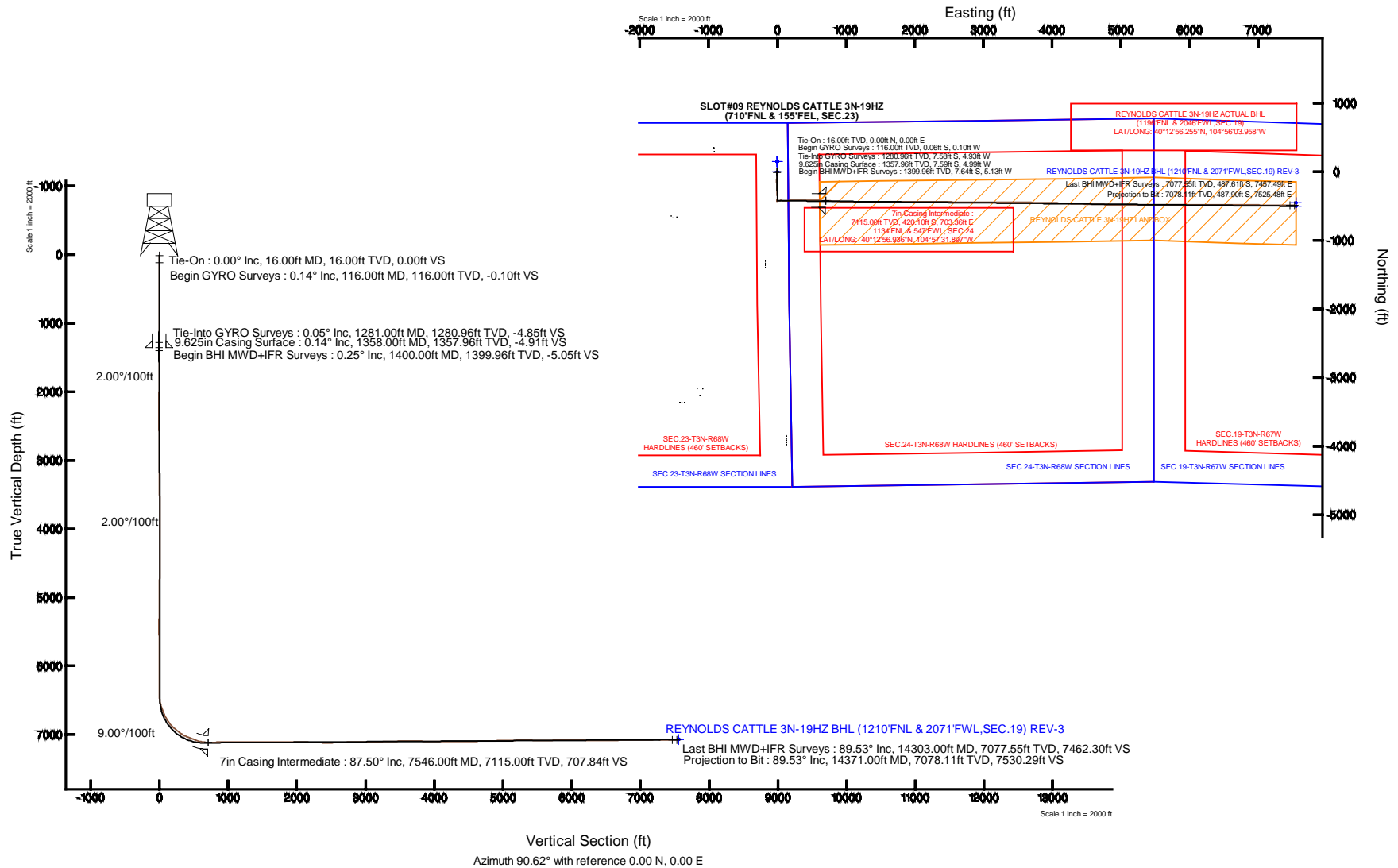


KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#09 REYNOLDS CATTLE 3N-19HZ (710'FNL & 155'FEL, SEC.23)
 Field: WELD COUNTY (KERR MCGEE) Well: REYNOLDS CATTLE 3N-19HZ
 Facility: SEC.23-T3N-R68W Wellbore: REYNOLDS CATTLE 3N-19HZ PWB

Plot reference wellpath is REYNOLDS CATTLE 3N-19HZ (REV-A.0) PWP

True vertical depths are referenced to XTREME 20 (16KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 20 (16KB) (RKB)	North Reference: True north
XTREME 20 (16KB) (RKB) to Mean Sea Level: 4947 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#09 REYNOLDS CATTLE 3N-19HZ (710'FNL & 155'FEL, SEC.23): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: precain on 28/JUL/2014



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 REYNOLDS CATTLE 3N-19HZ (710'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 3N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3N-19HZ AWP
Facility	SEC.23-T3N-R68W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Precain
Scale	0.999957	Report Generated	28/Jul/2014 at 15:11
Convergence at slot	n/a	Database/Source file	WellArchitectDB/REYNOLDS_CATTLE_3N-19HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-466.53	3022.06	3150415.63	1322340.77	40°13'01.088"N	104°57'40.964"W
Facility Reference Pt			3147390.98	1322789.28	40°13'05.700"N	104°58'19.920"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 20 (16'KB) (RKB) to Facility Vertical Datum	4947.00ft
Horizontal Reference Pt	Slot	XTREME 20 (16'KB) (RKB) to Mean Sea Level	4947.00ft
Vertical Reference Pt	XTREME 20 (16'KB) (RKB)	XTREME 20 (16'KB) (RKB) to Mud Line at Slot (SLOT#09 REYNOLDS CATTLE 3N-19HZ (710'FNL & 155'FEL, SEC.23))	4947.00ft
MD Reference Pt	XTREME 20 (16'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	90.62°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 REYNOLDS CATTLE 3N-19HZ (710'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 3N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3N-19HZ AWP
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (162 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	238.960	0.00	0.00	0.00	0.00	40°13'01.088"N	104°57'40.964"W	0.00	
16.00	0.000	238.960	16.00	0.00	0.00	0.00	40°13'01.088"N	104°57'40.964"W	0.00	Tie-On
116.00	0.140	238.960	116.00	-0.10	-0.06	-0.10	40°13'01.087"N	104°57'40.965"W	0.14	Begin GYRO Surveys
216.00	0.370	259.340	216.00	-0.52	-0.19	-0.53	40°13'01.086"N	104°57'40.971"W	0.24	
316.00	0.580	240.590	316.00	-1.28	-0.49	-1.28	40°13'01.083"N	104°57'40.981"W	0.26	
416.00	0.670	238.490	415.99	-2.21	-1.05	-2.22	40°13'01.078"N	104°57'40.993"W	0.09	
516.00	0.650	216.910	515.98	-3.04	-1.81	-3.06	40°13'01.070"N	104°57'41.003"W	0.25	
616.00	0.510	216.880	615.98	-3.64	-2.62	-3.67	40°13'01.062"N	104°57'41.011"W	0.14	
716.00	0.530	195.280	715.97	-4.02	-3.42	-4.06	40°13'01.054"N	104°57'41.016"W	0.20	
816.00	0.390	168.950	815.97	-4.07	-4.20	-4.12	40°13'01.047"N	104°57'41.017"W	0.25	
916.00	0.580	191.300	915.97	-4.10	-5.03	-4.15	40°13'01.038"N	104°57'41.018"W	0.26	
1016.00	0.500	193.990	1015.96	-4.29	-5.95	-4.36	40°13'01.029"N	104°57'41.020"W	0.08	
1116.00	0.500	204.810	1115.96	-4.57	-6.77	-4.64	40°13'01.021"N	104°57'41.024"W	0.09	
1216.00	0.310	196.110	1215.96	-4.82	-7.42	-4.90	40°13'01.015"N	104°57'41.027"W	0.20	
1281.00	0.050	51.830	1280.96	-4.85	-7.58	-4.93	40°13'01.013"N	104°57'41.028"W	0.54	Tie-Into GYRO Surveys
1400.00	0.250	247.540	1399.96	-5.05	-7.64	-5.13	40°13'01.012"N	104°57'41.030"W	0.25	Begin BHI MWD+IFR Surveys
1493.00	2.230	171.640	1492.93	-4.95	-9.51	-5.05	40°13'00.994"N	104°57'41.029"W	2.35	
1588.00	4.710	176.120	1587.75	-4.36	-15.23	-4.52	40°13'00.937"N	104°57'41.022"W	2.62	
1679.00	6.020	176.100	1678.35	-3.69	-23.72	-3.94	40°13'00.854"N	104°57'41.015"W	1.44	
1771.00	7.600	178.840	1769.70	-3.12	-34.62	-3.49	40°13'00.746"N	104°57'41.009"W	1.75	
1864.00	8.950	183.550	1861.73	-3.30	-47.99	-3.81	40°13'00.614"N	104°57'41.013"W	1.62	
1955.00	11.100	183.870	1951.33	-4.16	-63.79	-4.84	40°13'00.458"N	104°57'41.026"W	2.36	
2046.00	10.360	183.040	2040.74	-5.00	-80.70	-5.87	40°13'00.290"N	104°57'41.040"W	0.83	
2138.00	9.670	183.050	2131.34	-5.68	-96.68	-6.72	40°13'00.133"N	104°57'41.051"W	0.75	
2230.00	9.930	185.060	2222.00	-6.62	-112.30	-7.83	40°12'59.978"N	104°57'41.065"W	0.47	
2321.00	10.320	178.920	2311.58	-6.99	-128.26	-8.37	40°12'59.821"N	104°57'41.072"W	1.26	
2413.00	9.760	177.850	2402.17	-6.37	-144.30	-7.92	40°12'59.662"N	104°57'41.066"W	0.64	
2505.00	10.650	177.290	2492.72	-5.50	-160.58	-7.23	40°12'59.501"N	104°57'41.057"W	0.97	
2689.00	9.940	176.860	2673.75	-3.47	-193.42	-5.55	40°12'59.177"N	104°57'41.036"W	0.39	
2781.00	9.230	176.600	2764.47	-2.44	-208.72	-4.68	40°12'59.025"N	104°57'41.024"W	0.77	
2873.00	9.920	176.100	2855.19	-1.29	-223.99	-3.70	40°12'58.875"N	104°57'41.012"W	0.76	
2964.00	9.120	177.960	2944.93	-0.34	-239.01	-2.91	40°12'58.726"N	104°57'41.002"W	0.94	
3056.00	8.770	175.760	3035.81	0.59	-253.30	-2.13	40°12'58.585"N	104°57'40.992"W	0.53	
3148.00	9.640	181.580	3126.63	1.05	-267.99	-1.83	40°12'58.440"N	104°57'40.988"W	1.38	
3240.00	8.790	183.360	3217.44	0.59	-282.71	-2.45	40°12'58.294"N	104°57'40.996"W	0.97	
3331.00	9.430	180.110	3307.29	0.32	-297.10	-2.87	40°12'58.152"N	104°57'41.001"W	0.90	
3423.00	8.810	177.340	3398.13	0.79	-311.68	-2.56	40°12'58.008"N	104°57'40.997"W	0.83	
3514.00	8.430	172.560	3488.10	2.12	-325.25	-1.38	40°12'57.874"N	104°57'40.982"W	0.89	
3606.00	9.250	176.210	3579.01	3.63	-339.32	-0.01	40°12'57.735"N	104°57'40.964"W	1.08	
3698.00	9.980	178.890	3669.72	4.44	-354.67	0.63	40°12'57.583"N	104°57'40.956"W	0.93	
3789.00	10.480	179.810	3759.27	4.80	-370.83	0.81	40°12'57.423"N	104°57'40.954"W	0.58	
3881.00	9.610	182.330	3849.86	4.69	-386.87	0.53	40°12'57.265"N	104°57'40.957"W	1.06	
3973.00	8.240	181.600	3940.75	4.34	-401.13	0.03	40°12'57.124"N	104°57'40.964"W	1.49	
4064.00	6.100	179.040	4031.03	4.36	-412.49	-0.07	40°12'57.012"N	104°57'40.965"W	2.38	
4156.00	4.410	173.960	4122.64	4.91	-420.89	0.38	40°12'56.929"N	104°57'40.959"W	1.90	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 REYNOLDS CATTLE 3N-19HZ (710'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 3N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3N-19HZ AWP
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (162 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4248.00	2.960	171.910	4214.45	5.68	-426.76	1.09	40°12'56.871"N	104°57'40.950"W	1.58	
4333.00	0.680	178.000	4299.40	6.03	-429.44	1.42	40°12'56.844"N	104°57'40.946"W	2.69	
4419.00	0.560	311.720	4385.40	5.74	-429.67	1.12	40°12'56.842"N	104°57'40.950"W	1.33	
4504.00	0.620	304.490	4470.39	5.04	-429.13	0.43	40°12'56.847"N	104°57'40.958"W	0.11	
4674.00	0.820	329.400	4640.38	3.65	-427.57	-0.95	40°12'56.863"N	104°57'40.976"W	0.22	
4929.00	0.910	302.620	4895.35	0.99	-424.90	-3.58	40°12'56.889"N	104°57'41.010"W	0.16	
5185.00	0.780	268.500	5151.32	-2.48	-423.85	-7.04	40°12'56.900"N	104°57'41.055"W	0.20	
5440.00	0.800	278.540	5406.30	-5.98	-423.63	-10.53	40°12'56.902"N	104°57'41.100"W	0.05	
5525.00	1.390	57.160	5491.29	-5.70	-422.99	-10.25	40°12'56.908"N	104°57'41.096"W	2.42	
5695.00	0.850	80.210	5661.26	-2.74	-421.65	-7.28	40°12'56.921"N	104°57'41.058"W	0.41	
5951.00	0.130	97.010	5917.25	-0.59	-421.37	-5.12	40°12'56.924"N	104°57'41.030"W	0.28	
6207.00	0.040	6.280	6173.25	-0.29	-421.31	-4.82	40°12'56.925"N	104°57'41.026"W	0.05	
6377.00	0.110	85.920	6343.25	-0.12	-421.24	-4.65	40°12'56.925"N	104°57'41.024"W	0.06	
6462.00	0.560	51.050	6428.25	0.28	-420.98	-4.25	40°12'56.928"N	104°57'41.019"W	0.56	
6505.00	4.050	82.810	6471.21	1.95	-420.65	-2.57	40°12'56.931"N	104°57'40.997"W	8.34	
6547.00	9.590	86.200	6512.89	6.91	-420.24	2.39	40°12'56.935"N	104°57'40.933"W	13.22	
6590.00	15.250	87.680	6554.87	16.14	-419.77	11.62	40°12'56.940"N	104°57'40.814"W	13.18	
6632.00	18.800	86.950	6595.02	28.41	-419.18	23.90	40°12'56.946"N	104°57'40.656"W	8.47	
6675.00	19.840	85.980	6635.60	42.60	-418.30	38.10	40°12'56.954"N	104°57'40.473"W	2.53	
6717.00	22.940	89.900	6674.71	57.89	-417.79	53.40	40°12'56.959"N	104°57'40.276"W	8.12	
6760.00	24.360	91.410	6714.09	75.14	-417.99	70.65	40°12'56.957"N	104°57'40.053"W	3.59	
6803.00	28.250	91.640	6752.63	94.19	-418.50	89.69	40°12'56.952"N	104°57'39.808"W	9.05	
6846.00	31.590	91.260	6789.90	115.63	-419.04	111.13	40°12'56.947"N	104°57'39.531"W	7.78	
6888.00	35.080	89.320	6824.98	138.70	-419.14	134.21	40°12'56.946"N	104°57'39.234"W	8.69	
6931.00	41.640	87.600	6858.68	165.35	-418.40	160.86	40°12'56.953"N	104°57'38.890"W	15.46	
6973.00	46.190	87.560	6888.93	194.44	-417.17	189.96	40°12'56.966"N	104°57'38.515"W	10.83	
7016.00	49.040	87.180	6917.91	226.14	-415.71	221.69	40°12'56.980"N	104°57'38.106"W	6.66	
7058.00	52.470	88.030	6944.48	258.62	-414.35	254.18	40°12'56.993"N	104°57'37.688"W	8.32	
7101.00	53.320	88.290	6970.42	292.88	-413.25	288.45	40°12'57.004"N	104°57'37.246"W	2.03	
7143.00	57.600	89.970	6994.23	327.46	-412.74	323.04	40°12'57.009"N	104°57'36.800"W	10.71	
7186.00	61.540	90.860	7016.01	364.52	-413.01	360.11	40°12'57.007"N	104°57'36.322"W	9.33	
7228.00	66.570	91.050	7034.37	402.28	-413.65	397.86	40°12'57.000"N	104°57'35.836"W	11.98	
7271.00	69.490	90.560	7050.46	442.15	-414.20	437.72	40°12'56.995"N	104°57'35.322"W	6.87	
7313.00	69.700	91.160	7065.10	481.52	-414.79	477.08	40°12'56.989"N	104°57'34.814"W	1.43	
7356.00	69.850	91.010	7079.97	521.86	-415.56	517.43	40°12'56.981"N	104°57'34.294"W	0.48	
7398.00	74.210	91.440	7092.92	561.80	-416.41	557.36	40°12'56.973"N	104°57'33.779"W	10.43	
7441.00	79.600	91.640	7102.66	603.66	-417.54	599.21	40°12'56.962"N	104°57'33.240"W	12.54	
7492.00	82.830	90.670	7110.45	654.06	-418.55	649.59	40°12'56.952"N	104°57'32.591"W	6.61	
7546.00†	87.502	92.627	7115.00	707.84	-420.10	703.36	40°12'56.936"N	104°57'31.897"W	9.38	7" Casing Point
7605.00	92.610	94.750	7114.94	766.73	-423.90	762.22	40°12'56.899"N	104°57'31.139"W	9.38	
7697.00	92.730	93.570	7110.66	858.45	-430.57	853.87	40°12'56.833"N	104°57'29.957"W	1.29	
7788.00	91.570	91.290	7107.24	949.33	-434.42	944.72	40°12'56.795"N	104°57'28.786"W	2.81	
7880.00	89.690	90.200	7106.23	1041.32	-435.62	1036.70	40°12'56.783"N	104°57'27.601"W	2.36	
7972.00	89.380	89.580	7106.98	1133.31	-435.44	1128.70	40°12'56.785"N	104°57'26.415"W	0.75	
8063.00	90.670	89.660	7106.94	1224.30	-434.84	1219.69	40°12'56.791"N	104°57'25.242"W	1.42	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 REYNOLDS CATTLE 3N-19HZ (710'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 3N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3N-19HZ AWP
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (162 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8155.00	90.460	89.800	7106.03	1316.28	-434.40	1311.69	40°12'56.795"N	104°57'24.056"W	0.27	
8247.00	90.460	90.310	7105.29	1408.27	-434.49	1403.68	40°12'56.794"N	104°57'22.870"W	0.55	
8338.00	89.320	90.200	7105.47	1499.27	-434.90	1494.68	40°12'56.790"N	104°57'21.697"W	1.26	
8522.00	90.240	89.690	7106.17	1683.25	-434.72	1678.68	40°12'56.792"N	104°57'19.325"W	0.57	
8614.00	90.240	89.350	7105.79	1775.24	-433.95	1770.67	40°12'56.799"N	104°57'18.139"W	0.37	
8705.00	89.260	90.350	7106.19	1866.22	-433.71	1861.67	40°12'56.801"N	104°57'16.967"W	1.54	
8797.00	90.240	90.420	7106.59	1958.22	-434.33	1953.67	40°12'56.795"N	104°57'15.781"W	1.07	
8889.00	89.010	90.800	7107.19	2050.22	-435.31	2045.66	40°12'56.785"N	104°57'14.595"W	1.40	
8981.00	87.100	90.430	7110.31	2142.16	-436.29	2137.59	40°12'56.776"N	104°57'13.410"W	2.11	
9072.00	87.650	90.710	7114.48	2233.06	-437.20	2228.49	40°12'56.767"N	104°57'12.238"W	0.68	
9164.00	87.720	90.940	7118.20	2324.99	-438.52	2320.41	40°12'56.753"N	104°57'11.053"W	0.26	
9256.00	89.560	90.420	7120.38	2416.96	-439.61	2412.37	40°12'56.743"N	104°57'09.868"W	2.08	
9348.00	91.130	90.180	7119.82	2508.95	-440.10	2504.37	40°12'56.738"N	104°57'08.682"W	1.73	
9440.00	91.720	90.180	7117.54	2600.92	-440.38	2596.34	40°12'56.735"N	104°57'07.496"W	0.64	
9531.00	92.950	90.380	7113.83	2691.84	-440.83	2687.26	40°12'56.730"N	104°57'06.324"W	1.37	
9623.00	91.690	90.780	7110.11	2783.76	-441.76	2779.18	40°12'56.721"N	104°57'05.140"W	1.44	
9714.00	89.780	90.570	7108.94	2874.75	-442.83	2870.16	40°12'56.710"N	104°57'03.967"W	2.11	
9806.00	89.870	89.850	7109.22	2966.75	-443.17	2962.16	40°12'56.707"N	104°57'02.781"W	0.79	
9898.00	90.520	89.750	7108.91	3058.74	-442.85	3054.15	40°12'56.710"N	104°57'01.595"W	0.71	
9990.00	91.190	90.090	7107.53	3150.72	-442.72	3146.14	40°12'56.711"N	104°57'00.409"W	0.82	
10081.00	92.460	89.320	7104.63	3241.66	-442.25	3237.09	40°12'56.716"N	104°56'59.237"W	1.63	
10173.00	92.400	90.030	7100.73	3333.57	-441.73	3329.01	40°12'56.721"N	104°56'58.052"W	0.77	
10265.00	90.920	91.220	7098.07	3425.52	-442.73	3420.96	40°12'56.711"N	104°56'56.867"W	2.06	
10357.00	91.970	90.790	7095.75	3517.49	-444.35	3512.92	40°12'56.695"N	104°56'55.681"W	1.23	
10442.00	90.800	90.790	7093.69	3602.46	-445.52	3597.88	40°12'56.683"N	104°56'54.586"W	1.38	
10527.00	88.270	91.660	7094.38	3687.45	-447.33	3682.85	40°12'56.665"N	104°56'53.491"W	3.15	
10612.00	89.070	91.040	7096.36	3772.42	-449.34	3767.80	40°12'56.645"N	104°56'52.396"W	1.19	
10697.00	89.500	91.020	7097.42	3857.41	-450.86	3852.78	40°12'56.630"N	104°56'51.300"W	0.51	
10782.00	90.240	90.690	7097.61	3942.41	-452.13	3937.77	40°12'56.617"N	104°56'50.205"W	0.95	
10867.00	89.720	91.260	7097.64	4027.40	-453.58	4022.76	40°12'56.603"N	104°56'49.109"W	0.91	
10953.00	88.390	92.410	7099.06	4113.37	-456.33	4108.70	40°12'56.575"N	104°56'48.002"W	2.04	
11038.00	88.890	92.230	7101.08	4198.31	-459.77	4193.61	40°12'56.541"N	104°56'46.907"W	0.63	
11123.00	89.510	91.990	7102.26	4283.27	-462.90	4278.54	40°12'56.510"N	104°56'45.812"W	0.78	
11208.00	90.980	92.830	7101.90	4368.22	-466.48	4363.46	40°12'56.475"N	104°56'44.718"W	1.99	
11293.00	90.460	91.380	7100.83	4453.19	-469.60	4448.39	40°12'56.444"N	104°56'43.623"W	1.81	
11378.00	91.230	91.380	7099.58	4538.17	-471.64	4533.36	40°12'56.423"N	104°56'42.528"W	0.91	
11463.00	91.660	91.250	7097.43	4623.14	-473.59	4618.31	40°12'56.404"N	104°56'41.433"W	0.53	
11548.00	92.150	91.550	7094.61	4708.08	-475.67	4703.24	40°12'56.383"N	104°56'40.338"W	0.68	
11633.00	91.140	91.030	7092.17	4793.04	-477.58	4788.18	40°12'56.364"N	104°56'39.243"W	1.34	
11718.00	91.230	91.360	7090.41	4878.01	-479.35	4873.14	40°12'56.346"N	104°56'38.148"W	0.40	
11803.00	92.310	91.130	7087.79	4962.97	-481.20	4958.08	40°12'56.328"N	104°56'37.053"W	1.30	
11888.00	91.780	90.450	7084.75	5047.91	-482.37	5043.02	40°12'56.316"N	104°56'35.958"W	1.01	
11973.00	90.520	89.930	7083.05	5132.89	-482.65	5128.00	40°12'56.313"N	104°56'34.863"W	1.60	
12059.00	91.440	89.960	7081.58	5218.87	-482.57	5213.98	40°12'56.314"N	104°56'33.754"W	1.07	
12144.00	90.120	90.010	7080.42	5303.86	-482.55	5298.98	40°12'56.314"N	104°56'32.659"W	1.55	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 REYNOLDS CATTLE 3N-19HZ (710'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 3N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3N-19HZ AWP
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (162 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12229.00	88.550	90.260	7081.41	5388.85	-482.75	5383.97	40°12'56.312"N	104°56'31.563"W	1.87	
12314.00	89.470	90.470	7082.87	5473.83	-483.29	5468.95	40°12'56.306"N	104°56'30.468"W	1.11	
12399.00	89.660	90.440	7083.52	5558.83	-483.96	5553.95	40°12'56.299"N	104°56'29.372"W	0.23	
12484.00	90.300	90.210	7083.55	5643.83	-484.45	5638.94	40°12'56.294"N	104°56'28.276"W	0.80	
12570.00	91.440	89.990	7082.24	5729.81	-484.60	5724.93	40°12'56.293"N	104°56'27.168"W	1.35	
12655.00	90.980	89.660	7080.45	5814.78	-484.34	5809.91	40°12'56.295"N	104°56'26.073"W	0.67	
12740.00	89.160	89.560	7080.34	5899.77	-483.76	5894.91	40°12'56.301"N	104°56'24.977"W	2.14	
12825.00	91.010	89.850	7080.22	5984.75	-483.32	5979.90	40°12'56.305"N	104°56'23.881"W	2.20	
12910.00	90.150	89.400	7079.36	6069.73	-482.77	6064.90	40°12'56.310"N	104°56'22.786"W	1.14	
12995.00	87.720	90.160	7080.94	6154.70	-482.44	6149.87	40°12'56.313"N	104°56'21.690"W	3.00	
13081.00	88.220	90.130	7083.98	6240.65	-482.66	6235.82	40°12'56.311"N	104°56'20.583"W	0.58	
13167.00	89.040	89.920	7086.04	6326.62	-482.69	6321.79	40°12'56.310"N	104°56'19.474"W	0.98	
13252.00	89.870	88.930	7086.85	6411.59	-481.84	6406.78	40°12'56.318"N	104°56'18.379"W	1.52	
13337.00	90.300	88.740	7086.72	6496.55	-480.11	6491.76	40°12'56.335"N	104°56'17.283"W	0.55	
13422.00	91.470	89.980	7085.41	6581.52	-479.16	6576.75	40°12'56.344"N	104°56'16.188"W	2.01	
13507.00	92.280	90.410	7082.63	6666.47	-479.45	6661.70	40°12'56.341"N	104°56'15.093"W	1.08	
13592.00	91.420	90.720	7079.88	6751.42	-480.29	6746.65	40°12'56.333"N	104°56'13.998"W	1.08	
13677.00	89.070	91.160	7079.52	6836.42	-481.68	6831.63	40°12'56.319"N	104°56'12.902"W	2.81	
13762.00	89.750	90.940	7080.40	6921.41	-483.24	6916.61	40°12'56.303"N	104°56'11.807"W	0.84	
13847.00	90.800	90.730	7079.99	7006.41	-484.48	7001.60	40°12'56.291"N	104°56'10.711"W	1.26	
13932.00	91.970	90.420	7077.93	7091.38	-485.33	7086.57	40°12'56.282"N	104°56'09.616"W	1.42	
14017.00	91.780	90.290	7075.15	7176.33	-485.86	7171.52	40°12'56.276"N	104°56'08.521"W	0.27	
14102.00	88.800	90.480	7074.72	7261.32	-486.43	7256.51	40°12'56.271"N	104°56'07.426"W	3.51	
14187.00	89.160	90.240	7076.24	7346.31	-486.96	7341.50	40°12'56.265"N	104°56'06.330"W	0.51	
14272.00	89.440	90.390	7077.27	7431.30	-487.43	7426.49	40°12'56.260"N	104°56'05.235"W	0.37	
14303.00	89.530	90.250	7077.55	7462.30	-487.61	7457.49	40°12'56.258"N	104°56'04.835"W	0.54	Last BHI MWD+IFR Surveys
14371.00	89.530	90.250	7078.11	7530.29	-487.90	7525.48	40°12'56.255"N	104°56'03.958"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: REYNOLDS CATTLE 3N-19HZ AWP Ref Wellpath: REYNOLDS CATTLE 3N-19HZ 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	16.00	1369.00	1353.00	16.00	1368.96	0.00	0.00	-7.60	-5.02
9.625in Casing Surface	16.00	1358.00	1342.00	16.00	1357.96	0.00	0.00	-7.59	-4.99
8.75in Open Hole	1369.00	7556.00	6187.00	1368.96	7115.36	-7.60	-5.02	-420.59	713.34
7in Casing Intermediate	16.00	7546.00	7530.00	16.00	7115.00	0.00	0.00	-420.10	703.36
6.125in Open Hole	7556.00	14371.00	6815.00	7115.36	7078.11	-420.59	713.34	-487.90	7525.48

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 REYNOLDS CATTLE 3N-19HZ (710'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 3N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3N-19HZ AWB
Facility	SEC.23-T3N-R68W		

TARGETS									
Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.19-T3N-R67W HARDLINES (460' SETBACKS)		-1.00	150.13	-1.71	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.19-T3N-R67W SECTION LINES		-1.00	150.13	-1.71	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.23-T3N-R68W HARDLINES (460' SETBACKS)		-1.00	150.13	-1.71	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.23-T3N-R68W SECTION LINES		-1.00	150.13	-1.71	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.24-T3N-R68W HARDLINES (460' SETBACKS)		-1.00	150.13	-1.71	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.24-T3N-R68W SECTION LINES		-1.00	150.13	-1.71	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
REYNOLDS CATTLE 3N-19HZ BHL ON PLAT (1160'FNL & 2071'FWL,SEC.19) REV-1		7066.00	-452.00	7550.02	3157967.92	1321934.66	40°12'56.610"N	104°56'03.642"W	point
REYNOLDS CATTLE 3N-19HZ LANDBOX		7066.00	0.04	-0.03	3150415.60	1322340.81	40°13'01.088"N	104°57'40.964"W	polygon
REYNOLDS CATTLE 3N-19HZ BHL (1210'FNL & 2071'FWL,SEC.19) REV-3		7073.00	-502.00	7550.02	3157968.23	1321884.66	40°12'56.116"N	104°56'03.642"W	point
REYNOLDS CATTLE 3N-19HZ BHL ON PLAT (1160'FNL & 2071'FWL,SEC.19) REV-2		7073.00	-452.00	7550.02	3157967.92	1321934.66	40°12'56.610"N	104°56'03.642"W	point

WELLPATH COMPOSITION - Ref Wellbore: REYNOLDS CATTLE 3N-19HZ AWB Ref Wellpath: REYNOLDS CATTLE 3N-19HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	1281.00	Generic gyro - continuous (Standard)	MS ENERGY GYRO SURVEYS <116-1281>	REYNOLDS CATTLE 3N-19HZ AWB
1281.00	7492.00	NaviTrak (IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <1400-7492>	REYNOLDS CATTLE 3N-19HZ AWB
7492.00	14303.00	NaviTrak (IFR)	BHI MWD+IFR SURVEYS 6 1/8" HOLE <7605-14303>	REYNOLDS CATTLE 3N-19HZ AWB
14303.00	14371.00	Blind Drilling (std)	Projection to bit	REYNOLDS CATTLE 3N-19HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#09 REYNOLDS CATTLE 3N-19HZ (710'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 3N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3N-19HZ AWP
Facility	SEC.23-T3N-R68W		

WELLPATH COMMENTS					
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment	
16.00	0.000	238.960	16.00	Tie-On	
116.00	0.140	238.960	116.00	Begin GYRO Surveys	
1281.00	0.050	51.830	1280.96	Tie-Into GYRO Surveys	
1400.00	0.250	247.540	1399.96	Begin BHI MWD+IFR Surveys	
7546.00	87.502	92.627	7115.00	7" Casing Point	
14303.00	89.530	90.250	7077.55	Last BHI MWD+IFR Surveys	
14371.00	89.530	90.250	7078.11	Projection to Bit	