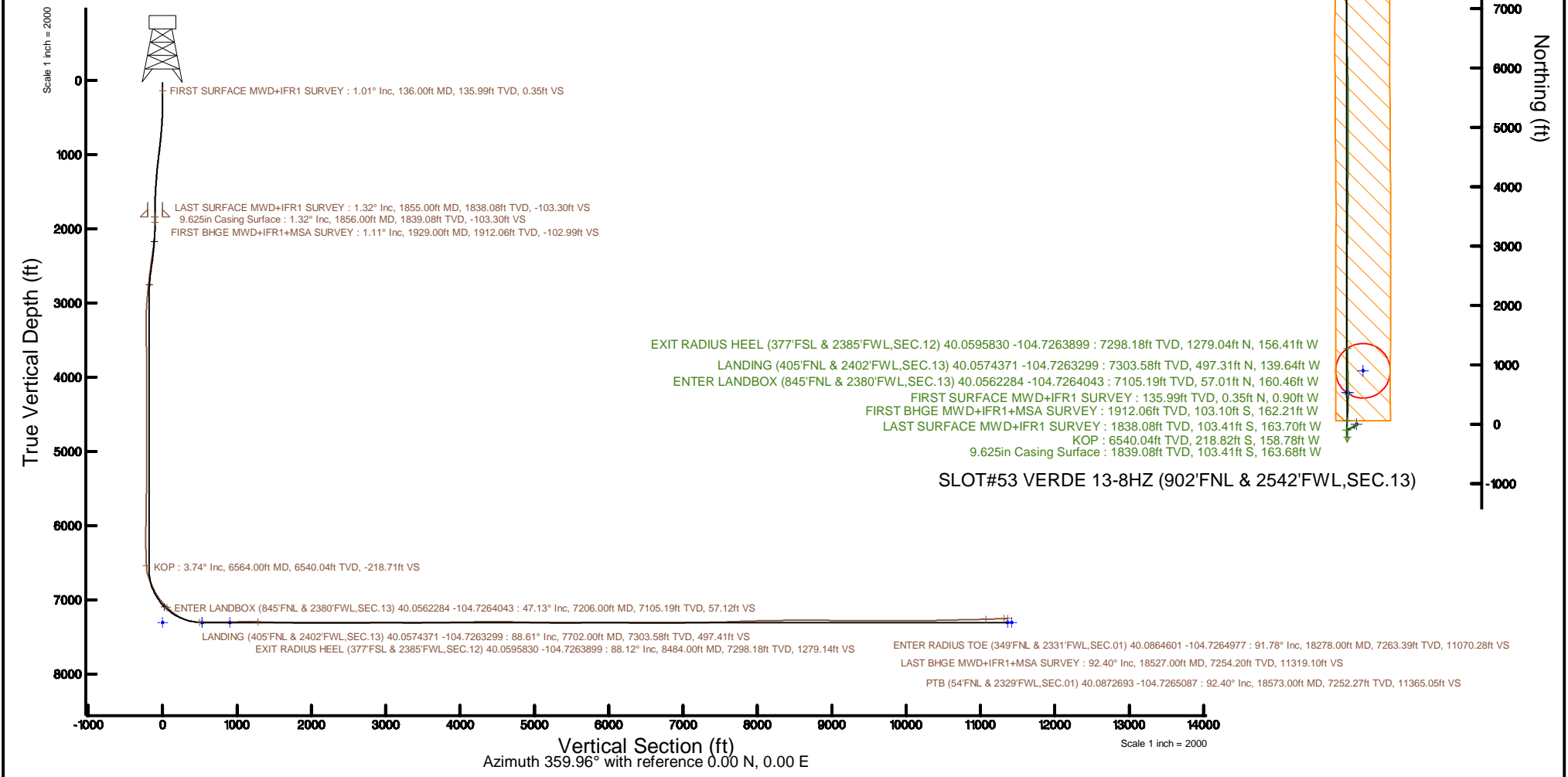


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO	Slot: SLOT#53 VERDE 13-8HZ (902'FNL & 2542'FWL,SEC.13)
Field: WELD COUNTY (UTM/TRUE NORTH)Well:	VERDE 13-8HZ
Facility: SEC.13-T1N-R66W	Wellbore: VERDE 13-8HZ PWB
Plot reference wellpath is VERDE 13-8HZ 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 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#53 VERDE 13-8HZ (902'FNL & 2542'FWL,SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2018-05-31
	Database: WA, DEN, Anadarko, Dfn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#53 VERDE 13-8HZ (902'FNL & 2542'FWL,SEC.13)
Area	COLORADO	Well	VERDE 13-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-8HZ 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	5/31/2018 at 8:27 AM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/VERDE_13-8HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-685.57	-337.32	1717135.14	14547269.76	40°03'21.859"N	104°43'32.992"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#53 VERDE 13-8HZ (902'FNL & 2542'FWL,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	359.04°

Actual Wellpath Report

VERDE 13-8HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#53 VERDE 13-8HZ (902'FNL & 2542'FWL, SEC.13)
Area	COLORADO	Well	VERDE 13-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-8HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (237 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	291.100	0.00	0.00	0.00	0.00	1717135.14	14547269.76	40°03'21.859°N	104°43'32.992°W	0.00	
26.00	0.000	291.100	26.00	0.00	0.00	0.00	1717135.14	14547269.76	40°03'21.859°N	104°43'32.992°W	0.00	
136.00	1.010	291.100	135.99	0.36	0.35	-0.90	1717134.23	14547270.11	40°03'21.862°N	104°43'33.004°W	0.92	FIRST SURFACE MWD+IFR1 SURVEY
167.00	0.660	284.680	166.99	0.51	0.49	-1.33	1717133.80	14547270.25	40°03'21.864°N	104°43'33.009°W	1.17	
199.00	0.480	262.450	198.99	0.55	0.52	-1.64	1717133.49	14547270.28	40°03'21.864°N	104°43'33.013°W	0.88	
231.00	0.660	223.950	230.99	0.40	0.37	-1.90	1717133.23	14547270.12	40°03'21.863°N	104°43'33.016°W	1.29	
262.00	0.790	217.620	261.99	0.11	0.07	-2.16	1717132.98	14547269.83	40°03'21.860°N	104°43'33.020°W	0.49	
294.00	0.970	208.040	293.98	-0.30	-0.34	-2.42	1717132.72	14547269.41	40°03'21.856°N	104°43'33.023°W	0.72	
325.00	1.050	210.330	324.98	-0.77	-0.82	-2.69	1717132.45	14547268.93	40°03'21.851°N	104°43'33.027°W	0.29	
357.00	1.140	208.660	356.97	-1.30	-1.35	-2.99	1717132.15	14547268.40	40°03'21.846°N	104°43'33.030°W	0.30	
388.00	1.360	213.140	387.96	-1.87	-1.93	-3.34	1717131.81	14547267.82	40°03'21.840°N	104°43'33.035°W	0.78	
420.00	2.240	226.320	419.95	-2.61	-2.68	-4.00	1717131.15	14547267.07	40°03'21.833°N	104°43'33.043°W	3.02	
451.00	2.680	224.040	450.92	-3.53	-3.62	-4.94	1717130.21	14547266.13	40°03'21.823°N	104°43'33.056°W	1.45	
483.00	3.250	225.970	482.88	-4.68	-4.79	-6.11	1717129.04	14547264.96	40°03'21.812°N	104°43'33.071°W	1.81	
514.00	4.170	226.590	513.81	-6.04	-6.17	-7.56	1717127.60	14547263.57	40°03'21.798°N	104°43'33.089°W	2.97	
546.00	4.880	226.590	545.71	-7.75	-7.91	-9.40	1717125.77	14547261.83	40°03'21.781°N	104°43'33.113°W	2.22	
578.00	5.980	229.930	577.57	-9.72	-9.91	-11.66	1717123.51	14547259.81	40°03'21.761°N	104°43'33.142°W	3.58	
610.00	7.030	231.680	609.36	-11.96	-12.20	-14.47	1717120.71	14547257.52	40°03'21.738°N	104°43'33.178°W	3.34	
642.00	7.730	234.230	641.10	-14.38	-14.67	-17.75	1717117.43	14547255.04	40°03'21.714°N	104°43'33.220°W	2.41	
673.00	8.310	234.580	671.79	-16.83	-17.19	-21.27	1717113.92	14547252.51	40°03'21.689°N	104°43'33.266°W	1.88	
705.00	8.700	236.250	703.44	-19.45	-19.88	-25.17	1717110.04	14547249.81	40°03'21.663°N	104°43'33.316°W	1.44	
769.00	9.230	235.550	766.66	-24.91	-25.47	-33.43	1717101.80	14547244.20	40°03'21.607°N	104°43'33.422°W	0.85	
800.00	9.580	235.810	797.24	-27.69	-28.32	-37.61	1717097.63	14547241.33	40°03'21.579°N	104°43'33.476°W	1.14	
832.00	10.590	237.310	828.75	-30.70	-31.41	-42.29	1717092.96	14547238.23	40°03'21.549°N	104°43'33.536°W	3.26	
864.00	11.430	236.870	860.16	-33.93	-34.73	-47.42	1717087.84	14547234.90	40°03'21.516°N	104°43'33.602°W	2.64	
896.00	12.220	237.220	891.48	-37.41	-38.30	-52.92	1717082.35	14547231.32	40°03'21.481°N	104°43'33.673°W	2.48	
927.00	13.270	237.840	921.71	-40.98	-41.97	-58.69	1717076.60	14547227.63	40°03'21.444°N	104°43'33.747°W	3.42	
959.00	13.540	237.660	952.84	-44.84	-45.93	-64.96	1717070.34	14547223.65	40°03'21.405°N	104°43'33.827°W	0.85	
991.00	13.010	239.860	983.99	-48.54	-49.74	-71.24	1717064.07	14547219.82	40°03'21.367°N	104°43'33.908°W	2.29	
1023.00	12.790	240.210	1015.18	-52.01	-53.31	-77.43	1717057.90	14547216.24	40°03'21.332°N	104°43'33.988°W	0.73	
1054.00	13.320	239.680	1045.38	-55.41	-56.81	-83.49	1717051.85	14547212.71	40°03'21.298°N	104°43'34.066°W	1.75	
1086.00	13.890	241.260	1076.48	-59.01	-60.52	-90.04	1717045.31	14547208.98	40°03'21.261°N	104°43'34.150°W	2.13	
1118.00	13.050	242.490	1107.60	-62.42	-64.04	-96.62	1717038.75	14547205.45	40°03'21.226°N	104°43'34.234°W	2.77	
1149.00	12.390	242.140	1137.84	-65.49	-67.21	-102.66	1717032.72	14547202.26	40°03'21.195°N	104°43'34.312°W	2.14	
1181.00	12.570	241.880	1169.08	-68.63	-70.45	-108.77	1717026.63	14547199.00	40°03'21.163°N	104°43'34.391°W	0.59	
1213.00	11.600	242.320	1200.37	-71.67	-73.59	-114.69	1717020.72	14547195.85	40°03'21.132°N	104°43'34.467°W	3.04	
1245.00	11.160	241.620	1231.74	-74.54	-76.56	-120.26	1717015.16	14547192.86	40°03'21.102°N	104°43'34.539°W	1.44	
1277.00	11.340	241.970	1263.13	-77.40	-79.51	-125.76	1717009.67	14547189.90	40°03'21.073°N	104°43'34.609°W	0.60	
1309.00	10.590	241.000	1294.54	-80.21	-82.41	-131.11	1717004.33	14547186.98	40°03'21.045°N	104°43'34.678°W	2.41	
1340.00	10.020	239.680	1325.04	-82.87	-85.15	-135.93	1716999.52	14547184.22	40°03'21.017°N	104°43'34.740°W	1.99	
1372.00	8.570	238.720	1356.62	-85.44	-87.80	-140.37	1716995.09	14547181.57	40°03'20.991°N	104°43'34.797°W	4.56	
1404.00	8.040	238.190	1388.29	-87.79	-90.21	-144.31	1716991.16	14547179.14	40°03'20.967°N	104°43'34.848°W	1.67	
1435.00	6.900	239.950	1419.02	-89.81	-92.29	-147.77	1716987.71	14547177.05	40°03'20.947°N	104°43'34.892°W	3.75	
1467.00	6.860	238.010	1450.79	-91.73	-94.26	-151.05	1716984.44	14547175.07	40°03'20.927°N	104°43'34.935°W	0.74	
1499.00	6.110	240.300	1482.59	-93.54	-96.12	-154.15	1716981.34	14547173.20	40°03'20.909°N	104°43'34.974°W	2.48	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#53 VERDE 13-8HZ (902'FNL & 2542'FWL, SEC.13)
Area	COLORADO	Well	VERDE 13-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-8HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (237 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
1530.00	5.580	237.750	1513.43	-95.11	-97.74	-156.86	1716978.64	14547171.57	40°03'20.893"N	104°43'35.009"W	1.90	
1562.00	4.480	242.140	1545.30	-96.49	-99.16	-159.28	1716976.22	14547170.15	40°03'20.879"N	104°43'35.040"W	3.64	
1594.00	3.870	245.390	1577.22	-97.48	-100.19	-161.37	1716974.14	14547169.11	40°03'20.869"N	104°43'35.067"W	2.04	
1625.00	3.030	244.780	1608.16	-98.24	-100.98	-163.06	1716972.45	14547168.32	40°03'20.861"N	104°43'35.089"W	2.71	
1657.00	2.460	232.210	1640.13	-99.00	-101.76	-164.37	1716971.15	14547167.54	40°03'20.853"N	104°43'35.106"W	2.58	
1689.00	1.360	230.010	1672.11	-99.65	-102.42	-165.20	1716970.32	14547166.87	40°03'20.847"N	104°43'35.116"W	3.44	
1721.00	0.830	206.810	1704.10	-100.10	-102.87	-165.60	1716969.92	14547166.42	40°03'20.842"N	104°43'35.122"W	2.13	
1752.00	0.530	126.220	1735.10	-100.38	-103.16	-165.58	1716969.94	14547166.13	40°03'20.840"N	104°43'35.121"W	2.93	
1784.00	0.920	104.770	1767.10	-100.54	-103.31	-165.21	1716970.31	14547165.98	40°03'20.838"N	104°43'35.117"W	1.46	
1816.00	1.320	91.590	1799.09	-100.63	-103.39	-164.60	1716970.92	14547165.91	40°03'20.837"N	104°43'35.109"W	1.48	
1855.00	1.320	91.590	1838.08	-100.67	-103.41	-163.70	1716971.82	14547165.89	40°03'20.837"N	104°43'35.097"W	0.00	LAST SURFACE MWD+IFR1 SURVEY
1929.00	1.110	62.580	1912.06	-100.38	-103.10	-162.21	1716973.31	14547166.20	40°03'20.840"N	104°43'35.078"W	0.87	FIRST BHGE MWD+IFR1+MSA SURVEY
2018.00	2.110	189.360	2001.05	-101.61	-104.32	-161.71	1716973.81	14547164.98	40°03'20.828"N	104°43'35.072"W	3.27	
2108.00	4.010	188.400	2090.91	-106.35	-109.07	-162.44	1716973.10	14547160.23	40°03'20.781"N	104°43'35.081"W	2.11	
2197.00	6.140	188.520	2179.56	-114.11	-116.86	-163.60	1716971.96	14547152.44	40°03'20.704"N	104°43'35.096"W	2.39	
2287.00	8.300	184.380	2268.84	-125.33	-128.10	-164.81	1716970.79	14547141.21	40°03'20.593"N	104°43'35.111"W	2.47	
2376.00	7.960	182.700	2356.95	-137.88	-140.66	-165.59	1716970.04	14547128.65	40°03'20.469"N	104°43'35.122"W	0.47	
2465.00	7.550	182.950	2445.13	-149.86	-152.65	-166.18	1716969.49	14547116.66	40°03'20.350"N	104°43'35.129"W	0.46	
2555.00	7.190	181.720	2534.39	-161.38	-164.19	-166.65	1716969.05	14547105.12	40°03'20.236"N	104°43'35.135"W	0.44	
2644.00	6.880	181.940	2622.72	-172.27	-175.08	-167.00	1716968.74	14547094.23	40°03'20.129"N	104°43'35.140"W	0.35	
2734.00	6.420	181.030	2712.11	-182.68	-185.50	-167.28	1716968.50	14547083.82	40°03'20.026"N	104°43'35.143"W	0.52	
2823.00	5.940	178.670	2800.60	-192.26	-195.08	-167.26	1716968.54	14547074.24	40°03'19.931"N	104°43'35.143"W	0.61	
2913.00	5.390	175.360	2890.16	-201.14	-203.95	-166.81	1716969.02	14547065.38	40°03'19.844"N	104°43'35.137"W	0.71	
3002.00	4.960	173.650	2978.79	-209.14	-211.94	-166.04	1716969.81	14547057.39	40°03'19.765"N	104°43'35.127"W	0.51	
3092.00	3.140	152.920	3068.57	-215.23	-218.00	-164.49	1716971.38	14547051.34	40°03'19.705"N	104°43'35.107"W	2.56	
3181.00	1.730	125.550	3157.49	-218.22	-220.95	-162.29	1716973.59	14547048.40	40°03'19.675"N	104°43'35.079"W	2.01	
3270.00	1.620	117.910	3246.45	-219.62	-222.32	-160.08	1716975.80	14547047.03	40°03'19.662"N	104°43'35.051"W	0.28	
3360.00	0.540	19.140	3336.44	-219.84	-222.52	-158.82	1716977.06	14547046.84	40°03'19.660"N	104°43'35.034"W	1.98	
3449.00	0.650	12.450	3425.43	-218.95	-221.63	-158.57	1716977.31	14547047.73	40°03'19.669"N	104°43'35.031"W	0.15	
3539.00	0.860	8.040	3515.43	-217.79	-220.46	-158.37	1716977.51	14547048.90	40°03'19.680"N	104°43'35.029"W	0.24	
3628.00	1.060	5.740	3604.41	-216.31	-218.98	-158.19	1716977.68	14547050.38	40°03'19.695"N	104°43'35.026"W	0.23	
3717.00	0.940	8.030	3693.40	-214.77	-217.44	-158.01	1716977.86	14547051.92	40°03'19.710"N	104°43'35.024"W	0.14	
3807.00	0.940	358.130	3783.39	-213.31	-215.97	-157.93	1716977.93	14547053.39	40°03'19.725"N	104°43'35.023"W	0.18	
3897.00	0.740	236.230	3873.38	-212.88	-215.56	-158.44	1716977.42	14547053.80	40°03'19.729"N	104°43'35.030"W	1.64	
3986.00	0.460	252.350	3962.38	-213.30	-215.98	-159.26	1716976.61	14547053.37	40°03'19.725"N	104°43'35.040"W	0.36	
4076.00	0.280	306.300	4052.38	-213.27	-215.96	-159.78	1716976.09	14547053.39	40°03'19.725"N	104°43'35.047"W	0.41	
4165.00	0.300	347.790	4141.38	-212.91	-215.61	-160.00	1716975.86	14547053.75	40°03'19.728"N	104°43'35.050"W	0.23	
4255.00	0.600	4.230	4231.37	-212.21	-214.91	-160.02	1716975.84	14547054.45	40°03'19.735"N	104°43'35.050"W	0.36	
4344.00	0.700	3.860	4320.37	-211.20	-213.90	-159.95	1716975.91	14547055.45	40°03'19.745"N	104°43'35.049"W	0.11	
4433.00	0.900	89.860	4409.36	-210.67	-213.35	-159.21	1716976.64	14547056.00	40°03'19.751"N	104°43'35.039"W	1.24	
4523.00	1.140	160.730	4499.35	-211.53	-214.20	-158.21	1716977.65	14547055.16	40°03'19.742"N	104°43'35.027"W	1.33	
4612.00	0.780	140.940	4588.34	-212.85	-215.50	-157.53	1716978.33	14547053.86	40°03'19.729"N	104°43'35.018"W	0.54	
4702.00	0.450	103.700	4678.33	-213.42	-216.06	-156.81	1716979.06	14547053.30	40°03'19.724"N	104°43'35.009"W	0.56	
4817.00	0.460	55.460	4793.33	-213.28	-215.91	-155.99	1716979.88	14547053.46	40°03'19.725"N	104°43'34.998"W	0.32	
4907.00	0.720	17.170	4883.32	-212.54	-215.16	-155.52	1716980.34	14547054.20	40°03'19.733"N	104°43'34.992"W	0.51	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#53 VERDE 13-8HZ (902'FNL & 2542'FWL, SEC.13)
Area	COLORADO	Well	VERDE 13-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-8HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (237 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
4996.00	0.600	300.530	4972.32	-211.76	-214.39	-155.76	1716980.10	14547054.97	40°03'19.740"N	104°43'34.995"W	0.93	
5086.00	0.700	342.480	5062.31	-210.99	-213.63	-156.33	1716979.53	14547055.73	40°03'19.748"N	104°43'35.002"W	0.53	
5175.00	0.110	261.990	5151.31	-210.48	-213.12	-156.58	1716979.28	14547056.24	40°03'19.753"N	104°43'35.006"W	0.78	
5265.00	0.650	149.880	5241.31	-210.94	-213.58	-156.41	1716979.45	14547055.79	40°03'19.748"N	104°43'35.003"W	0.78	
5355.00	1.060	158.490	5331.30	-212.16	-214.79	-155.85	1716980.01	14547054.57	40°03'19.736"N	104°43'34.996"W	0.48	
5444.00	1.050	150.500	5420.28	-213.65	-216.27	-155.14	1716980.72	14547053.10	40°03'19.722"N	104°43'34.987"W	0.17	
5534.00	1.370	205.010	5510.27	-215.34	-217.96	-155.19	1716980.68	14547051.41	40°03'19.705"N	104°43'34.988"W	1.27	
5623.00	1.230	209.460	5599.24	-217.12	-219.76	-156.11	1716979.76	14547049.61	40°03'19.687"N	104°43'35.000"W	0.19	
5713.00	1.010	205.700	5689.23	-218.66	-221.31	-156.93	1716978.95	14547048.05	40°03'19.672"N	104°43'35.010"W	0.26	
5802.00	0.850	208.860	5778.22	-219.94	-222.60	-157.59	1716978.29	14547046.77	40°03'19.659"N	104°43'35.019"W	0.19	
6071.00	0.830	190.020	6047.19	-223.58	-226.26	-158.89	1716977.00	14547043.10	40°03'19.623"N	104°43'35.035"W	0.10	
6160.00	0.590	133.060	6136.18	-224.53	-227.21	-158.67	1716977.23	14547042.15	40°03'19.614"N	104°43'35.032"W	0.80	
6250.00	0.770	15.430	6226.18	-224.27	-226.94	-158.17	1716977.73	14547042.42	40°03'19.616"N	104°43'35.026"W	1.30	
6339.00	0.710	24.860	6315.17	-223.20	-225.87	-157.78	1716978.12	14547043.50	40°03'19.627"N	104°43'35.021"W	0.15	
6429.00	2.020	349.110	6405.14	-221.14	-223.80	-157.84	1716978.04	14547045.56	40°03'19.647"N	104°43'35.022"W	1.67	
6518.00	1.710	353.510	6494.10	-218.27	-220.94	-158.29	1716977.59	14547048.42	40°03'19.676"N	104°43'35.028"W	0.38	
6564.00†	3.740	343.990	6540.04	-216.14	-218.82	-158.78	1716977.09	14547050.54	40°03'19.697"N	104°43'35.034"W	4.51	KOP
6608.00	5.710	341.270	6583.89	-212.67	-215.37	-159.88	1716975.98	14547053.99	40°03'19.731"N	104°43'35.048"W	4.51	
6698.00	17.070	357.010	6671.99	-195.15	-197.88	-162.01	1716973.80	14547071.46	40°03'19.904"N	104°43'35.076"W	12.97	
6787.00	21.850	357.400	6755.88	-165.52	-168.27	-163.45	1716972.27	14547101.05	40°03'20.196"N	104°43'35.094"W	5.37	
6877.00	26.450	356.830	6837.98	-128.73	-131.50	-165.32	1716970.29	14547137.80	40°03'20.559"N	104°43'35.118"W	5.12	
6966.00	29.860	358.220	6916.44	-86.76	-89.56	-167.10	1716968.38	14547179.72	40°03'20.974"N	104°43'35.141"W	3.90	
7056.00	35.650	0.950	6992.10	-38.10	-40.89	-167.36	1716967.97	14547228.37	40°03'21.455"N	104°43'35.144"W	6.64	
7146.00	41.700	5.190	7062.35	17.94	15.20	-164.22	1716970.94	14547284.45	40°03'22.009"N	104°43'35.104"W	7.34	
7206.00†	47.127	5.070	7105.19	59.68	57.01	-160.46	1716974.56	14547326.25	40°03'22.422"N	104°43'35.056"W	9.05	ENTER LANDBOX (845'FNL & 2380'FWL,SEC.13) 40.0562284 -104.7264043
7235.00	49.750	5.020	7124.43	81.26	78.62	-158.56	1716976.40	14547347.86	40°03'22.636"N	104°43'35.031"W	9.05	
7324.00	51.870	6.430	7180.66	149.76	147.25	-151.66	1716983.08	14547416.48	40°03'23.314"N	104°43'34.942"W	2.68	
7414.00	60.800	2.540	7230.52	224.24	221.84	-145.95	1716988.57	14547491.06	40°03'24.051"N	104°43'34.869"W	10.55	
7504.00	70.280	2.080	7267.74	305.94	303.60	-142.66	1716991.60	14547572.80	40°03'24.859"N	104°43'34.827"W	10.54	
7593.00	77.950	1.040	7292.08	391.39	389.11	-140.35	1716993.65	14547658.28	40°03'25.704"N	104°43'34.797"W	8.69	
7683.00	88.060	359.940	7303.03	480.58	478.32	-139.59	1716994.13	14547747.46	40°03'26.586"N	104°43'34.787"W	11.30	
7702.00†	88.607	359.795	7303.58	499.57	497.31	-139.64	1716994.02	14547766.44	40°03'26.774"N	104°43'34.788"W	2.98	LANDING (405'FNL & 2402'FWL,SEC.13) 40.0574371 -104.7263299
7772.00	90.620	359.260	7304.05	569.56	567.30	-140.21	1716993.23	14547836.40	40°03'27.465"N	104°43'34.795"W	2.98	
7861.00	90.490	359.000	7303.19	658.56	656.29	-141.56	1716991.61	14547925.35	40°03'28.345"N	104°43'34.813"W	0.33	
7951.00	90.860	358.740	7302.13	748.55	746.26	-143.34	1716989.56	14548015.28	40°03'29.234"N	104°43'34.835"W	0.50	
8041.00	90.650	358.350	7300.94	838.54	836.23	-145.62	1716986.99	14548105.20	40°03'30.123"N	104°43'34.865"W	0.49	
8130.00	90.520	357.790	7300.04	927.52	925.17	-148.62	1716983.72	14548194.10	40°03'31.002"N	104°43'34.903"W	0.65	
8220.00	90.680	357.920	7299.09	1017.50	1015.10	-151.99	1716980.08	14548283.99	40°03'31.890"N	104°43'34.947"W	0.23	
8309.00	90.550	359.300	7298.14	1106.49	1104.07	-154.15	1716977.65	14548372.91	40°03'32.770"N	104°43'34.974"W	1.56	
8398.00	90.620	359.010	7297.23	1195.48	1193.05	-155.46	1716976.06	14548461.86	40°03'33.649"N	104°43'34.991"W	0.34	
8484.00†	88.116	359.727	7298.18	1281.47	1279.04	-156.41	1716974.85	14548547.80	40°03'34.499"N	104°43'35.004"W	3.03	EXIT RADIUS HEEL (377'FSL & 2385'FWL,SEC.12) 40.0595830 -104.7263899
8488.00	88.000	359.760	7298.31	1285.46	1283.03	-156.43	1716974.82	14548551.80	40°03'34.538"N	104°43'35.004"W	3.03	
8577.00	87.980	359.720	7301.43	1374.40	1371.98	-156.83	1716974.14	14548640.71	40°03'35.417"N	104°43'35.009"W	0.05	
8667.00	88.060	359.830	7304.54	1464.34	1461.92	-157.18	1716973.51	14548730.61	40°03'36.306"N	104°43'35.014"W	0.15	
8757.00	88.330	359.530	7307.38	1554.29	1551.88	-157.69	1716972.73	14548820.53	40°03'37.195"N	104°43'35.020"W	0.45	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#53 VERDE 13-8HZ (902'FNL & 2542'FWL, SEC.13)
Area	COLORADO	Well	VERDE 13-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-8HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (237 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
8846.00	88.610	359.350	7309.76	1643.26	1640.84	-158.56	1716971.59	14548909.46	40°03'38.074"N	104°43'35.031"W	0.37	
8936.00	88.680	359.110	7311.88	1733.23	1730.81	-159.77	1716970.11	14548999.38	40°03'38.963"N	104°43'35.047"W	0.28	
9025.00	88.710	358.790	7313.91	1822.21	1819.77	-161.40	1716968.20	14549088.30	40°03'39.842"N	104°43'35.068"W	0.36	
9115.00	88.610	358.560	7316.02	1912.18	1909.72	-163.48	1716965.85	14549178.21	40°03'40.731"N	104°43'35.094"W	0.28	
9204.00	90.090	1.090	7317.03	2001.16	1998.71	-163.75	1716965.30	14549267.16	40°03'41.611"N	104°43'35.098"W	3.29	
9294.00	90.030	0.550	7316.93	2091.11	2088.70	-162.46	1716966.31	14549357.12	40°03'42.500"N	104°43'35.081"W	0.60	
9473.00	89.450	0.400	7317.74	2270.06	2267.69	-160.98	1716967.24	14549536.04	40°03'44.269"N	104°43'35.062"W	0.33	
9562.00	90.920	0.730	7317.46	2359.02	2356.68	-160.10	1716967.85	14549625.00	40°03'45.148"N	104°43'35.051"W	1.69	
9652.00	90.680	0.640	7316.20	2448.98	2446.66	-159.02	1716968.64	14549714.96	40°03'46.037"N	104°43'35.037"W	0.28	
9741.00	90.490	0.510	7315.29	2537.94	2535.65	-158.13	1716969.26	14549803.91	40°03'46.917"N	104°43'35.026"W	0.26	
9831.00	90.550	0.300	7314.47	2627.91	2625.65	-157.49	1716969.62	14549893.87	40°03'47.806"N	104°43'35.018"W	0.24	
9920.00	90.800	0.050	7313.43	2716.89	2714.64	-157.22	1716969.62	14549982.83	40°03'48.686"N	104°43'35.014"W	0.40	
10189.00	90.220	0.220	7311.03	2985.83	2983.63	-156.59	1716969.43	14550251.71	40°03'51.344"N	104°43'35.006"W	0.22	
10278.00	89.690	359.980	7311.10	3074.81	3072.63	-156.43	1716969.31	14550340.68	40°03'52.223"N	104°43'35.004"W	0.65	
10368.00	89.570	0.160	7311.68	3164.79	3162.63	-156.32	1716969.14	14550430.64	40°03'53.113"N	104°43'35.003"W	0.24	
10457.00	89.170	0.210	7312.66	3253.77	3251.62	-156.04	1716969.15	14550519.60	40°03'53.992"N	104°43'34.999"W	0.45	
10546.00	89.080	1.540	7314.02	3342.71	3340.60	-154.68	1716970.24	14550608.55	40°03'54.872"N	104°43'34.981"W	1.50	
10636.00	91.290	0.900	7313.73	3432.64	3430.57	-152.76	1716971.88	14550698.49	40°03'55.761"N	104°43'34.957"W	2.56	
10725.00	91.260	0.920	7311.75	3521.57	3519.54	-151.35	1716973.01	14550787.42	40°03'56.640"N	104°43'34.939"W	0.04	
10815.00	90.710	0.950	7310.20	3611.51	3609.51	-149.88	1716974.21	14550877.37	40°03'57.529"N	104°43'34.920"W	0.61	
10904.00	91.170	0.990	7308.74	3700.45	3698.49	-148.37	1716975.44	14550966.31	40°03'58.408"N	104°43'34.900"W	0.52	
10994.00	90.680	359.750	7307.29	3790.41	3788.47	-147.79	1716975.74	14551056.26	40°03'59.297"N	104°43'34.893"W	1.48	
11083.00	91.320	0.030	7305.74	3879.39	3877.46	-147.96	1716975.30	14551145.21	40°04'00.177"N	104°43'34.895"W	0.78	
11173.00	90.620	359.160	7304.21	3969.37	3967.44	-148.60	1716974.38	14551235.16	40°04'01.066"N	104°43'34.903"W	1.24	
11262.00	91.540	0.420	7302.53	4058.34	4056.42	-148.92	1716973.78	14551324.10	40°04'01.945"N	104°43'34.907"W	1.75	
11352.00	91.540	0.510	7300.12	4148.28	4146.39	-148.19	1716974.24	14551414.03	40°04'02.834"N	104°43'34.898"W	0.10	
11441.00	91.170	0.490	7298.01	4237.23	4235.36	-147.42	1716974.74	14551502.97	40°04'03.714"N	104°43'34.888"W	0.42	
11531.00	90.620	0.550	7296.61	4327.19	4325.34	-146.60	1716975.28	14551592.92	40°04'04.603"N	104°43'34.878"W	0.61	
11620.00	90.150	0.630	7296.01	4416.15	4414.34	-145.68	1716975.92	14551681.88	40°04'05.482"N	104°43'34.866"W	0.54	
11710.00	89.630	0.620	7296.18	4506.12	4504.33	-144.70	1716976.62	14551771.84	40°04'06.372"N	104°43'34.853"W	0.58	
11799.00	89.380	0.160	7296.95	4595.09	4593.32	-144.10	1716976.96	14551860.80	40°04'07.251"N	104°43'34.845"W	0.59	
11977.00	88.240	359.700	7300.65	4773.03	4771.28	-144.31	1716976.19	14552038.69	40°04'09.010"N	104°43'34.848"W	0.69	
12067.00	87.970	359.810	7303.62	4862.97	4861.23	-144.70	1716975.53	14552128.60	40°04'09.899"N	104°43'34.853"W	0.32	
12160.00	88.240	359.950	7306.70	4955.91	4954.18	-144.89	1716975.05	14552221.51	40°04'10.817"N	104°43'34.856"W	0.33	
12254.00	88.860	0.070	7309.08	5049.86	5048.15	-144.88	1716974.78	14552315.44	40°04'11.746"N	104°43'34.855"W	0.67	
12346.00	88.770	0.310	7310.98	5141.83	5140.13	-144.57	1716974.80	14552407.39	40°04'12.655"N	104°43'34.852"W	0.28	
12437.00	88.950	0.410	7312.79	5232.78	5231.11	-144.00	1716975.09	14552498.33	40°04'13.554"N	104°43'34.844"W	0.23	
12529.00	88.770	0.580	7314.62	5324.74	5323.09	-143.21	1716975.60	14552590.28	40°04'14.463"N	104°43'34.834"W	0.27	
12621.00	90.680	359.590	7315.06	5416.72	5415.08	-143.07	1716975.45	14552682.23	40°04'15.372"N	104°43'34.832"W	2.34	
12711.00	90.770	359.370	7313.92	5506.71	5505.07	-143.89	1716974.36	14552772.19	40°04'16.261"N	104°43'34.843"W	0.26	
12803.00	90.550	359.050	7312.86	5598.70	5597.06	-145.15	1716972.81	14552864.13	40°04'17.170"N	104°43'34.859"W	0.42	
12895.00	90.800	359.860	7311.78	5690.69	5689.04	-146.03	1716971.65	14552956.08	40°04'18.079"N	104°43'34.870"W	0.92	
13078.00	90.800	358.880	7309.22	5873.67	5872.01	-148.04	1716969.08	14553138.97	40°04'19.887"N	104°43'34.896"W	0.54	
13168.00	90.000	358.480	7308.59	5963.66	5961.99	-150.11	1716966.73	14553228.90	40°04'20.777"N	104°43'34.923"W	0.99	
13257.00	89.510	358.310	7308.98	6052.65	6050.95	-152.61	1716963.96	14553317.82	40°04'21.656"N	104°43'34.955"W	0.58	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#53 VERDE 13-8HZ (902'FNL & 2542'FWL, SEC.13)
Area	COLORADO	Well	VERDE 13-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-8HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (237 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
13346.00	89.080	358.410	7310.07	6141.64	6139.91	-155.15	1716961.14	14553406.73	40°04'22.535"N	104°43'34.988"W	0.50	
13436.00	88.830	358.450	7311.71	6231.62	6229.86	-157.62	1716958.40	14553496.64	40°04'23.424"N	104°43'35.019"W	0.28	
13525.00	88.460	358.250	7313.82	6320.59	6318.80	-160.18	1716955.57	14553585.54	40°04'24.303"N	104°43'35.052"W	0.47	
13614.00	89.350	358.960	7315.52	6409.57	6407.75	-162.35	1716953.13	14553674.45	40°04'25.182"N	104°43'35.080"W	1.28	
13703.00	90.770	359.890	7315.42	6498.56	6496.74	-163.24	1716951.96	14553763.40	40°04'26.061"N	104°43'35.092"W	1.91	
13793.00	89.780	359.130	7314.99	6588.56	6586.74	-164.01	1716950.91	14553853.36	40°04'26.951"N	104°43'35.102"W	1.39	
13882.00	90.770	359.290	7314.56	6677.56	6675.73	-165.24	1716949.41	14553942.31	40°04'27.830"N	104°43'35.118"W	1.13	
13971.00	89.940	359.260	7314.01	6766.55	6764.72	-166.36	1716948.01	14554031.26	40°04'28.709"N	104°43'35.132"W	0.93	
14060.00	90.340	359.050	7313.80	6855.55	6853.71	-167.68	1716946.43	14554120.21	40°04'29.589"N	104°43'35.149"W	0.51	
14150.00	90.370	359.090	7313.24	6945.55	6943.69	-169.14	1716944.69	14554210.16	40°04'30.478"N	104°43'35.168"W	0.06	
14328.00	91.200	357.220	7310.80	7123.50	7121.58	-174.87	1716938.42	14554387.95	40°04'32.236"N	104°43'35.241"W	1.15	
14417.00	91.170	357.780	7308.96	7212.45	7210.47	-178.75	1716934.26	14554476.80	40°04'33.114"N	104°43'35.291"W	0.63	
14506.00	91.260	357.760	7307.07	7301.41	7299.38	-182.21	1716930.53	14554565.66	40°04'33.993"N	104°43'35.336"W	0.10	
14685.00	91.510	357.690	7302.75	7480.31	7478.19	-189.31	1716922.88	14554744.38	40°04'35.760"N	104°43'35.427"W	0.15	
14774.00	92.090	359.790	7299.95	7569.26	7567.12	-191.27	1716920.65	14554833.26	40°04'36.639"N	104°43'35.452"W	2.45	
14863.00	92.160	359.510	7296.65	7658.19	7656.06	-191.81	1716919.83	14554922.16	40°04'37.518"N	104°43'35.459"W	0.32	
14952.00	92.310	0.000	7293.18	7747.12	7744.99	-192.19	1716919.18	14555011.06	40°04'38.397"N	104°43'35.464"W	0.58	
15042.00	91.790	1.670	7289.96	7837.01	7834.92	-190.88	1716920.21	14555100.96	40°04'39.285"N	104°43'35.447"W	1.94	
15131.00	91.540	1.490	7287.37	7925.89	7923.85	-188.43	1716922.39	14555189.86	40°04'40.164"N	104°43'35.416"W	0.35	
15221.00	91.290	1.450	7285.15	8015.78	8013.79	-186.12	1716924.42	14555279.77	40°04'41.053"N	104°43'35.386"W	0.28	
15310.00	91.110	0.850	7283.29	8104.70	8102.75	-184.34	1716925.93	14555368.70	40°04'41.932"N	104°43'35.363"W	0.70	
15399.00	90.740	0.620	7281.85	8193.65	8191.73	-183.19	1716926.80	14555457.65	40°04'42.811"N	104°43'35.349"W	0.49	
15489.00	91.140	0.170	7280.37	8283.61	8281.72	-182.57	1716927.14	14555547.60	40°04'43.701"N	104°43'35.341"W	0.67	
15578.00	91.020	359.750	7278.70	8372.58	8370.70	-182.64	1716926.80	14555636.55	40°04'44.580"N	104°43'35.341"W	0.49	
15668.00	91.110	359.640	7277.02	8462.56	8460.68	-183.12	1716926.05	14555726.50	40°04'45.469"N	104°43'35.348"W	0.16	
15757.00	89.970	359.880	7276.18	8551.55	8549.68	-183.49	1716925.40	14555815.45	40°04'46.349"N	104°43'35.352"W	1.31	
15936.00	89.880	359.490	7276.42	8730.54	8728.67	-184.47	1716923.87	14555994.38	40°04'48.118"N	104°43'35.365"W	0.22	
16026.00	89.350	359.010	7277.02	8820.53	8818.66	-185.65	1716922.41	14556084.33	40°04'49.007"N	104°43'35.380"W	0.79	
16116.00	89.170	359.120	7278.19	8910.53	8908.65	-187.12	1716920.67	14556174.27	40°04'49.896"N	104°43'35.399"W	0.23	
16205.00	89.320	358.900	7279.36	8999.52	8997.62	-188.66	1716918.86	14556263.20	40°04'50.775"N	104°43'35.419"W	0.30	
16294.00	89.230	359.300	7280.48	9088.51	9086.61	-190.05	1716917.19	14556352.15	40°04'51.655"N	104°43'35.437"W	0.46	
16384.00	88.890	359.340	7281.96	9178.50	9176.59	-191.12	1716915.84	14556442.09	40°04'52.544"N	104°43'35.451"W	0.38	
16473.00	89.100	358.000	7283.52	9267.48	9265.55	-193.19	1716913.50	14556531.01	40°04'53.423"N	104°43'35.477"W	1.52	
16562.00	90.280	0.400	7284.00	9356.47	9354.53	-194.43	1716911.99	14556619.95	40°04'54.302"N	104°43'35.493"W	3.00	
16652.00	90.340	0.510	7283.52	9446.44	9444.53	-193.72	1716912.42	14556709.91	40°04'55.192"N	104°43'35.484"W	0.14	
16741.00	90.680	0.790	7282.72	9535.40	9533.52	-192.71	1716913.16	14556798.87	40°04'56.071"N	104°43'35.471"W	0.49	
16831.00	90.280	0.490	7281.97	9625.37	9623.51	-191.70	1716913.89	14556888.83	40°04'56.960"N	104°43'35.458"W	0.56	
16920.00	90.310	0.480	7281.51	9714.34	9712.50	-190.95	1716914.37	14556977.79	40°04'57.840"N	104°43'35.448"W	0.04	
17009.00	90.060	0.360	7281.22	9803.31	9801.50	-190.29	1716914.75	14557066.75	40°04'58.719"N	104°43'35.440"W	0.31	
17099.00	89.910	359.970	7281.25	9893.29	9891.50	-190.04	1716914.73	14557156.72	40°04'59.609"N	104°43'35.437"W	0.46	
17188.00	90.150	359.590	7281.20	9982.28	9980.50	-190.38	1716914.11	14557245.68	40°05'00.488"N	104°43'35.441"W	0.50	
17277.00	89.630	359.180	7281.37	10071.28	10069.49	-191.33	1716912.88	14557334.63	40°05'01.368"N	104°43'35.453"W	0.74	
17367.00	90.030	358.930	7281.64	10161.28	10159.48	-192.82	1716911.12	14557424.58	40°05'02.257"N	104°43'35.473"W	0.52	
17456.00	89.690	358.760	7281.86	10250.28	10248.46	-194.61	1716909.06	14557513.52	40°05'03.136"N	104°43'35.496"W	0.43	
17546.00	91.420	0.340	7280.99	10340.27	10338.45	-195.32	1716908.07	14557603.47	40°05'04.026"N	104°43'35.505"W	2.60	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#53 VERDE 13-8HZ (902'FNL & 2542'FWL,SEC.13)
Area	COLORADO	Well	VERDE 13-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-8HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (237 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
17724.00	91.850	0.110	7275.91	10518.16	10516.37	-194.62	1716908.22	14557781.33	40°05'05.784"N	104°43'35.496"W	0.27	
17814.00	90.680	1.500	7273.92	10608.09	10606.34	-193.35	1716909.21	14557871.26	40°05'06.673"N	104°43'35.480"W	2.02	
17903.00	91.170	1.330	7272.48	10697.00	10695.30	-191.16	1716911.13	14557960.19	40°05'07.552"N	104°43'35.451"W	0.58	
17992.00	91.170	0.900	7270.67	10785.92	10784.26	-189.43	1716912.59	14558049.13	40°05'08.431"N	104°43'35.429"W	0.48	
18082.00	91.390	0.730	7268.65	10875.86	10874.23	-188.15	1716913.59	14558139.06	40°05'09.320"N	104°43'35.413"W	0.31	
18171.00	91.480	0.580	7266.43	10964.79	10963.20	-187.13	1716914.33	14558228.00	40°05'10.200"N	104°43'35.399"W	0.20	
18260.00	91.720	0.140	7263.94	11053.74	11052.16	-186.57	1716914.62	14558316.93	40°05'11.079"N	104°43'35.392"W	0.56	
18278.00†	91.776	0.058	7263.39	11071.72	11070.15	-186.54	1716914.59	14558334.91	40°05'11.256"N	104°43'35.392"W	0.55	ENTER RADIUS TOE (349'FNL & 2331'FWL,SEC.01) 40.0864601 -104.7264977
18350.00	92.000	359.730	7261.02	11143.68	11142.11	-186.67	1716914.24	14558406.84	40°05'11.968"N	104°43'35.394"W	0.55	
18439.00	92.220	359.400	7257.74	11232.61	11231.05	-187.35	1716913.29	14558495.74	40°05'12.846"N	104°43'35.402"W	0.45	
18527.00	92.400	358.860	7254.20	11320.54	11318.97	-188.68	1716911.69	14558583.62	40°05'13.715"N	104°43'35.419"W	0.65	LAST BHGE MWD+IFR1+MSA SURVEY
18573.00	92.400	358.860	7252.27	11366.50	11364.92	-189.60	1716910.63	14558629.55	40°05'14.169"N	104°43'35.431"W	0.00	PTB (54'FNL & 2329'FWL,SEC.01) 40.0872693 -104.7265087

HOLE & CASING SECTIONS - Ref Wellbore: VERDE 13-8HZ AWB Ref Wellpath: VERDE 13-8HZ 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	1856.00	1830.00	26.00	1839.08	0.00	0.00	-103.41	-163.68

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
VERDE 13-8HZ BHL REV-1(53'FNL & 2347'FWL,SEC.01)	7306.00	11366.28	-172.34	1716927.88	14558630.96	40°05'14.183"N	104°43'35.209"W	point
VERDE 13-8HZ HEEL REV-1(370'FNL & 2376'FWL,SEC.13)	7306.00	531.16	-164.85	1716968.72	14547800.20	40°03'27.108"N	104°43'35.112"W	point
VERDE 13-8HZ HEEL REV-2(370'FNL & 2396'FWL,SEC.13)	7306.00	531.16	-144.85	1716988.71	14547800.26	40°03'27.108"N	104°43'34.855"W	point
VERDE 13-8HZ LANDBOX	7306.00	0.00	0.00	1717135.14	14547269.76	40°03'21.859"N	104°43'32.992"W	polygon
VERDE 13-8HZ RADIUS 1	7306.00	11420.07	109.66	1717209.60	14558685.60	40°05'14.714"N	104°43'31.581"W	polygon
VERDE 13-8HZ RADIUS 2	7306.00	902.97	106.79	1717239.10	14548172.70	40°03'30.782"N	104°43'31.619"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: VERDE 13-8HZ AWB Ref Wellpath: VERDE 13-8HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	1855.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <136 - 1855>	VERDE 13-8HZ AWB
1855.00	18527.00	Custom APC ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1929 - 18527>	VERDE 13-8HZ AWB
18527.00	18573.00	Blind Drilling (std)	Projection to bit	VERDE 13-8HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#53 VERDE 13-8HZ (902'FNL & 2542'FWL,SEC.13)
Area	COLORADO	Well	VERDE 13-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	VERDE 13-8HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
136.00	1.010	291.100	135.99	FIRST SURFACE MWD+IFR1 SURVEY
1855.00	1.320	91.590	1838.08	LAST SURFACE MWD+IFR1 SURVEY
1929.00	1.110	62.580	1912.06	FIRST BHGE MWD+IFR1+MSA SURVEY
6564.00	3.740	343.990	6540.04	KOP
7206.00	47.127	5.070	7105.19	ENTER LANDBOX (845'FNL & 2380'FWL,SEC.13) 40.0562284 -104.7264043
7702.00	88.607	359.795	7303.58	LANDING (405'FNL & 2402'FWL,SEC.13) 40.0574371 -104.7263299
8484.00	88.116	359.727	7298.18	EXIT RADIUS HEEL (377'FSL & 2385'FWL,SEC.12) 40.0595830 -104.7263899
18278.00	91.776	0.058	7263.39	ENTER RADIUS TOE (349'FNL & 2331'FWL,SEC.01) 40.0864601 -104.7264977
18527.00	92.400	358.860	7254.20	LAST BHGE MWD+IFR1+MSA SURVEY
18573.00	92.400	358.860	7252.27	PTB (54'FNL & 2329'FWL,SEC.01) 40.0872693 -104.7265087