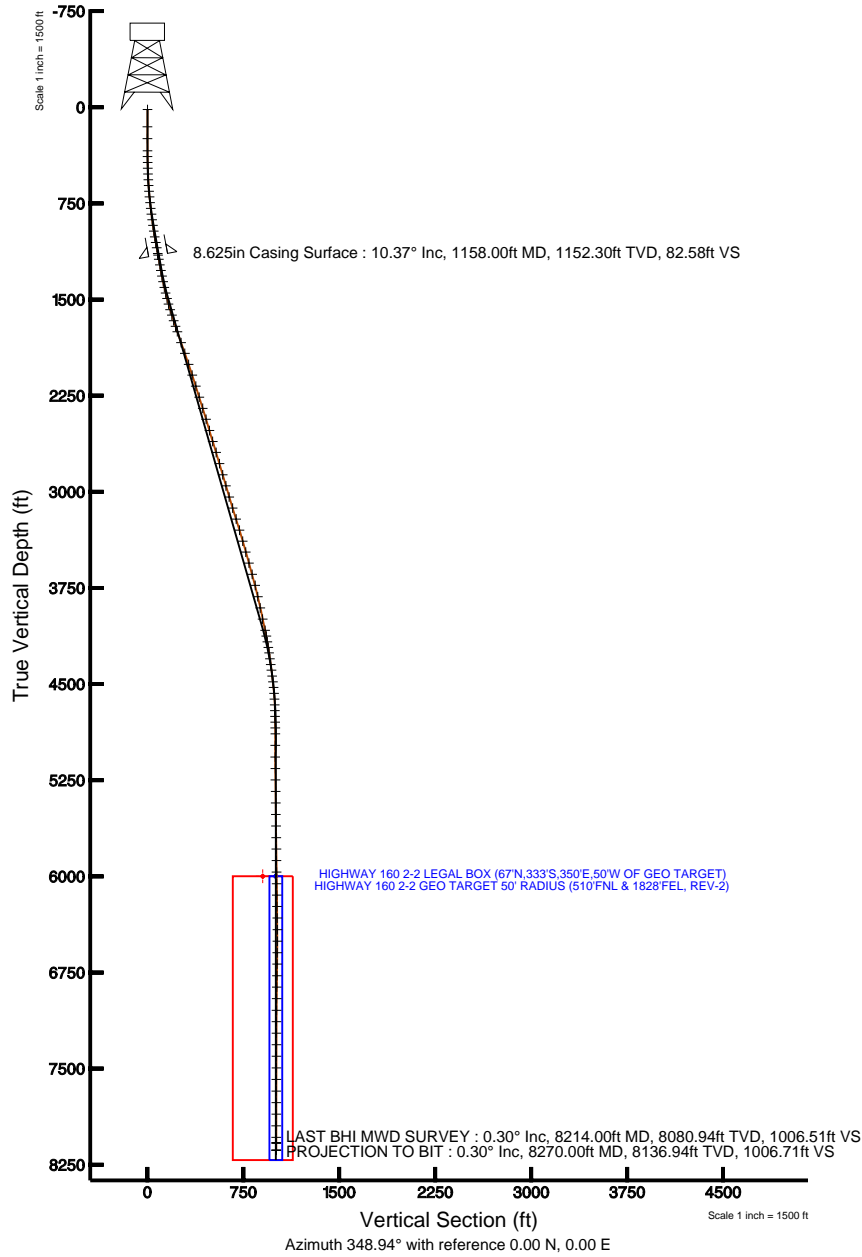
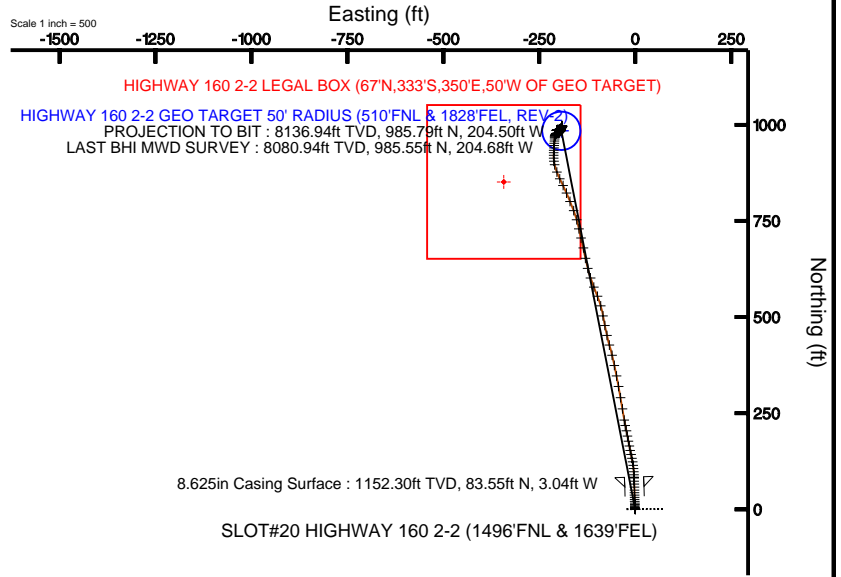


KERR MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#20 HIGHWAY 160 2-2 (1496'FNL & 1639'FEL)
 Field: WELD COUNTY (KERR MCGEE) Well: HIGHWAY 160 2-2
 Facility: SEC.02-T1N-R66W Wellbore: HIGHWAY 160 2-2 PWB



Plot reference wellpath is HIGHWAY 160 2-2 (REV-A.1) 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: 5122 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: cookdarn 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 2-2 AWP

Page 1 of 6



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#20 HIGHWAY 160 2-2 (1496'FNL & 1639'FEL)
Area	COLORADO	Well	HIGHWAY 160 2-2
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HIGHWAY 160 2-2 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 9:28:37 AM
Convergence at slot	0.49° East	Database/Source file	Denver Server/HIGHWAY_160_2-2_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	-298.97	2415.43	3212459.47	1274083.12	40°04'59.707"N	104°44'26.506"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	5122.00ft
Horizontal Reference Pt	Slot	XTREME 8 (RT) to Mean Sea Level	5122.00ft
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	348.94°



Actual Wellpath Report

HIGHWAY 160 2-2 AWP

Page 2 of 6



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#20 HIGHWAY 160 2-2 (1496'FNL & 1639'FEL)
Area	COLORADO	Well	HIGHWAY 160 2-2
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HIGHWAY 160 2-2 AWB
Facility	SEC.02-T1N-R66W		

WELLPATH DATA (119 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	154.100	0.00	0.00	0.00	0.00	0.00	
17.00	0.000	154.100	17.00	0.00	0.00	0.00	0.00	
151.00	0.300	154.100	151.00	-0.34	-0.32	0.15	0.22	
244.00	0.200	42.300	244.00	-0.48	-0.41	0.37	0.45	
339.00	0.400	346.400	339.00	-0.05	0.03	0.40	0.35	
384.00	0.800	313.700	384.00	0.37	0.40	0.14	1.14	
430.00	1.200	338.300	429.99	1.10	1.07	-0.27	1.26	
475.00	1.800	348.500	474.97	2.27	2.20	-0.59	1.45	
520.00	2.300	352.700	519.94	3.88	3.79	-0.84	1.16	
565.00	3.600	356.600	564.88	6.18	6.09	-1.04	2.92	
610.00	3.900	2.600	609.79	9.07	9.03	-1.06	1.10	
655.00	4.700	4.700	654.66	12.33	12.40	-0.84	1.81	
699.00	5.100	353.400	698.50	16.01	16.14	-0.91	2.37	
744.00	6.000	356.200	743.29	20.34	20.47	-1.30	2.09	
789.00	6.600	359.100	788.02	25.22	25.41	-1.49	1.51	
835.00	7.400	359.100	833.67	30.74	31.01	-1.58	1.74	
878.00	7.800	358.700	876.30	36.34	36.70	-1.69	0.94	
923.00	8.400	359.100	920.85	42.58	43.04	-1.81	1.34	
968.00	8.900	359.600	965.33	49.24	49.80	-1.89	1.12	
1014.00	10.200	358.700	1010.70	56.75	57.43	-2.01	2.84	
1058.00	10.600	356.600	1053.97	64.60	65.37	-2.33	1.25	
1100.00	10.500	356.900	1095.26	72.22	73.05	-2.77	0.27	
1146.00	10.400	359.800	1140.50	80.45	81.38	-3.01	1.16	
1191.00	10.300	356.600	1184.77	88.42	89.46	-3.26	1.30	
1236.00	10.100	355.900	1229.06	96.33	97.41	-3.79	0.52	
1281.00	11.300	356.200	1273.27	104.62	105.75	-4.36	2.67	
1325.00	11.500	352.400	1316.41	113.27	114.40	-5.23	1.77	
1370.00	11.800	348.900	1360.48	122.35	123.36	-6.70	1.71	
1415.00	12.400	347.400	1404.48	131.78	132.59	-8.64	1.51	
1460.00	13.600	347.400	1448.33	141.90	142.47	-10.85	2.67	
1504.00	14.400	348.200	1491.02	152.54	152.87	-13.10	1.87	
1549.00	15.900	349.600	1534.45	164.30	164.41	-15.36	3.43	
1595.00	17.000	349.200	1578.57	177.33	177.22	-17.75	2.40	
1640.00	17.800	349.600	1621.51	190.79	190.44	-20.23	1.80	
1685.00	17.900	347.100	1664.35	204.58	203.95	-23.01	1.72	
1731.00	18.500	348.500	1708.04	218.94	217.99	-26.05	1.61	
1776.00	18.700	351.300	1750.69	233.29	232.12	-28.56	2.03	
1866.00	19.300	350.600	1835.79	262.57	261.05	-33.17	0.71	
1955.00	19.600	349.900	1919.71	292.20	290.26	-38.19	0.43	
2046.00	18.300	349.600	2005.78	321.74	319.34	-43.45	1.43	
2134.00	18.700	348.900	2089.23	349.67	346.77	-48.66	0.52	
2225.00	17.100	347.400	2175.82	377.63	374.15	-54.39	1.83	
2315.00	17.900	347.100	2261.66	404.68	400.54	-60.36	0.89	
2406.00	17.200	343.600	2348.42	432.06	427.08	-67.28	1.39	
2495.00	16.800	348.200	2433.54	458.02	452.30	-73.63	1.58	



Actual Wellpath Report

HIGHWAY 160 2-2 AWP

Page 3 of 6



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#20 HIGHWAY 160 2-2 (1496'FNL & 1639'FEL)
Area	COLORADO	Well	HIGHWAY 160 2-2
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HIGHWAY 160 2-2 AWB
Facility	SEC.02-T1N-R66W		

WELLPATH DATA (119 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
2587.00	16.500	348.200	2521.68	484.38	478.10	-79.02	0.33	
2676.00	16.900	349.600	2606.93	509.95	503.20	-83.94	0.64	
2766.00	17.700	344.600	2692.86	536.68	529.25	-89.93	1.88	
2857.00	16.000	338.000	2779.96	562.79	554.22	-98.31	2.81	
2948.00	16.700	338.700	2867.28	587.97	578.03	-107.75	0.80	
3038.00	16.100	341.500	2953.62	613.07	601.92	-116.41	1.10	
3129.00	17.000	345.000	3040.85	638.85	626.73	-123.86	1.48	
3219.00	18.000	349.600	3126.69	665.89	653.12	-129.77	1.90	
3309.00	17.300	347.800	3212.45	693.17	679.88	-135.11	0.99	
3400.00	16.500	346.000	3299.52	719.61	705.64	-141.10	1.05	
3489.00	15.800	347.400	3385.01	744.34	729.73	-146.80	0.90	
3578.00	15.800	345.000	3470.65	768.54	753.26	-152.58	0.73	
3667.00	16.900	338.700	3556.05	793.36	777.02	-160.41	2.34	
3758.00	15.900	338.000	3643.35	818.62	800.90	-169.89	1.12	
3848.00	14.500	336.200	3730.20	841.71	822.64	-179.05	1.64	
3939.00	13.000	334.400	3818.59	862.73	842.30	-188.08	1.71	
4029.00	12.000	332.700	3906.45	881.52	859.74	-196.74	1.18	
4118.00	12.700	341.100	3993.40	900.09	877.22	-204.15	2.16	
4208.00	12.900	345.000	4081.17	919.92	896.28	-209.96	0.99	
4254.00	10.600	352.000	4126.20	929.27	905.43	-211.88	5.87	
4299.00	9.900	0.100	4170.48	937.19	913.40	-212.45	3.56	
4344.00	9.400	358.700	4214.85	944.61	920.94	-212.52	1.23	
4387.00	8.400	0.800	4257.33	951.15	927.59	-212.56	2.44	
4433.00	8.000	5.700	4302.86	957.50	934.14	-212.19	1.75	
4478.00	7.700	3.300	4347.44	963.42	940.27	-211.71	0.99	
4523.00	7.600	2.200	4392.04	969.23	946.25	-211.42	0.39	
4569.00	7.700	6.100	4437.63	975.14	952.35	-210.98	1.15	
4614.00	7.200	4.700	4482.25	980.73	958.16	-210.43	1.18	
4659.00	6.300	4.700	4526.94	985.82	963.43	-209.99	2.00	
4705.00	4.700	356.600	4572.72	990.12	967.83	-209.90	3.86	
4750.00	2.800	8.200	4617.63	992.99	970.76	-209.85	4.53	
4795.00	2.000	25.800	4662.59	994.65	972.55	-209.35	2.40	
4840.00	2.100	18.000	4707.56	996.00	974.04	-208.75	0.66	
4885.00	2.300	34.600	4752.53	997.35	975.57	-207.99	1.48	
4930.00	2.500	39.500	4797.49	998.61	977.07	-206.85	0.64	
4975.00	2.000	64.100	4842.45	999.43	978.17	-205.52	2.39	
5021.00	1.800	88.000	4888.43	999.52	978.55	-204.08	1.76	
5111.00	1.400	93.300	4978.39	999.03	978.53	-201.57	0.47	
5202.00	1.100	70.400	5069.37	998.88	978.76	-199.63	0.63	
5292.00	1.100	45.100	5159.36	999.49	979.66	-198.21	0.54	
5381.00	1.300	36.700	5248.34	1000.64	981.07	-197.00	0.30	
5471.00	1.400	27.500	5338.31	1002.19	982.87	-195.88	0.26	
5560.00	1.500	70.800	5427.28	1003.21	984.22	-194.28	1.21	
5650.00	0.800	21.600	5517.27	1003.90	985.19	-192.93	1.28	
5741.00	1.000	348.500	5608.26	1005.23	986.56	-192.86	0.60	



Actual Wellpath Report

HIGHWAY 160 2-2 AWP

Page 4 of 6



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#20 HIGHWAY 160 2-2 (1496'FNL & 1639'FEL)
Area	COLORADO	Well	HIGHWAY 160 2-2
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HIGHWAY 160 2-2 AWB
Facility	SEC.02-T1N-R66W		

WELLPATH DATA (119 stations)								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
5831.00	0.800	343.200	5698.25	1006.64	987.93	-193.20	0.24	
5920.00	0.700	342.900	5787.24	1007.80	989.04	-193.54	0.11	
6010.00	0.400	352.000	5877.23	1008.66	989.88	-193.74	0.35	
6100.00	0.600	47.900	5967.23	1009.22	990.51	-193.44	0.56	
6191.00	0.800	43.000	6058.22	1009.84	991.29	-192.65	0.23	
6280.00	1.100	30.300	6147.21	1010.84	992.48	-191.79	0.41	
6369.00	1.300	4.300	6236.19	1012.46	994.23	-191.29	0.64	
6459.00	1.800	359.800	6326.16	1014.83	996.66	-191.22	0.57	
6550.00	0.200	34.200	6417.14	1016.34	998.22	-191.13	1.80	
6640.00	1.100	116.100	6507.14	1015.93	997.97	-190.27	1.21	
6730.00	0.900	170.300	6597.13	1014.70	996.89	-189.37	1.03	
6818.00	1.100	213.500	6685.11	1013.41	995.51	-189.72	0.86	
6909.00	1.300	225.500	6776.09	1012.22	994.05	-190.94	0.35	
6998.00	1.100	225.800	6865.07	1011.20	992.75	-192.27	0.22	
7088.00	1.300	229.000	6955.05	1010.22	991.48	-193.66	0.23	
7179.00	1.200	234.200	7046.03	1009.30	990.24	-195.22	0.17	
7268.00	1.300	244.100	7135.01	1008.65	989.26	-196.88	0.27	
7357.00	1.100	250.800	7223.99	1008.27	988.54	-198.59	0.27	
7447.00	1.700	266.900	7313.97	1008.34	988.18	-200.74	0.79	
7538.00	0.500	237.800	7404.95	1008.38	987.89	-202.43	1.41	
7629.00	0.500	256.400	7495.94	1008.22	987.59	-203.15	0.18	
7719.00	0.400	216.000	7585.94	1007.99	987.24	-203.72	0.36	
7809.00	0.200	188.200	7675.94	1007.63	986.83	-203.92	0.27	
7900.00	0.300	234.200	7766.94	1007.38	986.54	-204.14	0.24	
7990.00	0.400	227.900	7856.94	1007.12	986.19	-204.56	0.12	
8081.00	0.200	189.900	7947.94	1006.80	985.82	-204.83	0.30	
8171.00	0.200	151.600	8037.94	1006.51	985.53	-204.78	0.15	
8214.00	0.300	36.300	8080.94	1006.51	985.55	-204.68	0.99	LAST BHI MWD SURVEY
8270.00	0.300	36.300	8136.94	1006.71	985.79	-204.50	0.00	PROJECTION TO BIT

HOLE & CASING SECTIONS Ref Wellbore: HIGHWAY 160 2-2 AWB Ref Wellpath: HIGHWAY 160 2-2 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	1158.00	1141.00	17.00	1152.30	0.00	0.00	83.55	-3.04
8.625in Casing Surface	17.00	1158.00	1141.00	17.00	1152.30	0.00	0.00	83.55	-3.04
7.875in Open Hole	1158.00	8270.00	7112.00	1152.30	8136.94	83.55	-3.04	985.79	-204.50



Actual Wellpath Report

HIGHWAY 160 2-2 AWP

Page 5 of 6



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#20 HIGHWAY 160 2-2 (1496'FNL & 1639'FEL)
Area	COLORADO	Well	HIGHWAY 160 2-2
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HIGHWAY 160 2-2 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 2-2 BHL ON PLAT (510'FNL & 1830'FEL, REV-1)		6000.00	984.68	-190.55	3212260.50	1275066.09	40°05'09.438"N	104°44'28.957"W	point
HIGHWAY 160 2-2 GEO TARGET 50' RADIUS (510'FNL & 1828'FEL, REV-2)		6000.00	984.68	-192.55	3212258.50	1275066.07	40°05'09.438"N	104°44'28.983"W	circle
HIGHWAY 160 2-2 LEGAL BOX (67'N,333'S,350'E,50'W OF GEO TARGET)		6000.00	851.68	-342.55	3212109.65	1274931.80	40°05'08.124"N	104°44'30.913"W	square

WELLPATH COMPOSITION Ref Wellbore: HIGHWAY 160 2-2 AWB Ref Wellpath: HIGHWAY 160 2-2 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1146.00	NaviTrak (Standard)	BHI MWD SURVEY 12.25 HOLE <151-1146>	HIGHWAY 160 2-2 AWB
1146.00	8214.00	NaviTrak (Standard)	BHI MWD SURVEYS 7.875 HOLE <1191-8214>	HIGHWAY 160 2-2 AWB
8214.00	8270.00	Blind Drilling (std)	Projection to bit	HIGHWAY 160 2-2 AWB



Actual Wellpath Report

HIGHWAY 160 2-2 AWP

Page 6 of 6



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#20 HIGHWAY 160 2-2 (1496'FNL & 1639'FEL)
Area	COLORADO	Well	HIGHWAY 160 2-2
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HIGHWAY 160 2-2 AWB
Facility	SEC.02-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
8214.00	0.300	36.300	8080.94	LAST BHI MWD SURVEY
8270.00	0.300	36.300	8136.94	PROJECTION TO BIT