Well Operator's Report of Well Work

Where energy meets innovation.

Well Number: 512916

API: 47 - 103 - 03058

Submission: ☑ Initial ☐ Amended

Notes: Initial report w/ Flowback

RECEIVED
Office of Oil and Gas

JAN 24 2018

WV Department of
Environmental Protection

WR-35
Rev. 8/23/13

Page ___ of ___

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

RECEIVED
Office of Oil and Gas

JAN 24 2018

WV Department of
Environmental Protection

API 47 - 103 - 03058 County Wetzel District Grant
Quad Big Run 7.5 Pad Name BIG177 Field/Pool Name
Farm name Coastal Forest Resources DBA Coastal Timberlands Co Well Number 512916
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	4,381,520.422	Easting	535,727.679
Landing Point of Curve	Northing	4,381,680.87	Easting	535,391.50
Bottom Hole	Northing	4,383,915.60	Easting	534,305.98

Elevation (ft) 811' 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)
Water base Mud 13.7 ppg barium sulfate, sodium chloride, xanthan gum, polyanionic cellulose, modified starch, sodium hydroxide, phosphonates and alkyl phophates, 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 5/3/2016 Date drilling commenced 4/30/2017 Date drilling ceased 9/3/2017
Date completion activities began 9/29/2017 Date completion activities ceased 10/27/2017
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 173', 283', 483', 633' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1,138', 1,453' Void(s) encountered (Y/N) depths N
Coal depth(s) ft 103', 156', 434', 544' Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed

Reviewed by:
DMH

WR-35
Rev. 8/23/13

API 47- 103 - 03058 Farm name Coastal Forest Resources DBA Coastal Timberlands Co Well number 512916

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	30"	26"	80'	NEW	A-500	N/A	Y
Fresh Water	24"	18 5/8"	325'	NEW	J-55	160'	Y
Surface	17 1/2"	13 3/8	768'	NEW	J-55	341'	Y
Intermediate 1	12 3/8"	9 5/8"	2731'	NEW	A-500	1128'	Y
Intermediate 2							
Intermediate 3							
Production	8-3/4" & 8-1/2"	5-1/2"	15667'	NEW	P-110	N/A	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	200	15.6	1.18	236	0	8
Fresh Water	Class A	718	15.6	1.20	862	0	8
Surface	Class A	668	15.6	1.20	802	0	8
Intermediate 1	Class A / Class A	238 / 905	15.6 / 16.2	1.18 / 1.10	1276	0	8
Intermediate 2							
Intermediate 3							
Production	Class H / Class H	208 / 1039	15.2 / 15.6	1.25 / 2.06	260 / 2140 / 2400	6200	72+
Tubing							

Drillers TD (ft) 15667' Loggers TD (ft) N/A
Deepest formation penetrated Marcellus Plug back to (ft) N/A
Plug back procedure N/A

Kick off depth (ft) 5525'

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
FRESH WATER: 2 CENTRALIZERS AT 323' & 77'
SURFACE: 3 CENTRALIZERS AT 766', 378', 112'
INTERMEDIATE:6 CENTRALIZERS AT EVERY 500' from 2729' to 244'
PRODUCTION: Composite body spiral centralizers run every joint from 15565' to 5488'

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

RECEIVED
Office of Oil and Gas
JAN 24 2018
WV Department of
Environmental Protection

WR-35
Rev. 8/23/13

API 47- 103 - 03058 Farm name Coastal Forest Resources DBA Coastal Timberlands Co Well number 512916

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

Please insert additional pages as applicable.

RECEIVED
Office of Oil and Gas
JAN 24 2018
WV Department of
Environmental Protection

WR-35
Rev. 8/23/13

Page ___ of ___

API 47- 103 - 03058 Farm name Coastal Forest Resources DBA Coastal Timberlands Co Well number 512916

PRODUCING FORMATION(S)	DEPTHS			
Marcellus	6,838'	TVD	7,343'	MD

Please insert additional pages as applicable.

GAS TEST ☐ Build up ☐ Drawdown ■ Open Flow OIL TEST ■ Flow ☐ Pump

SHUT-IN PRESSURE Surface 1,450 psi Bottom Hole N/A psi DURATION OF TEST 83.5 hrs

OPEN FLOW	Gas	Oil	NGL	Water	GAS MEASURED BY
	20,956 mcfpd	N/A bpd	0 bpd	1,016 bpd	☐ Estimated ■ Orifice ☐ Pilot

LITHOLOGY/ FORMATION NAME	TOP DEPTH IN FT TVD	BOTTOM DEPTH IN FT TVD	TOP DEPTH IN FT MD	BOTTOM DEPTH IN FT MD	DESCRIBE ROCK TYPE AND RECORD QUANTITYAND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H_2S, ETC)
	0		0		

Please insert additional pages as applicable.

Drilling Contractor Decker Drilling Rig 11
Address 11565 State Route 676 City Vincent State OH Zip 45784

Logging Company Scientific Drilling
Address 124 Vista Drive City Charleroi State PA Zip 15022

Cementing Company BJ Services
Address 2228 Philippi Pike City Clarksburg State WV Zip 26301

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

Please insert additional pages as applicable.

RECEIVED
Office of Oil and Gas

Completed by Michael Reid Telephone (412) 553-5815
Signature Title Dir Completions Date 1/22/2018

JAN 24 2018

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

WV Department of
Environmental Protection

WR-35
Rev. 8/23/13

Page ___ of ___

API 47- 103 - 03058 Farm name Coastal Forest Resources DBA Coastal Timberlands Co Well number 512916

Drilling Contractor Savanna Drilling Rig 803
Address 125 Industry Road City Rices Landing State PA Zip 15357

Logging Company Gyro Data Inc.
Address 601 Maver St. City Bridgeville State PA Zip 15017

Logging Company Phoenix Technology Services
Address 1805 Brittmoore Road City Houston State TX Zip 77043

Cementing Company BJ Services
Address 2228 Philippi Pike City Clarksburg State WV Zip 26301

RECEIVED
Office of Oil and Gas

JAN 24 2018

WV Department of
Environmental Protection

Final Formations Well #512916 API # 47-103-03058

Formation Name	Drill Top MD (ftKB)	Drill Top (TVD) (ftKB)	Drill Btm MD (ftKB)	Drill Btm (TVD) (ftKB)
SAND/SHALE	1	1	113	113
COAL	113	113	116	116
SAND/SHALE	116	116	166	166
WAYNESBURG	166	166	170	170
SAND/SHALE	170	170	444	444
MAPLETOWN	444	444	448	448
SAND/SHALE	448	448	554	554
PITTSBURGH	554	554	561	561
SAND/SHALE	561	561	1705	1703
MAXTON	1705	1703	1749	1747
SAND/SHALE	1749	1747	1821	1819
BIG LIME	1821	1819	1874	1872
SAND/SHALE	1874	1872	2203	2201
WEIR	2203	2201	2231	2229
SAND/SHALE	2231	2229	2377	2375
GANTZ	2377	2375	2415	2413
SAND/SHALE	2415	2413	2528	2526
50F	2528	2526	2573	2571
SAND/SHALE	2573	2571	2599	2597
30F	2599	2597	2633	2631
SAND/SHALE	2633	2631	2646	2644
GORDON	2646	2644	2691	2689
SAND/SHALE	2691	2689	2733	2731
4TH SAND	2733	2731	2744	2742
SAND/SHALE	2744	2742	2785	2783
BAYARD	2785	2783	2858	2856
SAND/SHALE	2858	2856	3242	3240
WARREN	3242	3240	3288	3286
SAND/SHALE	3288	3286	3392	3390
SPEECHLEY	3392	3390	3406	3404
SAND/SHALE	3406	3404	3781	3779
BALLTOWN A	3781	3779	3798	3796
SAND/SHALE	3798	3796	4241	4239
RILEY	4241	4239	4254	4252
SAND/SHALE	4254	4252	4893	4891
BENSON	4893	4891	4932	4930
ALEXANDER	5241	5239	6581	6419
SONYEA	6581	6419	6761	6548
MIDDLESEX	6761	6548	6852	6612
GENESEE	6852	6612	6970	6688
GENESEO	6970	6688	7032	6723
TULLY	7032	6723	7065	6740
HAMILTON	7065	6740	7343	6838
MARCELLUS	7343	6838	15667	6804

RECEIVED
Office of Oil and Gas

JAN 24 2018

WV Department of
Environmental Protection

Where energy meets innovation.

EQT PRODUCTION

Wetzel County, WV
Big 177
Well #512916 - MRC - Slot 512916
API#47-103-03058
OH

Design: 512916 As Drilled

Standard Survey Report

05 September, 2017

PHOENIX
TECHNOLOGY SERVICES

RECEIVED
Office of Oil and Gas
JAN 24 2018
WV Department of
Environmental Protection

Phoenix Technology Services LP

Survey Report

Company:	EQT PRODUCTION	Local Co-ordinate Reference:	Well Well #512916 - MRC - Slot 512916
Project:	Wetzel County, WV	TVD Reference:	KB @23' @ 834.0usft
Site:	Big 177	MD Reference:	KB @23' @ 834.0usft
Well:	Well #512916 - MRC	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	512916 As Drilled	Database:	Compass 5000 NER

Project Wetzel County, WV

Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	West Virginia North 4701		

Site Big 177

Site Position:		Northing:	396,138.09 usft	Latitude:	39° 34' 57.245 N
From:	Map	Easting:	1,694,445.70 usft	Longitude:	80° 35' 2.833 W
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	-0.69 °

Well Well #512916 - MRC - Slot 512916

Well Position	+N/-S	0.0 usft	Northing:	396,140.09 usft	Latitude:	39° 34' 57.263 N
	+E/-W	0.0 usft	Easting:	1,694,435.93 usft	Longitude:	80° 35' 2.958 W
Position Uncertainty		0.0 usft	Wellhead Elevation:	0.0 usft	Ground Level:	811.0 usft

Wellbore OH

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	HDGM	8/23/2017	-8.35	66.90	52,341

Design 512916 As Drilled

Audit Notes:

Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.0	0.0	0.0	330.31

RECEIVED
Office of Oil and Gas
JAN 24 2018
WV Department of
Environmental Protection

Survey Program Date 9/5/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
110.0	5,522.0	512916 Gyrodata Gyro (OH)	GYD_DP_MS	Gyrodata gyro-compassing and dro
5,564.0	6,438.0	SDI Air Curve (OH)	SDI MWD	SDI MWD - Standard ver 1.0.1
6,517.0	15,667.0	Phoenix MWD Surveys (OH)	MWD+HDGM	OWSG Rev.2 MWD + HDGM

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
110.0	0.44	132.41	110.0	-0.3	0.3	-0.4	0.40	0.40	0.00
210.0	0.42	139.98	210.0	-0.8	0.8	-1.1	0.06	-0.02	7.57
310.0	0.37	129.79	310.0	-1.3	1.3	-1.8	0.09	-0.05	-10.19
410.0	0.40	121.11	410.0	-1.7	1.9	-2.4	0.07	0.03	-8.68
510.0	0.44	132.47	510.0	-2.1	2.4	-3.1	0.09	0.04	11.36
610.0	0.29	124.31	610.0	-2.5	2.9	-3.7	0.16	-0.15	-8.16
710.0	0.18	145.75	710.0	-2.8	3.2	-4.0	0.14	-0.11	21.44
810.0	0.62	323.75	810.0	-2.5	3.0	-3.7	0.80	0.44	178.00

Company:	EQT PRODUCTION	Local Co-ordinate Reference:	Well Well #512916 - MRC - Slot 512916
Project:	Wetzel County, WV	TVD Reference:	KB @23' @ 834.0usft
Site:	Big 177	MD Reference:	KB @23' @ 834.0usft
Well:	Well #512916 - MRC	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	512916 As Drilled	Database:	Compass 5000 NER

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
910.0	2.76	314.65	909.9	-0.4	1.0	-0.8	2.15	2.14	-9.10
1,010.0	4.46	310.27	1,009.7	3.8	-3.7	5.2	1.72	1.70	-4.38
1,110.0	5.83	309.49	1,109.3	9.6	-10.6	13.6	1.37	1.37	-0.78
1,210.0	6.04	309.51	1,208.8	16.1	-18.6	23.2	0.21	0.21	0.02
1,310.0	5.47	310.93	1,308.3	22.6	-26.2	32.6	0.59	-0.57	1.42
1,410.0	2.51	326.74	1,408.0	27.6	-31.0	39.3	3.13	-2.96	15.81
1,510.0	0.63	28.27	1,508.0	29.9	-32.0	41.8	2.28	-1.88	61.53
1,610.0	0.53	81.69	1,608.0	30.4	-31.3	41.9	0.53	-0.10	53.42
1,710.0	0.56	89.68	1,708.0	30.5	-30.3	41.5	0.08	0.03	7.99
1,810.0	0.61	95.48	1,808.0	30.5	-29.3	41.0	0.08	0.05	5.80
1,910.0	0.67	98.88	1,908.0	30.3	-28.2	40.3	0.07	0.06	3.40
2,010.0	0.72	101.27	2,008.0	30.1	-27.0	39.5	0.06	0.05	2.39
2,110.0	0.61	97.13	2,108.0	29.9	-25.9	38.8	0.12	-0.11	-4.14
2,210.0	0.53	93.64	2,208.0	29.8	-24.9	38.2	0.09	-0.08	-3.49
2,310.0	0.46	77.29	2,308.0	29.9	-24.0	37.8	0.16	-0.07	-16.35
2,410.0	0.56	79.23	2,408.0	30.1	-23.1	37.6	0.10	0.10	1.94
2,510.0	0.66	79.24	2,507.9	30.3	-22.1	37.2	0.10	0.10	0.01
2,610.0	0.67	71.16	2,607.9	30.6	-21.0	36.9	0.09	0.01	-8.08
2,710.0	0.73	65.22	2,707.9	31.0	-19.8	36.8	0.09	0.06	-5.94
2,810.0	0.57	25.99	2,807.9	31.7	-19.0	37.0	0.46	-0.16	-39.23
2,910.0	0.49	19.48	2,907.9	32.6	-18.7	37.6	0.10	-0.08	-6.51
3,010.0	0.24	5.93	3,007.9	33.2	-18.5	38.0	0.26	-0.25	-13.55
3,110.0	0.26	0.79	3,107.9	33.6	-18.5	38.4	0.03	0.02	-5.14
3,210.0	0.27	345.47	3,207.9	34.1	-18.5	38.8	0.07	0.01	-15.32
3,310.0	0.17	324.88	3,307.9	34.4	-18.7	39.2	0.13	-0.10	-20.59
3,410.0	0.17	290.14	3,407.9	34.6	-18.9	39.4	0.10	0.00	-34.74
3,510.0	0.20	293.85	3,507.9	34.7	-19.2	39.7	0.03	0.03	3.71
3,610.0	0.20	290.59	3,607.9	34.9	-19.5	40.0	0.01	0.00	-3.26
3,710.0	0.22	297.56	3,707.9	35.0	-19.9	40.3	0.03	0.02	6.97
3,810.0	0.17	294.71	3,807.9	35.2	-20.2	40.5	0.05	-0.05	-2.85
3,910.0	0.07	35.27	3,907.9	35.3	-20.3	40.7	0.20	-0.10	100.56
4,010.0	0.12	60.48	4,007.9	35.4	-20.2	40.7	0.06	0.05	25.21
4,110.0	0.14	73.11	4,107.9	35.5	-19.9	40.7	0.03	0.02	12.63
4,210.0	0.30	92.15	4,207.9	35.5	-19.6	40.5	0.17	0.16	19.04
4,310.0	0.32	97.29	4,307.9	35.4	-19.0	40.2	0.03	0.02	5.14
4,410.0	0.34	96.49	4,407.9	35.4	-18.5	39.9	0.02	0.02	-0.80
4,510.0	0.34	98.70	4,507.9	35.3	-17.9	39.5	0.01	0.00	2.21
4,610.0	0.38	105.26	4,607.9	35.2	-17.3	39.1	0.06	0.04	6.56
4,710.0	0.44	118.88	4,707.9	34.9	-16.6	38.5	0.11	0.06	13.62
4,810.0	0.55	112.67	4,807.9	34.5	-15.8	37.8	0.12	0.11	-6.21
4,910.0	0.56	105.81	4,907.9	34.2	-14.9	37.1	0.07	0.01	-6.86
5,010.0	0.59	104.78	5,007.9	33.9	-13.9	36.4	0.03	0.03	-1.03
5,110.0	0.38	101.23	5,107.9	33.7	-13.1	35.8	0.21	-0.21	-3.55

Company:	EQT PRODUCTION	Local Co-ordinate Reference:	Well Well #512916 - MRC - Slot 512916
Project:	Wetzel County, WV	TVD Reference:	KB @23' @ 834.0usft
Site:	Big 177	MD Reference:	KB @23' @ 834.0usft
Well:	Well #512916 - MRC	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	512916 As Drilled	Database:	Compass 5000 NER

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
5,210.0	0.26	101.81	5,207.9	33.6	-12.6	35.4	0.12	-0.12	0.58
5,310.0	0.24	94.15	5,307.9	33.6	-12.1	35.2	0.04	-0.02	-7.66
5,410.0	0.33	107.51	5,407.9	33.5	-11.7	34.8	0.11	0.09	13.36
5,510.0	0.46	119.41	5,507.9	33.2	-11.0	34.3	0.15	0.13	11.90
5,522.0	0.48	119.55	5,519.9	33.1	-10.9	34.2	0.17	0.17	1.17
5,564.0	2.86	269.89	5,561.9	33.0	-11.8	34.6	7.82	5.67	357.87
5,608.0	6.61	273.76	5,605.7	33.2	-15.5	36.5	8.55	8.52	8.80
5,652.0	10.55	277.04	5,649.2	33.9	-22.0	40.3	9.02	8.95	7.45
5,695.0	14.48	282.95	5,691.2	35.6	-31.1	46.3	9.60	9.14	13.74
5,739.0	16.88	283.93	5,733.5	38.3	-42.7	54.4	5.49	5.45	2.23
5,783.0	19.22	285.65	5,775.4	41.8	-55.9	64.0	5.45	5.32	3.91
5,826.0	22.48	285.18	5,815.5	45.9	-70.6	74.8	7.59	7.58	-1.09
5,870.0	25.67	280.82	5,855.7	49.9	-88.1	87.0	8.30	7.25	-9.91
5,914.0	29.23	279.62	5,894.8	53.5	-108.1	100.0	8.19	8.09	-2.73
5,957.0	32.48	277.62	5,931.7	56.7	-129.9	113.6	7.92	7.56	-4.65
6,001.0	36.43	277.56	5,967.9	60.0	-154.5	128.7	8.98	8.98	-0.14
6,044.0	39.34	275.69	6,001.9	63.1	-180.8	144.3	7.27	6.77	-4.35
6,088.0	39.67	275.29	6,035.8	65.7	-208.6	160.4	0.95	0.75	-0.91
6,132.0	39.68	273.94	6,069.7	68.0	-236.6	176.3	1.96	0.02	-3.07
6,175.0	39.17	272.54	6,102.9	69.5	-263.9	191.1	2.38	-1.19	-3.26
6,219.0	38.35	271.66	6,137.2	70.6	-291.4	205.6	2.25	-1.86	-2.00
6,263.0	38.10	274.26	6,171.8	72.0	-318.6	220.3	3.70	-0.57	5.91
6,306.0	37.80	275.00	6,205.7	74.1	-345.0	235.2	1.27	-0.70	1.72
6,350.0	36.99	273.88	6,240.7	76.2	-371.6	250.2	2.40	-1.84	-2.55
6,394.0	37.03	273.92	6,275.8	78.0	-398.0	264.9	0.11	0.09	0.09
6,438.0	38.72	275.68	6,310.5	80.2	-424.9	280.2	4.56	3.84	4.00
Tie In									
6,517.0	40.27	278.24	6,371.5	86.3	-474.8	310.2	2.85	1.96	3.24
First Phoenix MWD Survey									
6,549.0	41.64	280.72	6,395.7	89.8	-495.5	323.4	6.64	4.28	7.75
6,580.0	43.26	283.24	6,418.5	94.1	-516.0	337.3	7.58	5.23	8.13
6,612.0	43.75	283.75	6,441.7	99.3	-537.4	352.4	1.88	1.53	1.59
6,706.0	44.54	286.18	6,509.2	116.2	-600.6	398.4	1.99	0.84	2.59
6,769.0	44.35	286.96	6,554.2	128.8	-642.9	430.3	0.92	-0.30	1.24
6,800.0	44.68	286.84	6,576.3	135.1	-663.7	446.1	1.10	1.06	-0.39
6,822.0	45.42	288.47	6,591.8	139.8	-678.5	457.5	6.21	3.35	7.39
As-Drilled KOP: 6822'MD/6591.8"TVD									
6,832.0	45.76	289.19	6,598.8	142.1	-685.3	462.9	6.21	3.43	7.25
6,863.0	47.54	292.47	6,620.1	150.1	-706.3	480.3	9.60	5.74	10.58
6,894.0	49.34	295.51	6,640.7	159.6	-727.5	499.0	9.36	5.81	9.81
6,926.0	51.43	298.50	6,661.1	170.8	-749.5	519.6	9.72	6.53	9.34
6,957.0	52.93	301.32	6,680.1	183.0	-770.7	540.7	8.66	4.84	9.10
6,989.0	54.48	304.21	6,699.0	197.0	-792.4	563.5	8.74	4.84	9.03
7,020.0	56.35	307.40	6,716.6	211.9	-813.1	586.8	10.40	6.03	10.29

Company:	EQT PRODUCTION	Local Co-ordinate Reference:	Well Well #512916 - MRC - Slot 512916
Project:	Wetzel County, WV	TVD Reference:	KB @23' @ 834.0usft
Site:	Big 177	MD Reference:	KB @23' @ 834.0usft
Well:	Well #512916 - MRC	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	512916 As Drilled	Database:	Compass 5000 NER

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,051.0	58.23	310.29	6,733.4	228.3	-833.4	611.0	9.91	6.06	9.32
7,083.0	60.10	312.13	6,749.8	246.4	-854.0	637.0	7.65	5.84	5.75
7,114.0	62.46	313.71	6,764.7	264.9	-873.9	662.9	8.83	7.61	5.10
7,146.0	65.43	315.00	6,778.7	285.0	-894.5	690.6	9.96	9.28	4.03
7,177.0	68.70	316.73	6,790.8	305.5	-914.4	718.2	11.73	10.55	5.58
7,209.0	71.25	317.47	6,801.8	327.5	-934.8	747.5	8.26	7.97	2.31
7,240.0	72.47	318.61	6,811.4	349.4	-954.5	776.3	5.26	3.94	3.68
7,271.0	73.32	318.82	6,820.5	371.7	-974.1	805.3	2.82	2.74	0.68
7,303.0	75.77	320.52	6,829.1	395.2	-994.0	835.6	9.21	7.66	5.31
7,334.0	77.29	322.15	6,836.3	418.7	-1,012.9	865.4	7.08	4.90	5.26
7,366.0	79.01	324.69	6,842.9	443.9	-1,031.5	896.5	9.45	5.38	7.94
7,397.0	81.43	326.56	6,848.1	469.1	-1,048.8	926.9	9.81	7.81	6.03
7,429.0	83.57	328.78	6,852.3	495.9	-1,065.7	958.6	9.59	6.69	6.94
7,460.0	85.61	329.92	6,855.2	522.4	-1,081.5	989.5	7.53	6.58	3.68
7,486.0	87.56	330.55	6,856.8	544.9	-1,094.3	1,015.4	7.86	7.48	2.42
As-Drilled LP: 7486'MD/6856.8'TVD - Hamilton Target									
7,491.0	87.93	330.67	6,857.0	549.3	-1,096.8	1,020.4	7.86	7.48	2.42
7,554.0	91.56	333.27	6,857.3	604.9	-1,126.4	1,083.4	7.09	5.76	4.13
7,649.0	93.30	332.83	6,853.2	689.5	-1,169.4	1,178.2	1.89	1.83	-0.46
7,743.0	90.35	332.38	6,850.2	772.9	-1,212.6	1,272.0	3.17	-3.14	-0.48
7,837.0	88.75	333.16	6,851.0	856.5	-1,255.6	1,365.9	1.89	-1.70	0.83
7,931.0	88.81	333.21	6,853.0	940.4	-1,298.0	1,459.8	0.08	0.06	0.05
8,026.0	89.75	333.92	6,854.2	1,025.4	-1,340.3	1,554.6	1.24	0.99	0.75
8,120.0	90.28	331.52	6,854.1	1,109.0	-1,383.4	1,648.5	2.61	0.56	-2.55
8,215.0	90.52	329.49	6,853.5	1,191.6	-1,430.2	1,743.5	2.15	0.25	-2.14
8,309.0	89.18	330.40	6,853.7	1,273.0	-1,477.3	1,837.5	1.72	-1.43	0.97
8,403.0	90.02	331.40	6,854.4	1,355.1	-1,523.0	1,931.5	1.39	0.89	1.06
8,491.0	91.19	332.83	6,853.4	1,432.9	-1,564.1	2,019.5	2.10	1.33	1.63
8,585.0	90.92	331.82	6,851.7	1,516.1	-1,607.8	2,113.4	1.11	-0.29	-1.07
8,680.0	89.84	332.40	6,851.1	1,600.1	-1,652.2	2,208.3	1.29	-1.14	0.61
8,774.0	89.78	331.00	6,851.4	1,682.9	-1,696.8	2,302.3	1.49	-0.06	-1.49
8,868.0	89.44	328.41	6,852.0	1,764.0	-1,744.2	2,396.3	2.78	-0.36	-2.76
8,963.0	89.92	330.46	6,852.6	1,845.8	-1,792.5	2,491.3	2.22	0.51	2.16
9,057.0	88.70	331.98	6,853.7	1,928.2	-1,837.7	2,585.3	2.07	-1.30	1.62
9,151.0	88.30	330.40	6,856.2	2,010.5	-1,883.0	2,679.2	1.73	-0.43	-1.68
9,246.0	89.78	332.34	6,857.8	2,093.9	-1,928.5	2,774.2	2.57	1.56	2.04
9,340.0	90.58	331.56	6,857.5	2,176.8	-1,972.7	2,868.1	1.19	0.85	-0.83
9,434.0	90.72	333.19	6,856.4	2,260.1	-2,016.3	2,962.1	1.74	0.15	1.73
9,528.0	90.88	334.26	6,855.1	2,344.4	-2,057.9	3,055.9	1.15	0.17	1.14
9,623.0	90.33	332.99	6,854.1	2,429.5	-2,100.1	3,150.7	1.46	-0.58	-1.34
9,717.0	90.95	332.59	6,853.0	2,513.1	-2,143.1	3,244.6	0.78	0.66	-0.43
9,811.0	91.91	332.46	6,850.7	2,596.5	-2,186.5	3,338.5	1.03	1.02	-0.14
9,905.0	90.25	332.39	6,848.9	2,679.8	-2,230.0	3,432.4	1.77	-1.77	-0.07

Company:	EQT PRODUCTION	Local Co-ordinate Reference:	Well Well #512916 - MRC - Slot 512916
Project:	Wetzel County, WV	TVD Reference:	KB @23' @ 834.0usft
Site:	Big 177	MD Reference:	KB @23' @ 834.0usft
Well:	Well #512916 - MRC	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	512916 As Drilled	Database:	Compass 5000 NER

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,000.0	90.36	331.37	6,848.4	2,763.5	-2,274.7	3,527.4	1.08	0.12	-1.07
10,094.0	89.27	331.14	6,848.7	2,846.0	-2,319.9	3,621.4	1.19	-1.16	-0.24
10,189.0	89.33	331.90	6,849.9	2,929.5	-2,365.2	3,716.4	0.80	0.06	0.80
10,283.0	89.24	330.82	6,851.0	3,011.9	-2,410.3	3,810.3	1.15	-0.10	-1.15
10,377.0	89.18	332.84	6,852.3	3,094.8	-2,454.7	3,904.3	2.15	-0.06	2.15
10,472.0	89.81	331.92	6,853.2	3,179.0	-2,498.7	3,999.2	1.17	0.66	-0.97
10,566.0	90.67	330.69	6,852.8	3,261.4	-2,543.8	4,093.2	1.60	0.91	-1.31
10,660.0	90.39	332.02	6,851.9	3,343.9	-2,588.9	4,187.2	1.45	-0.30	1.41
10,755.0	91.59	331.85	6,850.3	3,427.7	-2,633.6	4,282.1	1.28	1.26	-0.18
10,849.0	90.08	331.92	6,848.9	3,510.6	-2,677.9	4,376.1	1.61	-1.61	0.07
10,944.0	90.58	332.34	6,848.4	3,594.6	-2,722.3	4,471.0	0.69	0.53	0.44
11,038.0	89.13	331.86	6,848.6	3,677.7	-2,766.3	4,565.0	1.62	-1.54	-0.51
11,132.0	89.68	331.78	6,849.6	3,760.5	-2,810.6	4,658.9	0.59	0.59	-0.09
11,226.0	88.61	331.52	6,851.0	3,843.2	-2,855.3	4,752.9	1.17	-1.14	-0.28
11,321.0	88.82	331.11	6,853.1	3,926.6	-2,900.9	4,847.9	0.48	0.22	-0.43
11,414.0	89.58	334.77	6,854.4	4,009.4	-2,943.2	4,940.7	4.02	0.82	3.94
11,509.0	90.12	334.76	6,854.6	4,095.3	-2,983.7	5,035.5	0.57	0.57	-0.01
11,603.0	91.05	334.44	6,853.7	4,180.2	-3,024.0	5,129.2	1.05	0.99	-0.34
11,697.0	91.73	334.94	6,851.4	4,265.2	-3,064.2	5,222.9	0.90	0.72	0.53
11,792.0	90.44	335.02	6,849.6	4,351.2	-3,104.3	5,317.6	1.36	-1.36	0.08
11,886.0	90.22	332.14	6,849.1	4,435.4	-3,146.1	5,411.4	3.07	-0.23	-3.06
11,980.0	90.75	331.40	6,848.3	4,518.2	-3,190.6	5,505.4	0.97	0.56	-0.79
12,075.0	89.16	329.80	6,848.3	4,601.0	-3,237.2	5,600.3	2.37	-1.67	-1.68
12,169.0	89.78	328.84	6,849.2	4,681.8	-3,285.2	5,694.3	1.22	0.66	-1.02
12,263.0	89.24	328.76	6,850.0	4,762.2	-3,333.9	5,788.3	0.58	-0.57	-0.09
12,357.0	89.13	329.66	6,851.4	4,843.0	-3,382.0	5,882.3	0.96	-0.12	0.96
12,451.0	89.07	332.56	6,852.8	4,925.2	-3,427.4	5,976.2	3.09	-0.06	3.09
12,546.0	90.30	332.04	6,853.4	5,009.3	-3,471.6	6,071.2	1.41	1.29	-0.55
12,640.0	89.05	334.00	6,853.9	5,093.1	-3,514.2	6,165.1	2.47	-1.33	2.09
12,734.0	89.48	334.07	6,855.1	5,177.6	-3,555.4	6,258.9	0.46	0.46	0.07
12,829.0	88.71	332.15	6,856.6	5,262.3	-3,598.3	6,353.7	2.18	-0.81	-2.02
12,923.0	88.62	332.34	6,858.8	5,345.5	-3,642.1	6,447.6	0.22	-0.10	0.20
13,017.0	89.30	333.78	6,860.5	5,429.3	-3,684.7	6,541.5	1.69	0.72	1.53
13,111.0	89.76	336.77	6,861.3	5,514.6	-3,724.0	6,635.1	3.22	0.49	3.18
13,206.0	90.16	336.74	6,861.3	5,601.9	-3,761.5	6,729.5	0.42	0.42	-0.03
13,300.0	89.30	339.97	6,861.8	5,689.3	-3,796.1	6,822.6	3.56	-0.91	3.44
13,394.0	89.72	341.75	6,862.6	5,778.1	-3,826.9	6,915.0	1.95	0.45	1.89
13,489.0	90.56	341.63	6,862.3	5,868.3	-3,856.8	7,008.1	0.89	0.88	-0.13
13,583.0	88.53	341.41	6,863.1	5,957.4	-3,886.6	7,100.3	2.17	-2.16	-0.23
13,677.0	88.55	340.98	6,865.5	6,046.4	-3,916.9	7,192.6	0.46	0.02	-0.46
13,771.0	89.73	341.86	6,866.9	6,135.5	-3,946.8	7,284.9	1.57	1.26	0.94
13,866.0	90.65	342.96	6,866.6	6,226.0	-3,975.5	7,377.7	1.51	0.97	1.16
13,960.0	89.33	341.45	6,866.6	6,315.5	-4,004.3	7,469.7	2.13	-1.40	-1.61
14,054.0	89.65	341.20	6,867.4	6,404.6	-4,034.4	7,562.0	0.43	0.34	-0.27

Company:	EQT PRODUCTION	Local Co-ordinate Reference:	Well Well #512916 - MRC - Slot 512916
Project:	Wetzel County, WV	TVD Reference:	KB @23' @ 834.0usft
Site:	Big 177	MD Reference:	KB @23' @ 834.0usft
Well:	Well #512916 - MRC	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	512916 As Drilled	Database:	Compass 5000 NER

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
14,148.0	90.47	341.90	6,867.3	6,493.7	-4,064.1	7,654.2	1.15	0.87	0.74
14,243.0	88.64	339.47	6,868.1	6,583.4	-4,095.5	7,747.6	3.20	-1.93	-2.56
14,337.0	88.65	341.82	6,870.3	6,672.0	-4,126.7	7,840.1	2.50	0.01	2.50
14,432.0	89.36	340.26	6,871.9	6,761.8	-4,157.5	7,933.4	1.80	0.75	-1.64
14,527.0	89.27	341.46	6,873.1	6,851.6	-4,188.7	8,026.8	1.27	-0.09	1.26
14,621.0	89.19	343.72	6,874.3	6,941.3	-4,216.8	8,118.6	2.41	-0.09	2.40
14,715.0	89.30	344.71	6,875.6	7,031.7	-4,242.4	8,209.8	1.06	0.12	1.05
14,810.0	88.07	342.40	6,877.8	7,122.8	-4,269.2	8,302.3	2.75	-1.29	-2.43
14,904.0	88.41	341.09	6,880.7	7,212.0	-4,298.7	8,394.4	1.44	0.36	-1.39
14,998.0	88.42	342.11	6,883.3	7,301.2	-4,328.3	8,486.5	1.08	0.01	1.09
15,092.0	88.98	341.19	6,885.4	7,390.4	-4,357.9	8,578.7	1.15	0.60	-0.98
15,186.0	88.75	342.69	6,887.2	7,479.7	-4,387.1	8,670.7	1.61	-0.24	1.60
15,282.0	89.15	342.63	6,889.0	7,571.3	-4,415.7	8,764.5	0.42	0.42	-0.06
15,375.0	90.48	342.30	6,889.3	7,660.0	-4,443.7	8,855.4	1.47	1.43	-0.35
15,469.0	88.41	341.38	6,890.2	7,749.3	-4,473.0	8,947.5	2.41	-2.20	-0.98
15,563.0	88.99	342.53	6,892.4	7,838.7	-4,502.1	9,039.5	1.37	0.62	1.22
15,588.0	89.21	341.92	6,892.7	7,862.5	-4,509.7	9,064.0	2.59	0.88	-2.44
Final Phoenix MWD Survey									
15,667.0	89.21	341.92	6,893.8	7,937.6	-4,534.2	9,141.4	0.00	0.00	0.00

As-Drilled TD: 15667'MD/6893.8'TVD - Deepest Point @ 15667'MD/6893.8TVD

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
512916-As-Drilled KOP - actual wellpath hits target center - Point	0.00	360.00	6,591.8	139.8	-678.5	396,279.91	1,693,757.41	39° 34' 58.564 N	80° 35' 11.646 W
512916-As-Drilled LP - actual wellpath hits target center - Point	0.00	0.00	6,856.8	544.9	-1,094.3	396,685.04	1,693,341.58	39° 35' 2.518 N	80° 35' 17.019 W
512916-As-Drilled TD - actual wellpath hits target center - Point	0.00	360.00	6,893.8	7,937.6	-4,534.2	404,077.67	1,689,901.70	39° 36' 15.166 N	80° 36' 2.110 W

Company:	EQT PRODUCTION	**Local Co-ordinate Reference:**	Well Well #512916 - MRC - Slot 512916
Project:	Wetzel County, WV	**TVD Reference:**	KB @23' @ 834.0usft
Site:	Big 177	**MD Reference:**	KB @23' @ 834.0usft
Well:	Well #512916 - MRC	**North Reference:**	Grid
Wellbore:	OH	**Survey Calculation Method:**	Minimum Curvature
Design:	512916 As Drilled	**Database:**	Compass 5000 NER

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
6,438.0	6,310.5	80.2	-424.9	Tie In
6,517.0	6,371.5	86.3	-474.8	First Phoenix MWD Survey
6,822.0	6,591.8	139.8	-678.5	As-Drilled KOP: 6822'MD/6591.8"TVD
7,486.0	6,856.8	544.9	-1,094.3	As-Drilled LP: 7486'MD/6856.8'TVD
7,486.0	6,856.8	544.9	-1,094.3	Hamilton Target
15,588.0	6,892.7	7,862.5	-4,509.7	Final Phoenix MWD Survey
15,667.0	6,893.8	7,937.6	-4,534.2	As-Drilled TD: 15667'MD/6893.8'TVD
15,667.0	6,893.8	7,937.6	-4,534.2	Deepest Point @ 15667'MD/6893.8TVD

Checked By: _____ Approved By: _____ Date: _____

PHOENIX
TECHNOLOGY SERVICES

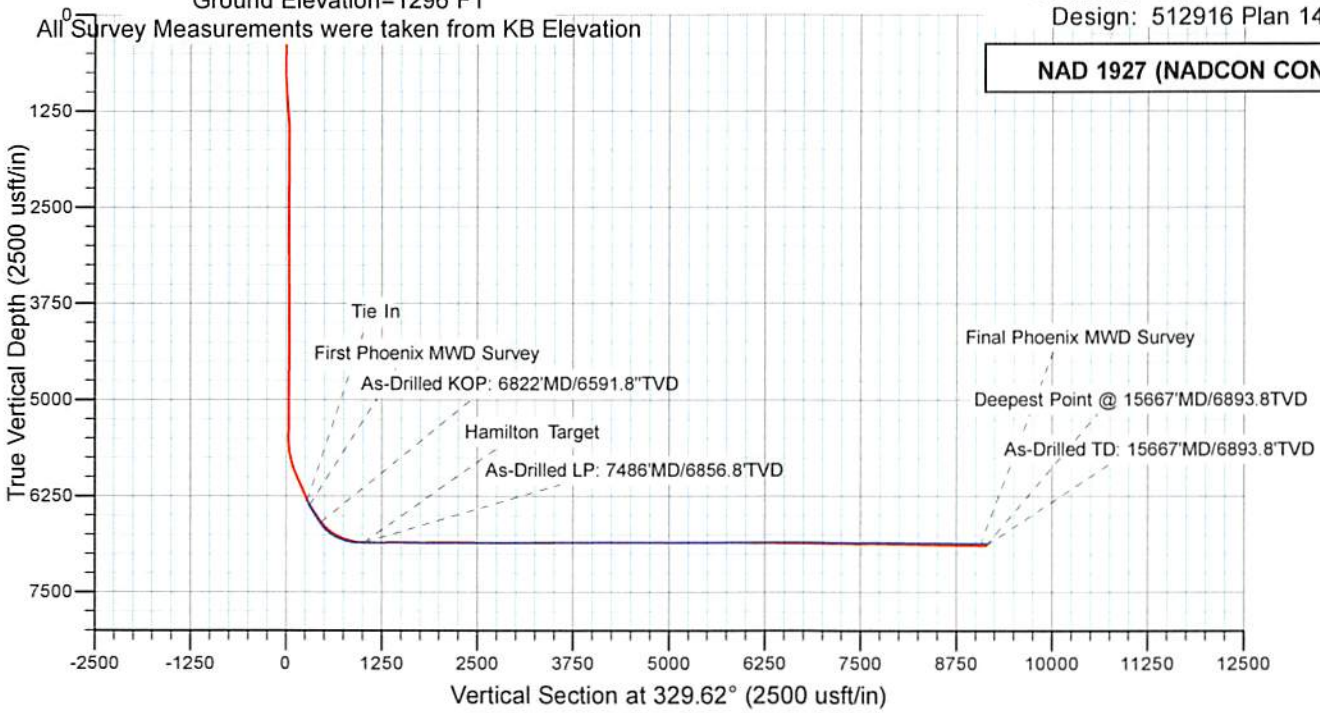
EQT PRODUCTION

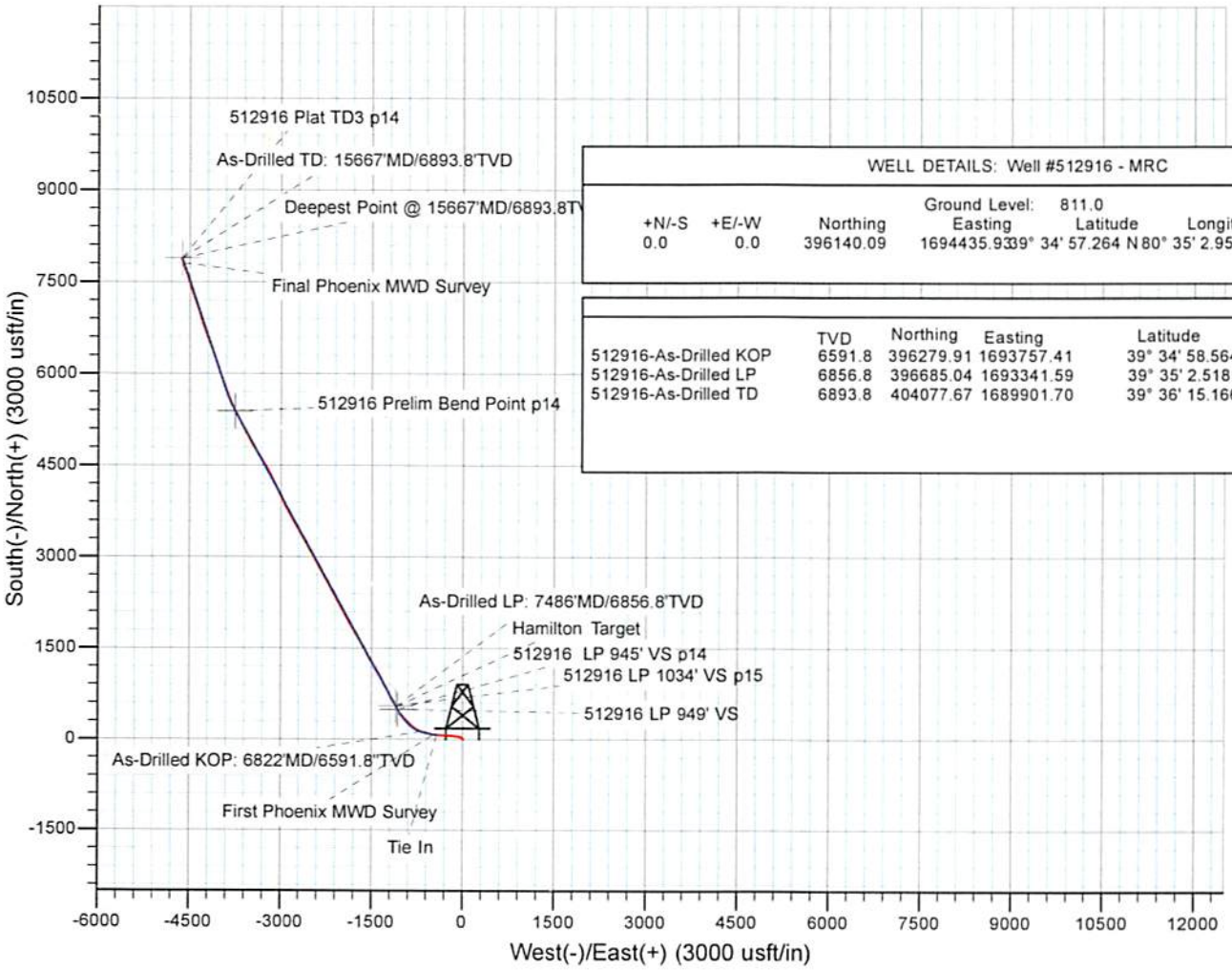
API #47-103-03058

Project: Wetzel County, WV
Site: Big 177
Well: Well #512916 - MRC
Wellbore: OH
Design: 512916 Plan 14

NAD 1927 (NADCON CONUS)

KB Elevation=1319 FT
Ground Elevation=1296 FT
All Survey Measurements were taken from KB Elevation





WELL DETAILS: Well #512916 - MRC

Ground Level: 811.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	396140.09	1694435.93	39° 34' 57.264 N	80° 35' 2.958 W	512916

	TVD	Northing	Easting	Latitude	Longitude
512916-As-Drilled KOP	6591.8	396279.91	1693757.41	39° 34' 58.564 N	80° 35' 11.646 W
512916-As-Drilled LP	6856.8	396685.04	1693341.59	39° 35' 2.518 N	80° 35' 17.019 W
512916-As-Drilled TD	6893.8	404077.67	1689901.70	39° 36' 15.166 N	80° 36' 2.110 W

512916 47-103-03058-0000 - Perforations					
Stage Number	Perforation Date	Top Perf Depth (ftKB)	Bottom Perf Depth (ftKB)	Number of Shots	Formation
Initiation Sleeve	9/21/2017	15,640	15,642	10	MARCELLUS
1	9/30/2017	15,479	15,601	32	MARCELLUS
2	10/1/2017	15,279	15,441	40	MARCELLUS
3	10/1/2017	15,079	15,241	40	MARCELLUS
4	10/2/2017	14,879	15,041	40	MARCELLUS
5	10/3/2017	14,679	14,841	40	MARCELLUS
6	10/3/2017	14,479	14,641	40	MARCELLUS
7	10/4/2017	14,279	14,441	40	MARCELLUS
8	10/5/2017	14,079	14,241	40	MARCELLUS
9	10/6/2017	13,879	14,041	40	MARCELLUS
10	10/7/2017	13,679	13,841	40	MARCELLUS
11	10/8/2017	13,479	13,641	40	MARCELLUS
12	10/9/2017	13,279	13,441	40	MARCELLUS
13	10/9/2017	13,079	13,241	40	MARCELLUS
14	10/10/2017	12,879	13,041	40	MARCELLUS
15	10/12/2017	12,679	12,841	40	MARCELLUS
16	10/12/2017	12,479	12,641	40	MARCELLUS
17	10/13/2017	12,279	12,441	40	MARCELLUS
18	10/13/2017	12,079	12,241	40	MARCELLUS
19	10/14/2017	11,879	12,041	40	MARCELLUS
20	10/14/2017	11,679	11,841	40	MARCELLUS
21	10/15/2017	11,479	11,641	40	MARCELLUS
22	10/16/2017	11,279	11,441	40	MARCELLUS
23	10/17/2017	11,079	11,241	40	MARCELLUS
24	10/17/2017	10,879	11,041	40	MARCELLUS
25	10/17/2017	10,679	10,841	40	MARCELLUS
26	10/18/2017	10,479	10,641	40	MARCELLUS
27	10/19/2017	10,199	10,241	16	MARCELLUS
27	10/19/2017	10,279	10,441	40	MARCELLUS
28	10/20/2017	9,999	10,161	40	MARCELLUS
29	10/20/2017	9,799	9,961	40	MARCELLUS
30	10/21/2017	9,599	9,761	40	MARCELLUS
31	10/21/2017	9,399	9,561	40	MARCELLUS
32	10/22/2017	9,199	9,361	40	MARCELLUS
33	10/22/2017	8,999	9,161	40	MARCELLUS
34	10/23/2017	8,799	8,961	40	MARCELLUS
35	10/23/2017	8,599	8,761	40	MARCELLUS
36	10/24/2017	8,399	8,561	40	MARCELLUS
37	10/24/2017	8,199	8,361	40	MARCELLUS
38	10/25/2017	7,999	8,161	40	MARCELLUS
39	10/26/2017	7,799	7,961	40	MARCELLUS
40	10/26/2017	7,599	7,761	40	MARCELLUS
41	10/27/2017	7,399	7,561	40	MARCELLUS

512916 47-103-03058-0000 - 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								
1.01	9/30/2017	13	7,217	6,712	5,633	0	1,099	0
1	9/30/2017	93	9,059	6,629	4,226	452,721	10,414	0
2	10/1/2017	91	8,926	6,152	4,059	450,745	8,004	0
3	10/2/2017	89	9,218	6,884	4,819	448,277	9,481	0
4	10/2/2017	90	9,085	6,945	4,233	448,844	8,609	0
5	10/3/2017	85	8,707	6,147	4,238	452,771	8,339	0
6	10/4/2017	93	9,071	6,521	4,397	451,144	8,580	0
7	10/5/2017	86	8,975	6,855	4,362	451,900	11,242	0
8	10/6/2017	92	8,751	7,073	4,753	450,524	8,071	0
9	10/7/2017	73	8,791	6,722	4,485	448,656	11,141	0
10	10/8/2017	75	8,896	6,262	4,615	450,965	10,236	0
11	10/9/2017	84	8,814	6,629	4,536	451,953	9,117	0
12	10/9/2017	90	8,736	6,281	4,543	450,902	7,863	0
13	10/10/2017	80	8,877	6,469	4,828	450,431	8,386	0
14	10/11/2017	80	7,985	6,677	5,312	85,996	3,613	0
14	10/11/2017	8	5,166	4,504	5,426	362,366	3,648	0
15	10/12/2017	93	8,701	6,447	4,577	450,525	7,820	0
16	10/12/2017	94	8,475	5,931	4,649	452,939	7,525	0
17	10/13/2017	93	8,532	6,724	4,607	449,716	8,050	0
18	10/13/2017	94	8,508	5,880	4,942	453,957	7,513	0
19	10/14/2017	92	8,647	6,648	4,703	450,640	8,038	0
20	10/15/2017	92	8,548	6,526	4,670	451,774	7,487	0
21	10/16/2017	94	8,881	6,165	4,801	450,116	8,010	0
22	10/17/2017	86	8,535	6,453	4,426	452,562	8,550	0
23	10/17/2017	98	8,807	8,198	4,597	449,600	7,896	0
24	10/17/2017	93	8,350	7,000	4,832	450,944	7,262	0
25	10/18/2017	94	8,786	7,136	4,647	449,402	8,928	0
26	10/19/2017	91	8,553	6,590	4,792	450,734	7,425	0
27	10/19/2017	86	8,553	6,147	5,065	287,627	7,110	0
27	10/20/2017	80	8,199	6,826	5,638	161,226	4,628	0
28	10/20/2017	98	8,796	6,432	4,701	448,487	7,689	0
29	10/21/2017	91	8,601	6,635	4,636	449,842	7,370	0
30	10/21/2017	97	8,771	6,793	4,722	450,734	7,394	0

Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	9/29/2017
Job End Date:	10/27/2017
State:	West Virginia
County:	Wetzel
API Number:	47-103-03058-00-00
Operator Name:	EQT Production
Well Name and Number:	512916
Latitude:	39.58257300
Longitude:	-80.58415500
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,838
Total Base Water Volume (gal):	14,537,964
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	86.45428	None
CS-500-SI	FTS International	Scale Inhibitor					
				Listed Below			

Sand (Proppant)	FTS International	Proppant					
				Listed Below			
MX-8-2544	Multi-Chem	Bacteria Treatment					
				Listed Below			
Hydrochloric Acid (15%)	FTS International	Acidizing					
				Listed Below			
FRW-1450	FTS International	Friction Reducer					
				Listed Below			
ABP-1	FTS International	Breaker					
				Listed Below			
Other Chemical (s)	Listed Above	See Trade Name (s) List					
				Listed Below			
HVG-1	FTS International	Gelling Agent					
				Listed Below			
MX-5-3886	Multi-Chem	Bacteria Treatment					
				Listed Below			
FRW-950	FTS International	Friction Reducer					

RECEIVED
Office of Oil and Gas
JAN 24 2018
WV Department of
Environmental Protection

				Listed Below			
CI-150	FTS International	Acid Corrosion Inhibitor					
				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	13.16443	None
			Calcium Nitrate.4H2O	13477-34-4	100.00000	0.10616	None
			Calcium Nitrate.4H2O	13477-34-4	100.00000	0.10616	
			Hydrochloric Acid	7647-01-0	15.00000	0.02338	None
			Hydrotreated Light Distillate	64742-47-8	30.00000	0.02037	None
			Hydrotreated Light Distillate	64742-47-8	30.00000	0.02037	
			Sodium Chloride	7647-14-5	100.00000	0.00937	None
			Sodium Chloride	7647-14-5	100.00000	0.00937	
			Distillates (Petroleum), Hydrotreated Light	64742-47-8	30.00000	0.00437	
			Distillates (Petroleum), Hydrotreated Light	64742-47-8	30.00000	0.00437	None
			Sodium Choloride	7647-14-5	5.00000	0.00340	None
			Oxyalkylated alcohol	Proprietary	5.00000	0.00340	None
			Sodium Choloride	7647-14-5	5.00000	0.00340	
			Oxyalkylated alcohol	Proprietary	5.00000	0.00340	
			Ethylene Glycol	107-21-1	10.00000	0.00246	None
			Petroleum Distillate	64742-47-8	55.00000	0.00109	
			Petroleum Distillate	64742-47-8	55.00000	0.00109	None
			Guar Gum	9000-30-0	50.00000	0.00099	
			Guar Gum	9000-30-0	50.00000	0.00099	None
			Alcohols, C11-14-iso-,C13-rich, ethoxylated	78330-21-9	5.00000	0.00073	None

			Alcohols, C11-14-iso-,C13-rich, ethoxylated	78330-21-9	5.00000	0.00073	
			Ammonium Persulfate	7727-54-0	95.00000	0.00049	None
			Sodium Nitrate	7631-99-4	5.00000	0.00047	
			Sodium Nitrate	7631-99-4	5.00000	0.00047	None
			Organic Amine Resin Salt	Proprietary	30.00000	0.00009	None
			Isopropanol	67-63-0	30.00000	0.00009	None
			Ethylene Glycol	107-21-1	30.00000	0.00009	None
			Clay	14808-60-7	2.00000	0.00004	
			Surfactant	68439-51-0	2.00000	0.00004	None
			Clay	14808-60-7	2.00000	0.00004	None
			Surfactant	68439-51-0	2.00000	0.00004	
			Aromatic Aldehyde	Proprietary	10.00000	0.00003	None
			Dimethylformamide	68-12-2	10.00000	0.00003	None
			Quaternary Ammonium Compound	Proprietary	10.00000	0.00003	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

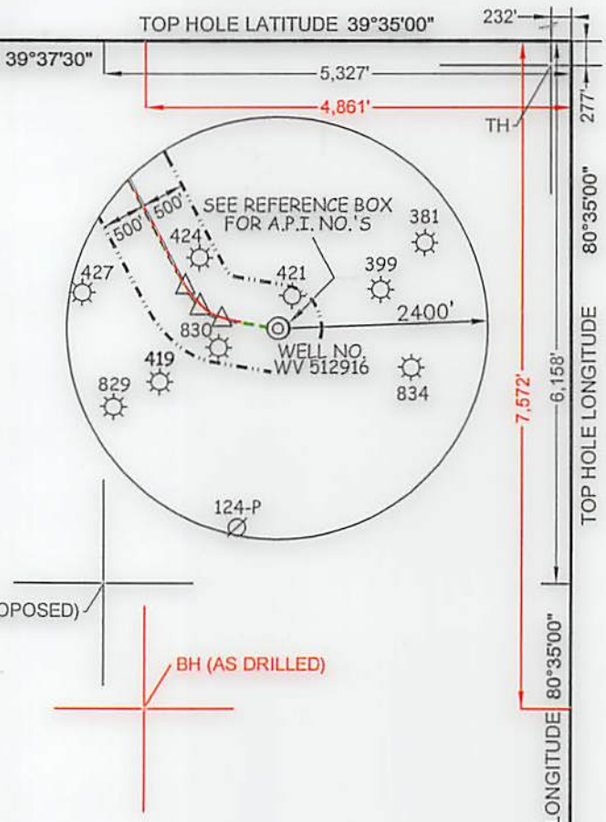
Note: For Field Development Products (products that begin with FDP), MSDS level only information has been provided.
Ingredient information for chemicals subject to 29 CFR 1910.1200(i) and Appendix D are obtained from suppliers Material Safety Data Sheets (MSDS)

RECEIVED
Office of Oil and Gas
JAN 24 2018
WV Department of
Environmental Protection

BIG177
WV 512916
EQT PRODUCTION COMPANY

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

NAD'27 S.P.C.(FT)	N. 396,140.10	E. 1,694,435.93
NAD'27 GEO.	LAT-(N) 39.582573	LONG-(W) 80.584155
NAD'83 UTM (M)	N. 4,381,520.422	E. 535,727.679
LANDING POINT		
NAD'27 S.P.C.(FT)	N. 396,618.92	E. 1,693,381.03
NAD'27 GEO.	LAT-(N) 39.583853	LONG-(W) 80.587918
NAD'83 UTM (M)	N. 4,381,660.93	E. 535,403.86
BOTTOM HOLE		
NAD'27 S.P.C.(FT)	N. 405,497.34	E. 1,689,453.20
NAD'27 GEO.	LAT-(N) 39.608095	LONG-(W) 80.602240
NAD'83 UTM (M)	N. 4,384,345.83	E. 534,162.14



SURFACE OWNERS		
G-TM-2-04	JOHN C. COMER ET UX	104.00 ACRES±
G-TM-2-05	EDWIN L. DULANEY ET UX	104.00 ACRES±
G-TM-2-12	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	3.63 ACRES±
G-TM-2-12.2	TEORA & SANDRA DULANEY	66.64 ACRES±
G-TM-3-05	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	179.00 ACRES±
G-TM-3-13	EDWARD L. DULANEY II	164.75 ACRES±
G-TM-3-23	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	167.75 ACRES±
G-TM-7-03	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	178 ACRES±
G-TM-7-3.2	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	156.98 ACRES±
G-TM-7-10	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	120 ACRES±
G-TM-8-01	DANNY STOCKSLAGER ET AL	170 ACRES±
G-TM-8-10	GARLAND MINOR ET AL	48.1 ACRES±
G-TM-8-17	KENNETH & LORRAINE WILDMAN	67 ACRES±
G-TM-8-18	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	337 ACRES±
G-TM-8-19	PHILLIP & KIMBERLY SHREVE	46.45 ACRES±
G-TM-8-23	DALE DULANEY ET AL	70.81 ACRES±
G-TM-8-34	HALLIE HARDBARGER	54.01 ACRES±
G-TM-8-35	DEBORAH FRONCZEK ET AL	15.5 ACRES±
G-TM-8-58	HIGGINS CHAPEL CHURCH OF CHRIST	0.99 ACRES±
G-TM-8-64	MARY EASTHAM ET AL	1.45 ACRES±
G-TM-8-65	IKEY & TINA WILLEY	2.15 ACRES±
G-TM-8-66	EQM GATHERING OPOC LLC	.42 ACRES±
G-TM-13-06	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	217.19 ACRES±

ROYALTY OWNERS		
COASTAL FOREST RESOURCES CO. d/b/a COASTAL TIMBERLANDS CO. ET AL	57.5 AC.±	LEASE NO. 993308
KEVIN GOFF	48.25 AC.±	LEASE NO. 1009272
EQT PRODUCTION COMPANY	300 AC.±	LEASE NO. 102694
JOSEPH SHIBEN & MINNIE SHIBEN ESTATE	1030 AC.±	LEASE NO. 102814
JAMES E. NEWMAN ET AL	P/O 332 AC.±	LEASE NO. 300653

* SEE NOTE 4

AS DRILLED COORDINATES
(BIG177H4 512916)
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 396140.10	E. 1694,435.93
NAD'27 GEO.	LAT-(N) 39.582573	LONG-(W) 80.584155
NAD'83 UTM (M)	N. 4,381,520.422	E. 535,727.679
LANDING POINT		
NAD'27 S.P.C.(FT)	N. 396,685.04	E. 1,693,341.59
NAD'27 GEO.	LAT-(N) 39.584033	LONG-(W) 80.588061
NAD'83 UTM (M)	N. 4,381,680.87	E. 535,391.50
BOTTOM HOLE		
NAD'27 S.P.C.(FT)	N. 404,077.67	E. 1,689,901.70
NAD'27 GEO.	LAT-(N) 39.604213	LONG-(W) 80.600586
NAD'83 UTM (M)	N. 4,383,915.60	E. 534,305.98

SURFACE OWNERS - CONTINUED		
G-TM-13-6.1	COASTAL FOREST RESOURCES COMPANY d/b/a COASTAL TIMBERLANDS COMPANY	55.06 ACRES±
G-TM-13-07	MANSEL McDIFFITT ET AL	51.8 ACRES±

NOTES ON SURVEY

1. NO WATER WELLS WERE FOUND WITHIN 250' OF PROPOSED GAS WELL. NO AGRICULTURAL BUILDINGS > 2500 SQ. FT. WERE FOUND WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD. SEE REFERENCE BOX FOR DWELLING WITHIN 625' OF THE CENTER OF PROPOSED WELL PAD.
2. WELL SPOT CIRCLE & TOPO MARK SCALE IS 1"=2000'.
3. AS DRILLED INFORMATION PROVIDED BY EQT.
4. AS-DRILLED PATH DOES NOT PENETRATE LEASE NO. 300653.

SLS
Land & Energy Development
Solutions from the ground up.
P.O. Box 150 ♦ 12 Vanhorn Drive ♦ Glenville, WV 26351 ♦ (304) 462-5634
www.slssurveys.com

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. 849 C. Victor Moyers

C. VICTOR MOYERS LICENSED No. 849 STATE OF WEST VIRGINIA PROFESSIONAL SURVEYOR

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

DATE OCTOBER 02, 20 13
REVISED 03/26/14, 09/09/14, 08/25/15, 09/14/15, 10/06/16 03/31/17, 04/21/17, 09/13/17 & 09/20/17
OPERATORS WELL NO. WV 512916
API WELL NO. 47 — 103 — 03058
STATE COUNTY PERMIT

MINIMUM DEGREE OF ACCURACY 1 / 2500 FILE NO. 6806P512916R14AD.dwg
SCALE SEE NOTE 2
HORIZONTAL & VERTICAL CONTROL DETERMINED BY DGPS (SURVEY GRADE TIE TO CORS NETWORK)

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

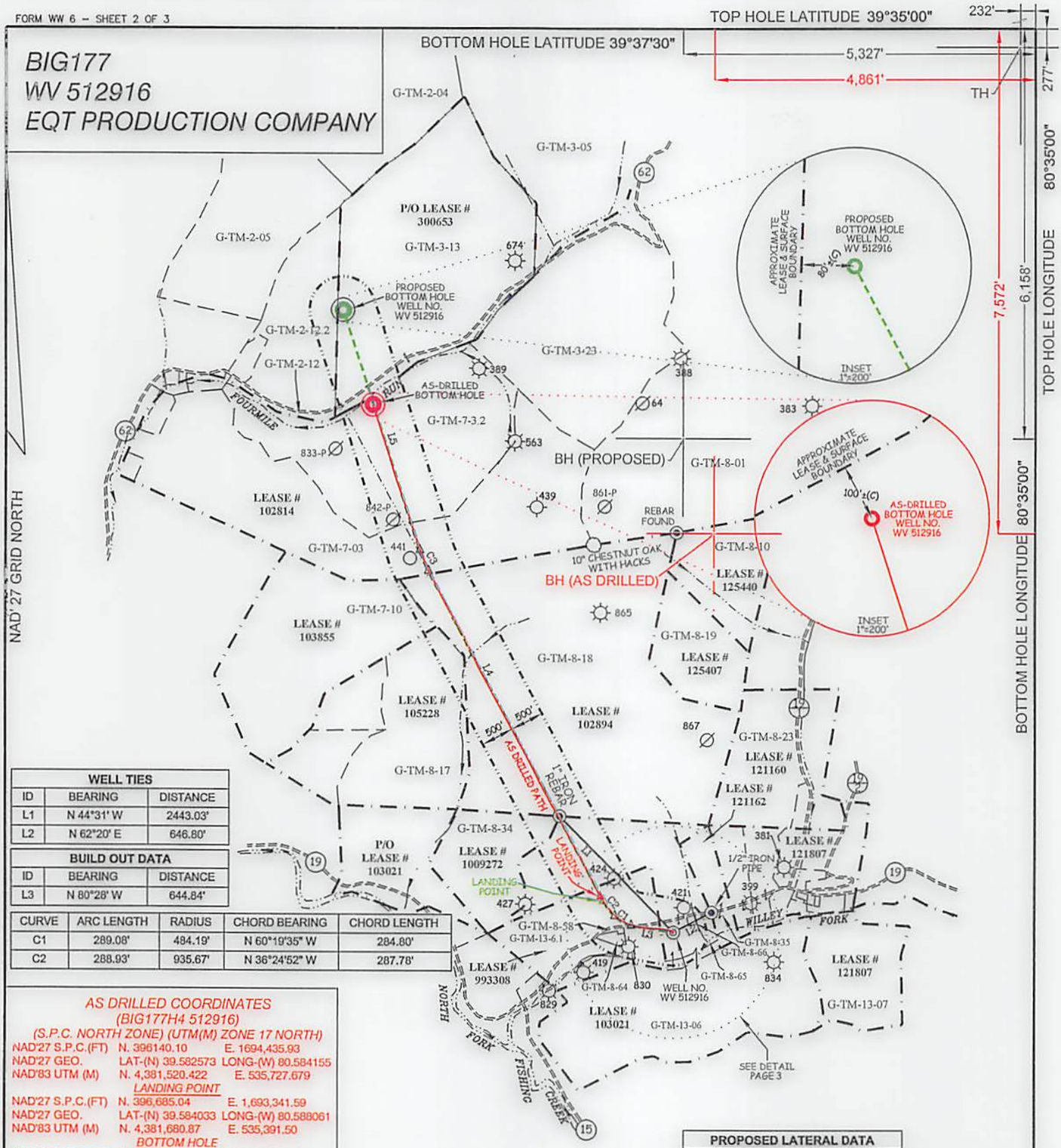
WELL TYPE: OIL ____ GAS X LIQUID INJECTION ____ WASTE DISPOSAL ____ IF "GAS" PRODUCTION X STORAGE ____ DEEP ____ SHALLOW X

LOCATION :
PAD ELEVATION 811' WATERSHED WILLEY FORK OF NORTH FORK FISHING CREEK
DISTRICT GRANT COUNTY WETZEL QUADRANGLE BIG RUN 7.5'
SURFACE OWNER COASTAL FOREST RESOURCES CO. d/b/a COASTAL TIMBERLANDS CO. ACREAGE 27± OF 217±
ROYALTY OWNER HIGGINS FAMILY TRUST ACREAGE 242.5
PROPOSED WORK : LEASE NO. 103021
DRILL X CONVERT ____ DRILL DEEPER ____ REDRILL ____ FRACTURE OR STIMULATE X 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 6,881'

COUNTY NAME
PERMIT

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

BIG177
WV 512916
EQT PRODUCTION COMPANY



WELL TIES		
ID	BEARING	DISTANCE
L1	N 44°31' W	2443.03'
L2	N 62°20' E	646.80'

BUILD OUT DATA		
ID	BEARING	DISTANCE
L3	N 80°28' W	644.84'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	289.08'	484.19'	N 60°19'35" W	284.80'
C2	288.93'	935.67'	N 36°24'52" W	287.78'

AS DRILLED COORDINATES
(BIG177H4 512916)
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 396140.10	E. 1694,435.93
NAD'27 GEO.	LAT-(N) 39.582573	LONG-(W) 80.584155
NAD'83 UTM (M)	N. 4,381,520.422	E. 535,727.679
LANDING POINT		
NAD'27 S.P.C.(FT)	N. 396,685.04	E. 1,693,341.59
NAD'27 GEO.	LAT-(N) 39.584033	LONG-(W) 80.588061
NAD'83 UTM (M)	N. 4,381,680.87	E. 535,391.50
BOTTOM HOLE		
NAD'27 S.P.C.(FT)	N. 404,077.67	E. 1,689,901.70
NAD'27 GEO.	LAT-(N) 39.604213	LONG-(W) 80.600586
NAD'83 UTM (M)	N. 4,383,915.60	E. 534,305.98

PROPOSED LATERAL DATA		
ID	BEARING	DISTANCE
L4	N 28°00' W	5610.22'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C3	338.90'	1910.04'	N 22°54'59" W	338.45'

ID	BEARING	DISTANCE
L5	N 17°50' W	3795.46'

TOTAL LATERAL LENGTH = 9744.58'

AS-DRILLED TOTAL LATERAL LENGTH = 8179.79'

SLS
Land & Energy Development
Solutions from the ground up.
P.O. Box 150 ♦ 12 Vanhorn Drive ♦ Glenville, WV 26351 ♦ (304) 462-5634
www.slssurveys.com

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

NAD'27 S.P.C.(FT)	N. 396,140.10	E. 1,694,435.93
NAD'27 GEO.	LAT-(N) 39.582573	LONG-(W) 80.584155
NAD'83 UTM (M)	N. 4,381,520.422	E. 535,727.679
LANDING POINT		
NAD'27 S.P.C.(FT)	N. 396,618.92	E. 1,693,381.03
NAD'27 GEO.	LAT-(N) 39.583853	LONG-(W) 80.587918
NAD'83 UTM (M)	N. 4,381,660.93	E. 535,403.86
BOTTOM HOLE		
NAD'27 S.P.C.(FT)	N. 405,497.34	E. 1,689,453.20
NAD'27 GEO.	LAT-(N) 39.608095	LONG-(W) 80.602240
NAD'83 UTM (M)	N. 4,384,345.83	E. 534,162.14

C. VICTOR MOYERS
LICENSED
No. 849
STATE OF WEST VIRGINIA
PROFESSIONAL SURVEYOR
6-9-2017

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

LEGEND

LEASE LINE
SURFACE LINE
PROPOSED WELL LATERAL
AS-DRILLED WELL LATERAL
OFFSET LINE
TIE LINE
CREEK
ROAD
COUNTY ROUTE
PROPOSED WELL
EXISTING WELL
PERMITTED WELL
GRANT DISTRICT TAX MAP-PARCEL G-TM-00-00

COUNTY NAME
PERMIT

SCALE 1" = 2000' FILE NO. 6806P512916R14AD.dwg
DATE OCTOBER 02, 20 13
REVISED 03/26/14, 09/09/14, 08/25/15, 09/14/15, 10/06/16 03/31/17, 04/21/17, 09/13/17 & 09/20/2017

OPERATORS WELL NO. WV 512916

API WELL NO. 47 — 103 — 03058
STATE COUNTY PERMIT

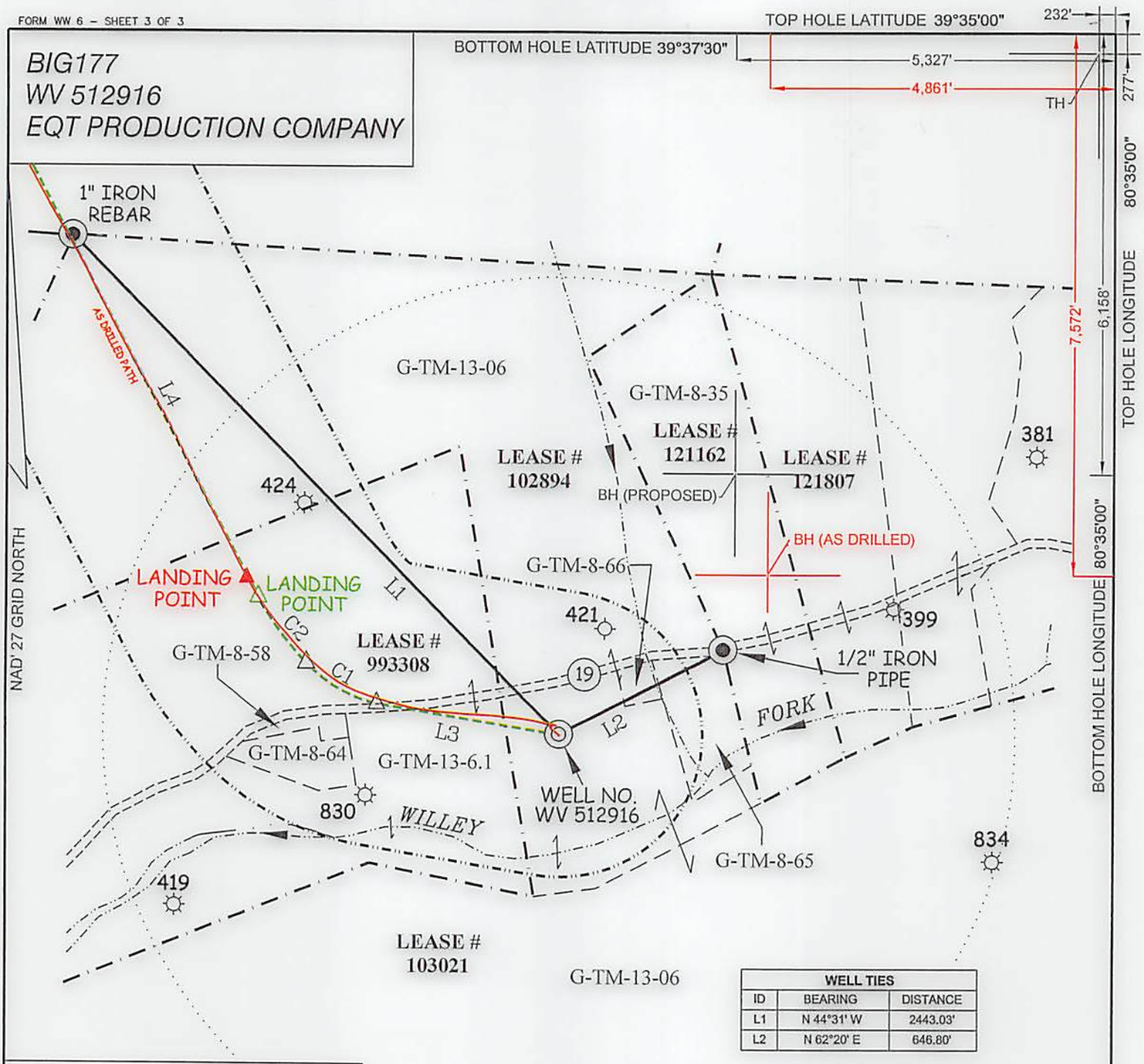
STATE OF WEST VIRGINIA
DIVISION OF
ENVIRONMENTAL PROTECTION
OFFICE OF OIL AND GAS

WELL OPERATOR EQT PRODUCTION COMPANY
ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280
BRIDGEPORT, WV 26330

DESIGNATED AGENT REX C. RAY
ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280
BRIDGEPORT, WV 26330

124568

BIG177
WV 512916
EQT PRODUCTION COMPANY



DETAIL 1"=500'

WELL TIES		
ID	BEARING	DISTANCE
L1	N 44°31' W	2443.03'
L2	N 62°20' E	646.80'

BUILD OUT DATA		
ID	BEARING	DISTANCE
L3	N 80°28' W	644.84'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C1	289.08'	484.19'	N 60°19'35" W	284.80'
C2	288.93'	935.67'	N 36°24'52" W	287.78'

PROPOSED LATERAL DATA		
ID	BEARING	DISTANCE
L4	N 28°00' W	5610.22'

CURVE	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
C3	338.90'	1910.04'	N 22°54'59" W	338.45'

ID	BEARING	DISTANCE
L5	N 17°50' W	3795.46'

TOTAL LATERAL LENGTH = 9744.58'

AS-DRILLED TOTAL LATERAL LENGTH = 8179.79'

AS DRILLED COORDINATES
(BIG177H4 512916)
(S.P.C. NORTH ZONE) (UTM(M) ZONE 17 NORTH)

NAD'27 S.P.C.(FT)	N. 396140.10	E. 1694,435.93
NAD'27 GEO.	LAT-(N) 39.582573	LONG-(W) 80.584155
NAD'83 UTM (M)	N. 4,381,520.422	E. 535,727.679
LANDING POINT		
NAD'27 S.P.C.(FT)	N. 396,685.04	E. 1,693,341.59
NAD'27 GEO.	LAT-(N) 39.584033	LONG-(W) 80.588061
NAD'83 UTM (M)	N. 4,381,680.87	E. 535,391.50
BOTTOM HOLE		
NAD'27 S.P.C.(FT)	N. 404,077.67	E. 1,689,901.70
NAD'27 GEO.	LAT-(N) 39.604213	LONG-(W) 80.600586
NAD'83 UTM (M)	N. 4,383,915.60	E. 534,305.98

SLS
Land & Energy Development
Solutions from the ground up.
P.O. Box 150 ♦ 12 Vanhorn Drive ♦ Glenville, WV 26351 ♦ (304) 462-5634
www.slssurveys.com

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

NAD'27 S.P.C.(FT)	N. 396,140.10	E. 1,694,435.93
NAD'27 GEO.	LAT-(N) 39.582573	LONG-(W) 80.584155
NAD'83 UTM (M)	N. 4,381,520.422	E. 535,727.679
LANDING POINT		
NAD'27 S.P.C.(FT)	N. 396,618.92	E. 1,693,381.03
NAD'27 GEO.	LAT-(N) 39.583853	LONG-(W) 80.587918
NAD'83 UTM (M)	N. 4,381,660.93	E. 535,403.86
BOTTOM HOLE		
NAD'27 S.P.C.(FT)	N. 405,497.34	E. 1,689,453.20
NAD'27 GEO.	LAT-(N) 39.608095	LONG-(W) 80.602240
NAD'83 UTM (M)	N. 4,384,345.83	E. 534,162.14

C. VICTOR MOYERS
LICENSED
No. 849
STATE OF WEST VIRGINIA
PROFESSIONAL SURVEYOR
C. 9-20-17

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

LEGEND

LEASE LINE
SURFACE LINE
PROPOSED WELL LATERAL
AS-DRILLED WELL LATERAL
OFFSET LINE
TIE LINE
CREEK
ROAD
COUNTY ROUTE
PROPOSED WELL
EXISTING WELL
PERMITTED WELL
GRANT DISTRICT TAX MAP–PARCEL G–TM–00–00

SCALE 1" = 2000' FILE NO. 6806P512916R14AD.dwg
DATE OCTOBER 02, 20 13
REVISED 03/26/14, 09/09/14, 08/25/15, 09/14/15, 10/06/16 03/31/17, 04/21/17, 09/13/17 & 09/20/17
OPERATORS WELL NO. WV 512916
API WELL NO. 47 — 103 — 03058
STATE COUNTY PERMIT

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

COUNTY NAME
PERMIT

WELL OPERATOR EQT PRODUCTION COMPANY
ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280
BRIDGEPORT, WV 26330

DESIGNATED AGENT REX C. RAY
ADDRESS 115 PROFESSIONAL PLACE P.O. BOX 280
BRIDGEPORT, WV 26330

SLS
124588