

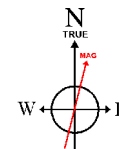
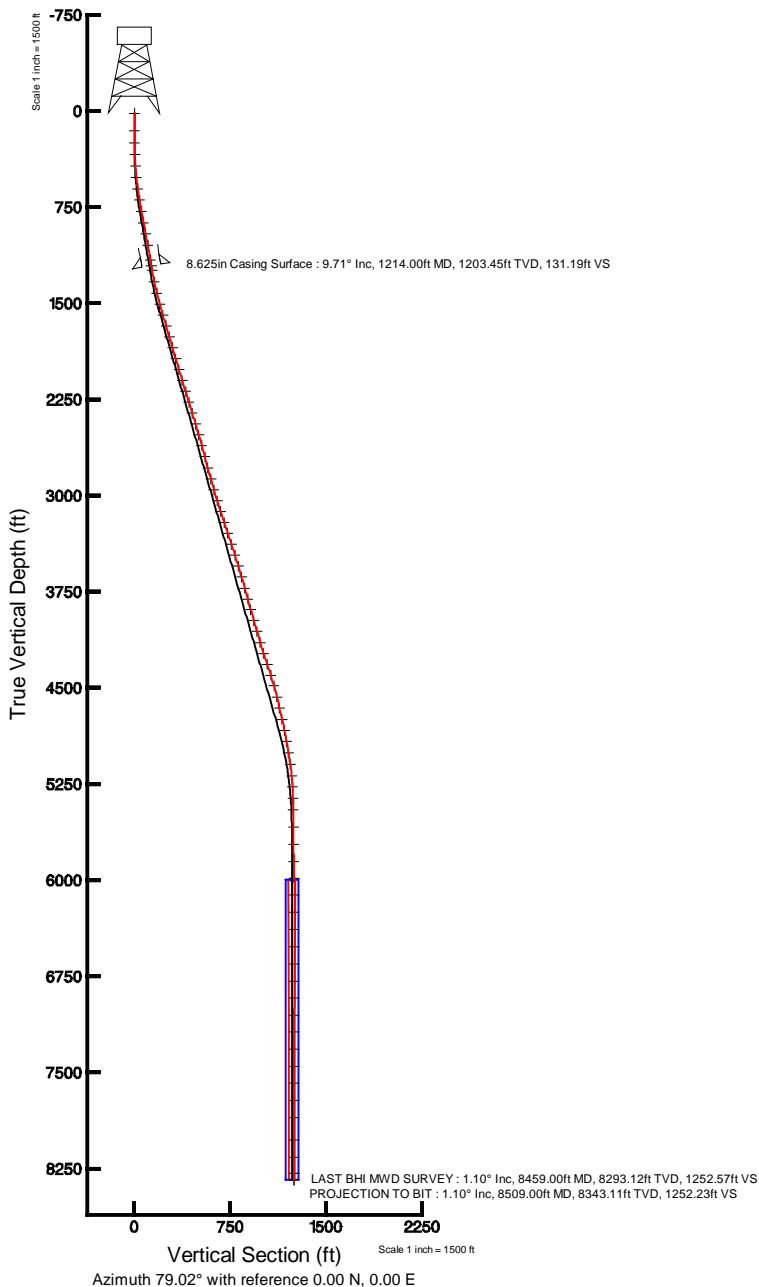
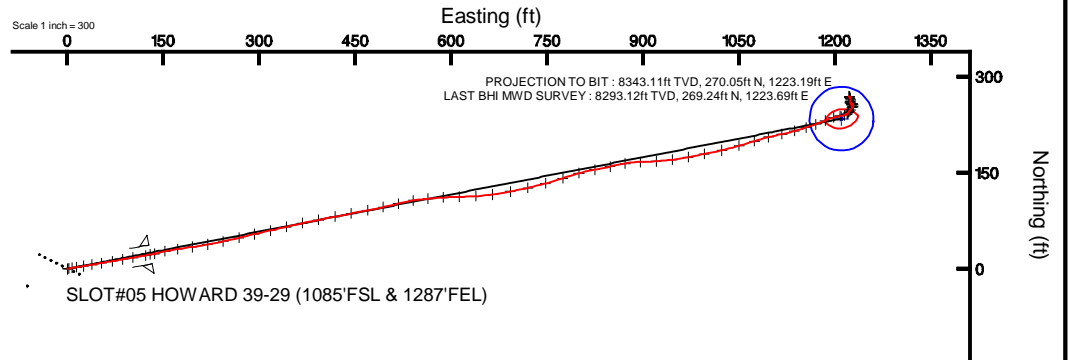


KERR MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#05 HOWARD 39-29 (1085'FSL & 1287'FEL)
Field: WELD COUNTY (KERR MCGEE) Well: HOWARD 39-29
Facility: SEC-29-T1N-R67W Wellbore: HOWARD 39-29 PWB



Plot reference wellpath is HOWARD 39-29 (REV AD) PWB	
True vertical depths are referenced to XTREME 15 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 15 (RKB)	North Reference: True north
XTREME 15 (RKB) to Mean Sea Level: 5038 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot SLOT#05 HOWARD 39-29 (1085'FSL & 1287'FEL)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: dodanna on 10/28/2011



BGGM (1945.0 to 2012.0) Dip: 66.72° Field: 52906.5 nT
Magnetic North is 8.85 degrees East of True North (at 8/19/2011)

To correct azimuth from Magnetic to True add 8.85 degrees
For example: if the Magnetic North Azimuth = 90 degs, then the True North Azimuth = 90 + 8.85 = 98.85



Actual Wellpath Report

HOWARD 39-29 AWP

Page 1 of 4



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 HOWARD 39-29 (1085'FSL & 1287'FEL)
Area	COLORADO	Well	HOWARD 39-29
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 39-29 AWB
Facility	SEC.29-T1N-R67W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 3.0.0
North Reference	True	User	Doddanna
Scale	0.999965	Report Generated	10/28/2011 at 7:40:45 PM
Convergence at slot	0.38° East	Database/Source file	WA_Denver/HOWARD_39-29_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-21.96	44.74	3165390.77	1249887.07	40°01'04.134"N	104°54'34.142"W
Facility Reference Pt			3165345.89	1249908.73	40°01'04.351"N	104°54'34.717"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 15 (RKB) to Facility Vertical Datum	5038.00ft
Horizontal Reference Pt	Slot	XTREME 15 (RKB) to Mean Sea Level	5038.00ft
Vertical Reference Pt	XTREME 15 (RKB)	XTREME 15 (RKB) to Mud Line at Slot (SLOT#05 HOWARD 39-29 (1085'FSL & 1287'FEL))	5038.00ft
MD Reference Pt	XTREME 15 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	79.02°



Actual Wellpath Report

HOWARD 39-29 AWP

Page 2 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 HOWARD 39-29 (1085'FSL & 1287'FEL)
Area	COLORADO	Well	HOWARD 39-29
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 39-29 AWB
Facility	SEC.29-T1N-R67W		

WELLPATH DATA (86 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	221.900	0.00	0.00	0.00	0.00	0.00	
15.00	0.000	221.900	15.00	0.00	0.00	0.00	0.00	
152.00	0.200	221.900	152.00	-0.19	-0.18	-0.16	0.15	
245.00	0.100	35.200	245.00	-0.26	-0.23	-0.22	0.32	
337.00	2.500	78.100	336.97	1.80	0.25	1.79	2.64	
427.00	3.700	78.100	426.84	6.67	1.25	6.55	1.33	
517.00	6.000	82.300	516.51	14.27	2.48	14.05	2.58	
605.00	7.800	80.200	603.87	24.83	4.11	24.50	2.07	
695.00	9.600	80.900	692.83	38.44	6.34	37.93	2.00	
783.00	10.600	79.900	779.46	53.87	8.92	53.14	1.15	
873.00	10.900	79.900	867.88	70.65	11.86	69.67	0.33	
962.00	10.600	80.200	955.32	87.25	14.73	86.02	0.34	
1052.00	10.300	80.200	1043.83	103.57	17.51	102.11	0.33	
1169.00	9.500	80.200	1159.09	123.68	20.93	121.93	0.68	
1253.00	9.900	78.100	1241.88	137.83	23.60	135.82	0.64	
1343.00	11.800	77.400	1330.27	154.77	27.21	152.38	2.12	
1433.00	13.700	81.600	1418.05	174.62	30.77	171.90	2.35	
1523.00	15.900	81.600	1505.06	197.58	34.13	194.65	2.44	
1612.00	16.300	79.500	1590.57	222.25	38.19	218.99	0.79	
1699.00	16.600	78.800	1674.01	246.89	42.83	243.18	0.41	
1788.00	16.300	76.000	1759.37	272.07	48.32	267.77	0.95	
1877.00	16.300	76.700	1844.79	297.02	54.21	292.05	0.22	
1966.00	16.900	78.100	1930.08	322.44	59.75	316.86	0.81	
2056.00	16.700	76.400	2016.24	348.44	65.49	342.23	0.59	
2145.00	16.800	77.400	2101.46	374.07	71.30	367.21	0.34	
2233.00	17.200	79.200	2185.62	399.79	76.51	392.40	0.75	
2322.00	17.300	79.500	2270.62	426.18	81.39	418.34	0.15	
2410.00	17.100	77.800	2354.68	452.20	86.51	443.85	0.61	
2500.00	16.700	80.200	2440.79	478.36	91.51	469.53	0.89	
2588.00	16.100	76.700	2525.22	503.19	96.47	493.86	1.31	
2675.00	15.900	76.000	2608.85	527.15	102.13	517.16	0.32	
2766.00	14.900	80.600	2696.58	551.29	107.05	540.80	1.73	
2855.00	15.300	85.800	2782.51	574.39	109.78	563.80	1.59	
2945.00	16.100	85.800	2869.15	598.57	111.56	588.09	0.89	
3034.00	16.200	89.000	2954.64	623.06	112.69	612.81	1.01	
3124.00	17.400	86.900	3040.80	648.75	113.63	638.80	1.49	
3211.00	18.000	81.300	3123.69	675.07	116.37	665.08	2.07	
3301.00	18.300	79.500	3209.21	703.10	121.05	692.72	0.71	
3390.00	18.300	77.100	3293.71	731.03	126.71	720.08	0.85	
3480.00	18.500	74.900	3379.11	759.40	133.59	747.64	0.80	
3571.00	17.700	71.400	3465.61	787.51	141.76	774.69	1.48	
3660.00	17.100	74.600	3550.54	813.97	149.55	800.13	1.27	
3749.00	16.300	80.200	3635.79	839.50	155.15	825.05	2.02	
3838.00	15.700	76.700	3721.34	864.02	160.05	849.08	1.28	
3927.00	15.600	79.900	3807.05	888.02	164.92	872.58	0.98	



Actual Wellpath Report

HOWARD 39-29 AWP

Page 3 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 HOWARD 39-29 (1085'FSL & 1287'FEL)
Area	COLORADO	Well	HOWARD 39-29
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 39-29 AWB
Facility	SEC.29-T1N-R67W		

WELLPATH DATA (86 stations)								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
4014.00	16.400	88.700	3890.69	911.83	167.25	896.38	2.93	
4101.00	16.300	85.500	3974.17	936.07	168.48	920.83	1.04	
4191.00	16.400	84.800	4060.53	961.26	170.63	946.08	0.25	
4281.00	16.300	77.100	4146.90	986.52	174.60	971.04	2.41	
4369.00	17.700	79.000	4231.05	1012.24	179.91	996.21	1.71	
4459.00	18.700	78.100	4316.55	1040.35	185.49	1023.76	1.15	
4549.00	17.800	72.500	4402.03	1068.45	192.61	1051.00	2.19	
4636.00	15.500	73.500	4485.38	1093.23	199.91	1074.83	2.66	
4725.00	14.300	74.900	4571.38	1116.03	206.15	1096.85	1.41	
4815.00	13.200	78.800	4658.80	1137.40	211.04	1117.66	1.60	
4905.00	13.100	74.200	4746.45	1157.84	215.81	1137.56	1.17	
4994.00	11.000	71.800	4833.48	1176.31	221.21	1155.33	2.43	
5082.00	10.400	70.000	4919.95	1192.49	226.55	1170.77	0.78	
5172.00	9.800	69.000	5008.56	1208.05	232.08	1185.55	0.69	
5262.00	8.000	72.100	5097.47	1221.81	236.75	1198.66	2.07	
5351.00	5.200	82.300	5185.87	1231.99	239.19	1208.56	3.40	
5440.00	4.000	76.700	5274.59	1239.12	240.44	1215.57	1.44	
5529.00	1.500	47.900	5363.48	1243.22	241.94	1219.46	3.12	
5618.00	0.700	34.500	5452.46	1244.60	243.17	1220.63	0.94	
5753.00	1.100	39.100	5587.45	1246.19	244.85	1221.92	0.30	
5886.00	0.600	19.000	5720.43	1247.51	246.50	1222.95	0.43	
6022.00	1.900	53.500	5856.40	1249.90	248.52	1224.99	1.06	
6153.00	2.400	22.200	5987.31	1253.36	252.35	1227.78	0.96	
6285.00	0.800	174.800	6119.28	1254.78	253.99	1228.90	2.37	
6419.00	0.400	301.700	6253.27	1254.35	253.30	1228.59	0.81	
6553.00	0.500	8.500	6387.27	1254.20	254.13	1228.28	0.37	
6688.00	1.400	17.300	6522.25	1255.18	256.29	1228.86	0.67	
6822.00	0.700	314.700	6656.23	1255.49	258.42	1228.76	0.93	
6956.00	1.100	185.300	6790.22	1254.67	257.72	1228.06	1.22	
7090.00	0.400	248.300	6924.21	1253.85	256.27	1227.51	0.74	
7222.00	0.400	315.100	7056.21	1253.14	256.42	1226.75	0.33	
7353.00	0.700	357.600	7187.20	1253.00	257.55	1226.40	0.37	
7490.00	0.800	315.400	7324.19	1252.60	259.06	1225.69	0.40	
7621.00	0.400	328.400	7455.18	1251.93	260.10	1224.81	0.32	
7753.00	0.200	341.100	7587.18	1251.74	260.71	1224.49	0.16	
7888.00	0.400	22.200	7722.18	1251.96	261.37	1224.60	0.21	
8021.00	0.700	14.800	7855.17	1252.57	262.59	1224.98	0.23	
8197.00	0.900	358.000	8031.16	1253.25	265.01	1225.20	0.17	
8330.00	1.000	339.000	8164.14	1253.21	267.14	1224.75	0.25	
8459.00	1.100	328.100	8293.12	1252.57	269.24	1223.69	0.17	LAST BHI MWD SURVEY
8509.00	1.100	328.100	8343.11	1252.23	270.05	1223.19	0.00	PROJECTION TO BIT



Actual Wellpath Report

HOWARD 39-29 AWP

Page 4 of 4



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 HOWARD 39-29 (1085'FSL & 1287'FEL)
Area	COLORADO	Well	HOWARD 39-29
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 39-29 AWB
Facility	SEC.29-T1N-R67W		

HOLE & CASING SECTIONS - Ref Wellbore: HOWARD 39-29 AWB Ref Wellpath: HOWARD 39-29 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	15.00	1224.00	1209.00	15.00	1213.31	0.00	0.00	22.61	130.97
8.625in Casing Surface	15.00	1214.00	1199.00	15.00	1203.45	0.00	0.00	22.29	129.31
7.875in Open Hole	1214.00	8509.00	7295.00	1203.45	8343.11	22.29	129.31	270.05	1223.19

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
HOWARD 39-29 GEO TARGET 50' RADIUS (1320'FSL & 75'FEL, REV-1)		6000.00	235.00	1211.07	3166600.20	1250130.12	40°01'06.456"N	104°54'18.576"W	circle
HOWARD 39-29 HARDLINE 75'E OF GEO TARGET		6000.00	235.00	1286.07	3166675.20	1250130.62	40°01'06.456"N	104°54'17.612"W	point

WELLPATH COMPOSITION - Ref Wellbore: HOWARD 39-29 AWB Ref Wellpath: HOWARD 39-29 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
15.00	8459.00	NaviTrak (Standard)	BHI MWD SURVEYS <152-8459>	HOWARD 39-29 AWB
8459.00	8509.00	Blind Drilling (std)	Projection to bit	HOWARD 39-29 AWB