

# Sandridge Energy

Rock 3319 2-16H (Final)

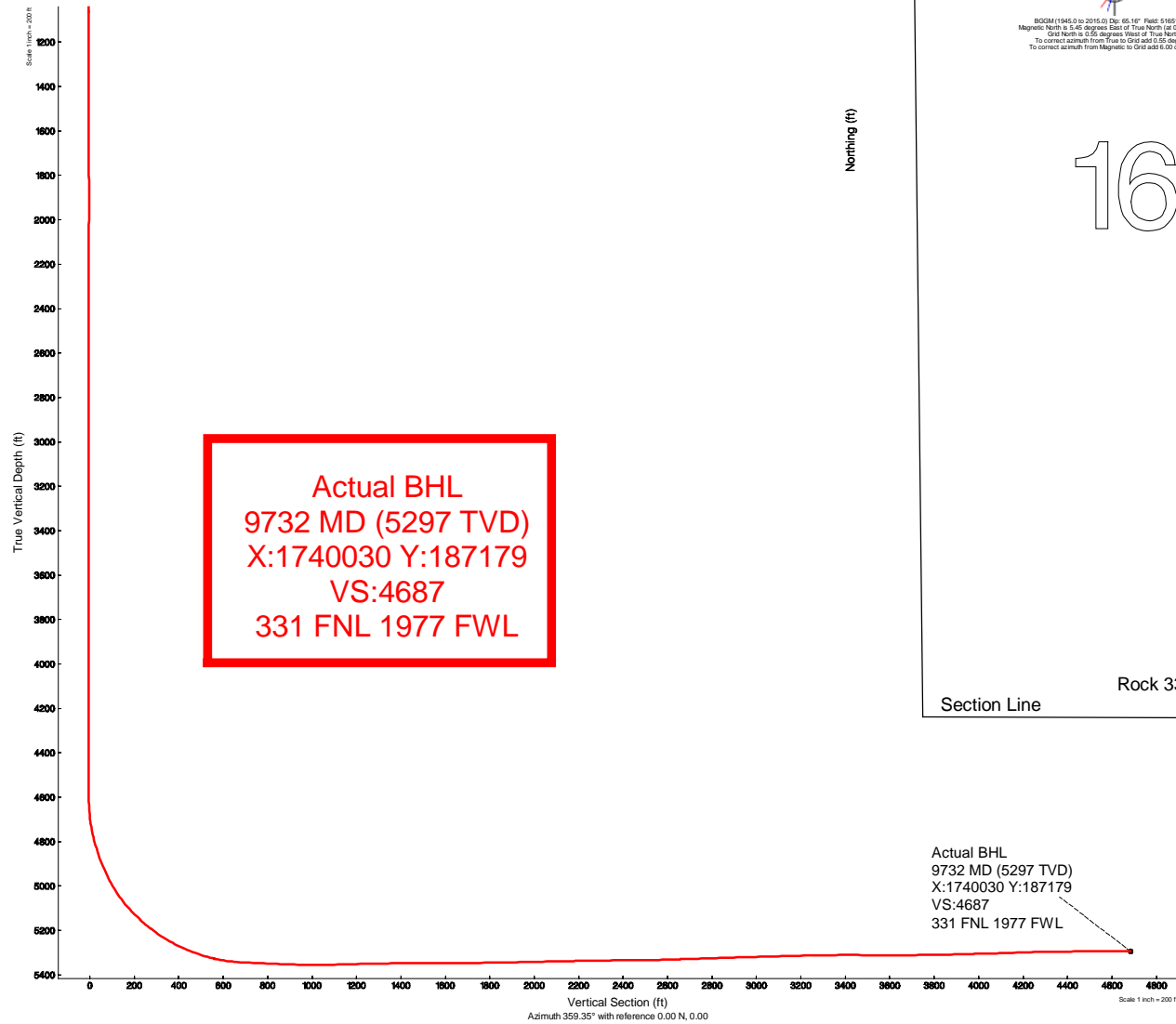
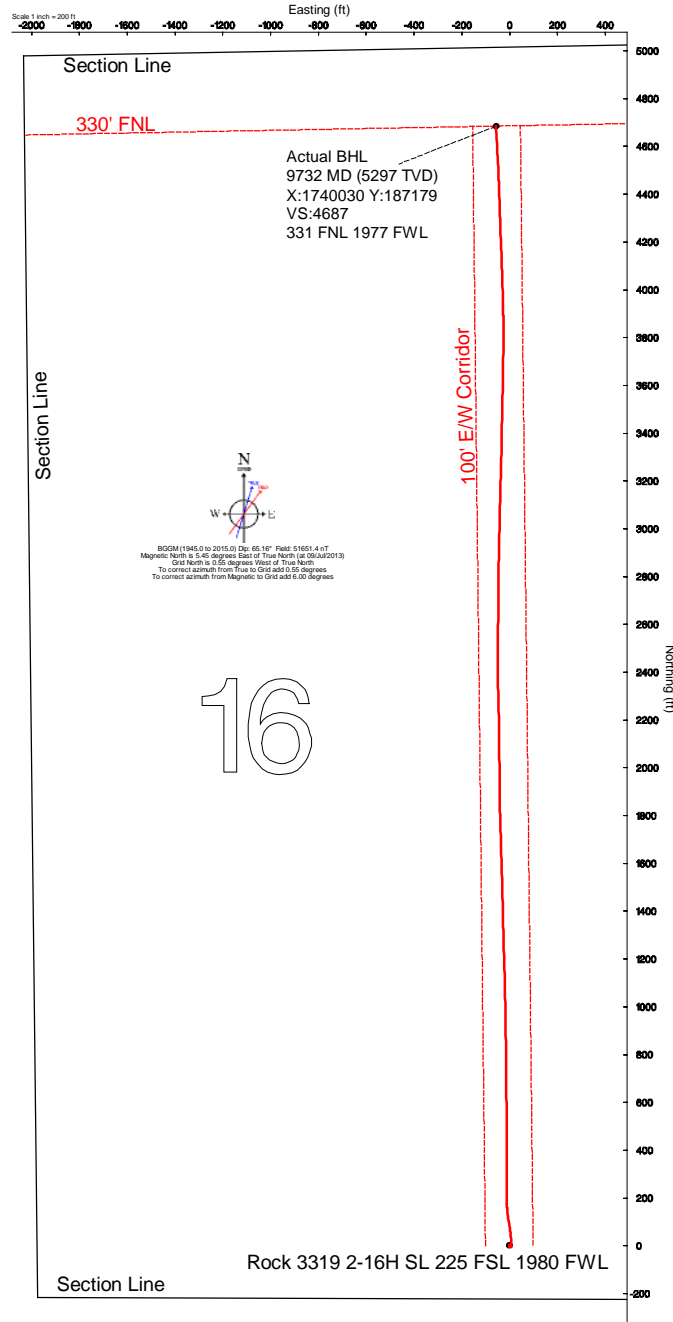
Rock 3319 2-16H SL 225 FSL 1980 FWL

Comanche County, Kansas (Sandridge Energy) NAD27 / Grid

Plot reference wellpath is Plan 1	
True vertical depths are referenced to Lariat 38 (RT)	Grid System: NAD27 / Lambert Kansas SP, Southern Zone (1502), US feet
Measured depths are referenced to Lariat 38 (RT)	North Reference: Grid north
Lariat 38 (RT) to Mean Sea Level: 1989 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: Rock 3319 2-16H SL 225 FSL 1980 FWL) : -1969 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: bouglac on 09/Jul/2013

### Location Information

Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Rock 3319 2-16H Sec. 16-33S-19W		1740086.361	182492.683	37°09'51.995"N	99°23'30.887"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Rock 3319 2-16H SL 225 FSL 1980 FWL	0.00	0.00	1740086.361	182492.683	37°09'51.995"N	99°23'30.887"W
Lariat 38 (RT) to Mud line (At Slot: Rock 3319 2-16H SL 225 FSL 1980 FWL)					20ft	
Mean Sea Level to Mud line (At Slot: Rock 3319 2-16H SL 225 FSL 1980 FWL)					-1969ft	
Lariat 38 (RT) to Mean Sea Level					1989ft	





## Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Sandridge Energy	Slot	Rock 3319 2-16H SL 225 FSL 1980 FWL
Area	Kansas	Well	Lariat 38
Field	Comanche County, Kansas (Sandridge Energy) NAD27 / Grid	Wellbore	Rock 3319 2-16H Actual
Facility	Rock 3319 2-16H Sec. 16-33S-19W		

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	0.55° West	User	Adammic
Scale	1.00002	Report Generated	24/Jul/2013 at 4:17:04 PM
Wellbore last revised	07-09-2013	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	1740086.36	182492.68	37°09'51.995"N	99°23'30.887"W
Facility Reference Pt			1740086.36	182492.68	37°09'51.995"N	99°23'30.887"W
Field Reference Pt			1773194.47	191302.75	37°11'22.030"N	99°16'42.810"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Lariat 38 (RT) to Facility Vertical Datum	20.00ft
Horizontal Reference Pt	Slot	Lariat 38 (RT) to Mean Sea Level	1989.00ft
Vertical Reference Pt	Lariat 38 (RT)	Lariat 38 (RT) to Mud Line at Slot (Rock 3319 2-16H SL 225 FSL 1980 FWL)	20.00ft
MD Reference Pt	Lariat 38 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.35°



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Field	Comanche County, Kansas (Sandridge Energy) NAD27 / Grid	Wellbore	Rock 3319 2-16H Actual
Facility	Rock 3319 2-16H Sec. 16-33S-19W		

WELLPATH DATA (126 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	169.970	0.00	0.00	0.00	0.00	1740086.36	182492.68	0.00	
20.00	0.000	169.970	20.00	0.00	0.00	0.00	1740086.36	182492.68	0.00	
249.00	0.640	169.970	249.00	-1.26	-1.26	0.22	1740086.58	182491.42	0.28	
491.00	0.310	169.970	490.99	-3.24	-3.23	0.57	1740086.93	182489.45	0.14	
766.00	0.560	169.970	765.98	-5.30	-5.29	0.94	1740087.30	182487.39	0.09	
1095.00	0.220	169.970	1094.97	-7.51	-7.50	1.33	1740087.69	182485.19	0.10	
1186.00	0.320	191.320	1185.97	-7.93	-7.92	1.31	1740087.67	182484.77	0.15	
1278.00	0.520	87.280	1277.97	-8.17	-8.15	1.67	1740088.03	182484.53	0.73	
1370.00	0.500	104.360	1369.96	-8.26	-8.23	2.48	1740088.84	182484.45	0.17	
1462.00	0.070	139.750	1461.96	-8.40	-8.37	2.90	1740089.27	182484.31	0.48	
1554.00	0.380	69.170	1553.96	-8.34	-8.31	3.23	1740089.59	182484.38	0.39	
1645.00	0.440	64.130	1644.96	-8.09	-8.05	3.82	1740090.18	182484.64	0.08	
1736.00	0.620	0.910	1735.96	-7.45	-7.40	4.14	1740090.51	182485.28	0.63	
1831.00	0.220	5.200	1830.95	-6.75	-6.71	4.17	1740090.53	182485.98	0.42	
1926.00	0.120	194.030	1925.95	-6.67	-6.62	4.16	1740090.52	182486.06	0.36	
2021.00	0.140	185.320	2020.95	-6.88	-6.83	4.13	1740090.49	182485.85	0.03	
2116.00	0.140	185.320	2115.95	-7.11	-7.06	4.10	1740090.47	182485.62	0.00	
2211.00	0.400	242.750	2210.95	-7.37	-7.33	3.80	1740090.16	182485.35	0.36	
2306.00	0.030	8.410	2305.95	-7.50	-7.46	3.51	1740089.87	182485.22	0.44	
2401.00	0.300	352.160	2400.95	-7.23	-7.19	3.48	1740089.84	182485.50	0.29	
2496.00	0.120	84.740	2495.95	-6.97	-6.93	3.54	1740089.90	182485.75	0.35	
2591.00	0.210	143.170	2590.95	-7.10	-7.06	3.75	1740090.11	182485.62	0.19	
2686.00	0.210	103.390	2685.95	-7.29	-7.24	4.02	1740090.38	182485.44	0.15	
2781.00	0.130	128.500	2780.95	-7.40	-7.35	4.27	1740090.63	182485.33	0.11	
2876.00	0.220	129.600	2875.95	-7.58	-7.53	4.50	1740090.86	182485.15	0.09	
2971.00	0.100	30.660	2970.95	-7.63	-7.58	4.68	1740091.04	182485.11	0.27	
3066.00	0.140	108.350	3065.95	-7.60	-7.54	4.83	1740091.20	182485.14	0.16	
3161.00	0.150	151.850	3160.95	-7.75	-7.69	5.00	1740091.36	182484.99	0.11	
3256.00	0.130	302.780	3255.95	-7.80	-7.74	4.97	1740091.33	182484.94	0.29	
3351.00	0.330	92.320	3350.95	-7.75	-7.69	5.15	1740091.51	182484.99	0.47	
3446.00	0.070	259.310	3445.95	-7.78	-7.72	5.37	1740091.73	182484.97	0.42	
3541.00	0.160	71.100	3540.95	-7.74	-7.68	5.44	1740091.80	182485.00	0.24	
3636.00	0.310	73.580	3635.95	-7.63	-7.57	5.81	1740092.17	182485.12	0.16	
3731.00	0.110	93.900	3730.95	-7.57	-7.50	6.15	1740092.51	182485.18	0.22	
3826.00	0.260	55.780	3825.94	-7.46	-7.39	6.42	1740092.78	182485.30	0.20	
3921.00	0.340	359.680	3920.94	-7.06	-6.98	6.59	1740092.95	182485.70	0.31	
4015.00	0.310	156.800	4014.94	-7.01	-6.94	6.69	1740093.05	182485.75	0.68	
4110.00	0.070	34.560	4109.94	-7.20	-7.13	6.83	1740093.19	182485.56	0.37	
4206.00	0.340	178.800	4205.94	-7.44	-7.36	6.87	1740093.23	182485.32	0.42	
4301.00	0.110	29.190	4300.94	-7.64	-7.56	6.92	1740093.28	182485.12	0.46	
4396.00	0.220	154.770	4395.94	-7.73	-7.65	7.04	1740093.40	182485.03	0.31	
4491.00	0.100	277.170	4490.94	-7.88	-7.80	7.03	1740093.39	182484.88	0.30	
4586.00	0.060	316.710	4585.94	-7.85	-7.77	6.96	1740093.32	182484.91	0.10	
4681.00	0.440	34.570	4680.94	-7.74	-7.66	7.01	1740093.38	182485.02	1.35	
4776.00	1.430	17.340	4775.94	-7.27	-7.19	7.20	1740093.56	182485.49	3.28	



## Actual Wellpath Report

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Area	Kansas	Well	Lariat 38
Field	Comanche County, Kansas (Sandridge Energy) NAD27 / Grid	Wellbore	Rock 3319 2-16H Actual
Facility	Rock 3319 2-16H Sec. 16-33S-19W		

WELLPATH DATA (126 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
4649.00	3.360	8.740	4648.91	-5.97	-5.88	7.46	1740093.82	182486.80	6.12	
4680.00	5.310	3.670	4679.82	-3.64	-3.56	7.69	1740094.05	182489.13	6.40	
4712.00	7.710	1.500	4711.61	-0.02	0.07	7.84	1740094.20	182492.75	7.54	
4744.00	10.310	359.430	4743.21	4.99	5.08	7.87	1740094.23	182497.76	8.19	
4775.00	12.760	358.380	4773.58	11.19	11.28	7.74	1740094.10	182503.96	7.93	
4807.00	15.360	358.060	4804.62	18.96	19.05	7.50	1740093.86	182511.73	8.13	
4839.00	17.580	357.220	4835.31	28.03	28.11	7.12	1740093.48	182520.79	6.98	
4870.00	19.670	355.360	4864.68	37.91	37.99	6.47	1740092.83	182530.67	7.01	
4902.00	21.380	353.540	4894.65	49.09	49.15	5.38	1740091.74	182541.84	5.70	
4934.00	23.010	352.200	4924.28	61.10	61.14	3.88	1740090.24	182553.83	5.33	
4965.00	25.810	350.800	4952.50	73.78	73.81	1.97	1740088.34	182566.50	9.22	
4997.00	28.570	350.440	4980.96	88.24	88.24	-0.41	1740085.95	182580.92	8.64	
5029.00	31.300	350.640	5008.69	104.01	103.99	-3.03	1740083.33	182596.67	8.54	
5060.00	33.780	352.810	5034.83	120.54	120.49	-5.42	1740080.94	182613.17	8.84	
5092.00	36.550	353.870	5060.98	138.87	138.79	-7.55	1740078.81	182631.47	8.86	
5124.00	39.670	355.990	5086.16	158.55	158.46	-9.29	1740077.07	182651.14	10.57	
5155.00	42.670	358.560	5109.49	178.94	178.84	-10.24	1740076.12	182671.52	11.11	
5187.00	45.250	359.550	5132.53	201.15	201.04	-10.60	1740075.76	182693.73	8.34	
5219.00	47.610	0.350	5154.58	224.33	224.23	-10.62	1740075.74	182716.91	7.59	
5250.00	49.780	0.500	5175.04	247.62	247.51	-10.45	1740075.91	182740.20	7.01	
5282.00	52.340	0.340	5195.15	272.50	272.40	-10.27	1740076.09	182765.09	8.01	
5313.00	54.710	0.000	5213.58	297.42	297.32	-10.19	1740076.17	182790.01	7.70	
5345.00	57.290	0.330	5231.47	323.95	323.85	-10.12	1740076.24	182816.54	8.11	
5377.00	60.410	0.040	5248.02	351.33	351.23	-10.03	1740076.33	182843.92	9.78	
5408.00	62.890	359.790	5262.74	378.60	378.51	-10.07	1740076.29	182871.20	8.03	
5440.00	64.830	359.440	5276.84	407.33	407.24	-10.26	1740076.10	182899.93	6.14	
5472.00	66.860	359.310	5289.93	436.53	436.43	-10.58	1740075.78	182929.13	6.35	
5503.00	69.450	359.320	5301.47	465.30	465.20	-10.93	1740075.43	182957.90	8.35	
5535.00	72.060	359.680	5312.02	495.51	495.41	-11.19	1740075.17	182988.10	8.23	
5567.00	74.290	359.300	5321.28	526.13	526.04	-11.46	1740074.90	183018.73	7.06	
5598.00	76.950	359.670	5328.98	556.16	556.06	-11.73	1740074.63	183048.76	8.66	
5630.00	79.820	359.910	5335.42	587.50	587.40	-11.85	1740074.51	183080.10	9.00	
5662.00	82.220	359.760	5340.41	619.11	619.01	-11.94	1740074.42	183111.70	7.51	
5693.00	84.480	359.750	5344.00	649.89	649.80	-12.07	1740074.29	183142.49	7.29	
5725.00	86.830	359.260	5346.43	681.80	681.70	-12.35	1740074.02	183174.40	7.50	
5757.00	87.540	359.350	5348.00	713.76	713.66	-12.73	1740073.63	183206.36	2.24	
5820.00	87.540	359.020	5350.70	776.70	776.60	-13.63	1740072.73	183269.30	0.52	
5883.00	88.030	359.630	5353.14	839.65	839.55	-14.37	1740071.99	183332.25	1.24	
5947.00	87.780	359.240	5355.48	903.61	903.50	-15.00	1740071.36	183396.20	0.72	
6010.00	87.970	358.740	5357.81	966.57	966.45	-16.11	1740070.25	183459.15	0.85	
6050.00	90.090	359.050	5358.49	1006.56	1006.43	-16.88	1740069.48	183499.13	5.36	
6108.00	91.730	358.910	5357.57	1064.55	1064.41	-17.91	1740068.45	183557.12	2.84	
6200.00	91.570	358.130	5354.92	1156.50	1156.34	-20.29	1740066.07	183649.05	0.87	
6291.00	91.260	358.230	5352.67	1247.45	1247.27	-23.18	1740063.18	183739.98	0.36	
6383.00	91.020	358.700	5350.84	1339.42	1339.22	-25.64	1740060.72	183831.93	0.57	



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Field	Comanche County, Kansas (Sandridge Energy) NAD27 / Grid	Wellbore	Rock 3319 2-16H Actual
Facility	Rock 3319 2-16H Sec. 16-33S-19W		

WELLPATH DATA (126 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
6475.00	90.650	358.710	5349.50	1431.41	1431.18	-27.72	1740058.64	183923.89	0.40	
6566.00	90.090	358.330	5348.91	1522.39	1522.15	-30.07	1740056.29	184014.86	0.74	
6658.00	89.510	358.130	5349.23	1614.38	1614.11	-32.91	1740053.45	184106.82	0.67	
6753.00	90.920	358.730	5348.88	1709.36	1709.07	-35.52	1740050.84	184201.78	1.61	
6848.00	90.710	357.770	5347.53	1804.33	1804.01	-38.42	1740047.94	184296.73	1.03	
6943.00	91.110	359.560	5346.02	1899.31	1898.97	-40.63	1740045.73	184391.69	1.93	
7038.00	91.290	359.750	5344.03	1994.29	1993.95	-41.20	1740045.16	184486.67	0.28	
7133.00	91.260	359.340	5341.91	2089.26	2088.92	-41.96	1740044.40	184581.64	0.43	
7228.00	91.020	359.130	5340.02	2184.24	2183.89	-43.22	1740043.14	184676.62	0.34	
7323.00	91.110	358.110	5338.26	2279.22	2278.85	-45.51	1740040.85	184771.58	1.08	
7417.00	90.090	359.450	5337.27	2373.21	2372.82	-47.51	1740038.85	184865.55	1.79	
7512.00	90.710	0.100	5336.61	2468.20	2467.81	-47.89	1740038.47	184960.55	0.95	
7607.00	91.540	0.740	5334.75	2563.16	2562.79	-47.19	1740039.17	185055.53	1.10	
7702.00	91.780	0.560	5331.99	2658.10	2657.75	-46.11	1740040.25	185150.48	0.32	
7797.00	92.000	0.220	5328.86	2753.03	2752.69	-45.47	1740040.89	185245.43	0.43	
7892.00	91.880	1.130	5325.64	2847.95	2847.63	-44.35	1740042.01	185340.37	0.97	
7987.00	91.570	1.260	5322.78	2942.86	2942.57	-42.37	1740043.99	185435.31	0.35	
8082.00	91.540	1.320	5320.21	3037.77	3037.51	-40.23	1740046.13	185530.25	0.07	
8177.00	91.230	1.540	5317.91	3132.68	3132.45	-37.86	1740048.50	185625.19	0.40	
8272.00	91.600	1.750	5315.56	3227.57	3227.38	-35.13	1740051.23	185720.13	0.45	
8367.00	90.680	0.940	5313.67	3322.49	3322.33	-32.90	1740053.46	185815.08	1.29	
8462.00	89.910	1.140	5313.19	3417.45	3417.32	-31.18	1740055.18	185910.07	0.84	
8557.00	89.820	1.370	5313.41	3512.40	3512.29	-29.10	1740057.26	186005.05	0.26	
8652.00	89.540	1.010	5313.94	3607.35	3607.27	-27.13	1740059.24	186100.03	0.48	
8747.00	90.830	0.730	5313.63	3702.31	3702.26	-25.68	1740060.68	186195.01	1.39	
8842.00	90.740	0.400	5312.33	3797.28	3797.24	-24.75	1740061.61	186290.00	0.36	
8937.00	91.570	358.940	5310.42	3892.26	3892.22	-25.29	1740061.07	186384.98	1.77	
9032.00	91.450	358.300	5307.91	3987.21	3987.16	-27.58	1740058.78	186479.92	0.69	
9127.00	91.730	358.120	5305.28	4082.16	4082.08	-30.55	1740055.81	186574.84	0.35	
9222.00	92.220	357.450	5302.00	4177.07	4176.95	-34.22	1740052.14	186669.71	0.87	
9317.00	91.020	358.360	5299.32	4272.00	4271.84	-37.69	1740048.67	186764.61	1.59	
9412.00	90.770	358.030	5297.83	4366.96	4366.78	-40.68	1740045.68	186859.55	0.44	
9507.00	90.310	357.630	5296.94	4461.93	4461.71	-44.28	1740042.08	186954.48	0.64	
9602.00	89.880	356.920	5296.78	4556.86	4556.60	-48.79	1740037.57	187049.38	0.87	
9687.00	89.850	356.300	5296.98	4641.77	4641.45	-53.82	1740032.54	187134.23	0.73	
9732.00	89.850	356.300	5297.10	4686.70	4686.36	-56.72	1740029.64	187179.14	0.00	Actual BHL 9732 MD (5297 TVD) X:1740030 Y:187179 VS:4687 331 FNL 1977 FWL



## Actual Wellpath Report

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REFERENCE WELLPATH IDENTIFICATION			
Operator	Sandridge Energy	Slot	Rock 3319 2-16H SL 225 FSL 1980 FWL
Area	Kansas	Well	Lariat 38
Field	Comanche County, Kansas (Sandridge Energy) NAD27 / Grid	Wellbore	Rock 3319 2-16H Actual
Facility	Rock 3319 2-16H Sec. 16-33S-19W		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Rock PBHL		5295.19	4687.22	-53.36	1740033.00	187180.00	37°10'38.332"N	99°23'32.101"W	point

WELLPATH COMPOSITION - Ref Wellbore: Rock 3319 2-16H Actual					Ref Wellpath: AWP (Final)	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore		
20.00	491.00	EMS (Standard)	EMS	Rock 3319 2-16H Actual		
491.00	9687.00	NaviTrak (Standard)	Inteq MWD	Rock 3319 2-16H Actual		
9687.00	9732.00	Blind Drilling (std)	Projection to bit	Rock 3319 2-16H Actual		