

Results of Directional Survey

API number:	30-025-40334		
OGRID:		Operator:	APACHE CORP
		Property:	HIGH PLAINS STATE COM # 1H

surface	ULSTR:	L	23	T 14S	R 34E
				1700 FSL	330 FWL

BH Loc	ULSTR:	L	23	T 14S	R 34E
14730	MD	9727.0	TVD	1700	FSL
				728	FWL

Top Perf/OH	ULSTR:	L	24	T 14S	R 34E
14640	MD	9723.5	TVD	1710	FSL
					241
					5521
					FWL
Bot Perf/OH	ULSTR:	L	24	T 14S	R 34E
14730	MD	9727.0	TVD	1709	FSL
					330
					5610
					FWL

	MD	N/S	E/W	VD
	9823	0.16	379.39	9666.72
TOP PERFS/OH	9842	0.11	397.78	9700.73
	9855	0.08	410.37	9724.00
	14675	9.72	5225.54	9724.91
BOT PERFS/OH	14730	8.96	5280.49	9727.02
	14730	8.96	5280.49	9727.02

NEXT TO LAST	14675	9.72	5225.54	9724.91
LAST READING	14730	8.96	5280.49	9727.02
TD	14730	8.96	5280.49	9727.02

Surface Location	1700	FS	330	FW
Projected BHL	1709	FS	5610	FW
Location of				
Top Perfs/OH	1700	FS	728	FW
Bottom Perfs/OH	1709	FS	5610	FW

SUMMARY of Subsurface Locations

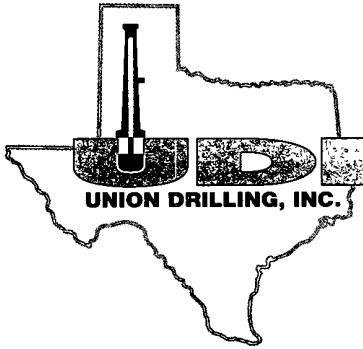
Surface Location	L-23-14S-34E	1700	FS	330	FW	Vert. Depth
Top Perfs/OH	L-23-14S-34E	1700	FS	728	FW	9700.73
Bottom Perfs/OH	L-24-14S-34E	1709	FS	5610	FW	9727.02
Projected TD	L-24-14S-34E	1709	FS	5610	FW	9727.02

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SUR: L-23-14s-34e, 1700/S & 330/W
 BHL: L-24-14s-34e, 1709/S & 5610/W
 API# 30-025-40334

Well Name & Number: High Plains State Com #1H

API Number: 30-025-40334

Location: 1,700 FSL & 330' FWL, Lot L, Sec. 23, Township 14-S, Range 34-E
Lea County, New Mexico

Operator: Apache Corporation

Drilling Contractor: Union Drilling, Inc.

The undersigned hereby certifies that she is an authorized representative of the drilling Contractor who drilled the above described well and that deviation survey tests were conducted and she obtained the following results: **RECORD OF INCLINATION**

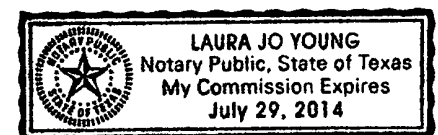
*11 Measured Depth (feet)	12 Course Length (Hundreds of feet)	*13 Angle of Inclination (Degrees)	14 Displacement per Hundred Feet (Sine of Angle X100)	15. Course Displacement (feet)	16 Accumulative Displacement (feet)
390	390	0.4	0.70	2.72	2.72
1215	825	.2	0.35	2.88	5.60
1984	769	.7	1.22	9.40	15.00
2742	758	.5	0.87	6.61	21.61
3700	958	.8	1.40	13.38	34.99
4532	832	.5	0.87	7.26	42.25
5388	856	.6	1.05	8.96	51.21
6338	950	1	1.75	16.58	67.79
7288	950	.6	1.05	9.95	77.74
8242	954	1.8	3.14	29.97	107.71
9101	859	.6	1.05	9.00	116.71
9250	149	4	6.98	10.40	127.11
DIRECTIONAL					
TOOK OVER					

Drilling Contractor: Union Drilling, Inc.

By: Seree Hendrix
 Seree Hendrix
 Title: Agent

Subscribed and sworn to before me this 28th Day of March, 2012.

COUNTY OF TAYLOR)
 4725 Loop 322 / Abilene, Texas 79602)
 STATE OF TEXAS)



Laura Jo Young
 325.698.9864 / Fax 325.698.6470
 My Commission Expires: July 29, 2014



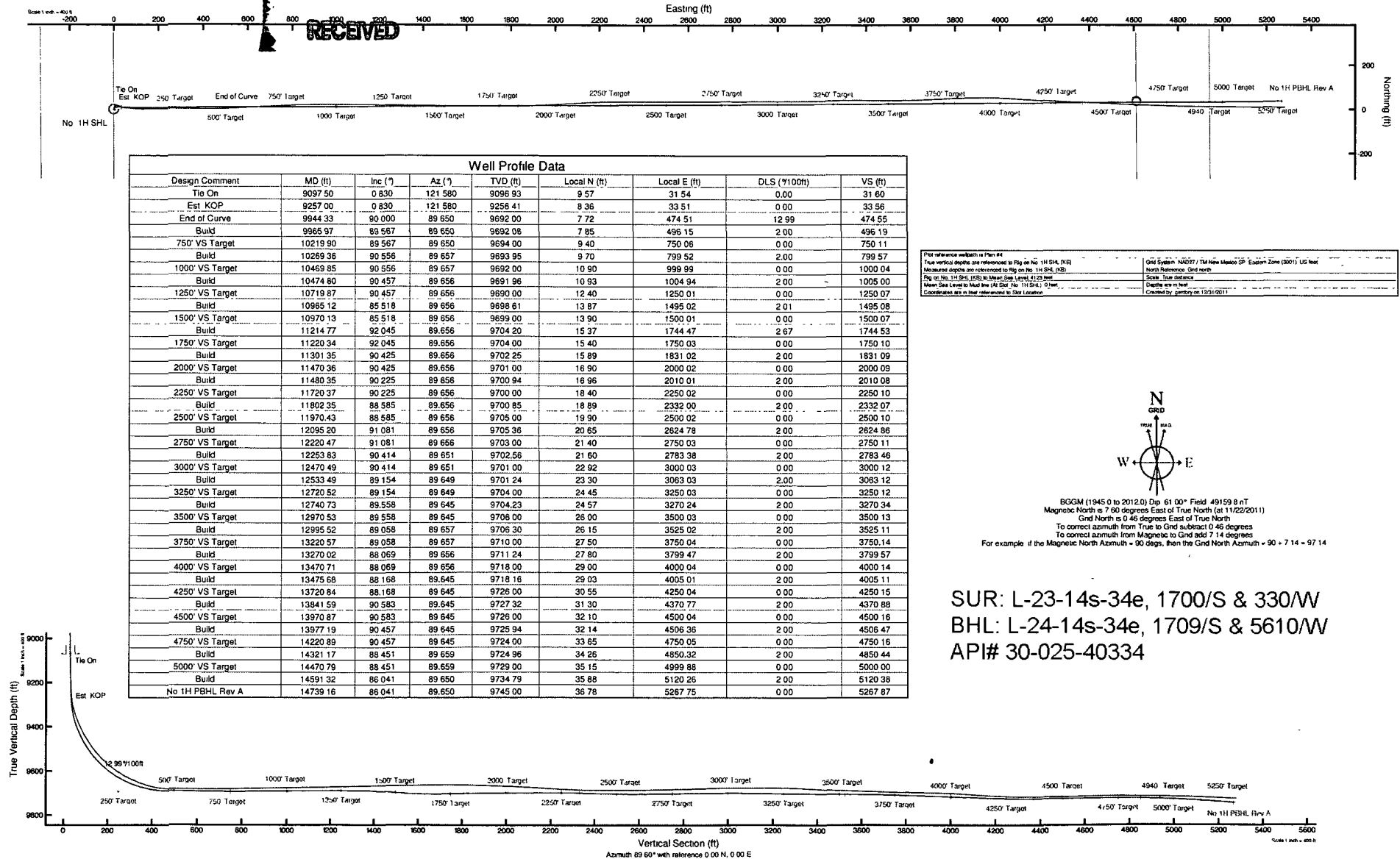
HOBBS OCD

Apache Corporation

Location Lea County, NM
Field (High Plains) Sec 23, T14S, R34E
Facility High Plains State Com

Slot No 1H SHL
Well No 1H
Wellbore No 1H PWB

JUN 26 2012





Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Apache Corporation	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(High Plains) Sec 23, T14S, R34E	Wellbore	No.1H AWB
Facility	High Plains State Com		

REPORT SETUP INFORMATION

Projection System	NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North Reference	Grid	User	Gentbry
Scale	0.999986	Report Generated	1/23/2012 at 10:57:11 AM
Convergence at slot	0.46° East	Database/Source file	WA Midland/No.1H_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	758754.80	760350.70	33°05'14.628"N	103°29'18.660"W
Facility Reference Pt			758754.80	760350.70	33°05'14.628"N	103°29'18.660"W
Field Reference Pt			758754.80	760350.70	33°05'14.628"N	103°29'18.660"W

WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 1H SHL (KB) to GL	4123.00ft
Horizontal Reference Pt	Slot Location	Rig on No. 1H SHL (KB) to Mean Sea Level	4123.00ft
Vertical Reference Pt	Rig on No. 1H SHL (KB)	Rig on No. 1H SHL (KB) to Mud Line at Slot (No. 1H SHL)	4123.00ft
MD Reference Pt	Rig on No. 1H SHL (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	89.60°



Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION

Operator	Apache Corporation	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(High Plains) Sec 23, T14S, R34E	Wellbore	No.1H AWB
Facility	High Plains State Com		

WELLPATH DATA (268 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	30.120	0.00	0.00	0.00	0.00	758754.80	760350.70	33°05'14.628"N	103°29'18.660"W	0.00	
88.00	0.360	30.120	88.00	0.14	0.24	0.14	758754.94	760350.94	33°05'14.631"N	103°29'18.659"W	0.41	
151.40	0.410	85.640	151.40	0.47	0.43	0.46	758755.26	760351.13	33°05'14.632"N	103°29'18.655"W	0.57	
243.00	0.570	96.410	242.99	1.25	0.40	1.24	758756.04	760351.10	33°05'14.632"N	103°29'18.646"W	0.20	
334.70	0.650	99.330	334.69	2.21	0.27	2.21	758757.01	760350.97	33°05'14.631"N	103°29'18.634"W	0.09	
426.30	0.700	114.120	426.28	3.23	-0.05	3.23	758758.03	760350.65	33°05'14.628"N	103°29'18.622"W	0.20	
521.50	0.560	121.910	521.48	4.16	-0.53	4.16	758758.96	760350.17	33°05'14.623"N	103°29'18.612"W	0.17	
612.30	0.520	119.850	612.27	4.89	-0.97	4.89	758759.69	760349.73	33°05'14.618"N	103°29'18.603"W	0.05	
703.20	0.500	128.260	703.17	5.55	-1.42	5.56	758760.36	760349.28	33°05'14.614"N	103°29'18.595"W	0.09	
801.00	0.510	133.300	800.97	6.20	-1.98	6.22	758761.02	760348.72	33°05'14.608"N	103°29'18.587"W	0.05	
898.90	0.450	143.870	898.86	6.74	-2.59	6.76	758761.56	760348.11	33°05'14.602"N	103°29'18.581"W	0.11	
993.70	0.410	171.080	993.66	7.01	-3.23	7.03	758761.83	760347.47	33°05'14.596"N	103°29'18.578"W	0.22	
1088.50	0.360	180.170	1088.46	7.06	-3.86	7.08	758761.88	760346.84	33°05'14.590"N	103°29'18.577"W	0.08	
1183.40	0.320	182.050	1183.36	7.04	-4.42	7.07	758761.87	760346.28	33°05'14.584"N	103°29'18.578"W	0.04	
1278.20	0.300	202.910	1278.16	6.93	-4.92	6.97	758761.77	760345.78	33°05'14.579"N	103°29'18.579"W	0.12	
1373.10	0.220	189.360	1373.05	6.80	-5.33	6.84	758761.64	760345.38	33°05'14.575"N	103°29'18.580"W	0.11	
1467.90	0.220	240.780	1467.85	6.61	-5.59	6.65	758761.45	760345.11	33°05'14.572"N	103°29'18.583"W	0.20	
1562.80	0.340	281.300	1562.75	6.18	-5.63	6.22	758761.02	760345.07	33°05'14.572"N	103°29'18.588"W	0.24	
1657.60	0.630	304.890	1657.55	5.48	-5.27	5.51	758760.31	760345.43	33°05'14.576"N	103°29'18.596"W	0.37	
1752.40	0.650	309.550	1752.34	4.64	-4.63	4.67	758759.47	760346.07	33°05'14.582"N	103°29'18.606"W	0.06	
1847.30	0.570	301.850	1847.24	3.83	-4.04	3.85	758758.65	760346.66	33°05'14.588"N	103°29'18.615"W	0.12	
1942.10	0.570	299.140	1942.03	3.02	-3.56	3.04	758757.84	760347.14	33°05'14.593"N	103°29'18.625"W	0.03	
2037.00	0.640	303.830	2036.93	2.17	-3.04	2.19	758756.99	760347.66	33°05'14.598"N	103°29'18.635"W	0.09	
2134.80	0.540	289.220	2134.72	1.28	-2.58	1.30	758756.10	760348.12	33°05'14.603"N	103°29'18.645"W	0.18	
2232.60	0.490	297.280	2232.52	0.48	-2.24	0.49	758755.29	760348.46	33°05'14.606"N	103°29'18.655"W	0.09	
2326.50	0.320	290.930	2326.42	-0.12	-1.96	-0.11	758754.69	760348.74	33°05'14.609"N	103°29'18.662"W	0.19	
2420.30	0.240	322.320	2420.22	-0.48	-1.71	-0.47	758754.33	760348.99	33°05'14.611"N	103°29'18.666"W	0.18	
2517.20	0.290	342.350	2517.11	-0.68	-1.32	-0.67	758754.13	760349.38	33°05'14.615"N	103°29'18.668"W	0.11	
2614.00	0.440	353.250	2613.91	-0.79	-0.72	-0.79	758754.01	760349.98	33°05'14.621"N	103°29'18.670"W	0.17	
2706.80	0.610	346.00	2706.71	-0.80	-0.13	-0.80	758754.00	760350.83	33°05'14.630"N	103°29'18.670"W	0.21	
2803.70	0.450	359.740	2803.60	-0.76	1.03	-0.77	758754.03	760351.73	33°05'14.638"N	103°29'18.669"W	0.17	
2900.50	0.540	24.760	2900.40	-0.57	1.82	-0.58	758754.22	760352.52	33°05'14.646"N	103°29'18.667"W	0.24	
2995.30	0.530	21.690	2995.20	-0.21	2.63	-0.23	758754.57	760353.33	33°05'14.654"N	103°29'18.663"W	0.03	
3090.20	0.410	50.670	3090.09	0.21	3.26	0.19	758754.99	760353.96	33°05'14.660"N	103°29'18.658"W	0.28	
3185.00	0.550	45.120	3184.89	0.80	3.79	0.78	758755.58	760354.49	33°05'14.666"N	103°29'18.651"W	0.16	
3279.90	0.450	43.880	3279.79	1.39	4.38	1.36	758756.16	760355.08	33°05'14.672"N	103°29'18.644"W	0.11	
3374.70	0.500	63.130	3374.58	2.02	4.84	1.98	758756.78	760355.54	33°05'14.676"N	103°29'18.637"W	0.18	
3469.60	0.700	58.140	3469.48	2.88	5.33	2.85	758757.65	760356.03	33°05'14.681"N	103°29'18.626"W	0.22	
3564.40	0.680	71.110	3564.27	3.91	5.82	3.87	758758.67	760356.52	33°05'14.686"N	103°29'18.614"W	0.17	
3661.20	0.710	68.820	3661.06	5.02	6.22	4.97	758759.77	760356.92	33°05'14.689"N	103°29'18.601"W	0.04	
3756.10	0.510	67.850	3755.96	5.96	6.59	5.91	758760.71	760357.29	33°05'14.693"N	103°29'18.590"W	0.21	
3850.90	0.500	74.140	3850.75	6.75	6.87	6.70	758761.50	760357.57	33°05'14.696"N	103°29'18.581"W	0.06	
3945.80	0.500	74.460	3945.65	7.55	7.09	7.50	758762.30	760357.79	33°05'14.698"N	103°29'18.572"W	0.00	
4040.60	0.530	72.510	4040.45	8.37	7.33	8.32	758763.12	760358.03	33°05'14.700"N	103°29'18.562"W	0.04	
4132.40	0.490	90.250	4132.24	9.16	7.46	9.11	758763.91	760358.16	33°05'14.701"N	103°29'18.553"W	0.18	



Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Apache Corporation	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(High Plains) Sec 23, T14S, R34E	Wellbore	No.1H AWB
Facility	High Plains State Com		

WELLPATH DATA (268 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4228.30	0.270	86.290	4228.14	9.80	7.47	9.75	758764.55	760358.17	33°05'14.701"N	103°29'18.545"W	0.23	
4324.10	0.360	81.160	4323.94	10.32	7.53	10.27	758765.07	760358.23	33°05'14.702"N	103°29'18.539"W	0.10	
4419.90	0.130	107.380	4419.74	10.72	7.55	10.67	758765.47	760358.25	33°05'14.702"N	103°29'18.534"W	0.26	
4515.80	0.190	96.600	4515.64	10.99	7.50	10.93	758765.73	760358.20	33°05'14.702"N	103°29'18.531"W	0.07	
4611.60	0.230	80.130	4611.44	11.33	7.51	11.28	758766.08	760358.21	33°05'14.702"N	103°29'18.527"W	0.08	
4705.50	0.230	67.530	4705.34	11.69	7.61	11.64	758766.44	760358.31	33°05'14.703"N	103°29'18.523"W	0.05	
4801.30	0.250	83.210	4801.14	12.08	7.71	12.03	758766.83	760358.41	33°05'14.704"N	103°29'18.518"W	0.07	
4895.10	0.300	82.580	4894.94	12.53	7.77	12.47	758767.27	760358.47	33°05'14.704"N	103°29'18.513"W	0.05	
4991.00	0.390	93.370	4990.83	13.10	7.78	13.05	758767.85	760358.48	33°05'14.704"N	103°29'18.506"W	0.12	
5086.80	0.420	91.680	5086.63	13.78	7.75	13.72	758768.52	760358.45	33°05'14.704"N	103°29'18.498"W	0.03	
5181.70	0.140	104.760	5181.53	14.24	7.71	14.18	758768.98	760358.41	33°05'14.703"N	103°29'18.493"W	0.30	
5275.50	0.190	108.910	5275.33	14.49	7.63	14.44	758769.24	760358.33	33°05'14.703"N	103°29'18.490"W	0.05	
5371.40	0.110	98.240	5371.23	14.74	7.57	14.68	758769.48	760358.27	33°05'14.702"N	103°29'18.487"W	0.09	
5561.00	0.800	291.600	5560.82	13.69	8.03	13.63	758768.43	760358.73	33°05'14.707"N	103°29'18.499"W	0.48	
5657.90	1.140	282.260	5657.71	12.12	8.48	12.06	758766.86	760359.18	33°05'14.711"N	103°29'18.518"W	0.39	
5750.70	1.100	290.250	5750.49	10.39	8.99	10.32	758765.12	760359.69	33°05'14.716"N	103°29'18.538"W	0.17	
5846.50	1.040	295.060	5846.28	8.74	9.67	8.67	758763.47	760360.37	33°05'14.723"N	103°29'18.557"W	0.11	
5942.40	0.880	303.850	5942.16	7.35	10.45	7.27	758762.07	760361.15	33°05'14.731"N	103°29'18.574"W	0.23	
6038.20	0.710	312.830	6037.95	6.31	11.27	6.23	758761.03	760361.97	33°05'14.739"N	103°29'18.586"W	0.22	
6135.10	0.720	321.750	6134.85	5.50	12.15	5.41	758760.21	760362.85	33°05'14.748"N	103°29'18.596"W	0.12	
6227.90	0.710	332.710	6227.64	4.88	13.12	4.79	758759.59	760363.82	33°05'14.758"N	103°29'18.603"W	0.15	
6320.80	0.620	344.500	6320.53	4.49	14.12	4.39	758759.19	760364.82	33°05'14.768"N	103°29'18.607"W	0.18	
6415.60	0.520	4.320	6415.33	4.39	15.04	4.28	758759.08	760365.74	33°05'14.777"N	103°29'18.609"W	0.23	
6510.40	0.480	24.600	6510.12	4.59	15.83	4.48	758759.28	760366.53	33°05'14.785"N	103°29'18.606"W	0.19	
6605.30	0.540	50.520	6605.02	5.11	16.48	4.99	758759.79	760367.18	33°05'14.791"N	103°29'18.600"W	0.25	
6700.10	0.580	67.060	6699.82	5.90	16.95	5.78	758760.58	760367.65	33°05'14.795"N	103°29'18.591"W	0.17	
6796.90	0.590	66.300	6796.61	6.81	17.34	6.69	758761.49	760368.04	33°05'14.799"N	103°29'18.580"W	0.01	
6891.80	0.520	63.420	6891.51	7.64	17.73	7.52	758762.32	760368.43	33°05'14.803"N	103°29'18.570"W	0.08	
6986.60	0.620	69.270	6986.30	8.51	18.10	8.38	758763.18	760368.80	33°05'14.807"N	103°29'18.560"W	0.12	
7081.50	0.440	93.060	7081.20	9.35	18.26	9.23	758764.03	760368.96	33°05'14.808"N	103°29'18.550"W	0.30	
7176.30	0.320	112.940	7176.00	9.96	18.14	9.83	758764.63	760368.84	33°05'14.807"N	103°29'18.543"W	0.19	
7271.10	0.070	166.680	7270.80	10.22	17.98	10.09	758764.89	760368.68	33°05'14.805"N	103°29'18.540"W	0.30	
7364.00	0.120	200.190	7363.70	10.19	17.84	10.07	758764.87	760368.53	33°05'14.804"N	103°29'18.540"W	0.08	
7460.30	0.130	233.280	7459.99	10.07	17.68	9.95	758764.75	760368.37	33°05'14.802"N	103°29'18.542"W	0.07	
7556.60	0.120	256.490	7556.29	9.88	17.59	9.76	758764.56	760368.29	33°05'14.801"N	103°29'18.544"W	0.05	
7652.80	0.120	289.340	7652.49	9.69	17.60	9.57	758764.37	760368.30	33°05'14.802"N	103°29'18.546"W	0.07	
7749.10	0.050	283.200	7748.79	9.56	17.64	9.43	758764.23	760368.34	33°05'14.802"N	103°29'18.548"W	0.07	
7844.60	0.020	198.540	7844.29	9.51	17.63	9.39	758764.19	760368.33	33°05'14.802"N	103°29'18.548"W	0.05	
7940.00	0.190	138.990	7939.69	9.61	17.50	9.49	758764.29	760368.20	33°05'14.801"N	103°29'18.547"W	0.19	
8034.80	0.720	118.680	8034.49	10.23	17.09	10.11	758764.91	760367.79	33°05'14.797"N	103°29'18.540"W	0.58	
8130.70	0.910	105.190	8130.38	11.49	16.60	11.38	758766.17	760367.30	33°05'14.792"N	103°29'18.525"W	0.28	
8226.00	1.300	100.570	8225.66	13.28	16.21	13.17	758767.97	760366.91	33°05'14.788"N	103°29'18.504"W	0.42	
8321.20	1.670	103.840	8320.83	15.69	15.68	15.58	758770.38	760366.38	33°05'14.782"N	103°29'18.476"W	0.40	
8416.50	1.480	103.630	8416.10	18.23	15.06	18.12	758772.92	760365.76	33°05'14.776"N	103°29'18.446"W	0.20	
8511.80	1.550	104.400	8511.36	20.67	14.45	20.57	758775.37	760365.15	33°05'14.770"N	103°29'18.417"W	0.08	



Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Apache Corporation	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(High Plains) Sec 23, T14S, R34E	Wellbore	No.1H AWP
Facility	High Plains State Com		

WELLPATH DATA (268 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8607.10	1.500	108.640	8606.63	23.09	13.73	23.00	758777.80	760364.43	33°05'14.762"N	103°29'18.389"W	0.13	
8702.40	1.380	111.250	8701.90	25.34	12.91	25.25	758780.05	760363.61	33°05'14.754"N	103°29'18.362"W	0.14	
8798.00	1.180	111.400	8797.47	27.32	12.14	27.24	758782.04	760362.83	33°05'14.746"N	103°29'18.339"W	0.21	
8893.60	1.000	118.130	8893.06	28.97	11.38	28.89	758783.69	760362.08	33°05'14.739"N	103°29'18.320"W	0.23	
8989.30	0.900	128.950	8988.74	30.28	10.52	30.21	758785.01	760361.22	33°05'14.730"N	103°29'18.304"W	0.21	
9097.50	0.830	121.580	9096.93	31.60	9.57	31.54	758786.34	760360.27	33°05'14.720"N	103°29'18.289"W	0.12	
9197.00	2.300	118.400	9196.39	33.97	8.24	33.91	758788.71	760358.94	33°05'14.707"N	103°29'18.261"W	1.48	
9218.00	2.700	119.700	9217.37	34.76	7.80	34.71	758789.51	760358.50	33°05'14.703"N	103°29'18.252"W	1.92	
9250.00	4.000	105.900	9249.32	36.49	7.12	36.44	758791.24	760357.82	33°05'14.696"N	103°29'18.231"W	4.75	
9282.00	8.300	99.400	9281.13	39.83	6.44	39.79	758794.59	760357.14	33°05'14.689"N	103°29'18.192"W	13.59	
9314.00	13.400	96.500	9312.54	45.80	5.64	45.76	758800.56	760356.34	33°05'14.680"N	103°29'18.122"W	16.02	
9346.00	18.400	95.100	9343.31	54.51	4.77	54.48	758809.28	760355.47	33°05'14.671"N	103°29'18.020"W	15.67	
9377.00	21.300	92.700	9372.46	65.00	4.07	64.98	758819.78	760354.77	33°05'14.663"N	103°29'17.896"W	9.72	
9409.00	25.300	93.700	9401.85	77.63	3.35	77.61	758832.41	760354.05	33°05'14.655"N	103°29'17.748"W	12.56	
9441.00	28.900	93.900	9430.33	92.17	2.39	92.15	758846.95	760353.09	33°05'14.645"N	103°29'17.577"W	11.25	
9473.00	31.700	93.800	9457.96	108.27	1.30	108.26	758863.06	760352.00	33°05'14.633"N	103°29'17.388"W	8.75	
9505.00	35.100	91.500	9484.67	125.85	0.51	125.85	758880.65	760351.21	33°05'14.623"N	103°29'17.181"W	11.34	
9536.00	38.800	88.300	9509.44	144.48	0.56	144.48	758899.28	760351.26	33°05'14.622"N	103°29'16.962"W	13.45	
9568.00	42.500	87.900	9533.72	165.31	1.25	165.31	758920.11	760351.95	33°05'14.627"N	103°29'16.717"W	11.59	
9600.00	46.400	89.200	9556.56	187.71	1.81	187.71	758942.50	760352.51	33°05'14.631"N	103°29'16.454"W	12.51	
9632.00	51.100	90.000	9577.65	211.77	1.97	211.76	758966.55	760352.67	33°05'14.631"N	103°29'16.171"W	14.81	
9664.00	54.900	90.400	9596.90	237.32	1.88	237.31	758992.11	760352.58	33°05'14.628"N	103°29'15.871"W	11.92	
9695.00	58.500	91.300	9613.92	263.22	1.49	263.21	759018.01	760352.19	33°05'14.622"N	103°29'15.567"W	11.86	
9727.00	61.700	90.600	9629.87	290.95	1.04	290.94	759045.74	760351.74	33°05'14.615"N	103°29'15.241"W	10.18	
9759.00	65.100	90.500	9644.20	319.55	0.76	319.55	759074.35	760351.46	33°05'14.610"N	103°29'14.905"W	10.63	
9791.00	69.400	90.600	9656.57	349.05	0.48	349.05	759103.85	760351.18	33°05'14.605"N	103°29'14.558"W	13.44	
9823.00	73.600	90.600	9666.72	379.38	0.16	379.39	759134.19	760350.86	33°05'14.600"N	103°29'14.202"W	13.12	
9855.00	77.400	89.700	9674.73	410.36	0.08	410.37	759165.16	760350.78	33°05'14.596"N	103°29'13.838"W	12.18	
9887.00	82.000	89.200	9680.45	441.83	0.39	441.84	759196.63	760351.09	33°05'14.597"N	103°29'13.468"W	14.46	
9918.00	87.400	89.100	9683.31	472.69	0.84	472.69	759227.49	760351.54	33°05'14.599"N	103°29'13.105"W	17.42	
9950.00	90.200	87.700	9683.98	504.67	1.74	504.67	759259.46	760352.44	33°05'14.605"N	103°29'12.729"W	9.78	
9982.00	90.100	87.800	9683.90	536.65	2.99	536.65	759291.44	760353.69	33°05'14.615"N	103°29'12.353"W	0.44	
10021.00	89.800	86.400	9683.93	575.62	4.97	575.59	759330.39	760355.67	33°05'14.631"N	103°29'11.895"W	3.67	
10053.00	90.400	86.500	9683.88	607.57	6.95	607.53	759362.32	760357.65	33°05'14.649"N	103°29'11.520"W	1.90	
10084.00	90.300	86.800	9683.69	638.53	8.76	638.48	759393.27	760359.46	33°05'14.664"N	103°29'11.156"W	1.02	
10116.00	90.600	86.900	9683.44	670.49	10.52	670.43	759425.22	760361.22	33°05'14.679"N	103°29'10.780"W	0.99	
10147.00	90.600	87.200	9683.11	701.45	12.11	701.39	759456.18	760362.81	33°05'14.692"N	103°29'10.416"W	0.97	
10179.00	90.700	87.700	9682.75	733.43	13.54	733.35	759488.14	760364.24	33°05'14.704"N	103°29'10.040"W	1.59	
10211.00	90.800	87.600	9682.33	765.41	14.85	765.32	759520.11	760365.55	33°05'14.714"N	103°29'09.665"W	0.44	
10307.00	91.100	88.600	9680.74	861.36	18.03	861.26	759616.04	760368.73	33°05'14.738"N	103°29'08.537"W	1.09	
10338.00	91.000	88.800	9680.17	892.35	18.73	892.24	759647.03	760369.43	33°05'14.742"N	103°29'08.173"W	0.72	
10370.00	91.000	89.300	9679.61	924.35	19.26	924.23	759679.02	760369.96	33°05'14.745"N	103°29'07.797"W	1.56	
10402.00	91.000	89.400	9679.05	956.34	19.63	956.23	759711.01	760370.33	33°05'14.746"N	103°29'07.420"W	0.31	
10434.00	91.000	90.300	9678.50	988.34	19.71	988.22	759743.01	760370.41	33°05'14.744"N	103°29'07.044"W	2.81	
10465.00	90.900	90.200	9677.98	1019.33	19.58	1019.22	759774.00	760370.28	33°05'14.741"N	103°29'06.680"W	0.46	



Actual Wellpath Report

No.1H AWP

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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION

Operator	Apache Corporation	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(High Plains) Sec 23, T14S, R34E	Wellbore	No.1H AWB
Facility	High Plains State Com		

WELLPATH DATA (268 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10497.00	90.900	90.100	9677.48	1051.32	19.49	1051.21	759806.00	760370.19	33°05'14.737"N	103°29'06.304"W	0.31	
10529.00	90.900	90.200	9676.98	1083.32	19.41	1083.21	759837.99	760370.11	33°05'14.734"N	103°29'05.928"W	0.31	
10561.00	91.100	90.400	9676.42	1115.31	19.24	1115.20	759869.99	760369.94	33°05'14.730"N	103°29'05.552"W	0.88	
10593.00	91.200	90.400	9675.78	1147.30	19.02	1147.20	759901.98	760369.72	33°05'14.725"N	103°29'05.176"W	0.31	
10625.00	91.500	90.700	9675.02	1179.29	18.71	1179.19	759933.97	760369.41	33°05'14.719"N	103°29'04.800"W	1.33	
10657.00	91.500	90.800	9674.18	1211.27	18.29	1211.17	759965.95	760368.99	33°05'14.713"N	103°29'04.424"W	0.31	
10689.00	91.600	90.700	9673.32	1243.25	17.87	1243.16	759997.94	760368.57	33°05'14.706"N	103°29'04.049"W	0.44	
10720.00	91.500	90.600	9672.48	1274.24	17.52	1274.14	760028.92	760368.22	33°05'14.700"N	103°29'03.684"W	0.46	
10752.00	91.500	90.400	9671.64	1306.22	17.24	1306.13	760060.91	760367.94	33°05'14.695"N	103°29'03.308"W	0.62	
10783.00	91.500	90.700	9670.83	1337.21	16.94	1337.12	760091.90	760367.64	33°05'14.689"N	103°29'02.944"W	0.97	
10814.00	91.300	90.500	9670.07	1368.19	16.62	1368.11	760122.89	760367.32	33°05'14.683"N	103°29'02.580"W	0.91	
10846.00	91.000	90.500	9669.43	1400.18	16.34	1400.10	760154.88	760367.04	33°05'14.678"N	103°29'02.204"W	0.94	
10878.00	90.900	90.700	9668.90	1432.17	16.01	1432.10	760186.87	760366.71	33°05'14.672"N	103°29'01.828"W	0.70	
10910.00	90.700	90.800	9668.45	1464.16	15.59	1464.09	760218.87	760366.29	33°05'14.666"N	103°29'01.452"W	0.70	
10942.00	91.300	90.900	9667.90	1496.15	15.11	1496.08	760250.86	760365.81	33°05'14.658"N	103°29'01.076"W	1.90	
10973.00	90.600	90.400	9667.38	1527.14	14.76	1527.07	760281.85	760365.46	33°05'14.652"N	103°29'00.712"W	2.77	
11006.00	91.400	90.000	9666.81	1560.13	14.65	1560.07	760314.84	760365.35	33°05'14.649"N	103°29'00.324"W	2.71	
11038.00	90.700	90.000	9666.22	1592.13	14.65	1592.06	760346.84	760365.35	33°05'14.646"N	103°28'59.948"W	2.19	
11069.00	91.300	90.200	9665.68	1623.12	14.59	1623.06	760377.83	760365.29	33°05'14.643"N	103°28'59.584"W	2.04	
11100.00	90.900	90.500	9665.08	1654.11	14.40	1654.05	760408.83	760365.10	33°05'14.639"N	103°28'59.220"W	1.61	
11132.00	90.800	90.600	9664.61	1686.10	14.09	1686.05	760440.82	760364.79	33°05'14.633"N	103°28'58.844"W	0.44	
11164.00	90.500	90.800	9664.24	1718.10	13.70	1718.04	760472.81	760364.40	33°05'14.627"N	103°28'58.468"W	1.13	
11196.00	89.900	90.300	9664.13	1750.09	13.40	1750.04	760504.81	760364.10	33°05'14.621"N	103°28'58.092"W	2.44	
11228.00	89.400	90.200	9664.33	1782.09	13.26	1782.04	760536.81	760363.96	33°05'14.617"N	103°28'57.716"W	1.59	
11260.00	89.500	89.400	9664.64	1814.09	13.37	1814.04	760568.81	760364.07	33°05'14.616"N	103°28'57.340"W	2.52	
11292.00	88.700	88.300	9665.14	1846.08	14.01	1846.03	760600.80	760364.71	33°05'14.619"N	103°28'56.964"W	4.25	
11323.00	88.200	87.800	9665.98	1877.06	15.07	1877.00	760631.77	760365.77	33°05'14.627"N	103°28'56.600"W	2.28	
11355.00	88.100	87.400	9667.01	1909.02	16.40	1908.95	760663.72	760367.10	33°05'14.638"N	103°28'56.224"W	1.29	
11387.00	87.500	87.000	9668.24	1940.97	17.97	1940.89	760695.66	760368.67	33°05'14.651"N	103°28'55.848"W	2.25	
11418.00	88.200	87.100	9669.40	1971.92	19.56	1971.83	760726.60	760370.26	33°05'14.664"N	103°28'55.485"W	2.28	
11450.00	87.900	87.000	9670.49	2003.87	21.21	2003.77	760758.53	760371.91	33°05'14.678"N	103°28'55.109"W	0.99	
11482.00	87.600	86.700	9671.75	2035.80	22.96	2035.69	760790.46	760373.66	33°05'14.693"N	103°28'54.734"W	1.33	
11514.00	87.000	86.500	9673.25	2067.72	24.86	2067.60	760822.37	760375.56	33°05'14.709"N	103°28'54.359"W	1.98	
11546.00	86.800	86.300	9674.98	2099.63	26.87	2099.49	760854.26	760377.57	33°05'14.726"N	103°28'53.984"W	0.88	
11578.00	86.600	86.600	9676.83	2131.53	28.84	2131.38	760886.14	760379.54	33°05'14.743"N	103°28'53.609"W	1.13	
11609.00	86.600	87.000	9678.67	2162.43	30.57	2162.27	760917.04	760381.27	33°05'14.758"N	103°28'53.245"W	1.29	
11641.00	86.600	87.900	9680.56	2194.36	31.99	2194.19	760948.95	760382.69	33°05'14.769"N	103°28'52.870"W	2.81	
11673.00	86.600	88.600	9682.46	2226.29	32.97	2226.11	760980.88	760383.67	33°05'14.776"N	103°28'52.495"W	2.18	
11705.00	87.300	89.600	9684.16	2258.24	33.47	2258.06	761012.83	760384.17	33°05'14.779"N	103°28'52.119"W	3.81	
11737.00	87.800	89.600	9685.53	2290.21	33.69	2290.03	761044.80	760384.39	33°05'14.778"N	103°28'51.744"W	1.56	
11769.00	88.500	89.700	9686.56	2322.20	33.89	2322.02	761076.78	760384.59	33°05'14.778"N	103°28'51.368"W	2.21	
11800.00	89.000	89.700	9687.24	2353.19	34.05	2353.01	761107.77	760384.75	33°05'14.777"N	103°28'51.004"W	1.61	
11832.00	89.400	89.900	9687.69	2385.19	34.16	2385.01	761139.77	760384.86	33°05'14.775"N	103°28'50.627"W	1.40	
11864.00	89.600	89.900	9687.97	2417.18	34.22	2417.00	761171.76	760384.92	33°05'14.773"N	103°28'50.251"W	0.62	
11895.00	90.000	90.000	9688.07	2448.18	34.25	2448.00	761202.76	760384.94	33°05'14.771"N	103°28'49.887"W	1.33	



Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Apache Corporation	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(High Plains) Sec 23, T14S, R34E	Wellbore	No.1H AWB
Facility	High Plains State Com		

WELLPATH DATA (268 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11927.00	90.000	89.800	9688.07	2480.18	34.30	2480.00	761234.76	760385.00	33°05'14.769"N	103°28'49.511"W	0.62	
11959.00	90.000	89.900	9688.07	2512.18	34.39	2512.00	761266.76	760385.08	33°05'14.767"N	103°28'49.135"W	0.31	
11990.00	90.000	89.700	9688.07	2543.18	34.49	2543.00	761297.76	760385.19	33°05'14.766"N	103°28'48.771"W	0.65	
12022.00	90.300	89.700	9687.99	2575.18	34.66	2575.00	761329.76	760385.36	33°05'14.765"N	103°28'48.394"W	0.94	
12054.00	91.000	89.900	9687.63	2607.18	34.77	2607.00	761361.76	760385.47	33°05'14.764"N	103°28'48.018"W	2.28	
12087.00	91.100	89.700	9687.02	2640.17	34.89	2639.99	761394.75	760385.59	33°05'14.762"N	103°28'47.631"W	0.68	
12118.00	91.100	89.800	9686.43	2671.17	35.02	2670.99	761425.75	760385.72	33°05'14.761"N	103°28'47.266"W	0.32	
12149.00	91.200	89.700	9685.81	2702.16	35.16	2701.98	761456.74	760385.86	33°05'14.760"N	103°28'46.902"W	0.46	
12180.00	91.200	89.900	9685.16	2733.15	35.27	2732.98	761487.73	760385.97	33°05'14.758"N	103°28'46.538"W	0.65	
12212.00	91.300	90.000	9684.46	2765.15	35.29	2764.97	761519.72	760385.99	33°05'14.756"N	103°28'46.162"W	0.44	
12243.00	91.400	90.100	9683.73	2796.14	35.27	2795.96	761550.71	760385.97	33°05'14.753"N	103°28'45.798"W	0.46	
12275.00	91.900	90.000	9682.81	2828.12	35.24	2827.95	761582.70	760385.94	33°05'14.750"N	103°28'45.422"W	1.59	
12306.00	91.900	89.900	9681.78	2859.10	35.27	2858.93	761613.68	760385.97	33°05'14.748"N	103°28'45.058"W	0.32	
12338.00	92.100	89.900	9680.66	2891.09	35.32	2890.91	761645.66	760386.02	33°05'14.746"N	103°28'44.682"W	0.62	
12370.00	91.900	90.100	9679.55	2923.06	35.32	2922.89	761677.64	760386.02	33°05'14.744"N	103°28'44.306"W	0.88	
12402.00	91.300	89.800	9678.65	2955.05	35.35	2954.88	761709.63	760386.05	33°05'14.741"N	103°28'43.930"W	2.10	
12434.00	90.500	89.600	9678.15	2987.05	35.52	2986.87	761741.62	760386.22	33°05'14.740"N	103°28'43.554"W	2.58	
12465.00	90.300	89.400	9677.93	3018.05	35.79	3017.87	761772.62	760386.49	33°05'14.741"N	103°28'43.190"W	0.91	
12497.00	89.900	89.400	9677.88	3050.05	36.12	3049.87	761804.62	760386.82	33°05'14.741"N	103°28'42.814"W	1.25	
12529.00	90.100	89.400	9677.88	3082.05	36.46	3081.87	761836.62	760387.16	33°05'14.742"N	103°28'42.437"W	0.62	
12561.00	89.600	89.100	9677.96	3114.04	36.88	3113.86	761868.61	760387.58	33°05'14.744"N	103°28'42.061"W	1.82	
12593.00	89.500	89.000	9678.21	3146.04	37.41	3145.86	761900.61	760388.11	33°05'14.746"N	103°28'41.685"W	0.44	
12625.00	90.000	88.600	9678.35	3178.04	38.08	3177.85	761932.60	760388.78	33°05'14.750"N	103°28'41.309"W	2.00	
12657.00	90.100	88.600	9678.32	3210.03	38.86	3209.84	761964.59	760389.56	33°05'14.755"N	103°28'40.933"W	0.31	
12688.00	89.300	88.200	9678.49	3241.03	39.73	3240.83	761995.58	760390.42	33°05'14.762"N	103°28'40.569"W	2.89	
12720.00	88.900	88.000	9678.99	3273.01	40.79	3272.81	762027.55	760391.49	33°05'14.769"N	103°28'40.193"W	1.40	
12749.00	88.100	89.500	9679.75	3302.00	41.42	3301.79	762056.54	760392.12	33°05'14.773"N	103°28'39.852"W	5.86	
12781.00	87.200	89.300	9681.06	3333.97	41.75	3333.76	762088.51	760392.45	33°05'14.774"N	103°28'39.477"W	2.88	
12813.00	87.200	90.700	9682.62	3365.93	41.75	3365.72	762120.47	760392.45	33°05'14.772"N	103°28'39.101"W	4.37	
12844.00	86.600	91.000	9684.30	3396.88	41.29	3396.67	762151.42	760391.99	33°05'14.765"N	103°28'38.737"W	2.16	
12876.00	86.600	90.400	9686.20	3428.81	40.90	3428.61	762183.36	760391.60	33°05'14.758"N	103°28'38.362"W	1.87	
12908.00	87.900	89.600	9687.73	3460.78	40.90	3460.58	762215.32	760391.60	33°05'14.755"N	103°28'37.986"W	4.77	
12940.00	88.100	89.900	9688.85	3492.76	41.04	3492.56	762247.30	760391.74	33°05'14.754"N	103°28'37.610"W	1.13	
12972.00	88.000	90.100	9689.94	3524.74	41.04	3524.54	762279.28	760391.74	33°05'14.752"N	103°28'37.235"W	0.70	
13002.00	87.800	89.500	9691.04	3554.72	41.15	3554.52	762309.26	760391.85	33°05'14.750"N	103°28'36.882"W	2.11	
13035.00	87.400	89.300	9692.42	3587.69	41.49	3587.49	762342.23	760392.19	33°05'14.751"N	103°28'36.495"W	1.35	
13067.00	88.100	88.200	9693.68	3619.66	42.19	3619.45	762374.19	760392.89	33°05'14.755"N	103°28'36.119"W	4.07	
13099.00	88.300	87.900	9694.68	3651.63	43.28	3651.42	762406.16	760393.98	33°05'14.764"N	103°28'35.743"W	1.13	
13130.00	88.000	87.900	9695.68	3682.60	44.41	3682.38	762437.12	760395.11	33°05'14.772"N	103°28'35.379"W	0.97	
13162.00	87.900	87.400	9696.83	3714.56	45.73	3714.33	762469.07	760396.43	33°05'14.783"N	103°28'35.004"W	1.59	
13194.00	89.100	86.700	9697.66	3746.52	47.37	3746.28	762501.02	760398.07	33°05'14.796"N	103°28'34.628"W	4.34	
13226.00	89.300	86.900	9698.11	3778.48	49.16	3778.23	762532.96	760399.86	33°05'14.812"N	103°28'34.252"W	0.88	
13257.00	89.500	88.500	9698.44	3809.46	50.40	3809.20	762563.94	760401.10	33°05'14.821"N	103°28'33.888"W	5.20	
13289.00	89.500	88.600	9698.72	3841.45	51.21	3841.19	762595.92	760401.91	33°05'14.827"N	103°28'33.512"W	0.31	
13321.00	88.300	88.500	9699.33	3873.44	52.02	3873.17	762627.91	760402.72	33°05'14.832"N	103°28'33.136"W	3.76	



Actual Wellpath Report

No.1H AWP

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BAKER HUGHES

REFERENCE WELLPATH IDENTIFICATION

Operator	Apache Corporation	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(High Plains) Sec 23, T14S, R34E	Wellbore	No.1H AWB
Facility	High Plains State Com		

WELLPATH DATA (268 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
13385.00	88.700	90.000	9701.01	3937.41	52.86	3937.14	762691.88	760403.56	33°05'14.835"N	103°28'32.384"W	2.42	
13417.00	88.600	90.600	9701.76	3969.40	52.69	3969.13	762723.87	760403.39	33°05'14.831"N	103°28'32.008"W	1.90	
13448.00	87.800	92.500	9702.73	4000.37	51.85	4000.10	762754.84	760402.55	33°05'14.820"N	103°28'31.644"W	6.65	
13480.00	86.700	93.500	9704.27	4032.27	50.18	4032.02	762786.76	760400.88	33°05'14.801"N	103°28'31.269"W	4.64	
13512.00	86.300	93.600	9706.22	4064.14	48.20	4063.90	762818.63	760398.90	33°05'14.779"N	103°28'30.895"W	1.29	
13543.00	86.000	93.500	9708.30	4094.99	46.29	4094.77	762849.50	760396.99	33°05'14.758"N	103°28'30.532"W	1.02	
13575.00	85.500	93.700	9710.67	4126.83	44.28	4126.62	762881.35	760394.98	33°05'14.735"N	103°28'30.158"W	1.68	
13607.00	86.900	93.300	9712.80	4158.68	42.34	4158.49	762913.22	760393.03	33°05'14.713"N	103°28'29.784"W	4.55	
13639.00	87.500	93.000	9714.36	4190.58	40.58	4190.40	762945.13	760391.28	33°05'14.693"N	103°28'29.409"W	2.10	
13670.00	87.400	93.100	9715.74	4221.50	38.93	4221.33	762976.06	760389.63	33°05'14.674"N	103°28'29.046"W	0.46	
13701.00	87.100	93.200	9717.23	4252.40	37.23	4252.25	763006.98	760387.93	33°05'14.655"N	103°28'28.683"W	1.02	
13733.00	88.100	92.800	9718.57	4284.32	35.56	4284.17	763038.90	760386.26	33°05'14.636"N	103°28'28.308"W	3.37	
13764.00	88.700	92.400	9719.43	4315.26	34.15	4315.13	763069.86	760384.85	33°05'14.620"N	103°28'27.944"W	2.33	
13796.00	90.300	92.200	9719.71	4347.22	32.87	4347.10	763101.83	760383.57	33°05'14.604"N	103°28'27.568"W	5.04	
13828.00	90.900	92.400	9719.37	4379.19	31.58	4379.07	763133.80	760382.28	33°05'14.589"N	103°28'27.193"W	1.98	
13859.00	90.800	92.500	9718.91	4410.15	30.26	4410.04	763164.77	760380.96	33°05'14.573"N	103°28'26.829"W	0.46	
13891.00	90.500	92.300	9718.55	4442.11	28.92	4442.01	763196.74	760379.62	33°05'14.558"N	103°28'26.453"W	1.13	
13922.00	90.400	92.700	9718.31	4473.06	27.57	4472.98	763227.71	760378.26	33°05'14.542"N	103°28'26.089"W	1.33	
13954.00	90.200	92.700	9718.14	4505.02	26.06	4504.94	763259.67	760376.76	33°05'14.524"N	103°28'25.714"W	0.62	
13985.00	91.000	92.400	9717.82	4535.97	24.68	4535.91	763290.64	760375.38	33°05'14.508"N	103°28'25.350"W	2.76	
14016.00	91.200	92.200	9717.22	4566.93	23.43	4566.88	763321.61	760374.13	33°05'14.493"N	103°28'24.986"W	0.91	
14047.00	91.100	92.000	9716.60	4597.90	22.30	4597.85	763352.58	760373.00	33°05'14.479"N	103°28'24.622"W	0.72	
14079.00	91.000	91.900	9716.01	4629.87	21.21	4629.83	763384.56	760371.91	33°05'14.466"N	103°28'24.247"W	0.44	
14111.00	90.800	92.200	9715.51	4661.83	20.07	4661.81	763416.53	760370.77	33°05'14.452"N	103°28'23.871"W	1.13	
14143.00	90.600	92.300	9715.12	4693.80	18.81	4693.78	763448.50	760369.51	33°05'14.437"N	103°28'23.495"W	0.70	
14174.00	90.400	92.200	9714.85	4724.76	17.59	4724.75	763479.48	760368.29	33°05'14.423"N	103°28'23.131"W	0.72	
14206.00	89.200	91.700	9714.96	4756.73	16.50	4756.73	763511.46	760367.20	33°05'14.409"N	103°28'22.756"W	4.06	
14238.00	88.900	91.400	9715.49	4788.71	15.64	4788.72	763543.44	760366.34	33°05'14.398"N	103°28'22.380"W	1.33	
14269.00	88.600	91.500	9716.17	4819.69	14.85	4819.70	763574.42	760365.55	33°05'14.388"N	103°28'22.016"W	1.02	
14301.00	89.400	91.000	9716.73	4851.67	14.16	4851.69	763606.41	760364.86	33°05'14.378"N	103°28'21.640"W	2.95	
14333.00	89.600	90.700	9717.00	4883.66	13.68	4883.68	763638.40	760364.38	33°05'14.371"N	103°28'21.264"W	1.13	
14365.00	89.600	90.700	9717.23	4915.65	13.29	4915.68	763670.40	760363.99	33°05'14.365"N	103°28'20.888"W	0.00	
14397.00	89.500	90.600	9717.48	4947.65	12.93	4947.68	763702.40	760363.63	33°05'14.358"N	103°28'20.512"W	0.44	
14428.00	89.400	90.700	9717.78	4978.64	12.58	4978.67	763733.39	760363.28	33°05'14.352"N	103°28'20.148"W	0.46	
14460.00	89.300	90.400	9718.14	5010.63	12.27	5010.67	763765.39	760362.97	33°05'14.347"N	103°28'19.772"W	0.99	
14492.00	89.300	90.500	9718.53	5042.63	12.02	5042.67	763797.38	760362.72	33°05'14.342"N	103°28'19.396"W	0.31	
14524.00	88.200	90.700	9719.23	5074.61	11.68	5074.66	763829.37	760362.38	33°05'14.336"N	103°28'19.020"W	3.49	
14556.00	88.000	90.700	9720.29	5106.59	11.29	5106.64	763861.35	760361.99	33°05'14.329"N	103°28'18.644"W	0.62	
14588.00	87.800	90.700	9721.46	5138.56	10.90	5138.61	763893.33	760361.60	33°05'14.323"N	103°28'18.268"W	0.62	
14620.00	87.700	90.700	9722.72	5170.53	10.51	5170.59	763925.30	760361.21	33°05'14.316"N	103°28'17.892"W	0.31	
14652.00	87.700	90.900	9724.00	5202.50	10.06	5202.56	763957.27	760360.76	33°05'14.309"N	103°28'17.517"W	0.62	
14675.00	87.800	90.800	9724.91	5225.48	9.72	5225.54	763989.25	760360.42	33°05'14.304"N	103°28'17.247"W	0.61	
14730.00	87.800	90.800	9727.02	5280.42	8.96	5280.49	764035.21	760359.66	33°05'14.292"N	103°28'16.601"W	0.00	Proj to Bit

REFERENCE WELLPATH IDENTIFICATION

Operator	Apache Corporation	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(High Plains) Sec 23, T14S, R34E	Wellbore	No.1H AWB
Facility	High Plains State Com		

TARGETS

[illegible]

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
4250' Target		9702.00	34.34	4250.01	763004.74	760385.04	33°05'14.627"N	103°28'28.709"W	point
5000' Target		9705.00	40.40	4999.84	763754.56	760391.10	33°05'14.626"N	103°28'19.896"W	point
4500' Target		9707.00	36.36	4500.01	763254.73	760387.06	33°05'14.627"N	103°28'25.771"W	point
5250' Target		9720.00	42.42	5249.83	764004.54	760393.12	33°05'14.626"N	103°28'16.958"W	point
No.1H PBHL Rev.A		9721.00	42.61	5267.70	764022.42	760393.31	33°05'14.626"N	103°28'16.748"W	point



Actual Wellpath Report

No.1H AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	Apache Corporation	Slot	No. 1H SHL
Area	Lea County, NM	Well	No. 1H
Field	(High Plains) Sec 23, T14S, R34E	Wellbore	No.1H AWB
Facility	High Plains State Com		

WELLPATH COMPOSITION - Ref Wellbore: No.1H AWB Ref Wellpath: No.1H AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	9097.50	Generic gyro - northseeking (Standard)	Scientific Drilling Gyro <0-9097.5>	No.1H AWB
9097.50	14730.00	NaviTrak (Standard)	MWD NaviTrak <9197-XXXX>	No.1H AWB

HOBBS OCD

JUN 26 2012

RECEIVED

ACTUAL WELLPATH REPORT (CSV version)

Prepared by Baker Hughes

Software System: WellArchitect®3.0.0

REFERENCE WELLPATH IDENTIFICATION

Operator Apache Corporation
Area Lea County, NM
Field (High Plains) Sec 23, T14S, R34E
Facility High Plains State Com
Slot No. 1H SHL
Well No. 1H
Wellbore No.1H AWB
Wellpath No.1H AWP
Sidetrack (none)

SUR: L-23-14s-34e, 1700/S & 330/W
BHL: L-24-14s-34e, 1709/S & 5610/W
API# 30-025-40334

REPORT SETUP INFORMATION

Projection NAD27 / TM New Mexico SP, Eastern Zone (3001), US feet

North Refe Grid

Scale 0.999986

Convergence 0.46° East

Software S WellArchitect®

User Gentbry

Report Gen 1/23/2012 at 10:57:12 AM

DataBase/S WA Midland/ev3334.xml

WELLPATH	Local North [ft]	Local East [ft]	Grid East [ft]	Grid North [ft]	Latitude	Longitude
Slot Location	0	0	758754.8	760350.7	33°05'14.6	103°29'18.660"W
Facility Ref			758754.8	760350.7	33°05'14.6	103°29'18.660"W
Field Refer			758754.8	760350.7	33°05'14.6	103°29'18.660"W

WELLPATH DATUM

Calculation Minimum curvature

Horizontal Slot Location

Vertical Re Rig on No. 1H SHL (KB)

MD Refere Rig on No. 1H SHL (KB)

Field Vertic Mean Sea Level

Rig on No. 4123.00ft

Rig on No. 4123.00ft

Rig on No. 4123.00ft

Section Ori 0.00ft

Section Ori 0.00ft

Section Azi 89.60°

WELLPATH DATA Wellbore: No.1H AWB Wellpath: No.1H AWP † = interpolated/extrapolated
MD Inclination Azimuth TVD Vert Sect North East Grid East

[ft]	[°]	[°]	[ft]	[ft]	[ft]	[ft]	[US ft]
0	0	30.12	0	0	0	0	758754.8
88	0.36	30.12	88	0.14	0.24	0.14	758754.9
151.4	0.41	85.64	151.4	0.47	0.43	0.46	758755.3
243	0.57	96.41	242.99	1.25	0.4	1.24	758756
334.7	0.65	99.33	334.69	2.21	0.27	2.21	758757
426.3	0.7	114.12	426.28	3.23	-0.05	3.23	758758
521.5	0.56	121.91	521.48	4.16	-0.53	4.16	758759
612.3	0.52	119.85	612.27	4.89	-0.97	4.89	758759.7
703.2	0.5	128.26	703.17	5.55	-1.42	5.56	758760.4
801	0.51	133.3	800.97	6.2	-1.98	6.22	758761
898.9	0.45	143.87	898.86	6.74	-2.59	6.76	758761.6
993.7	0.41	171.08	993.66	7.01	-3.23	7.03	758761.8
1088.5	0.36	180.17	1088.46	7.06	-3.86	7.08	758761.9
1183.4	0.32	182.05	1183.36	7.04	-4.42	7.07	758761.9
1278.2	0.3	202.91	1278.16	6.93	-4.92	6.97	758761.8
1373.1	0.22	189.36	1373.05	6.8	-5.33	6.84	758761.6
1467.9	0.22	240.78	1467.85	6.61	-5.59	6.65	758761.5
1562.8	0.34	281.3	1562.75	6.18	-5.63	6.22	758761
1657.6	0.63	304.89	1657.55	5.48	-5.27	5.51	758760.3
1752.4	0.65	309.55	1752.34	4.64	-4.63	4.67	758759.5
1847.3	0.57	301.85	1847.24	3.83	-4.04	3.85	758758.7
1942.1	0.57	299.14	1942.03	3.02	-3.56	3.04	758757.8
2037	0.64	303.83	2036.93	2.17	-3.04	2.19	758757
2134.8	0.54	289.22	2134.72	1.28	-2.58	1.3	758756.1
2232.6	0.49	297.28	2232.52	0.48	-2.24	0.49	758755.3
2326.5	0.32	290.93	2326.42	-0.12	-1.96	-0.11	758754.7
2420.3	0.24	322.32	2420.22	-0.48	-1.71	-0.47	758754.3
2517.2	0.29	342.35	2517.11	-0.68	-1.32	-0.67	758754.1
2614	0.44	353.25	2613.91	-0.79	-0.72	-0.79	758754
2706.8	0.61	3.46	2706.71	-0.8	0.13	-0.8	758754
2803.7	0.45	359.74	2803.6	-0.76	1.03	-0.77	758754
2900.5	0.54	24.76	2900.4	-0.57	1.82	-0.58	758754.2
2995.3	0.53	21.69	2995.2	-0.21	2.63	-0.23	758754.6
3090.2	0.41	50.67	3090.09	0.21	3.26	0.19	758755
3185	0.55	45.12	3184.89	0.8	3.79	0.78	758755.6
3279.9	0.45	43.88	3279.79	1.39	4.38	1.36	758756.2
3374.7	0.5	63.13	3374.58	2.02	4.84	1.98	758756.8
3469.6	0.7	58.14	3469.48	2.88	5.33	2.85	758757.7
3564.4	0.68	71.11	3564.27	3.91	5.82	3.87	758758.7
3661.2	0.71	68.82	3661.06	5.02	6.22	4.97	758759.8
3756.1	0.51	67.85	3755.96	5.96	6.59	5.91	758760.7
3850.9	0.5	74.14	3850.75	6.75	6.87	6.7	758761.5
3945.8	0.5	74.46	3945.65	7.55	7.09	7.5	758762.3
4040.6	0.53	72.51	4040.45	8.37	7.33	8.32	758763.1
4132.4	0.49	90.25	4132.24	9.16	7.46	9.11	758763.9
4228.3	0.27	86.29	4228.14	9.8	7.47	9.75	758764.6

4324.1	0.36	81.16	4323.94	10.32	7.53	10.27	758765.1
4419.9	0.13	107.38	4419.74	10.72	7.55	10.67	758765.5
4515.8	0.19	96.6	4515.64	10.99	7.5	10.93	758765.7
4611.6	0.23	80.13	4611.44	11.33	7.51	11.28	758766.1
4705.5	0.23	67.53	4705.34	11.69	7.61	11.64	758766.4
4801.3	0.25	83.21	4801.14	12.08	7.71	12.03	758766.8
4895.1	0.3	82.58	4894.94	12.53	7.77	12.47	758767.3
4991	0.39	93.37	4990.83	13.1	7.78	13.05	758767.9
5086.8	0.42	91.68	5086.63	13.78	7.75	13.72	758768.5
5181.7	0.14	104.76	5181.53	14.24	7.71	14.18	758769
5275.5	0.19	108.91	5275.33	14.49	7.63	14.44	758769.2
5371.4	0.11	98.24	5371.23	14.74	7.57	14.68	758769.5
5561	0.8	291.6	5560.82	13.69	8.03	13.63	758768.4
5657.9	1.14	282.26	5657.71	12.12	8.48	12.06	758766.9
5750.7	1.1	290.25	5750.49	10.39	8.99	10.32	758765.1
5846.5	1.04	295.06	5846.28	8.74	9.67	8.67	758763.5
5942.4	0.88	303.85	5942.16	7.35	10.45	7.27	758762.1
6038.2	0.71	312.83	6037.95	6.31	11.27	6.23	758761
6135.1	0.72	321.75	6134.85	5.5	12.15	5.41	758760.2
6227.9	0.71	332.71	6227.64	4.88	13.12	4.79	758759.6
6320.8	0.62	344.5	6320.53	4.49	14.12	4.39	758759.2
6415.6	0.52	4.32	6415.33	4.39	15.04	4.28	758759.1
6510.4	0.48	24.6	6510.12	4.59	15.83	4.48	758759.3
6605.3	0.54	50.52	6605.02	5.11	16.48	4.99	758759.8
6700.1	0.58	67.06	6699.82	5.9	16.95	5.78	758760.6
6796.9	0.59	66.3	6796.61	6.81	17.34	6.69	758761.5
6891.8	0.52	63.42	6891.51	7.64	17.73	7.52	758762.3
6986.6	0.62	69.27	6986.3	8.51	18.1	8.38	758763.2
7081.5	0.44	93.06	7081.2	9.35	18.26	9.23	758764
7176.3	0.32	112.94	7176	9.96	18.14	9.83	758764.6
7271.1	0.07	166.68	7270.8	10.22	17.98	10.09	758764.9
7364	0.12	200.19	7363.7	10.19	17.84	10.07	758764.9
7460.3	0.13	233.28	7459.99	10.07	17.68	9.95	758764.8
7556.6	0.12	256.49	7556.29	9.88	17.59	9.76	758764.6
7652.8	0.12	289.34	7652.49	9.69	17.6	9.57	758764.4
7749.1	0.05	283.2	7748.79	9.56	17.64	9.43	758764.2
7844.6	0.02	198.54	7844.29	9.51	17.63	9.39	758764.2
7940	0.19	138.99	7939.69	9.61	17.5	9.49	758764.3
8034.8	0.72	118.68	8034.49	10.23	17.09	10.11	758764.9
8130.7	0.91	105.19	8130.38	11.49	16.6	11.38	758766.2
8226	1.3	100.57	8225.66	13.28	16.21	13.17	758768
8321.2	1.67	103.84	8320.83	15.69	15.68	15.58	758770.4
8416.5	1.48	103.63	8416.1	18.23	15.06	18.12	758772.9
8511.8	1.55	104.4	8511.36	20.67	14.45	20.57	758775.4
8607.1	1.5	108.64	8606.63	23.09	13.73	23	758777.8
8702.4	1.38	111.25	8701.9	25.34	12.91	25.25	758780.1
8798	1.18	111.4	8797.47	27.32	12.14	27.24	758782

8893.6	1	118.13	8893.06	28.97	11.38	28.89	758783.7
8989.3	0.9	128.95	8988.74	30.28	10.52	30.21	758785
9097.5	0.83	121.58	9096.93	31.6	9.57	31.54	758786.3
9197	2.3	118.4	9196.39	33.97	8.24	33.91	758788.7
9218	2.7	119.7	9217.37	34.76	7.8	34.71	758789.5
9250	4	105.9	9249.32	36.49	7.12	36.44	758791.2
9282	8.3	99.4	9281.13	39.83	6.44	39.79	758794.6
9314	13.4	96.5	9312.54	45.8	5.64	45.76	758800.6
9346	18.4	95.1	9343.31	54.51	4.77	54.48	758809.3
9377	21.3	92.7	9372.46	65	4.07	64.98	758819.8
9409	25.3	93.7	9401.85	77.63	3.35	77.61	758832.4
9441	28.9	93.9	9430.33	92.17	2.39	92.15	758847
9473	31.7	93.8	9457.96	108.27	1.3	108.26	758863.1
9505	35.1	91.5	9484.67	125.85	0.51	125.85	758880.7
9536	38.8	88.3	9509.44	144.48	0.56	144.48	758899.3
9568	42.5	87.9	9533.72	165.31	1.25	165.31	758920.1
9600	46.4	89.2	9556.56	187.71	1.81	187.71	758942.5
9632	51.1	90	9577.65	211.77	1.97	211.76	758966.6
9664	54.9	90.4	9596.9	237.32	1.88	237.31	758992.1
9695	58.5	91.3	9613.92	263.22	1.49	263.21	759018
9727	61.7	90.6	9629.87	290.95	1.04	290.94	759045.7
9759	65.1	90.5	9644.2	319.55	0.76	319.55	759074.4
9791	69.4	90.6	9656.57	349.05	0.48	349.05	759103.9
9823	73.6	90.6	9666.72	379.38	0.16	379.39	759134.2
9855	77.4	89.7	9674.73	410.36	0.08	410.37	759165.2
9887	82	89.2	9680.45	441.83	0.39	441.84	759196.6
9918	87.4	89.1	9683.31	472.69	0.84	472.69	759227.5
9950	90.2	87.7	9683.98	504.67	1.74	504.67	759259.5
9982	90.1	87.8	9683.9	536.65	2.99	536.65	759291.4
10021	89.8	86.4	9683.93	575.62	4.97	575.59	759330.4
10053	90.4	86.5	9683.88	607.57	6.95	607.53	759362.3
10084	90.3	86.8	9683.69	638.53	8.76	638.48	759393.3
10116	90.6	86.9	9683.44	670.49	10.52	670.43	759425.2
10147	90.6	87.2	9683.11	701.45	12.11	701.39	759456.2
10179	90.7	87.7	9682.75	733.43	13.54	733.35	759488.1
10211	90.8	87.6	9682.33	765.41	14.85	765.32	759520.1
10307	91.1	88.6	9680.74	861.36	18.03	861.26	759616
10338	91	88.8	9680.17	892.35	18.73	892.24	759647
10370	91	89.3	9679.61	924.35	19.26	924.23	759679
10402	91	89.4	9679.05	956.34	19.63	956.23	759711
10434	91	90.3	9678.5	988.34	19.71	988.22	759743
10465	90.9	90.2	9677.98	1019.33	19.58	1019.22	759774
10497	90.9	90.1	9677.48	1051.32	19.49	1051.21	759806
10529	90.9	90.2	9676.98	1083.32	19.41	1083.21	759838
10561	91.1	90.4	9676.42	1115.31	19.24	1115.2	759870
10593	91.2	90.4	9675.78	1147.3	19.02	1147.2	759902
10625	91.5	90.7	9675.02	1179.29	18.71	1179.19	759934

10657	91.5	90.8	9674.18	1211.27	18.29	1211.17	759966
10689	91.6	90.7	9673.32	1243.25	17.87	1243.16	759997.9
10720	91.5	90.6	9672.48	1274.24	17.52	1274.14	760028.9
10752	91.5	90.4	9671.64	1306.22	17.24	1306.13	760060.9
10783	91.5	90.7	9670.83	1337.21	16.94	1337.12	760091.9
10814	91.3	90.5	9670.07	1368.19	16.62	1368.11	760122.9
10846	91	90.5	9669.43	1400.18	16.34	1400.1	760154.9
10878	90.9	90.7	9668.9	1432.17	16.01	1432.1	760186.9
10910	90.7	90.8	9668.45	1464.16	15.59	1464.09	760218.9
10942	91.3	90.9	9667.9	1496.15	15.11	1496.08	760250.9
10973	90.6	90.4	9667.38	1527.14	14.76	1527.07	760281.9
11006	91.4	90	9666.81	1560.13	14.65	1560.07	760314.8
11038	90.7	90	9666.22	1592.13	14.65	1592.06	760346.8
11069	91.3	90.2	9665.68	1623.12	14.59	1623.06	760377.8
11100	90.9	90.5	9665.08	1654.11	14.4	1654.05	760408.8
11132	90.8	90.6	9664.61	1686.1	14.09	1686.05	760440.8
11164	90.5	90.8	9664.24	1718.1	13.7	1718.04	760472.8
11196	89.9	90.3	9664.13	1750.09	13.4	1750.04	760504.8
11228	89.4	90.2	9664.33	1782.09	13.26	1782.04	760536.8
11260	89.5	89.4	9664.64	1814.09	13.37	1814.04	760568.8
11292	88.7	88.3	9665.14	1846.08	14.01	1846.03	760600.8
11323	88.2	87.8	9665.98	1877.06	15.07	1877	760631.8
11355	88.1	87.4	9667.01	1909.02	16.4	1908.95	760663.7
11387	87.5	87	9668.24	1940.97	17.97	1940.89	760695.7
11418	88.2	87.1	9669.4	1971.92	19.56	1971.83	760726.6
11450	87.9	87	9670.49	2003.87	21.21	2003.77	760758.5
11482	87.6	86.7	9671.75	2035.8	22.96	2035.69	760790.5
11514	87	86.5	9673.25	2067.72	24.86	2067.6	760822.4
11546	86.8	86.3	9674.98	2099.63	26.87	2099.49	760854.3
11578	86.6	86.6	9676.83	2131.53	28.84	2131.38	760886.1
11609	86.6	87	9678.67	2162.43	30.57	2162.27	760917
11641	86.6	87.9	9680.56	2194.36	31.99	2194.19	760949
11673	86.6	88.6	9682.46	2226.29	32.97	2226.11	760980.9
11705	87.3	89.6	9684.16	2258.24	33.47	2258.06	761012.8
11737	87.8	89.6	9685.53	2290.21	33.69	2290.03	761044.8
11769	88.5	89.7	9686.56	2322.2	33.89	2322.02	761076.8
11800	89	89.7	9687.24	2353.19	34.05	2353.01	761107.8
11832	89.4	89.9	9687.69	2385.19	34.16	2385.01	761139.8
11864	89.6	89.9	9687.97	2417.18	34.22	2417	761171.8
11895	90	90	9688.07	2448.18	34.25	2448	761202.8
11927	90	89.8	9688.07	2480.18	34.3	2480	761234.8
11959	90	89.9	9688.07	2512.18	34.39	2512	761266.8
11990	90	89.7	9688.07	2543.18	34.49	2543	761297.8
12022	90.3	89.7	9687.99	2575.18	34.66	2575	761329.8
12054	91	89.9	9687.63	2607.18	34.77	2607	761361.8
12087	91.1	89.7	9687.02	2640.17	34.89	2639.99	761394.8
12118	91.1	89.8	9686.43	2671.17	35.02	2670.99	761425.8

12149	91.2	89.7	9685.81	2702.16	35.16	2701.98	761456.7
12180	91.2	89.9	9685.16	2733.15	35.27	2732.98	761487.7
12212	91.3	90	9684.46	2765.15	35.29	2764.97	761519.7
12243	91.4	90.1	9683.73	2796.14	35.27	2795.96	761550.7
12275	91.9	90	9682.81	2828.12	35.24	2827.95	761582.7
12306	91.9	89.9	9681.78	2859.1	35.27	2858.93	761613.7
12338	92.1	89.9	9680.66	2891.09	35.32	2890.91	761645.7
12370	91.9	90.1	9679.55	2923.06	35.32	2922.89	761677.6
12402	91.3	89.8	9678.65	2955.05	35.35	2954.88	761709.6
12434	90.5	89.6	9678.15	2987.05	35.52	2986.87	761741.6
12465	90.3	89.4	9677.93	3018.05	35.79	3017.87	761772.6
12497	89.9	89.4	9677.88	3050.05	36.12	3049.87	761804.6
12529	90.1	89.4	9677.88	3082.05	36.46	3081.87	761836.6
12561	89.6	89.1	9677.96	3114.04	36.88	3113.86	761868.6
12593	89.5	89	9678.21	3146.04	37.41	3145.86	761900.6
12625	90	88.6	9678.35	3178.04	38.08	3177.85	761932.6
12657	90.1	88.6	9678.32	3210.03	38.86	3209.84	761964.6
12688	89.3	88.2	9678.49	3241.03	39.73	3240.83	761995.6
12720	88.9	88	9678.99	3273.01	40.79	3272.81	762027.6
12749	88.1	89.5	9679.75	3302	41.42	3301.79	762056.5
12781	87.2	89.3	9681.06	3333.97	41.75	3333.76	762088.5
12813	87.2	90.7	9682.62	3365.93	41.75	3365.72	762120.5
12844	86.6	91	9684.3	3396.88	41.29	3396.67	762151.4
12876	86.6	90.4	9686.2	3428.81	40.9	3428.61	762183.4
12908	87.9	89.6	9687.73	3460.78	40.9	3460.58	762215.3
12940	88.1	89.9	9688.85	3492.76	41.04	3492.56	762247.3
12972	88	90.1	9689.94	3524.74	41.04	3524.54	762279.3
13002	87.8	89.5	9691.04	3554.72	41.15	3554.52	762309.3
13035	87.4	89.3	9692.42	3587.69	41.49	3587.49	762342.2
13067	88.1	88.2	9693.68	3619.66	42.19	3619.45	762374.2
13099	88.3	87.9	9694.68	3651.63	43.28	3651.42	762406.2
13130	88	87.9	9695.68	3682.6	44.41	3682.38	762437.1
13162	87.9	87.4	9696.83	3714.56	45.73	3714.33	762469.1
13194	89.1	86.7	9697.66	3746.52	47.37	3746.28	762501
13226	89.3	86.9	9698.11	3778.48	49.16	3778.23	762533
13257	89.5	88.5	9698.44	3809.46	50.4	3809.2	762563.9
13289	89.5	88.6	9698.72	3841.45	51.21	3841.19	762595.9
13321	88.3	88.5	9699.33	3873.44	52.02	3873.17	762627.9
13385	88.7	90	9701.01	3937.41	52.86	3937.14	762691.9
13417	88.6	90.6	9701.76	3969.4	52.69	3969.13	762723.9
13448	87.8	92.5	9702.73	4000.37	51.85	4000.1	762754.8
13480	86.7	93.5	9704.27	4032.27	50.18	4032.02	762786.8
13512	86.3	93.6	9706.22	4064.14	48.2	4063.9	762818.6
13543	86	93.5	9708.3	4094.99	46.29	4094.77	762849.5
13575	85.5	93.7	9710.67	4126.83	44.28	4126.62	762881.4
13607	86.9	93.3	9712.8	4158.68	42.34	4158.49	762913.2
13639	87.5	93	9714.36	4190.58	40.58	4190.4	762945.1

13670	87.4	93.1	9715.74	4221.5	38.93	4221.33	762976.1
13701	87.1	93.2	9717.23	4252.4	37.23	4252.25	763007
13733	88.1	92.8	9718.57	4284.32	35.56	4284.17	763038.9
13764	88.7	92.4	9719.43	4315.26	34.15	4315.13	763069.9
13796	90.3	92.2	9719.71	4347.22	32.87	4347.1	763101.8
13828	90.9	92.4	9719.37	4379.19	31.58	4379.07	763133.8
13859	90.8	92.5	9718.91	4410.15	30.26	4410.04	763164.8
13891	90.5	92.3	9718.55	4442.11	28.92	4442.01	763196.7
13922	90.4	92.7	9718.31	4473.06	27.57	4472.98	763227.7
13954	90.2	92.7	9718.14	4505.02	26.06	4504.94	763259.7
13985	91	92.4	9717.82	4535.97	24.68	4535.91	763290.6
14016	91.2	92.2	9717.22	4566.93	23.43	4566.88	763321.6
14047	91.1	92	9716.6	4597.9	22.3	4597.85	763352.6
14079	91	91.9	9716.01	4629.87	21.21	4629.83	763384.6
14111	90.8	92.2	9715.51	4661.83	20.07	4661.81	763416.5
14143	90.6	92.3	9715.12	4693.8	18.81	4693.78	763448.5
14174	90.4	92.2	9714.85	4724.76	17.59	4724.75	763479.5
14206	89.2	91.7	9714.96	4756.73	16.5	4756.73	763511.5
14238	88.9	91.4	9715.49	4788.71	15.64	4788.72	763543.4
14269	88.6	91.5	9716.17	4819.69	14.85	4819.7	763574.4
14301	89.4	91	9716.73	4851.67	14.16	4851.69	763606.4
14333	89.6	90.7	9717	4883.66	13.68	4883.68	763638.4
14365	89.6	90.7	9717.23	4915.65	13.29	4915.68	763670.4
14397	89.5	90.6	9717.48	4947.65	12.93	4947.68	763702.4
14428	89.4	90.7	9717.78	4978.64	12.58	4978.67	763733.4
14460	89.3	90.4	9718.14	5010.63	12.27	5010.67	763765.4
14492	89.3	90.5	9718.53	5042.63	12.02	5042.67	763797.4
14524	88.2	90.7	9719.23	5074.61	11.68	5074.66	763829.4
14556	88	90.7	9720.29	5106.59	11.29	5106.64	763861.4
14588	87.8	90.7	9721.46	5138.56	10.9	5138.61	763893.3
14620	87.7	90.7	9722.72	5170.53	10.51	5170.59	763925.3
14652	87.7	90.9	9724	5202.5	10.06	5202.56	763957.3
14675	87.8	90.8	9724.91	5225.48	9.72	5225.54	763980.3
14730	87.8	90.8	9727.02	5280.42	8.96	5280.49	764035.2

T A R G E T S

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North	Latitude	Longitude
1250' Target		9666	10.1	1250	760004.8	760360.8	33°05'14.6	103°29'03.1
500' Target		9667	13.2	500	759254.8	760363.9	33°05'14.7	103°29'12.1
1000' Target		9668	10	999.97	759754.8	760360.7	33°05'14.6	103°29'06.1
250' Target		9670	2.02	250	759004.8	760352.7	33°05'14.6	103°29'15.1
750' Target		9670	11	750	759504.8	760361.7	33°05'14.6	103°29'09.1
1500' Target		9675	12.12	1500	760254.8	760362.8	33°05'14.6	103°29'01.1
2250' Target		9676	18.18	2250	761004.8	760368.9	33°05'14.6	103°28'52.1
2000' Target		9677	16.16	2000	760754.8	760366.9	33°05'14.6	103°28'55.1
3000' Target		9677	24.24	3000	761754.8	760374.9	33°05'14.6	103°28'43.1

2750' Target	9679	22.22	2750	761504.8	760372.9	33°05'14.6	103°28'46.1
1750' Target	9680	16	1750	760504.8	760366.7	33°05'14.6	103°28'58.1
3250' Target	9680	26.26	3250	762004.8	760377	33°05'14.6	103°28'40.1
2500' Target	9681	20.2	2500	761254.8	760370.9	33°05'14.6	103°28'49.1
3500' Target	9682	28.28	3500	762254.8	760379	33°05'14.6	103°28'37.1
3750' Target	9686	30.3	3750	762504.7	760381	33°05'14.6	103°28'34.1
4000' Target	9694	32.32	4000.01	762754.7	760383	33°05'14.6	103°28'31.1
4750' Target	9700	38.39	4750.01	763504.7	760389.1	33°05'14.6	103°28'22.1
4940' Target	9701	39.92	4939.84	763694.6	760390.6	33°05'14.6	103°28'20.1
4250' Target	9702	34.34	4250.01	763004.7	760385	33°05'14.6	103°28'28.1
5000' Target	9705	40.4	4999.84	763754.6	760391.1	33°05'14.6	103°28'19.1
4500' Target	9707	36.36	4500.01	763254.7	760387.1	33°05'14.6	103°28'25.1
5250' Target	9720	42.42	5249.83	764004.5	760393.1	33°05'14.6	103°28'16.1
No.1H PBHL Rev.A	9721	42.61	5267.7	764022.4	760393.3	33°05'14.6	103°28'16.1

WELLPATH COMPOSITION Ref Wellbore: No.1H AWB Ref Wellpath: No.1H AWP

Log Name/	Start MD	End MD	Pos Unc	Model
	[ft]	[ft]		

Scientific D	0	9097.5		Generic gyro - northseeking (Standard)
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MWD Navi	9097.5	14730		NaviTrak (Standard)
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Station

Grid North Latitude Longitude DLS

[US ft]	[°/100ft]
760350.7 33°05'14.6 103°29'18.1	0
760350.9 33°05'14.6 103°29'18.1	0.41
760351.1 33°05'14.6 103°29'18.1	0.57
760351.1 33°05'14.6 103°29'18.1	0.2
760351 33°05'14.6 103°29'18.1	0.09
760350.7 33°05'14.6 103°29'18.1	0.2
760350.2 33°05'14.6 103°29'18.1	0.17
760349.7 33°05'14.6 103°29'18.1	0.05
760349.3 33°05'14.6 103°29'18.1	0.09
760348.7 33°05'14.6 103°29'18.1	0.05
760348.1 33°05'14.6 103°29'18.1	0.11
760347.5 33°05'14.5 103°29'18.1	0.22
760346.8 33°05'14.5 103°29'18.1	0.08
760346.3 33°05'14.5 103°29'18.1	0.04
760345.8 33°05'14.5 103°29'18.1	0.12
760345.4 33°05'14.5 103°29'18.1	0.11
760345.1 33°05'14.5 103°29'18.1	0.2
760345.1 33°05'14.5 103°29'18.1	0.24
760345.4 33°05'14.5 103°29'18.1	0.37
760346.1 33°05'14.5 103°29'18.1	0.06
760346.7 33°05'14.5 103°29'18.1	0.12
760347.1 33°05'14.5 103°29'18.1	0.03
760347.7 33°05'14.5 103°29'18.1	0.09
760348.1 33°05'14.6 103°29'18.1	0.18
760348.5 33°05'14.6 103°29'18.1	0.09
760348.7 33°05'14.6 103°29'18.1	0.19
760349 33°05'14.6 103°29'18.1	0.18
760349.4 33°05'14.6 103°29'18.1	0.11
760350 33°05'14.6 103°29'18.1	0.17
760350.8 33°05'14.6 103°29'18.1	0.21
760351.7 33°05'14.6 103°29'18.1	0.17
760352.5 33°05'14.6 103°29'18.1	0.24
760353.3 33°05'14.6 103°29'18.1	0.03
760354 33°05'14.6 103°29'18.1	0.28
760354.5 33°05'14.6 103°29'18.1	0.16
760355.1 33°05'14.6 103°29'18.1	0.11
760355.5 33°05'14.6 103°29'18.1	0.18
760356 33°05'14.6 103°29'18.1	0.22
760356.5 33°05'14.6 103°29'18.1	0.17
760356.9 33°05'14.6 103°29'18.1	0.04
760357.3 33°05'14.6 103°29'18.1	0.21
760357.6 33°05'14.6 103°29'18.1	0.06
760357.8 33°05'14.6 103°29'18.1	0
760358 33°05'14.7 103°29'18.1	0.04
760358.2 33°05'14.7 103°29'18.1	0.18
760358.2 33°05'14.7 103°29'18.1	0.23

760358.2	33°05'14.7"	103°29'18."	0.1
760358.3	33°05'14.7"	103°29'18."	0.26
760358.2	33°05'14.7"	103°29'18."	0.07
760358.2	33°05'14.7"	103°29'18."	0.08
760358.3	33°05'14.7"	103°29'18."	0.05
760358.4	33°05'14.7"	103°29'18."	0.07
760358.5	33°05'14.7"	103°29'18."	0.05
760358.5	33°05'14.7"	103°29'18."	0.12
760358.5	33°05'14.7"	103°29'18."	0.03
760358.4	33°05'14.7"	103°29'18."	0.3
760358.3	33°05'14.7"	103°29'18."	0.05
760358.3	33°05'14.7"	103°29'18."	0.09
760358.7	33°05'14.7"	103°29'18."	0.48
760359.2	33°05'14.7"	103°29'18."	0.39
760359.7	33°05'14.7"	103°29'18."	0.17
760360.4	33°05'14.7"	103°29'18."	0.11
760361.2	33°05'14.7"	103°29'18."	0.23
760362	33°05'14.7"	103°29'18."	0.22
760362.9	33°05'14.7"	103°29'18."	0.12
760363.8	33°05'14.7"	103°29'18."	0.15
760364.8	33°05'14.7"	103°29'18."	0.18
760365.7	33°05'14.7"	103°29'18."	0.23
760366.5	33°05'14.7"	103°29'18."	0.19
760367.2	33°05'14.7"	103°29'18."	0.25
760367.7	33°05'14.7"	103°29'18."	0.17
760368	33°05'14.7"	103°29'18."	0.01
760368.4	33°05'14.8"	103°29'18."	0.08
760368.8	33°05'14.8"	103°29'18."	0.12
760369	33°05'14.8"	103°29'18."	0.3
760368.8	33°05'14.8"	103°29'18."	0.19
760368.7	33°05'14.8"	103°29'18."	0.3
760368.5	33°05'14.8"	103°29'18."	0.08
760368.4	33°05'14.8"	103°29'18."	0.07
760368.3	33°05'14.8"	103°29'18."	0.05
760368.3	33°05'14.8"	103°29'18."	0.07
760368.3	33°05'14.8"	103°29'18."	0.07
760368.3	33°05'14.8"	103°29'18."	0.05
760368.2	33°05'14.8"	103°29'18."	0.19
760367.8	33°05'14.7"	103°29'18."	0.58
760367.3	33°05'14.7"	103°29'18."	0.28
760366.9	33°05'14.7"	103°29'18."	0.42
760366.4	33°05'14.7"	103°29'18."	0.4
760365.8	33°05'14.7"	103°29'18."	0.2
760365.2	33°05'14.7"	103°29'18."	0.08
760364.4	33°05'14.7"	103°29'18."	0.13
760363.6	33°05'14.7"	103°29'18."	0.14
760362.8	33°05'14.7"	103°29'18."	0.21

760362.1	33°05'14.7	103°29'18.	0.23
760361.2	33°05'14.7	103°29'18.	0.21
760360.3	33°05'14.7	103°29'18.	0.12
760358.9	33°05'14.7	103°29'18.	1.48
760358.5	33°05'14.7	103°29'18.	1.92
760357.8	33°05'14.6	103°29'18.	4.75
760357.1	33°05'14.6	103°29'18.	13.59
760356.3	33°05'14.6	103°29'18.	16.02
760355.5	33°05'14.6	103°29'18.	15.67
760354.8	33°05'14.6	103°29'17.	9.72
760354.1	33°05'14.6	103°29'17.	12.56
760353.1	33°05'14.6	103°29'17.	11.25
760352	33°05'14.6	103°29'17.	8.75
760351.2	33°05'14.6	103°29'17.	11.34
760351.3	33°05'14.6	103°29'16.	13.45
760352	33°05'14.6	103°29'16.	11.59
760352.5	33°05'14.6	103°29'16.	12.51
760352.7	33°05'14.6	103°29'16.	14.81
760352.6	33°05'14.6	103°29'15.	11.92
760352.2	33°05'14.6	103°29'15.	11.86
760351.7	33°05'14.6	103°29'15.	10.18
760351.5	33°05'14.6	103°29'14.	10.63
760351.2	33°05'14.6	103°29'14.	13.44
760350.9	33°05'14.6	103°29'14.	13.12
760350.8	33°05'14.5	103°29'13.	12.18
760351.1	33°05'14.5	103°29'13.	14.46
760351.5	33°05'14.5	103°29'13.	17.42
760352.4	33°05'14.6	103°29'12.	9.78
760353.7	33°05'14.6	103°29'12.	0.44
760355.7	33°05'14.6	103°29'11.	3.67
760357.7	33°05'14.6	103°29'11.	1.9
760359.5	33°05'14.6	103°29'11.	1.02
760361.2	33°05'14.6	103°29'10.	0.99
760362.8	33°05'14.6	103°29'10.	0.97
760364.2	33°05'14.7	103°29'10.	1.59
760365.6	33°05'14.7	103°29'09.	0.44
760368.7	33°05'14.7	103°29'08.	1.09
760369.4	33°05'14.7	103°29'08.	0.72
760370	33°05'14.7	103°29'07.	1.56
760370.3	33°05'14.7	103°29'07.	0.31
760370.4	33°05'14.7	103°29'07.	2.81
760370.3	33°05'14.7	103°29'06.	0.46
760370.2	33°05'14.7	103°29'06.	0.31
760370.1	33°05'14.7	103°29'05.	0.31
760369.9	33°05'14.7	103°29'05.	0.88
760369.7	33°05'14.7	103°29'05.	0.31
760369.4	33°05'14.7	103°29'04.	1.33

760369	33°05'14.7	103°29'04.0	0.31
760368.6	33°05'14.7	103°29'04.0	0.44
760368.2	33°05'14.7	103°29'03.0	0.46
760367.9	33°05'14.6	103°29'03.0	0.62
760367.6	33°05'14.6	103°29'02.0	0.97
760367.3	33°05'14.6	103°29'02.0	0.91
760367	33°05'14.6	103°29'02.0	0.94
760366.7	33°05'14.6	103°29'01.0	0.7
760366.3	33°05'14.6	103°29'01.0	0.7
760365.8	33°05'14.6	103°29'01.0	1.9
760365.5	33°05'14.6	103°29'00.0	2.77
760365.4	33°05'14.6	103°29'00.0	2.71
760365.4	33°05'14.6	103°28'59.0	2.19
760365.3	33°05'14.6	103°28'59.0	2.04
760365.1	33°05'14.6	103°28'59.0	1.61
760364.8	33°05'14.6	103°28'58.0	0.44
760364.4	33°05'14.6	103°28'58.0	1.13
760364.1	33°05'14.6	103°28'58.0	2.44
760364	33°05'14.6	103°28'57.0	1.59
760364.1	33°05'14.6	103°28'57.0	2.52
760364.7	33°05'14.6	103°28'56.0	4.25
760365.8	33°05'14.6	103°28'56.0	2.28
760367.1	33°05'14.6	103°28'56.0	1.29
760368.7	33°05'14.6	103°28'55.0	2.25
760370.3	33°05'14.6	103°28'55.0	2.28
760371.9	33°05'14.6	103°28'55.0	0.99
760373.7	33°05'14.6	103°28'54.0	1.33
760375.6	33°05'14.7	103°28'54.0	1.98
760377.6	33°05'14.7	103°28'53.0	0.88
760379.5	33°05'14.7	103°28'53.0	1.13
760381.3	33°05'14.7	103°28'53.0	1.29
760382.7	33°05'14.7	103°28'52.0	2.81
760383.7	33°05'14.7	103°28'52.0	2.18
760384.2	33°05'14.7	103°28'52.0	3.81
760384.4	33°05'14.7	103°28'51.0	1.56
760384.6	33°05'14.7	103°28'51.0	2.21
760384.8	33°05'14.7	103°28'51.0	1.61
760384.9	33°05'14.7	103°28'50.0	1.4
760384.9	33°05'14.7	103°28'50.0	0.62
760384.9	33°05'14.7	103°28'49.0	1.33
760385	33°05'14.7	103°28'49.0	0.62
760385.1	33°05'14.7	103°28'49.0	0.31
760385.2	33°05'14.7	103°28'48.0	0.65
760385.4	33°05'14.7	103°28'48.0	0.94
760385.5	33°05'14.7	103°28'48.0	2.28
760385.6	33°05'14.7	103°28'47.0	0.68
760385.7	33°05'14.7	103°28'47.0	0.32

760385.9	33°05'14.7"	103°28'46."	0.46
760386	33°05'14.7"	103°28'46."	0.65
760386	33°05'14.7"	103°28'46."	0.44
760386	33°05'14.7"	103°28'45."	0.46
760385.9	33°05'14.7"	103°28'45."	1.59
760386	33°05'14.7"	103°28'45."	0.32
760386	33°05'14.7"	103°28'44."	0.62
760386	33°05'14.7"	103°28'44."	0.88
760386.1	33°05'14.7"	103°28'43."	2.1
760386.2	33°05'14.7"	103°28'43."	2.58
760386.5	33°05'14.7"	103°28'43."	0.91
760386.8	33°05'14.7"	103°28'42."	1.25
760387.2	33°05'14.7"	103°28'42."	0.62
760387.6	33°05'14.7"	103°28'42."	1.82
760388.1	33°05'14.7"	103°28'41."	0.44
760388.8	33°05'14.7"	103°28'41."	2
760389.6	33°05'14.7"	103°28'40."	0.31
760390.4	33°05'14.7"	103°28'40."	2.89
760391.5	33°05'14.7"	103°28'40."	1.4
760392.1	33°05'14.7"	103°28'39."	5.86
760392.5	33°05'14.7"	103°28'39."	2.88
760392.5	33°05'14.7"	103°28'39."	4.37
760392	33°05'14.7"	103°28'38."	2.16
760391.6	33°05'14.7"	103°28'38."	1.87
760391.6	33°05'14.7"	103°28'37."	4.77
760391.7	33°05'14.7"	103°28'37."	1.13
760391.7	33°05'14.7"	103°28'37."	0.7
760391.9	33°05'14.7"	103°28'36."	2.11
760392.2	33°05'14.7"	103°28'36."	1.35
760392.9	33°05'14.7"	103°28'36."	4.07
760394	33°05'14.7"	103°28'35."	1.13
760395.1	33°05'14.7"	103°28'35."	0.97
760396.4	33°05'14.7"	103°28'35."	1.59
760398.1	33°05'14.7"	103°28'34."	4.34
760399.9	33°05'14.8"	103°28'34."	0.88
760401.1	33°05'14.8"	103°28'33."	5.2
760401.9	33°05'14.8"	103°28'33."	0.31
760402.7	33°05'14.8"	103°28'33."	3.76
760403.6	33°05'14.8"	103°28'32."	2.42
760403.4	33°05'14.8"	103°28'32."	1.9
760402.6	33°05'14.8"	103°28'31."	6.65
760400.9	33°05'14.8"	103°28'31."	4.64
760398.9	33°05'14.7"	103°28'30."	1.29
760397	33°05'14.7"	103°28'30."	1.02
760395	33°05'14.7"	103°28'30."	1.68
760393	33°05'14.7"	103°28'29."	4.55
760391.3	33°05'14.6"	103°28'29."	2.1

760389.6	33°05'14.6	103°28'29.0	0.46
760387.9	33°05'14.6	103°28'28.0	1.02
760386.3	33°05'14.6	103°28'28.0	3.37
760384.9	33°05'14.6	103°28'27.0	2.33
760383.6	33°05'14.6	103°28'27.0	5.04
760382.3	33°05'14.5	103°28'27.0	1.98
760381	33°05'14.5	103°28'26.0	0.46
760379.6	33°05'14.5	103°28'26.0	1.13
760378.3	33°05'14.5	103°28'26.0	1.33
760376.8	33°05'14.5	103°28'25.0	0.62
760375.4	33°05'14.5	103°28'25.0	2.76
760374.1	33°05'14.4	103°28'24.0	0.91
760373	33°05'14.4	103°28'24.0	0.72
760371.9	33°05'14.4	103°28'24.0	0.44
760370.8	33°05'14.4	103°28'23.0	1.13
760369.5	33°05'14.4	103°28'23.0	0.7
760368.3	33°05'14.4	103°28'23.0	0.72
760367.2	33°05'14.4	103°28'22.0	4.06
760366.3	33°05'14.3	103°28'22.0	1.33
760365.6	33°05'14.3	103°28'22.0	1.02
760364.9	33°05'14.3	103°28'21.0	2.95
760364.4	33°05'14.3	103°28'21.0	1.13
760364	33°05'14.3	103°28'20.0	0
760363.6	33°05'14.3	103°28'20.0	0.44
760363.3	33°05'14.3	103°28'20.0	0.46
760363	33°05'14.3	103°28'19.0	0.99
760362.7	33°05'14.3	103°28'19.0	0.31
760362.4	33°05'14.3	103°28'19.0	3.49
760362	33°05'14.3	103°28'18.0	0.62
760361.6	33°05'14.3	103°28'18.0	0.62
760361.2	33°05'14.3	103°28'17.0	0.31
760360.8	33°05'14.3	103°28'17.0	0.62
760360.4	33°05'14.3	103°28'17.0	0.61
760359.7	33°05'14.2	103°28'16.0	0

Shape	Comment
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[illegible]

HOBBS OCD

JUN 18 2012

RECEIVED

APACHE CORP

Wildcat (Lea County, NM)
Lea County, NM
High Plains State Com #1H
VH - Job #32K12111250

SUR: L-23-14s-34e, 1700/S & 330/W
BHL: L-24-14s-34e, 1709/S & 5610/W
API# 30-025-40334

Survey: Gyro

SDI Standard Survey Report

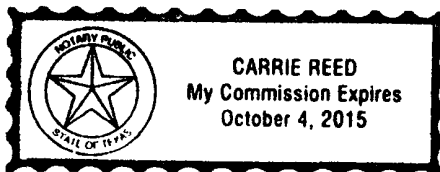
This survey is correct to the best of my knowledge and is supported by actual field data.

Richard

Notarized this date 31st of December, 2011.

Carrie Reed

Notary Signature
County of Midland
State of Texas



Scientific Drilling International, Inc.

SDI Standard Survey Report



Company:	APACHE CORP	Local Co-ordinate Reference:	Well High Plains State Com #1H
Project:	Wildcat (Lea County,NM)	TVD Reference:	WELL @ 0 0usft (Original Well Elev)
Site:	Lea County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	High Plains State Com #1H	North Reference:	Grid
Wellbore:	VH - Job #32K12111250	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K12111250	Database:	EDM-Regulatory

Project	Wildcat (Lea County,NM)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Lea County, NM				
Site Position:		Northing:	763,506 88 usft	Latitude:	33° 5' 45 600 N
From:	Lat/Long	Easting:	800,219 68 usft	Longitude:	103° 29' 16 800 W
Position Uncertainty:	0 0 usft	Slot Radius:	0"	Grid Convergence:	0 46 °

Well	High Plains State Com #1H, Directional (Baker)					
Well Position	+N/-S	0 0 usft	Northing:	760,375 43 usft	Latitude:	33° 5' 14 629 N
	+E/-W	0 0 usft	Easting:	800,086 54 usft	Longitude:	103° 29' 18 661 W
Position Uncertainty		0 0 usft	Wellhead Elevation:	usft	Ground Level:	0 0 usft

Wellbore	VH - Job #32K12111250				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	12/28/2011	7 55	60 98	49,117

Design	VH - Job #32K12111250				
Audit Notes:					
Version:	1 0	Phase:	ACTUAL	Tie On Depth:	0 0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)	
	0 0	0 0	0 0	73 12	

Survey Program	Date	1/22/2012			
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description	
88 0	9,097 5	Gyro (VH - Job #32K12111250)	Keeper	Keeper Gyro	

Survey								
Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)	
0 0	0 00	0 00	0 0	0 0	0 0	0 00	0 0	0 0
88 0	0 36	30 12	88 0	0 2	0 1	30 12	0 3	0 3
151 4	0 41	85 64	151 4	0 4	0 5	47 32	0 6	0 6
243 0	0 57	96 41	243 0	0 4	1 2	72 07	1 3	1 3
334 7	0 65	99 33	334 7	0 3	2 2	83 10	2 2	2 2
426 3	0 70	114 12	426 3	0 0	3 2	90 80	3 2	3 2
521 5	0 56	121 91	521 5	-0 5	4 2	97 25	4 2	4 2
612 3	0 52	119 85	612 3	-1 0	4 9	101 20	5 0	5 0
703 2	0 50	128 26	703 2	-1 4	5 6	104 31	5 7	5 7
801 0	0 51	133 30	801 0	-2 0	6 2	107 69	6 5	6 5
898 9	0 45	143 87	898 9	-2 6	6 8	110 98	7 2	7 2
993 7	0 41	171 08	993 7	-3 2	7 0	114 66	7 7	7 7

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Site:	Lea County, NM	MD Reference:	WELL @ 0 0usft (Original Well Elev)
Well:	High Plains State Com #1H	North Reference:	Grid
Wellbore:	VH - Job #32K12111250	Survey Calculation Method:	Minimum Curvature
Design:	VH - Job #32K12111250	Database:	EDM-Regulatory

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
1,088 5	0 36	180 17	1,088 5	-3 9	7 1	118 59	8 1
1,183 4	0 32	182 05	1,183 4	-4 4	7 1	122 02	8 3
1,278 2	0 30	202 91	1,278 2	-4 9	7 0	125 21	8 5
1,373 1	0 22	189 36	1,373 1	-5 3	6 8	127 90	8 7
1,467 9	0 22	240 78	1,467 9	-5 6	6 7	130 06	8 7
1,562 8	0 34	281 30	1,562 8	-5 6	6 2	132 15	8 4
1,657 6	0 63	304 89	1,657 5	-5 3	5 5	133 73	7 6
1,752 4	0 65	309 55	1,752 3	-4 6	4 7	134 77	6 6
1,847 3	0 57	301 85	1,847 2	-4 0	3 9	136 36	5 6
1,942 1	0 57	299 14	1,942 0	-3 6	3 0	139 51	4 7
2,037 0	0 64	303 83	2,036 9	-3 0	2 2	144 22	3 7
2,134 8	0 54	289 22	2,134 7	-2 6	1 3	153 26	2 9
2,232 6	0 49	297 28	2,232 5	-2 2	0 5	167 56	2 3
2,326 5	0 32	290 93	2,326 4	-2 0	-0 1	183 14	2 0
2,420 3	0 24	322 32	2,420 2	-1 7	-0 5	195 42	1 8
2,517 2	0 29	342 35	2,517 1	-1 3	-0 7	206 98	1 5
2,614 0	0 44	353 25	2,613 9	-0 7	-0 8	227 79	1 1
2,706 8	0 61	3 46	2,706 7	0 1	-0 8	279 32	0 8
2,803 7	0 45	359 74	2,803 6	1 0	-0 8	323 08	1 3
2,900 5	0 54	24 76	2,900 4	1 8	-0 6	342 27	1 9
2,995 3	0 53	21 69	2,995 2	2 6	-0 2	354 95	2 6
3,090 2	0 41	50 67	3,090 1	3 3	0 2	3 37	3 3
3,185 0	0 55	45 12	3,184 9	3 8	0 8	11 57	3 9
3,279 9	0 45	43 88	3,279 8	4 4	1 4	17 21	4 6
3,374 7	0 50	63 13	3,374 6	4 8	2 0	22 30	5 2
3,469 6	0 70	58 14	3,469 5	5 3	2 8	28 10	6 0
3,564 4	0 68	71 11	3,564 3	5 8	3 9	33 63	7 0
3,661 2	0 71	68 82	3,661 1	6 2	5 0	38 63	8 0
3,756 1	0 51	67 85	3,756 0	6 6	5 9	41 88	8 9
3,850 9	0 50	74 14	3,850 8	6 9	6 7	44 30	9 6
3,945 8	0 50	74 46	3,945 7	7 1	7 5	46 60	10 3
4,040 6	0 53	72 51	4,040 4	7 3	8 3	48 59	11 1
4,132 4	0 49	90 25	4,132 2	7 5	9 1	50 70	11 8
4,228 3	0 27	86 29	4,228 1	7 5	9 7	52 53	12 3
4,324 1	0 36	81 16	4,323 9	7 5	10 3	53 75	12 7
4,419 9	0 13	107 38	4,419 7	7 5	10 7	54 74	13 1
4,515 8	0 19	96 60	4,515 6	7 5	10 9	55 57	13 3
4,611 6	0 23	80 13	4,611 4	7 5	11 3	56 35	13 6
4,705 5	0 23	67 53	4,705 3	7 6	11 6	56 81	13 9
4,801 3	0 25	83 21	4,801 1	7 7	12 0	57 33	14 3
4,895 1	0 30	82 58	4,894 9	7 8	12 5	58 08	14 7
4,991 0	0 39	93 37	4,990 8	7 8	13 0	59 19	15 2
5,086 8	0 42	91 68	5,086 6	7 8	13 7	60 54	15 8
5,181 7	0 14	104 76	5,181 5	7 7	14 2	61 46	16 1

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Design:	VH - Job #32K12111250	Database:	EDM-Regulatory

Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	True Vertical Depth	North/South (usft)	East/West (usft)	Closure Azimuth (°)	Closure Distance (usft)
5,275 5	0 19	108 91	5,275 3	7 6	14 4	62 14	16 3
5,371 4	0 11	98 24	5,371 2	7 6	14 7	62 73	16 5
5,561 0	0 80	291 60	5,560 8	8 0	13 6	59 50	15 8
5,657 9	1 14	282 26	5,657 7	8 5	12 1	54 88	14 7
5,750 7	1 10	290 25	5,750 5	9 0	10 3	48 96	13 7
5,846 5	1 04	295 06	5,846 3	9 7	8 7	41 88	13 0
5,942 4	0 88	303 85	5,942 2	10 5	7 3	34 83	12 7
6,038 2	0 71	312 83	6,038 0	11 3	6 2	28 93	12 9
6,135 1	0 72	321 75	6,134 8	12 2	5 4	24 00	13 3
6,227 9	0 71	332 71	6,227 6	13 1	4 8	20 04	14 0
6,320 8	0 62	344 50	6,320 5	14 1	4 4	17 26	14 8
6,415 6	0 52	4 32	6,415 3	15 0	4 3	15 89	15 6
6,510 4	0 48	24 60	6,510 1	15 8	4 5	15 80	16 5
6,605 3	0 54	50 52	6,605 0	16 5	5 0	16 85	17 2
6,700 1	0 58	67 06	6,699 8	16 9	5 8	18 83	17 9
6,796 9	0 59	66 30	6,796 6	17 3	6 7	21 09	18 6
6,891 8	0 52	63 42	6,891 5	17 7	7 5	22 98	19 3
6,986 6	0 62	69 27	6,986 3	18 1	8 4	24 85	19 9
7,081 5	0 44	93 06	7,081 2	18 3	9 2	26 80	20 5
7,176 3	0 32	112 94	7,176 0	18 1	9 8	28 46	20 6
7,271 1	0 07	166 68	7,270 8	18 0	10 1	29 30	20 6
7,364 0	0 12	200 19	7,363 7	17 8	10 1	29 45	20 5
7,460 3	0 13	233 28	7,460 0	17 7	9 9	29 37	20 3
7,556 6	0 12	256 49	7,556 3	17 6	9 8	29 04	20 1
7,652 8	0 12	289 34	7,652 5	17 6	9 6	28 54	20 0
7,749 1	0 05	283 20	7,748 8	17 6	9 4	28 14	20 0
7,844 6	0 02	198 54	7,844 3	17 6	9 4	28 03	20 0
7,940 0	0 19	138 99	7,939 7	17 5	9 5	28 46	19 9
8,034 8	0 72	118 68	8,034 5	17 1	10 1	30 61	19 9
8,130 7	0 91	105 19	8,130 4	16 6	11 4	34 41	20 1
8,226 0	1 30	100 57	8,225 7	16 2	13 2	39 09	20 9
8,321 2	1 67	103 84	8,320 8	15 7	15 6	44 81	22 1
8,416 5	1 48	103 63	8,416 1	15 1	18 1	50 28	23 6
8,511 8	1 55	104 40	8,511 4	14 4	20 6	54 92	25 1
8,607 1	1 50	108 64	8,606 6	13 7	23 0	59 17	26 8
8,702 4	1 38	111 25	8,701 9	12 9	25 2	62 91	28 4
8,798 0	1 18	111 40	8,797 5	12 1	27 2	65 99	29 8
8,893 6	1 00	118 13	8,893 1	11 4	28 9	68 50	31 1
8,989 3	0 90	128 95	8,988 7	10 5	30 2	70 81	32 0
9,097 5	0 83	121 58	9,096 9	9 6	31 5	73 12	33 0



Scientific Drilling
Directional Drilling Operations

Proje Wildcat (Lea County,NM)
Lea County, NM
Well: High Plains State Com #1H
Wellbore: VH - Job #32K12111250
Design: VH - Job #32K12111250

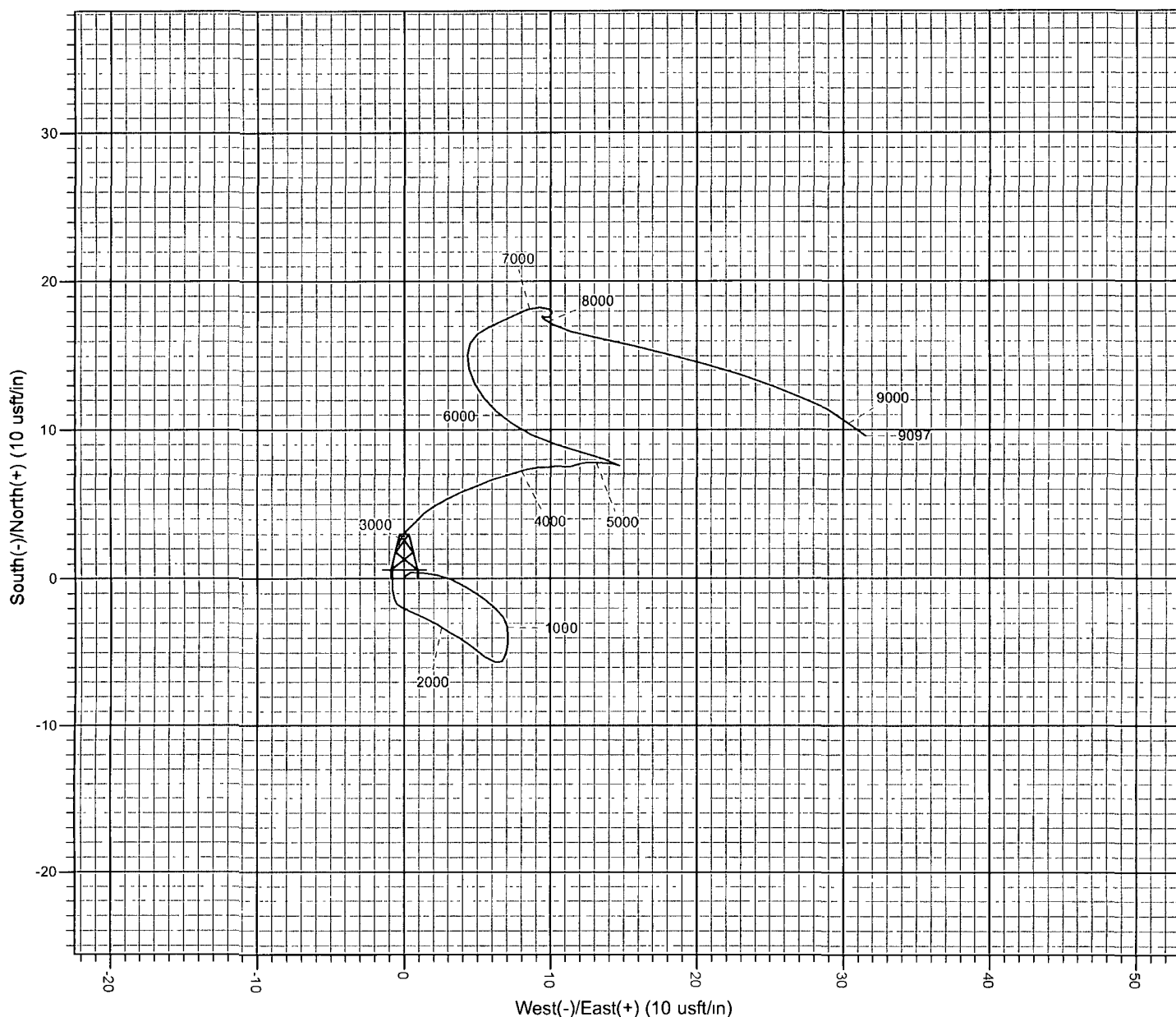


Azimuths to Grid North
True North -0 46°
Magnetic North 7 08°

Magnetic Field
Strength 49117 4snT
Dip Angle 60 98°
Date 12/28/2011
Model IGRF2010

WELL DETAILS: High Plains State Com #1H
WELL @ 0.0usft (Original Well Elev)
Ground Level: 0.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0 0	760375.43	800086.54	33° 5' 14.629 N	103° 29' 18.661 W	



PROJECT DETAILS: Wildcat (Lea County,NM)
Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

SITE DETAILS: Lea County, NM
Site Centre Latitude: 33° 5' 45.600 N
Longitude: 103° 29' 16.800 W
Positional Uncertainty: 0.0
Convergence: 0.46
Local North: Grid