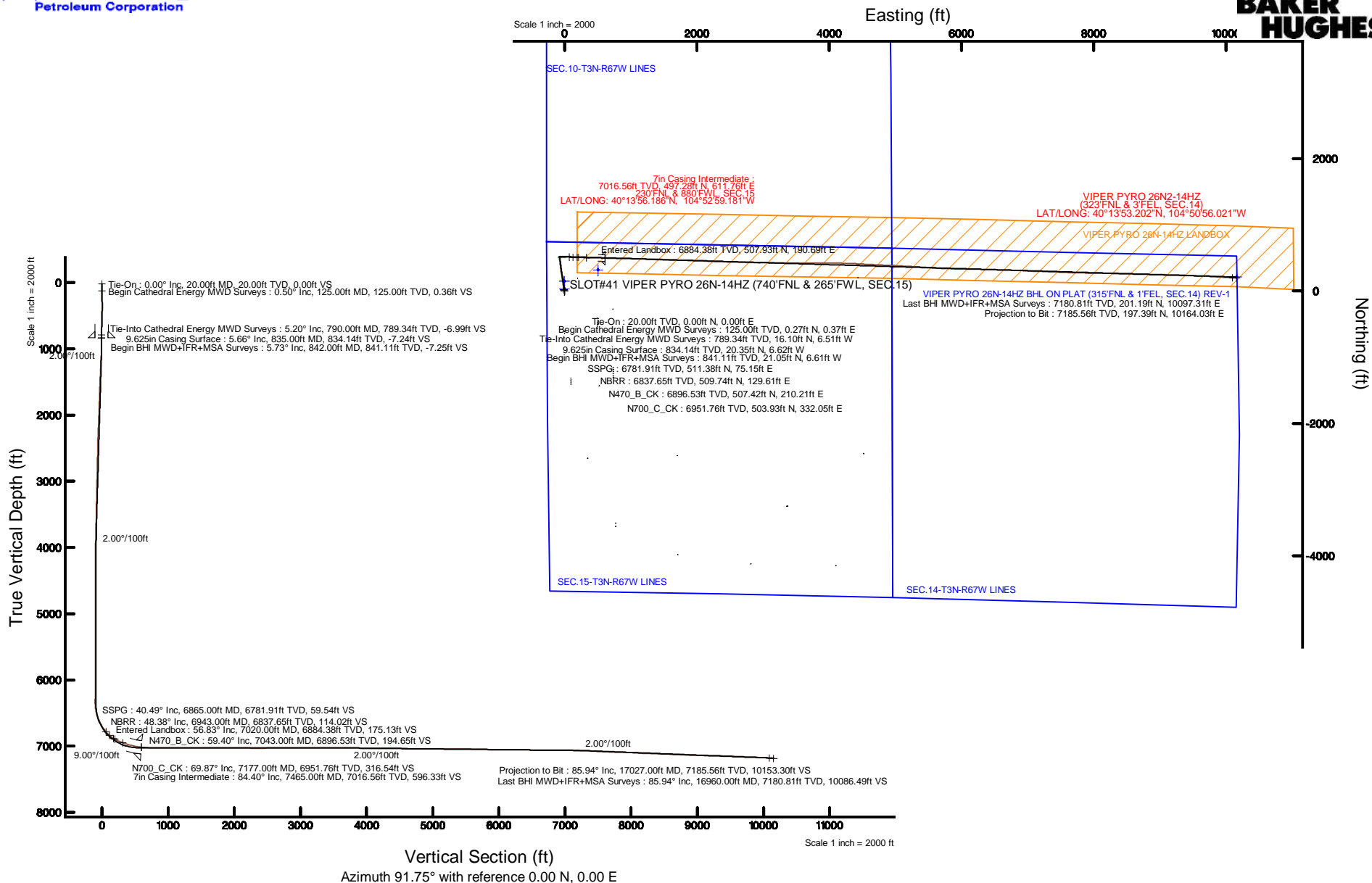


# KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#41 VIPER PYRO 26N-14HZ (740'FNL & 265'FWL, SEC.15)  
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: VIPER PYRO 26N-14HZ  
 Facility: SEC.15-T3N-R67W Wellbore: VIPER PYRO 26N-14HZ PWB

Plot reference wellpath is VIPER PYRO 26N-14HZ (REV-B.0) PWP

True vertical depths are referenced to PRECISION 462 (20'KB) (RKB)	Grid System: NAD83 / UTM Zone 13 North, US feet
Measured depths are referenced to PRECISION 462 (20'KB) (RKB)	North Reference: True north
PRECISION 462 (20'KB) (RKB) to Mean Sea Level: 4814 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#41 VIPER PYRO 26N-14HZ (740'FNL & 265'FWL, SEC.15)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: precain on 8/25/2015



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#41 VIPER PYRO 26N-14HZ (740'FNL & 265'FWL, SEC.15)
Area	COLORADO	Well	VIPER PYRO 26N-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VIPER PYRO 26N-14HZ AWB <17027>
Facility	SEC.15-T3N-R67W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 4.1.1
North Reference	True	User	Precain
Scale	0.999601	Report Generated	8/25/2015 at 10:56:36 AM
Convergence at slot	0.07° East	Database/Source file	WellArchitectAPC/VIPER_PYRO_26N-14HZ_AWB__17027_.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	1274.00	-1743.95	1672430.91	14610839.11	40°13'51.272"N	104°53'07.069"W
Facility Reference Pt			1674175.89	14609568.00	40°13'38.683"N	104°52'44.584"W
Field Reference Pt			1698235.31	14552047.82	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	PRECISION 462 (20'KB) (RKB) to Facility Vertical Datum	4814.00ft
Horizontal Reference Pt	Slot	PRECISION 462 (20'KB) (RKB) to Mean Sea Level	4814.00ft
Vertical Reference Pt	PRECISION 462 (20'KB) (RKB)	PRECISION 462 (20'KB) (RKB) to Mud Line at Slot (SLOT#41 VIPER PYRO 26N-14HZ (740'FNL & 265'FWL, SEC.15))	4814.00ft
MD Reference Pt	PRECISION 462 (20'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	91.75°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#41 VIPER PYRO 26N-14HZ (740'FNL & 265'FWL, SEC.15)
Area	COLORADO	Well	VIPER PYRO 26N-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VIPER PYRO 26N-14HZ AWB <17027>
Facility	SEC.15-T3N-R67W		

WELLPATH DATA (190 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	54.200	0.00	0.00	0.00	0.00	40°13'51.272"N	104°53'07.069"W	0.00	
20.00	0.000	54.200	20.00	0.00	0.00	0.00	40°13'51.272"N	104°53'07.069"W	0.00	Tie-On
125.00	0.500	54.200	125.00	0.36	0.27	0.37	40°13'51.275"N	104°53'07.064"W	0.48	Begin Cathedral Energy MWD Surveys
187.00	0.800	56.900	186.99	0.93	0.66	0.95	40°13'51.279"N	104°53'07.057"W	0.49	
249.00	0.900	54.000	248.99	1.67	1.19	1.71	40°13'51.284"N	104°53'07.047"W	0.18	
311.00	0.500	92.900	310.98	2.33	1.46	2.37	40°13'51.286"N	104°53'07.038"W	0.97	
373.00	0.700	189.700	372.98	2.55	1.07	2.58	40°13'51.283"N	104°53'07.036"W	1.46	
457.00	1.100	248.100	456.97	1.74	0.26	1.75	40°13'51.275"N	104°53'07.046"W	1.12	
542.00	2.100	307.700	541.94	-0.27	0.91	-0.24	40°13'51.281"N	104°53'07.072"W	2.13	
627.00	3.900	326.100	626.82	-3.22	4.26	-3.09	40°13'51.314"N	104°53'07.109"W	2.38	
712.00	4.300	345.400	711.61	-5.80	9.75	-5.50	40°13'51.368"N	104°53'07.140"W	1.68	
790.00	5.200	355.700	789.34	-6.99	16.10	-6.51	40°13'51.431"N	104°53'07.153"W	1.59	Tie-Into Cathedral Energy MWD Surveys
842.00	5.730	1.660	841.11	-7.25	21.05	-6.61	40°13'51.480"N	104°53'07.154"W	1.49	Begin BHI MWD+IFR+MSA Surveys
935.00	7.240	354.610	933.51	-7.98	31.52	-7.02	40°13'51.584"N	104°53'07.160"W	1.83	
1029.00	8.860	353.760	1026.58	-9.72	44.62	-8.37	40°13'51.713"N	104°53'07.177"W	1.73	
1122.00	11.930	353.650	1118.04	-12.07	61.29	-10.21	40°13'51.878"N	104°53'07.201"W	3.30	
1215.00	13.360	351.200	1208.79	-15.39	81.47	-12.92	40°13'52.077"N	104°53'07.236"W	1.64	
1309.00	13.380	349.820	1300.24	-19.63	102.90	-16.50	40°13'52.289"N	104°53'07.282"W	0.34	
1402.00	12.540	346.410	1390.87	-24.52	123.31	-20.77	40°13'52.491"N	104°53'07.337"W	1.22	
1495.00	11.980	349.230	1481.75	-29.28	142.60	-24.95	40°13'52.681"N	104°53'07.391"W	0.88	
1589.00	10.880	351.780	1573.89	-32.93	160.97	-28.04	40°13'52.863"N	104°53'07.431"W	1.29	
1682.00	10.930	351.480	1665.21	-36.02	178.38	-30.60	40°13'53.035"N	104°53'07.464"W	0.08	
1775.00	11.010	352.510	1756.51	-39.02	195.90	-33.07	40°13'53.208"N	104°53'07.495"W	0.23	
1869.00	10.620	351.910	1848.84	-41.94	213.38	-35.46	40°13'53.381"N	104°53'07.526"W	0.43	
1962.00	10.440	351.250	1940.27	-44.94	230.19	-37.94	40°13'53.547"N	104°53'07.558"W	0.23	
2055.00	10.200	350.460	2031.77	-48.09	246.64	-40.59	40°13'53.709"N	104°53'07.592"W	0.30	
2148.00	9.500	348.250	2123.40	-51.49	262.27	-43.52	40°13'53.864"N	104°53'07.630"W	0.86	
2241.00	9.040	346.260	2215.18	-55.23	276.88	-46.82	40°13'54.008"N	104°53'07.673"W	0.60	
2334.00	8.710	344.710	2307.07	-59.24	290.77	-50.41	40°13'54.145"N	104°53'07.719"W	0.44	
2427.00	9.000	350.230	2398.96	-62.76	304.73	-53.50	40°13'54.283"N	104°53'07.759"W	0.96	
2520.00	10.230	354.810	2490.65	-65.21	320.13	-55.48	40°13'54.435"N	104°53'07.784"W	1.56	
2610.00	10.170	356.030	2579.23	-66.97	336.01	-56.75	40°13'54.592"N	104°53'07.801"W	0.25	
2700.00	9.750	356.130	2667.87	-68.50	351.54	-57.82	40°13'54.746"N	104°53'07.814"W	0.47	
2790.00	9.160	354.870	2756.65	-70.11	366.28	-58.97	40°13'54.892"N	104°53'07.829"W	0.69	
2879.00	8.880	354.010	2844.55	-71.88	380.17	-60.32	40°13'55.029"N	104°53'07.847"W	0.35	
2969.00	8.210	351.760	2933.55	-73.93	393.44	-61.97	40°13'55.160"N	104°53'07.868"W	0.83	
3059.00	7.080	348.710	3022.75	-76.29	405.24	-63.98	40°13'55.277"N	104°53'07.894"W	1.33	
3149.00	7.490	351.810	3112.02	-78.56	416.48	-65.90	40°13'55.388"N	104°53'07.919"W	0.63	
3238.00	8.000	354.710	3200.21	-80.32	428.39	-67.30	40°13'55.505"N	104°53'07.937"W	0.72	
3328.00	8.550	356.890	3289.28	-81.65	441.31	-68.24	40°13'55.633"N	104°53'07.949"W	0.70	
3418.00	9.120	354.760	3378.21	-83.08	455.09	-69.25	40°13'55.769"N	104°53'07.962"W	0.73	
3508.00	8.490	352.880	3467.15	-84.98	468.79	-70.73	40°13'55.905"N	104°53'07.981"W	0.77	
3598.00	7.640	351.280	3556.26	-87.09	481.29	-72.46	40°13'56.028"N	104°53'08.003"W	0.98	
3687.00	7.400	350.890	3644.49	-89.24	492.80	-74.26	40°13'56.142"N	104°53'08.026"W	0.28	
3777.00	6.630	349.720	3733.82	-91.41	503.63	-76.10	40°13'56.249"N	104°53'08.050"W	0.87	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#41 VIPER PYRO 26N-14HZ (740'FNL & 265'FWL, SEC.15)
Area	COLORADO	Well	VIPER PYRO 26N-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VIPER PYRO 26N-14HZ AWB <17027>
Facility	SEC.15-T3N-R67W		

WELLPATH DATA (190 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3867.00	5.520	343.960	3823.31	-93.82	512.91	-78.23	40°13'56.341"N	104°53'08.078"W	1.41	
3957.00	3.140	345.150	3913.05	-95.85	519.45	-80.06	40°13'56.405"N	104°53'08.101"W	2.65	
4136.00	0.130	91.280	4091.96	-97.04	524.19	-81.11	40°13'56.452"N	104°53'08.115"W	1.78	
4316.00	0.700	237.590	4271.95	-97.75	523.59	-81.83	40°13'56.446"N	104°53'08.124"W	0.45	
4406.00	0.510	201.940	4361.95	-98.34	522.93	-82.45	40°13'56.440"N	104°53'08.132"W	0.46	
4585.00	1.450	163.440	4540.92	-97.91	520.02	-82.10	40°13'56.411"N	104°53'08.128"W	0.61	
4675.00	0.730	166.100	4630.91	-97.39	518.37	-81.64	40°13'56.394"N	104°53'08.122"W	0.80	
4765.00	0.590	177.980	4720.90	-97.21	517.35	-81.48	40°13'56.384"N	104°53'08.120"W	0.22	
4855.00	0.650	176.050	4810.89	-97.13	516.38	-81.43	40°13'56.375"N	104°53'08.119"W	0.07	
4945.00	0.580	183.190	4900.89	-97.09	515.41	-81.42	40°13'56.365"N	104°53'08.119"W	0.12	
5034.00	0.710	184.000	4989.88	-97.12	514.41	-81.49	40°13'56.355"N	104°53'08.120"W	0.15	
5124.00	0.810	184.470	5079.88	-97.17	513.22	-81.57	40°13'56.344"N	104°53'08.121"W	0.11	
5214.00	0.850	185.390	5169.87	-97.25	511.92	-81.69	40°13'56.331"N	104°53'08.122"W	0.05	
5304.00	0.810	190.100	5259.86	-97.38	510.63	-81.86	40°13'56.318"N	104°53'08.124"W	0.09	
5394.00	1.400	177.310	5349.84	-97.39	508.91	-81.92	40°13'56.301"N	104°53'08.125"W	0.71	
5483.00	0.860	268.750	5438.83	-97.97	507.81	-82.54	40°13'56.290"N	104°53'08.133"W	1.87	
5573.00	1.220	273.170	5528.81	-99.60	507.85	-84.17	40°13'56.290"N	104°53'08.154"W	0.41	
5663.00	0.350	350.550	5618.81	-100.62	508.17	-85.17	40°13'56.294"N	104°53'08.167"W	1.33	
5753.00	0.270	328.880	5708.80	-100.78	508.62	-85.33	40°13'56.298"N	104°53'08.169"W	0.16	
5932.00	0.170	327.940	5887.80	-101.16	509.21	-85.68	40°13'56.304"N	104°53'08.174"W	0.06	
6292.00	0.550	231.890	6247.80	-102.78	508.59	-87.33	40°13'56.298"N	104°53'08.195"W	0.16	
6382.00	0.680	241.170	6337.79	-103.58	508.07	-88.14	40°13'56.293"N	104°53'08.205"W	0.18	
6471.00	6.870	92.780	6426.59	-98.70	507.56	-83.27	40°13'56.288"N	104°53'08.143"W	8.38	
6561.00	16.120	88.920	6514.69	-80.80	507.53	-65.37	40°13'56.287"N	104°53'07.912"W	10.31	
6651.00	23.740	86.420	6599.24	-50.24	508.90	-34.75	40°13'56.301"N	104°53'07.517"W	8.52	
6741.00	28.710	88.280	6679.96	-10.60	510.68	4.97	40°13'56.319"N	104°53'07.005"W	5.60	
6831.00	37.160	89.700	6755.42	38.23	511.47	53.84	40°13'56.326"N	104°53'06.375"W	9.43	
6865.00†	40.485	90.770	6781.91	59.54	511.38	75.15	40°13'56.325"N	104°53'06.100"W	9.98	SSPG
6921.00	45.980	92.250	6822.70	97.88	510.34	113.48	40°13'56.315"N	104°53'05.606"W	9.98	
6943.00†	48.385	92.035	6837.65	114.02	509.74	129.61	40°13'56.309"N	104°53'05.398"W	10.95	NBRR
7011.00	55.820	91.460	6879.39	167.64	508.12	183.20	40°13'56.293"N	104°53'04.707"W	10.95	
7043.00†	59.404	91.502	6896.53	194.65	507.42	210.21	40°13'56.286"N	104°53'04.359"W	11.20	N470_B_CK
7101.00	65.900	91.570	6923.16	246.14	506.04	261.68	40°13'56.273"N	104°53'03.695"W	11.20	
7177.00†	69.869	91.859	6951.76	316.54	503.93	332.05	40°13'56.252"N	104°53'02.788"W	5.23	N700_C_CK
7191.00	70.600	91.910	6956.50	329.71	503.50	345.21	40°13'56.248"N	104°53'02.618"W	5.23	
7280.00	75.130	91.760	6982.71	414.74	500.78	430.20	40°13'56.221"N	104°53'01.522"W	5.09	
7325.00	76.180	91.570	6993.86	458.34	499.51	473.78	40°13'56.208"N	104°53'00.960"W	2.37	
7370.00	78.870	91.000	7003.58	502.27	498.53	517.70	40°13'56.198"N	104°53'00.394"W	6.10	
7411.00	82.270	90.720	7010.30	542.70	497.92	558.13	40°13'56.192"N	104°52'59.873"W	8.32	
7465.00†	84.401	90.640	7016.56	596.33	497.28	611.76	40°13'56.186"N	104°52'59.181"W	3.95	7in Casing Intermediate
7561.00	88.190	90.500	7022.76	692.09	496.33	707.54	40°13'56.177"N	104°52'57.946"W	3.95	
7651.00	88.870	91.140	7025.07	782.05	495.04	797.50	40°13'56.164"N	104°52'56.787"W	1.04	
7741.00	89.360	91.250	7026.46	872.03	493.17	887.47	40°13'56.145"N	104°52'55.626"W	0.56	
7831.00	89.880	91.710	7027.06	962.03	490.84	977.44	40°13'56.122"N	104°52'54.467"W	0.77	
7921.00	90.160	91.930	7027.03	1052.03	487.98	1067.39	40°13'56.094"N	104°52'53.307"W	0.40	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#41 VIPER PYRO 26N-14HZ (740'FNL & 265'FWL, SEC.15)
Area	COLORADO	Well	VIPER PYRO 26N-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VIPER PYRO 26N-14HZ AWP <17027>
Facility	SEC.15-T3N-R67W		

WELLPATH DATA (190 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8010.00	89.450	91.930	7027.33	1141.03	484.99	1156.34	40°13'56.064"N	104°52'52.160"W	0.80	
8100.00	90.930	92.430	7027.03	1231.02	481.56	1246.27	40°13'56.030"N	104°52'51.000"W	1.74	
8190.00	90.560	92.190	7025.86	1321.01	477.93	1336.19	40°13'55.995"N	104°52'49.841"W	0.49	
8280.00	90.560	92.160	7024.98	1411.00	474.52	1426.12	40°13'55.961"N	104°52'48.681"W	0.03	
8370.00	90.440	91.980	7024.20	1501.00	471.27	1516.06	40°13'55.929"N	104°52'47.522"W	0.24	
8460.00	90.130	91.760	7023.75	1590.99	468.33	1606.01	40°13'55.900"N	104°52'46.362"W	0.42	
8549.00	89.790	91.450	7023.81	1679.99	465.84	1694.97	40°13'55.875"N	104°52'45.215"W	0.52	
8639.00	89.540	91.380	7024.34	1769.99	463.62	1784.94	40°13'55.853"N	104°52'44.055"W	0.29	
8729.00	89.270	91.480	7025.27	1859.98	461.37	1874.91	40°13'55.831"N	104°52'42.895"W	0.32	
8819.00	88.740	91.250	7026.84	1949.97	459.23	1964.87	40°13'55.809"N	104°52'41.735"W	0.64	
8909.00	89.820	92.130	7027.97	2039.96	456.57	2054.82	40°13'55.783"N	104°52'40.575"W	1.55	
8998.00	89.540	92.410	7028.46	2128.95	453.05	2143.75	40°13'55.748"N	104°52'39.429"W	0.44	
9088.00	88.860	92.560	7029.72	2218.94	449.15	2233.66	40°13'55.709"N	104°52'38.270"W	0.77	
9178.00	89.700	92.190	7030.85	2308.92	445.42	2323.57	40°13'55.672"N	104°52'37.110"W	1.02	
9268.00	90.280	91.950	7030.87	2398.92	442.17	2413.51	40°13'55.640"N	104°52'35.951"W	0.70	
9358.00	90.770	91.180	7030.04	2488.92	439.71	2503.48	40°13'55.616"N	104°52'34.791"W	1.01	
9447.00	89.570	89.950	7029.78	2577.89	438.83	2592.47	40°13'55.607"N	104°52'33.643"W	1.93	
9537.00	90.680	93.000	7029.58	2667.88	436.51	2682.43	40°13'55.584"N	104°52'32.483"W	3.61	
9627.00	90.280	92.370	7028.83	2757.86	432.30	2772.32	40°13'55.542"N	104°52'31.324"W	0.83	
9717.00	90.830	92.380	7027.96	2847.85	428.57	2862.24	40°13'55.505"N	104°52'30.165"W	0.61	
9851.00	89.850	88.190	7027.16	2981.78	427.90	2996.21	40°13'55.499"N	104°52'28.438"W	3.21	
9986.00	90.740	91.550	7026.47	3116.68	428.21	3131.18	40°13'55.502"N	104°52'26.697"W	2.57	
10076.00	89.660	90.600	7026.15	3206.67	426.52	3221.16	40°13'55.485"N	104°52'25.537"W	1.60	
10166.00	89.290	90.800	7026.98	3296.65	425.42	3311.15	40°13'55.474"N	104°52'24.377"W	0.47	
10255.00	89.850	91.340	7027.64	3385.64	423.76	3400.13	40°13'55.457"N	104°52'23.230"W	0.87	
10345.00	90.860	90.630	7027.09	3475.63	422.21	3490.12	40°13'55.442"N	104°52'22.070"W	1.37	
10438.00	88.700	88.840	7027.44	3568.57	422.64	3583.11	40°13'55.446"N	104°52'20.871"W	3.02	
10531.00	89.810	90.550	7028.65	3661.49	423.14	3676.09	40°13'55.451"N	104°52'19.672"W	2.19	
10624.00	90.090	89.640	7028.73	3754.45	422.98	3769.09	40°13'55.449"N	104°52'18.473"W	1.02	
10717.00	89.290	89.600	7029.24	3847.39	423.60	3862.09	40°13'55.455"N	104°52'17.274"W	0.86	
10811.00	89.100	89.840	7030.56	3941.32	424.06	3956.08	40°13'55.459"N	104°52'16.062"W	0.33	
10904.00	88.730	90.910	7032.32	4034.27	423.45	4049.06	40°13'55.453"N	104°52'14.863"W	1.22	
10997.00	89.100	91.420	7034.08	4127.25	421.56	4142.02	40°13'55.434"N	104°52'13.664"W	0.68	
11091.00	89.470	91.530	7035.25	4221.24	419.14	4235.98	40°13'55.410"N	104°52'12.453"W	0.41	
11184.00	89.930	91.790	7035.74	4314.24	416.45	4328.94	40°13'55.384"N	104°52'11.254"W	0.57	
11277.00	90.270	93.400	7035.58	4407.23	412.24	4421.84	40°13'55.342"N	104°52'10.056"W	1.77	
11370.00	89.630	92.800	7035.66	4500.20	407.21	4514.71	40°13'55.292"N	104°52'08.859"W	0.94	
11464.00	89.230	93.050	7036.59	4594.18	402.41	4608.58	40°13'55.244"N	104°52'07.649"W	0.50	
11557.00	88.360	92.630	7038.55	4687.14	397.80	4701.44	40°13'55.199"N	104°52'06.452"W	1.04	
11650.00	89.260	92.960	7040.48	4780.10	393.27	4794.31	40°13'55.154"N	104°52'05.254"W	1.03	
11744.00	88.920	91.610	7041.97	4874.08	389.52	4888.22	40°13'55.116"N	104°52'04.043"W	1.48	
11836.00	90.700	93.250	7042.28	4966.07	385.62	4980.13	40°13'55.078"N	104°52'02.858"W	2.63	
11929.00	90.330	92.970	7041.44	5059.04	380.58	5072.99	40°13'55.028"N	104°52'01.661"W	0.50	
12022.00	90.180	93.180	7041.03	5152.01	375.59	5165.86	40°13'54.978"N	104°52'00.464"W	0.28	
12115.00	90.150	93.600	7040.76	5244.97	370.09	5258.69	40°13'54.924"N	104°51'59.267"W	0.45	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#41 VIPER PYRO 26N-14HZ (740'FNL & 265'FWL, SEC.15)
Area	COLORADO	Well	VIPER PYRO 26N-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VIPER PYRO 26N-14HZ AWP <17027>
Facility	SEC.15-T3N-R67W		

WELLPATH DATA (190 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12207.00	89.560	92.930	7040.99	5336.94	364.85	5350.54	40°13'54.872"N	104°51'58.083"W	0.97	
12297.00	89.600	94.530	7041.65	5426.88	358.99	5440.35	40°13'54.814"N	104°51'56.925"W	1.78	
12387.00	89.200	94.220	7042.60	5516.78	352.13	5530.08	40°13'54.746"N	104°51'55.768"W	0.56	
12477.00	87.900	93.110	7044.87	5606.70	346.38	5619.86	40°13'54.689"N	104°51'54.610"W	1.90	
12566.00	88.180	91.800	7047.92	5695.64	342.57	5708.73	40°13'54.651"N	104°51'53.464"W	1.50	
12656.00	89.110	92.590	7050.05	5785.61	339.12	5798.63	40°13'54.616"N	104°51'52.305"W	1.36	
12746.00	88.150	91.400	7052.20	5875.58	335.99	5888.55	40°13'54.585"N	104°51'51.146"W	1.70	
12836.00	89.230	90.300	7054.26	5965.54	334.65	5978.51	40°13'54.572"N	104°51'49.986"W	1.71	
12925.00	89.470	90.210	7055.27	6054.51	334.26	6067.51	40°13'54.568"N	104°51'48.839"W	0.29	
13015.00	89.810	91.010	7055.83	6144.49	333.30	6157.50	40°13'54.558"N	104°51'47.678"W	0.97	
13105.00	89.900	92.070	7056.06	6234.48	330.88	6247.47	40°13'54.534"N	104°51'46.518"W	1.18	
13195.00	89.750	92.000	7056.33	6324.48	327.69	6337.41	40°13'54.502"N	104°51'45.359"W	0.18	
13285.00	89.130	91.470	7057.21	6414.48	324.96	6427.36	40°13'54.475"N	104°51'44.199"W	0.91	
13374.00	89.500	91.660	7058.28	6503.47	322.53	6516.32	40°13'54.451"N	104°51'43.052"W	0.47	
13464.00	89.350	91.590	7059.18	6593.47	319.98	6606.28	40°13'54.425"N	104°51'41.892"W	0.18	
13554.00	90.060	91.830	7059.64	6683.46	317.29	6696.24	40°13'54.399"N	104°51'40.732"W	0.83	
13643.00	90.090	92.650	7059.53	6772.46	313.81	6785.17	40°13'54.364"N	104°51'39.586"W	0.92	
13733.00	89.410	92.340	7059.92	6862.45	309.90	6875.08	40°13'54.325"N	104°51'38.426"W	0.83	
13823.00	89.840	92.710	7060.51	6952.44	305.93	6964.99	40°13'54.286"N	104°51'37.267"W	0.63	
13896.00	88.890	92.330	7061.32	7025.43	302.72	7037.92	40°13'54.254"N	104°51'36.327"W	1.40	
13986.00	89.010	92.690	7062.97	7115.40	298.78	7127.82	40°13'54.214"N	104°51'35.168"W	0.42	
14076.00	88.400	90.090	7065.00	7205.37	296.60	7217.76	40°13'54.193"N	104°51'34.008"W	2.97	
14165.00	87.320	92.770	7068.33	7294.30	294.38	7306.66	40°13'54.170"N	104°51'32.862"W	3.24	
14255.00	86.530	92.770	7073.15	7384.15	290.04	7396.42	40°13'54.127"N	104°51'31.705"W	0.88	
14345.00	86.750	92.800	7078.43	7473.98	285.67	7486.16	40°13'54.084"N	104°51'30.548"W	0.25	
14435.00	87.550	92.690	7082.90	7563.86	281.37	7575.95	40°13'54.041"N	104°51'29.390"W	0.90	
14524.00	88.530	91.270	7085.95	7652.80	278.29	7664.84	40°13'54.010"N	104°51'28.244"W	1.94	
14614.00	88.160	91.500	7088.55	7742.76	276.12	7754.78	40°13'53.989"N	104°51'27.084"W	0.48	
14704.00	87.790	91.800	7091.73	7832.71	273.53	7844.68	40°13'53.963"N	104°51'25.925"W	0.53	
14794.00	87.600	90.740	7095.35	7922.63	271.54	7934.59	40°13'53.943"N	104°51'24.766"W	1.20	
14883.00	87.260	90.730	7099.34	8011.53	270.40	8023.49	40°13'53.931"N	104°51'23.620"W	0.38	
14973.00	86.430	91.020	7104.29	8101.38	269.02	8113.34	40°13'53.917"N	104°51'22.461"W	0.98	
15063.00	87.880	90.970	7108.76	8191.26	267.46	8203.21	40°13'53.902"N	104°51'21.302"W	1.61	
15152.00	88.950	91.560	7111.22	8280.22	265.50	8292.16	40°13'53.882"N	104°51'20.156"W	1.37	
15242.00	88.090	91.110	7113.54	8370.18	263.40	8382.10	40°13'53.861"N	104°51'18.996"W	1.08	
15332.00	87.380	91.160	7117.10	8460.11	261.62	8472.01	40°13'53.843"N	104°51'17.837"W	0.79	
15422.00	88.310	91.330	7120.49	8550.04	259.67	8561.93	40°13'53.823"N	104°51'16.678"W	1.05	
15512.00	87.810	91.260	7123.53	8639.99	257.63	8651.85	40°13'53.803"N	104°51'15.518"W	0.56	
15602.00	87.260	91.530	7127.40	8729.90	255.45	8741.74	40°13'53.781"N	104°51'14.359"W	0.68	
15691.00	86.890	92.020	7131.94	8818.78	252.69	8830.58	40°13'53.754"N	104°51'13.214"W	0.69	
15781.00	87.230	91.700	7136.56	8908.66	249.78	8920.42	40°13'53.724"N	104°51'12.055"W	0.52	
15871.00	88.060	91.410	7140.26	8998.59	247.34	9010.31	40°13'53.700"N	104°51'10.896"W	0.98	
15961.00	89.540	91.480	7142.14	9088.56	245.07	9100.26	40°13'53.677"N	104°51'09.737"W	1.65	
16050.00	89.110	91.590	7143.19	9177.56	242.68	9189.22	40°13'53.653"N	104°51'08.590"W	0.50	
16140.00	88.620	91.300	7144.97	9267.54	240.41	9279.17	40°13'53.631"N	104°51'07.430"W	0.63	



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#41 VIPER PYRO 26N-14HZ (740'FNL & 265'FWL, SEC.15)
Area	COLORADO	Well	VIPER PYRO 26N-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VIPER PYRO 26N-14HZ AWB <17027>
Facility	SEC.15-T3N-R67W		

WELLPATH DATA (190 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
16230.00	87.010	91.600	7148.41	9357.47	238.14	9369.07	40°13'53.608"N	104°51'06.271"W	1.82	
16320.00	88.150	92.690	7152.21	9447.38	234.77	9458.93	40°13'53.574"N	104°51'05.112"W	1.75	
16409.00	87.630	92.320	7155.48	9536.31	230.88	9547.78	40°13'53.535"N	104°51'03.967"W	0.72	
16499.00	87.170	91.590	7159.57	9626.22	227.82	9637.64	40°13'53.505"N	104°51'02.808"W	0.96	
16589.00	87.820	92.700	7163.50	9716.13	224.45	9727.48	40°13'53.471"N	104°51'01.650"W	1.43	
16679.00	88.310	94.020	7166.54	9806.04	219.18	9817.28	40°13'53.419"N	104°51'00.492"W	1.56	
16768.00	87.700	93.920	7169.64	9894.92	213.02	9906.01	40°13'53.357"N	104°50'59.348"W	0.69	
16858.00	86.560	93.510	7174.14	9984.75	207.20	9995.71	40°13'53.300"N	104°50'58.192"W	1.35	
16960.00	85.940	93.260	7180.81	10086.49	201.19	10097.31	40°13'53.240"N	104°50'56.882"W	0.66	Last BHI MWD+IFR+MSA Surveys
17027.00	85.940	93.260	7185.56	10153.30	197.39	10164.03	40°13'53.202"N	104°50'56.021"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: VIPER PYRO 26N-14HZ AWB <17027>      Ref Wellpath: VIPER PYRO 26N-14HZ 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	20.00	846.00	826.00	20.00	845.09	0.00	0.00	21.45	-6.60	
9.625in Casing Surface	20.00	835.00	815.00	20.00	834.14	0.00	0.00	20.35	-6.62	
8.75in Open Hole	20.00	7475.00	7455.00	20.00	7017.50	0.00	0.00	497.17	621.72	
7in Casing Intermediate	20.00	7465.00	7445.00	20.00	7016.56	0.00	0.00	497.28	611.76	
6.125in Open Hole	7475.00	17027.00	9552.00	7017.50	7185.56	497.17	621.72	197.39	10164.03	

TARGETS									
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape	
SEC.10-T3N-R67W LINES	0.00	150.17	-0.85	1672429.86	14610989.22	40°13'52.756"N	104°53'07.080"W	polygon	
SEC.14-T3N-R67W LINES	0.00	150.17	-0.85	1672429.86	14610989.22	40°13'52.756"N	104°53'07.080"W	polygon	
SEC.15-T3N-R67W LINES	5.00	320.59	508.17	1672938.46	14611160.23	40°13'54.440"N	104°53'00.517"W	polygon	
VIPER PYRO 26N-14HZ LANDBOX	7055.00	29.95	0.00	1672430.87	14610869.05	40°13'51.568"N	104°53'07.069"W	polygon	
VIPER PYRO 26N-14HZ BHL ON PLAT (315'FNL & 1'FEL, SEC.14) REV-1	7181.00	211.24	10165.10	1682591.65	14611063.40	40°13'53.339"N	104°50'56.008"W	point	

WELLPATH COMPOSITION - Ref Wellbore: VIPER PYRO 26N-14HZ AWB <17027>      Ref Wellpath: VIPER PYRO 26N-14HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
20.00	790.00	Custom APC_ISCWSA REV 2 MWD	CATHEDRAL ENERGY MWD SURVEYS <125-790>	VIPER PYRO 26N-14HZ AWB <17027>
790.00	7411.00	Custom APC_ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHI MWD+IFR+MSA 8 3/4" HOLE <842-7411>	VIPER PYRO 26N-14HZ AWB <17027>
7411.00	16960.00	Custom APC_ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHI MWD+IFR+MSA SURVEYS 6 1/8" HOLE <7561-16960>	VIPER PYRO 26N-14HZ AWB <17027>
16960.00	17027.00	Blind Drilling (std)	Projection to bit	VIPER PYRO 26N-14HZ AWB <17027>

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#41 VIPER PYRO 26N-14HZ (740'FNL & 265'FWL, SEC.15)
Area	COLORADO	Well	VIPER PYRO 26N-14HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VIPER PYRO 26N-14HZ AWB <17027>
Facility	SEC.15-T3N-R67W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
20.00	0.000	54.200	20.00	Tie-On
125.00	0.500	54.200	125.00	Begin Cathedral Energy MWD Surveys
790.00	5.200	355.700	789.34	Tie-Into Cathedral Energy MWD Surveys
842.00	5.730	1.660	841.11	Begin BHI MWD+IFR+MSA Surveys
6865.00	40.485	90.770	6781.91	SSPG
6943.00	48.385	92.035	6837.65	NBRR
7043.00	59.404	91.502	6896.53	N470_B_CK
7177.00	69.869	91.859	6951.76	N700_C_CK
7465.00	84.401	90.640	7016.56	7in Casing Intermediate
16960.00	85.940	93.260	7180.81	Last BHI MWD+IFR+MSA Surveys
17027.00	85.940	93.260	7185.56	Projection to Bit