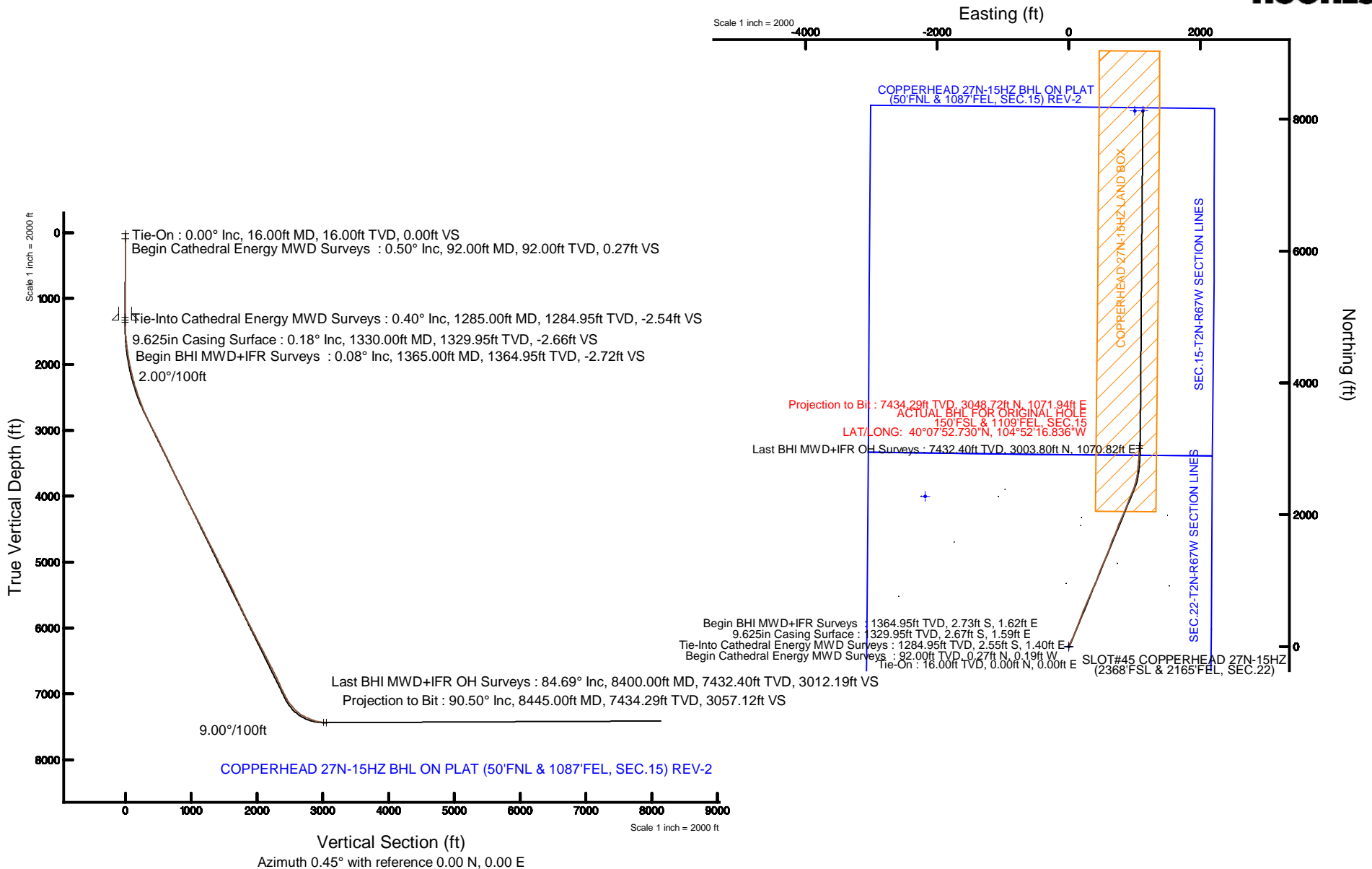


# KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#45 COPPERHEAD 27N-15HZ (2368'FSL & 2165'FEL, SEC.22)  
 Field: WELD COUNTY (KERR MCGEE) Well: COPPERHEAD 27N-15HZ  
 Facility: SEC.22-T2N-R67W Wellbore: COPPERHEAD 27N-15HZ PWB

Plot reference wellpath is COPPERHEAD 27N-15HZ (REV-C.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: 5045 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#45 COPPERHEAD 27N-15HZ (2368'FSL & 2165'FEL, SEC.22)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: preacoin on 2/19/2015



### REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#45 COPPERHEAD 27N-15HZ (2368'FSL & 2165'FEL, SEC.22)
Area	COLORADO	Well	COPPERHEAD 27N-15HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	COPPERHEAD 27N-15HZ AWB <92-1285>
Facility	SEC.22-T2N-R67W		

### 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	0.999959	Report Generated	2/19/2015 at 3:52:29 PM
Convergence at slot	0.40° East	Database/Source file	WellArchitectDB/COPPERHEAD_27N-15HZ_AWB_92-1285_.xml

### WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-2388.34	942.46	3174729.41	1288248.38	40°07'22.602"N	104°52'30.637"W
Facility Reference Pt			3173770.27	1290629.95	40°07'46.204"N	104°52'42.769"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	5045.00ft
Horizontal Reference Pt	Slot	XTREME 20 (16'KB) (RKB) to Mean Sea Level	5045.00ft
Vertical Reference Pt	XTREME 20 (16'KB) (RKB)	XTREME 20 (16'KB) (RKB) to Mud Line at Slot (SLOT#45 COPPERHEAD 27N-15HZ (2368'FSL & 2165'FEL, SEC.22))	5045.00ft
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	0.45°

### REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#45 COPPERHEAD 27N-15HZ (2368'FSL & 2165'FEL, SEC.22)
Area	COLORADO	Well	COPPERHEAD 27N-15HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	COPPERHEAD 27N-15HZ AWB <92-1285>
Facility	SEC.22-T2N-R67W		

### WELLPATH DATA (111 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	324.200	0.00	0.00	0.00	0.00	40°07'22.602"N	104°52'30.637"W	0.00	
16.00	0.000	324.200	16.00	0.00	0.00	0.00	40°07'22.602"N	104°52'30.637"W	0.00	Tie-On
92.00	0.500	324.200	92.00	0.27	0.27	-0.19	40°07'22.605"N	104°52'30.639"W	0.66	Begin Cathedral Energy MWD Surveys
162.00	0.500	330.700	162.00	0.78	0.78	-0.52	40°07'22.610"N	104°52'30.644"W	0.08	
238.00	0.400	332.400	237.99	1.30	1.31	-0.81	40°07'22.615"N	104°52'30.647"W	0.13	
319.00	0.200	8.000	318.99	1.69	1.70	-0.92	40°07'22.619"N	104°52'30.649"W	0.33	
399.00	0.200	257.800	398.99	1.80	1.81	-1.04	40°07'22.620"N	104°52'30.650"W	0.41	
479.00	0.400	243.800	478.99	1.64	1.65	-1.42	40°07'22.618"N	104°52'30.655"W	0.26	
559.00	0.600	235.200	558.99	1.28	1.29	-2.02	40°07'22.615"N	104°52'30.663"W	0.27	
639.00	0.600	214.500	638.98	0.69	0.71	-2.60	40°07'22.609"N	104°52'30.670"W	0.27	
719.00	0.700	186.900	718.98	-0.15	-0.12	-2.89	40°07'22.601"N	104°52'30.674"W	0.41	
799.00	0.700	140.800	798.97	-1.01	-0.99	-2.64	40°07'22.592"N	104°52'30.671"W	0.69	
879.00	1.000	108.800	878.97	-1.60	-1.59	-1.67	40°07'22.586"N	104°52'30.659"W	0.69	
959.00	0.800	109.400	958.96	-2.00	-2.00	-0.49	40°07'22.582"N	104°52'30.643"W	0.25	
1039.00	0.300	98.400	1038.95	-2.22	-2.22	0.25	40°07'22.580"N	104°52'30.634"W	0.64	
1119.00	0.400	104.800	1118.95	-2.31	-2.32	0.72	40°07'22.579"N	104°52'30.628"W	0.13	
1199.00	0.100	98.400	1198.95	-2.39	-2.40	1.06	40°07'22.578"N	104°52'30.623"W	0.38	
1285.00	0.400	117.700	1284.95	-2.54	-2.55	1.40	40°07'22.577"N	104°52'30.619"W	0.36	Tie-Into Cathedral Energy MWD Surveys
1365.00	0.080	209.920	1364.95	-2.72	-2.73	1.62	40°07'22.575"N	104°52'30.616"W	0.51	Begin BHI MWD+IFR Surveys
1460.00	2.460	25.300	1459.92	-0.92	-0.94	2.46	40°07'22.593"N	104°52'30.605"W	2.67	
1553.00	4.940	15.080	1552.72	4.76	4.73	4.36	40°07'22.649"N	104°52'30.581"W	2.75	
1647.00	6.880	15.140	1646.22	14.13	14.07	6.88	40°07'22.741"N	104°52'30.548"W	2.06	
1742.00	7.660	16.020	1740.45	25.73	25.65	10.11	40°07'22.855"N	104°52'30.507"W	0.83	
1836.00	8.840	25.430	1833.48	38.31	38.20	14.94	40°07'22.979"N	104°52'30.445"W	1.90	
1930.00	10.760	25.600	1926.10	52.80	52.63	21.84	40°07'23.122"N	104°52'30.356"W	2.04	
2018.00	12.640	23.590	2012.27	69.10	68.87	29.24	40°07'23.283"N	104°52'30.261"W	2.19	
2103.00	13.890	25.340	2095.00	86.90	86.61	37.33	40°07'23.458"N	104°52'30.156"W	1.54	
2188.00	15.680	26.260	2177.19	106.50	106.13	46.78	40°07'23.651"N	104°52'30.035"W	2.12	
2273.00	16.650	26.050	2258.82	127.83	127.38	57.21	40°07'23.861"N	104°52'29.901"W	1.14	
2360.00	18.360	25.990	2341.79	151.43	150.89	68.69	40°07'24.093"N	104°52'29.753"W	1.97	
2445.00	20.540	22.440	2421.94	177.34	176.71	80.25	40°07'24.348"N	104°52'29.604"W	2.92	
2530.00	21.540	23.370	2501.27	205.54	204.82	92.13	40°07'24.626"N	104°52'29.451"W	1.24	
2615.00	22.280	23.190	2580.13	234.78	233.95	104.66	40°07'24.914"N	104°52'29.290"W	0.87	
2700.00	23.050	17.730	2658.58	265.53	264.62	116.08	40°07'25.217"N	104°52'29.143"W	2.63	
2785.00	23.950	21.580	2736.53	297.52	296.51	127.49	40°07'25.532"N	104°52'28.996"W	2.09	
2871.00	25.510	23.240	2814.64	330.87	329.76	141.22	40°07'25.861"N	104°52'28.819"W	1.99	
2956.00	29.200	21.070	2890.13	367.17	365.94	155.90	40°07'26.218"N	104°52'28.630"W	4.50	
3041.00	29.580	20.640	2964.19	406.27	404.93	170.75	40°07'26.604"N	104°52'28.439"W	0.51	
3126.00	30.020	19.440	3037.95	446.06	444.61	185.22	40°07'26.996"N	104°52'28.253"W	0.87	
3211.00	27.180	19.010	3112.57	484.58	483.02	198.63	40°07'27.375"N	104°52'28.080"W	3.35	
3296.00	27.150	21.850	3188.19	521.04	519.38	212.17	40°07'27.735"N	104°52'27.906"W	1.53	
3381.00	27.620	22.710	3263.67	557.34	555.56	226.99	40°07'28.092"N	104°52'27.715"W	0.72	
3466.00	29.070	22.410	3338.48	594.73	592.82	242.47	40°07'28.460"N	104°52'27.516"W	1.71	
3551.00	27.540	24.440	3413.31	631.84	629.81	258.48	40°07'28.826"N	104°52'27.310"W	2.13	
3636.00	26.920	25.080	3488.89	667.28	665.12	274.76	40°07'29.175"N	104°52'27.100"W	0.81	

### REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#45 COPPERHEAD 27N-15HZ (2368'FSL & 2165'FEL, SEC.22)
Area	COLORADO	Well	COPPERHEAD 27N-15HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	COPPERHEAD 27N-15HZ AWB <92-1285>
Facility	SEC.22-T2N-R67W		

### WELLPATH DATA (111 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3721.00	25.520	20.910	3565.15	701.93	699.66	289.46	40°07'29.516"N	104°52'26.911"W	2.72	
3806.00	26.860	22.790	3641.42	736.85	734.47	303.43	40°07'29.860"N	104°52'26.731"W	1.85	
3891.00	29.670	23.980	3716.28	773.91	771.40	319.42	40°07'30.225"N	104°52'26.525"W	3.37	
3976.00	28.830	22.740	3790.44	812.16	809.53	335.90	40°07'30.602"N	104°52'26.313"W	1.22	
4061.00	28.380	24.000	3865.07	849.65	846.88	352.03	40°07'30.971"N	104°52'26.105"W	0.89	
4147.00	28.010	24.970	3940.87	886.76	883.86	368.87	40°07'31.336"N	104°52'25.888"W	0.68	
4232.00	28.340	23.630	4015.79	923.46	920.44	385.38	40°07'31.698"N	104°52'25.676"W	0.84	
4317.00	27.400	24.490	4090.94	959.87	956.72	401.58	40°07'32.056"N	104°52'25.467"W	1.20	
4402.00	27.950	22.430	4166.21	996.21	992.93	417.29	40°07'32.414"N	104°52'25.265"W	1.30	
4487.00	31.130	19.950	4240.16	1035.41	1032.01	432.39	40°07'32.800"N	104°52'25.071"W	4.01	
4572.00	28.990	19.240	4313.72	1075.62	1072.12	446.68	40°07'33.197"N	104°52'24.887"W	2.55	
4657.00	29.230	20.970	4387.98	1114.56	1110.94	460.89	40°07'33.580"N	104°52'24.704"W	1.03	
4744.00	27.910	21.320	4464.39	1153.48	1149.75	475.90	40°07'33.964"N	104°52'24.511"W	1.53	
4829.00	27.020	23.060	4539.81	1189.90	1186.05	490.69	40°07'34.323"N	104°52'24.320"W	1.41	
4914.00	28.130	24.200	4615.15	1226.07	1222.09	506.47	40°07'34.679"N	104°52'24.117"W	1.45	
4999.00	30.340	23.940	4689.32	1264.10	1259.99	523.40	40°07'35.053"N	104°52'23.899"W	2.60	
5084.00	29.050	22.830	4763.16	1302.88	1298.64	540.12	40°07'35.435"N	104°52'23.684"W	1.65	
5169.00	29.620	22.970	4837.26	1341.36	1337.00	556.32	40°07'35.814"N	104°52'23.475"W	0.68	
5254.00	26.850	21.860	4912.14	1378.65	1374.16	571.67	40°07'36.182"N	104°52'23.278"W	3.32	
5340.00	27.260	21.770	4988.73	1415.08	1410.48	586.20	40°07'36.540"N	104°52'23.091"W	0.48	
5424.00	28.400	21.940	5063.01	1451.59	1446.87	600.80	40°07'36.900"N	104°52'22.903"W	1.36	
5510.00	28.340	20.880	5138.68	1489.75	1484.91	615.72	40°07'37.276"N	104°52'22.711"W	0.59	
5595.00	29.060	19.460	5213.24	1528.17	1523.23	629.79	40°07'37.655"N	104°52'22.529"W	1.17	
5680.00	28.320	18.890	5287.80	1566.82	1561.77	643.19	40°07'38.035"N	104°52'22.357"W	0.93	
5765.00	27.720	19.680	5362.84	1604.61	1599.46	656.38	40°07'38.408"N	104°52'22.187"W	0.83	
5850.00	26.060	24.910	5438.66	1640.28	1635.02	670.90	40°07'38.759"N	104°52'22.000"W	3.40	
5935.00	26.060	25.980	5515.02	1674.12	1668.73	686.95	40°07'39.093"N	104°52'21.794"W	0.55	
6020.00	27.270	22.840	5590.98	1708.98	1703.47	702.68	40°07'39.436"N	104°52'21.591"W	2.18	
6104.00	28.430	21.760	5665.25	1745.41	1739.77	717.57	40°07'39.795"N	104°52'21.399"W	1.51	
6190.00	26.350	20.250	5741.60	1782.44	1776.70	731.76	40°07'40.159"N	104°52'21.217"W	2.55	
6274.00	28.090	19.500	5816.30	1818.68	1812.83	744.82	40°07'40.516"N	104°52'21.048"W	2.11	
6359.00	28.530	22.590	5891.14	1856.40	1850.44	759.30	40°07'40.888"N	104°52'20.862"W	1.80	
6444.00	28.740	24.020	5965.74	1893.93	1887.85	775.41	40°07'41.258"N	104°52'20.655"W	0.84	
6531.00	29.670	23.610	6041.68	1932.90	1926.68	792.55	40°07'41.642"N	104°52'20.434"W	1.09	
6615.00	29.900	24.030	6114.58	1971.21	1964.85	809.40	40°07'42.019"N	104°52'20.217"W	0.37	
6700.00	29.260	23.910	6188.51	2009.68	2003.20	826.45	40°07'42.398"N	104°52'19.997"W	0.76	
6785.00	29.150	22.670	6262.70	2047.90	2041.29	842.85	40°07'42.774"N	104°52'19.786"W	0.72	
6870.00	28.780	21.780	6337.07	2086.13	2079.39	858.42	40°07'43.151"N	104°52'19.586"W	0.67	
6956.00	29.090	22.740	6412.33	2124.76	2117.90	874.18	40°07'43.531"N	104°52'19.383"W	0.65	
7041.00	29.510	22.140	6486.46	2163.33	2156.34	890.06	40°07'43.911"N	104°52'19.178"W	0.60	
7126.00	28.900	19.940	6560.66	2202.15	2195.05	904.96	40°07'44.294"N	104°52'18.987"W	1.45	
7211.00	28.070	20.780	6635.37	2240.26	2233.05	919.06	40°07'44.669"N	104°52'18.805"W	1.08	
7296.00	27.380	23.330	6710.61	2277.03	2269.70	933.89	40°07'45.031"N	104°52'18.614"W	1.61	
7381.00	26.890	21.090	6786.26	2313.02	2305.58	948.55	40°07'45.386"N	104°52'18.425"W	1.33	
7466.00	26.170	23.370	6862.31	2348.28	2340.72	962.90	40°07'45.733"N	104°52'18.241"W	1.47	

### REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#45 COPPERHEAD 27N-15HZ (2368'FSL & 2165'FEL, SEC.22)
Area	COLORADO	Well	COPPERHEAD 27N-15HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	COPPERHEAD 27N-15HZ AWB <92-1285>
Facility	SEC.22-T2N-R67W		

### WELLPATH DATA (111 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7550.00	27.760	22.300	6937.17	2383.50	2375.83	977.67	40°07'46.080"N	104°52'18.050"W	1.98	
7635.00	28.780	20.380	7012.04	2421.11	2413.33	992.31	40°07'46.451"N	104°52'17.862"W	1.61	
7678.00	27.750	18.230	7049.91	2440.38	2432.54	999.05	40°07'46.640"N	104°52'17.775"W	3.37	
7720.00	30.860	18.120	7086.53	2459.96	2452.07	1005.46	40°07'46.833"N	104°52'17.693"W	7.41	
7763.00	35.340	16.540	7122.54	2482.43	2474.48	1012.43	40°07'47.055"N	104°52'17.603"W	10.61	
7805.00	39.800	13.060	7155.83	2507.23	2499.24	1018.93	40°07'47.300"N	104°52'17.519"W	11.76	
7848.00	40.620	12.400	7188.67	2534.36	2526.31	1025.05	40°07'47.567"N	104°52'17.440"W	2.15	
7890.00	43.080	11.970	7219.95	2561.79	2553.70	1030.96	40°07'47.838"N	104°52'17.364"W	5.90	
7933.00	46.480	9.420	7250.47	2591.59	2583.46	1036.56	40°07'48.132"N	104°52'17.292"W	8.94	
7975.00	50.680	7.040	7278.25	2622.79	2614.62	1041.04	40°07'48.440"N	104°52'17.234"W	10.86	
8018.00	56.520	6.440	7303.76	2657.18	2648.98	1045.10	40°07'48.779"N	104°52'17.182"W	13.63	
8060.00	61.360	6.070	7325.42	2692.96	2684.73	1049.01	40°07'49.133"N	104°52'17.132"W	11.55	
8103.00	62.630	5.540	7345.61	2730.76	2722.50	1052.85	40°07'49.506"N	104°52'17.082"W	3.15	
8145.00	64.880	4.700	7364.18	2768.30	2760.02	1056.21	40°07'49.877"N	104°52'17.039"W	5.65	
8188.00	67.020	3.800	7381.71	2807.48	2799.18	1059.12	40°07'50.264"N	104°52'17.002"W	5.33	
8230.00	70.810	3.700	7396.81	2846.60	2838.27	1061.68	40°07'50.650"N	104°52'16.969"W	9.03	
8273.00	74.380	4.000	7409.67	2887.55	2879.21	1064.44	40°07'51.054"N	104°52'16.933"W	8.33	
8315.00	77.690	3.250	7419.81	2928.24	2919.88	1067.01	40°07'51.456"N	104°52'16.900"W	8.07	
8358.00	81.800	2.640	7427.46	2970.50	2962.12	1069.18	40°07'51.874"N	104°52'16.872"W	9.66	
8400.00	84.690	1.860	7432.40	3012.19	3003.80	1070.82	40°07'52.286"N	104°52'16.851"W	7.12	Last BHI MWD+IFR OH Surveys
8445.00	90.500	1.000	7434.29	3057.12	3048.72	1071.94	40°07'52.730"N	104°52'16.836"W	13.05	Projection to Bit

### HOLE & CASING SECTIONS - Ref Wellbore: COPPERHEAD 27N-15HZ AWB <92-1285> Ref Wellpath: COPPERHEAD 27N-15HZ 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	1340.00	1324.00	16.00	1339.95	0.00	0.00	-2.69	1.61
9.625in Casing Surface	16.00	1330.00	1314.00	16.00	1329.95	0.00	0.00	-2.67	1.59

### TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.15-T2N-67W SECTION LINES	30.00	12820.29	-1047.10	3173592.05	1301060.42	40°09'29.293"N	104°52'44.123"W	polygon
SEC.22-T2N-R67W SECTION LINES	30.00	2280.18	-2182.86	3172530.63	1290513.02	40°07'45.134"N	104°52'58.739"W	polygon
COPPERHEAD 27N-15HZ BHL ON PLAT (50'FNL & 1212'FEL, SEC.15) REV-1	7345.00	8127.08	1005.31	3175677.38	1296381.99	40°08'42.914"N	104°52'17.692"W	point
COPPERHEAD 27N-15HZ LAND BOX	7362.00	0.00	-0.02	3174729.39	1288248.38	40°07'22.602"N	104°52'30.637"W	polygon
COPPERHEAD 27N-15HZ BHL ON PLAT (50'FNL & 1087'FEL, SEC.15) REV-2	7410.00	8127.08	1125.31	3175797.38	1296382.84	40°08'42.914"N	104°52'16.146"W	point

### REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#45 COPPERHEAD 27N-15HZ (2368'FSL & 2165'FEL, SEC.22)
Area	COLORADO	Well	COPPERHEAD 27N-15HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	COPPERHEAD 27N-15HZ AWB <92-1285>
Facility	SEC.22-T2N-R67W		

### WELLPATH COMPOSITION - Ref Wellbore: COPPERHEAD 27N-15HZ AWB <92-1285> Ref Wellpath: COPPERHEAD 27N-15HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	1285.00	ISCWSA MWD, Rev. 3 (Standard)	CATHEDRAL MWD SURVEYS <92-1285>	COPPERHEAD 27N-15HZ AWB <92-1285>
1285.00	8400.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <1365-8400>	COPPERHEAD 27N-15HZ AWB <92-1285>
8400.00	8445.00	Blind Drilling (std)	Projection to bit	COPPERHEAD 27N-15HZ AWB <92-1285>

### REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#45 COPPERHEAD 27N-15HZ (2368'FSL & 2165'FEL, SEC.22)
Area	COLORADO	Well	COPPERHEAD 27N-15HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	COPPERHEAD 27N-15HZ AWB <92-1285>
Facility	SEC.22-T2N-R67W		

### WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	324.200	16.00	Tie-On
92.00	0.500	324.200	92.00	Begin Cathedral Energy MWD Surveys
1285.00	0.400	117.700	1284.95	Tie-Into Cathedral Energy MWD Surveys
1365.00	0.080	209.920	1364.95	Begin BHI MWD+IFR Surveys
8400.00	84.690	1.860	7432.40	Last BHI MWD+IFR OH Surveys
8445.00	90.500	1.000	7434.29	Projection to Bit