

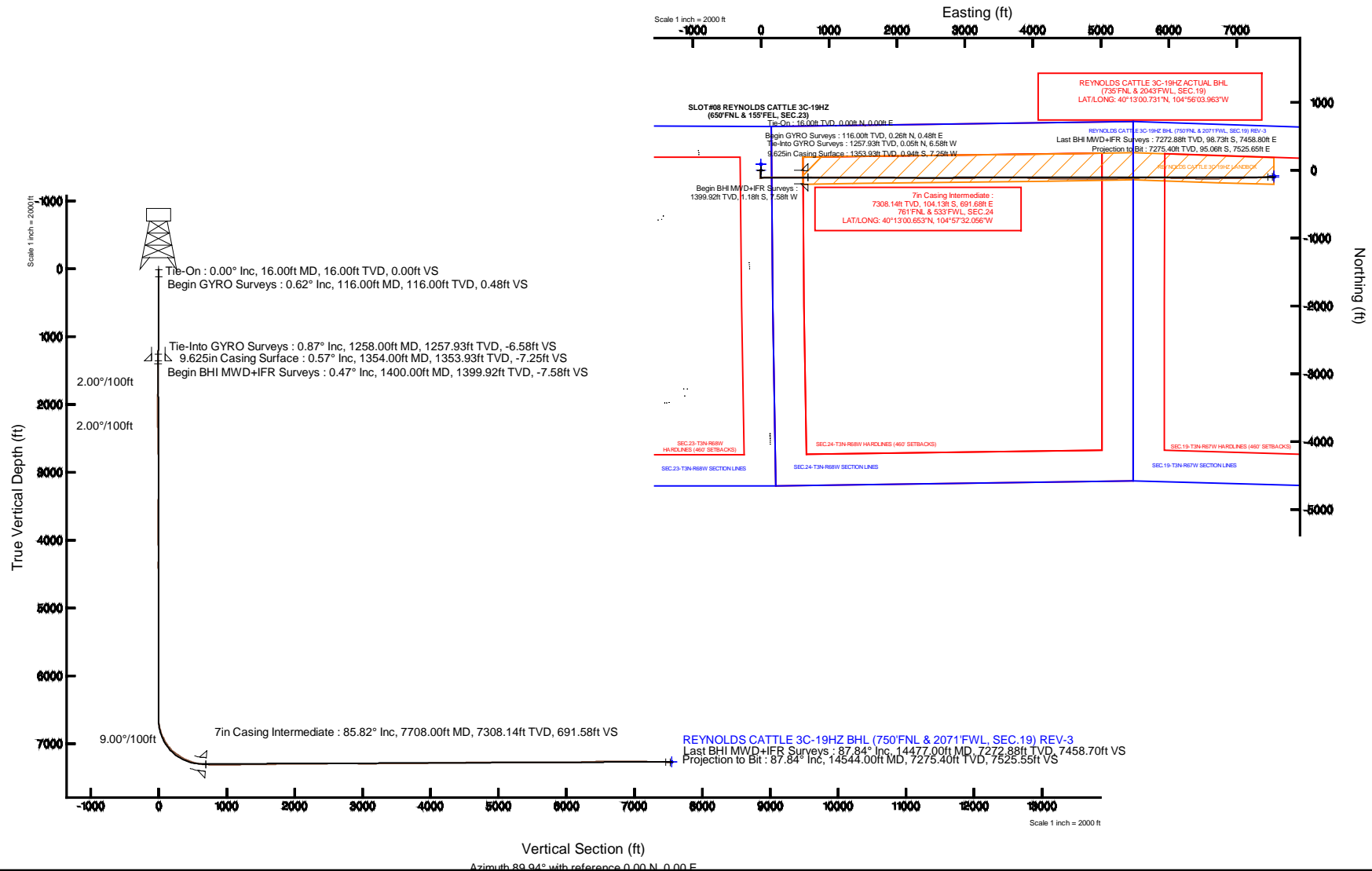
KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#08 REYNOLDS CATTLE 3C-19HZ (650'FNL & 155'FEL, SEC.23)
 Field: WELD COUNTY (KERR MCGEE) Well: REYNOLDS CATTLE 3C-19HZ
 Facility: SEC.23-T3N-R68W Wellbore: REYNOLDS CATTLE 3C-19HZ



Plot reference wellpath is REYNOLDS CATTLE 3C-19HZ (REV-B.0)

True vertical depths are referenced to XTREME 20 (16KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (50T), 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#08 REYNOLDS CATTLE 3C-19HZ (650'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



Actual Wellpath Report

REYNOLDS CATTLE 3C-19HZ AWP

Page 1 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 REYNOLDS CATTLE 3C-19HZ (650'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 3C-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3C-19HZ 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	Precain
Scale	0.999957	Report Generated	28/Jul/2014 at 14:01
Convergence at slot	n/a	Database/Source file	WellArchitectDB/REYNOLDS_CATTLE_3C-19HZ_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-406.42	3021.44	3150414.65	1322400.87	40°13'01.682"N	104°57'40.972"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#08 REYNOLDS CATTLE 3C-19HZ (650'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	89.94°

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 REYNOLDS CATTLE 3C-19HZ (650'FNL & 155'FEL, SEC.23)	
Area	COLORADO	Well	REYNOLDS CATTLE 3C-19HZ	
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3C-19HZ AWP	
Facility	SEC.23-T3N-R68W			

WELLPATH DATA (161 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	61.700	0.00	0.00	0.00	0.00	40°13'01.682"N	104°57'40.972"W	0.00	
16.00	0.000	61.700	16.00	0.00	0.00	0.00	40°13'01.682"N	104°57'40.972"W	0.00	Tie-On
116.00	0.620	61.700	116.00	0.48	0.26	0.48	40°13'01.685"N	104°57'40.966"W	0.62	Begin GYRO Surveys
216.00	0.700	10.720	215.99	1.07	1.11	1.07	40°13'01.693"N	104°57'40.958"W	0.57	
316.00	0.680	348.160	315.99	1.06	2.29	1.06	40°13'01.705"N	104°57'40.958"W	0.27	
416.00	0.430	309.630	415.98	0.65	3.11	0.65	40°13'01.713"N	104°57'40.964"W	0.44	
516.00	0.470	294.650	515.98	-0.01	3.52	-0.01	40°13'01.717"N	104°57'40.972"W	0.12	
616.00	0.450	276.310	615.97	-0.77	3.74	-0.78	40°13'01.719"N	104°57'40.982"W	0.15	
716.00	0.560	247.840	715.97	-1.62	3.60	-1.62	40°13'01.718"N	104°57'40.993"W	0.27	
816.00	0.520	240.960	815.97	-2.47	3.19	-2.47	40°13'01.714"N	104°57'41.004"W	0.08	
916.00	0.650	238.290	915.96	-3.35	2.67	-3.35	40°13'01.708"N	104°57'41.015"W	0.13	
1016.00	0.650	229.510	1015.95	-4.26	2.01	-4.26	40°13'01.702"N	104°57'41.027"W	0.10	
1116.00	0.710	250.630	1115.95	-5.28	1.43	-5.28	40°13'01.696"N	104°57'41.040"W	0.26	
1216.00	0.860	212.940	1215.94	-6.27	0.60	-6.27	40°13'01.688"N	104°57'41.053"W	0.53	
1258.00	0.870	206.050	1257.93	-6.58	0.05	-6.58	40°13'01.682"N	104°57'41.057"W	0.25	Tie-Into GYRO Surveys
1400.00	0.470	244.020	1399.92	-7.58	-1.18	-7.58	40°13'01.670"N	104°57'41.070"W	0.41	Begin BHI MWD+IFR Surveys
1494.00	1.200	209.420	1493.91	-8.41	-2.20	-8.41	40°13'01.660"N	104°57'41.080"W	0.91	
1588.00	2.410	194.790	1587.87	-9.40	-4.97	-9.40	40°13'01.633"N	104°57'41.093"W	1.37	
1680.00	4.210	192.900	1679.71	-10.66	-10.13	-10.65	40°13'01.582"N	104°57'41.109"W	1.96	
1772.00	5.780	191.830	1771.36	-12.37	-17.96	-12.35	40°13'01.505"N	104°57'41.131"W	1.71	
1864.00	7.380	185.190	1862.75	-13.86	-28.38	-13.83	40°13'01.402"N	104°57'41.150"W	1.92	
1955.00	9.090	182.390	1952.81	-14.70	-41.38	-14.66	40°13'01.273"N	104°57'41.161"W	1.93	
2047.00	8.220	183.310	2043.76	-15.40	-55.21	-15.35	40°13'01.136"N	104°57'41.170"W	0.96	
2139.00	7.680	178.340	2134.88	-15.62	-67.92	-15.55	40°13'01.011"N	104°57'41.172"W	0.95	
2230.00	6.200	175.040	2225.21	-15.03	-78.89	-14.95	40°13'00.902"N	104°57'41.165"W	1.68	
2322.00	5.260	169.830	2316.75	-13.86	-87.99	-13.77	40°13'00.812"N	104°57'41.150"W	1.17	
2413.00	4.920	171.790	2407.39	-12.57	-95.96	-12.48	40°13'00.734"N	104°57'41.133"W	0.42	
2505.00	4.040	173.350	2499.11	-11.64	-103.09	-11.54	40°13'00.663"N	104°57'41.121"W	0.97	
2597.00	2.970	149.270	2590.94	-10.06	-108.36	-9.95	40°13'00.611"N	104°57'41.100"W	1.95	
2689.00	1.880	115.170	2682.86	-7.47	-111.05	-7.36	40°13'00.585"N	104°57'41.067"W	1.92	
2781.00	0.650	139.520	2774.84	-5.77	-112.08	-5.66	40°13'00.574"N	104°57'41.045"W	1.43	
2964.00	0.450	173.060	2957.83	-5.01	-113.59	-4.90	40°13'00.560"N	104°57'41.035"W	0.20	
3148.00	0.420	8.800	3141.83	-4.82	-113.64	-4.71	40°13'00.559"N	104°57'41.033"W	0.47	
3423.00	0.920	227.770	3416.82	-6.30	-114.13	-6.19	40°13'00.554"N	104°57'41.052"W	0.46	
3515.00	0.580	231.180	3508.81	-7.21	-114.91	-7.10	40°13'00.546"N	104°57'41.063"W	0.37	
3606.00	0.610	359.320	3599.80	-7.58	-114.72	-7.46	40°13'00.548"N	104°57'41.068"W	1.18	
3789.00	0.690	11.110	3782.79	-7.37	-112.66	-7.26	40°13'00.569"N	104°57'41.066"W	0.08	
4065.00	0.870	21.110	4058.77	-6.30	-109.08	-6.19	40°13'00.604"N	104°57'41.052"W	0.08	
4334.00	1.220	346.280	4327.72	-6.23	-104.39	-6.13	40°13'00.650"N	104°57'41.051"W	0.26	
4419.00	0.410	54.360	4412.72	-6.20	-103.33	-6.10	40°13'00.661"N	104°57'41.051"W	1.33	
4504.00	1.690	171.390	4497.71	-5.77	-104.40	-5.66	40°13'00.650"N	104°57'41.045"W	2.25	
4590.00	1.460	141.460	4583.67	-4.90	-106.51	-4.79	40°13'00.629"N	104°57'41.034"W	0.98	
4675.00	1.290	134.020	4668.65	-3.54	-108.02	-3.43	40°13'00.615"N	104°57'41.016"W	0.29	
4760.00	1.220	131.490	4753.63	-2.17	-109.28	-2.06	40°13'00.602"N	104°57'40.999"W	0.11	
4845.00	0.890	135.720	4838.61	-1.03	-110.36	-0.92	40°13'00.591"N	104°57'40.984"W	0.40	

REFERENCE WELLPATH IDENTIFICATION				
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 REYNOLDS CATTLE 3C-19HZ (650'FNL & 155'FEL, SEC.23)	
Area	COLORADO	Well	REYNOLDS CATTLE 3C-19HZ	
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3C-19HZ AWP	
Facility	SEC.23-T3N-R68W			

WELLPATH DATA (161 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5015.00	0.670	132.560	5008.60	0.62	-111.97	0.73	40°13'00.575"N	104°57'40.963"W	0.13	
5270.00	0.510	248.440	5263.59	0.66	-113.40	0.77	40°13'00.561"N	104°57'40.962"W	0.39	
5525.00	1.030	223.220	5518.57	-1.97	-115.49	-1.85	40°13'00.541"N	104°57'40.996"W	0.24	
5611.00	0.610	257.660	5604.56	-2.94	-116.15	-2.83	40°13'00.534"N	104°57'41.008"W	0.73	
5696.00	1.200	245.030	5689.55	-4.19	-116.62	-4.08	40°13'00.530"N	104°57'41.025"W	0.73	
5781.00	0.380	10.790	5774.54	-4.95	-116.72	-4.83	40°13'00.529"N	104°57'41.034"W	1.71	
6036.00	0.240	169.080	6029.54	-4.69	-116.41	-4.57	40°13'00.532"N	104°57'41.031"W	0.24	
6206.00	1.610	202.440	6199.52	-5.53	-118.97	-5.41	40°13'00.506"N	104°57'41.042"W	0.83	
6291.00	0.150	99.190	6284.51	-5.88	-120.09	-5.76	40°13'00.495"N	104°57'41.046"W	1.94	
6376.00	1.120	3.630	6369.50	-5.72	-119.28	-5.60	40°13'00.503"N	104°57'41.044"W	1.35	
6461.00	0.900	5.370	6454.49	-5.60	-117.79	-5.48	40°13'00.518"N	104°57'41.043"W	0.26	
6547.00	0.960	21.400	6540.48	-5.27	-116.44	-5.16	40°13'00.531"N	104°57'41.038"W	0.31	
6632.00	0.790	30.540	6625.47	-4.72	-115.27	-4.60	40°13'00.543"N	104°57'41.031"W	0.26	
6675.00	4.860	71.540	6668.41	-2.84	-114.44	-2.72	40°13'00.551"N	104°57'41.007"W	9.99	
6717.00	8.950	73.730	6710.09	1.99	-112.96	2.11	40°13'00.566"N	104°57'40.945"W	9.76	
6760.00	12.630	75.440	6752.33	9.76	-110.84	9.87	40°13'00.587"N	104°57'40.845"W	8.59	
6802.00	15.350	80.090	6793.08	19.68	-108.73	19.79	40°13'00.608"N	104°57'40.717"W	7.00	
6845.00	19.000	84.130	6834.15	32.26	-107.04	32.37	40°13'00.624"N	104°57'40.555"W	8.93	
6887.00	23.060	85.750	6873.35	47.27	-105.73	47.38	40°13'00.637"N	104°57'40.361"W	9.76	
6930.00	26.600	86.420	6912.37	65.28	-104.50	65.39	40°13'00.649"N	104°57'40.129"W	8.26	
6972.00	29.050	86.950	6949.51	84.85	-103.37	84.96	40°13'00.660"N	104°57'39.877"W	5.86	
7015.00	32.290	87.750	6986.49	106.76	-102.36	106.87	40°13'00.670"N	104°57'39.594"W	7.59	
7058.00	35.290	87.450	7022.22	130.65	-101.36	130.76	40°13'00.680"N	104°57'39.286"W	6.99	
7101.00	39.200	88.070	7056.45	156.66	-100.35	156.76	40°13'00.690"N	104°57'38.951"W	9.13	
7143.00	43.590	89.110	7087.94	184.41	-99.68	184.51	40°13'00.697"N	104°57'38.594"W	10.58	
7186.00	48.680	89.730	7117.73	215.40	-99.37	215.50	40°13'00.700"N	104°57'38.194"W	11.88	
7228.00	53.610	90.730	7144.07	248.10	-99.51	248.20	40°13'00.699"N	104°57'37.773"W	11.88	
7271.00	57.300	91.590	7168.45	283.50	-100.24	283.60	40°13'00.691"N	104°57'37.316"W	8.74	
7313.00	59.120	91.080	7190.58	319.19	-101.07	319.29	40°13'00.683"N	104°57'36.856"W	4.45	
7356.00	59.940	90.640	7212.38	356.25	-101.62	356.35	40°13'00.678"N	104°57'36.378"W	2.10	
7398.00	64.590	89.100	7231.92	393.41	-101.53	393.51	40°13'00.679"N	104°57'35.899"W	11.54	
7441.00	68.080	88.720	7249.18	432.78	-100.78	432.88	40°13'00.686"N	104°57'35.392"W	8.16	
7483.00	69.980	89.310	7264.21	471.99	-100.10	472.09	40°13'00.693"N	104°57'34.886"W	4.71	
7529.00	72.220	90.540	7279.11	515.51	-100.05	515.61	40°13'00.693"N	104°57'34.326"W	5.49	
7569.00	76.040	91.530	7290.05	553.97	-100.75	554.07	40°13'00.686"N	104°57'33.830"W	9.84	
7612.00	81.850	91.760	7298.29	596.13	-101.96	596.24	40°13'00.674"N	104°57'33.286"W	13.52	
7654.00	84.130	91.440	7303.42	637.80	-103.12	637.90	40°13'00.663"N	104°57'32.749"W	5.48	
7708.00†	85.824	90.717	7308.14	691.58	-104.13	691.68	40°13'00.653"N	104°57'32.056"W	3.41	7" Casing Point
7785.00	88.240	89.690	7312.13	768.47	-104.41	768.57	40°13'00.650"N	104°57'31.065"W	3.41	
7877.00	90.180	89.730	7313.40	860.45	-103.94	860.56	40°13'00.655"N	104°57'29.879"W	2.11	
7969.00	90.730	89.940	7312.67	952.45	-103.68	952.56	40°13'00.657"N	104°57'28.693"W	0.64	
8060.00	90.520	89.600	7311.68	1043.44	-103.31	1043.55	40°13'00.661"N	104°57'27.520"W	0.44	
8152.00	90.150	89.330	7311.14	1135.44	-102.45	1135.54	40°13'00.669"N	104°57'26.334"W	0.50	
8243.00	90.980	89.850	7310.24	1226.43	-101.80	1226.54	40°13'00.676"N	104°57'25.161"W	1.08	
8335.00	91.540	90.810	7308.22	1318.41	-102.33	1318.51	40°13'00.670"N	104°57'23.976"W	1.21	

REFERENCE WELLPATH IDENTIFICATION			
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Area	COLORADO	Well	REYNOLDS CATTLE 3C-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3C-19HZ AWP
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (161 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8427.00	91.100	90.470	7306.10	1410.37	-103.36	1410.48	40°13'00.660"N	104°57'22.790"W	0.60	
8518.00	90.640	90.170	7304.72	1501.36	-103.86	1501.47	40°13'00.655"N	104°57'21.617"W	0.60	
8610.00	89.960	89.420	7304.23	1593.36	-103.54	1593.46	40°13'00.658"N	104°57'20.431"W	1.10	
8702.00	90.830	89.350	7303.60	1685.35	-102.55	1685.46	40°13'00.668"N	104°57'19.246"W	0.95	
8794.00	90.270	91.190	7302.72	1777.34	-102.98	1777.45	40°13'00.664"N	104°57'18.060"W	2.09	
8886.00	89.780	90.870	7302.68	1869.32	-104.64	1869.43	40°13'00.647"N	104°57'16.874"W	0.64	
8978.00	90.000	91.360	7302.85	1961.30	-106.43	1961.41	40°13'00.630"N	104°57'15.688"W	0.58	
9069.00	89.900	91.310	7302.93	2052.28	-108.55	2052.39	40°13'00.609"N	104°57'14.516"W	0.12	
9161.00	91.070	91.380	7302.15	2144.24	-110.71	2144.36	40°13'00.587"N	104°57'13.330"W	1.27	
9253.00	91.010	91.320	7300.48	2236.20	-112.87	2236.32	40°13'00.566"N	104°57'12.145"W	0.09	
9345.00	91.260	91.260	7298.66	2328.16	-114.94	2328.28	40°13'00.545"N	104°57'10.959"W	0.28	
9436.00	90.950	91.730	7296.91	2419.11	-117.32	2419.23	40°13'00.522"N	104°57'09.787"W	0.62	
9528.00	91.010	90.310	7295.33	2511.08	-118.95	2511.20	40°13'00.505"N	104°57'08.601"W	1.54	
9619.00	90.640	89.900	7294.02	2602.07	-119.12	2602.19	40°13'00.503"N	104°57'07.429"W	0.61	
9711.00	90.060	89.520	7293.46	2694.06	-118.66	2694.18	40°13'00.508"N	104°57'06.243"W	0.75	
9803.00	89.690	89.520	7293.66	2786.06	-117.88	2786.18	40°13'00.516"N	104°57'05.057"W	0.40	
9894.00	88.850	89.330	7294.82	2877.05	-116.97	2877.17	40°13'00.524"N	104°57'03.884"W	0.95	
9986.00	89.320	89.660	7296.29	2969.03	-116.16	2969.15	40°13'00.532"N	104°57'02.698"W	0.62	
10078.00	89.900	89.210	7296.92	3061.03	-115.25	3061.14	40°13'00.541"N	104°57'01.512"W	0.80	
10170.00	90.670	89.100	7296.46	3153.02	-113.90	3153.13	40°13'00.554"N	104°57'00.327"W	0.85	
10261.00	91.320	89.520	7294.88	3244.00	-112.80	3244.11	40°13'00.565"N	104°56'59.154"W	0.85	
10353.00	90.490	88.980	7293.43	3335.98	-111.60	3336.09	40°13'00.577"N	104°56'57.968"W	1.08	
10438.00	90.300	90.360	7292.84	3420.97	-111.11	3421.09	40°13'00.582"N	104°56'56.872"W	1.64	
10523.00	90.430	91.020	7292.30	3505.96	-112.13	3506.08	40°13'00.571"N	104°56'55.777"W	0.79	
10608.00	90.400	90.060	7291.68	3590.95	-112.93	3591.07	40°13'00.563"N	104°56'54.681"W	1.13	
10693.00	90.330	89.720	7291.14	3675.95	-112.77	3676.07	40°13'00.565"N	104°56'53.586"W	0.41	
10778.00	89.410	89.880	7291.33	3760.95	-112.47	3761.07	40°13'00.568"N	104°56'52.490"W	1.10	
10864.00	90.700	90.310	7291.25	3846.95	-112.61	3847.06	40°13'00.566"N	104°56'51.381"W	1.58	
10949.00	91.600	91.740	7289.55	3931.91	-114.13	3932.03	40°13'00.551"N	104°56'50.286"W	1.99	
11034.00	91.230	91.550	7287.45	4016.85	-116.57	4016.97	40°13'00.527"N	104°56'49.191"W	0.49	
11119.00	90.670	91.710	7286.04	4101.80	-118.99	4101.92	40°13'00.503"N	104°56'48.096"W	0.69	
11204.00	90.640	90.500	7285.07	4186.78	-120.63	4186.90	40°13'00.486"N	104°56'47.001"W	1.42	
11289.00	90.950	90.820	7283.89	4271.76	-121.61	4271.89	40°13'00.477"N	104°56'45.905"W	0.52	
11374.00	90.580	91.050	7282.75	4356.74	-123.00	4356.87	40°13'00.463"N	104°56'44.810"W	0.51	
11459.00	90.730	90.290	7281.78	4441.73	-123.99	4441.85	40°13'00.453"N	104°56'43.714"W	0.91	
11545.00	90.460	90.190	7280.89	4527.72	-124.35	4527.85	40°13'00.449"N	104°56'42.606"W	0.33	
11630.00	90.360	89.870	7280.28	4612.72	-124.40	4612.85	40°13'00.448"N	104°56'41.510"W	0.39	
11715.00	89.690	89.880	7280.24	4697.72	-124.21	4697.85	40°13'00.450"N	104°56'40.414"W	0.79	
11800.00	90.730	90.030	7279.93	4782.72	-124.14	4782.84	40°13'00.451"N	104°56'39.319"W	1.24	
11885.00	90.520	90.120	7279.00	4867.71	-124.25	4867.84	40°13'00.449"N	104°56'38.223"W	0.27	
11970.00	89.660	90.250	7278.87	4952.71	-124.53	4952.84	40°13'00.447"N	104°56'37.127"W	1.02	
12055.00	90.330	89.030	7278.88	5037.71	-123.99	5037.83	40°13'00.452"N	104°56'36.032"W	1.64	
12140.00	90.000	89.370	7278.63	5122.70	-122.81	5122.83	40°13'00.463"N	104°56'34.936"W	0.56	
12225.00	89.750	89.420	7278.82	5207.69	-121.91	5207.82	40°13'00.472"N	104°56'33.841"W	0.30	
12310.00	90.330	88.650	7278.76	5292.68	-120.48	5292.81	40°13'00.486"N	104°56'32.745"W	1.13	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 REYNOLDS CATTLE 3C-19HZ (650'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 3C-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3C-19HZ AWP
Facility	SEC.23-T3N-R68W		

WELLPATH DATA (161 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12396.00	90.860	88.790	7277.86	5378.66	-118.56	5378.78	40°13'00.505"N	104°56'31.637"W	0.64	
12481.00	90.770	88.730	7276.66	5463.63	-116.72	5463.75	40°13'00.523"N	104°56'30.542"W	0.13	
12566.00	90.150	88.330	7275.97	5548.60	-114.54	5548.72	40°13'00.544"N	104°56'29.446"W	0.87	
12651.00	90.550	89.310	7275.45	5633.58	-112.79	5633.70	40°13'00.561"N	104°56'28.351"W	1.25	
12736.00	90.830	90.510	7274.43	5718.58	-112.65	5718.69	40°13'00.562"N	104°56'27.255"W	1.45	
12821.00	89.930	90.340	7273.87	5803.57	-113.28	5803.69	40°13'00.556"N	104°56'26.160"W	1.08	
12906.00	88.980	89.780	7274.67	5888.56	-113.37	5888.68	40°13'00.555"N	104°56'25.064"W	1.30	
12991.00	89.440	90.250	7275.85	5973.56	-113.40	5973.67	40°13'00.554"N	104°56'23.968"W	0.77	
13076.00	90.030	91.000	7276.24	6058.55	-114.32	6058.67	40°13'00.545"N	104°56'22.873"W	1.12	
13162.00	90.760	90.350	7275.65	6144.54	-115.34	6144.66	40°13'00.535"N	104°56'21.764"W	1.14	
13247.00	92.400	91.290	7273.30	6229.49	-116.55	6229.61	40°13'00.522"N	104°56'20.669"W	2.22	
13332.00	91.840	91.570	7270.16	6314.40	-118.67	6314.53	40°13'00.501"N	104°56'19.575"W	0.74	
13417.00	92.370	92.030	7267.04	6399.30	-121.34	6399.43	40°13'00.475"N	104°56'18.480"W	0.83	
13502.00	91.500	90.450	7264.17	6484.23	-123.18	6484.36	40°13'00.456"N	104°56'17.385"W	2.12	
13587.00	90.210	89.490	7262.90	6569.22	-123.13	6569.34	40°13'00.457"N	104°56'16.290"W	1.89	
13672.00	90.180	89.260	7262.61	6654.21	-122.21	6654.34	40°13'00.466"N	104°56'15.194"W	0.27	
13757.00	89.930	89.590	7262.53	6739.21	-121.35	6739.33	40°13'00.474"N	104°56'14.099"W	0.49	
13842.00	89.720	89.250	7262.79	6824.20	-120.49	6824.33	40°13'00.482"N	104°56'13.003"W	0.47	
13927.00	89.630	88.780	7263.27	6909.19	-119.03	6909.31	40°13'00.496"N	104°56'11.908"W	0.56	
14012.00	89.560	88.520	7263.87	6994.17	-117.03	6994.29	40°13'00.516"N	104°56'10.812"W	0.32	
14097.00	89.290	88.430	7264.72	7079.13	-114.77	7079.25	40°13'00.538"N	104°56'09.717"W	0.33	
14182.00	89.350	88.100	7265.73	7164.09	-112.19	7164.21	40°13'00.563"N	104°56'08.622"W	0.39	
14268.00	88.950	87.710	7267.01	7250.03	-109.05	7250.14	40°13'00.594"N	104°56'07.514"W	0.65	
14353.00	88.490	87.130	7268.91	7334.92	-105.22	7335.03	40°13'00.631"N	104°56'06.420"W	0.87	
14477.00	87.840	86.860	7272.88	7458.70	-98.73	7458.80	40°13'00.695"N	104°56'04.824"W	0.57	Last BHI MWD+IFR Surveys
14544.00	87.840	86.860	7275.40	7525.55	-95.06	7525.65	40°13'00.731"N	104°56'03.963"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: REYNOLDS CATTLE 3C-19HZ AWP Ref Wellpath: REYNOLDS CATTLE 3C-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	1363.93	0.00	0.00	-1.00	-7.32
9.625in Casing Surface	16.00	1354.00	1338.00	16.00	1353.93	0.00	0.00	-0.94	-7.25
8.75in Open Hole	1364.00	7719.00	6355.00	1363.93	7308.91	-1.00	-7.32	-104.26	702.66
7in Casing Intermediate	16.00	7708.00	7692.00	16.00	7308.14	0.00	0.00	-104.13	691.68
6.125in Open Hole	7719.00	14544.00	6825.00	7308.91	7275.40	-104.26	702.66	-95.06	7525.65

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 REYNOLDS CATTLE 3C-19HZ (650'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 3C-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3C-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	90.02	-1.09	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.19-T3N-R67W SECTION LINES		-1.00	90.02	-1.09	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.23-T3N-R68W HARDLINES (460' SETBACKS)		-1.00	90.02	-1.09	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.23-T3N-R68W SECTION LINES		-1.00	90.02	-1.09	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.24-T3N-R68W HARDLINES (460' SETBACKS)		-1.00	90.02	-1.09	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
SEC.24-T3N-R68W SECTION LINES		-1.00	90.02	-1.09	3150413.01	1322490.88	40°13'02.572"N	104°57'40.986"W	polygon
REYNOLDS CATTLE 3C-19HZ BHL (750'FNL & 2071'FWL, SEC.19) REV-3		7269.00	-101.87	7550.51	3157965.30	1322344.87	40°13'00.664"N	104°56'03.642"W	point
REYNOLDS CATTLE 3C-19HZ BHL ON PLAT (730'FNL & 2071'FWL, SEC.19) REV-2		7269.00	-81.87	7550.51	3157965.18	1322364.87	40°13'00.862"N	104°56'03.642"W	point
REYNOLDS CATTLE 3C-19HZ BHL ON PLAT (730'FNL & 2071'FWL, SEC.19) REV-1		7272.00	-81.87	7550.51	3157965.18	1322364.87	40°13'00.862"N	104°56'03.642"W	point
REYNOLDS CATTLE 3C-19HZ LANDBOX		7272.00	0.00	0.00	3150414.65	1322400.87	40°13'01.682"N	104°57'40.972"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: REYNOLDS CATTLE 3C-19HZ AWB					Ref Wellpath: REYNOLDS CATTLE 3C-19HZ AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore	
16.00	1258.00	Generic gyro - continuous (Standard)	MS ENERGY GYRO SURVEYS <116-1258>		REYNOLDS CATTLE 3C-19HZ AWB	
1258.00	7654.00	NaviTrak (IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <1400-7654>		REYNOLDS CATTLE 3C-19HZ AWB	
7654.00	14477.00	NaviTrak (IFR)	BHI MWD+IFR SURVEYS 6 1/8" HOLE <7785-14477>		REYNOLDS CATTLE 3C-19HZ AWB	
14477.00	14544.00	Blind Drilling (std)	Projection to bit		REYNOLDS CATTLE 3C-19HZ AWB	

Actual Wellpath Report

REYNOLDS CATTLE 3C-19HZ AWP

Page 7 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#08 REYNOLDS CATTLE 3C-19HZ (650'FNL & 155'FEL, SEC.23)
Area	COLORADO	Well	REYNOLDS CATTLE 3C-19HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	REYNOLDS CATTLE 3C-19HZ AWP
Facility	SEC.23-T3N-R68W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	61.700	16.00	Tie-On
116.00	0.620	61.700	116.00	Begin GYRO Surveys
1258.00	0.870	206.050	1257.93	Tie-Into GYRO Surveys
1400.00	0.470	244.020	1399.92	Begin BHI MWD+IFR Surveys
7708.00	85.824	90.717	7308.14	7" Casing Point
14477.00	87.840	86.860	7272.88	Last BHI MWD+IFR Surveys
14544.00	87.840	86.860	7275.40	Projection to Bit