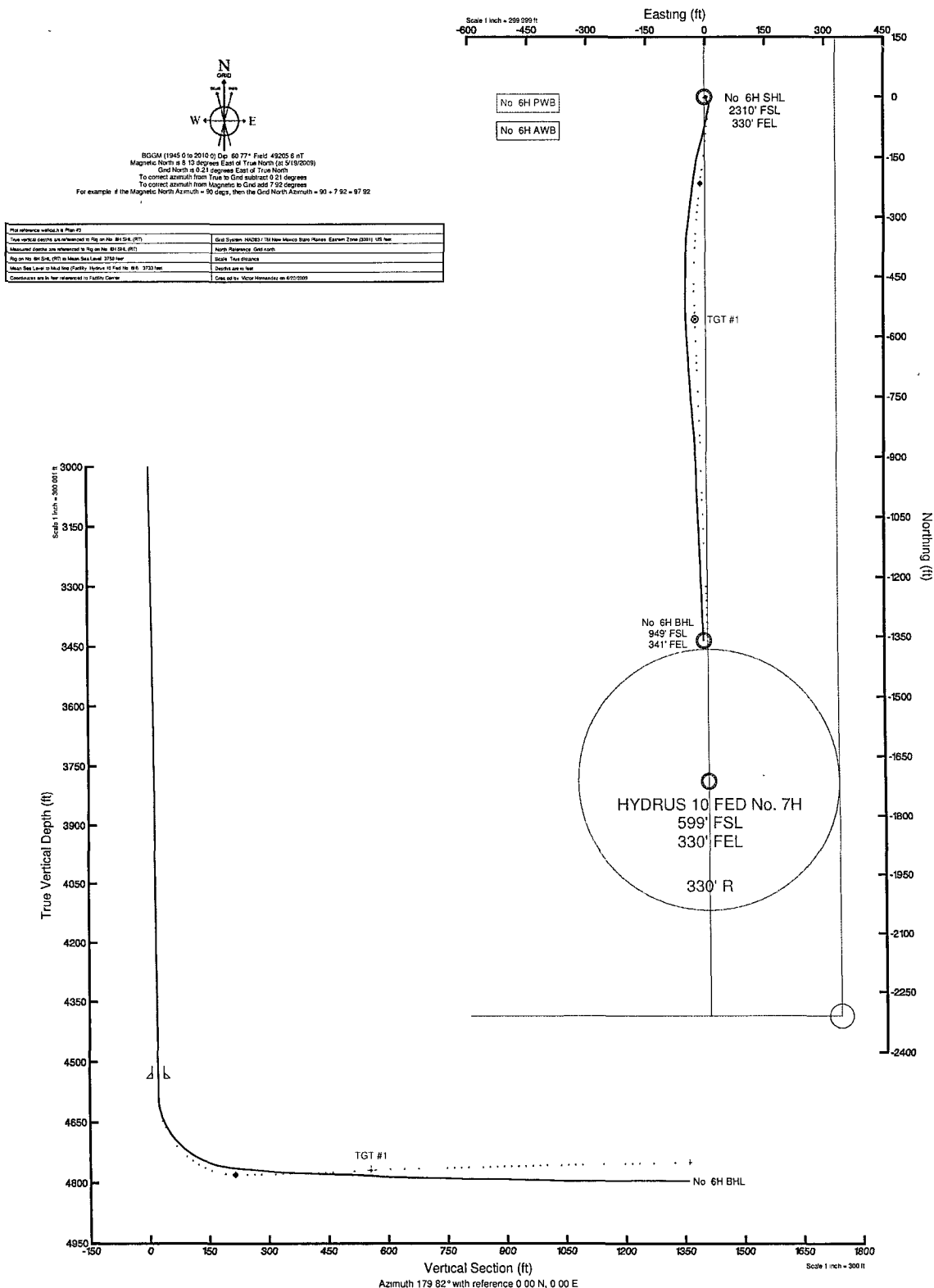






Actual Wellpath Report

No. 6H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 6H SHL
Area	Eddy County, NM	Well	No. 6H
Field	(Hydrus) Sec 10, T17S, R30E	Wellbore	No. 6H AWB
Facility	Hydrus 10 Fed No. 6H		

REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico State Planes, Eastern Zone (3001), US feet	Software System	WellArchitect® 2.0
North Reference	Grid	User	Victor Hernandez
Scale	0.999925	Report Generated	6/22/2009 at 10:23:49 AM
Convergence at slot	0.21° East	Database/Source file	WA_Midland/No. 6H_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	0.00	0.00	658369.02	672480.92	32°50'53.139"N	103°57'08.098"W
Facility Reference Pt			658369.02	672480.92	32°50'53.139"N	103°57'08.098"W
Field Reference Pt			658374.74	670729.93	32°50'35.813"N	103°57'08.105"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 6H SHL (RT) to Facility Vertical Datum	17.00ft
Horizontal Reference Pt	Facility Center	Rig on No. 6H SHL (RT) to Mean Sea Level	3750.00ft
Vertical Reference Pt	Rig on No. 6H SHL (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	Rig on No. 6H SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	179.82°



Actual Wellpath Report

No. 6H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 6H SHL
Area	Eddy County, NM	Well	No. 6H
Field	(Hydrus) Sec 10, T17S, R30E	Wellbore	No. 6H AWB
Facility	Hydrus 10 Fed No. 6H		

WELLPATH DATA (91 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
0.00	0.000	54.290	0.00	0.00	0.00	0.00	658369.02	672480.92	32°50'53.139"N	103°57'08.098"W	0.00
100.00	0.480	54.290	100.00	-0.24	0.24	0.34	658369.36	672481.16	32°50'53.141"N	103°57'08.094"W	0.48
200.00	0.190	33.060	200.00	-0.63	0.63	0.77	658369.79	672481.55	32°50'53.145"N	103°57'08.089"W	0.31
300.00	0.250	49.140	300.00	-0.91	0.91	1.03	658370.05	672481.83	32°50'53.148"N	103°57'08.086"W	0.09
400.00	0.220	140.060	400.00	-0.90	0.91	1.31	658370.34	672481.83	32°50'53.147"N	103°57'08.083"W	0.34
500.00	0.840	227.910	499.99	-0.26	0.27	0.89	658369.92	672481.19	32°50'53.141"N	103°57'08.088"W	0.86
600.00	0.390	222.510	599.99	0.48	-0.48	0.12	658369.14	672480.44	32°50'53.134"N	103°57'08.097"W	0.45
700.00	0.150	241.050	699.98	0.79	-0.79	-0.22	658368.80	672480.13	32°50'53.131"N	103°57'08.101"W	0.25
800.00	0.080	20.010	799.98	0.79	-0.79	-0.32	658368.71	672480.13	32°50'53.131"N	103°57'08.102"W	0.22
900.00	0.530	41.320	899.98	0.37	-0.37	0.01	658369.04	672480.55	32°50'53.135"N	103°57'08.098"W	0.46
1000.00	0.520	42.140	999.98	-0.31	0.31	0.62	658369.65	672481.23	32°50'53.142"N	103°57'08.091"W	0.01
1100.00	0.590	50.290	1099.97	-0.97	0.97	1.32	658370.35	672481.89	32°50'53.148"N	103°57'08.083"W	0.11
1200.00	0.730	58.780	1199.97	-1.63	1.63	2.27	658371.29	672482.55	32°50'53.155"N	103°57'08.072"W	0.17
1300.00	0.680	74.120	1299.96	-2.12	2.13	3.38	658372.40	672483.05	32°50'53.160"N	103°57'08.058"W	0.19
1400.00	0.650	75.380	1399.95	-2.42	2.43	4.50	658373.52	672483.35	32°50'53.162"N	103°57'08.045"W	0.03
1500.00	0.400	101.740	1499.95	-2.49	2.50	5.39	658374.41	672483.42	32°50'53.163"N	103°57'08.035"W	0.34
1600.00	0.370	115.930	1599.95	-2.27	2.29	6.02	658375.05	672483.21	32°50'53.161"N	103°57'08.027"W	0.10
1700.00	0.310	135.600	1699.95	-1.94	1.96	6.50	658375.53	672482.88	32°50'53.158"N	103°57'08.022"W	0.13
1800.00	0.270	142.400	1799.94	-1.56	1.58	6.84	658375.86	672482.50	32°50'53.154"N	103°57'08.018"W	0.05
1900.00	0.150	161.610	1899.94	-1.24	1.27	7.02	658376.04	672482.19	32°50'53.151"N	103°57'08.016"W	0.14
2000.00	0.130	204.790	1999.94	-1.02	1.04	7.01	658376.04	672481.96	32°50'53.149"N	103°57'08.016"W	0.10
2100.00	0.240	212.310	2099.94	-0.74	0.76	6.85	658375.88	672481.68	32°50'53.146"N	103°57'08.018"W	0.11
2200.00	0.350	218.660	2199.94	-0.32	0.34	6.55	658375.58	672481.26	32°50'53.142"N	103°57'08.021"W	0.11
2300.00	0.490	205.410	2299.94	0.30	-0.28	6.18	658375.20	672480.64	32°50'53.136"N	103°57'08.026"W	0.17
2400.00	0.480	210.890	2399.93	1.04	-1.03	5.78	658374.80	672479.89	32°50'53.128"N	103°57'08.030"W	0.05
2500.00	0.420	207.860	2499.93	1.73	-1.71	5.39	658374.42	672479.21	32°50'53.121"N	103°57'08.035"W	0.06
2600.00	0.280	192.260	2599.93	2.29	-2.27	5.17	658374.19	672478.65	32°50'53.116"N	103°57'08.038"W	0.17
2700.00	0.270	183.580	2699.93	2.76	-2.75	5.10	658374.13	672478.17	32°50'53.111"N	103°57'08.038"W	0.04
2800.00	0.410	191.640	2799.93	3.35	-3.33	5.02	658374.04	672477.59	32°50'53.105"N	103°57'08.039"W	0.15
2900.00	0.520	187.750	2899.92	4.15	-4.13	4.88	658373.91	672476.79	32°50'53.098"N	103°57'08.041"W	0.11



Actual Wellpath Report

No. 6H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 6H SHL
Area	Eddy County, NM	Well	No. 6H
Field	(Hydrus) Sec 10, T17S, R30E	Wellbore	No. 6H AWB
Facility	Hydrus 10 Fed No. 6H		

WELLPATH DATA (91 stations)											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
3000.00	0.740	193.520	2999.92	5.22	-5.21	4.67	658373.69	672475.71	32°50'53.087"N	103°57'08.044"W	0.23
3100.00	0.780	177.810	3099.91	6.53	-6.52	4.55	658373.57	672474.40	32°50'53.074"N	103°57'08.045"W	0.21
3200.00	0.880	157.060	3199.90	7.92	-7.91	4.87	658373.89	672473.02	32°50'53.060"N	103°57'08.041"W	0.31
3300.00	1.110	141.990	3299.88	9.39	-9.38	5.77	658374.79	672471.54	32°50'53.046"N	103°57'08.031"W	0.35
3400.00	1.070	146.100	3399.87	10.94	-10.91	6.88	658375.91	672470.01	32°50'53.030"N	103°57'08.018"W	0.09
3500.00	0.700	148.790	3499.85	12.24	-12.21	7.72	658376.74	672468.71	32°50'53.017"N	103°57'08.008"W	0.37
3600.00	0.650	143.850	3599.85	13.22	-13.19	8.37	658377.40	672467.73	32°50'53.008"N	103°57'08.001"W	0.08
3700.00	0.690	142.260	3699.84	14.15	-14.13	9.08	658378.10	672466.80	32°50'52.999"N	103°57'07.992"W	0.04
3800.00	0.710	141.890	3799.83	15.12	-15.09	9.83	658378.85	672465.83	32°50'52.989"N	103°57'07.984"W	0.02
3900.00	0.490	158.010	3899.83	16.01	-15.97	10.37	658379.39	672464.95	32°50'52.980"N	103°57'07.977"W	0.28
4000.00	0.570	152.060	3999.82	16.84	-16.81	10.76	658379.79	672464.11	32°50'52.972"N	103°57'07.973"W	0.10
4100.00	0.530	142.900	4099.82	17.65	-17.62	11.27	658380.30	672463.30	32°50'52.964"N	103°57'07.967"W	0.10
4200.00	0.530	156.220	4199.81	18.45	-18.41	11.74	658380.76	672462.51	32°50'52.956"N	103°57'07.961"W	0.12
4300.00	0.640	168.980	4299.81	19.42	-19.38	12.03	658381.06	672461.54	32°50'52.946"N	103°57'07.958"W	0.17
4400.00	0.630	173.000	4399.80	20.51	-20.48	12.21	658381.23	672460.45	32°50'52.936"N	103°57'07.956"W	0.05
4500.00	0.790	197.870	4499.79	21.72	-21.68	12.06	658381.09	672459.24	32°50'52.924"N	103°57'07.958"W	0.34
4541.00	0.820	214.400	4540.79	22.23	-22.19	11.81	658380.83	672458.73	32°50'52.919"N	103°57'07.961"W	0.57
4580.00	0.700	230.800	4579.79	22.61	-22.57	11.47	658380.49	672458.35	32°50'52.915"N	103°57'07.965"W	0.63
4611.00	8.900	192.800	4610.65	25.07	-25.03	10.79	658379.81	672455.89	32°50'52.891"N	103°57'07.973"W	26.97
4643.00	21.200	193.700	4641.50	33.13	-33.10	8.86	658377.89	672447.82	32°50'52.811"N	103°57'07.996"W	38.44
4675.00	32.600	190.900	4669.99	47.25	-47.23	5.85	658374.88	672433.69	32°50'52.671"N	103°57'08.032"W	35.84
4706.00	41.500	192.400	4694.71	65.51	-65.50	2.06	658371.08	672415.43	32°50'52.490"N	103°57'08.077"W	28.86
4738.00	50.900	193.000	4716.83	87.99	-88.00	-3.02	658366.00	672392.92	32°50'52.268"N	103°57'08.137"W	29.41
4770.00	60.100	196.400	4734.94	113.44	-113.47	-9.75	658359.28	672367.46	32°50'52.016"N	103°57'08.217"W	30.05
4798.00	69.100	194.600	4746.94	137.77	-137.82	-16.48	658352.54	672343.11	32°50'51.776"N	103°57'08.297"W	32.66
4830.00	76.600	190.000	4756.37	167.60	-167.67	-22.97	658346.06	672313.26	32°50'51.480"N	103°57'08.374"W	27.16
4862.00	81.400	188.000	4762.48	198.59	-198.68	-27.88	658341.15	672282.25	32°50'51.174"N	103°57'08.433"W	16.21
4893.00	85.400	187.100	4766.04	229.10	-229.20	-31.92	658337.11	672251.73	32°50'50.872"N	103°57'08.482"W	13.22
4925.00	85.400	187.400	4768.61	260.73	-260.85	-35.94	658333.08	672220.09	32°50'50.559"N	103°57'08.530"W	0.93
4957.00	84.900	186.500	4771.31	292.37	-292.50	-39.80	658329.22	672188.45	32°50'50.246"N	103°57'08.577"W	3.21



Actual Wellpath Report

No. 6H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 6H SHL
Area	Eddy County, NM	Well	No. 6H
Field	(Hydrus) Sec 10, T17S, R30E	Wellbore	No. 6H AWB
Facility	Hydrus 10 Fed No. 6H		

WELLPATH DATA (91 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]	
4988.00	84.800	187.200	4774.09	323.01	-323.15	-43.49	658325.54	672157.79	32°50'49.943"N	103°57'08.622"W	2.27	
5020.00	87.800	184.800	4776.16	354.75	-354.90	-46.82	658322.21	672126.04	32°50'49.629"N	103°57'08.662"W	12.00	
5052.00	87.900	180.000	4777.36	386.69	-386.84	-48.16	658320.87	672094.11	32°50'49.313"N	103°57'08.679"W	14.99	
5083.00	88.300	180.000	4778.39	417.67	-417.83	-48.16	658320.87	672063.13	32°50'49.006"N	103°57'08.680"W	1.29	
5115.00	88.000	180.100	4779.42	449.66	-449.81	-48.19	658320.84	672031.14	32°50'48.690"N	103°57'08.682"W	0.99	
5147.00	88.400	181.200	4780.43	481.64	-481.79	-48.55	658320.48	671999.17	32°50'48.373"N	103°57'08.688"W	3.66	
5179.00	89.000	180.600	4781.15	513.62	-513.78	-49.05	658319.97	671967.18	32°50'48.057"N	103°57'08.695"W	2.65	
5210.00	86.400	178.000	4782.40	544.59	-544.75	-48.68	658320.35	671936.22	32°50'47.751"N	103°57'08.692"W	11.86	
5242.00	86.300	177.700	4784.43	576.51	-576.66	-47.48	658321.55	671904.30	32°50'47.435"N	103°57'08.679"W	0.99	
5273.00	87.800	176.800	4786.03	607.43	-607.58	-45.99	658323.04	671873.39	32°50'47.129"N	103°57'08.663"W	5.64	
5305.00	88.400	176.200	4787.09	639.36	-639.50	-44.04	658324.99	671841.47	32°50'46.813"N	103°57'08.641"W	2.65	
5337.00	88.800	176.200	4787.87	671.29	-671.42	-41.92	658327.11	671809.55	32°50'46.497"N	103°57'08.618"W	1.25	
5369.00	88.600	176.900	4788.60	703.23	-703.36	-39.99	658329.03	671777.62	32°50'46.181"N	103°57'08.597"W	2.27	
5400.00	88.500	176.100	4789.38	734.17	-734.29	-38.10	658330.92	671746.69	32°50'45.875"N	103°57'08.576"W	2.60	
5432.00	88.800	175.300	4790.14	766.07	-766.19	-35.70	658333.32	671714.79	32°50'45.559"N	103°57'08.549"W	2.67	
5464.00	89.300	175.800	4790.67	797.98	-798.09	-33.22	658335.80	671682.89	32°50'45.243"N	103°57'08.521"W	2.21	
5495.00	89.900	174.800	4790.88	828.88	-828.98	-30.68	658338.34	671652.00	32°50'44.938"N	103°57'08.493"W	3.76	
5527.00	88.900	175.400	4791.22	860.77	-860.86	-27.95	658341.08	671620.12	32°50'44.622"N	103°57'08.462"W	3.64	
5559.00	88.800	176.500	4791.86	892.69	-892.78	-25.69	658343.34	671588.21	32°50'44.306"N	103°57'08.437"W	3.45	
5590.00	88.600	176.400	4792.56	923.63	-923.71	-23.77	658345.26	671557.28	32°50'44.000"N	103°57'08.416"W	0.72	
5622.00	88.700	180.500	4793.32	955.61	-955.68	-22.90	658346.12	671525.31	32°50'43.684"N	103°57'08.407"W	12.81	
5654.00	88.500	177.400	4794.10	987.59	-987.66	-22.32	658346.71	671493.33	32°50'43.367"N	103°57'08.401"W	9.70	
5686.00	88.200	178.100	4795.02	1019.55	-1019.63	-21.06	658347.96	671461.37	32°50'43.051"N	103°57'08.388"W	2.38	
5717.00	88.500	176.600	4795.91	1050.51	-1050.58	-19.63	658349.40	671430.42	32°50'42.745"N	103°57'08.373"W	4.93	
5749.00	90.500	177.400	4796.19	1082.47	-1082.53	-17.96	658351.07	671398.47	32°50'42.429"N	103°57'08.354"W	6.73	
5781.00	90.500	178.000	4795.91	1114.45	-1114.50	-16.67	658352.35	671366.50	32°50'42.112"N	103°57'08.341"W	1.87	
5812.00	90.700	176.700	4795.59	1145.42	-1145.47	-15.24	658353.79	671335.54	32°50'41.806"N	103°57'08.325"W	4.24	
5844.00	90.500	178.200	4795.25	1177.39	-1177.44	-13.81	658355.21	671303.58	32°50'41.489"N	103°57'08.310"W	4.73	
5876.00	90.700	178.300	4794.92	1209.37	-1209.42	-12.84	658356.19	671271.60	32°50'41.173"N	103°57'08.300"W	0.70	
5987.00	89.000	177.100	4795.21	1320.29	-1320.32	-8.38	658360.64	671160.70	32°50'40.075"N	103°57'08.252"W	1.87	



Actual Wellpath Report

No. 6H AWP

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INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	Cimarex Energy Co.	Slot	No. 6H SHL
Area	Eddy County, NM	Well	No. 6H
Field	(Hydrus) Sec 10, T17S, R30E	Wellbore	No. 6H AWB
Facility	Hydrus 10 Fed No. 6H		

WELLPATH DATA (91 stations) † = interpolated/extrapolated station											
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	DLS [°/100ft]
6027.00†	89.000	177.100	4795.91	1360.24	1360.27	6.36	658362.66	671120.76	32°50'39.680"N	103°57'08.230"W	0.00

TARGETS										
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape	
No. 6H PBHL		4750.00	-1361.47	4.30	658373.32	671119.55	32°50'39.668"N	103°57'08.105"W	point	
TGT #1		4769.00	-556.13	1.43	658370.45	671924.83	32°50'47.636"N	103°57'08.105"W	point	

WELLPATH COMPOSITION Ref Wellbore: No. 6H AWB Ref Wellpath: No. 6H AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	4541.00	Generic gyro - continuous (Standard)	GYRO	No. 6H AWB
4541.00	5987.00	NaviTrak (Standard)	MWD	No. 6H AWB
5987.00	6027.00	Blind Drilling (std)	Projection to bit	No. 6H AWB