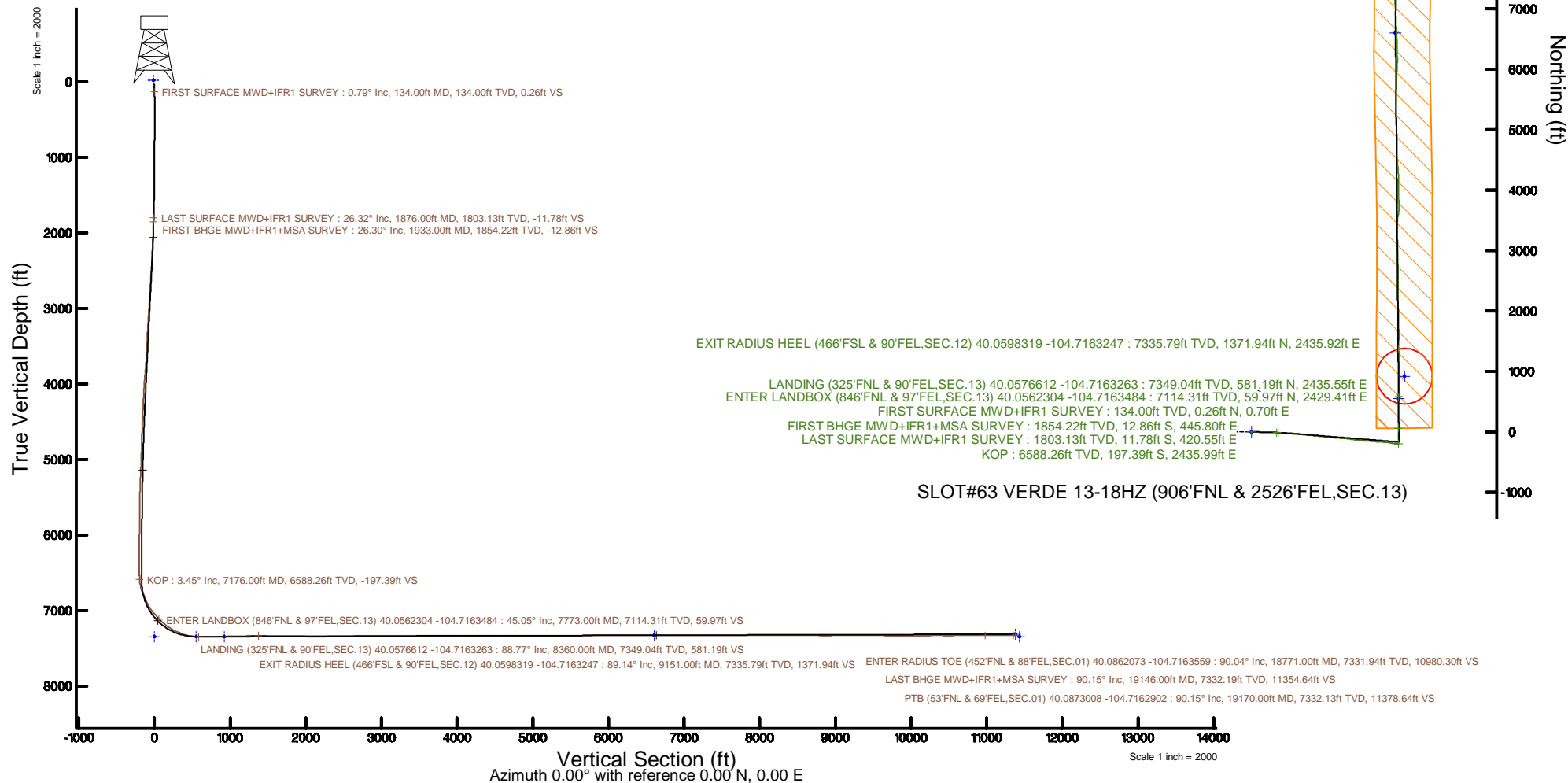


Location:	COLORADO	Slot:	SLOT#63 VERDE 13-18HZ (906°FNL & 2526°FEL, SEC. 13)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	VERDE 13-18HZ
Facility:	SEC.13-T1N-R66W	Wellbore:	VERDE 13-18HZ PWB
Plot reference wellpath is VERDE 13-18HZ PWP Rev-A.0		Grid System: NAD83 / UTM Zone 13 North, US feet	
True vertical depths are referenced to PD 564 (26) (RT)		* = Wellpath was transformed from a different geoidic datum	
Measured depths are referenced to PD 564 (26) (RT)		North Reference: True north	
PD 564 (26) (RT) to Mean Sea Level: 5098 feet		Scale: True distance	
Mean Sea Level to Mean Lat (At Slot: SLO#63 VERDE 13-18HZ (906°FNL & 2526°FEL, SEC. 13)): 0 feet		Depths are in feet	
Coordinates are in feet referenced to Slot		Created by: painser on 2018-03-28	
		Database: WA_DEN_Anadarko_Defn	



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 VERDE 13-18HZ (906'FNL & 2526'FEL, SEC.13)
Area	COLORADO	Well	VERDE 13-18HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-18HZ 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	3/28/2018 at 2:19 PM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/VERDE_13-18HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-687.70	-112.21	1717360.17	14547268.33	40°03'21.838"N	104°43'30.097"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#63 VERDE 13-18HZ (906'FNL & 2526'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	0.00°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 VERDE 13-18HZ (906°FNL & 2526°FEL, SEC.13)
Area	COLORADO	Well	VERDE 13-18HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-18HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (257 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	69.260	0.00	0.00	0.00	0.00	1717360.17	14547268.33	40°03'21.838"N	104°43'30.097"W	0.00	
26.00	0.000	69.260	26.00	0.00	0.00	0.00	1717360.17	14547268.33	40°03'21.838"N	104°43'30.097"W	0.00	
134.00	0.790	69.260	134.00	0.26	0.26	0.70	1717360.86	14547268.59	40°03'21.841"N	104°43'30.088"W	0.73	FIRST SURFACE MWD+IFR1 SURVEY
166.00	0.750	63.900	165.99	0.43	0.43	1.09	1717361.25	14547268.77	40°03'21.842"N	104°43'30.083"W	0.26	
198.00	1.010	57.570	197.99	0.68	0.68	1.52	1717361.68	14547269.01	40°03'21.845"N	104°43'30.077"W	0.87	
261.00	1.100	49.220	260.98	1.37	1.37	2.44	1717362.60	14547269.71	40°03'21.852"N	104°43'30.066"W	0.28	
293.00	1.360	63.720	292.97	1.74	1.74	3.02	1717363.18	14547270.08	40°03'21.855"N	104°43'30.058"W	1.26	
324.00	1.930	83.240	323.96	1.96	1.96	3.86	1717364.02	14547270.30	40°03'21.857"N	104°43'30.047"W	2.55	
356.00	2.240	86.660	355.94	2.06	2.06	5.02	1717365.18	14547270.41	40°03'21.858"N	104°43'30.032"W	1.04	
387.00	2.150	89.130	386.92	2.11	2.11	6.21	1717366.37	14547270.45	40°03'21.859"N	104°43'30.017"W	0.42	
419.00	2.720	93.700	418.89	2.07	2.07	7.57	1717367.72	14547270.42	40°03'21.858"N	104°43'30.000"W	1.88	
450.00	3.650	93.430	449.84	1.96	1.96	9.29	1717369.44	14547270.32	40°03'21.857"N	104°43'29.978"W	3.00	
482.00	4.090	92.640	481.77	1.85	1.85	11.44	1717371.60	14547270.21	40°03'21.856"N	104°43'29.950"W	1.39	
513.00	4.350	93.960	512.68	1.72	1.72	13.72	1717373.88	14547270.09	40°03'21.855"N	104°43'29.921"W	0.90	
545.00	4.970	91.500	544.58	1.60	1.60	16.32	1717376.47	14547269.97	40°03'21.854"N	104°43'29.887"W	2.04	
577.00	5.630	92.030	576.44	1.50	1.50	19.27	1717379.43	14547269.89	40°03'21.853"N	104°43'29.849"W	2.07	
609.00	6.150	90.800	608.27	1.42	1.42	22.55	1717382.71	14547269.82	40°03'21.852"N	104°43'29.807"W	1.67	
641.00	7.120	91.060	640.05	1.36	1.36	26.25	1717386.40	14547269.77	40°03'21.851"N	104°43'29.759"W	3.03	
672.00	8.090	91.410	670.78	1.27	1.27	30.35	1717390.50	14547269.70	40°03'21.851"N	104°43'29.707"W	3.13	
704.00	8.660	92.110	702.44	1.13	1.13	35.01	1717395.16	14547269.57	40°03'21.849"N	104°43'29.647"W	1.81	
736.00	8.880	92.640	734.07	0.93	0.93	39.89	1717400.03	14547269.38	40°03'21.847"N	104°43'29.584"W	0.73	
768.00	9.760	92.990	765.64	0.67	0.67	45.06	1717405.21	14547269.14	40°03'21.845"N	104°43'29.517"W	2.76	
799.00	10.810	93.170	796.14	0.37	0.37	50.59	1717410.73	14547268.86	40°03'21.842"N	104°43'29.446"W	3.39	
831.00	11.290	92.820	827.55	0.05	0.05	56.71	1717416.86	14547268.56	40°03'21.839"N	104°43'29.368"W	1.51	
863.00	12.040	92.990	858.89	-0.27	-0.27	63.18	1717423.32	14547268.25	40°03'21.835"N	104°43'29.285"W	2.35	
895.00	12.440	93.700	890.16	-0.67	-0.67	69.95	1717430.09	14547267.87	40°03'21.831"N	104°43'29.197"W	1.34	
926.00	13.050	93.780	920.40	-1.12	-1.12	76.77	1717436.91	14547267.45	40°03'21.827"N	104°43'29.110"W	1.97	
958.00	13.360	93.340	951.55	-1.57	-1.57	84.07	1717444.20	14547267.02	40°03'21.822"N	104°43'29.016"W	1.02	
990.00	13.840	92.550	982.66	-1.96	-1.96	91.58	1717451.72	14547266.66	40°03'21.819"N	104°43'28.919"W	1.61	
1022.00	14.810	92.820	1013.66	-2.33	-2.33	99.49	1717459.62	14547266.31	40°03'21.815"N	104°43'28.818"W	3.04	
1053.00	15.910	91.850	1043.55	-2.66	-2.66	107.70	1717467.83	14547266.00	40°03'21.812"N	104°43'28.712"W	3.64	
1085.00	16.660	92.380	1074.27	-2.99	-2.99	116.66	1717476.79	14547265.70	40°03'21.808"N	104°43'28.597"W	2.39	
1117.00	17.010	91.940	1104.90	-3.34	-3.34	125.92	1717486.05	14547265.38	40°03'21.805"N	104°43'28.478"W	1.16	
1148.00	17.530	91.940	1134.50	-3.65	-3.65	135.12	1717495.24	14547265.10	40°03'21.802"N	104°43'28.359"W	1.68	
1180.00	17.710	91.320	1165.00	-3.93	-3.93	144.80	1717504.92	14547264.85	40°03'21.799"N	104°43'28.235"W	0.81	
1212.00	17.970	91.320	1195.46	-4.15	-4.15	154.60	1717514.72	14547264.65	40°03'21.797"N	104°43'28.109"W	0.81	
1244.00	19.560	90.360	1225.76	-4.30	-4.30	164.90	1717525.01	14547264.54	40°03'21.795"N	104°43'27.976"W	5.06	
1276.00	20.300	91.060	1255.84	-4.44	-4.44	175.80	1717535.91	14547264.44	40°03'21.794"N	104°43'27.836"W	2.43	
1307.00	20.390	90.530	1284.91	-4.59	-4.59	186.58	1717546.69	14547264.32	40°03'21.793"N	104°43'27.698"W	0.66	
1339.00	20.430	89.210	1314.90	-4.56	-4.56	197.74	1717557.84	14547264.38	40°03'21.793"N	104°43'27.554"W	1.44	
1371.00	21.800	89.920	1344.75	-4.48	-4.48	209.27	1717569.36	14547264.50	40°03'21.794"N	104°43'27.406"W	4.36	
1403.00	22.060	90.970	1374.43	-4.57	-4.57	221.22	1717581.31	14547264.44	40°03'21.793"N	104°43'27.252"W	1.47	
1434.00	22.240	90.440	1403.15	-4.71	-4.71	232.90	1717592.99	14547264.34	40°03'21.791"N	104°43'27.102"W	0.87	
1466.00	22.320	89.740	1432.76	-4.73	-4.73	245.04	1717605.12	14547264.36	40°03'21.791"N	104°43'26.946"W	0.87	
1498.00	23.860	90.440	1462.19	-4.75	-4.75	257.58	1717617.66	14547264.37	40°03'21.791"N	104°43'26.784"W	4.89	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 VERDE 13-18HZ (906°FNL & 2526°FEL, SEC.13)
Area	COLORADO	Well	VERDE 13-18HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-18HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (257 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	24.170	90.530	1490.51	-4.86	-4.86	270.20	1717630.27	14547264.30	40°03'21.790"N	104°43'26.622"W	1.01	
1561.00	24.130	91.590	1519.71	-5.10	-5.10	283.29	1717643.36	14547264.10	40°03'21.788"N	104°43'26.454"W	1.36	
1592.00	25.050	92.900	1547.90	-5.61	-5.61	296.18	1717656.24	14547263.64	40°03'21.783"N	104°43'26.288"W	3.45	
1624.00	25.360	93.340	1576.85	-6.35	-6.35	309.79	1717669.85	14547262.94	40°03'21.775"N	104°43'26.113"W	1.13	
1656.00	25.530	93.610	1605.75	-7.19	-7.19	323.51	1717683.57	14547262.14	40°03'21.767"N	104°43'25.937"W	0.64	
1688.00	25.930	93.080	1634.57	-8.00	-8.00	337.38	1717697.43	14547261.38	40°03'21.759"N	104°43'25.758"W	1.44	
1719.00	25.930	92.730	1662.45	-8.68	-8.68	350.92	1717710.97	14547260.73	40°03'21.752"N	104°43'25.584"W	0.49	
1751.00	26.060	92.640	1691.21	-9.34	-9.34	364.93	1717724.97	14547260.12	40°03'21.746"N	104°43'25.404"W	0.42	
1783.00	26.320	92.200	1719.93	-9.94	-9.94	379.04	1717739.08	14547259.57	40°03'21.740"N	104°43'25.223"W	1.01	
1815.00	26.630	92.820	1748.57	-10.56	-10.56	393.29	1717753.33	14547258.99	40°03'21.734"N	104°43'25.039"W	1.30	
1847.00	26.670	92.470	1777.17	-11.22	-11.22	407.63	1717767.66	14547258.37	40°03'21.727"N	104°43'24.855"W	0.51	
1876.00	26.320	92.470	1803.13	-11.78	-11.78	420.55	1717780.58	14547257.85	40°03'21.722"N	104°43'24.689"W	1.21	LAST SURFACE MWD+IFR1 SURVEY
1924.00	26.320	92.470	1846.15	-12.70	-12.70	441.81	1717801.84	14547257.00	40°03'21.712"N	104°43'24.415"W	0.00	
1933.00	26.300	92.270	1854.22	-12.86	-12.86	445.80	1717805.83	14547256.85	40°03'21.711"N	104°43'24.364"W	1.01	FIRST BHGE MWD+IFR1+MSA SURVEY
2023.00	28.780	93.870	1934.02	-15.12	-15.12	487.35	1717847.36	14547254.72	40°03'21.689"N	104°43'23.830"W	2.88	
2112.00	28.700	94.130	2012.05	-18.10	-18.10	530.04	1717890.04	14547251.87	40°03'21.659"N	104°43'23.281"W	0.17	
2202.00	30.360	92.320	2090.36	-20.58	-20.58	574.32	1717934.32	14547249.53	40°03'21.635"N	104°43'22.711"W	2.09	
2291.00	31.090	95.200	2166.87	-23.57	-23.57	619.68	1717979.67	14547246.68	40°03'21.605"N	104°43'22.128"W	1.85	
2380.00	30.770	95.160	2243.21	-27.70	-27.70	665.24	1718025.22	14547242.69	40°03'21.564"N	104°43'21.542"W	0.36	
2470.00	32.460	95.460	2319.86	-32.07	-32.07	712.21	1718072.19	14547238.47	40°03'21.521"N	104°43'20.938"W	1.89	
2559.00	32.190	95.380	2395.06	-36.57	-36.57	759.59	1718119.56	14547234.12	40°03'21.477"N	104°43'20.329"W	0.31	
2649.00	31.660	95.310	2471.45	-41.00	-41.00	806.98	1718166.94	14547229.84	40°03'21.433"N	104°43'19.719"W	0.59	
2738.00	31.070	94.950	2547.44	-45.14	-45.14	853.11	1718213.08	14547225.84	40°03'21.392"N	104°43'19.126"W	0.70	
2827.00	32.490	95.380	2623.10	-49.37	-49.37	899.79	1718259.75	14547221.76	40°03'21.350"N	104°43'18.526"W	1.62	
2917.00	32.510	95.950	2699.00	-54.14	-54.14	947.91	1718307.87	14547217.14	40°03'21.303"N	104°43'17.907"W	0.34	
3007.00	31.940	95.410	2775.14	-58.89	-58.89	995.67	1718355.62	14547212.54	40°03'21.256"N	104°43'17.293"W	0.71	
3096.00	31.240	94.500	2850.95	-62.92	-62.92	1042.11	1718402.06	14547208.65	40°03'21.216"N	104°43'16.695"W	0.95	
3185.00	32.420	96.250	2926.57	-67.33	-67.33	1088.84	1718448.78	14547204.39	40°03'21.172"N	104°43'16.094"W	1.68	
3275.00	31.910	96.240	3002.75	-72.54	-72.54	1136.47	1718496.40	14547199.33	40°03'21.121"N	104°43'15.482"W	0.57	
3364.00	31.120	96.730	3078.63	-77.79	-77.79	1182.69	1718542.62	14547194.22	40°03'21.069"N	104°43'14.887"W	0.93	
3454.00	32.780	95.730	3154.99	-82.95	-82.95	1230.04	1718589.96	14547189.21	40°03'21.018"N	104°43'14.279"W	1.94	
3543.00	32.420	95.290	3229.97	-87.56	-87.56	1277.76	1718637.69	14547184.75	40°03'20.972"N	104°43'13.665"W	0.48	
3632.00	31.690	95.460	3305.40	-91.98	-91.98	1324.79	1718684.71	14547180.47	40°03'20.929"N	104°43'13.060"W	0.83	
3722.00	30.660	95.180	3382.40	-96.30	-96.30	1371.18	1718731.09	14547176.30	40°03'20.886"N	104°43'12.463"W	1.16	
3811.00	32.480	94.800	3458.23	-100.35	-100.35	1417.59	1718777.50	14547172.39	40°03'20.846"N	104°43'11.867"W	2.06	
3901.00	31.810	94.090	3534.43	-104.06	-104.06	1465.34	1718825.24	14547168.83	40°03'20.809"N	104°43'11.253"W	0.85	
3991.00	30.860	93.870	3611.30	-107.31	-107.31	1512.03	1718871.92	14547165.73	40°03'20.777"N	104°43'10.652"W	1.06	
4080.00	31.860	94.310	3687.30	-110.62	-110.62	1558.22	1718918.11	14547162.56	40°03'20.744"N	104°43'10.058"W	1.15	
4170.00	31.570	97.660	3763.87	-115.55	-115.55	1605.26	1718965.14	14547157.78	40°03'20.696"N	104°43'09.453"W	1.98	
4259.00	32.210	98.450	3839.43	-122.14	-122.14	1651.81	1719011.70	14547151.34	40°03'20.630"N	104°43'08.855"W	0.86	
4349.00	31.350	97.990	3915.94	-128.92	-128.92	1698.73	1719058.61	14547144.71	40°03'20.563"N	104°43'08.251"W	0.99	
4438.00	32.420	96.290	3991.51	-134.75	-134.75	1745.37	1719105.25	14547139.02	40°03'20.506"N	104°43'07.651"W	1.57	
4528.00	32.640	94.700	4067.39	-139.38	-139.38	1793.54	1719153.42	14547134.54	40°03'20.460"N	104°43'07.032"W	0.98	
4617.00	31.510	94.830	4142.80	-143.31	-143.31	1840.64	1719200.51	14547130.76	40°03'20.421"N	104°43'06.426"W	1.27	
4707.00	31.520	94.570	4219.53	-147.16	-147.16	1887.52	1719247.39	14547127.05	40°03'20.383"N	104°43'05.823"W	0.15	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 VERDE 13-18HZ (906°FNL & 2526°FEL, SEC.13)
Area	COLORADO	Well	VERDE 13-18HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-18HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (257 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
4797.00	30.320	93.870	4296.74	-150.57	-150.57	1933.64	1719293.50	14547123.79	40°03'20.349"N	104°43'05.230"W	1.39	
4886.00	29.630	93.940	4373.83	-153.60	-153.60	1978.00	1719337.85	14547120.90	40°03'20.319"N	104°43'04.660"W	0.78	
4976.00	27.450	96.160	4452.89	-157.35	-157.35	2020.83	1719380.67	14547117.28	40°03'20.282"N	104°43'04.109"W	2.69	
5065.00	26.100	95.650	4532.35	-161.48	-161.48	2060.71	1719420.55	14547113.28	40°03'20.241"N	104°43'03.596"W	1.54	
5155.00	24.290	94.260	4613.79	-164.80	-164.80	2098.87	1719458.71	14547110.07	40°03'20.208"N	104°43'03.105"W	2.12	
5244.00	22.820	93.130	4695.37	-167.11	-167.11	2134.36	1719494.19	14547107.88	40°03'20.186"N	104°43'02.649"W	1.73	
5333.00	21.510	92.080	4777.79	-168.64	-168.64	2167.90	1719527.72	14547106.45	40°03'20.171"N	104°43'02.218"W	1.54	
5422.00	20.180	95.730	4860.97	-170.77	-170.77	2199.49	1719559.30	14547104.42	40°03'20.149"N	104°43'01.811"W	2.09	
5512.00	19.490	95.630	4945.63	-173.79	-173.79	2229.88	1719589.69	14547101.49	40°03'20.120"N	104°43'01.421"W	0.77	
5602.00	17.990	95.360	5030.85	-176.56	-176.56	2258.66	1719618.46	14547098.81	40°03'20.092"N	104°43'01.051"W	1.67	
5691.00	15.420	99.540	5116.09	-179.81	-179.81	2284.01	1719643.82	14547095.65	40°03'20.060"N	104°43'00.724"W	3.19	
5781.00	14.040	100.820	5203.13	-183.84	-183.84	2306.54	1719666.35	14547091.68	40°03'20.020"N	104°43'00.435"W	1.58	
5871.00	12.610	99.730	5290.71	-187.55	-187.55	2326.94	1719686.76	14547088.04	40°03'19.984"N	104°43'00.172"W	1.61	
5960.00	11.240	99.290	5377.78	-190.59	-190.59	2345.08	1719704.90	14547085.05	40°03'19.953"N	104°42'59.939"W	1.54	
6050.00	10.180	99.290	5466.22	-193.29	-193.29	2361.59	1719721.40	14547082.41	40°03'19.927"N	104°42'59.727"W	1.18	
6140.00	8.700	98.080	5554.99	-195.53	-195.53	2376.18	1719735.99	14547080.21	40°03'19.905"N	104°42'59.539"W	1.66	
6229.00	7.280	95.250	5643.13	-196.99	-196.99	2388.46	1719748.27	14547078.79	40°03'19.890"N	104°42'59.381"W	1.66	
6319.00	6.100	95.950	5732.51	-198.01	-198.01	2398.89	1719758.71	14547077.80	40°03'19.880"N	104°42'59.247"W	1.31	
6408.00	5.180	91.950	5821.08	-198.64	-198.64	2407.61	1719767.42	14547077.20	40°03'19.874"N	104°42'59.135"W	1.12	
6497.00	4.190	90.380	5909.78	-198.80	-198.80	2414.88	1719774.69	14547077.07	40°03'19.872"N	104°42'59.042"W	1.12	
6587.00	3.480	95.980	5999.58	-199.10	-199.10	2420.88	1719780.69	14547076.78	40°03'19.869"N	104°42'58.964"W	0.89	
6677.00	2.760	94.380	6089.45	-199.55	-199.55	2425.76	1719785.57	14547076.34	40°03'19.865"N	104°42'58.902"W	0.81	
6766.00	2.410	94.760	6178.36	-199.87	-199.87	2429.76	1719789.57	14547076.04	40°03'19.862"N	104°42'58.850"W	0.39	
6856.00	0.890	81.530	6268.32	-199.93	-199.93	2432.34	1719792.15	14547075.99	40°03'19.861"N	104°42'58.817"W	1.73	
6945.00	0.630	70.900	6357.31	-199.66	-199.66	2433.48	1719793.29	14547076.26	40°03'19.864"N	104°42'58.802"W	0.33	
7035.00	0.520	72.400	6447.31	-199.38	-199.38	2434.34	1719794.15	14547076.55	40°03'19.867"N	104°42'58.791"W	0.12	
7124.00	0.990	75.680	6536.30	-199.07	-199.07	2435.47	1719795.28	14547076.86	40°03'19.870"N	104°42'58.777"W	0.53	
7176.00†	3.455	3.203	6588.26	-197.39	-197.39	2435.99	1719795.79	14547078.54	40°03'19.886"N	104°42'58.770"W	6.34	KOP
7213.00	5.740	356.470	6625.14	-194.43	-194.43	2435.94	1719795.73	14547081.50	40°03'19.915"N	104°42'58.771"W	6.34	
7303.00	20.230	355.000	6712.60	-174.33	-174.33	2434.30	1719794.03	14547101.58	40°03'20.114"N	104°42'58.792"W	16.10	
7393.00	21.570	357.850	6796.68	-142.29	-142.29	2432.32	1719791.95	14547133.60	40°03'20.431"N	104°42'58.817"W	1.87	
7482.00	23.890	1.960	6878.77	-107.93	-107.93	2432.32	1719791.85	14547167.95	40°03'20.770"N	104°42'58.817"W	3.16	
7572.00	31.580	358.770	6958.38	-66.09	-66.09	2432.44	1719791.84	14547209.78	40°03'21.184"N	104°42'58.816"W	8.70	
7662.00	38.850	357.860	7031.86	-14.25	-14.25	2430.88	1719790.12	14547261.59	40°03'21.696"N	104°42'58.836"W	8.10	
7751.00	43.920	359.480	7098.61	44.55	44.55	2429.56	1719788.61	14547320.36	40°03'22.277"N	104°42'58.852"W	5.82	
7773.00†	45.054	359.470	7114.31	59.97	59.97	2429.41	1719788.42	14547335.77	40°03'22.429"N	104°42'58.854"W	5.16	ENTER LANDBOX (846°FNL & 97°FEL, SEC.13) 40.0562304 -104.7163484
7841.00	48.560	359.440	7160.84	109.53	109.53	2428.94	1719787.80	14547385.32	40°03'22.919"N	104°42'58.860"W	5.16	
7930.00	55.040	1.320	7215.85	179.43	179.43	2429.46	1719788.10	14547455.19	40°03'23.610"N	104°42'58.854"W	7.47	
8020.00	62.080	0.750	7262.77	256.15	256.15	2430.83	1719789.23	14547531.89	40°03'24.368"N	104°42'58.836"W	7.84	
8109.00	68.170	1.070	7300.19	336.85	336.85	2432.12	1719790.27	14547612.55	40°03'25.166"N	104°42'58.819"W	6.85	
8199.00	73.870	1.600	7329.45	421.90	421.90	2434.11	1719791.99	14547697.57	40°03'26.006"N	104°42'58.793"W	6.36	
8288.00	85.440	359.970	7345.40	509.29	509.29	2435.28	1719792.90	14547784.93	40°03'26.870"N	104°42'58.778"W	13.12	
8360.00†	88.768	0.458	7349.04	581.19	581.19	2435.55	1719792.95	14547856.80	40°03'27.580"N	104°42'58.775"W	4.67	LANDING (325°FNL & 90°FEL, SEC.13) 40.0576612 -104.7163263
8378.00	89.600	0.580	7349.30	599.19	599.19	2435.71	1719793.05	14547874.79	40°03'27.758"N	104°42'58.773"W	4.67	
8467.00	90.060	0.440	7349.56	688.18	688.18	2436.50	1719793.57	14547963.76	40°03'28.638"N	104°42'58.762"W	0.54	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 VERDE 13-18HZ (906°FNL & 2526°FEL, SEC.13)
Area	COLORADO	Well	VERDE 13-18HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-18HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (257 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
8557.00	90.430	0.640	7349.18	778.18	778.18	2437.35	1719794.14	14548053.72	40°03'29.527"N	104°42'58.751"W	0.47	
8646.00	90.830	0.440	7348.20	867.17	867.17	2438.19	1719794.70	14548142.68	40°03'30.406"N	104°42'58.740"W	0.50	
8736.00	92.030	0.530	7345.95	957.13	957.13	2438.95	1719795.19	14548232.61	40°03'31.295"N	104°42'58.730"W	1.34	
8825.00	90.340	359.380	7344.11	1046.11	1046.11	2438.88	1719794.84	14548321.55	40°03'32.175"N	104°42'58.731"W	2.30	
8915.00	91.660	359.420	7342.54	1136.09	1136.09	2437.94	1719793.62	14548411.49	40°03'33.064"N	104°42'58.743"W	1.47	
9004.00	92.990	359.580	7338.93	1225.01	1225.01	2437.16	1719792.57	14548500.37	40°03'33.943"N	104°42'58.753"W	1.51	
9094.00	90.950	359.360	7335.84	1314.95	1314.95	2436.33	1719791.46	14548590.27	40°03'34.831"N	104°42'58.764"W	2.28	
9151.00†	89.138	359.808	7335.79	1371.94	1371.94	2435.92	1719790.87	14548647.25	40°03'35.395"N	104°42'58.769"W	3.28	EXIT RADIUS HEEL (466°FSL & 90°FEL, SEC.12) 40.0598319 -104.7163247
9183.00	88.120	0.060	7336.56	1403.94	1403.94	2435.88	1719790.74	14548679.22	40°03'35.711"N	104°42'58.769"W	3.28	
9273.00	88.240	0.090	7339.42	1493.89	1493.89	2436.00	1719790.58	14548769.14	40°03'36.600"N	104°42'58.768"W	0.14	
9362.00	90.060	0.750	7340.74	1582.87	1582.87	2436.65	1719790.96	14548858.09	40°03'37.479"N	104°42'58.759"W	2.18	
9452.00	89.380	358.900	7341.18	1672.87	1672.87	2436.38	1719790.40	14548948.05	40°03'38.368"N	104°42'58.763"W	2.19	
9541.00	90.680	358.520	7341.13	1761.84	1761.84	2434.37	1719788.13	14549036.98	40°03'39.248"N	104°42'58.788"W	1.52	
9631.00	88.240	358.820	7341.98	1851.81	1851.81	2432.28	1719785.76	14549126.91	40°03'40.137"N	104°42'58.815"W	2.73	
9721.00	88.770	358.840	7344.33	1941.76	1941.76	2430.45	1719783.65	14549216.81	40°03'41.026"N	104°42'58.839"W	0.59	
9810.00	88.400	358.110	7346.53	2030.70	2030.70	2428.08	1719781.00	14549305.71	40°03'41.905"N	104°42'58.869"W	0.92	
9900.00	89.290	358.860	7348.34	2120.65	2120.65	2425.70	1719778.35	14549395.62	40°03'42.794"N	104°42'58.899"W	1.29	
9989.00	91.570	0.160	7347.67	2209.63	2209.63	2424.94	1719777.31	14549484.57	40°03'43.673"N	104°42'58.909"W	2.95	
10115.00	92.770	1.090	7342.90	2335.53	2335.53	2426.31	1719778.30	14549610.42	40°03'44.917"N	104°42'58.891"W	1.20	
10204.00	90.800	359.760	7340.13	2424.48	2424.48	2426.97	1719778.68	14549699.33	40°03'45.796"N	104°42'58.883"W	2.67	
10293.00	90.150	359.150	7339.39	2513.47	2513.47	2426.13	1719777.56	14549788.29	40°03'46.676"N	104°42'58.893"W	1.00	
10383.00	90.120	358.690	7339.18	2603.46	2603.46	2424.43	1719775.59	14549878.23	40°03'47.565"N	104°42'58.915"W	0.51	
10472.00	90.280	358.290	7338.87	2692.42	2692.42	2422.08	1719772.97	14549967.15	40°03'48.444"N	104°42'58.945"W	0.48	
10562.00	90.250	357.710	7338.45	2782.37	2782.37	2418.94	1719769.55	14550057.05	40°03'49.333"N	104°42'58.986"W	0.65	
10651.00	90.090	358.110	7338.19	2871.31	2871.31	2415.70	1719766.03	14550145.95	40°03'50.212"N	104°42'59.027"W	0.48	
10741.00	90.250	358.080	7337.92	2961.26	2961.26	2412.71	1719762.76	14550235.85	40°03'51.101"N	104°42'59.066"W	0.18	
10830.00	90.280	357.470	7337.51	3050.19	3050.19	2409.25	1719759.04	14550324.74	40°03'51.979"N	104°42'59.110"W	0.69	
10920.00	90.220	358.700	7337.12	3140.14	3140.14	2406.24	1719755.75	14550414.64	40°03'52.868"N	104°42'59.148"W	1.37	
11009.00	90.060	0.020	7336.90	3229.13	3229.13	2405.25	1719754.48	14550503.59	40°03'53.748"N	104°42'59.161"W	1.49	
11099.00	90.180	1.280	7336.71	3319.12	3319.12	2406.27	1719755.23	14550593.55	40°03'54.637"N	104°42'59.148"W	1.41	
11188.00	90.220	0.620	7336.40	3408.11	3408.11	2407.75	1719756.43	14550682.51	40°03'55.516"N	104°42'59.129"W	0.74	
11278.00	90.650	5.930	7335.72	3497.93	3497.93	2412.88	1719761.29	14550772.30	40°03'56.404"N	104°42'59.063"W	5.92	
11367.00	90.310	11.200	7334.97	3585.90	3585.90	2426.13	1719774.26	14550860.28	40°03'57.273"N	104°42'58.892"W	5.93	
11457.00	89.910	3.920	7334.80	3675.06	3675.06	2437.97	1719785.81	14550949.44	40°03'58.155"N	104°42'58.740"W	8.10	
11546.00	90.150	357.290	7334.75	3764.00	3764.00	2438.91	1719786.48	14551038.35	40°03'59.033"N	104°42'58.728"W	7.45	
11635.00	90.280	358.370	7334.42	3852.94	3852.94	2435.54	1719782.83	14551127.24	40°03'59.912"N	104°42'58.771"W	1.22	
11725.00	90.060	358.180	7334.15	3942.89	3942.89	2432.83	1719779.85	14551217.16	40°04'00.801"N	104°42'58.805"W	0.32	
11815.00	90.220	0.540	7333.93	4032.88	4032.88	2431.82	1719778.56	14551307.11	40°04'01.691"N	104°42'58.818"W	2.63	
11904.00	89.910	359.540	7333.83	4121.88	4121.88	2431.88	1719778.35	14551396.07	40°04'02.570"N	104°42'58.817"W	1.18	
11994.00	89.750	358.480	7334.09	4211.87	4211.87	2430.33	1719776.52	14551486.01	40°04'03.459"N	104°42'58.837"W	1.19	
12115.00	89.850	355.870	7334.52	4332.71	4332.71	2424.37	1719770.19	14551606.79	40°04'04.654"N	104°42'58.914"W	2.16	
12205.00	90.120	356.210	7334.54	4422.49	4422.49	2418.15	1719763.70	14551696.52	40°04'05.541"N	104°42'58.994"W	0.48	
12294.00	90.000	356.750	7334.45	4511.32	4511.32	2412.69	1719757.96	14551785.30	40°04'06.419"N	104°42'59.064"W	0.62	
12384.00	90.150	359.050	7334.33	4601.26	4601.26	2409.39	1719754.39	14551875.18	40°04'07.307"N	104°42'59.106"W	2.56	
12473.00	89.940	359.350	7334.26	4690.25	4690.25	2408.15	1719752.87	14551964.14	40°04'08.187"N	104°42'59.122"W	0.41	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 VERDE 13-18HZ (906°FNL & 2526°FEL, SEC.13)
Area	COLORADO	Well	VERDE 13-18HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-18HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (257 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
12562.00	89.850	359.290	7334.42	4779.24	4779.24	2407.09	1719751.54	14552053.09	40°04'09.066"N	104°42'59.135"W	0.12	
12652.00	89.780	358.230	7334.71	4869.22	4869.22	2405.14	1719749.31	14552143.03	40°04'09.956"N	104°42'59.160"W	1.18	
12741.00	90.150	357.060	7334.77	4958.14	4958.14	2401.49	1719745.38	14552231.90	40°04'10.834"N	104°42'59.207"W	1.38	
12830.00	89.690	356.090	7334.89	5046.98	5046.98	2396.17	1719739.79	14552320.69	40°04'11.712"N	104°42'59.276"W	1.21	
12920.00	90.220	357.140	7334.96	5136.82	5136.82	2390.85	1719734.20	14552410.48	40°04'12.600"N	104°42'59.344"W	1.31	
13009.00	90.250	359.180	7334.60	5225.77	5225.77	2388.00	1719731.07	14552499.38	40°04'13.479"N	104°42'59.381"W	2.29	
13098.00	90.340	0.570	7334.14	5314.77	5314.77	2387.80	1719730.61	14552588.34	40°04'14.359"N	104°42'59.383"W	1.57	
13187.00	90.220	359.290	7333.70	5403.77	5403.77	2387.69	1719730.22	14552677.30	40°04'15.238"N	104°42'59.384"W	1.44	
13277.00	89.970	0.430	7333.56	5493.76	5493.76	2387.47	1719729.72	14552767.27	40°04'16.127"N	104°42'59.387"W	1.30	
13366.00	90.180	2.880	7333.44	5582.72	5582.72	2390.04	1719732.02	14552856.19	40°04'17.006"N	104°42'59.354"W	2.76	
13455.00	90.060	2.930	7333.25	5671.61	5671.61	2394.55	1719736.25	14552945.06	40°04'17.885"N	104°42'59.296"W	0.15	
13545.00	90.580	0.790	7332.75	5761.55	5761.55	2397.48	1719738.90	14553034.98	40°04'18.774"N	104°42'59.258"W	2.45	
13634.00	90.000	0.200	7332.30	5850.55	5850.55	2398.24	1719739.39	14553123.94	40°04'19.653"N	104°42'59.248"W	0.93	
13723.00	90.340	4.660	7332.04	5939.44	5939.44	2402.02	1719742.89	14553212.81	40°04'20.532"N	104°42'59.199"W	5.03	
13813.00	90.400	3.120	7331.45	6029.23	6029.23	2408.12	1719748.71	14553302.58	40°04'21.419"N	104°42'59.121"W	1.71	
13902.00	90.000	0.730	7331.14	6118.17	6118.17	2411.11	1719751.42	14553391.50	40°04'22.298"N	104°42'59.082"W	2.72	
13991.00	90.090	359.390	7331.07	6207.17	6207.17	2411.21	1719751.24	14553480.46	40°04'23.177"N	104°42'59.081"W	1.51	
14080.00	89.970	358.950	7331.03	6296.16	6296.16	2409.92	1719749.68	14553569.41	40°04'24.057"N	104°42'59.097"W	0.51	
14169.00	90.150	358.590	7330.93	6385.14	6385.14	2408.01	1719747.50	14553658.35	40°04'24.936"N	104°42'59.122"W	0.45	
14259.00	90.000	357.440	7330.82	6475.09	6475.09	2404.89	1719744.10	14553748.25	40°04'25.825"N	104°42'59.162"W	1.29	
14348.00	90.120	357.480	7330.72	6564.00	6564.00	2400.94	1719739.88	14553837.11	40°04'26.704"N	104°42'59.212"W	0.14	
14437.00	89.910	357.390	7330.70	6652.91	6652.91	2396.96	1719735.63	14553925.98	40°04'27.582"N	104°42'59.263"W	0.26	
14526.00	89.940	357.350	7330.82	6741.81	6741.81	2392.88	1719731.27	14554014.83	40°04'28.461"N	104°42'59.316"W	0.06	
14615.00	89.940	357.610	7330.91	6830.73	6830.73	2388.96	1719727.09	14554103.70	40°04'29.340"N	104°42'59.366"W	0.29	
14704.00	90.280	357.430	7330.74	6919.64	6919.64	2385.11	1719722.96	14554192.57	40°04'30.218"N	104°42'59.415"W	0.43	
14794.00	90.090	357.260	7330.45	7009.55	7009.55	2380.94	1719718.52	14554282.42	40°04'31.107"N	104°42'59.469"W	0.28	
14883.00	89.820	357.530	7330.52	7098.46	7098.46	2376.90	1719714.20	14554371.28	40°04'31.985"N	104°42'59.521"W	0.43	
14972.00	89.880	357.940	7330.75	7187.39	7187.39	2373.38	1719710.41	14554460.17	40°04'32.864"N	104°42'59.566"W	0.47	
15061.00	89.970	358.650	7330.87	7276.35	7276.35	2370.73	1719707.49	14554549.08	40°04'33.743"N	104°42'59.600"W	0.80	
15151.00	90.030	358.680	7330.87	7366.32	7366.32	2368.64	1719705.11	14554639.02	40°04'34.632"N	104°42'59.627"W	0.07	
15240.00	89.850	359.840	7330.96	7455.31	7455.31	2367.49	1719703.69	14554727.97	40°04'35.512"N	104°42'59.642"W	1.32	
15330.00	89.850	1.750	7331.20	7545.30	7545.30	2368.74	1719704.66	14554817.92	40°04'36.401"N	104°42'59.625"W	2.12	
15419.00	89.880	2.110	7331.41	7634.25	7634.25	2371.73	1719707.38	14554906.85	40°04'37.280"N	104°42'59.587"W	0.41	
15509.00	89.940	1.400	7331.55	7724.20	7724.20	2374.49	1719709.86	14554996.78	40°04'38.169"N	104°42'59.551"W	0.79	
15598.00	89.820	1.020	7331.73	7813.18	7813.18	2376.37	1719711.46	14555085.72	40°04'39.048"N	104°42'59.527"W	0.45	
15688.00	89.780	0.260	7332.05	7903.18	7903.18	2377.37	1719712.19	14555175.69	40°04'39.938"N	104°42'59.514"W	0.85	
15777.00	90.120	0.980	7332.13	7992.17	7992.17	2378.34	1719712.88	14555264.65	40°04'40.817"N	104°42'59.501"W	0.89	
15867.00	90.220	1.060	7331.86	8082.16	8082.16	2379.94	1719714.20	14555354.60	40°04'41.706"N	104°42'59.481"W	0.14	
15956.00	90.000	0.760	7331.69	8171.15	8171.15	2381.35	1719715.34	14555443.56	40°04'42.586"N	104°42'59.462"W	0.42	
16046.00	89.780	1.130	7331.86	8261.13	8261.13	2382.84	1719716.55	14555533.51	40°04'43.475"N	104°42'59.443"W	0.48	
16135.00	90.030	5.440	7332.01	8349.97	8349.97	2387.94	1719721.37	14555622.33	40°04'44.353"N	104°42'59.377"W	4.85	
16224.00	89.970	8.130	7332.01	8438.33	8438.33	2398.45	1719731.60	14555710.69	40°04'45.226"N	104°42'59.242"W	3.02	
16314.00	89.780	3.070	7332.20	8527.88	8527.88	2407.23	1719740.10	14555800.23	40°04'46.111"N	104°42'59.129"W	5.63	
16403.00	90.250	359.520	7332.18	8616.84	8616.84	2409.24	1719741.84	14555889.16	40°04'46.990"N	104°42'59.103"W	4.02	
16493.00	89.780	357.880	7332.16	8706.81	8706.81	2407.20	1719739.52	14555979.09	40°04'47.879"N	104°42'59.129"W	1.90	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 VERDE 13-18HZ (906°FNL & 2526°FEL, SEC.13)
Area	COLORADO	Well	VERDE 13-18HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-18HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (257 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
16582.00	89.780	355.890	7332.50	8795.67	8795.67	2402.36	1719734.41	14556067.90	40°04'48.757"N	104°42'59.191"W	2.24	
16671.00	90.090	357.960	7332.60	8884.54	8884.54	2397.59	1719729.37	14556156.72	40°04'49.636"N	104°42'59.253"W	2.35	
16761.00	90.250	3.780	7332.33	8974.49	8974.49	2398.95	1719730.45	14556246.64	40°04'50.525"N	104°42'59.235"W	6.47	
16851.00	89.970	5.520	7332.16	9064.19	9064.19	2406.25	1719737.47	14556336.32	40°04'51.411"N	104°42'59.141"W	1.96	
16940.00	89.850	357.390	7332.30	9153.09	9153.09	2408.51	1719739.45	14556425.19	40°04'52.290"N	104°42'59.112"W	9.14	
17029.00	90.150	354.480	7332.30	9241.86	9241.86	2402.20	1719732.87	14556513.90	40°04'53.167"N	104°42'59.193"W	3.29	
17119.00	89.850	355.770	7332.30	9331.53	9331.53	2394.55	1719724.95	14556603.52	40°04'54.053"N	104°42'59.291"W	1.47	
17208.00	89.970	357.580	7332.44	9420.37	9420.37	2389.39	1719719.52	14556692.31	40°04'54.931"N	104°42'59.357"W	2.04	
17297.00	90.090	0.100	7332.39	9509.35	9509.35	2387.59	1719717.44	14556781.25	40°04'55.810"N	104°42'59.380"W	2.83	
17387.00	89.970	355.980	7332.35	9599.28	9599.28	2384.51	1719714.09	14556871.13	40°04'56.699"N	104°42'59.420"W	4.58	
17476.00	89.750	352.960	7332.56	9687.85	9687.85	2375.94	1719705.24	14556959.64	40°04'57.574"N	104°42'59.530"W	3.40	
17565.00	89.940	356.110	7332.80	9776.44	9776.44	2367.46	1719696.50	14557048.16	40°04'58.450"N	104°42'59.639"W	3.55	
17655.00	90.090	1.760	7332.78	9866.38	9866.38	2365.79	1719694.55	14557138.07	40°04'59.338"N	104°42'59.660"W	6.28	
17744.00	89.940	2.340	7332.76	9955.33	9955.33	2368.97	1719697.46	14557226.99	40°05'00.217"N	104°42'59.619"W	0.67	
17833.00	90.150	2.270	7332.69	10044.25	10044.25	2372.55	1719700.76	14557315.89	40°05'01.096"N	104°42'59.573"W	0.25	
17923.00	90.030	3.790	7332.55	10134.13	10134.13	2377.31	1719705.24	14557405.74	40°05'01.984"N	104°42'59.512"W	1.69	
18012.00	90.030	2.880	7332.50	10222.97	10222.97	2382.49	1719710.14	14557494.57	40°05'02.862"N	104°42'59.445"W	1.02	
18101.00	90.150	3.810	7332.36	10311.82	10311.82	2387.68	1719715.05	14557583.40	40°05'03.740"N	104°42'59.378"W	1.05	
18191.00	89.820	3.660	7332.38	10401.63	10401.63	2393.54	1719720.64	14557673.19	40°05'04.628"N	104°42'59.303"W	0.40	
18280.00	90.000	359.440	7332.52	10490.58	10490.58	2395.95	1719722.77	14557762.11	40°05'05.507"N	104°42'59.272"W	4.75	
18369.00	90.150	0.380	7332.41	10579.58	10579.58	2395.81	1719722.35	14557851.07	40°05'06.386"N	104°42'59.273"W	1.07	
18459.00	90.030	4.040	7332.27	10669.49	10669.49	2399.28	1719725.55	14557940.96	40°05'07.275"N	104°42'59.229"W	4.07	
18548.00	89.910	4.040	7332.31	10758.27	10758.27	2405.55	1719731.54	14558029.72	40°05'08.152"N	104°42'59.148"W	0.13	
18638.00	90.090	5.460	7332.31	10847.96	10847.96	2413.00	1719738.71	14558119.40	40°05'09.039"N	104°42'59.052"W	1.59	
18727.00	90.250	5.910	7332.05	10936.52	10936.52	2421.82	1719747.25	14558207.95	40°05'09.914"N	104°42'58.938"W	0.54	
18771.00†	90.040	5.646	7331.94	10980.30	10980.30	2426.25	1719751.54	14558251.73	40°05'10.346"N	104°42'58.881"W	0.77	ENTER RADIUS TOE (452°FNL & 88°FEL, SEC.01) 40.0862073 -104.7163559
18817.00	89.820	5.370	7331.99	11026.09	11026.09	2430.66	1719755.82	14558297.51	40°05'10.799"N	104°42'58.824"W	0.77	
18906.00	89.850	3.840	7332.25	11114.80	11114.80	2437.81	1719762.68	14558386.21	40°05'11.675"N	104°42'58.732"W	1.72	
18995.00	90.060	2.080	7332.32	11203.67	11203.67	2442.40	1719767.00	14558475.06	40°05'12.554"N	104°42'58.673"W	1.99	
19084.00	90.000	0.680	7332.27	11292.65	11292.65	2444.55	1719768.87	14558564.00	40°05'13.433"N	104°42'58.645"W	1.57	
19146.00	90.150	359.670	7332.19	11354.64	11354.64	2444.74	1719768.87	14558625.98	40°05'14.046"N	104°42'58.643"W	1.65	LAST BHGE MWD+IFR1+MSA SURVEY
19170.00	90.150	359.670	7332.13	11378.64	11378.64	2444.60	1719768.66	14558649.97	40°05'14.283"N	104°42'58.645"W	0.00	PTB (53°FNL & 69°FEL, SEC.01) 40.0873008 -104.7162902

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 VERDE 13-18HZ (906'FNL & 2526'FEL,SEC.13)
Area	COLORADO	Well	VERDE 13-18HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-18HZ 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	-15.30	-1986.99	1715374.02	14547246.90	40°03'21.686"N	104°43'55.650"W	polygon
SEC.12-T1N-R66W	-24.00	-15.30	-1986.99	1715374.02	14547246.90	40°03'21.686"N	104°43'55.650"W	polygon
VERDE 13-18HZ BHL REV-1(50'FNL & 81'FEL,SEC.01)	7315.00	11381.64	2432.89	1719756.94	14558652.93	40°05'14.312"N	104°42'58.795"W	point
VERDE 13-18HZ LAT. TARGET	7329.56	6604.62	2382.87	1719721.69	14553877.66	40°04'27.105"N	104°42'59.445"W	point
VERDE 13-18HZ HEEL REV-1(370'FNL & 95'FEL,SEC.13)	7348.00	550.89	2432.84	1719790.33	14547826.51	40°03'27.281"N	104°42'58.810"W	point
VERDE 13-18HZ LANDBOX	7348.00	0.00	0.00	1717360.17	14547268.33	40°03'21.838"N	104°43'30.097"W	polygon
VERDE 13-18HZ RADIUS 1	7348.00	11431.98	2513.73	1719837.60	14558703.50	40°05'14.810"N	104°42'57.755"W	polygon
VERDE 13-18HZ RADIUS 2	7348.00	921.43	2528.79	1719885.10	14548197.20	40°03'30.943"N	104°42'57.575"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: VERDE 13-18HZ AWB					Ref Wellpath: VERDE 13-18HZ AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model		Log Name/Comment		Wellbore
26.00	1876.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)		Custom APC ISCWSA Rev-2 MWD+IFR1 <134 - 1876>		VERDE 13-18HZ AWB
1876.00	19146.00	Custom APC ISCWSA REV 2 MWD+IFR1+MSA (approximation)		BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1924 - 19146>		VERDE 13-18HZ AWB
19146.00	19170.00	Blind Drilling (std)		Projection to bit		VERDE 13-18HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#63 VERDE 13-18HZ (906'FNL & 2526'FEL, SEC.13)
Area	COLORADO	Well	VERDE 13-18HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-18HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
134.00	0.790	69.260	134.00	FIRST SURFACE MWD+IFR1 SURVEY
1876.00	26.320	92.470	1803.13	LAST SURFACE MWD+IFR1 SURVEY
1933.00	26.300	92.270	1854.22	FIRST BHGE MWD+IFR1+MSA SURVEY
7176.00	3.455	3.203	6588.26	KOP
7773.00	45.054	359.470	7114.31	ENTER LANDBOX (846'FNL & 97'FEL, SEC.13) 40.0562304 -104.7163484
8360.00	88.768	0.458	7349.04	LANDING (325'FNL & 90'FEL, SEC.13) 40.0576612 -104.7163263
9151.00	89.138	359.808	7335.79	EXIT RADIUS HEEL (466'FSL & 90'FEL, SEC.12) 40.0598319 -104.7163247
18771.00	90.040	5.646	7331.94	ENTER RADIUS TOE (452'FNL & 88'FEL, SEC.01) 40.0862073 -104.7163559
19146.00	90.150	359.670	7332.19	LAST BHGE MWD+IFR1+MSA SURVEY
19170.00	90.150	359.670	7332.13	PTB (53'FNL & 69'FEL, SEC.01) 40.0873008 -104.7162902