

REFERENCE WELLPATH IDENTIFICATION

Operator	GASTAR EXPLORATION USA, INC.	Slot	Slot #U-5H
Area	Marshall County, WV	Well	Simms U-5H
Field	Marshall	Wellbore	Simms U-5H (AWB)
Facility	Simms	Wellpath	Simms U-5H (AWP) Proj: 16804'
Projection System	NAD83 / UTM ZONE 17 NORTH / METERS	Sidetrack	(none)

WELLPATH DATA † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [M]	Grid North [M]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
0	0	136.53	0	0	0	0	519682.57	4399588.3	39°44'45.493"N	80°46'12.955"W	0	0	0
29.4	0	136.53	29.4	0	0	0	519682.57	4399588.3	39°44'45.493"N	80°46'12.955"W	0	0	0
119.4	0.59	136.53	119.4	0.41	-0.34	0.32	519682.67	4399588.2	39°44'45.490"N	80°46'12.951"W	0.46	136.53	0.66
219.4	0.73	139.9	219.39	1.42	-1.2	1.08	519682.9	4399587.9	39°44'45.481"N	80°46'12.941"W	1.61	137.859	0.15
319.4	0.88	148.43	319.38	2.56	-2.34	1.9	519683.15	4399587.5	39°44'45.470"N	80°46'12.931"W	3.01	140.973	0.19
419.4	0.41	145.93	419.38	3.44	-3.29	2.5	519683.33	4399587.3	39°44'45.460"N	80°46'12.923"W	4.13	142.785	0.47
519.4	0.62	136.07	519.37	4.21	-3.98	3.07	519683.51	4399587	39°44'45.454"N	80°46'12.916"W	5.03	142.287	0.23
619.4	0.32	138.99	619.37	4.94	-4.58	3.63	519683.68	4399586.9	39°44'45.448"N	80°46'12.909"W	5.84	141.555	0.3
719.4	0.43	135.56	719.37	5.51	-5.05	4.08	519683.81	4399586.7	39°44'45.443"N	80°46'12.903"W	6.49	141.099	0.11
819.4	0.32	131.19	819.36	6.11	-5.51	4.55	519683.96	4399586.6	39°44'45.439"N	80°46'12.897"W	7.14	140.423	0.11
919.4	0.39	122.41	919.36	6.7	-5.87	5.05	519684.11	4399586.5	39°44'45.435"N	80°46'12.891"W	7.74	139.313	0.09
1019.4	0.21	109.97	1019.36	7.21	-6.12	5.51	519684.25	4399586.4	39°44'45.432"N	80°46'12.885"W	8.23	137.999	0.19
1119.4	0.25	84.64	1119.36	7.6	-6.16	5.9	519684.37	4399586.4	39°44'45.432"N	80°46'12.880"W	8.53	136.244	0.11
1219.4	0.26	71.92	1219.36	7.97	-6.07	6.33	519684.5	4399586.4	39°44'45.433"N	80°46'12.874"W	8.77	133.79	0.06
1319.4	0.43	45.12	1319.36	8.32	-5.73	6.81	519684.65	4399586.5	39°44'45.436"N	80°46'12.868"W	8.9	130.086	0.23
1419.4	0.42	57.6	1419.35	8.71	-5.27	7.39	519684.82	4399586.6	39°44'45.441"N	80°46'12.861"W	9.08	125.515	0.09
1519.4	0.31	68.33	1519.35	9.14	-4.98	7.95	519684.99	4399586.7	39°44'45.444"N	80°46'12.853"W	9.38	122.049	0.13
1619.4	0.39	61.67	1619.35	9.58	-4.71	8.5	519685.16	4399586.8	39°44'45.446"N	80°46'12.846"W	9.72	119.018	0.09
1719.4	0.38	67.39	1719.35	10.05	-4.43	9.11	519685.34	4399586.9	39°44'45.449"N	80°46'12.839"W	10.12	115.924	0.04
1819.4	0.29	75.46	1819.35	10.51	-4.23	9.66	519685.51	4399587	39°44'45.451"N	80°46'12.832"W	10.54	113.681	0.1
1919.4	0.42	85.2	1919.34	11.06	-4.14	10.27	519685.7	4399587	39°44'45.452"N	80°46'12.824"W	11.07	111.965	0.14
2019.4	0.44	97.99	2019.34	11.77	-4.16	11.01	519685.93	4399587	39°44'45.452"N	80°46'12.814"W	11.77	110.711	0.1
2119.4	0.38	99.09	2119.34	12.47	-4.27	11.72	519686.14	4399587	39°44'45.451"N	80°46'12.805"W	12.47	110.015	0.06
2219.4	0.4	108.18	2219.34	13.15	-4.43	12.38	519686.34	4399586.9	39°44'45.449"N	80°46'12.797"W	13.15	109.693	0.06
2319.4	0.31	115.02	2319.33	13.77	-4.65	12.96	519686.52	4399586.8	39°44'45.447"N	80°46'12.789"W	13.77	109.759	0.1
2419.4	0.32	143.42	2419.33	14.27	-4.99	13.37	519686.64	4399586.7	39°44'45.443"N	80°46'12.784"W	14.27	110.48	0.15

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2519.4	0.17	224.2	2519.33	14.43	-5.32	13.43	519686.66	4399586.6	39°44'45.440"N	80°46'12.783"W	14.45	111.621	0.34
2619.4	0.24	273.85	2619.33	14.17	-5.42	13.12	519686.57	4399586.6	39°44'45.439"N	80°46'12.787"W	14.19	112.432	0.18
2719.4	0.09	253.64	2719.33	13.9	-5.42	12.83	519686.48	4399586.6	39°44'45.439"N	80°46'12.791"W	13.93	112.909	0.16
2819.4	0.43	244.21	2819.33	13.57	-5.61	12.42	519686.36	4399586.5	39°44'45.437"N	80°46'12.796"W	13.63	114.303	0.34
2859.4	0.58	225.74	2859.33	13.38	-5.82	12.14	519686.27	4399586.5	39°44'45.435"N	80°46'12.800"W	13.46	115.596	0.55
2918.4	2.76	13.58	2918.31	13.1	-4.64	12.26	519686.3	4399586.8	39°44'45.447"N	80°46'12.798"W	13.11	110.741	5.53
2949.4	4.77	20.61	2949.24	13.06	-2.71	12.89	519686.5	4399587.4	39°44'45.466"N	80°46'12.790"W	13.17	101.877	6.64
2981.4	6.46	23.82	2981.09	13.24	0.18	14.08	519686.86	4399588.3	39°44'45.494"N	80°46'12.775"W	14.09	89.261	5.37
3012.4	7.64	26.97	3011.85	13.66	3.61	15.72	519687.36	4399589.4	39°44'45.528"N	80°46'12.754"W	16.13	77.056	4
3076.4	8.57	28.09	3075.21	14.97	11.61	19.9	519688.63	4399591.8	39°44'45.607"N	80°46'12.700"W	23.04	59.732	1.47
3139.4	7.01	35.35	3137.63	16.77	18.89	24.33	519689.98	4399594.8	39°44'45.679"N	80°46'12.643"W	30.8	52.177	2.92
3171.4	5.63	43.54	3169.43	17.96	21.62	26.54	519690.66	4399594.8	39°44'45.706"N	80°46'12.614"W	34.24	50.837	5.14
3202.4	4.37	48.83	3200.32	19.17	23.5	28.48	519691.25	4399595.4	39°44'45.725"N	80°46'12.590"W	36.92	50.473	4.32
3234.4	3.4	55.34	3232.24	20.33	24.84	30.18	519691.77	4399595.8	39°44'45.738"N	80°46'12.568"W	39.09	50.539	3.33
3266.4	2.78	52.89	3264.2	21.32	25.85	31.58	519692.19	4399596.1	39°44'45.748"N	80°46'12.550"W	40.81	50.696	1.98
3297.4	2.1	50.5	3295.17	22.03	26.67	32.62	519692.51	4399596.4	39°44'45.756"N	80°46'12.537"W	42.13	50.732	2.22
3329.4	1.94	45.33	3327.15	22.58	27.42	33.45	519692.76	4399596.6	39°44'45.763"N	80°46'12.526"W	43.25	50.661	0.76
3361.4	1.82	39.42	3359.13	22.99	28.19	34.16	519692.98	4399596.8	39°44'45.771"N	80°46'12.517"W	44.29	50.468	0.71
3391.4	2	34.71	3389.11	23.29	28.99	34.76	519693.16	4399597.1	39°44'45.779"N	80°46'12.509"W	45.26	50.173	0.8
3454.4	1.82	36.72	3452.08	23.89	30.7	35.99	519693.53	4399597.6	39°44'45.795"N	80°46'12.493"W	47.3	49.536	0.3
3517.4	1.16	30.79	3515.06	24.32	32.05	36.91	519693.82	4399598	39°44'45.809"N	80°46'12.481"W	48.88	49.035	1.07
3581.4	0.88	24.44	3579.05	24.49	33.05	37.45	519693.98	4399598.3	39°44'45.819"N	80°46'12.475"W	49.95	48.568	0.47
3644.4	0.71	23.59	3642.04	24.64	33.82	37.86	519694.11	4399598.6	39°44'45.826"N	80°46'12.469"W	50.76	48.231	0.34
3708.4	0.67	23.07	3706.04	24.63	34.52	38.1	519694.18	4399598.8	39°44'45.833"N	80°46'12.466"W	51.41	47.824	0.57
3771.4	0.55	23.04	3769.03	24.31	35.16	37.98	519694.14	4399599	39°44'45.840"N	80°46'12.468"W	51.76	47.214	0.53
3834.4	0.95	11.65	3832.03	24.02	35.94	37.95	519694.14	4399599.2	39°44'45.847"N	80°46'12.468"W	52.27	46.562	0.99
3898.4	1.63	36.78	3896.01	24.23	37.21	38.61	519694.34	4399599.6	39°44'45.860"N	80°46'12.459"W	53.62	46.06	1.4
3961.4	2.06	40.61	3958.98	24.91	38.81	39.89	519694.73	4399600.1	39°44'45.876"N	80°46'12.443"W	55.66	45.788	0.66
4024.4	1.95	31.69	4021.94	25.56	40.58	41.19	519695.12	4399600.6	39°44'45.893"N	80°46'12.426"W	57.82	45.428	0.52
4087.4	2	38.54	4084.9	26.15	42.35	42.44	519695.5	4399601.2	39°44'45.911"N	80°46'12.410"W	59.96	45.059	0.38
4150.4	2.07	34.53	4147.86	26.82	44.15	43.77	519695.91	4399601.7	39°44'45.928"N	80°46'12.393"W	62.17	44.753	0.25
4213.4	1.71	28.21	4210.83	27.26	45.92	44.86	519696.24	4399602.2	39°44'45.946"N	80°46'12.379"W	64.19	44.333	0.66

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4276.4	1.49	21.48	4273.8	27.44	47.51	45.6	519696.47	4399602.7	39°44'45.961"N	80°46'12.370"W	65.85	43.83	0.46
4339.4	1.15	21.09	4336.79	27.5	48.86	46.13	519696.63	4399603.1	39°44'45.975"N	80°46'12.363"W	67.2	43.356	0.54
4402.4	1.13	16.93	4399.77	27.49	50.04	46.54	519696.75	4399603.5	39°44'45.986"N	80°46'12.358"W	68.34	42.923	0.14
4464.4	1.17	0.35	4461.76	27.27	51.26	46.72	519696.81	4399603.9	39°44'45.998"N	80°46'12.355"W	69.36	42.348	0.54
4526.4	1.27	356.83	4523.75	26.8	52.58	46.69	519696.8	4399604.3	39°44'46.011"N	80°46'12.356"W	70.32	41.603	0.2
4589.4	1.45	348.49	4586.73	26.13	54.06	46.49	519696.74	4399604.7	39°44'46.026"N	80°46'12.358"W	71.3	40.696	0.42
4652.4	0.99	352.1	4649.72	25.47	55.38	46.26	519696.66	4399605.1	39°44'46.039"N	80°46'12.361"W	72.16	39.871	0.74
4715.4	0.8	358.46	4712.71	25.07	56.36	46.17	519696.64	4399605.4	39°44'46.049"N	80°46'12.362"W	72.85	39.326	0.34
4778.4	0.99	1.15	4775.7	24.74	57.34	46.17	519696.64	4399605.7	39°44'46.059"N	80°46'12.362"W	73.62	38.84	0.31
4841.4	1.06	351.8	4838.69	24.31	58.46	46.1	519696.62	4399606.1	39°44'46.070"N	80°46'12.363"W	74.45	38.256	0.29
4903.4	0.67	9.46	4900.68	23.98	59.39	46.07	519696.61	4399606.3	39°44'46.079"N	80°46'12.363"W	75.16	37.806	0.75
4966.4	0.69	89.96	4963.68	24.28	59.75	46.51	519696.74	4399606.5	39°44'46.082"N	80°46'12.358"W	75.72	37.9	1.39
5029.4	1.05	100.03	5026.67	25.21	59.65	47.46	519697.03	4399606.4	39°44'46.081"N	80°46'12.345"W	76.23	38.508	0.62
5092.4	0.98	114.96	5089.66	26.31	59.32	48.52	519697.35	4399606.3	39°44'46.078"N	80°46'12.332"W	76.64	39.279	0.43
5155.4	0.79	119.97	5152.66	27.27	58.88	49.38	519697.62	4399606.2	39°44'46.074"N	80°46'12.321"W	76.85	39.988	0.33
5216.4	0.88	130.58	5213.65	28.12	58.36	50.1	519697.84	4399606	39°44'46.069"N	80°46'12.312"W	76.92	40.646	0.29
5279.4	0.77	111.42	5276.64	29	57.89	50.87	519698.07	4399605.9	39°44'46.064"N	80°46'12.302"W	77.06	41.302	0.47
5342.4	0.93	54.48	5339.64	29.71	58.04	51.68	519698.31	4399605.9	39°44'46.065"N	80°46'12.292"W	77.71	41.682	1.31
5405.4	1.24	48.23	5402.63	30.34	58.79	52.6	519698.6	4399606.2	39°44'46.073"N	80°46'12.280"W	78.88	41.821	0.53
5468.4	1.2	38.09	5465.61	30.89	59.76	53.52	519698.87	4399606.5	39°44'46.082"N	80°46'12.268"W	80.22	41.844	0.35
5531.4	0.85	45.62	5528.6	31.31	60.61	54.26	519699.1	4399606.7	39°44'46.091"N	80°46'12.258"W	81.34	41.836	0.59
5594.4	0.28	309.86	5591.6	31.37	61.03	54.47	519699.17	4399606.9	39°44'46.095"N	80°46'12.256"W	81.81	41.749	1.46
5657.4	0.09	312.53	5654.6	31.18	61.16	54.32	519699.12	4399606.9	39°44'46.096"N	80°46'12.258"W	81.8	41.607	0.3
5720.4	0.41	267.48	5717.6	30.93	61.19	54.06	519699.04	4399606.9	39°44'46.096"N	80°46'12.261"W	81.65	41.459	0.56
5783.4	0.2	221.23	5780.6	30.68	61.1	53.76	519698.95	4399606.9	39°44'46.095"N	80°46'12.265"W	81.38	41.345	0.49
5845.4	0.42	237.12	5842.6	30.6	60.98	53.63	519698.91	4399606.8	39°44'46.094"N	80°46'12.266"W	81.21	41.332	0.15
5907.4	0.19	210.88	5904.6	30.53	60.86	53.52	519698.88	4399606.8	39°44'46.093"N	80°46'12.268"W	81.04	41.333	0.16
5970.4	0.24	231.24	5967.6	30.44	60.68	53.37	519698.83	4399606.7	39°44'46.091"N	80°46'12.270"W	80.81	41.331	0.14
6031.4	0.25	196.83	6028.59	30.38	60.4	53.21	519698.78	4399606.7	39°44'46.089"N	80°46'12.272"W	80.49	41.378	0.4
6094.4	0.44	227.73	6091.59	30.28	60.03	52.96	519698.71	4399606.5	39°44'46.085"N	80°46'12.275"W	80.05	41.424	0.36
6157.4	0.47	212.63	6126.19	30.18	59.82	52.79	519698.66	4399606.5	39°44'46.083"N	80°46'12.277"W	79.78	41.429	0.36
6198.4	0.37	177.03	6195.19	30.2	59.36	52.65	519698.61	4399606.3	39°44'46.078"N	80°46'12.279"W	79.34	41.573	0.4

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6293	0.6	187.85	6290.19	30.41	58.56	52.6	519698.6	4399606.1	39°44'46.070"N	80°46'12.280"W	78.71	41.931	0.26
6389	0.7	187.68	6386.18	30.63	57.48	52.45	519698.55	4399605.8	39°44'46.060"N	80°46'12.282"W	77.81	42.381	0.1
6484	0.99	189	6481.17	30.89	56.09	52.24	519698.49	4399605.3	39°44'46.046"N	80°46'12.284"W	76.65	42.965	0.31
6579	1.22	198.03	6576.15	31.06	54.32	51.8	519698.35	4399604.8	39°44'46.029"N	80°46'12.290"W	75.06	43.641	0.3
6675	1.44	196	6672.13	31.14	52.19	51.15	519698.16	4399604.2	39°44'46.008"N	80°46'12.298"W	73.08	44.426	0.23
6770	1.74	193.75	6767.09	31.35	49.64	50.48	519697.95	4399603.4	39°44'45.982"N	80°46'12.307"W	70.8	45.481	0.32
6865	2.31	191.84	6862.03	31.73	46.37	49.75	519697.73	4399602.4	39°44'45.950"N	80°46'12.317"W	68	47.014	0.6
6958	2.88	192.64	6954.93	32.24	42.25	48.85	519697.45	4399601.1	39°44'45.909"N	80°46'12.328"W	64.59	49.143	0.61
7053	3.28	187.88	7049.8	33.04	37.23	47.96	519697.18	4399599.6	39°44'45.860"N	80°46'12.340"W	60.71	52.176	0.5
7147	3.56	187.49	7143.63	34.16	31.67	47.21	519696.95	4399597.9	39°44'45.805"N	80°46'12.350"W	56.85	56.14	0.3
7242	3.25	187.33	7238.46	35.32	26.08	46.48	519696.73	4399596.2	39°44'45.750"N	80°46'12.359"W	53.29	60.704	0.33
7338	2.99	184.59	7334.32	36.51	20.88	45.93	519696.56	4399594.6	39°44'45.698"N	80°46'12.366"W	50.46	65.55	0.31
7433	2.53	180.56	7429.21	37.8	16.32	45.71	519696.5	4399593.2	39°44'45.653"N	80°46'12.369"W	48.54	70.356	0.53
7525	2.26	171.42	7521.13	39.3	12.49	45.96	519696.57	4399592.1	39°44'45.615"N	80°46'12.366"W	47.63	74.794	0.51
7620	2.78	172.92	7616.04	41.19	8.35	46.53	519696.75	4399590.8	39°44'45.574"N	80°46'12.359"W	47.27	79.82	0.55
7715	3.1	179.63	7710.91	43.07	3.5	46.83	519696.84	4399589.3	39°44'45.526"N	80°46'12.355"W	46.96	85.726	0.49
7810	2.76	181.17	7805.79	44.64	-1.36	46.8	519696.83	4399587.8	39°44'45.478"N	80°46'12.356"W	46.82	91.66	0.37
7904	2.85	176.9	7899.68	46.23	-5.95	46.88	519696.85	4399586.4	39°44'45.433"N	80°46'12.355"W	47.25	97.237	0.24
7998	2.99	173.58	7993.55	48.17	-10.72	47.28	519696.98	4399585	39°44'45.386"N	80°46'12.350"W	48.48	102.778	0.23
8094	2.66	178.89	8089.44	50.03	-15.44	47.6	519697.07	4399583.6	39°44'45.339"N	80°46'12.346"W	50.04	107.969	0.44
8189	2.8	176.86	8184.33	51.68	-19.96	47.77	519697.13	4399582.2	39°44'45.295"N	80°46'12.344"W	51.77	112.675	0.18
8284	2.73	179.4	8279.22	53.32	-24.54	47.92	519697.17	4399580.8	39°44'45.249"N	80°46'12.342"W	53.84	117.114	0.15
8379	2.84	182.16	8374.11	54.78	-29.15	47.86	519697.15	4399579.4	39°44'45.204"N	80°46'12.343"W	56.04	121.348	0.18
8474	3.15	182.91	8468.98	56.2	-34.11	47.63	519697.09	4399577.9	39°44'45.155"N	80°46'12.346"W	58.59	125.606	0.33
8570	3.04	180.71	8564.84	57.75	-39.29	47.47	519697.03	4399576.3	39°44'45.104"N	80°46'12.349"W	61.62	129.614	0.17
8664	3.19	182.21	8658.7	59.3	-44.4	47.34	519696.99	4399574.7	39°44'45.053"N	80°46'12.350"W	64.9	133.163	0.18
8758	2.65	186.48	8752.57	60.55	-49.17	46.99	519696.89	4399573.3	39°44'45.006"N	80°46'12.355"W	68.01	136.297	0.62
8854	2.96	190.34	8848.48	61.34	-53.32	46.39	519696.7	4399572	39°44'44.965"N	80°46'12.363"W	70.67	138.977	0.35
8947	2.34	178.81	8941.41	62.3	-57.1	46.08	519696.61	4399570.9	39°44'44.928"N	80°46'12.367"W	73.38	141.095	0.51
9042	1.68	196.08	9036.35	63.05	-60.38	45.74	519696.51	4399569.9	39°44'44.895"N	80°46'12.371"W	75.74	142.856	0.94
9136	1.4	188.02	9130.31	63.35	-62.84	45.19	519696.34	4399569.1	39°44'44.871"N	80°46'12.378"W	77.4	144.275	0.38
9245	1	192.53	9239.29	63.71	-65.08	44.8	519696.22	4399568.4	39°44'44.849"N	80°46'12.384"W	79.01	145.458	0.38

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9322	1.23	172.54	9316.27	64.16	-66.56	44.76	519696.21	4399568	39°44'44.834"N	80°46'12.384"W	80.21	146.078	0.58
9417	1.33	174.07	9411.25	65.09	-68.67	45.01	519696.28	4399567.3	39°44'44.813"N	80°46'12.381"W	82.1	146.756	0.11
9511	1.18	165.65	9505.23	66.09	-70.69	45.36	519696.39	4399566.7	39°44'44.793"N	80°46'12.377"W	83.99	147.311	0.25
9605	1.24	157.54	9599.21	67.3	-72.57	45.99	519696.58	4399566.1	39°44'44.775"N	80°46'12.369"W	85.91	147.635	0.19
9700	1.13	147.12	9694.19	68.72	-74.31	46.89	519696.86	4399565.6	39°44'44.758"N	80°46'12.357"W	87.86	147.745	0.25
9795	0.9	137.19	9789.17	70.12	-75.64	47.91	519697.17	4399565.2	39°44'44.744"N	80°46'12.344"W	89.53	147.651	0.3
9890	0.93	119.07	9884.16	71.54	-76.56	49.09	519697.53	4399564.9	39°44'44.735"N	80°46'12.329"W	90.95	147.333	0.3
9984	0.77	120.24	9978.15	72.91	-77.25	50.3	519697.9	4399564.7	39°44'44.728"N	80°46'12.314"W	92.18	146.93	0.17
10078	0.5	123.29	10072.14	73.93	-77.79	51.19	519698.17	4399564.6	39°44'44.723"N	80°46'12.302"W	93.12	146.654	0.29
10173	0.18	214.57	10167.14	74.29	-78.14	51.45	519698.25	4399564.4	39°44'44.719"N	80°46'12.299"W	93.56	146.638	0.56
10266	0.62	272.68	10260.14	73.77	-78.24	50.87	519698.07	4399564.4	39°44'44.719"N	80°46'12.306"W	93.32	146.971	0.59
10337	0.79	278.47	10331.14	72.92	-78.15	50	519697.8	4399564.4	39°44'44.719"N	80°46'12.317"W	92.78	147.39	0.26
10446	1.84	325.65	10440.11	70.77	-76.59	48.27	519697.28	4399564.9	39°44'44.735"N	80°46'12.340"W	90.53	147.782	1.31
10498	6.81	2.24	10491.95	69.2	-72.82	47.92	519697.17	4399566.1	39°44'44.772"N	80°46'12.344"W	87.17	146.655	10.47
10541	11.49	5.03	10534.39	67.41	-66	48.39	519697.31	4399568.1	39°44'44.840"N	80°46'12.338"W	81.84	143.752	10.93
10590	13.12	5.29	10582.26	64.88	-55.6	49.33	519697.6	4399571.3	39°44'44.942"N	80°46'12.325"W	74.33	138.42	3.33
10636	15.55	15.09	10626.84	63.18	-44.45	51.42	519698.24	4399574.7	39°44'45.052"N	80°46'12.298"W	67.97	130.841	7.45
10688	18.36	18.02	10676.57	62.51	-29.93	55.77	519699.56	4399579.1	39°44'45.196"N	80°46'12.242"W	63.29	118.22	5.65
10731	19.2	17.05	10717.28	62.1	-16.73	59.94	519700.83	4399583.2	39°44'45.326"N	80°46'12.188"W	62.23	105.594	2.08
10782	19.83	17.14	10765.35	61.48	-0.44	64.95	519702.36	4399588.1	39°44'45.487"N	80°46'12.124"W	64.95	90.392	1.24
10826	21.27	18.88	10806.55	61.17	14.24	69.73	519703.82	4399592.6	39°44'45.632"N	80°46'12.062"W	71.17	78.458	3.55
10875	25.84	20.21	10851.46	61.3	32.68	76.3	519705.82	4399598.2	39°44'45.814"N	80°46'11.977"W	83	66.813	9.39
10921	30.95	20.74	10891.91	61.8	53.16	83.95	519708.15	4399604.5	39°44'46.016"N	80°46'11.878"W	99.37	57.656	11.12
10970	35.68	17.41	10932.85	61.69	78.6	92.7	519710.81	4399612.2	39°44'46.267"N	80°46'11.766"W	121.53	49.705	10.35
11017	39.73	14.06	10970.03	59.92	106.26	100.45	519713.18	4399620.6	39°44'46.541"N	80°46'11.666"W	146.23	43.39	9.65
11065	45.17	14.22	11005.43	57.06	137.67	108.36	519715.59	4399630.2	39°44'46.851"N	80°46'11.563"W	175.2	38.208	11.34
11112	50.71	16.55	11036.91	54.77	171.28	117.65	519718.42	4399640.4	39°44'47.183"N	80°46'11.443"W	207.8	34.483	12.35
11160	56.57	19.01	11065.36	53.85	208.06	129.47	519722.02	4399651.6	39°44'47.546"N	80°46'11.291"W	245.06	31.893	12.89
11207	61.94	20.09	11089.38	54.1	246.11	143	519726.14	4399663.2	39°44'47.922"N	80°46'11.116"W	284.64	30.158	11.59
11255	66.85	20.7	11110.11	55.01	286.67	158.08	519730.74	4399675.6	39°44'48.322"N	80°46'10.922"W	327.37	28.874	10.29
11302	67.43	20.08	11128.37	55.91	327.26	173.17	519735.33	4399688	39°44'48.723"N	80°46'10.727"W	370.25	27.885	1.73
11350	67.39	20.57	11146.81	56.78	368.82	188.56	519740.02	4399700.6	39°44'49.133"N	80°46'10.529"W	414.23	27.079	0.95

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11397	71.88	20.91	11163.16	57.97	410.02	204.16	519744.77	4399713.2	39°44'49.540"N	80°46'10.328"W	458.03	26.471	9.58
11446	75.8	20.84	11176.8	59.34	453.98	220.93	519749.88	4399726.6	39°44'49.974"N	80°46'10.112"W	504.89	25.95	8
11492	75.76	24.34	11188.1	61.98	495.14	238.06	519755.1	4399739.1	39°44'50.380"N	80°46'09.891"W	549.4	25.677	7.38
11540	75.83	29.99	11199.89	68.42	536.53	259.29	519761.57	4399751.7	39°44'50.789"N	80°46'09.618"W	595.9	25.794	11.41
11587	75.75	35.25	11211.43	78.99	574.89	283.84	519769.05	4399763.4	39°44'51.167"N	80°46'09.302"W	641.14	26.277	10.85
11635	75.7	38.63	11223.27	93.16	612.06	311.79	519777.57	4399774.7	39°44'51.534"N	80°46'08.943"W	686.9	26.995	6.82
11682	75.79	41.43	11234.85	109.36	646.94	341.09	519786.49	4399785.4	39°44'51.878"N	80°46'08.567"W	731.35	27.8	5.78
11729	75.73	45.77	11246.41	128.18	679.92	372.5	519796.06	4399795.4	39°44'52.203"N	80°46'08.164"W	775.27	28.716	8.95
11777	76.56	50.14	11257.91	150.59	711.12	407.1	519806.61	4399804.9	39°44'52.510"N	80°46'07.720"W	819.4	29.79	9.01
11825	76.39	53.54	11269.14	175.76	739.95	443.79	519817.78	4399813.7	39°44'52.794"N	80°46'07.249"W	862.83	30.953	6.9
11872	76.62	56.12	11280.11	202.38	766.27	481.14	519829.16	4399821.7	39°44'53.054"N	80°46'06.770"W	904.8	32.125	5.36
11920	78.57	59.37	11290.43	231.59	791.28	520.78	519841.24	4399829.3	39°44'53.300"N	80°46'06.262"W	947.28	33.351	7.76
11967	78.6	62.3	11299.73	262.19	813.73	561.01	519853.5	4399836.2	39°44'53.521"N	80°46'05.746"W	988.37	34.584	6.11
12015	79.8	65.21	11308.73	295.27	834.57	603.29	519866.38	4399842.5	39°44'53.726"N	80°46'05.204"W	1029.79	35.862	6.46
12062	80.17	67.42	11316.9	329.18	853.16	645.68	519879.3	4399848.2	39°44'53.908"N	80°46'04.661"W	1069.95	37.118	4.7
12110	80.66	69.81	11324.89	365.13	870.42	689.74	519892.72	4399853.5	39°44'54.078"N	80°46'04.096"W	1110.58	38.394	5.01
12157	82.41	75.32	11331.82	402.42	884.34	734.08	519906.23	4399857.7	39°44'54.214"N	80°46'03.528"W	1149.31	39.696	12.18
12204	83.49	81.85	11337.59	442.54	893.56	779.77	519920.15	4399860.5	39°44'54.304"N	80°46'02.942"W	1185.96	41.11	13.98
12253	84.82	88.5	11342.59	487.03	897.66	828.32	519934.94	4399861.8	39°44'54.343"N	80°46'02.321"W	1221.43	42.699	13.77
12298	84.67	94.7	11346.71	529.73	896.41	873.09	519948.58	4399861.4	39°44'54.330"N	80°46'01.748"W	1251.33	44.245	13.72
12347	84.73	99.09	11351.24	577.38	890.55	921.51	519963.34	4399859.6	39°44'54.271"N	80°46'01.128"W	1281.51	45.979	8.92
12442	86.43	102.79	11358.56	671.1	872.57	1014.49	519991.67	4399854.1	39°44'54.091"N	80°45'59.938"W	1338.12	49.301	4.28
12496	88.65	105.94	11360.88	724.85	859.19	1066.74	520007.59	4399850	39°44'53.957"N	80°45'59.270"W	1369.73	51.151	7.13
12537	88.28	107.26	11361.98	765.79	847.48	1106.02	520019.55	4399846.5	39°44'53.840"N	80°45'58.767"W	1393.38	52.539	3.34
12629	88.21	108.09	11364.8	857.71	819.56	1193.63	520046.25	4399838	39°44'53.562"N	80°45'57.646"W	1447.91	55.526	0.9
12724	89.29	111.29	11366.87	952.67	787.57	1283.05	520073.49	4399828.2	39°44'53.244"N	80°45'56.503"W	1505.48	58.457	3.55
12819	88.31	112.25	11368.86	1047.56	752.34	1371.25	520100.36	4399817.5	39°44'52.893"N	80°45'55.375"W	1564.08	61.248	1.44
12914	87.91	113.54	11371.99	1142.3	715.4	1458.72	520127.01	4399806.2	39°44'52.526"N	80°45'54.256"W	1624.7	63.875	1.42
13009	87.91	110.39	11375.46	1237.12	679.9	1546.75	520153.84	4399795.4	39°44'52.173"N	80°45'53.130"W	1689.58	66.271	3.31
13103	87.94	105.37	11378.87	1331	651.06	1636.12	520181.06	4399786.6	39°44'51.885"N	80°45'51.987"W	1760.9	68.301	5.34
13197	87.94	106.51	11382.25	1424.79	625.27	1726.45	520208.58	4399778.8	39°44'51.628"N	80°45'50.831"W	1836.19	70.091	1.21
13292	88.58	107.36	11385.13	1519.67	597.61	1817.29	520236.26	4399770.3	39°44'51.352"N	80°45'49.669"W	1913.02	71.797	1.12

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13387	88.95	108.52	11387.18	1614.62	568.35	1907.64	520263.79	4399761.4	39°44'51.061"N	80°45'48.514"W	1990.51	73.409	1.28
13483	88.92	110.93	11388.96	1710.59	535.96	1997.99	520291.32	4399751.6	39°44'50.738"N	80°45'47.358"W	2068.63	74.984	2.51
13577	89.42	110.2	11390.32	1804.56	502.94	2085.99	520318.13	4399741.5	39°44'50.410"N	80°45'46.233"W	2145.76	76.444	0.94
13672	89.57	110.81	11391.16	1899.53	469.67	2174.97	520345.24	4399731.4	39°44'50.079"N	80°45'45.095"W	2225.1	77.814	0.66
13767	89.42	110.71	11392	1994.49	436	2263.79	520372.3	4399721.1	39°44'49.744"N	80°45'43.958"W	2305.4	79.099	0.19
13862	88.89	114.62	11393.4	2089.29	399.4	2351.43	520399	4399709.9	39°44'49.380"N	80°45'42.838"W	2385.11	80.36	4.15
13956	87.85	111.39	11396.07	2183.03	362.68	2437.91	520425.35	4399698.8	39°44'49.014"N	80°45'41.732"W	2464.74	81.538	3.61
14051	87.84	109.84	11399.65	2277.93	329.26	2526.76	520452.42	4399688.6	39°44'48.682"N	80°45'40.596"W	2548.12	82.576	1.63
14147	87.91	109.54	11403.21	2373.86	296.94	2617.08	520479.94	4399678.7	39°44'48.360"N	80°45'39.440"W	2633.87	83.527	0.32
14242	88.31	107.74	11406.34	2468.8	266.59	2707.05	520507.35	4399669.5	39°44'48.058"N	80°45'38.290"W	2720.14	84.376	1.94
14336	88.37	108.08	11409.06	2562.73	237.7	2796.45	520534.59	4399660.7	39°44'47.770"N	80°45'37.146"W	2806.54	85.142	0.37
14431	88.37	107.86	11411.77	2657.67	208.4	2886.78	520562.12	4399651.8	39°44'47.478"N	80°45'35.990"W	2894.3	85.871	0.23
14526	88.86	109.77	11414.06	2752.64	177.77	2976.68	520589.5	4399642.4	39°44'47.173"N	80°45'34.841"W	2981.98	86.582	2.08
14621	88.92	108.99	11415.9	2847.62	146.25	3066.28	520616.8	4399632.8	39°44'46.859"N	80°45'33.695"W	3069.76	87.269	0.82
14716	88.92	107.43	11417.69	2942.59	116.57	3156.5	520644.29	4399623.8	39°44'46.563"N	80°45'32.541"W	3158.65	87.885	1.64
14811	88.89	109.36	11419.51	3037.56	86.6	3246.62	520671.75	4399614.6	39°44'46.265"N	80°45'31.388"W	3247.78	88.472	2.03
14907	88.89	108.2	11421.37	3133.53	55.7	3337.49	520699.44	4399605.2	39°44'45.957"N	80°45'30.226"W	3337.96	89.044	1.21
15001	88.89	106.07	11423.19	3227.45	28.01	3427.3	520726.8	4399596.8	39°44'45.681"N	80°45'29.077"W	3427.41	89.532	2.27
15092	88.92	108.38	11424.93	3318.37	1.07	3514.2	520753.27	4399588.6	39°44'45.412"N	80°45'27.965"W	3514.2	89.983	2.54
15187	88.46	109.56	11427.1	3413.34	-29.8	3604.01	520780.64	4399579.2	39°44'45.105"N	80°45'26.816"W	3604.14	90.474	1.33
15282	88.4	108.78	11429.7	3508.31	-60.99	3693.71	520807.97	4399569.7	39°44'44.794"N	80°45'25.669"W	3694.21	90.946	0.82
15377	88.37	108.9	11432.38	3603.27	-91.65	3783.58	520835.35	4399560.3	39°44'44.489"N	80°45'24.520"W	3784.69	91.388	0.13
15472	89.11	109.4	11434.47	3698.24	-122.81	3873.3	520862.69	4399550.8	39°44'44.178"N	80°45'23.372"W	3875.25	91.816	0.94
15567	89.2	107.16	11435.87	3793.22	-152.6	3963.49	520890.17	4399541.8	39°44'43.881"N	80°45'22.219"W	3966.43	92.205	2.36
15663	89.14	108.58	11437.26	3889.18	-182.05	4054.85	520918	4399532.8	39°44'43.588"N	80°45'21.050"W	4058.94	92.571	1.48
15758	89.14	106.95	11438.69	3984.13	-211.04	4145.31	520945.56	4399524	39°44'43.299"N	80°45'19.893"W	4150.68	92.914	1.72
15852	89.11	108.18	11440.12	4078.08	-239.4	4234.91	520972.86	4399515.3	39°44'43.016"N	80°45'18.747"W	4241.67	93.235	1.31
15948	88.52	110.69	11442.11	4174.05	-271.33	4325.42	521000.44	4399505.6	39°44'42.698"N	80°45'17.589"W	4333.92	93.589	2.69
16042	87.97	111.12	11444.99	4267.97	-304.86	4413.19	521027.18	4399495.4	39°44'42.365"N	80°45'16.467"W	4423.7	93.952	0.74
16138	88.4	111.59	11448.03	4363.85	-339.8	4502.55	521054.41	4399484.7	39°44'42.017"N	80°45'15.324"W	4515.35	94.316	0.66
16232	88.43	107.73	11450.63	4457.79	-371.41	4591.02	521081.36	4399475.1	39°44'41.702"N	80°45'14.193"W	4606.02	94.625	4.1
16328	88.37	106.53	11453.31	4553.69	-399.67	4682.72	521109.3	4399466.5	39°44'41.420"N	80°45'13.020"W	4699.75	94.878	1.25

06/12/2015

WELLPATH DATA † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [M]	Grid North [M]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]
16422	88.34	110.48	11456.01	4647.63	-429.49	4771.81	521136.44	4399457.4	39°44'41.123"N	80°45'11.880"W	4791.1	95.143	4.2
16517	88.98	110.3	11458.23	4742.58	-462.58	4860.83	521163.57	4399447.3	39°44'40.794"N	80°45'10.742"W	4882.79	95.436	0.7
16612	89.05	109.14	11459.86	4837.56	-494.63	4950.25	521190.81	4399437.6	39°44'40.475"N	80°45'09.598"W	4974.9	95.706	1.22
16707	89.02	111.42	11461.46	4932.52	-527.55	5039.34	521217.96	4399427.5	39°44'40.147"N	80°45'08.459"W	5066.88	95.976	2.4
16779	89.02	109.73	11462.7	5004.49	-552.85	5106.73	521238.49	4399419.8	39°44'39.895"N	80°45'07.597"W	5136.57	96.179	2.35
16804	89.02	109.73	11463.12	5029.49	-561.28	5130.26	521245.66	4399417.2	39°44'39.811"N	80°45'07.296"W	5160.87	96.244	0



GASTAR EXPLORATION USA, INC.

Location: Marshall County, WV
 Field: Marshall
 Facility: Simms Unit

Slot: Slot #5
 Well: Simms 5H
 Wellbore: Simms 5H (PWB)



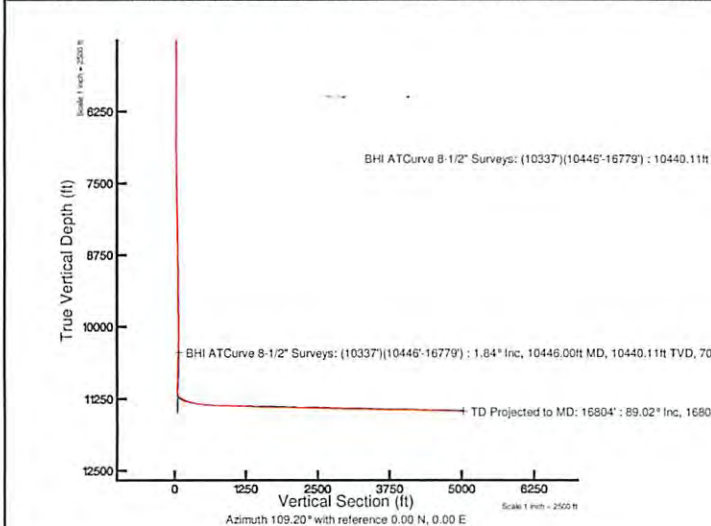
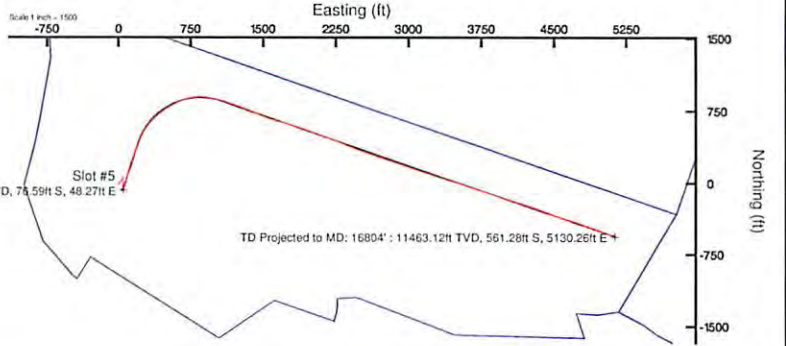
Location Information					
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Simms Unit		1704965.660	14434318.030	39°44'45.516"N	80°46'13.291"W
Slot #5	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Longitude
Slot #5	-2.23	26.25	1704991.900	14434315.800	39°44'45.493"N 80°46'12.955"W
Nomac 323 (RT) to Mud line (At Slot: Slot #5)					1249.4ft
Mean Sea Level to Mud line (At Slot: Slot #5)					Dft
Nomac 323 (RT) to Mean Sea Level					1249.4ft

Well Data			
Slot	Well	Wellbore	Wellpath
Slot #5	Simms 5H	Simms 5H (AWB)	Simms 5H (AWP) Proj: 16804
Slot #5	Simms 5H	Simms 5H (AWB)	Simms 5H (Pilot Hole) Proj: 11492
Slot #5	Simms 5H	Simms 5H (PWB)	Simms 5H (PWP) Rev-N.0

Plot reference wellpath is Simms 5H (PWP) Rev-N.0
 True vertical depths are referenced to Nomac 323 (RT)
 Measured depths are referenced to Nomac 323 (RT)
 Nomac 323 (RT) to Mean Sea Level: 1249.4 feet
 Mean Sea Level to Mud line (At Slot: Slot #5): 0 feet
 Coordinates are in feet referenced to Slot

Targets							
Name	MD (ft)	TVD (ft)	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude
Simms 5H XP Plat	11127.40	1087.23	374.55	1705368.30	1435402.70	39°44'56.227"N	80°46'08.086"W
Simms 5H LP Row-4	12537.69	11302.24	848.56	1068.91	1706060.26	39°44'53.817"N	80°45'58.986"W
Simms 5H PWB Row-4	16818.50	11405.73	858.92	5130.64	1710120.50	39°44'39.834"N	80°45'07.291"W

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	10337.00	0.790	278.470	10331.14	-78.15	50.00	0.26	72.92
Csg Pt.	10400.00	0.790	278.470	10394.13	-78.02	49.14	0.00	72.05
KOP	10500.00	0.790	278.470	10494.12	-77.82	47.78	0.00	70.71
End of 3D Arc	11429.29	75.940	18.128	11174.64	428.08	205.57	8.19	53.36
Landing Pt.	12537.69	88.750	109.200	11362.34	848.56	1088.91	8.19	749.28
BHL	16818.50	88.750	109.200	11455.73	-558.92	5130.64	0.00	5029.05



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