



Actual Wellpath Report

MWD Surveys (5761')(5766'-12702')Proj:12728'
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REFERENCE WELLPATH IDENTIFICATION

Operator	GASTAR EXPLORATION USA, INC.	Slot	Slot #6
Area	Marshall County, WV	Well	Goudy 6H
Field	Marshall	Wellbore	Goudy 6H (AWB)
Facility	Goudy		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 17 North, US feet	Software System	WellArchitect® 3.0.3
North Reference	Grid	User	Thomsuze
Scale	0.999603	Report Generated	19/Mar/2013 at 14:54
Convergence at slot	0.11° East	Database/Source file	WA_Eastern_US/Goudy_6H_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	19.61	3.70	1688563.80	14430962.60	39°44'12.704"N	80°49'43.438"W
Facility Reference Pt			1688560.10	14430943.00	39°44'12.511"N	80°49'43.486"W
Field Reference Pt			0.00	0.00	0°00'00.000"	85°29'19.478"W

WELLPATH DATUM

Calculation method	Minimum curvature	Precision 823 (RT) to Facility Vertical Datum	13.00ft
Horizontal Reference Pt	Slot	Precision 823 (RT) to Mean Sea Level	1251.00ft
Vertical Reference Pt	Precision 823 (RT)	Precision 823 (RT) to Mud Line at Slot (Slot #6)	13.00ft
MD Reference Pt	Precision 823 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	114.80°

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WELLPATH DATA (245 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [%/100ft]	Build Rate [%/100ft]	Turn Rate [%/100ft]
0.00†	0.000	278.020	0.00	0.00	0.00	0.00	1688563.80	14430962.60	39°44'12.704"N	80°49'43.438"W	0.00	0.000	0.00	0.00	0.00
13.00	0.000	278.020	13.00	0.00	0.00	0.00	1688563.80	14430962.60	39°44'12.704"N	80°49'43.438"W	0.00	0.000	0.00	0.00	0.00
103.00	0.300	278.020	103.00	-0.23	0.03	-0.23	1688563.57	14430962.63	39°44'12.705"N	80°49'43.441"W	0.24	278.020	0.33	0.33	0.00
203.00	0.190	261.360	203.00	-0.61	0.04	-0.66	1688563.14	14430962.64	39°44'12.705"N	80°49'43.447"W	0.66	273.877	0.13	-0.11	-16.66
303.00	0.080	163.530	303.00	-0.71	-0.05	-0.80	1688563.00	14430962.55	39°44'12.704"N	80°49'43.449"W	0.80	266.614	0.22	-0.11	-97.83
403.00	0.040	201.920	403.00	-0.66	-0.15	-0.79	1688563.01	14430962.45	39°44'12.703"N	80°49'43.449"W	0.81	259.530	0.05	-0.04	38.39
503.00	0.100	169.050	503.00	-0.61	-0.26	-0.79	1688563.01	14430962.34	39°44'12.702"N	80°49'43.448"W	0.83	251.479	0.07	0.06	-32.87
603.00	0.040	357.630	603.00	-0.57	-0.32	-0.78	1688563.03	14430962.28	39°44'12.701"N	80°49'43.448"W	0.84	247.849	0.14	-0.06	-171.42
703.00	0.100	324.280	703.00	-0.66	-0.21	-0.83	1688562.97	14430962.39	39°44'12.702"N	80°49'43.449"W	0.85	255.772	0.07	0.06	-33.35
803.00	0.130	225.310	803.00	-0.78	-0.22	-0.96	1688562.84	14430962.38	39°44'12.702"N	80°49'43.451"W	0.98	257.152	0.18	0.03	-98.97
903.00	0.160	232.900	903.00	-0.88	-0.38	-1.15	1688562.65	14430962.22	39°44'12.701"N	80°49'43.453"W	1.21	251.608	0.04	0.03	7.59
1003.00	0.120	291.210	1003.00	-1.05	-0.43	-1.36	1688562.44	14430962.17	39°44'12.700"N	80°49'43.456"W	1.43	252.490	0.14	-0.04	58.31
1103.00	0.210	292.810	1103.00	-1.34	-0.32	-1.63	1688562.17	14430962.28	39°44'12.701"N	80°49'43.459"W	1.66	258.865	0.09	0.09	1.60
1203.00	0.060	257.400	1203.00	-1.57	-0.26	-1.85	1688561.95	14430962.34	39°44'12.702"N	80°49'43.462"W	1.87	261.969	0.16	-0.15	-35.41
1303.00	0.230	36.770	1303.00	-1.57	-0.11	-1.78	1688562.02	14430962.49	39°44'12.703"N	80°49'43.461"W	1.78	266.421	0.28	0.17	139.37
1403.00	0.380	20.730	1403.00	-1.55	0.36	-1.54	1688562.26	14430962.96	39°44'12.708"N	80°49'43.458"W	1.58	283.146	0.17	0.15	-16.04
1503.00	0.490	44.540	1502.99	-1.43	0.97	-1.12	1688562.68	14430963.57	39°44'12.714"N	80°49'43.453"W	1.49	310.958	0.21	0.11	23.81
1603.00	0.760	47.680	1602.99	-1.03	1.73	-0.33	1688563.47	14430964.33	39°44'12.721"N	80°49'43.443"W	1.76	349.093	0.27	0.27	3.14
1703.00	0.770	47.890	1702.98	-0.50	2.62	0.66	1688564.46	14430965.22	39°44'12.730"N	80°49'43.430"W	2.70	14.047	0.01	0.01	0.21
1803.00	0.640	56.720	1802.97	0.05	3.38	1.62	1688565.42	14430965.98	39°44'12.738"N	80°49'43.417"W	3.75	25.630	0.17	-0.13	8.83
1903.00	0.730	73.200	1902.96	0.83	3.87	2.70	1688566.50	14430966.47	39°44'12.743"N	80°49'43.404"W	4.72	34.882	0.22	0.09	16.48
2003.00	0.770	80.840	2002.95	1.86	4.16	3.97	1688567.77	14430966.76	39°44'12.745"N	80°49'43.387"W	5.75	43.661	0.11	0.04	7.64
2103.00	0.710	78.650	2102.95	2.92	4.39	5.24	1688569.04	14430966.99	39°44'12.748"N	80°49'43.371"W	6.84	50.053	0.07	-0.06	-2.19
2203.00	0.680	78.640	2202.94	3.90	4.63	6.43	1688570.23	14430967.23	39°44'12.750"N	80°49'43.356"W	7.92	54.254	0.03	-0.03	-0.01
2303.00	0.940	75.120	2302.93	5.01	4.96	7.81	1688571.60	14430967.55	39°44'12.753"N	80°49'43.338"W	9.25	57.584	0.26	0.26	-3.52
2403.00	0.950	71.360	2402.91	6.24	5.43	9.38	1688573.18	14430968.03	39°44'12.758"N	80°49'43.318"W	10.84	59.934	0.06	0.01	-3.76
2503.00	0.840	56.060	2502.90	7.22	6.11	10.78	1688574.57	14430968.70	39°44'12.765"N	80°49'43.300"W	12.39	60.464	0.26	-0.11	-15.30
2600.00	0.570	38.080	2599.90	7.70	6.88	11.67	1688575.46	14430969.48	39°44'12.772"N	80°49'43.289"W	13.55	59.456	0.36	-0.28	-18.54
2638.00	0.570	35.940	2637.89	7.78	7.19	11.89	1688575.69	14430969.78	39°44'12.775"N	80°49'43.286"W	13.90	58.861	0.06	0.00	-5.63
2701.00	0.300	36.340	2700.89	7.88	7.57	12.17	1688575.97	14430970.17	39°44'12.779"N	80°49'43.282"W	14.34	58.121	0.43	-0.43	0.63

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Area	Marshall County, WV	Well	Goudy 6H
Field	Marshall	Wellbore	Goudy 6H (AWB)
Facility	Goudy		

WELLPATH DATA (245 stations)																
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]	
2765.00	0.400	53.870	2764.89	8.02	7.84	12.45	1688576.25	14430970.44	39°44'12.782"N	80°49'43.279"W	14.72	57.814	0.23	0.16	27.39	
2828.00	0.250	76.820	2827.89	8.23	8.00	12.77	1688576.56	14430970.60	39°44'12.783"N	80°49'43.275"W	15.07	57.927	0.31	-0.24	36.43	
2891.00	0.170	89.480	2890.89	8.43	8.03	12.99	1688576.79	14430970.63	39°44'12.784"N	80°49'43.272"W	15.28	58.277	0.15	-0.13	20.10	
2954.00	0.130	40.270	2953.89	8.53	8.09	13.13	1688576.93	14430970.68	39°44'12.784"N	80°49'43.270"W	15.42	58.375	0.21	-0.06	-78.11	
3017.00	0.170	85.190	3016.89	8.63	8.15	13.27	1688577.07	14430970.75	39°44'12.785"N	80°49'43.268"W	15.57	58.449	0.19	0.06	71.30	
3080.00	0.150	88.900	3079.89	8.79	8.16	13.45	1688577.24	14430970.76	39°44'12.785"N	80°49'43.266"W	15.73	58.754	0.04	-0.03	5.89	
3143.00	0.150	22.440	3142.89	8.86	8.24	13.56	1688577.36	14430970.83	39°44'12.786"N	80°49'43.265"W	15.87	58.727	0.26	0.00	-105.49	
3206.00	0.160	76.270	3205.89	8.92	8.33	13.68	1688577.47	14430970.93	39°44'12.787"N	80°49'43.263"W	16.02	58.647	0.22	0.02	85.44	
3269.00	0.180	64.660	3268.89	9.05	8.40	13.85	1688577.65	14430970.99	39°44'12.787"N	80°49'43.261"W	16.20	58.778	0.06	0.03	-18.43	
3332.00	0.140	139.860	3331.89	9.19	8.38	13.99	1688577.79	14430970.98	39°44'12.787"N	80°49'43.259"W	16.31	59.081	0.31	-0.06	119.37	
3395.00	0.030	218.400	3394.89	9.25	8.31	14.03	1688577.83	14430970.91	39°44'12.786"N	80°49'43.259"W	16.31	59.368	0.22	-0.17	124.67	
3427.00	0.030	4.890	3426.89	9.25	8.31	14.03	1688577.82	14430970.91	39°44'12.786"N	80°49'43.259"W	16.30	59.355	0.18	0.00	457.78	
3458.00	0.060	215.580	3457.89	9.24	8.31	14.02	1688577.81	14430970.90	39°44'12.786"N	80°49'43.259"W	16.29	59.355	0.28	0.10	-481.65	
3490.00	0.120	286.300	3489.89	9.21	8.30	13.98	1688577.77	14430970.90	39°44'12.786"N	80°49'43.259"W	16.26	59.292	0.36	0.19	221.00	
3522.00	0.870	33.220	3521.89	9.21	8.51	14.08	1688577.87	14430971.11	39°44'12.788"N	80°49'43.258"W	16.45	58.835	2.85	2.34	334.12	
3553.00	2.210	37.540	3552.87	9.37	9.18	14.57	1688578.37	14430971.78	39°44'12.795"N	80°49'43.252"W	17.22	57.774	4.34	4.32	13.94	
3585.00	3.490	39.350	3584.83	9.76	10.43	15.56	1688579.36	14430973.02	39°44'12.807"N	80°49'43.239"W	18.73	56.180	4.01	4.00	5.66	
3616.00	4.580	40.530	3615.76	10.33	12.10	16.97	1688580.76	14430974.69	39°44'12.824"N	80°49'43.221"W	20.84	54.511	3.53	3.52	3.81	
3647.00	5.640	42.850	3646.63	11.14	14.16	18.81	1688582.60	14430976.75	39°44'12.844"N	80°49'43.197"W	23.54	53.033	3.48	3.42	7.48	
3679.00	6.730	43.440	3678.45	12.22	16.67	21.17	1688584.96	14430979.26	39°44'12.869"N	80°49'43.167"W	26.94	51.777	3.41	3.41	1.84	
3710.00	7.630	46.640	3709.20	13.57	19.40	23.91	1688587.70	14430981.99	39°44'12.896"N	80°49'43.132"W	30.79	50.944	3.18	2.90	10.32	
3742.00	8.120	49.590	3740.90	15.31	22.33	27.18	1688590.97	14430984.92	39°44'12.925"N	80°49'43.090"W	35.17	50.598	1.98	1.53	9.22	
3772.00	8.850	51.410	3770.57	17.23	25.14	30.59	1688594.38	14430987.73	39°44'12.952"N	80°49'43.046"W	39.60	50.591	2.59	2.43	6.07	
3803.00	9.470	52.690	3801.18	19.49	28.17	34.49	1688598.27	14430990.76	39°44'12.982"N	80°49'42.996"W	44.53	50.755	2.11	2.00	4.13	
3834.00	10.210	54.090	3831.72	22.03	31.33	38.74	1688602.52	14430993.92	39°44'13.013"N	80°49'42.942"W	49.82	51.038	2.51	2.39	4.52	
3866.00	10.900	54.810	3863.18	24.93	34.74	43.51	1688607.29	14430997.32	39°44'13.047"N	80°49'42.881"W	55.67	51.398	2.20	2.16	2.25	
3898.00	11.620	54.560	3894.56	28.04	38.35	48.61	1688612.39	14431000.93	39°44'13.082"N	80°49'42.815"W	61.91	51.729	2.26	2.25	-0.78	
3929.00	12.120	54.310	3924.90	31.19	42.06	53.79	1688617.57	14431004.64	39°44'13.119"N	80°49'42.749"W	68.28	51.982	1.62	1.61	-0.81	
3961.00	12.220	53.430	3956.18	34.47	46.03	59.24	1688623.02	14431008.62	39°44'13.158"N	80°49'42.679"W	75.03	52.151	0.66	0.31	-2.75	
4024.00	12.800	50.400	4017.69	40.68	54.46	69.98	1688633.75	14431017.03	39°44'13.241"N	80°49'42.541"W	88.67	52.110	1.39	0.92	-4.81	

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4088.00	13.260	48.750	4080.04	46.72	63.81	80.96	1688644.72	14431026.39	39°44'13.334"N	80°49'42.400"W	103.08	51.753	0.92	0.72	-2.58
4151.00	12.780	50.790	4141.42	52.71	72.98	91.79	1688655.55	14431035.55	39°44'13.424"N	80°49'42.262"W	117.27	51.511	1.05	-0.76	3.24
4214.00	12.070	51.300	4202.94	58.70	81.51	102.33	1688666.09	14431044.07	39°44'13.508"N	80°49'42.126"W	130.82	51.462	1.14	-1.13	0.81
4277.00	11.360	52.260	4264.63	64.50	89.42	112.37	1688676.13	14431051.99	39°44'13.586"N	80°49'41.998"W	143.61	51.489	1.17	-1.13	1.52
4340.00	11.910	55.000	4326.34	70.63	96.95	122.61	1688686.36	14431059.51	39°44'13.660"N	80°49'41.867"W	156.31	51.665	1.24	0.87	4.35
4403.00	12.730	54.530	4387.88	77.35	104.71	133.59	1688697.33	14431067.26	39°44'13.737"N	80°49'41.726"W	169.73	51.910	1.31	1.30	-0.75
4466.00	12.750	54.410	4449.33	84.22	112.78	144.89	1688708.63	14431075.33	39°44'13.816"N	80°49'41.581"W	183.61	52.104	0.05	0.03	-0.19
4529.00	13.340	52.920	4510.71	91.08	121.21	156.34	1688720.08	14431083.76	39°44'13.899"N	80°49'41.434"W	197.82	52.215	1.08	0.94	-2.37
4592.00	13.630	51.380	4571.97	97.83	130.22	167.94	1688731.67	14431092.77	39°44'13.988"N	80°49'41.285"W	212.51	52.210	0.73	0.46	-2.44
4655.00	13.610	50.430	4633.20	104.36	139.58	179.46	1688743.18	14431102.12	39°44'14.080"N	80°49'41.138"W	227.35	52.125	0.36	-0.03	-1.51
4719.00	13.750	49.460	4695.38	110.79	149.32	191.04	1688754.76	14431111.86	39°44'14.176"N	80°49'40.989"W	242.47	51.988	0.42	0.22	-1.52
4781.00	14.230	50.470	4755.54	117.16	158.96	202.52	1688766.24	14431121.49	39°44'14.272"N	80°49'40.842"W	257.45	51.871	0.87	0.77	1.63
4844.00	14.320	53.660	4816.60	124.28	168.50	214.77	1688778.48	14431131.04	39°44'14.366"N	80°49'40.685"W	272.98	51.882	1.26	0.14	5.06
4908.00	14.230	56.510	4878.63	132.23	177.53	227.70	1688791.41	14431140.06	39°44'14.455"N	80°49'40.519"W	288.73	52.057	1.11	-0.14	4.45
4971.00	14.170	56.630	4939.70	140.37	186.05	240.60	1688804.30	14431148.57	39°44'14.539"N	80°49'40.354"W	304.14	52.286	0.11	-0.10	0.19
5035.00	13.240	55.050	5001.88	148.20	194.56	253.15	1688816.85	14431157.08	39°44'14.622"N	80°49'40.193"W	319.27	52.456	1.57	-1.45	-2.47
5097.00	13.260	53.930	5062.23	155.23	202.81	264.71	1688828.41	14431165.33	39°44'14.704"N	80°49'40.045"W	333.48	52.543	0.42	0.03	-1.81
5160.00	12.700	54.010	5123.62	162.13	211.13	276.16	1688839.85	14431173.65	39°44'14.786"N	80°49'39.898"W	347.62	52.601	0.89	-0.89	0.13
5224.00	11.620	54.560	5186.18	168.76	219.00	287.10	1688850.79	14431181.52	39°44'14.863"N	80°49'39.758"W	361.10	52.663	1.70	-1.69	0.86
5287.00	11.930	52.470	5247.85	174.94	226.65	297.44	1688861.12	14431189.16	39°44'14.939"N	80°49'39.625"W	373.95	52.692	0.84	0.49	-3.32
5350.00	12.350	51.610	5309.45	181.00	234.80	307.88	1688871.56	14431197.31	39°44'15.019"N	80°49'39.492"W	387.20	52.669	0.73	0.67	-1.37
5413.00	12.220	50.090	5371.00	186.89	243.26	318.28	1688881.95	14431205.77	39°44'15.102"N	80°49'39.358"W	400.59	52.609	0.55	-0.21	-2.41
5477.00	12.000	53.060	5433.58	192.93	251.61	328.79	1688892.46	14431214.11	39°44'15.185"N	80°49'39.223"W	414.01	52.575	1.03	-0.34	4.64
5540.00	11.770	53.550	5495.23	199.12	259.36	339.19	1688902.86	14431221.86	39°44'15.261"N	80°49'39.090"W	426.99	52.597	0.40	-0.37	0.78
5604.00	11.560	52.300	5557.91	205.22	267.16	349.52	1688913.18	14431229.65	39°44'15.338"N	80°49'38.958"W	439.93	52.607	0.51	-0.33	-1.95
5667.00	12.000	54.490	5619.58	211.38	274.82	359.84	1688923.50	14431237.31	39°44'15.414"N	80°49'38.825"W	452.79	52.630	1.00	0.70	3.48
5729.00	12.900	53.170	5680.12	217.86	282.72	370.63	1688934.28	14431245.20	39°44'15.491"N	80°49'38.687"W	466.15	52.663	1.52	1.45	-2.13
5761.00	13.050	52.440	5711.31	221.23	287.06	376.35	1688940.00	14431249.55	39°44'15.534"N	80°49'38.614"W	473.33	52.666	0.69	0.47	-2.28
5766.00	12.970	52.810	5716.18	221.76	287.74	377.25	1688940.89	14431250.23	39°44'15.541"N	80°49'38.602"W	474.46	52.665	2.31	-1.60	7.40
5811.00	12.860	52.150	5760.04	226.43	293.87	385.22	1688948.87	14431256.35	39°44'15.601"N	80°49'38.500"W	484.52	52.662	0.41	-0.24	-1.47

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Actual Wellpath Report

MWD Surveys (5761')(5766'-12702')Proj:12728'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	GASTAR EXPLORATION USA, INC.	Slot	Slot #6
Area	Marshall County, WV	Well	Goudy 6H
Field	Marshall	Wellbore	Goudy 6H (AWB)
Facility	Goudy		

WELLPATH DATA (245 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
5856.00	12.470	52.910	5803.94	231.02	299.87	393.05	1688956.70	14431262.35	39°44'15.661"N	80°49'38.400"W	494.38	52.659	0.94	-0.87	1.69
5901.00	13.140	62.400	5847.83	236.43	305.17	401.46	1688965.10	14431267.65	39°44'15.713"N	80°49'38.292"W	504.28	52.760	4.90	1.49	21.09
5946.00	15.260	75.280	5891.46	244.12	309.05	411.73	1688975.36	14431271.52	39°44'15.751"N	80°49'38.160"W	514.81	53.108	8.43	4.71	28.62
5990.00	18.170	83.630	5933.61	254.47	311.28	424.15	1688987.78	14431273.76	39°44'15.773"N	80°49'38.001"W	526.12	53.725	8.56	6.61	18.98
6035.00	21.050	89.070	5975.99	267.75	312.19	439.21	1689002.83	14431274.67	39°44'15.781"N	80°49'37.809"W	538.86	54.595	7.57	6.40	12.09
6080.00	24.670	93.260	6017.46	283.78	311.79	456.67	1689020.29	14431274.26	39°44'15.777"N	80°49'37.585"W	552.96	55.677	8.82	8.04	9.31
6125.00	28.390	94.650	6057.71	302.56	310.39	476.72	1689040.33	14431272.86	39°44'15.763"N	80°49'37.328"W	568.86	56.932	8.38	8.27	3.09
6169.00	32.590	95.790	6095.62	323.59	308.34	498.94	1689062.54	14431270.82	39°44'15.742"N	80°49'37.044"W	586.53	58.284	9.64	9.55	2.59
6214.00	36.560	98.860	6132.67	347.95	305.05	524.25	1689087.84	14431267.53	39°44'15.709"N	80°49'36.720"W	606.55	59.806	9.63	8.82	6.82
6259.00	40.470	102.330	6167.87	375.11	299.87	551.78	1689115.36	14431262.35	39°44'15.657"N	80°49'36.368"W	628.00	61.478	9.92	8.69	7.71
6303.00	45.120	104.270	6200.15	404.40	292.97	580.85	1689144.42	14431255.46	39°44'15.589"N	80°49'35.996"W	650.56	63.234	10.98	10.57	4.41
6348.00	49.930	105.430	6230.53	437.08	284.46	612.92	1689176.48	14431246.94	39°44'15.504"N	80°49'35.586"W	675.71	65.104	10.86	10.69	2.58
6393.00	53.750	106.120	6258.33	472.02	274.83	646.96	1689210.50	14431237.32	39°44'15.408"N	80°49'35.150"W	702.92	66.984	8.57	8.49	1.53
6438.00	57.220	105.510	6283.82	508.64	264.73	682.63	1689246.16	14431227.23	39°44'15.308"N	80°49'34.694"W	732.17	68.803	7.79	7.71	-1.36
6482.00	60.740	106.080	6306.50	545.87	254.47	718.91	1689282.42	14431216.97	39°44'15.206"N	80°49'34.230"W	762.62	70.508	8.08	8.00	1.30
6527.00	63.460	106.440	6327.55	585.20	243.33	757.08	1689320.58	14431205.84	39°44'15.095"N	80°49'33.741"W	795.23	72.182	6.09	6.04	0.80
6572.00	65.100	106.190	6347.08	625.29	231.94	795.99	1689359.47	14431194.45	39°44'14.982"N	80°49'33.243"W	829.10	73.754	3.68	3.64	-0.56
6616.00	65.030	108.260	6365.63	664.84	220.13	834.10	1689397.57	14431182.64	39°44'14.864"N	80°49'32.756"W	862.66	75.216	4.27	-0.16	4.70
6661.00	65.610	110.410	6384.42	705.54	206.59	872.68	1689436.13	14431169.11	39°44'14.729"N	80°49'32.262"W	896.80	76.681	4.53	1.29	4.78
6706.00	69.570	111.520	6401.57	747.04	191.71	911.52	1689474.95	14431154.23	39°44'14.582"N	80°49'31.766"W	931.46	78.123	9.09	8.80	2.47
6751.00	73.140	114.000	6415.96	789.64	175.20	950.82	1689514.24	14431137.73	39°44'14.418"N	80°49'31.263"W	966.83	79.559	9.50	7.93	5.51
6795.00	76.930	114.280	6427.32	832.14	157.82	989.60	1689553.01	14431120.36	39°44'14.245"N	80°49'30.767"W	1002.11	80.939	8.64	8.61	0.64
6840.00	82.470	115.070	6435.36	876.40	139.34	1029.82	1689593.21	14431101.89	39°44'14.062"N	80°49'30.253"W	1039.20	82.294	12.43	12.31	1.76
6885.00	86.920	114.790	6439.52	921.19	120.46	1070.44	1689633.81	14431083.01	39°44'13.874"N	80°49'29.733"W	1077.20	83.579	9.91	9.89	-0.62
6930.00	90.180	116.250	6440.66	966.17	101.08	1111.03	1689674.39	14431063.64	39°44'13.682"N	80°49'29.214"W	1115.62	84.801	7.94	7.24	3.24
6974.00	90.060	116.450	6440.57	1010.15	81.56	1150.46	1689713.80	14431044.12	39°44'13.488"N	80°49'28.710"W	1153.35	85.945	0.53	-0.27	0.45
7019.00	90.000	115.370	6440.55	1055.14	61.89	1190.93	1689754.26	14431024.47	39°44'13.293"N	80°49'28.192"W	1192.54	87.025	2.40	-0.13	-2.40
7064.00	90.030	115.560	6440.53	1100.14	42.54	1231.56	1689794.87	14431005.13	39°44'13.101"N	80°49'27.673"W	1232.30	88.022	0.43	0.07	0.42
7108.00	89.970	114.100	6440.53	1144.14	24.07	1271.49	1689834.79	14430986.66	39°44'12.918"N	80°49'27.162"W	1271.72	88.916	3.32	-0.14	-3.32
7153.00	90.030	114.010	6440.53	1189.13	5.73	1312.59	1689875.86	14430968.32	39°44'12.736"N	80°49'26.636"W	1312.60	89.750	0.24	0.13	-0.20

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Actual Wellpath Report

MWD Surveys (5761')(5766'-12702')Proj:12728'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	GASTAR EXPLORATION USA, INC.	Slot	Slot #6
Area	Marshall County, WV	Well	Goudy 6H
Field	Marshall	Wellbore	Goudy 6H (AWB)
Facility	Goudy		

WELLPATH DATA (245 stations)															
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
7198.00	89.970	114.520	6440.53	1234.13	-12.77	1353.61	1689916.87	14430949.84	39°44'12.552"N	80°49'26.112"W	1353.67	90.540	1.14	-0.13	1.13
7243.00	90.000	115.250	6440.55	1279.13	-31.70	1394.43	1689957.67	14430930.91	39°44'12.364"N	80°49'25.590"W	1394.79	91.302	1.62	0.07	1.62
7287.00	89.970	117.230	6440.56	1323.12	-51.16	1433.90	1689997.12	14430911.46	39°44'12.171"N	80°49'25.085"W	1434.81	92.043	4.50	-0.07	4.50
7332.00	90.090	115.490	6440.53	1368.10	-71.14	1474.21	1690037.43	14430891.49	39°44'11.973"N	80°49'24.569"W	1475.93	92.763	3.88	0.27	-3.87
7377.00	91.110	116.010	6440.06	1413.09	-90.68	1514.74	1690077.94	14430871.95	39°44'11.779"N	80°49'24.051"W	1517.46	93.426	2.54	2.27	1.16
7421.00	92.960	116.230	6438.50	1457.05	-110.04	1554.22	1690117.40	14430852.60	39°44'11.587"N	80°49'23.546"W	1558.11	94.050	4.23	4.20	0.50
7466.00	92.000	114.530	6436.55	1502.00	-129.31	1594.84	1690158.00	14430833.34	39°44'11.396"N	80°49'23.027"W	1600.07	94.635	4.34	-2.13	-3.78
7511.00	89.110	112.030	6436.12	1546.97	-147.09	1636.17	1690199.31	14430815.57	39°44'11.219"N	80°49'22.498"W	1642.77	95.137	8.49	-6.42	-5.56
7556.00	88.180	112.200	6437.18	1591.91	-164.03	1677.84	1690240.97	14430798.64	39°44'11.051"N	80°49'21.965"W	1685.84	95.584	2.10	-2.07	0.38
7600.00	88.120	113.080	6438.60	1635.86	-180.96	1718.43	1690281.55	14430781.72	39°44'10.883"N	80°49'21.446"W	1727.93	96.011	2.00	-0.14	2.00
7645.00	88.120	114.050	6440.08	1680.82	-198.94	1759.66	1690322.75	14430763.74	39°44'10.705"N	80°49'20.919"W	1770.87	96.450	2.15	0.00	2.16
7690.00	88.520	114.850	6441.40	1725.80	-217.55	1800.60	1690363.68	14430745.13	39°44'10.520"N	80°49'20.395"W	1813.70	96.889	1.99	0.89	1.78
7735.00	89.110	115.280	6442.33	1770.79	-236.61	1841.36	1690404.42	14430726.08	39°44'10.331"N	80°49'19.874"W	1856.50	97.322	1.62	1.31	0.96
7779.00	89.080	114.910	6443.02	1814.78	-255.27	1881.20	1690444.25	14430707.43	39°44'10.145"N	80°49'19.364"W	1898.44	97.728	0.84	-0.07	-0.84
7824.00	89.020	115.480	6443.77	1859.78	-274.43	1921.91	1690484.94	14430688.28	39°44'09.955"N	80°49'18.844"W	1941.40	98.126	1.27	-0.13	1.27
7869.00	89.050	115.250	6444.53	1904.77	-293.70	1962.57	1690525.58	14430669.02	39°44'09.764"N	80°49'18.324"W	1984.42	98.511	0.52	0.07	-0.51
7914.00	89.050	115.230	6445.27	1949.76	-312.89	2003.27	1690566.27	14430649.84	39°44'09.574"N	80°49'17.803"W	2027.55	98.877	0.04	0.00	-0.04
7958.00	89.350	115.640	6445.89	1993.75	-331.78	2043.00	1690605.98	14430630.95	39°44'09.386"N	80°49'17.295"W	2069.76	99.224	1.15	0.68	0.93
8003.00	89.720	116.160	6446.25	2038.74	-351.44	2083.48	1690646.44	14430611.30	39°44'09.191"N	80°49'16.778"W	2112.91	99.574	1.42	0.82	1.16
8048.00	89.630	115.720	6446.51	2083.73	-371.12	2123.94	1690686.89	14430591.63	39°44'08.996"N	80°49'16.260"W	2156.12	99.911	1.00	-0.20	-0.98
8093.00	89.630	115.560	6446.80	2128.73	-390.59	2164.51	1690727.44	14430572.16	39°44'08.802"N	80°49'15.741"W	2199.47	100.229	0.36	0.00	-0.36
8138.00	89.660	115.610	6447.08	2173.72	-410.03	2205.10	1690768.01	14430552.74	39°44'08.610"N	80°49'15.222"W	2242.89	100.534	0.13	0.07	0.11
8183.00	89.630	115.230	6447.36	2218.72	-429.34	2245.74	1690808.64	14430533.43	39°44'08.418"N	80°49'14.703"W	2286.41	100.823	0.85	-0.07	-0.84
8227.00	89.660	115.010	6447.63	2262.72	-448.02	2285.58	1690848.46	14430514.76	39°44'08.233"N	80°49'14.193"W	2329.07	101.091	0.50	0.07	-0.50
8272.00	89.750	114.780	6447.86	2307.72	-466.96	2326.39	1690889.26	14430495.82	39°44'08.045"N	80°49'13.671"W	2372.80	101.350	0.55	0.20	-0.51
8317.00	89.600	114.640	6448.12	2352.72	-485.77	2367.27	1690930.13	14430477.02	39°44'07.858"N	80°49'13.148"W	2416.60	101.596	0.46	-0.33	-0.31
8362.00	89.600	115.170	6448.43	2397.71	-504.72	2408.09	1690970.93	14430458.08	39°44'07.670"N	80°49'12.626"W	2460.41	101.838	1.18	0.00	1.18
8406.00	89.720	115.710	6448.69	2441.71	-523.62	2447.82	1691010.64	14430439.18	39°44'07.482"N	80°49'12.118"W	2503.20	102.074	1.26	0.27	1.23
8451.00	89.630	116.330	6448.95	2486.70	-543.37	2488.26	1691051.06	14430419.45	39°44'07.286"N	80°49'11.601"W	2546.89	102.318	1.39	-0.20	1.38
8496.00	89.720	116.320	6449.20	2531.68	-563.32	2528.59	1691091.38	14430399.50	39°44'07.088"N	80°49'11.085"W	2590.58	102.559	0.20	0.20	-0.02

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Actual Wellpath Report

MWD Surveys (5761')(5766'-12702')Proj:12728'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	GASTAR EXPLORATION USA, INC.	Slot	Slot #6
Area	Marshall County, WV	Well	Goudy 6H
Field	Marshall	Wellbore	Goudy 6H (AWB)
Facility	Goudy		

WELLPATH DATA (245 stations)															
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
8541.00	89.750	116.230	6449.41	2576.67	-583.24	2568.94	1691131.71	14430379.59	39°44'06.891"N	80°49'10.569"W	2634.32	102.791	0.21	0.07	-0.20
8585.00	89.750	115.470	6449.60	2620.66	-602.43	2608.54	1691171.30	14430360.42	39°44'06.700"N	80°49'10.063"W	2677.20	103.004	1.73	0.00	-1.73
8630.00	89.600	115.560	6449.86	2665.66	-621.81	2649.15	1691211.89	14430341.04	39°44'06.508"N	80°49'09.544"W	2721.14	103.209	0.39	-0.33	0.20
8675.00	89.690	115.600	6450.14	2710.65	-641.24	2689.74	1691252.46	14430321.62	39°44'06.315"N	80°49'09.025"W	2765.12	103.409	0.22	0.20	0.09
8719.00	89.660	115.570	6450.39	2754.65	-660.24	2729.42	1691292.13	14430302.62	39°44'06.126"N	80°49'08.517"W	2808.14	103.598	0.10	-0.07	-0.07
8764.00	89.690	115.510	6450.64	2799.64	-679.64	2770.02	1691332.72	14430283.23	39°44'05.934"N	80°49'07.998"W	2852.18	103.786	0.15	0.07	-0.13
8809.00	89.630	114.330	6450.91	2844.64	-698.60	2810.83	1691373.51	14430264.28	39°44'05.746"N	80°49'07.476"W	2896.35	103.957	2.63	-0.13	-2.62
8854.00	89.690	114.100	6451.17	2889.64	-717.06	2851.87	1691414.53	14430245.83	39°44'05.562"N	80°49'06.951"W	2940.64	104.114	0.53	0.13	-0.51
8898.00	89.660	114.230	6451.42	2933.63	-735.07	2892.02	1691454.66	14430227.82	39°44'05.384"N	80°49'06.438"W	2983.97	104.261	0.30	-0.07	0.30
8943.00	89.660	114.350	6451.69	2978.63	-753.58	2933.03	1691495.66	14430209.32	39°44'05.200"N	80°49'05.913"W	3028.29	104.409	0.27	0.00	0.27
8988.00	89.660	114.580	6451.96	3023.63	-772.22	2973.99	1691536.60	14430190.69	39°44'05.015"N	80°49'05.390"W	3072.61	104.556	0.51	0.00	0.51
9033.00	89.630	115.020	6452.24	3068.63	-791.09	3014.84	1691577.44	14430171.83	39°44'04.828"N	80°49'04.867"W	3116.90	104.703	0.98	-0.07	0.98
9077.00	89.720	115.640	6452.49	3112.62	-809.91	3054.61	1691617.19	14430153.01	39°44'04.641"N	80°49'04.359"W	3160.16	104.850	1.42	0.20	1.41
9122.00	89.690	116.070	6452.72	3157.62	-829.54	3095.10	1691657.67	14430133.39	39°44'04.446"N	80°49'03.841"W	3204.34	105.004	0.96	-0.07	0.96
9167.00	89.630	116.380	6452.99	3202.60	-849.42	3135.47	1691698.02	14430113.52	39°44'04.249"N	80°49'03.325"W	3248.49	105.158	0.70	-0.13	0.69
9212.00	89.690	116.550	6453.25	3247.58	-869.48	3175.75	1691738.29	14430093.47	39°44'04.050"N	80°49'02.809"W	3292.63	105.312	0.40	0.13	0.38
9256.00	89.660	116.300	6453.50	3291.56	-889.06	3215.16	1691777.67	14430073.90	39°44'03.855"N	80°49'02.306"W	3335.81	105.457	0.57	-0.07	-0.57
9301.00	89.720	116.620	6453.75	3336.54	-909.11	3255.44	1691817.94	14430053.85	39°44'03.656"N	80°49'01.790"W	3380.00	105.603	0.72	0.13	0.71
9346.00	89.720	116.750	6453.97	3381.52	-929.32	3295.65	1691858.13	14430033.65	39°44'03.456"N	80°49'01.276"W	3424.17	105.748	0.29	0.00	0.29
9391.00	89.630	116.410	6454.22	3426.50	-949.45	3335.89	1691898.36	14430013.53	39°44'03.256"N	80°49'00.762"W	3468.38	105.887	0.78	-0.20	-0.76
9435.00	89.690	116.630	6454.48	3470.48	-969.10	3375.26	1691937.71	14429993.89	39°44'03.061"N	80°49'00.258"W	3511.63	106.020	0.52	0.14	0.50
9480.00	89.750	116.750	6454.70	3515.45	-989.31	3415.47	1691977.90	14429973.68	39°44'02.861"N	80°48'59.744"W	3555.86	106.154	0.30	0.13	0.27
9525.00	89.630	117.230	6454.94	3560.42	-1009.73	3455.56	1692017.98	14429953.27	39°44'02.658"N	80°48'59.231"W	3600.07	106.289	1.10	-0.27	1.07
9570.00	89.750	117.220	6455.19	3605.38	-1030.32	3495.58	1692057.98	14429932.69	39°44'02.454"N	80°48'58.720"W	3644.26	106.423	0.27	0.27	-0.02
9614.00	89.540	117.650	6455.46	3649.33	-1050.59	3534.63	1692097.02	14429912.43	39°44'02.252"N	80°48'58.221"W	3687.46	106.553	1.09	-0.48	0.98
9659.00	89.630	117.050	6455.79	3694.28	-1071.27	3574.60	1692136.97	14429891.76	39°44'02.047"N	80°48'57.709"W	3731.67	106.683	1.35	0.20	-1.33
9704.00	89.660	115.290	6456.07	3739.27	-1091.11	3614.98	1692177.34	14429871.93	39°44'01.850"N	80°48'57.193"W	3776.06	106.795	3.91	0.07	-3.91
9748.00	89.720	114.640	6456.30	3783.27	-1109.68	3654.87	1692217.21	14429853.36	39°44'01.666"N	80°48'56.683"W	3819.62	106.889	1.48	0.14	-1.48
9793.00	89.720	115.140	6456.52	3828.27	-1128.62	3695.69	1692258.01	14429834.43	39°44'01.478"N	80°48'56.161"W	3864.18	106.982	1.11	0.00	1.11
9838.00	89.320	115.970	6456.90	3873.26	-1148.03	3736.29	1692298.59	14429815.03	39°44'01.285"N	80°48'55.642"W	3908.68	107.080	2.05	-0.89	1.84

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Actual Wellpath Report

MWD Surveys (5761')(5766'-12702')Proj:12728'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	GASTAR EXPLORATION USA, INC.	Slot	Slot #6
Area	Marshall County, WV	Well	Goudy 6H
Field	Marshall	Wellbore	Goudy 6H (AWB)
Facility	Goudy		

WELLPATH DATA (245 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
9883.00	89.020	117.130	6457.55	3918.23	-1168.14	3776.53	1692338.83	14429794.92	39°44'01.086"N	80°48'55.127"W	3953.07	107.188	2.66	-0.67	2.58
9927.00	89.010	118.350	6458.31	3962.17	-1188.62	3815.47	1692377.75	14429774.46	39°44'00.883"N	80°48'54.629"W	3996.33	107.303	2.77	-0.02	2.77
9972.00	89.140	119.380	6459.04	4007.05	-1210.34	3854.87	1692417.14	14429752.74	39°44'00.667"N	80°48'54.126"W	4040.42	107.431	2.31	0.29	2.29
10017.00	89.140	118.000	6459.71	4051.94	-1231.94	3894.34	1692456.59	14429731.15	39°44'00.453"N	80°48'53.621"W	4084.56	107.554	3.07	0.00	-3.07
10062.00	89.050	116.590	6460.42	4096.89	-1252.57	3934.33	1692496.56	14429710.53	39°44'00.248"N	80°48'53.110"W	4128.91	107.660	3.14	-0.20	-3.13
10106.00	89.020	115.030	6461.16	4140.87	-1271.73	3973.93	1692536.15	14429691.38	39°44'00.058"N	80°48'52.603"W	4172.46	107.746	3.55	-0.07	-3.55
10151.00	89.020	113.300	6461.93	4185.86	-1290.14	4014.98	1692577.18	14429672.97	39°43'59.875"N	80°48'52.078"W	4217.17	107.814	3.84	0.00	-3.84
10196.00	89.050	112.560	6462.69	4230.83	-1307.67	4056.42	1692618.60	14429655.45	39°43'59.701"N	80°48'51.548"W	4261.99	107.868	1.65	0.07	-1.64
10241.00	88.980	113.090	6463.46	4275.80	-1325.13	4097.89	1692660.05	14429638.00	39°43'59.528"N	80°48'51.018"W	4306.82	107.920	1.19	-0.16	1.18
10285.00	89.080	113.980	6464.21	4319.78	-1342.70	4138.22	1692700.37	14429620.44	39°43'59.353"N	80°48'50.502"W	4350.60	107.976	2.04	0.23	2.02
10330.00	89.230	114.400	6464.87	4364.77	-1361.13	4179.27	1692741.40	14429602.01	39°43'59.170"N	80°48'49.977"W	4395.33	108.040	0.99	0.33	0.93
10375.00	89.110	114.010	6465.52	4409.77	-1379.58	4220.31	1692782.42	14429583.57	39°43'58.987"N	80°48'49.453"W	4440.07	108.102	0.91	-0.27	-0.87
10419.00	89.200	113.340	6466.17	4453.75	-1397.25	4260.60	1692822.70	14429565.91	39°43'58.812"N	80°48'48.937"W	4483.86	108.157	1.54	0.20	-1.52
10464.00	89.380	112.930	6466.73	4498.73	-1414.93	4301.98	1692864.06	14429548.24	39°43'58.636"N	80°48'48.408"W	4528.69	108.206	0.99	0.40	-0.91
10509.00	89.630	112.770	6467.12	4543.70	-1432.40	4343.44	1692905.51	14429530.77	39°43'58.463"N	80°48'47.878"W	4573.54	108.252	0.66	0.56	-0.36
10554.00	89.540	112.850	6467.45	4588.67	-1449.84	4384.92	1692946.97	14429513.33	39°43'58.289"N	80°48'47.347"W	4618.40	108.296	0.27	-0.20	0.18
10599.00	89.450	113.080	6467.84	4633.65	-1467.40	4426.35	1692988.39	14429495.78	39°43'58.115"N	80°48'46.818"W	4663.25	108.341	0.55	-0.20	0.51
10643.00	89.290	114.000	6468.33	4677.64	-1484.97	4466.69	1693028.71	14429478.22	39°43'57.941"N	80°48'46.302"W	4707.07	108.390	2.12	-0.36	2.09
10688.00	89.350	115.320	6468.86	4722.63	-1503.75	4507.58	1693069.58	14429459.45	39°43'57.754"N	80°48'45.779"W	4751.79	108.449	2.94	0.13	2.93
10733.00	89.290	116.340	6469.39	4767.62	-1523.35	4548.08	1693110.07	14429439.86	39°43'57.560"N	80°48'45.261"W	4796.42	108.518	2.27	-0.13	2.27
10778.00	89.260	115.630	6469.96	4812.61	-1543.07	4588.53	1693150.50	14429420.15	39°43'57.364"N	80°48'44.744"W	4841.04	108.587	1.58	-0.07	-1.58
10822.00	89.230	115.190	6470.54	4856.60	-1561.94	4628.27	1693190.22	14429401.28	39°43'57.176"N	80°48'44.236"W	4884.73	108.648	1.00	-0.07	-1.00
10867.00	89.320	115.340	6471.11	4901.60	-1581.15	4668.96	1693230.90	14429382.08	39°43'56.986"N	80°48'43.715"W	4929.43	108.709	0.39	0.20	0.33
10912.00	89.230	115.670	6471.68	4946.59	-1600.52	4709.57	1693271.49	14429362.71	39°43'56.794"N	80°48'43.196"W	4974.11	108.770	0.76	-0.20	0.73
10957.00	89.350	116.080	6472.24	4991.58	-1620.16	4750.06	1693311.96	14429343.09	39°43'56.599"N	80°48'42.678"W	5018.76	108.834	0.95	0.27	0.91
11001.00	89.260	115.510	6472.77	5035.57	-1639.31	4789.67	1693351.56	14429323.95	39°43'56.409"N	80°48'42.172"W	5062.44	108.894	1.31	-0.20	-1.30
11046.00	89.260	114.770	6473.35	5080.56	-1658.42	4830.41	1693392.28	14429304.84	39°43'56.219"N	80°48'41.651"W	5107.17	108.949	1.64	0.00	-1.64
11091.00	89.290	114.300	6473.92	5125.56	-1677.11	4871.34	1693433.19	14429286.16	39°43'56.033"N	80°48'41.127"W	5151.95	108.998	1.05	0.07	-1.04
11136.00	89.170	114.550	6474.53	5170.55	-1695.71	4912.31	1693474.15	14429267.56	39°43'55.849"N	80°48'40.604"W	5196.75	109.045	0.62	-0.27	0.56
11180.00	89.350	114.870	6475.10	5214.55	-1714.10	4952.28	1693514.10	14429249.18	39°43'55.666"N	80°48'40.092"W	5240.53	109.092	0.83	0.41	0.73

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Actual Wellpath Report

MWD Surveys (5761')(5766'-12702')Proj:12728'
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REFERENCE WELLPATH IDENTIFICATION

Operator	GASTAR EXPLORATION USA, INC.	Slot	Slot #6
Area	Marshall County, WV	Well	Goudy 6H
Field	Marshall	Wellbore	Goudy 6H (AWB)
Facility	Goudy		

WELLPATH DATA (245 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
11225.00	89.290	115.690	6475.63	5259.54	-1733.32	4992.96	1693554.77	14429229.97	39°43'55.475"N	80°48'39.572"W	5285.27	109.145	1.83	-0.13	1.82
11270.00	89.690	117.140	6476.03	5304.52	-1753.34	5033.26	1693595.05	14429209.96	39°43'55.277"N	80°48'39.057"W	5329.91	109.206	3.34	0.89	3.22
11315.00	89.690	117.050	6476.28	5349.49	-1773.83	5073.32	1693635.10	14429189.48	39°43'55.073"N	80°48'38.545"W	5374.49	109.272	0.20	0.00	-0.20
11359.00	89.720	116.720	6476.50	5393.46	-1793.73	5112.57	1693674.32	14429169.59	39°43'54.876"N	80°48'38.043"W	5418.10	109.333	0.75	0.07	-0.75
11404.00	89.660	115.900	6476.75	5438.44	-1813.67	5152.90	1693714.65	14429149.65	39°43'54.678"N	80°48'37.527"W	5462.77	109.391	1.83	-0.13	-1.82
11449.00	89.720	115.060	6476.99	5483.44	-1833.03	5193.53	1693755.25	14429130.30	39°43'54.486"N	80°48'37.008"W	5507.52	109.440	1.87	0.13	-1.87
11493.00	89.690	114.430	6477.22	5527.43	-1851.45	5233.49	1693795.20	14429111.89	39°43'54.303"N	80°48'36.497"W	5551.33	109.482	1.43	-0.07	-1.43
11538.00	89.540	113.930	6477.52	5572.43	-1869.88	5274.54	1693836.23	14429093.47	39°43'54.120"N	80°48'35.972"W	5596.18	109.520	1.16	-0.33	-1.11
11583.00	89.510	114.140	6477.89	5617.43	-1888.21	5315.63	1693877.31	14429075.14	39°43'53.938"N	80°48'35.446"W	5641.04	109.556	0.47	-0.07	0.47
11628.00	89.570	114.060	6478.25	5662.42	-1906.58	5356.71	1693918.37	14429056.78	39°43'53.755"N	80°48'34.921"W	5685.89	109.592	0.22	0.13	-0.18
11672.00	89.570	113.000	6478.58	5706.41	-1924.15	5397.05	1693958.69	14429039.22	39°43'53.581"N	80°48'34.405"W	5729.79	109.622	2.41	0.00	-2.41
11717.00	89.480	113.380	6478.96	5751.39	-1941.87	5438.41	1694000.04	14429021.51	39°43'53.405"N	80°48'33.876"W	5774.70	109.650	0.87	-0.20	0.84
11762.00	89.600	113.650	6479.32	5796.38	-1959.82	5479.67	1694041.29	14429003.56	39°43'53.227"N	80°48'33.349"W	5819.60	109.680	0.66	0.27	0.60
11807.00	89.480	114.350	6479.68	5841.37	-1978.12	5520.78	1694082.38	14428985.27	39°43'53.045"N	80°48'32.823"W	5864.47	109.713	1.58	-0.27	1.56
11851.00	89.570	114.940	6480.04	5885.37	-1996.47	5560.77	1694122.35	14428966.93	39°43'52.863"N	80°48'32.312"W	5908.31	109.750	1.36	0.20	1.34
11896.00	89.510	114.610	6480.40	5930.37	-2015.33	5601.63	1694163.19	14428948.08	39°43'52.675"N	80°48'31.789"W	5953.13	109.787	0.75	-0.13	-0.73
11941.00	89.540	115.800	6480.78	5975.36	-2034.49	5642.34	1694203.89	14428928.92	39°43'52.485"N	80°48'31.269"W	5997.93	109.828	2.65	0.07	2.64
11986.00	89.480	116.070	6481.16	6020.35	-2054.17	5682.81	1694244.34	14428909.25	39°43'52.290"N	80°48'30.751"W	6042.68	109.873	0.61	-0.13	0.60
12030.00	89.380	116.370	6481.60	6064.34	-2073.61	5722.28	1694283.79	14428889.82	39°43'52.097"N	80°48'30.246"W	6086.41	109.919	0.72	-0.23	0.68
12075.00	89.350	116.060	6482.10	6109.32	-2093.49	5762.65	1694324.15	14428869.95	39°43'51.900"N	80°48'29.730"W	6131.13	109.965	0.69	-0.07	-0.69
12120.00	89.320	114.920	6482.62	6154.31	-2112.85	5803.26	1694364.75	14428850.59	39°43'51.707"N	80°48'29.211"W	6175.92	110.006	2.53	-0.07	-2.53
12164.00	89.420	114.340	6483.10	6198.31	-2131.19	5843.26	1694404.73	14428832.26	39°43'51.525"N	80°48'28.700"W	6219.78	110.038	1.34	0.23	-1.32
12209.00	89.420	114.260	6483.56	6243.31	-2149.71	5884.27	1694445.72	14428813.75	39°43'51.342"N	80°48'28.175"W	6264.65	110.069	0.18	0.00	-0.18
12254.00	89.290	114.610	6484.07	6288.30	-2168.32	5925.24	1694486.67	14428795.15	39°43'51.157"N	80°48'27.651"W	6309.52	110.100	0.83	-0.29	0.78
12299.00	89.450	115.160	6484.56	6333.30	-2187.25	5966.06	1694527.47	14428776.22	39°43'50.969"N	80°48'27.129"W	6354.36	110.134	1.27	0.36	1.22
12344.00	89.420	115.280	6485.00	6378.30	-2206.43	6006.76	1694568.17	14428757.05	39°43'50.778"N	80°48'26.609"W	6399.18	110.169	0.27	-0.07	0.27
12388.00	89.350	115.740	6485.48	6422.29	-2225.38	6046.47	1694607.86	14428738.11	39°43'50.590"N	80°48'26.101"W	6442.99	110.206	1.06	-0.16	1.05
12433.00	89.350	116.210	6485.99	6467.28	-2245.08	6086.92	1694648.29	14428718.41	39°43'50.395"N	80°48'25.584"W	6487.76	110.246	1.04	0.00	1.04
12478.00	89.420	117.010	6486.47	6512.25	-2265.24	6127.15	1694688.51	14428698.27	39°43'50.195"N	80°48'25.070"W	6532.48	110.290	1.78	0.16	1.78
12523.00	89.380	117.150	6486.94	6557.21	-2285.72	6167.22	1694728.56	14428677.79	39°43'49.991"N	80°48'24.557"W	6577.17	110.336	0.32	-0.09	0.31



Actual Wellpath Report

MWD Surveys (5761')(5766'-12702')Proj:12728'
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REFERENCE WELLPATH IDENTIFICATION

Operator	GASTAR EXPLORATION USA, INC.	Slot	Slot #6
Area	Marshall County, WV	Well	Goudy 6H
Field	Marshall	Wellbore	Goudy 6H (AWB)
Facility	Goudy		

WELLPATH DATA (245 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Closure Dist [ft]	Closure Dir [°]	DLS [°/100ft]	Build Rate [°/100ft]	Turn Rate [°/100ft]
12567.00	89.380	116.670	6487.42	6601.18	-2305.63	6206.45	1694767.77	14428657.89	39°43'49.794"N	80°48'24.056"W	6620.88	110.380	1.09	0.00	-1.09
12612.00	89.720	116.460	6487.77	6646.16	-2325.76	6246.70	1694808.01	14428637.77	39°43'49.594"N	80°48'23.541"W	6665.61	110.421	0.89	0.76	-0.47
12657.00	89.600	116.280	6488.04	6691.14	-2345.75	6287.02	1694848.31	14428617.79	39°43'49.396"N	80°48'23.026"W	6710.37	110.461	0.48	-0.27	-0.40
12702.00	89.660	116.340	6488.33	6736.12	-2365.69	6327.35	1694888.63	14428597.85	39°43'49.198"N	80°48'22.510"W	6755.14	110.500	0.19	0.13	0.13
12728.00	89.660	116.340	6488.48	6762.11	-2377.23	6350.65	1694911.92	14428586.32	39°43'49.083"N	80°48'22.212"W	6781.00	110.522	0.00	0.00	0.00

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HOLE & CASING SECTIONS - Ref Wellbore: Goudy 6H (AWB) Ref Wellpath: MWD Surveys (5761')(5766'-12702')Proj:12728'

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
9.625in Casing	13.00	2528.00	2515.00	13.00	2527.90	0.00	0.00	6.31	11.06

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Goudy 6H LP Rev-1		6430.50	144.08	1024.29	1689587.68	14431106.62	39°44'14.109"N	80°49'30.323"W	point
Goudy 6H PBHL Rev-1		6461.00	-2357.24	6313.72	1694875.00	14428606.30	39°43'49.281"N	80°48'22.684"W	point

WELLPATH COMPOSITION - Ref Wellbore: Goudy 6H (AWB) Ref Wellpath: MWD Surveys (5761')(5766'-12702')Proj:12728'

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	2600.00	Generic gyro - continuous (Standard)	VES / Continous gyro <100 - 2597>	Goudy 6H (AWB)
2600.00	5761.00	NaviTrak (Standard)	BHI / EMTrak <2635 - 5758>	Goudy 6H (AWB)
5761.00	12702.00	NaviTrak (AT Curve Short Spaced)	BHI / AutoTrak Curve <5766 - 12702>	Goudy 6H (AWB)
12702.00	12728.00	Blind Drilling (std)	Projection to bit	Goudy 6H (AWB)



Actual Wellpath Report

MWD Surveys (5761')(5766'-12702')Proj:12728'
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REFERENCE WELLPATH IDENTIFICATION			
Operator	GASTAR EXPLORATION USA, INC.	Slot	Slot #6
Area	Marshall County, WV	Well	Goudy 6H
Field	Marshall	Wellbore	Goudy 6H (AWB)
Facility	Goudy		

COMMENTS
Wellpath general comments API: 47-051-01589-00 BHI Job#: 5196907 Rig: Precision 823 Duration: 03/06/2013 - 03/14/2013 VES Gyro (100'-2597') BHI EMTrak (2635'-5758') BHI AT Curve (5766'-12702') Projected to TD: 12728'MD

51-01589