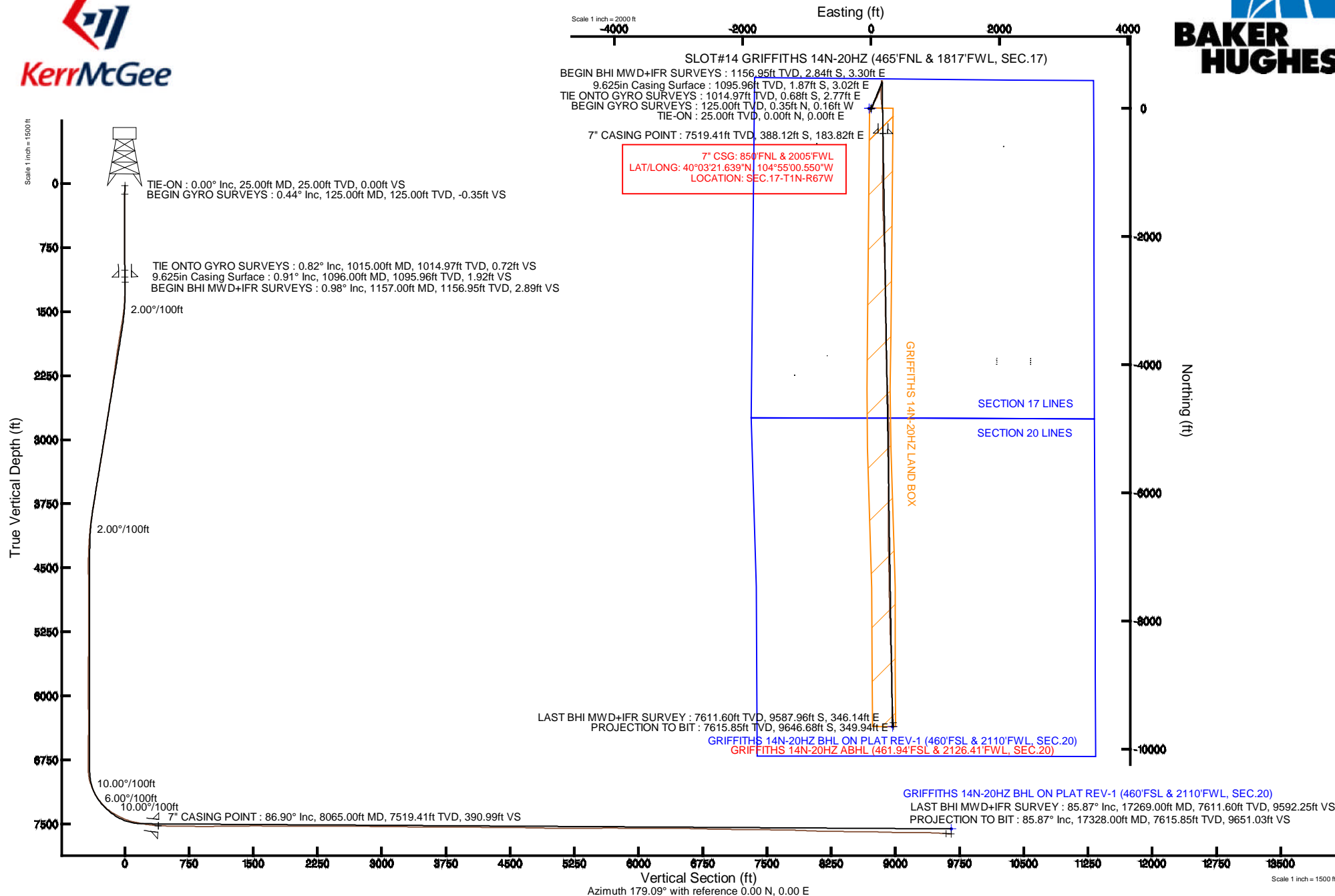


# KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#14 GRIFFITHS 14N-20HZ (465'FNL & 1817'FWL, SEC.17)  
 Field: WELD COUNTY (KERR MCGEE) Well: GRIFFITHS 14N-20HZ  
 Facility: SEC.17-T1N-R67W Wellbore: GRIFFITHS 14N-20HZ PWB

Plot reference wellpath is GRIFFITHS 14N-20HZ (REV-B.0) PWP

True vertical depths are referenced to H&P 307 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to H&P 307 (RKB)	North Reference: True north
H&P 307 (RKB) to Mean Sea Level: 5081 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#14 GRIFFITHS 14N-20HZ (465'FNL & 1817'FWL, SEC.17)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: robale01 on 14/Oct/2013



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#14 GRIFFITHS 14N-20HZ (465'FNL & 1817'FWL, SEC.17)
Area	COLORADO	Well	GRIFFITHS 14N-20HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRIFFITHS 14N-20HZ AWB
Facility	SEC.17-T1N-R67W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Robiale01
Scale	0.999963	Report Generated	14/Oct/2013 at 11:16
Convergence at slot	n/a	Database/Source file	WA_ANADARKO/GRIFFITHS_14N-20HZ_AWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	2190.13	-816.88	3163058.43	1264173.81	40°03'25.474"N	104°55'02.914"W
Facility Reference Pt			3163889.72	1261989.21	40°03'03.831"N	104°54'52.408"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

## WELLPATH DATUM

Calculation method	Minimum curvature	H&P 307 (RKB) to Facility Vertical Datum	5081.00ft
Horizontal Reference Pt	Slot	H&P 307 (RKB) to Mean Sea Level	5081.00ft
Vertical Reference Pt	H&P 307 (RKB)	H&P 307 (RKB) to Mud Line at Slot (SLOT#14 GRIFFITHS 14N-20HZ (465'FNL & 1817'FWL, SEC.17))	5081.00ft
MD Reference Pt	H&P 307 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	177.92°

# Actual Wellpath Report

GRIFFITHS 14N-20HZ AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#14 GRIFFITHS 14N-20HZ (465'FNL & 1817'FWL, SEC.1'
Area	COLORADO	Well	GRIFFITHS 14N-20HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRIFFITHS 14N-20HZ AWB
Facility	SEC.17-T1N-R67W		

## WELLPATH DATA (188 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	334.610	0.00	0.00	0.00	0.00	40°03'25.474"N	104°55'02.914"W	0.00	
25.00	0.000	334.610	25.00	0.00	0.00	0.00	40°03'25.474"N	104°55'02.914"W	0.00	TIE-ON
125.00	0.440	334.610	125.00	-0.35	0.35	-0.16	40°03'25.477"N	104°55'02.916"W	0.44	BEGIN GYRO SURVEYS
225.00	0.530	351.140	225.00	-1.16	1.15	-0.40	40°03'25.485"N	104°55'02.919"W	0.17	
325.00	0.030	204.990	324.99	-1.60	1.58	-0.48	40°03'25.490"N	104°55'02.920"W	0.56	
425.00	0.160	157.610	424.99	-1.45	1.43	-0.44	40°03'25.488"N	104°55'02.919"W	0.14	
525.00	0.300	31.020	524.99	-1.53	1.53	-0.25	40°03'25.489"N	104°55'02.917"W	0.42	
625.00	0.450	71.040	624.99	-1.87	1.88	0.25	40°03'25.493"N	104°55'02.910"W	0.29	
725.00	0.460	97.670	724.99	-1.91	1.95	1.02	40°03'25.493"N	104°55'02.900"W	0.21	
825.00	0.620	124.520	824.98	-1.52	1.59	1.87	40°03'25.490"N	104°55'02.890"W	0.30	
925.00	0.830	165.030	924.98	-0.49	0.59	2.50	40°03'25.480"N	104°55'02.881"W	0.54	
1015.00	0.820	170.750	1014.97	0.78	-0.68	2.77	40°03'25.467"N	104°55'02.878"W	0.09	TIE ONTO GYRO SURVEYS
1157.00	0.980	162.450	1156.95	2.96	-2.84	3.30	40°03'25.446"N	104°55'02.871"W	0.15	BEGIN BHI MWD+IFR SURVEYS
1249.00	1.980	27.810	1248.93	2.34	-2.18	4.28	40°03'25.452"N	104°55'02.859"W	3.00	
1340.00	3.260	32.450	1339.84	-1.16	1.39	6.40	40°03'25.488"N	104°55'02.831"W	1.42	
1432.00	5.280	33.230	1431.58	-6.77	7.14	10.13	40°03'25.545"N	104°55'02.783"W	2.20	
1523.00	7.860	25.960	1521.97	-15.68	16.24	15.14	40°03'25.634"N	104°55'02.719"W	2.97	
1615.00	10.630	26.710	1612.77	-28.67	29.48	21.71	40°03'25.765"N	104°55'02.634"W	3.01	
1707.00	10.180	20.810	1703.26	-43.60	44.66	28.42	40°03'25.915"N	104°55'02.548"W	1.26	
1798.00	9.880	17.770	1792.87	-58.35	59.61	33.66	40°03'26.063"N	104°55'02.481"W	0.67	
1890.00	9.620	11.520	1883.54	-73.24	74.66	37.60	40°03'26.212"N	104°55'02.430"W	1.18	
1982.00	8.620	18.170	1974.38	-87.19	88.74	41.29	40°03'26.351"N	104°55'02.383"W	1.58	
2074.00	8.840	27.540	2065.32	-99.80	101.56	46.70	40°03'26.478"N	104°55'02.313"W	1.56	
2165.00	9.740	32.230	2155.13	-112.24	114.27	54.04	40°03'26.603"N	104°55'02.219"W	1.29	
2260.00	9.100	29.200	2248.84	-125.30	127.63	61.99	40°03'26.735"N	104°55'02.116"W	0.85	
2354.00	9.600	31.400	2341.60	-138.19	140.81	69.70	40°03'26.865"N	104°55'02.017"W	0.65	
2449.00	10.230	30.380	2435.18	-151.91	154.85	78.10	40°03'27.004"N	104°55'01.909"W	0.69	
2543.00	9.320	26.740	2527.81	-165.63	168.85	85.74	40°03'27.143"N	104°55'01.811"W	1.17	
2638.00	10.110	19.470	2621.45	-180.12	183.58	91.98	40°03'27.288"N	104°55'01.731"W	1.53	
2732.00	9.860	20.740	2714.03	-195.21	198.88	97.58	40°03'27.439"N	104°55'01.659"W	0.35	
2827.00	9.000	24.900	2807.74	-209.33	213.23	103.59	40°03'27.581"N	104°55'01.581"W	1.15	
2921.00	9.170	27.680	2900.57	-222.39	226.53	110.17	40°03'27.713"N	104°55'01.497"W	0.50	
3016.00	10.590	24.740	2994.16	-236.75	241.16	117.34	40°03'27.857"N	104°55'01.405"W	1.59	
3110.00	9.700	22.380	3086.69	-251.67	256.33	123.97	40°03'28.007"N	104°55'01.319"W	1.04	
3205.00	9.830	21.370	3180.31	-266.39	271.28	129.97	40°03'28.155"N	104°55'01.242"W	0.23	
3299.00	10.220	19.890	3272.87	-281.49	286.60	135.73	40°03'28.306"N	104°55'01.168"W	0.50	
3394.00	10.460	16.840	3366.33	-297.46	302.78	141.10	40°03'28.466"N	104°55'01.099"W	0.63	
3488.00	9.350	14.530	3458.93	-312.85	318.34	145.49	40°03'28.620"N	104°55'01.043"W	1.25	
3583.00	9.320	19.560	3552.67	-327.40	333.06	150.00	40°03'28.765"N	104°55'00.985"W	0.86	
3677.00	9.350	23.590	3645.43	-341.36	347.23	155.60	40°03'28.905"N	104°55'00.912"W	0.70	
3771.00	10.160	22.840	3738.07	-355.76	361.86	161.88	40°03'29.050"N	104°55'00.832"W	0.87	
3866.00	10.340	21.010	3831.55	-371.20	377.55	168.18	40°03'29.205"N	104°55'00.751"W	0.39	
3960.00	8.370	17.710	3924.30	-385.40	391.94	173.29	40°03'29.347"N	104°55'00.685"W	2.17	
4054.00	7.120	14.110	4017.44	-397.43	404.11	176.79	40°03'29.467"N	104°55'00.640"W	1.43	
4148.00	5.020	2.290	4110.91	-407.13	413.87	178.38	40°03'29.564"N	104°55'00.620"W	2.59	

### REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#14 GRIFFITHS 14N-20HZ (465'FNL & 1817'FWL, SEC.1'
Area	COLORADO	Well	GRIFFITHS 14N-20HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRIFFITHS 14N-20HZ AWB
Facility	SEC.17-T1N-R67W		

### WELLPATH DATA (188 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4242.00	3.310	347.430	4204.66	-413.90	420.63	177.95	40°03'29.631"N	104°55'00.625"W	2.14	
4336.00	2.240	354.020	4298.55	-418.40	425.10	177.17	40°03'29.675"N	104°55'00.635"W	1.19	
4431.00	0.670	324.470	4393.52	-420.72	427.40	176.65	40°03'29.698"N	104°55'00.642"W	1.78	
4525.00	0.530	245.870	4487.51	-421.01	427.67	175.94	40°03'29.700"N	104°55'00.651"W	0.82	
4808.00	1.060	243.050	4770.49	-419.42	425.95	172.41	40°03'29.683"N	104°55'00.696"W	0.19	
5091.00	1.310	262.180	5053.43	-417.99	424.32	166.87	40°03'29.667"N	104°55'00.768"W	0.16	
5185.00	0.880	256.320	5147.41	-417.74	424.01	165.10	40°03'29.664"N	104°55'00.790"W	0.47	
5279.00	0.690	48.110	5241.41	-417.96	424.21	164.82	40°03'29.666"N	104°55'00.794"W	1.62	
5562.00	0.830	29.350	5524.38	-420.80	427.14	167.10	40°03'29.695"N	104°55'00.765"W	0.10	
5657.00	0.080	132.390	5619.38	-421.34	427.69	167.48	40°03'29.701"N	104°55'00.760"W	0.90	
5940.00	0.090	43.740	5902.38	-421.36	427.72	167.78	40°03'29.701"N	104°55'00.756"W	0.04	
6223.00	0.330	163.140	6185.38	-420.72	427.10	168.17	40°03'29.695"N	104°55'00.751"W	0.14	
6506.00	0.500	320.680	6468.37	-420.92	427.28	167.63	40°03'29.696"N	104°55'00.758"W	0.29	
6789.00	0.350	295.650	6751.37	-422.30	428.61	166.07	40°03'29.710"N	104°55'00.778"W	0.08	
6883.00	0.220	354.690	6845.36	-422.62	428.91	165.79	40°03'29.713"N	104°55'00.781"W	0.32	
6930.00	3.210	187.320	6892.34	-421.41	427.69	165.61	40°03'29.701"N	104°55'00.784"W	7.29	
6977.00	8.330	190.920	6939.09	-416.79	423.04	164.80	40°03'29.655"N	104°55'00.794"W	10.92	
7026.00	14.820	189.860	6987.07	-407.19	413.37	163.05	40°03'29.559"N	104°55'00.817"W	13.25	
7071.00	19.270	186.760	7030.08	-394.22	400.32	161.19	40°03'29.430"N	104°55'00.841"W	10.09	
7118.00	21.750	185.010	7074.10	-377.91	383.94	159.52	40°03'29.268"N	104°55'00.862"W	5.43	
7166.00	24.760	182.640	7118.19	-359.06	365.04	158.28	40°03'29.081"N	104°55'00.878"W	6.57	
7213.00	29.820	179.450	7159.95	-337.55	343.51	157.94	40°03'28.869"N	104°55'00.882"W	11.20	
7260.00	34.610	179.860	7199.70	-312.52	318.46	158.08	40°03'28.621"N	104°55'00.881"W	10.20	
7307.00	38.490	180.910	7237.45	-284.56	290.47	157.88	40°03'28.345"N	104°55'00.883"W	8.36	
7354.00	42.680	180.600	7273.14	-254.03	259.91	157.48	40°03'28.042"N	104°55'00.888"W	8.93	
7401.00	46.930	179.280	7306.48	-220.94	226.80	157.53	40°03'27.715"N	104°55'00.888"W	9.26	
7448.00	52.860	178.650	7336.74	-185.01	190.87	158.19	40°03'27.360"N	104°55'00.879"W	12.66	
7495.00	56.840	177.460	7363.80	-146.59	152.47	159.50	40°03'26.981"N	104°55'00.862"W	8.72	
7543.00	60.620	175.500	7388.71	-105.59	111.53	162.04	40°03'26.576"N	104°55'00.830"W	8.61	
7590.00	63.250	174.440	7410.82	-64.17	70.22	165.68	40°03'26.168"N	104°55'00.783"W	5.94	
7637.00	65.240	173.660	7431.24	-21.94	28.12	170.07	40°03'25.752"N	104°55'00.726"W	4.49	
7684.00	69.840	173.890	7449.19	21.37	-15.04	174.77	40°03'25.325"N	104°55'00.666"W	9.80	
7732.00	73.740	174.550	7464.19	66.86	-60.40	179.36	40°03'24.877"N	104°55'00.607"W	8.23	
7779.00	78.120	176.340	7475.62	112.40	-105.83	182.98	40°03'24.428"N	104°55'00.560"W	10.02	
7826.00	78.830	177.940	7485.01	158.44	-151.83	185.27	40°03'23.974"N	104°55'00.531"W	3.66	
7873.00	79.690	179.730	7493.77	204.61	-197.99	186.21	40°03'23.517"N	104°55'00.519"W	4.17	
7920.00	80.100	180.170	7502.01	250.85	-244.26	186.25	40°03'23.060"N	104°55'00.518"W	1.27	
7967.00	81.960	181.080	7509.34	297.22	-290.68	185.74	40°03'22.601"N	104°55'00.525"W	4.40	
8014.00	83.910	181.150	7515.12	343.79	-337.31	184.84	40°03'22.141"N	104°55'00.537"W	4.15	
8026.00	84.160	181.300	7516.37	355.71	-349.25	184.58	40°03'22.023"N	104°55'00.540"W	2.43	
8065.00†	86.903	180.941	7519.41	394.52	-388.12	183.82	40°03'21.639"N	104°55'00.550"W	7.09	7" CASING POINT
8088.00	88.520	180.730	7520.32	417.48	-411.09	183.49	40°03'21.411"N	104°55'00.554"W	7.09	
8182.00	88.830	180.410	7522.50	511.35	-505.06	182.55	40°03'20.483"N	104°55'00.566"W	0.47	
8276.00	89.130	180.370	7524.17	605.25	-599.05	181.91	40°03'19.554"N	104°55'00.574"W	0.32	
8371.00	89.320	179.890	7525.46	700.17	-694.04	181.70	40°03'18.615"N	104°55'00.577"W	0.54	

### REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#14 GRIFFITHS 14N-20HZ (465'FNL & 1817'FWL, SEC.1'
Area	COLORADO	Well	GRIFFITHS 14N-20HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRIFFITHS 14N-20HZ AWB
Facility	SEC.17-T1N-R67W		

### WELLPATH DATA (188 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8465.00	89.410	180.080	7526.50	794.10	-788.03	181.72	40°03'17.686"N	104°55'00.577"W	0.22	
8559.00	89.660	180.730	7527.26	888.01	-882.03	181.06	40°03'16.758"N	104°55'00.585"W	0.74	
8654.00	90.300	180.230	7527.29	982.91	-977.02	180.26	40°03'15.819"N	104°55'00.595"W	0.85	
8748.00	90.700	180.240	7526.47	1076.83	-1071.02	179.87	40°03'14.890"N	104°55'00.600"W	0.43	
8842.00	91.020	179.550	7525.06	1170.77	-1165.01	180.05	40°03'13.961"N	104°55'00.598"W	0.81	
8937.00	91.010	179.410	7523.38	1265.72	-1259.99	180.91	40°03'13.023"N	104°55'00.587"W	0.15	
9031.00	90.420	179.660	7522.21	1359.67	-1353.98	181.67	40°03'12.094"N	104°55'00.577"W	0.68	
9126.00	90.030	178.880	7521.83	1454.64	-1448.97	182.88	40°03'11.155"N	104°55'00.562"W	0.92	
9220.00	90.150	178.720	7521.69	1548.63	-1542.95	184.85	40°03'10.226"N	104°55'00.537"W	0.21	
9315.00	89.190	177.480	7522.23	1643.63	-1637.89	188.00	40°03'09.288"N	104°55'00.496"W	1.65	
9409.00	89.690	177.660	7523.15	1737.62	-1731.80	191.98	40°03'08.360"N	104°55'00.445"W	0.57	
9501.00	90.060	178.050	7523.35	1829.62	-1823.73	195.43	40°03'07.451"N	104°55'00.401"W	0.58	
9593.00	90.490	178.400	7522.91	1921.62	-1915.69	198.28	40°03'06.543"N	104°55'00.364"W	0.60	
9685.00	89.600	177.500	7522.84	2013.62	-2007.63	201.57	40°03'05.634"N	104°55'00.322"W	1.38	
9777.00	90.150	178.550	7523.04	2105.61	-2099.57	204.74	40°03'04.726"N	104°55'00.281"W	1.29	
9868.00	89.570	178.160	7523.26	2196.61	-2190.53	207.35	40°03'03.827"N	104°55'00.247"W	0.77	
9960.00	89.200	178.490	7524.25	2288.60	-2282.49	210.04	40°03'02.918"N	104°55'00.213"W	0.54	
10052.00	89.600	178.690	7525.21	2380.59	-2374.46	212.30	40°03'02.009"N	104°55'00.184"W	0.49	
10143.00	90.150	178.490	7525.41	2471.58	-2465.43	214.54	40°03'01.110"N	104°55'00.155"W	0.64	
10235.00	90.400	178.780	7524.97	2563.58	-2557.40	216.74	40°03'00.201"N	104°55'00.127"W	0.42	
10327.00	89.470	179.200	7525.07	2655.56	-2649.38	218.36	40°02'59.292"N	104°55'00.106"W	1.11	
10419.00	89.720	179.130	7525.72	2747.53	-2741.37	219.70	40°02'58.383"N	104°55'00.089"W	0.28	
10514.00	89.200	179.730	7526.62	2842.50	-2836.36	220.64	40°02'57.444"N	104°55'00.076"W	0.84	
10608.00	89.290	179.440	7527.86	2936.45	-2930.35	221.32	40°02'56.516"N	104°55'00.068"W	0.32	
10703.00	89.810	180.060	7528.60	3031.40	-3025.35	221.74	40°02'55.577"N	104°55'00.062"W	0.85	
10797.00	89.540	178.360	7529.14	3125.37	-3119.33	223.03	40°02'54.648"N	104°55'00.046"W	1.83	
10892.00	88.950	178.660	7530.39	3220.35	-3214.29	225.50	40°02'53.710"N	104°55'00.014"W	0.70	
10987.00	88.920	179.190	7532.16	3315.32	-3309.26	227.29	40°02'52.771"N	104°54'59.991"W	0.56	
11081.00	89.130	179.290	7533.75	3409.28	-3403.24	228.53	40°02'51.842"N	104°54'59.975"W	0.25	
11176.00	89.660	178.380	7534.76	3504.27	-3498.21	230.46	40°02'50.904"N	104°54'59.950"W	1.11	
11271.00	90.060	180.160	7534.99	3599.24	-3593.20	231.67	40°02'49.965"N	104°54'59.935"W	1.92	
11365.00	89.900	178.380	7535.02	3693.21	-3687.19	232.87	40°02'49.036"N	104°54'59.919"W	1.90	
11460.00	89.380	178.010	7535.62	3788.20	-3782.14	235.86	40°02'48.098"N	104°54'59.881"W	0.67	
11554.00	90.330	178.440	7535.86	3882.20	-3876.09	238.78	40°02'47.170"N	104°54'59.843"W	1.11	
11614.00	90.060	178.270	7535.65	3942.20	-3936.07	240.50	40°02'46.577"N	104°54'59.821"W	0.53	
11708.00	89.970	178.630	7535.63	4036.19	-4030.03	243.04	40°02'45.648"N	104°54'59.789"W	0.39	
11803.00	89.050	178.320	7536.44	4131.18	-4124.99	245.57	40°02'44.710"N	104°54'59.756"W	1.02	
11897.00	89.690	177.440	7537.47	4225.18	-4218.92	249.05	40°02'43.782"N	104°54'59.711"W	1.16	
11992.00	89.410	177.640	7538.22	4320.17	-4313.83	253.12	40°02'42.844"N	104°54'59.659"W	0.36	
12087.00	89.480	177.470	7539.14	4415.16	-4408.74	257.18	40°02'41.906"N	104°54'59.607"W	0.19	
12181.00	89.410	177.560	7540.05	4509.16	-4502.65	261.25	40°02'40.978"N	104°54'59.554"W	0.12	
12276.00	89.600	177.460	7540.87	4604.15	-4597.55	265.38	40°02'40.040"N	104°54'59.501"W	0.23	
12303.00	89.630	177.240	7541.05	4631.15	-4624.52	266.63	40°02'39.773"N	104°54'59.485"W	0.82	
12371.00	88.800	178.580	7541.99	4699.14	-4692.47	269.11	40°02'39.102"N	104°54'59.453"W	2.32	
12466.00	88.270	178.730	7544.41	4794.10	-4787.41	271.34	40°02'38.164"N	104°54'59.425"W	0.58	



### REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#14 GRIFFITHS 14N-20HZ (465'FNL & 1817'FWL, SEC.1'
Area	COLORADO	Well	GRIFFITHS 14N-20HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRIFFITHS 14N-20HZ AWB
Facility	SEC.17-T1N-R67W		

### WELLPATH DATA (188 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12560.00	88.950	179.170	7546.69	4888.06	-4881.37	273.06	40°02'37.235"N	104°54'59.403"W	0.86	
12655.00	89.810	179.120	7547.72	4983.03	-4976.35	274.47	40°02'36.297"N	104°54'59.384"W	0.91	
12750.00	89.230	178.980	7548.52	5078.01	-5071.33	276.05	40°02'35.358"N	104°54'59.364"W	0.63	
12844.00	90.300	179.200	7548.90	5171.99	-5165.32	277.54	40°02'34.429"N	104°54'59.345"W	1.16	
12939.00	90.240	180.560	7548.46	5266.93	-5260.32	277.74	40°02'33.490"N	104°54'59.343"W	1.43	
13033.00	90.060	180.410	7548.21	5360.83	-5354.31	276.95	40°02'32.561"N	104°54'59.353"W	0.25	
13128.00	90.550	180.700	7547.70	5455.73	-5449.31	276.03	40°02'31.623"N	104°54'59.365"W	0.60	
13223.00	90.330	180.510	7546.97	5550.62	-5544.30	275.02	40°02'30.684"N	104°54'59.378"W	0.31	
13317.00	90.030	180.500	7546.68	5644.53	-5638.29	274.19	40°02'29.755"N	104°54'59.388"W	0.32	
13412.00	89.850	180.090	7546.78	5739.45	-5733.29	273.71	40°02'28.816"N	104°54'59.394"W	0.47	
13506.00	89.850	180.110	7547.03	5833.38	-5827.29	273.54	40°02'27.887"N	104°54'59.397"W	0.02	
13601.00	89.850	180.840	7547.27	5928.28	-5922.29	272.75	40°02'26.949"N	104°54'59.407"W	0.77	
13695.00	89.820	180.280	7547.54	6022.18	-6016.28	271.83	40°02'26.020"N	104°54'59.419"W	0.60	
13790.00	89.720	180.790	7547.93	6117.08	-6111.28	270.95	40°02'25.081"N	104°54'59.430"W	0.55	
13884.00	89.630	180.490	7548.46	6210.98	-6205.27	269.90	40°02'24.152"N	104°54'59.443"W	0.33	
13978.00	89.170	180.060	7549.44	6304.89	-6299.26	269.45	40°02'23.223"N	104°54'59.449"W	0.67	
14073.00	89.450	180.250	7550.59	6399.81	-6394.26	269.19	40°02'22.284"N	104°54'59.453"W	0.36	
14167.00	90.220	180.730	7550.86	6493.72	-6488.25	268.39	40°02'21.356"N	104°54'59.463"W	0.97	
14262.00	89.050	179.350	7551.46	6588.65	-6583.25	268.32	40°02'20.417"N	104°54'59.464"W	1.90	
14356.00	88.150	178.640	7553.76	6682.60	-6677.20	269.97	40°02'19.488"N	104°54'59.443"W	1.22	
14451.00	88.730	179.960	7556.35	6777.53	-6772.16	271.13	40°02'18.550"N	104°54'59.428"W	1.52	
14545.00	89.200	178.670	7558.04	6871.49	-6866.13	272.25	40°02'17.621"N	104°54'59.413"W	1.46	
14639.00	89.070	178.670	7559.46	6965.47	-6960.10	274.43	40°02'16.693"N	104°54'59.385"W	0.14	
14734.00	88.730	178.660	7561.29	7060.44	-7055.05	276.65	40°02'15.754"N	104°54'59.357"W	0.36	
14828.00	89.220	179.120	7562.97	7154.42	-7149.02	278.47	40°02'14.826"N	104°54'59.333"W	0.71	
14922.00	89.130	178.990	7564.32	7248.39	-7243.00	280.02	40°02'13.897"N	104°54'59.314"W	0.17	
15016.00	89.750	179.060	7565.24	7342.37	-7336.98	281.62	40°02'12.968"N	104°54'59.293"W	0.66	
15111.00	89.530	178.820	7565.84	7437.35	-7431.96	283.37	40°02'12.030"N	104°54'59.270"W	0.34	
15205.00	89.450	179.230	7566.67	7531.33	-7525.94	284.97	40°02'11.101"N	104°54'59.250"W	0.44	
15299.00	89.420	179.140	7567.60	7625.30	-7619.93	286.31	40°02'10.172"N	104°54'59.233"W	0.10	
15393.00	88.800	179.500	7569.06	7719.26	-7713.91	287.43	40°02'09.243"N	104°54'59.218"W	0.76	
15417.00	88.710	178.990	7569.58	7743.25	-7737.90	287.74	40°02'09.006"N	104°54'59.214"W	2.16	
15511.00	88.400	178.590	7571.95	7837.21	-7831.85	289.73	40°02'08.078"N	104°54'59.189"W	0.54	
15606.00	87.660	178.460	7575.22	7932.14	-7926.76	292.17	40°02'07.140"N	104°54'59.157"W	0.79	
15701.00	87.380	178.150	7579.33	8027.05	-8021.63	294.98	40°02'06.202"N	104°54'59.121"W	0.44	
15795.00	87.160	179.230	7583.81	8120.94	-8115.50	297.12	40°02'05.275"N	104°54'59.094"W	1.17	
15889.00	89.930	178.120	7586.19	8214.89	-8209.43	299.30	40°02'04.346"N	104°54'59.066"W	3.17	
15984.00	89.900	177.360	7586.33	8309.89	-8304.36	303.04	40°02'03.408"N	104°54'59.018"W	0.80	
16078.00	89.410	176.650	7586.90	8403.87	-8398.23	307.95	40°02'02.481"N	104°54'58.955"W	0.92	
16173.00	89.850	177.590	7587.51	8498.86	-8493.10	312.73	40°02'01.543"N	104°54'58.893"W	1.09	
16267.00	90.250	177.820	7587.43	8592.86	-8587.03	316.49	40°02'00.615"N	104°54'58.845"W	0.49	
16362.00	88.950	178.340	7588.10	8687.85	-8681.97	319.67	40°01'59.677"N	104°54'58.804"W	1.47	
16456.00	87.660	179.700	7590.88	8781.79	-8775.91	321.28	40°01'58.748"N	104°54'58.783"W	1.99	
16551.00	87.940	179.790	7594.52	8876.67	-8870.84	321.70	40°01'57.810"N	104°54'58.778"W	0.31	
16645.00	88.790	178.620	7597.20	8970.61	-8964.79	323.01	40°01'56.882"N	104°54'58.761"W	1.54	

### REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#14 GRIFFITHS 14N-20HZ (465'FNL & 1817'FWL, SEC.1'
Area	COLORADO	Well	GRIFFITHS 14N-20HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRIFFITHS 14N-20HZ AWB
Facility	SEC.17-T1N-R67W		

### WELLPATH DATA (188 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16739.00	90.330	179.260	7597.93	9064.59	-9058.77	324.75	40°01'55.953"N	104°54'58.739"W	1.77	
16833.00	89.810	178.280	7597.81	9158.58	-9152.75	326.76	40°01'55.024"N	104°54'58.713"W	1.18	
16928.00	89.690	177.900	7598.23	9253.57	-9247.69	329.93	40°01'54.086"N	104°54'58.672"W	0.42	
17022.00	88.580	177.920	7599.65	9347.56	-9341.62	333.36	40°01'53.158"N	104°54'58.628"W	1.18	
17116.00	87.680	177.290	7602.71	9441.51	-9435.48	337.28	40°01'52.230"N	104°54'58.578"W	1.17	
17210.00	86.360	176.450	7607.60	9535.36	-9529.21	342.41	40°01'51.304"N	104°54'58.512"W	1.66	
17269.00	85.870	176.290	7611.60	9594.21	-9587.96	346.14	40°01'50.723"N	104°54'58.464"W	0.87	LAST BHI MWD+IFR SURVEY
17328.00	85.870	176.290	7615.85	9653.03	-9646.68	349.94	40°01'50.143"N	104°54'58.415"W	0.00	PROJECTION TO BIT

### HOLE & CASING SECTIONS - Ref Wellbore: GRIFFITHS 14N-20HZ AWB Ref Wellpath: GRIFFITHS 14N-20HZ 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]
13.5in Open Hole	25.00	1096.00	1071.00	25.00	1095.96	0.00	0.00	-1.87	3.02
9.625in Casing Surface	25.00	1096.00	1071.00	25.00	1095.96	0.00	0.00	-1.87	3.02
8.75in Open Hole	1096.00	8075.00	6979.00	1095.96	7519.88	-1.87	3.02	-398.10	183.66
7in Casing Intermediate	25.00	8065.00	8040.00	25.00	7519.41	0.00	0.00	-388.12	183.82
6.125in Open Hole	8075.00	17328.00	9253.00	7519.88	7615.85	-398.10	183.66	-9646.68	349.94

### TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
GRIFFITHS SECTION 17 LINES		0.00	0.00	-29.97	3163028.47	1264173.61	40°03'25.474"N	104°55'03.299"W	polygon
GRIFFITHS SECTION 20 LINES		0.00	0.00	-29.97	3163028.47	1264173.61	40°03'25.474"N	104°55'03.299"W	polygon
GRIFFITHS 14N-20HZ BHL ON PLAT REV-1 (460'FSL & 2110'FWL, SEC.20)		7556.00	-9648.62	333.53	3163455.32	1254527.97	40°01'50.124"N	104°54'58.626"W	point
GRIFFITHS 14N-20HZ LAND BOX		7600.00	0.00	2.53	3163060.97	1264173.83	40°03'25.474"N	104°55'02.881"W	polygon

### WELLPATH COMPOSITION - Ref Wellbore: GRIFFITHS 14N-20HZ AWB Ref Wellpath: GRIFFITHS 14N-20HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
25.00	1015.00	Generic gyro - continuous (Standard)	MS GYRODATA SURVEYS <125-1015>	GRIFFITHS 14N-20HZ AWB
1015.00	8026.00	NaviTrak (MAGCORR,IFR)	BHI NAVITRAK MWD+IFR 8 3/4" <1157-8026>	GRIFFITHS 14N-20HZ AWB
8026.00	17269.00	OnTrak (MAGCORR,IFR)	BHI ONTRAK MWD+IFR 6 1/8" <8088-17269>	GRIFFITHS 14N-20HZ AWB
17269.00	17328.00	Blind Drilling (std)	Projection to bit	GRIFFITHS 14N-20HZ AWB



# Actual Wellpath Report

## GRIFFITHS 14N-20HZ AWP

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### REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#14 GRIFFITHS 14N-20HZ (465'FNL & 1817'FWL, SEC.1'
Area	COLORADO	Well	GRIFFITHS 14N-20HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GRIFFITHS 14N-20HZ AWB
Facility	SEC.17-T1N-R67W		

### WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
25.00	0.000	334.610	25.00	TIE-ON
125.00	0.440	334.610	125.00	BEGIN GYRO SURVEYS
1015.00	0.820	170.750	1014.97	TIE ONTO GYRO SURVEYS
1157.00	0.980	162.450	1156.95	BEGIN BHI MWD+IFR SURVEYS
8065.00	86.903	180.941	7519.41	7" CASING POINT
17269.00	85.870	176.290	7611.60	LAST BHI MWD+IFR SURVEY
17328.00	85.870	176.290	7615.85	PROJECTION TO BIT