

51-01698



GASTAR EXPLORATION USA, INC.

Location: Marshall County, WV
 Facility: Marshall
 Slot: Slot #03
 Well: Blake 3H
 Wellbore: Blake 3H PWB

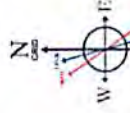
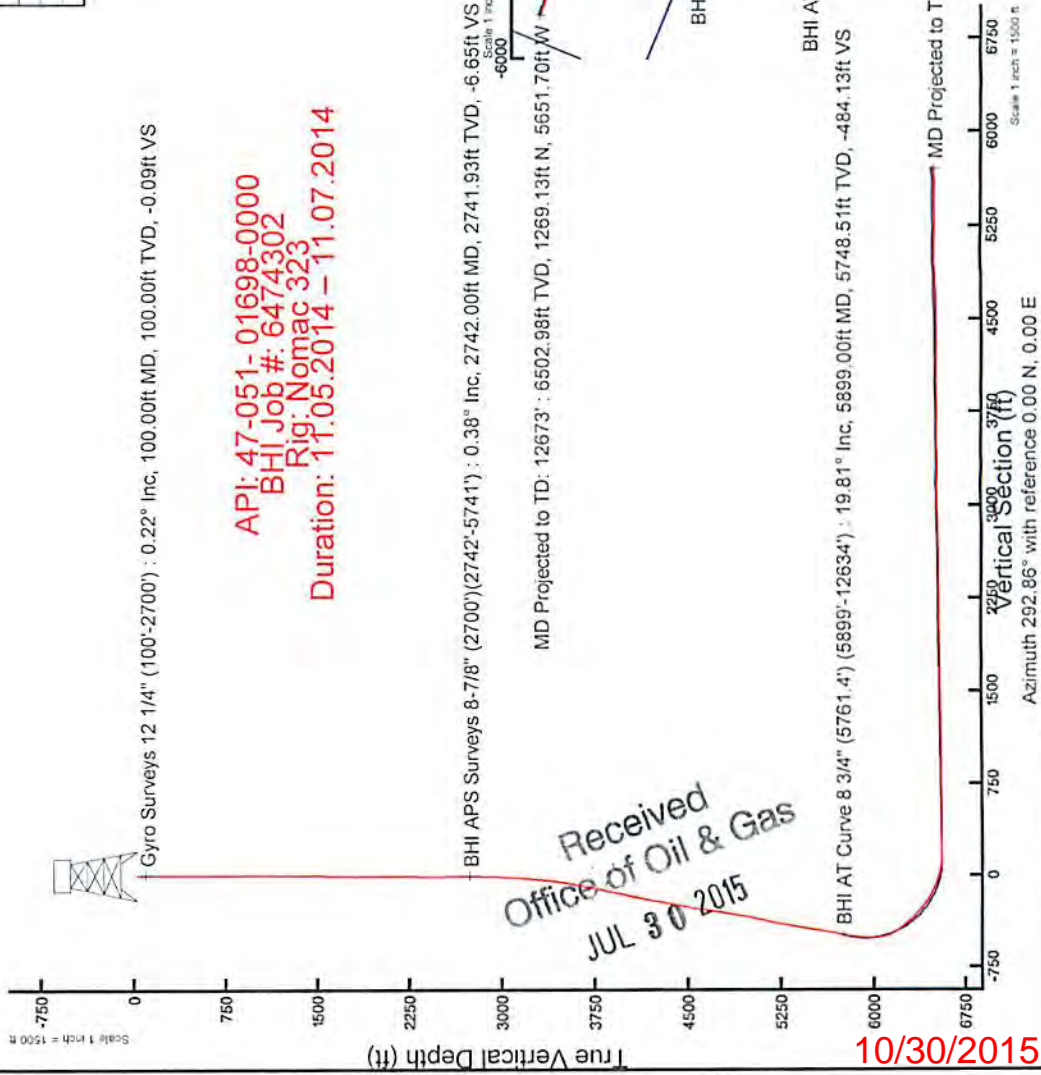


Pilot reference wellpath is Blake 3H PWP Rev-B.0

True vertical depths are referenced to Nomac 323 (RT)	Grid System: NAD83 / UTM Zone 17 North, US feet
Measured depths are referenced to Nomac 323 (RT)	North Reference: Grid north
Nomac 323 (RT) to Mean Sea Level: 1355.4 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Slot #03): -1326 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: kroschr on 11/12/2014

Location Information			
Facility Name	Grid East (US ft)	Grid North (US ft)	Longitude
Blake Unit	1695207.000	14440891.700	39°45'50.736"N 80°48'18.091"W
Local N (ft)	Local E (ft)	Grid North (US ft)	Latitude
37.21	14.71	1695221.700	39°45'51.103"N
Nomac 323 (RT) to Mud line (At Slot: Slot #03)		14440928.900	Longitude
Mean Sea Level to Mud line (At Slot: Slot #03)		-1326ft	80°48'17.901"W
Nomac 323 (RT) to Mean Sea Level		1355.4ft	

Well Data	
Slot	Wellbore
Slot #03	Blake 3H (AWB)
Slot #03	Blake 3H PWB
	Blake 3H PWP Rev-B.0
	Wellpath
	Blake 3H (AWP) Proj: 12673°
	Blake 3H PWP Rev-B.0



BGGM (1945.0 to 2016.0) Dip: 67.21° Field: 52451.9 nT
 Magnetic North is 8.55 degrees West of True North (at 10/16/2014)
 To correct azimuth from True to Grid subtract 8.55 degrees
 To correct azimuth from True to Grid subtract 8.67 degrees

10/30/2015

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REFERENCE WELLPATH IDENTIFICATION

Operator	GASTAR EXPLORATION INC.	Slot	Slot #03
Area	Marshall County, WV	Well	Blake 3H
Field	Marshall	Wellbore	Blake 3H (AWB)
Facility	Blake	Wellpath	Blake 3H (AWP) Proj: 12,673'
		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]
0.00	0.00	159.78	0.00	0.00	0.00	0.00	516704.6	4401603.9	39°45'51.103"N	80°48'17.901"W	0.00	0.00	0.00
29.40	0.00	159.78	29.40	0.00	0.00	0.00	516704.6	4401603.9	39°45'51.103"N	80°48'17.901"W	0.00	0.00	0.00
120.40	0.28	159.78	120.40	-0.15	-0.21	0.08	516704.6	4401603.9	39°45'51.101"N	80°48'17.900"W	0.22	159.78	0.31
220.40	0.05	237.21	220.40	-0.29	-0.46	0.12	516704.6	4401603.8	39°45'51.099"N	80°48'17.900"W	0.48	164.89	0.27
320.40	0.14	286.15	320.40	-0.15	-0.45	-0.03	516704.6	4401603.8	39°45'51.099"N	80°48'17.902"W	0.45	183.73	0.11
420.40	0.09	344.84	420.40	0.02	-0.34	-0.17	516704.6	4401603.8	39°45'51.100"N	80°48'17.904"W	0.38	206.11	0.12
520.40	0.13	67.76	520.40	-0.01	-0.22	-0.08	516704.6	4401603.9	39°45'51.101"N	80°48'17.902"W	0.24	200.40	0.15
620.40	0.06	113.43	620.40	-0.14	-0.20	0.07	516704.6	4401603.9	39°45'51.101"N	80°48'17.900"W	0.21	160.71	0.10
720.40	0.04	93.43	720.40	-0.23	-0.22	0.15	516704.7	4401603.9	39°45'51.101"N	80°48'17.899"W	0.27	145.59	0.03
820.40	0.05	74.70	820.40	-0.30	-0.21	0.23	516704.7	4401603.9	39°45'51.101"N	80°48'17.898"W	0.31	132.94	0.02
920.40	0.10	62.48	920.40	-0.39	-0.16	0.35	516704.7	4401603.9	39°45'51.102"N	80°48'17.897"W	0.39	114.90	0.05
1020.40	0.16	56.44	1020.40	-0.52	-0.04	0.54	516704.8	4401603.9	39°45'51.103"N	80°48'17.894"W	0.55	94.70	0.06
1120.40	0.18	54.58	1120.40	-0.68	0.12	0.79	516704.8	4401604.0	39°45'51.105"N	80°48'17.891"W	0.80	81.09	0.02
1220.40	0.18	49.98	1220.40	-0.83	0.32	1.04	516704.9	4401604.0	39°45'51.106"N	80°48'17.888"W	1.08	73.06	0.01
1320.40	0.29	60.92	1320.40	-1.06	0.54	1.38	516705.0	4401604.1	39°45'51.109"N	80°48'17.884"W	1.48	68.61	0.12
1426.40	0.38	71.72	1420.39	-1.47	0.77	1.91	516705.2	4401604.2	39°45'51.111"N	80°48'17.877"W	2.06	68.17	0.11
1520.40	0.75	73.54	1520.39	-2.22	1.06	2.86	516705.5	4401604.3	39°45'51.114"N	80°48'17.865"W	3.04	69.71	0.37
1620.40	1.17	80.51	1620.38	-3.59	1.41	4.49	516706.0	4401604.4	39°45'51.117"N	80°48'17.844"W	4.71	72.57	0.44
1720.40	1.01	81.64	1720.36	-5.21	1.71	6.37	516706.5	4401604.5	39°45'51.120"N	80°48'17.820"W	6.59	75.00	0.16
1820.40	0.58	68.88	1820.35	-6.32	2.02	7.71	516707.0	4401604.5	39°45'51.123"N	80°48'17.803"W	7.97	75.35	0.46
1920.40	0.28	42.03	1920.34	-6.77	2.38	8.35	516707.2	4401604.7	39°45'51.127"N	80°48'17.794"W	8.68	74.09	0.35
2020.40	0.32	40.14	2020.34	-6.93	2.78	8.69	516707.3	4401604.8	39°45'51.131"N	80°48'17.790"W	9.13	72.29	0.04
2120.40	0.36	44.83	2120.34	-7.13	3.21	9.09	516707.4	4401604.9	39°45'51.135"N	80°48'17.785"W	9.65	70.55	0.05
2220.40	0.28	52.34	2220.34	-7.37	3.58	9.51	516707.5	4401605.0	39°45'51.139"N	80°48'17.779"W	10.16	69.35	0.09
2320.40	0.30	53.22	2320.34	-7.62	3.89	9.91	516707.6	4401605.1	39°45'51.142"N	80°48'17.774"W	10.65	68.57	0.02

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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]
2420.40	0.14	32.65	2420.34	-7.78	4.15	10.19	516707.7	4401605.2	39°45'51.144"N	80°48'17.771"W	11.00	67.84	0.18
2520.40	0.24	337.20	2520.34	-7.65	4.45	10.17	516707.7	4401605.3	39°45'51.147"N	80°48'17.771"W	11.10	66.39	0.20
2620.40	0.33	326.70	2620.34	-7.26	4.88	9.93	516707.6	4401605.4	39°45'51.151"N	80°48'17.774"W	11.07	63.84	0.10
2720.40	0.35	314.08	2720.33	-6.73	5.33	9.56	516707.5	4401605.6	39°45'51.156"N	80°48'17.779"W	10.94	60.84	0.08
2762.40	0.83	198.23	2762.33	-6.64	5.13	9.37	516707.5	4401605.5	39°45'51.154"N	80°48'17.781"W	10.68	61.28	2.46
2793.40	1.32	183.63	2793.33	-6.77	4.56	9.28	516707.4	4401605.3	39°45'51.148"N	80°48'17.782"W	10.34	63.81	1.80
2824.40	2.72	178.17	2824.31	-7.20	3.47	9.28	516707.4	4401605.0	39°45'51.138"N	80°48'17.782"W	9.91	69.48	4.55
2855.40	3.55	182.23	2855.26	-7.84	1.78	9.26	516707.4	4401604.5	39°45'51.121"N	80°48'17.783"W	9.43	79.14	2.77
2887.40	4.68	181.18	2887.18	-8.68	-0.52	9.20	516707.4	4401603.8	39°45'51.098"N	80°48'17.784"W	9.21	93.22	3.54
2919.40	5.62	181.89	2919.05	-9.72	-3.39	9.12	516707.4	4401602.9	39°45'51.070"N	80°48'17.785"W	9.73	110.39	2.94
2951.40	6.41	181.56	2950.87	-10.93	-6.74	9.02	516707.4	4401601.9	39°45'51.037"N	80°48'17.786"W	11.26	126.78	2.47
2982.40	7.20	182.96	2981.65	-12.22	-10.41	8.87	516707.3	4401600.8	39°45'51.000"N	80°48'17.788"W	13.68	139.57	2.60
3014.40	7.77	180.32	3013.38	-13.73	-14.58	8.76	516707.3	4401599.5	39°45'50.959"N	80°48'17.790"W	17.00	149.01	2.08
3046.40	7.96	181.13	3045.08	-15.38	-18.95	8.70	516707.3	4401598.2	39°45'50.916"N	80°48'17.790"W	20.86	155.35	0.69
3077.40	8.20	178.53	3075.77	-17.09	-23.31	8.71	516707.3	4401596.8	39°45'50.873"N	80°48'17.790"W	24.89	159.50	1.41
3109.40	8.39	177.79	3107.44	-19.02	-27.93	8.86	516707.3	4401595.4	39°45'50.827"N	80°48'17.789"W	29.30	162.39	0.68
3140.40	8.77	178.08	3138.09	-20.96	-32.55	9.03	516707.4	4401594.0	39°45'50.782"N	80°48'17.787"W	33.78	164.50	1.23
3171.40	9.01	176.92	3168.72	-23.02	-37.33	9.24	516707.4	4401592.6	39°45'50.734"N	80°48'17.784"W	38.46	166.10	0.97
3203.40	9.45	175.84	3200.30	-25.31	-42.46	9.56	516707.5	4401591.0	39°45'50.684"N	80°48'17.780"W	43.52	167.31	1.48
3234.40	10.27	177.27	3230.85	-27.66	-47.75	9.88	516707.6	4401589.4	39°45'50.631"N	80°48'17.776"W	48.77	168.31	2.76
3266.40	11.19	176.46	3262.29	-30.27	-53.70	10.21	516707.7	4401587.6	39°45'50.572"N	80°48'17.772"W	54.66	169.24	2.91
3298.40	11.92	177.71	3293.64	-33.05	-60.10	10.53	516707.8	4401585.6	39°45'50.509"N	80°48'17.768"W	61.02	170.06	2.41
3329.40	12.52	178.46	3323.93	-35.80	-66.66	10.75	516707.9	4401583.6	39°45'50.444"N	80°48'17.766"W	67.52	170.84	2.00
3360.40	13.04	177.75	3354.17	-38.67	-73.51	10.98	516708.0	4401581.5	39°45'50.377"N	80°48'17.763"W	74.33	171.51	1.75
3393.40	14.00	176.33	3386.25	-42.04	-81.22	11.38	516708.1	4401579.2	39°45'50.300"N	80°48'17.758"W	82.01	172.02	3.08
3424.40	15.34	174.36	3416.24	-45.67	-89.04	12.02	516708.3	4401576.8	39°45'50.223"N	80°48'17.750"W	89.85	172.31	4.61
3455.40	16.19	174.30	3446.07	-49.69	-97.42	12.85	516708.5	4401574.3	39°45'50.140"N	80°48'17.739"W	98.27	172.48	2.74
3486.40	17.04	173.37	3475.78	-53.99	-106.24	13.81	516708.8	4401571.6	39°45'50.053"N	80°48'17.728"W	107.13	172.59	2.87
3518.40	17.59	172.86	3506.33	-58.72	-115.69	14.95	516709.2	4401568.7	39°45'49.960"N	80°48'17.713"W	116.65	172.64	1.78
3549.40	18.52	172.01	3535.80	-63.59	-125.21	16.22	516709.5	4401565.8	39°45'49.866"N	80°48'17.697"W	126.26	172.62	3.12
3580.40	19.53	171.29	3565.11	-68.82	-135.21	17.69	516710.0	4401562.7	39°45'49.767"N	80°48'17.679"W	136.36	172.55	3.34

10/30/2015

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WELL PATH DATA † = interpolated/extrapolated station

MID [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]
3612.40	19.74	169.14	3595.25	-74.62	-145.81	19.51	516710.6	4401559.5	39°45'49.662"N	80°48'17.656"W	147.11	172.38	2.35
3676.40	19.90	168.58	3655.46	-86.76	-167.10	23.71	516711.8	4401553.0	39°45'49.452"N	80°48'17.602"W	168.77	171.93	0.39
3739.40	19.02	166.35	3714.86	-98.91	-187.58	28.25	516713.2	4401546.8	39°45'49.249"N	80°48'17.545"W	189.70	171.44	1.83
3803.40	18.05	165.35	3775.54	-111.15	-207.31	33.22	516714.7	4401540.8	39°45'49.054"N	80°48'17.482"W	209.96	170.90	1.59
3866.40	19.02	167.29	3835.27	-123.06	-226.77	37.95	516716.2	4401534.8	39°45'48.861"N	80°48'17.422"W	229.92	170.50	1.82
3929.40	18.79	165.25	3894.87	-135.23	-246.59	42.79	516717.6	4401528.8	39°45'48.665"N	80°48'17.360"W	250.28	170.16	1.11
3993.40	20.79	165.68	3955.09	-148.38	-267.57	48.23	516719.3	4401522.4	39°45'48.458"N	80°48'17.291"W	271.88	169.78	3.13
4056.40	21.37	167.56	4013.87	-161.77	-289.61	53.46	516720.9	4401515.7	39°45'48.240"N	80°48'17.225"W	294.51	169.54	1.41
4119.40	21.01	167.37	4072.61	-174.96	-311.84	58.41	516722.4	4401508.9	39°45'48.020"N	80°48'17.162"W	317.26	169.39	0.58
4183.40	20.86	168.31	4132.39	-188.09	-334.20	63.22	516723.9	4401502.1	39°45'47.799"N	80°48'17.101"W	340.12	169.29	0.57
4247.40	20.80	171.20	4192.21	-200.51	-356.58	67.27	516725.1	4401495.3	39°45'47.578"N	80°48'17.050"W	362.87	169.32	1.61
4310.40	19.79	172.37	4251.30	-211.80	-378.21	70.40	516726.1	4401488.7	39°45'47.364"N	80°48'17.010"W	384.71	169.46	1.73
4373.40	20.08	172.81	4310.52	-222.62	-399.51	73.17	516726.9	4401482.2	39°45'47.154"N	80°48'16.976"W	406.16	169.62	0.52
4436.40	20.94	175.04	4369.53	-233.29	-421.46	75.49	516727.6	4401475.5	39°45'46.937"N	80°48'16.946"W	428.16	169.84	1.84
4500.40	20.54	171.51	4429.38	-244.47	-443.96	78.14	516728.4	4401468.7	39°45'46.714"N	80°48'16.913"W	450.78	170.02	2.05
4562.40	20.40	170.89	4487.47	-255.85	-465.38	81.46	516729.4	4401462.1	39°45'46.502"N	80°48'16.871"W	472.46	170.07	0.42
4625.40	20.35	175.56	4546.53	-266.69	-487.15	84.04	516730.2	4401455.5	39°45'46.287"N	80°48'16.839"W	494.34	170.21	2.58
4688.40	20.28	177.95	4605.61	-276.31	-508.98	85.28	516730.6	4401448.9	39°45'46.071"N	80°48'16.823"W	516.08	170.49	1.32
4752.40	19.63	178.89	4665.77	-285.35	-530.81	85.89	516730.8	4401442.2	39°45'45.856"N	80°48'16.816"W	537.72	170.81	1.13
4814.40	19.06	178.00	4724.27	-293.84	-551.34	86.44	516730.9	4401436.0	39°45'45.653"N	80°48'16.810"W	558.08	171.09	1.04
4877.40	18.40	174.44	4783.92	-302.91	-571.56	87.77	516731.3	4401429.8	39°45'45.453"N	80°48'16.793"W	578.26	171.27	2.04
4940.40	18.33	170.58	4843.70	-312.95	-591.26	90.36	516732.1	4401423.8	39°45'45.258"N	80°48'16.761"W	598.13	171.31	1.95
5003.40	18.65	171.94	4903.45	-323.42	-611.01	93.39	516733.1	4401417.8	39°45'45.063"N	80°48'16.723"W	618.11	171.31	0.85
5066.40	19.53	170.34	4962.99	-334.26	-631.36	96.57	516734.0	4401411.6	39°45'44.862"N	80°48'16.682"W	638.71	171.30	1.63
5129.40	21.19	171.16	5022.05	-345.90	-653.00	100.09	516735.1	4401405.0	39°45'44.648"N	80°48'16.638"W	660.62	171.29	2.67
5192.40	21.29	170.28	5080.77	-358.05	-675.52	103.77	516736.2	4401398.1	39°45'44.425"N	80°48'16.591"W	683.45	171.27	0.53
5255.40	21.71	167.35	5139.39	-370.97	-698.17	108.25	516737.6	4401391.2	39°45'44.201"N	80°48'16.535"W	706.51	171.19	1.83
5318.40	20.86	168.73	5198.09	-384.03	-720.54	113.00	516739.0	4401384.4	39°45'43.980"N	80°48'16.475"W	729.34	171.09	1.57
5380.40	18.84	171.82	5256.41	-395.39	-741.27	116.58	516740.1	4401378.1	39°45'43.775"N	80°48'16.429"W	750.38	171.06	3.67
5443.40	18.85	170.54	5316.03	-406.08	-761.38	119.70	516741.1	4401372.0	39°45'43.576"N	80°48'16.390"W	770.73	171.07	0.66
5507.40	17.73	169.53	5376.79	-416.96	-781.16	123.17	516742.1	4401365.9	39°45'43.381"N	80°48'16.346"W	790.81	171.04	1.82

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5571.40	17.26	168.42	5437.83	-427.68	-800.05	126.84	516743.3	4401360.2	39°45'43.194"N	80°48'16.299"W	810.04	170.99	0.90
5634.40	17.28	169.59	5497.99	-438.10	-818.41	130.41	516744.3	4401354.6	39°45'43.013"N	80°48'16.254"W	828.73	170.95	0.55
5698.40	17.67	171.19	5559.04	-448.42	-837.35	133.62	516745.3	4401348.8	39°45'42.825"N	80°48'16.214"W	847.95	170.93	0.97
5761.40	19.20	171.50	5618.81	-458.83	-857.05	136.61	516746.2	4401342.8	39°45'42.631"N	80°48'16.176"W	867.87	170.94	2.43
5899.00	19.81	167.41	5748.51	-484.13	-902.18	145.04	516748.8	4401329.1	39°45'42.184"N	80°48'16.069"W	913.77	170.87	1.09
5994.00	15.49	175.51	5839.04	-499.30	-930.56	149.54	516750.2	4401320.4	39°45'41.904"N	80°48'16.012"W	942.50	170.87	5.22
6089.00	15.76	190.59	5930.56	-507.88	-955.90	148.17	516749.8	4401312.7	39°45'41.653"N	80°48'16.031"W	967.31	171.19	4.27
6184.00	20.47	213.27	6020.94	-507.62	-982.52	136.66	516746.2	4401304.6	39°45'41.391"N	80°48'16.179"W	991.98	172.08	8.84
6278.00	28.46	236.68	6106.63	-492.12	-1008.67	108.82	516737.8	4401296.6	39°45'41.133"N	80°48'16.536"W	1014.52	173.84	13.22
6373.00	37.41	255.93	6186.50	-456.28	-1028.21	61.69	516723.4	4401290.7	39°45'40.941"N	80°48'17.140"W	1030.06	176.57	14.40
6469.00	42.63	275.86	6260.30	-401.62	-1032.00	0.77	516704.8	4401289.5	39°45'40.904"N	80°48'17.920"W	1032.00	179.96	14.36
6564.00	43.65	289.03	6329.76	-338.01	-1017.99	-62.36	516685.6	4401293.8	39°45'41.044"N	80°48'18.728"W	1019.90	183.51	9.53
6658.00	50.56	291.30	6393.70	-269.27	-994.20	-126.93	516665.9	4401301.0	39°45'41.281"N	80°48'19.554"W	1002.27	187.28	7.56
6753.00	57.94	287.31	6449.18	-192.40	-968.85	-199.66	516643.8	4401308.7	39°45'41.533"N	80°48'20.485"W	989.21	191.64	8.48
6849.00	65.34	285.95	6494.76	-108.49	-944.73	-280.55	516619.1	4401316.1	39°45'41.773"N	80°48'21.520"W	985.51	196.54	7.81
6943.00	72.73	286.31	6528.37	-21.38	-920.35	-364.81	516593.5	4401323.5	39°45'42.016"N	80°48'22.599"W	990.02	201.62	7.87
7038.00	78.48	288.40	6551.98	70.17	-892.90	-452.59	516566.7	4401331.9	39°45'42.289"N	80°48'23.722"W	1001.05	206.88	6.42
7133.00	88.80	289.51	6562.49	164.24	-862.26	-541.76	516539.5	4401341.2	39°45'42.594"N	80°48'24.863"W	1018.33	212.14	10.92
7167.00	90.71	289.66	6562.63	198.18	-850.87	-573.80	516529.8	4401344.7	39°45'42.707"N	80°48'25.273"W	1026.26	213.99	5.63
7228.00	90.37	291.04	6562.06	259.12	-829.65	-630.98	516512.4	4401351.2	39°45'42.918"N	80°48'26.004"W	1042.34	217.25	2.33
7323.00	90.62	290.98	6561.23	354.07	-795.59	-719.67	516485.3	4401361.5	39°45'43.256"N	80°48'27.139"W	1072.79	222.13	0.27
7418.00	90.65	291.49	6560.18	449.02	-761.19	-808.21	516458.4	4401372.0	39°45'43.598"N	80°48'28.272"W	1110.23	226.72	0.54
7513.00	90.48	293.73	6559.31	544.01	-724.67	-895.90	516431.6	4401383.1	39°45'43.961"N	80°48'29.394"W	1152.29	231.03	2.37
7608.00	90.15	294.69	6558.86	638.98	-685.71	-982.54	516405.2	4401395.0	39°45'44.348"N	80°48'30.502"W	1198.16	235.09	1.04
7703.00	90.77	294.22	6558.09	733.94	-646.39	-1069.02	516378.9	4401407.0	39°45'44.738"N	80°48'31.608"W	1249.24	238.84	0.82
7798.00	90.71	293.19	6556.87	828.92	-608.20	-1155.99	516352.4	4401418.6	39°45'45.117"N	80°48'32.721"W	1306.22	242.25	1.09
7891.00	90.62	293.07	6555.79	921.92	-571.67	-1241.51	516326.3	4401429.8	39°45'45.480"N	80°48'33.815"W	1366.80	245.28	0.16
7985.00	90.55	294.44	6554.83	1015.90	-533.80	-1327.54	516300.1	4401441.3	39°45'45.856"N	80°48'34.916"W	1430.84	248.10	1.46
8080.00	90.83	294.37	6553.68	1110.86	-494.55	-1414.04	516273.8	4401453.3	39°45'46.246"N	80°48'36.023"W	1498.03	250.72	0.30
8175.00	91.32	292.19	6551.90	1205.83	-457.02	-1501.29	516247.2	4401464.7	39°45'46.619"N	80°48'37.139"W	1569.31	253.07	2.35
8270.00	90.55	289.95	6550.35	1300.76	-422.87	-1589.92	516220.2	4401475.1	39°45'46.958"N	80°48'38.273"W	1645.19	255.11	2.49

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WELL PATH 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]
8365.00	90.62	288.25	6549.38	1395.55	-391.79	-1679.68	516192.8	4401484.6	39°45'47.267"N	80°48'39.421"W	1724.77	256.87	1.79
8460.00	90.46	290.39	6548.48	1490.36	-360.36	-1769.32	516165.5	4401494.1	39°45'47.580"N	80°48'40.568"W	1805.65	258.49	2.26
8555.00	90.37	293.77	6547.80	1585.34	-324.66	-1857.34	516138.7	4401505.0	39°45'47.934"N	80°48'41.695"W	1885.50	260.09	3.56
8650.00	90.68	295.41	6546.93	1680.29	-285.13	-1943.72	516112.4	4401517.1	39°45'48.327"N	80°48'42.800"W	1964.52	261.66	1.76
8744.00	90.77	293.08	6545.74	1774.24	-246.53	-2029.41	516086.3	4401528.8	39°45'48.710"N	80°48'43.896"W	2044.33	263.07	2.48
8838.00	90.58	293.65	6544.63	1868.23	-209.26	-2115.70	516060.0	4401540.2	39°45'49.080"N	80°48'45.000"W	2126.02	264.35	0.64
8933.00	90.62	294.43	6543.63	1963.21	-170.56	-2202.45	516033.6	4401552.0	39°45'49.464"N	80°48'46.110"W	2209.05	265.57	0.82
9026.00	91.54	294.17	6541.88	2056.16	-132.30	-2287.20	516007.7	4401563.6	39°45'49.844"N	80°48'47.194"W	2291.02	266.69	1.03
9120.00	90.62	291.92	6540.11	2150.14	-95.51	-2373.67	515981.4	4401574.8	39°45'50.209"N	80°48'48.300"W	2375.60	267.70	2.59
9215.00	90.71	291.65	6539.01	2245.11	-60.25	-2461.88	515954.5	4401585.6	39°45'50.560"N	80°48'49.429"W	2462.62	268.60	0.30
9310.00	90.46	292.28	6538.04	2340.10	-24.72	-2549.98	515927.7	4401596.4	39°45'50.913"N	80°48'50.556"W	2550.10	269.45	0.71
9405.00	90.46	293.40	6537.27	2435.09	12.15	-2637.53	515901.0	4401607.6	39°45'51.279"N	80°48'51.676"W	2637.56	270.26	1.18
9500.00	90.77	295.19	6536.25	2530.05	51.23	-2724.11	515874.6	4401619.5	39°45'51.667"N	80°48'52.784"W	2724.59	271.08	1.91
9595.00	91.51	295.32	6534.36	2624.95	91.76	-2810.01	515848.5	4401631.9	39°45'52.069"N	80°48'53.883"W	2811.51	271.87	0.79
9691.00	91.88	293.72	6531.52	2720.86	131.58	-2897.31	515821.9	4401644.0	39°45'52.464"N	80°48'55.000"W	2900.30	272.60	1.71
9786.00	90.49	291.08	6529.56	2815.83	167.77	-2985.12	515795.1	4401655.0	39°45'52.824"N	80°48'56.123"W	2989.83	273.22	3.14
9881.00	90.58	289.85	6528.67	2910.74	200.98	-3074.11	515768.0	4401665.2	39°45'53.154"N	80°48'57.262"W	3080.68	273.74	1.30
9974.00	90.22	291.72	6528.02	3003.67	233.98	-3161.05	515741.5	4401675.2	39°45'53.482"N	80°48'58.375"W	3169.70	274.23	2.05
10068.00	90.62	293.05	6527.33	3097.67	269.78	-3247.97	515715.0	4401686.1	39°45'53.837"N	80°48'59.487"W	3259.15	274.75	1.48
10164.00	90.49	294.06	6526.40	3193.65	308.14	-3335.96	515688.2	4401697.8	39°45'54.218"N	80°49'00.613"W	3350.16	275.28	1.06
10259.00	90.83	292.84	6525.31	3288.64	345.94	-3423.11	515661.7	4401709.3	39°45'54.594"N	80°49'01.728"W	3440.55	275.77	1.33
10354.00	90.83	292.70	6523.93	3383.63	382.71	-3510.70	515635.0	4401720.5	39°45'54.959"N	80°49'02.848"W	3531.49	276.22	0.15
10448.00	90.28	292.89	6523.02	3477.62	419.12	-3597.35	515608.6	4401731.6	39°45'55.320"N	80°49'03.957"W	3621.68	276.65	0.62
10543.00	90.28	293.27	6522.56	3572.62	456.36	-3684.74	515581.9	4401743.0	39°45'55.690"N	80°49'05.075"W	3712.90	277.06	0.40
10639.00	90.28	293.66	6522.09	3668.62	494.59	-3772.80	515555.1	4401754.6	39°45'56.070"N	80°49'06.202"W	3805.09	277.47	0.41
10734.00	91.08	291.73	6520.96	3763.60	531.24	-3860.44	515528.4	4401765.8	39°45'56.434"N	80°49'07.323"W	3896.82	277.84	2.20
10829.00	90.62	291.95	6519.55	3858.58	566.58	-3948.61	515501.5	4401776.6	39°45'56.785"N	80°49'08.451"W	3989.05	278.17	0.54
10924.00	90.62	291.74	6518.52	3953.56	601.92	-4036.78	515474.7	4401787.3	39°45'57.136"N	80°49'09.580"W	4081.41	278.48	0.22
11019.00	90.34	292.37	6517.73	4048.54	637.59	-4124.83	515447.9	4401798.2	39°45'57.490"N	80°49'10.706"W	4173.81	278.79	0.73
11114.00	90.34	294.45	6517.16	4143.53	675.34	-4212.00	515421.3	4401809.7	39°45'57.865"N	80°49'11.822"W	4265.80	279.11	2.19
11208.00	90.46	293.93	6516.51	4237.50	713.85	-4297.74	515395.2	4401821.4	39°45'58.247"N	80°49'12.919"W	4356.63	279.43	0.57

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WELL PATH 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]
11304.00	90.31	293.67	6515.86	4333.49	752.59	-4385.58	515368.4	4401833.2	39°45'58.632"N	80°49'14.042"W	4449.68	279.74	0.31
11399.00	90.18	292.21	6515.46	4428.49	789.62	-4473.06	515341.8	4401844.5	39°45'58.999"N	80°49'15.162"W	4542.22	280.01	1.54
11494.00	90.22	294.63	6515.13	4523.47	827.37	-4560.23	515315.2	4401856.0	39°45'59.374"N	80°49'16.277"W	4634.68	280.28	2.55
11589.00	90.34	298.47	6514.66	4618.26	869.83	-4645.19	515289.3	4401869.0	39°45'59.795"N	80°49'17.364"W	4725.93	280.61	4.04
11684.00	90.83	296.60	6513.69	4712.93	913.74	-4729.42	515263.7	4401882.3	39°46'00.231"N	80°49'18.442"W	4816.88	280.94	2.03
11779.00	91.60	292.98	6511.68	4807.84	953.56	-4815.64	515237.4	4401894.5	39°46'00.626"N	80°49'19.545"W	4909.14	281.20	3.89
11874.00	91.63	289.30	6509.00	4902.74	987.80	-4904.19	515210.4	4401904.9	39°46'00.966"N	80°49'20.678"W	5002.68	281.39	3.87
11969.00	90.34	289.02	6507.36	4997.53	1018.98	-4993.91	515183.1	4401914.4	39°46'01.276"N	80°49'21.826"W	5096.81	281.53	1.39
12063.00	90.34	289.28	6506.81	5091.33	1049.81	-5082.71	515156.0	4401923.8	39°46'01.583"N	80°49'22.962"W	5190.00	281.67	0.28
12158.00	90.31	291.14	6506.27	5186.22	1082.63	-5171.86	515128.8	4401933.8	39°46'01.909"N	80°49'24.103"W	5283.96	281.82	1.96
12253.00	90.09	292.82	6505.94	5281.21	1118.18	-5259.95	515102.0	4401944.6	39°46'02.262"N	80°49'25.230"W	5377.49	282.00	1.78
12348.00	90.58	292.92	6505.38	5376.21	1155.10	-5347.48	515075.3	4401955.9	39°46'02.628"N	80°49'26.350"W	5470.81	282.19	0.53
12444.00	90.80	291.67	6504.22	5472.19	1191.52	-5436.29	515048.3	4401967.0	39°46'02.990"N	80°49'27.487"W	5565.34	282.36	1.32
12539.00	90.15	289.89	6503.44	5567.12	1225.22	-5525.11	515021.2	4401977.2	39°46'03.325"N	80°49'28.623"W	5659.33	282.50	1.99
12634.00	90.22	288.71	6503.13	5661.94	1256.62	-5614.77	514993.9	4401986.8	39°46'03.637"N	80°49'29.771"W	5753.67	282.62	1.24
12673	90.22	288.71	6502.98	5700.83	1269.13	-5651.7	514982.7	4401990.6	39°46'03.761"N	80°49'30.244"W	5792.45	282.66	0.00

Received
Office of Oil & Gas
JUL 30 2015