

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

API 47 - 051 - 01888 County Marshall District Franklin
Quad Powhatan Point 7.5' Pad Name Greer Field/Pool Name _____
Farm name PPG Industries, Inc. Well Number 1S-3HM
Operator (as registered with the OOG) Tug Hill Operating, LLC
Address 1320 South University Drive, Suite 500 City Ft. Worth State TX Zip 76107

As Drilled location NAD 83/UTM Attach an as-drilled plat, profile view, and deviation survey
Top hole Northing 4,400,801.1 Easting 514,021.3
Landing Point of Curve Northing 4,400,630.8 Easting 514,055.7
Bottom Hole Northing 4,399,090.5 Easting 514,939.5

Elevation (ft) 1,251' 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)
SOBM; Base oil, osmotic inhibitor, weighting agent, viscosifier, emulsifier, hardness buffer, fluid loss additive, LCM, shale inhibitor, de-foamer, soaping agent, coagulant, flocculant; Specific additives per WSSP and Permit.

Date permit issued 1/23/2017 Date drilling commenced 3/27/2017 Date drilling ceased 8/15/2017
Date completion activities began 11/12/2017 Date completion activities ceased 1/8/2018
Verbal plugging (Y/N) n/a 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 70' Open mine(s) (Y/N) depths N
Salt water depth(s) ft 1600' Void(s) encountered (Y/N) depths N
Coal depth(s) ft Sewickley 785' TVD, Pittsburgh 879' TVD Cavern(s) encountered (Y/N) depths N
Is coal being mined in area (Y/N) N

Reviewed
Joe Zuber 10/23/18

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Reviewed by: _____

API 47-051 - 01888 Farm name PPG Industries, Inc. Well number 1S-3HM

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	36	30	120	NEW	94.5#	N/A	YES
Surface	17 1/2	13 3/8	1,008	NEW	54.5#	N/A	YES
Coal	17 1/2	13 3/8	1,008	NEW	54.5#	N/A	YES
Intermediate 1	12 1/4	9 5/8	2584	NEW	36#	N/A	YES
Intermediate 2							
Intermediate 3							
Production	8 3/4	5 1/2	13,022	NEW	20#	N/A	YES
Tubing		2 3/8	6,511	NEW	4.7#	N/A	
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	A	466	15.6	1.19	555	0	8
Surface	A	1084	15.6	1.19	1290	0	8
Coal	A	1084	15.6	1.19	1290	0	8
Intermediate 1	A	878	15.6	1.19	1045	0	8
Intermediate 2							
Intermediate 3							
Production	A	2580	14.5	1.17	3018	0	8
Tubing							

Drillers TD (ft) 13,059 Loggers TD (ft) _____
 Deepest formation penetrated Marcellus Plug back to (ft) n/a
 Plug back procedure n/a

Kick off depth (ft) 5,679

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 3 centralizers on surface casing at equal distance.
Intermediate - 1 centralizer every other joint.
Production - one centralizer every other joint in lateral, one centralizer every joint through curve, one centralizer every other joint to surface.

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 _____

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**Greer 1S-3HM
Perforation Record**

Stage	Date Perforated	Bottom Perf (ft)	Top Perf (ft)	Number of Perfs	Formation
1	11/14/2017	12,909	12,857	2	Marcellus
2	11/14/2017	12,803	12,669	48	Marcellus
3	11/15/2017	12,625	12,494	48	Marcellus
4	11/25/2017	12,450	12,319	48	Marcellus
5	11/25/2017	12,275	12,144	48	Marcellus
6	11/26/2017	12,100	11,969	48	Marcellus
7	11/26/2017	11,925	11,794	48	Marcellus
8	11/26/2017	11,750	11,619	48	Marcellus
9	11/27/2017	11,575	11,444	48	Marcellus
10	11/27/2017	11,400	11,269	48	Marcellus
11	11/27/2017	11,225	11,094	48	Marcellus
12	11/28/2017	11,050	10,919	48	Marcellus
13	11/28/2017	10,875	10,744	48	Marcellus
14	11/29/2017	10,700	10,569	48	Marcellus
15	11/29/2017	10,525	10,394	48	Marcellus
16	11/29/2017	10,350	10,219	48	Marcellus
17	11/30/2017	10,175	10,044	48	Marcellus
18	12/1/2017	10,000	9,869	48	Marcellus
19	12/1/2017	9,825	9,694	48	Marcellus
20	12/1/2017	9,650	9,519	48	Marcellus
21	12/2/2017	9,475	9,344	48	Marcellus
22	12/2/2017	9,300	9,169	48	Marcellus
23	12/2/2017	9,125	8,994	48	Marcellus
24	12/2/2017	8,950	8,819	48	Marcellus
25	12/3/2017	8,775	8,644	48	Marcellus
26	12/3/2017	8,600	8,469	48	Marcellus
27	12/3/2017	8,425	8,294	48	Marcellus
28	12/16/2017	8,250	8,119	48	Marcellus
29	12/17/2017	8,075	7,944	48	Marcellus
30	12/18/2017	7,900	7,769	48	Marcellus
31	12/21/2017	7,725	7,594	48	Marcellus
32	12/22/2017	7,550	7,419	48	Marcellus
33	1/5/2018	7,375	7,244	48	Marcellus
34	1/6/2018	7,200	7,069	48	Marcellus
35	1/6/2018	7,025	6,894	48	Marcellus
36	1/7/2018	6850	6719	48	Marcellus
37	1/7/2018	6675	6544	48	Marcellus

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**Stimulation Summary
Greer 1S-3HM**

Stage	Avg. Pump Rate (BPM)	Avg. Treating Pressure (PSI)	Max Breakdown Pressure (PSI)	ISIP (PSI)	Proppant Total (lbs)	Water Total (bbls)	Amount of N2 (scf)
1	73.5	7,556	5,206	2,971	453,507	8,051	0
2	79.1	8,103	5,645	3,128	449,372	7,669	0
3	79.1	7,610	4,890	8,308	449,524	7,879	0
4	83.2	8,195	5,929	3,611	452,337	8,430	0
5	89.6	7,993	5,600	3,977	345,349	9,258	0
6	82.8	7,590	5,055	3,787	452,313	8,036	0
7	84.6	7,892	6,555	4,068	452,329	8,224	0
8	84.2	7,663	5,507	4,114	452,307	8,032	0
9	83.9	7,448	4,770	3,912	452,530	7,955	0
10	85.1	7,558	4,980	4,647	452,504	8,083	0
11	84.1	7,354	5,381	3,880	452,830	8,096	0
12	85.5	7,708	6,093	4,407	450,606	8,091	0
13	84.2	7,610	5,546	4,043	447,313	8,011	0
14	82.3	7,483	4,758	4,510	452,361	7,931	0
15	84.8	7,163	5,891	3,798	451,525	8,160	0
16	84.5	7,382	5,918	3,801	451,104	7,903	0
17	84.8	7,333	5,446	3,918	452,171	8,065	0
18	83.8	7,386	5,814	3,751	451,607	7,962	0
19	84.4	7,524	6,731	4,579	450,885	8,071	0
20	84.5	7,242	5,876	3,841	452,394	8,005	0
21	77.5	7,373	6,714	3,778	314,937	10,282	0
22	84.2	7,441	6,047	5,254	261,993	6,086	0
23	84.7	7,108	5,674	3,586	451,630	8,170	0
24	82.7	7,103	7,376	7,532	449,943	8,417	0
25	83.9	7,152	6,799	3,675	451,394	8,007	0
26	83.9	7,018	5,193	3,574	450,838	7,921	0
27	84.7	7,109	5,319	7,362	395,092	8,318	0
28	90.5	7,006	5,665	3,689	450,337	7,991	0
29	90.1	7,087	6,390	3,729	451,238	8,401	0
30	88.1	7,215	6,565	4,385	452,347	8,450	0
31	89.8	6,958	5,946	4,636	450,926	8,288	0
32	89.4	6,794	5,884	8,471	449,322	10,380	0
33	87.9	6,888	5,009	4,584	387,026	7,758	0
34	88.1	7,334	7,451	8,839	444,151	8,106	0
35	86.1	7,228	6,063	4,454	423,900	9,911	0
36	89.8	7,190	5,586	3,917	446,716	8,372	0
37	89.8	6,741	5,338	3,582	450,432	8,278	0

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**Greer 1S-3HM
Lithology/Formation Information**

FORMATION	TOP TVD	BASE TVD	TOP MD	BASE MD	DESCRIBE ROCKY TYPE AND RECORD QUANTITY AND TYPE OF FLUID (FRESHWATER, BRINE, OIL, GAS, H2S ETC)
Maxton	1857	1929	1858	1930	Sandstone
Big Lime	1929	2038	1930	2039	Limestone
Big Injun	2038	2346	2039	2347	Sandstone
Weir	2346	2536	2347	2538	Sandstone
Berea	2536	2854	2538	2856	Sandstone
Gordon	2854	2956	2856	2958	Sandstone
Fifty Foot	2956	3529	2958	3532	Sandstone
Speechley	3529	4865	3532	4871	Sandstone
Benson	4865	5234	4871	5254	Sandstone
Alexander	5234	5854	5254	5908	Siltstone
Rhinstreet	5854	6216	5908	6288	Black shale
Middlesex	6216	6302	6288	6402	Black shale
Geneseo/Burkett	6302	6343	6402	6468	Black shale
Tully	6343	6360	6468	6509	Limestone
Hamilton	6360	6367	6509	6527	Grey shale
Marcellus	6367	-	6527	-	Black shale

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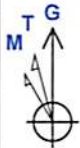
Well: Greer 1S-03M
Site: Greer Unit N
Project: Marshall County, West Virginia
Design: rev4

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	5449.00	23.48	313.07	5415.74	202.66	-240.65	0.00	0.00	-292.15	Survey @ 5449.00 MD 5415.74 TVD
2	5679.00	23.48	313.07	5626.69	265.24	-307.60	0.00	0.00	-378.90	KOP Begin 10°/100' drop/turn
3	5779.00	13.79	305.08	5721.35	285.74	-331.96	10.00	-169.00	-408.47	Begin 10°/100' drop build/turn
4	6793.97	89.00	149.96	6414.56	-225.12	-117.71	10.00	-154.58	143.09	Begin 89.00° lateral section
5	13033.68	89.00	149.96	6523.00	-5625.62	3005.88	0.00	0.00	6378.32	PBHL/TD 13033.68 MD/6523.00 TVD

ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSec	Departure	Annotation
2642.00	3.56	302.55	2639.99	-1.15	-33.46	-14.75	72.87	MWD surveys
12997.00	90.15	146.36	6462.39	-5560.43	2977.99	6307.68	7233.39	Survey @ 12997.00 MD 6462.39 TVD
13059.00	90.15	146.36	6462.23	-5612.05	3012.34	6369.39	7295.39	Survey projected to 13059.00 MD 6462.23 TVD

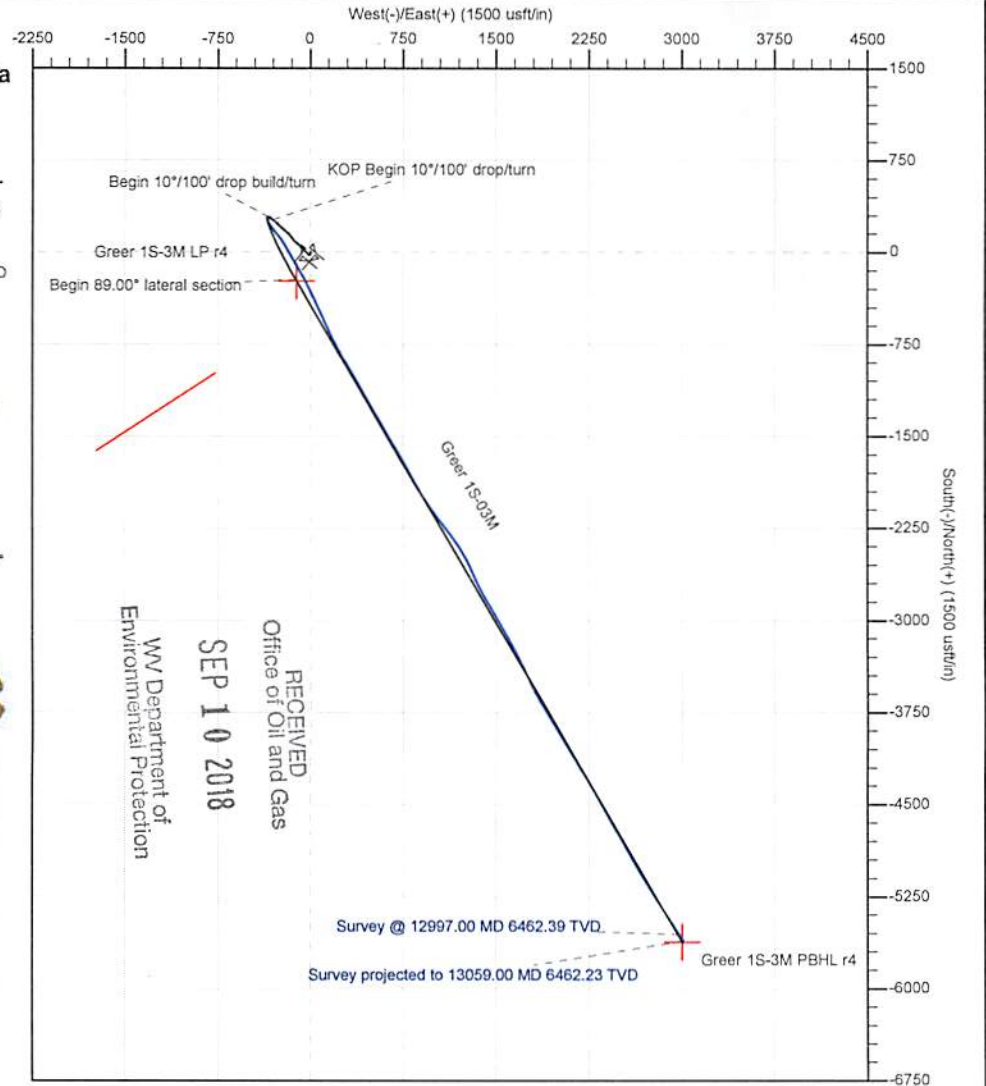
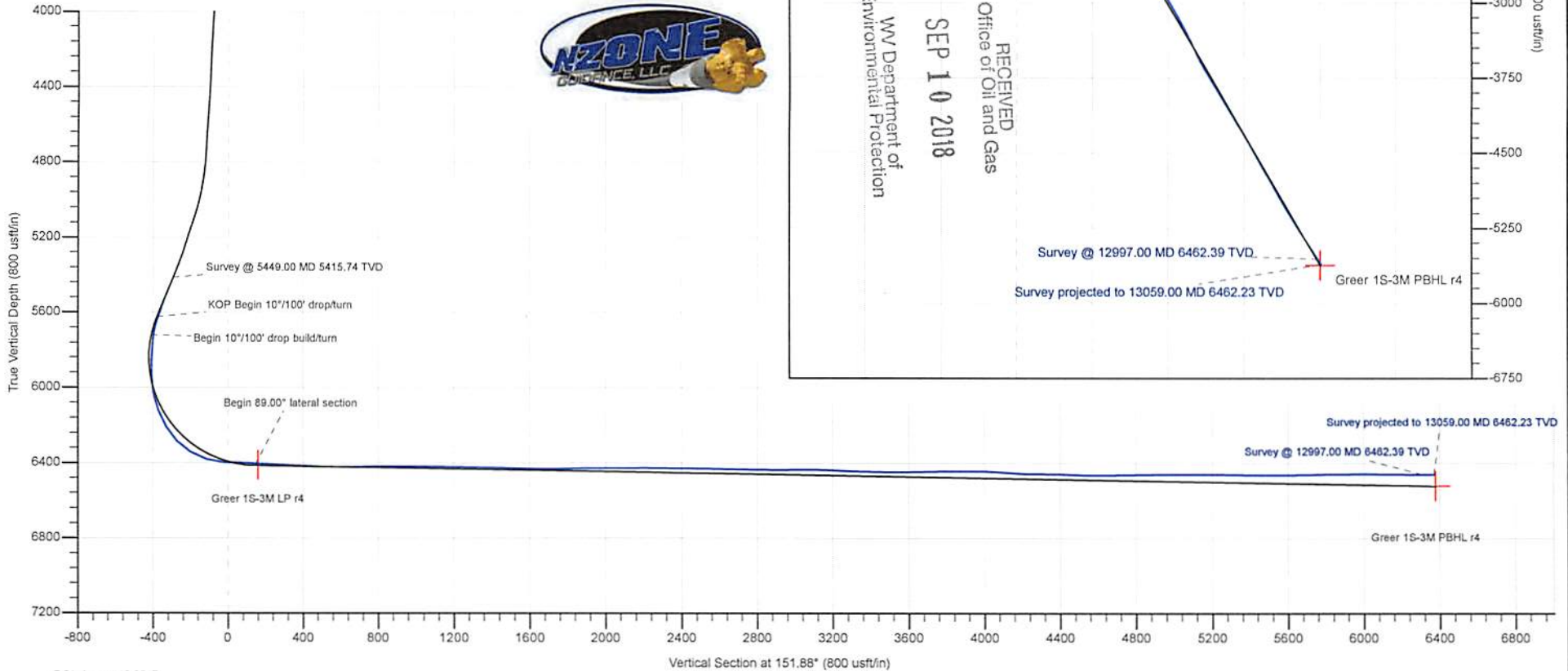


Azimuths to Grid North
True North: -0.10°
Magnetic North: -8.70°

Magnetic Field
Strength: 52173.6snT
Dip Angle: 66.95°
Date: 6/15/2017
Model: IGRF2015

Surface Location: RKB=1254+26 @ 1280.00usft (Nabors B28)
Universal Transverse Mercator (US Survey Feet)
Zone 17N (84 W to 78 W)
Northing: 14438294.82 Easting: 1686418.17 Latitude: 39.75700984 Longitude: -80.83631754

Total Correction (M => G) To convert a Magnetic Direction to a Grid Direction, Subtract 8.70°



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Survey Report

Service Company:	NZone Directional, LLC	Location:	New Martinsville
Well:	Greer 1S-03HM	Rig:	Nabors B28
API or UWI:	47-051-01888	Job Number:	THO-17-015
State:	West Virginia	Operating Company:	Tug Hill Operating, LLC
County:	Marshall	Magnetic Declination:	0
Country:	USA	Proposed Azimuth:	151.88
Comment		North Reference:	GRID
		Latitude:	39.75701
		Longitude:	-80.8363

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Tie-In Data

MD	Inclination	Azimuth	TVD	NS	EW
0	0	0	0	0	0

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Survey Data

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS
100	0.09	15.56	100	0.08	0.02	15.56	0.08	-0.06	0.09
200	0.15	355.98	200	0.28	0.03	6.67	0.28	-0.23	0.07
300	0.18	336.7	300	0.56	-0.04	356.06	0.56	-0.51	0.06
400	0.04	306.88	400	0.72	-0.13	349.92	0.73	-0.7	0.15
500	0.08	314.64	500	0.79	-0.21	345.42	0.82	-0.8	0.04
600	0.08	291.14	600	0.87	-0.32	339.68	0.92	-0.92	0.03
700	0.05	94.39	700	0.89	-0.34	338.92	0.95	-0.94	0.13
800	0.07	53.15	800	0.92	-0.25	344.82	0.95	-0.93	0.05
900	0.15	39.8	900	1.06	-0.12	353.67	1.07	-0.99	0.08
1000	0.03	38.87	1000	1.18	-0.02	359.17	1.18	-1.05	0.12
1100	0.16	49.67	1100	1.29	0.11	4.69	1.29	-1.09	0.13
1200	0.32	69.58	1200	1.48	0.47	17.78	1.55	-1.08	0.18
1300	0.53	80.8	1299.99	1.65	1.19	35.86	2.04	-0.89	0.22
1400	0.75	116.53	1399.99	1.43	2.23	57.36	2.65	-0.21	0.45
1500	2.26	163.46	1499.95	-0.75	3.38	102.53	3.46	2.26	1.83
1600	2.9	170.34	1599.85	-5.14	4.37	139.62	6.74	6.59	0.71
1700	3.51	185.51	1699.7	-10.68	4.5	157.16	11.59	11.54	1.04
1800	3.86	212.71	1799.5	-16.56	2.38	171.8	16.73	15.73	1.76
1900	4.12	239.53	1899.26	-21.21	-2.53	186.8	21.36	17.51	1.87
2000	3.53	258.82	1999.05	-23.63	-8.65	200.1	25.16	16.76	1.41
2100	2.58	281.11	2098.91	-23.79	-13.88	210.25	27.54	14.44	1.5
2200	1.97	314.3	2198.83	-22.16	-17.32	218.01	28.12	11.38	1.42
2300	2.68	328.85	2298.75	-18.96	-19.75	226.18	27.38	7.41	0.92
2400	3.85	327.37	2398.58	-14.13	-22.77	238.19	26.8	1.73	1.17
2500	4.38	325.8	2498.33	-8.14	-26.73	253.06	27.94	-5.42	0.54
2530	4.22	322.94	2528.24	-6.31	-28.04	257.31	28.74	-7.65	0.89
2642	3.56	302.55	2639.99	-1.15	-33.46	268.02	33.48	-14.75	1.36
2706	3.24	293.4	2703.88	0.63	-36.79	270.99	36.8	-17.9	0.98
2800	2.98	311.7	2797.74	3.31	-41.05	274.61	41.19	-22.27	1.09
2894	2.82	323.59	2891.62	6.8	-44.25	278.74	44.77	-26.85	0.66
2991	2.18	313.4	2988.53	9.99	-47.01	282	48.06	-30.96	0.8
3085	2.19	303.68	3082.46	12.21	-49.8	283.78	51.27	-34.24	0.39

3179	2.93	314.91	3176.37	14.9	-53	285.71	55.05	-38.12	0.95
3274	3.05	317.51	3271.24	18.48	-56.42	288.14	59.37	-42.89	0.19
3368	2.67	313.8	3365.12	21.84	-59.69	290.1	63.56	-47.4	0.45
3463	2.3	302.46	3460.03	24.4	-62.9	291.2	67.46	-51.16	0.65
3652	2.76	315.3	3648.85	29.67	-69.3	293.18	75.38	-58.83	0.38
3746	3.27	319.01	3742.72	33.3	-72.65	294.62	79.92	-63.61	0.58
3842	3.27	318.36	3838.56	37.41	-76.26	296.13	84.95	-68.94	0.04
3937	2.67	312.96	3933.43	40.94	-79.68	297.2	89.59	-73.67	0.7
4029	3.29	307.55	4025.31	44.01	-83.34	297.84	94.25	-78.1	0.74
4123	3.55	308.96	4119.14	47.49	-87.75	298.42	99.77	-83.24	0.29
4217	2.97	322.65	4212.99	51.25	-91.49	299.26	104.86	-88.32	1.03
4312	2.59	329.19	4307.88	55.05	-94.08	300.34	109	-92.9	0.52
4406	3.15	317.01	4401.76	58.77	-96.93	301.23	113.35	-97.51	0.88
4501	3.64	315.79	4496.59	62.84	-100.81	301.94	118.79	-102.93	0.52
4596	3.17	313.07	4591.43	66.79	-104.83	302.5	124.3	-108.32	0.52
4691	2.8	309.32	4686.3	70.06	-108.55	302.84	129.19	-112.95	0.44
4785	4.67	308.44	4780.09	73.89	-113.32	303.11	135.28	-118.58	1.99
4880	8.79	311.07	4874.42	81.07	-121.82	303.64	146.33	-128.92	4.35
4974	12.52	318.04	4966.78	93.37	-134.06	304.86	163.37	-145.53	4.19
5069	17.02	325.47	5058.63	112.49	-148.83	307.08	186.56	-169.36	5.13
5164	19.07	321.55	5148.96	136.1	-166.37	309.29	214.94	-198.45	2.51
5259	18.58	307.47	5238.92	157.47	-188.04	309.94	245.27	-227.51	4.8
5353	21.8	310.7	5327.14	177.97	-213.17	309.86	277.69	-257.43	3.62
5449	23.48	313.07	5415.74	202.66	-240.65	310.1	314.62	-292.16	1.99
5520	22.77	313.53	5481.03	221.78	-260.95	310.36	342.46	-318.59	1.03
5615	22.9	310.8	5568.59	246.52	-288.27	310.54	379.3	-353.29	1.12
5710	16	312.04	5658.11	267.39	-312.01	310.6	410.91	-382.89	7.28
5804	5.45	309.05	5750.34	278.91	-325.14	310.62	428.38	-399.23	11.24
5899	5.14	290.85	5844.94	283.27	-332.62	310.42	436.89	-406.6	1.79
5994	7.65	225.29	5939.46	280.33	-341.1	309.41	441.51	-408.01	7.61
6089	13.32	181.43	6032.96	264.91	-345.88	307.45	435.67	-396.66	9.9
6183	20.84	155.24	6122.88	238.82	-339.13	305.15	414.78	-370.47	11.26
6278	31.52	144.52	6208.06	203.13	-317.56	302.61	376.97	-328.83	12.25
6373	42.99	140.03	6283.56	157.93	-282.22	299.23	323.4	-272.3	12.4
6468	59.03	145.57	6343.17	99.1	-238.07	292.6	257.88	-199.61	17.47
6562	72.48	148.91	6381.69	27.13	-191.92	278.05	193.83	-114.39	14.67
6657	88.84	150.58	6397.05	-53.58	-144.88	249.71	154.47	-21.03	17.31
6752	87.12	149.09	6400.4	-135.66	-97.18	215.62	166.87	73.84	2.39
6847	87.25	151.46	6405.07	-218.05	-50.13	192.95	223.74	168.68	2.5
6941	86.77	154.36	6409.97	-301.61	-7.39	181.4	301.7	262.53	3.12
7036	86.99	154.62	6415.14	-387.23	33.46	175.06	388.67	357.29	0.36
7130	88.04	155.33	6419.22	-472.32	73.19	171.19	477.96	451.06	1.35
7225	88.84	155.41	6421.81	-558.64	112.77	168.59	569.91	545.85	0.85
7319	90.07	155.06	6422.7	-643.99	152.14	166.71	661.72	639.68	1.36
7414	91.91	153.66	6421.06	-729.62	193.24	165.17	754.78	734.57	2.43
7509	90.77	152.51	6418.84	-814.3	236.23	163.82	847.88	829.52	1.7
7603	89.76	149.53	6418.4	-896.52	281.77	162.55	939.76	923.5	3.35

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7697	88.57	149.79	6419.77	-977.64	329.24	161.39	1031.59	1017.42	1.3
7792	89.01	149.7	6421.78	-1059.68	377.1	160.41	1124.78	1112.33	0.47
7886	90.24	152.34	6422.39	-1141.9	422.63	159.69	1217.6	1206.31	3.1
7981	89.58	149.88	6422.54	-1225.07	468.53	159.07	1311.61	1301.29	2.68
8076	87.74	149.35	6424.76	-1306.99	516.56	158.43	1405.37	1396.19	2.02
8170	88.04	149.7	6428.22	-1387.95	564.21	157.88	1498.25	1490.04	0.49
8265	88.13	149.88	6431.4	-1470.01	611.98	157.4	1592.3	1584.93	0.21
8359	90.11	149.53	6432.84	-1551.15	659.39	156.97	1685.49	1678.84	2.14
8453	90.86	149.44	6432.05	-1632.13	707.12	156.58	1778.73	1772.76	0.8
8547	91.25	150.67	6430.32	-1713.57	754.03	156.25	1872.13	1866.69	1.37
8642	89.93	151.63	6429.34	-1796.77	799.87	156	1966.77	1961.68	1.72
8737	90.24	151.11	6429.2	-1880.15	845.39	155.79	2061.47	2056.67	0.64
8831	90.99	150.23	6428.19	-1962.1	891.43	155.57	2155.1	2150.64	1.23
8926	89.67	148.82	6427.64	-2043.97	939.6	155.31	2249.59	2245.56	2.03
9021	88.35	141.97	6429.28	-2122.1	993.51	154.91	2343.16	2339.88	7.34
9116	90.11	143.02	6430.56	-2197.46	1051.34	154.43	2436.01	2433.59	2.16
9209	88.7	142.93	6431.53	-2271.7	1107.34	154.01	2527.22	2525.46	1.52
9304	88.18	144.52	6434.11	-2348.25	1163.53	153.64	2620.7	2619.47	1.76
9399	88.62	149.53	6436.77	-2427.89	1215.19	153.41	2715.03	2714.06	5.29
9494	89.58	151.63	6438.26	-2510.63	1261.85	153.32	2809.9	2809.01	2.43
9588	89.49	155.94	6439.02	-2594.94	1303.36	153.33	2903.87	2902.94	4.59
9683	90.99	155.94	6438.63	-2681.68	1342.09	153.41	2998.77	2997.7	1.58
9777	90.55	153.13	6437.36	-2766.53	1382.5	153.45	3092.73	3091.58	3.03
9872	86.24	148.38	6440.02	-2849.35	1428.87	153.37	3187.55	3186.47	6.75
9966	88	151.11	6444.75	-2930.43	1476.16	153.26	3281.23	3280.27	3.45
10061	88.92	150.32	6447.3	-3013.26	1522.61	153.19	3376.1	3375.22	1.28
10155	89.58	151.63	6448.53	-3095.44	1568.22	153.13	3470.03	3469.2	1.56
10250	90.07	150.58	6448.82	-3178.62	1614.12	153.08	3564.97	3564.19	1.22
10344	91.25	154.01	6447.74	-3261.82	1657.81	153.06	3658.94	3658.16	3.86
10439	90.68	153.39	6446.14	-3346.97	1699.9	153.07	3753.91	3753.1	0.89
10534	90.99	155.33	6444.75	-3432.6	1741	153.11	3848.88	3848	2.07
10629	89.41	154.36	6444.42	-3518.59	1781.38	153.15	3943.83	3942.86	1.95
10724	87.16	151.28	6447.27	-3603.05	1824.74	153.14	4038.77	4037.79	4.01
10818	84.53	150.84	6454.08	-3685.09	1870.11	153.09	4132.45	4131.53	2.84
10912	89.27	149.35	6459.16	-3766.42	1916.89	153.03	4226.16	4225.31	5.28
11007	90.37	148.47	6459.46	-3847.78	1965.95	152.94	4320.92	4320.18	1.48
11102	87.69	148.47	6461.06	-3928.73	2015.61	152.84	4415.61	4414.99	2.82
11197	87.65	148.65	6464.93	-4009.72	2065.12	152.75	4510.27	4509.75	0.19
11292	90.02	149.26	6466.86	-4091.09	2114.1	152.67	4605.04	4604.6	2.58
11387	90.9	149.53	6466.1	-4172.85	2162.47	152.61	4699.89	4699.51	0.97
11480	91.56	149.26	6464.1	-4252.88	2209.8	152.54	4792.72	4792.4	0.77
11575	90.37	150.14	6462.5	-4334.88	2257.73	152.49	4887.59	4887.32	1.56
11670	91.16	150.32	6461.23	-4417.34	2304.89	152.45	4982.51	4982.27	0.85
11766	89.27	150.49	6460.87	-4500.81	2352.3	152.41	5078.44	5078.23	1.98
11861	89.8	150.49	6461.64	-4583.48	2399.09	152.37	5173.39	5173.2	0.56
11956	89.05	150.14	6462.59	-4666.01	2446.14	152.33	5268.32	5268.16	0.87
12051	89.98	150.67	6463.4	-4748.61	2493.05	152.3	5363.27	5363.12	1.13

12145	89.19	151.2	6464.08	-4830.77	2538.71	152.28	5457.24	5457.11	1.01
12239	89.63	151.37	6465.05	-4913.21	2583.87	152.26	5551.22	5551.1	0.5
12334	90.77	149.61	6464.72	-4995.88	2630.67	152.23	5646.17	5646.06	2.21
12428	91.87	149.61	6462.55	-5076.94	2678.21	152.19	5740.04	5739.96	1.17
12523	90.81	148.56	6460.33	-5158.42	2727	152.14	5834.88	5834.82	1.57
12618	90.55	147.94	6459.2	-5239.2	2776.99	152.07	5929.66	5929.62	0.71
12712	89.8	147.86	6458.91	-5318.82	2826.94	152.01	6023.41	6023.39	0.8
12807	88.57	149.26	6460.27	-5399.86	2876.48	151.96	6118.23	6118.22	1.96
12902	89.36	147.59	6461.98	-5480.78	2926.22	151.9	6213.03	6213.03	1.94
12997	90.15	146.36	6462.39	-5560.43	2977.99	151.83	6307.68	6307.68	1.54

Projected Survey

MD	Inclination	Azimuth	TVD	NS	EW	CA	CD	VS	DLS	
13059	90.15	146.36	6462.23	-5612.05	3012.34	151.77	6369.4	6369.39	0	
DigiDrill DataLogger		1-Jan								www.digidrill.com

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Hydraulic Fracturing Fluid Product Component Information Disclosure

Job Start Date:	1/16/2018
Job End Date:	1/16/2018
State:	West Virginia
County:	Marshall
API Number:	47-051-01888-00-00
Operator Name:	Tug Hill Operating, LLC
Well Name and Number:	Greer 1S-3HM
Latitude:	39.75699000
Longitude:	-80.83635000
Datum:	NAD27
Federal Well:	NO
Indian Well:	NO
True Vertical Depth:	6,467
Total Base Water Volume (gal):	13,091,826
Total Base Non Water Volume:	0

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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
Fresh Water	Operator	Base Fluid					
			Water	7732-18-5	100.00000	86.35202	Density = 8.330
Ingredients	Listed Above	Listed Above					
			Water	7732-18-5	100.00000	0.84080	

SAND-COMMON WHITE - 100 MESH, 3307 LB BAG	Halliburton	Proppant					
				Listed Below			
SAND- PREMIUM WHITE-40/70, BULK	Halliburton	Proppant					
				Listed Below			
FR-76	Halliburton	Friction Reducer					
				Listed Below			
HAI-OS ACID INHIBITOR	Halliburton	Corrosion Inhibitor					
				Listed Below			
OILPERM A	Halliburton	Non-ionic Surfactant					
				Listed Below			
CALCIUM CHLORIDE - HI- TEST PELLETS	Halliburton	Accelerator					
				Listed Below			
HAI-150E	Halliburton	Corrosion Inhibitor					
				Listed Below			
MC MX 2-2822	Halliburton	Scale Inhibitor					
				Listed Below			

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HYDROCHLORIC ACID	Halliburton	Solvent					
				Listed Below			
MC B-8614	Halliburton	Biocide					
				Listed Below			
Items above are Trade Names with the exception of Base Water . Items below are the individual ingredients.							
			Crystalline silica, quartz	14808-60-7	100.00000	12.75391	
			Hydrochloric acid	7647-01-0	7.50000	0.05543	
			Inorganic salt	Proprietary	30.00000	0.03166	
			Hydrotreated light petroleum distillate	64742-47-8	30.00000	0.03166	
			Acrylamide acrylate copolymer	Proprietary	30.00000	0.03166	Denise Tuck, Halliburton, 3000 N. Sam Houston Pkwy E., Houston, TX 77032, 281-871-6226
			Glutaraldehyde	111-30-8	30.00000	0.00785	
			Methanol	67-56-1	60.00000	0.00675	
			Amines, polyethylenepoly-, ethoxylated, phosphonomethylated, sodium salts	70900-16-2	30.00000	0.00640	
			Quaternary ammonium compounds, benzyl-C12-16-alkyldimethyl chlorides	68424-85-1	5.00000	0.00131	
			Calcium chloride	10043-52-4	96.00000	0.00114	
			Sodium chloride	7647-14-5	5.00000	0.00113	
			Ethanol	64-17-5	60.00000	0.00059	
			Oxyalkylated phenolic resin	Proprietary	30.00000	0.00022	
			Heavy aromatic petroleum naphtha	64742-94-5	30.00000	0.00017	

			Modified thiourea polymer	Proprietary	30.00000	0.00016	
			Ethoxylated alcohols	Proprietary	30.00000	0.00016	
			Fatty acids, tall oil	Proprietary	30.00000	0.00016	
			Olefins	Proprietary	5.00000	0.00006	
			Non-hazardous food substance	Proprietary	100.00000	0.00006	
			Strontium chloride	10476-85-4	5.00000	0.00006	
			Potassium chloride	7447-40-7	5.00000	0.00006	
			Propargyl alcohol	107-19-7	10.00000	0.00005	
			Naphthalene	91-20-3	5.00000	0.00003	
			Poly(oxy-1,2-ethanediyl), alpha-(4-nonylphenyl)-omega-hydroxy-, branched	127087-87-0	5.00000	0.00003	
			Phosphoric acid	7664-38-2	0.10000	0.00003	
			Formaldehyde	50-00-0	0.09000	0.00002	
			1,2,4 Trimethylbenzene	95-63-6	1.00000	0.00001	

* 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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- NOTES
1. BORE PATH BASED ON GRID NORTH.
 2. NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 625' OF PAD CENTER WERE FOUND.
 3. OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN JULY, 2016.
 4. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
 5. WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.
 6. ROYALTY OWNERSHIP PROVIDED BY TUG HILL OPERATING, LLC.
 7. SURFACE OWNERSHIP WAS NOT ADDRESSED.
 8. PLAT UPDATED TO SHOW AS-DRILLED PATH.

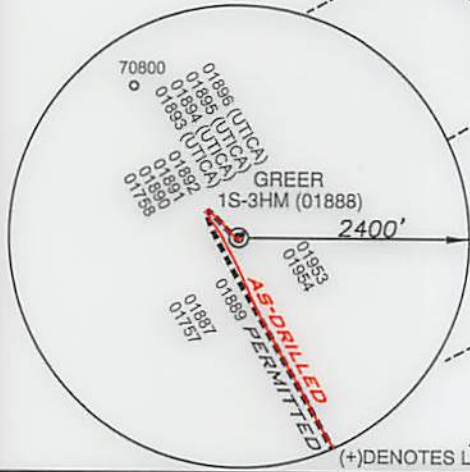
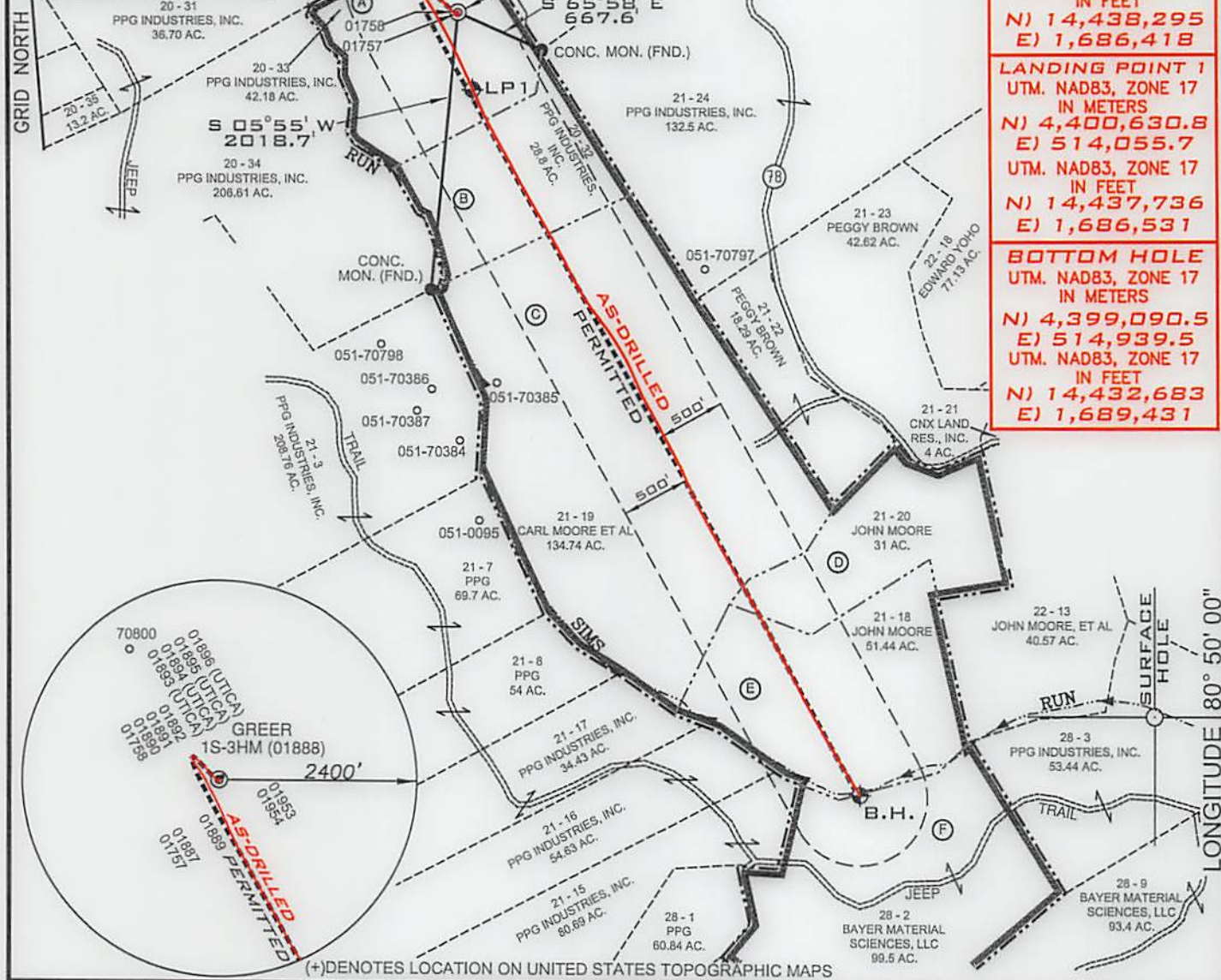
LATITUDE 39° 47' 30" GREER LEASE
WELL NO. 1S-3HM
387.66± ACRES



LEGEND

- LEASED TRACTS
- INTERIOR MINERAL TRACTS
- SURFACE TRACTS
- HARD LEASE LINE
- (A) LEASE # (SEE PG 2)

AS-DRILLED
SURFACE HOLE UTM. NAD83, ZONE 17 IN METERS N) 4,400,801.1 E) 514,021.3 UTM. NAD83, ZONE 17 IN FEET N) 14,438,295 E) 1,686,418
LANDING POINT 1 UTM. NAD83, ZONE 17 IN METERS N) 4,400,630.8 E) 514,055.7 UTM. NAD83, ZONE 17 IN FEET N) 14,437,736 E) 1,686,531
BOTTOM HOLE UTM. NAD83, ZONE 17 IN METERS N) 4,399,090.5 E) 514,939.5 UTM. NAD83, ZONE 17 IN FEET N) 14,432,683 E) 1,689,431



FILE NUMBER **8837**

DRAWING NUMBER **8837ADG1S3HM.dwg**

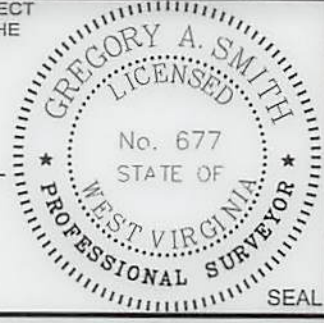
SCALE **1" = 1200'**

MINIMUM DEGREE OF ACCURACY **1/2500**

PROVEN SOURCE OF ELEVATION **SUBMETER MAPPING**
GRADE GPS

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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION

P.S. 677
Gregory A. Smith



WVDEP
OFFICE OF OIL & GAS
601 57TH STREET, SE
CHARLESTON, WV 25304

DATE: **JULY 17, 2018**

OPERATORS WELL NO. **GREER 1S-3HM (AS-DRILLED)**

API WELL NO. **47-051-01888**

STATE COUNTY PERMIT

LOCATION ELEVATION **1251'** WATERSHED (HUC 10) **FRENCH CREEK - OHIO RIVER (UNDEFINED)**

DISTRICT **FRANKLIN** COUNTY **MARSHALL**

QUADRANGLE **POWATAN POINT 7.5' (SH)**
NEW MARTINSVILLE POINT 7.5' (BH) LEASE NUMBER **SEE ATTACHED PG 2 OF 2**

SURFACE OWNER **PPG INDUSTRIES, INC.** ACREAGE **42.18**

OIL & GAS ROYALTY OWNER **PPG INDUSTRIES, INC., ET AL** LEASE ACREAGE **387.66**

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

PERFORATE NEW FORMATION OTHER PHYSICAL CHANGE (SPECIFY) _____

TARGET FORMATION **MARCELLUS** PLUG & ABANDON CLEAN OUT & REPLUG

ESTIMATED DEPTH **TVD 6,462' TMD:13,059'**

WELL OPERATOR **TUG HILL OPERATING, LLC** DESIGNATED AGENT **DIANNA STAMPER**

ADDRESS **1320 SOUTH UNIVERSITY DRIVE, SUITE 500 FORT WORTH, TX 76107** ADDRESS **5400 D BIG TYLER ROAD CHARLESTON, WV 25313**

12,657'

00.09.08

COUNTY NAME PERMIT

- NOTES
1. BORE PATH BASED ON GRID NORTH.
 2. NO WATER WELLS WITHIN 250' OF WELL WERE FOUND, NO DWELLINGS WITHIN 825' OF PAD CENTER WERE FOUND.
 3. OWNERSHIP TAKEN FROM PUBLIC RECORDS OF MARSHALL COUNTY, WV IN JULY, 2012.
 4. COORDINATES AND WELL TIES BASED UPON DIFFERENTIAL GPS MEASUREMENTS.
 5. WELL LOCATION REFERENCES ARE BASED UPON THE MAGNETIC MERIDIAN.
 6. ROYALTY OWNERSHIP PROVIDED BY TUG HILL OPERATING, LLC.
 7. SURFACE OWNERSHIP WAS NOT ADDRESSED.
 8. PLAT UPDATED TO SHOW AS-DRILLED PATH.

LATITUDE 39° 47' 30" GREER LEASE
 WELL NO. 12-3HM
 387.66± ACRES

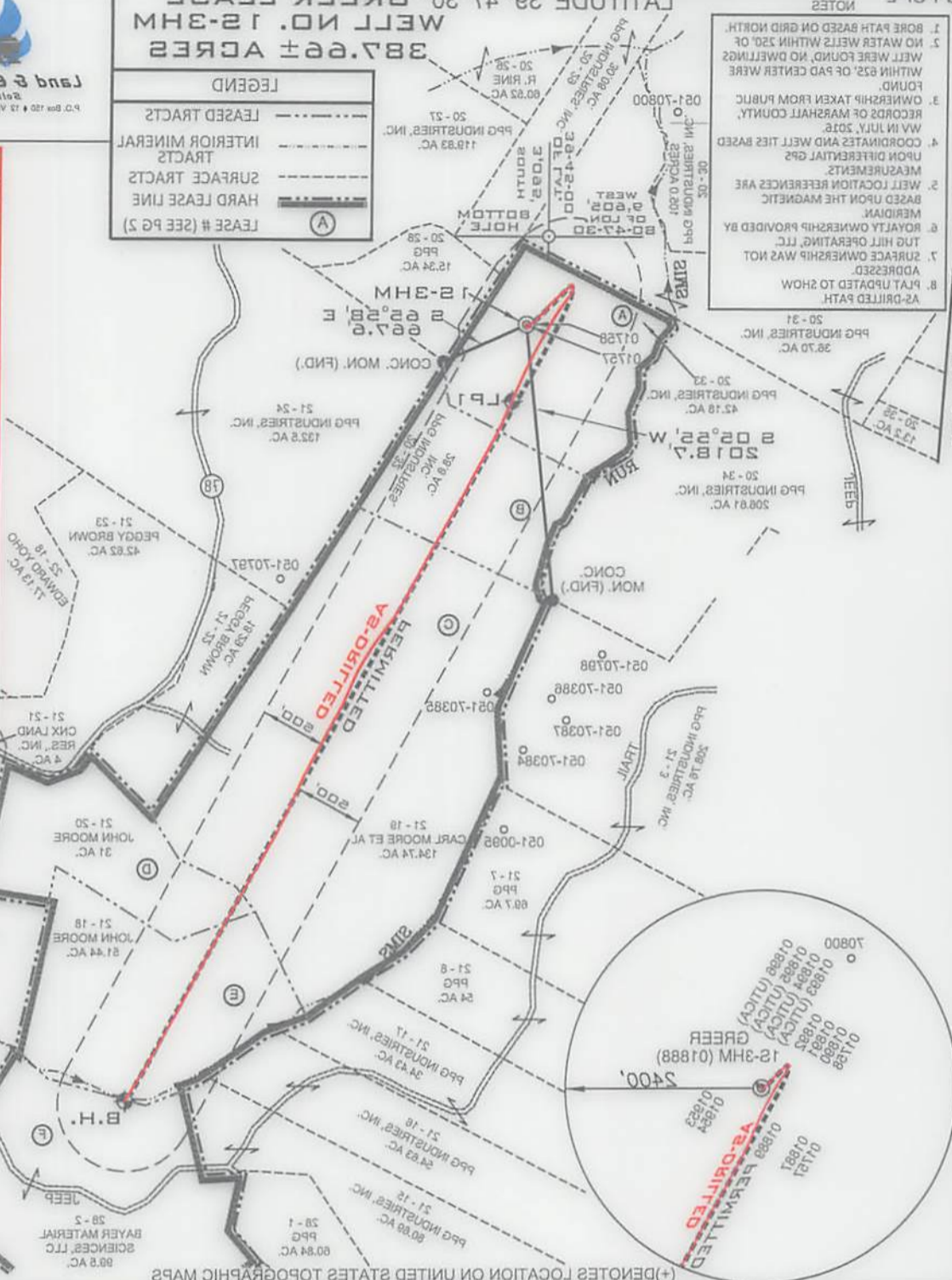
LEGEND

- LEASSED TRACTS
- INTERIOR MINERAL TRACTS
- SURFACE TRACTS
- HARD LEASE LINE
- LEASE # (SEE PG 2)



AS-DRILLED SURFACE HOLE
 UTM. NAD83, ZONE 17
 IN METERS
 (N) 4,400,801.1
 (E) 214,021.3
 UTM. NAD83, ZONE 17
 IN FEET
 (N) 14,438,225
 (E) 1,684,18

BOTTOM HOLE
 UTM. NAD83, ZONE 17
 IN METERS
 (N) 4,399,002.5
 (E) 214,332.5
 UTM. NAD83, ZONE 17
 IN FEET
 (N) 14,432,683
 (E) 1,689,431



LONGITUDE 80° 20.00"
 HOLE BRIDGE

FILE NUMBER 8837
 DRAWING NUMBER 8837ADG123HM.dwg
 SCALE 1" = 1200'
 MINIMUM DEGREE OF ACCURACY 1/2500
 PROVEN SOURCE OF ELEVATION SUBMETER MAPPING
 GRADE GPS

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 RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Gregory A. Smith
 P.S. 877

WV DEP
 OFFICE OF OIL & GAS
 801 5TH STREET, SE
 CHARLESTON, WV 25304

WELL OPERATOR TUG HILL OPERATING, LLC
 Address 1320 SOUTH UNIVERSITY DRIVE, SUITE 500
 FORT WORTH, TX 76107

DESIGNATED AGENT DIANNA STAMPER
 CT CORPORATION SYSTEM

ESTIMATED DEPTH TVD 6,462', TMD:13,029'
 PLUG & ABANDON CLEAN OUT & REPLUG

PERMIT

PERFORATE NEW FORMATION _____ OTHER PHYSICAL CHANGE (SPECIFY) _____
 PROPOSED WORK: DRILL CONVERT DRILL DEEPER REFRILL FRACTURE OR STIMULATE PLUG OFF OLD FORMATION _____

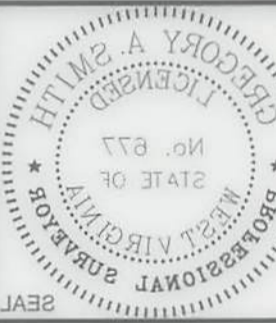
LEASE ACREAGE 387.66 ACREAGE 42.18

SURFACE OWNER PPG INDUSTRIES, INC.
 OIL & GAS ROYALTY OWNER PPG INDUSTRIES, INC., ET AL

QUADRANGLE NEW MARTINSVILLE POINT 7.5 (SH)
 DISTRICT FRANKLIN COUNTY MARSHALL
 LOCATION ELEVATION 1251' WATERSHED (HUC 10) FRENCH CREEK - OHIO RIVER (UNDEFINED)

STATE COUNTY PERMIT 47-051-01888

APR WELL NO. OPERATORS WELL NO. GREER 12-3HM (AS-DRILLED)
 DATE: JULY 17, 2018



**GREER WELL NO. 1S-3HM
WELL PLAT LEASE INFORMATION**

Lease No.	Tag	Parcel	Oil & Gas Royalty Owner	DEED BOOK/PAGE	
10*14300	A	5-20-33	PPG INDUSTRIES, INC.	725	123
10*14312	A	5-20-33	JAMIE LU BENSON	790	531
10*14313	A	5-20-33	TERRI JEAN GODDARD	790	585
10*14314	A	5-20-33	RALPH BLACHLY	790	529
10*14315	A	5-20-33	MARGARET ROSS	790	527
10*14316	A	5-20-33	ANDREW GERST	791	645
10*14317	A	5-20-33	HAROLD BLACHLY	791	643
10*14318	A	5-20-33	MARTHA BLACHLY-CROSS	792	112
10*14319	A	5-20-33	JACK J. PFALZGRAF	792	118
10*14320	A	5-20-33	SANDRA CHEYNEY	792	91
10*14321	A	5-20-33	HERBERT BLACHLY	792	102
10*14322	A	5-20-33	LOIS KAY MORFORD	792	110
10*14327	A	5-20-33	ROBERT D. OKEY	792	646
10*14328	A	5-20-33	RAE ELLEN STUART	796	38
10*14329	A	5-20-33	TONDA ROTHENBUHLER	796	40
10*14331	A	5-20-33	CHRISTINA JEAN RIOUX	796	70
10*14332	A	5-20-33	MICHAEL EDWARD BARTH	796	68
10*14333	A	5-20-33	DEAN ROTHENBUHLER	796	42
10*14355	A	5-20-33	DEWAYNE STARKEY	815	228
10*14356	A	5-20-33	FREDRIC RICHTER & BETTY RICHTER	822	270
10*14362	A	5-20-33	CAROLYN STARKEY	827	226
10*14368	A	5-20-33	JOSEPH LONG	836	106
10*14371	A	5-20-33	THOMAS F LONG AND JENNIFER LONG	842	398
10*14372	A	5-20-33	UNITED CHURCH HOMES INC	846	408
10*14377	A	5-20-33	JOSEPH A LONG	849	519
10*14387	A	5-20-33	JOHN F LONG AND PAM LONG	849	542
10*14388	A	5-20-33	IMMANUEL CHURCH OF THE UNITED	849	513
10*14398	A	5-20-33	JAN KAFFENBERGER	860	434
10*14399	A	5-20-33	RITA ANN DOEBERT AND RONALD DOEBERT	860	437
10*14400	A	5-20-33	COLEEN SLAGLE AND FRANKLIN SLAGLE	860	440
10*14401	A	5-20-33	IMELDA J SCURLOCK	860	443
10*14402	A	5-20-33	CAROL F WILSON AND RICHARD WILSON	860	446
10*14403	A	5-20-33	SUE WHITE	862	429
10*14404	A	5-20-33	DON FORGRAVES	862	426
10*14405	A	5-20-33	JOHN WHITE	862	423
10*14395	A	5-20-33	WILLIAM V BUCKNOR	862	421
10*14394	A	5-20-33	LESLIE F BUCKNOR	862	419
10*14408	A	5-20-33	LORNA M LONG MORGAN	864	323
10*14409	A	5-20-33	JAMES C LONG AND PATTI LONG	864	326
10*14410	A	5-20-33	HENRY T LONG	867	385
10*14411	A	5-20-33	THOMAS WHITE, ESQ., SPECIAL CO	870	34
10*14412	A	5-20-33	THE VILLAGE NETWORK, F/K/A BOY	872	203
10*14413	A	5-20-33	JUANITA SANDIFER	872	206
10*14416	A	5-20-33	KATHERINE ANN WILLIAMS COTHRAN	879	1
10*14419	A	5-20-33	CROSSROAD CHILD AND FAMILY SERVICES	887	105
10*15734	A	5-20-33	GENEVIEVE L LONG	904	13
10*16355	A	5-20-33	JAMES P. LONG AND LINDA L. LONG	904	10
10*15766	A	5-20-33	JOHN J. POZENEL	904	7
10*15762	A	5-20-33	DAWN PETROVICH	904	4
10*16357	A	5-20-33	DEANNA CAMPBELL	904	1
10*15760	A	5-20-33	DIEDRE WINGER	903	645
10*16358	A	5-20-33	ANNE MARIE KRAMER	903	648
10*15761	A	5-20-33	CAMERON CEMETERY ASSOCIATION	903	642
10*16230	A	5-20-33	TH Exploration, LLC	900	134
10*15763	A	5-20-33	BONNIE J. SELDERS	904	34
10*16356	A	5-20-33	DARYLS. BUCKNOR	904	31
10*15765	A	5-20-33	JOHN A. BUCKNOR	904	16
10*15764	A	5-20-33	JAMES E. BUCKNOR.	904	28
10*14381	A	5-20-33	WILLIAM LONG	792	95
10*14300	B	5-20-32	PPG INDUSTRIES, INC.	725	123
10*14933	C	5-21-19	CLARA LOU HERRICK AND EDWIN A HERRICK	850	531
10*14934	C	5-21-19	GLENDA ROSE MOORE	849	564
10*14935	C	5-21-19	JOHN M MOORE AND MELANIE A MOORE	849	562
10*14936	C	5-21-19	LINDA LORRAINE MOORE	850	533
10*14937	D	5-21-20	JOHN M MOORE, MELANIE A MOORE,	850	524
10*14937	D	5-21-20	JOHN M MOORE, MELANIE A MOORE,	850	524
10*14937	E	5-21-18	JOHN M MOORE, MELANIE A MOORE,	850	524
10*14498	F	5-28-2	BAYER MATERIALSCIENCE LLC	757	340

WELL OPERATOR TUG HILL OPERATING, LLC
ADDRESS 1320 SOUTH UNIVERSITY DRIVE, SUITE 500
FORT WORTH, TX 76107

DESIGNATED AGENT DIANNA STAMPER
CT CORPORATION SYSTEM
ADDRESS 5400 D BIG TYLER ROAD
CHARLESTON, WV 25313

WELL PLAT LEASE INFORMATION
GREER WELL NO. 12-31M

Lease No.	Tag	Parcel	Oil & Gas Royalty Owner	DEED BOOK/Pg
10*14488	F	2-28-2	BAYER MATERIALSCIENCE LLC	252
10*14437	E	2-21-18	JOHN M MOORE, MELANIE A MOORE,	850
10*14437	D	2-21-20	JOHN M MOORE, MELANIE A MOORE,	850
10*14437	D	2-21-20	JOHN M MOORE, MELANIE A MOORE,	850
10*14436	C	2-21-19	LINDA LORRAINE MOORE	850
10*14435	C	2-21-19	JOHN M MOORE AND MELANIE A MOORE	849
10*14434	C	2-21-19	GLENDA ROSE MOORE	849
10*14433	C	2-21-19	CLARA LOU HERRICK AND EDWIN A HERRICK	850
10*14300	B	2-20-32	PPG INDUSTRIES, INC.	725
10*14381	A	2-20-33	WILLIAM LONG	792
10*12764	A	2-20-33	JAMES E. BUCKNOR	904
10*12765	A	2-20-33	JOHN A. BUCKNOR	904
10*16356	A	2-20-33	DARYL S. BUCKNOR	904
10*12763	A	2-20-33	BONNIE I. SELDERS	904
10*16230	A	2-20-33	TH Exploration, LLC	900
10*12761	A	2-20-33	CAMERON CEMETERY ASSOCIATION	903
10*16328	A	2-20-33	ANNE MARIE KRAMER	903
10*12760	A	2-20-33	DIEDRE WINGER	903
10*16327	A	2-20-33	DEANNA CAMPBELL	904
10*12762	A	2-20-33	DAWN PETROVICH	904
10*12766	A	2-20-33	JOHN I. POZENEL	904
10*16325	A	2-20-33	JAMES P. LONG AND LINDA L. LONG	904
10*12734	A	2-20-33	GENEVIÈVE J. LONG	904
10*14419	A	2-20-33	GROSSROAD CHILD AND FAMILY SERVICES	887
10*14416	A	2-20-33	KATHERINE ANN WILLIAMS COTHRAN	879
10*14413	A	2-20-33	JUANITA SANDIFER	872
10*14412	A	2-20-33	THE VILLAGE NETWORK, FKA BOY	872
10*14411	A	2-20-33	THOMAS WHITE, ESC., SPECIAL CO	870
10*14410	A	2-20-33	HENRY T LONG	867
10*14409	A	2-20-33	JAMES C LONG AND PATTI LONG	864
10*14408	A	2-20-33	LORNA M LONG MORGAN	864
10*14394	A	2-20-33	LESLIE F BUCKNOR	862
10*14392	A	2-20-33	WILLIAM V BUCKNOR	862
10*14402	A	2-20-33	JOHN WHITE	862
10*14404	A	2-20-33	DON FORGRAVES	862
10*14403	A	2-20-33	SUE WHITE	862
10*14402	A	2-20-33	CAROL F WILSON AND RICHARD WILSON	860
10*14401	A	2-20-33	IMELDA L SCURLOCK	860
10*14400	A	2-20-33	COLEEN SLAGLE AND FRANKLIN SLAGLE	860
10*14399	A	2-20-33	RITA ANN DOEBERT AND RONALD DOEBERT	860
10*14388	A	2-20-33	JAN KAFFENBERGER	860
10*14387	A	2-20-33	IMMANUEL CHURCH OF THE UNITED	849
10*14387	A	2-20-33	JOHN F LONG AND PAM LONG	849
10*14377	A	2-20-33	JOSEPH A LONG	849
10*14375	A	2-20-33	UNITED CHURCH HOMES INC	846
10*14371	A	2-20-33	THOMAS F LONG AND JENNIFER LONG	842
10*14368	A	2-20-33	JOSEPH LONG	836
10*14365	A	2-20-33	CAROLYN STARKEY	827
10*14356	A	2-20-33	FREDRIC RICHTER & BETTY RICHTER	822
10*14352	A	2-20-33	DEWAYNE STARKEY	812
10*14333	A	2-20-33	DEAN ROTHENBUHLER	796
10*14332	A	2-20-33	MICHAEL EDWARD BARTH	796
10*14331	A	2-20-33	CHRISTINA LEAN RIOUX	796
10*14329	A	2-20-33	TONDA ROTHENBUHLER	796
10*14328	A	2-20-33	RAE ELLEN STUART	796
10*14327	A	2-20-33	ROBERT D. OKEY	792
10*14325	A	2-20-33	LOIS KAY MORFORD	792
10*14321	A	2-20-33	HERBERT BLACHLY	792
10*14320	A	2-20-33	SANDRA CHEYNEY	792
10*14319	A	2-20-33	JACK J. PEALZGRAF	792
10*14318	A	2-20-33	MARTHA BLACHLY-CROSS	792
10*14317	A	2-20-33	HAROLD BLACHLY	791
10*14316	A	2-20-33	ANDREW GERST	791
10*14315	A	2-20-33	MARGARET ROSS	790
10*14314	A	2-20-33	RALPH BLACHLY	790
10*14313	A	2-20-33	TERRI JEAN GODDARD	790
10*14312	A	2-20-33	JAMIE LU BENSON	790
10*14300	A	2-20-33	PPG INDUSTRIES, INC.	725

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