

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 514394

API: 47 - 017 - 6447

Submission: Initial Amended

Notes: Add'l Inj Tests- 4.01, 19.01, 25.01,
43.01, 43.02, 49.01, 53.01,

Reperf - 27.1

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Office of Oil and Gas
SEP 23 2015
WV Department of
Environmental Protection

03/25/2016

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

API 47 - 017 - 6447 County DODDRIDGE District WEST UNION
Quad WEST UNION 7.5' Pad Name WEU49 Field/Pool Name _____
Farm name MARY FARR SECRIST Well Number 514394
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 4,345,094 Easting 518,425
Landing Point of Curve Northing 4,344,637 Easting 517,961
Bottom Hole Northing 4,341,968 Easting 519,260

Elevation (ft) 1130 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)
SBM 12.0 ppg - powdered hydrocarbon resin, calcium carbonate, ground almond hulls, barium sulfate, calcium chloride, lecithin liquid, organophilic clay,
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 03/13/2014 Date drilling commenced 06/24/2014 Date drilling ceased 08/9/2015
Date completion activities began 5/27/2015 Date completion activities ceased 6/11/2015
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 487 Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1542 Void(s) encountered (Y/N) depths N
Coal depth(s) ft 340, 483 Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed by:
03/25/2016

API 47- 017 - 6447

Farm name MARY FARR SECRIST

Well number 514394

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	24"	20"	40'	NEW	A-500 40LB/FT	NONE	Y
Surface	17.5"	13.375"	1067'	NEW	J-55 54.5LB/FT	276'	Y
Coal							
Intermediate 1	12.375"	9.625"	5247'	NEW	P-110 40LB/FT	1451', 2282', 2946', 4214'	Y
Intermediate 2							
Intermediate 3							
Production	8.5"	5.5"	18136'	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	900	15.6	1.19	1071	0	8
Coal							
Intermediate 1	CLASS A / CLASS A	370 / 340	14.2 / 15.6	1.28 / 1.18	874.8	0	8
Intermediate 2							
Intermediate 3							
Production	Class A/ Class H	405/1305	14.2/15.2	1.26/1.97	3081	5800	8
Tubing							

Drillers TD (ft) 18146

Loggers TD (ft) N/A

Deepest formation penetrated Onondaga

Plug back to (ft) N/A

Plug back procedure _____

Kick off depth (ft) 5509'

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, 24

INTERMEDIATE- JOINTS: 1, 12, 24, 36, 48, 60, 72, 84, 96, 108, 121

PRODUCTION- JOINTS: 1-285 (5796'-18125')

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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- 017 - 6447 Farm name MARY FARR SECRIST Well number 514394

Drilling Contractor Orion 17
Address 674 Flato Road City Corpus Christi State TX Zip 78405

Logging Company ProDirectional
Address 103 Suds Run Rado City Mount Clare State WV Zip 26408

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

Cementing Company Nabors Cementing Services
Address 2504 Smith Creek Road City Waynesburg State PA Zip 15370

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Well 514394

API :47-170-6447

Farm Name: Mary Farr Secrist

Formations

Formation Name	Final Top MD (ftGL) (ft)	Final Top TVD (ft)	Final Btm MD (ftGL) (ft)	Final Btm TVD (ft)
FRESH WATER ZONE	1	1	497	497
SAND/SHALE	1	1	350	350
COAL	350	350	353	353
SAND/SHALE	353	353	493	493
PITTSBURGH COAL	493	493	495	495
SAND/SHALE	495	495	1,428.00	1,428.00
MAXTON	1,428.00	1,428.00	1,861.00	1,861.00
BIG LIME	1,861.00	1,861.00	2,156.00	2,156.00
WEIR	2,156.00	2,156.00	2,358.00	2,358.00
BEREA	2,358.00	2,358.00	2,363.00	2,363.00
GANTZ	2,363.00	2,363.00	2,484.00	2,484.00
50F	2,484.00	2,484.00	2,567.00	2,567.00
30F	2,567.00	2,567.00	2,610.00	2,610.00
GORDON	2,610.00	2,610.00	2,721.00	2,721.00
4TH	2,721.00	2,721.00	2,905.00	2,905.00
BAYARD	2,905.00	2,905.00	3,229.00	3,229.00
WARREN	3,229.00	3,229.00	3,293.00	3,293.00
SPEECHLEY	3,293.00	3,293.00	3,930.00	3,930.00
BALLTOWN A	3,930.00	3,930.00	4,227.00	4,227.00
BRADFORD	4,227.00	4,227.00	4,426.00	4,426.00
RILEY	4,426.00	4,426.00	4,867.00	4,867.00
BENSON	4,867.00	4,867.00	5,121.00	5,121.00
ALEXANDER	5,121.00	5,121.00	6,334.00	6,100.30
SONYEA	6,334.00	6,100.30	7,222.00	6,422.40
MIDDLESEX	7,222.00	6,422.40	7,361.00	6,473.20
GENESSEE	7,361.00	6,473.20	7,576.00	6,555.20
GENESE0	7,576.00	6,555.20	7,670.00	6,586.20
TULLY	7,670.00	6,586.20	7,746.00	6,607.20
HAMILTON	7,746.00	6,607.20	7,818.00	6,625.50
MARCELLUS	7,818.00	6,625.50		

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514394 - 47-017-6447-0000-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)
Initiation Sleeve	5/27/2015	23.2	6,681.00	8,485.00	5,149.00	0	975	0
1	5/27/2015	95.3	8,238.00	8,901.00	3,634.00	299,597	8,367	0
2	5/27/2015	90.2	8,159.00	8,960.00	3,833.00	300,103	7,890	0
3	5/28/2015	92.5	8,426.00	8,961.00	4,028.00	301,666	8,008	0
4	5/28/2015	35.4	7,545.00	9,467.00	4,659.00	0	3,660	0
4.01	5/29/2015	37.1	7,904.00	9,154.00	4,996.00	0	2,642	0
5	5/29/2015	94	8,111.00	8,478.00	4,408.00	504,237	12,194	0
6	5/30/2015	89.8	8,138.00	8,721.00	4,901.00	300,663	8,536	0
7	5/30/2015	94	8,176.00	8,752.00	4,498.00	297,494	7,735	0
8	5/30/2015	87.1	8,054.00	8,561.00	4,183.00	298,207	7,993	0
9	5/30/2015	90.8	8,047.00	8,452.00	3,741.00	298,537	7,690	0
10	5/30/2015	90.9	7,844.00	8,582.00	3,583.00	299,955	7,745	0
11	5/31/2015	95.5	8,017.00	8,384.00	3,488.00	299,025	7,710	0
12	5/31/2015	96.3	8,047.00	8,443.00	3,937.00	297,549	7,739	0
13	5/31/2015	98.9	8,136.00	8,845.00	3,607.00	299,379	7,788	0
14	5/31/2015	93.1	8,203.00	9,401.00	4,115.00	298,930	7,788	0
15	5/31/2015	93.8	8,046.00	9,010.00	4,664.00	299,623	7,653	0
16	6/1/2015	93.6	8,047.00	8,673.00	4,840.00	290,280	7,587	0
17	6/1/2015	97.6	7,999.00	9,033.00	4,293.00	299,723	7,839	0
18	6/1/2015	96.70	8,244.00	10,496.00	7,225	300,641	7,756	0
19	6/2/2015	90.90	8,095.00	8,607.00	4,846	301,498	8,265	0
19.01	6/2/2015	9.50	5,102.00	6,758.00	4,898	0	4,364	0
20	6/2/2015	93.50	8,269.00	8,680.00	4,350	300,975	7,735	0
21	6/2/2015	95.00	8,383.00	9,093.00	4,019	301,147	7,686	0
22	6/2/2015	95.70	8,192.00	9,494.00	4,671	300,083	8,442	0
23	6/3/2015	89.60	7,906.00	9,140.00	4,476	301,480	9,637	0
24	6/3/2015	94.6	8,397.00	8,858.00	4,409.00	300,429	8,127	0
25	6/3/2015	60.3	8,397.00	9,560.00	5,032.00	5,733	3,973	0
25.01	6/3/2015	50.4	8,244.00	8,508.00	5,665.00	515	2,769	0
26	6/3/2015	93	7,890.00	8,651.00	3,352.00	500,652	12,308	0
27	6/4/2015	52.4	8,637.00	9,067.00	5,767.00	11,415	5,509	0
27.1	6/4/2015	82.8	8,397.00	8,843.00	4,144.00	300,816	9,580	0
28	6/5/2015	94.8	8,211.00	9,450.00	4,813.00	301,058	7,609	0
29	6/5/2015	95.9	8,144.00	8,733.00	5,033.00	300,381	7,675	0
30	6/5/2015	98.8	8,174.00	8,726.00	5,269.00	302,046	7,714	0
31	6/5/2015	97.20	8,378.00	8,721.00	4,893	299,375	7,499	0
32	6/5/2015	99.60	7,966.00	8,578.00	4,872	300,971	7,582	0
33	6/6/2015	99.50	7,950.00	8,695.00	5,816	300,783	7,463	0
34	6/6/2015	100.40	7,733.00	8,546.00	4,817	300,107	7,465	0
35	6/6/2015	101.70	7,892.00	8,696.00	5,080	300,214	7,745	0
36	6/6/2015	99.60	7,574.00	8,407.00	5,240	299,722	7,373	0
37	6/6/2015	99.90	7,637.00	8,376.00	4,935	300,488	7,439	0
38	6/7/2015	100.60	7,567.00	8,580.00	5,298	300,477	7,431	0
39	6/7/2015	100.90	7,336.00	8,537.00	7,424	301,742	7,421	0
40	6/7/2015	100.60	7,551.00	8,225.00	4,762	301,721	7,363	0
41	6/7/2015	100.50	7,828.00	8,454.00	4,533	300,436	7,332	0
42	6/7/2015	100.40	7,626.00	8,212.00	5,153	300,770	7,355	0
43	6/8/2015	96.40	8,002.00	9,818.00	7,662	128,977	4,387	0
43.01	6/8/2015	76.20	12.90	8,640.00	4,776	0	4,075	0
43.02	6/8/2015	101.70	95.60	8,640.00	4,776	170,196	3,512	0
44	6/8/2015	100.20	7,805.00	8,289.00	4,762	300,440	7,278	0
45	6/8/2015	100.00	7,833.00	9,037.00	4,889	240,914	6,801	0
46	6/9/2015	99.90	7,819.00	8,990.00	5,424	299,466	7,247	0
47	6/9/2015	97.70	7,678.00	8,802.00	5,320	299,276	7,277	0
48	6/9/2015	100.60	7,774.00	10,056.00	7,623	300,077	6,924	0
49	6/10/2015	100.70	7,692.00	8,426.00	5,088	300,131	7,292	0
49.01	6/10/2015	11.10	5,266.00	6,418.00	4,918	0	2,725	0
50	6/10/2015	100.80	7,795.00	8,590.00	4,883	300,480	7,279	0
51	6/10/2015	98.40	8,117.00	9,122.00	3,784	299,293	7,253	0
52	6/10/2015	97.40	7,934.00	10,001.00	9,078	300,585	7,127	0
53	6/11/2015	101.60	7,346.00	8,194.00	4,788	299,819	7,116	0
53.01	6/11/2015	14.30	5,637.00	6,214.00	5,043	0	2,447	0
54	6/11/2015	100.40	7,273.00	8,585.00	5,057	300,102	7,137	0
55	6/11/2015	96.90	7,309.00	8,760.00	4,759	300,144	7,705	0

514394 - 47-017-6447-0000- Perforations

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Initiation Sleeve	4/25/2015	18,134.00	18,136.00	10	MARCELLUS
1	5/27/2015	17,990.00	18,111.00	28	MARCELLUS
2	5/27/2015	17,810.00	17,932.00	42	MARCELLUS
3	5/28/2015	17,630.00	17,750.00	42	MARCELLUS
4	5/28/2015	17,441.00	17,572.00	42	MARCELLUS
4.01	5/28/2015	17,440.00	17,462.00	42	MARCELLUS
5	5/28/2015	17,268.00	17,390.00	42	MARCELLUS
6	5/29/2015	17,090.00	17,212.00	42	MARCELLUS
7	5/30/2015	16,910.00	17,032.00	42	MARCELLUS
8	5/30/2015	16,730.00	16,852.00	42	MARCELLUS
9	5/30/2015	16,550.00	16,672.00	42	MARCELLUS
10	5/30/2015	16,370.00	16,492.00	42	MARCELLUS
11	5/31/2015	16,190.00	16,308.00	42	MARCELLUS
12	5/31/2015	16,010.00	16,132.00	42	MARCELLUS
13	5/31/2015	15,833.00	15,952.00	42	MARCELLUS
14	5/31/2015	15,650.00	15,772.00	42	MARCELLUS
15	5/31/2015	15,470.00	15,592.00	42	MARCELLUS
16	6/1/2015	15,290.00	15,412.00	42	MARCELLUS
17	6/1/2015	15,101.00	15,232.00	42	MARCELLUS
18	6/1/2015	14,930.00	15,054.00	42	MARCELLUS
19	6/2/2015	14,750.00	14,872.00	42	MARCELLUS
19.01	6/2/2015	14,930.00	15,054.00	42	MARCELLUS
20	6/2/2015	14,572.00	14,690.00	42	MARCELLUS
21	6/2/2015	14,390.00	14,512.00	42	MARCELLUS
22	6/2/2015	14,210.00	14,332.00	42	MARCELLUS
23	6/3/2015	14,030.00	14,150.00	42	MARCELLUS
24	6/3/2015	13,850.00	13,970.00	42	MARCELLUS
25	6/3/2015	13,670.00	13,790.00	42	MARCELLUS
25.01	6/3/2015	13,670.00	13,790.00	28	MARCELLUS
26	6/3/2015	13,490.00	13,610.00	42	MARCELLUS
27	6/4/2015	13,310.00	13,434.00	28	MARCELLUS
27.1	6/4/2015	13,336.00	13,434.00	42	MARCELLUS
28	6/5/2015	13,130.00	13,250.00	42	MARCELLUS
29	6/5/2015	12,950.00	13,070.00	42	MARCELLUS
30	6/5/2015	12,770.00	12,890.00	42	MARCELLUS
31	6/5/2015	12,590.00	12,714.00	42	MARCELLUS
32	6/5/2015	12,410.00	12,532.00	42	MARCELLUS
33	6/6/2015	12,280.00	12,352.00	42	MARCELLUS
34	6/6/2015	12,042.00	12,102.00	42	MARCELLUS
35	6/6/2015	11,870.00	11,990.00	42	MARCELLUS
36	6/6/2015	11,690.00	11,810.00	42	MARCELLUS
37	6/6/2015	11,510.00	11,630.00	42	MARCELLUS
38	6/7/2015	11,330.00	11,452.00	42	MARCELLUS
39	6/7/2015	11,150.00	11,274.00	42	MARCELLUS
40	6/7/2015	10,970.00	11,088.00	28	MARCELLUS
41	6/7/2015	10,790.00	10,910.00	42	MARCELLUS
42	6/7/2015	10,610.00	10,730.00	42	MARCELLUS
43	6/8/2015	10,430.00	10,550.00	42	MARCELLUS
44	6/8/2015	10,250.00	10,370.00	42	MARCELLUS
45	6/8/2015	10,070.00	10,190.00	42	MARCELLUS
46	6/9/2015	0.00	0.00	42	MARCELLUS
47	6/9/2015	9,710.00	9,830.00	42	MARCELLUS
48	6/9/2015	9,528.00	9,652.00	42	MARCELLUS
49	6/10/2015	9,350.00	9,470.00	42	MARCELLUS
50	6/10/2015	9,170.00	9,291.00	42	MARCELLUS
51	6/10/2015	8,990.00	9,110.00	42	MARCELLUS
52	6/10/2015	8,810.00	8,932.00	42	MARCELLUS

03/25/2016

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	5/27/2015
Job End Date:	6/11/2015
State:	West Virginia
County:	Doddridge
API Number:	47-017-06447-00-00
Operator Name:	EQT Production
Well Name and Number:	514394
Longitude:	-80.78663000
Latitude:	39.25493000
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,626
Total Base Water Volume (gal):	18,888,996
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	90.29209	None
Sand (Proppant)	FTS International	Proppant	Crystalline Silica	14808-60-7	100.00000	9.31429	None
MC MX 437-5	Multi-Chem	Calcium nitrate solution	Calcium nitrate	10124-37-5	60.00000	0.05815	None
FRW-900	FTS International	Friction reducer	Hydrotreated light distillate	64742-47-8	30.00000	0.02487	None
			Alkyl Alcohol	Proprietary	10.00000	0.00829	None
			Oxyalkylated alcohol A	Proprietary	5.00000	0.00415	None
Hydrochloric Acid (15%)	FTS International	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.02762	None
HVG-1	FTS International	Gelling agent	Petroleum distillate	64742-47-8	55.00000	0.00143	None
			Guar gum	9000-30-0	50.00000	0.00130	None
			Clay	14808-60-7	2.00000	0.00005	None
			Surfactant	68439-51-0	2.00000	0.00005	None
CS-500-SI	FTS International	Scale inhibitor					

FE-100L	FTS International	Iron control	Ethylene glycol	107-21-1	10.00000	0.00252	None
			Citric acid	77-92-9	55.00000	0.00062	None
CI-150	FTS International	Acid Corrosion Inhibitor					
			Ethylene glycol	107-21-1	30.00000	0.00010	None
			Organic amine resin salt	Proprietary	30.00000	0.00010	None
			Isopropanol	67-63-0	30.00000	0.00010	None
			Aromatic aldehyde	Proprietary	10.00000	0.00003	None
			Quaternary ammonium compound	Proprietary	10.00000	0.00003	None
			Dimethylformamide	68-12-2	10.00000	0.00003	None
NE-100	FTS International	Non-emulsifier					
			2-Propanol	67-63-0	10.00000	0.00003	None
			2-Butoxyethanol	111-76-2	10.00000	0.00003	None
			Dodecylbenzenesulfonic acid	27176-87-0	5.00000	0.00001	None
APB-1	FTS International	Breaker					
			Ammonium persulfate	7727-54-0	95.00000	0.00005	None
B-10	FTS International	High pH buffer					
			Potassium carbonate	584-08-7	48.00000	0.00001	None
			Potassium hydroxide	1310-58-3	20.00000	0.00001	None

Ingredients shown above are subject to 29 CFR 1910.1200(i) and appear on Material Safety Data Sheets (MSDS). Ingredients shown below are Non-MSDS.

* Total Water Volume sources may include fresh water, produced water, and/or recycled water

** Information is based on the maximum potential for concentration and thus the total may be over 100%

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)

WELL NO. WV 514394
STATE PLANE COORDINATES
(NORTH ZONE) NAD 27

N. 277,554.7
E. 1,635,663.7

LAT=(N) 39.254889
LONG=(W) 80.786630

UTM (NAD83)(METERS)
N. 4,345,093.5
E. 518,424.5

EQT PRODUCTION COMPANY LEWIS MAXWELL LEASE 2,654 ACRES± WELL NO. WV 514394

A	KEVIN & ROBERT ORNDORFF	2 ACRES±	TM 20-20
B	EDWARD & FERN WERNER	2.02 ACRES±	TM 20-16
C	TIMBERLAND TRUST	2.02 ACRES±	TM 20-13
D	HENRY FLUHARTY, ET AL	2.02 ACRES±	TM 20-17
E	WILLIAM & WANDA BLEVINS	2.01 ACRES±	TM 20-18

LANDING POINT
WELL NO. WV 514394
STATE PLANE COORDINATES
(NORTH ZONE) NAD 27

N. 276,081.0
E. 1,634,116.3

LAT=(N) 39.250782
LONG=(W) 80.792019

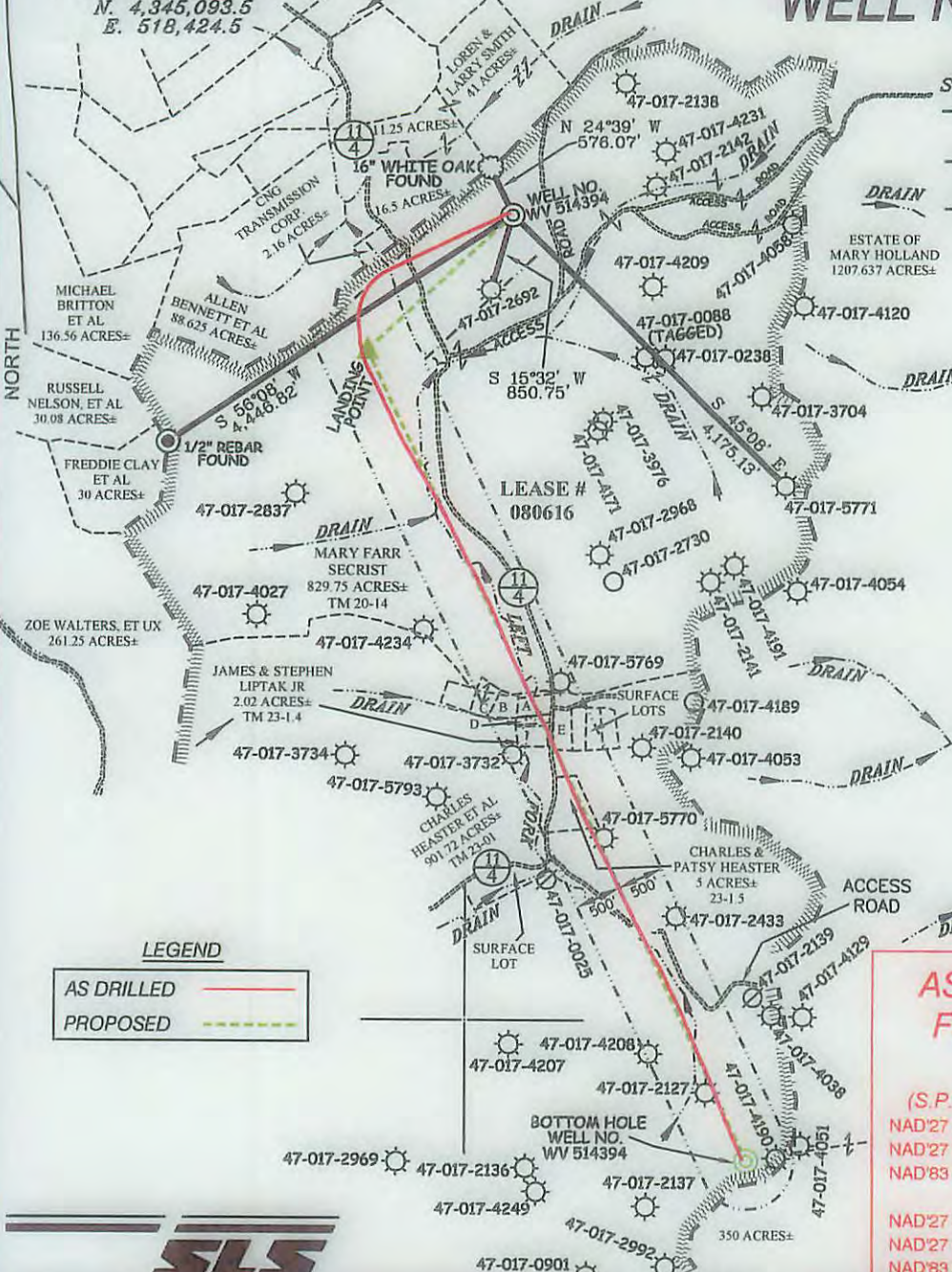
UTM (NAD83)(METERS)
N. 4,344,636.7
E. 517,960.6

BOTTOM HOLE
WELL NO. WV 514394
STATE PLANE COORDINATES
(NORTH ZONE) NAD 27

N. 267,253.6
E. 1,638,232.6

LAT=(N) 39.226709
LONG=(W) 80.777042

UTM (NAD83)(METERS)
N. 4,341,968.4
E. 519,259.5



NOTES ON SURVEY

1. TIES TO WELLS, CORNERS AND REFERENCES ARE BASED ON GRID NORTH FOR THE WV STATE PLANE COORDINATE SYSTEM NORTH ZONE NAD '27.
2. LEASE BOUNDARY SHOWN HEREON TAKEN FROM DB 28 PG 177.
3. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF DODDRIDGE COUNTY IN JULY, 2013.
4. WELL LAT./LONG. (NAD'27) ESTABLISHED BY DGPS(SURVEY GRADE TIE TO CORS NETWORK).
5. PLAT DATED 09/19/13 REVISED 12/02/13 TO CONCUR WITH DEP REGULATIONS.
6. NO WATER WELLS WERE FOUND WITHIN 250 FEET OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS (GREATER THAN 2500 SQUARE FEET) OR DWELLINGS WERE FOUND WITHIN 625 FEET OF CENTER OF PROPOSED WELL PAD.
7. AS DRILLED INFORMATION PROVIDED BY EQT.

LEGEND

AS DRILLED	
PROPOSED	

**AS DRILLED COORDINATES
FOR WELL NO. WV 514394
(WEU49 H5)**

(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD27 S.P.C.(FT)	N. 277,562.9	E. 1,635,630.8
NAD27 GEO.	LAT-(N) 39.254910	LONG-(W) 80.786747
NAD83 UTM (M)	N. 4,345,095.8	E. 518,414.5

BOTTOM HOLE

NAD27 S.P.C.(FT)	N. 267,261.3	E. 1,638,196.4
NAD27 GEO.	LAT-(N) 39.226729	LONG-(W) 80.777170
NAD83 UTM (M)	N. 4,341,970.5	E. 519,248.4

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. *Earl N. Thompson*
2288



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS.
DATE DECEMBER 03, 20 13
REVISED SEPTEMBER 10, 20 15

OPERATORS WELL NO. WV 514394
API WELL NO. 47 - 017 - 06447H

MINIMUM DEGREE OF ACCURACY 1 / 200 FILE NO. 7871AD514394
PROVEN SOURCE OF ELEVATION 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 1,160'(GROUND) 1,130'(PROPOSED) WATERSHED LEFT FORK OF ARNOLD CREEK
DISTRICT WEST UNION COUNTY DODDRIDGE QUADRANGLE WEST UNION 7.5'

SURFACE OWNER MARY FARR SECRIST ACREAGE 829.75±
ROYALTY OWNER LEWIS MAXWELL HRS ACREAGE 2654±

PROPOSED WORK: LEASE NO. 080616

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) TARGET FORMATION MARCELLUS ESTIMATED DEPTH

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

03/25/2016

LONGITUDE 80°45'00" COUNTY NAME PERMIT