

Location:	COLORADO	Slot:	SLOT#07 REYNOLDS CATTLE 28N-19HZ (590'FNL & 155'FEL, SEC.23)
Field:	WELD COUNTY (KERR MCGEE)	Well:	REYNOLDS CATTLE 28N-19HZ
Facility:	SEC.23-T3N-R68W	Wellbore:	REYNOLDS CATTLE 28N-19HZ PWB

Plot reference wellpath is REYNOLDS CATTLE 28N-19HZ (REV-C.1) PWP

True vertical depths are referenced to XTREME 20 (16KB) (RKB)

Measured depths are referenced to XTREME 20 (16KB) (RKB)

XTREME 20 (16KB) (RKB) to Mean Sea Level: 4947 feet

Mean Sea Level to Mud line (At Slot: SLOTH07 REYNOLDS CATTLE 28N-19HZ (590FNL & 155FEL, SEC.23)): 0 feet

Coordinates are in feet referenced to Slot

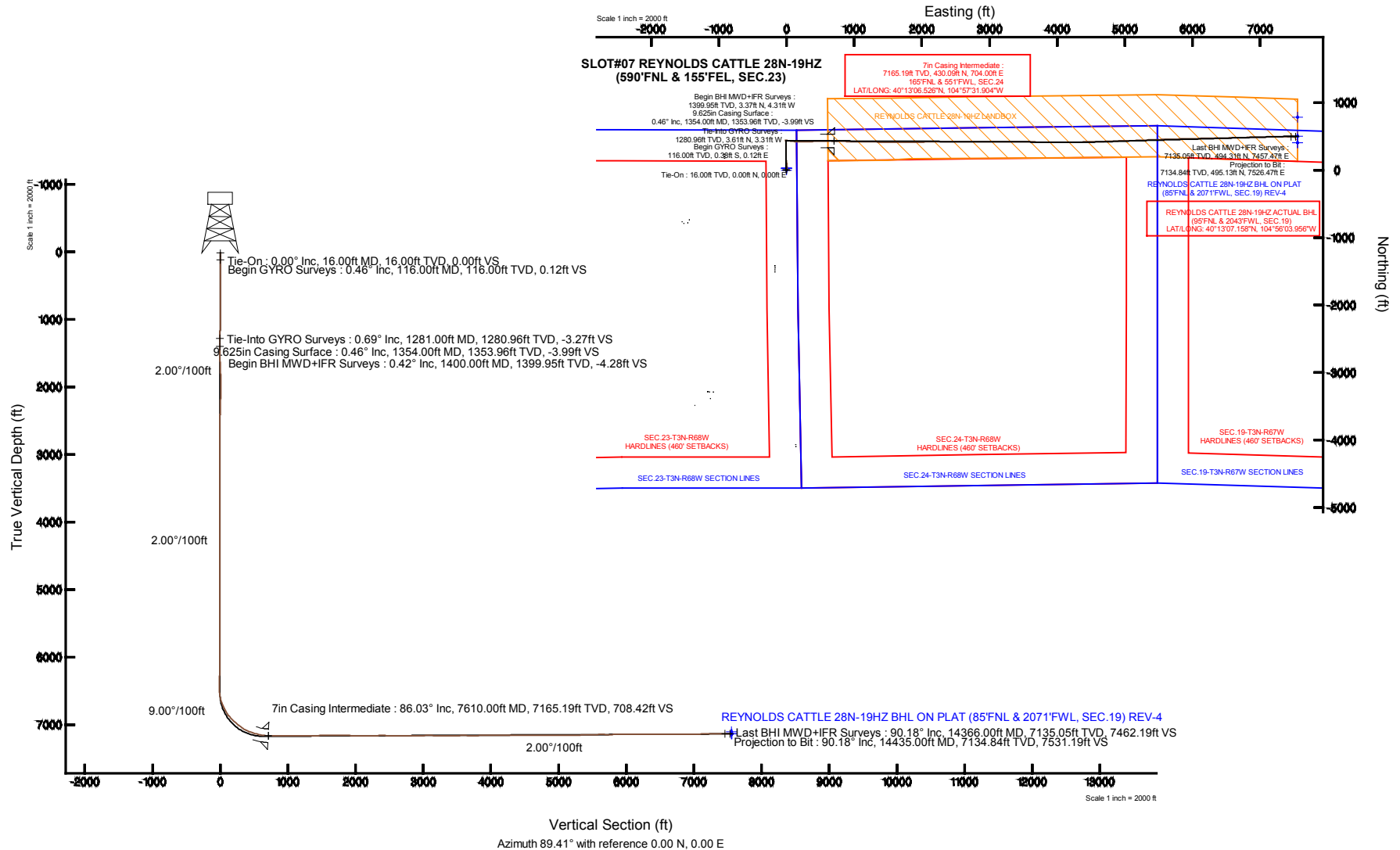
Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet

North Reference: True north

Scale: True distance

Depths are in feet

Created by: precain on 28/Jul/2014



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 REYNOLDS CATTLE 28N-19HZ (590'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 28N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 28N-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 13:54
Convergence at slot	n/a	Database/Source file	WellArchitectDB/REYNOLDS_CATTLE_28N-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	-346.31	3020.89	3150413.74	1322460.98	40°13'02.276"N	104°57'40.979"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 (16KB) (RKB) to Facility Vertical Datum	4947.00ft
Horizontal Reference Pt	Slot	XTREME 20 (16KB) (RKB) to Mean Sea Level	4947.00ft
Vertical Reference Pt	XTREME 20 (16KB) (RKB)	XTREME 20 (16KB) (RKB) to Mud Line at Slot (SLOT#07 REYNOLDS CATTLE 28N-19HZ (590'FNL & 155'FEL, SEC.23))	4947.00ft
MD Reference Pt	XTREME 20 (16KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	89.41°

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 REYNOLDS CATTLE 28N-19HZ (590'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 28N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 28N-19HZ AWB
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (166 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	162.560	0.00	0.00	0.00	0.00	40°13'02.276"N	104°57'40.979"W	0.00	
16.00	0.000	162.560	16.00	0.00	0.00	0.00	40°13'02.276"N	104°57'40.979"W	0.00	Tie-On
116.00	0.460	162.560	116.00	0.12	-0.38	0.12	40°13'02.272"N	104°57'40.977"W	0.46	Begin GYRO Surveys
216.00	0.320	125.340	216.00	0.46	-0.93	0.47	40°13'02.267"N	104°57'40.973"W	0.28	
316.00	0.180	65.950	316.00	0.83	-1.02	0.84	40°13'02.266"N	104°57'40.968"W	0.28	
416.00	0.260	22.670	416.00	1.06	-0.75	1.07	40°13'02.269"N	104°57'40.965"W	0.18	
516.00	0.260	14.740	515.99	1.21	-0.32	1.22	40°13'02.273"N	104°57'40.963"W	0.04	
616.00	0.340	356.730	615.99	1.26	0.19	1.26	40°13'02.278"N	104°57'40.963"W	0.12	
716.00	0.260	16.550	715.99	1.31	0.71	1.30	40°13'02.283"N	104°57'40.962"W	0.13	
816.00	0.290	333.720	815.99	1.27	1.15	1.26	40°13'02.287"N	104°57'40.963"W	0.20	
916.00	0.630	315.450	915.99	0.78	1.77	0.76	40°13'02.293"N	104°57'40.969"W	0.37	
1016.00	0.730	293.830	1015.98	-0.18	2.42	-0.21	40°13'02.300"N	104°57'40.982"W	0.27	
1116.00	0.700	302.700	1115.97	-1.27	3.01	-1.31	40°13'02.306"N	104°57'40.996"W	0.11	
1216.00	0.780	281.480	1215.96	-2.45	3.47	-2.49	40°13'02.310"N	104°57'41.011"W	0.28	
1281.00	0.690	277.020	1280.96	-3.27	3.61	-3.31	40°13'02.312"N	104°57'41.022"W	0.16	Tie-Into GYRO Surveys
1400.00	0.420	221.750	1399.95	-4.28	3.37	-4.31	40°13'02.309"N	104°57'41.035"W	0.48	Begin BHI MWD+IFR Surveys
1494.00	0.900	5.310	1493.95	-4.43	3.85	-4.47	40°13'02.314"N	104°57'41.037"W	1.34	
1589.00	3.520	23.450	1588.87	-3.17	7.27	-3.24	40°13'02.348"N	104°57'41.021"W	2.82	
1680.00	5.520	28.450	1679.59	0.10	13.68	-0.04	40°13'02.411"N	104°57'40.980"W	2.24	
1772.00	6.930	22.770	1771.04	4.45	22.69	4.21	40°13'02.500"N	104°57'40.925"W	1.67	
1864.00	8.220	9.970	1862.24	7.85	34.28	7.50	40°13'02.615"N	104°57'40.882"W	2.30	
1955.00	9.710	2.980	1952.13	9.52	48.36	9.02	40°13'02.754"N	104°57'40.863"W	2.03	
2047.00	10.580	355.330	2042.70	9.41	64.52	8.74	40°13'02.914"N	104°57'40.866"W	1.74	
2139.00	11.600	348.050	2132.98	6.99	81.99	6.14	40°13'03.086"N	104°57'40.900"W	1.88	
2230.00	10.850	351.390	2222.24	3.99	99.41	2.96	40°13'03.258"N	104°57'40.941"W	1.09	
2322.00	10.230	349.150	2312.69	1.33	116.00	0.13	40°13'03.422"N	104°57'40.977"W	0.81	
2414.00	10.080	347.700	2403.25	-1.76	131.89	-3.13	40°13'03.579"N	104°57'41.019"W	0.32	
2505.00	9.780	346.760	2492.88	-5.07	147.19	-6.59	40°13'03.731"N	104°57'41.064"W	0.37	
2597.00	8.860	354.610	2583.67	-7.37	161.85	-9.05	40°13'03.875"N	104°57'41.096"W	1.70	
2689.00	9.350	2.140	2674.52	-7.61	176.37	-9.44	40°13'04.019"N	104°57'41.101"W	1.40	
2781.00	10.140	0.450	2765.19	-7.10	191.94	-9.09	40°13'04.173"N	104°57'41.096"W	0.91	
2873.00	9.670	359.370	2855.82	-6.96	207.76	-9.11	40°13'04.329"N	104°57'41.096"W	0.55	
2964.00	9.020	358.930	2945.61	-7.02	222.54	-9.33	40°13'04.475"N	104°57'41.099"W	0.72	
3056.00	9.550	2.910	3036.40	-6.62	237.37	-9.08	40°13'04.622"N	104°57'41.096"W	0.90	
3148.00	9.870	359.930	3127.09	-6.08	252.88	-8.70	40°13'04.775"N	104°57'41.091"W	0.65	
3240.00	8.650	359.720	3217.89	-5.97	267.68	-8.74	40°13'04.921"N	104°57'41.092"W	1.33	
3332.00	10.230	1.270	3308.64	-5.67	282.77	-8.60	40°13'05.070"N	104°57'41.090"W	1.74	
3423.00	9.670	1.890	3398.27	-5.07	298.49	-8.17	40°13'05.226"N	104°57'41.084"W	0.63	
3515.00	8.840	359.940	3489.07	-4.67	313.28	-7.92	40°13'05.372"N	104°57'41.081"W	0.96	
3606.00	10.010	0.790	3578.84	-4.41	328.18	-7.82	40°13'05.519"N	104°57'41.080"W	1.29	
3698.00	9.700	358.570	3669.48	-4.33	343.92	-7.90	40°13'05.675"N	104°57'41.081"W	0.53	
3790.00	11.700	0.200	3759.88	-4.32	361.00	-8.06	40°13'05.843"N	104°57'41.083"W	2.20	
3881.00	10.720	1.110	3849.14	-3.94	378.69	-7.86	40°13'06.018"N	104°57'41.080"W	1.09	
3973.00	9.100	356.740	3939.77	-4.02	394.51	-8.11	40°13'06.175"N	104°57'41.084"W	1.94	
4065.00	6.840	357.300	4030.87	-4.56	407.25	-8.78	40°13'06.300"N	104°57'41.092"W	2.46	

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Area	COLORADO	Well	REYNOLDS CATTLE 28N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 28N-19HZ AWP
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (166 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4157.00	5.190	355.930	4122.36	-5.02	416.87	-9.34	40°13'06.395"N	104°57'41.099"W	1.80	
4249.00	4.920	354.930	4214.01	-5.58	424.95	-9.98	40°13'06.475"N	104°57'41.108"W	0.31	
4334.00	3.890	358.530	4298.75	-5.90	431.46	-10.38	40°13'06.540"N	104°57'41.113"W	1.25	
4419.00	2.590	359.210	4383.62	-5.96	436.27	-10.48	40°13'06.587"N	104°57'41.114"W	1.53	
4504.00	1.110	339.470	4468.57	-6.24	438.96	-10.79	40°13'06.614"N	104°57'41.118"W	1.87	
4590.00	0.150	153.860	4554.56	-6.48	439.64	-11.04	40°13'06.620"N	104°57'41.121"W	1.46	
4760.00	0.390	176.110	4724.56	-6.35	438.86	-10.90	40°13'06.613"N	104°57'41.119"W	0.15	
4930.00	0.380	208.100	4894.56	-6.59	437.79	-11.13	40°13'06.602"N	104°57'41.122"W	0.12	
5100.00	0.420	238.470	5064.56	-7.39	436.96	-11.92	40°13'06.594"N	104°57'41.133"W	0.13	
5270.00	0.210	63.280	5234.55	-7.65	436.78	-12.17	40°13'06.592"N	104°57'41.136"W	0.37	
5440.00	0.030	229.050	5404.55	-7.40	436.89	-11.93	40°13'06.593"N	104°57'41.133"W	0.14	
5611.00	0.500	220.410	5575.55	-7.92	436.29	-12.45	40°13'06.587"N	104°57'41.139"W	0.28	
5781.00	0.280	34.320	5745.55	-8.17	436.07	-12.69	40°13'06.585"N	104°57'41.143"W	0.46	
5952.00	0.190	308.840	5916.55	-8.15	436.59	-12.68	40°13'06.590"N	104°57'41.142"W	0.19	
6122.00	0.350	344.580	6086.55	-8.50	437.27	-13.04	40°13'06.597"N	104°57'41.147"W	0.13	
6292.00	0.410	303.610	6256.54	-9.14	438.11	-13.68	40°13'06.605"N	104°57'41.155"W	0.16	
6377.00	0.460	312.930	6341.54	-9.64	438.51	-14.18	40°13'06.609"N	104°57'41.162"W	0.10	
6462.00	0.620	324.180	6426.54	-10.15	439.11	-14.70	40°13'06.615"N	104°57'41.169"W	0.22	
6547.00	0.770	39.220	6511.53	-10.05	439.93	-14.61	40°13'06.623"N	104°57'41.167"W	1.01	
6590.00	5.690	92.640	6554.45	-7.74	440.05	-12.30	40°13'06.625"N	104°57'41.138"W	12.25	
6632.00	11.420	94.770	6595.97	-1.51	439.61	-6.07	40°13'06.620"N	104°57'41.057"W	13.66	
6675.00	18.570	96.640	6637.48	9.53	438.46	4.99	40°13'06.609"N	104°57'40.915"W	16.66	
6718.00	21.540	97.840	6677.87	24.14	436.60	19.61	40°13'06.590"N	104°57'40.726"W	6.97	
6761.00	25.640	99.040	6717.27	41.13	434.06	36.63	40°13'06.565"N	104°57'40.507"W	9.60	
6803.00	25.750	98.380	6755.11	59.10	431.30	54.63	40°13'06.538"N	104°57'40.275"W	0.73	
6846.00	27.380	97.600	6793.57	78.11	428.63	73.67	40°13'06.512"N	104°57'40.029"W	3.88	
6888.00	30.750	97.190	6830.28	98.31	426.01	93.90	40°13'06.486"N	104°57'39.769"W	8.04	
6931.00	38.850	96.480	6865.56	122.63	423.10	118.25	40°13'06.457"N	104°57'39.455"W	18.86	
6973.00	44.440	93.580	6896.93	150.39	420.70	146.04	40°13'06.433"N	104°57'39.096"W	14.08	
7016.00	47.470	90.750	6926.83	181.25	419.55	176.91	40°13'06.422"N	104°57'38.698"W	8.49	
7058.00	47.510	90.730	6955.21	212.21	419.15	207.87	40°13'06.418"N	104°57'38.299"W	0.10	
7101.00	48.460	91.090	6983.99	244.14	418.64	239.82	40°13'06.413"N	104°57'37.888"W	2.30	
7143.00	51.150	89.850	7011.09	276.22	418.39	271.89	40°13'06.410"N	104°57'37.474"W	6.79	
7186.00	52.980	88.780	7037.53	310.13	418.80	305.80	40°13'06.414"N	104°57'37.037"W	4.69	
7228.00	55.830	86.770	7061.97	344.26	420.13	339.92	40°13'06.428"N	104°57'36.597"W	7.82	
7271.00	63.780	85.160	7083.58	381.33	422.77	376.96	40°13'06.454"N	104°57'36.120"W	18.77	
7313.00	67.940	87.200	7100.76	419.58	425.31	415.19	40°13'06.479"N	104°57'35.627"W	10.85	
7356.00	72.250	88.480	7115.40	459.99	426.82	455.59	40°13'06.494"N	104°57'35.106"W	10.41	
7398.00	74.750	88.680	7127.32	500.25	427.82	495.84	40°13'06.504"N	104°57'34.587"W	5.97	
7441.00	75.300	88.410	7138.43	541.78	428.88	537.37	40°13'06.514"N	104°57'34.052"W	1.42	
7484.00	79.060	88.940	7147.97	583.70	429.84	579.28	40°13'06.524"N	104°57'33.512"W	8.83	
7527.00	80.560	89.370	7155.58	626.02	430.47	621.59	40°13'06.530"N	104°57'32.966"W	3.62	
7555.00	82.510	89.920	7159.70	653.71	430.64	649.29	40°13'06.531"N	104°57'32.609"W	7.23	
7610.00†	86.027	91.237	7165.19	708.42	430.09	704.00	40°13'06.526"N	104°57'31.904"W	6.82	7" Casing Point
7686.00	90.890	93.040	7167.24	784.28	427.25	779.89	40°13'06.498"N	104°57'30.926"W	6.82	

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Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 28N-19HZ AWP
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (166 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7778.00	91.260	91.840	7165.51	876.13	423.33	871.79	40°13'06.459"N	104°57'29.741"W	1.36	
7869.00	91.290	90.800	7163.49	967.06	421.24	962.74	40°13'06.438"N	104°57'28.568"W	1.14	
7962.00	90.670	91.030	7161.90	1060.01	419.75	1055.72	40°13'06.424"N	104°57'27.370"W	0.71	
8054.00	89.040	90.560	7162.13	1151.98	418.48	1147.70	40°13'06.411"N	104°57'26.184"W	1.84	
8145.00	89.930	90.840	7162.95	1242.95	417.37	1238.69	40°13'06.400"N	104°57'25.011"W	1.03	
8237.00	90.580	90.930	7162.54	1334.92	415.94	1330.68	40°13'06.386"N	104°57'23.825"W	0.71	
8328.00	90.610	90.920	7161.59	1425.88	414.48	1421.66	40°13'06.371"N	104°57'22.653"W	0.03	
8420.00	91.600	91.780	7159.82	1517.81	412.31	1513.62	40°13'06.350"N	104°57'21.467"W	1.43	
8511.00	91.590	90.930	7157.29	1608.72	410.16	1604.56	40°13'06.329"N	104°57'20.295"W	0.93	
8603.00	90.670	89.530	7155.47	1700.69	409.79	1696.53	40°13'06.325"N	104°57'19.109"W	1.82	
8695.00	87.770	88.850	7156.72	1792.67	411.09	1788.51	40°13'06.338"N	104°57'17.924"W	3.24	
8787.00	88.210	88.800	7159.95	1884.61	412.97	1880.43	40°13'06.356"N	104°57'16.739"W	0.48	
8879.00	88.790	89.150	7162.36	1976.58	414.62	1972.38	40°13'06.372"N	104°57'15.553"W	0.74	
8971.00	89.600	89.130	7163.65	2068.57	416.00	2064.36	40°13'06.386"N	104°57'14.368"W	0.88	
9063.00	90.830	89.710	7163.31	2160.56	416.93	2156.36	40°13'06.395"N	104°57'13.182"W	1.48	
9154.00	90.640	89.540	7162.14	2251.55	417.53	2247.35	40°13'06.401"N	104°57'12.009"W	0.28	
9246.00	91.040	91.170	7160.79	2343.53	416.96	2339.33	40°13'06.395"N	104°57'10.823"W	1.82	
9338.00	88.950	90.200	7160.80	2435.50	415.86	2431.32	40°13'06.384"N	104°57'09.637"W	2.50	
9430.00	88.240	89.410	7163.05	2527.47	416.17	2523.29	40°13'06.387"N	104°57'08.452"W	1.15	
9521.00	88.950	89.680	7165.28	2618.44	416.89	2614.26	40°13'06.394"N	104°57'07.279"W	0.83	
9704.00	90.700	89.670	7165.84	2801.43	417.93	2797.25	40°13'06.404"N	104°57'04.920"W	0.96	
9796.00	91.470	90.080	7164.10	2893.41	418.13	2889.23	40°13'06.406"N	104°57'03.734"W	0.95	
9888.00	91.380	89.540	7161.81	2985.38	418.44	2981.20	40°13'06.409"N	104°57'02.549"W	0.59	
9979.00	90.180	89.460	7160.58	3076.37	419.23	3072.19	40°13'06.417"N	104°57'01.376"W	1.32	
10071.00	88.860	89.300	7161.35	3168.36	420.23	3164.18	40°13'06.427"N	104°57'00.190"W	1.45	
10163.00	89.380	89.390	7162.76	3260.35	421.28	3256.16	40°13'06.437"N	104°56'59.004"W	0.57	
10255.00	90.210	90.570	7163.09	3352.34	421.31	3348.16	40°13'06.437"N	104°56'57.819"W	1.57	
10346.00	90.640	90.940	7162.41	3443.32	420.11	3439.15	40°13'06.425"N	104°56'56.646"W	0.62	
10438.00	90.950	90.970	7161.14	3535.27	418.58	3531.12	40°13'06.410"N	104°56'55.460"W	0.34	
10523.00	89.500	91.020	7160.80	3620.24	417.10	3616.11	40°13'06.395"N	104°56'54.364"W	1.71	
10609.00	89.690	91.430	7161.41	3706.19	415.26	3702.09	40°13'06.377"N	104°56'53.256"W	0.53	
10694.00	90.460	91.550	7161.30	3791.14	413.05	3787.06	40°13'06.355"N	104°56'52.161"W	0.92	
10780.00	90.760	90.630	7160.38	3877.09	411.42	3873.03	40°13'06.339"N	104°56'51.052"W	1.13	
10865.00	91.600	90.370	7158.63	3962.06	410.67	3958.01	40°13'06.331"N	104°56'49.957"W	1.03	
10950.00	91.320	89.900	7156.47	4047.02	410.47	4042.98	40°13'06.329"N	104°56'48.862"W	0.64	
11035.00	90.890	89.420	7154.83	4132.01	410.98	4127.97	40°13'06.334"N	104°56'47.766"W	0.76	
11120.00	88.760	88.870	7155.09	4217.00	412.25	4212.95	40°13'06.346"N	104°56'46.671"W	2.59	
11206.00	89.160	88.780	7156.65	4302.98	414.01	4298.92	40°13'06.364"N	104°56'45.562"W	0.48	
11291.00	89.900	88.850	7157.35	4387.97	415.77	4383.90	40°13'06.381"N	104°56'44.467"W	0.87	
11376.00	90.240	88.900	7157.24	4472.97	417.44	4468.88	40°13'06.397"N	104°56'43.372"W	0.40	
11461.00	90.890	88.850	7156.40	4557.96	419.11	4553.86	40°13'06.413"N	104°56'42.276"W	0.77	
11546.00	90.520	88.100	7155.36	4642.94	421.37	4638.82	40°13'06.436"N	104°56'41.181"W	0.98	
11631.00	90.460	87.830	7154.63	4727.91	424.39	4723.77	40°13'06.465"N	104°56'40.086"W	0.33	
11716.00	89.040	88.100	7155.00	4812.88	427.40	4808.71	40°13'06.495"N	104°56'38.991"W	1.70	
11801.00	88.820	88.080	7156.59	4897.84	430.24	4893.65	40°13'06.523"N	104°56'37.896"W	0.26	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 REYNOLDS CATTLE 28N-19HZ (590'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 28N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 28N-19HZ AWP
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (166 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11886.00	89.010	88.850	7158.20	4982.82	432.51	4978.60	40°13'06.545"N	104°56'36.801"W	0.93	
11971.00	90.460	88.150	7158.59	5067.80	434.74	5063.57	40°13'06.567"N	104°56'35.705"W	1.89	
12056.00	90.920	87.710	7157.57	5152.77	437.81	5148.51	40°13'06.597"N	104°56'34.611"W	0.75	
12141.00	91.320	87.940	7155.91	5237.72	441.03	5233.43	40°13'06.629"N	104°56'33.516"W	0.54	
12226.00	91.630	87.720	7153.72	5322.66	444.25	5318.34	40°13'06.660"N	104°56'32.421"W	0.45	
12312.00	92.330	87.740	7150.75	5408.57	447.66	5404.22	40°13'06.694"N	104°56'31.314"W	0.81	
12397.00	91.410	87.890	7147.97	5493.49	450.89	5489.11	40°13'06.726"N	104°56'30.220"W	1.10	
12482.00	90.860	88.540	7146.29	5578.46	453.54	5574.05	40°13'06.752"N	104°56'29.125"W	1.00	
12567.00	89.590	88.320	7145.96	5663.44	455.87	5659.02	40°13'06.774"N	104°56'28.030"W	1.52	
12652.00	89.900	88.270	7146.33	5748.42	458.40	5743.98	40°13'06.799"N	104°56'26.934"W	0.37	
12737.00	91.070	88.090	7145.62	5833.40	461.10	5828.93	40°13'06.826"N	104°56'25.839"W	1.39	
12823.00	90.670	88.560	7144.31	5919.37	463.61	5914.89	40°13'06.850"N	104°56'24.731"W	0.72	
12908.00	90.210	89.190	7143.66	6004.37	465.28	5999.87	40°13'06.867"N	104°56'23.636"W	0.92	
12992.00	89.220	88.650	7144.07	6088.36	466.86	6083.85	40°13'06.882"N	104°56'22.553"W	1.34	
13078.00	89.500	88.940	7145.04	6174.35	468.67	6169.82	40°13'06.900"N	104°56'21.445"W	0.47	
13163.00	89.960	89.170	7145.44	6259.35	470.07	6254.81	40°13'06.913"N	104°56'20.349"W	0.61	
13248.00	90.120	89.050	7145.38	6344.35	471.39	6339.80	40°13'06.926"N	104°56'19.254"W	0.24	
13334.00	90.700	88.830	7144.76	6430.34	472.99	6425.78	40°13'06.942"N	104°56'18.145"W	0.72	
13418.00	90.240	89.000	7144.07	6514.34	474.58	6509.77	40°13'06.957"N	104°56'17.063"W	0.58	
13503.00	89.560	88.070	7144.22	6599.32	476.75	6594.74	40°13'06.979"N	104°56'15.967"W	1.36	
13589.00	90.580	88.330	7144.12	6685.30	479.45	6680.69	40°13'07.005"N	104°56'14.859"W	1.22	
13674.00	91.500	88.720	7142.57	6770.28	481.64	6765.65	40°13'07.026"N	104°56'13.764"W	1.18	
13759.00	90.580	88.380	7141.03	6855.25	483.79	6850.61	40°13'07.047"N	104°56'12.669"W	1.15	
13843.00	90.460	88.580	7140.27	6939.24	486.02	6934.57	40°13'07.069"N	104°56'11.586"W	0.28	
13929.00	90.520	88.570	7139.53	7025.23	488.15	7020.54	40°13'07.090"N	104°56'10.478"W	0.07	
14013.00	90.760	88.760	7138.59	7109.22	490.11	7104.52	40°13'07.109"N	104°56'09.396"W	0.36	
14099.00	90.760	89.510	7137.45	7195.21	491.41	7190.50	40°13'07.122"N	104°56'08.287"W	0.87	
14184.00	90.610	89.340	7136.44	7280.20	492.26	7275.49	40°13'07.130"N	104°56'07.192"W	0.27	
14269.00	90.490	89.380	7135.62	7365.20	493.21	7360.48	40°13'07.139"N	104°56'06.096"W	0.15	
14366.00	90.180	89.320	7135.05	7462.19	494.31	7457.47	40°13'07.150"N	104°56'04.846"W	0.33	Last BHI MWD+IFR Surveys
14435.00	90.180	89.320	7134.84	7531.19	495.13	7526.47	40°13'07.158"N	104°56'03.956"W	0.00	Projection to Bit

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 REYNOLDS CATTLE 28N-19HZ (590'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 28N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 28N-19HZ AWB
Facility	SEC.23-T3N-R68W		

HOLE & CASING SECTIONS - Ref Wellbore: REYNOLDS CATTLE 28N-19HZ AWB Ref Wellpath: REYNOLDS CATTLE 28N-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	1364.00	1348.00	16.00	1363.96	0.00	0.00	3.53	-4.10
9.625in Casing Surface	16.00	1354.00	1338.00	16.00	1353.96	0.00	0.00	3.56	-4.02
8.75in Open Hole	1364.00	7620.00	6256.00	1363.96	7165.83	3.53	-4.10	429.85	713.97
7in Casing Intermediate	16.00	7610.00	7594.00	16.00	7165.19	0.00	0.00	430.09	704.00
6.125in Open Hole	7620.00	14435.00	6815.00	7165.83	7134.84	429.85	713.97	495.13	7526.47

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	29.91	-0.54	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.19-T3N-R67W SECTION LINES		-1.00	29.91	-0.54	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.23-T3N-R68W HARDLINES (460' SETBACKS)		-1.00	29.91	-0.54	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.23-T3N-R68W SECTION LINES		-1.00	29.91	-0.54	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.24-T3N-R68W HARDLINES (460' SETBACKS)		-1.00	29.91	-0.54	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.24-T3N-R68W SECTION LINES		-1.00	29.91	-0.54	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
REYNOLDS CATTLE 28N-19HZ BHL ON PLAT (185'FNL & 2071'FWL, SEC.19) REV-1		7107.00	403.40	7551.43	3157962.24	1322910.21	40°13'06.251"N	104°56'03.635"W	point
REYNOLDS CATTLE 28N-19HZ LANDBOX		7107.00	0.04	0.02	3150413.75	1322461.02	40°13'02.276"N	104°57'40.979"W	polygon
REYNOLDS CATTLE 28N-19HZ BHL (195'FSL & 2071'FWL, SEC.18) REV-3		7137.00	783.40	7551.43	3157959.93	1323290.19	40°13'10.006"N	104°56'03.634"W	point
REYNOLDS CATTLE 28N-19HZ BHL ON PLAT (185'FNL & 2071'FWL, SEC.19) REV-2		7137.00	403.40	7551.43	3157962.24	1322910.21	40°13'06.251"N	104°56'03.635"W	point
REYNOLDS CATTLE 28N-19HZ BHL ON PLAT (85'FNL & 2071'FWL, SEC.19) REV-4		7137.00	503.40	7551.43	3157961.63	1323010.21	40°13'07.239"N	104°56'03.635"W	point

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 REYNOLDS CATTLE 28N-19HZ (590'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 28N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 28N-19HZ AWB
Facility	SEC.23-T3N-R68W		

WELLPATH COMPOSITION - Ref Wellbore: REYNOLDS CATTLE 28N-19HZ AWB Ref Wellpath: REYNOLDS CATTLE 28N-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 28N-19HZ AWB
1281.00	7555.00	NaviTrak (IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <1400-7555>	REYNOLDS CATTLE 28N-19HZ AWB
7555.00	14366.00	NaviTrak (IFR)	BHI MWD+IFR SURVEYS 6 1/8" HOLE <7686-14366>	REYNOLDS CATTLE 28N-19HZ AWB
14366.00	14435.00	Blind Drilling (std)	Projection to bit	REYNOLDS CATTLE 28N-19HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#07 REYNOLDS CATTLE 28N-19HZ (590'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 28N-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 28N-19HZ AWP
Facility	SEC.23-T3N-R68W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	162.560	16.00	Tie-On
116.00	0.460	162.560	116.00	Begin GYRO Surveys
1281.00	0.690	277.020	1280.96	Tie-Into GYRO Surveys
1400.00	0.420	221.750	1399.95	Begin BHI MWD+IFR Surveys
7610.00	86.027	91.237	7165.19	7" Casing Point
14366.00	90.180	89.320	7135.05	Last BHI MWD+IFR Surveys
14435.00	90.180	89.320	7134.84	Projection to Bit