

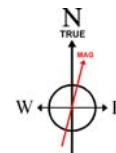
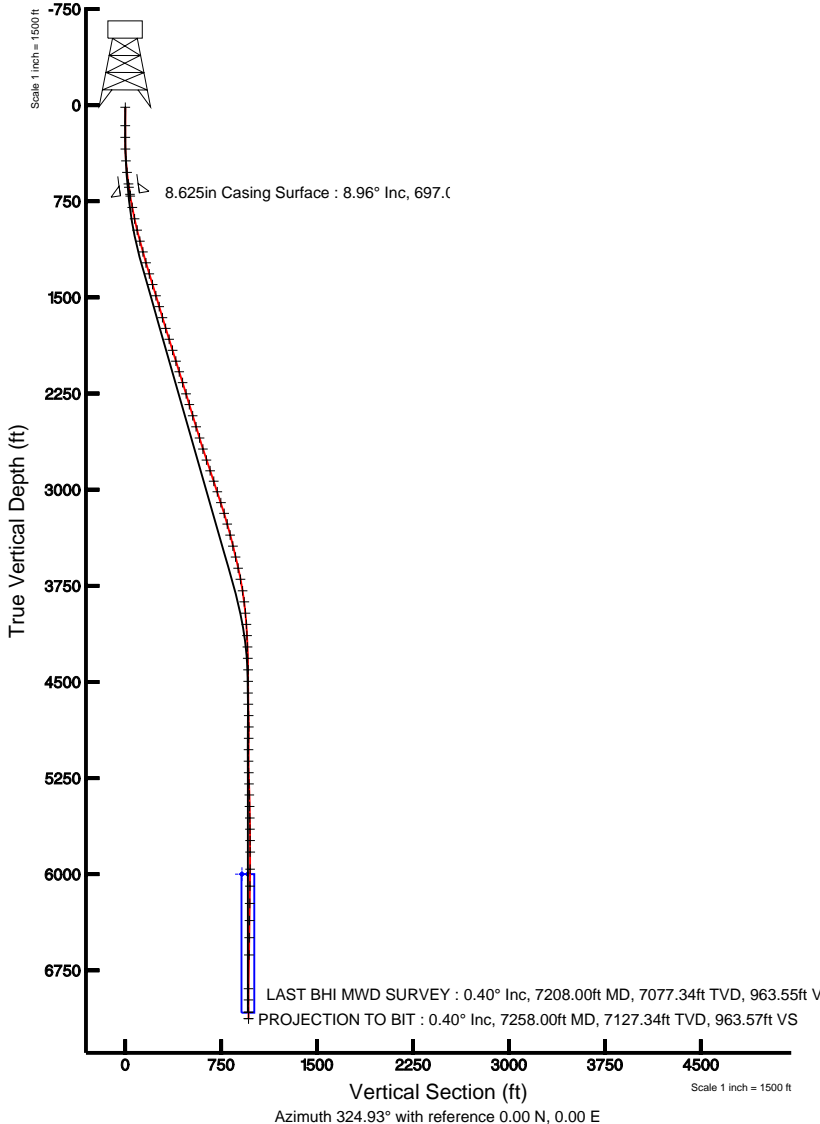
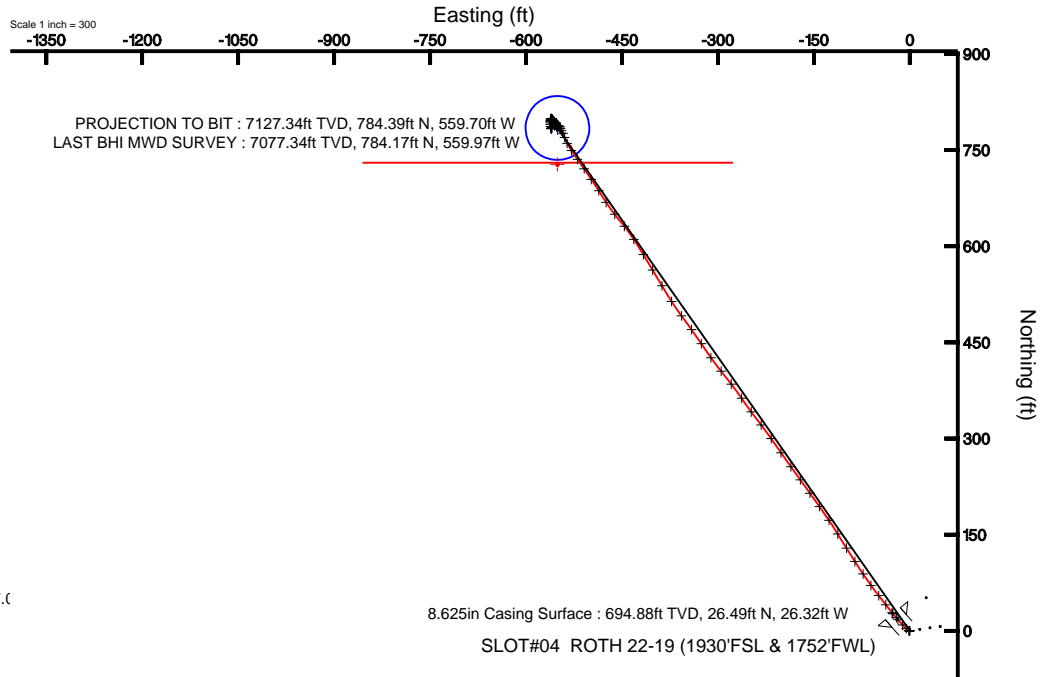


KERR MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#04 ROTH 22-19 (1930'FSL & 1752'FWL)
 Field: WELD COUNTY (KERR MCGEE) Well: ROTH 22-19
 Facility: SEC.19-T6N-R64W Wellbore: ROTH 22-19 PWB



Plot reference wellpath is ROTH 22-19 (REV-A.0) PWP	
True vertical depths are referenced to XTREME 6 (RKB)	Grid System: NAD83 / Lambert Colorado State Planes, Northern Zone (501), US feet
Measured depths are referenced to XTREME 6 (RKB)	North Reference: True north
XTREME 6 (RKB) to Mean Sea Level: 4687 feet	Scale: True distance
Mean Sea Level to Mud line (Facility: SEC.19-T6N-R64W): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: cookdamm on 5/1/2011



BGGM (1945.0 to 2012.0) Dip: 67.16° Field: 53252.1 nT
 Magnetic North is 8.80 degrees East of True North (at 1/11/2011)

To correct azimuth from Magnetic to True add 8.80 degrees
 For example: if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 8.80 = 98.80



Actual Wellpath Report

ROTH 22-19 awp

Page 1 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 ROTH 22-19 (1930'FSL & 1752'FWL)
Area	COLORADO	Well	ROTH 22-19
Field	WELD COUNTY (KERR MCGEE)	Wellbore	ROTH 22-19 awb
Facility	SEC.19-T6N-R64W		

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	0.999964	Report Generated	5/1/2011 at 11:03:39 PM
Convergence at slot	0.58° East	Database/Source file	Denver Server/ROTH_22-19_awb.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[USft]	Northing[USft]	Latitude	Longitude
Slot Location	-6.56	-47.58	3251626.53	1415144.22	40°28'10.020"N	104°35'44.106"W
Facility Reference Pt			3251674.04	1415151.26	40°28'10.085"N	104°35'43.490"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 6 (RKB) to Facility Vertical Datum	4687.00ft
Horizontal Reference Pt	Slot	XTREME 6 (RKB) to Mean Sea Level	4687.00ft
Vertical Reference Pt	XTREME 6 (RKB)	Facility Vertical Datum to Mud Line (Facility)	0.00ft
MD Reference Pt	XTREME 6 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	324.93°



Actual Wellpath Report

ROTH 22-19 awp

Page 2 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 ROTH 22-19 (1930'FSL & 1752'FWL)
Area	COLORADO	Well	ROTH 22-19
Field	WELD COUNTY (KERR MCGEE)	Wellbore	ROTH 22-19 awb
Facility	SEC.19-T6N-R64W		

WELLPATH DATA (79 stations) † = interpolated/extrapolated station								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
0.00†	0.000	220.400	0.00	0.00	0.00	0.00	0.00	
16.00	0.000	220.400	16.00	0.00	0.00	0.00	0.00	
160.00	0.300	220.400	160.00	-0.09	-0.29	-0.24	0.21	
251.00	0.300	179.300	251.00	-0.35	-0.71	-0.40	0.23	
342.00	2.100	307.300	341.98	1.04	0.07	-1.72	2.52	
434.00	4.000	310.100	433.84	5.75	3.15	-5.52	2.07	
525.00	6.100	319.600	524.49	13.63	8.88	-11.08	2.48	
615.00	8.100	318.500	613.79	24.70	17.27	-18.38	2.23	
642.00	8.400	318.200	640.51	28.55	20.17	-20.95	1.12	
711.00	9.100	321.700	708.71	39.00	28.21	-27.69	1.27	
801.00	10.900	322.000	797.34	54.60	40.50	-37.35	2.00	
892.00	12.100	322.000	886.51	72.72	54.79	-48.51	1.32	
982.00	13.500	323.100	974.27	92.64	70.63	-60.63	1.58	
1071.00	14.900	327.300	1060.55	114.46	88.57	-73.05	1.95	
1158.00	16.000	326.600	1144.41	137.62	107.99	-85.69	1.28	
1247.00	16.400	328.400	1229.88	162.42	128.93	-99.03	0.72	
1337.00	17.000	328.400	1316.08	188.24	150.96	-112.58	0.67	
1424.00	16.800	326.300	1399.32	213.50	172.25	-126.22	0.74	
1515.00	16.800	323.800	1486.44	239.80	193.81	-141.29	0.79	
1604.00	16.500	325.200	1571.71	265.30	214.56	-156.09	0.56	
1694.00	16.600	324.200	1657.98	290.93	235.49	-170.91	0.34	
1781.00	17.300	324.200	1741.20	316.29	256.06	-185.75	0.80	
1870.00	17.500	324.900	1826.13	342.91	277.74	-201.18	0.33	
1960.00	17.400	325.200	1911.99	369.90	299.86	-216.64	0.15	
2049.00	17.200	321.700	1996.96	396.34	321.11	-232.39	1.19	
2136.00	17.000	324.200	2080.12	421.90	341.52	-247.80	0.88	
2224.00	17.500	325.200	2164.16	448.00	362.82	-262.88	0.66	
2316.00	17.200	322.400	2251.97	475.42	384.96	-279.08	0.96	
2404.00	16.700	321.000	2336.15	501.03	405.09	-294.97	0.73	
2495.00	16.900	324.500	2423.27	527.30	426.02	-310.88	1.13	
2585.00	17.400	327.000	2509.27	553.83	447.96	-325.81	0.99	
2676.00	17.100	323.100	2596.18	580.80	470.07	-341.25	1.31	
2767.00	16.800	324.200	2683.23	607.33	491.44	-356.98	0.48	
2857.00	18.400	327.000	2769.01	634.53	513.90	-372.32	2.01	
2945.00	19.800	329.400	2852.17	663.27	538.38	-387.47	1.82	
3032.00	18.500	329.100	2934.35	691.73	562.91	-402.06	1.50	
3119.00	19.300	329.000	3016.66	719.83	587.07	-416.56	0.92	
3208.00	17.400	327.000	3101.13	747.81	610.84	-431.38	2.25	
3295.00	16.300	321.300	3184.40	772.99	631.28	-446.10	2.28	
3382.00	15.900	320.300	3267.99	797.06	649.98	-461.35	0.56	
3471.00	13.900	328.700	3354.00	819.88	668.50	-474.69	3.30	
3560.00	14.300	327.000	3440.32	841.53	686.85	-486.23	0.65	
3648.00	13.500	325.900	3525.74	862.66	704.47	-497.91	0.96	
3737.00	12.400	325.600	3612.48	882.61	720.96	-509.13	1.24	
3826.00	11.200	324.300	3699.59	900.80	735.86	-519.58	1.38	



Actual Wellpath Report

ROTH 22-19 awp

Page 3 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 ROTH 22-19 (1930'FSL & 1752'FWL)
Area	COLORADO	Well	ROTH 22-19
Field	WELD COUNTY (KERR MCGEE)	Wellbore	ROTH 22-19 awb
Facility	SEC.19-T6N-R64W		

WELLPATH DATA (79 stations)								
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
3917.00	9.800	326.600	3789.07	917.38	749.51	-529.00	1.61	
4004.00	7.400	332.200	3875.09	930.34	760.65	-535.69	2.92	
4093.00	5.710	343.500	3963.50	940.23	769.96	-539.62	2.38	
4181.00	3.400	329.800	4051.22	946.98	776.42	-542.17	2.88	
4268.00	2.900	326.300	4138.09	951.75	780.48	-544.69	0.62	
4357.00	2.100	350.900	4227.01	955.47	783.96	-546.20	1.48	
4446.00	1.600	340.700	4315.96	958.13	786.74	-546.87	0.67	
4536.00	2.300	285.100	4405.92	960.72	788.40	-549.03	2.13	
4626.00	1.800	199.400	4495.88	961.29	787.54	-551.24	3.12	
4717.00	0.400	115.000	4586.86	960.18	786.05	-551.43	1.98	
4805.00	2.500	331.900	4674.84	961.82	787.62	-552.05	3.22	
4893.00	1.600	329.100	4762.78	964.95	790.36	-553.59	1.03	
4982.00	0.800	250.700	4851.76	966.36	791.23	-554.81	1.84	
5070.00	2.500	195.500	4939.73	965.31	789.17	-555.91	2.44	
5159.00	2.300	72.800	5028.69	963.53	787.83	-554.72	4.73	
5249.00	1.700	27.100	5118.64	963.60	789.55	-552.38	1.83	
5339.00	1.700	311.500	5208.61	965.52	791.63	-552.78	2.32	
5426.00	1.400	316.400	5295.58	967.83	793.25	-554.48	0.38	
5513.00	1.300	323.800	5382.55	969.86	794.82	-555.79	0.23	
5603.00	1.400	319.200	5472.53	971.98	796.47	-557.11	0.16	
5692.00	1.000	321.000	5561.51	973.83	797.90	-558.31	0.45	
5780.00	0.800	314.300	5649.50	975.20	798.92	-559.24	0.26	
5869.00	0.600	290.000	5738.49	976.20	799.52	-560.12	0.40	
5958.00	0.500	254.900	5827.49	976.71	799.58	-560.93	0.39	
6092.00	0.800	190.600	5961.48	976.26	798.50	-561.67	0.55	
6224.00	0.900	184.200	6093.47	974.81	796.57	-561.91	0.10	
6359.00	0.700	183.200	6228.45	973.34	794.68	-562.04	0.15	
6493.00	0.900	174.700	6362.44	971.79	792.82	-561.98	0.17	
6627.00	1.300	177.900	6496.41	969.60	790.25	-561.83	0.30	
6762.00	1.400	181.100	6631.38	966.98	787.07	-561.81	0.09	
7025.00	0.350	98.800	6894.35	963.83	783.74	-561.08	0.53	
7112.00	0.400	65.100	6981.35	963.59	783.82	-560.54	0.26	
7208.00	0.400	51.700	7077.34	963.55	784.17	-559.97	0.10	LAST BHI MWD SURVEY
7258.00	0.400	51.700	7127.34	963.57	784.39	-559.70	0.00	PROJECTION TO BIT



Actual Wellpath Report

ROTH 22-19 awp
Page 4 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 ROTH 22-19 (1930'FSL & 1752'FWL)
Area	COLORADO	Well	ROTH 22-19
Field	WELD COUNTY (KERR MCGEE)	Wellbore	ROTH 22-19 awb
Facility	SEC.19-T6N-R64W		

HOLE & CASING SECTIONS Ref Wellbore: ROTH 22-19 awb Ref Wellpath: ROTH 22-19 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	16.00	697.00	681.00	16.00	694.88	0.00	0.00	26.49	-26.32
8.625in Casing Surface	16.00	697.00	681.00	16.00	694.88	0.00	0.00	26.49	-26.32
7.875in Open Hole	697.00	7258.00	6561.00	694.88	7127.34	26.49	-26.32	784.39	-559.70

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [srv ft]	Grid North [srv ft]	Latitude	Longitude	Shape
ROTH 22-19 GEO TARGET 50' RADIUS (2580'FNL & 1200'FWL, REV-1)		6000.00	784.74	-550.89	3251067.69	1415923.27	40°28'17.774"N	104°35'51.234"W	circle
ROTH 22-19 HARDLINE 57'S OF GEO TARGET		6000.00	727.74	-550.89	3251068.27	1415866.27	40°28'17.211"N	104°35'51.234"W	point

WELLPATH COMPOSITION Ref Wellbore: ROTH 22-19 awb Ref Wellpath: ROTH 22-19 awp

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	642.00	NaviTrak (Standard)	BHI MWD SURVEYS 12.25 HOLE <160-642>	ROTH 22-19 awb
642.00	7208.00	NaviTrak (Standard)	BHI MWD SRUVEYS 7.875 HOLE<711-7208>	ROTH 22-19 awb
7208.00	7258.00	Blind Drilling (std)	Projection to bit	ROTH 22-19 awb



Actual Wellpath Report

ROTH 22-19 awp
Page 5 of 5



INTEQ

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#04 ROTH 22-19 (1930'FSL & 1752'FWL)
Area	COLORADO	Well	ROTH 22-19
Field	WELD COUNTY (KERR MCGEE)	Wellbore	ROTH 22-19 awb
Facility	SEC.19-T6N-R64W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
7208.00	0.400	51.700	7077.34	LAST BHI MWD SURVEY
7258.00	0.400	51.700	7127.34	PROJECTION TO BIT