

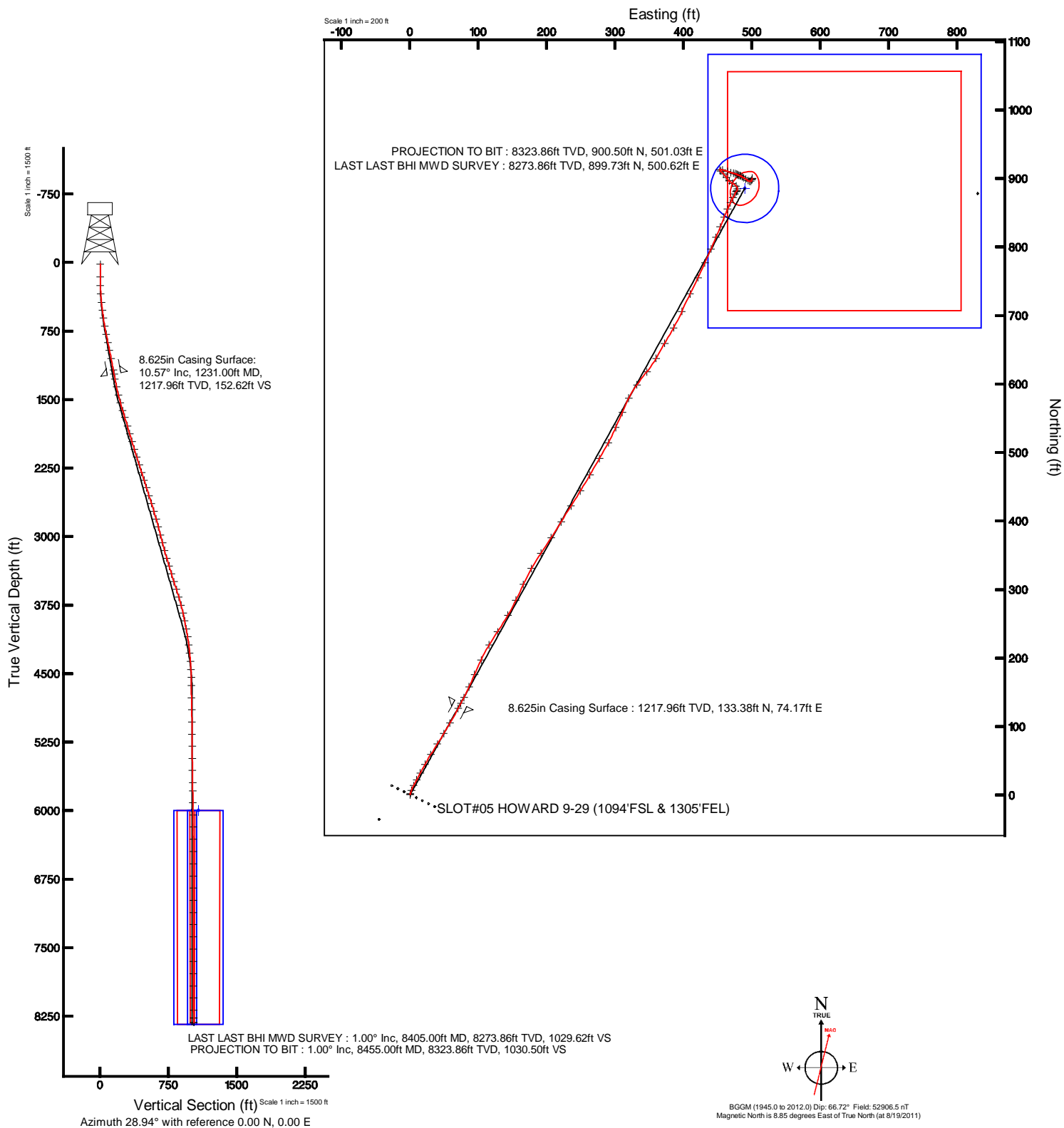


KERR MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#05 HOWARD 9-29 (1094'FSL & 1305'FEL)
Field: WELD COUNTY (KERR MCGEE) Well: HOWARD 9-29
Facility: SEC.29-T1N-R67W Wellbore: HOWARD 9-29 PWB



Plot reference wellpath is HOWARD 9-29 (REV-A.0) PWP	
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 9-29 (1094'FSL & 1305'FEL)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: doddanna on 10/26/2011





Actual Wellpath Report

HOWARD 9-29 AWP

Page 1 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 HOWARD 9-29 (1094'FSL & 1305'FEL)
Area	COLORADO	Well	HOWARD 9-29
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 9-29 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 5:34:25 PM
Convergence at slot	0.38° East	Database/Source file	WA_Denver/HOWARD_9-29_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-13.26	27.08	3165373.05	1249895.66	40°01'04.220"N	104°54'34.369"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 9-29 (1094'FSL & 1305'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	28.94°



Actual Wellpath Report

HOWARD 9-29 AWP

Page 2 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 HOWARD 9-29 (1094'FSL & 1305'FEL)
Area	COLORADO	Well	HOWARD 9-29
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 9-29 AWB
Facility	SEC.29-T1N-R67W		

WELLPATH DATA (83 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	312.200	0.00	0.00	0.00	0.00	0.00	
15.00	0.000	312.200	15.00	0.00	0.00	0.00	0.00	
155.00	0.200	312.200	155.00	0.06	0.16	-0.18	0.14	
248.00	2.000	20.100	247.98	1.70	1.80	0.26	2.08	
340.00	4.100	19.000	339.84	6.52	6.42	1.88	2.28	
432.00	5.400	28.500	431.53	14.09	13.33	5.02	1.65	
521.00	6.700	28.900	520.03	23.47	21.56	9.52	1.46	
608.00	8.200	26.800	606.29	34.75	31.54	14.77	1.75	
698.00	10.300	29.600	695.12	49.21	44.26	21.64	2.39	
788.00	11.200	31.700	783.54	65.99	58.70	30.21	1.09	
878.00	11.800	32.100	871.73	83.90	73.93	39.69	0.67	
967.00	11.700	30.300	958.87	102.01	89.43	49.08	0.43	
1056.00	11.100	31.300	1046.11	119.59	104.54	58.09	0.71	
1186.00	10.800	27.800	1173.75	144.27	126.01	70.27	0.56	
1285.00	10.300	28.200	1271.07	162.40	142.01	78.78	0.51	
1374.00	12.000	23.600	1358.39	179.57	157.50	86.24	2.15	
1464.00	13.700	24.000	1446.13	199.50	175.82	94.32	1.89	
1554.00	15.900	25.000	1533.14	222.42	196.73	103.87	2.46	
1643.00	16.900	31.300	1618.53	247.51	218.83	115.74	2.29	
1721.00	17.000	33.500	1693.14	270.21	238.03	127.93	0.83	
1820.00	16.600	30.300	1787.92	298.77	262.31	143.05	1.02	
1908.00	16.100	26.100	1872.36	323.53	284.12	154.76	1.46	
1997.00	17.500	24.300	1957.56	349.19	307.40	165.70	1.68	
2085.00	16.900	29.900	2041.63	375.17	330.55	177.52	2.00	
2175.00	17.300	33.500	2127.65	401.59	353.05	191.42	1.26	
2264.00	18.000	33.800	2212.46	428.48	375.51	206.38	0.79	
2353.00	18.000	31.000	2297.11	455.93	398.72	221.11	0.97	
2442.00	17.800	32.400	2381.80	483.25	422.00	235.48	0.53	
2528.00	17.000	31.700	2463.86	508.93	443.79	249.13	0.96	
2619.00	17.900	29.900	2550.68	536.20	467.24	263.09	1.15	
2709.00	18.000	30.600	2636.30	563.93	491.19	277.07	0.26	
2798.00	16.700	28.200	2721.25	590.46	514.30	290.11	1.67	
2887.00	15.700	23.600	2806.71	615.24	536.61	300.98	1.83	
2977.00	15.100	23.300	2893.48	639.03	558.53	310.49	0.67	
3067.00	14.400	26.400	2980.52	661.88	579.32	320.10	1.17	
3156.00	15.200	35.900	3066.58	684.52	598.69	331.86	2.87	
3245.00	16.300	39.100	3152.24	708.39	617.84	346.58	1.57	
3332.00	15.600	28.900	3235.90	732.11	637.56	359.94	3.32	
3422.00	17.100	30.600	3322.26	757.44	659.54	372.52	1.75	
3512.00	16.500	29.900	3408.42	783.45	682.01	385.63	0.70	
3602.00	18.600	24.000	3494.23	810.53	706.21	397.84	3.06	
3690.00	18.600	26.400	3577.64	838.54	731.60	409.79	0.87	
3779.00	15.900	25.700	3662.63	864.89	755.30	421.39	3.04	
3870.00	14.900	24.300	3750.36	889.00	777.20	431.61	1.17	
3960.00	13.400	22.900	3837.63	910.90	797.35	440.43	1.71	



Actual Wellpath Report

HOWARD 9-29 AWP

Page 3 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 HOWARD 9-29 (1094'FSL & 1305'FEL)
Area	COLORADO	Well	HOWARD 9-29
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 9-29 AWB
Facility	SEC.29-T1N-R67W		

WELLPATH DATA (83 stations)								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
4048.00	10.700	23.600	3923.68	929.18	814.23	447.67	3.07	
4137.00	10.900	21.200	4011.10	945.75	829.65	454.02	0.55	
4225.00	9.100	22.200	4097.76	960.90	843.85	459.66	2.05	
4315.00	7.200	25.000	4186.85	973.60	855.55	464.73	2.16	
4406.00	6.000	23.600	4277.24	984.02	865.08	469.05	1.33	
4495.00	4.400	32.400	4365.88	992.06	872.23	472.74	2.00	
4584.00	3.300	19.000	4454.68	998.00	877.53	475.40	1.59	
4671.00	1.800	42.600	4541.59	1001.79	880.90	477.14	2.07	
4759.00	0.300	182.200	4629.58	1002.93	881.69	478.07	2.32	
4894.00	1.000	18.000	4764.57	1003.77	882.46	478.42	0.96	
5027.00	1.600	11.300	4897.54	1006.68	885.38	479.14	0.46	
5160.00	2.700	314.400	5030.45	1009.28	889.40	477.27	1.70	
5294.00	3.000	299.900	5164.29	1010.18	893.35	471.97	0.58	
5426.00	2.400	315.800	5296.14	1011.04	897.06	467.05	0.72	
5560.00	2.900	319.600	5430.00	1013.05	901.65	462.90	0.40	
5693.00	3.000	321.000	5562.82	1015.55	906.92	458.53	0.09	
5827.00	2.100	312.600	5696.69	1017.44	911.30	454.52	0.73	
5915.00	1.000	338.300	5784.66	1018.31	913.11	453.04	1.45	
6047.00	4.000	104.800	5916.56	1020.17	913.00	457.07	3.53	
6179.00	2.700	108.700	6048.33	1021.85	910.83	464.47	1.00	
6313.00	1.900	108.000	6182.22	1022.83	909.13	469.57	0.60	
6448.00	1.400	108.300	6317.17	1023.56	907.92	473.26	0.37	
6581.00	1.000	101.700	6450.14	1024.20	907.18	475.94	0.32	
6715.00	0.700	115.400	6584.12	1024.60	906.59	477.83	0.27	
6849.00	0.500	120.300	6718.12	1024.63	905.94	479.07	0.15	
6982.00	0.700	101.000	6851.11	1024.87	905.49	480.37	0.21	
7114.00	0.500	114.700	6983.10	1025.16	905.10	481.69	0.19	
7249.00	0.600	109.000	7118.09	1025.33	904.62	482.89	0.08	
7381.00	0.700	122.800	7250.09	1025.39	903.96	484.22	0.14	
7516.00	1.000	120.300	7385.07	1025.31	902.92	485.93	0.22	
7651.00	1.400	120.600	7520.04	1025.23	901.49	488.37	0.30	
7784.00	1.800	126.600	7652.99	1024.91	899.41	491.44	0.33	
7919.00	1.300	122.100	7787.94	1024.54	897.34	494.44	0.38	
8054.00	0.800	106.200	7922.92	1024.66	896.26	496.64	0.43	
8187.00	1.100	66.500	8055.90	1025.88	896.51	498.71	0.53	
8320.00	1.100	11.000	8188.88	1028.11	898.27	500.12	0.77	
8405.00	1.000	27.800	8273.86	1029.62	899.73	500.62	0.38	LAST LAST BHI MWD SURVEY
8455.00	1.000	27.800	8323.86	1030.50	900.50	501.03	0.00	PROJECTION TO BIT



Actual Wellpath Report

HOWARD 9-29 AWP

Page 4 of 4



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#05 HOWARD 9-29 (1094'FSL & 1305'FEL)
Area	COLORADO	Well	HOWARD 9-29
Field	WELD COUNTY (KERR MCGEE)	Wellbore	HOWARD 9-29 AWB
Facility	SEC.29-T1N-R67W		

HOLE & CASING SECTIONS - Ref Wellbore: HOWARD 9-29 AWB Ref Wellpath: HOWARD 9-29 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	1241.00	1226.00	15.00	1227.80	0.00	0.00	135.00	75.03
8.625in Casing Surface	15.00	1231.00	1216.00	15.00	1217.96	0.00	0.00	133.38	74.17
7.875in Open Hole	1241.00	8455.00	7214.00	1227.80	8323.86	135.00	75.03	900.50	501.03

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
HOWARD 9-29 GEO TARGET 50' RADIUS (1980'FSL & 810'FEL, REV-1)		6000.00	886.03	489.83	3165856.95	1250784.90	40°01'12.976"N	104°54'28.073"W	circle
HOWARD 9-29 LEGAL BOX (196°N,204°S,54°W,346°E OF GEO TARGET)		6000.00	882.03	635.83	3166002.97	1250781.87	40°01'12.936"N	104°54'26.196"W	square

WELLPATH COMPOSITION - Ref Wellbore: HOWARD 9-29 AWB Ref Wellpath: HOWARD 9-29 AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
15.00	8405.00	NaviTrak (Standard)	BHI MWD SURVEY <155-8405>	HOWARD 9-29 AWB
8405.00	8455.00	Blind Drilling (std)	Projection to bit	HOWARD 9-29 AWB