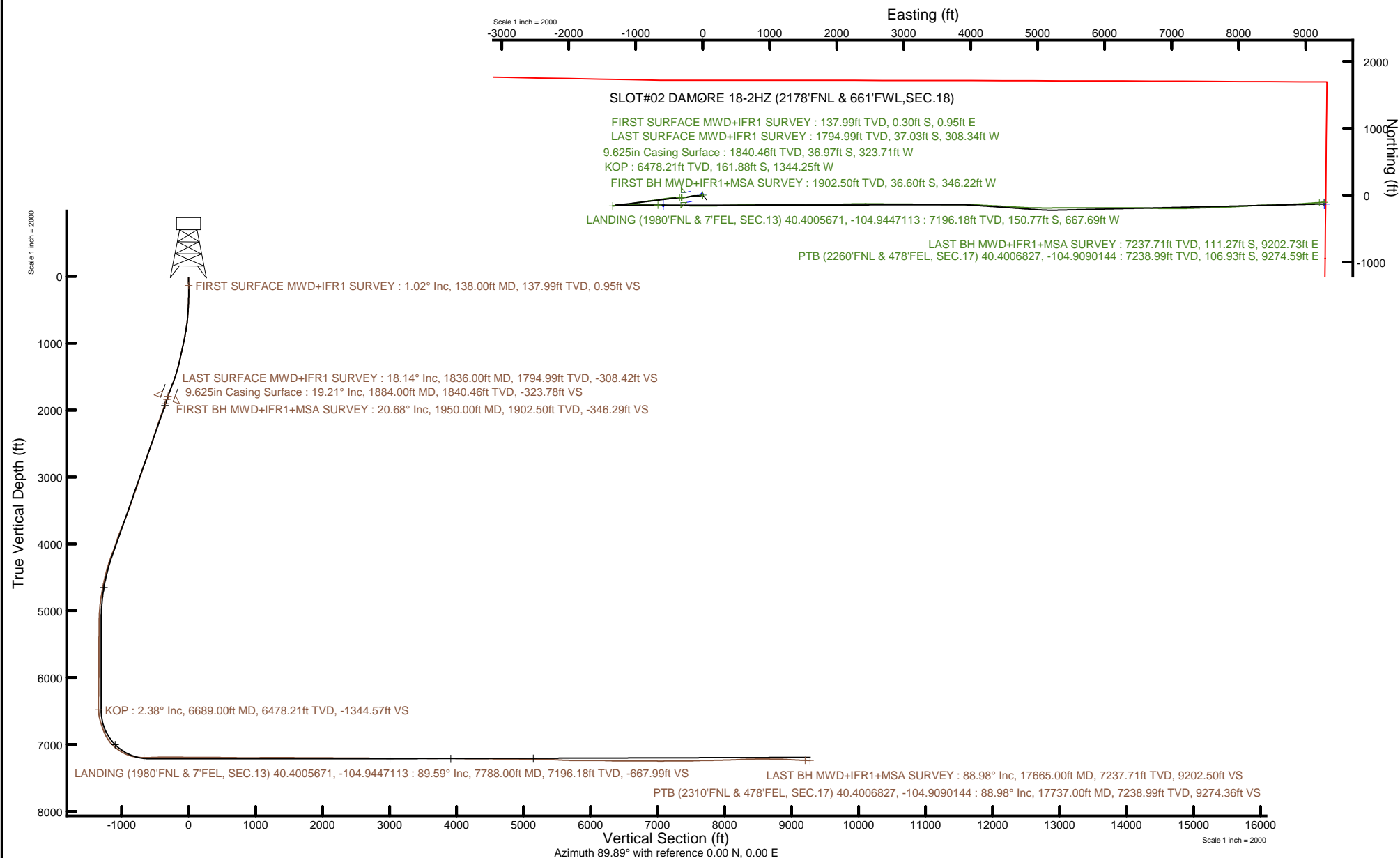


Location:	COLORADO	Slot:	SLOT#02 DAMORE 18-2HZ (2178'FNL & 661'FWL,SEC.18)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	DAMORE 18-2HZ
Facility:	SEC.18-T5N-R67W	Wellbore:	DAMORE 18-2HZ PWB
Plot reference wellpath is DAMORE 18-2HZ PWP Rev.C-0		Grid System: NAD83 / UTM Zone 13 North, US feet	
True vertical 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: 4048 feet		Coordinates are in feet referenced to Slot	
Mean Sea Level to Mud line (At Slot: SLOT#02 DAMORE 18-2HZ (2178'FNL & 661'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 18-2HZ AWP

Page 1 of 8

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-2HZ AWB
Slot	SLOT#02 DAMORE 18-2HZ (2178'FNL & 661'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 9:23:48 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	-11.48	9.72	1656476.80	14672757.17	40.4009810°	-104.9423140°
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#02 DAMORE 18-2HZ (2178'FNL & 661'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	89.89°

Actual Wellpath Report

DAMORE 18-2HZ AWP

Page 2 of 8

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-2HZ AWB
Slot	SLOT#02 DAMORE 18-2HZ (2178'FNL & 661'FWL,SEC.18)		

WELLPATH DATA (199 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	107.620	0.00	0.00	0.00	0.00	1656476.79	14672757.17	40.4009810	-104.9423140	0.00	
26.00	0.000	107.620	26.00	0.00	0.00	0.00	1656476.79	14672757.17	40.4009810	-104.9423140	0.00	
138.00	1.020	107.620	137.99	0.95	-0.30	0.95	1656477.74	14672756.87	40.4009802	-104.9423106	0.91	FIRST SURFACE MWD+IFR1 SURVEY
233.00	0.920	190.750	232.98	1.61	-1.31	1.61	1656478.41	14672755.87	40.4009774	-104.9423082	1.36	
328.00	1.290	272.180	327.97	0.40	-2.02	0.40	1656477.20	14672755.16	40.4009755	-104.9423126	1.55	
423.00	2.710	273.940	422.91	-2.91	-1.82	-2.91	1656473.89	14672755.35	40.4009760	-104.9423244	1.50	
518.00	3.500	266.950	517.77	-8.05	-1.82	-8.04	1656468.76	14672755.35	40.4009760	-104.9423429	0.92	
613.00	5.120	252.830	612.50	-15.00	-3.23	-14.99	1656461.81	14672753.94	40.4009721	-104.9423678	2.03	
708.00	7.570	253.780	706.91	-25.06	-6.23	-25.05	1656451.76	14672750.93	40.4009639	-104.9424039	2.58	
803.00	9.410	259.300	800.87	-38.71	-9.42	-38.69	1656438.13	14672747.73	40.4009552	-104.9424529	2.12	
899.00	11.150	267.210	895.33	-55.70	-11.33	-55.67	1656421.15	14672745.81	40.4009499	-104.9425139	2.33	
993.00	11.630	273.210	987.48	-74.24	-11.24	-74.21	1656402.62	14672745.89	40.4009502	-104.9425805	1.36	
1089.00	12.080	271.440	1081.43	-93.94	-10.44	-93.92	1656382.92	14672746.67	40.4009523	-104.9426512	0.60	
1184.00	12.930	268.130	1174.18	-114.50	-10.54	-114.48	1656362.37	14672746.56	40.4009521	-104.9427250	1.17	
1279.00	12.450	262.740	1266.86	-135.28	-12.18	-135.26	1656341.60	14672744.91	40.4009476	-104.9427996	1.34	
1373.00	15.430	259.940	1358.09	-157.66	-15.65	-157.63	1656319.24	14672741.43	40.4009380	-104.9428800	3.25	
1468.00	17.380	258.550	1449.21	-184.02	-20.67	-183.98	1656292.90	14672736.39	40.4009243	-104.9429746	2.09	
1562.00	19.950	257.360	1538.26	-213.45	-26.97	-213.39	1656263.50	14672730.07	40.4009070	-104.9430802	2.76	
1658.00	21.550	262.470	1628.04	-246.92	-32.86	-246.86	1656230.06	14672724.16	40.4008908	-104.9432003	2.52	
1753.00	20.600	266.600	1716.69	-280.91	-36.14	-280.84	1656196.09	14672720.86	40.4008818	-104.9433223	1.86	
1836.00	18.140	269.910	1794.99	-308.42	-37.03	-308.34	1656168.60	14672719.96	40.4008794	-104.9434211	3.24	LAST SURFACE MWD+IFR1 SURVEY
1950.00	20.680	271.300	1902.50	-346.29	-36.60	-346.22	1656130.74	14672720.36	40.4008805	-104.9435571	2.26	FIRST BH MWD+IFR1+MSA SURVEY
2040.00	19.950	269.790	1986.90	-377.53	-36.29	-377.46	1656099.51	14672720.64	40.4008814	-104.9436693	1.00	
2130.00	19.500	267.400	2071.62	-407.89	-37.03	-407.82	1656069.16	14672719.89	40.4008793	-104.9437783	1.03	
2219.00	19.220	265.300	2155.59	-437.34	-38.91	-437.26	1656039.73	14672717.99	40.4008742	-104.9438840	0.84	
2308.00	18.680	263.590	2239.77	-466.11	-41.70	-466.03	1656010.98	14672715.19	40.4008665	-104.9439872	0.87	
2398.00	18.570	263.180	2325.05	-494.67	-45.01	-494.58	1655982.44	14672711.86	40.4008574	-104.9440897	0.19	
2487.00	18.510	262.920	2409.44	-522.76	-48.43	-522.67	1655954.37	14672708.42	40.4008480	-104.9441906	0.11	
2576.00	18.250	263.290	2493.90	-550.63	-51.80	-550.53	1655926.52	14672705.03	40.4008388	-104.9442906	0.32	
2666.00	19.730	260.160	2579.00	-579.60	-56.05	-579.50	1655897.57	14672700.77	40.4008271	-104.9443946	2.00	
2755.00	18.560	259.840	2663.07	-608.36	-61.11	-608.24	1655868.84	14672695.69	40.4008132	-104.9444978	1.32	
2845.00	20.580	261.530	2747.87	-638.12	-65.97	-637.99	1655839.11	14672690.81	40.4007999	-104.9446046	2.33	
2934.00	19.490	261.460	2831.48	-668.28	-70.48	-668.14	1655808.97	14672686.29	40.4007875	-104.9447129	1.23	
3024.00	17.670	261.020	2916.79	-696.63	-74.84	-696.48	1655780.64	14672681.91	40.4007755	-104.9448147	2.03	
3113.00	19.900	263.820	3001.04	-725.04	-78.58	-724.89	1655752.25	14672678.15	40.4007653	-104.9449167	2.70	
3202.00	18.110	262.840	3085.19	-753.83	-81.93	-753.68	1655723.48	14672674.78	40.4007561	-104.9450200	2.04	
3292.00	19.810	264.100	3170.30	-782.89	-85.25	-782.73	1655694.44	14672671.45	40.4007470	-104.9451243	1.94	
3382.00	18.150	262.750	3255.41	-811.98	-88.58	-811.80	1655665.37	14672668.09	40.4007378	-104.9452287	1.91	
3471.00	19.670	261.740	3339.60	-840.56	-92.48	-840.38	1655636.81	14672664.18	40.4007271	-104.9453313	1.75	
3561.00	20.320	260.520	3424.18	-870.97	-97.23	-870.78	1655606.42	14672659.41	40.4007141	-104.9454405	0.86	
3650.00	19.110	259.780	3507.96	-900.56	-102.36	-900.37	1655576.86	14672654.26	40.4007000	-104.9455467	1.39	
3740.00	22.420	262.180	3592.10	-932.08	-107.32	-931.88	1655545.36	14672649.29	40.4006864	-104.9456598	3.80	
3829.00	22.640	261.960	3674.31	-965.87	-112.02	-965.65	1655511.60	14672644.57	40.4006735	-104.9457811	0.26	
3918.00	22.080	261.930	3756.62	-999.40	-116.76	-999.18	1655478.10	14672639.80	40.4006604	-104.9459015	0.63	
4008.00	20.410	260.260	3840.50	-1031.63	-121.79	-1031.39	1655445.90	14672634.75	40.4006466	-104.9460171	1.97	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-2HZ AWB
Slot	SLOT#02 DAMORE 18-2HZ (2178'FNL & 661'FWL,SEC.18)		

WELLPATH DATA (199 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	19.600	253.900	3924.14	-1061.28	-128.56	-1061.03	1655416.27	14672627.97	40.4006281	-104.9461236	2.61	
4187.00	19.640	258.120	4008.92	-1090.60	-135.86	-1090.34	1655386.98	14672620.65	40.4006080	-104.9462288	1.57	
4277.00	20.230	261.980	4093.53	-1120.82	-141.15	-1120.55	1655356.79	14672615.35	40.4005935	-104.9463372	1.60	
4366.00	20.050	266.620	4177.09	-1151.30	-144.19	-1151.02	1655326.33	14672612.29	40.4005851	-104.9464466	1.81	
4456.00	19.080	266.400	4261.89	-1181.39	-146.03	-1181.10	1655296.26	14672610.43	40.4005801	-104.9465546	1.08	
4545.00	16.520	266.710	4346.63	-1208.54	-147.67	-1208.26	1655269.12	14672608.78	40.4005756	-104.9466521	2.88	
4634.00	14.590	264.980	4432.36	-1232.35	-149.37	-1232.06	1655245.33	14672607.06	40.4005709	-104.9467376	2.23	
4724.00	12.690	263.890	4519.82	-1253.48	-151.42	-1253.18	1655224.21	14672605.00	40.4005653	-104.9468134	2.13	
4814.00	11.720	268.510	4607.79	-1272.45	-152.71	-1272.15	1655205.26	14672603.70	40.4005617	-104.9468815	1.53	
4903.00	10.320	266.430	4695.15	-1289.44	-153.44	-1289.14	1655188.27	14672602.95	40.4005597	-104.9469426	1.63	
4992.00	8.800	265.000	4782.91	-1304.18	-154.53	-1303.88	1655173.54	14672601.85	40.4005567	-104.9469955	1.73	
5082.00	6.900	262.520	4872.06	-1316.40	-155.83	-1316.10	1655161.32	14672600.54	40.4005532	-104.9470393	2.14	
5171.00	5.150	271.520	4960.57	-1325.70	-156.42	-1325.40	1655152.03	14672599.95	40.4005515	-104.9470727	2.23	
5261.00	2.840	280.810	5050.34	-1331.93	-155.90	-1331.63	1655145.81	14672600.47	40.4005530	-104.9470951	2.66	
5350.00	0.320	234.110	5139.30	-1334.30	-155.63	-1333.99	1655143.44	14672600.73	40.4005537	-104.9471036	2.96	
5464.00	0.770	242.380	5253.30	-1335.23	-156.17	-1334.93	1655142.50	14672600.19	40.4005522	-104.9471069	0.40	
5553.00	1.090	255.800	5342.29	-1336.58	-156.66	-1336.28	1655141.15	14672599.71	40.4005509	-104.9471118	0.43	
5643.00	0.360	277.110	5432.28	-1337.70	-156.83	-1337.39	1655140.04	14672599.53	40.4005504	-104.9471158	0.85	
5732.00	0.240	226.300	5521.28	-1338.11	-156.92	-1337.80	1655139.63	14672599.44	40.4005502	-104.9471173	0.31	
5821.00	0.360	218.720	5610.28	-1338.42	-157.27	-1338.11	1655139.32	14672599.09	40.4005492	-104.9471184	0.14	
5911.00	0.390	207.790	5700.27	-1338.74	-157.76	-1338.43	1655139.00	14672598.60	40.4005479	-104.9471195	0.09	
6000.00	0.450	227.790	5789.27	-1339.14	-158.27	-1338.83	1655138.60	14672598.10	40.4005465	-104.9471210	0.18	
6090.00	0.530	203.890	5879.27	-1339.57	-158.88	-1339.26	1655138.17	14672597.48	40.4005448	-104.9471225	0.24	
6179.00	0.780	232.520	5968.26	-1340.22	-159.63	-1339.91	1655137.53	14672596.73	40.4005427	-104.9471248	0.45	
6268.00	0.890	237.950	6057.25	-1341.29	-160.36	-1340.98	1655136.46	14672596.00	40.4005407	-104.9471287	0.15	
6358.00	0.690	241.130	6147.24	-1342.36	-161.00	-1342.04	1655135.39	14672595.36	40.4005390	-104.9471325	0.23	
6447.00	0.640	256.540	6236.24	-1343.31	-161.37	-1343.00	1655134.44	14672594.99	40.4005380	-104.9471359	0.21	
6536.00	0.700	271.820	6325.23	-1344.34	-161.47	-1344.02	1655133.42	14672594.89	40.4005377	-104.9471396	0.21	
6626.00	0.730	260.810	6415.23	-1345.45	-161.54	-1345.14	1655132.30	14672594.81	40.4005375	-104.9471436	0.16	
6689.00†	2.384	101.958	6478.21	-1344.57	-161.88	-1344.25	1655133.19	14672594.48	40.4005366	-104.9471404	4.88	KOP
6715.00	3.650	100.250	6504.17	-1343.22	-162.14	-1342.91	1655134.53	14672594.22	40.4005358	-104.9471356	4.88	
6804.00	11.960	84.700	6592.28	-1331.23	-161.79	-1330.92	1655146.52	14672594.58	40.4005368	-104.9470925	9.55	
6894.00	17.420	79.430	6679.31	-1308.68	-158.45	-1308.37	1655169.05	14672597.93	40.4005460	-104.9470116	6.24	
6983.00	19.690	81.590	6763.68	-1280.74	-153.82	-1280.44	1655196.97	14672602.58	40.4005587	-104.9469113	2.66	
7073.00	24.070	87.720	6847.19	-1247.37	-150.87	-1247.08	1655230.31	14672605.55	40.4005668	-104.9467915	5.48	
7162.00	34.840	87.190	6924.57	-1203.71	-148.89	-1203.43	1655273.95	14672607.55	40.4005722	-104.9466348	12.10	
7252.00	43.250	87.580	6994.40	-1147.12	-146.33	-1146.84	1655330.51	14672610.15	40.4005793	-104.9464316	9.35	
7341.00	51.090	88.560	7054.86	-1081.94	-144.17	-1081.66	1655395.66	14672612.36	40.4005852	-104.9461976	8.85	
7431.00	58.740	88.360	7106.55	-1008.37	-142.18	-1008.09	1655469.20	14672614.39	40.4005907	-104.9459335	8.50	
7520.00	66.640	90.920	7147.36	-929.36	-141.75	-929.09	1655548.17	14672614.87	40.4005919	-104.9456498	9.24	
7609.00	75.690	91.880	7176.06	-845.25	-143.82	-844.97	1655632.26	14672612.85	40.4005862	-104.9453478	10.22	
7699.00	84.460	92.970	7191.56	-756.77	-147.58	-756.48	1655720.71	14672609.15	40.4005759	-104.9450301	9.82	
7788.00	89.590	91.150	7196.18	-667.99	-150.77	-667.69	1655809.47	14672606.02	40.4005671	-104.9447113	6.11	LANDING (1980'FNL & 7'FEL, SEC.13) 40.4005671, -104.9447113
7878.00	91.410	90.370	7195.40	-578.00	-151.97	-577.71	1655899.42	14672604.89	40.4005638	-104.9443882	2.20	
7967.00	92.380	90.380	7192.45	-489.06	-152.55	-488.76	1655988.33	14672604.36	40.4005623	-104.9440688	1.09	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-2HZ AWB
Slot	SLOT#02 DAMORE 18-2HZ (2178'FNL & 661'FWL,SEC.18)		

WELLPATH DATA (199 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	91.390	91.440	7189.52	-400.12	-153.96	-399.82	1656077.23	14672603.01	40.4005584	-104.9437495	1.63	
8146.00	89.310	91.260	7188.97	-310.16	-156.08	-309.85	1656167.17	14672600.95	40.4005526	-104.9434265	2.32	
8235.00	90.220	91.520	7189.34	-221.19	-158.24	-220.88	1656256.11	14672598.85	40.4005466	-104.9431071	1.06	
8324.00	88.360	90.980	7190.44	-132.23	-160.18	-131.91	1656345.04	14672596.97	40.4005413	-104.9427876	2.18	
8414.00	89.180	90.590	7192.37	-42.26	-161.41	-41.94	1656434.97	14672595.79	40.4005379	-104.9424646	1.01	
8503.00	90.180	90.340	7192.87	46.73	-162.14	47.05	1656523.93	14672595.13	40.4005360	-104.9421451	1.16	
8593.00	89.580	88.640	7193.06	136.73	-161.34	137.04	1656613.89	14672595.99	40.4005381	-104.9418220	2.00	
8682.00	90.490	87.480	7193.01	225.68	-158.32	225.99	1656702.80	14672599.06	40.4005464	-104.9415026	1.66	
8772.00	88.990	88.250	7193.41	315.62	-154.97	315.92	1656792.69	14672602.47	40.4005556	-104.9411797	1.87	
8861.00	89.960	88.230	7194.23	404.58	-152.24	404.88	1656881.61	14672605.26	40.4005631	-104.9408603	1.09	
8950.00	88.870	88.570	7195.14	493.54	-149.75	493.84	1656970.53	14672607.80	40.4005699	-104.9405409	1.28	
9040.00	89.870	88.340	7196.13	583.51	-147.33	583.80	1657060.45	14672610.29	40.4005766	-104.9402179	1.14	
9129.00	88.590	89.320	7197.32	672.48	-145.51	672.77	1657149.39	14672612.16	40.4005816	-104.9398985	1.81	
9219.00	89.190	89.660	7199.07	762.46	-144.71	762.75	1657239.33	14672613.02	40.4005838	-104.9395754	0.77	
9308.00	89.510	89.170	7200.08	851.45	-143.80	851.74	1657328.28	14672613.99	40.4005862	-104.9392559	0.66	
9398.00	90.390	89.080	7200.16	941.44	-142.42	941.72	1657418.23	14672615.42	40.4005900	-104.9389328	0.98	
9487.00	91.290	88.890	7198.85	1030.42	-140.85	1030.70	1657507.17	14672617.05	40.4005943	-104.9386134	1.03	
9576.00	90.700	89.930	7197.31	1119.40	-139.93	1119.68	1657596.12	14672618.03	40.4005968	-104.9382939	1.34	
9666.00	89.870	91.590	7196.86	1209.39	-141.13	1209.67	1657686.07	14672616.89	40.4005935	-104.9379708	2.06	
9755.00	90.620	91.580	7196.48	1298.35	-143.59	1298.63	1657775.00	14672614.49	40.4005868	-104.9376514	0.84	
9845.00	89.790	91.240	7196.16	1388.31	-145.80	1388.60	1657864.93	14672612.33	40.4005807	-104.9373283	1.00	
9934.00	89.610	91.670	7196.62	1477.28	-148.06	1477.57	1657953.87	14672610.13	40.4005745	-104.9370089	0.52	
10024.00	88.780	89.330	7197.89	1567.26	-148.85	1567.55	1658043.81	14672609.41	40.4005723	-104.9366858	2.76	
10113.00	89.950	88.550	7198.87	1656.24	-147.20	1656.53	1658132.76	14672611.11	40.4005768	-104.9363664	1.58	
10202.00	88.870	88.950	7199.79	1745.22	-145.26	1745.50	1658221.69	14672613.11	40.4005821	-104.9360469	1.29	
10292.00	90.010	88.790	7200.67	1835.20	-143.48	1835.48	1658311.63	14672614.94	40.4005870	-104.9357239	1.28	
10381.00	91.100	88.400	7199.81	1924.17	-141.30	1924.45	1658400.56	14672617.18	40.4005929	-104.9354044	1.30	
10471.00	89.160	88.430	7199.60	2014.13	-138.81	2014.41	1658490.48	14672619.73	40.4005997	-104.9350814	2.16	
10560.00	89.360	87.360	7200.75	2103.07	-135.54	2103.34	1658579.38	14672623.05	40.4006087	-104.9347621	1.22	
10649.00	88.760	88.920	7202.21	2192.01	-132.66	2192.28	1658668.28	14672626.00	40.4006166	-104.9344428	1.88	
10739.00	89.470	89.060	7203.60	2281.99	-131.07	2282.25	1658758.21	14672627.64	40.4006209	-104.9341198	0.80	
10828.00	90.160	88.860	7203.89	2370.98	-129.45	2371.24	1658847.16	14672629.32	40.4006253	-104.9338003	0.81	
10917.00	89.410	90.570	7204.22	2459.97	-129.01	2460.23	1658936.12	14672629.82	40.4006265	-104.9334808	2.10	
11043.00	90.420	90.740	7204.41	2585.96	-130.45	2586.22	1659062.06	14672628.46	40.4006225	-104.9330284	0.81	
11133.00	89.250	90.930	7204.67	2675.95	-131.76	2676.21	1659152.01	14672627.21	40.4006189	-104.9327053	1.32	
11222.00	89.220	90.280	7205.86	2764.93	-132.70	2765.20	1659240.97	14672626.32	40.4006163	-104.9323858	0.73	
11312.00	90.190	90.400	7206.32	2854.93	-133.24	2855.19	1659330.93	14672625.85	40.4006148	-104.9320627	1.09	
11401.00	89.080	90.380	7206.89	2943.92	-133.84	2944.19	1659419.89	14672625.30	40.4006131	-104.9317432	1.25	
11491.00	89.820	90.600	7207.75	3033.91	-134.61	3034.18	1659509.84	14672624.59	40.4006110	-104.9314200	0.86	
11581.00	90.960	90.380	7207.14	3123.90	-135.38	3124.17	1659599.80	14672623.88	40.4006088	-104.9310969	1.29	
11670.00	89.240	90.550	7206.98	3212.89	-136.11	3213.17	1659688.76	14672623.22	40.4006068	-104.9307774	1.94	
11759.00	89.810	90.370	7207.72	3301.88	-136.82	3302.16	1659777.72	14672622.56	40.4006048	-104.9304579	0.67	
11849.00	90.780	90.160	7207.26	3391.88	-137.24	3392.16	1659867.68	14672622.20	40.4006037	-104.9301348	1.10	
11938.00	89.190	90.940	7207.28	3480.87	-138.09	3481.15	1659956.63	14672621.41	40.4006013	-104.9298152	1.99	
12028.00	89.070	90.190	7208.65	3570.85	-138.98	3571.13	1660046.58	14672620.58	40.4005988	-104.9294922	0.84	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-2HZ AWB
Slot	SLOT#02 DAMORE 18-2HZ (2178'FNL & 661'FWL,SEC.18)		

WELLPATH DATA (199 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
12117.00	90.330	90.830	7209.11	3659.85	-139.77	3660.13	1660135.54	14672619.85	40.4005966	-104.9291726	1.59	
12207.00	91.240	90.290	7207.88	3749.83	-140.65	3750.11	1660225.49	14672619.02	40.4005941	-104.9288496	1.18	
12296.00	89.380	90.560	7207.40	3838.82	-141.31	3839.10	1660314.45	14672618.42	40.4005923	-104.9285300	2.11	
12386.00	89.950	90.700	7207.93	3928.81	-142.30	3929.10	1660404.40	14672617.49	40.4005895	-104.9282069	0.65	
12475.00	88.670	91.510	7209.00	4017.78	-144.02	4018.07	1660493.34	14672615.83	40.4005848	-104.9278875	1.70	
12565.00	88.250	93.130	7211.42	4107.66	-147.66	4107.96	1660583.20	14672612.25	40.4005748	-104.9275647	1.86	
12654.00	89.480	93.400	7213.18	4196.49	-152.72	4196.80	1660672.00	14672607.25	40.4005608	-104.9272458	1.41	
12744.00	90.410	92.440	7213.27	4286.36	-157.31	4286.68	1660761.85	14672602.72	40.4005482	-104.9269231	1.49	
12833.00	88.960	92.780	7213.75	4375.26	-161.36	4375.58	1660850.72	14672598.73	40.4005370	-104.9266039	1.67	
12923.00	90.050	92.890	7214.53	4465.13	-165.81	4465.47	1660940.58	14672594.34	40.4005247	-104.9262811	1.22	
13012.00	88.990	93.680	7215.28	4553.97	-170.91	4554.32	1661029.39	14672589.30	40.4005107	-104.9259621	1.49	
13102.00	89.720	93.670	7216.29	4643.77	-176.68	4644.12	1661119.17	14672583.59	40.4004948	-104.9256397	0.81	
13191.00	90.640	93.260	7216.01	4732.60	-182.06	4732.96	1661207.97	14672578.27	40.4004800	-104.9253208	1.13	
13281.00	90.190	93.160	7215.36	4822.44	-187.10	4822.82	1661297.80	14672573.29	40.4004661	-104.9249981	0.51	
13370.00	87.590	90.940	7217.08	4911.35	-190.28	4911.73	1661386.67	14672570.17	40.4004573	-104.9246789	3.84	
13460.00	87.850	90.760	7220.66	5001.26	-191.62	5001.65	1661476.56	14672568.89	40.4004536	-104.9243561	0.35	
13549.00	88.990	90.550	7223.12	5090.22	-192.63	5090.61	1661565.48	14672567.94	40.4004508	-104.9240367	1.30	
13639.00	89.810	89.670	7224.06	5180.21	-192.81	5180.60	1661655.44	14672567.82	40.4004503	-104.9237135	1.34	
13728.00	90.380	87.960	7223.91	5269.19	-190.97	5269.58	1661744.38	14672569.72	40.4004553	-104.9233941	2.03	
13818.00	88.390	89.610	7224.88	5359.16	-189.06	5359.54	1661834.31	14672571.69	40.4004605	-104.9230711	2.87	
13907.00	87.370	91.170	7228.17	5448.10	-189.66	5448.48	1661923.21	14672571.14	40.4004587	-104.9227518	2.09	
13997.00	86.850	90.870	7232.71	5537.96	-191.26	5538.35	1662013.04	14672569.60	40.4004543	-104.9224291	0.67	
14086.00	87.710	89.900	7236.93	5626.86	-191.86	5627.24	1662101.90	14672569.06	40.4004526	-104.9221099	1.46	
14176.00	89.330	90.090	7239.26	5716.83	-191.85	5717.21	1662191.83	14672569.13	40.4004526	-104.9217869	1.81	
14265.00	90.790	89.760	7239.16	5805.82	-191.74	5806.21	1662280.79	14672569.30	40.4004528	-104.9214674	1.68	
14355.00	89.220	89.460	7239.16	5895.82	-191.12	5896.20	1662370.75	14672569.97	40.4004544	-104.9211442	1.78	
14444.00	89.610	89.110	7240.06	5984.81	-190.01	5985.19	1662459.71	14672571.14	40.4004574	-104.9208247	0.59	
14534.00	89.790	91.110	7240.54	6074.80	-190.19	6075.19	1662549.66	14672571.03	40.4004569	-104.9205016	2.23	
14623.00	89.880	89.660	7240.79	6163.80	-190.78	6164.18	1662638.62	14672570.49	40.4004552	-104.9201821	1.63	
14712.00	87.500	90.010	7242.83	6252.77	-190.53	6253.15	1662727.56	14672570.80	40.4004558	-104.9198627	2.70	
14802.00	88.480	89.990	7245.98	6342.71	-190.53	6343.09	1662817.46	14672570.86	40.4004558	-104.9195397	1.09	
14892.00	90.330	90.080	7246.92	6432.70	-190.58	6433.09	1662907.42	14672570.86	40.4004556	-104.9192166	2.06	
14981.00	90.690	90.610	7246.13	6521.69	-191.12	6522.08	1662996.38	14672570.38	40.4004540	-104.9188971	0.72	
15070.00	89.780	92.020	7245.76	6610.66	-193.16	6611.05	1663085.32	14672568.40	40.4004484	-104.9185776	1.89	
15160.00	90.530	91.780	7245.52	6700.61	-196.14	6701.00	1663175.23	14672565.48	40.4004401	-104.9182547	0.87	
15249.00	88.930	91.600	7245.94	6789.56	-198.77	6789.96	1663264.15	14672562.91	40.4004328	-104.9179353	1.81	
15339.00	89.790	91.280	7246.94	6879.52	-201.03	6879.92	1663354.09	14672560.71	40.4004266	-104.9176123	1.02	
15428.00	88.960	89.980	7247.91	6968.50	-202.01	6968.91	1663443.04	14672559.79	40.4004238	-104.9172928	1.73	
15518.00	90.120	89.450	7248.64	7058.50	-201.56	7058.91	1663532.99	14672560.30	40.4004250	-104.9169697	1.42	
15607.00	91.530	89.410	7247.35	7147.48	-200.68	7147.89	1663621.94	14672561.24	40.4004273	-104.9166502	1.58	
15697.00	89.880	88.240	7246.25	7237.46	-198.83	7237.86	1663711.87	14672563.14	40.4004323	-104.9163272	2.25	
15786.00	90.900	87.940	7245.64	7326.41	-195.86	7326.81	1663800.78	14672566.16	40.4004404	-104.9160078	1.19	
15875.00	89.480	87.780	7245.35	7415.35	-192.54	7415.74	1663889.68	14672569.54	40.4004494	-104.9156885	1.61	
15965.00	90.320	87.740	7245.50	7505.29	-189.02	7505.67	1663979.57	14672573.12	40.4004590	-104.9153656	0.93	
16054.00	92.690	88.700	7243.17	7594.21	-186.26	7594.59	1664068.45	14672575.94	40.4004665	-104.9150463	2.87	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-2HZ AWB
Slot	SLOT#02 DAMORE 18-2HZ (2178'FNL & 661'FWL, SEC.18)		

WELLPATH DATA (199 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
16143.00	91.500	87.940	7239.91	7683.12	-183.65	7683.49	1664157.32	14672578.60	40.4004736	-104.9147272	1.59	
16233.00	90.120	88.140	7238.64	7773.06	-180.57	7773.43	1664247.22	14672581.74	40.4004820	-104.9144042	1.55	
16322.00	90.700	87.220	7238.00	7861.99	-176.97	7862.35	1664336.10	14672585.40	40.4004918	-104.9140850	1.22	
16411.00	92.270	86.900	7235.70	7950.85	-172.41	7951.20	1664424.91	14672590.02	40.4005042	-104.9137660	1.80	
16501.00	91.150	86.860	7233.01	8040.68	-167.51	8041.03	1664514.70	14672594.97	40.4005176	-104.9134434	1.25	
16590.00	92.030	86.660	7230.54	8129.52	-162.48	8129.85	1664603.48	14672600.06	40.4005313	-104.9131245	1.01	
16680.00	93.440	86.800	7226.25	8219.27	-157.36	8219.60	1664693.19	14672605.24	40.4005453	-104.9128023	1.57	
16769.00	92.270	87.870	7221.81	8308.07	-153.22	8308.39	1664781.94	14672609.43	40.4005566	-104.9124835	1.78	
16859.00	90.920	89.150	7219.31	8398.01	-150.88	8398.32	1664871.84	14672611.82	40.4005629	-104.9121606	2.07	
16948.00	91.460	88.540	7217.46	8486.97	-149.09	8487.28	1664960.76	14672613.68	40.4005677	-104.9118412	0.92	
17038.00	89.360	88.110	7216.82	8576.93	-146.46	8577.23	1665050.68	14672616.36	40.4005749	-104.9115182	2.38	
17127.00	88.980	87.310	7218.11	8665.86	-142.91	8666.15	1665139.56	14672619.98	40.4005846	-104.9111989	1.00	
17217.00	90.010	87.190	7218.90	8755.76	-138.59	8756.04	1665229.41	14672624.35	40.4005963	-104.9108762	1.15	
17306.00	87.790	87.410	7220.61	8844.64	-134.40	8844.92	1665318.25	14672628.60	40.4006077	-104.9105571	2.51	
17396.00	87.010	86.410	7224.69	8934.43	-129.55	8934.70	1665407.99	14672633.50	40.4006209	-104.9102347	1.41	
17486.00	86.240	85.580	7229.99	9024.06	-123.28	9024.32	1665497.57	14672639.83	40.4006381	-104.9099129	1.26	
17575.00	87.440	86.230	7234.89	9112.71	-116.93	9112.96	1665586.17	14672646.23	40.4006554	-104.9095947	1.53	
17665.00	88.980	86.550	7237.71	9202.50	-111.27	9202.73	1665675.90	14672651.95	40.4006709	-104.9092724	1.75	LAST BH MWD+IFR1+MSA SURVEY
17737.00‡	88.980	86.550	7238.99	9274.36	-106.93	9274.59	1665747.73	14672656.33	40.4006827	-104.9090144	0.00	PTB (2260'FNL & 478'FEL, SEC.17) 40.4006827, -104.9090144

HOLE & CASING SECTIONS - Ref Wellbore: DAMORE 18-2HZ AWB Ref Wellpath: DAMORE 18-2HZ 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	1884.00	1858.00	26.00	1840.46	0.00	0.00	-36.97	-323.71

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-2HZ AWB
Slot	SLOT#02 DAMORE 18-2HZ (2178'FNL & 661'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	11.29	-9.75	1656467.04	14672768.45	40.4010120	-104.9423490	polygon
	2D Polygon: dimensions not calculated							
SEC.13-T5N-R67W	16.00	-980.64	-1230.06	1655247.87	14671776.13	40.3982892	-104.9467303	polygon
	2D Polygon: dimensions not calculated							
SEC.17-T5N-R67W	16.00	-966.64	-1230.06	1655247.86	14671790.12	40.3983276	-104.9467303	polygon
	2D Polygon: dimensions not calculated							
SEC.18-T5N-R67W	16.00	-966.64	-1230.06	1655247.86	14671790.12	40.3983276	-104.9467303	polygon
	2D Polygon: dimensions not calculated							
DAMORE 18-2HZ BHL REV-2 (2285'FNL & 480'FEL,SEC.17)	7193.00	-132.29	9277.28	1665750.43	14672630.99	40.4006131	-104.9090047	point
DAMORE 18-2HZ HEEL REV-1 (2330'FNL & 75'FWL,SEC.18)	7213.00	-151.55	-588.51	1655888.62	14672605.30	40.4005650	-104.9444270	point

WELLPATH COMPOSITION - Ref Wellbore: DAMORE 18-2HZ AWB					Ref Wellpath: DAMORE 18-2HZ AWP			
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment		Wellbore	Survey Date		
26.00	1836.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <120 - 1818 >		DAMORE 18-2HZ AWB	2/25/2020		
1836.00	17737.00	Custom APC_ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BH Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1950 - 17665 >		DAMORE 18-2HZ AWB	3/11/2020		

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Well	DAMORE 18-2HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	API/Legal	
Facility	SEC.18-T5N-R67W	Wellbore	DAMORE 18-2HZ AWB
Slot	SLOT#02 DAMORE 18-2HZ (2178'FNL & 661'FWL, SEC.18)		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
138.00	1.020	107.620	137.99	FIRST SURFACE MWD+IFR1 SURVEY
1836.00	18.140	269.910	1794.99	LAST SURFACE MWD+IFR1 SURVEY
1950.00	20.680	271.300	1902.50	FIRST BH MWD+IFR1+MSA SURVEY
6689.00	2.384	101.958	6478.21	KOP
7788.00	89.590	91.150	7196.18	LANDING (1980'FNL & 7'FEL, SEC.13) 40.4005671, -104.9447113
17665.00	88.980	86.550	7237.71	LAST BH MWD+IFR1+MSA SURVEY
17737.00	88.980	86.550	7238.99	PTB (2260'FNL & 478'FEL, SEC.17) 40.4006827, -104.9090144