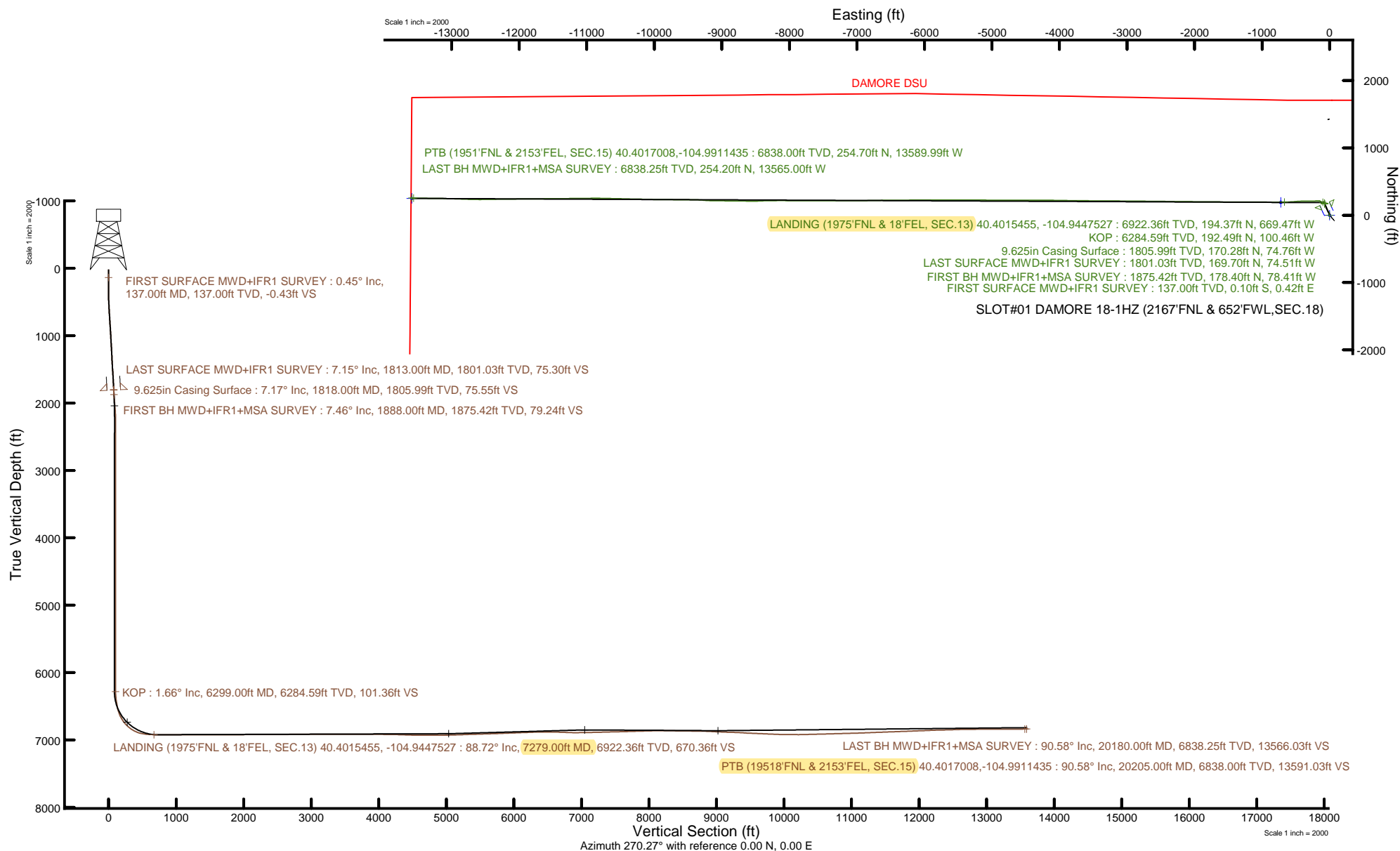


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#01 DAMORE 18-1HZ (2167'FNL & 652'FWL, SEC.18)
Field: WELD COUNTY (UTM/TRUE NORTH) Well: DAMORE 18-1HZ
Facility: SEC.18-T5N-R67W Wellbore: DAMORE 18-1HZ PWB

Plot reference wellpath is DAMORE 18-1HZ PWP Rev-B.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to PD564 (26) (RT)	North Reference: True north
Reference wellpath measured depths are referenced to PD564 (26) (RT)	Scale: True distance
PD564 (26) (RT) to Mean Sea Level: 4948 feet	Coordinates are in feet referenced to Slot
Mean Sea Level to Mud line (At Slot: SLOT#01 DAMORE 18-1HZ (2167'FNL & 652'FWL, SEC.18)): 0 feet	Depths are in feet
Offset wellpath MDs are referenced to each path's default MD datum	Created by: ragbyos on 2020-03-24, Database: WellArchitectDB



Actual Wellpath Report

DAMORE 18-1HZ AWP

Page 1 of 9

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-1HZ AWB
Slot	SLOT#01 DAMORE 18-1HZ (2167'FNL & 652'FWL,SEC.18)		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 6.0
North Reference	True	User	Ragbyos
Scale	0.999600	Report Generated	3/25/2020 at 9:18:39 AM
Convergence at slot	0.04° East	Database	WellArchitectDB

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-0.18	-0.03	1656467.04	14672768.45	40.4010120°	-104.9423490°
Facility Reference Pt			1656467.07	14672768.64	40.4010125°	-104.9423489°
Field Reference Pt			1698235.31	14552047.82	40.0693333°	-104.7933333°

WELLPATH DATUM

Calculation method	Minimum curvature	PD564 (26') (RT) to Facility Vertical Datum	4948.00ft
Horizontal Reference Pt	Slot	PD564 (26') (RT) to Mean Sea Level	4948.00ft
Vertical Reference Pt	PD564 (26') (RT)	PD564 (26') (RT) to Mud Line at Slot (SLOT#01 DAMORE 18-1HZ (2167'FNL & 652'FWL,SEC.18))	4948.00ft
MD Reference Pt	PD564 (26') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	270.27°

Actual Wellpath Report

DAMORE 18-1HZ AWP

Page 2 of 9

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-1HZ AWB
Slot	SLOT#01 DAMORE 18-1HZ (2167'FNL & 652'FWL,SEC.18)		

WELLPATH DATA (227 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	103.000	0.00	0.00	0.00	0.00	1656467.04	14672768.45	40.4010120	-104.9423490	0.00	
26.00	0.000	103.000	26.00	0.00	0.00	0.00	1656467.04	14672768.45	40.4010120	-104.9423490	0.00	
137.00	0.450	103.000	137.00	-0.43	-0.10	0.42	1656467.47	14672768.36	40.4010117	-104.9423475	0.41	FIRST SURFACE MWD+IFR1 SURVEY
232.00	0.710	42.700	231.99	-1.19	0.25	1.19	1656468.23	14672768.71	40.4010127	-104.9423447	0.66	
327.00	1.680	359.420	326.97	-1.56	2.08	1.57	1656468.61	14672770.53	40.4010177	-104.9423434	1.33	
422.00	4.130	346.070	421.85	-0.70	6.79	0.73	1656467.77	14672775.24	40.4010306	-104.9423464	2.66	
517.00	6.000	333.370	516.47	2.38	14.55	-2.31	1656464.72	14672783.00	40.4010519	-104.9423573	2.28	
612.00	7.030	333.800	610.86	7.22	24.20	-7.11	1656459.92	14672792.64	40.4010784	-104.9423745	1.09	
707.00	7.310	329.190	705.12	12.93	34.61	-12.77	1656454.26	14672803.04	40.4011070	-104.9423948	0.67	
802.00	7.010	331.200	799.38	18.87	44.88	-18.66	1656448.36	14672813.31	40.4011352	-104.9424160	0.41	
898.00	7.970	334.000	894.56	24.66	56.00	-24.40	1656442.62	14672824.41	40.4011657	-104.9424366	1.07	
993.00	8.130	335.660	988.62	30.37	68.04	-30.05	1656436.96	14672836.44	40.4011988	-104.9424569	0.30	
1088.00	7.050	332.280	1082.79	35.90	79.32	-35.53	1656431.47	14672847.72	40.4012297	-104.9424766	1.23	
1183.00	7.490	335.880	1177.02	41.19	90.13	-40.78	1656426.22	14672858.52	40.4012594	-104.9424954	0.67	
1278.00	8.090	342.590	1271.15	45.78	102.16	-45.31	1656421.69	14672870.54	40.4012924	-104.9425117	1.15	
1372.00	7.580	338.330	1364.27	50.10	114.23	-49.57	1656417.41	14672882.61	40.4013256	-104.9425270	0.82	
1467.00	7.750	331.920	1458.42	55.49	125.71	-54.90	1656412.08	14672894.08	40.4013571	-104.9425461	0.92	
1561.00	8.380	335.350	1551.49	61.38	137.53	-60.74	1656406.23	14672905.89	40.4013895	-104.9425671	0.84	
1657.00	8.930	336.900	1646.40	67.28	150.74	-66.58	1656400.39	14672919.09	40.4014258	-104.9425881	0.62	
1752.00	6.910	337.680	1740.49	72.40	162.81	-71.65	1656395.32	14672931.15	40.4014589	-104.9426063	2.13	
1813.00	7.150	337.190	1801.03	75.30	169.70	-74.51	1656392.45	14672938.04	40.4014778	-104.9426165	0.41	LAST SURFACE MWD+IFR1 SURVEY
1888.00	7.460	334.620	1875.42	79.24	178.40	-78.41	1656388.55	14672946.73	40.4015017	-104.9426305	0.60	FIRST BH MWD+IFR1+MSA SURVEY
1977.00	7.030	325.780	1963.71	84.82	188.13	-83.95	1656383.00	14672956.45	40.4015284	-104.9426504	1.34	
2067.00	6.580	304.650	2053.09	92.20	195.61	-91.29	1656375.66	14672963.93	40.4015489	-104.9426768	2.81	
2156.00	3.950	267.890	2141.73	99.47	198.40	-98.55	1656368.40	14672966.71	40.4015566	-104.9427028	4.66	
2246.00	1.200	189.060	2231.65	102.71	197.36	-101.80	1656365.16	14672965.66	40.4015537	-104.9427145	4.33	
2335.00	0.230	255.590	2320.65	103.03	196.39	-102.12	1656364.84	14672964.70	40.4015511	-104.9427157	1.27	
2425.00	0.130	310.670	2410.64	103.28	196.41	-102.37	1656364.59	14672964.72	40.4015511	-104.9427166	0.21	
2514.00	0.150	28.960	2499.64	103.30	196.58	-102.39	1656364.56	14672964.89	40.4015516	-104.9427166	0.20	
2603.00	0.650	56.130	2588.64	102.83	196.96	-101.92	1656365.04	14672965.27	40.4015526	-104.9427149	0.59	
2692.00	0.850	190.220	2677.64	102.53	196.60	-101.61	1656365.34	14672964.90	40.4015516	-104.9427138	1.55	
2782.00	0.350	310.060	2767.64	102.85	196.12	-101.94	1656365.01	14672964.42	40.4015503	-104.9427150	1.19	
2872.00	0.120	326.850	2857.63	103.12	196.37	-102.20	1656364.75	14672964.68	40.4015510	-104.9427160	0.26	
2961.00	0.000	335.910	2946.63	103.17	196.45	-102.26	1656364.70	14672964.76	40.4015512	-104.9427161	0.13	
3050.00	0.030	199.850	3035.63	103.17	196.43	-102.26	1656364.69	14672964.74	40.4015512	-104.9427162	0.03	
3140.00	0.170	349.390	3125.63	103.21	196.54	-102.30	1656364.66	14672964.85	40.4015515	-104.9427163	0.22	
3229.00	0.320	149.820	3214.63	103.11	196.45	-102.20	1656364.76	14672964.76	40.4015512	-104.9427159	0.54	
3319.00	0.040	340.680	3304.63	102.99	196.26	-102.08	1656364.88	14672964.57	40.4015507	-104.9427155	0.40	
3408.00	0.100	259.370	3393.63	103.08	196.28	-102.17	1656364.79	14672964.59	40.4015508	-104.9427158	0.11	
3498.00	0.100	41.330	3483.63	103.10	196.32	-102.19	1656364.76	14672964.63	40.4015509	-104.9427159	0.21	
3587.00	0.060	84.140	3572.63	103.00	196.39	-102.09	1656364.86	14672964.70	40.4015511	-104.9427156	0.08	
3677.00	0.170	175.930	3662.63	102.95	196.26	-102.04	1656364.92	14672964.57	40.4015507	-104.9427154	0.20	
3766.00	0.140	195.720	3751.63	102.97	196.02	-102.06	1656364.90	14672964.33	40.4015501	-104.9427154	0.07	
3856.00	0.090	77.040	3841.63	102.93	195.93	-102.02	1656364.94	14672964.24	40.4015498	-104.9427153	0.22	
3945.00	0.790	75.090	3930.63	102.27	196.11	-101.36	1656365.60	14672964.41	40.4015503	-104.9427129	0.79	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-1HZ AWB
Slot	SLOT#01 DAMORE 18-1HZ (2167'FNL & 652'FWL,SEC.18)		

WELLPATH DATA (227 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
4035.00	0.210	124.510	4020.63	101.53	196.17	-100.62	1656366.33	14672964.48	40.4015505	-104.9427103	0.75	
4124.00	0.250	169.430	4109.63	101.36	195.89	-100.45	1656366.50	14672964.20	40.4015497	-104.9427097	0.20	
4213.00	0.190	117.550	4198.63	101.19	195.63	-100.29	1656366.67	14672963.94	40.4015490	-104.9427091	0.22	
4303.00	0.190	220.590	4288.62	101.16	195.45	-100.25	1656366.71	14672963.76	40.4015485	-104.9427089	0.33	
4393.00	0.500	158.050	4378.62	101.10	194.97	-100.20	1656366.76	14672963.28	40.4015472	-104.9427088	0.50	
4482.00	0.100	192.670	4467.62	100.97	194.53	-100.07	1656366.88	14672962.84	40.4015460	-104.9427083	0.47	
4572.00	0.250	196.970	4557.62	101.05	194.27	-100.15	1656366.81	14672962.58	40.4015452	-104.9427086	0.17	
4661.00	0.120	175.390	4646.62	101.10	193.99	-100.20	1656366.76	14672962.30	40.4015445	-104.9427088	0.16	
4751.00	0.040	128.580	4736.62	101.06	193.88	-100.16	1656366.79	14672962.19	40.4015442	-104.9427086	0.11	
4840.00	0.130	183.430	4825.62	101.04	193.76	-100.15	1656366.81	14672962.07	40.4015438	-104.9427086	0.13	
4930.00	0.090	199.070	4915.62	101.07	193.59	-100.17	1656366.78	14672961.90	40.4015434	-104.9427087	0.06	
5019.00	0.060	239.900	5004.62	101.14	193.50	-100.24	1656366.72	14672961.81	40.4015431	-104.9427089	0.07	
5198.00	0.170	167.720	5183.62	101.16	193.19	-100.26	1656366.69	14672961.50	40.4015423	-104.9427090	0.09	
5287.00	0.300	200.970	5272.62	101.21	192.85	-100.32	1656366.64	14672961.16	40.4015413	-104.9427092	0.21	
5377.00	0.500	226.560	5362.62	101.58	192.36	-100.69	1656366.27	14672960.67	40.4015400	-104.9427105	0.29	
5466.00	0.990	283.490	5451.61	102.61	192.27	-101.72	1656365.24	14672960.58	40.4015398	-104.9427142	0.93	
5556.00	1.030	80.010	5541.61	102.57	192.59	-101.68	1656365.28	14672960.90	40.4015406	-104.9427141	2.20	
5645.00	0.280	133.650	5630.60	101.62	192.58	-100.73	1656366.23	14672960.89	40.4015406	-104.9427107	1.00	
5735.00	0.130	96.210	5720.60	101.36	192.42	-100.47	1656366.49	14672960.73	40.4015402	-104.9427097	0.22	
5824.00	0.150	192.050	5809.60	101.29	192.29	-100.39	1656366.56	14672960.60	40.4015398	-104.9427095	0.23	
5913.00	0.130	303.490	5898.60	101.39	192.23	-100.50	1656366.46	14672960.54	40.4015397	-104.9427099	0.26	
6003.00	0.110	357.970	5988.60	101.48	192.37	-100.59	1656366.37	14672960.69	40.4015400	-104.9427102	0.12	
6092.00	0.180	49.810	6077.60	101.38	192.55	-100.49	1656366.47	14672960.86	40.4015405	-104.9427098	0.16	
6181.00	0.150	72.890	6166.60	101.16	192.68	-100.27	1656366.69	14672960.99	40.4015409	-104.9427090	0.08	
6271.00	0.060	120.990	6256.60	101.01	192.69	-100.12	1656366.84	14672961.00	40.4015409	-104.9427085	0.13	
6299.00†	1.665	242.376	6284.59	101.36	192.49	-100.46	1656366.49	14672960.80	40.4015404	-104.9427097	6.06	KOP
6360.00	5.360	243.570	6345.47	104.69	190.81	-103.80	1656363.16	14672959.12	40.4015358	-104.9427217	6.06	
6449.00	9.090	281.040	6433.79	115.32	190.31	-114.43	1656352.53	14672958.61	40.4015344	-104.9427599	6.54	
6539.00	15.270	315.690	6521.83	130.65	200.17	-129.72	1656337.24	14672968.46	40.4015614	-104.9428148	10.35	
6628.00	20.450	277.280	6606.80	154.40	210.57	-153.43	1656313.54	14672978.84	40.4015900	-104.9428999	14.13	
6717.00	30.750	267.360	6686.99	192.68	211.49	-191.70	1656275.28	14672979.74	40.4015925	-104.9430373	12.50	
6807.00	41.110	268.700	6759.77	245.38	209.76	-244.41	1656222.60	14672977.97	40.4015878	-104.9432265	11.54	
6896.00	51.620	270.180	6821.10	309.69	209.20	-308.73	1656158.31	14672977.37	40.4015862	-104.9434575	11.87	
6986.00	63.350	268.820	6869.39	385.44	208.48	-384.48	1656082.58	14672976.60	40.4015843	-104.9437295	13.09	
7075.00	75.000	266.000	6900.98	468.37	204.65	-467.42	1655999.67	14672972.72	40.4015737	-104.9440273	13.42	
7165.00	85.010	266.060	6916.58	556.65	198.52	-555.73	1655911.41	14672966.53	40.4015569	-104.9443443	11.12	
7254.00	88.370	269.050	6921.72	645.38	194.74	-644.48	1655822.70	14672962.69	40.4015465	-104.9446630	5.05	
7279.00†	88.715	269.272	6922.36	670.36	194.37	-669.47	1655797.72	14672962.31	40.4015455	-104.9447527	1.64	LANDING (1975'FNL & 18'FEL, SEC.13) 40.4015455, -104.9447527
7343.00	89.600	269.840	6923.30	734.35	193.87	-733.46	1655733.75	14672961.77	40.4015441	-104.9449825	1.64	
7433.00	90.430	269.880	6923.28	824.35	193.65	-823.46	1655643.79	14672961.49	40.4015435	-104.9453056	0.92	
7522.00	90.490	270.260	6922.56	913.34	193.76	-912.46	1655554.83	14672961.54	40.4015438	-104.9456251	0.43	
7612.00	90.000	270.450	6922.18	1003.34	194.32	-1002.45	1655464.87	14672962.04	40.4015453	-104.9459483	0.58	
7701.00	89.880	270.250	6922.27	1092.34	194.86	-1091.45	1655375.90	14672962.53	40.4015468	-104.9462678	0.26	
7791.00	89.780	270.270	6922.54	1182.34	195.27	-1181.45	1655285.94	14672962.88	40.4015479	-104.9465910	0.11	
7880.00	89.820	270.180	6922.85	1271.34	195.62	-1270.45	1655196.98	14672963.17	40.4015489	-104.9469105	0.11	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-1HZ AWB
Slot	SLOT#01 DAMORE 18-1HZ (2167'FNL & 652'FWL,SEC.18)		

WELLPATH DATA (227 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
7970.00	89.750	270.370	6923.19	1361.34	196.05	-1360.45	1655107.02	14672963.54	40.4015500	-104.9472336	0.22	
8059.00	89.880	270.240	6923.47	1450.34	196.53	-1449.44	1655018.05	14672963.96	40.4015513	-104.9475532	0.21	
8148.00	89.690	270.130	6923.81	1539.34	196.82	-1538.44	1654929.09	14672964.19	40.4015521	-104.9478727	0.25	
8238.00	90.280	270.400	6923.83	1629.34	197.23	-1628.44	1654839.13	14672964.54	40.4015532	-104.9481959	0.72	
8327.00	90.220	270.340	6923.44	1718.34	197.81	-1717.44	1654750.17	14672965.06	40.4015548	-104.9485154	0.10	
8416.00	90.520	270.810	6922.87	1807.34	198.70	-1806.43	1654661.21	14672965.90	40.4015572	-104.9488349	0.63	
8506.00	90.400	270.690	6922.15	1897.33	199.88	-1896.42	1654571.25	14672967.02	40.4015604	-104.9491580	0.19	
8595.00	90.060	269.990	6921.79	1986.33	200.41	-1985.42	1654482.29	14672967.48	40.4015619	-104.9494776	0.87	
8685.00	90.090	270.370	6921.67	2076.33	200.69	-2075.42	1654392.33	14672967.71	40.4015626	-104.9498007	0.42	
8774.00	90.370	270.390	6921.31	2165.33	201.28	-2164.42	1654303.37	14672968.24	40.4015642	-104.9501203	0.32	
8863.00	90.280	270.480	6920.81	2254.32	201.95	-2253.41	1654214.41	14672968.86	40.4015661	-104.9504398	0.14	
8953.00	90.400	270.630	6920.27	2344.32	202.83	-2343.41	1654124.45	14672969.67	40.4015684	-104.9507629	0.21	
9042.00	90.400	270.610	6919.65	2433.32	203.79	-2432.40	1654035.49	14672970.58	40.4015711	-104.9510824	0.02	
9132.00	90.220	270.680	6919.17	2523.31	204.80	-2522.39	1653945.53	14672971.53	40.4015738	-104.9514056	0.21	
9221.00	90.310	270.640	6918.75	2612.31	205.83	-2611.38	1653856.57	14672972.50	40.4015766	-104.9517251	0.11	
9310.00	90.430	270.760	6918.18	2701.31	206.91	-2700.38	1653767.62	14672973.53	40.4015796	-104.9520446	0.19	
9400.00	90.400	270.540	6917.53	2791.30	207.94	-2790.37	1653677.66	14672974.49	40.4015823	-104.9523677	0.25	
9489.00	90.310	270.480	6916.98	2880.30	208.73	-2879.36	1653588.70	14672975.22	40.4015845	-104.9526873	0.12	
9579.00	90.250	270.510	6916.54	2970.30	209.51	-2969.36	1653498.74	14672975.94	40.4015866	-104.9530104	0.07	
9668.00	90.060	270.400	6916.30	3059.30	210.21	-3058.35	1653409.78	14672976.59	40.4015885	-104.9533299	0.25	
9758.00	89.970	270.480	6916.27	3149.30	210.90	-3148.35	1653319.82	14672977.22	40.4015904	-104.9536530	0.13	
9847.00	89.720	270.630	6916.51	3238.30	211.77	-3237.35	1653230.86	14672978.02	40.4015927	-104.9539726	0.33	
9937.00	89.940	270.350	6916.78	3328.29	212.54	-3327.34	1653140.90	14672978.73	40.4015948	-104.9542957	0.40	
10026.00	89.780	270.330	6917.00	3417.29	213.06	-3416.34	1653051.94	14672979.20	40.4015962	-104.9546153	0.18	
10116.00	89.780	270.220	6917.34	3507.29	213.50	-3506.34	1652961.97	14672979.58	40.4015973	-104.9549384	0.12	
10205.00	89.780	270.400	6917.68	3596.29	213.98	-3595.34	1652873.01	14672980.00	40.4015986	-104.9552579	0.20	
10294.00	90.180	270.400	6917.72	3685.29	214.32	-3684.34	1652784.05	14672980.28	40.4015995	-104.9555775	0.60	
10384.00	89.910	270.990	6917.64	3775.29	215.13	-3774.33	1652694.09	14672981.03	40.4016017	-104.9559006	1.10	
10473.00	90.370	271.040	6917.43	3864.28	216.70	-3863.32	1652605.14	14672982.55	40.4016060	-104.9562201	0.52	
10563.00	89.750	271.040	6917.33	3954.27	218.34	-3953.30	1652515.19	14672984.13	40.4016104	-104.9565432	0.69	
10652.00	89.260	270.830	6918.10	4043.26	219.79	-4042.29	1652426.24	14672985.52	40.4016144	-104.9568627	0.60	
10741.00	89.910	270.670	6918.75	4132.26	220.95	-4131.28	1652337.28	14672986.63	40.4016175	-104.9571822	0.75	
10831.00	88.400	270.180	6920.07	4222.24	221.62	-4221.26	1652247.33	14672987.24	40.4016193	-104.9575053	1.76	
10920.00	88.250	269.580	6922.68	4311.20	221.44	-4310.22	1652158.41	14672986.99	40.4016188	-104.9578247	0.69	
11009.00	88.340	270.130	6925.32	4400.16	221.21	-4399.18	1652069.48	14672986.71	40.4016181	-104.9581441	0.63	
11098.00	87.260	269.900	6928.74	4489.09	221.23	-4488.12	1651980.59	14672986.67	40.4016181	-104.9584634	1.24	
11188.00	90.120	269.600	6930.80	4579.06	220.84	-4578.08	1651890.66	14672986.22	40.4016170	-104.9587865	3.20	
11277.00	90.180	270.610	6930.56	4668.06	221.00	-4667.08	1651801.69	14672986.33	40.4016174	-104.9591060	1.14	
11367.00	90.000	270.350	6930.42	4758.06	221.76	-4757.08	1651711.73	14672987.02	40.4016194	-104.9594291	0.35	
11457.00	89.880	270.300	6930.52	4848.06	222.27	-4847.08	1651621.77	14672987.47	40.4016208	-104.9597523	0.14	
11546.00	89.910	270.280	6930.68	4937.05	222.72	-4936.07	1651532.81	14672987.87	40.4016220	-104.9600718	0.04	
11636.00	92.090	270.460	6929.11	5027.04	223.30	-5026.05	1651442.86	14672988.39	40.4016235	-104.9603949	2.43	
11814.00	91.820	270.840	6923.04	5204.93	225.32	-5203.94	1651265.05	14672990.29	40.4016290	-104.9610336	0.26	
11904.00	92.150	270.270	6919.92	5294.87	226.19	-5293.88	1651175.14	14672991.10	40.4016313	-104.9613565	0.73	
11994.00	91.850	269.860	6916.78	5384.82	226.29	-5383.82	1651085.24	14672991.15	40.4016315	-104.9616794	0.56	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-1HZ AWB
Slot	SLOT#01 DAMORE 18-1HZ (2167'FNL & 652'FWL,SEC.18)		

WELLPATH DATA (227 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
12083.00	91.750	269.900	6913.98	5473.77	226.11	-5472.78	1650996.32	14672990.90	40.4016310	-104.9619988	0.12	
12172.00	91.750	269.900	6911.27	5562.73	225.95	-5561.74	1650907.39	14672990.69	40.4016305	-104.9623182	0.00	
12262.00	91.780	269.980	6908.49	5652.68	225.86	-5651.70	1650817.47	14672990.54	40.4016302	-104.9626412	0.09	
12352.00	91.690	269.900	6905.77	5742.64	225.76	-5741.65	1650727.55	14672990.38	40.4016299	-104.9629642	0.13	
12441.00	92.650	269.990	6902.40	5831.57	225.68	-5830.59	1650638.65	14672990.24	40.4016296	-104.9632835	1.08	
12531.00	92.060	269.970	6898.70	5921.50	225.65	-5920.51	1650548.76	14672990.15	40.4016294	-104.9636064	0.66	
12620.00	92.220	270.090	6895.38	6010.43	225.69	-6009.45	1650459.86	14672990.14	40.4016295	-104.9639257	0.22	
12710.00	92.120	269.480	6891.97	6100.37	225.35	-6099.38	1650369.96	14672989.74	40.4016285	-104.9642486	0.69	
12799.00	92.060	269.280	6888.72	6189.30	224.39	-6188.32	1650281.06	14672988.72	40.4016258	-104.9645680	0.23	
12889.00	91.970	269.350	6885.56	6279.23	223.32	-6278.26	1650191.16	14672987.59	40.4016228	-104.9648909	0.13	
12978.00	91.480	269.490	6882.88	6368.18	222.42	-6367.21	1650102.24	14672986.63	40.4016203	-104.9652103	0.57	
13068.00	89.350	269.070	6882.23	6458.16	221.29	-6457.20	1650012.30	14672985.44	40.4016171	-104.9655334	2.41	
13157.00	89.750	270.480	6882.93	6547.15	220.94	-6546.19	1649923.34	14672985.03	40.4016161	-104.9658529	1.65	
13246.00	88.400	269.090	6884.36	6636.13	220.60	-6635.18	1649834.39	14672984.64	40.4016151	-104.9661724	2.18	
13336.00	87.910	269.330	6887.26	6726.07	219.36	-6725.12	1649744.48	14672983.34	40.4016116	-104.9664953	0.61	
13425.00	87.940	268.540	6890.48	6814.98	217.71	-6814.05	1649655.59	14672981.63	40.4016070	-104.9668146	0.89	
13515.00	89.940	269.630	6892.15	6904.94	216.27	-6904.01	1649565.66	14672980.14	40.4016030	-104.9671376	2.53	
13605.00	91.140	269.960	6891.30	6994.93	215.95	-6994.01	1649475.71	14672979.76	40.4016020	-104.9674607	1.38	
13694.00	90.740	269.690	6889.84	7083.92	215.68	-7082.99	1649386.76	14672979.43	40.4016012	-104.9677803	0.54	
13784.00	91.380	270.070	6888.18	7173.90	215.49	-7172.98	1649296.81	14672979.18	40.4016006	-104.9681033	0.83	
13873.00	91.350	270.220	6886.06	7262.88	215.72	-7261.95	1649207.87	14672979.35	40.4016012	-104.9684228	0.17	
13962.00	91.510	270.420	6883.83	7351.85	216.21	-7350.92	1649118.93	14672979.79	40.4016025	-104.9687422	0.29	
14052.00	91.320	270.000	6881.61	7441.82	216.54	-7440.89	1649029.00	14672980.06	40.4016033	-104.9690653	0.51	
14141.00	91.690	270.390	6879.27	7530.79	216.84	-7529.86	1648940.06	14672980.30	40.4016041	-104.9693847	0.60	
14231.00	91.140	269.670	6877.05	7620.76	216.89	-7619.83	1648850.13	14672980.29	40.4016041	-104.9697078	1.01	
14321.00	92.060	270.270	6874.54	7710.72	216.84	-7709.80	1648760.20	14672980.19	40.4016039	-104.9700308	1.22	
14410.00	91.600	269.850	6871.70	7799.68	216.94	-7798.75	1648671.28	14672980.22	40.4016041	-104.9703502	0.70	
14499.00	91.420	269.960	6869.35	7888.64	216.79	-7887.72	1648582.35	14672980.01	40.4016036	-104.9706696	0.24	
14589.00	91.420	270.140	6867.12	7978.61	216.87	-7977.69	1648492.41	14672980.03	40.4016037	-104.9709926	0.20	
14678.00	91.750	270.290	6864.66	8067.58	217.20	-8066.66	1648403.48	14672980.31	40.4016046	-104.9713121	0.41	
14768.00	90.280	269.780	6863.07	8157.56	217.26	-8156.64	1648313.54	14672980.31	40.4016046	-104.9716351	1.73	
14857.00	89.510	269.650	6863.23	8246.56	216.81	-8245.64	1648224.58	14672979.81	40.4016033	-104.9719547	0.88	
14947.00	89.020	268.760	6864.38	8336.53	215.57	-8335.62	1648134.63	14672978.50	40.4015998	-104.9722778	1.13	
15036.00	89.080	266.760	6865.86	8425.43	212.09	-8424.54	1648045.75	14672974.96	40.4015902	-104.9725970	2.25	
15126.00	89.230	269.970	6867.19	8515.36	209.52	-8514.48	1647955.85	14672972.34	40.4015831	-104.9729199	3.57	
15215.00	89.380	270.710	6868.27	8604.35	210.05	-8603.47	1647866.89	14672972.81	40.4015844	-104.9732395	0.85	
15305.00	89.350	270.250	6869.26	8694.35	210.80	-8693.46	1647776.94	14672973.50	40.4015864	-104.9735626	0.51	
15394.00	89.480	270.990	6870.17	8783.34	211.77	-8782.45	1647687.98	14672974.41	40.4015890	-104.9738821	0.84	
15484.00	87.200	270.620	6872.78	8873.29	213.03	-8872.40	1647598.07	14672975.61	40.4015924	-104.9742050	2.57	
15573.00	87.170	270.460	6877.15	8962.18	213.87	-8961.29	1647509.22	14672976.39	40.4015946	-104.9745242	0.18	
15662.00	87.200	269.830	6881.52	9051.08	214.09	-9050.18	1647420.36	14672976.56	40.4015951	-104.9748434	0.71	
15752.00	88.650	271.750	6884.78	9141.01	215.33	-9140.11	1647330.47	14672977.74	40.4015984	-104.9751662	2.67	
15841.00	88.120	274.240	6887.29	9229.86	219.98	-9228.94	1647241.67	14672982.33	40.4016111	-104.9754852	2.86	
15931.00	87.480	273.460	6890.74	9319.62	226.02	-9318.67	1647151.97	14672988.31	40.4016276	-104.9758074	1.12	
16020.00	86.060	268.760	6895.76	9408.44	227.74	-9407.49	1647063.19	14672989.97	40.4016322	-104.9761263	5.51	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-1HZ AWB
Slot	SLOT#01 DAMORE 18-1HZ (2167'FNL & 652'FWL,SEC.18)		

WELLPATH DATA (227 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
16110.00	87.880	271.320	6900.52	9498.30	227.81	-9497.35	1646973.36	14672989.98	40.4016323	-104.9764489	3.49	
16199.00	87.600	270.610	6904.03	9587.23	229.30	-9586.27	1646884.48	14672991.42	40.4016363	-104.9767682	0.86	
16288.00	87.480	270.480	6907.85	9676.14	230.15	-9675.18	1646795.60	14672992.21	40.4016385	-104.9770874	0.20	
16377.00	87.290	270.360	6911.91	9765.05	230.80	-9764.08	1646706.73	14672992.80	40.4016402	-104.9774066	0.25	
16466.00	87.570	270.700	6915.90	9853.96	231.62	-9852.99	1646617.86	14672993.56	40.4016424	-104.9777259	0.49	
16556.00	88.030	270.660	6919.35	9943.89	232.69	-9942.92	1646527.97	14672994.57	40.4016452	-104.9780487	0.51	
16645.00	89.720	271.330	6921.10	10032.86	234.24	-10031.88	1646439.04	14672996.06	40.4016493	-104.9783682	2.04	
16735.00	89.750	270.920	6921.52	10122.85	236.00	-10121.86	1646349.09	14672997.77	40.4016541	-104.9786912	0.46	
16824.00	89.880	271.060	6921.81	10211.84	237.54	-10210.85	1646260.14	14672999.24	40.4016582	-104.9790107	0.21	
16914.00	91.750	271.120	6920.53	10301.82	239.25	-10300.82	1646170.21	14673000.90	40.4016628	-104.9793338	2.08	
17003.00	91.630	271.540	6917.90	10390.77	241.32	-10389.76	1646081.30	14673002.90	40.4016684	-104.9796531	0.49	
17093.00	91.540	271.330	6915.41	10480.71	243.57	-10479.70	1645991.40	14673005.10	40.4016745	-104.9799760	0.25	
17183.00	91.540	271.180	6912.99	10570.67	245.54	-10569.64	1645901.49	14673007.01	40.4016798	-104.9802990	0.17	
17272.00	91.660	271.290	6910.51	10659.62	247.46	-10658.59	1645812.58	14673008.87	40.4016849	-104.9806183	0.18	
17362.00	91.480	271.280	6908.04	10749.57	249.48	-10748.53	1645722.67	14673010.82	40.4016904	-104.9809413	0.20	
17452.00	91.600	270.920	6905.62	10839.53	251.20	-10838.48	1645632.75	14673012.49	40.4016950	-104.9812643	0.42	
17541.00	91.660	268.790	6903.09	10928.49	250.98	-10927.44	1645543.83	14673012.21	40.4016943	-104.9815837	2.39	
17631.00	91.540	269.520	6900.58	11018.43	249.65	-11017.39	1645453.91	14673010.82	40.4016905	-104.9819066	0.82	
17720.00	91.630	269.340	6898.12	11107.39	248.77	-11106.36	1645364.99	14673009.88	40.4016880	-104.9822260	0.23	
17810.00	92.310	269.420	6895.02	11197.33	247.79	-11196.30	1645275.08	14673008.85	40.4016852	-104.9825490	0.76	
17899.00	92.190	269.290	6891.53	11286.25	246.79	-11285.22	1645186.20	14673007.79	40.4016823	-104.9828683	0.20	
17988.00	92.160	269.530	6888.15	11375.17	245.88	-11374.15	1645097.30	14673006.82	40.4016797	-104.9831876	0.27	
18078.00	91.940	269.330	6884.93	11465.10	244.98	-11464.09	1645007.40	14673005.86	40.4016771	-104.9835105	0.33	
18167.00	92.310	269.770	6881.63	11554.04	244.28	-11553.03	1644918.50	14673005.11	40.4016751	-104.9838298	0.65	
18257.00	92.220	269.580	6878.07	11643.96	243.77	-11642.96	1644828.61	14673004.54	40.4016736	-104.9841527	0.23	
18346.00	92.090	269.680	6874.73	11732.89	243.20	-11731.89	1644739.71	14673003.91	40.4016719	-104.9844720	0.18	
18525.00	92.220	269.490	6868.00	11911.75	241.90	-11910.76	1644650.91	14673002.50	40.4016681	-104.9851142	0.13	
18614.00	92.060	269.430	6864.67	12000.68	241.07	-11999.69	1644472.02	14673001.60	40.4016657	-104.9854335	0.19	
18703.00	92.120	269.200	6861.43	12089.61	240.00	-12088.63	1644383.12	14673000.48	40.4016626	-104.9857529	0.27	
18793.00	92.400	269.750	6857.88	12179.53	239.18	-12178.55	1644293.23	14672999.60	40.4016603	-104.9860757	0.69	
18882.00	92.090	269.350	6854.39	12268.46	238.48	-12267.48	1644204.34	14672998.84	40.4016582	-104.9863950	0.57	
18972.00	90.800	268.750	6852.12	12358.41	236.99	-12357.44	1644114.42	14672997.29	40.4016540	-104.9867180	1.58	
19061.00	91.720	269.210	6850.17	12447.36	235.40	-12446.40	1644025.49	14672995.65	40.4016495	-104.9870374	1.16	
19150.00	92.060	269.120	6847.23	12536.30	234.11	-12535.34	1643936.59	14672994.30	40.4016458	-104.9873568	0.40	
19240.00	92.060	270.780	6843.99	12626.23	234.03	-12625.28	1643846.68	14672994.16	40.4016455	-104.9876797	1.84	
19330.00	89.970	271.610	6842.40	12716.20	235.91	-12715.24	1643756.76	14672995.98	40.4016505	-104.9880027	2.50	
19419.00	90.430	272.050	6842.09	12805.17	238.75	-12804.20	1643667.84	14672998.76	40.4016582	-104.9883221	0.72	
19509.00	90.620	271.920	6841.27	12895.12	241.87	-12894.14	1643577.93	14673001.82	40.4016666	-104.9886450	0.26	
19598.00	90.280	271.450	6840.57	12984.09	244.48	-12983.10	1643489.01	14673004.37	40.4016737	-104.9889644	0.65	
19688.00	89.970	270.990	6840.37	13074.08	246.40	-13073.08	1643399.06	14673006.23	40.4016788	-104.9892875	0.62	
19777.00	89.630	270.790	6840.68	13163.07	247.78	-13162.06	1643310.11	14673007.56	40.4016825	-104.9896070	0.44	
19866.00	90.310	270.580	6840.73	13252.07	248.85	-13251.06	1643221.15	14673008.56	40.4016853	-104.9899265	0.80	
19955.00	90.310	270.980	6840.25	13341.06	250.06	-13340.05	1643132.19	14673009.71	40.4016885	-104.9902461	0.45	
20045.00	90.740	271.180	6839.42	13431.05	251.75	-13430.03	1643042.25	14673011.35	40.4016930	-104.9905691	0.53	
20134.00	90.310	270.910	6838.61	13520.04	253.38	-13519.01	1642953.30	14673012.92	40.4016973	-104.9908886	0.57	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-1HZ AWB
Slot	SLOT#01 DAMORE 18-1HZ (2167'FNL & 652'FWL,SEC.18)		

WELLPATH DATA (227 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
20180.00	90.580	271.140	6838.25	13566.03	254.20	-13565.00	1642907.33	14673013.71	40.4016995	-104.9910538	0.77	LAST BH MWD+IFR1+MSA SURVEY
20205.00‡	90.580	271.140	6838.00	13591.03	254.70	-13589.99	1642882.35	14673014.19	40.4017008	-104.9911435	0.00	PTB (1951'FNL & 2153'FEL, SEC.15) 40.4017008,-104.9911435

HOLE & CASING SECTIONS - Ref Wellbore: DAMORE 18-1HZ AWB Ref Wellpath: DAMORE 18-1HZ 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	1818.00	1792.00	26.00	1805.99	0.00	0.00	170.28	-74.76

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
DAMORE DSU	16.00	0.00	0.00	1656467.04	14672768.45	40.4010120	-104.9423490	polygon
2D Polygon: dimensions not calculated								
SEC.13-T5N-R67W	16.00	-991.93	-1220.31	1655247.87	14671776.13	40.3982892	-104.9467303	polygon
2D Polygon: dimensions not calculated								
SEC.14-T5N-R67W	16.00	-991.93	-1220.31	1655247.87	14671776.13	40.3982892	-104.9467303	polygon
2D Polygon: dimensions not calculated								
SEC.15-T5N-R67W	16.00	-997.93	-1220.31	1655247.87	14671770.13	40.3982727	-104.9467303	polygon
2D Polygon: dimensions not calculated								
SEC.17-T5N-R67W	16.00	-977.93	-1220.31	1655247.86	14671790.12	40.3983276	-104.9467303	polygon
2D Polygon: dimensions not calculated								
SEC.18-T5N-R67W	16.00	-977.93	-1220.31	1655247.86	14671790.12	40.3983276	-104.9467303	polygon
2D Polygon: dimensions not calculated								
DAMORE 18-1HZ BHL REV-2 (1956'FNL & 2154'FEL,SEC.15)	6818.00	249.60	-13590.99	1642881.35	14673009.09	40.4016868	-104.9911471	point
DAMORE 18-1HZ HEEL REV-1 (1979'FNL & 75'FEL,SEC.13)	6923.00	189.82	-724.14	1655743.07	14672957.72	40.4015330	-104.9449490	point

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-1HZ AWB
Slot	SLOT#01 DAMORE 18-1HZ (2167'FNL & 652'FWL,SEC.18)		

WELLPATH COMPOSITION - Ref Wellbore: DAMORE 18-1HZ AWB Ref Wellpath: DAMORE 18-1HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	1813.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <119 - 1795 >	DAMORE 18-1HZ AWB
1813.00	20205.00	Custom APC_ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BH Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1888 - 20180 >	DAMORE 18-1HZ AWB

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-1HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-1HZ AWB
Slot	SLOT#01 DAMORE 18-1HZ (2167'FNL & 652'FWL,SEC.18)		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
137.00	0.450	103.000	137.00	FIRST SURFACE MWD+IFR1 SURVEY
1813.00	7.150	337.190	1801.03	LAST SURFACE MWD+IFR1 SURVEY
1888.00	7.460	334.620	1875.42	FIRST BH MWD+IFR1+MSA SURVEY
6299.00	1.665	242.376	6284.59	KOP
7279.00	88.715	269.272	6922.36	LANDING (1975'FNL & 18'FEL, SEC.13) 40.4015455, -104.9447527
20180.00	90.580	271.140	6838.25	LAST BH MWD+IFR1+MSA SURVEY
20205.00	90.580	271.140	6838.00	PTB (1951'FNL & 2153'FEL, SEC.15) 40.4017008, -104.9911435