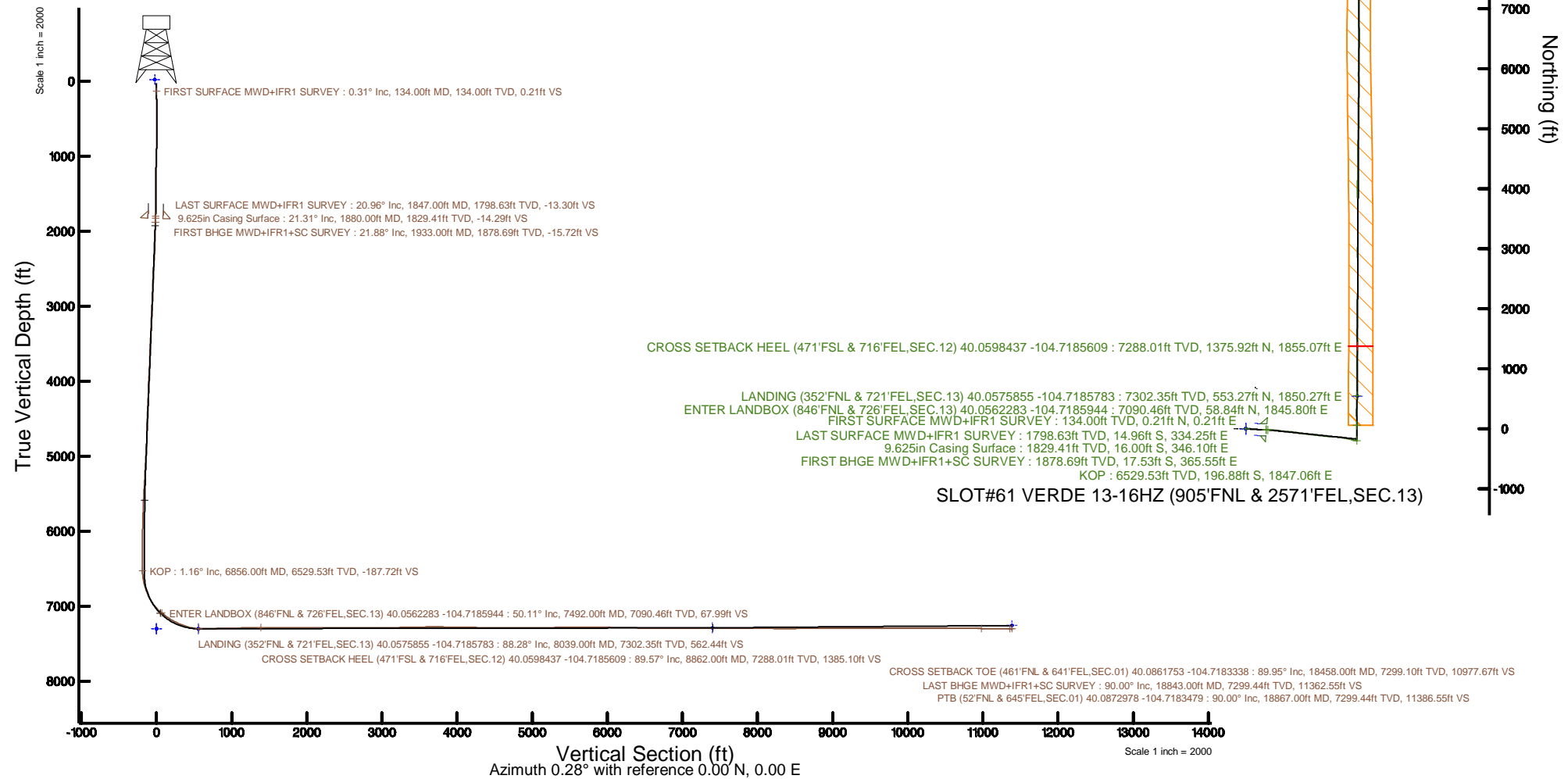


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location:	COLORADO	Slot:	SLOT#61 VERDE 13-16HZ (905'FNL & 2571'FEL,SEC.13)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	VERDE 13-16HZ
Facility:	SEC.13-T1N-R66W	Wellbore:	VERDE 13-16HZ PWB
Plot reference wellpath is VERDE 13-16HZ PWP Rev-B.1		Grid System: NAD83 / UTM Zone 13 North, US feet	
True vertical depths are referenced to PD 564 (26) (RT)		* = Wellpath was transformed from a different geodetic datum	
Measured depths are referenced to PD 564 (26) (RT)		North Reference: True north	
PD 564 (26) (RT) to Mean Sea Level: 5096 feet		Scale: True distance	
Mean Sea Level to Mud line (At Slot: SLOT#61 VERDE 13-16HZ (905'FNL & 2571'FEL,SEC.13)): 0 feet		Depths are in feet	
Coordinates are in feet referenced to Slot		Created by: painsetr on 2018-04-10	
		Database: WA_DEN_Anadarko_Defn	



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#61 VERDE 13-16HZ (905'FNL & 2571'FEL,SEC.13)
Area	COLORADO	Well	VERDE 13-16HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-16HZ AWB
Facility	SEC.13-T1N-R66W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Painsetr
Scale	0.999607	Report Generated	4/10/2018 at 12:32 PM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/VERDE_13-16HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-687.40	-157.31	1717315.08	14547268.49	40°03'21.841"N	104°43'30.677"W
Facility Reference Pt			1717470.20	14547956.10	40°03'28.634"N	104°43'28.654"W
Field Reference Pt			1698235.31	14552047.82	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	PD 564 (26') (RT) to Facility Vertical Datum	5098.00ft
Horizontal Reference Pt	Slot	PD 564 (26') (RT) to Mean Sea Level	5098.00ft
Vertical Reference Pt	PD 564 (26') (RT)	PD 564 (26') (RT) to Mud Line at Slot (SLOT#61 VERDE 13-16HZ (905'FNL & 2571'FEL,SEC.13))	5098.00ft
MD Reference Pt	PD 564 (26') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.28°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#61 VERDE 13-16HZ (905'FNL & 2571'FEL,SEC.13)
Area	COLORADO	Well	VERDE 13-16HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-16HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (252 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	45.440	0.00	0.00	0.00	0.00	1717315.08	14547268.49	40°03'21.841"N	104°43'30.677"W	0.00	
26.00	0.000	45.440	26.00	0.00	0.00	0.00	1717315.08	14547268.49	40°03'21.841"N	104°43'30.677"W	0.00	
134.00	0.310	45.440	134.00	0.21	0.21	0.21	1717315.29	14547268.70	40°03'21.843"N	104°43'30.674"W	0.29	FIRST SURFACE MWD+IFR1 SURVEY
166.00	0.220	17.140	166.00	0.33	0.32	0.29	1717315.37	14547268.82	40°03'21.844"N	104°43'30.673"W	0.49	
198.00	0.310	37.970	198.00	0.45	0.45	0.36	1717315.44	14547268.95	40°03'21.845"N	104°43'30.672"W	0.41	
230.00	0.530	56.170	230.00	0.60	0.60	0.54	1717315.62	14547269.10	40°03'21.847"N	104°43'30.670"W	0.80	
261.00	0.400	68.300	261.00	0.73	0.72	0.76	1717315.83	14547269.22	40°03'21.848"N	104°43'30.667"W	0.52	
293.00	0.130	72.340	293.00	0.78	0.77	0.89	1717315.97	14547269.27	40°03'21.849"N	104°43'30.666"W	0.85	
324.00	0.180	51.330	324.00	0.82	0.82	0.97	1717316.04	14547269.31	40°03'21.849"N	104°43'30.665"W	0.24	
356.00	0.660	95.280	356.00	0.84	0.83	1.19	1717316.27	14547269.33	40°03'21.849"N	104°43'30.662"W	1.70	
387.00	1.540	95.280	386.99	0.78	0.77	1.78	1717316.86	14547269.27	40°03'21.849"N	104°43'30.654"W	2.84	
419.00	1.580	89.210	418.98	0.75	0.74	2.65	1717317.73	14547269.24	40°03'21.848"N	104°43'30.643"W	0.53	
450.00	1.850	80.780	449.96	0.85	0.83	3.57	1717318.65	14547269.33	40°03'21.849"N	104°43'30.631"W	1.19	
482.00	2.370	86.220	481.94	0.98	0.95	4.74	1717319.82	14547269.46	40°03'21.850"N	104°43'30.616"W	1.74	
513.00	3.250	90.440	512.90	1.02	0.99	6.26	1717321.34	14547269.50	40°03'21.851"N	104°43'30.597"W	2.91	
545.00	3.430	92.730	544.85	0.98	0.94	8.12	1717323.20	14547269.45	40°03'21.850"N	104°43'30.573"W	0.70	
577.00	3.470	92.730	576.79	0.89	0.85	10.05	1717325.12	14547269.37	40°03'21.849"N	104°43'30.548"W	0.12	
609.00	4.090	89.300	608.72	0.87	0.81	12.15	1717327.23	14547269.34	40°03'21.849"N	104°43'30.521"W	2.06	
641.00	4.920	90.710	640.62	0.88	0.81	14.67	1717329.74	14547269.35	40°03'21.849"N	104°43'30.488"W	2.62	
672.00	5.710	87.540	671.49	0.95	0.86	17.54	1717332.61	14547269.41	40°03'21.849"N	104°43'30.451"W	2.72	
704.00	5.980	90.800	703.32	1.01	0.90	20.80	1717335.87	14547269.46	40°03'21.850"N	104°43'30.410"W	1.34	
736.00	7.080	90.000	735.12	1.00	0.88	24.43	1717339.50	14547269.45	40°03'21.850"N	104°43'30.363"W	3.45	
768.00	7.730	89.130	766.85	1.06	0.91	28.56	1717343.63	14547269.50	40°03'21.850"N	104°43'30.310"W	2.06	
799.00	8.040	87.980	797.56	1.18	1.02	32.81	1717347.87	14547269.62	40°03'21.851"N	104°43'30.255"W	1.12	
831.00	8.610	90.880	829.22	1.25	1.06	37.44	1717352.50	14547269.67	40°03'21.852"N	104°43'30.196"W	2.21	
863.00	9.450	92.900	860.82	1.11	0.89	42.46	1717357.52	14547269.52	40°03'21.850"N	104°43'30.131"W	2.81	
895.00	10.110	95.100	892.36	0.75	0.51	47.88	1717362.94	14547269.15	40°03'21.846"N	104°43'30.061"W	2.37	
926.00	11.120	97.120	922.83	0.17	-0.10	53.56	1717368.62	14547268.56	40°03'21.840"N	104°43'29.988"W	3.47	
958.00	12.220	97.740	954.16	-0.64	-0.94	59.98	1717375.04	14547267.74	40°03'21.832"N	104°43'29.906"W	3.46	
990.00	13.100	97.300	985.39	-1.52	-1.86	66.93	1717381.99	14547266.84	40°03'21.823"N	104°43'29.816"W	2.77	
1022.00	13.450	96.770	1016.53	-2.39	-2.76	74.22	1717389.28	14547265.97	40°03'21.814"N	104°43'29.723"W	1.16	
1053.00	13.800	96.680	1046.66	-3.21	-3.61	81.47	1717396.53	14547265.14	40°03'21.805"N	104°43'29.629"W	1.13	
1085.00	14.190	96.240	1077.71	-4.04	-4.48	89.16	1717404.22	14547264.29	40°03'21.797"N	104°43'29.530"W	1.26	
1117.00	14.460	97.210	1108.71	-4.93	-5.41	97.03	1717412.09	14547263.39	40°03'21.788"N	104°43'29.429"W	1.13	
1180.00	16.790	96.070	1169.38	-6.79	-7.36	113.88	1717428.94	14547261.49	40°03'21.768"N	104°43'29.212"W	3.73	
1212.00	16.830	95.190	1200.01	-7.66	-8.27	123.09	1717438.15	14547260.61	40°03'21.759"N	104°43'29.094"W	0.81	
1244.00	16.790	94.660	1230.65	-8.40	-9.06	132.31	1717447.37	14547259.84	40°03'21.751"N	104°43'28.975"W	0.50	
1276.00	16.710	92.730	1261.29	-8.95	-9.66	141.51	1717456.57	14547259.28	40°03'21.746"N	104°43'28.857"W	1.76	
1307.00	17.750	92.030	1290.90	-9.29	-10.03	150.69	1717465.74	14547258.93	40°03'21.742"N	104°43'28.739"W	3.42	
1339.00	18.280	92.290	1321.33	-9.61	-10.41	160.57	1717475.62	14547258.58	40°03'21.738"N	104°43'28.612"W	1.68	
1371.00	18.370	92.900	1351.71	-10.02	-10.86	170.63	1717485.67	14547258.16	40°03'21.734"N	104°43'28.483"W	0.66	
1403.00	18.630	92.550	1382.05	-10.45	-11.35	180.77	1717495.81	14547257.71	40°03'21.729"N	104°43'28.352"W	0.88	
1434.00	19.560	92.290	1411.35	-10.83	-11.77	190.90	1717505.94	14547257.31	40°03'21.725"N	104°43'28.222"W	3.01	
1466.00	20.080	91.230	1441.45	-11.11	-12.11	201.74	1717516.78	14547257.01	40°03'21.721"N	104°43'28.083"W	1.98	
1498.00	20.170	90.970	1471.50	-11.26	-12.32	212.75	1717527.79	14547256.84	40°03'21.719"N	104°43'27.941"W	0.40	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#61 VERDE 13-16HZ (905'FNL & 2571'FEL,SEC.13)
Area	COLORADO	Well	VERDE 13-16HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-16HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (252 stations)												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
1529.00	20.210	90.090	1500.59	-11.31	-12.42	223.45	1717538.48	14547256.77	40°03'21.718"N	104°43'27.803"W	0.99	
1561.00	20.430	89.920	1530.60	-11.25	-12.42	234.56	1717549.59	14547256.81	40°03'21.718"N	104°43'27.660"W	0.71	
1592.00	20.480	89.560	1559.65	-11.15	-12.37	245.40	1717560.42	14547256.89	40°03'21.719"N	104°43'27.521"W	0.44	
1624.00	20.040	91.590	1589.67	-11.21	-12.48	256.48	1717571.49	14547256.81	40°03'21.718"N	104°43'27.379"W	2.59	
1656.00	19.780	91.850	1619.75	-11.48	-12.80	267.37	1717582.38	14547256.52	40°03'21.714"N	104°43'27.239"W	0.86	
1688.00	20.000	91.500	1649.84	-11.74	-13.12	278.25	1717593.26	14547256.24	40°03'21.711"N	104°43'27.099"W	0.78	
1719.00	20.130	90.880	1678.96	-11.91	-13.34	288.88	1717603.89	14547256.05	40°03'21.709"N	104°43'26.962"W	0.80	
1751.00	20.570	90.270	1708.97	-11.97	-13.45	300.01	1717615.01	14547255.97	40°03'21.708"N	104°43'26.819"W	1.53	
1783.00	21.050	90.970	1738.88	-12.03	-13.58	311.38	1717626.38	14547255.88	40°03'21.707"N	104°43'26.673"W	1.69	
1815.00	20.960	93.780	1768.75	-12.45	-14.05	322.84	1717637.83	14547255.44	40°03'21.702"N	104°43'26.525"W	3.16	
1847.00	20.960	95.280	1798.63	-13.30	-14.96	334.25	1717649.24	14547254.57	40°03'21.693"N	104°43'26.379"W	1.68	LAST SURFACE MWD+IFR1 SURVEY
1933.00	21.880	94.140	1878.69	-15.72	-17.53	365.55	1717680.54	14547252.10	40°03'21.668"N	104°43'25.976"W	1.17	FIRST BHGE MWD+IFR1+SC SURVEY
2022.00	22.960	94.600	1960.97	-18.14	-20.12	399.39	1717714.37	14547249.62	40°03'21.642"N	104°43'25.541"W	1.23	
2111.00	23.810	93.740	2042.65	-20.53	-22.68	434.62	1717749.60	14547247.16	40°03'21.617"N	104°43'25.088"W	1.03	
2201.00	22.840	93.620	2125.30	-22.64	-24.97	470.18	1717785.15	14547244.98	40°03'21.594"N	104°43'24.630"W	1.08	
2290.00	22.410	92.950	2207.45	-24.43	-26.93	504.36	1717819.33	14547243.13	40°03'21.575"N	104°43'24.191"W	0.56	
2380.00	22.600	96.990	2290.60	-27.25	-29.92	538.66	1717853.62	14547240.25	40°03'21.545"N	104°43'23.750"W	1.73	
2469.00	22.530	97.410	2372.79	-31.36	-34.20	572.55	1717887.50	14547236.07	40°03'21.503"N	104°43'23.314"W	0.20	
2559.00	22.380	97.590	2455.96	-35.68	-38.69	606.63	1717921.59	14547231.69	40°03'21.459"N	104°43'22.876"W	0.18	
2648.00	22.850	96.210	2538.12	-39.62	-42.80	640.60	1717955.56	14547227.69	40°03'21.418"N	104°43'22.439"W	0.80	
2737.00	23.210	96.320	2620.03	-43.25	-46.60	675.21	1717990.17	14547224.00	40°03'21.380"N	104°43'21.994"W	0.41	
2827.00	21.650	93.760	2703.22	-46.12	-49.64	709.41	1718024.36	14547221.07	40°03'21.350"N	104°43'21.554"W	2.04	
2916.00	21.330	93.720	2786.03	-48.09	-51.76	741.94	1718056.89	14547219.04	40°03'21.329"N	104°43'21.136"W	0.36	
3006.00	21.270	93.520	2869.88	-49.99	-53.83	774.57	1718089.51	14547217.08	40°03'21.309"N	104°43'20.716"W	0.10	
3095.00	20.700	98.290	2952.99	-53.09	-57.09	806.25	1718121.19	14547213.92	40°03'21.277"N	104°43'20.309"W	2.02	
3185.00	20.380	98.820	3037.26	-57.63	-61.78	837.48	1718152.41	14547209.32	40°03'21.230"N	104°43'19.907"W	0.41	
3274.00	20.300	100.430	3120.71	-62.65	-66.95	867.97	1718182.91	14547204.24	40°03'21.179"N	104°43'19.515"W	0.64	
3364.00	21.440	98.880	3204.81	-67.86	-72.32	899.58	1718214.53	14547198.98	40°03'21.126"N	104°43'19.108"W	1.41	
3453.00	21.220	97.860	3287.71	-72.41	-77.03	931.61	1718246.55	14547194.37	40°03'21.080"N	104°43'18.696"W	0.48	
3542.00	21.030	97.930	3370.73	-76.66	-81.44	963.38	1718278.33	14547190.06	40°03'21.036"N	104°43'18.288"W	0.22	
3632.00	20.150	98.310	3454.98	-80.98	-85.91	994.71	1718309.66	14547185.69	40°03'20.992"N	104°43'17.885"W	0.99	
3721.00	18.900	97.230	3538.86	-84.86	-89.94	1024.18	1718339.13	14547181.75	40°03'20.952"N	104°43'17.506"W	1.46	
3811.00	19.300	94.900	3623.91	-87.82	-93.04	1053.46	1718368.41	14547178.74	40°03'20.921"N	104°43'17.129"W	0.96	
3900.00	19.470	93.910	3707.86	-89.94	-95.31	1082.91	1718397.86	14547176.56	40°03'20.899"N	104°43'16.751"W	0.42	
3990.00	20.430	95.130	3792.46	-92.22	-97.74	1113.52	1718428.46	14547174.23	40°03'20.875"N	104°43'16.357"W	1.16	
4080.00	21.680	98.390	3876.46	-95.89	-101.57	1145.62	1718460.55	14547170.50	40°03'20.837"N	104°43'15.944"W	1.90	
4169.00	23.350	99.790	3958.67	-101.12	-106.97	1179.26	1718494.20	14547165.21	40°03'20.784"N	104°43'15.512"W	1.97	
4258.00	23.720	97.380	4040.27	-106.24	-112.26	1214.40	1718529.34	14547160.02	40°03'20.731"N	104°43'15.060"W	1.16	
4348.00	21.490	95.350	4123.35	-109.94	-116.13	1248.77	1718563.71	14547156.27	40°03'20.693"N	104°43'14.618"W	2.62	
4438.00	22.870	93.440	4206.69	-112.36	-118.71	1282.64	1718597.58	14547153.78	40°03'20.668"N	104°43'14.182"W	1.73	
4527.00	22.850	94.620	4288.70	-114.61	-121.14	1317.13	1718632.06	14547151.46	40°03'20.643"N	104°43'13.739"W	0.52	
4617.00	24.720	96.250	4371.05	-117.89	-124.60	1353.26	1718668.18	14547148.12	40°03'20.609"N	104°43'13.274"W	2.20	
4706.00	25.570	96.360	4451.62	-121.86	-128.75	1390.84	1718705.77	14547144.08	40°03'20.568"N	104°43'12.791"W	0.96	
4796.00	24.070	94.230	4533.30	-125.18	-132.26	1428.45	1718743.37	14547140.69	40°03'20.534"N	104°43'12.307"W	1.94	
4885.00	21.600	90.470	4615.33	-126.48	-133.73	1462.94	1718777.85	14547139.33	40°03'20.519"N	104°43'11.863"W	3.22	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#61 VERDE 13-16HZ (905'FNL & 2571'FEL,SEC.13)
Area	COLORADO	Well	VERDE 13-16HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-16HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (252 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4975.00	21.100	91.860	4699.15	-126.98	-134.39	1495.70	1718810.60	14547138.77	40°03'20.512"N	104°43'11.442"W	0.79	
5064.00	21.240	94.870	4782.15	-128.71	-136.28	1527.77	1718842.67	14547136.98	40°03'20.494"N	104°43'11.030"W	1.23	
5154.00	20.560	99.330	4866.23	-132.50	-140.23	1559.61	1718874.51	14547133.13	40°03'20.455"N	104°43'10.620"W	1.92	
5243.00	20.160	97.950	4949.67	-137.00	-144.88	1590.22	1718905.12	14547128.57	40°03'20.409"N	104°43'10.227"W	0.70	
5332.00	21.170	100.720	5032.94	-141.96	-150.00	1621.21	1718936.10	14547123.56	40°03'20.358"N	104°43'09.828"W	1.58	
5422.00	21.060	101.250	5116.90	-147.98	-156.17	1653.03	1718967.94	14547117.48	40°03'20.297"N	104°43'09.419"W	0.24	
5511.00	17.820	99.450	5200.82	-153.19	-161.53	1682.16	1718997.07	14547112.22	40°03'20.244"N	104°43'09.044"W	3.70	
5601.00	15.110	100.420	5287.12	-157.45	-165.91	1707.28	1719022.20	14547107.91	40°03'20.201"N	104°43'08.721"W	3.03	
5690.00	13.370	105.040	5373.38	-162.11	-170.68	1728.63	1719043.55	14547103.21	40°03'20.154"N	104°43'08.447"W	2.33	
5780.00	12.640	104.630	5461.07	-167.20	-175.87	1748.21	1719063.14	14547098.09	40°03'20.102"N	104°43'08.195"W	0.82	
5870.00	11.300	103.330	5549.12	-171.63	-180.39	1766.32	1719081.25	14547093.63	40°03'20.058"N	104°43'07.962"W	1.52	
5960.00	10.050	102.430	5637.56	-175.28	-184.11	1782.57	1719097.51	14547089.95	40°03'20.021"N	104°43'07.753"W	1.40	
6049.00	9.450	102.000	5725.27	-178.39	-187.30	1797.30	1719112.24	14547086.81	40°03'19.989"N	104°43'07.564"W	0.68	
6139.00	7.910	105.440	5814.24	-181.51	-190.49	1810.50	1719125.44	14547083.67	40°03'19.958"N	104°43'07.394"W	1.80	
6228.00	6.870	102.430	5902.50	-184.23	-193.27	1821.60	1719136.55	14547080.93	40°03'19.930"N	104°43'07.251"W	1.25	
6318.00	5.130	103.120	5992.00	-186.26	-195.34	1830.77	1719145.73	14547078.88	40°03'19.910"N	104°43'07.133"W	1.93	
6407.00	3.890	100.010	6080.72	-187.65	-196.77	1837.62	1719152.58	14547077.48	40°03'19.896"N	104°43'07.045"W	1.42	
6497.00	2.230	104.770	6170.59	-188.61	-197.74	1842.32	1719157.28	14547076.51	40°03'19.886"N	104°43'06.985"W	1.86	
6586.00	1.170	102.730	6259.55	-189.24	-198.38	1844.88	1719159.84	14547075.88	40°03'19.880"N	104°43'06.952"W	1.19	
6676.00	0.520	64.500	6349.54	-189.26	-198.41	1846.15	1719161.10	14547075.86	40°03'19.880"N	104°43'06.935"W	0.92	
6766.00	0.430	42.070	6439.54	-188.83	-197.98	1846.74	1719161.70	14547076.29	40°03'19.884"N	104°43'06.928"W	0.23	
6855.00	1.090	6.470	6528.53	-187.74	-196.90	1847.06	1719162.01	14547077.38	40°03'19.895"N	104°43'06.924"W	0.88	
6856.00†	1.162	5.939	6529.53	-187.72	-196.88	1847.06	1719162.01	14547077.40	40°03'19.895"N	104°43'06.924"W	7.28	KOP
6945.00	7.630	359.160	6618.22	-180.91	-190.06	1847.07	1719162.00	14547084.21	40°03'19.962"N	104°43'06.924"W	7.28	
7034.00	13.340	357.450	6705.70	-164.73	-173.88	1846.53	1719161.41	14547100.38	40°03'20.122"N	104°43'06.931"W	6.42	
7123.00	19.830	0.830	6790.95	-139.35	-148.51	1846.29	1719161.09	14547125.74	40°03'20.373"N	104°43'06.934"W	7.37	
7213.00	26.000	359.770	6873.81	-104.33	-113.48	1846.43	1719161.12	14547160.76	40°03'20.719"N	104°43'06.932"W	6.87	
7302.00	33.840	359.530	6950.89	-59.97	-69.12	1846.15	1719160.70	14547205.09	40°03'21.157"N	104°43'06.935"W	8.81	
7392.00	42.550	359.650	7021.55	-4.38	-13.53	1845.76	1719160.14	14547260.67	40°03'21.707"N	104°43'06.940"W	9.68	
7482.00	49.500	0.310	7084.01	60.35	51.20	1845.75	1719159.94	14547325.37	40°03'22.346"N	104°43'06.940"W	7.74	
7492.00†	50.110	0.297	7090.46	67.99	58.84	1845.80	1719159.96	14547333.00	40°03'22.422"N	104°43'06.940"W	6.10	ENTER LANDBOX (846'FNL & 726'FEL,SEC.13) 40.0562283 -104.7185944
7572.00	54.990	0.200	7139.09	131.48	122.33	1846.07	1719160.03	14547396.47	40°03'23.049"N	104°43'06.936"W	6.10	
7661.00	59.520	358.970	7187.22	206.31	197.16	1845.51	1719159.24	14547471.27	40°03'23.789"N	104°43'06.943"W	5.22	
7750.00	64.540	0.210	7228.95	284.88	275.74	1844.96	1719158.46	14547549.81	40°03'24.565"N	104°43'06.950"W	5.77	
7840.00	71.460	0.800	7262.65	368.27	359.13	1845.71	1719158.95	14547633.17	40°03'25.389"N	104°43'06.941"W	7.71	
7930.00	76.080	1.500	7287.79	454.65	445.50	1847.45	1719160.42	14547719.52	40°03'26.243"N	104°43'06.918"W	5.19	
8019.00	86.300	1.550	7301.41	542.46	533.30	1849.79	1719162.48	14547807.29	40°03'27.111"N	104°43'06.888"W	11.48	
8039.00	88.280	1.200	7302.35	562.44	553.27	1850.27	1719162.90	14547827.25	40°03'27.308"N	104°43'06.882"W	10.05	LANDING (352'FNL & 721'FEL,SEC.13) 40.0575855 -104.7185783
8109.00	90.090	359.310	7303.35	632.42	623.26	1850.58	1719163.00	14547897.21	40°03'28.000"N	104°43'06.878"W	3.74	
8198.00	92.060	358.370	7301.68	721.37	712.22	1848.78	1719160.92	14547986.13	40°03'28.879"N	104°43'06.901"W	2.45	
8288.00	91.910	359.250	7298.56	811.29	802.15	1846.91	1719158.78	14548076.02	40°03'29.767"N	104°43'06.925"W	0.99	
8377.00	91.050	0.280	7296.26	900.25	891.11	1846.54	1719158.14	14548164.95	40°03'30.647"N	104°43'06.929"W	1.51	
8467.00	90.250	1.280	7295.24	990.24	981.10	1847.77	1719159.09	14548254.90	40°03'31.536"N	104°43'06.913"W	1.42	
8556.00	91.850	1.340	7293.61	1079.21	1070.06	1849.80	1719160.84	14548343.83	40°03'32.415"N	104°43'06.887"W	1.80	
8646.00	90.490	1.450	7291.77	1169.17	1160.01	1851.99	1719162.76	14548433.75	40°03'33.304"N	104°43'06.859"W	1.52	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#61 VERDE 13-16HZ (905'FNL & 2571'FEL, SEC.13)
Area	COLORADO	Well	VERDE 13-16HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-16HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (252 stations) † = interpolated/extrapolated station												Comments
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	
8735.00	91.970	1.530	7289.86	1258.13	1248.96	1854.31	1719164.79	14548522.67	40°03'34.183"N	104°43'06.829"W	1.67	
8825.00	90.400	359.730	7288.00	1348.10	1338.92	1855.30	1719165.51	14548612.61	40°03'35.072"N	104°43'06.816"W	2.65	
8862.00†	89.569	359.576	7288.01	1385.10	1375.92	1855.07	1719165.17	14548649.59	40°03'35.437"N	104°43'06.819"W	2.29	CROSS SETBACK HEEL (471'FSL & 716'FEL, SEC.12) 40.0598437 -104.7185609
8914.00	88.400	359.360	7288.93	1437.09	1427.91	1854.59	1719164.52	14548701.56	40°03'35.951"N	104°43'06.825"W	2.29	
9004.00	89.820	358.950	7290.33	1527.06	1517.89	1853.26	1719162.92	14548791.49	40°03'36.840"N	104°43'06.842"W	1.64	
9093.00	90.090	0.670	7290.40	1616.05	1606.88	1852.97	1719162.35	14548880.45	40°03'37.720"N	104°43'06.846"W	1.96	
9183.00	91.820	0.400	7288.90	1706.03	1696.86	1853.81	1719162.91	14548970.40	40°03'38.609"N	104°43'06.835"W	1.95	
9272.00	90.220	1.490	7287.32	1795.01	1785.83	1855.28	1719164.11	14549059.34	40°03'39.488"N	104°43'06.816"W	2.18	
9362.00	88.310	1.000	7288.47	1884.98	1875.80	1857.23	1719165.78	14549149.27	40°03'40.377"N	104°43'06.791"W	2.19	
9451.00	89.380	0.320	7290.26	1973.96	1964.78	1858.26	1719166.53	14549238.22	40°03'41.257"N	104°43'06.778"W	1.42	
9541.00	90.920	0.530	7290.03	2063.96	2054.77	1858.92	1719166.92	14549328.18	40°03'42.146"N	104°43'06.769"W	1.73	
9630.00	88.830	1.110	7290.22	2152.95	2143.76	1860.20	1719167.92	14549417.13	40°03'43.025"N	104°43'06.753"W	2.44	
9720.00	89.970	0.990	7291.17	2242.93	2233.73	1861.85	1719169.29	14549507.08	40°03'43.915"N	104°43'06.731"W	1.27	
9810.00	91.720	0.930	7289.84	2332.92	2323.71	1863.35	1719170.52	14549597.02	40°03'44.804"N	104°43'06.712"W	1.95	
9899.00	89.480	0.590	7288.91	2421.90	2412.69	1864.53	1719171.43	14549685.97	40°03'45.683"N	104°43'06.696"W	2.55	
9989.00	89.750	359.980	7289.51	2511.90	2502.69	1864.98	1719171.60	14549775.93	40°03'46.572"N	104°43'06.691"W	0.74	
10078.00	90.650	359.620	7289.20	2600.89	2591.68	1864.67	1719171.01	14549864.89	40°03'47.452"N	104°43'06.695"W	1.09	
10167.00	89.260	359.390	7289.27	2689.88	2680.68	1863.90	1719169.97	14549953.85	40°03'48.331"N	104°43'06.704"W	1.58	
10257.00	90.000	359.360	7289.85	2779.87	2770.67	1862.92	1719168.71	14550043.80	40°03'49.221"N	104°43'06.717"W	0.82	
10346.00	91.630	359.130	7288.59	2868.84	2859.65	1861.75	1719167.26	14550132.74	40°03'50.100"N	104°43'06.732"W	1.85	
10436.00	90.460	0.110	7286.94	2958.82	2949.63	1861.15	1719166.39	14550222.69	40°03'50.989"N	104°43'06.739"W	1.70	
10525.00	89.320	1.000	7287.11	3047.82	3038.62	1862.01	1719166.98	14550311.65	40°03'51.869"N	104°43'06.728"W	1.63	
10615.00	90.150	0.650	7287.53	3137.81	3128.61	1863.31	1719167.99	14550401.60	40°03'52.758"N	104°43'06.712"W	1.00	
10704.00	91.780	0.200	7286.03	3226.79	3217.59	1863.97	1719168.38	14550490.55	40°03'53.637"N	104°43'06.703"W	1.90	
10794.00	90.430	0.650	7284.30	3316.77	3307.57	1864.64	1719168.77	14550580.50	40°03'54.526"N	104°43'06.694"W	1.58	
10883.00	90.310	359.820	7283.72	3405.77	3396.57	1865.00	1719168.86	14550669.46	40°03'55.406"N	104°43'06.689"W	0.94	
10973.00	91.970	359.600	7281.93	3495.75	3486.55	1864.55	1719168.13	14550759.40	40°03'56.295"N	104°43'06.695"W	1.86	
11097.00	91.450	359.710	7278.23	3619.68	3610.49	1863.80	1719167.00	14550883.29	40°03'57.520"N	104°43'06.705"W	0.43	
11186.00	89.600	359.660	7277.42	3708.67	3699.48	1863.31	1719166.23	14550972.24	40°03'58.399"N	104°43'06.711"W	2.08	
11276.00	88.950	359.420	7278.55	3798.66	3789.47	1862.59	1719165.23	14551062.19	40°03'59.289"N	104°43'06.720"W	0.77	
11365.00	88.980	359.450	7280.16	3887.63	3878.45	1861.71	1719164.08	14551151.14	40°04'00.168"N	104°43'06.731"W	0.05	
11454.00	89.020	359.840	7281.72	3976.61	3967.44	1861.16	1719163.26	14551240.08	40°04'01.047"N	104°43'06.738"W	0.44	
11544.00	89.020	0.320	7283.25	4066.60	4057.42	1861.29	1719163.10	14551330.04	40°04'01.937"N	104°43'06.737"W	0.53	
11633.00	89.320	0.660	7284.54	4155.59	4146.41	1862.05	1719163.59	14551418.99	40°04'02.816"N	104°43'06.727"W	0.51	
11723.00	89.380	1.080	7285.56	4245.58	4236.39	1863.41	1719164.68	14551508.94	40°04'03.705"N	104°43'06.709"W	0.47	
11812.00	89.420	1.370	7286.50	4334.56	4325.37	1865.32	1719166.31	14551597.89	40°04'04.585"N	104°43'06.685"W	0.33	
11902.00	89.940	0.680	7287.00	4424.55	4415.35	1866.93	1719167.64	14551687.84	40°04'05.474"N	104°43'06.664"W	0.96	
11991.00	89.820	0.110	7287.19	4513.55	4504.35	1867.54	1719167.98	14551776.80	40°04'06.353"N	104°43'06.656"W	0.65	
12081.00	89.780	359.780	7287.50	4603.55	4594.35	1867.45	1719167.61	14551866.77	40°04'07.243"N	104°43'06.657"W	0.37	
12170.00	90.060	359.810	7287.62	4692.54	4683.35	1867.13	1719167.02	14551955.73	40°04'08.122"N	104°43'06.661"W	0.32	
12260.00	90.150	2.130	7287.46	4782.53	4773.33	1868.66	1719168.26	14552045.68	40°04'09.011"N	104°43'06.641"W	2.58	
12349.00	90.000	3.180	7287.34	4871.45	4862.23	1872.78	1719172.11	14552134.56	40°04'09.890"N	104°43'06.588"W	1.19	
12439.00	89.970	2.470	7287.37	4961.36	4952.12	1877.22	1719176.27	14552224.43	40°04'10.778"N	104°43'06.531"W	0.79	
12528.00	89.970	1.110	7287.41	5050.33	5041.08	1880.00	1719178.77	14552313.35	40°04'11.657"N	104°43'06.495"W	1.53	
12617.00	90.400	1.380	7287.13	5139.32	5130.05	1881.93	1719180.43	14552402.30	40°04'12.537"N	104°43'06.470"W	0.57	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#61 VERDE 13-16HZ (905'FNL & 2571'FEL,SEC.13)
Area	COLORADO	Well	VERDE 13-16HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-16HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (252 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12707.00	90.520	1.160	7286.40	5229.30	5220.03	1883.92	1719182.15	14552492.25	40°04'13.426"N	104°43'06.444"W	0.28	
12796.00	90.620	0.360	7285.52	5318.29	5309.02	1885.10	1719183.05	14552581.20	40°04'14.305"N	104°43'06.429"W	0.91	
12885.00	90.550	359.840	7284.61	5407.29	5398.01	1885.26	1719182.93	14552670.16	40°04'15.185"N	104°43'06.427"W	0.59	
12974.00	90.220	358.760	7284.01	5496.27	5487.00	1884.17	1719181.57	14552759.11	40°04'16.064"N	104°43'06.441"W	1.27	
13064.00	90.400	359.130	7283.52	5586.25	5576.98	1882.52	1719179.64	14552849.05	40°04'16.953"N	104°43'06.462"W	0.46	
13153.00	90.150	359.260	7283.10	5675.23	5665.97	1881.27	1719178.11	14552938.01	40°04'17.833"N	104°43'06.478"W	0.32	
13242.00	90.220	359.000	7282.81	5764.21	5754.96	1879.91	1719176.49	14553026.95	40°04'18.712"N	104°43'06.495"W	0.30	
13331.00	89.690	359.590	7282.88	5853.20	5843.96	1878.82	1719175.12	14553115.91	40°04'19.591"N	104°43'06.509"W	0.89	
13421.00	88.890	0.120	7283.99	5943.19	5933.95	1878.59	1719174.61	14553205.86	40°04'20.481"N	104°43'06.512"W	1.07	
13510.00	88.980	1.070	7285.65	6032.17	6022.93	1879.52	1719175.26	14553294.81	40°04'21.360"N	104°43'06.500"W	1.07	
13600.00	88.890	1.430	7287.32	6122.14	6112.89	1881.48	1719176.95	14553384.74	40°04'22.249"N	104°43'06.475"W	0.41	
13689.00	88.980	1.350	7288.98	6211.11	6201.85	1883.64	1719178.83	14553473.67	40°04'23.128"N	104°43'06.447"W	0.14	
13778.00	88.980	1.200	7290.56	6300.08	6290.81	1885.62	1719180.53	14553562.61	40°04'24.007"N	104°43'06.422"W	0.17	
13868.00	88.950	1.250	7292.19	6390.05	6380.78	1887.54	1719182.18	14553652.54	40°04'24.896"N	104°43'06.397"W	0.06	
13957.00	89.010	0.610	7293.77	6479.03	6469.75	1888.98	1719183.35	14553741.48	40°04'25.776"N	104°43'06.378"W	0.72	
14046.00	88.860	359.500	7295.42	6568.02	6558.73	1889.07	1719183.16	14553830.43	40°04'26.655"N	104°43'06.377"W	1.26	
14135.00	89.910	358.770	7296.38	6656.99	6647.72	1887.73	1719181.54	14553919.37	40°04'27.534"N	104°43'06.394"W	1.44	
14224.00	89.850	359.040	7296.57	6745.96	6736.70	1886.03	1719179.57	14554008.32	40°04'28.414"N	104°43'06.416"W	0.31	
14313.00	89.780	358.550	7296.85	6834.93	6825.68	1884.15	1719177.42	14554097.26	40°04'29.293"N	104°43'06.440"W	0.56	
14403.00	89.880	358.060	7297.12	6924.88	6915.64	1881.49	1719174.48	14554187.17	40°04'30.182"N	104°43'06.474"W	0.56	
14492.00	89.880	359.620	7297.31	7013.85	7004.62	1879.69	1719172.41	14554276.11	40°04'31.061"N	104°43'06.497"W	1.75	
14581.00	89.910	0.020	7297.47	7102.84	7093.62	1879.41	1719171.85	14554365.07	40°04'31.941"N	104°43'06.501"W	0.45	
14670.00	89.970	0.720	7297.56	7191.84	7182.61	1879.99	1719172.15	14554454.03	40°04'32.820"N	104°43'06.493"W	0.79	
14759.00	89.910	0.880	7297.66	7280.84	7271.61	1881.23	1719173.12	14554542.99	40°04'33.700"N	104°43'06.477"W	0.19	
14848.00	89.910	2.010	7297.80	7369.82	7360.58	1883.47	1719175.09	14554631.94	40°04'34.579"N	104°43'06.448"W	1.27	
14938.00	89.820	0.220	7298.01	7459.81	7450.55	1885.22	1719176.56	14554721.88	40°04'35.468"N	104°43'06.425"W	1.99	
15027.00	89.940	355.880	7298.19	7548.72	7539.48	1882.20	1719173.26	14554810.77	40°04'36.347"N	104°43'06.464"W	4.88	
15117.00	90.030	355.990	7298.22	7638.46	7629.25	1875.82	1719166.61	14554900.48	40°04'37.234"N	104°43'06.546"W	0.16	
15206.00	89.970	1.970	7298.22	7727.40	7718.20	1874.23	1719164.75	14554989.39	40°04'38.113"N	104°43'06.567"W	6.72	
15295.00	89.850	4.620	7298.36	7816.26	7807.05	1879.35	1719169.59	14555078.21	40°04'38.991"N	104°43'06.501"W	2.98	
15385.00	89.820	1.960	7298.62	7906.13	7896.89	1884.51	1719174.48	14555168.04	40°04'39.879"N	104°43'06.434"W	2.96	
15474.00	90.060	359.270	7298.71	7995.12	7985.88	1885.47	1719175.16	14555256.99	40°04'40.758"N	104°43'06.422"W	3.03	
15564.00	89.850	0.410	7298.78	8085.12	8075.87	1885.22	1719174.63	14555346.95	40°04'41.648"N	104°43'06.425"W	1.29	
15653.00	89.880	359.470	7298.99	8174.12	8164.87	1885.12	1719174.26	14555435.92	40°04'42.527"N	104°43'06.426"W	1.06	
15743.00	89.850	359.450	7299.20	8264.11	8254.87	1884.27	1719173.13	14555525.87	40°04'43.417"N	104°43'06.437"W	0.04	
15832.00	89.820	358.510	7299.46	8353.08	8343.85	1882.69	1719171.27	14555614.82	40°04'44.296"N	104°43'06.457"W	1.06	
15922.00	90.280	358.620	7299.38	8443.04	8433.82	1880.44	1719168.74	14555704.75	40°04'45.185"N	104°43'06.486"W	0.53	
16011.00	90.180	357.640	7299.02	8531.98	8522.77	1877.53	1719165.57	14555793.65	40°04'46.064"N	104°43'06.523"W	1.11	
16101.00	90.060	359.050	7298.84	8621.92	8612.73	1874.93	1719162.69	14555883.57	40°04'46.953"N	104°43'06.557"W	1.57	
16190.00	90.030	359.480	7298.77	8710.91	8701.73	1873.79	1719161.28	14555972.52	40°04'47.833"N	104°43'06.571"W	0.48	
16280.00	89.970	358.370	7298.77	8800.88	8791.71	1872.10	1719159.31	14556062.46	40°04'48.722"N	104°43'06.593"W	1.24	
16369.00	90.000	358.420	7298.79	8889.83	8880.67	1869.61	1719156.54	14556151.38	40°04'49.601"N	104°43'06.625"W	0.07	
16458.00	90.060	359.040	7298.74	8978.80	8969.65	1867.64	1719154.30	14556240.32	40°04'50.480"N	104°43'06.650"W	0.70	
16548.00	90.030	359.660	7298.67	9068.79	9059.65	1866.62	1719153.00	14556330.27	40°04'51.370"N	104°43'06.663"W	0.69	
16637.00	90.030	1.420	7298.62	9157.78	9148.64	1867.46	1719153.56	14556419.23	40°04'52.249"N	104°43'06.652"W	1.98	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#61 VERDE 13-16HZ (905'FNL & 2571'FEL,SEC.13)
Area	COLORADO	Well	VERDE 13-16HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-16HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (252 stations) † = interpolated/extrapolated station												
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS °/100ft	Comments
16727.00	90.120	2.790	7298.51	9247.73	9238.58	1870.76	1719156.59	14556509.15	40°04'53.138"N	104°43'06.610"W	1.53	
16816.00	90.150	3.980	7298.30	9336.60	9327.42	1876.02	1719161.57	14556597.97	40°04'54.016"N	104°43'06.542"W	1.34	
16906.00	90.030	4.210	7298.16	9426.40	9417.19	1882.44	1719167.72	14556687.72	40°04'54.903"N	104°43'06.459"W	0.29	
16995.00	90.250	4.530	7297.94	9515.18	9505.93	1889.22	1719174.22	14556776.45	40°04'55.780"N	104°43'06.372"W	0.44	
17084.00	90.060	3.510	7297.70	9603.99	9594.71	1895.46	1719180.18	14556865.21	40°04'56.657"N	104°43'06.292"W	1.17	
17174.00	89.780	2.330	7297.82	9693.89	9684.59	1900.05	1719184.49	14556955.07	40°04'57.545"N	104°43'06.232"W	1.35	
17263.00	90.030	0.060	7297.97	9782.87	9773.56	1901.90	1719186.07	14557044.02	40°04'58.425"N	104°43'06.209"W	2.57	
17352.00	89.880	1.750	7298.04	9871.86	9862.55	1903.31	1719187.20	14557132.97	40°04'59.304"N	104°43'06.190"W	1.91	
17442.00	89.940	1.040	7298.18	9961.85	9952.52	1905.50	1719189.11	14557222.91	40°05'00.193"N	104°43'06.162"W	0.79	
17531.00	89.940	1.360	7298.28	10050.83	10041.50	1907.36	1719190.70	14557311.87	40°05'01.072"N	104°43'06.138"W	0.36	
17620.00	90.030	1.350	7298.30	10139.82	10130.48	1909.47	1719192.53	14557400.81	40°05'01.952"N	104°43'06.111"W	0.10	
17710.00	89.910	1.910	7298.35	10229.79	10220.44	1912.03	1719194.81	14557490.75	40°05'02.841"N	104°43'06.078"W	0.64	
17799.00	89.850	0.990	7298.53	10318.77	10309.41	1914.28	1719196.79	14557579.69	40°05'03.720"N	104°43'06.049"W	1.04	
17888.00	89.970	359.140	7298.67	10407.77	10398.41	1914.38	1719196.62	14557668.65	40°05'04.599"N	104°43'06.047"W	2.08	
17978.00	89.940	359.820	7298.74	10497.76	10488.40	1913.57	1719195.52	14557758.61	40°05'05.489"N	104°43'06.058"W	0.76	
18067.00	90.030	0.840	7298.77	10586.76	10577.40	1914.08	1719195.76	14557847.57	40°05'06.368"N	104°43'06.051"W	1.15	
18156.00	89.880	2.360	7298.84	10675.73	10666.36	1916.56	1719197.97	14557936.50	40°05'07.247"N	104°43'06.019"W	1.72	
18246.00	90.000	1.100	7298.93	10765.70	10756.32	1919.28	1719200.41	14558026.43	40°05'08.136"N	104°43'05.984"W	1.41	
18335.00	89.940	359.380	7298.98	10854.70	10845.32	1919.65	1719200.50	14558115.40	40°05'09.016"N	104°43'05.979"W	1.93	
18425.00	89.940	359.200	7299.07	10944.69	10935.31	1918.54	1719199.11	14558205.35	40°05'09.905"N	104°43'05.993"W	0.20	
18458.00†	89.951	358.510	7299.10	10977.67	10968.30	1917.88	1719198.35	14558238.33	40°05'10.231"N	104°43'06.002"W	2.09	CROSS SETBACK TOE (461'FNL & 641'FEL,SEC.01) 40.0861753 -104.7183338
18514.00	89.970	357.340	7299.14	11033.63	11024.27	1915.85	1719196.15	14558294.26	40°05'10.784"N	104°43'06.028"W	2.09	
18603.00	89.850	359.060	7299.28	11122.56	11113.22	1913.06	1719193.08	14558383.17	40°05'11.663"N	104°43'06.064"W	1.94	
18693.00	90.000	0.490	7299.40	11212.56	11203.21	1912.70	1719192.45	14558473.13	40°05'12.553"N	104°43'06.068"W	1.60	
18782.00	89.970	1.110	7299.42	11301.55	11292.21	1913.94	1719193.42	14558562.09	40°05'13.432"N	104°43'06.052"W	0.70	
18843.00	90.000	359.330	7299.44	11362.55	11353.20	1914.18	1719193.47	14558623.06	40°05'14.035"N	104°43'06.049"W	2.92	LAST BHGE MWD+IFR1+SC SURVEY
18867.00	90.000	359.330	7299.44	11386.55	11377.20	1913.90	1719193.11	14558647.05	40°05'14.272"N	104°43'06.053"W	0.00	PTB (52'FNL & 645'FEL,SEC.01) 40.0872978 -104.7183479

HOLE & CASING SECTIONS - Ref Wellbore: VERDE 13-16HZ AWB Ref Wellpath: VERDE 13-16HZ 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]
9.625in Casing Surface	26.00	1880.00	1854.00	26.00	1829.41	0.00	0.00	-16.00	346.10

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#61 VERDE 13-16HZ (905'FNL & 2571'FEL,SEC.13)
Area	COLORADO	Well	VERDE 13-16HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-16HZ AWB
Facility	SEC.13-T1N-R66W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.01-T1N-R66W	-24.00	-15.61	-1941.89	1715374.02	14547246.90	40°03'21.686"N	104°43'55.650"W	polygon
SEC.12-T1N-R66W	-24.00	-15.61	-1941.89	1715374.02	14547246.90	40°03'21.686"N	104°43'55.650"W	polygon
VERDE 13-16HZ BHL REV-1(51'FNL & 651'FEL,SEC.01)	7259.00	11378.01	1907.72	1719186.94	14558647.84	40°05'14.280"N	104°43'06.132"W	point
VERDE 13-16HZ INT. TARGET@7400'VS	7290.00	7390.73	1887.94	1719179.46	14554662.09	40°04'34.877"N	104°43'06.391"W	point
VERDE 13-16HZ HEEL REV-1(370'FNL & 719'FEL,SEC.13)	7302.00	546.53	1853.98	1719166.63	14547820.52	40°03'27.241"N	104°43'06.834"W	point
VERDE 13-16HZ LANDBOX	7302.00	0.00	0.00	1717315.08	14547268.49	40°03'21.841"N	104°43'30.677"W	polygon
VERDE 13-16HZ SETBACK 1	7302.00	0.00	0.00	1717315.08	14547268.49	40°03'21.841"N	104°43'30.677"W	polygon
VERDE 13-16HZ SETBACK 2	7302.00	0.00	0.00	1717315.08	14547268.49	40°03'21.841"N	104°43'30.677"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: VERDE 13-16HZ AWB Ref Wellpath: VERDE 13-16HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	1847.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <134 - 1847>	VERDE 13-16HZ AWB
1847.00	18843.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1933 - 18843>	VERDE 13-16HZ AWB
18843.00	18867.00	Blind Drilling (std)	Projection to bit	VERDE 13-16HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#61 VERDE 13-16HZ (905'FNL & 2571'FEL,SEC.13)
Area	COLORADO	Well	VERDE 13-16HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-16HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
134.00	0.310	45.440	134.00	FIRST SURFACE MWD+IFR1 SURVEY
1847.00	20.960	95.280	1798.63	LAST SURFACE MWD+IFR1 SURVEY
1933.00	21.880	94.140	1878.69	FIRST BHGE MWD+IFR1+SC SURVEY
6856.00	1.162	5.939	6529.53	KOP
7492.00	50.110	0.297	7090.46	ENTER LANDBOX (846'FNL & 726'FEL,SEC.13) 40.0562283 -104.7185944
8039.00	88.280	1.200	7302.35	LANDING (352'FNL & 721'FEL,SEC.13) 40.0575855 -104.7185783
8862.00	89.569	359.576	7288.01	CROSS SETBACK HEEL (471'FSL & 716'FEL,SEC.12) 40.0598437 -104.7185609
18458.00	89.951	358.510	7299.10	CROSS SETBACK TOE (461'FNL & 641'FEL,SEC.01) 40.0861753 -104.7183338
18843.00	90.000	359.330	7299.44	LAST BHGE MWD+IFR1+SC SURVEY
18867.00	90.000	359.330	7299.44	PTB (52'FNL & 645'FEL,SEC.01) 40.0872978 -104.7183479