

Sandridge Energy

Starks 3408 3-35H (Plan 1)

Starks 3408 3-35H SL 200 FSL, 660 FEL

Harper County, Kansas (Sandridge Energy) NAD27 / Grid

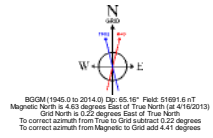
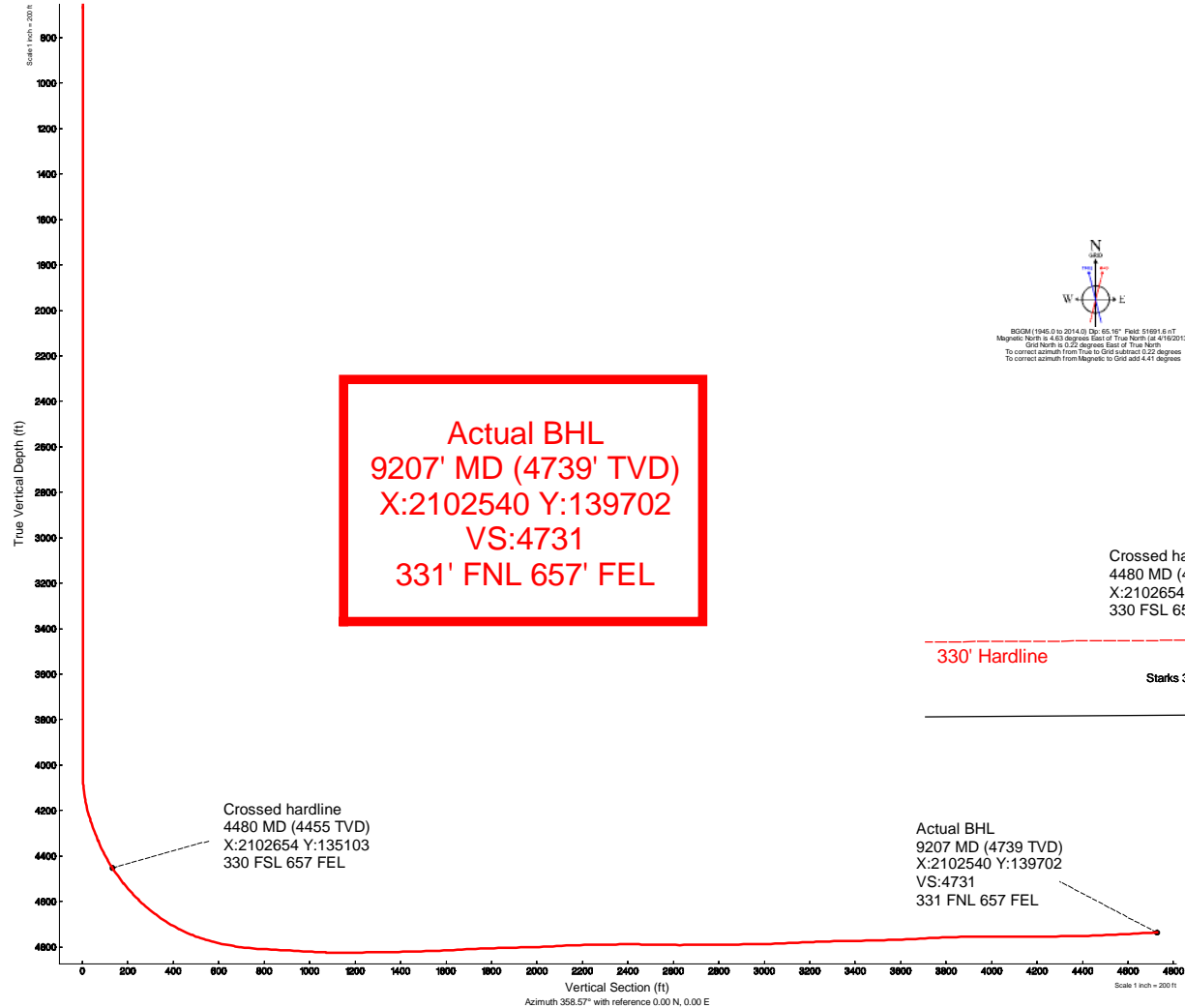
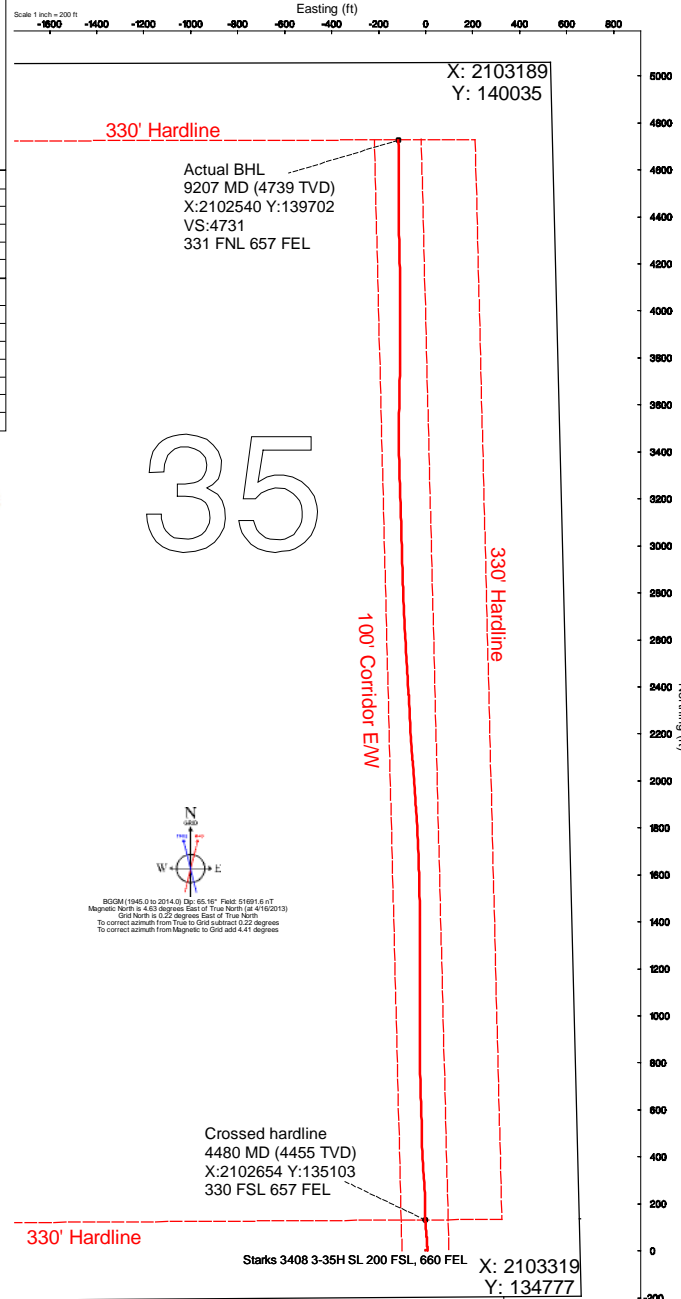
Plot reference wellpath is Plan 1		Grid System: NAD27 / Lambert Kansas SP, Southern Zone (1502), US feet
True vertical depths are referenced to Latshaw 38 (KB)		North Reference: Grid north
Measured depths are referenced to Latshaw 38 (KB)		Scale: True distance
Latshaw 38 (KB) to Mean Sea Level: 1313 feet		Depths are in feet
Mean Sea Level to Mud line (At Slot: Starks 3408 3-35H SL 200 FSL, 660 FEL): -1290 feet		Created by: broomart on 4/17/2013
Coordinates are in feet referenced to Slot		

Location Information

Facility Name				Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Starks 3408 3-35H Sec. 35-34S-8W				2102655.000	134973.000	37°02'12.540"N	98°08'54.016"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude		
Starks 3408 3-35H SL 200 FSL, 660 FEL	0.00	0.00	2102655.000	134973.000	37°02'12.540"N	98°08'54.016"W		
Latshaw 38 (KB) to Mud line (At Slot: Starks 3408 3-35H SL 200 FSL, 660 FEL)								23ft
Mean Sea Level to Mud line (At Slot: Starks 3408 3-35H SL 200 FSL, 660 FEL)								-1290ft
Latshaw 38 (KB) to Mean Sea Level								1313ft



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Sandridge Starks 3408 3-35H_Svy (07-Jun-2013).
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REFERENCE WELLPATH IDENTIFICATION			
Operator	Sandridge Energy	Slot	Starks 3408 3-35H SL 200 FSL, 660 FEL
Area	Kansas	Well	Subject
Field	Harper County, Kansas (Sandridge Energy) NAD27 / Grid	Wellbore	Starks 3408 3-35H Actual
Facility	Starks 3408 3-35H 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	0.22° East	User	Adammic
Scale	1.00005	Report Generated	07/Jun/2013 at 3:20:32 PM
Wellbore last revised	04-16-2013	Database/Source file	intokcapp01

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	2102655.00	134973.00	37°02'12.540"N	98°08'54.016"W
Facility Reference Pt			2102655.00	134973.00	37°02'12.540"N	98°08'54.016"W
Field Reference Pt			2132248.82	161602.28	37°06'34.560"N	98°02'47.460"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Latshaw 38 (KB) to Facility Vertical Datum	23.00ft
Horizontal Reference Pt	Slot	Latshaw 38 (KB) to Mean Sea Level	1313.00ft
Vertical Reference Pt	Latshaw 38 (KB)	Latshaw 38 (KB) to Mud Line at Slot (Starks 3408 3-35H SL 200 FSL, 660 FEL)	23.00ft
MD Reference Pt	Latshaw 38 (KB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	358.57°



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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 3-35H Actual
Facility	Starks 3408 3-35H Sec. 35-34S-8W		

WELLPATH DATA (100 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]	Comments
0.00†	0.000	88.570	0.00	0.00	0.00	0.00	2102655.00	134973.00	0.00	
23.00	0.000	88.570	23.00	0.00	0.00	0.00	2102655.00	134973.00	0.00	
268.00	0.530	88.570	268.00	0.00	0.03	1.13	2102656.13	134973.03	0.22	
495.00	0.440	88.570	494.99	0.00	0.08	3.05	2102658.05	134973.08	0.04	
765.00	0.690	88.570	764.98	0.00	0.14	5.72	2102660.72	134973.14	0.09	
851.00	0.750	88.570	850.97	0.00	0.17	6.80	2102661.80	134973.17	0.07	
1008.00	0.070	251.300	1007.96	-0.03	0.16	7.73	2102662.73	134973.16	0.52	
1469.00	0.040	282.160	1468.96	-0.07	0.11	7.31	2102662.31	134973.11	0.01	
1944.00	0.030	36.890	1943.96	0.06	0.24	7.22	2102662.22	134973.24	0.01	
2418.00	0.040	76.420	2417.96	0.19	0.38	7.46	2102662.46	134973.38	0.01	
2892.00	0.030	190.750	2891.96	0.11	0.30	7.59	2102662.59	134973.30	0.01	
3366.00	0.070	133.440	3365.96	-0.22	-0.02	7.78	2102662.78	134972.98	0.01	
3840.00	0.000	4.340	3839.96	-0.42	-0.22	7.99	2102662.99	134972.78	0.01	
4016.00	0.000	4.340	4015.96	-0.42	-0.22	7.99	2102662.99	134972.78	0.00	
4061.00	1.610	358.210	4060.96	0.21	0.41	7.97	2102662.97	134973.41	3.58	
4093.00	4.630	359.360	4092.91	1.95	2.15	7.94	2102662.94	134975.15	9.44	
4124.00	7.810	0.090	4123.72	5.31	5.51	7.93	2102662.93	134978.51	10.26	
4155.00	10.070	359.080	4154.34	10.13	10.33	7.89	2102662.89	134983.33	7.31	
4187.00	12.990	357.830	4185.69	16.52	16.72	7.71	2102662.71	134989.72	9.16	
4219.00	16.100	356.520	4216.66	24.55	24.74	7.31	2102662.31	134997.74	9.77	
4250.00	18.250	356.270	4246.28	33.70	33.88	6.73	2102661.73	135006.88	6.94	
4282.00	20.140	356.270	4276.50	44.21	44.38	6.04	2102661.04	135017.38	5.91	
4313.00	21.620	355.140	4305.46	55.25	55.39	5.21	2102660.21	135028.40	4.95	
4345.00	22.870	354.960	4335.08	67.34	67.46	4.17	2102659.17	135040.47	3.91	
4376.00	24.680	355.270	4363.45	79.81	79.91	3.10	2102658.10	135052.92	5.85	
4408.00	26.880	355.140	4392.26	93.70	93.78	1.94	2102656.94	135066.79	6.88	
4439.00	29.710	354.900	4419.55	108.37	108.42	0.66	2102655.66	135081.42	9.14	
4471.00	32.420	356.250	4446.96	124.86	124.88	-0.60	2102654.40	135097.89	8.74	
4480.00†	33.205	356.991	4454.53	129.73	129.75	-0.89	2102654.11	135102.75	9.80	Crossed hardline 4480 MD (4455 TVD) X:2102654 Y:135103 330 FSL 657 FEL.
4503.00	35.230	358.750	4473.55	142.66	142.67	-1.37	2102653.63	135115.68	9.80	
4534.00	36.870	359.330	4498.61	160.90	160.91	-1.67	2102653.33	135133.92	5.40	
4566.00	38.430	359.960	4523.94	180.45	180.46	-1.79	2102653.21	135153.47	5.02	
4597.00	40.900	359.770	4547.81	200.23	200.24	-1.84	2102653.16	135173.25	7.98	
4629.00	43.410	358.940	4571.53	221.70	221.72	-2.08	2102652.92	135194.73	8.03	
4661.00	45.850	357.250	4594.30	244.17	244.18	-2.84	2102652.16	135217.19	8.48	
4693.00	47.860	356.620	4616.18	267.51	267.49	-4.09	2102650.91	135240.51	6.44	
4724.00	50.600	356.110	4636.42	290.97	290.92	-5.58	2102649.42	135263.94	8.93	
4757.00	53.260	355.820	4656.77	316.92	316.83	-7.41	2102647.59	135289.85	8.09	
4788.00	55.450	355.540	4674.83	342.08	341.95	-9.30	2102645.70	135314.97	7.10	
4819.00	57.960	356.500	4691.85	367.96	367.80	-11.10	2102643.90	135340.82	8.50	
4851.00	60.110	357.260	4708.31	395.39	395.20	-12.59	2102642.41	135368.22	7.02	
4884.00	62.220	357.960	4724.23	424.29	424.08	-13.79	2102641.20	135397.10	6.66	
4915.00	65.560	358.730	4737.87	452.12	451.90	-14.60	2102640.40	135424.92	11.00	
4947.00	68.340	359.180	4750.40	481.56	481.34	-15.13	2102639.87	135454.36	8.78	
4978.00	70.730	358.900	4761.24	510.60	510.37	-15.62	2102639.38	135483.40	7.76	



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REFERENCE WELLPATH IDENTIFICATION			
Operator	Sandridge Energy	Slot	Starks 3408 3-35H SL 200 FSL, 660 FEL
Area	Kansas	Well	Subject
Field	Harper County, Kansas (Sandridge Energy) NAD27 / Grid	Wellbore	Starks 3408 3-35H Actual
Facility	Starks 3408 3-35H Sec. 35-34S-8W		

WELLPATH DATA (100 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Comments
5010.00	73.380	358.330	4771.09	541.04	540.80	-16.36	2102638.64	135513.83	8.45	
5041.00	75.660	357.910	4779.37	570.92	570.66	-17.34	2102637.66	135543.69	7.47	
5074.00	77.400	358.310	4787.05	603.01	602.73	-18.39	2102636.61	135575.77	5.40	
5105.00	79.250	358.270	4793.33	633.36	633.08	-19.30	2102635.70	135606.11	5.97	
5137.00	80.880	358.660	4798.85	664.88	664.59	-20.14	2102634.86	135637.62	5.23	
5168.00	82.680	358.530	4803.28	695.56	695.26	-20.90	2102634.10	135668.29	5.82	
5199.00	83.770	358.450	4806.94	726.35	726.03	-21.71	2102633.29	135699.07	3.53	
5262.00	86.990	358.740	4812.01	789.13	788.80	-23.25	2102631.75	135761.84	5.13	
5307.00	86.980	359.450	4814.38	834.07	833.73	-23.96	2102631.04	135806.77	1.58	
5358.00	86.980	359.880	4817.06	884.99	884.66	-24.25	2102630.74	135857.70	0.84	
5403.00	87.040	0.420	4819.41	929.91	929.60	-24.14	2102630.86	135902.64	1.21	
5452.00	86.920	0.630	4821.99	978.81	978.53	-23.69	2102631.31	135951.58	0.49	
5497.00	86.950	0.370	4824.40	1023.72	1023.46	-23.30	2102631.70	135996.51	0.58	
5546.00	87.140	359.970	4826.93	1072.64	1072.39	-23.15	2102631.85	136045.45	0.90	
5566.00	88.210	0.000	4827.74	1092.62	1092.38	-23.16	2102631.84	136065.43	5.35	
5639.00	91.110	0.460	4828.17	1165.58	1165.37	-22.86	2102632.14	136138.43	4.02	
5731.00	91.020	359.660	4826.46	1257.53	1257.35	-22.77	2102632.23	136230.42	0.87	
5823.00	90.690	359.930	4825.09	1349.50	1349.34	-23.10	2102631.90	136322.41	0.46	
5915.00	91.880	358.780	4823.02	1441.46	1441.31	-24.13	2102630.87	136414.38	1.80	
6006.00	91.780	359.360	4820.12	1532.41	1532.25	-25.61	2102629.39	136505.33	0.65	
6097.00	92.910	357.790	4816.39	1623.33	1623.14	-27.87	2102627.13	136596.22	2.12	
6189.00	92.930	358.150	4811.71	1715.21	1714.96	-31.12	2102623.88	136688.05	0.39	
6281.00	91.610	356.240	4808.06	1807.10	1806.77	-35.62	2102619.38	136779.87	2.52	
6373.00	91.390	356.310	4805.66	1899.00	1898.55	-41.60	2102613.40	136871.65	0.25	
6466.00	91.740	355.680	4803.12	1991.87	1991.29	-48.09	2102606.91	136964.39	0.77	
6559.00	93.310	355.880	4799.02	2084.66	2083.94	-54.93	2102600.07	137057.05	1.70	
6650.00	92.160	356.120	4794.68	2175.47	2174.61	-61.27	2102593.73	137147.73	1.29	
6745.00	90.490	357.630	4792.48	2270.39	2269.44	-66.44	2102588.55	137242.56	2.37	
6839.00	90.980	356.330	4791.27	2364.35	2363.30	-71.39	2102583.60	137336.42	1.48	
6934.00	88.760	356.620	4791.49	2459.28	2458.12	-77.24	2102577.76	137431.24	2.36	
7028.00	88.920	356.400	4793.39	2553.20	2551.92	-82.96	2102572.04	137525.05	0.29	
7123.00	90.280	357.250	4794.06	2648.15	2646.77	-88.22	2102566.78	137619.91	1.69	
7217.00	90.890	357.330	4793.10	2742.12	2740.66	-92.66	2102562.33	137713.80	0.65	
7313.00	90.640	358.570	4791.81	2838.10	2836.59	-96.10	2102558.90	137809.73	1.32	
7407.00	90.000	357.940	4791.29	2932.10	2930.54	-98.96	2102556.04	137903.69	0.96	
7502.00	92.470	358.940	4789.24	3027.07	3025.48	-101.54	2102553.45	137998.63	2.80	
7598.00	92.600	357.900	4784.99	3122.97	3121.34	-104.19	2102550.81	138094.50	1.09	
7693.00	92.840	357.830	4780.49	3217.86	3216.17	-107.72	2102547.27	138189.34	0.26	
7788.00	90.830	358.580	4777.44	3312.80	3311.07	-110.70	2102544.30	138284.24	2.26	
7882.00	91.300	358.800	4775.70	3406.78	3405.03	-112.85	2102542.15	138378.20	0.55	
7977.00	91.670	0.850	4773.24	3501.72	3499.99	-113.14	2102541.86	138473.17	2.19	
8071.00	91.670	0.280	4770.50	3595.63	3593.95	-112.21	2102542.78	138567.13	0.61	
8165.00	93.580	1.790	4766.19	3689.44	3687.83	-110.51	2102544.48	138661.01	2.59	
8260.00	92.850	1.220	4760.86	3784.16	3782.64	-108.02	2102546.97	138755.84	0.97	
8354.00	90.220	359.920	4758.35	3878.06	3876.59	-107.09	2102547.91	138849.79	3.12	



Actual Wellpath Report

Sandridge Starks 3408 3-35H_Svy (07-Jun-2013).
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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 3-35H Actual
Facility	Starks 3408 3-35H Sec. 35-34S-8W		

WELLPATH DATA (100 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Comments
8447.00	90.280	359.600	4757.94	3971.04	3969.59	-107.48	2102547.52	138942.80	0.35	
8543.00	90.580	359.750	4757.22	4067.02	4065.59	-108.02	2102546.97	139038.80	0.35	
8637.00	90.310	359.040	4756.49	4161.00	4159.58	-109.02	2102545.98	139132.79	0.81	
8732.00	90.150	358.720	4756.11	4256.00	4254.56	-110.87	2102544.12	139227.78	0.38	
8827.00	90.590	358.630	4755.49	4351.00	4349.53	-113.07	2102541.92	139322.75	0.47	
8922.00	92.310	359.690	4753.09	4445.96	4444.49	-114.46	2102540.53	139417.71	2.13	
9016.00	92.980	0.340	4748.75	4539.83	4538.39	-114.44	2102540.56	139511.62	0.99	
9111.00	93.170	359.950	4743.66	4634.66	4633.25	-114.20	2102540.80	139606.49	0.46	
9164.00	92.590	359.230	4740.99	4687.58	4686.18	-114.58	2102540.42	139659.42	1.74	
9207.00	92.590	359.230	4739.05	4730.53	4729.13	-115.15	2102539.84	139702.37	0.00	Actual BHL 9207 MD (4739 TVD) X:2102540 Y:139702 VS:4731 331 FNL 657 FEL

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
PBHL 330' FNL, 660 FEL		4739.37	4729.76	-117.99	2102537.00	139703.00	37°02'59.310"N	98°08'55.251"W	point

WELLPATH COMPOSITION - Ref Wellbore: Starks 3408 3-35H Actual Ref Wellpath: AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
23.00	765.00	EMS (Standard)	Single Shots	Starks 3408 3-35H Actual
765.00	9164.00	NaviTrak (Standard)	INTEQ MWD	Starks 3408 3-35H Actual
9164.00	9207.00	Blind Drilling (std)	Projection to bit	Starks 3408 3-35H Actual