

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

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WV Department of  
Environmental Protection

API 47-103-03164 County WETZEL District GRANT  
Quad BIG RUN Pad Name BIG360 Field/Pool Name N/A  
Farm name COASTAL FOREST RESOURCES d/b/a COASTAL TIMBERLANDS COMPANY Well Number 515111  
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 4,375,975.15 Easting 532,952.01  
Landing Point of Curve Northing 4,376,284.23 Easting 532,515.35  
Bottom Hole Northing 4,377,542.02 Easting 532,195.26

Elevation (ft) 999' 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)

Synthetic Base Mud 13.4 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 11/30/2016 Date drilling commenced 06/18/2017 Date drilling ceased 02/06/2018  
Date completion activities began 03/05/2018 Date completion activities ceased 03/15/2018  
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 291,353 Open mine(s) (Y/N) depths N  
Salt water depth(s) ft 1972 Void(s) encountered (Y/N) depths N  
Coal depth(s) ft 280,440,661,763 Cavern(s) encountered (Y/N) depths N  
Is coal being mined in area (Y/N) N

Reviewed

Reviewed by: DMK

API 47-103 - 03164

Farm name COASTAL FOREST RESOURCES dba COASTAL TIMBERLANDS COMPANY

Well number 515111

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"	40'	NEW	A-500	N/A	Y
Surface	17 1/2"	13 3/8"	859'	NEW	J-55	273'	Y
Coal							
Intermediate 1	12 3/8"	9 5/8"	2450'	NEW	A-500	N/A	Y
Intermediate 2							
Intermediate 3							
Production	8 1/2"	5 1/2"	12,098'	NEW	P-110	N/A	N
Tubing							
Packer type and depth set							

Comment Details N/A

CEMENT DATA	Class/Type of Cement	Number of Sacks	Slurry wt (ppg)	Yield (ft <sup>3</sup> /sks)	Volume (ft <sup>3</sup> )	Cement Top (MD)	WOC (hrs)
Conductor	CLASS A	49	15.6	1.18	57.8	0	8
Surface	CLASS A	780	15.6	1.20	936	0	8
Coal							
Intermediate 1	CLASS A / CLASS A	676 / 200	15.6 / 15.6	1.2 / 1.20	1051	0	8
Intermediate 2							
Intermediate 3							
Production	CLASS H / CLASS H	464 / 566	15.2 / 15.6	1.25 / 2.06	1747	5500	72+
Tubing							

Drillers TD (ft) 12,106'

Loggers TD (ft) N/A

Deepest formation penetrated Marcellus

Plug back to (ft) N/A

Plug back procedure N/A

Kick off depth (ft) 4410'

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: 3 CENTRALIZERS @ JOINTS 1,10,20

INTERMEDIATE: 6 CENTRALIZERS PLACED EVERY 500'

PRODUCTION: 191 Spiral body composite centralizers placed every joint from 12,087' to 3853' MD.

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

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

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

API 47- 103 - 03164

Farm name COASTAL FOREST RESOURCES dba COASTAL TIMBERLANDS COMPANY

Well number 515111

**PERFORATION RECORD**

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

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)
								<b>Please See Attached</b>

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Please insert additional pages as applicable.

API 47- 103 - 03164 Farm name COASTAL FOREST RESOURCES 45% COASTAL TIMBERLANDS COMPANY Well number 515111

PRODUCING FORMATION(S)	DEPTHS	
Marcellus	7,073' TVD	7,635' MD

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Please insert additional pages as applicable.

GAS TEST  Build up  Drawdown  Open Flow OIL TEST  Flow  Pump

SHUT-IN PRESSURE Surface 979 psi Bottom Hole N/A psi DURATION OF TEST 163 hrs

OPEN FLOW Gas 12,360 mcfpd Oil N/A bpd NGL 0 bpd Water 1,550 bpd GAS MEASURED BY  Estimated  Orifice  Pilot

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

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 Gyrodatta Incorporated  
Address 73 Noblestown Road City Carnegie State PA Zip 15106

Cementing Company BJ Cementing Services  
Address 837 Phillippi Pike City Clarksburg State WV Zip 26301

Stimulating Company Universal Well Services  
Address 730 Braddock View Drive City Lemont Furnace State PA Zip 15456

Please insert additional pages as applicable.

Completed by Bradley Maddox Telephone (412) 395-7053  
Signature *[Signature]* Title Dir Completions Date 06/06/2018

API 47- 103 - 03164 Farm name COASTAL FOREST RESOURCES AND COASTAL TIMBERLANDS COMPANY Well number 515111

Drilling Contractor Pioneer Drilling Rig 72  
Address 1083 N Eighty Eight Rd City Rices Landing State PA Zip 15357

Logging Company Baker Hughes  
Address 400 Technology Drive City Canonsburg State TX Zip 15317

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## BIG360 Well #515111 Final Formations API: 47-103-03164

Formation Name	Drill Top MD (ftKB)	Drill Top (TVD) (ftKB)	Drill Btm MD (ftKB)	Drill Btm (TVD) (ftKB)
SAND / SHALE	1	1	280	280
WASHINGTON COAL	280	280	282	282
SAND / SHALE	282	282	440	440
COAL	440	440	444	444
SAND / SHALE	444	444	661	661
SEWICKLEY COAL	661	661	662	662
SAND / SHALE	662	662	763	763
PITTSBURGH COAL	763	763	767	767
SAND / SHALE	767	767	1792	1792
MAXTON	1792	1792	1809	1809
SAND / SHALE	1809	1809	1943	1943
BIG LIME	1943	1943	2082	2082
SAND / SHALE	2082	2082	2105	2105
BIG INJUN	2105	2105	2206	2206
SAND / SHALE	2206	2206	2372	2372
WEIR	2372	2372	2441	2441
SAND / SHALE	2441	2441	2523	2523
GANTZ	2523	2523	2558	2558
SAND / SHALE	2558	2558	2628	2628
FIFTY FOOT	2628	2628	2656	2656
SAND / SHALE	2656	2656	2784	2784
THIRTY FOOT	2784	2784	2798	2798
SAND / SHALE	2798	2798	2800	2800
GORDON	2800	2800	2846	2846
SAND / SHALE	2846	2846	2886	2886
FORTH SAND	2886	2886	2897	2897
SAND / SHALE	2897	2897	3018	3018
BAYARD	3018	3018	3043	3043
SAND / SHALE	3043	3043	3466	3466
WARREN	3466	3466	3523	3523
SAND / SHALE	3523	3523	3620	3620
SPEECHLEY	3620	3620	3654	3654
SAND / SHALE	3654	3654	3973	3973
BALLTOWN A	3973	3973	4339	4339
SAND / SHALE	4339	4339	4461	4459
RILEY	4461	4459	5116	5100
BENSON	5116	5100	5168	5148
SAND / SHALE	5168	5148	5456	5404
ALEXANDER	5456	5404	5495	5438
ELKS	5495	5438	6940	6674
SONYEA	6940	6674	7102	6801
MIDDLESEX	7102	6801	7196	6866
GENESEE	7196	6866	7318	6941
GENESE0	7318	6941	7376	6972
TULLY	7376	6972	7413	6990
HAMILTON	7413	6990	7635	7073
MARCELLUS	7635	7073	12106	7060

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Location: Wetzel County, WV  
Field: Wetzel  
Facility: Big 360 Pad

Slot: Slot 515111  
Well: Big 360 515111  
Wellbore: Big 360 515111 PWB

Grid System: NAD83 Lambert West Virginia SPT Northern Zone (4701), US feet
North Reference: Grid north
Scale: True distance
Depths are in feet
Created by: schaefer on 2018-02-07
Mean Sea Level to Mud line (M Slot: Slot 515111) : -999 feet
Coordinates are in feet referenced to Slot

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Big 360 Pad	1684822.780	378111.730	80°37'00.828"W
Slot	Local E (ft)	Grid East (US ft)	Longitude
Slot 515111	-15.73	1685024.940	80°37'00.287"W
Pioneer 72 (RKB) to Mud line (At Slot: Slot 515111)	23ft		
Mean Sea Level to Mud line (At Slot: Slot 515111)	-999ft		
Pioneer 72 (RKB) to Mean Sea Level	1022ft		

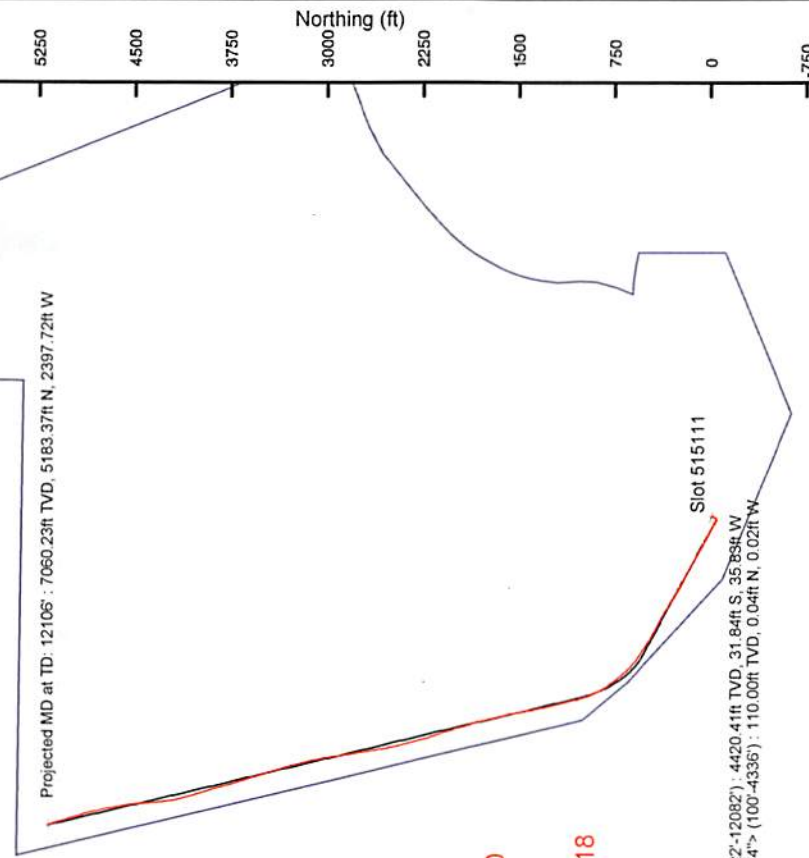
Gyrodatta MS Gyro <8-3/4"> : 0.06° Inc, 110.00ft MD, 110.00ft TVD, 0.05ft VS

Well Profile Data						
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	VS (ft)
Tile On	4346.00	0.260	34.870	4344.41	-32.51	0.23
Proj. to Bottom	4410.00	0.260	34.870	4408.41	-32.27	0.00
End of 3D Arc	5443.93	30.988	298.508	5392.71	99.84	3.00
Curve KOP	6952.52	30.988	298.508	6885.99	470.65	828.99
Build	7165.17	48.000	298.500	6849.49	534.95	8.00
Landing Pl.	7838.14	90.500	346.500	7095.00	1028.26	9.00
BHL	12109.73	90.500	346.500	7057.70	5181.67	0.00

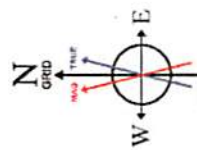
API: 47-103-03164-0000  
BH Job #: 8986093  
Rig: Pioneer 72  
Duration: 2/1/2018-2/5/2018

BH AT Curve <8-1/2"> (4346)(4422-12082) : 1.18° Inc, 4422.00ft MD, 4420.41ft TVD, -13.83ft VS

BH AT Curve <8-1/2"> (4346)(4422-12082) : 4420.41ft TVD, 31.84ft S, 35.89ft W  
Gyrodatta MS Gyro <8-3/4"> (100-4336) : 110.00ft TVD, 0.04ft N, 0.02ft W



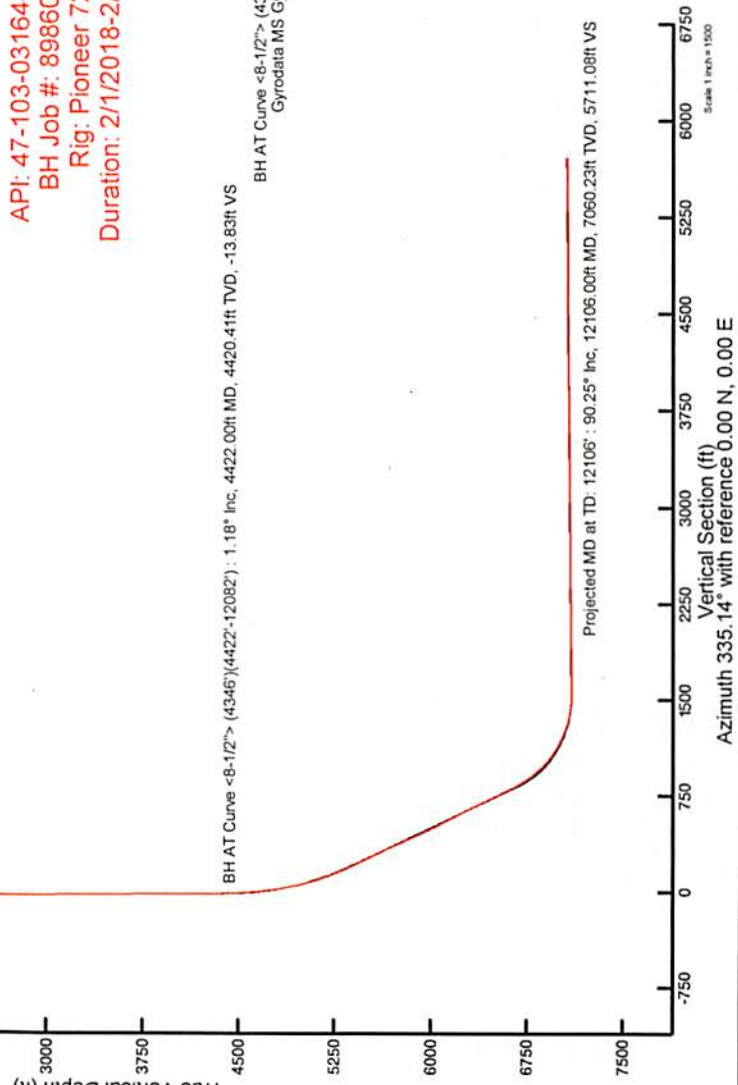
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User specified (HDGM) Dip: 66.84° Field: 52340 nT  
Magnetic North is 8.14 degrees West of True North (at 23/Jan/2018)  
Grid North is 0.71 degrees West of True North  
To correct azimuth from True to Grid add 0.71 degrees  
To correct azimuth from Magnetic to Grid subtract 7.43 degrees



Scale 1 inch = 1500



Projected MD at TD: 12106' : 90.25° Inc, 12106.00ft MD, 7060.23ft TVD, 5711.08ft VS

Vertical Section (ft)  
Azimuth 335.14° with reference 0.00 N, 0.00 E

Scale 1 inch = 1500



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# Actual Wellpath Report

Big 360 515111 AWP Proj: 12106'

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## REFERENCE WELLPATH IDENTIFICATION

Operator	EQT	Slot	Slot 515111
Area	Wetzel County, WV	Well	Big 360 515111
Field	Wetzel	Wellbore	Big 360 515111 AWB
Facility	Big 360 Pad	API:	47-103-03164

## REPORT SETUP INFORMATION

Projection System	NAD27 / Lambert West Virginia SP, Northern Zone (4701), US feet	Software System	WellArchitect® 5.1
North Reference	Grid	User	Edsaryar
Scale	0.999942	Report Generated	07/Feb/2018 at 15:16
Convergence at slot	0.71° West	Database/Source file	WA_MPL_EASTERNUS_Defn/Big_360_515111_AWP_Proj_12106_.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-15.73	42.16	1685024.94	378096.00	39°31'57.792"N	80°37'00.287"W
Facility Reference Pt			1684982.78	378111.73	39°31'57.943"N	80°37'00.828"W
Field Reference Pt			1688243.35	385255.46	39°33'08.944"N	80°36'20.337"W

## WELLPATH DATUM

Calculation method	Minimum curvature	Pioneer 72 (RKB) to Facility Vertical Datum	1022.00ft
Horizontal Reference Pt	Slot	Pioneer 72 (RKB) to Mean Sea Level	1022.00ft
Vertical Reference Pt	Pioneer 72 (RKB)	Pioneer 72 (RKB) to Mud Line at Slot (Slot 515111)	23.00ft
MD Reference Pt	Pioneer 72 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	335.14°

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Big 360 515111 AWP Proj: 12106'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 515111
Area	Wetzel County, WV	Well	Big 360 515111
Field	Wetzel	Wellbore	Big 360 515111 AWB
Facility	Big 360 Pad		

WELLPATH DATA (137 stations) † = interpolated/extrapolated station															
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
0.00	0.000	334.150	0.00	0.00	0.00	0.00	1685024.94	378096.00	39°31'57.792"N	80°37'00.287"W	0.00	0.000	0.00	0.00	0.00
23.00	0.000	334.150	23.00	0.00	0.00	0.00	1685024.94	378096.00	39°31'57.792"N	80°37'00.287"W	0.00	0.000	0.00	0.00	0.00
110.00	0.060	334.150	110.00	0.05	0.04	-0.02	1685024.92	378096.04	39°31'57.793"N	80°37'00.288"W	0.05	334.150	0.07	0.07	-29.71
210.00	0.100	328.850	210.00	0.18	0.16	-0.09	1685024.85	378096.16	39°31'57.794"N	80°37'00.289"W	0.18	331.652	0.04	0.04	-5.30
310.00	0.110	333.840	310.00	0.37	0.32	-0.18	1685024.76	378096.32	39°31'57.795"N	80°37'00.290"W	0.37	331.559	0.01	0.01	4.99
410.00	0.160	10.170	410.00	0.58	0.55	-0.19	1685024.75	378096.55	39°31'57.798"N	80°37'00.290"W	0.58	340.577	0.10	0.05	36.33
510.00	0.190	53.850	510.00	0.72	0.78	-0.03	1685024.91	378096.78	39°31'57.800"N	80°37'00.288"W	0.78	357.481	0.13	0.03	43.68
610.00	0.130	75.770	610.00	0.74	0.91	0.21	1685025.15	378096.91	39°31'57.801"N	80°37'00.285"W	0.93	12.985	0.08	-0.06	21.92
710.00	0.120	139.120	710.00	0.61	0.86	0.39	1685025.33	378096.86	39°31'57.801"N	80°37'00.283"W	0.94	24.357	0.13	-0.01	63.35
810.00	0.110	120.980	810.00	0.43	0.73	0.54	1685025.48	378096.73	39°31'57.800"N	80°37'00.281"W	0.91	36.492	0.04	-0.01	-18.14
910.00	0.160	203.000	910.00	0.26	0.55	0.57	1685025.51	378096.55	39°31'57.798"N	80°37'00.280"W	0.79	45.828	0.18	0.05	82.02
1010.00	0.140	216.650	1010.00	0.11	0.32	0.44	1685025.38	378096.32	39°31'57.796"N	80°37'00.282"W	0.55	53.588	0.04	-0.02	13.65
1110.00	0.150	288.400	1110.00	0.14	0.27	0.24	1685025.18	378096.27	39°31'57.795"N	80°37'00.284"W	0.36	42.163	0.17	0.01	71.75
1210.00	0.310	337.810	1210.00	0.50	0.56	0.02	1685024.96	378096.56	39°31'57.798"N	80°37'00.287"W	0.56	1.589	0.24	0.16	49.41
1310.00	0.330	336.810	1310.00	1.06	1.07	-0.20	1685024.74	378097.07	39°31'57.803"N	80°37'00.290"W	1.09	349.449	0.02	0.02	-1.00
1410.00	0.350	335.570	1409.99	1.65	1.62	-0.44	1685024.50	378097.62	39°31'57.808"N	80°37'00.293"W	1.68	344.784	0.02	0.02	-1.24
1510.00	0.240	347.300	1509.99	2.16	2.10	-0.61	1685024.33	378098.10	39°31'57.813"N	80°37'00.296"W	2.19	343.744	0.12	-0.11	11.73
1610.00	0.350	71.660	1609.99	2.33	2.40	-0.37	1685024.57	378098.40	39°31'57.816"N	80°37'00.293"W	2.43	351.275	0.40	0.11	84.36
1710.00	3.130	116.420	1709.94	0.17	1.28	2.37	1685027.31	378097.28	39°31'57.805"N	80°37'00.257"W	2.69	61.582	2.89	2.78	44.76
1810.00	3.040	179.270	1809.82	-4.38	-2.59	4.85	1685029.79	378093.41	39°31'57.767"N	80°37'00.225"W	5.49	118.086	3.22	-0.09	62.85
1910.00	3.810	215.290	1909.65	-8.46	-7.95	2.96	1685027.90	378088.05	39°31'57.714"N	80°37'00.248"W	8.48	159.575	2.24	0.77	36.02
2010.00	3.770	217.800	2009.43	-11.62	-13.26	-0.97	1685023.97	378082.74	39°31'57.661"N	80°37'00.298"W	13.30	184.200	0.17	-0.04	2.51
2110.00	3.600	218.270	2109.22	-14.55	-18.32	-4.93	1685020.01	378077.68	39°31'57.611"N	80°37'00.347"W	18.97	195.069	0.17	-0.17	0.47
2210.00	3.520	218.790	2209.03	-17.33	-23.18	-8.80	1685016.14	378072.82	39°31'57.562"N	80°37'00.396"W	24.79	200.790	0.09	-0.08	0.52
2310.00	3.310	219.390	2308.85	-19.95	-27.80	-12.56	1685012.38	378068.20	39°31'57.516"N	80°37'00.443"W	30.51	204.304	0.21	-0.21	0.60
2410.00	3.010	219.270	2408.70	-22.35	-32.07	-16.05	1685008.89	378063.93	39°31'57.473"N	80°37'00.487"W	35.86	206.588	0.30	-0.30	-0.12
2510.00	2.590	221.050	2508.58	-24.42	-35.80	-19.20	1685005.75	378060.20	39°31'57.436"N	80°37'00.527"W	40.63	208.197	0.43	-0.42	1.78
2610.00	1.620	228.050	2608.51	-25.75	-38.45	-21.73	1685003.21	378057.55	39°31'57.410"N	80°37'00.559"W	44.17	209.472	1.00	-0.97	7.00
2710.00	0.900	240.780	2708.49	-26.23	-39.78	-23.47	1685001.47	378056.22	39°31'57.396"N	80°37'00.581"W	46.19	210.537	0.77	-0.72	12.73
2810.00	0.630	267.220	2808.48	-26.08	-40.19	-24.70	1685000.24	378055.81	39°31'57.392"N	80°37'00.596"W	47.18	211.575	0.44	-0.27	26.44

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Area	Wetzel County, WV	Well	Big 360 515111
Field	Wetzel	Wellbore	Big 360 515111 AWB
Facility	Big 360 Pad		

WELLPATH DATA (137 stations)															
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
2910.00	0.550	285.590	2908.48	-25.56	-40.09	-25.71	1684999.23	378055.91	39°31'57.393"N	80°37'00.609"W	47.63	212.676	0.20	-0.08	18.37
3010.00	0.570	286.290	3008.47	-24.93	-39.82	-26.65	1684998.29	378056.18	39°31'57.395"N	80°37'00.621"W	47.92	213.796	0.02	0.02	0.70
3110.00	0.540	291.790	3108.47	-24.26	-39.51	-27.57	1684997.37	378056.50	39°31'57.398"N	80°37'00.633"W	48.17	214.908	0.06	-0.03	5.50
3210.00	0.580	299.460	3208.46	-23.50	-39.08	-28.45	1684996.50	378056.92	39°31'57.403"N	80°37'00.644"W	48.34	216.049	0.08	0.04	7.67
3310.00	0.470	317.040	3308.46	-22.70	-38.53	-29.17	1684995.77	378057.47	39°31'57.408"N	80°37'00.654"W	48.33	217.123	0.19	-0.11	17.58
3410.00	0.510	323.820	3408.45	-21.87	-37.87	-29.71	1684995.23	378058.13	39°31'57.414"N	80°37'00.661"W	48.14	218.111	0.07	0.04	6.78
3510.00	0.540	322.940	3508.45	-20.98	-37.14	-30.26	1684994.69	378058.86	39°31'57.422"N	80°37'00.668"W	47.90	219.169	0.03	0.03	-0.88
3610.00	0.600	309.380	3608.44	-20.05	-36.43	-30.94	1684994.00	378059.57	39°31'57.428"N	80°37'00.677"W	47.80	220.345	0.15	0.06	-13.56
3710.00	0.660	312.440	3708.44	-19.04	-35.71	-31.77	1684993.17	378060.29	39°31'57.435"N	80°37'00.687"W	47.80	221.662	0.07	0.06	3.06
3810.00	0.610	303.280	3808.43	-18.06	-35.03	-32.64	1684992.30	378060.97	39°31'57.442"N	80°37'00.698"W	47.88	222.982	0.11	-0.05	-9.16
3910.00	0.570	308.450	3908.43	-17.16	-34.43	-33.48	1684991.46	378061.57	39°31'57.448"N	80°37'00.709"W	48.02	224.200	0.07	-0.04	5.17
4010.00	0.590	310.650	4008.42	-16.25	-33.78	-34.26	1684990.68	378062.22	39°31'57.454"N	80°37'00.719"W	48.11	225.401	0.03	0.02	2.20
4110.00	0.480	304.260	4108.42	-15.42	-33.21	-35.00	1684989.95	378062.79	39°31'57.460"N	80°37'00.729"W	48.25	226.499	0.12	-0.11	-6.39
4210.00	0.150	325.100	4208.42	-14.93	-32.87	-35.42	1684989.53	378063.13	39°31'57.463"N	80°37'00.734"W	48.32	227.137	0.34	-0.33	20.84
4310.00	0.180	27.830	4308.42	-14.71	-32.62	-35.42	1684989.52	378063.38	39°31'57.466"N	80°37'00.734"W	48.15	227.353	0.17	0.03	62.73
4346.00	0.260	34.870	4344.41	-14.63	-32.51	-35.35	1684989.60	378063.50	39°31'57.467"N	80°37'00.733"W	48.02	227.397	0.23	0.22	19.56
4422.00	1.180	311.770	4420.41	-13.83	-31.84	-35.83	1684989.11	378064.16	39°31'57.473"N	80°37'00.740"W	47.93	228.373	1.55	1.21	-109.34
4454.00	3.440	304.390	4452.38	-12.70	-31.08	-36.87	1684988.07	378064.92	39°31'57.481"N	80°37'00.753"W	48.22	229.869	7.11	7.06	-23.06
4549.00	4.720	300.280	4547.14	-7.04	-27.50	-42.60	1684982.35	378068.50	39°31'57.515"N	80°37'00.827"W	50.70	237.154	1.38	1.35	-4.33
4644.00	6.140	302.260	4641.71	0.43	-22.82	-50.27	1684974.67	378073.18	39°31'57.561"N	80°37'00.925"W	55.20	245.587	1.51	1.49	2.08
4739.00	8.820	300.190	4735.89	10.67	-16.44	-60.86	1684964.08	378079.56	39°31'57.622"N	80°37'01.062"W	63.04	254.883	2.83	2.82	-2.18
4833.00	12.100	299.320	4828.32	24.57	-7.99	-75.68	1684949.26	378088.01	39°31'57.704"N	80°37'01.252"W	76.11	263.973	3.49	3.49	-0.93
4928.00	15.200	297.860	4920.62	42.56	2.71	-95.38	1684929.56	378098.71	39°31'57.807"N	80°37'01.505"W	95.42	271.626	3.28	3.26	-1.54
5023.00	17.440	296.970	5011.79	63.66	14.99	-119.08	1684905.86	378110.98	39°31'57.926"N	80°37'01.810"W	120.02	277.172	2.37	2.36	-0.94
5118.00	20.560	297.510	5101.60	88.07	29.15	-146.57	1684878.38	378125.15	39°31'58.062"N	80°37'02.163"W	149.44	281.248	3.29	3.28	0.57
5213.00	24.250	297.800	5189.42	116.80	45.96	-178.64	1684846.31	378141.96	39°31'58.225"N	80°37'02.574"W	184.45	284.428	3.89	3.88	0.31
5308.00	27.490	299.720	5274.89	150.19	65.93	-214.95	1684810.01	378161.93	39°31'58.417"N	80°37'03.041"W	224.83	287.053	3.52	3.41	2.02
5403.00	29.620	297.920	5358.33	186.76	87.80	-254.74	1684770.22	378183.80	39°31'58.629"N	80°37'03.552"W	269.44	289.018	2.42	2.24	-1.89
5498.00	30.890	298.380	5440.39	224.99	110.39	-296.94	1684728.02	378206.38	39°31'58.847"N	80°37'04.094"W	316.79	290.392	1.36	1.34	0.48
5593.00	30.680	302.290	5522.01	264.89	134.93	-338.89	1684686.07	378230.92	39°31'59.084"N	80°37'04.634"W	364.76	291.710	2.12	-0.22	4.12

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# Actual Wellpath Report

Big 360 515111 AWP Proj: 12106'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 515111
Area	Wetzel County, WV	Well	Big 360 515111
Field	Wetzel	Wellbore	Big 360 515111 AWB
Facility	Big 360 Pad		

## WELLPATH DATA (137 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
5687.00	31.100	300.590	5602.68	305.04	160.09	-380.06	1684644.90	378256.08	39°31'59.328"N	80°37'05.163"W	412.40	292.842	1.03	0.45	-1.81
5782.00	31.150	296.850	5684.01	344.53	183.68	-423.10	1684601.86	378279.67	39°31'59.555"N	80°37'05.716"W	461.25	293.467	2.04	0.05	-3.94
5877.00	31.130	294.430	5765.32	382.43	204.93	-467.39	1684557.58	378300.92	39°31'59.760"N	80°37'06.285"W	510.34	293.676	1.32	-0.02	-2.55
5972.00	30.240	294.990	5847.02	419.33	225.20	-511.43	1684513.54	378321.18	39°31'59.955"N	80°37'06.850"W	558.81	293.765	0.98	-0.94	0.59
6067.00	28.900	297.960	5929.65	455.91	246.07	-553.39	1684471.58	378342.05	39°32'00.156"N	80°37'07.389"W	605.63	293.972	2.09	-1.41	3.13
6162.00	30.980	303.380	6011.98	495.00	270.29	-594.10	1684430.88	378366.27	39°32'00.390"N	80°37'07.912"W	652.69	294.464	3.59	2.19	5.71
6257.00	31.690	303.940	6093.13	537.14	297.67	-635.22	1684389.76	378393.66	39°32'00.656"N	80°37'08.441"W	701.50	295.109	0.81	0.75	0.59
6352.00	31.700	301.510	6173.96	579.26	324.65	-677.20	1684347.78	378420.63	39°32'00.917"N	80°37'08.981"W	751.00	295.613	1.34	0.01	-2.56
6447.00	31.610	300.180	6254.83	620.45	350.21	-720.00	1684304.98	378446.19	39°32'01.165"N	80°37'09.532"W	800.66	295.939	0.74	-0.09	-1.40
6542.00	31.670	299.050	6335.71	661.01	374.84	-763.32	1684261.66	378470.82	39°32'01.403"N	80°37'10.088"W	850.39	296.154	0.63	0.06	-1.19
6637.00	31.760	298.550	6416.52	701.24	398.90	-807.09	1684217.90	378494.87	39°32'01.635"N	80°37'10.651"W	900.28	296.301	0.29	0.09	-0.53
6732.00	31.730	297.600	6497.31	741.12	422.42	-851.19	1684173.80	378518.39	39°32'01.862"N	80°37'11.217"W	950.24	296.394	0.53	-0.03	-1.00
6827.00	31.760	298.960	6578.10	781.11	446.10	-895.20	1684129.79	378542.07	39°32'02.091"N	80°37'11.783"W	1000.20	296.488	0.75	0.03	1.43
6922.00	31.680	301.140	6658.91	821.97	471.11	-938.43	1684086.57	378567.08	39°32'02.333"N	80°37'12.338"W	1050.04	296.657	1.21	-0.08	2.29
6969.00	33.570	302.460	6698.49	843.14	484.46	-959.96	1684065.04	378580.44	39°32'02.462"N	80°37'12.615"W	1075.28	296.779	4.30	4.02	2.81
7017.00	37.200	304.140	6737.62	866.76	499.74	-983.18	1684041.82	378595.71	39°32'02.610"N	80°37'12.914"W	1102.89	296.944	7.83	7.56	3.50
7064.00	41.970	305.140	6773.83	892.56	516.77	-1007.80	1684017.20	378612.73	39°32'02.775"N	80°37'13.231"W	1132.57	297.147	10.24	10.15	2.13
7112.00	45.790	305.250	6808.43	921.39	535.94	-1034.98	1683990.02	378631.91	39°32'02.961"N	80°37'13.581"W	1165.51	297.376	7.96	7.96	0.23
7159.00	46.650	305.020	6840.94	950.77	555.47	-1062.74	1683962.27	378651.43	39°32'03.151"N	80°37'13.938"W	1199.15	297.595	1.86	1.83	-0.49
7207.00	48.200	303.660	6873.42	981.13	575.40	-1091.92	1683933.08	378671.37	39°32'03.344"N	80°37'14.314"W	1234.25	297.788	3.84	3.23	-2.83
7254.00	52.240	305.810	6903.49	1012.28	595.99	-1121.59	1683903.42	378691.96	39°32'03.544"N	80°37'14.696"W	1270.10	297.985	9.29	8.60	4.57
7302.00	55.750	312.250	6931.72	1047.14	620.46	-1151.69	1683873.32	378716.42	39°32'03.782"N	80°37'15.084"W	1308.19	298.313	13.08	7.31	13.42
7349.00	57.120	317.210	6957.72	1083.83	648.01	-1179.49	1683845.53	378743.97	39°32'04.051"N	80°37'15.443"W	1345.77	298.785	9.26	2.91	10.55
7397.00	61.200	318.220	6982.32	1123.14	678.50	-1207.20	1683817.81	378774.46	39°32'04.349"N	80°37'15.802"W	1384.81	299.338	8.69	8.50	2.10
7444.00	63.810	319.280	7004.01	1163.13	709.85	-1234.68	1683790.33	378805.80	39°32'04.655"N	80°37'16.157"W	1424.19	299.895	5.90	5.55	2.26
7492.00	64.860	321.260	7024.81	1204.95	743.12	-1262.33	1683762.68	378839.07	39°32'04.981"N	80°37'16.515"W	1464.82	300.485	4.31	2.19	4.13
7587.00	72.300	326.140	7059.49	1291.55	814.37	-1314.56	1683710.46	378910.32	39°32'05.679"N	80°37'17.193"W	1546.37	301.778	9.17	7.83	5.14
7682.00	79.070	332.260	7082.99	1383.02	893.39	-1361.57	1683663.45	378989.34	39°32'06.454"N	80°37'17.806"W	1628.50	303.271	9.47	7.13	6.44
7777.00	85.930	341.270	7095.41	1477.01	979.82	-1398.62	1683626.41	379075.76	39°32'07.303"N	80°37'18.292"W	1707.68	305.014	11.85	7.22	9.48
7838.00	90.740	345.470	7097.18	1537.32	1038.21	-1416.05	1683608.97	379134.15	39°32'07.878"N	80°37'18.524"W	1755.87	306.248	10.46	7.89	6.89

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# Actual Wellpath Report

Big 360 515111 AWP Proj: 12106'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 515111
Area	Wetzel County, WV	Well	Big 360 515111
Field	Wetzel	Wellbore	Big 360 515111 AWB
Facility	Big 360 Pad		

## WELLPATH DATA (137 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
7871.00	90.680	345.990	7096.77	1569.76	1070.19	-1424.19	1683600.84	379166.13	39°32'08.193"N	80°37'18.633"W	1781.47	306.923	1.59	-0.18	1.58
7966.00	90.310	346.570	7095.95	1662.96	1162.48	-1446.72	1683578.31	379258.41	39°32'09.102"N	80°37'18.935"W	1855.89	308.783	0.72	-0.39	0.61
8061.00	90.520	346.310	7095.26	1756.12	1254.83	-1468.99	1683556.04	379350.75	39°32'10.012"N	80°37'19.234"W	1931.97	310.504	0.35	0.22	-0.27
8156.00	90.830	348.680	7094.14	1848.91	1347.56	-1489.56	1683535.47	379443.48	39°32'10.926"N	80°37'19.512"W	2008.66	312.135	2.52	0.33	2.49
8251.00	90.890	350.240	7092.72	1940.94	1440.94	-1506.93	1683518.10	379536.86	39°32'11.847"N	80°37'19.748"W	2084.99	313.718	1.64	0.06	1.64
8346.00	90.860	348.910	7091.27	2032.93	1534.36	-1524.12	1683500.91	379630.27	39°32'12.768"N	80°37'19.983"W	2162.69	315.192	1.40	-0.03	-1.40
8441.00	90.430	346.460	7090.20	2125.65	1627.16	-1544.38	1683480.65	379723.06	39°32'13.683"N	80°37'20.256"W	2243.38	316.495	2.62	-0.45	-2.58
8536.00	90.370	345.980	7089.53	2218.87	1719.43	-1567.01	1683458.03	379815.32	39°32'14.592"N	80°37'20.559"W	2326.36	317.655	0.51	-0.06	-0.51
8631.00	90.430	344.160	7088.87	2312.44	1811.21	-1591.48	1683433.55	379907.10	39°32'15.496"N	80°37'20.886"W	2411.08	318.695	1.92	0.06	-1.92
8726.00	90.400	343.280	7088.18	2406.38	1902.40	-1618.11	1683406.92	379998.29	39°32'16.394"N	80°37'21.241"W	2497.48	319.617	0.93	-0.03	-0.93
8821.00	90.520	343.370	7087.42	2500.41	1993.40	-1645.37	1683379.67	380089.28	39°32'17.289"N	80°37'21.603"W	2584.74	320.463	0.16	0.13	0.09
8916.00	90.430	342.150	7086.63	2594.56	2084.13	-1673.53	1683351.51	380180.00	39°32'18.183"N	80°37'21.977"W	2672.88	321.236	1.29	-0.09	-1.28
9011.00	90.340	342.630	7085.99	2688.80	2174.67	-1702.27	1683322.78	380270.54	39°32'19.074"N	80°37'22.358"W	2761.69	321.947	0.51	-0.09	0.51
9105.00	90.310	342.890	7085.46	2781.97	2264.45	-1730.12	1683294.92	380360.31	39°32'19.958"N	80°37'22.728"W	2849.75	322.619	0.28	-0.03	0.28
9201.00	90.220	346.060	7085.02	2876.69	2356.93	-1755.82	1683269.23	380452.79	39°32'20.868"N	80°37'23.071"W	2939.05	323.315	3.30	-0.09	3.30
9296.00	90.620	347.140	7084.32	2969.79	2449.34	-1777.83	1683247.21	380545.20	39°32'21.779"N	80°37'23.366"W	3026.54	324.026	1.21	0.42	1.14
9391.00	90.550	349.930	7083.35	3062.19	2542.43	-1796.71	1683228.34	380638.28	39°32'22.697"N	80°37'23.622"W	3113.22	324.752	2.94	-0.07	2.94
9486.00	90.550	350.810	7082.44	3153.85	2636.09	-1812.60	1683212.45	380731.93	39°32'23.620"N	80°37'23.840"W	3199.14	325.487	0.93	0.00	0.93
9581.00	90.400	350.820	7081.65	3245.31	2729.87	-1827.77	1683197.28	380825.71	39°32'24.545"N	80°37'24.049"W	3285.26	326.196	0.16	-0.16	0.01
9676.00	90.550	350.530	7080.86	3336.84	2823.61	-1843.16	1683181.89	380919.44	39°32'25.470"N	80°37'24.260"W	3371.94	326.865	0.34	0.16	-0.31
9771.00	90.620	351.500	7079.89	3428.21	2917.44	-1858.00	1683167.06	381013.26	39°32'26.395"N	80°37'24.464"W	3458.84	327.509	1.02	0.07	1.02
9866.00	90.490	349.960	7078.97	3519.71	3011.19	-1873.30	1683151.75	381107.01	39°32'27.320"N	80°37'24.675"W	3546.34	328.114	1.63	-0.14	-1.62
9961.00	90.550	348.410	7078.11	3611.86	3104.50	-1891.12	1683133.93	381200.31	39°32'28.240"N	80°37'24.917"W	3635.14	328.652	1.63	0.06	-1.63
10056.00	90.920	346.190	7076.89	3704.71	3197.16	-1912.00	1683113.05	381292.97	39°32'29.153"N	80°37'25.198"W	3725.26	329.119	2.37	0.39	-2.34
10151.00	90.800	344.580	7075.47	3798.19	3289.07	-1935.97	1683089.08	381384.87	39°32'30.058"N	80°37'25.519"W	3816.54	329.519	1.70	-0.13	-1.69
10246.00	91.020	343.040	7073.96	3892.09	3380.29	-1962.46	1683062.60	381476.09	39°32'30.956"N	80°37'25.871"W	3908.66	329.862	1.64	0.23	-1.62
10341.00	91.110	343.190	7072.19	3986.15	3471.18	-1990.04	1683035.02	381566.97	39°32'31.851"N	80°37'26.238"W	4001.17	330.174	0.18	0.09	0.16
10435.00	91.230	343.410	7070.27	4079.18	3561.20	-2017.05	1683008.01	381656.98	39°32'32.737"N	80°37'26.597"W	4092.75	330.473	0.27	0.13	0.23
10530.00	90.650	342.100	7068.71	4173.33	3651.91	-2045.21	1682979.85	381747.69	39°32'33.630"N	80°37'26.971"W	4185.61	330.750	1.51	-0.61	-1.38
10625.00	90.340	343.610	7067.89	4267.46	3742.68	-2073.21	1682951.85	381838.46	39°32'34.524"N	80°37'27.343"W	4278.54	331.016	1.62	-0.33	1.59

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# Actual Wellpath Report

Big 360 515111 AWP Proj: 12106'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 515111
Area	Wetzel County, WV	Well	Big 360 515111
Field	Wetzel	Wellbore	Big 360 515111 AWB
Facility	Big 360 Pad		

WELLPATH DATA (137 stations)																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	
10721.00	90.280	345.790	7067.37	4362.12	3835.27	-2098.54	1682926.52	381931.04	39°32'35.436"N	80°37'27.681"W	4371.86	331.314	2.27	-0.06	2.27	
10816.00	90.460	343.690	7066.76	4455.78	3926.92	-2123.54	1682901.52	382022.68	39°32'36.338"N	80°37'28.015"W	4464.31	331.597	2.22	0.19	-2.21	
10911.00	90.250	341.920	7066.17	4549.93	4017.66	-2151.63	1682873.44	382113.42	39°32'37.232"N	80°37'28.388"W	4557.53	331.829	1.88	-0.22	-1.86	
11005.00	90.340	343.590	7065.69	4643.09	4107.43	-2179.49	1682845.58	382203.19	39°32'38.115"N	80°37'28.758"W	4649.86	332.049	1.78	0.10	1.78	
11100.00	90.250	348.740	7065.20	4736.31	4199.65	-2202.20	1682822.87	382295.39	39°32'39.024"N	80°37'29.062"W	4742.02	332.328	5.42	-0.09	5.42	
11195.00	89.910	353.790	7065.06	4827.54	4293.51	-2216.62	1682808.45	382389.26	39°32'39.950"N	80°37'29.261"W	4831.94	332.694	5.33	-0.36	5.32	
11290.00	89.940	356.040	7065.19	4916.93	4388.13	-2225.04	1682800.03	382483.87	39°32'40.884"N	80°37'29.384"W	4920.01	333.112	2.37	0.03	2.37	
11385.00	89.940	353.700	7065.29	5006.35	4482.75	-2233.54	1682791.54	382578.48	39°32'41.818"N	80°37'29.508"W	5008.36	333.515	2.46	0.00	-2.46	
11480.00	90.060	351.300	7065.29	5097.02	4576.93	-2245.94	1682779.14	382672.65	39°32'42.747"N	80°37'29.681"W	5098.28	333.862	2.53	0.13	-2.53	
11575.00	90.460	349.890	7064.86	5188.58	4670.65	-2261.46	1682763.62	382766.37	39°32'43.671"N	80°37'29.894"W	5189.33	334.164	1.54	0.42	-1.48	
11670.00	90.860	348.010	7063.76	5280.82	4763.87	-2279.67	1682745.41	382859.59	39°32'44.590"N	80°37'30.141"W	5281.23	334.427	2.02	0.42	-1.98	
11765.00	90.830	346.010	7062.36	5373.77	4856.43	-2301.02	1682724.06	382952.14	39°32'45.502"N	80°37'30.429"W	5373.97	334.648	2.11	-0.03	-2.11	
11860.00	90.310	343.710	7061.42	5467.40	4948.12	-2325.83	1682699.25	383043.82	39°32'46.405"N	80°37'30.760"W	5467.48	334.824	2.48	-0.55	-2.42	
11955.00	90.250	342.400	7060.95	5561.49	5038.99	-2353.51	1682671.57	383134.69	39°32'47.300"N	80°37'31.128"W	5561.52	334.965	1.38	-0.06	-1.38	
12050.00	90.310	343.050	7060.49	5655.66	5129.71	-2381.72	1682643.36	383225.40	39°32'48.193"N	80°37'31.502"W	5655.66	335.095	0.69	0.06	0.68	
12082.00	90.250	343.540	7060.33	5687.33	5160.35	-2390.92	1682634.16	383256.05	39°32'48.495"N	80°37'31.625"W	5687.33	335.141	1.54	-0.19	1.53	
12106.00	90.250	343.540	7060.23	5711.08	5183.37	-2397.72	1682627.36	383279.06	39°32'48.721"N	80°37'31.715"W	5711.08	335.176	0.00	0.00	0.00	

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# Actual Wellpath Report

Big 360 515111 AWP Proj: 12106'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 515111
Area	Wetzel County, WV	Well	Big 360 515111
Field	Wetzel	Wellbore	Big 360 515111 AWB
Facility	Big 360 Pad		

HOLE & CASING SECTIONS - Ref Wellbore: Big 360 515111 AWB Ref Wellpath: Big 360 515111 AWP Proj: 12106'									
String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
26in Conductor	23.00	63.00	40.00	23.00	63.00	0.00	0.00	0.01	0.00
17.5in Open Hole	63.00	869.00	806.00	63.00	869.00	0.01	0.00	0.64	0.59
13.375in Casing Surface	23.00	869.00	846.00	23.00	869.00	0.00	0.00	0.64	0.59
12.25in Open Hole	869.00	2460.00	1591.00	869.00	2458.64	0.64	0.59	-34.02	-17.67
9.625in Casing Intermediate	23.00	2460.00	2437.00	23.00	2458.64	0.00	0.00	-34.02	-17.67
8.75in Open Hole	2460.00	4410.00	1950.00	2458.64	4408.41	-34.02	-17.67	-32.00	-35.66
8.5in Open Hole	4410.00	12106.00	7696.00	4408.41	7060.23	-32.00	-35.66	5183.37	-2397.72
5.5in Casing Production	23.00	12106.00	12083.00	23.00	7060.23	0.00	0.00	5183.37	-2397.72

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Big 360 515111 BHL Rev-2	7057.70	5181.67	-2401.26	1682623.82	383277.35	39°32'48.704"N	80°37'31.760"W	point
Big 360 515111 LP Rev-2	7095.00	1028.26	-1404.11	1683620.91	379124.20	39°32'07.781"N	80°37'18.370"W	point
Big 360 Hard Line Rev-1	7500.00	0.00	0.00	1685024.94	378096.00	39°31'57.792"N	80°37'00.287"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: Big 360 515111 AWB Ref Wellpath: Big 360 515111 AWP Proj: 12106'					
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	
23.00	4346.00	Gyrodatta standard - Drop gyro or Multi-shot	01_Gyrodatta MS Gyro <8-3/4"> (100'-4336')	Big 360 515111 AWB	
4346.00	12082.00	BHI AutoTrak Curve (Short)	02_BH AT Curve <8-1/2"> (4346')(4422'-12082')	Big 360 515111 AWB	
12082.00	12106.00	Blind Drilling (std)	Projection to bit	Big 360 515111 AWB	

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# Actual Wellpath Report

Big 360 515111 AWP Proj: 12106'

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REFERENCE WELLPATH IDENTIFICATION			
Operator	EQT	Slot	Slot 515111
Area	Wetzel County, WV	Well	Big 360 515111
Field	Wetzel	Wellbore	Big 360 515111 AWB
Facility	Big 360 Pad		

COMMENTS
<p>Wellpath general comments            API: 47-103-03164-0000            BH Job #: 8986093            Rig: Pioneer 72            Duration: 2/1/2018-2/5/2018            Gyrodata MS Gyro &lt;8-3/4"&gt; (100'-4336')            BH AT Curve &lt;8-1/2"&gt; (4346')(4422'-12082')            Projected MD at TD: 12106'</p>

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**515111 47-103-03164-0000 - Perforations**

<b>Stage Number</b>	<b>Perforation Date</b>	<b>Top Perf Depth (ftKB)</b>	<b>Bottom Perf Depth (ftKB)</b>	<b>Number of Shots</b>	<b>Formation</b>
Initiation Sleeve	2/24/2018	11,978	12,098	10	Marcellus
2	3/5/2018	11,778	11,940	40	Marcellus
3	3/5/2018	11,578	11,740	40	Marcellus
4	3/6/2018	11,378	11,540	40	Marcellus
5	3/6/2018	11,178	11,340	40	Marcellus
6	3/7/2018	10,978	11,140	40	Marcellus
7	3/7/2018	10,778	10,940	40	Marcellus
8	3/8/2018	10,578	10,740	40	Marcellus
9	3/8/2018	10,378	10,540	40	Marcellus
10	3/9/2018	10,178	10,340	40	Marcellus
11	3/9/2018	9,978	10,140	40	Marcellus
12	3/10/2018	9,778	9,940	40	Marcellus
13	3/10/2018	9,578	9,740	40	Marcellus
14	3/11/2018	9,378	9,540	40	Marcellus
15	3/11/2018	9,178	9,340	40	Marcellus
16	3/12/2018	8,978	9,140	40	Marcellus
17	3/12/2018	8,778	8,940	40	Marcellus
18	3/13/2018	8,578	8,740	40	Marcellus
19	3/13/2018	8,378	8,540	40	Marcellus
20	3/13/2018	8,178	8,340	40	Marcellus
21	3/14/2018	7,978	8,140	40	Marcellus
22	3/14/2018	7,778	7,940	40	Marcellus
23	3/15/2018	7,618	7,740	32	Marcellus

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**515111 47-103-03164-0000 - Stimulated Stages**

<b>Stage Number</b>	<b>Stimulation Date</b>	<b>Ave Pump Rate (BPM)</b>	<b>Ave Treatment Pressure (PSI)</b>	<b>Max Breakdown Pressure (PSI)</b>	<b>ISIP (PSI)</b>	<b>Amount of Proppant (lbs)</b>	<b>Amount of Water (bbls)</b>	<b>Amount of Nitrogen/other (units)</b>
1	3/5/2018	65	9,167	9,528	3,696	271,700	7,073	0
2	3/5/2018	90	9,235	9,535	4,082	452,300	8,277	0
3	3/6/2018	99	8,627	9,501	4,538	453,600	7,534	0
4	3/6/2018	99	8,592	9,303	4,575	451,600	7,484	0
5	3/7/2018	100	8,652	9,096	4,606	454,700	7,484	0
6	3/7/2018	100	8,738	9,446	4,499	451,400	7,470	0
7	3/8/2018	96	8,914	9,557	4,414	451,100	7,488	0
8	3/8/2018	100	8,575	9,294	4,498	450,700	7,437	0
9	3/9/2018	98	8,425	9,404	4,723	451,500	7,536	0
10	3/9/2018	99	8,449	9,210	4,731	451,100	7,484	0
11	3/10/2018	99	8,537	9,538	4,704	452,200	7,471	0
12	3/10/2018	88	8,319	9,681	4,923	449,700	9,108	0
13	3/11/2018	93	8,476	9,545	4,762	452,800	7,258	0
14	3/11/2018	93	8,570	9,403	4,681	451,300	7,195	0
15	3/12/2018	99	8,366	9,395	4,744	441,200	7,149	0
16	3/12/2018	100	8,076	8,919	4,792	450,500	7,074	0
17	3/12/2018	96	8,222	9,459	4,744	452,900	7,206	0
18	3/13/2018	99	8,056	8,564	4,630	450,400	7,164	0
19	3/13/2018	99	8,002	8,875	4,451	453,200	7,159	0
20	3/14/2018	99	7,862	8,038	4,649	451,400	7,219	0
21	3/14/2018	100	8,108	8,390	4,698	450,300	7,252	0
22	3/14/2018	100	7,874	8,803	4,823	453,000	7,080	0
23	3/15/2018	96	8,519	9,384	4,316	361,600	5,723	0

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# Hydraulic Fracturing Fluid Product Component Information Disclosure

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Job Start Date:	3/5/2018
Job End Date:	3/15/2018
State:	West Virginia
County:	Wetzel
API Number:	47-103-03164-00-00
Operator Name:	EQT Production
Well Name and Number:	515111
Latitude:	39.53272000
Longitude:	-80.61675000
Datum:	NAD83
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	7,060
Total Base Water Volume (gal):	7,111,650
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	Universal	Carrier/Base Fluid					
			Water	7732-18-5	100.00000	85.18261	None
Hydrochloric Acid (15%)	Universal	Acidizing					
				Listed Below			

MX-5-3886	Multi-Chem	Bacteria Treatment					
				Listed Below			
Other Chemical (s)	Listed Above	See Trade Name (s) List					
				Listed Below			
Unihib-G	GeoSafe	Acid Corrosion Inhibitor					
				Listed Below			
Sand (Proppant)	Universal	Proppant					
				Listed Below			
LD-2950	Multi Chem	Friction Reducer					
				Listed Below			
MX-8-4543	Multi-Chem	Bacteria Treatment					
				Listed Below			
Scale Hib PE-18	Universal	Scale Inhibitor					
				Listed Below			

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Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.

			Silica Substrate	14808-60-7	100.00000	14.51156	None
			Calcium Nitrate.4H2O	13477-34-4	100.00000	0.03742	None
			Hydrochloric Acid	7647-01-0	15.00000	0.02572	None
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.02087	None
			Ethylene Glycol	107-21-1	40.00000	0.00990	None

			Proprietary Scale Inhibitor	Proprietary	30.00000	0.00742	None
			Ethoxylated alcohol	Proprietary	5.00000	0.00348	
			Poly(oxy-1,2-ethanediyl) alpha-tridecyl-omega-hydroxy-branched	69011-36-5	5.00000	0.00348	None
			Poly(oxy-1,2-ethanediyl) alpha-tridecyl-omega-hydroxy-branched	69011-36-5	5.00000	0.00348	
			Ethoxylated alcohol	Proprietary	5.00000	0.00348	None
			Contains no hazardous substances in concentrations above cut-off values according to the competent authority	Proprietary	60.00000	0.00149	None
			Butyl Diglycol	0000112-34-5	75.00000	0.00011	None
			Butyl Diglycol	0000112-34-5	75.00000	0.00011	
			Alcohols, C10-16, ethoxylated	0068002-97-1	50.00000	0.00007	None
			Alcohols, C10-16, ethoxylated	0068002-97-1	50.00000	0.00007	
			Methanol	0000067-56-1	5.00000	0.00001	None
			Methanol	0000067-56-1	5.00000	0.00001	
			Thiourea	0000062-56-6	1.00000	0.00000	None
			Formaldehyde	0000050-00-0	1.00000	0.00000	None
			Formaldehyde	0000050-00-0	1.00000	0.00000	
			Thiourea	0000062-56-6	1.00000	0.00000	

\* 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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Well Operator's Report of Well Work



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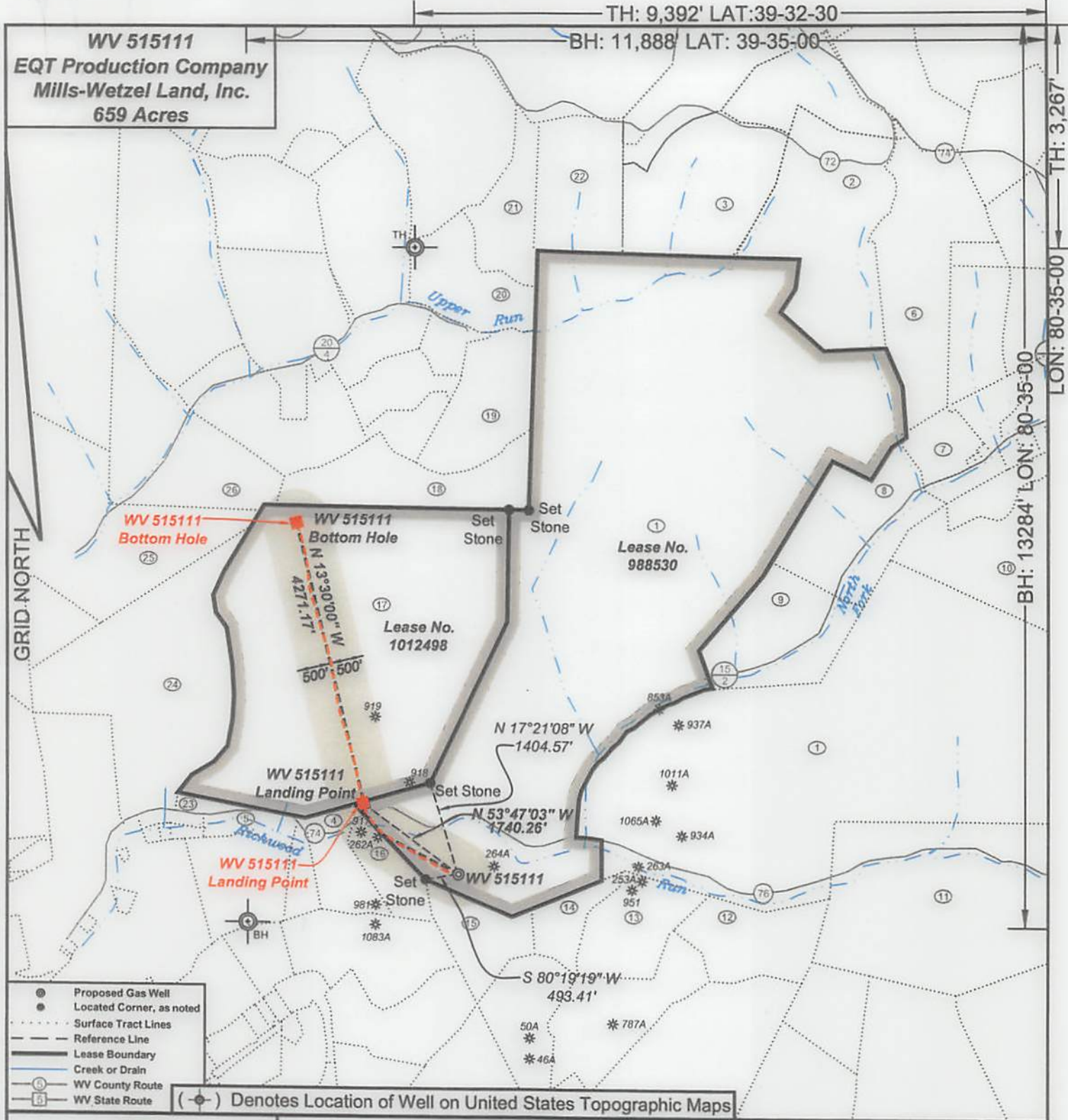
WV Department of  
Environmental Protection

Well Number: 515111

API: 47 - 103 - 03164

Submission:  Initial  Amended

Notes:



GRID NORTH

- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- Ⓢ WV County Route
- Ⓡ WV State Route

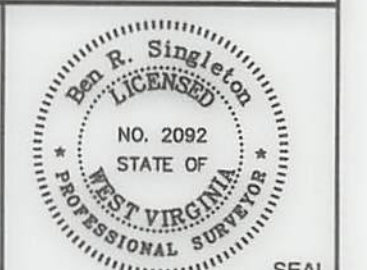
(●) Denotes Location of Well on United States Topographic Maps



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 Department of Environmental Protection.

*Ben R. Singleton*

P.S. 2092



FILE NO: 174-13  
 DRAWING NO: 174-13 Big 360 H4  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1:2500  
 PROVEN SOURCE OF ELEVATION: NGS CORS Station

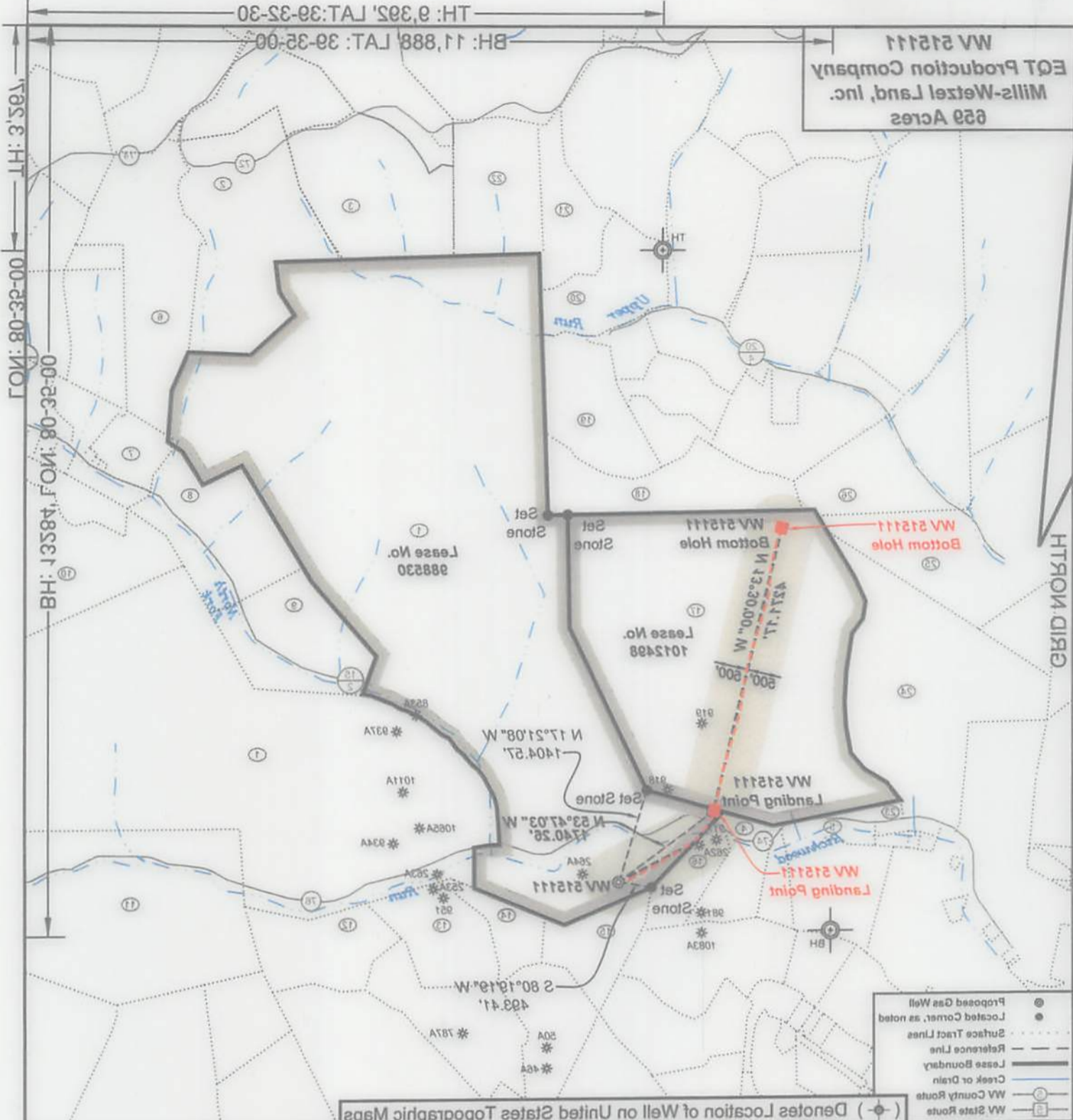
STATE OF WEST VIRGINIA  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
 OIL AND GAS DIVISION

DATE: March 5 20 18  
 OPERATOR'S WELL NO. 515111  
 API WELL NO  
 47 - 103 - 03164  
 STATE COUNTY PERMIT

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL  
 (IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW  
 LOCATION: ELEVATION: Original Ground = 1008' Proposed Ground = 998' WATERSHED Richwood Run QUADRANGLE: Big Run  
 DISTRICT: Grant COUNTY: Wetzel  
 SURFACE OWNER: Coastal Forest Resources Company d/b/a Coastal Timberlands Company ACREAGE: 1,636.5  
 ROYALTY OWNER: Mills-Wetzel Land, Inc. LEASE NO: 988530 ACREAGE: 659  
 PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 7,064'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson  
 ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280  
 Bridgeport, WV 26330 Bridgeport, WV 26330

WV 515111  
 EQT Production Company  
 Mills-Wetzel Land, Inc.  
 659 Acres



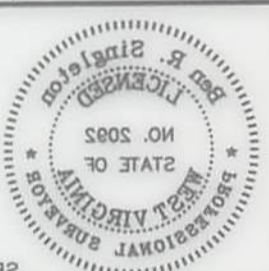
- ⊙ Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- WV County Route
- WV State Route

(- ⊙ -) Denotes Location of Well on United States Topographic Maps



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 Department of Environmental Protection.

*[Signature]*  
 P.S. 2092



FILE NO: 174-13  
 DRAWING NO: 174-13 Big 380 H4  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1:2500  
 PROVEN SOURCE OF ELEVATION: NGS CORS Station

**STATE OF WEST VIRGINIA**  
 DEPARTMENT OF ENVIRONMENTAL PROTECTION  
**OIL AND GAS DIVISION**

STATE COUNTY PERMIT  
 47 103 03164  
 API WELL NO  
 OPERATOR'S WELL NO. 515111  
 DATE: March 5 20 18

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL

(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: WATERSHED Richwood Run Original Ground = 1008' Proposed Ground = 998'

DISTRICT: Grant COUNTY: Wetzel QUADRANGLE: Big Run

SURFACE OWNER: Coastal Forest Resources Company d/b/a Coastal Timberlands Company ACREAGE: 1,636.5

ROYALTY OWNER: Mills-Wetzel Land, Inc. LEASE NO: 988230 ACREAGE: 659

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION

PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY) \_\_\_\_\_

PLUG AND ABANDON  CLEAN OUT AND REPLUG  TARGET FORMATION: Marcellus ESTIMATED DEPTH: 1,064'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson

ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280

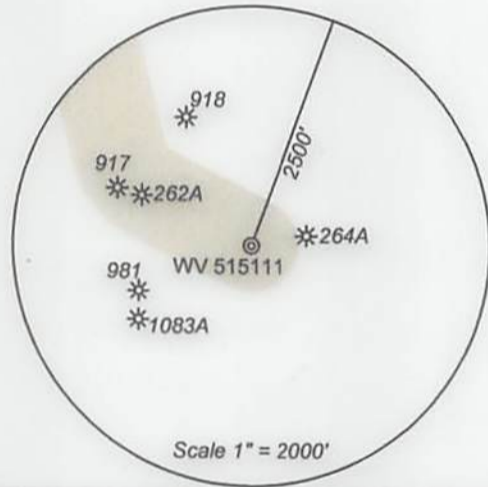
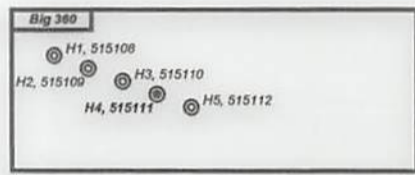
Big Spring, WV 26330 Big Spring, WV 26330

**WV 515111**  
**EQT Production Company**  
**Mills-Wetzel Land, Inc.**  
**659 Acres**

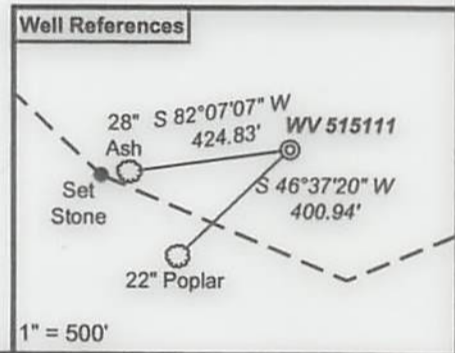
Tract I.D.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	17	14	Wetzel	Grant	Coastal Forest Resources Co.	1627.60
2	13	46	Wetzel	Grant	Burl Henthorn Est, et al.	99.00
3	12	47	Wetzel	Grant	Coastal Forest Resources Co.	87.50
4	22	12	Wetzel	Grant	James Jones, et al.	18.67
5	22	11	Wetzel	Grant	Mary M. Snodgrass	10.14
6	18	1	Wetzel	Grant	McKinley E. Calvert Heirs	100.00
7	18	14	Wetzel	Grant	Frank M. & Frankie L. Dulaney	9.55
8	18	13	Wetzel	Grant	Ralph G. Dulaney	87.50
9	18	17	Wetzel	Grant	Alan D. & Diana L. Barr	13.00
10	18	22	Wetzel	Grant	Karen R. Dennison, et al.	111.40
11	23	5	Wetzel	Grant	Thomas E. Wyatt, et al.	174.68
12	23	4	Wetzel	Grant	Dallison Lumber Inc.	36.10
13	23	2	Wetzel	Grant	Billy D. Arnolds, Jr.	38.80
14	23	1	Wetzel	Grant	Billy D. Arnolds, Jr.	16.50
15	22	27	Wetzel	Grant	Dallison Lumber Inc.	31.35
16	22	13	Wetzel	Grant	James Jones, et al.	16.75
17	17	16	Wetzel	Grant	David A. Arnolds	402.61
18	17	13	Wetzel	Grant	David A. Arnolds	62.25
19	17	12	Wetzel	Grant	Rhonda K. Spencer	57.20
20	17	4	Wetzel	Grant	George W. Cain	42.60
21	12	45	Wetzel	Grant	Jimmy L & James C. Yoho	44.10
22	12	46	Wetzel	Grant	Jimmy L & James C. Yoho	56.10
23	22	7	Wetzel	Grant	Billy D. Arnolds	5.20
24	17	16.1	Wetzel	Grant	Coastal Forest Resources Co.	137.39
25	16	40	Wetzel	Grant	Coastal Forest Resources Co.	412.80
26	17	6	Wetzel	Grant	Georgia Ann Smith	0.55

**As-Drilled Well Information:**  
**WV 515111 coordinates:**  
 NAD 27 N: 378,096.00 E: 1,685,024.94  
 NAD 83 UTM N: 4,375,975.15 E: 532,952.01  
**WV 515111 Landing Point coordinates:**  
 NAD 27 N: 379,134.15 E: 1,683,608.97  
 NAD 83 UTM N: 4,376,284.23 E: 532,515.35  
**WV 515111 Bottom Hole coordinates:**  
 NAD 27 N: 383,279.06 E: 1,682,627.36  
 NAD 83 UTM N: 4,377,542.02 E: 532,195.26

West Virginia Coordinate System of 1927 (North Zone) based upon Differential GPS Measurements.  
 Plat orientation, corner and well ties are based upon the grid north meridian.  
 Well location references are based upon the grid north meridian.  
 UTM coordinates are NAD83, Zone 17, Meters.



Lease No.	Acres	Owner
1012498	514	Kenneth R. Mason, et al.

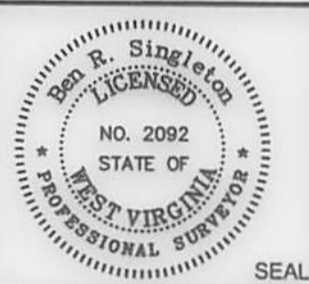


- Proposed Gas Well
- Located Corner, as noted
- Surface Tract Lines
- Reference Line
- Lease Boundary
- Creek or Drain
- ⊙ WV County Route
- ⊙ WV State Route



*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 Department of Environmental Protection.*

*Ben R. Singleton*  
 P.S. 2092



FILE NO: 174-13  
 DRAWING NO: 174-13 Big 360 H4  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1:2500  
 PROVEN SOURCE OF ELEVATION: NGS CORS Station



DATE: March 5 20 18  
 OPERATOR'S WELL NO. 515111  
 API WELL NO  
 47 - 103 - 03164  
 STATE COUNTY PERMIT

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

LOCATION: ELEVATION: Original Ground = 1008' Proposed Ground = 998' WATERSHED Richwood Run QUADRANGLE: Big Run

DISTRICT: Grant COUNTY: Wetzel

SURFACE OWNER: Coastal Forest Resources Company d/b/a Coastal Timberlands Company ACREAGE: 1,636.5  
 ROYALTY OWNER: Mills-Wetzel Land, Inc. LEASE NO: 988530 ACREAGE: 659

PROPOSED WORK:  DRILL  CONVERT  DRILL DEEPER  FRACTURE OR STIMULATE  PLUG OFF OLD FORMATION  
 PERFORATE NEW FORMATION  OTHER PHYSICAL CHANGE IN WELL (SPECIFY)  
 PLUG AND ABANDON  CLEAN OUT AND REPLUG TARGET FORMATION: Marcellus ESTIMATED DEPTH: 7,064'

WELL OPERATOR: EQT Production Company DESIGNATED AGENT: Jason Ranson  
 ADDRESS: 115 Professional Place PO Box 280 ADDRESS: 115 Professional Place PO Box 280  
 Bridgeport, WV 26330 Bridgeport, WV 26330

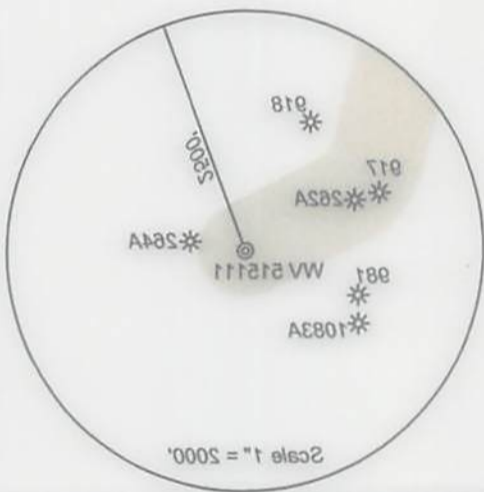
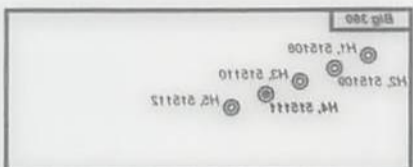


**EQT Production Company  
Mills-Wetzel Land, Inc.  
659 Acres  
WV 515111**

Tract I.D.	Tax Map No.	Parcel No.	County	District	Surface Tract Owner	Acres
1	17	14	Wetzel	Grant	Coastal Forest Resources Co.	1627.60
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4	22	12	Wetzel	Grant	James Jones, et al.	18.67
5	22	11	Wetzel	Grant	Mary M. Snodgrass	10.14
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20	17	4	Wetzel	Grant	George W. Cain	42.60
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25	16	40	Wetzel	Grant	Coastal Forest Resources Co.	412.80
26	17	6	Wetzel	Grant	Georgia Ann Smith	0.22

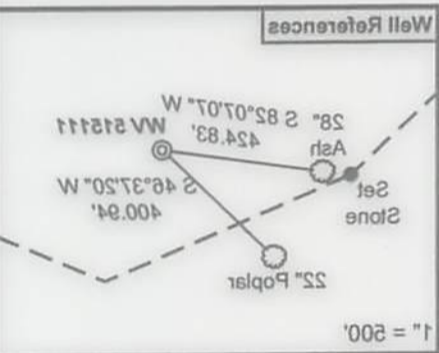
**As-Drilled Well Information:**  
**WV 515111 coordinates:**  
 NAD 83 UTM N: 4375925.15 E: 522962.01  
 NAD 83 UTM N: 4375925.15 E: 522962.01  
**WV 515111 Landing Point coordinates:**  
 NAD 83 UTM N: 4375925.15 E: 522962.01  
 NAD 83 UTM N: 4375925.15 E: 522962.01  
**WV 515111 Bottom Hole coordinates:**  
 NAD 83 UTM N: 4375925.15 E: 522962.01  
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West Virginia Coordinate System of 1927 (North Zone) based upon Differential GPS Measurements upon Differential GPS Measurements. Plat orientation, corner and well ties are based upon the grid north meridian. UTM coordinates are NAD83, Zone 17, Meters.



Proposed Gas Well  
 Located Corner, as noted  
 Surface Tract Lines  
 Reference Line  
 Lease Boundary  
 Creek or Drain  
 WV County Route  
 WV State Route

Lease No. 1012498  
 Acres 514  
 Owner Kenneth R. Mason, et al.



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 Department of Environmental Protection.

*[Signature]*  
 P.S. 2092



DATE: March 5 18  
 OPERATOR'S WELL NO. 515111  
 API WELL NO. 103 - 03164  
 STATE COUNTY PERMIT

**STATE OF WEST VIRGINIA**  
**DEPARTMENT OF ENVIRONMENTAL PROTECTION**  
**OIL AND GAS DIVISION**

FILE NO: 174-13  
 DRAWING NO: 174-13 Big 380 H4  
 SCALE: 1" = 2000'  
 MINIMUM DEGREE OF ACCURACY: 1:2500  
 PROVEN SOURCE OF ELEVATION: NGS CORS Station

WELL TYPE:  OIL  GAS  LIQUID INJECTION  WASTE DISPOSAL

(IF GAS) PRODUCTION:  STORAGE  DEEP  SHALLOW

LOCATION: ELEVATION: 1008' (if Gas) 1008' (if Oil)  
 Digital Ground = 1008'  
 Proposed Ground = 998'

DISTRICT: Grant COUNTY: Wetzel

SURFACE OWNER: Coastal Forest Resources Company d/b/a Coastal Timberlands Company ACREAGE: 1,636.5

ROYALTY OWNER: Mills-Wetzel Land, Inc. LEASE NO: 988530 ACREAGE: 659

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Bridgeport, WV 26330 Bridgeport, WV 26330