

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 513762

API: 47 - 085 - 10085

Submission: Initial Amended

Notes:

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

API 47 - 851 - 0085 County RITCHIE District UNION
Quad OXFORD 7.5' Pad Name OXF122 Field/Pool Name _____
Farm name RICHARD L. & SHERYL A. RAY Well Number 513762
Operator (as registered with the OOG) EQT Production Company
Address 625 Liberty Ave. EQT Plaza, Suite 1700 City Pittsburgh State PA Zip 15222

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,331,476.85 Easting 514,617.71
Landing Point of Curve Northing 4,331,414.18 Easting 514,566.96
Bottom Hole Northing 4,328,266.97 Easting 515,706.04

Elevation (ft) 1111 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

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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)
Water base Mud 11.5 ppg, Synthetic Base Mud 11.5 ppg, barium sulfate, sodium chloride, xanthan gum, polyanionic cellulose, modified starch, sodium hydroxide, phosphonates and alkyl phosphates, glutaraldehyde solution, calcium hydroxide, partially hydrolyzed polyacrylamide/polyacrylate, potassium chloride, sodium carbonate, ground walnut shells, alcohol and modified fatty acid, ferrochrome lignosulfonate, calcium carbonate, fibrous cellulose

Date permit issued 04/11/2014 Date drilling commenced 10/06/2014 Date drilling ceased 05/30/2016
Date completion activities began 2/24/2018 Date completion activities ceased 3/10/2018
Verbal plugging (Y/N) N Date permission granted N/A Granted by N/A

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

Freshwater depth(s) ft 236' Open mine(s) (Y/N) depths N
Salt water depth(s) ft NONE Void(s) encountered (Y/N) depths N
Coal depth(s) ft 929' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed
Michael Daff

9-5-18

Reviewed by:
09/07/2018

API 47- 851 - 0085 Farm name RICHARD L. & SHERYL A. RAY Well number 513762

CASING STRINGS	Hole Size	Casing Size	Depth	New or Used	Grade w/ft	Basket Depth(s)	Did cement circulate (Y/ N) * Provide details below*
Conductor	24"	20"	40'	NEW	A-500 40LB/FT	NONE	Y
Surface	17.5"	13.375"	1058'	NEW	J-55 54.5LB/FT	224',557'	Y
Coal							
Intermediate 1	12.375"	9.625"	2982'	NEW	A-500 40LB/FT	531',1502'	Y
Intermediate 2							
Intermediate 3							
Production	8.5"	5.5"	18,084	NEW	P-110 20LB/FT	None	N
Tubing							
Packer type and depth set							

Comment Details _____

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft ³ /sks)	Volume (ft ³)	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	38	15.6	1.18	44.84	0	8
Surface	CLASS A	825	15.6	1.19	981.75	0	8
Coal							
Intermediate 1	CLASS A	1085	15.6	1.18	1280.3	0	8
Intermediate 2							
Intermediate 3							
Production	Class H/Class H	191/365/1612	12.5/15.2/15/6	1.72/1.1/1.84	3692	3050'	72+
Tubing							

Drillers TD (ft) 18,084' Loggers TD (ft) 16,848'
 Deepest formation penetrated Marcellus Plug back to (ft) _____
 Plug back procedure _____

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Kick off depth (ft) 4437'

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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 _____

CONDUCTOR- NONE
 SURFACE- JOINTS: 1,11,23
 INTERMEDIATE- RAN AT LEAST EVERY 500' FEET
 PRODUCTION- Run composite body centralizers every joint from shoe to 4500' and one inside intermediate casing at 2882'

WAS WELL COMPLETED AS SHOT HOLE Yes No DETAILS _____

WAS WELL COMPLETED OPEN HOLE? Yes No DETAILS _____

WERE TRACERS USED Yes No TYPE OF TRACER(S) USED _____

API 47- 851 - 0085 Farm name RICHARD L. & SHERYL A. RAY Well number 513762

PERFORATION RECORD

Stage No.	Perforation date	Perforated from MD ft.	Perforated to MD ft.	Number of Perforations	Formation(s)
					Please See Attached

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)
							Please	See Attached
								RECEIVED Office of Oil and Gas
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Please insert additional pages as applicable.

API 47- 851 - 0085

Farm name RICHARD L. & SHERYL A. RAY

Well number 513762

PRODUCING FORMATION(S)

DEPTHS

Marcellus 6,465' TVD 6,899 MD

Please insert additional pages as applicable.

GAS TEST Build up Drawdown Open Flow OIL TEST Flow Pump

SHUT-IN PRESSURE Surface 900 psi Bottom Hole N/A psi DURATION OF TEST 250.5 hrs

OPEN FLOW Gas 15,322 mcfd Oil N/A bpd NGL 28.4 bpd Water 1,360 bpd GAS MEASURED BY Estimated Orifice Pilot

LITHOLOGY/ FORMATION	TOP	BOTTOM	TOP	BOTTOM	DESCRIBE ROCK TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H ₂ S, ETC)
	DEPTH IN FT NAME TVD	DEPTH IN FT TVD	DEPTH IN FT MD	DEPTH IN FT MD	
	<u>0</u>		<u>0</u>		

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Please insert additional pages as applicable.

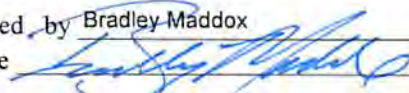
Drilling Contractor ALPHA HUNTER DRILLING (RIG 4)
Address P.O. BOX 430 City RENO State OH Zip 45773

Logging Company GYRODATA INC.
Address 601 MAYER ST. City BRIDGEVILLE State PA Zip 15017

Cementing Company NABORS
Address 2504 SMITH CREEK ROAD City WAYNESBURG State PA Zip 15370

Stimulating Company FTS International
Address 1432 Route 519 City Eighty Four State PA Zip 15330

Please insert additional pages as applicable.

Completed by Bradley Maddox Telephone (412) 395-7053
Signature  Title Dir Completions Date 05/30/2018

API 47- 851 - 0085 Farm name RICHARD L. & SHERYL A. RAY Well number 513762

Drilling Contractor Pioneer Drilling
Address 1083 N. Eighty Eight Rd City Rices Landing State PA Zip 15357

Logging Company Professional Directional
Address 103 Suds Run Road City Mt. Clare State WV Zip 26408

Logging Company _____
Address _____ City _____ State _____ Zip _____

Cementing Company ALLIED SERVICES
Address 116 KIMMEL SCHOOL ROAD City SHELOCTA State PA Zip 15773

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OXF122 Well 513762 API# 47-851-0085

Final Formations				
Formation Name	Final Top MD (ftGL) (ft)	Final Top TVD (ft)	Final Btm MD (ftGL) (ft)	Final Btm TVD (ft)
SAND/SHALE	1	1	939	939
COAL	939	939	942	942
SAND/SHALE	942	942	1698	1698
MAXTON	1698	1698	1881	1881
BIG LIME	1881	1881	2156	2156
WEIR	2156	2156	2370	2370
BEREA	2370	2370	2381	2381
GANTZ	2381	2381	2475	2475
50F	2475	2475	2631	2631
GORDON	2631	2631	2894	2894
BAYARD	2894	2894	3214	3214
WARREN	3214	3214	3272	3272
SPEECHLEY	3272	3272	3771	3771
BALLTOWN A	3771	3771	4349	4349
RILEY	4349	4349	4689	4688
BENSON	4689	4688	5021	4988
ALEXANDER	5021	4988	6342	6143
SONYEA	6342	6143	6512	6280
MIDDLESEX	6512	6280	6581	6328
GENESSEE	6581	6328	6782	6431
GENESEO	6782	6431	6823	6445
TULLY	6823	6445	6858	6455
HAMILTON	6858	6455	6899	6465
MARCELLUS	6899	6465	18084	6589

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513762 47-085-10085-0000 - Perforations

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Initiation Sleeve	6/15/2016	18,057	18,084	10	MARCELLUS
1	2/24/2018	17,897	18,019	30	MARCELLUS
2	2/24/2018	17,697	17,859	40	MARCELLUS
3	2/24/2018	17,497	17,659	40	MARCELLUS
4	2/24/2018	17,297	17,459	40	MARCELLUS
5	2/25/2018	17,097	17,259	40	MARCELLUS
6	2/25/2018	16,897	17,059	40	MARCELLUS
7	2/25/2018	16,697	16,859	40	MARCELLUS
8	2/26/2018	16,477	16,479	16	MARCELLUS
8	2/26/2018	16,657	16,659	40	MARCELLUS
9	2/26/2018	16,257	16,419	40	MARCELLUS
10	2/27/2018	16,017	16,070	23	MARCELLUS
10	2/27/2018	16,057	16,219	40	MARCELLUS
11	2/27/2018	15,817	15,979	40	MARCELLUS
12	2/27/2018	15,617	15,779	40	MARCELLUS
13	2/28/2018	15,417	15,579	40	MARCELLUS
14	2/28/2018	15,217	15,379	40	MARCELLUS
15	2/28/2018	15,017	15,179	40	MARCELLUS
16	3/1/2018	14,817	14,979	40	MARCELLUS
17	3/1/2018	14,617	14,779	40	MARCELLUS
18	3/1/2018	14,417	14,579	40	MARCELLUS
19	3/1/2018	14,217	14,379	40	MARCELLUS
20	3/2/2018	14,017	14,179	40	MARCELLUS
21	3/2/2018	13,817	13,979	40	MARCELLUS
22	3/2/2018	13,617	13,779	40	MARCELLUS
23	3/2/2018	13,417	13,579	40	MARCELLUS
24	3/3/2018	13,217	13,379	40	MARCELLUS
25	3/3/2018	13,017	13,179	40	MARCELLUS
26	3/3/2018	12,817	12,979	40	MARCELLUS
27	3/3/2018	12,617	12,779	40	MARCELLUS
28	3/3/2018	12,417	12,579	40	MARCELLUS
29	3/4/2018	12,217	12,379	40	MARCELLUS
30	3/4/2018	12,017	12,179	40	MARCELLUS
31	3/4/2018	11,817	11,979	40	MARCELLUS
32	3/4/2018	11,617	11,779	40	MARCELLUS
33	3/5/2018	11,417	11,579	40	MARCELLUS
34	3/5/2018	11,217	11,379	40	MARCELLUS
35	3/5/2018	11,017	11,179	40	MARCELLUS
36	3/5/2018	10,817	10,979	40	MARCELLUS
37	3/6/2018	10,617	10,779	40	MARCELLUS
38	3/6/2018	10,417	10,579	40	MARCELLUS
39	3/6/2018	10,217	10,379	40	MARCELLUS
40	3/6/2018	10,017	10,179	40	MARCELLUS
41	3/7/2018	9,817	9,979	40	MARCELLUS
42	3/7/2018	9,617	9,779	40	MARCELLUS
43	3/7/2018	9,417	9,579	40	MARCELLUS
44	3/7/2018	9,217	9,379	40	MARCELLUS
45	3/8/2018	9,017	9,179	40	MARCELLUS
46	3/8/2018	8,817	8,979	40	MARCELLUS
47	3/8/2018	8,617	8,779	40	MARCELLUS
48	3/8/2018	8,417	8,579	40	MARCELLUS
49	3/8/2018	8,217	8,379	40	MARCELLUS
50	3/9/2018	8,017	8,179	40	MARCELLUS
51	3/9/2018	7,817	7,979	40	MARCELLUS
52	3/9/2018	7,617	7,779	40	MARCELLUS
53	3/9/2018	7,417	7,579	40	MARCELLUS
54	3/9/2018	7,217	7,379	40	MARCELLUS
55	3/10/2018	7,017	7,179	40	MARCELLUS

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513762 47-085-10085-0000 - Stimulated Stages

Stage Number	Stimulation 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	2/24/2018	22	6,038	6,889	3,051	0	1,145	0
1	2/24/2018	85	8,855	9,308	3,005	449,527	8,609	0
2	2/24/2018	87	8,927	9,171	3,200	449,988	8,284	0
3	2/24/2018	82	8,471	9,192	3,353	450,240	8,238	0
4	2/25/2018	81	8,580	9,198	3,501	450,031	8,047	0
5	2/25/2018	89	8,899	9,070	3,707	450,272	8,163	0
6	2/25/2018	83	8,534	9,236	3,804	450,703	9,017	0
7	2/26/2018	81	8,443	8,860	3,785	449,516	8,369	0
8	2/26/2018	28	8,050	9,396	4,872	3,300	4,447	0
8	2/26/2018	60	8,954	9,117	5,311	5,177	2,410	0
9	2/26/2018	85	8,328	8,574	3,867	666,542	11,372	0
10	2/27/2018	55	8,761	9,354	4,761	7,420	4,015	0
10	2/27/2018	83	8,432	8,790	3,820	443,375	9,372	0
11	2/27/2018	81	8,108	8,273	4,022	449,737	8,394	0
12	2/28/2018	79	7,900	8,305	5,250	449,180	10,186	0
13	2/28/2018	86	8,839	9,184	4,679	449,757	8,346	0
14	2/28/2018	92	8,905	9,250	4,624	449,884	8,358	0
15	2/28/2018	85	8,602	9,387	4,472	450,619	8,164	0
16	3/1/2018	84	8,557	9,364	4,524	450,629	8,254	0
17	3/1/2018	88	8,870	9,185	3,988	450,745	8,402	0
18	3/1/2018	95	8,870	9,146	3,961	450,367	8,119	0
19	3/1/2018	88	8,742	9,126	3,881	449,600	8,021	0
20	3/2/2018	92	8,925	9,239	4,017	449,685	8,199	0
21	3/2/2018	95	8,977	9,248	3,896	449,999	8,259	0
22	3/2/2018	85	8,440	9,055	3,799	449,307	8,025	0
23	3/2/2018	88	8,473	8,988	4,004	450,314	8,151	0
24	3/3/2018	92	8,676	8,920	3,841	450,598	8,055	0
25	3/3/2018	94	8,969	9,133	3,778	451,071	8,101	0
26	3/3/2018	94	8,957	9,078	3,895	450,650	8,509	0
27	3/3/2018	92	8,601	8,916	4,050	450,105	7,993	0
28	3/4/2018	97	8,600	8,756	4,072	450,179	7,890	0
29	3/4/2018	93	8,676	9,129	4,061	448,455	9,306	0
30	3/4/2018	99	8,776	9,072	4,083	450,083	7,703	0
31	3/4/2018	86	8,542	8,782	3,891	450,871	8,422	0
32	3/4/2018	88	8,627	8,916	3,784	450,220	7,801	0
33	3/5/2018	101	7,711	8,890	3,800	450,387	7,723	0
34	3/5/2018	100	8,637	8,962	3,480	451,102	7,683	0
35	3/5/2018	93	8,717	8,113	3,690	450,030	7,767	0
36	3/5/2018	95	8,454	8,701	3,746	450,072	7,617	0
37	3/6/2018	100	8,329	8,467	3,907	450,388	7,587	0
38	3/6/2018	99	8,972	9,154	3,887	449,537	7,318	0
39	3/6/2018	98	8,460	8,773	3,852	449,390	7,407	0
40	3/6/2018	98	8,311	9,240	4,054	450,157	7,610	0
41	3/7/2018	94	8,419	8,693	3,952	449,380	7,647	0
42	3/7/2018	97	8,614	9,171	3,692	450,419	7,236	0
43	3/7/2018	100	8,516	8,990	3,844	449,685	7,472	0
44	3/7/2018	99	8,066	8,341	3,906	450,619	7,556	0
45	3/8/2018	100	8,122	8,267	3,865	450,388	7,505	0
46	3/8/2018	100	8,377	8,721	3,676	450,902	7,162	0
47	3/8/2018	99	8,611	8,987	3,815	450,996	7,915	0
48	3/8/2018	100	8,385	8,971	3,787	450,797	7,378	0
49	3/9/2018	101	8,273	8,676	3,663	450,387	7,342	0
50	3/9/2018	101	7,896	8,112	3,673	450,715	7,263	0
51	3/9/2018	101	8,160	8,415	3,749	450,556	7,080	0
52	3/9/2018	100	8,248	8,600	3,780	450,031	7,064	0
53	3/9/2018	100	8,012	8,218	3,739	449,769	7,686	0
54	3/10/2018	100	8,335	8,633	3,786	449,611	7,255	0
55	3/10/2018	100	7,863	8,166	3,816	470,228	7,236	0

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	2/24/2018
Job End Date:	3/10/2018
State:	West Virginia
County:	Ritchie
API Number:	47-085-10085-00-00
Operator Name:	EQT Production
Well Name and Number:	513762
Latitude:	39.13226000
Longitude:	-80.83105000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,590
Total Base Water Volume (gal):	18,717,510
Total Base Non Water Volume:	0



Hydraulic Fracturing Fluid Composition:

Trade Name	Supplier	Purpose	Ingredients	Chemical Abstract Service Number (CAS #)	Maximum Ingredient Concentration in Additive (% by mass)**	Maximum Ingredient Concentration in HF Fluid (% by mass)**	Comments
Water	FTS International	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	86.14576	None
Other Chemical (s)	Listed Above	See Trade Name (s) List					
				Listed Below			

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Hydrochloric Acid (15%)	FTS International	Acidizing					
				Listed Below			
APB-1	FTS International	Gel Breaker					
				Listed Below			
FRW-1450	FTS International	Mixture					
				Listed Below			
HVG-1	FTS International	Water Gelling Agent					
				Listed Below			
CI-150	FTS International	Acid Corrosion Inhibitor					
				Listed Below			
CS-500-SI	FTS International	Scale Inhibitor					
				Listed Below			
MX-5-3886	Multi-Chem	Bacteria Treatment					
				Listed Below			
Sand (Proppant)	FTS International	Proppant					
				Listed Below			
MX-8-2544	Multi-Chem	Bacteria Treatment					

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				Listed Below			
Items above are Trade Names with the exception of Base Water. Items below are the individual ingredients.							
			Silica Substrate	14808-60-7	100.00000	13.54180	None
			Calcium Nitrate.4H2O	13477-34-4	100.00000	0.03785	None
			Calcium Nitrate.4H2O	13477-34-4	100.00000	0.03785	
			Hydrochloric Acid	7647-01-0	15.00000	0.02566	None
			Distillates (petroleum), hydrotreated light	64742-47-8	30.00000	0.02298	
			Distillates (petroleum), hydrotreated light	64742-47-8	30.00000	0.02298	None
			Alcohols, C-11-14-iso, C13-rich, ethoxylated	78330-21-9	5.00000	0.00383	
			Alcohols, C-11-14-iso, C13-rich, ethoxylated	78330-21-9	5.00000	0.00383	None
			Ethylene Glycol	107-21-1	10.00000	0.00243	None
			Sodium Chloride	7647-14-5	100.00000	0.00234	
			Sodium Chloride	7647-14-5	100.00000	0.00234	None
			Sodium Nitrate	7631-99-4	5.00000	0.00012	
			Sodium Nitrate	7631-99-4	5.00000	0.00012	None
			Organic Amine Resin Salt	Proprietary	30.00000	0.00009	None
			Ethylene Glycol	107-21-1	30.00000	0.00009	None
			Isopropanol	67-63-0	30.00000	0.00009	None
			Dimethylformamide	68-12-2	10.00000	0.00003	None
			Quaternary Ammonium Compound	Proprietary	10.00000	0.00003	None
			Aromatic Aldehyde	Proprietary	10.00000	0.00003	None
			Petroleum Distillate	64742-47-8	55.00000	0.00001	None
			Petroleum Distillate	64742-47-8	55.00000	0.00001	
			Guar Gum	9000-30-0	50.00000	0.00001	
			Guar Gum	9000-30-0	50.00000	0.00001	None
			Ammonium Persulfate	7727-54-0	95.00000	0.00001	
			Ammonium Persulfate	7727-54-0	95.00000	0.00001	None

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			Surfactant	68439-51-0	2.00000	0.00000	None
			Clay	14808-60-7	2.00000	0.00000	
			Surfactant	68439-51-0	2.00000	0.00000	
			Clay	14808-60-7	2.00000	0.00000	None

* Total Water Volume sources may include various types of water including fresh water, produced water, and recycled water
 ** Information is based on the maximum potential for concentration and thus the total may be over 100%
 *** If you are calculating a percentage of total ingredients do not add the water volume below the green line to the water volume above the green line

Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
 Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

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 WV Department of
 Environmental Protection

09/07/2018

EQT PRODUCTION COMPANY
W.M. ADAMS LEASE
402 ACRES±
WELL NO. WV 513762
(OXF122 H6)

AS DRILLED COORDINATES
 (S.P.C. NORTH ZONE) (UTMM) ZONE 17 NORTH)

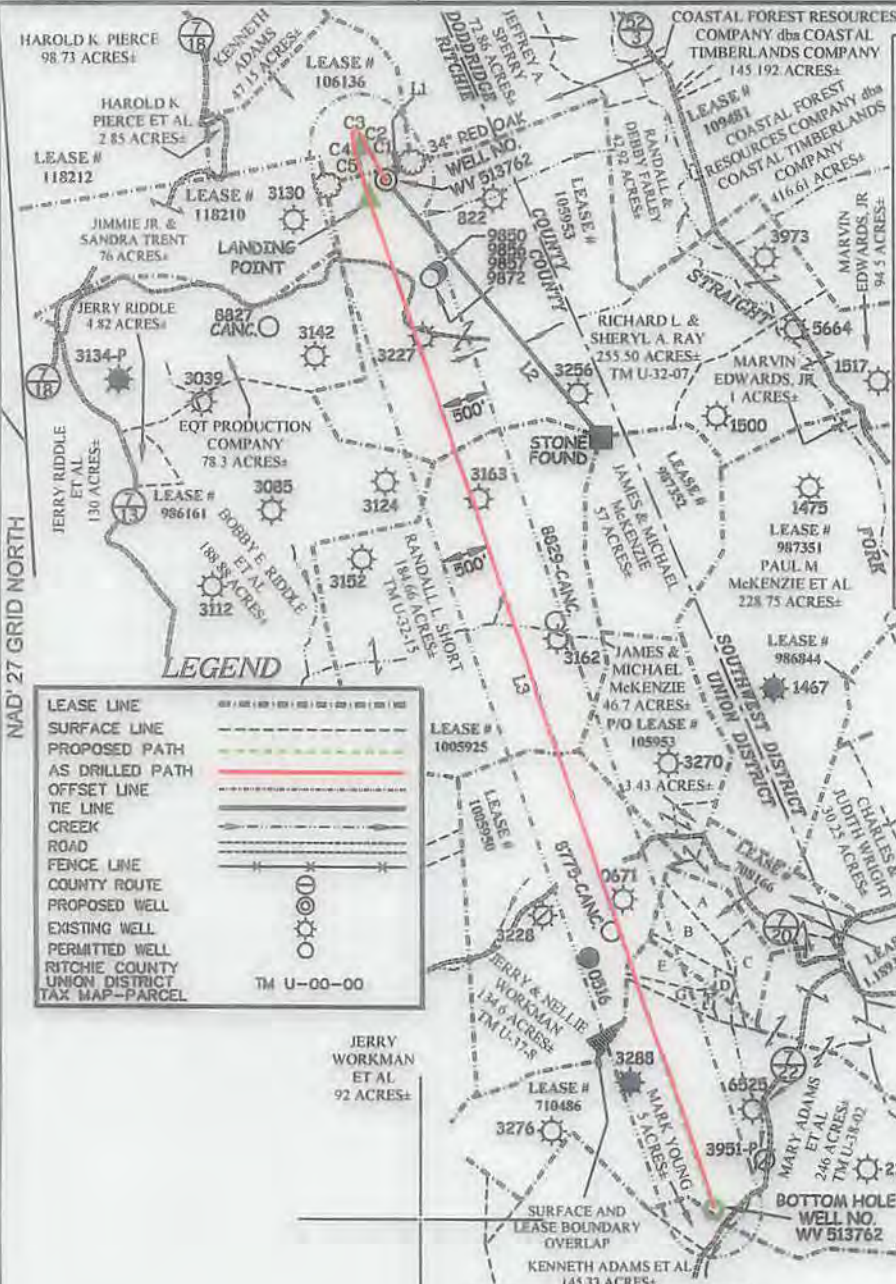
NAD'27 S.P.C.(FT)	N. 233,079.15	E. 1,622,425.66
NAD'27 GEO.	LAT-(N) 39.132259	LONG-(W) 80.831046
NAD'83 UTM (M)	N. 4,331,478.85	E. 514,617.71
LANDING POINT		
NAD'27 S.P.C.(FT)	N. 232,876.28	E. 1,622,255.68
NAD'27 GEO.	LAT-(N) 39.131695	LONG-(W) 80.831634
NAD'83 UTM (M)	N. 4,331,414.18	E. 514,566.96
BOTTOM HOLE		
NAD'27 S.P.C.(FT)	N. 222,485.89	E. 1,625,821.27
NAD'27 GEO.	LAT-(N) 39.103315	LONG-(W) 80.818529
NAD'83 UTM (M)	N. 4,328,266.97	E. 515,706.04

NOTES ON SURVEY

- NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS ≥ 2500 SQ. FT. OR DWELLINGS WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
- AS DRILLED INFORMATION PROVIDED BY EQT

NAD'27 GRID NORTH

12.532'



LEGEND

LEASE LINE	---
SURFACE LINE	---
PROPOSED PATH	---
AS DRILLED PATH	---
OFFSET LINE	---
TIE LINE	---
CREEK	---
ROAD	---
FENCE LINE	---
COUNTY ROUTE	---
PROPOSED WELL	○
EXISTING WELL	○
PERMITTED WELL	○
RITCHIE COUNTY UNION DISTRICT TAX MAP--PARCEL	○

TM U-00-00

WELL TIES

ID	BEARING	DISTANCE
L1	N 55°09' E	322.35'
L2	S 39°56' E	3462.72'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	369.47'	6866.75'	N 30°48' W	369.43'
C2	82.39'	260.92'	N 40°15' W	82.05'
C3	49.08'	25.81'	S 81°05' W	42.01'
C4	73.28'	161.44'	S 05°41' W	72.65'
C5	603.72'	2190.64'	S 13°18' E	502.61'

LATERAL

ID	BEARING	DISTANCE
L3	S 18°53' E	11001.69'

ALAKI SPENCER	7.204 ACRES±
ZAVADA & SUNRAK SPENCER	7.202 ACRES±
MELVIN & MARY BRITTON	7.226 ACRES±
CAZIJN SPENCER	2.278 ACRES±
CHIARA RUMMEL	7.204 ACRES±
CEMETERY	0.467 ACRES±
MELVIN BRITTON	3.57 ACRES±

ROYALTY OWNERS

NAME	ACRES±	LEASE NO.
ADELE McDOUGAL ET AL	53 AC±	LEASE NO. 106136
ILENE BECKETT ET AL	183.16 AC±	LEASE NO. 1005925
MARY J. SMITH ET AL	134 AC±	LEASE NO. 1005950
JANE L. GARRISON ET AL	246 AC±	LEASE NO. 710485



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.

P.S. 2288 *Earl N. Thompson*

(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
 DATE DECEMBER 12, 20 13
 REVISED 07/02/15, 05/18/16 & 06/27/16
 OPERATORS WELL NO. WV 513762
 API WELL NO. 47 - 085 - 10085H
 STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 6811AD513762
 HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 2000'

STATE OF WEST VIRGINIA
 DIVISION OF ENVIRONMENTAL PROTECTION
 OFFICE OF OIL AND GAS

WELL TYPE: OIL GAS LIQUID INJECTION WASTE DISPOSAL IF "GAS" PRODUCTION STORAGE DEEP SHALLOW

LOCATION: ELEVATION 1,111'(PAD ELEVATION) WATERSHED STRAIGHT FORK
 DISTRICT UNION COUNTY RITCHIE QUADRANGLE OXFORD 7.5'
 SURFACE OWNER RICHARD L. & SHERYL A. RAY ACREAGE 255.50±
 ROYALTY OWNER HAUGHT FAMILY TRUST ET AL ACREAGE 402± LEASE NO. 105953
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG AND ABANDON CLEAN OUT AND REPLUG OTHER
 PHYSICAL CHANGE IN WELL (SPECIFY) MARCELLUS TARGET FORMATION MARCELLUS
 ESTIMATED DEPTH 6,461'

WELL OPERATOR EQT PRODUCTION COMPANY DESIGNATED AGENT REX C. RAY
 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330 ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280 BRIDGEPORT, WV 26330

09/07/2018

COUNTY NAME PERMIT