

APPROVED

NAME: *Jacqueline Monte*

DATE: *2/11/2016*

Well Operator's Report of Well Work



Where energy meets innovation.

Well Number: 512476

API: 47 - 0170 - 6390

Submission: Initial Amended

Notes: Stimulation Notes:

Re-perforated stage 25 (25.1)

Combined stages 6 and 7

Performed additional injection tests prior to stages 4 (two test), 7, 25.1, 26, and 27

Weatherford International fractured stages 1 - 3

FTS International Services fractured stages 4 - 44

Correction to Production Cement Top (MD)

RECEIVED
Office of Oil and Gas

DEC 21 2015

WV Department of
Environmental Protection

AX WS 03/25/2016

512476 - 47-017-06390-0000 - Perforations

Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Initiation Sleeve	7/29/2014	13,763.00	13,766.00	10	MARCELLUS
1	7/30/2014	13,642.00	13,732.00	32	MARCELLUS
2	7/31/2014	13,492.00	13,612.00	40	MARCELLUS
3	7/31/2014	13,342.00	13,478.00	40	MARCELLUS
4	10/31/2014	13,192.00	13,312.00	40	MARCELLUS
5	10/31/2014	13,042.00	13,062.00	40	MARCELLUS
6	10/31/2014	12,892.00	13,012.00	40	MARCELLUS
7	11/6/2014	12,742.00	12,862.00	56	MARCELLUS
8	11/7/2014	12,592.00	12,712.00	40	MARCELLUS
9	11/7/2014	12,442.00	12,562.00	40	MARCELLUS
10	11/7/2014	12,292.00	12,412.00	40	MARCELLUS
11	11/7/2014	12,142.00	12,262.00	40	MARCELLUS
12	11/8/2014	11,992.00	12,108.00	40	MARCELLUS
13	11/8/2014	11,842.00	11,957.00	40	MARCELLUS
14	11/8/2014	11,692.00	11,812.00	40	MARCELLUS
15	11/9/2014	11,542.00	11,662.00	40	MARCELLUS
16	11/9/2014	11,392.00	11,512.00	40	MARCELLUS
17	11/9/2014	11,242.00	11,358.00	40	MARCELLUS
18	11/9/2014	11,092.00	11,212.00	40	MARCELLUS
19	11/9/2014	10,942.00	11,062.00	40	MARCELLUS
20	11/10/2014	10,792.00	10,912.00	40	MARCELLUS
21	11/10/2014	10,642.00	10,762.00	40	MARCELLUS
22	11/10/2014	10,492.00	10,612.00	40	MARCELLUS
23	11/11/2014	10,342.00	10,462.00	40	MARCELLUS
24	11/11/2014	10,192.00	10,312.00	40	MARCELLUS
25	11/11/2014	10,042.00	10,162.00	40	MARCELLUS
25.1 (Re-Perf)	11/11/2014	10,032.00	10,094.00	24	MARCELLUS
26	11/12/2014	9,882.00	10,002.00	40	MARCELLUS
27	11/12/2014	9,732.00	9,852.00	40	MARCELLUS
28	11/13/2014	9,582.00	9,702.00	40	MARCELLUS
29	11/13/2014	9,432.00	9,552.00	40	MARCELLUS
30	11/14/2014	9,282.00	9,402.00	40	MARCELLUS
31	11/14/2014	9,142.00	9,240.00	40	MARCELLUS
32	11/14/2014	8,992.00	9,092.00	40	MARCELLUS
33	11/15/2014	8,842.00	8,942.00	40	MARCELLUS
34	11/15/2014	8,692.00	8,792.00	40	MARCELLUS
35	11/15/2014	8,542.00	8,642.00	40	MARCELLUS
36	11/15/2014	8,392.00	8,492.00	40	MARCELLUS
37	11/15/2014	8,232.00	8,352.00	40	MARCELLUS
38	11/16/2014	8,082.00	8,202.00	40	MARCELLUS
39	11/16/2014	7,932.00	8,052.00	40	MARCELLUS
40	11/16/2014	7,782.00	7,902.00	40	MARCELLUS
41	11/16/2014	7,632.00	7,752.00	40	MARCELLUS
42	11/16/2014	7,482.00	7,602.00	40	MARCELLUS
43	11/17/2014	7,332.00	7,452.00	40	MARCELLUS
44	11/17/2014	7,182.00	7,302.00	40	MARCELLUS

03/25/2016

512476 - 47-017-06390-0000 - 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)
Inflation Sleeve	7/29/2014	NA	NA	NA	4,950	NA	1,717	0
1	7/31/2014	77.40	8,871.00	9,470.00	5,075	250,800	6,428	0
2	7/31/2014	86.40	9,095.00	9,373.00	5,289	250,820	6,538	0
3	8/1/2014	87.00	8,144.00	9,605.00	4,878	241,480	6,372	0
Injection Test	8/2/2014	2.50	4,853.00	NA	4,200	0	941	0
Injection Test	10/30/2014	3.50	4,532.00	NA	4,980	0	3,680	0
4	10/31/2014	87.30	7,443.00	8,176.00	4,727	250,304	6,764	0
5	10/31/2014	81.70	7,956.00	8,761.00	5,493	201,877	5,795	0
6	11/1/2014	78.80	8,283.00	9,116.00	5,322	4,201	1,843	0
Injection Test	11/1/2014	3.20	6,670.00	NA	8,027	0	327	0
7	11/6/2014	99.40	8,257.00	8,929.00	5,111	389,351	10,567	0
8	11/7/2014	94.30	7,571.00	8,151.00	4,447	201,250	5,550	0
9	11/7/2014	92.10	7,812.00	8,589.00	4,780	205,835	5,575	0
10	11/7/2014	95.10	7,897.00	8,347.00	5,078	203,605	5,518	0
11	11/8/2014	98.00	8,153.00	8,601.00	5,413	202,625	5,788	0
12	11/8/2014	93.50	8,134.00	8,788.00	4,983	200,335	5,246	0
13	11/8/2014	79.60	8,246.00	8,771.00	5,704	149,230	3,842	0
14	11/8/2014	96.30	8,280.00	8,665.00	5,355	200,255	5,333	0
15	11/9/2014	98.30	8,426.00	8,740.00	5,313	199,311	5,292	0
16	11/9/2014	94.20	8,335.00	8,878.00	5,225	202,240	5,630	0
17	11/9/2014	95.60	8,273.00	8,684.00	5,155	200,280	5,204	0
18	11/9/2014	88.80	8,414.00	8,945.00	5,419	197,956	5,265	0
19	11/10/2014	97.90	8,282.00	8,814.00	4,955	197,519	5,148	0
20	11/10/2014	96.70	7,891.00	8,594.00	4,927	201,784	5,222	0
21	11/10/2014	97.00	8,129.00	9,140.00	5,644	182,155	4,879	0
22	11/11/2014	88.10	8,438.00	9,030.00	5,437	152,442	6,171	0
23	11/11/2014	97.90	8,199.00	8,413.00	4,638	198,105	5,470	0
24	11/11/2014	93.40	8,142.00	8,712.00	5,380	197,518	5,040	0
25	11/11/2014	69.10	7,370.00	9,087.00	4,651	76,500	3,252	0
Injection Test	11/11/2014	18.00	7,233.00	NA	5,362	0	863	0
25.1 (Re-Perf)	11/12/2014	84.20	7,417.00	9,609.00	4,639	68,400	2,463	0
Injection Test	11/12/2014	12.00	6,700.00	7,934.00	3,920	0	2,321	0
26	11/12/2014	85.30	7,325.00	9,375.00	4,891	156,509	6,344	0
Injection Test	11/13/2014	11.00	5,450.00	6,382.00	4,996	0	1,261	0
27	11/13/2014	91.70	7,620.00	8,121.00	4,403	198,574	5,332	0
28	11/13/2014	91.40	7,663.00	8,296.00	3,888	197,000	5,275	0
29	11/14/2014	93.70	8,200.00	8,552.00	4,535	194,316	5,625	0
30	11/14/2014	90.30	8,002.00	8,477.00	4,421	198,800	5,341	0
31	11/14/2014	98.50	7,924.00	8,250.00	5,268	196,120	5,325	0
32	11/15/2014	100.80	7,556.00	7,774.00	5,132	198,000	5,351	0
33	11/15/2014	99.20	7,334.00	7,741.00	4,036	200,211	5,273	0
34	11/15/2014	99.60	7,572.00	7,932.00	4,356	203,137	5,274	0
35	11/15/2014	96.30	7,830.00	8,493.00	4,799	196,700	6,034	0
36	11/15/2014	92.40	7,385.00	7,794.00	4,385	195,900	5,519	0
37	11/16/2014	100.40	7,465.00	7,715.00	4,978	198,100	5,311	0
38	11/16/2014	99.10	7,374.00	7,625.00	4,139	198,789	5,333	0
39	11/16/2014	98.70	7,332.00	8,148.00	5,374	197,161	5,183	0
40	11/16/2014	97.70	7,580.00	7,968.00	4,447	196,500	5,459	0
41	11/16/2014	98.70	7,215.00	7,379.00	5,388	198,800	5,351	0
42	11/17/2014	98.70	7,117.00	7,353.00	4,944	197,500	5,316	0
43	11/17/2014	99.20	7,377.00	7,520.00	5,113	198,369	5,277	0
44	11/17/2014	90.50	7,321.00	7,996.00	5,097	198,867	6,237	0

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	7/29/2014
Job End Date:	11/17/2014
State:	West Virginia
County:	Doddridge
API Number:	47-017-06390-00-00
Operator Name:	EQT Production
Well Name and Number:	OXF150 - 512476
Longitude:	-80.79104700
Latitude:	39.22312800
Datum:	NAD83
Federal/Tribal Well:	NO
True Vertical Depth:	6,764
Total Base Water Volume (gal):	11,246,298
Total Base Non Water Volume:	514,548



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	FTSI	Carrier	Water	7732-18-5	100.00000	82.41837	
Water	Weatherford	Carrier	Water	7732-18-5	100.00000	8.03463	
Sand	FTSI	Proppant	Crystalline Silica	14808-60-7	100.00000	7.72663	
Sand	Weatherford	Proppant	Crystalline Silica	14808-60-7	100.00000	0.71749	
Hydrochloric Acid 15%	FTSI	Acidizing	Hydrochloric Acid	7647-01-0	15.00000	0.11332	
MX-5	Halliburton	Biocide	Sodium Nitrate	7631-99-4	60.00000	0.05732	
HVG-1	FTSI	Gel	Petroleum Distillate	64742-47-8	55.00000	0.02626	
			Guar Gum	9000-30-0	50.00000	0.02387	
			Surfactant	68439-51-0	2.00000	0.00095	
			Clay	14808-60-7	2.00000	0.00095	
FRW-600	FTSI	Friction Reducer	Hydrotreated light distillate	64742-47-8	30.00000	0.02441	

EQT PRODUCTION COMPANY LEWIS MAXWELL LEASE 2654 ACRES ± WELL NO. WV 512476

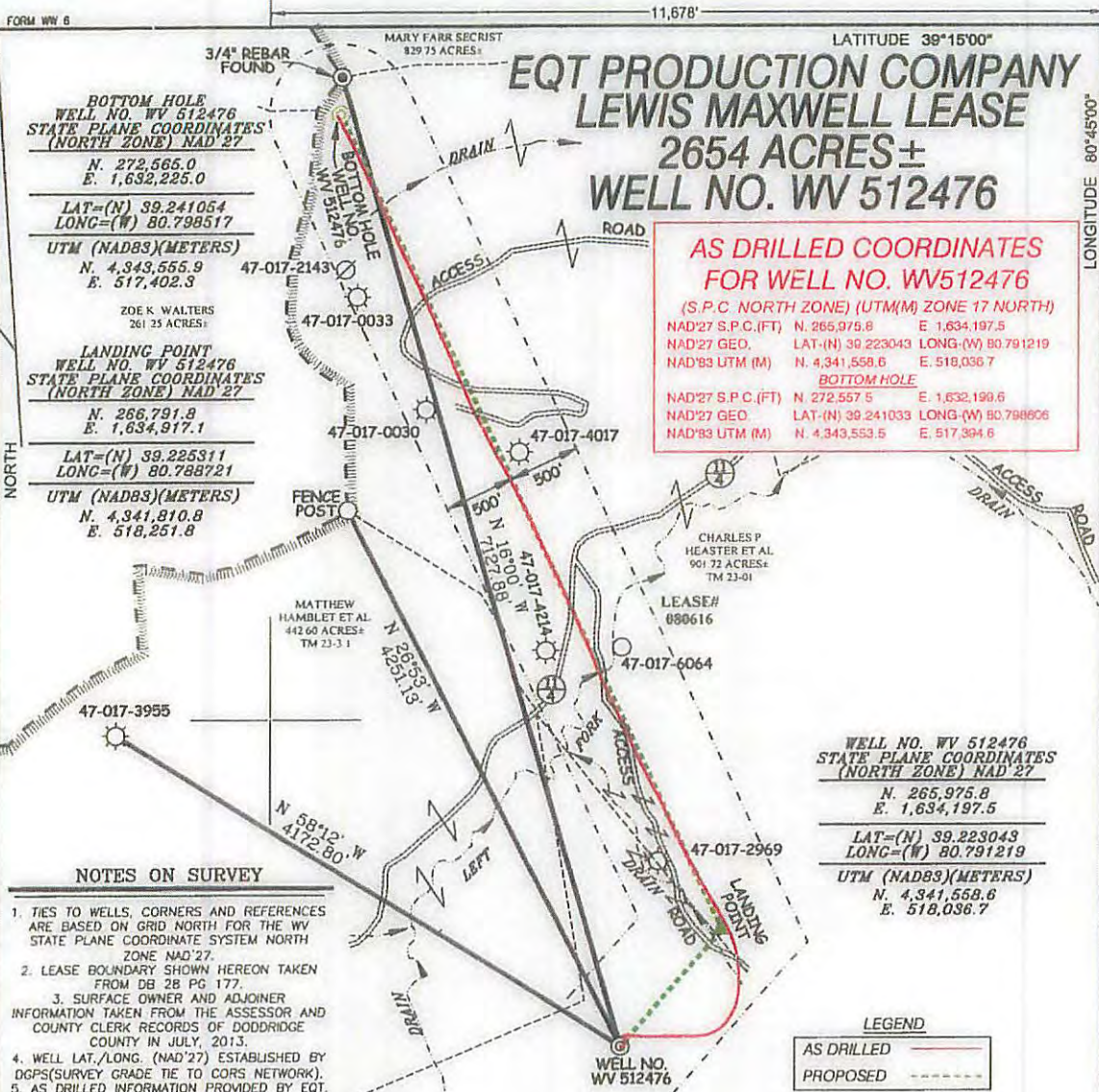
AS DRILLED COORDINATES FOR WELL NO. WV512476

(S.P.C. NORTH ZONE) (UTM/M) ZONE 17 NORTH)
 NAD'27 S.P.C.(FT) N. 265,975.8 E. 1,634,197.5
 NAD'27 GEO. LAT-(N) 39.223043 LONG-(W) 80.791219
 NAD'83 UTM (M) N. 4,341,558.6 E. 518,036.7
BOTTOM HOLE
 NAD'27 S.P.C.(FT) N. 272,557.5 E. 1,632,199.6
 NAD'27 GEO. LAT-(N) 39.241033 LONG-(W) 80.798606
 NAD'83 UTM (M) N. 4,343,553.5 E. 517,394.6

BOTTOM HOLE
 WELL NO. WV 512476
 STATE PLANE COORDINATES
 (NORTH ZONE) NAD 27
 N. 272,565.0
 E. 1,632,225.0
 LAT=(N) 39.241054
 LONG=(W) 80.798517
 UTM (NAD83)(METERS)
 N. 4,343,555.9
 E. 517,402.3

ZOE K. WALTERS
 261.25 ACRES

LANDING POINT
 WELL NO. WV 512476
 STATE PLANE COORDINATES
 (NORTH ZONE) NAD 27
 N. 266,791.9
 E. 1,634,917.1
 LAT=(N) 39.225311
 LONG=(W) 80.788721
 UTM (NAD83)(METERS)
 N. 4,341,810.8
 E. 518,251.8



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 DE 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. AS DRILLED INFORMATION PROVIDED BY EQT.

WELL NO. WV 512476
 STATE PLANE COORDINATES
 (NORTH ZONE) NAD 27
 N. 265,975.8
 E. 1,634,197.5
 LAT=(N) 39.223043
 LONG=(W) 80.791219
 UTM (NAD83)(METERS)
 N. 4,341,558.6
 E. 518,036.7

LEGEND

AS DRILLED	—————
PROPOSED	-----



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	AUGUST 29	20	13
REVISED	JANUARY 29	20	15
OPERATORS WELL NO.	WV 512476		
API WELL NO.	47		
STATE	COUNTY	PERMIT	

MINIMUM DEGREE OF ACCURACY 1/200 FILE NO. 6980ASDRILLED512476
 PROVEN SOURCE OF ELEVATION DGPS (SURVEY GRADE TIE TO CORS NETWORK) SCALE 1" = 1000'

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 1,269' (GROUND) 1,268' (PROPOSED) WATERSHED LEFT FORK ARNOLDS CREEK
 DISTRICT WEST UNION COUNTY DODDRIDGE QUADRANGLE OXFORD 7.5'

SURFACE OWNER LUCY E. HARPER ACREAGE 442.60 ±
 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