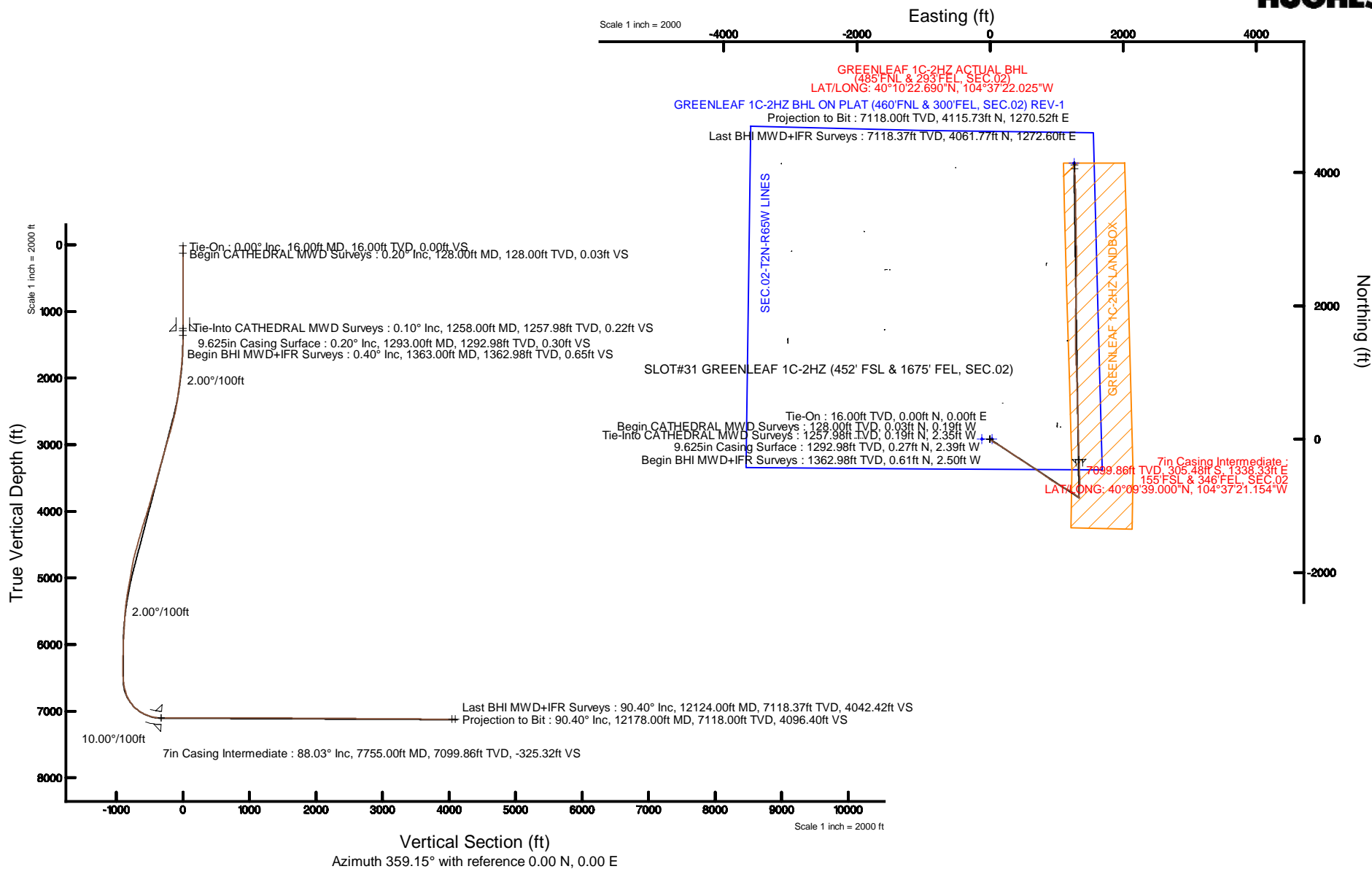


KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#31 GREENLEAF 1C-2HZ (452' FSL & 1675' FEL, SEC.02)
 Field: WELD COUNTY (KERR MCGEE) Well: GREENLEAF 1C-2HZ
 Facility: SEC.02-T2N-R65W Wellbore: GREENLEAF 1C-2HZ PWB

Plot reference wellpath is GREENLEAF 1C-2HZ (REV-B.0) PWB

True vertical depths are referenced to XTREME 23 (16KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 23 (16KB) (RKB)	North Reference: True north
XTREME 23 (16KB) (RKB) to Mean Sea Level: 4862 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#31 GREENLEAF 1C-2HZ (452' FSL & 1675' FEL, SEC.02)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: precalin on 3/10/2015



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 GREENLEAF 1C-2HZ (452' FSL & 1675' FEL, SEC.02)
Area	COLORADO	Well	GREENLEAF 1C-2HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GREENLEAF 1C-2HZ AWB <12178>
Facility	SEC.02-T2N-R65W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.1.1
North Reference	True	User	Precain
Scale	0.999958	Report Generated	3/10/2015 at 10:58:50 AM
Convergence at slot	0.56° East	Database/Source file	WellArchitectDB/GREENLEAF_1C-2HZ_AWB__12178_.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-232.42	-1009.31	3243897.80	1302940.37	40°09'42.019"N	104°37'38.392"W
Facility Reference Pt			3244904.72	1303182.74	40°09'44.316"N	104°37'25.392"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 23 (16'KB) (RKB) to Facility Vertical Datum	4862.00ft
Horizontal Reference Pt	Slot	XTREME 23 (16'KB) (RKB) to Mean Sea Level	4862.00ft
Vertical Reference Pt	XTREME 23 (16'KB) (RKB)	XTREME 23 (16'KB) (RKB) to Mud Line at Slot (SLOT#31 GREENLEAF 1C-2HZ (452' FSL & 1675' FEL, SEC.02))	4862.00ft
MD Reference Pt	XTREME 23 (16'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.15°

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 GREENLEAF 1C-2HZ (452' FSL & 1675' FEL, SEC.02)
Area	COLORADO	Well	GREENLEAF 1C-2HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GREENLEAF 1C-2HZ AWB <12178>
Facility	SEC.02-T2N-R65W		

WELLPATH DATA (144 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	278.300	0.00	0.00	0.00	0.00	40°09'42.019"N	104°37'38.392"W	0.00	
16.00	0.000	278.300	16.00	0.00	0.00	0.00	40°09'42.019"N	104°37'38.392"W	0.00	Tie-On
128.00†	0.198	278.300	128.00	0.03	0.03	-0.19	40°09'42.019"N	104°37'38.394"W	0.18	Begin CATHEDRAL MWD Surveys
129.00	0.200	278.300	129.00	0.03	0.03	-0.20	40°09'42.019"N	104°37'38.395"W	0.18	
208.00	0.400	291.000	208.00	0.16	0.15	-0.59	40°09'42.020"N	104°37'38.400"W	0.27	
286.00	0.400	278.800	286.00	0.30	0.29	-1.11	40°09'42.022"N	104°37'38.406"W	0.11	
367.00	0.600	289.700	366.99	0.50	0.47	-1.79	40°09'42.024"N	104°37'38.415"W	0.27	
447.00	0.500	302.700	446.99	0.84	0.80	-2.48	40°09'42.027"N	104°37'38.424"W	0.20	
527.00	0.400	243.800	526.99	0.91	0.87	-3.02	40°09'42.028"N	104°37'38.431"W	0.56	
607.00	0.200	270.000	606.99	0.80	0.74	-3.41	40°09'42.026"N	104°37'38.436"W	0.30	
687.00	0.300	159.800	686.99	0.60	0.55	-3.48	40°09'42.024"N	104°37'38.437"W	0.52	
767.00	0.200	155.000	766.99	0.27	0.22	-3.35	40°09'42.021"N	104°37'38.435"W	0.13	
847.00	0.300	149.000	846.98	-0.03	-0.08	-3.18	40°09'42.018"N	104°37'38.433"W	0.13	
927.00	0.400	103.600	926.98	-0.28	-0.33	-2.80	40°09'42.016"N	104°37'38.428"W	0.36	
1007.00	0.100	98.300	1006.98	-0.37	-0.40	-2.46	40°09'42.015"N	104°37'38.424"W	0.38	
1087.00	0.200	30.000	1086.98	-0.26	-0.29	-2.32	40°09'42.016"N	104°37'38.422"W	0.23	
1167.00	0.200	350.300	1166.98	0.00	-0.03	-2.28	40°09'42.019"N	104°37'38.421"W	0.17	
1258.00	0.100	322.700	1257.98	0.22	0.19	-2.35	40°09'42.021"N	104°37'38.422"W	0.13	Tie-Into CATHEDRAL MWD Surveys
1363.00	0.400	345.200	1362.98	0.65	0.61	-2.50	40°09'42.025"N	104°37'38.424"W	0.30	Begin BHI MWD+IFR Surveys
1457.00	0.700	124.900	1456.98	0.63	0.60	-2.11	40°09'42.025"N	104°37'38.419"W	1.10	
1553.00	2.800	123.800	1552.93	-1.04	-1.04	0.32	40°09'42.009"N	104°37'38.388"W	2.19	
1646.00	5.100	133.300	1645.70	-5.21	-5.14	5.21	40°09'41.968"N	104°37'38.325"W	2.56	
1737.00	7.000	131.700	1736.19	-11.78	-11.60	12.30	40°09'41.904"N	104°37'38.234"W	2.10	
1829.00	8.900	131.000	1827.30	-20.32	-20.00	21.85	40°09'41.821"N	104°37'38.111"W	2.07	
1922.00	10.000	125.900	1919.04	-29.95	-29.45	33.82	40°09'41.728"N	104°37'37.956"W	1.49	
2016.00	11.700	127.800	2011.36	-40.79	-40.08	47.97	40°09'41.623"N	104°37'37.774"W	1.85	
2108.00	13.100	123.700	2101.21	-52.53	-51.58	64.01	40°09'41.509"N	104°37'37.568"W	1.80	
2201.00	14.700	117.000	2191.49	-64.02	-62.79	83.30	40°09'41.398"N	104°37'37.319"W	2.44	
2294.00	16.100	117.600	2281.15	-75.68	-74.12	105.24	40°09'41.287"N	104°37'37.037"W	1.52	
2386.00	18.900	118.200	2368.88	-88.99	-87.08	129.68	40°09'41.159"N	104°37'36.722"W	3.05	
2480.00	20.100	120.900	2457.49	-104.89	-102.57	156.96	40°09'41.005"N	104°37'36.370"W	1.60	
2571.00	22.100	123.300	2542.39	-122.73	-120.00	184.69	40°09'40.833"N	104°37'36.013"W	2.39	
2664.00	23.500	123.500	2628.12	-143.01	-139.84	214.77	40°09'40.637"N	104°37'35.626"W	1.51	
2756.00	24.700	124.600	2712.10	-164.51	-160.88	245.89	40°09'40.429"N	104°37'35.225"W	1.39	
2849.00	26.400	125.100	2796.00	-187.92	-183.80	278.80	40°09'40.203"N	104°37'34.801"W	1.84	
2934.00	27.600	123.700	2871.74	-210.18	-205.59	310.65	40°09'39.987"N	104°37'34.391"W	1.60	
3021.00	26.400	123.100	2949.25	-232.42	-227.34	343.62	40°09'39.772"N	104°37'33.966"W	1.41	
3108.00	27.300	122.800	3026.87	-254.27	-248.71	376.59	40°09'39.561"N	104°37'33.542"W	1.05	
3195.00	26.600	123.900	3104.42	-276.43	-270.38	409.53	40°09'39.347"N	104°37'33.117"W	0.99	
3280.00	26.000	125.000	3180.62	-298.19	-291.68	440.59	40°09'39.137"N	104°37'32.717"W	0.91	
3366.00	27.000	123.800	3257.59	-320.33	-313.35	472.25	40°09'38.922"N	104°37'32.309"W	1.32	
3451.00	26.200	122.600	3333.59	-341.65	-334.20	504.09	40°09'38.716"N	104°37'31.899"W	1.13	
3536.00	26.000	123.900	3409.92	-362.61	-354.70	535.36	40°09'38.514"N	104°37'31.497"W	0.71	
3623.00	25.700	122.300	3488.22	-383.79	-375.41	567.14	40°09'38.309"N	104°37'31.087"W	0.87	
3712.00	27.100	122.900	3567.94	-405.61	-396.74	600.47	40°09'38.098"N	104°37'30.658"W	1.60	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 GREENLEAF 1C-2HZ (452' FSL & 1675' FEL, SEC.02)
Area	COLORADO	Well	GREENLEAF 1C-2HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GREENLEAF 1C-2HZ AWB <12178>
Facility	SEC.02-T2N-R65W		

WELLPATH DATA (144 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3797.00	29.800	123.000	3642.66	-428.14	-418.76	634.45	40°09'37.881"N	104°37'30.220"W	3.18	
3882.00	28.300	122.600	3716.97	-451.01	-441.12	669.14	40°09'37.660"N	104°37'29.774"W	1.78	
3967.00	25.600	120.800	3792.73	-471.76	-461.38	701.89	40°09'37.459"N	104°37'29.352"W	3.32	
4053.00	26.600	125.300	3869.97	-492.87	-482.03	733.57	40°09'37.255"N	104°37'28.944"W	2.58	
4138.00	27.000	124.400	3945.84	-515.23	-503.92	765.02	40°09'37.039"N	104°37'28.539"W	0.67	
4227.00	28.300	125.500	4024.67	-539.40	-527.59	798.87	40°09'36.805"N	104°37'28.103"W	1.57	
4312.00	28.800	126.100	4099.34	-563.65	-551.35	831.81	40°09'36.570"N	104°37'27.678"W	0.68	
4397.00	27.600	126.100	4174.25	-587.79	-575.02	864.27	40°09'36.336"N	104°37'27.260"W	1.41	
4484.00	26.500	124.900	4251.73	-611.25	-598.00	896.47	40°09'36.109"N	104°37'26.846"W	1.41	
4573.00	27.800	122.900	4330.92	-634.38	-620.63	930.18	40°09'35.886"N	104°37'26.411"W	1.78	
4658.00	27.600	122.500	4406.18	-656.22	-641.98	963.43	40°09'35.675"N	104°37'25.983"W	0.32	
4746.00	26.500	121.100	4484.56	-677.82	-663.07	997.44	40°09'35.466"N	104°37'25.545"W	1.44	
4833.00	27.100	122.800	4562.21	-699.07	-683.84	1030.72	40°09'35.261"N	104°37'25.117"W	1.12	
4918.00	27.200	123.000	4637.85	-720.62	-704.90	1063.28	40°09'35.053"N	104°37'24.697"W	0.16	
5005.00	25.000	118.200	4715.98	-740.63	-724.43	1096.17	40°09'34.860"N	104°37'24.274"W	3.50	
5090.00	23.300	113.500	4793.54	-756.28	-739.62	1127.42	40°09'34.710"N	104°37'23.871"W	3.02	
5175.00	21.300	112.500	4872.18	-769.33	-752.23	1157.10	40°09'34.585"N	104°37'23.489"W	2.39	
5262.00	19.300	116.900	4953.78	-782.29	-764.78	1184.53	40°09'34.461"N	104°37'23.136"W	2.89	
5348.00	17.300	123.100	5035.43	-796.06	-778.20	1207.92	40°09'34.328"N	104°37'22.834"W	3.24	
5433.00	16.400	130.500	5116.79	-811.04	-792.90	1227.63	40°09'34.183"N	104°37'22.581"W	2.73	
5520.00	14.600	130.400	5200.63	-826.39	-807.98	1245.32	40°09'34.034"N	104°37'22.353"W	2.07	
5605.00	13.600	129.300	5283.06	-839.90	-821.26	1261.21	40°09'33.903"N	104°37'22.148"W	1.22	
5690.00	12.100	125.200	5365.93	-851.58	-832.72	1276.23	40°09'33.790"N	104°37'21.955"W	2.06	
5775.00	10.600	120.800	5449.27	-860.93	-841.86	1290.22	40°09'33.699"N	104°37'21.774"W	2.04	
5862.00	8.100	128.900	5535.11	-869.05	-849.81	1301.87	40°09'33.621"N	104°37'21.624"W	3.24	
5948.00	6.600	120.200	5620.41	-875.47	-856.10	1310.86	40°09'33.559"N	104°37'21.509"W	2.17	
6033.00	5.600	121.200	5704.92	-880.19	-860.71	1318.63	40°09'33.513"N	104°37'21.409"W	1.18	
6119.00	5.000	137.700	5790.56	-885.23	-865.65	1324.74	40°09'33.464"N	104°37'21.330"W	1.90	
6204.00	3.700	133.600	5875.31	-889.93	-870.28	1329.22	40°09'33.418"N	104°37'21.272"W	1.57	
6290.00	2.900	126.900	5961.17	-893.20	-873.50	1332.97	40°09'33.387"N	104°37'21.224"W	1.03	
6375.00	2.400	120.000	6046.08	-895.43	-875.68	1336.23	40°09'33.365"N	104°37'21.182"W	0.70	
6460.00	2.000	151.500	6131.02	-897.66	-877.88	1338.48	40°09'33.343"N	104°37'21.153"W	1.48	
6630.00	1.200	161.600	6300.95	-901.98	-882.17	1340.46	40°09'33.301"N	104°37'21.127"W	0.50	
6719.00	1.200	31.200	6389.94	-902.08	-882.26	1341.23	40°09'33.300"N	104°37'21.117"W	2.45	
6805.00	3.600	354.800	6475.87	-898.63	-878.80	1341.45	40°09'33.334"N	104°37'21.115"W	3.17	
6890.00	5.700	350.400	6560.58	-891.79	-871.98	1340.51	40°09'33.402"N	104°37'21.127"W	2.50	
6978.00	12.300	356.000	6647.45	-878.10	-858.31	1339.12	40°09'33.537"N	104°37'21.145"W	7.56	
7063.00	19.400	2.200	6729.17	-854.93	-835.14	1339.03	40°09'33.766"N	104°37'21.146"W	8.58	
7150.00	26.200	4.800	6809.33	-821.35	-801.52	1341.20	40°09'34.098"N	104°37'21.118"W	7.90	
7237.00	37.300	3.300	6883.20	-775.80	-755.92	1344.33	40°09'34.549"N	104°37'21.077"W	12.79	
7323.00	45.600	2.000	6947.60	-719.03	-699.10	1346.91	40°09'35.110"N	104°37'21.044"W	9.70	
7408.00	57.100	359.700	7000.60	-652.79	-632.84	1347.79	40°09'35.765"N	104°37'21.033"W	13.69	
7493.00	64.400	358.600	7042.11	-578.68	-558.74	1346.66	40°09'36.497"N	104°37'21.047"W	8.66	
7578.00	72.600	358.200	7073.24	-499.67	-479.76	1344.45	40°09'37.278"N	104°37'21.076"W	9.66	
7665.00	81.700	358.100	7092.56	-414.95	-395.07	1341.71	40°09'38.115"N	104°37'21.111"W	10.46	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 GREENLEAF 1C-2HZ (452' FSL & 1675' FEL, SEC.02)
Area	COLORADO	Well	GREENLEAF 1C-2HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GREENLEAF 1C-2HZ AWB <12178>
Facility	SEC.02-T2N-R65W		

WELLPATH DATA (144 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7718.00	86.400	357.600	7098.06	-362.27	-342.41	1339.73	40°09'38.635"N	104°37'21.136"W	8.92	
7755.00†	88.030	358.041	7099.86	-325.32	-305.48	1338.33	40°09'39.000"N	104°37'21.154"W	4.56	7" Casing Point
7802.00	90.100	358.600	7100.62	-278.33	-258.51	1336.95	40°09'39.464"N	104°37'21.172"W	4.56	
7845.00	91.400	359.100	7100.06	-235.34	-215.52	1336.09	40°09'39.889"N	104°37'21.183"W	3.24	
7930.00	90.800	358.300	7098.43	-150.36	-130.56	1334.16	40°09'40.728"N	104°37'21.208"W	1.18	
8016.00	89.700	358.200	7098.05	-64.37	-44.60	1331.53	40°09'41.578"N	104°37'21.242"W	1.28	
8103.00	89.400	358.000	7098.74	22.61	42.35	1328.65	40°09'42.437"N	104°37'21.279"W	0.41	
8188.00	88.800	358.200	7100.07	107.59	127.29	1325.83	40°09'43.277"N	104°37'21.315"W	0.74	
8275.00	90.100	358.700	7100.91	194.57	214.25	1323.48	40°09'44.136"N	104°37'21.345"W	1.60	
8361.00	90.100	359.100	7100.76	280.57	300.24	1321.83	40°09'44.986"N	104°37'21.367"W	0.47	
8446.00	89.700	359.000	7100.90	365.57	385.22	1320.42	40°09'45.825"N	104°37'21.385"W	0.49	
8531.00	89.300	359.200	7101.65	450.57	470.21	1319.08	40°09'46.665"N	104°37'21.402"W	0.53	
8616.00	89.700	358.500	7102.39	535.56	555.19	1317.38	40°09'47.505"N	104°37'21.424"W	0.95	
8702.00	90.300	357.200	7102.39	621.54	641.13	1314.15	40°09'48.354"N	104°37'21.465"W	1.66	
8789.00	90.200	358.100	7102.01	708.51	728.05	1310.58	40°09'49.213"N	104°37'21.511"W	1.04	
8873.00	90.700	358.200	7101.35	792.49	812.01	1307.87	40°09'50.043"N	104°37'21.546"W	0.61	
8959.00	90.800	358.200	7100.22	878.47	897.96	1305.17	40°09'50.892"N	104°37'21.581"W	0.12	
9044.00	89.900	358.500	7099.70	963.46	982.92	1302.72	40°09'51.732"N	104°37'21.612"W	1.12	
9133.00	90.300	357.200	7099.55	1052.44	1071.85	1299.38	40°09'52.611"N	104°37'21.655"W	1.53	
9223.00	90.100	357.200	7099.23	1142.38	1161.75	1294.99	40°09'53.499"N	104°37'21.712"W	0.22	
9306.00	89.500	357.500	7099.52	1225.34	1244.66	1291.15	40°09'54.318"N	104°37'21.761"W	0.81	
9391.00	89.200	357.900	7100.49	1310.31	1329.58	1287.74	40°09'55.158"N	104°37'21.805"W	0.59	
9478.00	88.800	359.200	7102.01	1397.29	1416.54	1285.54	40°09'56.017"N	104°37'21.833"W	1.56	
9563.00	90.100	0.400	7102.82	1482.28	1501.53	1285.24	40°09'56.857"N	104°37'21.837"W	2.08	
9648.00	89.900	0.600	7102.82	1567.25	1586.53	1285.98	40°09'57.697"N	104°37'21.827"W	0.33	
9733.00	89.500	359.900	7103.27	1652.23	1671.52	1286.35	40°09'58.537"N	104°37'21.823"W	0.95	
9818.00	88.700	0.300	7104.60	1737.21	1756.51	1286.50	40°09'59.377"N	104°37'21.821"W	1.05	
9903.00	89.600	1.000	7105.86	1822.17	1841.50	1287.47	40°10'00.216"N	104°37'21.808"W	1.34	
9988.00	90.000	1.800	7106.16	1907.10	1926.47	1289.54	40°10'01.056"N	104°37'21.781"W	1.05	
10073.00	89.300	0.200	7106.68	1992.06	2011.45	1291.03	40°10'01.896"N	104°37'21.762"W	2.05	
10160.00	89.800	359.700	7107.36	2079.04	2098.45	1290.95	40°10'02.756"N	104°37'21.763"W	0.81	
10246.00	91.200	1.500	7106.61	2165.01	2184.43	1291.85	40°10'03.605"N	104°37'21.751"W	2.65	
10333.00	89.800	0.400	7105.85	2251.96	2271.42	1293.29	40°10'04.465"N	104°37'21.733"W	2.05	
10420.00	89.500	2.000	7106.38	2338.90	2358.39	1295.11	40°10'05.324"N	104°37'21.709"W	1.87	
10508.00	88.600	1.300	7107.84	2426.80	2446.34	1297.65	40°10'06.194"N	104°37'21.677"W	1.30	
10595.00	89.300	1.000	7109.44	2513.73	2533.31	1299.39	40°10'07.053"N	104°37'21.654"W	0.88	
10680.00	89.700	359.200	7110.18	2598.71	2618.30	1299.54	40°10'07.893"N	104°37'21.652"W	2.17	
10767.00	89.800	359.200	7110.56	2685.71	2705.29	1298.33	40°10'08.752"N	104°37'21.668"W	0.11	
10852.00	89.500	359.900	7111.08	2770.71	2790.29	1297.66	40°10'09.592"N	104°37'21.676"W	0.90	
10939.00	88.900	359.900	7112.29	2857.69	2877.28	1297.51	40°10'10.452"N	104°37'21.678"W	0.69	
11025.00	90.100	359.200	7113.04	2943.68	2963.27	1296.83	40°10'11.302"N	104°37'21.687"W	1.62	
11110.00	90.300	358.300	7112.75	3028.68	3048.25	1294.98	40°10'12.142"N	104°37'21.711"W	1.08	
11197.00	90.500	359.300	7112.14	3115.68	3135.23	1293.16	40°10'13.001"N	104°37'21.734"W	1.17	
11284.00	89.600	359.500	7112.06	3202.67	3222.22	1292.24	40°10'13.861"N	104°37'21.746"W	1.06	
11370.00	89.200	358.600	7112.96	3288.67	3308.20	1290.82	40°10'14.710"N	104°37'21.764"W	1.15	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 GREENLEAF 1C-2HZ (452' FSL & 1675' FEL, SEC.02)
Area	COLORADO	Well	GREENLEAF 1C-2HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GREENLEAF 1C-2HZ AWB <12178>
Facility	SEC.02-T2N-R65W		

WELLPATH DATA (144 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
11455.00	89.700	358.800	7113.78	3373.66	3393.18	1288.89	40°10'15.550"N	104°37'21.789"W	0.63	
11542.00	89.800	359.500	7114.16	3460.66	3480.17	1287.60	40°10'16.410"N	104°37'21.805"W	0.81	
11627.00	88.300	0.200	7115.57	3545.64	3565.15	1287.38	40°10'17.250"N	104°37'21.808"W	1.95	
11714.00	87.100	359.100	7119.06	3632.56	3652.08	1286.85	40°10'18.109"N	104°37'21.815"W	1.87	
11798.00	89.900	357.900	7121.26	3716.52	3736.01	1284.65	40°10'18.938"N	104°37'21.843"W	3.63	
11884.00	91.200	358.200	7120.43	3802.50	3821.95	1281.72	40°10'19.787"N	104°37'21.881"W	1.55	
11969.00	90.300	357.700	7119.32	3887.47	3906.89	1278.68	40°10'20.627"N	104°37'21.920"W	1.21	
12124.00	90.400	357.800	7118.37	4042.42	4061.77	1272.60	40°10'22.157"N	104°37'21.998"W	0.09	Last BHI MWD+IFR Surveys
12178.00	90.400	357.800	7118.00	4096.40	4115.73	1270.52	40°10'22.690"N	104°37'22.025"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: GREENLEAF 1C-2HZ AWB <12178> Ref Wellpath: GREENLEAF 1C-2HZ 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	1303.00	1287.00	16.00	1302.98	0.00	0.00	0.30	-2.41
9.625in Casing Surface	16.00	1293.00	1277.00	16.00	1292.98	0.00	0.00	0.27	-2.39
8.75in Open Hole	1303.00	7765.00	6462.00	1302.98	7100.16	0.30	-2.41	-295.49	1338.00
7in Casing Intermediate	16.00	7755.00	7739.00	16.00	7099.86	0.00	0.00	-305.48	1338.33
6.125in Open Hole	7765.00	12178.00	4413.00	7100.16	7118.00	-295.49	1338.00	4115.73	1270.52

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.02-T2N-R65W LINES	0.00	1.11	-119.88	3243777.93	1302940.31	40°09'42.030"N	104°37'39.936"W	polygon
GREENLEAF 1C-2HZ BHL ON PLAT (460'FNL & 300'FEL, SEC.02) REV-1	7127.00	4141.38	1262.61	3245119.54	1307093.80	40°10'22.944"N	104°37'22.127"W	point
GREENLEAF 1C-2HZ LANDBOX	7127.00	0.00	29.97	3243927.77	1302940.67	40°09'42.019"N	104°37'38.006"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: GREENLEAF 1C-2HZ AWB <12178> Ref Wellpath: GREENLEAF 1C-2HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	1258.00	ISCWSA MWD, Rev. 3 (Standard)	CATHEDRAL ENERGY MWD SURVEYS <129-1258>	GREENLEAF 1C-2HZ AWB <12178>
1258.00	7718.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <1363-7718>	GREENLEAF 1C-2HZ AWB <12178>
7718.00	12124.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEY 6 1/8" HOLE <7802-12124>	GREENLEAF 1C-2HZ AWB <12178>
12124.00	12178.00	Blind Drilling (std)	Projection to bit	GREENLEAF 1C-2HZ AWB <12178>

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 GREENLEAF 1C-2HZ (452' FSL & 1675' FEL, SEC.02)
Area	COLORADO	Well	GREENLEAF 1C-2HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	GREENLEAF 1C-2HZ AWB <12178>
Facility	SEC.02-T2N-R65W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	278.300	16.00	Tie-On
128.00	0.198	278.300	128.00	Begin CATHEDRAL MWD Surveys
1258.00	0.100	322.700	1257.98	Tie-Into CATHEDRAL MWD Surveys
1363.00	0.400	345.200	1362.98	Begin BHI MWD+IFR Surveys
7755.00	88.030	358.041	7099.86	7" Casing Point
12124.00	90.400	357.800	7118.37	Last BHI MWD+IFR Surveys
12178.00	90.400	357.800	7118.00	Projection to Bit