

Sandridge Energy

Starks 3408 2-35H (Final)

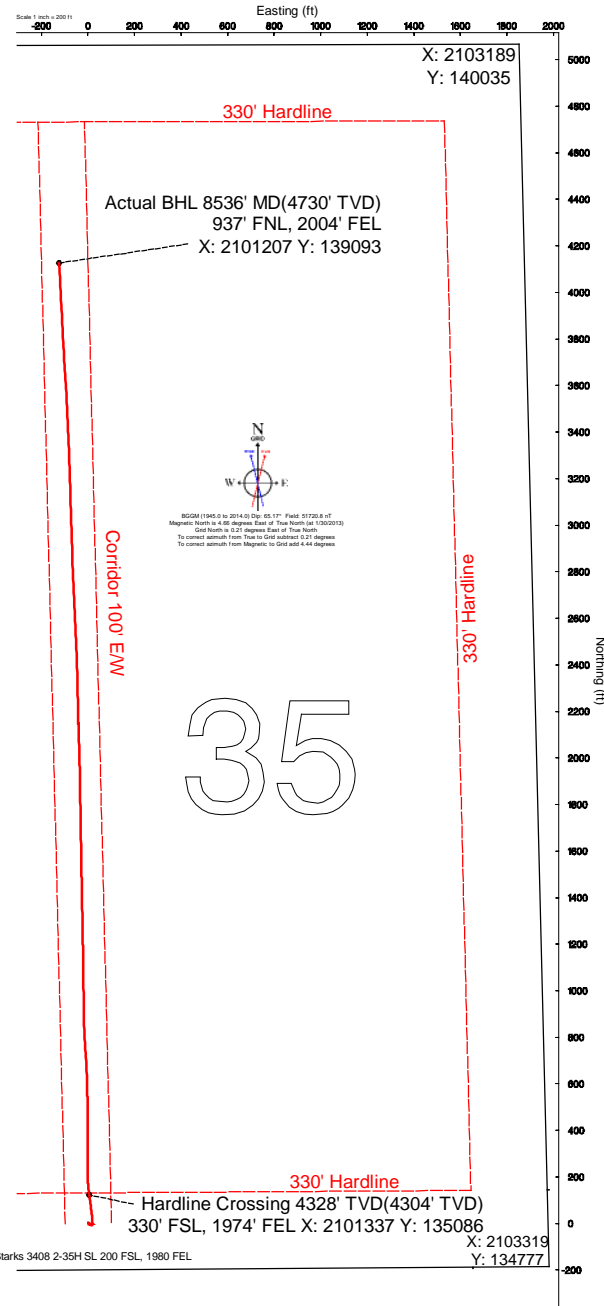
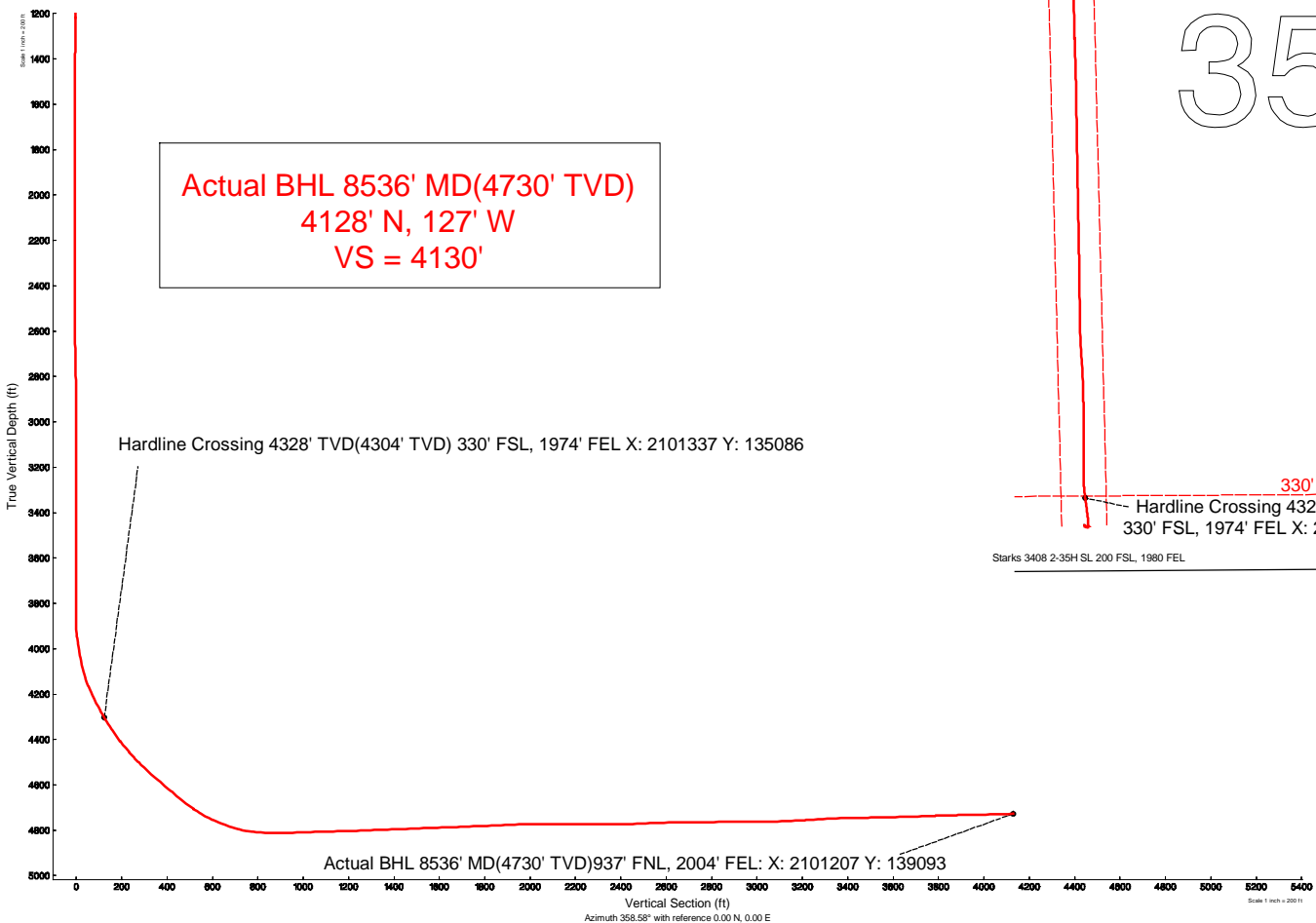
Starks 3408 2-35H SL 200 FSL, 1980 FEL

Harper County, Kansas (Sandridge Energy) NAD27 / Grid

Plot reference wellpath is Plan 1	
True vertical depths are referenced to Unit 310 (KB)	Grid System: NAD27 / Lambert Kansas SP, Southern Zone (1502), US feet
Measured depths are referenced to Unit 310 (KB)	North Reference: Grid north
Unit 310 (KB) to Mean Sea Level: 1292 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Starks 3408 2-35H SL 200 FSL, 1980 FEL): -1277 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: broomart on 1/30/2013

Location Information

Facility Name	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Starks 3408 2-35H Sec. 35-34S-81W	2101334.000	134965.000	37°02'12.510"N	98°09'10.307"W
Slot	Local N (ft)	Local E (ft)	Latitude	Longitude
Starks 3408 2-35H SL 200 FSL, 1980 FEL	0.00	0.00	37°02'12.510"N	98°09'10.307"W
Unit 310 (KB) to Mud line (At Slot: Starks 3408 2-35H SL 200 FSL, 1980 FEL)			15ft	
Mean Sea Level to Mud line (At Slot: Starks 3408 2-35H SL 200 FSL, 1980 FEL)			-1277ft	
Unit 310 (KB) to Mean Sea Level			1292ft	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	Sandridge Energy	Slot	Starks 3408 2-35H SL 200 FSL, 1980 FEL
Area	Kansas	Well	Subject
Field	Harper County, Kansas (Sandridge Energy) NAD27 / Grid	Wellbore	Starks 3408 2-35H Actual
Facility	Starks 3408 2-35H Sec. 35-34S-8W		

REPORT SETUP INFORMATION			
Projection System	NAD27 / Lambert Kansas SP, Southern Zone (1502), US feet		
North Reference	Grid	Software System	WellArchitect 3.0.0
Convergence at slot	0.21° East	User	Broomarl
Scale	1.00005	Report Generated	3/8/2013 at 11:50:25 AM
Wellbore last revised	01-30-2013	Database/Source file	WA_OklahomaCity

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	2101334.00	134965.00	37°02'12.510"N	98°09'10.307"W
Facility Reference Pt			2101334.00	134965.00	37°02'12.510"N	98°09'10.307"W
Field Reference Pt			2132248.82	161602.28	37°06'34.560"N	98°02'47.460"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Unit 310 (KB) to Facility Vertical Datum	15.00ft
Horizontal Reference Pt	Slot	Unit 310 (KB) to Mean Sea Level	1292.00ft
Vertical Reference Pt	Unit 310 (KB)	Unit 310 (KB) to Mud Line at Slot (Starks 3408 2-35H SL 200 FSL, 1980 FEL)	15.00ft
MD Reference Pt	Unit 310 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	358.58°

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Facility	Starks 3408 2-35H Sec. 35-34S-8W		

WELLPATH DATA (115 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Log Comment
0.00	0.000	151.840	0.00	0.00	0.00	0.00	2101334.00	134965.00	0.00	
15.00	0.000	151.840	15.00	0.00	0.00	0.00	2101334.00	134965.00	0.00	
250.00	0.250	151.840	250.00	-0.46	-0.45	0.24	2101334.24	134964.55	0.11	
500.00	1.000	151.840	499.98	-2.89	-2.86	1.53	2101335.53	134962.14	0.30	
775.00	0.250	151.840	774.96	-5.57	-5.50	2.94	2101336.94	134959.50	0.27	
816.00	0.220	151.840	815.96	-5.72	-5.65	3.02	2101337.02	134959.35	0.07	
908.00	0.740	125.280	907.96	-6.23	-6.15	3.59	2101337.59	134958.85	0.60	
999.00	0.830	86.330	998.95	-6.56	-6.45	4.73	2101338.73	134958.55	0.58	
1091.00	0.970	75.790	1090.94	-6.36	-6.21	6.15	2101340.15	134958.79	0.24	
1182.00	0.830	97.180	1181.93	-6.29	-6.10	7.55	2101341.55	134958.90	0.40	
1274.00	1.030	126.990	1273.92	-6.90	-6.69	8.87	2101342.87	134958.31	0.56	
1366.00	0.820	112.450	1365.91	-7.68	-7.43	10.14	2101344.14	134957.57	0.34	
1548.00	1.230	115.050	1547.88	-9.08	-8.76	13.11	2101347.11	134956.24	0.23	
1640.00	0.250	94.660	1639.87	-9.54	-9.19	14.21	2101348.21	134955.81	1.09	
1735.00	0.070	11.450	1734.87	-9.51	-9.15	14.43	2101348.43	134955.85	0.26	
1829.00	0.070	129.360	1828.87	-9.49	-9.13	14.48	2101348.48	134955.87	0.13	
1924.00	0.090	189.590	1923.87	-9.60	-9.24	14.52	2101348.52	134955.76	0.09	
2019.00	0.100	108.770	2018.87	-9.70	-9.34	14.58	2101348.58	134955.66	0.13	
2114.00	0.150	77.270	2113.87	-9.71	-9.34	14.78	2101348.78	134955.66	0.09	
2209.00	0.030	4.290	2208.87	-9.66	-9.29	14.90	2101348.90	134955.71	0.15	
2304.00	0.150	30.600	2303.87	-9.53	-9.16	14.97	2101348.97	134955.84	0.13	
2399.00	0.310	240.660	2398.87	-9.54	-9.18	14.81	2101348.81	134955.82	0.47	
2494.00	0.280	341.580	2493.87	-9.44	-9.08	14.51	2101348.51	134955.92	0.48	
2589.00	0.690	41.420	2588.86	-8.80	-8.43	14.82	2101348.82	134956.57	0.63	
2684.00	1.500	38.050	2683.85	-7.42	-7.03	15.96	2101349.96	134957.97	0.85	
2779.00	1.170	13.930	2778.82	-5.52	-5.11	16.96	2101350.96	134959.89	0.68	
2873.00	0.250	259.460	2872.81	-4.63	-4.21	16.99	2101350.99	134960.79	1.38	
2968.00	0.130	342.010	2967.81	-4.56	-4.15	16.75	2101350.75	134960.85	0.28	
3063.00	0.070	62.410	3062.81	-4.43	-4.02	16.77	2101350.77	134960.98	0.14	
3158.00	0.100	81.010	3157.81	-4.39	-3.98	16.90	2101350.91	134961.02	0.04	
3252.00	0.030	297.950	3251.81	-4.37	-3.95	16.96	2101350.96	134961.05	0.13	
3347.00	0.100	56.740	3346.81	-4.32	-3.90	17.01	2101351.01	134961.10	0.12	
3442.00	0.100	63.670	3441.81	-4.24	-3.81	17.15	2101351.16	134961.19	0.01	
3537.00	0.070	154.900	3536.81	-4.26	-3.83	17.25	2101351.25	134961.17	0.13	
3632.00	0.090	66.300	3631.81	-4.28	-3.85	17.35	2101351.35	134961.15	0.12	
3726.00	0.030	164.210	3725.81	-4.28	-3.85	17.42	2101351.42	134961.15	0.11	
3821.00	0.070	141.990	3820.81	-4.35	-3.92	17.46	2101351.46	134961.08	0.05	
3885.00	0.960	357.260	3884.81	-3.84	-3.41	17.46	2101351.46	134961.59	1.59	
3916.00	3.760	356.960	3915.78	-2.57	-2.14	17.40	2101351.40	134962.86	9.03	
3948.00	6.320	358.920	3947.65	0.24	0.67	17.31	2101351.31	134965.67	8.02	
3980.00	8.200	359.070	3979.40	4.29	4.72	17.24	2101351.24	134969.72	5.88	
4011.00	9.940	357.510	4010.01	9.17	9.60	17.08	2101351.09	134974.60	5.67	
4043.00	12.080	355.320	4041.42	15.28	15.70	16.69	2101350.69	134980.70	6.81	
4075.00	13.620	355.090	4072.61	22.38	22.79	16.10	2101350.10	134987.79	4.82	
4106.00	14.910	353.460	4102.66	30.00	30.39	15.33	2101349.33	134995.39	4.36	

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REFERENCE WELLPATH IDENTIFICATION				
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Area	Kansas		Well	Subject
Field	Harper County, Kansas (Sandridge Energy) NAD27 / Grid		Wellbore	Starks 3408 2-35H Actual
Facility	Starks 3408 2-35H Sec. 35-34S-8W			

WELLPATH DATA (115 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Log Comment
4138.00	17.600	353.570	4133.38	38.92	39.29	14.32	2101348.32	135004.29	8.41	
4170.00	21.120	352.830	4163.56	49.48	49.82	13.06	2101347.06	135014.82	11.03	
4201.00	24.120	350.580	4192.17	61.31	61.61	11.32	2101345.32	135026.61	10.07	
4233.00	26.610	351.910	4221.09	74.91	75.16	9.24	2101343.24	135040.16	7.98	
4265.00	28.650	352.360	4249.44	89.65	89.86	7.21	2101341.21	135054.86	6.41	
4296.00	29.840	352.800	4276.48	104.71	104.88	5.26	2101339.26	135069.88	3.90	
4328.00	30.170	352.240	4304.20	120.63	120.74	3.18	2101337.18	135085.75	1.35	Hardline Crossing 4328' TVD(4304' TVD) 330' FSL, 1974' FEL X: 2101
4360.00	31.460	354.270	4331.68	136.95	137.02	1.26	2101335.26	135102.03	5.18	
4391.00	33.690	354.070	4357.80	153.59	153.62	-0.44	2101333.56	135118.63	7.20	
4423.00	35.850	355.780	4384.09	171.80	171.80	-2.05	2101331.95	135136.81	7.41	
4454.00	37.490	357.590	4408.95	190.30	190.28	-3.11	2101330.89	135155.29	6.34	
4486.00	39.480	357.940	4434.00	210.21	210.18	-3.89	2101330.11	135175.19	6.26	
4518.00	41.640	359.770	4458.31	231.01	230.98	-4.29	2101329.70	135195.99	7.71	
4549.00	43.210	359.830	4481.19	251.92	251.89	-4.37	2101329.63	135216.90	5.07	
4581.00	43.730	1.380	4504.42	273.92	273.90	-4.13	2101329.87	135238.92	3.71	
4612.00	46.210	1.690	4526.35	295.80	295.80	-3.55	2101330.45	135260.82	8.03	
4644.00	48.670	0.780	4547.99	319.34	319.36	-3.04	2101330.96	135284.38	7.97	
4707.00	49.760	0.020	4589.14	367.02	367.06	-2.71	2101331.29	135332.08	1.96	
4771.00	49.750	358.840	4630.49	415.86	415.91	-3.20	2101330.80	135380.93	1.41	
4802.00	49.990	359.220	4650.47	439.56	439.61	-3.60	2101330.40	135404.63	1.22	
4833.00	50.470	359.900	4670.30	463.39	463.43	-3.78	2101330.22	135428.46	2.29	
4865.00	52.950	359.270	4690.13	488.50	488.55	-3.96	2101330.04	135453.57	7.90	
4897.00	55.620	359.290	4708.81	514.47	514.52	-4.29	2101329.71	135479.55	8.34	
4928.00	58.320	359.200	4725.70	540.46	540.51	-4.63	2101329.37	135505.54	8.71	
4960.00	61.960	0.270	4741.63	568.20	568.26	-4.76	2101329.24	135533.28	11.74	
4992.00	65.060	358.380	4755.90	596.83	596.89	-5.10	2101328.90	135561.92	11.04	
5023.00	67.950	357.150	4768.26	625.26	625.29	-6.21	2101327.79	135590.33	10.01	
5055.00	70.120	357.640	4779.71	655.13	655.14	-7.57	2101326.43	135620.18	6.93	
5087.00	72.780	357.160	4789.89	685.46	685.45	-8.95	2101325.05	135650.48	8.43	
5118.00	76.010	355.890	4798.23	715.29	715.24	-10.76	2101323.24	135680.28	11.14	
5150.00	79.600	355.680	4804.99	746.53	746.43	-13.06	2101320.94	135711.47	11.24	
5181.00	83.460	357.030	4809.55	777.16	777.02	-15.01	2101318.99	135742.06	13.18	
5213.00	86.240	356.730	4812.42	809.01	808.85	-16.74	2101317.26	135773.89	8.74	
5259.00	89.510	358.590	4814.13	854.97	854.77	-18.62	2101315.38	135819.81	8.18	
5320.00	91.080	359.010	4813.82	915.96	915.75	-19.89	2101314.11	135880.80	2.66	
5415.00	91.910	359.360	4811.34	1010.92	1010.71	-21.24	2101312.75	135975.76	0.95	
5509.00	91.840	358.960	4808.26	1104.87	1104.65	-22.62	2101311.38	136069.70	0.43	
5604.00	91.530	359.330	4805.47	1199.82	1199.60	-24.04	2101309.96	136164.66	0.51	
5699.00	92.210	358.480	4802.37	1294.77	1294.53	-25.85	2101308.15	136259.59	1.15	
5794.00	92.150	359.340	4798.75	1389.70	1389.44	-27.66	2101306.34	136354.51	0.91	
5889.00	92.220	358.500	4795.13	1484.63	1484.35	-29.45	2101304.55	136449.43	0.89	
5984.00	92.100	359.220	4791.55	1579.56	1579.27	-31.34	2101302.66	136544.35	0.77	
6079.00	92.140	358.950	4788.04	1674.49	1674.19	-32.85	2101301.15	136639.27	0.29	
6174.00	92.250	359.010	4784.40	1769.42	1769.10	-34.54	2101299.46	136734.19	0.13	
6269.00	92.750	359.020	4780.26	1864.32	1864.00	-36.17	2101297.82	136829.09	0.53	

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REFERENCE WELLPATH IDENTIFICATION			
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Area	Kansas	Well	Subject
Field	Harper County, Kansas (Sandridge Energy) NAD27 / Grid	Wellbore	Starks 3408 2-35H Actual
Facility	Starks 3408 2-35H Sec. 35-34S-8W		

WELLPATH DATA (115 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Log Comment
6364.00	91.940	359.130	4776.37	1959.24	1958.91	-37.71	2101296.29	136924.01	0.86	
6459.00	89.780	357.970	4774.94	2054.22	2053.86	-40.11	2101293.89	137018.96	2.58	
6554.00	89.110	358.220	4775.86	2149.21	2148.80	-43.27	2101290.73	137113.91	0.75	
6648.00	91.020	358.760	4775.76	2243.21	2242.76	-45.74	2101288.25	137207.88	2.11	
6743.00	89.750	358.850	4775.12	2338.20	2337.74	-47.73	2101286.27	137302.86	1.34	
6838.00	90.870	357.570	4774.60	2433.20	2432.69	-50.69	2101283.30	137397.81	1.79	
6933.00	92.960	357.540	4771.43	2528.12	2527.54	-54.74	2101279.25	137492.67	2.20	
7028.00	90.890	357.000	4768.24	2623.04	2622.37	-59.27	2101274.73	137587.51	2.25	
7060.00	89.750	357.620	4768.06	2655.03	2654.34	-60.77	2101273.23	137619.47	4.06	
7148.00	90.860	357.140	4767.59	2743.01	2742.24	-64.79	2101269.21	137707.38	1.37	
7243.00	92.060	358.450	4765.17	2837.96	2837.14	-68.44	2101265.55	137802.28	1.87	
7338.00	89.320	357.980	4764.03	2932.95	2932.08	-71.40	2101262.59	137897.23	2.93	
7433.00	90.090	358.310	4764.52	3027.94	3027.02	-74.48	2101259.52	137992.18	0.88	
7528.00	92.180	358.010	4762.63	3122.91	3121.95	-77.53	2101256.47	138087.11	2.22	
7623.00	94.080	358.490	4757.45	3217.77	3216.76	-80.42	2101253.57	138181.93	2.06	
7718.00	92.860	357.620	4751.70	3312.58	3311.53	-83.64	2101250.35	138276.70	1.58	
7812.00	91.180	357.240	4748.38	3406.50	3405.37	-87.86	2101246.14	138370.55	1.83	
7907.00	90.990	357.600	4746.58	3501.47	3500.26	-92.13	2101241.86	138465.44	0.43	
8002.00	91.390	356.500	4744.61	3596.41	3595.11	-97.02	2101236.98	138560.30	1.23	
8097.00	91.730	356.250	4742.03	3691.30	3689.89	-103.02	2101230.97	138655.07	0.44	
8192.00	92.500	356.920	4738.52	3786.18	3784.65	-108.68	2101225.32	138749.84	1.07	
8286.00	90.920	357.250	4735.71	3880.10	3878.48	-113.46	2101220.54	138843.68	1.72	
8381.00	91.200	357.180	4733.96	3975.06	3973.36	-118.07	2101215.92	138938.56	0.30	
8476.00	91.670	356.730	4731.58	4069.99	4068.19	-123.12	2101210.88	139033.40	0.68	
8536.00	91.670	356.730	4729.83	4129.93	4128.07	-126.54	2101207.46	139093.28	0.00	Actual BHL 8536' MD(4730' TVD)937' FNL, 2004' FEL: X: 2101207

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Facility	Starks 3408 2-35H Sec. 35-34S-8W		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
BHL 330 FNL, 1980' FEL		4739.93	4734.76	-116.99	2101217.00	139700.00	37°02'59.329"N	98°09'11.533"W	point

WELLPATH COMPOSITION - Ref Wellbore: Starks 3408 2-35H Actual Ref Wellpath: AWP - Final				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
15.00	775.00	Generic gyro - northseeking (Standard)	Gyro rcvd from field 2-3-13 file seems corrupt; need to check into it	Starks 3408 2-35
775.00	8476.00	NaviTrak (Standard)	Inteq MWD	Starks 3408 2-35
8476.00	8536.00	Blind Drilling (std)	Projection to bit	Starks 3408 2-35