



Scale 1 inch = 2000

Easting (ft)

Northing (ft)

SLOT#04 DAMORE 18-4HZ (2201'FNL & 681'FWL, SEC.18)

FIRST SURFACE MWD+IFR1 SURVEY : 138.00ft TVD, 0.13ft S, 0.02ft W
 LAST SURFACE MWD+IFR1 SURVEY : 1792.99ft TVD, 117.45ft S, 309.65ft W
 9.625in Casing Surface : 1837.77ft TVD, 123.22ft S, 325.92ft W
 FIRST BH MWD+IFR1+MSA SURVEY : 1897.56ft TVD, 131.21ft S, 347.32ft W
 KOP : 6332.32ft TVD, 537.17ft S, 1344.78ft W
 LANDING (2571'FSL & 26'FWL, SEC.18) 40.3995128, -104.9445958 : 7071.92ft TVD, 511.57ft S, 654.49ft W
 LAST BH MWD+IFR1+MSA SURVEY : 7077.61ft TVD, 502.20ft S, 9179.25ft E
 PTB (2606'FSL & 481'FEL, SEC.17) 40.3995371, -104.9090246 : 7071.19ft TVD, 500.98ft S, 9252.96ft E

FIRST SURFACE MWD+IFR1 SURVEY :
 0.13° Inc, 138.00ft MD, 138.00ft TVD, -0.02ft VS

LAST SURFACE MWD+IFR1 SURVEY : 21.16° Inc, 1838.00ft MD, 1792.99ft TVD, -309.73ft VS
 9.625in Casing Surface : 21.01° Inc, 1886.00ft MD, 1837.77ft TVD, -326.01ft VS
 FIRST BH MWD+IFR1+MSA SURVEY : 20.81° Inc, 1950.00ft MD, 1897.56ft TVD, -347.41ft VS

KOP : 1.18° Inc, 6566.00ft MD, 6332.32ft TVD, -1345.14ft VS

LANDING (2571'FSL & 26'FWL, SEC.18) 40.3995128, -104.9445958 : 87.37° Inc, 7699.00ft MD, 7071.92ft TVD, -654.83ft VS
 LAST BH MWD+IFR1+MSA SURVEY : 94.98° Inc, 17539.00ft MD, 7077.61ft TVD, 9178.91ft VS
 PTB (2606'FSL & 481'FEL, SEC.17) 40.3995371, -104.9090246 : 94.98° Inc, 17613.00ft MD, 7071.19ft TVD, 9252.62ft VS

True Vertical Depth (ft)

Vertical Section (ft)

Azimuth 89.96° with reference 0.00 N, 0.00 E

Scale 1 inch = 2000

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-4HZ AWB
Slot	SLOT#04 DAMORE 18-4HZ (2201'FNL & 681'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	4/1/2020 at 4:23:40 PM
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	-34.79	28.66	1656495.74	14672733.88	40.4009170°	-104.9422460°
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#04 DAMORE 18-4HZ (2201'FNL & 681'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	89.96°

Actual Wellpath Report

DAMORE 18-4HZ AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-4HZ AWB
Slot	SLOT#04 DAMORE 18-4HZ (2201'FNL & 681'FWL,SEC.18)		

WELLPATH DATA (198 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	189.140	0.00	0.00	0.00	0.00	1656495.74	14672733.88	40.4009170	-104.9422460	0.00	
26.00	0.000	189.140	26.00	0.00	0.00	0.00	1656495.74	14672733.88	40.4009170	-104.9422460	0.00	
138.00	0.130	189.140	138.00	-0.02	-0.13	-0.02	1656495.72	14672733.75	40.4009167	-104.9422461	0.12	FIRST SURFACE MWD+IFR1 SURVEY
233.00	0.540	157.920	233.00	0.13	-0.65	0.13	1656495.87	14672733.23	40.4009152	-104.9422455	0.46	
328.00	1.650	218.950	327.98	-0.56	-2.13	-0.56	1656495.18	14672731.75	40.4009112	-104.9422480	1.54	
423.00	3.530	229.320	422.88	-3.64	-5.10	-3.64	1656492.11	14672728.78	40.4009030	-104.9422591	2.03	
518.00	4.740	246.430	517.64	-9.46	-8.57	-9.45	1656486.30	14672725.30	40.4008935	-104.9422799	1.81	
613.00	6.580	260.340	612.17	-18.43	-11.05	-18.42	1656477.34	14672722.81	40.4008867	-104.9423121	2.40	
708.00	7.720	260.710	706.43	-30.09	-13.00	-30.08	1656465.68	14672720.86	40.4008813	-104.9423540	1.20	
803.00	9.090	250.170	800.42	-43.45	-16.57	-43.44	1656452.33	14672717.28	40.4008715	-104.9424020	2.16	
899.00	10.410	248.250	895.03	-58.65	-22.36	-58.63	1656437.15	14672711.49	40.4008556	-104.9424565	1.42	
993.00	11.350	245.520	987.34	-74.96	-29.34	-74.94	1656420.85	14672704.50	40.4008365	-104.9425151	1.14	
1089.00	13.480	244.570	1081.09	-93.67	-38.06	-93.64	1656402.16	14672695.77	40.4008125	-104.9425822	2.23	
1184.00	14.630	245.180	1173.24	-114.56	-47.85	-114.53	1656381.29	14672685.97	40.4007856	-104.9426572	1.22	
1279.00	15.280	244.960	1265.02	-136.80	-58.19	-136.76	1656359.07	14672675.62	40.4007573	-104.9427370	0.69	
1373.00	16.880	249.480	1355.35	-160.81	-68.21	-160.77	1656335.08	14672665.59	40.4007298	-104.9428232	2.16	
1468.00	18.940	250.570	1445.74	-188.28	-78.18	-188.23	1656307.64	14672655.61	40.4007024	-104.9429218	2.20	
1562.00	19.230	251.290	1534.57	-217.33	-88.22	-217.28	1656278.61	14672645.55	40.4006748	-104.9430261	0.40	
1658.00	20.430	253.210	1624.88	-248.36	-98.13	-248.29	1656247.61	14672635.62	40.4006476	-104.9431375	1.42	
1753.00	21.110	252.960	1713.70	-280.59	-107.93	-280.52	1656215.40	14672625.80	40.4006207	-104.9432532	0.72	
1838.00	21.160	250.860	1792.99	-309.73	-117.45	-309.65	1656186.29	14672616.27	40.4005946	-104.9433578	0.89	LAST SURFACE MWD+IFR1 SURVEY
1950.00	20.810	248.990	1897.56	-347.41	-131.21	-347.32	1656148.65	14672602.49	40.4005568	-104.9434930	0.67	FIRST BH MWD+IFR1+MSA SURVEY
2040.00	19.010	244.640	1982.18	-375.59	-143.22	-375.50	1656120.49	14672590.47	40.4005239	-104.9435942	2.59	
2130.00	20.160	244.350	2066.97	-402.83	-156.21	-402.72	1656093.28	14672577.46	40.4004882	-104.9436919	1.28	
2219.00	22.060	247.100	2150.00	-432.06	-169.36	-431.95	1656064.08	14672564.30	40.4004521	-104.9437969	2.41	
2308.00	21.320	246.050	2232.70	-462.25	-182.43	-462.13	1656033.92	14672551.22	40.4004162	-104.9439052	0.94	
2398.00	22.800	248.910	2316.11	-493.48	-195.35	-493.35	1656002.71	14672538.29	40.4003808	-104.9440173	2.03	
2487.00	22.660	248.480	2398.20	-525.53	-207.84	-525.39	1655970.70	14672525.78	40.4003465	-104.9441324	0.24	
2576.00	22.230	248.650	2480.45	-557.17	-220.26	-557.02	1655939.09	14672513.34	40.4003124	-104.9442459	0.49	
2666.00	20.930	247.760	2564.14	-587.91	-232.54	-587.76	1655908.37	14672501.04	40.4002787	-104.9443563	1.49	
2755.00	21.470	247.820	2647.12	-617.72	-244.71	-617.56	1655878.59	14672488.86	40.4002453	-104.9444633	0.61	
2845.00	20.190	247.430	2731.24	-647.32	-256.89	-647.15	1655849.02	14672476.67	40.4002118	-104.9445695	1.43	
2934.00	21.620	248.360	2814.38	-676.75	-268.83	-676.57	1655819.61	14672464.71	40.4001791	-104.9446752	1.65	
3024.00	19.720	248.550	2898.58	-706.31	-280.50	-706.12	1655790.09	14672453.03	40.4001470	-104.9447813	2.11	
3113.00	20.570	249.990	2982.13	-734.98	-291.34	-734.79	1655761.44	14672442.18	40.4001173	-104.9448842	1.11	
3203.00	18.740	250.310	3066.89	-763.46	-301.62	-763.26	1655732.99	14672431.88	40.4000890	-104.9449864	2.04	
3292.00	19.170	247.150	3151.06	-790.39	-312.11	-790.19	1655706.08	14672421.37	40.4000602	-104.9450831	1.25	
3382.00	19.590	243.870	3235.96	-817.57	-324.50	-817.35	1655678.93	14672408.98	40.4000263	-104.9451806	1.30	
3471.00	20.410	245.430	3319.60	-845.08	-337.52	-844.86	1655651.44	14672395.94	40.3999905	-104.9452794	1.10	
3561.00	21.160	248.070	3403.74	-874.43	-350.11	-874.20	1655622.12	14672383.33	40.3999559	-104.9453847	1.33	
3650.00	23.190	249.150	3486.15	-905.72	-362.35	-905.48	1655590.86	14672371.08	40.3999223	-104.9454970	2.33	
3740.00	24.060	248.900	3568.61	-939.41	-375.26	-939.16	1655557.21	14672358.15	40.3998869	-104.9456179	0.97	
3829.00	24.390	248.450	3649.77	-973.43	-388.54	-973.18	1655523.21	14672344.86	40.3998504	-104.9457401	0.42	
3918.00	24.450	247.870	3730.81	-1007.60	-402.23	-1007.33	1655489.08	14672331.15	40.3998129	-104.9458627	0.28	
4008.00	23.300	247.430	3813.11	-1041.30	-416.08	-1041.02	1655455.41	14672317.29	40.3997748	-104.9459836	1.29	

Actual Wellpath Report

DAMORE 18-4HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-4HZ AWB
Slot	SLOT#04 DAMORE 18-4HZ (2201'FNL & 681'FWL, SEC.18)		

WELLPATH DATA (198 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
4097.00	19.910	246.700	3895.84	-1071.49	-428.83	-1071.20	1655425.25	14672304.52	40.3997398	-104.9460920	3.82	
4187.00	16.770	246.400	3981.26	-1097.47	-440.10	-1097.18	1655399.29	14672293.24	40.3997089	-104.9461853	3.49	
4277.00	15.530	245.660	4067.71	-1120.36	-450.26	-1120.06	1655376.43	14672283.07	40.3996810	-104.9462674	1.40	
4366.00	13.760	245.250	4153.81	-1140.83	-459.60	-1140.53	1655355.97	14672273.71	40.3996554	-104.9463409	1.99	
4456.00	14.770	246.450	4241.04	-1161.07	-468.67	-1160.76	1655335.75	14672264.64	40.3996305	-104.9464136	1.17	
4545.00	15.400	245.050	4326.97	-1182.20	-478.19	-1181.88	1655314.65	14672255.11	40.3996044	-104.9464894	0.82	
4635.00	13.540	244.230	4414.11	-1202.53	-487.81	-1202.20	1655294.34	14672245.48	40.3995779	-104.9465623	2.08	
4724.00	14.730	245.350	4500.42	-1222.20	-497.06	-1221.87	1655274.69	14672236.22	40.3995525	-104.9466329	1.37	
4814.00	13.880	245.740	4587.62	-1242.45	-506.26	-1242.11	1655254.46	14672227.01	40.3995273	-104.9467056	0.95	
4903.00	12.500	244.950	4674.27	-1260.91	-514.73	-1260.57	1655236.01	14672218.53	40.3995040	-104.9467719	1.56	
4993.00	10.690	243.540	4762.43	-1277.21	-522.57	-1276.87	1655219.73	14672210.68	40.3994825	-104.9468304	2.04	
5082.00	8.100	243.070	4850.23	-1290.20	-529.09	-1289.85	1655206.76	14672204.16	40.3994646	-104.9468770	2.91	
5171.00	6.620	242.790	4938.50	-1300.36	-534.28	-1300.00	1655196.61	14672198.97	40.3994504	-104.9469135	1.66	
5261.00	5.610	242.140	5027.98	-1308.86	-538.71	-1308.51	1655188.11	14672194.53	40.3994382	-104.9469440	1.12	
5350.00	2.360	264.400	5116.76	-1314.54	-540.92	-1314.18	1655182.45	14672192.32	40.3994321	-104.9469644	3.98	
5440.00	1.960	269.210	5206.70	-1317.92	-541.12	-1317.56	1655179.06	14672192.11	40.3994316	-104.9469765	0.49	
5553.00	1.860	273.520	5319.63	-1321.68	-541.03	-1321.32	1655175.30	14672192.20	40.3994318	-104.9469900	0.15	
5643.00	2.190	276.520	5409.58	-1324.85	-540.75	-1324.49	1655172.14	14672192.48	40.3994326	-104.9470014	0.38	
5732.00	1.760	285.190	5498.53	-1327.86	-540.20	-1327.50	1655169.13	14672193.03	40.3994341	-104.9470122	0.59	
5821.00	1.450	282.910	5587.49	-1330.27	-539.59	-1329.91	1655166.71	14672193.64	40.3994358	-104.9470209	0.36	
5911.00	1.290	272.670	5677.46	-1332.39	-539.29	-1332.04	1655164.59	14672193.94	40.3994366	-104.9470285	0.32	
6000.00	1.270	271.220	5766.44	-1334.38	-539.22	-1334.02	1655162.61	14672194.00	40.3994368	-104.9470356	0.04	
6090.00	1.350	270.660	5856.42	-1336.44	-539.19	-1336.08	1655160.55	14672194.04	40.3994369	-104.9470430	0.09	
6179.00	1.210	273.570	5945.40	-1338.42	-539.11	-1338.07	1655158.56	14672194.11	40.3994371	-104.9470501	0.17	
6268.00	1.220	300.900	6034.38	-1340.17	-538.57	-1339.82	1655156.81	14672194.65	40.3994386	-104.9470564	0.65	
6358.00	1.310	296.400	6124.36	-1341.92	-537.62	-1341.56	1655155.07	14672195.60	40.3994412	-104.9470627	0.15	
6447.00	1.020	272.930	6213.34	-1343.62	-537.13	-1343.26	1655153.37	14672196.09	40.3994425	-104.9470688	0.62	
6536.00	1.000	259.420	6302.32	-1345.17	-537.23	-1344.82	1655151.81	14672195.99	40.3994423	-104.9470744	0.27	
6566.00†	1.182	70.240	6332.32	-1345.14	-537.17	-1344.78	1655151.85	14672196.04	40.3994424	-104.9470742	7.25	KOP
6626.00	5.530	73.550	6392.20	-1341.78	-536.14	-1341.43	1655155.20	14672197.07	40.3994452	-104.9470622	7.25	
6715.00	10.720	76.620	6480.28	-1329.61	-533.01	-1329.25	1655167.37	14672200.21	40.3994538	-104.9470185	5.85	
6804.00	16.300	84.140	6566.79	-1309.11	-529.82	-1308.76	1655187.85	14672203.42	40.3994626	-104.9469449	6.56	
6894.00	21.440	84.290	6651.93	-1280.16	-526.89	-1279.81	1655216.79	14672206.36	40.3994706	-104.9468410	5.71	
6983.00	26.970	84.810	6733.07	-1243.84	-523.44	-1243.50	1655253.09	14672209.83	40.3994801	-104.9467106	6.22	
7073.00	34.590	85.190	6810.34	-1197.99	-519.45	-1197.65	1655298.92	14672213.85	40.3994911	-104.9465460	8.47	
7162.00	43.570	85.620	6879.35	-1142.12	-514.98	-1141.78	1655354.76	14672218.36	40.3995034	-104.9463454	10.09	
7252.00	52.720	88.660	6939.35	-1075.24	-511.77	-1074.91	1655421.60	14672221.61	40.3995122	-104.9461053	10.47	
7341.00	62.880	91.030	6986.72	-1000.04	-511.65	-999.70	1655496.78	14672221.78	40.3995125	-104.9458353	11.63	
7431.00	71.430	90.550	7021.63	-917.19	-512.78	-916.85	1655579.60	14672220.70	40.3995094	-104.9455378	9.51	
7520.00	76.390	89.610	7046.29	-831.70	-512.89	-831.36	1655665.05	14672220.65	40.3995091	-104.9452309	5.66	
7609.00	81.600	89.510	7063.27	-744.37	-512.22	-744.03	1655752.35	14672221.38	40.3995110	-104.9449173	5.85	
7699.00	87.370	89.660	7071.92	-654.83	-511.57	-654.49	1655841.85	14672222.08	40.3995128	-104.9445958	6.41	LANDING (2571'FSL & 26'FWL, SEC.18) 40.3995128, -104.9445958
7788.00	88.700	89.690	7074.97	-565.88	-511.07	-565.54	1655930.76	14672222.64	40.3995141	-104.9442765	1.49	
7878.00	88.840	88.980	7076.90	-475.91	-510.02	-475.57	1656020.70	14672223.75	40.3995170	-104.9439535	0.80	
7967.00	88.880	87.290	7078.67	-386.97	-507.13	-386.64	1656109.59	14672226.70	40.3995250	-104.9436342	1.90	

Actual Wellpath Report

DAMORE 18-4HZ AWP

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REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-4HZ AWB
Slot	SLOT#04 DAMORE 18-4HZ (2201'FNL & 681'FWL,SEC.18)		

WELLPATH DATA (198 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
8056.00	90.610	88.650	7079.07	-298.03	-503.98	-297.70	1656198.49	14672229.91	40.3995336	-104.9433148	2.47	
8146.00	91.210	88.200	7077.64	-208.08	-501.50	-207.75	1656288.41	14672232.44	40.3995404	-104.9429919	0.83	
8235.00	91.810	90.730	7075.29	-119.12	-500.67	-118.79	1656377.33	14672233.33	40.3995427	-104.9426725	2.92	
8324.00	93.460	90.880	7071.20	-30.23	-501.92	-29.89	1656466.19	14672232.14	40.3995393	-104.9423533	1.86	
8414.00	92.770	92.350	7066.31	59.60	-504.45	59.93	1656555.98	14672229.66	40.3995323	-104.9420308	1.80	
8503.00	89.990	91.500	7064.17	148.51	-507.44	148.85	1656644.86	14672226.74	40.3995241	-104.9417116	3.27	
8593.00	90.950	93.280	7063.43	238.42	-511.19	238.76	1656734.74	14672223.04	40.3995138	-104.9413888	2.25	
8682.00	88.050	91.670	7064.20	327.32	-515.04	327.66	1656823.61	14672219.26	40.3995033	-104.9410696	3.73	
8771.00	88.710	91.440	7066.72	416.25	-517.45	416.60	1656912.51	14672216.91	40.3994966	-104.9407503	0.79	
8861.00	89.500	91.280	7068.13	506.21	-519.59	506.56	1657002.44	14672214.83	40.3994908	-104.9404273	0.90	
8950.00	89.440	91.050	7068.95	595.19	-521.40	595.54	1657091.38	14672213.08	40.3994858	-104.9401078	0.27	
9040.00	89.130	89.930	7070.07	685.18	-522.17	685.52	1657181.33	14672212.37	40.3994837	-104.9397847	1.29	
9129.00	88.210	90.620	7072.14	774.15	-522.59	774.50	1657270.27	14672212.00	40.3994825	-104.9394653	1.29	
9219.00	88.110	90.770	7075.03	864.10	-523.68	864.44	1657360.18	14672210.97	40.3994795	-104.9391423	0.20	
9308.00	88.810	91.280	7077.42	953.05	-525.28	953.40	1657449.10	14672209.43	40.3994751	-104.9388230	0.97	
9398.00	89.450	90.860	7078.79	1043.02	-526.96	1043.37	1657539.04	14672207.81	40.3994705	-104.9384999	0.85	
9487.00	90.320	90.970	7078.96	1132.01	-528.38	1132.36	1657627.99	14672206.45	40.3994666	-104.9381804	0.99	
9576.00	89.780	88.180	7078.89	1221.00	-527.72	1221.35	1657716.94	14672207.17	40.3994684	-104.9378609	3.19	
9666.00	90.530	88.720	7078.64	1310.96	-525.28	1311.31	1657806.87	14672209.66	40.3994751	-104.9375379	1.03	
9755.00	90.720	86.860	7077.67	1399.89	-521.85	1400.24	1657895.76	14672213.15	40.3994845	-104.9372187	2.10	
9845.00	91.520	88.480	7075.91	1489.80	-518.19	1490.14	1657985.62	14672216.86	40.3994945	-104.9368959	2.01	
9934.00	91.610	90.210	7073.48	1578.76	-517.18	1579.10	1658074.54	14672217.94	40.3994973	-104.9365765	1.95	
10024.00	90.350	90.790	7071.94	1668.74	-517.96	1669.08	1658164.49	14672217.21	40.3994951	-104.9362534	1.54	
10113.00	91.440	90.620	7070.55	1757.72	-519.06	1758.06	1658253.44	14672216.18	40.3994921	-104.9359339	1.24	
10202.00	90.390	91.330	7069.13	1846.69	-520.57	1847.04	1658342.37	14672214.72	40.3994879	-104.9356145	1.42	
10292.00	88.280	91.310	7070.18	1936.65	-522.64	1937.00	1658432.30	14672212.71	40.3994822	-104.9352915	2.34	
10381.00	88.670	91.000	7072.54	2025.60	-524.44	2025.95	1658521.22	14672210.97	40.3994772	-104.9349721	0.56	
10471.00	90.330	93.040	7073.33	2115.53	-527.61	2115.88	1658611.12	14672207.86	40.3994685	-104.9346492	2.92	
10560.00	89.470	93.850	7073.49	2204.37	-532.96	2204.72	1658699.92	14672202.57	40.3994538	-104.9343303	1.33	
10649.00	89.420	94.380	7074.35	2293.13	-539.34	2293.49	1658788.66	14672196.25	40.3994363	-104.9340116	0.60	
10739.00	89.510	93.900	7075.19	2382.89	-545.84	2383.25	1658878.39	14672189.81	40.3994184	-104.9336893	0.54	
10828.00	88.710	89.380	7076.57	2471.81	-548.39	2472.18	1658967.28	14672187.32	40.3994114	-104.9333700	5.16	
10917.00	90.450	88.940	7077.22	2560.80	-547.08	2561.16	1659056.23	14672188.69	40.3994149	-104.9330505	2.02	
11007.00	89.270	87.650	7077.44	2650.76	-544.41	2651.12	1659146.15	14672191.42	40.3994223	-104.9327276	1.94	
11096.00	89.990	88.400	7078.02	2739.70	-541.34	2740.06	1659235.06	14672194.55	40.3994307	-104.9324082	1.17	
11185.00	88.170	87.410	7079.45	2828.63	-538.09	2828.99	1659323.94	14672197.86	40.3994396	-104.9320889	2.33	
11275.00	88.280	87.450	7082.23	2918.50	-534.05	2918.85	1659413.77	14672201.95	40.3994506	-104.9317663	0.13	
11365.00	89.350	87.680	7084.10	3008.40	-530.23	3008.75	1659503.63	14672205.83	40.3994611	-104.9314435	1.22	
11454.00	91.560	88.250	7083.39	3097.34	-527.07	3097.69	1659592.53	14672209.04	40.3994697	-104.9311242	2.56	
11544.00	89.640	86.540	7082.45	3187.23	-522.98	3187.58	1659682.38	14672213.19	40.3994809	-104.9308015	2.86	
11633.00	90.470	86.820	7082.36	3276.09	-517.82	3276.43	1659771.19	14672218.40	40.3994950	-104.9304825	0.98	
11723.00	88.900	87.500	7082.86	3365.97	-513.37	3366.31	1659861.04	14672222.92	40.3995072	-104.9301597	1.90	
11812.00	89.220	87.690	7084.32	3454.89	-509.63	3455.22	1659949.91	14672226.71	40.3995174	-104.9298405	0.42	
11902.00	90.730	88.180	7084.36	3544.83	-506.39	3545.16	1660039.81	14672230.01	40.3995263	-104.9295176	1.76	
11991.00	89.480	89.050	7084.19	3633.80	-504.24	3634.13	1660128.74	14672232.22	40.3995322	-104.9291982	1.71	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-4HZ AWB
Slot	SLOT#04 DAMORE 18-4HZ (2201'FNL & 681'FWL,SEC.18)		

WELLPATH DATA (198 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
12080.00	90.520	89.070	7084.19	3722.79	-502.78	3723.12	1660217.69	14672233.73	40.3995362	-104.9288787	1.17	
12170.00	89.520	90.100	7084.16	3812.78	-502.13	3813.12	1660307.65	14672234.44	40.3995379	-104.9285556	1.60	
12260.00	90.750	90.800	7083.95	3902.78	-502.83	3903.11	1660397.61	14672233.80	40.3995359	-104.9282324	1.57	
12349.00	89.350	90.440	7083.87	3991.77	-503.79	3992.10	1660486.57	14672232.89	40.3995332	-104.9279129	1.62	
12439.00	89.420	89.890	7084.84	4081.76	-504.05	4082.10	1660576.53	14672232.69	40.3995325	-104.9275898	0.62	
12528.00	90.330	89.660	7085.03	4170.76	-503.70	4171.10	1660665.49	14672233.10	40.3995334	-104.9272703	1.05	
12618.00	89.520	91.780	7085.15	4260.75	-504.84	4261.08	1660755.44	14672232.03	40.3995303	-104.9269472	2.52	
12707.00	90.010	92.360	7085.51	4349.68	-508.05	4350.02	1660844.35	14672228.87	40.3995214	-104.9266279	0.85	
12797.00	89.160	92.600	7086.17	4439.59	-511.94	4439.93	1660934.23	14672225.04	40.3995107	-104.9263051	0.98	
12886.00	87.900	90.000	7088.45	4528.53	-513.96	4528.87	1661023.13	14672223.08	40.3995051	-104.9259857	3.25	
12976.00	89.080	91.440	7090.82	4618.49	-515.09	4618.83	1661113.05	14672222.01	40.3995019	-104.9256628	2.07	
13065.00	89.870	89.280	7091.64	4707.48	-515.65	4707.82	1661202.01	14672221.51	40.3995003	-104.9253433	2.58	
13155.00	91.380	88.900	7090.66	4797.46	-514.22	4797.80	1661291.95	14672222.99	40.3995042	-104.9250202	1.73	
13244.00	89.820	88.630	7089.72	4886.43	-512.31	4886.77	1661380.88	14672224.97	40.3995094	-104.9247008	1.78	
13333.00	89.550	88.030	7090.21	4975.39	-509.71	4975.73	1661469.81	14672227.62	40.3995165	-104.9243814	0.74	
13423.00	90.050	87.600	7090.53	5065.33	-506.28	5065.67	1661559.70	14672231.11	40.3995259	-104.9240585	0.73	
13513.00	89.920	89.070	7090.55	5155.29	-503.67	5155.63	1661649.62	14672233.78	40.3995330	-104.9237355	1.64	
13602.00	90.300	88.380	7090.38	5244.27	-501.69	5244.60	1661738.56	14672235.82	40.3995384	-104.9234160	0.89	
13692.00	90.620	90.180	7089.66	5334.26	-500.55	5334.59	1661828.51	14672237.01	40.3995414	-104.9230929	2.03	
13781.00	90.010	91.890	7089.17	5423.23	-502.16	5423.57	1661917.46	14672235.46	40.3995370	-104.9227735	2.04	
13870.00	88.810	92.300	7090.08	5512.17	-505.42	5512.50	1662006.36	14672232.26	40.3995280	-104.9224542	1.42	
13960.00	89.180	92.250	7091.66	5602.08	-508.99	5602.42	1662096.24	14672228.75	40.3995181	-104.9221313	0.41	
14050.00	89.750	92.390	7092.50	5692.00	-512.63	5692.34	1662186.13	14672225.17	40.3995081	-104.9218085	0.65	
14139.00	90.950	94.190	7091.96	5780.84	-517.74	5781.19	1662274.94	14672220.12	40.3994940	-104.9214895	2.43	
14229.00	90.080	94.140	7091.15	5870.59	-524.27	5870.94	1662364.67	14672213.65	40.3994760	-104.9211672	0.97	
14318.00	89.010	92.160	7091.86	5959.45	-529.16	5959.80	1662453.49	14672208.82	40.3994625	-104.9208482	2.53	
14407.00	88.110	90.180	7094.09	6048.40	-530.98	6048.75	1662542.41	14672207.06	40.3994575	-104.9205289	2.44	
14497.00	88.710	90.350	7096.59	6138.36	-531.40	6138.71	1662632.33	14672206.70	40.3994563	-104.9202059	0.69	
14586.00	89.810	92.470	7097.74	6227.32	-533.59	6227.67	1662721.26	14672204.57	40.3994502	-104.9198865	2.68	
14676.00	89.070	90.500	7098.62	6317.28	-535.92	6317.63	1662811.18	14672202.30	40.3994437	-104.9195635	2.34	
14765.00	89.390	88.720	7099.82	6406.26	-535.31	6406.62	1662900.13	14672202.96	40.3994453	-104.9192440	2.03	
14855.00	90.180	89.290	7100.15	6496.25	-533.75	6496.60	1662990.08	14672204.58	40.3994496	-104.9189209	1.08	
14944.00	90.700	87.520	7099.47	6585.21	-531.27	6585.56	1663079.00	14672207.12	40.3994563	-104.9186015	2.07	
15034.00	91.010	87.510	7098.13	6675.12	-527.37	6675.47	1663168.87	14672211.08	40.3994669	-104.9182787	0.34	
15123.00	91.830	87.670	7095.92	6764.01	-523.63	6764.36	1663257.73	14672214.87	40.3994771	-104.9179596	0.94	
15213.00	90.070	88.090	7094.43	6853.94	-520.30	6854.28	1663347.61	14672218.26	40.3994862	-104.9176367	2.01	
15302.00	90.010	88.230	7094.37	6942.89	-517.44	6943.24	1663436.53	14672221.17	40.3994940	-104.9173173	0.17	
15392.00	90.650	87.970	7093.85	7032.84	-514.46	7033.19	1663526.44	14672224.22	40.3995021	-104.9169944	0.77	
15481.00	91.420	88.340	7092.24	7121.78	-511.60	7122.12	1663615.34	14672227.14	40.3995099	-104.9166751	0.96	
15570.00	89.620	88.760	7091.43	7210.75	-509.34	7211.09	1663704.26	14672229.45	40.3995160	-104.9163556	2.08	
15660.00	89.840	88.240	7091.86	7300.72	-506.99	7301.06	1663794.19	14672231.86	40.3995224	-104.9160326	0.63	
15750.00	89.560	87.970	7092.33	7390.67	-504.01	7391.01	1663884.11	14672234.89	40.3995305	-104.9157097	0.43	
15839.00	89.840	88.150	7092.80	7479.62	-501.00	7479.95	1663973.02	14672237.96	40.3995387	-104.9153903	0.37	
15928.00	90.810	90.000	7092.29	7568.60	-499.56	7568.94	1664061.96	14672239.46	40.3995426	-104.9150708	2.35	
16018.00	90.790	89.390	7091.03	7658.59	-499.08	7658.92	1664151.91	14672240.00	40.3995438	-104.9147477	0.68	

Actual Wellpath Report

DAMORE 18-4HZ AWP

Page 6 of 8

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-4HZ AWB
Slot	SLOT#04 DAMORE 18-4HZ (2201'FNL & 681'FWL, SEC.18)		

WELLPATH DATA (198 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
16107.00	91.980	89.930	7088.88	7747.56	-498.55	7747.90	1664240.85	14672240.58	40.3995452	-104.9144283	1.47	
16196.00	90.010	90.730	7087.34	7836.54	-499.07	7836.88	1664329.79	14672240.13	40.3995437	-104.9141088	2.39	
16285.00	89.320	92.500	7087.86	7925.50	-501.58	7925.83	1664418.72	14672237.68	40.3995367	-104.9137894	2.13	
16375.00	89.980	91.990	7088.41	8015.43	-505.10	8015.76	1664508.61	14672234.21	40.3995270	-104.9134666	0.93	
16464.00	88.020	90.470	7089.96	8104.38	-507.01	8104.72	1664597.54	14672232.36	40.3995216	-104.9131472	2.79	
16554.00	89.020	90.190	7092.29	8194.35	-507.53	8194.69	1664687.47	14672231.90	40.3995201	-104.9128242	1.15	
16643.00	89.500	89.780	7093.43	8283.34	-507.51	8283.68	1664776.42	14672231.98	40.3995201	-104.9125046	0.71	
16733.00	90.240	90.350	7093.64	8373.34	-507.61	8373.68	1664866.39	14672231.94	40.3995198	-104.9121815	1.04	
16822.00	91.320	90.770	7092.43	8462.33	-508.48	8462.67	1664955.34	14672231.13	40.3995173	-104.9118620	1.30	
16912.00	89.900	89.340	7091.47	8552.32	-508.56	8552.66	1665045.29	14672231.10	40.3995170	-104.9115389	2.24	
17001.00	90.130	88.780	7091.45	8641.31	-507.10	8641.64	1665134.24	14672232.62	40.3995209	-104.9112194	0.68	
17091.00	91.250	88.650	7090.36	8731.28	-505.09	8731.61	1665224.17	14672234.70	40.3995263	-104.9108964	1.25	
17180.00	89.610	90.130	7089.69	8820.26	-504.14	8820.60	1665313.13	14672235.70	40.3995289	-104.9105769	2.48	
17270.00	90.470	90.150	7089.63	8910.26	-504.36	8910.60	1665403.09	14672235.54	40.3995282	-104.9102538	0.96	
17360.00	91.820	89.930	7087.83	9000.24	-504.42	9000.58	1665493.03	14672235.54	40.3995279	-104.9099307	1.52	
17449.00	93.140	89.090	7083.98	9089.15	-503.66	9089.49	1665581.91	14672236.35	40.3995299	-104.9096115	1.76	
17539.00	94.980	89.050	7077.61	9178.91	-502.20	9179.25	1665671.63	14672237.87	40.3995338	-104.9092892	2.04	LAST BH MWD+IFR1+MSA SURVEY
17613.00†	94.980	89.050	7071.19	9252.62	-500.98	9252.96	1665745.31	14672239.14	40.3995371	-104.9090246	0.00	PTB (2606'FSL & 481'FEL, SEC.17) 40.3995371, -104.9090246

HOLE & CASING SECTIONS - Ref Wellbore: DAMORE 18-4HZ AWB Ref Wellpath: DAMORE 18-4HZ 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	1886.00	1860.00	26.00	1837.77	0.00	0.00	-123.22	-325.92

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-4HZ AWB
Slot	SLOT#04 DAMORE 18-4HZ (2201'FNL & 681'FWL,SEC.18)		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
DAMORE DSU	16.00	34.61	-28.69	1656467.04	14672768.45	40.4010120	-104.9423490	polygon
	2D Polygon: dimensions not calculated							
SEC.13-T5N-R67W	16.00	-957.32	-1249.00	1655247.87	14671776.13	40.3982892	-104.9467303	polygon
	2D Polygon: dimensions not calculated							
SEC.14-T5N-R67W	16.00	-957.32	-1249.00	1655247.87	14671776.13	40.3982892	-104.9467303	polygon
	2D Polygon: dimensions not calculated							
SEC.15-T5N-R67W	16.00	-963.32	-1249.00	1655247.87	14671770.13	40.3982727	-104.9467303	polygon
	2D Polygon: dimensions not calculated							
SEC.17-T5N-R67W	16.00	-943.32	-1249.00	1655247.86	14671790.12	40.3983276	-104.9467303	polygon
	2D Polygon: dimensions not calculated							
SEC.18-T5N-R67W	16.00	-943.32	-1249.00	1655247.86	14671790.12	40.3983276	-104.9467303	polygon
	2D Polygon: dimensions not calculated							
DAMORE 18-4HZ HEEL REV-1 (2559'FSL & 75'FWL,SEC.18)	7068.00	-523.51	-613.03	1655883.30	14672210.18	40.3994800	-104.9444470	point
DAMORE 18-4HZ BHL REV-2 (2590'FSL & 480'FEL,SEC.17)	7088.00	-517.01	9254.35	1665746.71	14672223.12	40.3994931	-104.9090196	point

WELLPATH COMPOSITION - Ref Wellbore: DAMORE 18-4HZ AWB Ref Wellpath: DAMORE 18-4HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore	Survey Date
26.00	1838.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <120 - 1820 >	DAMORE 18-4HZ AWB	2/25/2020
1838.00	17613.00	Custom APC ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BH Custom APC ISCWSA Rev-2 MWD+IFR1+MSA<1950 - 17539 >	DAMORE 18-4HZ AWB	3/24/2020

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-4HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-4HZ AWB
Slot	SLOT#04 DAMORE 18-4HZ (2201'FNL & 681'FWL, SEC.18)		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
138.00	0.130	189.140	138.00	FIRST SURFACE MWD+IFR1 SURVEY
1838.00	21.160	250.860	1792.99	LAST SURFACE MWD+IFR1 SURVEY
1950.00	20.810	248.990	1897.56	FIRST BH MWD+IFR1+MSA SURVEY
6566.00	1.182	70.240	6332.32	KOP
7699.00	87.370	89.660	7071.92	LANDING (2571'FSL & 26'FWL, SEC.18) 40.3995128, -104.9445958
17539.00	94.980	89.050	7077.61	LAST BH MWD+IFR1+MSA SURVEY
17613.00	94.980	89.050	7071.19	PTB (2606'FSL & 481'FEL, SEC.17) 40.3995371, -104.9090246