

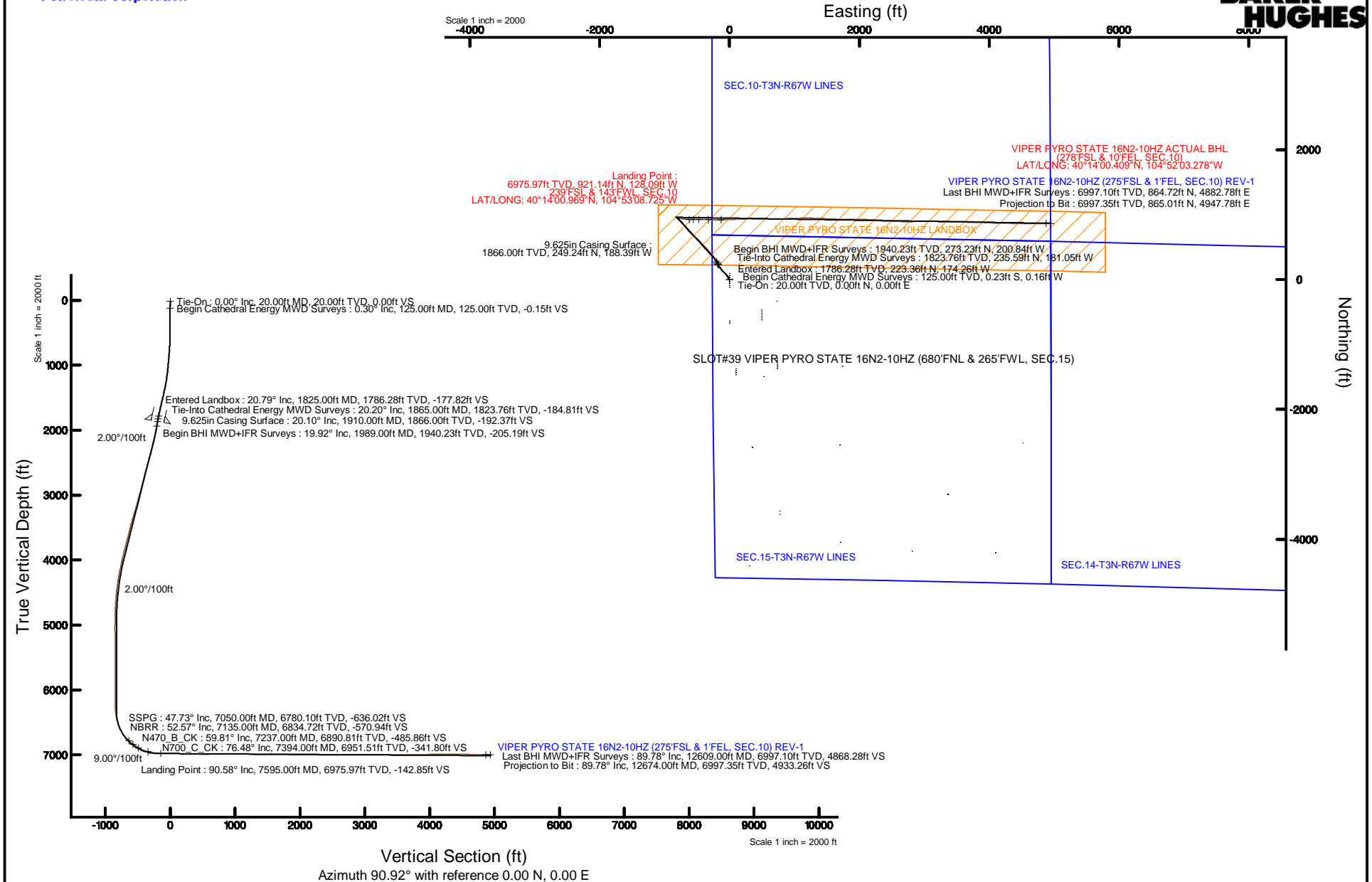
# KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#39 VIPER PYRO STATE 16N2-10HZ (680'FNL & 265'FWL, SEC.15)  
 Field: WELD COUNTY (UTM/TRUE NORTH) Well: VIPER PYRO STATE 16N2-10HZ  
 Facility: SEC.15-T3N-R67W Wellbore: VIPER PYRO STATE 16N2-10HZ PWB



Plot reference wellpath is VIPER PYRO STATE 16N2-10HZ (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#39 VIPER PYRO STATE 16N2-10HZ (680'FNL & 265'FWL, SEC.15)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: precain on 8/18/2015



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#39 VIPER PYRO STATE 16N2-10HZ (680'FNL & 265'FWL, SEC.15)
Area	COLORADO	Well	VIPER PYRO STATE 16N2-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VIPER PYRO STATE 16N2-10HZ AWB <12674>
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	8/18/2015 at 11:52:15 AM
Convergence at slot	0.07° East	Database/Source file	WellArchitectAPC/VIPER_PYRO_STATE_16N2-10HZ_AWB__12674_.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	1334.11	-1744.25	1672430.52	14610899.20	40°13'51.866"N	104°53'07.073"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#39 VIPER PYRO STATE 16N2-10HZ (680'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	90.92°

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Area	COLORADO	Well	VIPER PYRO STATE 16N2-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VIPER PYRO STATE 16N2-10HZ AWB <12674>
Facility	SEC.15-T3N-R67W		

WELLPATH DATA (145 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	214.800	0.00	0.00	0.00	0.00	40°13'51.866"N	104°53'07.073"W	0.00	
20.00	0.000	214.800	20.00	0.00	0.00	0.00	40°13'51.866"N	104°53'07.073"W	0.00	Tie-On
125.00	0.300	214.800	125.00	-0.15	-0.23	-0.16	40°13'51.864"N	104°53'07.075"W	0.29	Begin Cathedral Energy MWD Surveys
187.00	0.300	279.000	187.00	-0.40	-0.33	-0.41	40°13'51.863"N	104°53'07.078"W	0.51	
249.00	0.100	227.800	249.00	-0.60	-0.34	-0.61	40°13'51.863"N	104°53'07.081"W	0.40	
311.00	0.200	175.600	311.00	-0.63	-0.49	-0.64	40°13'51.861"N	104°53'07.081"W	0.26	
373.00	0.200	324.700	373.00	-0.69	-0.51	-0.70	40°13'51.861"N	104°53'07.082"W	0.62	
457.00	0.700	307.200	457.00	-1.19	-0.08	-1.19	40°13'51.865"N	104°53'07.088"W	0.61	
542.00	1.500	321.700	541.98	-2.31	1.11	-2.29	40°13'51.877"N	104°53'07.103"W	0.99	
627.00	3.100	328.800	626.91	-4.24	3.95	-4.17	40°13'51.905"N	104°53'07.127"W	1.91	
712.00	5.500	329.000	711.66	-7.61	9.41	-7.46	40°13'51.959"N	104°53'07.169"W	2.82	
797.00	7.900	327.200	796.08	-13.01	17.81	-12.73	40°13'52.042"N	104°53'07.237"W	2.83	
881.00	9.200	327.200	879.14	-19.94	28.31	-19.49	40°13'52.146"N	104°53'07.324"W	1.55	
966.00	9.300	331.600	963.04	-27.08	40.06	-26.44	40°13'52.262"N	104°53'07.414"W	0.84	
1051.00	10.000	327.700	1046.83	-34.48	52.34	-33.65	40°13'52.383"N	104°53'07.507"W	1.13	
1136.00	11.000	321.400	1130.41	-43.69	64.92	-42.65	40°13'52.507"N	104°53'07.623"W	1.79	
1219.00	12.600	315.400	1211.66	-55.19	77.55	-53.95	40°13'52.632"N	104°53'07.769"W	2.43	
1302.00	14.300	314.400	1292.38	-69.08	91.17	-67.63	40°13'52.767"N	104°53'07.945"W	2.07	
1387.00	15.600	313.600	1374.50	-85.10	106.40	-83.41	40°13'52.917"N	104°53'08.148"W	1.55	
1473.00	17.800	316.200	1456.87	-102.86	123.86	-100.88	40°13'53.090"N	104°53'08.374"W	2.70	
1557.00	20.100	320.000	1536.31	-121.35	144.19	-119.05	40°13'53.291"N	104°53'08.608"W	3.11	
1642.00	21.400	323.700	1615.80	-140.30	167.88	-137.62	40°13'53.525"N	104°53'08.847"W	2.17	
1684.00	21.600	324.600	1654.88	-149.51	180.35	-146.64	40°13'53.648"N	104°53'08.964"W	0.92	
1727.00	21.400	326.200	1694.89	-158.66	193.32	-155.58	40°13'53.776"N	104°53'09.079"W	1.44	
1770.00	21.200	327.800	1734.95	-167.38	206.42	-164.09	40°13'53.906"N	104°53'09.189"W	1.43	
1812.00	21.000	329.700	1774.14	-175.43	219.35	-171.94	40°13'54.034"N	104°53'09.290"W	1.70	
1825.00†	20.787	330.202	1786.28	-177.82	223.36	-174.26	40°13'54.073"N	104°53'09.320"W	2.14	Entered Landbox
1855.00	20.300	331.400	1814.37	-183.10	232.55	-179.39	40°13'54.164"N	104°53'09.386"W	2.14	
1865.00	20.200	331.400	1823.76	-184.81	235.59	-181.05	40°13'54.194"N	104°53'09.407"W	1.00	Tie-Into Cathedral Energy MWD Surveys
1989.00	19.920	333.160	1940.23	-205.19	273.23	-200.84	40°13'54.566"N	104°53'09.662"W	0.54	Begin BHI MWD+IFR Surveys
2084.00	21.370	331.540	2029.13	-221.22	302.89	-216.39	40°13'54.859"N	104°53'09.863"W	1.64	
2179.00	21.050	326.680	2117.70	-239.31	332.37	-234.01	40°13'55.150"N	104°53'10.090"W	1.88	
2274.00	21.090	322.880	2206.36	-259.45	360.25	-253.70	40°13'55.426"N	104°53'10.344"W	1.44	
2370.00	21.410	317.720	2295.84	-282.09	386.99	-275.91	40°13'55.690"N	104°53'10.630"W	1.98	
2465.00	22.580	319.100	2383.92	-306.12	413.61	-299.52	40°13'55.953"N	104°53'10.935"W	1.35	
2560.00	22.050	319.350	2471.81	-330.11	440.92	-323.08	40°13'56.223"N	104°53'11.239"W	0.57	
2656.00	22.880	315.270	2560.53	-355.41	467.86	-347.96	40°13'56.489"N	104°53'11.559"W	1.84	
2751.00	21.680	315.260	2648.43	-381.17	493.44	-373.31	40°13'56.742"N	104°53'11.886"W	1.26	
2846.00	19.800	314.930	2737.27	-405.30	517.27	-397.05	40°13'56.978"N	104°53'12.192"W	1.98	
2941.00	19.760	317.290	2826.67	-427.95	540.43	-419.33	40°13'57.206"N	104°53'12.480"W	0.84	
3036.00	20.980	319.300	2915.73	-450.33	565.13	-441.32	40°13'57.451"N	104°53'12.763"W	1.48	
3131.00	21.530	316.860	3004.27	-473.74	590.74	-464.33	40°13'57.704"N	104°53'13.060"W	1.10	
3226.00	20.660	314.580	3092.90	-497.99	615.23	-488.19	40°13'57.946"N	104°53'13.367"W	1.26	
3320.00	20.640	311.920	3180.86	-522.49	637.94	-512.33	40°13'58.170"N	104°53'13.679"W	1.00	
3416.00	21.000	310.540	3270.59	-548.51	660.42	-537.99	40°13'58.392"N	104°53'14.010"W	0.63	

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Area	COLORADO	Well	VIPER PYRO STATE 16N2-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VIPER PYRO STATE 16N2-10HZ AWP <12674>
Facility	SEC.15-T3N-R67W		

WELLPATH DATA (145 stations) † = interpolated/extrapolated station										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
3510.00	20.540	309.490	3358.49	-574.38	681.86	-563.51	40°13'58.604"N	104°53'14.339"W	0.63	
3606.00	19.880	311.870	3448.58	-599.87	703.46	-588.67	40°13'58.817"N	104°53'14.663"W	1.10	
3701.00	19.630	316.820	3537.99	-623.18	725.88	-611.62	40°13'59.039"N	104°53'14.959"W	1.78	
3796.00	21.650	321.960	3626.90	-645.31	751.32	-633.34	40°13'59.290"N	104°53'15.239"W	2.85	
3891.00	23.060	322.500	3714.75	-667.89	779.89	-655.46	40°13'59.573"N	104°53'15.524"W	1.50	
3986.00	22.300	321.010	3802.41	-691.02	808.66	-678.13	40°13'59.857"N	104°53'15.817"W	1.00	
4081.00	19.960	317.680	3891.02	-713.69	834.66	-700.39	40°14'00.114"N	104°53'16.104"W	2.77	
4176.00	17.940	316.570	3980.87	-735.03	857.28	-721.37	40°14'00.337"N	104°53'16.374"W	2.16	
4271.00	17.010	317.630	4071.48	-754.78	878.17	-740.79	40°14'00.544"N	104°53'16.625"W	1.03	
4367.00	14.990	315.140	4163.76	-773.31	897.35	-759.02	40°14'00.733"N	104°53'16.860"W	2.22	
4462.00	13.870	313.670	4255.76	-790.48	913.92	-775.92	40°14'00.897"N	104°53'17.077"W	1.24	
4557.00	11.560	314.820	4348.42	-805.70	928.49	-790.91	40°14'01.041"N	104°53'17.271"W	2.45	
4652.00	9.030	310.490	4441.89	-818.31	940.04	-803.33	40°14'01.155"N	104°53'17.431"W	2.78	
4747.00	7.180	312.160	4535.94	-828.52	948.87	-813.41	40°14'01.243"N	104°53'17.561"W	1.96	
4842.00	5.930	323.180	4630.32	-835.99	956.78	-820.75	40°14'01.321"N	104°53'17.655"W	1.86	
4938.00	4.530	311.440	4725.92	-841.91	963.26	-826.56	40°14'01.385"N	104°53'17.730"W	1.83	
5033.00	1.890	288.740	4820.76	-846.25	966.25	-830.86	40°14'01.414"N	104°53'17.786"W	3.03	
5129.00	0.810	217.000	4916.74	-848.16	966.22	-832.77	40°14'01.414"N	104°53'17.810"W	1.88	
5224.00	0.860	224.150	5011.73	-849.04	965.17	-833.67	40°14'01.404"N	104°53'17.822"W	0.12	
5319.00	0.820	115.350	5106.72	-848.91	964.37	-833.55	40°14'01.396"N	104°53'17.821"W	1.44	
5509.00	0.430	134.330	5296.71	-847.15	963.29	-831.81	40°14'01.385"N	104°53'17.798"W	0.23	
5699.00	0.650	166.000	5486.70	-846.36	961.74	-831.04	40°14'01.370"N	104°53'17.788"W	0.19	
5889.00	0.800	164.310	5676.69	-845.70	959.42	-830.42	40°14'01.347"N	104°53'17.780"W	0.08	
5984.00	0.670	156.360	5771.68	-845.28	958.27	-830.02	40°14'01.335"N	104°53'17.775"W	0.17	
6175.00	0.980	163.410	5962.66	-844.33	955.68	-829.11	40°14'01.310"N	104°53'17.763"W	0.17	
6271.00	1.040	168.160	6058.65	-843.89	954.04	-828.69	40°14'01.294"N	104°53'17.758"W	0.11	
6366.00	0.210	357.920	6153.64	-843.71	953.38	-828.52	40°14'01.287"N	104°53'17.756"W	1.31	
6461.00	0.110	242.740	6248.64	-843.80	953.51	-828.61	40°14'01.288"N	104°53'17.757"W	0.29	
6556.00	5.130	101.020	6343.52	-839.69	952.65	-824.52	40°14'01.280"N	104°53'17.704"W	5.49	
6651.00	14.030	103.210	6437.10	-824.23	949.20	-809.11	40°14'01.246"N	104°53'17.505"W	9.37	
6746.00	17.720	102.230	6528.46	-798.79	943.51	-783.76	40°14'01.190"N	104°53'17.179"W	3.89	
6840.00	26.690	99.520	6615.40	-763.82	936.97	-748.89	40°14'01.125"N	104°53'16.729"W	9.60	
6935.00	37.210	95.980	6695.90	-713.96	930.43	-699.13	40°14'01.060"N	104°53'16.087"W	11.24	
7031.00	46.740	92.990	6767.20	-649.96	925.57	-635.20	40°14'01.012"N	104°53'15.263"W	10.14	
7050.00†	47.730	92.031	6780.10	-636.02	924.96	-621.26	40°14'01.006"N	104°53'15.083"W	6.39	SSPG
7123.00	51.600	88.610	6827.35	-580.40	924.70	-565.65	40°14'01.004"N	104°53'14.366"W	6.39	
7135.00†	52.571	88.884	6834.72	-570.94	924.90	-556.18	40°14'01.006"N	104°53'14.244"W	8.29	NBRR
7219.00	59.380	90.630	6881.70	-501.38	925.16	-486.61	40°14'01.008"N	104°53'13.347"W	8.29	
7237.00†	59.812	90.977	6890.81	-485.86	924.94	-471.08	40°14'01.006"N	104°53'13.147"W	2.92	N470_B_CK
7266.00	60.510	91.530	6905.24	-460.70	924.39	-445.94	40°14'01.001"N	104°53'12.823"W	2.92	
7314.00	66.980	91.290	6926.46	-417.68	923.33	-402.92	40°14'00.990"N	104°53'12.268"W	13.49	
7394.00†	76.478	91.676	6951.51	-341.80	921.36	-327.07	40°14'00.971"N	104°53'11.290"W	11.88	N700_C_CK
7408.00	78.140	91.740	6954.59	-328.15	920.95	-313.42	40°14'00.967"N	104°53'11.114"W	11.88	
7503.00	82.110	89.760	6970.88	-234.58	919.74	-219.86	40°14'00.955"N	104°53'09.908"W	4.66	
7550.00	87.400	88.880	6975.17	-187.81	920.30	-173.07	40°14'00.960"N	104°53'09.305"W	11.41	

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Area	COLORADO	Well	VIPER PYRO STATE 16N2-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VIPER PYRO STATE 16N2-10HZ AWB <12674>
Facility	SEC.15-T3N-R67W		

## WELLPATH DATA (145 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7595.00	90.580	88.970	6975.97	-142.85	921.14	-128.09	40°14'00.969"N	104°53'08.725"W	7.07	Landing Point
7689.00	89.930	88.100	6975.55	-48.94	923.54	-34.13	40°14'00.992"N	104°53'07.513"W	1.16	
7784.00	88.030	87.440	6977.24	45.90	927.24	60.78	40°14'01.029"N	104°53'06.289"W	2.12	
7879.00	88.640	87.080	6980.00	140.67	931.78	155.63	40°14'01.074"N	104°53'05.066"W	0.75	
7975.00	88.370	88.890	6982.51	236.50	935.15	251.53	40°14'01.107"N	104°53'03.830"W	1.91	
8070.00	88.610	90.880	6985.01	331.45	935.34	346.50	40°14'01.109"N	104°53'02.605"W	2.11	
8165.00	89.380	90.650	6986.68	426.43	934.08	441.47	40°14'01.096"N	104°53'01.381"W	0.85	
8261.00	89.530	90.800	6987.59	522.43	932.86	537.46	40°14'01.084"N	104°53'00.143"W	0.22	
8356.00	91.350	91.750	6986.86	617.42	930.75	632.43	40°14'01.063"N	104°52'58.919"W	2.16	
8452.00	89.600	88.170	6986.06	713.38	930.81	728.41	40°14'01.064"N	104°52'57.681"W	4.15	
8546.00	90.610	88.710	6985.89	807.29	933.37	822.37	40°14'01.089"N	104°52'56.470"W	1.22	
8642.00	91.630	87.850	6984.01	903.17	936.25	918.31	40°14'01.118"N	104°52'55.233"W	1.39	
8737.00	90.300	87.920	6982.41	998.02	939.76	1013.23	40°14'01.152"N	104°52'54.009"W	1.40	
8832.00	89.500	88.430	6982.58	1092.91	942.78	1108.18	40°14'01.182"N	104°52'52.785"W	1.00	
8927.00	88.540	90.310	6984.20	1187.86	943.83	1203.15	40°14'01.193"N	104°52'51.560"W	2.22	
9023.00	88.180	92.470	6986.95	1283.81	941.50	1299.08	40°14'01.170"N	104°52'50.323"W	2.28	
9118.00	88.700	92.180	6989.54	1378.75	937.65	1393.96	40°14'01.131"N	104°52'49.100"W	0.63	
9214.00	89.100	91.900	6991.38	1474.71	934.23	1489.89	40°14'01.098"N	104°52'47.863"W	0.51	
9309.00	90.300	92.650	6991.88	1569.68	930.46	1584.81	40°14'01.060"N	104°52'46.639"W	1.49	
9405.00	90.270	91.270	6991.40	1665.66	927.18	1680.75	40°14'01.028"N	104°52'45.402"W	1.44	
9500.00	88.550	90.490	6992.38	1760.65	925.72	1775.73	40°14'01.013"N	104°52'44.177"W	1.99	
9595.00	88.700	89.990	6994.66	1855.62	925.32	1870.70	40°14'01.009"N	104°52'42.953"W	0.55	
9690.00	88.860	89.510	6996.68	1950.57	925.74	1965.68	40°14'01.013"N	104°52'41.728"W	0.53	
9785.00	88.090	92.410	6999.21	2045.53	924.15	2060.62	40°14'00.997"N	104°52'40.504"W	3.16	
9880.00	89.870	92.810	7000.90	2140.47	919.82	2155.50	40°14'00.955"N	104°52'39.281"W	1.92	
9974.00	90.390	93.590	7000.69	2234.39	914.57	2249.35	40°14'00.903"N	104°52'38.071"W	1.00	
10069.00	90.240	93.350	7000.17	2329.30	908.82	2344.18	40°14'00.846"N	104°52'36.848"W	0.30	
10164.00	90.360	93.190	6999.67	2424.22	903.40	2439.02	40°14'00.792"N	104°52'35.625"W	0.21	
10259.00	91.350	92.800	6998.25	2519.14	898.44	2533.88	40°14'00.743"N	104°52'34.402"W	1.12	
10355.00	91.570	92.720	6995.81	2615.06	893.82	2629.74	40°14'00.697"N	104°52'33.166"W	0.24	
10450.00	90.030	89.990	6994.48	2710.04	891.57	2724.69	40°14'00.675"N	104°52'31.942"W	3.30	
10544.00	90.150	88.190	6994.33	2803.99	893.07	2818.67	40°14'00.690"N	104°52'30.730"W	1.92	
10639.00	89.220	90.200	6994.85	2898.94	894.40	2913.66	40°14'00.703"N	104°52'29.505"W	2.33	
10735.00	89.160	90.260	6996.21	2994.92	894.02	3009.65	40°14'00.699"N	104°52'28.268"W	0.09	
10830.00	89.690	89.380	6997.16	3089.90	894.32	3104.64	40°14'00.702"N	104°52'27.043"W	1.08	
10926.00	90.210	89.010	6997.25	3185.85	895.66	3200.63	40°14'00.715"N	104°52'25.805"W	0.66	
11020.00	90.150	90.910	6996.95	3279.83	895.73	3294.62	40°14'00.715"N	104°52'24.593"W	2.02	
11116.00	88.730	91.470	6997.89	3375.83	893.74	3390.60	40°14'00.696"N	104°52'23.356"W	1.59	
11211.00	89.160	91.200	6999.64	3470.81	891.52	3485.55	40°14'00.674"N	104°52'22.131"W	0.53	
11306.00	89.470	91.000	7000.78	3565.80	889.70	3580.53	40°14'00.655"N	104°52'20.907"W	0.39	
11399.00	90.330	91.010	7000.94	3658.80	888.07	3673.51	40°14'00.639"N	104°52'19.708"W	0.92	
11495.00	90.950	90.900	6999.87	3754.79	886.47	3769.49	40°14'00.623"N	104°52'18.470"W	0.66	
11590.00	90.800	93.370	6998.41	3849.75	882.93	3864.41	40°14'00.588"N	104°52'17.247"W	2.60	
11684.00	92.360	93.910	6995.82	3943.61	876.96	3958.18	40°14'00.529"N	104°52'16.038"W	1.76	
11780.00	90.920	91.800	6993.08	4039.50	872.19	4054.02	40°14'00.482"N	104°52'14.802"W	2.66	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#39 VIPER PYRO STATE 16N2-10HZ (680'FNL & 265'FWL, SEC.15)
Area	COLORADO	Well	VIPER PYRO STATE 16N2-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VIPER PYRO STATE 16N2-10HZ AWB <12674>
Facility	SEC.15-T3N-R67W		

WELLPATH DATA (145 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS ["/100ft]	Comments
11875.00	89.930	91.480	6992.37	4134.49	869.47	4148.97	40°14'00.455"N	104°52'13.578"W	1.10	
11971.00	91.450	91.190	6991.21	4230.48	867.23	4244.94	40°14'00.432"N	104°52'12.340"W	1.61	
12066.00	89.560	91.340	6990.38	4325.47	865.13	4339.91	40°14'00.411"N	104°52'11.116"W	2.00	
12161.00	90.830	90.950	6990.05	4420.47	863.24	4434.88	40°14'00.393"N	104°52'09.891"W	1.40	
12256.00	87.900	89.980	6991.11	4515.45	862.46	4529.86	40°14'00.385"N	104°52'08.667"W	3.25	
12350.00	88.330	89.910	6994.20	4609.38	862.55	4623.81	40°14'00.385"N	104°52'07.455"W	0.46	
12443.00	89.230	89.390	6996.18	4702.34	863.12	4716.79	40°14'00.391"N	104°52'06.256"W	1.12	
12539.00	89.900	89.360	6996.91	4798.30	864.17	4812.78	40°14'00.401"N	104°52'05.019"W	0.70	
12609.00	89.780	89.740	6997.10	4868.28	864.72	4882.78	40°14'00.406"N	104°52'04.116"W	0.57	Last BHI MWD+IFR Surveys
12674.00	89.780	89.740	6997.35	4933.26	865.01	4947.78	40°14'00.409"N	104°52'03.278"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: VIPER PYRO STATE 16N2-10HZ AWB <12674>										Ref Wellpath: VIPER PYRO STATE 16N2-10HZ 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	1920.00	1900.00	20.00	1875.39	0.00	0.00	252.27	-190.00	
9.625in Casing Surface	20.00	1910.00	1890.00	20.00	1866.00	0.00	0.00	249.24	-188.39	
8.5in Open Hole	1920.00	12674.00	10754.00	1875.39	6997.35	252.27	-190.00	865.01	4947.78	

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	90.06	-0.54	1672429.86	14610989.22	40°13'52.756"N	104°53'07.080"W	polygon
SEC.14-T3N-R67W LINES	0.00	90.06	-0.54	1672429.86	14610989.22	40°13'52.756"N	104°53'07.080"W	polygon
SEC.15-T3N-R67W LINES	5.00	260.48	508.48	1672938.46	14611160.23	40°13'54.440"N	104°53'00.517"W	polygon
VIPER PYRO STATE 16N2-10HZ (275'FSL & 1'FEL, SEC.10) REV-1	7011.00	865.39	4948.41	1677375.82	14611770.63	40°14'00.413"N	104°52'03.270"W	point
VIPER PYRO STATE 16N2-10HZ LANDBOX	7011.00	0.00	0.00	1672430.52	14610899.20	40°13'51.866"N	104°53'07.073"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: VIPER PYRO STATE 16N2-10HZ AWB <12674>										Ref Wellpath: VIPER PYRO STATE 16N2-10HZ AWP
Start MD [ft]	End MD [ft]	Positional Uncertainty Model			Log Name/Comment			Wellbore		
20.00	1865.00	Custom APC_ISCWSA REV 2 MWD			CATHEDRAL ENERGY MWD SURVEYS <125-1865>			VIPER PYRO STATE 16N2-10HZ AWB <12674>		
1865.00	12609.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)			BHI MWD+IFR SURVEYS 8 1/2" HOLE <1989-12609>			VIPER PYRO STATE 16N2-10HZ AWB <12674>		
12609.00	12674.00	Blind Drilling (std)			Projection to bit			VIPER PYRO STATE 16N2-10HZ AWB <12674>		

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#39 VIPER PYRO STATE 16N2-10HZ (680'FNL & 265'FWL, SEC.15)
Area	COLORADO	Well	VIPER PYRO STATE 16N2-10HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VIPER PYRO STATE 16N2-10HZ AWB <12674>
Facility	SEC.15-T3N-R67W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
20.00	0.000	214.800	20.00	Tie-On
125.00	0.300	214.800	125.00	Begin Cathedral Energy MWD Surveys
1825.00	20.787	330.202	1786.28	Entered Landbox
1865.00	20.200	331.400	1823.76	Tie-Into Cathedral Energy MWD Surveys
1989.00	19.920	333.160	1940.23	Begin BHI MWD+IFR Surveys
7050.00	47.730	92.031	6780.10	SSPG
7135.00	52.571	88.884	6834.72	NBRR
7237.00	59.812	90.977	6890.81	N470_B_CK
7394.00	76.478	91.676	6951.51	N700_C_CK
7595.00	90.580	88.970	6975.97	Landing Point
12609.00	89.780	89.740	6997.10	Last BHI MWD+IFR Surveys
12674.00	89.780	89.740	6997.35	Projection to Bit