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west virginia department of environmental protection

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

Austin Caperton, Cabinet Secretary  
[www.dep.wv.gov](http://www.dep.wv.gov)

Thursday, July 9, 2020  
WELL WORK PERMIT  
Vertical / Re-Work

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

Re: Permit approval for RIPLEY 7346  
47-035-00914-00-00

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.

Please be advised that form WR-35, Well Operators Report of Well Work 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.

A handwritten signature in blue ink, appearing to read 'James A. Martin', is positioned above the printed name and title.

James A. Martin  
Chief

Operator's Well Number: RIPLEY 7346  
Farm Name: BONTO, THELMA - WIDOW  
U.S. WELL NUMBER: 47-035-00914-00-00  
Vertical Re-Work  
Date Issued: 7/9/2020

# PERMIT CONDITIONS

West Virginia Code §22-6-11 allows the Office of Oil and Gas to place specific conditions upon this permit. Permit conditions have the same effect as law. Failure to adhere to the specified permit conditions may result in enforcement action.

## CONDITIONS

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1. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
2. In the event of an accident or explosion causing loss of life or serious personal injury in or about the well or while working on the well, the well operator or its contractor shall give notice, stating the particulars of the accident or explosion, to the oil and gas inspector and the Chief within twenty-four (24) hours.
3. Well work activities shall not constitute a hazard to the safety of persons.

WW - 2B  
(Rev. 8/10)

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**WELL WORK PERMIT APPLICATION**

1) Well Operator: Columbia Gas Transmission, LLC 307032 Jackson Ravenswood Ripley, WV  
Operator ID County District Quadrangle

2) Operator's Well Number: Ripley 7346 3) Elevation: 624.2'

4) Well Type: (a) Oil \_\_\_\_\_ or Gas X  
(b) If Gas: Production \_\_\_\_\_ / Underground Storage X  
Deep X / Shallow \_\_\_\_\_

5) Proposed Target Formation(s): Oriskany Proposed Target Depth: 4835'

6) Proposed Total Depth: 4952' Feet Formation at Proposed Total Depth: Oriskany

7) Approximate fresh water strata depths: None reported by driller in 1956.

8) Approximate salt water depths: None reported by driller in 1956.

9) Approximate coal seam depths: None reported by driller in 1956.

10) Approximate void depths,(coal, Karst, other): None reported by driller in 1956.

11) Does land contain coal seams tributary to active mine? No. RECEIVED  
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12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed) Department of  
Environmental Protection  
Pull 2-3/8" tubing. Log the well. Perform a wellhead change. Re-perforate Oriskany storage zone.

Possibly acidize (1000 gals HCl) and/or fracture stimulate (400 bbls fluid/25000 lbs sand) depending on log results.

**13) CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE INTERVALS		CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	
Conductor	13-3/8"	?	48	53'	53'	25 sx Cal-Seal
Fresh Water	9-5/8"	?	36	1981'	1981'	150 sx
Coal						
Intermediate	7"	?	23	4839'	4839'	No record of cement
Production	4.5"	N-80	11.6	4912'	4912'	225 sx
Tubing	2-3/8"	J-55	4.6		4927'	
Liners						

Packers: Kind: N/A

Sizes: \_\_\_\_\_

Depths Set \_\_\_\_\_

*[Signature]*  
4-17-2020

**7" casing: No record of primary cement but cement bond log indicates cement top at 4150 ft.**

Form OC-2

STATE OF WEST VIRGINIA  
DEPARTMENT OF MINES  
OIL AND GAS DIVISION

WELL DRILLING PERMIT

Permit No. JAC-914

MAY 10, 1956

TO UNITED FUEL GAS COMPANY  
Well Operator

LOCATION OF WELL:

P. O. BOX 1273  
Street

RAVENSWOOD DISTRICT

CHARLESTON, WEST VIRGINIA  
City

JACKSON COUNTY

WELL No. X-59-7346

PETER F. BONTO ET AL FARM

The Department of Mines received your Notice and Plat of the Well described above on the 30TH day of APRIL, 1956, showing proposed location for drilling an oil or gas well.

Ten days having expired since the receipt of Notice and Plat and no objections having been made by the coal owners, coal operators, or the Department of Mines, the location is approved and permission is granted you to drill strictly in accordance with the several provisions of Chapter 22, Code of 1931, the Well to be numbered and located as above shown and more particularly as indicated on the Plat on file with this Department.

This Permit is assignable either by separate instrument, or incident to the transfer of title to the oil and gas, or of the right to drill therefor at said location, but no such assignment shall entitle the assignee to drill thereat until he shall have filed with the Department of Mines a certified, or sworn copy of the instrument assigning same, or as an incident to which such assignment was made.

In case the well is not commenced within four months from the above date, this Permit shall expire and be of no further force or effect.

JULIUS C. OLZER  
Chief of Department of Mines  
[Signature]  
Administrative Assistant

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**United Fuel Gas Company**  
COMPANY

47-035-00914W

SERIAL WELL NO. 7346

LEASE NO. 52319

MAP SQUARE 58-95

RECORD OF WELL NO.	on the	CASING AND TUBING				TEST BEFORE SHOT
		SIZE	WEIGHT	USED IN DRILLING	LEFT IN WELL	
<b>Peter S. Bontoetaka</b>	farm of 102 Acres					12 /10 of Water in 7" 23# inch
in <b>Ravenswood</b>	District	13	48	53	53	/10 of Merc. in _____ inch
<b>Jackson</b>	County	9-5/8"	36	2109	1981	Volume <u>1,494.000</u> Cu. ft.
State of: <b>West Virginia</b>		7"	23	5089	4839	<b>TEST AFTER SHOT</b>
Field: <b>Northern Division</b>		2"	4.6	5281	4917	/10 of Water in _____ inch
Rig Commenced <b>May 3,</b>	19 <b>56</b>					/10 of Merc. in _____ inch
Rig Completed <b>May 7,</b>	19 <b>56</b>					Volume _____ Cu. ft.
Drilling Commenced <b>May 7,</b>	19 <b>56</b>					_____ Hours After Shot
Drilling Completed <b>June 14,</b>	19 <b>56</b>					Rock Pressure _____
Drilling to cost _____	per foot					Date Shot _____
Contractor is: <b>Delta Drilling Co</b>						Size of Torpedo _____
Address: <b>Pittsburg, Pa.</b>						Oil Flowed _____ bbls. 1st 24 hrs.
						Oil Pumped _____ bbls. 1st 24 hrs.
Driller's Name <b>Evert Price</b>						
<b>P.G. Hancock</b>						Well abandoned and
<b>Bill Ditman</b>						Plugged _____ 19 _____
Elevation:						

**DRILLER'S RECORD**

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS
Shale	0	1235		
Sand & Shale	1235	1417		
Sand	1417	1475		
Sand & Shale	1475	1519		
Sand & Sandy Lime	1519	1556		
Sand	1556	1668		
Shale	1668	1683		
Lime	1683	1827		
Sand	1827	1875		
Shale & Sand	1875	1900		
Hard Shale & Sand	1900	1953		
Shale	1953	1969		
Lime & Shale	1969	1983		
Shale	1983	2315		
Lime	2315	2325		
Shale	2325	2503		
Shale & Shells	2503	3255		

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Field Name RIPLEY	Well Number 07346	Redlined By Amos	Redlined Date 4/10/2012	Comments			
Operating Area ST. ALBANS	Maximo Number SW-031207346	API Number 47035009140000	Lease Name: P. F. Bonto, Et Al	Average 102	TVD (ft) 4,952	MD (ft) 4,952	Datum Reference
Township/Tax District RAVENSWOOD	County Jackson	State WV	Longitude (DD) -81.6869	Line Length 906	Line Length 906	Lease # 52319	Inventory Map #300N/440E
Well Classification ACTIVE	Tax Number 351502	Group Key Well	Section # 58-95	SubGroup	Est. Deepest FW (ft)	Ground Elevation (ft)	KB Elevation (ft)
	Storage Well Yes	Key Well No	Completion Type				

**Direction To Well**

**Landowner Restrictions**

**Comments**

47-035-00914 W

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<b>Wellhead</b>	
Type	API Wellhead
Install Date	11/8/1993
Make	National
Flow String (in)	4.50
Support String (in)	7
Working Press (psi)	3000
Connection	2-3/8"
Tubing Hanger	<input checked="" type="checkbox"/>
Comments	

<b>Valves</b>						
Description	Installed	Type	Make	Size (in)	Working Press. (psi)	Comments
Sales	11/8/1993	Gate	Custom	4.00	3,000	
Side Valve	11/8/1993	Gate	Custom	4.00	3,000	
Tubing Master	11/8/1993	Gate	Custom	2.00	3,000	
Tubing Arm	11/8/1993	Gate	Custom	2.00	3,000	
Annular	11/8/1993	Ball	KF Industries	2.00		

<b>Downhole Components (Items in BOLD are still in hole - Items in ITALICS have been pulled)</b>										
Run	Pulled	OD (in)	Description	Top (ft)	Bottom (ft)	Wt (#/ft)	Grade	Thread	Cmt'd	Comments
6/1/1956		13.375	<b>Drive Pipe</b>	0	53	48.00			Y	25 sx Cal-Seal.
6/5/1956		9.625	<b>Surface Pipe</b>	0	1,981	36.00			Y	Records indicate primary cement job but no volume documented. 1993 CBL indicates cement top at approx 340 ft - free point indicates pipe free down to 314 ft. Sqz cmt'd thru perfs at 278 ft with 150 sx during recondition in 1993 - cement circ'd to surface.
6/10/1956	11/2/1993	7.000	<i>Casing</i>	0	1,013	23.00				Backed-off.
6/10/1956		7.000	<b>Casing</b>	1,013	4,839	23.00			Y	No record of primary cement job when drilled but 1993 CBL indicates cement top at approx 4150 ft. 1993 free point indicated pipe free down to 3240 ft but could not circulate through sqz perfs at 3194' - squeeze cmt job aborted.
11/7/1993		7.000	<b>Casing</b>	0	1,013	23.00				Re-ran and screwed back together.
11/11/1993		4.500	<b>Casing</b>	0	4,912	11.60	N-80		Y	Cmt'd primary with 225 sx. CBL indicates cement top at 2490 ft.
6/15/1956	10/24/1993	2.375	<i>Tubing</i>	0	4,917	4.60				
1/1/1994		2.375	<b>Tubing</b>	0	4,927	4.60				

<b>Formations</b>				
Formation	Top (ft)	Bottom (ft)	Fluid Shows	Comments / Log Reference
<b>Drillers Log of Formations</b>				
Shale	0	1,235		
Sand, Shale	1,235	1,417		
Sand	1,827	1,875		
Onondaga Limestone	4,722	4,835		
Oriskany Sandstone	4,835	4,894		
TD	4,894	4,894		
DDTD	4,952	4,952		
<b>Elog Formation Tops</b>				
Sand				
DDTD				
Oriskany Sandstone				
Logger's TD				
Onondaga Limestone				
Shale				
Sand, Shale				

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**Stimulations**

**12/3/1993 - Linear Gel. Frac.**

Date	12/3/1993	Stim Type	Linear Gel. Frac.	Stim Company	Zone	Top (ft)	Bottom (ft)
Est. Pore Press (psi)	2,930	Breakdown Press (psi)	2,930	Avg. Treat Press (psi)	ISIP (psi)	4,100	Fluid Flush Density (ppg)
Proppant Typee Mesh	20/40	Proppant Amount (lb)	14,000	Max BH sand concentration (lb/gal)	6.00	Total Job Load Recovered (bbl)	% Job Load Recovered
Fluid Type 1:	Water	Fluid Amt 1 (bbl):	Fluid Type 2:	Fluid Amt 2 (bbl):	Fluid Type 3:	Fluid Amt 3 (bbl):	Fluid Amt 4 (bbl):

Comments

Tail in w/9000 # Resin Coat prop

**6/10/1956 - Kerosene Frac.**

Date	6/10/1956	Stim Type	Kerosene Frac.	Stim Company	Zone	Top (ft)	Bottom (ft)
Est. Pore Press (psi)	3,193	Breakdown Press (psi)	3,193	Avg. Treat Press (psi)	ISIP (psi)	4,100	Fluid Flush Density (ppg)
Proppant Typee Mesh	20/40	Proppant Amount (lb)	14,000	Max BH sand concentration (lb/gal)	6.00	Total Job Load Recovered (bbl)	% Job Load Recovered
Fluid Type 1:	Water	Fluid Amt 1 (bbl):	Fluid Type 2:	Fluid Amt 2 (bbl):	Fluid Type 3:	Fluid Amt 3 (bbl):	Fluid Amt 4 (bbl):

Comments

Frac. ( Kerosene ) 8318 gals. no other data -

**Perforations**

Date	Top (ft)	Bottom (ft)	Shot Type	Gun Type	Gun size (in)	Shot Density	Phasing	Perfed String (in)	Perf Company	Cement Squeeze	Comments
11/2/1993	278	280				2				<input checked="" type="checkbox"/>	
11/7/1993	3,193	3,195				2				<input type="checkbox"/>	Attempted to circulate to perform squeeze cement job but could not establish circ.
12/3/1993	4,830	4,850				6				<input type="checkbox"/>	

**Build-Up Tests**

Date	Type	Single-Point	kh	Skin	True Skin	DD Rate (Mctd)	AOE (Mctd)	Comments	Analysis
09/07/2016	Single-Point	0.0349	6.7640			435	2.726	Field was shut-in for test duration but had been on Wdr. 10 hrs. before at 24 MMctd @ 1471 psig. Corrected data with 62° OPT recorded.	I suspect well was flow tested through tubing. Very close to Initial Open-Flow conditions.

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08/15/1996	Multi-Point	0.0927	0.7640	145	-3.42	1,263	7.927
06/15/1956	Open-Flow						
06/15/1956	Single-Point						

Notes		Detail						Added by
Date	Category							

<b>6/1/1956</b>	<b>Note</b>	<b>Historical Well Notes</b>							
12/15/1993		9 5/8 squeezed from 150 to surface 11/3/93							bubernak
		1956 completion report shows 950 sacks cement used, strings not specified							
		11/5/93 7 attempted to squeeze would not circulate 3193-3195 2spf							
		11/10/93 4 1/2 cemented from 4912 to 2700 with 225 sacks standard, calseal, kci							
		12/3/93 service rig report well perfed tried to frac screened off							bubernak
06/21/2001									
<b>7/20/2009</b>	<b>Operations</b>	<b>Removed as key well</b>							<b>bubernak</b>
07/20/2009		This well has been removed as a key well due to it's inconsistant pressures. I will choose a new key well for this withdrawal season. Bubernak.							

<b>Logs</b>									
API Neutron	10/28/1993	Log TD:	SCHLUMBERGER						

API Neutron	09/30/1981	Log TD:	SCHLUMBERGER						
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<b>Cement Bond</b>									
11/15/1993 Log TD: 4875 SCHLUMBERGER									
Problem	WIAT Burst	Baker Burst	Len(ft)	Top (ft)	Bot (ft)	Metal Loss	Details	Fixed	Comments
Free Pipe				2,330	2,490			<input type="checkbox"/>	
Partial Quality				2,490	4,400			<input type="checkbox"/>	
Good Quality				4,400	4,875			<input type="checkbox"/>	

<b>Cement Bond</b>									
11/02/1993 Log TD: 980 WESTERN ATLAS INTERNATIONAL									
Problem	WIAT Burst	Baker Burst	Len(ft)	Top (ft)	Bot (ft)	Metal Loss	Details	Fixed	Comments
Free Pipe				185	340			<input type="checkbox"/>	Poor log quality
Good Quality				340	850			<input type="checkbox"/>	Poor log quality
Partial Quality				850	980			<input type="checkbox"/>	Poor log quality

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**Ripley - 07346** **AFM (psig): 7,957** **CAP Ranking: 4,210**

Cement Bond		10/27/1993	Log TD: 4800		SCHLUMBERGER				
Problem	WIAT Burst	Baker Burst	Len(")	Top (ft)	Bot (ft)	Metal Loss	Details	Fixed	Comments
Free Pipe				100	4,300			<input type="checkbox"/>	
Poor Quality				4,300	4,380			<input type="checkbox"/>	
Good Quality				4,380	4,410			<input type="checkbox"/>	
Poor Quality				4,410	4,650			<input type="checkbox"/>	
Partial Quality				4,650	4,765			<input type="checkbox"/>	
Good Quality				4,765	4,800			<input type="checkbox"/>	
<b>Differential Temperature</b>		<b>09/30/1981</b>	<b>Log TD:</b>	<b>SCHLUMBERGER</b>					
<b>Gamma Ray</b>		<b>09/30/1981</b>	<b>Log TD:</b>	<b>SCHLUMBERGER</b>					
<b>Lithology density</b>		<b>10/28/1993</b>	<b>Log TD:</b>	<b>SCHLUMBERGER</b>					
<b>OH Neutron</b>		<b>11/15/1993</b>	<b>Log TD:</b>	<b>SCHLUMBERGER</b>					
<b>Other</b>		<b>10/28/1993</b>	<b>Log TD:</b>	<b>SCHLUMBERGER</b>					
<b>Sonic</b>		<b>10/28/1993</b>	<b>Log TD:</b>	<b>SCHLUMBERGER</b>					

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Jobs	Type of Work	Field Engineer	Responsible Entineer	Rig
1990	<b>Wellhead Changes</b>	<b>Not Specified</b>	<b>Not Specified</b>	
10/20/1993	TOOK SAMPLES FROM WATER WELLS OF SURROUND- ING DWELLINGS, WELLHEAD PRESSURE : 1500 PSIG KILLED W ELL W /219 BBLs OF 3% KCL FLUID, CIRCULATED 200 BBLs, SHUT WELL IN.			
10/21/1993	TUBING PRESSURE: -0- PRESSURE ON 7X2-3/8" ANNULUS: 20 PSI. BLEED PRESS. TO ATMOSPHERE LOADED HOLE W /4-1/2 BBLs 3% KCL FLUID. BROKE OUT WELL CELLAR & 2 LAYERS OF CON- CRETE PAD. SHUT WELL IN.			
10/22/1993	HAULED GRAVEL, LOADED HOLE W/36 BBLs OF 3% KCL FLUID, CRIBBED UP WELL CELLAR, RIGGED UP RIG, NIPPL ED DOWN TUBING VALVE, NIPPLED UP BOP & TESTED, PULLED 62 JTS (1939.60') OF 2-3/8" 10 RD TBG., SHUT WELL IN.			
10/25/1993	PULLED 2943.9' OF 2-3/8" TUBING. TOTAL PULLED: 4883.5' (157 JTS.). T.I.H. W/6-1/8 IN. BIT, DRIL L COLLARS & TUBING TO 4870', WELDED FLOWLINE. LOADED HOLE W/51 BBLs OF KCL FLUID, SHUT WELL IN.			
10/26/1993	LOADED HOLE W/55 BBLs OF 3% KCL FLUID, CIR- CULATED & CLEANED OUT 27' OF FIL L. DRILLED HOLE FRO M 489 7'-4925', CIRCULATING OUT WOOD & RUBBER WHILE CIRCULATED LAST ADDITIONAL 16 BBLs OF FLUID, SHUT WELL IN.			
10/27/1993	LOADED HOLE LW/9 BBLs OF 3% KCL FLUID, DRILLED HOLE TO DEPTH OF 4952'. CIRCULATED & CLEANED HOLE, LOST 25 BBLs OF FLUID TO THE FORMATION, SHUT WELL IN.			
10/28/1993	LOADED THE HOLE W/30 BBLs KCL FLUID; P.O.O.H. W/TUBING & BIT. SCHLUM BERGER RAN A CEMENT BOND LOG ON THE 7" CSG., SHUT IN.			
10/29/1993	LOADED HOLE W/9 BBLs FLUID, RAN GAMMA RAY NEUTRON LITHODENSITY LOG ON THE OPEN HOLE SECTION FROM 4770'-4930', RAN A SONIC LOG FROM 4930'-3930', WAITING FOR CORING TRUCK.			
11/01/1993	LOADED HOLE W/25 BBLs FLUID. RIGGED UP & RAN IN HOLE SCHLUMBERGER CORING TOOL, CUT 15 SIDEW ALL C ORES & PULLED OUT OF HOLE; RIGGED UP & RAN IN HOLE BAKER WIRELINE SET 7" RET. B/P & SET @4680', DUMPED 20' OF SAND ON PLUG. ATTEMPTED TO UNSCREW TUBING HEAD FROM 7" CSG. TO NO AVAIL. SHUT WELLIN.			
11/02/1993	REMOVED TUBING HEAD, PULLED 130,000# ON 7" CASING TO RELEASE SLIPS; WOULD N OT RELEASE. REINFORC ED RIG FOUNDATION W/A STEEL BASE BEAM. CUT BOWL AROUND SLIPS TO RELEASE. ATLAS NIPPLED UP TO 7" CSG. & FREEPOINTED, 7" CASING FREE @3240', STRING SHOT 7" CSG. @1,000' & BACKED OFF, SHUT WELL IN.			
11/03/1993	PULLED & LAID DOWN 1013' OF 7" 23#/FT. CSG. ATLAS RAN A CEMENT BOND LOG ON T HE 9-5/8" CSG. FRO M 980 ' SURFACE, FREEPOINTED 9-5/8", 100% FREE @314', PERFORATED 9-5/8" CSG. FROM 278'-280' W/2 SHOTS/FT. WAITING FOR 9-5/8" CASING JOINT TO BE CUT & THREADED.			
11/04/1993	T.I.H. ON TBG. A 9-5/8" BAKER RET. BRIDGE- PLUG & SET @506'. T.O.O.H. ATTE MPTED TO BACK OFF TOP JT. OF 9-5/8" CSG; WOULD NOT BACK OFF. ATLAS RAN IN HOLE TO TOP COLLAR @13' & STRING SHOT SAME, PULLED OUT OF HOLE T.I.H. W/9-5/8" CSG. SPEAR & SET IN 2ND JT. ATTEMPTED AGAIN TO BACK OFF TOP JT.; WOULDNOT BACK OFF. ATTEMPTED TO RELEASE SPEAR, WOULD NOT RELEASE. ATTEMPTED TO TORQUE UPSPEAR & PUSH DOWNHOLE TO RELEASE, WOULD NOT			
11/04/1993	RELEASE. NIPPLED UP POWER SWIVEL & TORQUED STRING & T.O.O.H. W/SPEAR. DUMP ED 20' OF SAND ON BRIDG E PLUG, ESTABLISHED CIRCULAT- ION AROUND THE 9-5/8" CSG. & SQUEEZE CEMENTED, CEMENT RETURNS TO THE SURFACE.			
11/05/1993	RIGGED UP & RAN IN HOLE W/8-1/2" BIT ON TUBING, TAGGED CEMENT @446', DRIL LED OUT 40 FT. OF C EMENT , CIRCULATED SAND OFF BRIDGE PLUG, T.O.O.H. T.I.H. W/RET. HEAD ON TBG. TO 506', RELEASED & T.O.O.H. W/9-5/8" BRIDGE PLUG. SHUT WELL IN.			
11/08/1993	RE-RAN THE ORIGINAL 1013' OF 7" CSG, SCREW- ED 7" CSG. BACK TOGETHER W/4500/ FT./# TORQUE, PULLE D 50,000# ON 7" CSG., ATLAS PERFORATED 7" CSG. FROM 3193-3195' W/2 SHOTS/FT, BROKE CIRCULATION W/250 PSI W/MUD PUMP. HALLIBURTON ATTEMPTED TO CIRCULATE; WOULD NOT CIRCULATE. SHUT WELL IN.			
11/09/1993	NIPPLED UP CASING SPOOL, CUT & DRESSED 7" CSG. & INSTALLED PRIMARY & SECON DARY PACK- ING. NI PPLED UP ADAPTER FLANGE & BOP & TESTED. T.I.H. W/7" RETRIEVING HEAD TO TOP OF THE SAND @4660', SHUT WELL IN.			
11/10/1993	CIRCULATED SAND OFF BRIDGE PLUG, PULLED EQUALIZING PRONG IN BRIDGE PLUG & CIR- CULATED, RELE ASED BRIDGE PLUG & PULLED OUT OF HOLE, CHANGED RAMS IN BOP. T.I.H. WITH GUIDE SHOE & LATCH DOWN BAFFLE ON NEW 4-1/2 IN. 11.6#/FT. N80 CSG. TO A DEPTH OF 1408'.			
11/11/1993	FINISHED RUNNING 4-1/2" CSG. TO TD OF 4912' (GL) HALLIBURTON CIRCULATED 80 BBLs OF CORR. IN HIB. BEHIND 4-1/2" CSG & CEMENTED SAME FROM TD TO 2700' W/CLASS A CEMENT W/ ADDITIVES.			
11/12/1993	W.O.C.			
11/16/1993	SCHLUMBERGER RAN CEMENT BOND LOG ON 4-1/2" CSG. FROM TD TO 2500'. RAN GAMMA RAY NEUTRON LOG ON 4-1/2" FROM TD TO SURFACE, PREPARING TO FRACTURE.			
11/17/1993	PREPARING TO FRAC WELL.			

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11/19/1993 HALLIBURTON PRESSURED TESTED 4-1/2" CSG. TO 2000 PSI FOR 20 MIN., TESTED OK. SWABBED 75 BBLs FROM 4-1/2" CSG., SHUT WELL IN, READY TO ACIDIZE, PERF & FRAC.

11/22/1993 PREPARING TO FRAC.

12/06/1993 SPOTTED 500 GAL. OF MSR ACID, FOLLOWED WITH 500 GAL. 3% KCL FLUID IN THE BOT TOM OF 4-1/2" CASING. ATLAS PERFORATED THE 4-1/2" CSG. FROM 4830'-4850' W/6 SHOTS/FT. DOWELL LOADED HOLE & BROKE DOWN FORMATION W/3200 PSI, PREMIXED CHEMICALS & FRACED FORMATION W/MAX. OF 6#/GAL. SAND, TOTAL OF 5,000# 20/40 SAND, USED 9,000# OF 20/40 RESIN COATED SAND, TOTAL OF 14,000# OF SAND. SHUT WELL IN.

12/07/1993 PRESSURE ON THE 4-1/2" CASING: 0- PSIG NIPPLED DOWN THE FRAC VALVE & BO P, CUT 6' OFF 4-1/2" CS G. & DRESSED. NIPPLED UP TUB- ING HEAD & SIDE-GATE VALVE, RIGGED UP & RAN IN HOLE 3-7/8" BIT ON 2-3/8" TUBING, TAGGED SAND @4640', READY TO CIRCULATE SAND OUT OF 4-1/2" CASING, SHUT WELL IN.

12/08/1993 DRILLED & CIRCULATED SAND OUT OF 4-1/2" CASING TO A T.D. OF 4890' G.L. PULLED OUT OF HOLE W/BIT & TUBING, SHUT WELL IN.

12/09/1993 T.I.H. W/WIRELINE RE-ENTRY GUIDE & SEATING NIPPLE ON NEW 2-3/8" 4.6#/FT. 10 RD TUBING TO 4927', NIP PLED DOWN BOP, ATTEMPTED TO NIPPLE UP ADAPTER FLANGE; WRONG THREADS IN ADAPTER, NIPPLED UP BOP, SHUT WELL IN.

12/10/1993 NIPPLED DOWN BOP, LANDED TUBING/HANGER IN HEAD, NIPPLED UP ADAPTER FLANGE & VALVES, NIPPLED UP FL OW BACK EQPT, RIGGED UP TO SWAB & SWABBED 35 BBLs OF LIQUID, SHUT WELL IN.

12/13/1993 AND FLOWED ANOTHER 5 BBLs. & DIED OFF. SHUT WELL IN.

12/13/1993 TBG PRESS: 0#; SWABBED WELL FROM 1550'-3800' RECOVERED 60 BBLs OF FLUID, SMAL L SHOW OF GAS, SHU T IN. 12/11: TBG. PRESS: 250#; CSG PRESS: 350#; FLOWED WELL BACK; WELL DIED. SWABBED WELL FROM 1800'-4700', SHUT IN FOR 1 HR, SWABBED FROM 3200'-4200', RECOVERED 75 BBLs FLUID, WELL KICKED OFF, SHUT IN. 12/12TBG. PRESS: 350#; CSG. PRESS: 510#; HITFLUID @1700', SWABBED FROM 1700'-4200', RE-COVERED 50 BBLs FLUID, WELL KICKED OFF,

12/14/1993 TUBING PRESS: 475#; CASING PRESS: 575# FLOWED WELL & UNLOADED 20 BBLs O F FLUID, CASING P RESSU RE DROPE D TO 475#, SHUT WELL IN TO ALLOW FLUID TO BUILD UP, RIGGED DOWN SERVICE RIG & MOVED OFF LOCATION, WILL MOVE IN ANOTHER SWABBING RIG.

12/15/1993 TBG. PRESS: 280 PSI, CSG. PRESS: 800 PSI, ATTEMPTED TO FLOW WELL, WELL WOU LD NOT FLOW WAITING FOR S WABBING UNIT.

12/16/1993 T.I.H. W/6-1/8" BIT ON DRILL COLLARS & 2-3/8" TUBING TO 4853', CIRCULAT ED OUT FILL ,ROM 485 3'-48 71', DRILLED FROM 4871'-4890', LOST 3 BBLs OF KCL FLUID WHILE DRILLING; SHUT WELL IN.

12/17/1993 TUBING PRESS: 125#; CSG. PRESS: 875#, WAITING FOR SWABBING UNIT.

12/20/1993 WAITING FOR SWABBING UNIT.

12/21/1993 PRESS. ON THE TUBING: 165#, PRESS. ON THE CASING: 1050#, T.I.H. TO SWAB, HIT FLUID @1400', SWABB ED FROM 1400'-2800', WELL KICKED OFF & FLOWED ON ITS OWN, PRESSURE ON THE CASING DECREASED TO 300 PSI, WELL STOPPED FLOWING, SWABBED AGAIN FROM 2800'- 4500', RECOVERED A DAILY TOTAL OF 26" OFFFLUID, SHUT WELL IN.

12/22/1993 PRESS. ON THE CSG: 450#, PRESS. ON THE TBG: 220#, BLEW WELL DOWN, T.I.H. TO SWAB, HIT FLUID @2 400', FORMATION GIVING UP FLUID AT A RATE OF 400'-500'/HR., SWABBED A DAILY TOTAL OF 35 BBLs, SHUT WELL IN FOR NIGHT.

12/23/1993 PRESS. ON THE CSG: 760#, PRESS. ON THE TBG: 160#, RIGGED UP, RAN IN HOLE TO SWAB, HIT FLUID @1 500', MADE 1 SWAB RUN & WELL KICK- ED OFF & FLOWED FOR 3 HRS, PRESSURE ON THE CASING DECREASED TO 350#, MADE 2 MORE SWAB RUNS, SHUT WELL IN, DAILY TOTAL OF RECOVER- ED FLUID = 50 BBLs., RIGGED DOWN SWABBINGUNIT, MOVED OFF LOCATION.

12/27/1993 RIGGED DOWN SWABBING UNIT, MOVED OFF SITE.

12/29/1993 IDLE.

12/30/1993 PRESS. ON THE TUBING: 1150#, PRESS. ON THE CASING: 1175#, FLOWED WELL & REC OVERED 30 BBLs OF FLUID , PRESSURE ON THE CASING DECREASED TO 300 PSI; SHUT WELL IN FOR 4 HRS., CASING PRESSURE INCREASED TO 800 PSI.

12/30/1993 TBG. PRESS: 1050#, CSG. PRESS: 1100#, FLOW- ED WELL FOR 10 MIN. BEFORE UNLOA DING A TOTAL OF 25 B BLS. OF FLUID, CASING PRESSURE DECREASED TO 300#, SHUT WELL IN.

01/03/1994 TBG. PRESS: 500 PSI, CSG. PRESS: 1125 PSI BLEW WELL DOWN FOR 5 MIN., WELL NOT UN- LOADING FLUID , DROPPED SOAP STICKS, SHUT WELL IN.

01/11/1994 PRESS. ON CSG: 1225#, PRESS. ON TBG: 550# BLEW TOP GAS OFF, WAITED 30 MIN. , WELL DEAD NO FLUID RETU RNS.

01/12/1994 TUBING PRESS: 640#, CASING PRESS: 1220# FLOWED WELL & RECOVERED 25 BBLs OF FLUID, CASING P RESSU RE DECREASED TO 250 PSI, SHUT WELL IN.

01/13/1994 TUBING PRESS: 730#, CASING PRESS: 1000#, BLEW WELL & RECOVERED 2 BBLs OF FLUID, CASING P RESSU RE DECREASED TO 900#, SHUT WELL IN.

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01/14/1994 600 PSIG ON TUBING; 1125 PSIG CASING PRESSURE; TRIED TO FLOW WELL; WELL WOULD NOT FLOW ON ITS OWN; PREPARING TO SWAB WELL.

01/17/1994 TUBING PRESS: 100#, CSG. PRESS: 1100# ATTEMPTED TO FLOW WELL; WOULD NOT FLOW. RIGGED UP SWABBING UNIT, TAGGED FLUID @2200 ON 1ST RUN, TAGGED FLUID @1200' ON 2ND RUN, WELL KICKED OFF, RECOVERED 20 BBLs OF FLUID SHUT WELL IN FOR 1 HR., MADE ANOTHER SWAB RUN, RECOVERED 500' OF FLUID, SHUT WELL IN.

01/18/1994 TUBING PRESS: 630#, CASING PRESS: 860# ATTEMPTED TO FLOW WELL, WELL WOULD NOT FLOW SWABBED WELL & HIT FLUID @1600', ON 4TH SWAB TRIP WELL KICKED OFF & RECOVERED 17 BBLs OF FLUID, SHUT WELL IN.

01/19/1994 NO ACTIVITY DUE TO WEATHER.

01/25/1994 TBG. PRESS: 925#, CSG. PRESS: 1150#, BLEW THE WELL DOWN IN 35 MIN., ON FIRST SWAB RUN HIT FLUID @41 00', ALTERNATELY SWABBED & SHUT WELL IN, RECOVERED 4 BBLs. FLUID.

01/26/1994 TUBING PRESS: 550#, CASING PRESS: 775#. WELL BLEW DOWN FAST, HIT FLUID ON FIRST SWAB RUN @230 0', FLUID IS GAS CUT, RECOVERED APPROX. 10 BBLs OF FLUID, RIGGED DOWN SERVICE RIG AND MOVED OFF LOCATION.

01/27/1994 WORK COMPLETED.

47-035-00914W

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WW-2A1  
(Rev. 1/11)

Operator's Well Number Ripley 7346

**INFORMATION SUPPLIED UNDER WEST VIRGINIA CODE  
Chapter 22, Article 6, Section 8(d)  
IN LIEU OF FILING LEASE(S) AND OTHER CONTINUING CONTRACT(S)**

Under the oath required to make the verification on page 1 of this Notice and Application, I depose and say that I am the person who signed the Notice and Application for the Applicant, and that –

- (1) the tract of land is the same tract described in this Application, partly or wholly depicted in the accompanying plat, and described in the Construction and Reclamation Plan;
- (2) the parties and recordation data (if recorded) for lease(s) or other continuing contract(s) by which the Applicant claims the right to extract, produce or market the oil or gas are as follows:

Grantor, Lessor, etc.	Grantee, Lessee, etc.	Royalty	Book/Page
P.F. Bonto and Fannie Bonto, his wife, Carrie Priddy, widow	United Fuel Gas Company	Lease No. 1052319-000	Bk. 83 / Pg. 307

**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

The permit applicant for the proposed well work addressed in this application hereby acknowledges the possibility of the need for permits and/or approvals from local, state, or federal entities in addition to the DEP, Office of Oil and Gas, including but not limited to the following:

- WV Division of Water and Waste Management
- WV Division of Natural Resources
- WV Division of Highways
- U.S. Army Corps of Engineers
- U.S. Fish and Wildlife Service
- County Floodplain Coordinator

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The applicant further acknowledges that any Office of Oil and Gas permit in no way overrides, replaces, or nullifies the need for other permits/approvals that may be necessary and further affirms that all needed permits/approvals should be acquired from the appropriate authority before the affected activity is initiated.

Well Operator:  
By: Its:

James Amos   
Columbia Gas Transmission, LLC  
Team Leader, Well Engineering & Technology

WW-2A  
(Rev. 6-14)

1.) Date: 03/18/2020  
2.) Operator's Well Number Ripley 7346  
State County Permit  
3.) API Well No.: 47-035-00914

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION, OFFICE OF OIL AND GAS**  
**NOTICE AND APPLICATION FOR A WELL WORK PERMIT**

4) Surface Owner(s) to be served: (a) Name Michael and Virginia L. Jones Address 3927 Parkersburg Road Sandvville, WV 25275  
(b) Name Address  
(c) Name Address  
5) (a) Coal Operator Name Not operated. Address  
(b) Coal Owner(s) with Declaration Name Address  
(c) Coal Lessee with Declaration Name Address  
6) Inspector Joe Taylor Address 1478 Claylick Road Ripley, WV 25271 Telephone 304-380-7469

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WV Department of Environmental Protection

**TO THE PERSONS NAMED ABOVE TAKE NOTICE THAT:**

OR Included is the lease or leases or other continuing contract or contracts by which I hold the right to extract oil and gas

X Included is the information required by Chapter 22, Article 6, Section 8(d) of the Code of West Virginia (see page 2)

I certify that as required under Chapter 22-6 of the West Virginia Code I have served copies of this notice and application, a location plat, and accompanying documents pages 1 through \_\_\_ on the above named parties by:

- Personal Service (Affidavit attached)
- X Certified Mail (Postmarked postal receipt attached)
- Publication (Notice of Publication attached)

I have read and understand Chapter 22-6 and 35 CSR 4, and I agree to the terms and conditions of any permit issued under this application.

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, 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.

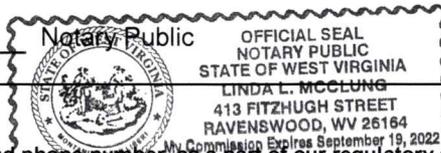
I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Well Operator Columbia Gas Transmission, LLC  
By: James Amos  
Its: Team Leader - Well Engineering & Technology  
Address: 48 Columbia Gas Rd Sandvville, WV 25275  
Telephone: 304-483-0073  
Email: james\_amos@tcenergy.com

Subscribed and sworn before me this 14th day of April, 2020

My Commission Expires 9-19-2022  
Linda L. McClung

Oil and Gas Privacy Notice



The Office of Oil and Gas processes your personal information, such as name, address and phone number, as a part of our regulatory duties. Your personal information may be disclosed to other State agencies or third parties in the normal course of business or as needed to comply with statutory or regulatory requirements, including Freedom of Information Act requests. Our office will appropriately secure your personal information. If you have any questions about our use of your personal information, please contact DEP's Chief Privacy Officer at [depprivacyofficer@wv.gov](mailto:depprivacyofficer@wv.gov)

WW-2A Surface Waiver (4/16)

SURFACE OWNER WAIVER

County 035 Operator 307032 Operator well number Ripley 7346

INSTRUCTIONS TO SURFACE OWNERS NAMED ON PAGE WW2-A

The well operator named on page WW2A is applying for a permit from the State to do oil or gas well work. (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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APR 20 2020

WV Department of Environmental Protection

Time Limits and methods for filing comments. The law requires these materials to be served on or before the date the operator files his Application. You have FIFTEEN (15) 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.

List of Water Testing Laboratories. The Office maintains a list of water testing laboratories which you can hire to test your water to establish water quality prior to and after drilling. Contact the Chief to obtain a copy.

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 Well Work Permit on Form WW2-A, and attachments consisting of pages 1 through \_\_\_ including a work order on Form WW2-B, a survey plat, WW-9, and a soil and erosion plan, all for proposed well work on my surface land as described therein.

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

FOR EXECUTION BY A CORPORATION, ETC.

Signature Date

Company Name Columbia Gas Transmission, LLC By Team Leader - Well Eng & Tech Its Date

Print Name

James Amos Signature Date

N/A

WW-2A Coal Waiver

\* coal not operated

COAL OPERATOR, OWNER, OR LESSEE WAIVER

County Jackson

Operator Columbia Gas Transmission, LLC

Operator's Well Number Ripley 7346

INSTRUCTIONS TO COAL OPERATOR, OWNER, OR LESSEE

To the coal operator, owner, or lessee named on page WW2-A. You are hereby notified that any objection you wish to make or are required to make by WV Code 22-6-15, 16 or 17, must be filed with the Chief of the Office of Oil and Gas within fifteen (15) days after the receipt of this application by the Office. Mail objections to:

Chief, Office of Oil and Gas  
Department of Environmental Protection  
601 57<sup>th</sup> St. SE  
Charleston, WV 25304  
(304) 926-0499 extension 1654

WAIVER

The undersigned coal operator \_\_\_\_\_ / owner \_\_\_\_\_ / lessee \_\_\_\_\_ / of the coal under this well location has examined this proposed well location. If a mine map exists which covers the area of well location, the well location has been added to the mine map. 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.

FOR EXECUTION BY A NATURAL PERSON

FOR EXECUTION BY A CORPORATION, ETC.

\_\_\_\_\_  
Signature Date \_\_\_\_\_

Company Name \_\_\_\_\_  
By \_\_\_\_\_  
Its \_\_\_\_\_ Date \_\_\_\_\_

\_\_\_\_\_  
Signature Date \_\_\_\_\_

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47-035-00914W

7017 0660 0001 0359 5576

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

**OFFICIAL USE**

Certified Mail Fee	\$	3.55
Extra Services & Fees (check box, add fee as appropriate)		
<input checked="" type="checkbox"/> Return Receipt (hardcopy)	\$	2.85
<input type="checkbox"/> Return Receipt (electronic)	\$	
<input type="checkbox"/> Certified Mail Restricted Delivery	\$	
<input type="checkbox"/> Adult Signature Required	\$	
<input type="checkbox"/> Adult Signature Restricted Delivery	\$	



Postage \$ 1.60

Total Postage and Fees \$ 8.00

Sent To **MICHAEL & VIRGINIA JONES**  
 Street and Apt. No., or PO Box No. **3927 PARKERSBURG RD**  
 City, State, ZIP+4® **SANDYVILLE, WV 25275**



1700 MacCorkle Ave SE  
P.O. Box 1273  
Charleston, WV 25325

April 15, 2020

Michael & Virginia Jones  
3927 Parkersburg Road  
Sandyville, WV 25275

Columbia Gas Transmission, LLC is applying for a permit to the WV Department of Environmental Protection – Office of Oil and Gas, to work on an existing underground natural gas storage well located on property owned by you. As reference, the field and well ID is Ripley 7346 (API 47-035-00914).

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,

Jim Amos  
Team Leader  
Well Engineering & Technology  
Columbia Gas Transmission, LLC

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Environmental Protection

N/A

WW-2B1  
(5-12)

Well No. Ripley 7346

West Virginia Department of Environmental Protection  
Office of Oil and Gas

NOTICE TO SURFACE OWNERS

The well operator named below is preparing to file for a permit from the state to drill a new well. Before a well work permit can be filed with the Chief of the Office of Oil and Gas, the well operator is required to have given notice of the right to request water well or spring analytical testing. This notice shall be given to the owners or occupants of land which have a water well or spring being utilized for human consumption, domestic animals, or other general use and which is located within 1000 feet of the proposed well site.

With this form, the operator is giving you notice of your right to request analytical testing. The operator is required to sample and analyze the water wells or springs of all owners or occupants who request it. Therefore, if you wish to have your water well or spring tested, contact the operator named below.

All sampling shall be completed prior to drilling. Within thirty (30) days of the receipt of such sample analyses the operator shall submit the results to the Chief of the Office of Oil and Gas and to the owners or occupants who may have requested them.

Be advised, you have the right to sample and analyze any water supply at your own expense.

Listed below is the laboratory chosen by operator to perform analysis, and contactor chosen to collect sample.

Certified Laboratory Name \_\_\_\_\_  
Sampling Contractor \_\_\_\_\_

Well Operator Not applicable - existing underground natural gas storage well.  
Address \_\_\_\_\_  
Telephone \_\_\_\_\_

FOR OPERATOR'S USE ONLY: Below, or on an attached page, list those persons which were given this notice. Place an asterisk beside the one(s) that contacted you and requested sampling and analyses. If there were no requests made, indicate by underling which one you have selected to sample and analyze. If there are no water wells or springs within 1000 feet of the proposed site, the Chief may require the operator to test wells up to 2000 feet from the proposed site.

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Environmental Protection

WW-9  
(5/16)

API Number 47 - 035 - 00914  
Operator's Well No. Ripley 7346

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) Mud Run of Sandy 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

NO PIT! WILL USE STEEL TANKS.

If so, please describe anticipated pit waste: \_\_\_\_\_

Will a synthetic liner be used in the pit? Yes  No  If so, what ml.? \_\_\_\_\_

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, Masontown, PA (permit 2608201))

Will closed loop system be used? If so, describe: Yes - steel piping connecting wellhead and tank(s).

Drilling medium anticipated for this well (vertical and horizontal)? Air, freshwater, oil based, etc. N/A - No drilling planned.

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

Additives to be used in drilling medium? No drilling planned; fresh water, polymer, starch, LCM, surfactant, iron control (for clean-out and frac)

Drill cuttings disposal method? Leave in pit, landfill, removed offsite, etc. N/A - No drilling planned.

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

-Landfill or offsite name/permit number? If needed: Rumpke Beech Hollow Landfill - Wellston, OH

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 James Amos  
Company Official (Typed Name) James Amos  
Company Official Title Team Leader - Well Engineering & Technology

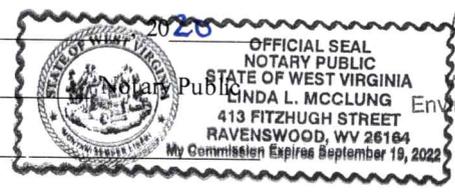
*[Handwritten Signature]*  
4-17-2020

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Subscribed and sworn before me this 14th day of April

Linda L. McClung

My commission expires 9-19-2022



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Proposed Revegetation Treatment: Acres Disturbed 0.4 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**

Temporary		Permanent	
Seed Type	lbs/acre	Seed Type	lbs/acre
Annual Rye	40	Orchard Grass and/or Tall Fescue	29
Hay or Straw	6000	Birdsfoot Trefoil (empire)	9
		Annual Rye	12

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

Attach:

Maps(s) of road, location, pit and proposed area for land application (unless engineered plans including this info have been provided). If water from the pit will be land applied, provide water volume, include dimensions (L, W, D) of the pit, and dimensions (L, W), and area in acres, of the land application area.

Photocopied section of involved 7.5' topographic sheet.

Plan Approved by: \_\_\_\_\_

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

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Title: OGG Inspector

Date: 4-17-2020

Field Reviewed?  Yes  No

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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): Mud Run of Sandy Creek Quad: Ripley, WV  
Farm Name: Peter F. Bonto Et. Al.

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.  
Spills from construction equipment and well treatment fluids is the only source of contaminate to groundwater.

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. Fluid pumping well service equipment will have secondary containment under all leak paths. 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.

Mud Run - 0.01 miles.  
6.1 miles from WHPA (Ravenswood Municipal Water Works).  
6.1 miles from WHPA (WV Baptist Conference Center).  
2.8 miles from ZPC (City of Ripley).

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

N/A

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

N/A

6. Provide a statement that no waste material will be used for deicing or fill material on the property.

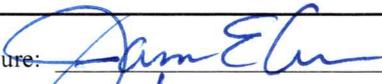
No waste material will be used for deicing or fill material on the property.

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

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

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

No fertilizer will be stored on site. Small quantities of fuel, oil, and lubrications will be stored on site, but located within secondary containment. Construction and well servicing equipment will be monitored and inspected daily for leaks or spill.

Signature: 

Date: 4/1/20

  
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# WV DEP Reclamation Plan Site Detail / Overview

Ripley well 7346 (API 035-00914)

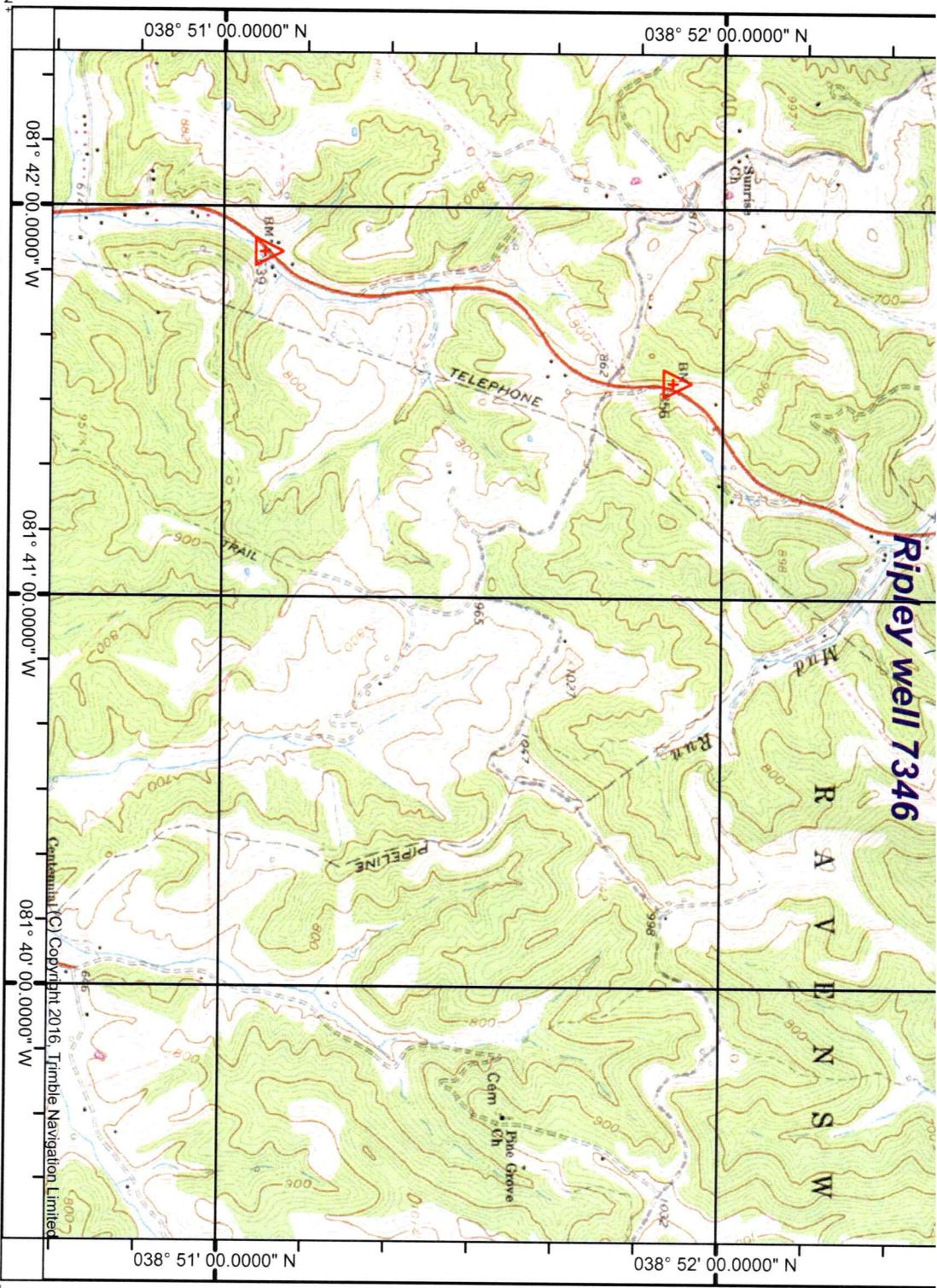
- BMPs and erosion control devices to be utilized per WV DEP guidelines and Columbia's WV Environmental Construction Standards.
- Existing drainage, culverts, and road ditches to be maintained.
- Minor grading and surface material to be applied as needed.

## Legend

- Ripley - 07346
- Ripley 7346 Access Route
- Ripley 7346 LOD



47-035-0091

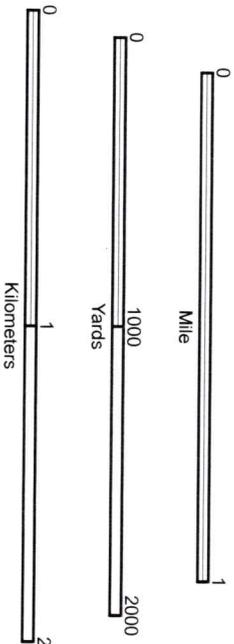


(COTTAGEVILLE)

(GAY)

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 13ME

GN 0.43° W  
 MN 7.81° W



(RIPLEY)  
 SCALE 1:24000

CONTOUR INTERVAL 20 FT

38081-H5-TM-024  
 SANDYVILLE, WV  
 JAN 1, 1988

Printed Wed Apr 01, 2020

038° 50' 38.9292" N  
081° 39' 19.9015" W

(PORTLAND)



SANDYVILLE QUADRANGLE  
WEST VIRGINIA  
TOPOGRAPHIC SERIES

(ROCKPORT)

081° 42' 23.8800" W  
038° 54' 48.0485" N

(POND CREEK)

081° 39' 19.9015" W  
038° 54' 48.0485" N

038° 53' 00.0000" N

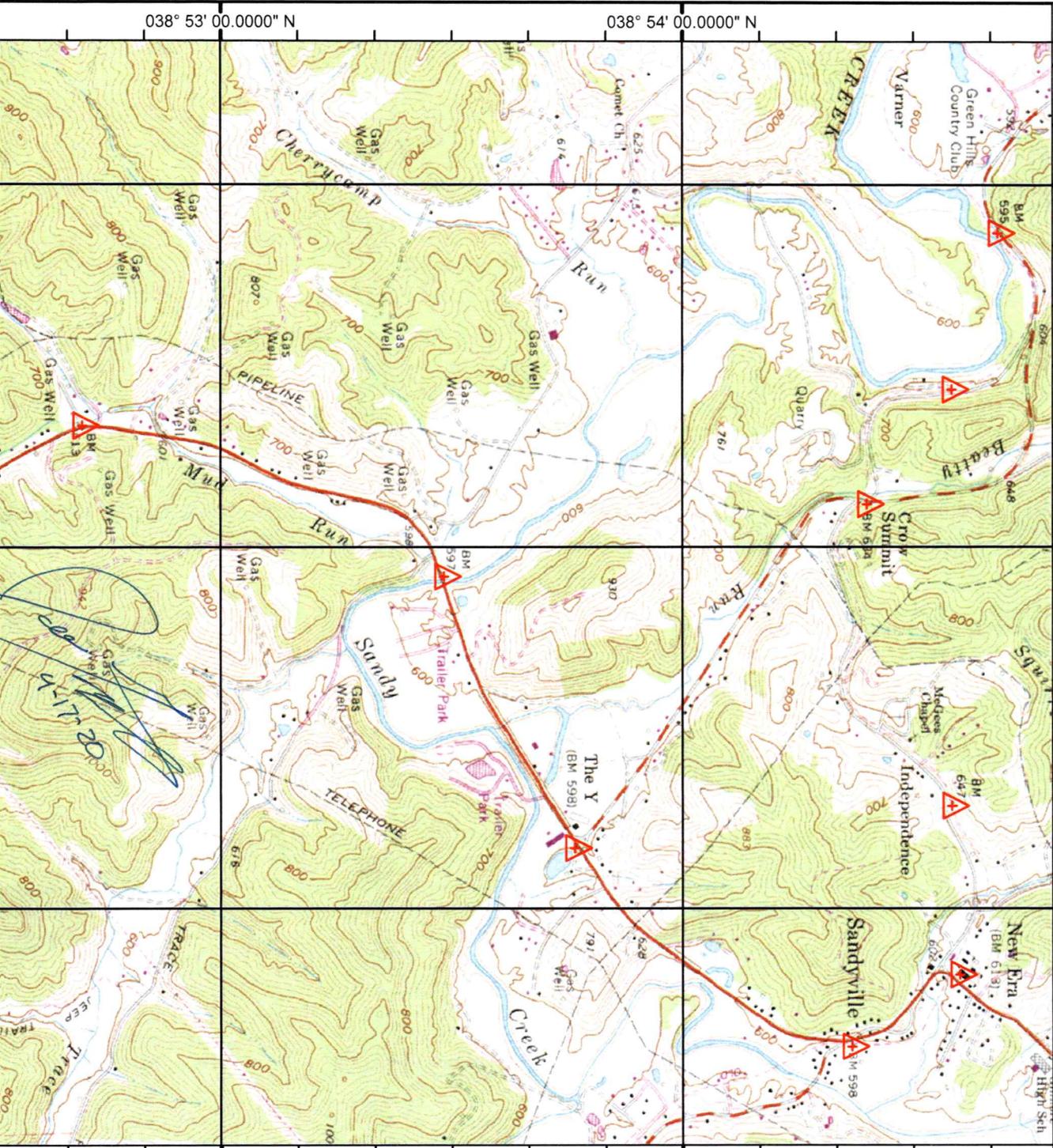
038° 54' 00.0000" N

038° 53' 00.0000" N

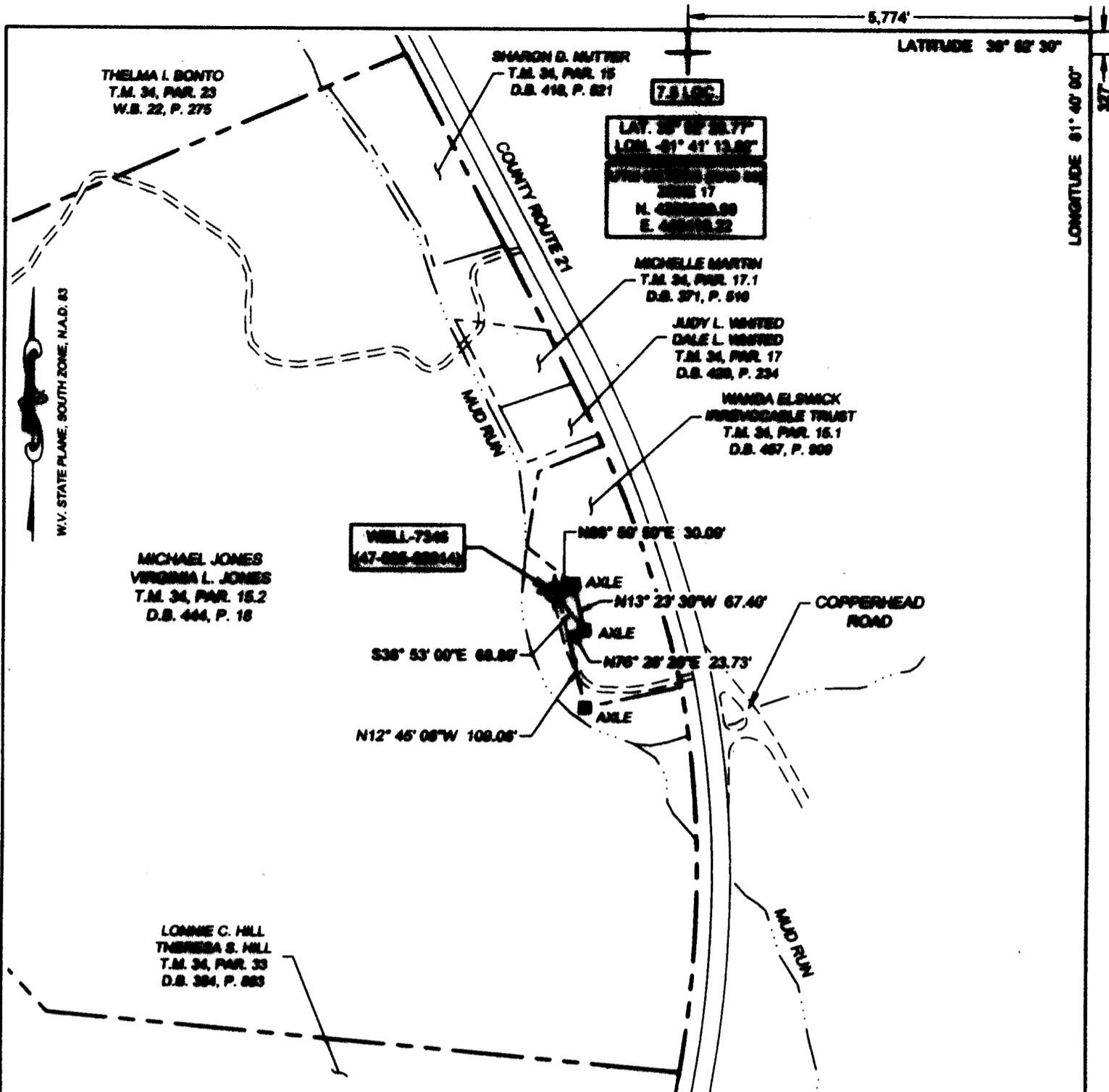
038° 54' 00.0000" N

(RAVENSWOOD)

(LIVERPOOL)



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

FILE No. 1901-2345-001-005  
 DRAWING No. 1901-2345-001-005  
 SCALE 1"=200'  
 MINIMUM DEGREE OF ACCURACY 1/200  
 PROMEN SOURCE OF ELEVATION STATE R10  
CS 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 PROMULGATED BY THE DIVISION OF ENVIRONMENTAL PROTECTION.

(SIGNED) [Signature]  
 ROBERT F. TRIM PS #005



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

DATE FEBRUARY 20 2020  
 OPERATOR'S WELL No. 7346  
 API WELL No. \_\_\_\_\_

WELL TYPE: OIL \_\_\_ GAS  LIQUID INJECTION \_\_\_ WASTE DISPOSAL \_\_\_  
 (IF "GAS") PRODUCTION \_\_\_ STORAGE  DEEP  SHALLOW \_\_\_  
 STATE 47 COUNTY 035 PERMIT 000146

LOCATION: ELEVATION 804.2' WATER SHED HEAD END OF BERRY CREEK  
 DISTRICT [REDACTED] COUNTY [REDACTED]  
 QUADRANGLE [REDACTED]

SURFACE OWNER MICHAEL JONES VIRGINIA L. JONES ACREAGE 44.48  
 OIL & GAS ROYALTY OWNER ROBERT F. TRIM, JR. LEASE ACREAGE 102  
 LEASE No. 85348

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

PLUG AND ABANDON \_\_\_ CLEAN OUT AND REPLUG \_\_\_  
 TARGET FORMATION GREYMI ESTIMATED DEPTH 4002  
 WELL OPERATOR COLANEA ENVIRONMENTAL LLC DESIGNATED AGENT JIM AMOS  
 ADDRESS [REDACTED] ADDRESS 48 COLANEA ENV. ROAD  
2605-1575 SHENANDOAH, WV 26076

FORM IV-6 (9-79)

**From:** Carr, Brian A (DHHR)  
**To:** [Brad Nelson](#)  
**Subject:** RE: [External] Wellhead Protection Area Evaluation  
**Date:** Friday, March 20, 2020 12:05:39 PM  
**Attachments:** [image001.png](#)  
[PreliminaryLetter\\_ResponseColumbia2.docx](#)

---

Brad, don't get used to this quick turn around. Brian.

**From:** Brad Nelson <[brad\\_nelson@tcenergy.com](mailto:brad_nelson@tcenergy.com)>  
**Sent:** Thursday, March 19, 2020 7:58 AM  
**To:** Carr, Brian A (DHHR) <[Brian.A.Carr@wv.gov](mailto:Brian.A.Carr@wv.gov)>  
**Subject:** [External] Wellhead Protection Area Evaluation

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

Hello Brian,

Could you also provide a Wellhead Protection Area Evaluation for the well listed below? This is a gas storage well. I appreciate the help.

Ripley 7346: (38.873900, -81.686900)

Thank you,  
Brad

**Brad Nelson**

**Storage Engineer**

Well Engineering & Technology

[brad\\_nelson@tcenergy.com](mailto:brad_nelson@tcenergy.com)

mobile: 724-250-0610 desk: 724-223-2753



455 Racetrack Road  
Washington, PA  
USA 15301

[TCEnergy.com](http://TCEnergy.com)

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This letter is in response to the informational request dated March 20, 2020 concerning a Wellhead Protection Area Evaluation in Jackson County, WV.

Based on the current information, we have found that the Gas Storage well (Ripley well # 7346) does not intersect with public water sources nor Protection Areas.

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

CLOSEST ACTIVE PUBLIC WATER				
Gas Storage Name	Distance	PWSID	Source	System Name
Ripley well 7346	6.2 miles	WV9918034	Ground Water (GW)	WV BAPTIST CONFERENCE CENTER

PROTECTION AREAS			
Gas Storage Name	Distance	PWSID	System Name
Ripley well 7346	6.1 miles from WHPA	WV3301810	RAVENSWOOD MUNICIPAL WATER WORKS
	6.1 miles from WHPA	WV9918034	WV BAPTIST CONFERENCE CENTER
	2.8 miles from ZPC	WV3301811	RIPLEY CITY OF

March 20, 2020

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## WV DEP Office of Oil &amp; Gas Permit Application Check-off

Well RIPLEY 7346

- |   |                                     |                                  |
|---|-------------------------------------|----------------------------------|
| 1. Survey plat  | <input checked="" type="checkbox"/> |                                  |
| 2. Surface owner name & address   | <input checked="" type="checkbox"/> |                                  |
| 3. Site Reclamation Plan  | <input checked="" type="checkbox"/> |                                  |
| 4. Topo map   | <input checked="" type="checkbox"/> |                                  |
| 5. Copy of old State Completion Report  | <input checked="" type="checkbox"/> |                                  |
| 6. Wellhead Protection Area Assessment  | <input checked="" type="checkbox"/> |                                  |
| 7. Application package prepared   | <input checked="" type="checkbox"/> |                                  |
| 8. Approved by State Inspector  | <input type="checkbox"/>            |                                  |
| 9. Signed & notarized   | <input checked="" type="checkbox"/> |                                  |
| 10. Water Well Testing Reqr'mts   | <input type="checkbox"/>            | N/A - EXISTING WELL              |
| <ul style="list-style-type: none"> <li>• Only required if drilling new well</li> </ul>  |                                     |                                  |
| 11. Surface Owner Waiver  | <input type="checkbox"/>            |                                  |
| <ul style="list-style-type: none"> <li>• Provide copy of entire permit application to surface owner</li> <li>• Include Certified Mail return receipt if mailed</li> </ul> |                                     |                                  |
| 12. Coal Operator Waiver  | <input type="checkbox"/>            | N/A - COAL NOT OPERATED          |
| <ul style="list-style-type: none"> <li>• Only required if coal is currently mined/operated</li> <li>• Include Certified Mail return receipt if mailed</li> </ul>          |                                     |                                  |
| 13. Coal Owner Waiver   | <input type="checkbox"/>            | N/A                              |
| <ul style="list-style-type: none"> <li>• Include Certified Mail return receipt if mailed</li> </ul>   |                                     |                                  |
| 14. Sent to the State with Fee  | <input checked="" type="checkbox"/> | (fee estimated @ \$ <u>900</u> ) |
| <ul style="list-style-type: none"> <li>• Ensure mylar copy of survey plat included</li> <li>• Include certified mail receipt if Surface Owner Waiver mailed</li> </ul>    |                                     |                                  |
| 15. Emergency Evacuation Plan   | <input type="checkbox"/>            |                                  |
| <ul style="list-style-type: none"> <li>• Only required if "Deep Well"</li> </ul>  |                                     |                                  |

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Environmental Protection(Received on 4-16-20  
Joe Taylor)