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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)

Wednesday, November 6, 2019  
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 7344  
47-035-00918-00-00

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 blue ink signature of James A. Martin, Chief, is written over a white background. The signature is stylized and cursive.

James A. Martin  
Chief

Operator's Well Number: 7344  
Farm Name: MESEK, STEVEN & ALTA C.  
U.S. WELL NUMBER: 47-035-00918-00-00  
Vertical Re-Work  
Date Issued: 11/6/2019

## 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.

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### CONDITIONS

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1. If the operator encounters an unanticipated void, or an anticipated void at an unanticipated depth, the operator shall notify the inspector within 24 hours. Modifications to the casing program may be necessary to comply with W. Va. Code §22-6-20, which requires drilling to a minimum depth of thirty feet below the bottom of the void, and installing a minimum of twenty (20) feet of casing. Under no circumstance should the operator drill more than fifty (50) feet below the bottom of the void or install less than twenty (20) feet of casing below the bottom of the void.
2. Pursuant to 35 CSR 4-19.1.a, at the request of the surface owner all water wells or springs within 1000 feet of the proposed well that are actually utilized for human consumption, domestic animals or other general use shall be sampled and analyzed.
3. Pursuant to 35 CSR 4-19.1.c, if the operator is unable to sample and analyze any water well or spring with one thousand (1,000) feet of the permitted well location, the Office of Oil and Gas requires the operator to sample, at a minimum, one water well or spring located between one thousand (1,000) feet and two thousand (2,000) feet of the permitted well location.
4. All pits must be lined with a minimum of 20 mil thickness synthetic liner.
5. 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.
6. During the surface casing and cementing process, in the event cement does not return to the surface, or any other casing string that is permitted to circulate cement to the surface and does not return to the surface, the oil and gas inspector shall be notified within twenty-four (24) hours
7. Well work activities shall not constitute a hazard to the safety of persons.
8. Operator shall provide the Office of Oil & Gas notification of the date that drilling commenced on this well. Such notice shall be provided by sending an email to DEPOOGNotify@wv.gov within 30 days of commencement of drilling.

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    Sandyville, WV  
Operator ID                      County                      District                      Quadrangle

2) Operator's Well Number: Ripley 7344                      3) Elevation: 743'

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: 4945'

6) Proposed Total Depth: 5016 Feet                      Formation at Proposed Total Depth: Oriskany

7) Approximate fresh water strata depths: 352' (as reported by driller in 1956)

8) Approximate salt water depths: 620', 775', 1370' (as reported by driller in 1956)

9) Approximate coal seam depths: 658'-660' (as 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.

12) Describe proposed well work and fracturing methods in detail (attach additional sheets if needed)

Freshwater treatment followed by a 45 minute flowback test. If deemed necessary, proceed with coiled tubing cleanout and another 45 minute flowback test evaluation. At that point, if deemed necessary, proceed with fracturing.

13) **CASING AND TUBING PROGRAM**

TYPE	SPECIFICATIONS			FOOTAGE	INTERVALS	CEMENT
	Size	Grade	Weight per ft	For Drilling	Left in Well	Fill -up (Cu. Ft.)
Conductor	13-3/8"	Unknown	48	699'	699'	Unknown
Fresh Water	10-3/4"	Unknown	40.5	1190'	0'	Unknown
Coal	8-5/8"	Unknown	24	2081'	2081'	50 sx.
Intermediate	7"	Unknown	23	4883'	4883'	125 sx.
Production	4-1/2"	N-80	11.6	N/A	5002'	90 sx.
Tubing	2-3/8"	Unknown	4.6	4965'	0'	Unknown
Liners						

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Packers: Kind: None of record.  
 Sizes: N/A  
 Depths Set N/A

*[Signature]*  
9-11-19

**REVISED**WR-35  
Rev. 8/23/13

Page 1 of 4

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

API 47-035-00918 County Jackson District Ravenswood  
 Quad Sandyville, WV Pad Name \_\_\_\_\_ Field/Pool Name Ripley Storage  
 Farm name Steven & Alta C. Mesek Well Number 7344  
 Operator (as registered with the OOG) Columbia Gas Transmission, LLC  
 Address PO Box 1273 City Charleston State WV Zip 25314

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey  
 Top hole Northing 4304374.11 m Easting 440295.41 m  
 Landing Point of Curve Northing N/A Easting N/A  
 Bottom Hole Northing not measured (vertical wellbore) Easting not measured (vertical wellbore)

Elevation (ft) 771.5 GL Type of Well  New  Existing Type of Report  Interim  Final  
 Permit Type  Deviated  Horizontal  Horizontal 6A  Vertical Depth Type  Deep  Shallow  
 Type of Operation  Convert  Deepen  Drill  Plug Back  Redrilling  Rework  Stimulate  
 Well Type  Brine Disposal  CBM  Gas  Oil  Secondary Recovery  Solution Mining  Storage  Other \_\_\_\_\_  
 Type of Completion  Single  Multiple Fluids Produced  Brine  Gas  NGL  Oil  Other \_\_\_\_\_  
 Drilled with  Cable  Rotary

Drilling Media Surface hole  Air  Mud  Fresh Water Intermediate hole  Air  Mud  Fresh Water  Brine  
 Production hole  Air  Mud  Fresh Water  Brine  
 Mud Type(s) and Additive(s)  
Fresh based polymer

Date permit issued 3/5/1998 Date drilling commenced N/A Date drilling ceased N/A  
 Date rework activities began 4/3/1998 Date rework activities ceased 5/6/1998  
 Verbal plugging (Y/N) N/A Date permission granted \_\_\_\_\_ Granted by \_\_\_\_\_

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

Freshwater depth(s) ft 352' per driller in 1956 Open mine(s) (Y/N) depths none observed during rework  
 Salt water depth(s) ft 620, 775, 1370', per driller Void(s) encountered (Y/N) depths none observed during rework  
 Coal depth(s) ft 658 - 660' per driller in 1956 Cavern(s) encountered (Y/N) depths none observed during rework  
 Is coal being mined in area (Y/N) N

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Reviewed by: \_\_\_\_\_

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WR-35  
Rev. 8/23/13

API 47-035 - 00918 Farm name Steven & Alta C. Mesek Well number 7344

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade wt/ft	Basket Depth(s)	Did cement circulate (Y/N) * Provide details below*
Conductor	unknown	13-3/8"	699	unknown	unknown / 48	unknown	unknown
Surface	unknown	10-3/4"	N/A				ran/pulled when drilled in 1956
Coal							
Intermediate 1	unknown	8-5/8"	2081	unknown	unknown / 24	unknown	unknown / 125 sx <sup>505x</sup>
Intermediate 2	unknown	7"	4883	unknown	unknown / 23	unknown	unknown / 125 sx
Intermediate 3							
Production	6.25"	4-1/2"	5002	new	N-80 / 11.6	none	N / 90 sx
Tubing							
Packer type and depth set							

Comment Details The conductor, surface, intermediate 1, and intermediate 2, are all existing strings of casing in well prior to re-work. The 4-1/2" casing was installed during rework.

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	unknown	unknown	unknown	unknown	unknown	unknown	unknown
Surface							
Coal							
Intermediate 1	unknown	50	unknown	unknown	unknown	unknown	unknown
Intermediate 2	unknown	125	unknown	unknown	unknown	unknown	unknown
Intermediate 3							
Production	Class A	90	15.7	1.21	109	4056	24
Tubing							

Drillers TD (ft) 5016 Loggers TD (ft) \_\_\_\_\_  
Deepest formation penetrated Oriskany Plug back to (ft) N/A  
Plug back procedure \_\_\_\_\_

Kick off depth (ft) \_\_\_\_\_

Check all wireline logs run  caliper  density  deviated/directional  induction  
 neutron  resistivity  gamma ray  temperature  sonic

Well cored  Yes  No Conventional  Sidewall Were cuttings collected  Yes  No

DESCRIBE THE CENTRALIZER PLACEMENT USED FOR EACH CASING STRING \_\_\_\_\_  
Unknown

WAS WELL COMPLETED AS SHOT HOLE  Yes  No DETAILS \_\_\_\_\_

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WAS WELL COMPLETED OPEN HOLE?  Yes  No DETAILS \_\_\_\_\_

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WERE TRACERS USED  Yes  No TYPE OF TRACER(S) USED \_\_\_\_\_

WR-35  
Rev. 8/23/13

API 47-035-00918 Farm name Steven & Alta C. Mesek Well number 7344

PRODUCING FORMATION(S)	DEPTHS		
Oriskany (natural gas storage)	TVD	4945 - 4972	MD
_____	_____	_____	_____
_____	_____	_____	_____

Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

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

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

LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
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LITHOLOGY/ FORMATION	TOP DEPTH IN FT NAME TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H <sub>2</sub> S, ETC)
Oriskany SS	0 unknown	unknown	0 4965	5016	Storage Gas

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Please insert additional pages as applicable.

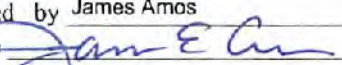
Drilling Contractor Key Energy Services  
 Address Hall Rd City Buckhannan State WV Zip 26201

Logging Company Western Atlas (for perforating)  
 Address Island Ave City Buckhannan State WV Zip 26201

Cementing Company Halliburton Energy Services  
 Address 5146 Elk River Rd City Blue Creek State WV Zip 25026

Stimulating Company Halliburton Energy Services  
 Address 5146 Elk River Rd City Blue Creek State WV Zip 25026

Please insert additional pages as applicable.

Completed by James Amos Telephone 304-483-0073  
 Signature  Title Principal Engineer Date 11/5/19

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

47-035-00918W

WR-35  
 Rev. 8/23/13

API 47-035 - 00918 Farm name Steven & Alta C. Mesek Well number 7344

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
1	4/29/1998	4952	4972	120	Oriskany

Please insert additional pages as applicable.

STIMULATION INFORMATION PER STAGE

Complete a separate record for each stimulation stage.

Stage No.	Stimulations Date	Ave Pump Rate (BPM)	Ave Treatment Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Amount of Proppant (lbs)	Amount of Water (bbls)	Amount of Nitrogen/other (units)
1	5/6/98	18	3150	2333	N/A	26800	425	163 MSCF
					screened out			

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Please insert additional pages as applicable.

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WV Department of Environmental Protection

REC'D  
Office of Oil and Gas  
WV Division of  
Environmental Protection

47-035-00918W

INSPECTOR'S PERMIT SUMMARY FORM

DATE STARTED/LOCATION: Existing  
DRILLING COMMENCED: 4/10/98  
TD DATE: 4/13/98 DEPTH: 5015

API# 47-35-00918 D  
OPERATOR: COLUMBIA GAS TRANSMISSION CO  
FARM: STEVEN & ALTA C. MESEK  
WELL NO.: 7344  
COAL DEPTHS

WATER DEPTHS

1. IS THE OPERATOR KEEPING DETAILED DRILLING AND CEMENT RECORDS: (6) POINTS  
YES [  ] NO [  ]  
RAN 707 FEET OF 13 1/2" PIPE ON Existing CEMENTED WITH \_\_\_\_\_ SACKS (CIRCULATED) Y  
RAN 2105 FEET OF 8 3/4" PIPE ON Existing CEMENTED WITH \_\_\_\_\_ SACKS (CIRCULATED) Y  
RAN 4883 FEET OF 7" PIPE ON Existing CEMENTED WITH 135 SACKS (CIRCULATED) Y  
RAN 5015 FEET OF 4 1/2" PIPE ON 4/17/98 CEMENTED WITH 75 SACKS (CIRCULATED) Y  
PIT DISCHARGE DATE: \_\_\_\_\_ TYPE: \_\_\_\_\_ WEATHER CONDITIONS: \_\_\_\_\_ LAND

ACRES DISCHARGED: \_\_\_\_\_ PIT VOLUME: \_\_\_\_\_ PIT ADDITIVES: \_\_\_\_\_

FIELD ANALYSIS: pH \_\_\_\_\_ Fe \_\_\_\_\_ mg/l cl \_\_\_\_\_ mg/l D.O. \_\_\_\_\_ mg/L toc \_\_\_\_\_ mg/L

QUESTIONS FOR THIS REPORT ARE IN ACCORDANCE OF WV CODE 22-6-28, 22-6-30, 22-6-6, 22-6-7, AND 22-6-27 AND REGULATION 38CSR 18-9.2.3, 38CSR 18-12.1, 38CSR 18-16.5, 38CSR 18-16.6.

TOTAL POINTS AVAILABLE FOR QUESTION 2: 2. (10) POINTS

2. DID OPERATOR GIVE PROPER NOTICE TO INSPECTOR BEFORE THE FOLLOWING:  
A. CONSTRUCTION YES [  ] NO [  ] (2 PTS) B. DRILLING YES [  ] NO [  ] (2 PTS)  
C. PIT TREATMENTS YES [  ] NO [  ] (2 PTS) D. PIT DISCHARGE YES [  ] NO [  ] (2PTS)  
E. RECLAMATION YES [  ] NO [  ] (2 PTS)

3. DID THE OPERATOR HAVE PERMIT ON SITE? YES [  ] NO [  ] 3. (4) POINTS

4. WAS THE TIMBER CUT, STACKED, AND BRUSH USED FOR SEDIMENT BARRIERS BEFORE DIRT WORK STARTED? YES [  ] NO [  ] 4. (4) POINTS

5. ARE ALL LOCATION AND/OR ROAD BANKS BEING SLOPED? YES [  ] NO [  ] 5. (4) PTS

TOTAL POINTS AVAILABLE FOR QUESTION 6: 6. (18) POINT

6. WERE THE FOLLOWING SEDIMENT CONTROL STRUCTURES PROPERLY INSTALLED/MAINTAIN  
A. ROAD DITCHES YES [  ] NO [  ] (3PTS) B. CROSS DRAINS YES [  ] NO [  ]  
C. CULVERTS YES [  ] NO [  ] (3PTS) D. CREEK CROSSINGS YES [  ] NO [  ]  
E. DIVERSION DITCHES YES [  ] NO [  ] (3PTS) F. BARRIERS YES [  ] NO [  ]  
G. TEMPORARY SEEDING YES [  ] NO [  ] (3PTS)--

7. HAS TOP SOIL (IF ANY) BEEN STOCKED PILED? YES [  ] NO [  ] 7. (2) PTS

8. IS THE WELL STAKE IN THE PROPER SPOT IN ACCORDANCE WITH 38CSR-9.2.3 AFTER CONSTRUCTION? YES [  ] NO [  ] 8. (3) PTS

9. IS THE PIT PROPERLY INSTALLED? YES [  ] NO [  ]  
A. WALLS COMPACTED YES [  ] NO [  ], CUT YES [  ] NO [  ]  
B. FREE OF DEBRIS BEFORE LINING YES [  ] NO [  ]  
C. LINED YES [  ] NO [  ]  
D. FLUIDS CONTAINED YES [  ] NO [  ]  
E. FREE OF NON EXEMPT/RESTRICTED MATERIALS YES [  ] NO [  ]  
F. PROPERLY TREATED YES [  ] NO [  ]  
9. (6) PTS

10. DID INSPECTOR APPROVE ALL MODIFICATIONS YES [  ] NO [  ]  
TOTAL POINTS PAGE 1 60-P  
57



11. WAS INSPECTOR ON SITE DURING THE FOLLOWING:

- A. CONSTRUCTION YES [ ] NO [ ]
- B. DRILLING YES [ ] NO [ ]
- C. PIT TREATMENT YES [ ] NO [ ]
- D. RECLAMATION YES [ ] NO [ ]

12. IS EQUIPMENT AND SITE BEING PROPERLY MAINTAINED TO PREVENT WASTE?

- A. SPILLS YES [ ] NO [ ]
- B. SOLID WASTE YES [ ] NO [ ]

13. IS EQUIPMENT BEING PROPERLY OPERATED TO MAINTAIN SAME CONDITIONS?

- A. BLOW OUT PREVENTER YES [ ] NO [ ]
- B. FLOW LINE YES [ ] NO [ ]
- C. FIRE EXTINGUISHER YES [ ] NO [ ]
- D. OTHERS YES [ ] NO [ ]

TOTAL POINTS AVAILABLE FOR QUESTION 14:

- 14. WAS ROAD AND LOCATION PROPERLY RECLAIMED? YES [ ] NO [ ]

- A. ROADWAY YES [ ] NO [ ] (2PTS)
- B. LOCATION YES [ ] NO [ ] (2PTS)
- C. PITS YES [ ] NO [ ] (2PTS)
- D. FIPELINES YES [ ] NO [ ] (2PTS)
- E. TANK DIKES YES [ ] NO [ ] (2PTS)
- F. GATES & FENCES YES [ ] NO [ ] (2PTS)

- G. API NUMBER INSTALLED YES [ ] NO [ ] (2PTS)
- H. ADEQUATE SEEDING MATERIALS YES [ ] NO [ ] (2PTS)
- I. WAS SEED BED ADEQUATE YES [ ] NO [ ] (2PTS)
- J. SOIL PH BEFORE AFTER

TOTAL POINTS AVAILABLE FOR QUESTION 15:

- 15. WAS RECLAMATION COMPLETED WITHIN:

- 6 MONTHS OF TD YES [ ] NO [ ] 8 POINTS
- 4 MONTHS OF TD YES [ ] NO [ ] 3 POINTS
- 2 MONTHS OF TD YES [ ] NO [ ] 1-4 POINTS

16. TOTAL RECLAMATION SCORE: 35

VISITS 92

#3 match in on road to Bill Koop

4/15/98

4/16/98

20. 5013 Pt. Parking with pipe out of well, digging in afternoon  
Pit area new 1/2" & covered  
Pit area now graded

9/18/99

Reclamation on road + station OK to release  
Road closed to well.

DATE RELEASED

9/2/99

INSPECTOR

*[Signature]*

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Office of Oil and GasSTATE OF WEST VIRGINIA  
DIVISION OF ENVIRONMENTAL PROTECTION  
SECTION OF OIL AND GAS

NOV 5 2019

WV Department of  
Environmental Protection

## WELL WORK PERMIT

This permit, issued to COLUMBIA GAS TRANSMISSION CORP. is evidence of permission granted to perform the specified well work at the location described 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 all conditions and provisions outlined in the \_\_\_ pages attached hereto. Notification shall be given to the Oil and Gas Inspector HOMER DOUGHERTY at 304-543-0781 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 reported to 1-800-654-3312.

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.

Well work to be conducted under this permit shall be commenced within two (2) years from date of issue.

Theodore M. Streit  
ChiefBy: Title: 

Operator's Well No: 7344

Farm Name: STEVEN &amp; ALTA C. MESEK

API Well Number : 47- 35-00918 D

Date Issued : 03/05/98

Expires two (2) years from issue date.

FEB 17 1990

035-0918-DD

47-035-0918W

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

24908

Well Operator: COLUMBIA GAS TRANSMISSION CORP. (2) 594

Operator's Well Number: 7344 3) Elevation: 748'

Well type: (a) Oil    / or Gas    ✓  
(b) If Gas: Production    / Undergound Storage    ✓  
Deep    / Shallow    ✓

Proposed Target Formation(s): ORISKANY

6) Proposed Total Depth: 5035' feet

7) Approximate fresh water strata depths: 353'

8) Approximate salt water depths: 620', 775', 1370'

9) Approximate coal seam depths: 658'-660'

10) Does land contain coal seams tributary to active mine? Yes    / No    ✓

11) Proposed Well Work: Run Tubing, Drill 70' Deeper, Run and Cement 4 1/2" casing, and frac Oriskany.

12) CASING AND TUBING PROGRAM

TYPE	SPECIFICATIONS		FOOTAGE INTERVALS		CEMENT	
	Size	Grade	Weight per ft.	For drilling		Left in well
2 1/4" H.H.D. Conductor						
Fresh Water	13 3/8"		48		707'	
Coal	8 5/8"		24		2105'	
Intermediate	7"		23		4883'	135 SK
(New) Production	4 1/2"	N-80	11.6		5025'	75 SK
(To be pulled) Tubing	2 3/8"		4.6		4965'	
Liners						

PACKERS : Kind None  
Sizes                       
Depths set                     

00355933

For Office of Oil and Gas Use Only

Fee(s) paid:  Well Work Permit  Reclamation Fund  WPCP  
 Plat  WW-9  WW-2B  Bond                       Agent  
(Type)

**UNITED FUEL GAS COMPANY**  
COMPANY

SERIAL WELL NO. X-59-7344

LEASE NO. pt. 52787- 52789.

MAP SQUARE 58-95

RECORD OF WELL NO.	on the	CASING AND TUBING				TEST BEFORE SHOT
		SIZE	WEIGHT	USED IN DRILLING	LEFT IN WELL	
W.E. Hupp et al farm of 14 Acres in Ravenswood Jackson County	District	13 3/8"	48#	-	707'	/10 of Water in _____ inch 18 /10 of Merc. in 7" 23# inch Volume 6,755,000 Cu. ft.
State of: West Virginia		10 3/4"	40.5#	1190'	Pulled	TEST AFTER SHOT
Field: Northern Division		8 5/8"	24#	-	2105'	/10 of Water in _____ inch
Rig Commenced By Contractor	19					/10 of Merc. in _____ inch
Rig Completed " "	19	7"	23#	-	4406'	Volume _____ Cu. ft.
Drilling Commenced June 21,	19 56					<del>1200</del> 18 Hours <del>ADVERSE</del>
Drilling Completed October 5,	19 56	2 3/8"	4.6#	-	4987'	Rock Pressure 1200
Drilling to cost per foot		2 3/8"	- Perforated		58	Date Shot <u>Not Shot</u>
Contractor is: Pace Bower Const. Co						Size of Torpedo _____
Address: Pineville, W. Va.				SHUT IN		Oil Flowed _____ bbls. 1st 24 hrs.
				Date 10-5-56		Oil Pumped _____ bbls. 1st 24 hrs.
Driller's Name Kenny Reynolds Vic Knight				7 in. Size of Packer	2" Tubing Run 10-30-56 Size of Packer	Well abandoned and Plugged _____ 19 _____
				Kind of Packer		
				1st Perf. Set _____ from _____		
Elevation: 743.12				2nd Perf. Set _____ from _____		

**DRILLER'S RECORD**

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS
Red Rock	0	20		
Slate	20	50		
Red Rock	50	70		
Sand	70	82		
Slate	82	94		
Red Rock	94	102		
Slate	102	108		
Red Rock	108	130		
Lime	130	172		
Red Rock	172	234		
Sand	234	275		
Lime	275	310		
Red Rock	310	324		
Sand	324	405		
Red Rock	405	414		2-Bailer Water hr at 352'
Lime	414	458		
Sand	458	480		

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2 of 3  
7344SERIAL WELL NO. X-59-7344LEASE NO. pt. 52787-52789MAP SQUARE 58-95

## DRILLER'S RECORD

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS
Lime	480	507		
Lime & Shells	507	518		
Sand	518	535		
Lime	535	585		
Grey Lime	585	592		
Sand	592	658		15-Bailer Water Hr 620'
Coal	658	660		
Slate	660	674		
Lime	674	696		
Lime, Red	696	702		
Lime, Blue	702	720		
Sand	720	782		1-Bailer Water Hr. at 775'
Slate	782	788		
Lime	788	824		
Red Rock	824	830		
Lime	830	844		
Sand	844	855		
Slate	855	860		
Red Rock	860	895		
Slate	895	920		
Lime	920	985		
Red Rock	985	990		
Slate & Shells	990	1002		
Red Rock	1002	1010		
Slate	1010	1090		
Red Rock	1090	1098		
Slate & Shells	1098	1190		
Lime	1190	1198		
Slate & Shells	1198	1347		
Lime	1347	1360		
Sand	1360	1444		Hole full Water at 1370'
Slate	1444	1450		
Blue Lime	1450	1460		
Gritty Lime	1460	1498		
Slate	1498	1515		
Sand	1515	1540		
Slate	1540	1550		

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47-035-00918W  
 3 of 3  
 7344  
 58-95  
 47-035-00918W

SERIAL WELL NO. X-59-7344

LEASE NO. pt. 52787-52789

MAP SQUARE 58-95

DRILLER'S RECORD

FORMATION	TOP	BOTTOM	THICKNESS	REMARKS
Sand	1550	1594		
Slate	1594	1617		
Sand	1617	1625		
Slate & Shells	1625	1652		
Sand	1652	1776		
<del>BK</del> Lime	1776	1800		
Slate	1800	1803		
Big Lime	1803	1950		
Slate	1950	1955		
Sand	1955	2021		
Lime <sup>s</sup>	2021	2100		
Slate & Shells	2100	2420		
Brown Shale	2420	2430		
Berea Shells	2430	2440		
Slate & Shells	2440	3690		
Brown Shale	3690	3740		
Slate & Shells	3740	3930		
Brown Shale	3930	4150		
White Slate	4150	4525		
Brown Shale	4525	4829		
Corniferious Lime	4829	4945		
Oriskany Sand	4945	4965		Gas at 4950' to 4962' 18/10" Mer.
Total Depth	4965			in 7" 23# 6,755,000 MCF.

*13/B.*

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 Environmental Protection

7344

X59-7344

W. E. Hupp, et al  
 United Fuel Gas Company  
 Ravenswood District, Jackson County, W. Va.  
 Map Squares - 58-95  
 Commenced - 6-21-56  
 Completed - 10-5-56  
 Elevation - 743.12'

Size	CASING:		Point	Ceme:
	Weight			
13-3/8"	48#		699'	
10-3/4"	40.5#		1190'	Fuller
8-5/8"	24#		2081'	50
7"	23#		4883'	125
2"	4.6#		4965'	

CONTRACTOR: Pace-Bower Const. Co.  
 DRILLERS: Kenny Reynolds  
 Vic Knight

Red Rock	0	20	Gritty Lime	1460	1498
Slate	20	50	Slate	1498	1515
Red Rock	50	70	Sand	1515	1540
Sand	70	82	Slate	1540	1550
Slate	82	94	Sand	1550	1594
Red Rock	94	102	Slate	1594	1617
Slate	102	108	Sand	1617	1625
Red Rock	108	130	Slate & Shells	1625	1652
Lime	130	172	Sand	1652	1776
Red Rock	172	234	Big Lime	1776	1800
Sand	234	275	Slate	1800	1803
Lime	275	310	Big Lime	1803	1950
Red Rock	310	324	Slate	1950	1955
Sand	324	405	Sand	1955	2021
Red Rock	405	414	Lime	2021	2100
Lime	414	458	Slate & Shells	2100	2420
Sand	458	480	Brown Shale	2420	2430
Lime	480	507	Berea Shells	2430	2440
Lime & Shells	507	518	Slate & Shells	2440	3690
Sand	518	535	Brown Shale	3690	3740
Lime	535	585	Slate & Shells	3740	3930
Grey Lime	585	592	Brown Shale	3930	4150
Sand	592	658	White Slate	4150	4525
Coal	658	660	Brown Shale	4525	4829
Slate	660	674	Corniferous Lime	4829	4945
Lime	674	696	Oriskany Sand	4945	4965
Red Lime	696	702	Total Depth	4965'	
Blue Lime	702	720	Water 352' 2 bailers per hour		
Sand	720	782	Water 620' 15 bailers per hour		
Slate	782	788	Water 775' 1 bailer per hour		
Lime	788	824	Hole full water 1370'		
Red Rock	824	830	Gas 4950' 4/10 W 7" 23# 853 M		
Lime	830	844	Gas 4950-4965' 18/10 Merc. 7" 23# 6,684 M		
Sand	844	855	NOT SHOT OR FRACTURED		
Slate	855	860	FINAL OPEN FLOW - 6,684 M - Oriskany		
Red Rock	860	895	18 Hr. R.P. 1200#		
Slate	895	920	Shut in 10-5-56 in 7" casing.		
Lime	920	985	RECEIVED		
Red Rock	985	990	Office of Oil and Gas		
Slate & Shells	990	1002	NOV 5 2019		
Red Rock	1002	1010	WV Department of		
Slate	1010	1090	Environmental Protection		
Red Rock	1090	1098			
Slate & Shells	1098	1190			
Lime	1190	1198			
Slate & Shells	1198	1347			
Lime	1347	1360			
Sand	1360	1444			
Slate	1444	1450			
Black Lime	1450	1460			

7344

### WELL WORK ORDER

1-5202-1957

REQUEST NO. <u>5652</u>	BUDGET NO. <u>253</u>	WORK ORDER NO. <u>4867</u>
DATE <u>September 10,</u> 19 <u>56</u>	DATE ISSUED <u>September 20,</u> 19 <u>56</u>	
COMPANY <u>United Fuel Gas Company</u>	DIVISION <u>Northern-Storage</u>	WELL NO. <u>X-59-7344</u>
FARM <u>W. E. Hupp, et al</u>	LEASE NO. <u>Pt. 52787 &amp; 52789</u>	ACRES <u>14</u>
DISTRICT <u>Ravenswood</u>	COUNTY <u>Jackson</u>	STATE <u>W. Va.</u>
ON WATERS <u>Mud Run of Sandy Creek</u>	MAP SQUARE <u>58-95</u>	
LOCATION MADE BY <u>M. S. Wherle</u>	DATE <u>April 19,</u> 19 <u>56</u>	NOTE BOOK <u>1620</u> PAGE <u>60</u>
COAL <u>Not Operated</u>	NO BUILDINGS WITHIN <u>200</u> FEET	
LEASE EXPIRES _____ 19 _____	CLASS OF LOCATION _____	
PURPOSE AND NECESSITY <u>Drill New Well for Storage in Pool X-59</u>		
RELATED WORK ORDER NOS _____ FOR _____		

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

ESTIMATED DEPTH 4975 FEET. SAND Oriskany CONTRACTOR Bower & Pace Drilling Company

COMPANY WILL FURNISH: \_\_\_\_\_ RIG: \_\_\_\_\_ YES  NO  WATER: \_\_\_\_\_ YES  NO  FUEL: \_\_\_\_\_ YES  NO

APPROVALS

J. W. Graham DATE Sept. 10, 19 56      H. C. Mefford, Jr. DATE Sept. 12, 19 56

S. R. Ferrell DATE Sept. 12, 19 56      \_\_\_\_\_ DATE \_\_\_\_\_ 19 \_\_\_\_\_

DETAIL OF ESTIMATED COST					DETAIL OF ACTUAL COST				
MATERIAL TO BE INSTALLED	SIZE	QUANTITY	PRICE	AMOUNT	QUANTITY	PRICE	AMOUNT	VARIATION	
CASING	WEIGHT <u>65#</u>	<u>16'</u>	<u>20'</u>	<u>4.90</u>	<u>98.00</u>	-	-	(98.00)	
"	<u>48#</u>	<u>13"</u>	<u>625'</u>	<u>7.00</u>	<u>4,375.00</u>	<u>707'</u>	<u>3.64</u>	<u>2,576.37</u>	<u>(1,798.63)</u>
"	<u>40.5#</u>	<u>10"</u>	<u>1075'</u>	<u>4.80</u>	<u>5,160.00</u>	-	-	<u>(5,160.00)</u>	
"	<u>24#</u>	<u>8"</u>	<u>2075'</u>	<u>1.99</u>	<u>4,129.00</u>	<u>2105'</u>	<u>2.04</u>	<u>4,287.23</u>	<u>158.23</u>
"	<u>23#</u>	<u>7"</u>	<u>4875'</u>	<u>-2.80</u>	<u>-13,650.00</u>	<u>4925'</u>	<u>1.89</u>	<u>-9,298.65</u>	<u>(4,351.35)</u>
TUBING	<u>4.6#</u>	<u>2"</u>	<u>5000'</u>	<u>.46</u>	<u>2,300.00</u>	<u>4992'</u>	<u>.517</u>	<u>2,582.54</u>	<u>282.54</u>
National Casing Head Assembly	<u>8 1/2" x 7"</u>	<u>1</u>		<u>875.00</u>	<u>1</u>		<u>1,019.64</u>	<u>144.64</u>	
Nordstrom Plug Valve	<u>4"</u>	<u>1</u>		<u>310.00</u>	<u>1</u>		<u>406.99</u>	<u>96.99</u>	
Anchor Clamps	<u>2"</u>	<u>1 Set</u>		<u>20.00</u>	<u>1</u>		<u>27.88</u>	<u>7.88</u>	
Turnbuckles	<u>1 1/2" x 18"</u>	<u>2</u>	<u>15.00</u>	<u>30.00</u>	-		-	<u>(30.00)</u>	
Casing Shoes Var.			<u>250.00</u>	<u>250.00</u>			<u>122.89</u>	<u>(127.11)</u>	
Misc. Fittings & Centralizers			<u>350.00</u>	<u>350.00</u>			<u>153.48</u>	<u>(196.52)</u>	
Gate Valve Orbit					<u>1</u>		<u>254.81</u>	<u>254.81</u>	
Otis Closing Tool					<u>1</u>		<u>55.00</u>	<u>55.00</u>	
W/n Flange					<u>2</u>	<u>32.46</u>	<u>64.92</u>	<u>64.92</u>	
TOTAL MATERIAL				<u>31,547.00</u>			<u>20,850.40</u>	<u>10,696.60</u>	
INSTALLATION OPERATING EXPENSE COST									
LABOR				<u>2,500.00</u>			<u>1,304.33</u>	<u>(1,195.67)</u>	
USE OF AUTOMOBILE AND HAULING				<u>4,000.00</u>			<u>3,246.46</u>	<u>(753.54)</u>	
DRILLING <u>4975</u> FEET @ <u>4.75</u> PER FOOT				<u>23,631.00</u>	<u>4965' @ 4.75</u>		<u>23,583.75</u>	<u>(47.25)</u>	
FUEL				<u>350.00</u>			<u>181.80</u>	<u>(168.20)</u>	
PROPERTY W. G. Line Cost							<u>215.47</u>	<u>215.47</u>	
SUPPLIES AND EXPENSES				<u>150.00</u>			<u>206.04</u>	<u>56.04</u>	
ENGINEERING SURVEY				<u>95.00</u>			<u>114.14</u>	<u>(18.86)</u>	
Cement - Aquagel & Services				<u>2,500.00</u>			<u>4,058.00</u>	<u>(1,558.00)</u>	
Tubing Well under Pressure-Otis Eastern Inc.				<u>1,100.00</u>			<u>1,638.00</u>	<u>538.00</u>	
Building Road & Repairs							<u>510.00</u>	<u>510.00</u>	
Material Converted into Junk iron							<u>89.86</u>	<u>89.86</u>	
Interest							<u>191.74</u>	<u>191.74</u>	
STORES EXPENSE AND FREIGHT				<u>3,470.00</u>			<u>2,155.17</u>	<u>(1,314.83)</u>	
ADMINISTRATIVE AND GENERAL LABOR OVERHEADS				<u>721.00</u>			<u>574.92</u>	<u>(146.08)</u>	
LABOR BENEFITS AND NON-PRODUCTIVE TIME				<u>448.00</u>			<u>254.36</u>	<u>(193.64)</u>	
TOTAL INSTALLATION OPERATING EXPENSE COST				<u>38,965.00</u>	<u>2-253-4867</u>		<u>35,473.42</u>	<u>(3,491.58)</u>	
TOTAL ESTIMATE				<u>70,512.00</u>			<u>56,323.82</u>	<u>(14,188.18)</u>	

WELL NO. X-59-7344



COMPLETION REPORT

47-035-009186

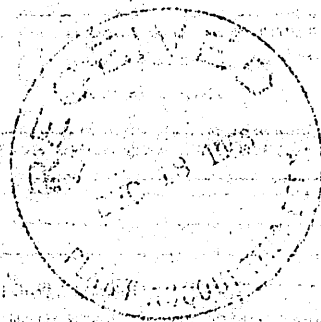
DRILLING COMMENCED June 21, 1956 COMPLETED October 5, 1956 CONTRACTOR Pace-Bower Construction Co.  
 DAYS DRILLING 106 DEPTH 4965' FEET. PRODUCING SAND Oriskany INITIAL ROCK PRESSURE 1200# LBS.  
 INITIAL OPEN FLOW 6,755,000 M. C. F. DATE SHUT IN 10-5-1956  
 PLUGGING COMMENCED \_\_\_\_\_ 19\_\_\_\_ COMPLETED \_\_\_\_\_ 19\_\_\_\_ CONTRACTOR Pace & Bower Construction Co.

MATERIAL INSTALLED OR RETIRED

QUANTITY	SIZE	DESCRIPTION	QUANTITY	SIZE	DESCRIPTION
707'	13 3/8"	Casing--4.8#	1	8 5/8"x7"x2"	Xmas Tree Assembly
2105'	8 5/8"	" --2 1/2#	135		Scks. Cement
496'	7"	" --23#	10 Lbs.		Pipe Thread Lubricant
4987'	2 3/8"	Tubing--4.6#	8.4		Tons Gravel
5'	2 3/8"	" --Perforated	4.5		Tons Sand
1	13 3/8"	Casing Shoe	3 1/2		Cu.Yds. Concrete
1	8 5/8"	Casing Shoe	<del>1</del> Lot		*Kerosene
1	7"	Casing Shoe	5-Gals		K.S.55
1-Set	8 5/8"	Anchor Clamps	1		Otis-Type A-Closing Tool
30	1 1/8"x7	Bolts A.T.	1	2 3/8"	Tubing Coupling
1	3"x2"	Swage Nipple			
1	2"x1"	Swage Nipple			
2	1 1/2"x2 1/2"	Bolts, H.P.			
2	2"	Gaskets, R-2 1/2, Oval.			
16	7/8"x6"	Bolts			
1	2"	Flange, W.Neck			
2	6"	Gaskets, R.J.			*Per Monroe Murphy 2-4-57. PR
1	4"	Plug Valve, Nordstrom, #2349			
2	4"	Flanges, W.Neck, Ser. 90			
2	4"	Gaskets, R.J.			
1	4"	Bull Plug, XXS			
1	2"	Bull Plug XS			
2	3/4"	Needle Valves, M&F, 3000#			
1	2"x2"	Swage Nipple			
1	1"	Globe Valve, 2000#			
1	1/2"	Globe Valve, 2000#			
3	1/2"	Steel Plugs			
1	1"	Bull Plug			
1	2"	Orbit Gate Valve, 3000#			

MATERIAL TRANSFER NUMBERS AND PURCHASE ORDER NUMBERS Transfers-N-59-N-61-& 7-65-7-66-7-200 & 7-211.  
 N-26-28-5-8-27-& 8-11/4. 9-50-9-71-9-211. N-49-10-2-10-5-10-42-10-89-10-126-10-148.  
 November-N-56-N-57-11-20-11-28-11-32-11-33-& N-124. December-N-34-N-24-N-25-N-76  
 12-201-12-250.  
 P.O.25739---Criss & Shaver--31234-Elk Refining Co.  
 P.O.24682---McJunkin Corpn. 27700-Well Service Inc.  
 Invoice 356-Otis Eastern Inc.

COMPILED BY *R.E. Bennett* DATE 12/14/1956  
 APPROVED BY *R.M. Pullis* DATE 12-14-1956



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Office of Oil and Gas

SEP 13 2019

WV Department of Environmental Protection

REASON FOR VARIATION FROM ESTIMATE: 10" Casing Was Run & Pulled.

WW-2A  
(Rev. 6-14)

1.) Date: 08/29/2019  
2.) Operator's Well Number Ripley 7344  
State 47- County 035 Permit 00918 W  
3.) API Well No.:

**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 Steven Brian Stone  
Address 14 Crooked Run Road  
Sandyville, WV 25275  
(b) Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Name \_\_\_\_\_  
Address \_\_\_\_\_  
6) Inspector Joe Taylor  
Address 1478 Claylick Road  
Ripley, WV 25271  
Telephone 304-380-7469

5) (a) Coal Operator  
Name Not operated  
Address \_\_\_\_\_  
(b) Coal Owner(s) with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_  
(c) Coal Lessee with Declaration  
Name \_\_\_\_\_  
Address \_\_\_\_\_

**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)
- 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: Principal Engineer  
Address: 48 Columbia Gas Rd  
Sandyville, WV 25275  
Telephone: 304-373-2412  
Email: james\_amos@tcenergvy.com

Subscribed and sworn before me this 3rd day of September

Michael D. McClung Notary Public  
My Commission Expires 6/19/2022

RECEIVED  
Office of Oil and Gas

Oil and Gas Privacy Notice

SEP 13 2019

47-035-00918P



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

September 11, 2019

Steven Stone  
14 Crooked Run 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 7344 (API 47-035-00918).

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,

A handwritten signature in blue ink that reads "Jim Amos". The signature is fluid and cursive, with the first name being more prominent.

Jim Amos  
Principal Engineer  
Columbia Gas Transmission, LLC

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Office of Oil and Gas

SEP 13 2019

WV Department of  
Environmental Protection

**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
W. E. Hupp et. al.	United Gas Fuel Company	Lease No. 1052789	84/548

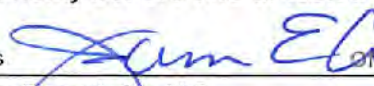
**Acknowledgement of Possible Permitting/Approval  
In Addition to the Office of Oil and Gas**

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

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  
Principal Engineer

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Office of Oil and Gas  
SEP 13 2019

WW-2B1  
(5-12)

Well No. Ripley 7344

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 contractor 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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Office of Oil and Gas

SEP 13 2019

WV Department of  
Environmental Protection

WW-9  
(5/16)

API Number 47 - 035 - 00918  
Operator's Well No. Ripley 7344

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 Sandyville

Do you anticipate using more than 5,000 bbls of water to complete the proposed well work? Yes  No

Will a pit be used? Yes  No

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

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 34-009-23821, 34-009-23823, 34-009-23824, 34-105-23619 )
- \_\_\_\_\_ Reuse (at API Number \_\_\_\_\_)
- \_\_\_\_\_ Off Site Disposal (Supply form WW-9 for disposal location)
- \_\_\_\_\_ Other (Explain \_\_\_\_\_)

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. Fresh water

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

Additives to be used in drilling medium? biocide, surfactant (CTCO), HCl acid, polymer, corrosion inhibitor, iron control

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) N/A

-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 [Signature]

Company Official (Typed Name) James Amos

Company Official Title Principal Engineer

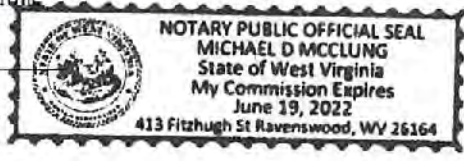
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Office of Oil and Gas

Subscribed and sworn before me this 3rd day of September, 20 19

[Signature]  
Notary Public

My commission expires 6/19/2022

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WV Department of Environmental Protection



Proposed Revegetation Treatment: Acres Disturbed < 0.2 Prevegetation pH 6 - 7

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

Fertilizer type 10-10-10

Fertilizer amount 600 lbs/acre

Mulch 2 Tons/acre

Seed Mixtures

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

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: Joe Taylor 

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

Title: OOG Inspector

Date: 9-11-19

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: Sandyville  
Farm Name: Mesek, Steven & Alta C.

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

No fluids planned to be discharged.  
  
No fertilizer will be stored on site. Fuel, oil, and lubricants will be stored on site, but located within secondary containment. Spills from construction equipment, well treatment fluids, and produced well fluids are the only possible source of contamination to groundwater. Drilling and flowback fluids to be stored in tanks.

- 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 - 0.13 miles.  
5.9 miles from WHPA (Ravenswood Municipal Water Works).  
4.7 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.

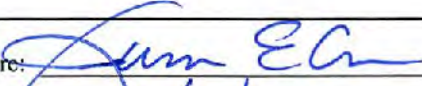
No waste material will be used for deicing or fill material on the property.

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: 9/3/19



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STATE OF WEST VIRGINIA  
DEPARTMENT OF HEALTH AND HUMAN RESOURCES  
Bureau for Public Health  
Office of Environmental Health Services

Bill J. Crouch  
Cabinet Secretary

Catherine C. Slemp, MD, MPH  
Commissioner & State Health Officer

August 27, 2019

Mr. Brad Nelson  
Well Engineering & Technology  
455 Racetrack Road  
Washington, PA 15301

**Re: Data Request for Public Drinking Water Locations Near  
Ripley 7344 (38.8862, -81.6884) & Ripley 7316 (38.8743, -81.6982)**

Dear Mr. Nelson:

This letter is in response to the August 8, 2019, data request concerning public drinking water locations near the above referenced sites in Jackson County. Our agency regulates public drinking water and their corresponding source water protection areas. Private drinking water well information is not maintained by this office, however, the Jackson County Health Department may have additional information. This area does not intersect any public water sources or source water protection areas on record. Your location is approximately 6 miles southeast and upstream from the public drinking water Well Head Protection Area for Ravenswood Municipal Water Works (WV3301810). Your location is approximately 4 miles northeast of the public surface water intake and zone of critical concern for the City of Ripley (WV3301811).

Well Name	Distance	PWSID	System Name
Ripley 7344	5.9 mile from WHPA	WV3301810	Ravenswood Municipal Water Works
	4.7 miles from ZPC	WV3301811	City of Ripley
Ripley 7316	6.2 mile from WHPA	WV3301810	Ravenswood Municipal Water Works
	3.8 miles from ZCC	WV3301811	City of Ripley

The West Virginia Department of Health and Human Resources provides a map viewer for the public to access a collection of data including delineated source water protection areas and reported potential contaminant sources. This viewer contains data that has been deemed publicly available by the West Virginia Division of Homeland Security and Emergency Management. It should be noted that we are making this data available solely as public service. As a disclaimer, this data was acquired from multiple federal and state sources, is updated periodically and maintained by the individual sources. Any questions will have to be directed to the responsible agency. The public map viewer can be found here: <https://oehsportal.wvdhhr.org/wvswap/index.html>.

Sincerely,

Brian A. Carr, P.G., Program Manager  
Source Water Assessment and Protection

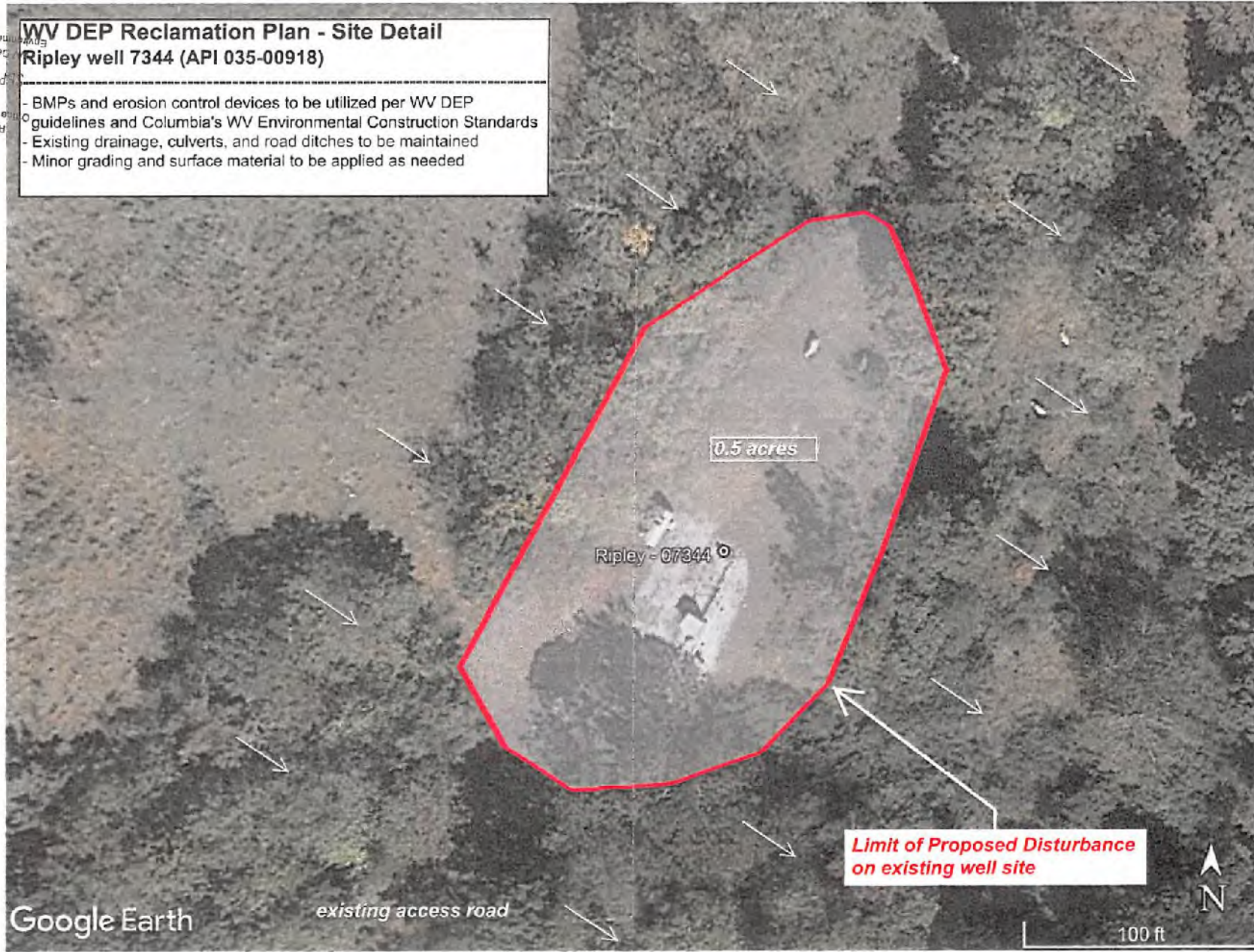
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September 13 2019  
Department of  
Environmental Protection

**WV DEP Reclamation Plan - Site Detail**  
**Ripley well 7344 (API 035-00918)**

---

- 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



JD  
9-11-19

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### WV DEP Reclamation Plan - Overview Ripley well 7344 (API 035-00918)

- 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



Google Earth

© 2018 Google

**Driving Directions**  
I-77 to Silverton-Ravenswood exit  
East on Old WV Rt 56  
3.2 miles turn right on Rt 21 (Parkersburg Road)  
1.6 miles turn right on to drive/lease road  
0.6 miles to well site

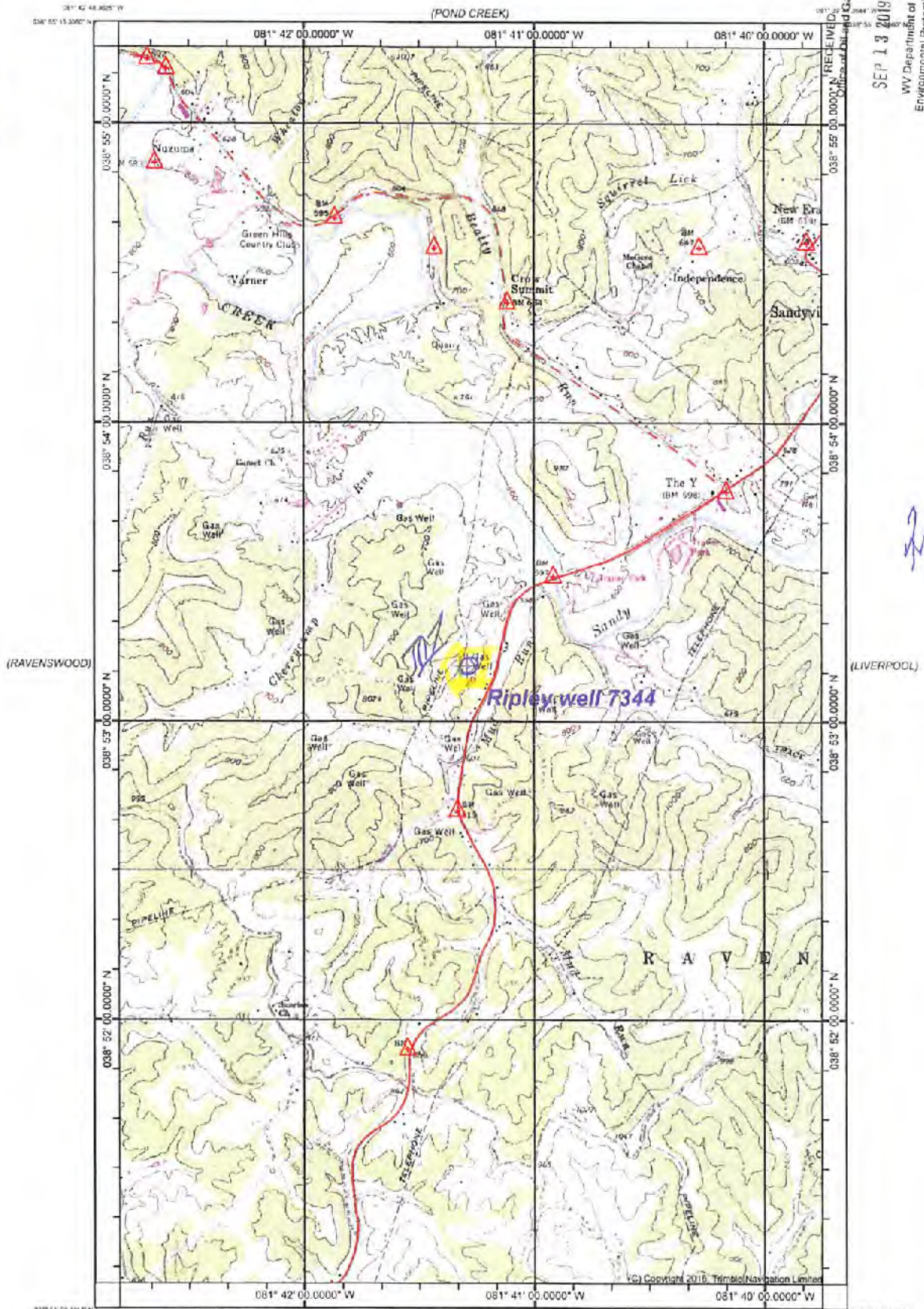
JTB  
9-11-19

47-035-009(8W)  
(PORTLAND)



SANDYVILLE QUADRANGLE  
WEST VIRGINIA  
TOPOGRAPHIC SERIES

(ROCKPORT)  
SEP 13 2019  
WV Department of  
Environmental Protection

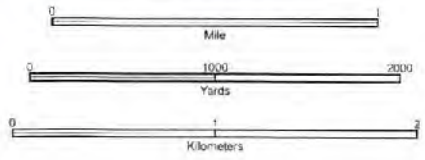


(COTTAGEVILLE)

Produced by Trimble Terrain Navigator Pro  
Topography based on USGS 1:24,000 Maps  
North American 1983 Datum (NA83)  
To place on the predicted North American 1997 move the  
projection lines 9M N and 13M E



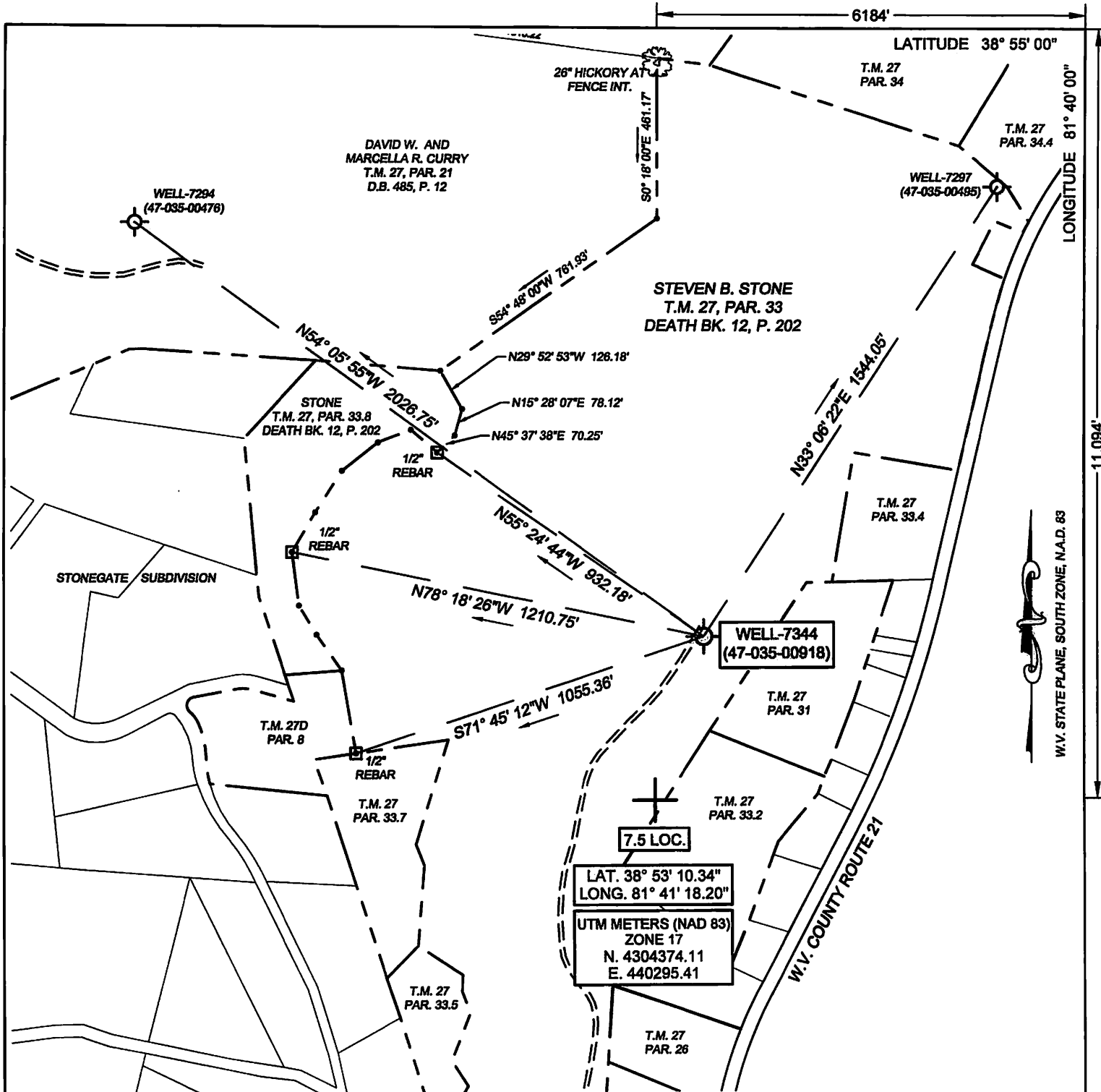
(RIPLEY)  
SCALE 1:24000



CONTOUR INTERVAL 20 FT

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

(GAY)

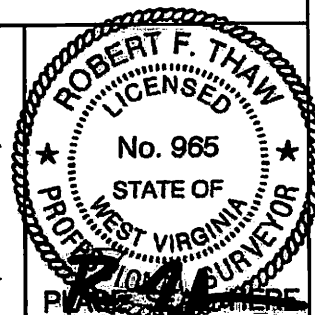


(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS

FILE No 1901-2345-001  
 DRAWING No. 1901-2345-001  
 SCALE 1"=400'  
 MINIMUM DEGREE OF ACCURACY 1:200  
 PROVEN SOURCE OF ELEVATION TRIMBLE R8-3  
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) R. Thaw  
 ROBERT F. THAW PS #965



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

DATE MAY 16 2019  
 OPERATOR'S WELL No. 7344  
 API WELL No. \_\_\_\_\_

WELL TYPE: OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  STATE 47 COUNTY 035 PERMIT 00918W  
 (IF "GAS") PRODUCTION  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION 771.5' WATER SHED MUD RUN OF SANDY CREEK  
 DISTRICT RAVENSWOOD COUNTY JACKSON  
 QUADRANGLE SANDYVILLE, WV

SURFACE OWNER STEVEN B. & ALTA CORINNE MASEK STONE ACREAGE 76.12  
 OIL & GAS ROYALTY OWNER ALTA CORINNE STONE LEASE ACREAGE 14  
 LEASE No. 1052789

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 ORISKANY ESTIMATED DEPTH 5106  
 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)