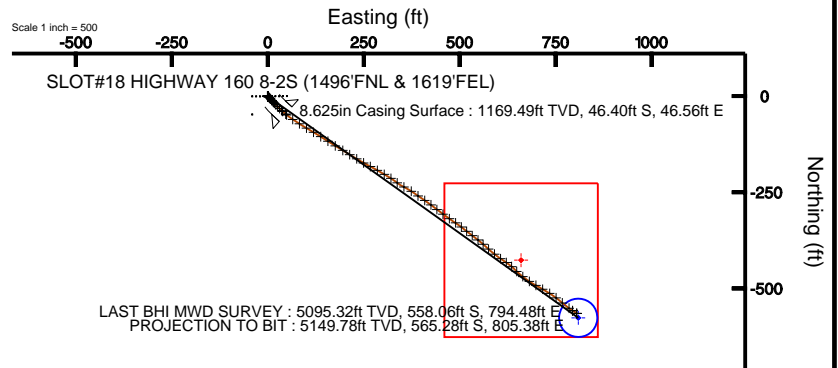
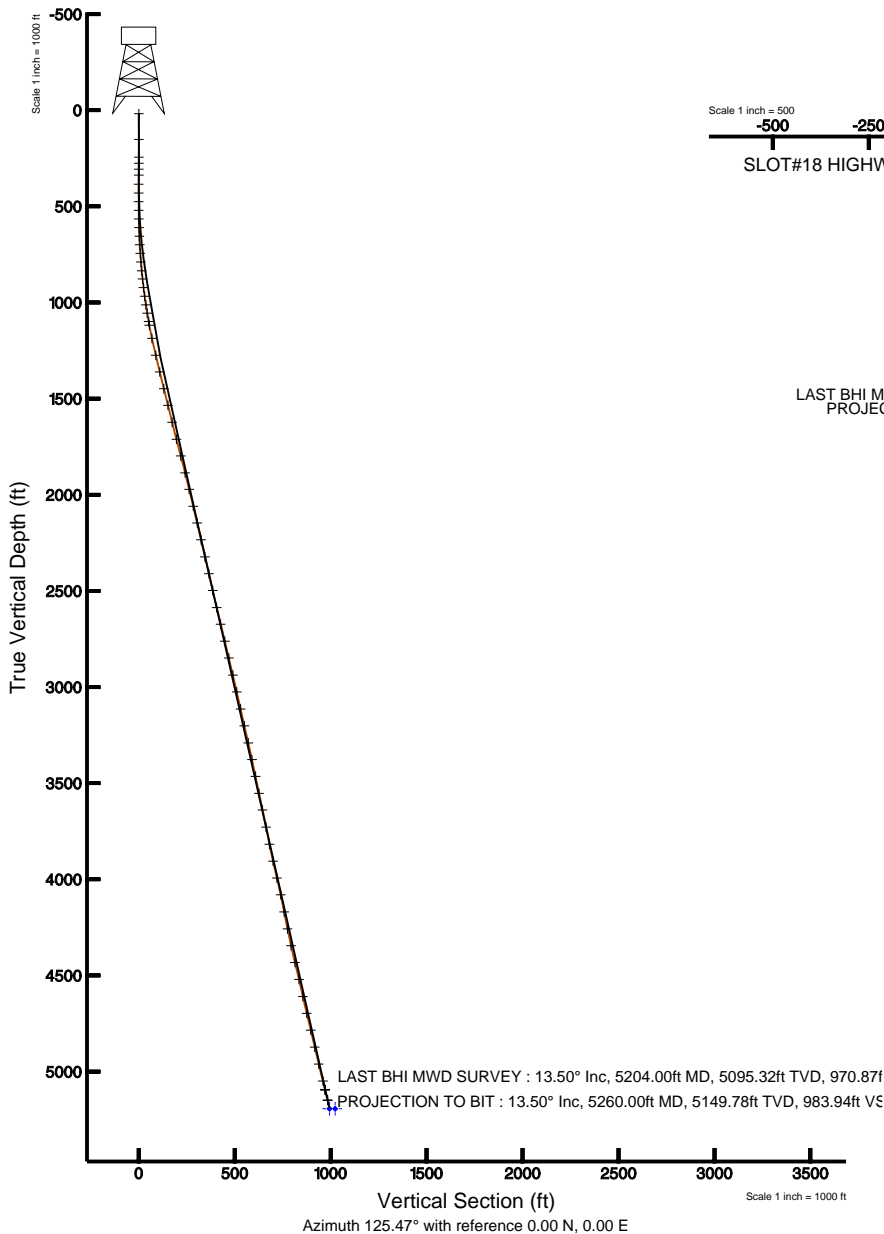


# KERR MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#18 HIGHWAY 160 8-2S (1496'FNL & 1619'FEL)  
 Field: WELD COUNTY (KERR MCGEE) Well: HIGHWAY 160 8-2S  
 Facility: SEC.02-T1N-R66W Wellbore: HIGHWAY 160 8-2S PWB



Plot reference wellpath is HIGHWAY 160 8-2S (REV 8.0) PWP	
True vertical depths are referenced to XTREME 8 (RT)	Grid System: NAD83 / Lambert Colorado State Planes, Northern Zone (501), US feet
Measured depths are referenced to XTREME 8 (RT)	North Reference: True north
XTREME 8 (RT) to Mean Sea Level: 5121 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: SEC.02-T1N-R66W): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: cookdann on 10/26/2010



BGGM (1945.0 to 2012.0) Dip: 66.84° Field: 53065.4 nT  
 Magnetic North is 8.89 degrees East of True North (at 9/20/2010)

To correct azimuth from Magnetic to True add 8.89 degrees  
 For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 8.89 = 98.89



# Actual Wellpath Report

HIGHWAY 160 8-2S AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#18 HIGHWAY 160 8-2S (1496'FNL & 1619'FEL)
Area	COLORADO	Well	HIGHWAY 160 8-2S
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HIGHWAY 160 8-2S AWB
Facility	SEC.02-T1N-R66W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado State Planes, Northern Zone (501), US feet	Software System	WellArchitect® 2.0
North Reference	True	User	Cookdanm
Scale	0.999961	Report Generated	10/26/2010 at 1:23:34 PM
Convergence at slot	0.49° East	Database/Source file	Denver Server/HIGHWAY_160_8-2S_AWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	-298.60	2435.58	3212479.61	1274083.66	40°04'59.711"N	104°44'26.246"W
Facility Reference Pt			3210041.69	1274361.62	40°05'02.663"N	104°44'57.581"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

## WELLPATH DATUM

Calculation method	Minimum curvature	XTREME 8 (RT) to Facility Vertical Datum	5121.00ft
Horizontal Reference Pt	Slot	XTREME 8 (RT) to Mean Sea Level	5121.00ft
Vertical Reference Pt	XTREME 8 (RT)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	XTREME 8 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	125.47°



# Actual Wellpath Report

HIGHWAY 160 8-2S AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#18 HIGHWAY 160 8-2S (1496'FNL & 1619'FEL)
Area	COLORADO	Well	HIGHWAY 160 8-2S
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HIGHWAY 160 8-2S AWB
Facility	SEC.02-T1N-R66W		

## WELLPATH DATA (72 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	198.000	0.00	0.00	0.00	0.00	0.00	
17.00	0.000	198.000	17.00	0.00	0.00	0.00	0.00	
151.00	0.100	198.000	151.00	0.04	-0.11	-0.04	0.07	
244.00	0.200	223.200	244.00	0.04	-0.31	-0.17	0.13	
275.00	0.300	239.200	275.00	0.00	-0.39	-0.28	0.39	
306.00	0.300	299.600	306.00	-0.12	-0.39	-0.42	0.97	
337.00	0.500	317.200	337.00	-0.33	-0.25	-0.58	0.75	
384.00	0.900	356.600	383.99	-0.76	0.27	-0.74	1.28	
430.00	0.800	6.800	429.99	-1.14	0.95	-0.73	0.39	
475.00	0.500	71.200	474.99	-1.18	1.32	-0.50	1.64	
520.00	0.600	149.900	519.99	-0.85	1.18	-0.20	1.56	
565.00	1.100	130.900	564.98	-0.20	0.70	0.25	1.26	
610.00	1.800	138.600	609.97	0.91	-0.12	1.04	1.61	
655.00	2.300	135.500	654.94	2.49	-1.29	2.14	1.14	
699.00	3.300	134.800	698.88	4.61	-2.81	3.66	2.27	
744.00	4.200	136.200	743.79	7.51	-4.91	5.72	2.01	
789.00	4.800	140.000	788.65	10.95	-7.55	8.07	1.49	
835.00	5.600	138.300	834.46	15.00	-10.70	10.80	1.77	
878.00	6.200	139.700	877.23	19.30	-14.03	13.70	1.43	
923.00	7.100	137.600	921.93	24.37	-17.94	17.14	2.07	
968.00	7.700	136.100	966.55	30.05	-22.17	21.11	1.40	
1014.00	8.900	136.200	1012.07	36.58	-26.96	25.71	2.61	
1058.00	9.800	133.700	1055.49	43.63	-32.00	30.77	2.24	
1102.00	10.400	133.000	1098.80	51.27	-37.30	36.38	1.39	
1121.00	10.600	132.600	1117.49	54.71	-39.65	38.92	1.12	
1191.00	11.900	129.800	1186.14	68.29	-48.63	49.21	2.01	
1281.00	13.500	123.500	1273.94	88.05	-60.37	65.10	2.35	
1370.00	13.500	121.400	1360.48	108.79	-71.51	82.63	0.55	
1460.00	14.200	121.000	1447.86	130.27	-82.67	101.06	0.79	
1549.00	13.600	121.700	1534.26	151.60	-93.79	119.32	0.70	
1640.00	14.100	121.000	1622.61	173.33	-105.12	137.92	0.58	
1731.00	14.400	122.800	1710.81	195.68	-116.96	156.93	0.59	
1821.00	14.600	121.700	1797.94	218.18	-128.98	175.99	0.38	
1912.00	14.400	121.400	1886.05	240.91	-140.91	195.41	0.23	
2000.00	13.600	120.700	1971.43	262.13	-151.89	213.64	0.93	
2091.00	13.500	121.700	2059.90	283.39	-162.93	231.88	0.28	
2180.00	13.300	119.600	2146.48	303.94	-173.45	249.62	0.59	
2270.00	12.700	116.500	2234.17	324.01	-182.98	267.48	1.02	
2361.00	13.500	120.000	2322.80	344.47	-192.75	285.63	1.24	
2451.00	13.300	120.000	2410.35	365.23	-203.18	303.69	0.22	
2541.00	12.700	123.200	2498.05	385.42	-213.77	320.93	1.04	
2632.00	12.800	127.000	2586.80	405.49	-225.32	337.36	0.93	
2721.00	14.100	117.200	2673.37	426.08	-236.21	354.87	2.94	
2812.00	14.100	122.400	2761.63	448.12	-247.21	374.09	1.39	
2902.00	13.400	126.300	2849.06	469.50	-259.26	391.75	1.29	



# Actual Wellpath Report

HIGHWAY 160 8-2S AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#18 HIGHWAY 160 8-2S (1496'FNL & 1619'FEL)
Area	COLORADO	Well	HIGHWAY 160 8-2S
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HIGHWAY 160 8-2S AWB
Facility	SEC.02-T1N-R66W		

## WELLPATH DATA (72 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
2993.00	13.200	122.500	2937.62	490.42	-271.09	409.02	0.99	
3083.00	12.600	127.400	3025.35	510.49	-282.57	425.48	1.39	
3174.00	12.400	129.100	3114.19	530.16	-294.76	440.95	0.46	
3264.00	13.200	126.700	3201.95	550.08	-307.00	456.69	1.07	
3355.00	12.700	122.800	3290.64	570.46	-318.63	473.43	1.11	
3444.00	12.600	124.600	3377.48	589.94	-329.44	489.64	0.46	
3533.00	11.400	128.400	3464.54	608.43	-340.41	504.52	1.61	
3623.00	11.500	128.400	3552.75	626.27	-351.51	518.53	0.11	
3712.00	12.200	126.700	3639.85	644.53	-362.64	533.02	0.88	
3803.00	11.300	128.100	3728.94	663.05	-373.89	547.74	1.04	
3894.00	11.300	131.200	3818.18	680.83	-385.26	561.47	0.67	
3984.00	12.800	132.600	3906.19	699.50	-397.82	575.44	1.70	
4074.00	13.400	127.400	3993.85	719.81	-410.90	591.07	1.47	
4163.00	12.000	126.300	4080.67	739.37	-422.65	606.72	1.60	
4254.00	11.000	122.400	4169.85	757.50	-432.90	621.67	1.39	
4344.00	11.300	131.900	4258.16	774.84	-443.39	635.49	2.07	
4433.00	12.700	134.400	4345.21	793.17	-456.06	648.97	1.68	
4523.00	13.800	127.000	4432.82	813.68	-469.44	664.61	2.24	
4614.00	13.100	124.200	4521.32	834.84	-481.77	681.81	1.05	
4705.00	12.200	118.200	4610.12	854.68	-492.11	698.81	1.75	
4795.00	14.000	121.000	4697.77	874.97	-502.21	716.52	2.12	
4885.00	13.200	121.700	4785.25	896.08	-513.22	734.60	0.91	
4975.00	12.800	127.000	4872.94	916.30	-524.62	751.30	1.40	
5066.00	14.100	130.500	4961.45	937.42	-537.88	767.79	1.68	
5157.00	14.200	126.000	5049.69	959.62	-551.64	785.24	1.21	
5204.00	13.500	123.500	5095.32	970.87	-558.06	794.48	1.96	LAST BHI MWD SURVEY
5260.00	13.500	123.500	5149.78	983.94	-565.28	805.38	0.00	PROJECTION TO BIT

## HOLE & CASING SECTIONS Ref Wellbore: HIGHWAY 160 8-2S AWB Ref Wellpath: HIGHWAY 160 8-2S AWP

String/Diameter	Start MD [ft]	End MD [ft]	Interval [ft]	Start TVD [ft]	End TVD [ft]	Start N/S [ft]	Start E/W [ft]	End N/S [ft]	End E/W [ft]
12.25in Open Hole	17.00	1174.00	1157.00	17.00	1169.49	0.00	0.00	-46.40	46.56
8.625in Casing Surface	17.00	1174.00	1157.00	17.00	1169.49	0.00	0.00	-46.40	46.56
7.875in Open Hole	1174.00	5260.00	4086.00	1169.49	5149.78	-46.40	46.56	-565.28	805.38



# Actual Wellpath Report

HIGHWAY 160 8-2S AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#18 HIGHWAY 160 8-2S (1496'FNL & 1619'FEL)
Area	COLORADO	Well	HIGHWAY 160 8-2S
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HIGHWAY 160 8-2S AWB
Facility	SEC.02-T1N-R66W		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
HIGHWAY 160 8-2S BHL ON PLAT (2130'FNL & 810'FEL, REV-1)		5194.00	-627.66	809.27	3213294.19	1273462.97	40°04'53.508"N	104°44'15.835"W	point
HIGHWAY 160 8-2S GEO TARGET 50' RADIUS (2079'FNL & 810'FEL, REV-2)		5194.00	-576.66	809.27	3213293.75	1273513.97	40°04'54.012"N	104°44'15.835"W	circle
HIGHWAY 160 8-2S LEGAL BOX (50'S,350'N,51'E,349'W OF GEO TARGET)		5194.00	-426.66	660.27	3213143.48	1273662.68	40°04'55.494"N	104°44'17.752"W	square

WELLPATH COMPOSITION					Ref Wellbore: HIGHWAY 160 8-2S AWB	Ref Wellpath: HIGHWAY 160 8-2S AWP
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore	
17.00	1102.00	NaviTrak (Standard)	BHI MWD SURVEYS 12.25 HOLE <151-1102>		HIGHWAY 160 8-2S AWB	
1102.00	5204.00	NaviTrak (Standard)	BHI MWD SURVEYS 7.875 HOLE <1121-5204>		HIGHWAY 160 8-2S AWB	
5204.00	5260.00	Blind Drilling (std)	Projection to bit		HIGHWAY 160 8-2S AWB	



# Actual Wellpath Report

HIGHWAY 160 8-2S AWP

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INTEQ

## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#18 HIGHWAY 160 8-2S (1496'FNL & 1619'FEL)
Area	COLORADO	Well	HIGHWAY 160 8-2S
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HIGHWAY 160 8-2S AWB
Facility	SEC.02-T1N-R66W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
5204.00	13.500	123.500	5095.32	LAST BHI MWD SURVEY
5260.00	13.500	123.500	5149.78	PROJECTION TO BIT