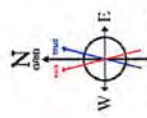
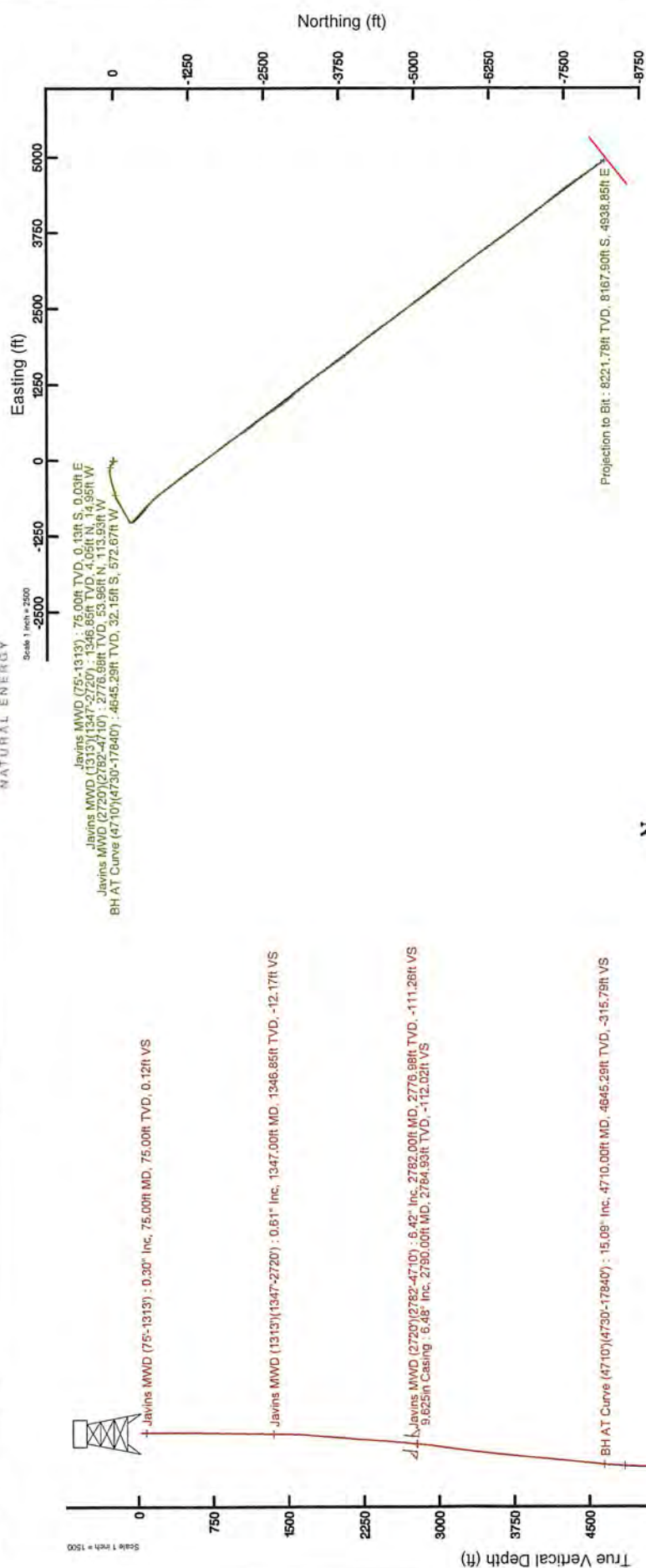


NORTHEAST NATURAL ENERGY, LLC

Location: Monongalia County, WV
 Field: Monongalia
 Facility: Coastal Pad
 Slot: Slot 02
 Well: Coastal 2H
 Wellbore: Coastal 2H PWB



Grid System: NAD83 (Lambert West Virginia State Plane Zone 1801N, US Feet)
True vertical depths are referenced to Publication 334 (NGVD)
Measured depths are referenced to Publication 334 (NGVD)
Publication 334 (NGVD) to Mean Sea Level, 1425 feet
Mean Sea Level to Ellipsoid (WGS 84), 984.8027 - 1429 feet
Conditions are as best understood to BH
Database: WVA_PermitArea

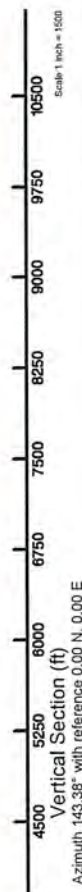


BGM (1600) to 2019 (D) Dip: 66.73° Field: 52041.1 RT
 Magnetic North is 30.04 degrees West of True North (10/20/2017)
 To correct azimuth from True to Grid add 0.45 degrees
 To correct azimuth from Magnetic to Grid subtract 8.59 degrees

Comments
API: 47-051-01675-0000
Job #: 8856915
Site: Patterson 334
Duration: 11/07/2017 - 11/21/2017

RECEIVED
 Office of Oil and Gas
 OCT 19 2018
 WV Department of
 Environmental Protection

Projection to Bit : 90.86° Inc, 17865.00R MD, 8221.78R TVD, 9501.69R VS





Company:	Baker Hughes, a GE Company	Long:	80° 12' 16.498" W	GT:	9.804 (m/s2)
Customer/Operator:	Northeast Natural Energy	Lat:	39° 42' 19.938" N	BT:	52081 (nT)
Date Range:	11/7/2017 - 11/21/2017	Ref North:	Grid	DIP:	66.73 (deg)
Rig Name:	Patterson 334	Mag Declination:	9.04 (deg) W	Mag Ref:	BGGM
Rig Elv/Dat:	25.00 (ft) / GL	True to Grid Conv:	0.45 (deg) W	MagCorr:	OFF
Well:	Coastal 2H	TAC:	-8.59 (deg)		
Wellbore:	Coastal 2H	Ver.Sec.Az:	143.38 (deg)		

Tie/ Proj	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	True Vertical Depth (ft)	Northing (ft)	Easting (ft)	DLS (deg/100ft)	Vertical Section (ft)	Closure Distance (ft)	Course Length (ft)	Build Rate (deg/100ft)	Turn Rate (deg/100ft)
Tie	0.00	0.00	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00	0.00
	25.00	0.00	167.26	25.00	0.00	0.00	0.00	0.00	0.00	25.00	0.00	669.04
	100.00	0.45	167.26	100.00	-0.29	0.06	0.60	0.27	0.29	75.00	0.60	0.00
	130.00	0.45	177.86	130.00	-0.52	0.10	0.28	0.47	0.53	30.00	0.00	35.33
	159.00	0.57	202.59	159.00	-0.77	0.04	0.85	0.64	0.77	29.00	0.41	85.28
	187.00	0.58	211.93	187.00	-1.02	-0.08	0.34	0.76	1.02	28.00	0.04	33.36
	216.00	0.57	212.68	215.99	-1.26	-0.24	0.04	0.87	1.28	29.00	-0.03	2.59
	244.00	0.69	215.84	243.99	-1.52	-0.41	0.45	0.97	1.57	28.00	0.43	11.29
	278.00	0.72	228.92	277.99	-1.82	-0.69	0.48	1.05	1.95	34.00	0.09	38.47
	309.00	0.78	239.63	308.99	-2.06	-1.02	0.49	1.04	2.30	31.00	0.19	34.55
	341.00	0.76	244.68	340.98	-2.26	-1.40	0.22	0.97	2.66	32.00	-0.06	15.78
	372.00	0.80	254.24	371.98	-2.40	-1.80	0.44	0.86	3.00	31.00	0.13	30.84
	403.00	0.71	255.52	402.98	-2.51	-2.19	0.30	0.71	3.33	31.00	-0.29	4.13
	434.00	0.76	264.38	433.98	-2.58	-2.58	0.40	0.53	3.65	31.00	0.16	28.58
	465.00	0.74	258.18	464.97	-2.64	-2.98	0.27	0.34	3.98	31.00	-0.06	-20.00
	497.00	0.72	263.49	496.97	-2.71	-3.38	0.22	0.15	4.33	32.00	-0.06	16.59
	528.00	0.77	264.43	527.97	-2.75	-3.79	0.17	-0.05	4.68	31.00	0.16	3.03
	559.00	0.78	269.22	558.97	-2.77	-4.20	0.21	-0.28	5.03	31.00	0.03	15.45
	590.00	0.85	276.50	589.96	-2.75	-4.64	0.40	-0.56	5.40	31.00	0.23	23.48
	621.00	0.87	283.84	620.96	-2.67	-5.10	0.36	-0.90	5.75	31.00	0.06	23.68
	652.00	0.90	279.39	651.96	-2.57	-5.57	0.24	-1.26	6.13	31.00	0.10	-14.35
	683.00	0.99	285.67	682.95	-2.46	-6.07	0.44	-1.65	6.55	31.00	0.29	20.26
	715.00	0.98	289.38	714.95	-2.29	-6.59	0.20	-2.09	6.98	32.00	-0.03	11.59
	746.00	1.02	296.21	745.94	-2.08	-7.09	0.41	-2.56	7.39	31.00	0.13	22.03
	777.00	1.08	293.89	776.94	-1.84	-7.60	0.24	-3.06	7.82	31.00	0.19	-7.48
	808.00	1.23	297.33	807.93	-1.57	-8.17	0.53	-3.61	8.32	31.00	0.48	11.10
	839.00	1.23	300.59	838.92	-1.25	-8.75	0.23	-4.22	8.84	31.00	0.00	10.52
	870.00	1.17	302.78	869.92	-0.91	-9.30	0.24	-4.82	9.35	31.00	-0.19	7.06
	901.00	1.09	305.82	900.91	-0.56	-9.81	0.32	-5.40	9.82	31.00	-0.26	9.81
	933.00	1.16	306.74	932.90	-0.19	-10.31	0.23	-6.00	10.31	32.00	0.22	2.87
	964.00	1.20	297.83	963.90	0.15	-10.85	0.61	-6.59	10.85	31.00	0.13	-28.74
	995.00	1.02	304.42	994.89	0.45	-11.37	0.71	-7.14	11.37	31.00	-0.58	21.26
	1026.00	1.00	310.54	1025.89	0.79	-11.80	0.35	-7.67	11.83	31.00	-0.06	19.74
	1057.00	1.06	310.75	1056.88	1.15	-12.22	0.19	-8.21	12.28	31.00	0.19	0.68
	1088.00	1.03	312.14	1087.88	1.52	-12.65	0.13	-8.77	12.74	31.00	-0.10	4.48
	1120.00	0.83	317.25	1119.87	1.89	-13.02	0.68	-9.28	13.15	32.00	-0.62	15.97
	1151.00	0.81	313.85	1150.87	2.20	-13.33	0.17	-9.72	13.51	31.00	-0.06	-10.97
	1182.00	0.86	320.54	1181.87	2.53	-13.63	0.35	-10.17	13.87	31.00	0.16	21.58
	1213.00	0.80	313.44	1212.86	2.86	-13.94	0.38	-10.61	14.23	31.00	-0.19	-22.90
	1244.00	0.74	319.01	1243.86	3.16	-14.23	0.31	-11.02	14.57	31.00	-0.19	17.97
	1276.00	0.66	323.56	1275.86	3.47	-14.47	0.30	-11.41	14.88	32.00	-0.25	14.22
	1307.00	0.61	318.03	1306.86	3.73	-14.69	0.25	-11.76	15.15	31.00	-0.16	-17.84
	1338.00	0.56	322.25	1337.85	3.98	-14.89	0.21	-12.07	15.41	31.00	-0.16	13.61
	1372.00	0.75	316.00	1371.85	4.27	-15.15	0.60	-12.46	15.74	34.00	0.56	-18.38
	1403.00	0.91	302.75	1402.85	4.55	-15.49	0.80	-12.89	16.15	31.00	0.52	-42.74
	1434.00	1.00	305.55	1433.84	4.84	-15.92	0.33	-13.38	16.64	31.00	0.29	9.03
	1465.00	1.17	290.71	1464.84	5.11	-16.44	1.05	-13.90	17.21	31.00	0.55	-47.87
	1496.00	1.45	293.26	1495.83	5.37	-17.09	0.92	-14.51	17.92	31.00	0.90	8.23
	1527.00	1.78	299.57	1526.82	5.77	-17.87	1.21	-15.29	18.78	31.00	1.06	20.35
	1558.00	2.25	306.53	1557.80	6.37	-18.78	1.71	-16.31	19.83	31.00	1.52	22.45
	1590.00	2.81	309.21	1589.77	7.24	-19.89	1.79	-17.67	21.17	32.00	1.75	8.37
	1621.00	3.47	309.37	1620.72	8.31	-21.21	2.13	-19.32	22.78	31.00	2.13	0.52
	1652.00	4.07	309.91	1651.65	9.61	-22.78	1.94	-21.30	24.72	31.00	1.94	1.74
	1683.00	4.63	310.16	1682.56	11.12	-24.58	1.81	-23.59	26.98	31.00	1.81	0.81
	1715.00	5.00	311.38	1714.45	12.88	-26.61	1.20	-26.21	29.56	32.00	1.16	3.81

RECEIVED
Office of Oil and Gas
Page 1 of 5

OCT 19 2018

MA/ Department of
Environmental Protection



1746.00	5.23	314.13	1745.33	14.76	-28.64	1.08	-28.93	32.22	31.00	0.74	8.87
1777.00	5.31	312.33	1776.20	16.71	-30.71	0.59	-31.73	34.96	31.00	0.26	-5.81
1808.00	4.89	311.68	1807.07	18.55	-32.76	1.37	-34.43	37.65	31.00	-1.35	-2.10
1839.00	4.51	304.11	1837.97	20.11	-34.76	2.34	-36.87	40.16	31.00	-1.23	-24.42
1871.00	4.61	301.32	1869.87	21.49	-36.90	0.76	-39.25	42.70	32.00	0.31	-8.72
1902.00	4.73	296.94	1900.77	22.71	-39.10	1.21	-41.55	45.22	31.00	0.39	-14.13
1933.00	5.01	297.98	1931.65	23.93	-41.43	0.95	-43.92	47.85	31.00	0.90	3.35
1964.00	5.28	295.73	1962.53	25.18	-43.91	1.09	-46.41	50.62	31.00	0.87	-7.26
1996.00	5.62	294.63	1994.38	26.47	-46.67	1.11	-49.08	53.65	32.00	1.06	-3.44
2027.00	5.97	294.47	2025.23	27.77	-49.51	1.13	-51.83	56.77	31.00	1.13	-0.52
2058.00	5.82	292.49	2056.06	29.04	-52.43	0.82	-54.59	59.94	31.00	-0.48	-6.39
2089.00	5.32	289.63	2086.92	30.13	-55.24	1.84	-57.13	62.92	31.00	-1.61	-9.23
2120.00	5.36	290.89	2117.78	31.13	-57.94	0.40	-59.55	65.78	31.00	0.13	4.06
2152.00	5.40	289.21	2149.64	32.15	-60.76	0.51	-62.05	68.75	32.00	0.12	-5.25
2183.00	5.48	289.76	2180.50	33.13	-63.53	0.31	-64.49	71.65	31.00	0.26	1.77
2214.00	5.11	287.69	2211.37	34.05	-66.24	1.34	-66.85	74.48	31.00	-1.19	-6.68
2245.00	4.56	288.75	2242.26	34.87	-68.72	1.80	-68.98	77.06	31.00	-1.77	3.42
2276.00	4.48	289.43	2273.16	35.67	-71.03	0.31	-71.00	79.49	31.00	-0.26	2.19
2308.00	4.42	291.72	2305.07	36.54	-73.36	0.59	-73.09	81.95	32.00	-0.19	7.16
2339.00	4.41	293.66	2335.97	37.46	-75.56	0.48	-75.14	84.34	31.00	-0.03	6.26
2370.00	4.70	292.49	2366.88	38.43	-77.82	0.98	-77.26	86.79	31.00	0.94	-3.77
2401.00	4.92	293.90	2397.77	39.45	-80.21	0.81	-79.51	89.39	31.00	0.71	4.55
2432.00	4.97	293.30	2428.65	40.52	-82.66	0.23	-81.83	92.06	31.00	0.16	-1.94
2464.00	4.76	293.62	2460.54	41.60	-85.15	0.66	-84.18	94.77	32.00	-0.66	1.00
2495.00	5.00	294.69	2491.42	42.68	-87.56	0.83	-86.48	97.40	31.00	0.77	3.45
2526.00	5.05	291.68	2522.30	43.75	-90.05	0.87	-88.83	100.12	31.00	0.16	-9.71
2557.00	5.47	294.94	2553.17	44.88	-92.66	1.66	-91.29	102.95	31.00	1.35	10.52
2589.00	5.80	295.44	2585.02	46.21	-95.50	1.04	-94.06	106.10	32.00	1.03	1.56
2620.00	5.79	294.47	2615.86	47.53	-98.34	0.32	-96.81	109.23	31.00	-0.03	-3.13
2651.00	5.72	293.31	2646.70	48.79	-101.18	0.44	-99.52	112.33	31.00	-0.23	-3.74
2675.00	5.82	291.61	2670.58	49.71	-103.41	0.83	-101.59	114.74	24.00	0.42	-7.08
2714.00	6.01	293.31	2709.37	51.25	-107.12	0.66	-105.03	118.75	39.00	0.49	4.36
2745.00	6.13	291.76	2740.20	52.51	-110.15	0.66	-107.85	122.03	31.00	0.39	-5.00
2807.00	6.61	289.49	2801.82	54.92	-116.59	0.87	-113.63	128.88	62.00	0.77	-3.66
2839.00	6.65	288.69	2833.60	56.13	-120.08	0.31	-116.68	132.55	32.00	0.12	-2.50
2870.00	7.52	284.20	2864.37	57.20	-123.75	3.32	-119.73	136.33	31.00	2.81	-14.48
2901.00	8.87	280.36	2895.05	58.13	-128.07	4.70	-123.05	140.64	31.00	4.35	-12.39
2932.00	10.69	276.76	2925.60	58.90	-133.27	6.19	-126.77	145.71	31.00	5.87	-11.61
2964.00	12.47	273.95	2956.95	59.49	-139.67	5.83	-131.06	151.81	32.00	5.56	-8.78
2995.00	13.69	272.99	2987.14	59.91	-146.67	4.00	-135.57	158.43	31.00	3.94	-3.10
3026.00	13.47	272.30	3017.28	60.25	-153.94	0.88	-140.18	165.31	31.00	-0.71	-2.23
3057.00	14.18	271.58	3047.38	60.50	-161.35	2.36	-144.80	172.31	31.00	2.29	-2.32
3088.00	14.98	270.98	3077.38	60.67	-169.15	2.63	-149.59	179.70	31.00	2.58	-1.94
3119.00	14.87	270.21	3107.33	60.75	-177.13	0.73	-154.42	187.26	31.00	-0.35	-2.48
3150.00	15.02	268.06	3137.28	60.63	-185.12	1.85	-159.09	194.80	31.00	0.48	-6.94
3182.00	15.45	266.48	3168.16	60.23	-193.52	1.87	-163.78	202.68	32.00	1.34	-4.94
3213.00	15.40	266.27	3198.04	59.71	-201.75	0.24	-168.27	210.40	31.00	-0.16	-0.68
3244.00	15.20	264.22	3227.94	59.03	-209.90	1.86	-172.59	218.04	31.00	-0.65	-6.61
3275.00	15.14	263.30	3257.86	58.15	-217.96	0.80	-176.69	225.59	31.00	-0.19	-2.97
3306.00	15.05	263.10	3287.79	57.19	-225.98	0.34	-180.70	233.11	31.00	-0.29	-0.65
3338.00	15.28	261.13	3318.68	56.04	-234.27	1.76	-184.73	240.88	32.00	0.72	-6.16
3369.00	15.58	259.66	3348.56	54.67	-242.40	1.59	-188.47	248.49	31.00	0.97	-4.74
3400.00	15.61	259.13	3378.42	53.13	-250.59	0.47	-192.13	256.17	31.00	0.10	-1.71
3431.00	15.45	256.64	3408.29	51.39	-258.71	2.21	-195.57	263.76	31.00	-0.52	-8.03
3462.00	15.43	255.39	3438.17	49.40	-266.72	1.08	-198.74	271.25	31.00	-0.06	-4.03
3493.00	15.31	255.24	3468.06	47.31	-274.66	0.41	-201.81	278.71	31.00	-0.39	-0.48
3524.00	15.00	254.84	3497.98	45.22	-282.49	1.06	-204.81	286.09	31.00	-1.00	-1.29
3555.00	14.84	255.04	3527.94	43.15	-290.20	0.54	-207.74	293.39	31.00	-0.52	0.65
3587.00	14.53	254.82	3558.89	41.04	-298.03	0.98	-210.72	300.85	32.00	-0.97	-0.69
3618.00	14.31	254.83	3588.92	39.02	-305.49	0.71	-213.54	307.97	31.00	-0.71	0.03
3649.00	13.88	254.70	3618.98	37.04	-312.77	1.39	-216.29	314.95	31.00	-1.39	-0.42
3712.00	13.90	255.52	3680.14	33.15	-327.38	0.31	-221.89	329.06	63.00	0.03	1.30
3743.00	14.15	256.88	3710.22	31.36	-334.68	1.33	-224.81	336.15	31.00	0.81	4.39
3774.00	13.96	257.03	3740.29	29.66	-342.01	0.62	-227.82	343.30	31.00	-0.61	0.48
3805.00	13.76	256.77	3770.39	27.98	-349.25	0.68	-230.78	350.37	31.00	-0.65	-0.84
3837.00	13.93	256.17	3801.46	26.18	-356.69	0.70	-233.78	357.65	32.00	0.53	-1.87
3868.00	14.21	255.39	3831.53	24.33	-364.00	1.09	-236.66	364.81	31.00	0.90	-2.52
3899.00	14.10	255.27	3861.59	22.41	-371.33	0.37	-239.49	372.01	31.00	-0.35	-0.39
3930.00	14.39	254.78	3891.63	20.44	-378.70	1.01	-242.30	379.25	31.00	0.94	-1.58
3961.00	14.73	255.32	3921.64	18.43	-386.23	1.18	-245.18	386.67	31.00	1.10	1.74
3992.00	14.46	255.59	3951.64	16.47	-393.79	0.90	-248.12	394.13	31.00	-0.87	0.87
4024.00	14.85	255.26	3982.60	14.43	-401.63	1.25	-251.15	401.89	32.00	1.22	-1.03

RECEIVED
Office of Oil and Gas
Page 2 of 5

OCT 19 2018

WV Department of
Environmental Protection



4055.00	15.09	254.62	4012.54	12.35	-409.36	0.94	-254.10	409.54	31.00	0.77	-2.06
4086.00	14.84	254.34	4042.49	10.21	-417.07	0.84	-256.98	417.20	31.00	-0.81	-0.90
4117.00	14.69	254.55	4072.47	8.09	-424.68	0.51	-259.82	424.76	31.00	-0.48	0.68
4148.00	15.05	254.18	4102.43	5.95	-432.34	1.20	-262.67	432.38	31.00	1.16	-1.19
4180.00	15.42	254.57	4133.31	3.68	-440.44	1.20	-265.68	440.46	32.00	1.16	1.22
4211.00	15.29	254.56	4163.20	1.50	-448.35	0.42	-268.65	448.36	31.00	-0.42	-0.03
4242.00	15.05	254.12	4193.12	-0.69	-456.17	0.86	-271.55	456.17	31.00	-0.77	-1.42
4273.00	14.89	254.78	4223.07	-2.84	-463.88	0.75	-274.43	463.89	31.00	-0.52	2.13
4304.00	14.56	254.78	4253.05	-4.91	-471.48	1.06	-277.30	471.51	31.00	-1.06	0.00
4335.00	14.34	254.95	4283.07	-6.93	-478.95	0.72	-280.14	479.00	31.00	-0.71	0.55
4367.00	14.93	255.11	4314.03	-9.02	-486.76	1.85	-283.12	486.84	32.00	1.84	0.50
4398.00	15.51	255.61	4343.94	-11.07	-494.64	1.92	-286.17	494.76	31.00	1.87	1.61
4429.00	15.37	254.98	4373.82	-13.17	-502.62	0.70	-289.25	502.79	31.00	-0.45	-2.03
4460.00	15.29	255.41	4403.72	-15.26	-510.54	0.45	-292.29	510.77	31.00	-0.26	1.39
4492.00	15.06	254.87	4434.61	-17.41	-518.64	0.84	-295.40	518.93	32.00	-0.72	-1.69
4523.00	14.73	254.86	4464.56	-19.49	-526.33	1.06	-298.32	526.69	31.00	-1.06	-0.03
4554.00	14.59	254.98	4494.55	-21.53	-533.91	0.46	-301.20	534.34	31.00	-0.45	0.39
4585.00	14.26	254.48	4524.58	-23.56	-541.36	1.14	-304.01	541.87	31.00	-1.06	-1.61
4616.00	14.89	255.21	4554.58	-25.60	-548.89	2.12	-306.86	549.48	31.00	2.03	2.35
4648.00	15.41	254.67	4585.47	-27.78	-556.96	1.68	-309.94	557.65	32.00	1.62	-1.69
4679.00	15.24	254.33	4615.36	-29.97	-564.86	0.62	-312.89	565.65	31.00	-0.55	-1.10
4710.00	15.09	254.39	4645.29	-32.15	-572.67	0.49	-315.79	573.57	31.00	-0.48	0.19
4730.00	14.81	254.56	4664.61	-33.53	-577.64	1.42	-317.65	578.61	20.00	-1.40	0.85
4765.00	13.48	253.44	4698.55	-35.89	-585.86	3.88	-320.66	586.96	35.00	-3.80	-3.20
4860.00	12.67	245.31	4791.09	-43.40	-605.94	2.11	-326.62	607.49	95.00	-0.85	-8.56
4954.00	12.36	242.93	4882.86	-52.28	-624.27	0.64	-330.42	626.45	94.00	-0.33	-2.53
5049.00	10.50	245.14	4975.97	-60.55	-641.17	2.01	-333.87	644.03	95.00	-1.96	2.33
5144.00	10.13	238.34	5069.44	-68.57	-656.14	1.34	-336.35	659.71	95.00	-0.39	-7.16
5239.00	10.27	240.91	5162.94	-77.07	-670.65	0.50	-338.19	675.07	95.00	0.15	2.71
5334.00	10.14	243.77	5256.43	-84.89	-685.55	0.55	-340.80	690.79	95.00	-0.14	3.01
5429.00	10.12	237.85	5349.96	-93.02	-700.12	1.10	-342.96	706.27	95.00	-0.02	-6.23
5524.00	10.19	236.07	5443.47	-102.16	-714.16	0.34	-344.01	721.43	95.00	0.07	-1.87
5619.00	9.99	245.39	5537.01	-110.28	-728.63	1.73	-346.12	736.92	95.00	-0.21	9.81
5714.00	10.12	248.34	5630.55	-116.79	-743.87	0.56	-349.99	752.99	95.00	0.14	3.11
5809.00	10.11	241.39	5724.07	-123.87	-758.95	1.28	-353.30	768.99	95.00	-0.01	-7.32
5904.00	10.01	236.38	5817.61	-132.43	-773.15	0.93	-354.90	784.41	95.00	-0.11	-5.27
5999.00	10.07	242.43	5911.16	-140.85	-787.39	1.11	-356.64	799.88	95.00	0.06	6.37
6094.00	10.21	246.37	6004.68	-148.06	-802.46	0.74	-359.83	816.01	95.00	0.15	4.15
6190.00	9.98	240.17	6099.20	-155.61	-817.47	1.16	-362.73	832.15	96.00	-0.24	-6.46
6285.00	10.03	237.48	6192.75	-164.15	-831.59	0.49	-364.30	847.64	95.00	0.05	-2.83
6379.00	10.03	233.92	6285.32	-173.38	-845.11	0.66	-364.96	862.71	94.00	0.00	-3.79
6473.00	10.05	238.36	6377.88	-182.50	-858.71	0.82	-365.75	877.89	94.00	0.02	4.72
6568.00	10.16	238.66	6471.40	-191.21	-872.92	0.13	-367.24	893.62	95.00	0.12	0.32
6663.00	10.20	240.43	6564.91	-199.71	-887.39	0.33	-369.04	909.59	95.00	0.04	1.86
6759.00	10.02	248.70	6659.42	-206.94	-902.57	1.52	-372.29	925.99	96.00	-0.19	8.61
6854.00	9.92	246.22	6752.99	-213.25	-917.76	0.46	-376.29	942.21	95.00	-0.11	-2.61
6949.00	9.88	237.65	6846.58	-220.91	-932.13	1.55	-378.72	957.95	95.00	-0.04	-9.02
7044.00	9.98	234.81	6940.16	-230.01	-945.74	0.53	-379.53	973.31	95.00	0.11	-2.99
7139.00	9.99	236.03	7033.72	-239.36	-959.31	0.22	-380.12	988.72	95.00	0.01	1.28
7233.00	9.96	237.36	7126.30	-248.30	-972.91	0.25	-381.06	1004.10	94.00	-0.03	1.41
7329.00	10.00	236.42	7220.85	-257.39	-986.85	0.17	-382.08	1019.86	96.00	0.04	-0.98
7423.00	10.04	238.31	7313.41	-266.21	-1000.62	0.35	-383.21	1035.42	94.00	0.04	2.01
7518.00	10.04	237.41	7406.96	-275.02	-1014.64	0.17	-384.51	1051.25	95.00	0.00	-0.95
7613.00	10.01	191.59	7500.65	-287.59	-1023.29	8.18	-379.58	1062.93	95.00	-0.03	-48.23
7707.00	11.82	133.96	7593.20	-302.31	-1017.99	11.27	-364.60	1061.93	94.00	1.93	-61.31
7802.00	18.54	131.01	7684.84	-319.00	-999.57	7.12	-340.22	1049.23	95.00	7.07	-3.11
7896.00	26.69	134.58	7771.54	-343.66	-973.21	8.79	-304.69	1032.10	94.00	8.67	3.80
7990.00	35.62	137.18	7851.90	-378.63	-939.49	9.61	-256.52	1012.92	94.00	9.50	2.77
8085.00	43.02	132.13	7925.37	-420.73	-896.59	8.48	-197.14	990.40	95.00	7.79	-5.32
8180.00	50.21	130.39	7990.58	-466.18	-844.68	7.68	-129.69	964.79	95.00	7.57	-1.83
8275.00	55.39	131.89	8048.00	-515.97	-787.74	5.60	-55.77	941.68	95.00	5.45	1.58
8369.00	65.01	138.83	8094.70	-574.06	-730.71	12.07	24.87	929.24	94.00	10.23	7.38
8462.00	71.14	136.97	8129.42	-638.02	-672.88	6.85	110.70	927.27	93.00	6.59	-2.00
8556.00	78.67	138.85	8153.88	-705.33	-612.11	8.24	200.98	933.91	94.00	8.01	2.00
8651.00	86.52	139.97	8166.11	-776.82	-550.87	8.35	294.88	952.32	95.00	8.26	1.18
8746.00	87.91	141.46	8170.73	-850.26	-490.80	2.14	389.66	981.75	95.00	1.46	1.57
8841.00	88.06	142.74	8174.07	-925.18	-432.48	1.36	484.58	1021.27	95.00	0.16	1.35
8936.00	87.51	143.13	8177.74	-1000.93	-375.26	0.71	579.51	1068.96	95.00	-0.58	0.41
9030.00	87.63	142.97	8181.73	-1075.98	-318.81	0.21	673.42	1122.22	94.00	0.13	-0.17
9125.00	88.98	142.51	8184.54	-1151.55	-261.32	1.50	768.37	1180.83	95.00	1.42	-0.48
9220.00	89.05	141.91	8186.17	-1226.62	-203.11	0.64	863.34	1243.32	95.00	0.07	-0.63
9315.00	89.23	145.22	8187.60	-1303.03	-146.71	3.49	958.31	1311.26	95.00	0.19	3.48

Page 3 RECEIVED
 Office of Oil and Gas
 OCT 19 2018
 WV Department of
 Environmental Protection



9408.00	89.08	145.95	8188.97	-1379.74	-94.15	0.80	1051.23	1382.95	93.00	-0.16	0.78
9502.00	89.42	147.01	8190.20	-1458.10	-42.25	1.18	1145.08	1458.71	94.00	0.36	1.13
9596.00	89.63	141.32	8190.98	-1534.27	12.76	6.06	1239.03	1534.33	94.00	0.22	-6.05
9691.00	89.66	142.47	8191.57	-1609.02	71.38	1.21	1334.00	1610.61	95.00	0.03	1.21
9786.00	89.85	142.85	8191.97	-1684.55	129.00	0.45	1428.99	1689.49	95.00	0.20	0.40
9881.00	89.69	141.23	8192.35	-1759.45	187.44	1.71	1523.96	1769.41	95.00	-0.17	-1.71
9976.00	89.45	141.96	8193.07	-1833.89	246.45	0.81	1618.91	1850.38	95.00	-0.25	0.77
10072.00	89.38	144.60	8194.05	-1910.83	303.84	2.75	1714.90	1934.84	96.00	-0.07	2.75
10166.00	89.29	147.47	8195.14	-1988.78	356.35	3.05	1808.78	2020.46	94.00	-0.10	3.05
10261.00	89.38	147.47	8196.24	-2068.87	407.43	0.09	1903.53	2108.61	95.00	0.09	0.00
10356.00	89.35	146.59	8197.29	-2148.57	459.13	0.93	1998.33	2197.08	95.00	-0.03	-0.93
10451.00	89.38	145.33	8198.35	-2227.28	512.30	1.33	2093.23	2285.44	95.00	0.03	-1.33
10546.00	89.29	140.51	8199.45	-2303.05	569.56	5.07	2188.19	2372.43	95.00	-0.09	-5.07
10641.00	89.45	140.27	8200.50	-2376.23	630.12	0.30	2283.06	2458.36	95.00	0.17	-0.25
10735.00	89.63	144.19	8201.25	-2450.52	687.68	4.17	2377.01	2545.18	94.00	0.19	4.17
10831.00	89.54	146.06	8201.95	-2529.27	742.57	1.95	2472.96	2636.02	96.00	-0.09	1.95
10926.00	89.45	148.05	8202.78	-2608.99	794.23	2.10	2567.76	2727.20	95.00	-0.09	2.09
11021.00	89.60	145.23	8203.57	-2688.32	846.46	2.97	2662.59	2818.44	95.00	0.16	-2.97
11116.00	89.75	144.16	8204.11	-2765.85	901.37	1.14	2757.57	2909.02	95.00	0.16	-1.13
11210.00	89.82	143.89	8204.46	-2841.92	956.58	0.30	2851.56	2998.59	94.00	0.07	-0.29
11305.00	89.85	141.89	8204.74	-2917.68	1013.90	2.11	2946.55	3088.82	95.00	0.03	-2.11
11400.00	89.85	139.14	8204.99	-2990.99	1074.30	2.89	3041.42	3178.07	95.00	0.00	-2.89
11495.00	89.60	140.27	8205.44	-3063.45	1135.74	1.22	3136.22	3267.20	95.00	-0.26	1.19
11590.00	90.65	143.72	8205.23	-3138.29	1194.22	3.80	3231.18	3357.83	95.00	1.11	3.63
11685.00	90.80	140.03	8204.03	-3213.00	1252.86	3.89	3326.12	3448.63	95.00	0.16	-3.88
11779.00	90.18	141.69	8203.23	-3285.90	1312.19	1.89	3420.02	3538.22	94.00	-0.66	1.77
11875.00	90.25	142.85	8202.87	-3361.83	1370.93	1.21	3516.00	3630.61	96.00	0.07	1.21
11970.00	89.85	144.14	8202.78	-3438.19	1427.45	1.42	3611.00	3722.73	95.00	-0.42	1.36
12064.00	89.54	145.11	8203.28	-3514.83	1481.87	1.08	3704.98	3814.44	94.00	-0.33	1.03
12159.00	89.88	144.97	8203.77	-3592.69	1536.30	0.39	3799.94	3907.38	95.00	0.36	-0.15
12255.00	90.00	146.01	8203.87	-3671.79	1590.69	1.09	3895.87	4001.54	96.00	0.12	1.08
12349.00	90.31	144.72	8203.61	-3749.13	1644.11	1.41	3989.81	4093.79	94.00	0.33	-1.37
12443.00	90.37	144.37	8203.05	-3825.70	1698.64	0.38	4083.79	4185.85	94.00	0.06	-0.37
12538.00	90.71	140.41	8202.16	-3900.94	1756.60	4.18	4178.75	4278.20	95.00	0.36	-4.17
12633.00	90.71	140.57	8200.98	-3974.23	1817.03	0.17	4273.62	4369.91	95.00	0.00	0.17
12727.00	91.08	140.07	8199.51	-4046.57	1877.05	0.66	4367.48	4460.72	94.00	0.39	-0.53
12822.00	88.92	139.50	8199.51	-4119.11	1938.38	2.35	4462.29	4552.40	95.00	-2.27	-0.60
12916.00	87.91	141.25	8202.11	-4191.48	1998.30	2.15	4556.12	4643.46	94.00	-1.07	1.86
13011.00	87.23	142.93	8206.14	-4266.36	2056.62	1.91	4651.00	4736.19	95.00	-0.72	1.77
13105.00	87.29	141.49	8210.63	-4340.56	2114.15	1.53	4744.87	4828.05	94.00	0.06	-1.53
13200.00	87.05	144.49	8215.33	-4416.31	2171.26	3.16	4839.74	4921.20	95.00	-0.25	3.16
13295.00	87.20	145.96	8220.09	-4494.25	2225.37	1.55	4934.57	5015.03	95.00	0.16	1.55
13389.00	87.60	145.21	8224.36	-4571.71	2278.45	0.90	5028.40	5108.02	94.00	0.43	-0.80
13485.00	87.85	142.08	8228.17	-4648.96	2335.30	3.27	5124.32	5202.54	96.00	0.26	-3.26
13580.00	88.49	143.18	8231.20	-4724.42	2392.93	1.34	5219.26	5295.87	95.00	0.67	1.16
13674.00	88.34	145.03	8233.80	-4800.53	2448.02	1.97	5313.21	5388.68	94.00	-0.16	1.97
13768.00	88.43	145.90	8236.45	-4877.94	2501.29	0.93	5407.11	5481.85	94.00	0.10	0.93
13863.00	88.40	147.16	8239.08	-4957.15	2553.66	1.33	5501.93	5576.25	95.00	-0.03	1.33
13957.00	88.40	145.77	8241.70	-5035.47	2605.57	1.48	5595.75	5669.65	94.00	0.00	-1.48
14052.00	88.28	142.84	8244.46	-5112.58	2660.97	3.09	5690.69	5763.62	95.00	-0.13	-3.08
14147.00	88.92	142.31	8246.78	-5188.01	2718.69	0.87	5785.65	5857.19	95.00	0.67	-0.56
14242.00	88.83	144.57	8248.64	-5264.29	2775.26	2.38	5880.63	5951.04	95.00	-0.09	2.38
14337.00	89.60	143.64	8249.94	-5341.24	2830.95	1.27	5975.61	6045.09	95.00	0.81	-0.98
14431.00	90.99	142.16	8249.46	-5416.21	2887.65	2.16	6069.60	6137.90	94.00	1.48	-1.57
14526.00	90.34	142.50	8248.36	-5491.40	2945.70	0.77	6164.58	6231.58	95.00	-0.68	0.36
14620.00	89.42	138.76	8248.55	-5564.06	3005.32	4.10	6258.45	6323.82	94.00	-0.98	-3.98
14715.00	90.25	141.43	8248.83	-5636.92	3066.25	2.94	6353.28	6416.92	95.00	0.87	2.81
14809.00	90.25	144.01	8248.42	-5711.71	3123.19	2.74	6447.27	6509.83	94.00	0.00	2.74
14904.00	89.69	141.32	8248.47	-5787.24	3180.79	2.89	6542.25	6603.76	95.00	-0.59	-2.83
14999.00	89.63	144.52	8249.03	-5863.02	3238.06	3.37	6637.24	6697.76	95.00	-0.06	3.37
15093.00	90.62	145.16	8248.83	-5939.87	3292.19	1.25	6731.20	6791.21	94.00	1.05	0.68
15188.00	90.71	144.44	8247.72	-6017.49	3346.95	0.76	6826.17	6885.66	95.00	0.09	-0.76
15283.00	90.37	144.19	8246.83	-6094.65	3402.37	0.44	6921.15	6980.03	95.00	-0.36	-0.26
15377.00	90.77	144.34	8245.89	-6170.95	3457.26	0.45	7015.13	7073.42	94.00	0.43	0.16
15473.00	90.68	144.99	8244.68	-6249.26	3512.78	0.68	7111.10	7168.88	96.00	-0.09	0.68
15567.00	90.62	141.68	8243.61	-6324.64	3568.90	3.52	7205.08	7262.10	94.00	-0.06	-3.52
15662.00	90.83	143.66	8242.41	-6400.17	3626.50	2.10	7300.06	7356.20	95.00	0.22	2.08
15757.00	89.85	141.81	8241.85	-6475.77	3684.02	2.20	7395.05	7450.34	95.00	-1.03	-1.95
15851.00	90.06	143.04	8241.92	-6550.27	3741.34	1.33	7489.03	7543.45	94.00	0.22	1.31
15947.00	90.18	142.82	8241.72	-6626.87	3799.21	0.26	7583.03	7638.67	96.00	0.12	-0.23
16041.00	90.15	144.32	8241.45	-6702.50	3855.02	1.60	7679.03	7732.05	94.00	-0.03	1.60
16136.00	90.77	145.71	8240.69	-6780.32	3909.49	1.60	7773.98	7826.68	95.00	0.65	1.46

Page 4 of 5
 RECEIVED
 Office of Oil and Gas
 OCT 9 2018
 EPA Department of Environmental Protection



	16231.00	90.92	144.91	8239.28	-6858.43	3963.55	0.86	7868.92	7921.35	95.00	0.16	-0.84
	16326.00	90.89	141.95	8237.78	-6934.71	4020.14	3.12	7963.90	8015.72	95.00	-0.03	-3.12
	16420.00	90.65	142.92	8236.52	-7009.21	4077.44	1.06	8057.87	8108.92	94.00	-0.26	1.03
	16516.00	90.40	141.05	8235.64	-7084.84	4136.56	1.97	8153.84	8204.03	96.00	-0.26	-1.95
	16611.00	90.37	139.51	8235.00	-7157.91	4197.27	1.62	8248.69	8297.75	95.00	-0.03	-1.62
	16706.00	90.43	140.00	8234.34	-7230.42	4258.64	0.52	8343.50	8391.36	95.00	0.06	0.52
	16801.00	90.71	142.53	8233.39	-7304.51	4318.08	2.68	8438.42	8485.38	95.00	0.29	2.66
	16895.00	90.65	141.72	8232.28	-7378.70	4375.78	0.86	8532.39	8578.62	94.00	-0.06	-0.86
	16991.00	90.55	141.02	8231.27	-7453.69	4435.71	0.74	8628.33	8673.70	96.00	-0.10	-0.73
	17086.00	90.71	141.97	8230.23	-7528.03	4494.85	1.01	8723.27	8767.84	95.00	0.17	1.00
	17181.00	90.68	144.97	8229.08	-7604.35	4551.39	3.16	8818.25	8862.35	95.00	-0.03	3.16
	17276.00	90.25	145.91	8228.30	-7682.59	4605.28	1.09	8913.19	8957.16	95.00	-0.45	0.99
	17372.00	90.28	145.07	8227.86	-7761.69	4659.66	0.88	9009.12	9052.97	96.00	0.03	-0.87
	17466.00	90.68	146.09	8227.07	-7839.23	4712.80	1.17	9103.04	9146.80	94.00	0.43	1.09
	17562.00	90.65	147.30	8225.96	-7919.45	4765.50	1.26	9198.88	9242.72	96.00	-0.03	1.26
	17657.00	90.80	144.67	8224.76	-7998.19	4818.64	2.77	9293.76	9337.57	95.00	0.16	-2.77
	17752.00	90.80	144.61	8223.43	-8075.65	4873.61	0.06	9388.73	9432.30	95.00	0.00	-0.06
	17840.00	90.86	144.81	8222.16	-8147.48	4924.44	0.24	9476.70	9520.06	88.00	0.07	0.23
Proj	17865.00	90.86	144.81	8221.78	-8167.90	4938.85	0.00	9501.69	9544.99	25.00	0.00	0.00

RECEIVED
Office of Oil and Gas
OCT 19 2018
WV Department of Environmental Protection
Page 5 of 5