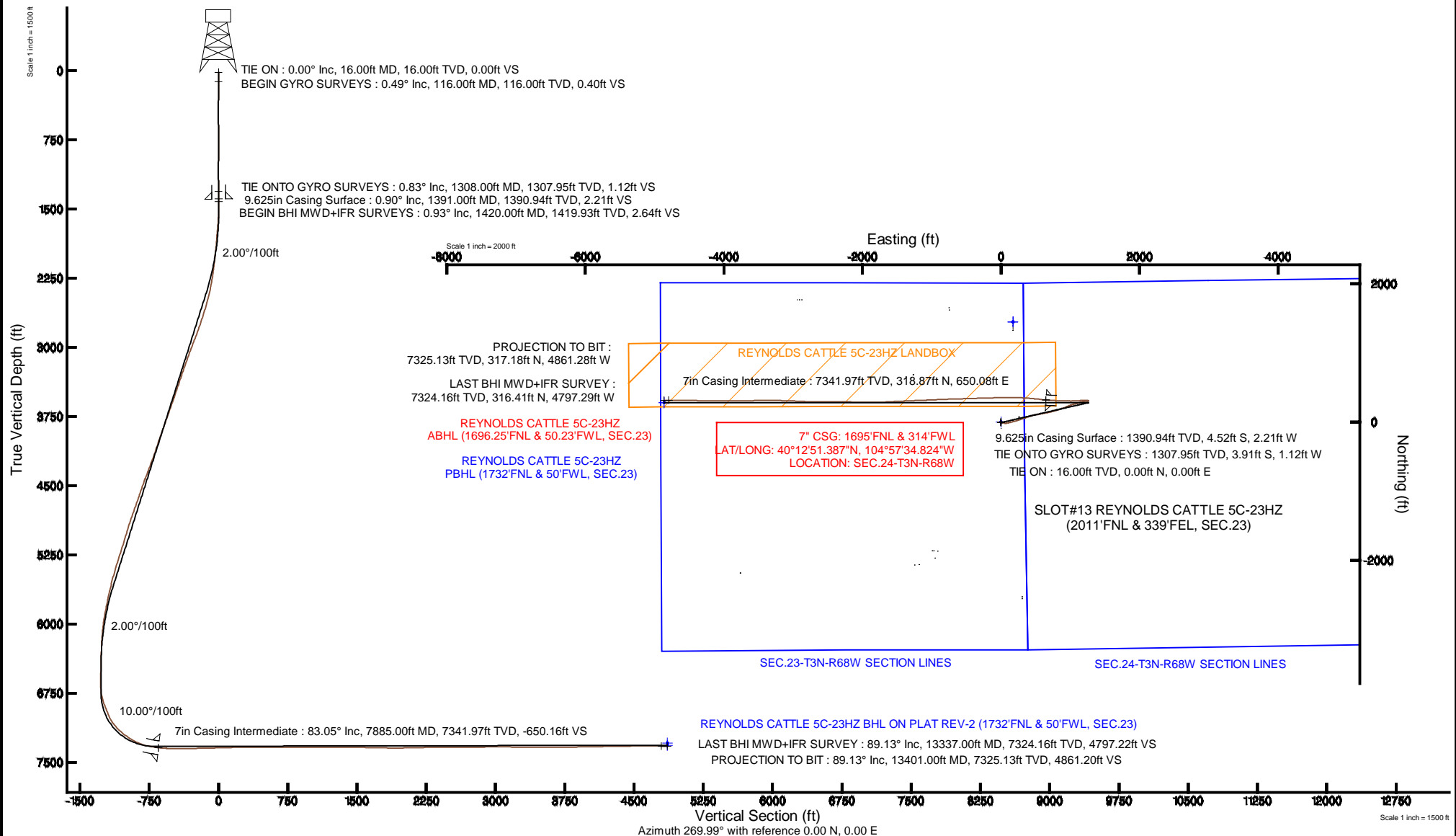


KERR-MCGEE OIL & GAS ONSHORE LP

Location:	COLORADO	Slot:	SLOT#13 REYNOLDS CATTLE 5C-23HZ (2011FNL & 339FEL, SEC.23)
Field:	WELD COUNTY (KERR MCGEE)	Well:	REYNOLDS CATTLE 5C-23HZ
Facility:	SEC.23-T3N-R68W	Wellbore:	REYNOLDS CATTLE 5C-23HZ PWB

Plot reference wellpath is REYNOLDS CATTLE 5C-23HZ (REV-A.0) PWP	
True vertical depths are referenced to XTREME 24 (16' RKB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 24 (16' RKB) (RKB)	North Reference: True north
XTREME 24 (16' RKB) (RKB) to Mean Sea Level: 4972 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#13 REYNOLDS CATTLE 5C-23HZ (2011 FNL & 339FEL, SEC 23)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: robials01 on 23 Jul/2014



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#13 REYNOLDS CATTLE 5C-23HZ (2011'FNL & 339'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 5C-23HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 5C-23HZ AWB
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	Robiale01
Scale	0.999957	Report Generated	23/Jul/2014 at 13:25
Convergence at slot	n/a	Database/Source file	WellArchitectDB/REYNOLDS_CATTLE_5C-23HZ_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-1767.10	2848.44	3150249.76	1321039.25	40°12'48.236"N	104°57'43.204"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 24 (16' RKB) (RKB) to Facility Vertical Datum	4972.00ft
Horizontal Reference Pt	Slot	XTREME 24 (16' RKB) (RKB) to Mean Sea Level	4972.00ft
Vertical Reference Pt	XTREME 24 (16' RKB) (RKB)	XTREME 24 (16' RKB) (RKB) to Mud Line at Slot (SLOT#13 REYNOLDS CATTLE 5C-23HZ (2011'FNL & 339'FEL, SEC.23))	4972.00ft
MD Reference Pt	XTREME 24 (16' RKB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	273.73°

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#13 REYNOLDS CATTLE 5C-23HZ (2011'FNL & 339'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 5C-23HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 5C-23HZ AWB
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (141 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	250.460	0.00	0.00	0.00	0.00	40°12'48.236"N	104°57'43.204"W	0.00	
16.00	0.000	250.460	16.00	0.00	0.00	0.00	40°12'48.236"N	104°57'43.204"W	0.00	TIE ON
116.00	0.490	250.460	116.00	0.39	-0.14	-0.40	40°12'48.235"N	104°57'43.209"W	0.49	BEGIN GYRO SURVEYS
216.00	0.420	164.350	216.00	0.66	-0.64	-0.71	40°12'48.230"N	104°57'43.213"W	0.62	
316.00	0.590	78.080	315.99	0.05	-0.89	-0.10	40°12'48.227"N	104°57'43.205"W	0.70	
416.00	0.710	14.180	415.99	-0.56	-0.18	0.55	40°12'48.234"N	104°57'43.197"W	0.70	
516.00	0.300	305.010	515.99	-0.45	0.57	0.49	40°12'48.242"N	104°57'43.198"W	0.67	
616.00	0.590	236.140	615.98	0.18	0.44	-0.15	40°12'48.240"N	104°57'43.206"W	0.56	
716.00	0.920	198.720	715.97	0.80	-0.61	-0.84	40°12'48.230"N	104°57'43.215"W	0.58	
816.00	0.730	165.060	815.96	0.80	-1.99	-0.93	40°12'48.216"N	104°57'43.216"W	0.51	
916.00	0.600	140.850	915.96	0.24	-3.01	-0.44	40°12'48.206"N	104°57'43.210"W	0.31	
1016.00	0.370	101.340	1015.95	-0.44	-3.48	0.21	40°12'48.202"N	104°57'43.201"W	0.39	
1116.00	0.200	315.260	1115.95	-0.63	-3.42	0.40	40°12'48.202"N	104°57'43.199"W	0.55	
1216.00	0.530	254.870	1215.95	-0.06	-3.41	-0.17	40°12'48.202"N	104°57'43.206"W	0.46	
1308.00	0.830	235.230	1307.95	0.87	-3.91	-1.12	40°12'48.197"N	104°57'43.218"W	0.41	TIE ONTO GYRO SURVEYS
1420.00	0.930	248.280	1419.93	2.32	-4.70	-2.63	40°12'48.190"N	104°57'43.238"W	0.20	BEGIN BHI MWD+IFR SURVEYS
1499.00	0.560	85.860	1498.93	2.52	-4.91	-2.85	40°12'48.187"N	104°57'43.241"W	1.87	
1594.00	2.980	75.810	1593.88	-0.29	-4.28	0.01	40°12'48.194"N	104°57'43.204"W	2.56	
1688.00	5.400	84.510	1687.62	-6.98	-3.25	6.79	40°12'48.204"N	104°57'43.117"W	2.65	
1782.00	5.100	111.900	1781.24	-15.32	-4.39	15.07	40°12'48.193"N	104°57'43.010"W	2.66	
1876.00	6.020	123.450	1874.80	-23.57	-8.66	23.06	40°12'48.150"N	104°57'42.907"W	1.54	
1974.00	6.680	106.690	1972.21	-33.59	-13.13	32.80	40°12'48.106"N	104°57'42.781"W	2.00	
2066.00	5.830	95.650	2063.66	-43.47	-15.13	42.58	40°12'48.086"N	104°57'42.655"W	1.60	
2159.00	7.430	96.710	2156.04	-54.20	-16.30	53.25	40°12'48.075"N	104°57'42.518"W	1.73	
2252.00	9.530	88.390	2248.02	-67.87	-16.78	66.92	40°12'48.070"N	104°57'42.341"W	2.61	
2345.00	10.980	79.990	2339.54	-84.14	-15.03	83.34	40°12'48.087"N	104°57'42.130"W	2.24	
2438.00	13.730	76.500	2430.37	-103.29	-10.91	102.80	40°12'48.128"N	104°57'41.879"W	3.06	
2531.00	15.840	77.400	2520.29	-126.02	-5.57	125.92	40°12'48.181"N	104°57'41.581"W	2.28	
2625.00	18.480	76.920	2610.10	-152.59	0.60	152.96	40°12'48.242"N	104°57'41.232"W	2.81	
2718.00	18.410	73.670	2698.32	-180.50	8.07	181.41	40°12'48.316"N	104°57'40.866"W	1.11	
2811.00	19.570	74.930	2786.26	-209.04	16.25	210.54	40°12'48.397"N	104°57'40.490"W	1.32	
2905.00	22.020	73.190	2874.13	-240.44	25.44	242.62	40°12'48.487"N	104°57'40.077"W	2.69	
2997.00	21.650	71.650	2959.53	-272.32	35.77	275.23	40°12'48.589"N	104°57'39.656"W	0.74	
3089.00	21.370	72.160	3045.12	-303.64	46.25	307.30	40°12'48.693"N	104°57'39.243"W	0.37	
3181.00	20.740	71.810	3130.98	-334.34	56.47	338.73	40°12'48.794"N	104°57'38.838"W	0.70	
3273.00	20.210	69.980	3217.17	-363.99	66.99	369.14	40°12'48.898"N	104°57'38.446"W	0.90	
3365.00	19.810	70.360	3303.62	-392.85	77.67	398.75	40°12'49.004"N	104°57'38.064"W	0.46	
3457.00	19.560	72.050	3390.24	-421.47	87.66	428.09	40°12'49.102"N	104°57'37.686"W	0.68	
3549.00	19.260	75.960	3477.01	-450.23	96.09	457.46	40°12'49.186"N	104°57'37.307"W	1.45	
3640.00	18.880	79.320	3563.02	-478.78	102.46	486.49	40°12'49.248"N	104°57'36.933"W	1.28	
3732.00	20.060	80.350	3649.76	-508.55	107.86	516.67	40°12'49.302"N	104°57'36.544"W	1.34	
3824.00	19.870	78.520	3736.23	-538.99	113.62	547.55	40°12'49.359"N	104°57'36.146"W	0.71	
3916.00	19.800	78.810	3822.77	-569.13	119.75	578.16	40°12'49.419"N	104°57'35.752"W	0.13	
4008.00	19.640	79.990	3909.38	-599.21	125.47	608.67	40°12'49.476"N	104°57'35.358"W	0.47	
4100.00	19.220	79.910	3996.14	-628.93	130.81	638.80	40°12'49.529"N	104°57'34.970"W	0.46	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#13 REYNOLDS CATTLE 5C-23HZ (2011'FNL & 339'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 5C-23HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 5C-23HZ AWB
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (141 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4192.00	18.410	80.330	4083.22	-657.77	135.90	668.03	40°12'49.579"N	104°57'34.593"W	0.89	
4284.00	19.740	79.090	4170.17	-686.93	141.28	697.61	40°12'49.632"N	104°57'34.212"W	1.51	
4376.00	21.640	74.490	4256.24	-717.98	148.76	729.22	40°12'49.706"N	104°57'33.804"W	2.72	
4468.00	21.670	73.230	4341.74	-749.91	158.20	761.83	40°12'49.799"N	104°57'33.384"W	0.51	
4560.00	21.160	71.950	4427.39	-781.24	168.24	793.88	40°12'49.898"N	104°57'32.971"W	0.75	
4650.00	20.450	71.170	4511.52	-810.84	178.35	824.20	40°12'49.998"N	104°57'32.580"W	0.85	
4741.00	19.750	71.010	4596.98	-839.71	188.48	853.79	40°12'50.098"N	104°57'32.199"W	0.77	
4827.00	20.530	71.690	4677.72	-867.09	197.95	881.85	40°12'50.192"N	104°57'31.837"W	0.95	
4912.00	20.690	70.090	4757.28	-894.66	207.75	910.11	40°12'50.289"N	104°57'31.473"W	0.69	
4997.00	19.850	69.810	4837.02	-921.60	217.84	937.78	40°12'50.389"N	104°57'31.116"W	0.99	
5082.00	19.230	69.010	4917.12	-947.51	227.84	964.39	40°12'50.487"N	104°57'30.773"W	0.79	
5167.00	18.280	67.260	4997.61	-972.16	238.00	989.76	40°12'50.588"N	104°57'30.446"W	1.30	
5252.00	17.720	70.790	5078.45	-996.01	247.41	1014.27	40°12'50.681"N	104°57'30.130"W	1.44	
5337.00	17.390	72.960	5159.49	-1019.79	255.39	1038.63	40°12'50.760"N	104°57'29.816"W	0.86	
5422.00	18.660	76.520	5240.32	-1044.66	262.28	1064.00	40°12'50.828"N	104°57'29.489"W	1.98	
5507.00	18.020	76.710	5321.00	-1070.22	268.48	1090.01	40°12'50.889"N	104°57'29.154"W	0.76	
5592.00	17.420	74.630	5401.97	-1094.82	274.87	1115.08	40°12'50.952"N	104°57'28.831"W	1.03	
5677.00	15.850	71.520	5483.41	-1117.59	281.92	1138.36	40°12'51.022"N	104°57'28.531"W	2.12	
5762.00	14.300	76.400	5565.49	-1138.36	288.07	1159.57	40°12'51.082"N	104°57'28.257"W	2.36	
5847.00	13.560	78.590	5647.99	-1158.00	292.51	1179.54	40°12'51.126"N	104°57'28.000"W	1.07	
5932.00	11.330	77.910	5730.99	-1175.65	296.23	1197.48	40°12'51.163"N	104°57'27.769"W	2.63	
6017.00	11.430	80.670	5814.32	-1191.89	299.34	1213.95	40°12'51.194"N	104°57'27.556"W	0.65	
6102.00	10.190	85.900	5897.81	-1207.54	301.25	1229.76	40°12'51.213"N	104°57'27.352"W	1.86	
6187.00	8.140	79.690	5981.72	-1220.83	302.86	1243.19	40°12'51.229"N	104°57'27.179"W	2.67	
6272.00	5.890	77.590	6066.08	-1230.86	304.88	1253.37	40°12'51.248"N	104°57'27.048"W	2.66	
6358.00	4.170	90.890	6151.75	-1238.22	305.78	1260.80	40°12'51.257"N	104°57'26.952"W	2.40	
6443.00	2.520	78.100	6236.60	-1243.11	306.11	1265.72	40°12'51.261"N	104°57'26.889"W	2.12	
6528.00	2.200	75.740	6321.53	-1246.46	306.90	1269.13	40°12'51.268"N	104°57'26.845"W	0.39	
6613.00	1.780	37.180	6406.48	-1248.74	308.36	1271.51	40°12'51.283"N	104°57'26.814"W	1.61	
6698.00	0.500	75.800	6491.46	-1249.82	309.50	1272.67	40°12'51.294"N	104°57'26.799"W	1.68	
6783.00	0.350	84.900	6576.46	-1250.43	309.61	1273.29	40°12'51.295"N	104°57'26.791"W	0.19	
6868.00	0.500	99.910	6661.46	-1251.05	309.57	1273.91	40°12'51.295"N	104°57'26.783"W	0.22	
6954.00	6.730	264.120	6747.27	-1246.45	308.99	1269.26	40°12'51.289"N	104°57'26.843"W	8.39	
7039.00	19.430	279.880	6829.92	-1227.40	310.91	1250.30	40°12'51.308"N	104°57'27.088"W	15.38	
7124.00	20.240	271.510	6909.89	-1198.65	313.73	1221.66	40°12'51.336"N	104°57'27.457"W	3.47	
7209.00	23.720	267.330	6988.71	-1166.95	313.32	1189.88	40°12'51.332"N	104°57'27.866"W	4.49	
7294.00	33.000	265.940	7063.42	-1126.94	310.88	1149.62	40°12'51.308"N	104°57'28.385"W	10.94	
7379.00	45.300	265.690	7129.22	-1073.89	306.95	1096.20	40°12'51.269"N	104°57'29.074"W	14.47	
7464.00	49.720	269.090	7186.62	-1011.62	304.17	1033.62	40°12'51.242"N	104°57'29.881"W	5.98	
7549.00	56.950	271.480	7237.35	-943.62	304.57	965.49	40°12'51.246"N	104°57'30.759"W	8.80	
7634.00	63.750	271.990	7279.38	-869.83	306.82	891.70	40°12'51.268"N	104°57'31.710"W	8.02	
7719.00	74.240	272.350	7309.80	-790.62	309.83	812.52	40°12'51.298"N	104°57'32.731"W	12.35	
7804.00	79.330	272.850	7329.23	-707.92	313.58	729.88	40°12'51.335"N	104°57'33.796"W	6.02	
7830.00	80.040	273.380	7333.88	-682.34	314.97	704.34	40°12'51.348"N	104°57'34.125"W	3.39	
7885.00†	83.046	274.826	7341.97	-627.94	318.87	650.08	40°12'51.387"N	104°57'34.824"W	6.05	7" CASING POINT

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#13 REYNOLDS CATTLE 5C-23HZ (2011'FNL & 339'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 5C-23HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 5C-23HZ AWB
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (141 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7972.00	87.810	277.080	7348.91	-541.32	327.87	563.86	40°12'51.476"N	104°57'35.936"W	6.05	
8064.00	89.100	275.520	7351.39	-449.45	337.96	472.45	40°12'51.576"N	104°57'37.114"W	2.20	
8156.00	90.770	274.550	7351.49	-357.48	346.03	380.81	40°12'51.655"N	104°57'38.295"W	2.10	
8248.00	91.130	272.550	7349.96	-265.49	351.73	289.01	40°12'51.712"N	104°57'39.479"W	2.21	
8333.00	91.230	271.570	7348.21	-180.55	354.78	204.08	40°12'51.742"N	104°57'40.573"W	1.16	
8418.00	91.350	270.420	7346.30	-95.67	356.26	119.12	40°12'51.757"N	104°57'41.669"W	1.36	
8504.00	91.780	267.960	7343.95	-9.98	355.04	33.16	40°12'51.745"N	104°57'42.777"W	2.90	
8589.00	91.660	268.480	7341.40	74.59	352.40	-51.76	40°12'51.718"N	104°57'43.871"W	0.63	
8673.00	91.450	268.340	7339.12	158.20	350.07	-135.69	40°12'51.695"N	104°57'44.953"W	0.30	
8759.00	91.260	268.870	7337.09	243.83	347.98	-221.64	40°12'51.675"N	104°57'46.061"W	0.65	
8844.00	90.360	267.590	7335.89	328.43	345.36	-306.59	40°12'51.649"N	104°57'47.156"W	1.84	
9014.00	90.210	268.440	7335.04	497.58	339.47	-476.49	40°12'51.591"N	104°57'49.346"W	0.51	
9099.00	90.120	267.900	7334.80	582.18	336.75	-561.44	40°12'51.564"N	104°57'50.441"W	0.64	
9269.00	89.500	268.680	7335.36	751.41	331.68	-731.36	40°12'51.514"N	104°57'52.631"W	0.59	
9439.00	89.440	267.110	7336.93	920.51	325.44	-901.23	40°12'51.452"N	104°57'54.821"W	0.92	
9609.00	89.930	267.610	7337.87	1089.46	317.61	-1071.05	40°12'51.374"N	104°57'57.010"W	0.41	
9779.00	90.430	267.920	7337.33	1258.53	310.98	-1240.92	40°12'51.309"N	104°57'59.199"W	0.35	
9949.00	89.870	267.220	7336.89	1427.55	303.77	-1410.76	40°12'51.237"N	104°58'01.389"W	0.53	
10120.00	88.890	266.890	7338.74	1597.38	294.98	-1581.53	40°12'51.151"N	104°58'03.590"W	0.60	
10290.00	88.700	268.050	7342.31	1766.32	287.48	-1751.32	40°12'51.076"N	104°58'05.779"W	0.69	
10375.00	88.890	269.720	7344.10	1851.00	285.83	-1836.28	40°12'51.060"N	104°58'06.874"W	1.98	
10461.00	90.300	269.850	7344.71	1936.79	285.50	-1922.28	40°12'51.057"N	104°58'07.982"W	1.65	
10546.00	90.860	270.660	7343.85	2021.63	285.88	-2007.27	40°12'51.060"N	104°58'09.078"W	1.16	
10630.00	91.500	272.050	7342.12	2105.53	287.87	-2091.23	40°12'51.080"N	104°58'10.160"W	1.82	
10716.00	91.380	271.720	7339.96	2191.46	290.70	-2177.15	40°12'51.108"N	104°58'11.268"W	0.41	
10801.00	91.070	271.490	7338.14	2276.38	293.08	-2262.10	40°12'51.131"N	104°58'12.362"W	0.45	
10886.00	90.640	270.520	7336.87	2361.28	294.57	-2347.08	40°12'51.146"N	104°58'13.458"W	1.25	
11055.00	90.300	270.060	7335.48	2529.96	295.42	-2516.07	40°12'51.154"N	104°58'15.636"W	0.34	
11226.00	89.960	270.530	7335.10	2700.66	296.30	-2687.06	40°12'51.163"N	104°58'17.840"W	0.34	
11311.00	90.180	269.770	7334.99	2785.49	296.53	-2772.06	40°12'51.165"N	104°58'18.936"W	0.93	
11400.00	90.710	272.700	7334.30	2874.39	298.44	-2861.03	40°12'51.184"N	104°58'20.083"W	3.35	
11485.00	91.140	272.890	7332.93	2959.37	302.59	-2945.92	40°12'51.224"N	104°58'21.177"W	0.55	
11570.00	90.090	272.470	7332.02	3044.35	306.56	-3030.82	40°12'51.264"N	104°58'22.271"W	1.33	
11655.00	88.950	271.530	7332.73	3129.30	309.53	-3115.76	40°12'51.293"N	104°58'23.366"W	1.74	
11741.00	88.340	270.850	7334.76	3215.19	311.31	-3201.72	40°12'51.310"N	104°58'24.474"W	1.06	
11826.00	88.640	270.980	7337.00	3300.06	312.67	-3286.68	40°12'51.324"N	104°58'25.569"W	0.38	
11911.00	89.500	270.670	7338.38	3384.94	313.89	-3371.66	40°12'51.336"N	104°58'26.665"W	1.08	
11996.00	89.960	269.110	7338.78	3469.75	313.73	-3456.65	40°12'51.334"N	104°58'27.760"W	1.91	
12081.00	90.460	268.100	7338.47	3554.40	311.66	-3541.63	40°12'51.313"N	104°58'28.856"W	1.33	
12166.00	90.300	268.210	7337.91	3639.00	308.93	-3626.58	40°12'51.286"N	104°58'29.951"W	0.23	
12252.00	91.130	269.090	7336.83	3724.65	306.90	-3712.55	40°12'51.266"N	104°58'31.059"W	1.41	
12337.00	90.920	269.190	7335.31	3809.37	305.62	-3797.52	40°12'51.253"N	104°58'32.154"W	0.27	
12507.00	91.070	269.970	7332.36	3978.89	304.38	-3967.49	40°12'51.241"N	104°58'34.345"W	0.47	
12678.00	90.860	270.970	7329.48	4149.59	305.78	-4138.46	40°12'51.254"N	104°58'36.549"W	0.60	
12763.00	90.610	271.470	7328.39	4234.50	307.59	-4223.43	40°12'51.272"N	104°58'37.644"W	0.66	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#13 REYNOLDS CATTLE 5C-23HZ (2011'FNL & 339'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 5C-23HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 5C-23HZ AWB
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (141 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12848.00	90.640	270.960	7327.46	4319.41	309.39	-4308.41	40°12'51.290"N	104°58'38.739"W	0.60	
12933.00	91.660	271.140	7325.76	4404.30	310.95	-4393.38	40°12'51.305"N	104°58'39.835"W	1.22	
13103.00	90.580	270.970	7322.44	4574.08	314.08	-4563.31	40°12'51.336"N	104°58'42.025"W	0.64	
13188.00	89.500	270.350	7322.38	4658.96	315.06	-4648.31	40°12'51.345"N	104°58'43.121"W	1.47	
13337.00	89.130	270.690	7324.16	4807.71	316.41	-4797.29	40°12'51.358"N	104°58'45.041"W	0.34	LAST BHI MWD+IFR SURVEY
13401.00	89.130	270.690	7325.13	4871.61	317.18	-4861.28	40°12'51.366"N	104°58'45.866"W	0.00	PROJECTION TO BIT

HOLE & CASING SECTIONS - Ref Wellbore: REYNOLDS CATTLE 5C-23HZ AWB Ref Wellpath: REYNOLDS CATTLE 5C-23HZ 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	1401.00	1385.00	16.00	1400.93	0.00	0.00	-4.59	-2.35
9.625in Casing Surface	16.00	1391.00	1375.00	16.00	1390.94	0.00	0.00	-4.52	-2.21
8.75in Open Hole	1401.00	7895.00	6494.00	1400.93	7343.14	-4.59	-2.35	319.73	640.19
7in Casing Intermediate	16.00	7885.00	7869.00	16.00	7341.97	0.00	0.00	318.87	650.08
6.125in Open Hole	7895.00	13401.00	5506.00	7343.14	7325.13	319.73	640.19	317.18	-4861.28

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#13 REYNOLDS CATTLE 5C-23HZ (2011'FNL & 339'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 5C-23HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 5C-23HZ 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 SECTION LINES		24.00	1450.69	172.06	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.23-T3N-R68W SECTION LINES		24.00	1450.69	172.06	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.24-T3N-R68W SECTION LINES		24.00	1450.69	172.06	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
REYNOLDS CATTLE 5C-23HZ BHL ON PLAT REV-1 (1732'FNL & 50'FWL, SEC.23)		7289.00	281.39	-4861.51	3145386.86	1321291.13	40°12'51.012"N	104°58'45.869"W	point
REYNOLDS CATTLE 5C-23HZ LANDBOX		7289.00	0.00	0.00	3150249.76	1321039.25	40°12'48.236"N	104°57'43.204"W	polygon
REYNOLDS CATTLE 5C-23HZ BHL ON PLAT REV-2 (1732'FNL & 50'FWL, SEC.23)		7315.00	281.39	-4861.51	3145386.85	1321291.13	40°12'51.012"N	104°58'45.869"W	point

WELLPATH COMPOSITION - Ref Wellbore: REYNOLDS CATTLE 5C-23HZ AWB Ref Wellpath: REYNOLDS CATTLE 5C-23HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	1308.00	Generic gyro - continuous (Standard)	MS ENERGY GYRODATA SURVEYS <116-1308>	REYNOLDS CATTLE 5C-23HZ AWB
1308.00	8064.00	NaviTrak (IFR)	BHI NAVITRAK MWD+IFR 8 3/4" <1420-8064>	REYNOLDS CATTLE 5C-23HZ AWB
8064.00	13337.00	NaviTrak (IFR)	BHI NAVITRAK MWD+IFR 6 1/8" <8156-13337>	REYNOLDS CATTLE 5C-23HZ AWB
13337.00	13401.00	Blind Drilling (std)	Projection to bit	REYNOLDS CATTLE 5C-23HZ AWB

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#13 REYNOLDS CATTLE 5C-23HZ (2011'FNL & 339'FEL, SEC.23)	
Area	COLORADO	Well	REYNOLDS CATTLE 5C-23HZ	
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 5C-23HZ AWB	
Facility	SEC.23-T3N-R68W			

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	250.460	16.00	TIE ON
116.00	0.490	250.460	116.00	BEGIN GYRO SURVEYS
1308.00	0.830	235.230	1307.95	TIE ONTO GYRO SURVEYS
1420.00	0.930	248.280	1419.93	BEGIN BHI MWD+IFR SURVEYS
7885.00	83.046	274.826	7341.97	7" CASING POINT
13337.00	89.130	270.690	7324.16	LAST BHI MWD+IFR SURVEY
13401.00	89.130	270.690	7325.13	PROJECTION TO BIT