717.96	57.96	
Original	INSTALLATION OR REPAIRS COST			X X X X X				X X X X X	X X X X X	
LABOR				2,000.00				1,159.52	(840.48)	
USE OF AUTO AND HAULING				3,000.00				2,445.23	(554.77)	
RIGHT OF WAY										
DRILLING	<u>5014</u> FEET @ <u>4.75</u> PER FOOT			23,817.00						
HAULING, ERECTING AND DISMANTLING RIG								17,328.38	(6688.62)	
USE OF RIG										
FUEL				200.00						
TORPEDO										
SUPPLIES AND EXPENSE				150.00				2,051.49	1901.49	
ENGINEERING DEPARTMENT SURVEY				-				630.96	630.96	
STORES EXPENSE AND FREIGHT										
LABOR BENEFITS OVERHEADS										
ADMINISTRATIVE OVERHEADS										
TOTAL INSTALLATION OR REPAIRS COST - Original				29,167.00				23,615.58	(5551.42)	
TOTAL ESTIMATE				34,827.00				29,333.54	(5493.46)	

JO

Ripley - 07307 AFM (psig): 4,902 CAP Ranking: 1,475

Field Name RIPLEY	Well Number 07307	Redlined By Amos	Redlined Date 11/11/2009	Comments				
Operating Area ST. ALBANS	Maximo Number SW-031207307	API Number 47035005370000	Lease Name: J. T. Thomas, Et Al	Spud Date 2/1/1947	Average 33	TVD (ft) 5,014	MD (ft)	Datum Reference
Township/Tax District RIPLEY	Tax Number 351516	State WV	Latitude (DD) 38.866775	Longitude (DD) -81.703531	Section # 56-58-95	Line Length	Lease # 52251	Inventory Map #300N/436E
Well Classification ACTIVE	Storage Well Yes	Group	SubGroup	Completion Type	Est. Deepest FW (ft)	Ground Elevation (ft)	KB Elevation (ft)	

Direction To Well

From Ripley CS
Rt 21 south
1.1 mi turn right on Puckett Ridge Rd at top of hill
0.6 mi well turn left on to lease road just passed green fenced-in above ground
pipeline facility
0.1 mi to well

Landowner Restrictions

Comments

RECEIVED
Office of Oil and Gas

JUN 10 2020

WV Department of
Environmental Protection

Ripley - 07307 **AFM (psig): 4,902** **CAP Ranking: 1,475**

Wellhead	
Type	API Wellhead
Install Date	7/28/1998
Make	Kvaerner Oilfield Pr
Flow String (in)	4.50
Support String (in)	7
Working Press (psi)	5000
Connection	4-1/2" 8RD
Tubing Hanger	<input type="checkbox"/>
Comments	

Valves						
Description	Installed	Type	Make	Size (in)	Working Press. (psi)	Comments
Side Valve	7/28/1998	Gate		4.00	5,000	
Master Valve	7/28/1998	Gate		4.00	5,000	

Downhole Components (Items in BOLD are still in hole - Items in ITALICS have been pulled)

Run	Pulled	OD (in)	Description	Top (ft)	Bottom (ft)	Wt (#ft)	Grade	Thread	Cmt'd	Comments
2/1/1947		16.000	Drive Pipe	0	53	69.50				
2/5/1947		13.375	<i>Surface Pipe</i>	0	743					Pulled.
2/6/1947		10.750	<i>Casing</i>	0	1,146					Pulled.
2/15/1947		8.625	<i>Casing</i>	0	2,181					Pulled.
2/20/1947		8.000	Packer	4,930	4,940		Bottom Hole			
2/20/1947		7.000	<i>Casing</i>	0	3,618					Pulled.
2/20/1947		7.000	Casing	3,618	4,946	23.00	used		Y	No record of cement when installed. 100 sx poured down annulus from surface when reconditioned in 1954.
7/12/1954		7.000	Surface Pipe	0	3,618	23.00	n-80	new		
7/13/1954		6.400	Packer	4,980	4,984		Nail & Ancho			W&A packer.
7/13/1954		4.500	<i>Casing</i>	0	5	12.60	J-55	Hydril		Cut.
7/13/1954		4.500	Casing	5	4,980	12.60	J-55	Hydril	Y	355 sx poured down annulus from surface when installed in 1954.
7/13/1954		4.500	Slotted Liner	4,984	5,014			Hydril		1 jt.
7/26/1958		4.500	<i>Casing</i>	0	5	11.60	N-80			Butt welded.
2/25/1947		2.375	<i>Tubing</i>	0	5,014	4.00				Pulled.

Cement

Flow Sup. Str.	<input checked="" type="checkbox"/>	Cemented Strong (text)	Cmt. String	Hole OD (in)	No. of Sacks	Yield (ft3/sk)	Volume (ft3)	Cement Top (ft)	Cement Bot (ft)	Full Retur	Est. Top	Cement Bond	Cement Type	Contractor	Comments
Date	7/13/1954	<input type="checkbox"/>	4.5	6.5	355	1.20	426.00	1,430	4,980	<input type="checkbox"/>	<input checked="" type="checkbox"/>	4/17/2018	Casing		

Formations

Formation	Top (ft)	Bottom (ft)	Fluid Shows	Comments / Log Reference
Drillers Log of Formations				
Sand	1,200	1,235	W	Comments: Water at 390' - 2 bailers/hr. Comments: Fresh water at 660' - 9 bailers/hr. Comments: 78
Salt Sand	1,721	1,827	W	Comments: Hole full at 1769'.
Big Injun	2,089	2,189		no show reported by driller
Berea	2,487	2,505		
Onondaga Limestone	4,902	5,002		
Oriskany Sandstone	5,002	5,014	G	Comments: 5.738 MMCFD NAT. - 650# RP 2 1/2 Hrs.
TD	5,014	5,014		
Elog Formation Tops				
Big Injun	0	0		NEED DEPTHS
sand	382	422	FW @ 390'	DEPTHS CORRELATED TO GR-NEUT-DT RAN 4/16/18. show per driller.
sand	650	678	FW @ 660'	show per driller

RECEIVED
 JUN 10 2020
 WV Department of Environmental Protection
 Office of Oil and Gas

RECEIVED
Office of Oil and Gas
JUN 10 2020
WV Department of
Environmental Protection

Ripley - 07307		AFM (psig): 4,902		CAP Ranking: 1,475	
coal	685	688			
sand	745	812	W @ 780'	show per driller	
sand	1,200	1,228			
unknown	1,245	1,245	W	show per driller	
Salt Sand	1,722	1,827	W @ 1769'	show per driller	
Berea	2,480	2,490			
Devonian Shale	2,490	4,874		No show reported by driller	
Marcellus Shale	4,874	4,886			
Onondaga LS	4,886	4,987			
Oriskany SS	4,987	5,014		STORAGE	
TD	5,014	5,014			

Ripley - 07307 AFM (psig): 4,902 CAP Ranking: 1,475

Stimulations									
12/2/2010 - Coil Tubing Cleanout									
Date	Stim Type	Stim Company	Stim Trade Name	Zone	Top (ft)	Bottom (ft)			
12/2/2010	Coil Tubing Cleanout	Key Energy							
Est. Pore Press (psi)	Breakdown Press (psi)	Avg. Treat Press (psi)	ISIP (psi)	Avg. BH Rate (bpm)	Fluid Flush Density (ppg)	Nitrogen Amt (mcf)			
1,500					705				
Proppant Typee Mesh		Proppant Amount (lb)	Max BH sand concentration (lb/gal)	Total Job Load Recovered (bbl)	% Job Load Recovered				
				50	100				
Fluid Type 1:	Fluid Amt 1 (bbl):	Fluid Type 2:	Fluid Amt 2 (bbl):	Fluid Type 3:	Fluid Amt 3 (bbl):	Fluid Type 4:	Fluid Amt 4 (bbl):		
Fresh Water	15% HCl		2						
Comments									
General Procedure: Washed well, 2 passes across anchor and w passes across anchor w/acid - dried up, out w/N2. Wash/Jetting Tool Used: Rotating jet (own). Pre Job Flow Data: IWHP: 1500 psig, Stabilized BackPressure: 1000 psig Choke Size: 3/4". Post Job Flow Data: Stabilized Backpressure: 1000, Choke Size: 3/4". Comments: Washed through bridge @ 5011' GV - ID 5015' GV.									
8/13/1998 - Acid - Fracture									
Date	Stim Type	Stim Company	Stim Trade Name	Zone	Top (ft)	Bottom (ft)			
8/13/1998	Acid - Fracture	Halliburton							
Est. Pore Press (psi)	Breakdown Press (psi)	Avg. Treat Press (psi)	ISIP (psi)	Avg. BH Rate (bpm)	Fluid Flush Density (ppg)	Nitrogen Amt (mcf)			
Proppant Typee Mesh		Proppant Amount (lb)	Max BH sand concentration (lb/gal)	Total Job Load Recovered (bbl)	% Job Load Recovered				
Fluid Type 1:	Fluid Amt 1 (bbl):	Fluid Type 2:	Fluid Amt 2 (bbl):	Fluid Type 3:	Fluid Amt 3 (bbl):	Fluid Type 4:	Fluid Amt 4 (bbl):		
Acid		Foamed Water	28	Foamed Acid	26				
Comments									
Well locked up. Did not take acid. Pressure up to 3485 psig.									
4/16/1998 - Coil Tubing Cleanout									
Date	Stim Type	Stim Company	Stim Trade Name	Zone	Top (ft)	Bottom (ft)			
4/16/1998	Coil Tubing Cleanout	Halliburton							
Est. Pore Press (psi)	Breakdown Press (psi)	Avg. Treat Press (psi)	ISIP (psi)	Avg. BH Rate (bpm)	Fluid Flush Density (ppg)	Nitrogen Amt (mcf)			
					5,014				
Proppant Typee Mesh		Proppant Amount (lb)	Max BH sand concentration (lb/gal)	Total Job Load Recovered (bbl)	% Job Load Recovered				
Fluid Type 1:	Fluid Amt 1 (bbl):	Fluid Type 2:	Fluid Amt 2 (bbl):	Fluid Type 3:	Fluid Amt 3 (bbl):	Fluid Type 4:	Fluid Amt 4 (bbl):		
N2									
Comments									
Tripped in hole with coiled tubing, tagged at 5014', and cleaned out with N2 to TD at 5016'.									

RECEIVED
Office of Oil and Gas
JUN 10 2020
WV Department of Environmental Protection

WW-4A
Revised 6-07

1) Date: 5/4/2020
2) Operator's Well Number
Ripley storage well 7307
3) API Well No.: 47 - 035 - 00537

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>Bobby Keith Adkins</u>	Name <u>not operated</u>
Address <u>PO Box 622</u>	Address _____
<u>Ripley, WV 25271</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
JUN 10 2020
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, LLC
 By: James Amos
 Its: Team Leader - Well Engineering & Technology
 Address 48 Columbia Gas Rd
Sandyville, WV 25275
 Telephone 304-373-2412

Subscribed and sworn before me this 15th day of MAY 2020
Michael D. McClung Notary Public
My Commission Expires 6/19/2022

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 depprivacyoffier@wv.gov.



WW-9
(5/16)

API Number 47 - 035 - 00537
Operator's Well No Ripley 7307

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

Operator Name Columbia Gas Transmission, LLC OP Code 307032

Watershed (HUC 10) Left Fork of Mill 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 34-119-28776, 34-167-23862)
- Reuse (at API Number _____)
- Off Site Disposal (Supply form WW-9 for disposal location)
- Other (Explain Appalachian Water Services, Station W1 Ronco WTP, Masontown, PA - Permit 2608201)

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? _____

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.

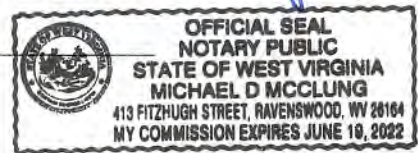
I certify that I understand and agree to the terms and conditions of the GENERAL WATER POLLUTION PERMIT issued on April 1, 2016, by the Office of Oil and Gas of the West Virginia Department of Environmental Protection. I understand that the provisions of the permit are enforceable by law. Violations 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 [Signature]
Company Official (Typed Name) James E. Amos
Company Official Title Team Leader, Well Engineering & Technology

Subscribed and sworn before me this 15th day of May, 2020
Michael D. McClung - Notary Notary Public

My commission expires 6/19/2022



RECEIVED
Office of Oil and Gas
JUN 10 2020
WV Department of
Environmental Protection

Operator's Well No. Ripley 7307

Proposed Revegetation Treatment: Acres Disturbed <1.0 Prevegetation pH 6.5

Lime 2 Tons/acre or to correct to pH 7

Fertilizer type 10-10-10

Fertilizer amount 600 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

<u>Temporary</u>		<u>Permanent</u>	
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>

Upland

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.

RECEIVED
Office of Oil and Gas

JUN 10 2020

Plan Approved by:



WV Department of
Environmental Protection

Comments:

Title: OGC Inspector

Date: 6-4-2020

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): Left Fork of Mill Creek Quad: Ripley, WV
Farm Name: Adkins, Bobby Keith

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

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 contaminate 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 equipment will be 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.

Per the enclosed Source Water Assessment & Protection evaluation, we have found that the 1-mile buffer for the Gas Storage well (Ripley well # 7307) does not intersect with public water sources nor Protection Areas.

Below are the results showing the public water sources/ intakes and protection areas closest to the location.

CLOSEST ACTIVE PUBLIC WATER

Gas Storage Name Distance PWSID Source System Name
Ripley well 7307 3.5 miles WV3301811 Intake (IN) RIPLEY CITY OF

PROTECTION AREAS

Gas Storage Name Distance PWSID System Name
Ripley well 7307 3.5 miles from ZCC WV3301811 RIPLEY CITY OF

RECEIVED
Office of Oil and Gas

JUN 10 2020

WV Department of
Environmental Protection

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.

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.

RECEIVED
Office of Oil and Gas
JUN 10 2020
WV Department of
Environmental Protection

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 lubrications will be stored on site, but located within secondary containment. Construction equipment will be inspected daily for leaks or spill.

Signature: Jam E. [Signature]

Date: 5/14/20

[Signature]

From: Carr, Brian A (DHHR)
To: [James Amos](#)
Subject: RE: [External] Wellhead Protection Area Evaluation: Ripley gas well 7307
Date: Wednesday, May 6, 2020 9:23:52 AM
Attachments: [TC_Energy_05052020.pdf](#)

May 6, 2020

Jim Amos
 Storage Engineer
 TC Energy
 455 Racetrack Road
 Washington, PA 15301

Re: Wellhead Protection Area Evaluation in
 Jackson County, West Virginia

Dear Mr. Amos:

This letter is in response to the informational request dated May 4, 2020 concerning a Wellhead Protection Area Evaluation in Jackson County, WV.

Based on the current information, we have found that the 1-mile buffer for the Gas Storage well (Ripley well # 7307) does not intersect with public water sources nor Protection Areas.

RECEIVED
 Office of Oil and Gas

JUN 10 2020

Attached are two tables showing the public water sources/ intakes and protection areas **closest** to the location.

WV Department of
 Environmental Protection

CLOSEST ACTIVE PUBLIC WATER				
Gas Storage Name	Distance	PWSID	Source	System Name
Ripley well 7307	3.5 miles	WV3301811	Intake (IN)	RIPLEY CITY OF

PROTECTION AREAS			
Gas Storage Name	Distance	PWSID	System Name
Ripley well 7307	3.5 miles from ZCC	WV3301811	RIPLEY CITY OF

Brian A. Carr, P.G. | Program Manager
 Office of Environmental Health Services
 Source Water Assessment & Protection
 350 Capitol Street, Room 313
 Charleston, West Virginia 25301
 Office 304.356.4298

Confidentiality Notice: This message, including any attachments, is for the sole use of the individual or entity named above. The message may contain confidential health and/or legally privileged information. If

you are not the above-named recipient, you are hereby notified that any disclosure, copying, distribution, or action taken in reliance on the content of this message is strictly prohibited. If you have received this message in error, please notify the sender immediately and destroy all copies of the original message.

From: James Amos <james_amos@tcenergy.com>
Sent: Monday, May 4, 2020 3:14 PM
To: Carr, Brian A (DHHR) <Brian.A.Carr@wv.gov>
Subject: [External] Wellhead Protection Area Evaluation: Ripley gas well 7307

CAUTION: External email. Do not click links or open attachments unless you verify sender.

Brian, my name is Jim Amos and I work for Columbia Gas Transmission. I'm preparing a gas well plugging permit application and need to evaluate the location of the well relative to water resources. I've attempted to use Source Water Protection Map Viewer but I can't seem to obtain the information I need.

The well location is depicted on the attached well survey plat. Can you help, or would you have time to walk me through it? I've referenced the Users Guide but having a difficult time navigating.

Thanks in advance.

Jim Amos
Team Leader – Well Engineering & Technology
Storage Technical Services

james_amos@tcenergy.com
Mobile: 304-483-0073 **Desk:** 304-373-2412



Columbia Gas
48 Columbia Gas Rd
Sandyville, WV
USA 25275

TCEnergy.com

This e-mail may contain confidential or privileged information. If you are not the intended recipient, please advise by return e-mail and delete immediately without reading or forwarding to others.

We respect your right to choose which electronic messages you receive. To stop receiving this message and similar communications from TC Energy please reply to this message with the subject "UNSUBSCRIBE".

This electronic message and any attached documents are intended only for the named addressee(s). This

RECEIVED
Office of Oil and Gas
JUN 10 2020
WV Department of
Environmental Protection

communication from TC Energy may contain information that is privileged, confidential or otherwise protected from disclosure and it must not be disclosed, copied, forwarded or distributed without authorization. If you have received this message in error, please notify the sender immediately and delete the original message. Thank you.

Nous respectons votre droit de choisir les messages électroniques que vous recevez. Pour ne plus recevoir ce message et des communications similaires de TC Énergie, veuillez répondre à ce message avec l'objet « DÉSABONNEMENT ».

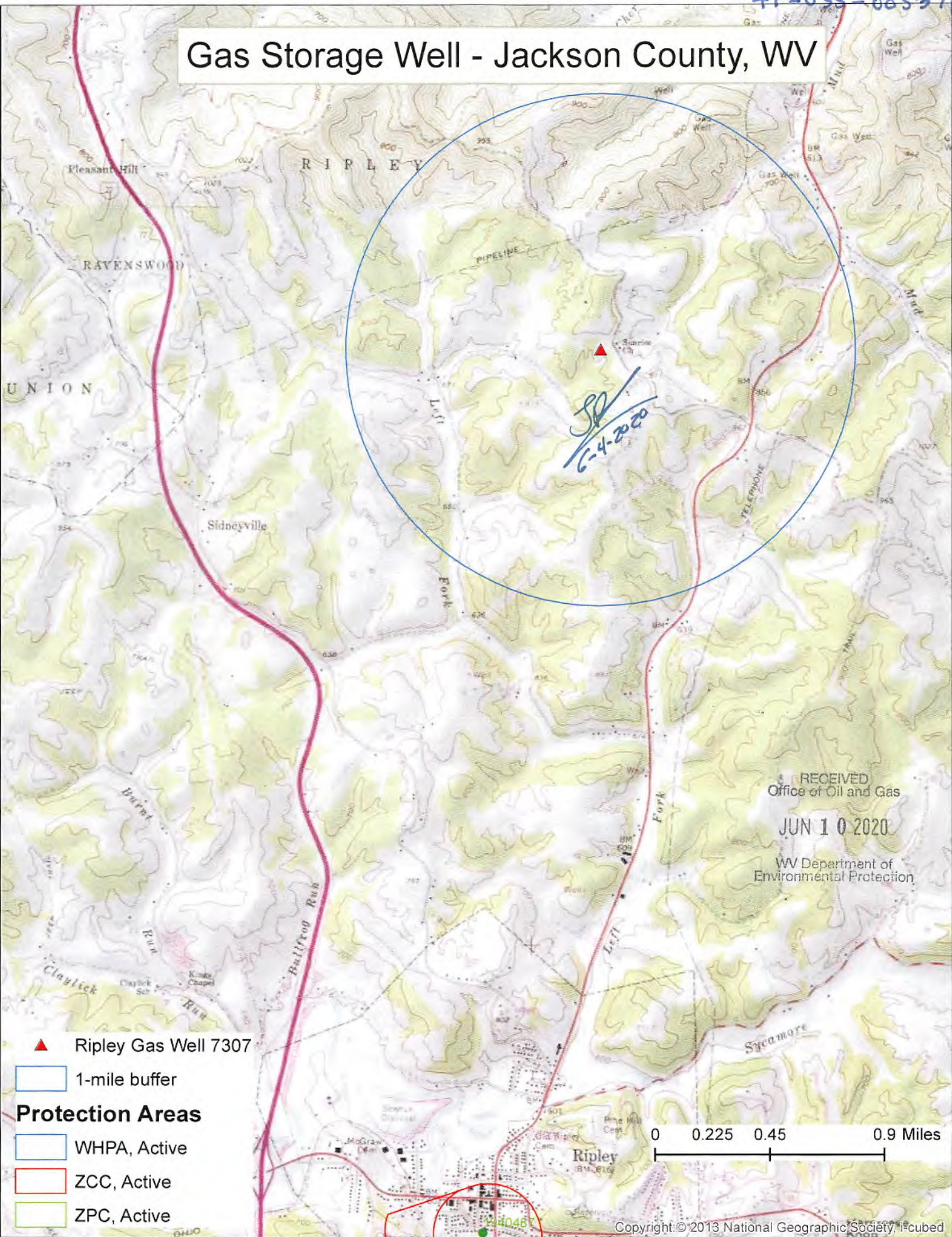
Ce message électronique et tous les documents joints sont destinés uniquement aux destinataires nommés. Cette communication de TC Énergie pourrait contenir de l'information privilégiée, confidentielle ou autrement protégée de la divulgation, et elle ne doit pas être divulguée, copiée, transférée ou distribuée sans autorisation. Si vous avez reçu ce message par erreur, veuillez en aviser immédiatement l'expéditeur et supprimer le message initial. Merci.

RECEIVED
Office of Oil and Gas

JUN 10 2020

WV Department of
Environmental Protection

Gas Storage Well - Jackson County, WV



▲ Ripley Gas Well 7307

□ 1-mile buffer

Protection Areas

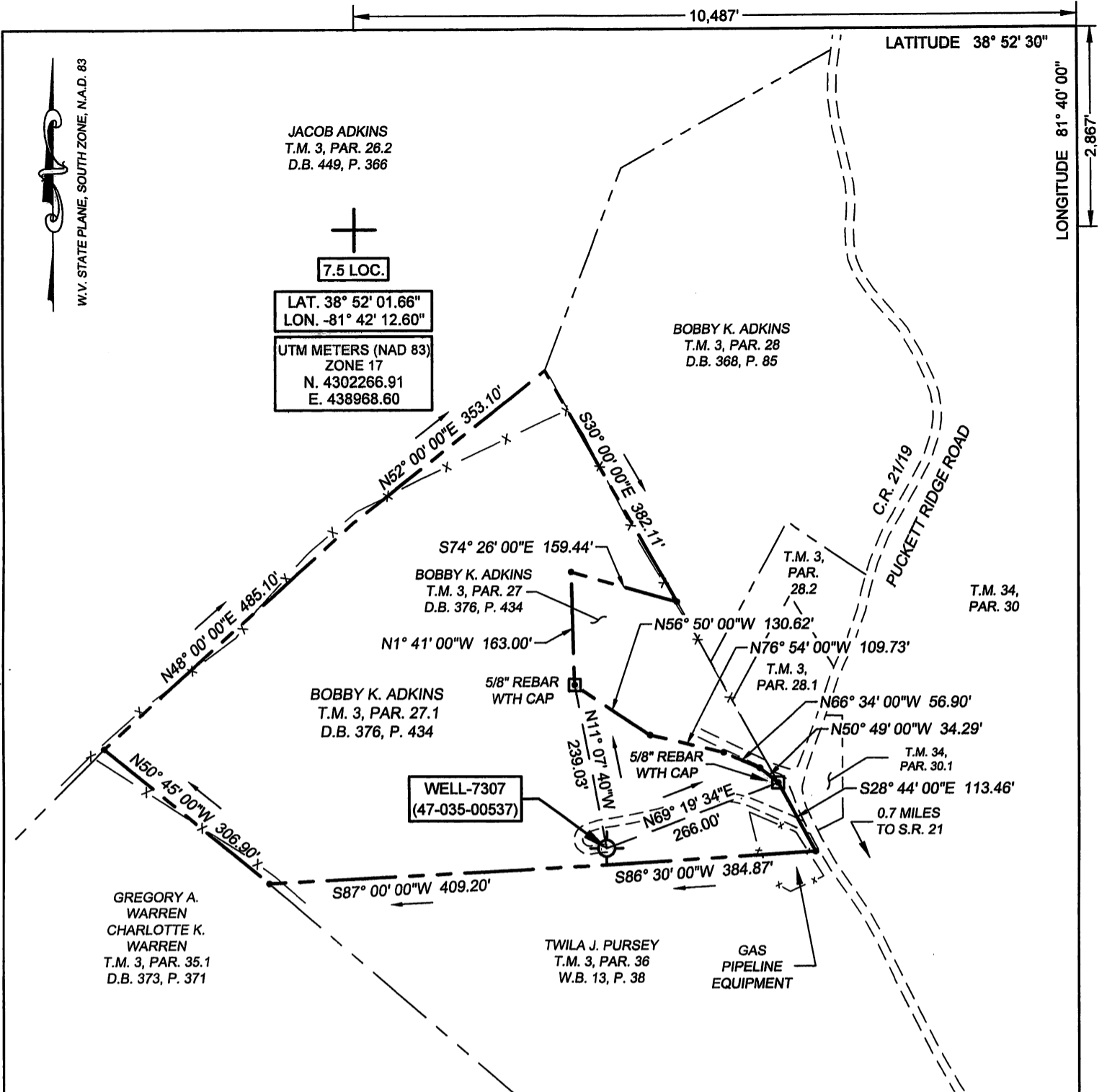
□ WHPA, Active

□ ZCC, Active

□ ZPC, Active

0 0.225 0.45 0.9 Miles

RECEIVED
Office of Oil and Gas
JUN 10 2020
WV Department of
Environmental Protection



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

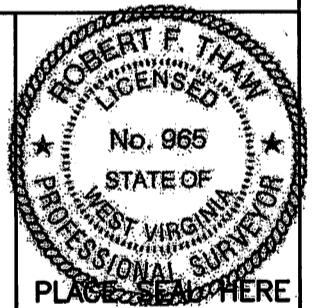
FILE No 1901-2345-001-007
DRAWING No. 1901-2345-001-007
SCALE 1"=200'
MINIMUM DEGREE OF ACCURACY 1:200
PROVEN SOURCE OF ELEVATION TRIMBLE R10
GPS UNIT

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)

ROBERT F. THAW

PS #965



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



DATE FEBRUARY 20 2020
OPERATOR'S WELL No. 7307
API WELL No.

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL STATE 47 COUNTY 035 PERMIT 00537P

LOCATION: ELEVATION 827.0' WATER SHED LEFT FORK OF MILL CREEK
DISTRICT RIPLEY COUNTY JACKSON

QUADRANGLE RIPLEY, WV

SURFACE OWNER BOBBY K. ADKINS ACREAGE 8.42

OIL & GAS ROYALTY OWNER J.T. THOMAS, ETAL LEASE ACREAGE 33

LEASE No. 52251

PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE
STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE IN WELL (SPECIFY) SQUEEZE CEMENT

PLUG AND ABANDON CLEAN OUT AND REPLUG

TARGET FORMATION ORISKANY ESTIMATED DEPTH 5014

WELL OPERATOR COLUMBIA GAS TRANSMISSION, LLC DESIGNATED AGENT JIM AMOS

ADDRESS PO BOX 1273, CHARLESTON, WV ADDRESS 48 COLUMBIA GAS ROAD

25325-1273 SANDYVILLE, WV 25275

FORM IV-6 (8-78)