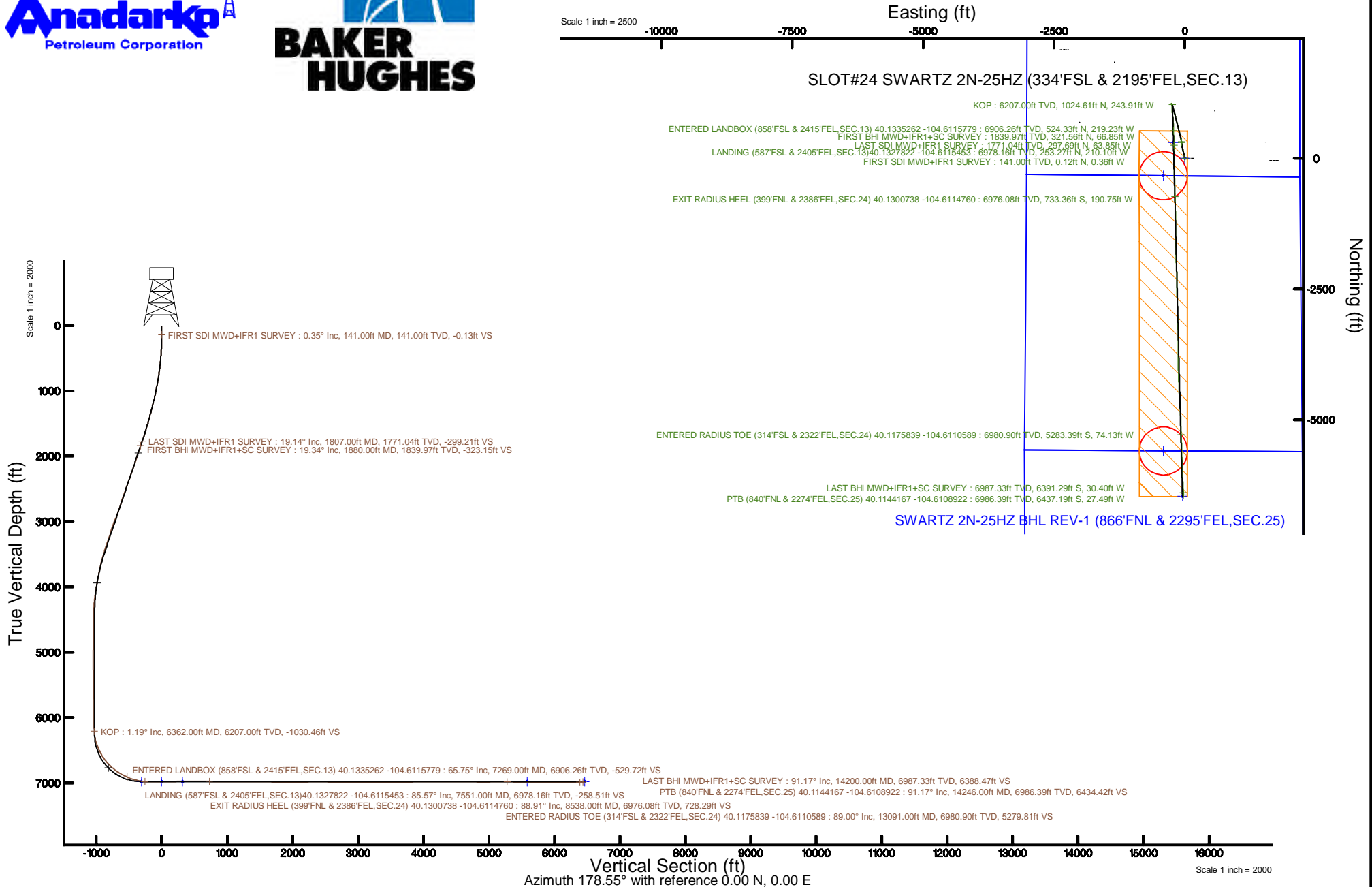


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#24 SWARTZ 2N-25HZ (334'FSL & 2195'FEL,SEC.13)
Field: WELD COUNTY (UTM/TRUE NORTH) Well: SWARTZ 2N-25HZ
Facility: SEC.13-T2N-R65W Wellbore: SWARTZ 2N-25HZ PWB

Plot reference wellpath is SWARTZ 2N-25HZ PWP Rev-B.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to Xtreme 22 (17) (RT)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to Xtreme 22 (17) (RT)	North Reference: True north
Xtreme 22 (17) (RT) to Mean Sea Level: 4897 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#24 SWARTZ 2N-25HZ (334'FSL & 2195'FEL,SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2017-06-06
	Database: WA_DEN_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#24 SWARTZ 2N-25HZ (334'FSL & 2195'FEL, SEC.13)
Area	COLORADO	Well	SWARTZ 2N-25HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SWARTZ 2N-25HZ AWP
Facility	SEC.13-T2N-R65W		

REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Painsetr
Scale	0.999614	Report Generated	6/6/2017 at 1:00 PM
Convergence at slot	0.26° East	Database/Source file	WA_DEN_Anadarko_Defn/SWARTZ_2N-25HZ_AWP.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4220.71	-1407.31	1749204.04	14575070.38	40°07'55.513"N	104°36'38.858"W
Facility Reference Pt			1750592.08	14579295.65	40°08'37.223"N	104°36'20.740"W
Field Reference Pt			1698235.31	14552047.82	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	Xtreme 22 (17') (RT) to Facility Vertical Datum	4897.00ft
Horizontal Reference Pt	Slot	Xtreme 22 (17') (RT) to Mean Sea Level	4897.00ft
Vertical Reference Pt	Xtreme 22 (17') (RT)	Xtreme 22 (17') (RT) to Mud Line at Slot (SLOT#24 SWARTZ 2N-25HZ (334'FSL & 2195'FEL, SEC.13))	4897.00ft
MD Reference Pt	Xtreme 22 (17') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	178.55°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#24 SWARTZ 2N-25HZ (334'FSL & 2195'FEL,SEC.13)
Area	COLORADO	Well	SWARTZ 2N-25HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SWARTZ 2N-25HZ AWB
Facility	SEC.13-T2N-R65W		

WELLPATH DATA (164 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	288.330	0.00	0.00	0.00	0.00	1749204.04	14575070.38	40°07'55.513"N	104°36'38.858"W	0.00	
17.00	0.000	288.330	17.00	0.00	0.00	0.00	1749204.04	14575070.38	40°07'55.513"N	104°36'38.858"W	0.00	
141.00	0.350	288.330	141.00	-0.13	0.12	-0.36	1749203.68	14575070.50	40°07'55.514"N	104°36'38.863"W	0.28	FIRST SDI MWD+IFR1 SURVEY
230.00	1.260	353.340	229.99	-1.19	1.18	-0.73	1749203.31	14575071.55	40°07'55.525"N	104°36'38.867"W	1.30	
319.00	2.400	353.220	318.94	-4.02	4.00	-1.06	1749202.96	14575074.37	40°07'55.553"N	104°36'38.872"W	1.28	
406.00	3.750	355.990	405.82	-8.68	8.65	-1.48	1749202.53	14575079.01	40°07'55.598"N	104°36'38.877"W	1.56	
494.00	4.670	345.510	493.58	-15.05	14.99	-2.58	1749201.40	14575085.35	40°07'55.661"N	104°36'38.891"W	1.36	
581.00	6.290	346.610	580.18	-23.16	23.05	-4.57	1749199.38	14575093.40	40°07'55.741"N	104°36'38.917"W	1.87	
668.00	7.140	349.290	666.58	-33.16	33.00	-6.67	1749197.23	14575103.34	40°07'55.839"N	104°36'38.944"W	1.04	
757.00	8.760	349.740	754.72	-45.32	45.10	-8.91	1749194.94	14575115.43	40°07'55.959"N	104°36'38.973"W	1.82	
844.00	9.970	345.310	840.56	-59.19	58.91	-12.00	1749191.79	14575129.21	40°07'56.095"N	104°36'39.012"W	1.62	
933.00	10.820	344.100	928.10	-74.78	74.40	-16.24	1749187.48	14575144.67	40°07'56.248"N	104°36'39.067"W	0.99	
1017.00	11.950	343.110	1010.45	-90.80	90.30	-20.93	1749182.73	14575160.55	40°07'56.405"N	104°36'39.127"W	1.37	
1104.00	13.270	345.390	1095.35	-109.21	108.58	-26.06	1749177.51	14575178.80	40°07'56.586"N	104°36'39.194"W	1.62	
1190.00	14.120	345.470	1178.90	-129.04	128.29	-31.19	1749172.31	14575198.48	40°07'56.781"N	104°36'39.260"W	0.99	
1279.00	14.450	347.590	1265.15	-150.51	149.64	-36.30	1749167.11	14575219.80	40°07'56.992"N	104°36'39.325"W	0.69	
1368.00	15.130	347.800	1351.20	-172.83	171.84	-41.14	1749162.17	14575241.97	40°07'57.211"N	104°36'39.388"W	0.77	
1455.00	15.570	347.380	1435.10	-195.44	194.33	-46.09	1749157.12	14575264.43	40°07'57.433"N	104°36'39.451"W	0.52	
1543.00	16.880	348.190	1519.59	-219.59	218.36	-51.28	1749151.82	14575288.43	40°07'57.671"N	104°36'39.518"W	1.51	
1630.00	16.980	349.540	1602.82	-244.57	243.22	-56.17	1749146.83	14575313.25	40°07'57.917"N	104°36'39.581"W	0.47	
1719.00	18.170	352.580	1687.67	-271.20	269.76	-60.33	1749142.56	14575339.77	40°07'58.179"N	104°36'39.635"W	1.69	
1807.00	19.140	353.040	1771.04	-299.21	297.69	-63.85	1749138.92	14575367.67	40°07'58.455"N	104°36'39.680"W	1.11	LAST SDI MWD+IFR1 SURVEY
1880.00	19.340	352.620	1839.97	-323.15	321.56	-66.85	1749135.81	14575391.51	40°07'58.691"N	104°36'39.719"W	0.33	FIRST BHI MWD+IFR1+SC SURVEY
1968.00	18.470	351.390	1923.22	-351.47	349.79	-70.81	1749131.73	14575419.72	40°07'58.970"N	104°36'39.770"W	1.09	
2055.00	18.170	350.410	2005.81	-378.57	376.79	-75.13	1749127.29	14575446.69	40°07'59.236"N	104°36'39.825"W	0.49	
2143.00	18.730	344.670	2089.29	-405.88	403.95	-81.15	1749121.15	14575473.81	40°07'59.505"N	104°36'39.903"W	2.16	
2231.00	19.060	343.500	2172.55	-433.47	431.35	-88.97	1749113.22	14575501.17	40°07'59.776"N	104°36'40.003"W	0.57	
2318.00	19.120	343.750	2254.77	-460.96	458.65	-96.99	1749105.08	14575528.42	40°08'00.045"N	104°36'40.107"W	0.12	
2406.00	19.520	343.790	2337.81	-489.11	486.61	-105.13	1749096.83	14575556.33	40°08'00.322"N	104°36'40.211"W	0.45	
2494.00	21.060	346.720	2420.35	-518.81	516.11	-112.86	1749088.96	14575585.79	40°08'00.613"N	104°36'40.311"W	2.10	
2581.00	19.640	346.610	2501.92	-548.42	545.55	-119.84	1749081.86	14575615.19	40°08'00.904"N	104°36'40.401"W	1.63	
2668.00	19.970	346.510	2583.77	-577.25	574.22	-126.69	1749074.89	14575643.82	40°08'01.188"N	104°36'40.489"W	0.38	
2756.00	18.440	345.940	2666.87	-605.53	602.34	-133.58	1749067.88	14575671.89	40°08'01.465"N	104°36'40.578"W	1.75	
2844.00	18.820	346.390	2750.26	-632.99	629.63	-140.30	1749061.04	14575699.15	40°08'01.735"N	104°36'40.664"W	0.46	
2932.00	19.810	346.780	2833.31	-661.46	657.95	-147.05	1749054.17	14575727.42	40°08'02.015"N	104°36'40.751"W	1.13	
3019.00	21.520	345.930	2914.71	-691.47	687.78	-154.30	1749046.79	14575757.21	40°08'02.310"N	104°36'40.845"W	2.00	
3107.00	20.590	345.730	2996.83	-722.31	718.43	-162.04	1749038.92	14575787.81	40°08'02.613"N	104°36'40.944"W	1.06	
3195.00	19.400	345.650	3079.52	-751.65	747.59	-169.48	1749031.36	14575816.93	40°08'02.901"N	104°36'41.040"W	1.35	
3282.00	19.420	344.310	3161.58	-779.75	775.51	-176.97	1749023.75	14575844.81	40°08'03.177"N	104°36'41.136"W	0.51	
3370.00	19.300	344.910	3244.60	-808.06	803.64	-184.71	1749015.89	14575872.89	40°08'03.455"N	104°36'41.236"W	0.26	
3458.00	19.410	345.580	3327.63	-836.44	831.84	-192.14	1749008.34	14575901.05	40°08'03.733"N	104°36'41.332"W	0.28	
3546.00	17.410	344.320	3411.12	-863.46	858.68	-199.34	1749001.02	14575927.84	40°08'03.999"N	104°36'41.424"W	2.32	
3633.00	16.500	343.920	3494.34	-888.03	883.08	-206.28	1748993.98	14575952.21	40°08'04.240"N	104°36'41.514"W	1.05	
3745.00	14.740	344.050	3602.20	-917.22	912.07	-214.60	1748985.54	14575981.14	40°08'04.526"N	104°36'41.621"W	1.57	
3833.00	13.310	342.000	3687.57	-937.77	932.47	-220.81	1748979.24	14576001.51	40°08'04.728"N	104°36'41.701"W	1.72	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#24 SWARTZ 2N-25HZ (334'FSL & 2195'FEL,SEC.13)
Area	COLORADO	Well	SWARTZ 2N-25HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SWARTZ 2N-25HZ AWB
Facility	SEC.13-T2N-R65W		

WELLPATH DATA (164 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
3920.00	12.240	342.280	3772.42	-956.22	950.78	-226.71	1748973.26	14576019.78	40°08'04.909"N	104°36'41.777"W	1.23	
4007.00	11.070	340.730	3857.62	-973.02	967.45	-232.27	1748967.63	14576036.42	40°08'05.073"N	104°36'41.849"W	1.39	
4094.00	10.680	345.510	3943.06	-988.83	983.14	-237.05	1748962.79	14576052.08	40°08'05.228"N	104°36'41.910"W	1.13	
4182.00	9.730	346.870	4029.67	-1004.06	998.27	-240.78	1748958.99	14576067.20	40°08'05.378"N	104°36'41.958"W	1.11	
4270.00	8.280	348.110	4116.58	-1017.57	1011.72	-243.77	1748955.94	14576080.62	40°08'05.511"N	104°36'41.997"W	1.66	
4357.00	6.480	348.580	4202.86	-1028.57	1022.66	-246.04	1748953.63	14576091.55	40°08'05.619"N	104°36'42.026"W	2.07	
4445.00	3.960	350.700	4290.49	-1036.47	1030.53	-247.51	1748952.12	14576099.41	40°08'05.697"N	104°36'42.045"W	2.87	
4532.00	1.790	345.530	4377.37	-1040.77	1034.81	-248.34	1748951.27	14576103.68	40°08'05.739"N	104°36'42.055"W	2.51	
4620.00	0.320	209.510	4465.36	-1041.90	1035.92	-248.80	1748950.81	14576104.80	40°08'05.750"N	104°36'42.061"W	2.31	
4882.00	0.630	283.820	4727.35	-1041.65	1035.63	-250.56	1748949.05	14576104.50	40°08'05.747"N	104°36'42.084"W	0.24	
5143.00	2.200	309.570	4988.27	-1045.32	1039.16	-255.82	1748943.78	14576108.01	40°08'05.782"N	104°36'42.152"W	0.63	
5231.00	0.650	329.710	5076.24	-1046.86	1040.67	-257.37	1748942.22	14576109.51	40°08'05.797"N	104°36'42.172"W	1.82	
5318.00	1.660	127.290	5163.23	-1046.51	1040.33	-256.62	1748942.97	14576109.17	40°08'05.794"N	104°36'42.162"W	2.61	
5406.00	1.610	130.580	5251.19	-1044.88	1038.76	-254.66	1748944.93	14576107.61	40°08'05.778"N	104°36'42.137"W	0.12	
5493.00	1.370	130.130	5338.16	-1043.37	1037.29	-252.94	1748946.66	14576106.15	40°08'05.764"N	104°36'42.115"W	0.28	
5581.00	1.030	130.550	5426.14	-1042.15	1036.10	-251.54	1748948.07	14576104.96	40°08'05.752"N	104°36'42.097"W	0.39	
5668.00	0.610	134.770	5513.13	-1041.29	1035.27	-250.61	1748949.00	14576104.13	40°08'05.744"N	104°36'42.085"W	0.49	
5756.00	1.430	143.460	5601.12	-1040.05	1034.05	-249.63	1748949.99	14576102.93	40°08'05.732"N	104°36'42.072"W	0.95	
5843.00	1.580	144.200	5688.09	-1038.17	1032.21	-248.28	1748951.35	14576101.09	40°08'05.713"N	104°36'42.055"W	0.17	
5931.00	1.450	145.060	5776.06	-1036.24	1030.31	-246.93	1748952.70	14576099.20	40°08'05.695"N	104°36'42.037"W	0.15	
6105.00	0.830	148.210	5950.02	-1033.32	1027.44	-245.01	1748954.64	14576096.33	40°08'05.666"N	104°36'42.012"W	0.36	
6193.00	0.570	152.450	6038.02	-1032.38	1026.51	-244.47	1748955.18	14576095.41	40°08'05.657"N	104°36'42.006"W	0.30	
6280.00	0.480	170.820	6125.01	-1031.63	1025.76	-244.21	1748955.44	14576094.66	40°08'05.650"N	104°36'42.002"W	0.22	
6362.00†	1.188	163.546	6207.00	-1030.46	1024.61	-243.91	1748955.74	14576093.51	40°08'05.638"N	104°36'41.998"W	0.87	KOP
6368.00	1.240	163.340	6213.00	-1030.34	1024.49	-243.88	1748955.78	14576093.39	40°08'05.637"N	104°36'41.998"W	0.87	
6455.00	9.990	183.600	6299.50	-1021.90	1016.04	-244.08	1748955.61	14576084.94	40°08'05.554"N	104°36'42.001"W	10.16	
6543.00	18.040	180.070	6384.82	-1000.64	994.76	-244.58	1748955.21	14576063.67	40°08'05.343"N	104°36'42.007"W	9.19	
6630.00	23.200	179.560	6466.21	-970.02	964.13	-244.46	1748955.46	14576033.05	40°08'05.041"N	104°36'42.005"W	5.93	
6718.00	28.030	179.430	6545.54	-931.99	926.10	-244.12	1748955.96	14575995.04	40°08'04.665"N	104°36'42.001"W	5.49	
6805.00	35.500	175.660	6619.47	-886.25	880.40	-242.01	1748958.28	14575949.37	40°08'04.213"N	104°36'41.974"W	8.88	
6893.00	41.630	173.300	6688.24	-831.57	825.84	-236.66	1748963.87	14575894.85	40°08'03.674"N	104°36'41.905"W	7.16	
6980.00	45.900	173.710	6751.06	-771.64	766.06	-229.86	1748970.92	14575835.12	40°08'03.083"N	104°36'41.817"W	4.92	
7068.00	53.820	177.740	6807.76	-704.52	699.04	-224.99	1748976.08	14575768.15	40°08'02.421"N	104°36'41.755"W	9.65	
7156.00	60.730	178.420	6855.30	-630.54	625.09	-222.53	1748978.87	14575694.25	40°08'01.690"N	104°36'41.723"W	7.88	
7243.00	64.490	177.970	6895.32	-553.30	547.90	-220.09	1748981.64	14575617.10	40°08'00.927"N	104°36'41.692"W	4.35	
7269.00†	65.745	177.866	6906.26	-529.72	524.33	-219.23	1748982.60	14575593.54	40°08'00.694"N	104°36'41.681"W	4.84	ENTERED LANDBOX (858'FSL & 2415'FEL,SEC.13) 40.1335262 -104.6115779
7330.00	68.690	177.630	6929.88	-473.49	468.14	-217.02	1748985.06	14575537.38	40°08'00.139"N	104°36'41.652"W	4.84	
7418.00	76.810	178.170	6955.95	-389.53	384.22	-213.95	1748988.49	14575453.51	40°07'59.310"N	104°36'41.613"W	9.25	
7505.00	80.920	178.250	6972.75	-304.18	298.92	-211.29	1748991.53	14575368.26	40°07'58.467"N	104°36'41.578"W	4.72	
7551.00†	85.572	178.771	6978.16	-258.51	253.27	-210.10	1748992.92	14575322.63	40°07'58.016"N	104°36'41.563"W	10.18	LANDING (587'FSL & 2405'FEL,SEC.13) 40.1327822 -104.6115453
7593.00	89.820	179.240	6979.85	-216.56	211.32	-209.37	1748993.83	14575280.70	40°07'57.601"N	104°36'41.554"W	10.18	
7680.00	90.800	178.940	6979.38	-129.57	124.33	-207.99	1748995.59	14575193.75	40°07'56.742"N	104°36'41.536"W	1.18	
7768.00	90.800	179.320	6978.15	-41.58	36.35	-206.66	1748997.31	14575105.81	40°07'55.872"N	104°36'41.519"W	0.43	
7855.00	89.970	179.120	6977.56	45.41	-50.64	-205.47	1748998.88	14575018.86	40°07'55.013"N	104°36'41.503"W	0.98	
7943.00	90.490	179.000	6977.21	133.41	-138.63	-204.03	1749000.70	14574930.91	40°07'54.143"N	104°36'41.485"W	0.61	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#24 SWARTZ 2N-25HZ (334'FSL & 2195'FEL,SEC.13)
Area	COLORADO	Well	SWARTZ 2N-25HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SWARTZ 2N-25HZ AWB
Facility	SEC.13-T2N-R65W		

WELLPATH DATA (164 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 (°/100R)	Comments
8030.00	90.830	179.780	6976.21	220.39	-225.61	-203.10	1749002.01	14574843.96	40°07'53.283"N	104°36'41.473"W	0.98	
8117.00	90.430	178.100	6975.25	307.38	-312.59	-201.49	1749004.00	14574757.03	40°07'52.424"N	104°36'41.452"W	1.98	
8205.00	89.880	177.000	6975.01	395.37	-400.51	-197.73	1749008.14	14574669.16	40°07'51.555"N	104°36'41.404"W	1.40	
8293.00	89.200	177.570	6975.72	483.34	-488.41	-193.56	1749012.70	14574581.32	40°07'50.687"N	104°36'41.350"W	1.01	
8380.00	90.490	180.540	6975.95	570.33	-575.38	-192.13	1749014.51	14574494.38	40°07'49.827"N	104°36'41.331"W	3.72	
8468.00	90.120	179.280	6975.49	658.30	-663.38	-191.99	1749015.03	14574406.42	40°07'48.957"N	104°36'41.330"W	1.49	
8538.00†	88.905	178.685	6976.08	728.29	-733.36	-190.75	1749016.58	14574336.47	40°07'48.266"N	104°36'41.314"W	1.93	EXIT RADIUS HEEL (399'FNL & 2386'FEL, SEC.24) 40.1300738 -104.6114760
8555.00	88.610	178.540	6976.45	745.29	-750.35	-190.33	1749017.07	14574319.49	40°07'48.098"N	104°36'41.308"W	1.93	
8643.00	88.400	178.310	6978.75	833.26	-838.29	-187.92	1749019.87	14574231.60	40°07'47.229"N	104°36'41.277"W	0.35	
8730.00	89.010	177.850	6980.71	920.23	-925.22	-185.00	1749023.16	14574144.72	40°07'46.370"N	104°36'41.240"W	0.88	
8818.00	88.950	178.480	6982.28	1008.21	-1013.16	-182.18	1749026.37	14574056.82	40°07'45.501"N	104°36'41.203"W	0.72	
8905.00	92.060	179.910	6981.51	1095.19	-1100.13	-180.96	1749027.97	14573969.89	40°07'44.641"N	104°36'41.188"W	3.93	
8993.00	91.290	179.890	6978.94	1183.13	-1188.10	-180.81	1749028.51	14573881.96	40°07'43.772"N	104°36'41.186"W	0.88	
9080.00	90.960	180.140	6977.23	1270.08	-1275.08	-180.83	1749028.86	14573795.01	40°07'42.913"N	104°36'41.186"W	0.48	
9168.00	89.660	178.780	6976.76	1358.07	-1363.07	-180.00	1749030.08	14573707.06	40°07'42.043"N	104°36'41.175"W	2.14	
9255.00	89.350	179.630	6977.51	1445.06	-1450.06	-178.80	1749031.67	14573620.11	40°07'41.183"N	104°36'41.160"W	1.04	
9342.00	88.980	178.720	6978.78	1532.04	-1537.04	-177.54	1749033.30	14573533.17	40°07'40.324"N	104°36'41.144"W	1.13	
9429.00	88.520	178.900	6980.67	1619.02	-1624.00	-175.74	1749035.48	14573446.26	40°07'39.464"N	104°36'41.120"W	0.57	
9517.00	87.660	178.890	6983.61	1706.97	-1711.93	-174.04	1749037.56	14573358.36	40°07'38.596"N	104°36'41.099"W	0.98	
9604.00	88.980	178.690	6986.16	1793.93	-1798.87	-172.20	1749039.78	14573271.47	40°07'37.736"N	104°36'41.075"W	1.53	
9692.00	89.880	178.290	6987.03	1881.92	-1886.84	-169.89	1749042.48	14573183.55	40°07'36.867"N	104°36'41.045"W	1.12	
9779.00	89.630	177.590	6987.40	1968.92	-1973.78	-166.76	1749045.99	14573096.65	40°07'36.008"N	104°36'41.005"W	0.85	
9866.00	90.620	177.280	6987.21	2055.90	-2060.69	-162.86	1749050.26	14573009.79	40°07'35.149"N	104°36'40.955"W	1.19	
9954.00	91.660	176.890	6985.46	2143.85	-2148.56	-158.39	1749055.12	14572921.98	40°07'34.281"N	104°36'40.897"W	1.26	
10041.00	91.510	177.770	6983.06	2230.80	-2235.43	-154.34	1749059.55	14572835.16	40°07'33.422"N	104°36'40.845"W	1.03	
10129.00	91.020	179.330	6981.11	2318.77	-2323.38	-152.11	1749062.16	14572747.26	40°07'32.553"N	104°36'40.816"W	1.86	
10217.00	89.540	179.600	6980.68	2406.76	-2411.37	-151.29	1749063.37	14572659.30	40°07'31.684"N	104°36'40.806"W	1.71	
10304.00	89.020	179.690	6981.78	2493.74	-2498.36	-150.75	1749064.29	14572572.35	40°07'30.824"N	104°36'40.799"W	0.61	
10391.00	88.270	179.520	6983.83	2580.70	-2585.33	-150.15	1749065.27	14572485.41	40°07'29.964"N	104°36'40.791"W	0.88	
10479.00	88.860	178.970	6986.04	2668.66	-2673.30	-148.99	1749066.81	14572397.49	40°07'29.095"N	104°36'40.776"W	0.92	
10567.00	90.520	179.100	6986.51	2756.65	-2761.28	-147.51	1749068.68	14572309.55	40°07'28.226"N	104°36'40.757"W	1.89	
10654.00	89.970	178.170	6986.14	2843.65	-2848.26	-145.44	1749071.13	14572222.62	40°07'27.366"N	104°36'40.730"W	1.24	
10742.00	89.320	178.410	6986.69	2931.65	-2936.21	-142.81	1749074.14	14572134.71	40°07'26.497"N	104°36'40.696"W	0.79	
10829.00	90.060	178.100	6987.16	3018.65	-3023.17	-140.16	1749077.17	14572047.80	40°07'25.638"N	104°36'40.662"W	0.92	
10917.00	91.850	177.450	6985.69	3106.62	-3111.09	-136.75	1749080.97	14571959.93	40°07'24.769"N	104°36'40.618"W	2.16	
11004.00	89.720	179.130	6984.50	3193.60	-3198.03	-134.15	1749083.94	14571873.03	40°07'23.910"N	104°36'40.585"W	3.12	
11092.00	90.000	178.490	6984.71	3281.60	-3286.01	-132.33	1749086.15	14571785.09	40°07'23.040"N	104°36'40.561"W	0.79	
11179.00	91.540	179.580	6983.55	3368.59	-3372.99	-130.86	1749088.00	14571698.16	40°07'22.181"N	104°36'40.543"W	2.17	
11267.00	89.040	180.170	6983.10	3456.55	-3460.98	-130.67	1749088.57	14571610.20	40°07'21.311"N	104°36'40.540"W	2.92	
11354.00	89.170	180.160	6984.46	3543.51	-3547.97	-130.92	1749088.70	14571523.25	40°07'20.452"N	104°36'40.543"W	0.15	
11442.00	89.970	180.220	6985.12	3631.47	-3635.97	-131.21	1749088.80	14571435.28	40°07'19.582"N	104°36'40.547"W	0.91	
11529.00	91.110	179.830	6984.30	3718.44	-3722.96	-131.25	1749089.14	14571348.32	40°07'18.722"N	104°36'40.547"W	1.38	
11617.00	90.460	179.400	6983.09	3806.41	-3810.95	-130.66	1749090.12	14571260.37	40°07'17.853"N	104°36'40.540"W	0.89	
11705.00	90.860	178.880	6982.08	3894.40	-3898.93	-129.34	1749091.82	14571172.43	40°07'16.983"N	104°36'40.523"W	0.75	
11792.00	90.460	177.760	6981.08	3981.39	-3985.89	-126.79	1749094.75	14571085.52	40°07'16.124"N	104°36'40.490"W	1.37	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#24 SWARTZ 2N-25HZ (334'FSL & 2195'FEL,SEC.13)
Area	COLORADO	Well	SWARTZ 2N-25HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SWARTZ 2N-25HZ AWB
Facility	SEC.13-T2N-R65W		

WELLPATH DATA (164 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
11879.00	90.090	177.940	6980.66	4068.38	-4072.83	-123.52	1749098.40	14570998.63	40°07'15.265"N	104°36'40.448"W	0.47	
11967.00	90.800	177.390	6979.98	4156.37	-4160.75	-119.94	1749102.36	14570910.76	40°07'14.396"N	104°36'40.402"W	1.02	
12055.00	90.250	178.620	6979.17	4244.36	-4248.69	-116.87	1749105.81	14570822.87	40°07'13.527"N	104°36'40.362"W	1.53	
12143.00	89.510	177.890	6979.36	4332.36	-4336.65	-114.19	1749108.87	14570734.96	40°07'12.658"N	104°36'40.328"W	1.18	
12230.00	90.090	177.790	6979.66	4419.35	-4423.59	-110.92	1749112.53	14570648.07	40°07'11.799"N	104°36'40.286"W	0.68	
12318.00	91.300	177.260	6978.59	4507.33	-4511.50	-107.12	1749116.72	14570560.21	40°07'10.930"N	104°36'40.237"W	1.50	
12405.00	90.400	177.080	6977.30	4594.29	-4598.38	-102.82	1749121.39	14570473.38	40°07'10.071"N	104°36'40.181"W	1.05	
12493.00	88.670	176.940	6978.01	4682.26	-4686.25	-98.23	1749126.36	14570385.56	40°07'09.203"N	104°36'40.122"W	1.97	
12580.00	87.290	175.550	6981.08	4769.13	-4773.01	-92.54	1749132.43	14570298.86	40°07'08.346"N	104°36'40.049"W	2.25	
12667.00	88.520	175.990	6984.26	4855.96	-4859.71	-86.12	1749139.22	14570212.22	40°07'07.489"N	104°36'39.967"W	1.50	
12754.00	90.950	177.090	6984.66	4942.90	-4946.54	-80.87	1749144.85	14570125.45	40°07'06.631"N	104°36'39.899"W	3.07	
12842.00	91.850	179.370	6982.51	5030.87	-5034.47	-78.16	1749147.95	14570037.57	40°07'05.762"N	104°36'39.864"W	2.78	
12929.00	90.890	179.720	6980.43	5117.83	-5121.44	-77.47	1749149.02	14569950.64	40°07'04.902"N	104°36'39.855"W	1.17	
13016.00	89.660	178.850	6980.02	5204.82	-5208.43	-76.38	1749150.49	14569863.69	40°07'04.043"N	104°36'39.841"W	1.73	
13091.00†	88.996	177.703	6980.90	5279.81	-5283.39	-74.13	1749153.07	14569788.77	40°07'03.302"N	104°36'39.812"W	1.77	ENTERED RADIUS TOE (314'FSL & 2322'FEL,SEC.24) 40.1175839 -104.6110589
13103.00	88.890	177.520	6981.12	5291.81	-5295.38	-73.63	1749153.62	14569776.79	40°07'03.184"N	104°36'39.806"W	1.77	
13190.00	88.890	176.250	6982.80	5378.75	-5382.23	-68.90	1749158.73	14569689.99	40°07'02.325"N	104°36'39.745"W	1.46	
13278.00	88.120	177.400	6985.10	5466.68	-5470.06	-64.03	1749163.98	14569602.21	40°07'01.457"N	104°36'39.682"W	1.57	
13365.00	88.550	179.230	6987.63	5553.64	-5556.98	-61.47	1749166.92	14569515.34	40°07'00.598"N	104°36'39.649"W	2.16	
13453.00	89.170	178.530	6989.38	5641.62	-5644.95	-59.75	1749169.02	14569427.41	40°06'59.729"N	104°36'39.627"W	1.06	
13541.00	89.720	178.280	6990.23	5729.61	-5732.91	-57.30	1749171.86	14569339.50	40°06'58.860"N	104°36'39.595"W	0.69	
13630.00	91.020	177.840	6989.66	5818.61	-5821.86	-54.29	1749175.26	14569250.60	40°06'57.981"N	104°36'39.557"W	1.54	
13717.00	91.170	177.330	6987.99	5905.58	-5908.76	-50.62	1749179.30	14569163.75	40°06'57.122"N	104°36'39.510"W	0.61	
13805.00	89.260	178.000	6987.66	5993.56	-5996.68	-47.04	1749183.27	14569075.87	40°06'56.253"N	104°36'39.463"W	2.30	
13892.00	89.540	178.450	6988.57	6080.56	-6083.64	-44.34	1749186.34	14568988.97	40°06'55.394"N	104°36'39.429"W	0.61	
13980.00	89.970	177.900	6988.95	6168.55	-6171.59	-41.54	1749189.53	14568901.06	40°06'54.525"N	104°36'39.393"W	0.79	
14067.00	90.150	177.220	6988.86	6255.54	-6258.51	-37.84	1749193.61	14568814.19	40°06'53.666"N	104°36'39.345"W	0.81	
14200.00	91.170	176.370	6987.33	6388.47	-6391.29	-30.40	1749201.63	14568681.50	40°06'52.354"N	104°36'39.249"W	1.00	LAST BHI MWD+IFR1+SC SURVEY
14246.00	91.170	176.370	6986.39	6434.42	-6437.19	-27.49	1749204.74	14568635.63	40°06'51.900"N	104°36'39.212"W	0.00	PTB (840'FNL & 2274'FEL,SEC.25) 40.1144167 -104.6108922

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#24 SWARTZ 2N-25HZ (334'FSL & 2195'FEL,SEC.13)
Area	COLORADO	Well	SWARTZ 2N-25HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SWARTZ 2N-25HZ AWB
Facility	SEC.13-T2N-R65W		

TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.13-T2N-R65W	-1.00	2066.29	-1135.64	1748059.81	14577130.87	40°08'15.932"N	104°36'53.480"W	polygon
SEC.24-T2N-R65W	-1.00	2066.29	-1135.64	1748059.81	14577130.87	40°08'15.932"N	104°36'53.480"W	polygon
SEC.25-T2N-R65W	-1.00	2066.29	-1135.64	1748059.81	14577130.87	40°08'15.932"N	104°36'53.480"W	polygon
SWARTZ 2N-25HZ BHL REV-1 (866'FNL & 2295'FEL,SEC.25)	6977.00	-6462.57	-48.42	1749183.92	14568610.17	40°06'51.649"N	104°36'39.481"W	point
SWARTZ 2N-25HZ HEEL REV-1 (636'FSL & 2415'FEL,SEC.13)	6977.00	304.21	-220.09	1748982.71	14575373.50	40°07'58.519"N	104°36'41.692"W	point
SWARTZ 2N-25HZ LANDBOX	6977.00	0.00	0.00	1749204.04	14575070.38	40°07'55.513"N	104°36'38.858"W	polygon
SWARTZ 2N-25HZ RADIUS HEEL	6977.00	-330.19	-415.15	1748790.50	14574738.50	40°07'52.250"N	104°36'44.203"W	polygon
SWARTZ 2N-25HZ RADIUS TOE	6977.00	-5596.61	-410.80	1748817.90	14569474.20	40°07'00.207"N	104°36'44.146"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: SWARTZ 2N-25HZ AWB Ref Wellpath: SWARTZ 2N-25HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
17.00	1807.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	SDI Custom APC ISCWSA Rev-2 MWD+IFR1 <141 - 1807>	SWARTZ 2N-25HZ AWB
1807.00	14200.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)	SDI Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1880 - 14200>	SWARTZ 2N-25HZ AWB
14200.00	14246.00	Blind Drilling (std)	Projection to bit	SWARTZ 2N-25HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#24 SWARTZ 2N-25HZ (334'FSL & 2195'FEL,SEC.13)
Area	COLORADO	Well	SWARTZ 2N-25HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	SWARTZ 2N-25HZ AWB
Facility	SEC.13-T2N-R65W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
141.00	0.350	288.330	141.00	FIRST SDI MWD+IFR1 SURVEY
1807.00	19.140	353.040	1771.04	LAST SDI MWD+IFR1 SURVEY
1880.00	19.340	352.620	1839.97	FIRST BHI MWD+IFR1+SC SURVEY
6362.00	1.188	163.546	6207.00	KOP
7269.00	65.745	177.866	6906.26	ENTERED LANDBOX (858'FSL & 2415'FEL,SEC.13) 40.1335262 -104.6115779
7551.00	85.572	178.771	6978.16	LANDING (587'FSL & 2405'FEL,SEC.13) 40.1327822 -104.6115453
8538.00	88.905	178.685	6976.08	EXIT RADIUS HEEL (399'FNL & 2386'FEL,SEC.24) 40.1300738 -104.6114760
13091.00	88.996	177.703	6980.90	ENTERED RADIUS TOE (314'FSL & 2322'FEL,SEC.24) 40.1175839 -104.6110589
14200.00	91.170	176.370	6987.33	LAST BHI MWD+IFR1+SC SURVEY
14246.00	91.170	176.370	6986.39	PTB (840'FNL & 2274'FEL,SEC.25) 40.1144167 -104.6108922