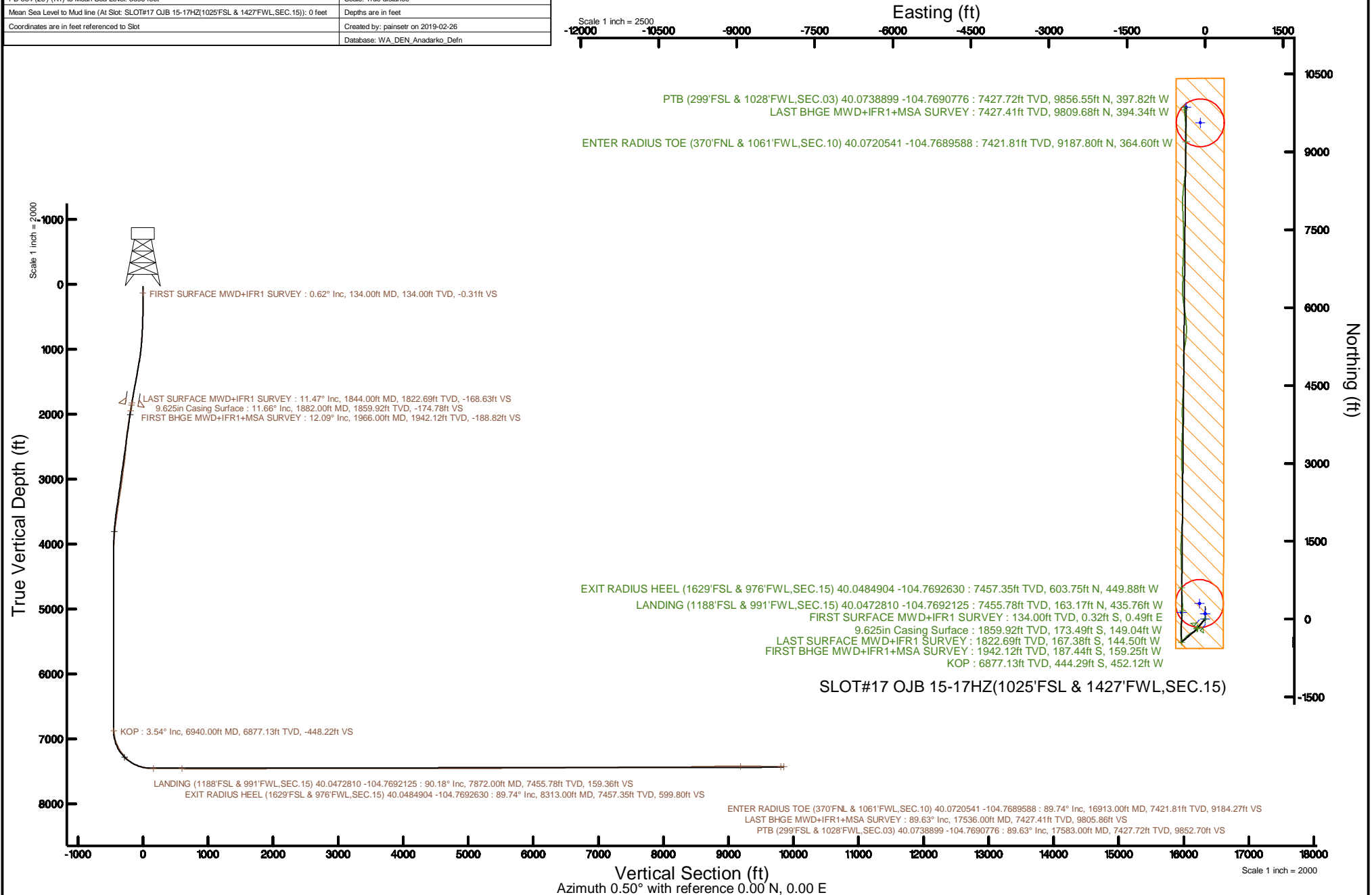


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#17 OJB 15-17HZ(1025'FSL & 1427'FWL,SEC.15)
Field: WELD COUNTY (UTM/TRUE NORTH) Well: OJB 15-17HZ
Facility: SEC.15-T1N-R66W Wellbore: OJB 15-17HZ PWB

Plot reference wellpath is OJB 15-17HZ PWP Rev-B.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to PD 564 (26) (RT)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to PD 564 (26) (RT)	North Reference: True north
PD 564 (26) (RT) to Mean Sea Level: 5096 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#17 OJB 15-17HZ(1025'FSL & 1427'FWL,SEC.15)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2019-02-26
	Database: WA_DEN_Anadarko_Defn



Actual Wellpath Report

OJB 15-17HZ AWP

Page 1 of 10

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#17 OJB 15-17HZ(1025'FSL & 1427'FWL,SEC.15)
Area	COLORADO	Well	OJB 15-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	OJB 15-17HZ AWB
Facility	SEC.15-T1N-R66W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Painsetr
Scale	0.999605	Report Generated	2/26/2019 at 7:45 AM
Convergence at slot	0.15° East	Database/Source file	WA_DEN_Anadarko_Defn/OJB_15-17HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-239.93	-2.18	1705440.35	14543872.18	40°02'48.599"N	104°46'03.562"W
Facility Reference Pt			1705441.90	14544112.02	40°02'50.970"N	104°46'03.534"W
Field Reference Pt			1698235.31	14552047.82	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	PD 564 (26') (RT) to Facility Vertical Datum	5096.00ft
Horizontal Reference Pt	Slot	PD 564 (26') (RT) to Mean Sea Level	5096.00ft
Vertical Reference Pt	PD 564 (26') (RT)	PD 564 (26') (RT) to Mud Line at Slot (SLOT#17 OJB 15-17HZ (1025'FSL & 1427'FWL,SEC.15))	5096.00ft
MD Reference Pt	PD 564 (26') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.50°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#17 OJB 15-17HZ(1025'FSL & 1427'FWL,SEC.15)
Area	COLORADO	Well	OJB 15-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	OJB 15-17HZ AWB
Facility	SEC.15-T1N-R66W		

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	122.810	0.00	0.00	0.00	0.00	1705440.35	14543872.18	40°02'48.599"N	104°46'03.562"W	0.00	
26.00	0.000	122.810	26.00	0.00	0.00	0.00	1705440.35	14543872.18	40°02'48.599"N	104°46'03.562"W	0.00	
134.00	0.620	122.810	134.00	-0.31	-0.32	0.49	1705440.84	14543871.87	40°02'48.596"N	104°46'03.556"W	0.57	FIRST SURFACE MWD+IFR1 SURVEY
230.00	0.790	111.560	229.99	-0.83	-0.84	1.54	1705441.89	14543871.34	40°02'48.591"N	104°46'03.542"W	0.23	
325.00	0.620	179.850	324.98	-1.58	-1.60	2.15	1705442.51	14543870.59	40°02'48.583"N	104°46'03.534"W	0.85	
420.00	0.660	293.750	419.98	-1.88	-1.89	1.65	1705442.01	14543870.30	40°02'48.580"N	104°46'03.541"W	1.13	
515.00	2.420	246.470	514.95	-2.48	-2.47	-0.69	1705439.67	14543869.71	40°02'48.575"N	104°46'03.571"W	2.14	
610.00	3.210	225.370	609.83	-5.18	-5.14	-4.42	1705435.95	14543867.03	40°02'48.548"N	104°46'03.619"W	1.36	
704.00	3.870	217.020	703.65	-9.59	-9.52	-8.20	1705432.18	14543862.64	40°02'48.505"N	104°46'03.667"W	0.89	
799.00	4.350	223.700	798.41	-14.80	-14.69	-12.62	1705427.77	14543857.47	40°02'48.454"N	104°46'03.724"W	0.71	
895.00	6.900	226.250	893.94	-21.47	-21.31	-19.30	1705421.11	14543850.83	40°02'48.388"N	104°46'03.810"W	2.67	
990.00	8.570	224.410	988.07	-30.56	-30.31	-28.38	1705412.06	14543841.81	40°02'48.299"N	104°46'03.927"W	1.78	
1084.00	10.150	223.180	1080.82	-41.69	-41.35	-38.95	1705401.52	14543830.74	40°02'48.190"N	104°46'04.063"W	1.69	
1180.00	11.290	219.660	1175.14	-55.20	-54.76	-50.73	1705389.78	14543817.31	40°02'48.058"N	104°46'04.214"W	1.37	
1275.00	12.220	217.640	1268.15	-70.42	-69.88	-62.81	1705377.75	14543802.17	40°02'47.908"N	104°46'04.370"W	1.07	
1370.00	13.010	219.750	1360.86	-86.72	-86.06	-75.79	1705364.82	14543785.96	40°02'47.749"N	104°46'04.537"W	0.96	
1465.00	13.400	217.640	1453.34	-103.77	-103.00	-89.35	1705351.31	14543768.99	40°02'47.581"N	104°46'04.711"W	0.65	
1560.00	14.150	220.980	1545.61	-121.38	-120.48	-103.69	1705337.02	14543751.48	40°02'47.408"N	104°46'04.895"W	1.15	
1656.00	13.180	220.100	1638.89	-138.74	-137.71	-118.43	1705322.32	14543734.21	40°02'47.238"N	104°46'05.085"W	1.03	
1751.00	11.950	224.140	1731.62	-154.21	-153.06	-132.26	1705308.54	14543718.84	40°02'47.086"N	104°46'05.263"W	1.59	
1844.00	11.470	216.760	1822.69	-168.63	-167.38	-144.50	1705296.35	14543704.49	40°02'46.945"N	104°46'05.420"W	1.69	LAST SURFACE MWD+IFR1 SURVEY
1966.00	12.090	215.910	1942.12	-188.82	-187.44	-159.25	1705281.65	14543684.40	40°02'46.747"N	104°46'05.610"W	0.53	FIRST BHGE MWD+IFR1+MSA SURVEY
2056.00	12.170	217.320	2030.11	-204.10	-202.62	-170.53	1705270.42	14543669.20	40°02'46.597"N	104°46'05.755"W	0.34	
2145.00	11.980	217.960	2117.14	-218.94	-217.36	-181.90	1705259.09	14543654.43	40°02'46.451"N	104°46'05.901"W	0.26	
2235.00	11.780	226.950	2205.22	-232.69	-231.00	-194.36	1705246.67	14543640.77	40°02'46.316"N	104°46'06.061"W	2.07	
2324.00	11.890	234.410	2292.33	-244.35	-242.54	-208.45	1705232.61	14543629.20	40°02'46.202"N	104°46'06.242"W	1.72	
2414.00	12.140	242.670	2380.37	-254.23	-252.28	-224.40	1705216.69	14543619.42	40°02'46.106"N	104°46'06.447"W	1.93	
2503.00	11.760	250.870	2467.45	-261.65	-259.55	-241.29	1705199.84	14543612.11	40°02'46.034"N	104°46'06.665"W	1.95	
2593.00	12.170	249.950	2555.49	-268.06	-265.81	-258.86	1705182.28	14543605.80	40°02'45.972"N	104°46'06.891"W	0.50	
2682.00	12.240	245.110	2642.48	-275.39	-272.99	-276.23	1705164.94	14543598.57	40°02'45.901"N	104°46'07.114"W	1.15	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#17 OJB 15-17HZ(1025'FSL & 1427'FWL,SEC.15)
Area	COLORADO	Well	OJB 15-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	OJB 15-17HZ AWB
Facility	SEC.15-T1N-R66W		

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
2771.00	12.300	230.590	2729.47	-285.52	-282.99	-292.12	1705149.08	14543588.55	40°02'45.802"N	104°46'07.318"W	3.46	
2861.00	11.160	221.940	2817.59	-298.21	-295.55	-305.35	1705135.89	14543575.95	40°02'45.678"N	104°46'07.488"W	2.33	
2950.00	11.290	232.300	2904.90	-310.05	-307.29	-318.00	1705123.28	14543564.19	40°02'45.562"N	104°46'07.651"W	2.27	
3040.00	12.170	233.720	2993.02	-321.18	-318.29	-332.62	1705108.69	14543553.15	40°02'45.454"N	104°46'07.839"W	1.03	
3129.00	12.140	230.010	3080.03	-332.87	-329.85	-347.35	1705094.00	14543541.55	40°02'45.339"N	104°46'08.028"W	0.88	
3219.00	12.130	227.740	3168.02	-345.44	-342.30	-361.60	1705079.79	14543529.08	40°02'45.216"N	104°46'08.212"W	0.53	
3308.00	12.220	220.510	3255.02	-359.00	-355.75	-374.64	1705066.79	14543515.60	40°02'45.083"N	104°46'08.379"W	1.72	
3397.00	12.100	220.120	3342.02	-373.40	-370.04	-386.77	1705054.70	14543501.28	40°02'44.942"N	104°46'08.535"W	0.16	
3486.00	12.210	234.250	3429.05	-386.15	-382.67	-400.42	1705041.09	14543488.61	40°02'44.817"N	104°46'08.711"W	3.34	
3575.00	10.240	220.260	3516.36	-397.80	-394.21	-413.18	1705028.37	14543477.05	40°02'44.703"N	104°46'08.875"W	3.76	
3665.00	9.810	214.610	3604.98	-410.30	-406.63	-422.70	1705018.88	14543464.61	40°02'44.581"N	104°46'08.997"W	1.19	
3755.00	8.050	205.800	3693.89	-422.35	-418.61	-429.80	1705011.81	14543452.61	40°02'44.462"N	104°46'09.088"W	2.47	
3844.00	6.370	197.790	3782.19	-432.70	-428.93	-434.02	1705007.62	14543442.29	40°02'44.360"N	104°46'09.143"W	2.20	
3933.00	5.640	213.460	3870.71	-441.08	-437.28	-437.94	1705003.72	14543433.94	40°02'44.278"N	104°46'09.193"W	2.01	
4023.00	3.680	230.330	3960.41	-446.66	-442.81	-442.60	1704999.08	14543428.39	40°02'44.223"N	104°46'09.253"W	2.64	
4112.00	2.840	257.600	4049.27	-448.99	-445.11	-446.96	1704994.73	14543426.08	40°02'44.200"N	104°46'09.309"W	1.95	
4201.00	1.830	243.970	4138.19	-450.12	-446.21	-450.39	1704991.31	14543424.98	40°02'44.189"N	104°46'09.353"W	1.29	
4291.00	0.380	327.900	4228.18	-450.51	-446.58	-451.84	1704989.86	14543424.60	40°02'44.186"N	104°46'09.372"W	2.03	
4380.00	0.070	4.590	4317.18	-450.21	-446.28	-451.99	1704989.71	14543424.90	40°02'44.189"N	104°46'09.374"W	0.37	
4470.00	0.120	357.620	4407.18	-450.06	-446.13	-451.99	1704989.71	14543425.05	40°02'44.190"N	104°46'09.374"W	0.06	
4559.00	0.150	126.020	4496.18	-450.03	-446.11	-451.90	1704989.80	14543425.07	40°02'44.190"N	104°46'09.373"W	0.27	
4649.00	0.040	3.170	4586.18	-450.07	-446.14	-451.80	1704989.89	14543425.04	40°02'44.190"N	104°46'09.371"W	0.19	
4738.00	0.040	257.990	4675.18	-450.05	-446.12	-451.83	1704989.86	14543425.06	40°02'44.190"N	104°46'09.372"W	0.07	
4828.00	0.130	192.430	4765.18	-450.15	-446.23	-451.88	1704989.81	14543424.96	40°02'44.189"N	104°46'09.372"W	0.13	
4917.00	0.140	62.150	4854.18	-450.20	-446.27	-451.81	1704989.89	14543424.91	40°02'44.189"N	104°46'09.371"W	0.28	
5007.00	0.060	48.190	4944.18	-450.12	-446.19	-451.68	1704990.02	14543424.99	40°02'44.190"N	104°46'09.370"W	0.09	
5096.00	0.150	187.480	5033.18	-450.20	-446.28	-451.66	1704990.04	14543424.91	40°02'44.189"N	104°46'09.369"W	0.22	
5186.00	0.000	7.980	5123.18	-450.32	-446.39	-451.67	1704990.02	14543424.79	40°02'44.188"N	104°46'09.370"W	0.17	
5275.00	0.060	184.550	5212.18	-450.36	-446.44	-451.68	1704990.02	14543424.74	40°02'44.187"N	104°46'09.370"W	0.07	
5365.00	0.120	110.590	5302.18	-450.44	-446.52	-451.59	1704990.10	14543424.66	40°02'44.186"N	104°46'09.369"W	0.13	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#17 OJB 15-17HZ(1025'FSL & 1427'FWL,SEC.15)
Area	COLORADO	Well	OJB 15-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	OJB 15-17HZ AWB
Facility	SEC.15-T1N-R66W		

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
5454.00	0.130	165.890	5391.18	-450.57	-446.65	-451.48	1704990.22	14543424.53	40°02'44.185"N	104°46'09.367"W	0.13	
5544.00	0.190	262.330	5481.18	-450.69	-446.77	-451.60	1704990.09	14543424.41	40°02'44.184"N	104°46'09.369"W	0.27	
5633.00	0.110	338.280	5570.18	-450.63	-446.71	-451.78	1704989.92	14543424.47	40°02'44.184"N	104°46'09.371"W	0.22	
5722.00	0.150	285.590	5659.18	-450.52	-446.60	-451.92	1704989.77	14543424.58	40°02'44.186"N	104°46'09.373"W	0.14	
5812.00	0.220	143.870	5749.18	-450.63	-446.71	-451.93	1704989.76	14543424.48	40°02'44.185"N	104°46'09.373"W	0.39	
5902.00	0.220	307.740	5839.18	-450.67	-446.74	-451.97	1704989.73	14543424.44	40°02'44.184"N	104°46'09.374"W	0.48	
5991.00	0.140	340.380	5928.17	-450.46	-446.53	-452.14	1704989.55	14543424.65	40°02'44.186"N	104°46'09.376"W	0.14	
6080.00	0.090	318.060	6017.17	-450.31	-446.38	-452.22	1704989.47	14543424.80	40°02'44.188"N	104°46'09.377"W	0.07	
6170.00	0.150	98.410	6107.17	-450.27	-446.34	-452.16	1704989.54	14543424.84	40°02'44.188"N	104°46'09.376"W	0.25	
6259.00	0.090	217.040	6196.17	-450.34	-446.42	-452.08	1704989.61	14543424.76	40°02'44.187"N	104°46'09.375"W	0.23	
6349.00	0.580	149.230	6286.17	-450.79	-446.86	-451.89	1704989.80	14543424.32	40°02'44.183"N	104°46'09.373"W	0.61	
6439.00	0.170	306.840	6376.17	-451.10	-447.17	-451.77	1704989.93	14543424.01	40°02'44.180"N	104°46'09.371"W	0.82	
6528.00	0.140	314.590	6465.17	-450.95	-447.02	-451.95	1704989.75	14543424.16	40°02'44.181"N	104°46'09.373"W	0.04	
6618.00	0.280	323.570	6555.17	-450.69	-446.76	-452.16	1704989.54	14543424.42	40°02'44.184"N	104°46'09.376"W	0.16	
6707.00	0.170	3.470	6644.17	-450.39	-446.46	-452.28	1704989.42	14543424.72	40°02'44.187"N	104°46'09.377"W	0.21	
6797.00	0.140	358.400	6734.17	-450.14	-446.22	-452.27	1704989.42	14543424.96	40°02'44.189"N	104°46'09.377"W	0.04	
6886.00	0.130	344.090	6823.17	-449.94	-446.01	-452.30	1704989.39	14543425.17	40°02'44.191"N	104°46'09.378"W	0.04	
6940.00†	3.540	6.928	6877.13	-448.22	-444.29	-452.12	1704989.57	14543426.88	40°02'44.208"N	104°46'09.375"W	6.33	KOP
6976.00	5.820	7.260	6913.01	-445.31	-441.38	-451.76	1704989.93	14543429.80	40°02'44.237"N	104°46'09.371"W	6.33	
7065.00	14.890	3.160	7000.47	-429.37	-425.45	-450.55	1704991.09	14543445.72	40°02'44.395"N	104°46'09.355"W	10.22	
7155.00	23.110	359.750	7085.50	-400.11	-396.19	-449.99	1704991.57	14543474.97	40°02'44.684"N	104°46'09.348"W	9.21	
7244.00	31.340	348.930	7164.62	-359.87	-355.92	-454.52	1704986.94	14543515.22	40°02'45.082"N	104°46'09.406"W	10.76	
7334.00	38.670	350.260	7238.29	-309.20	-305.17	-463.79	1704977.55	14543565.92	40°02'45.583"N	104°46'09.525"W	8.19	
7424.00	46.080	0.640	7304.81	-248.96	-244.89	-468.19	1704972.98	14543626.17	40°02'46.179"N	104°46'09.582"W	11.30	
7513.00	55.890	4.420	7360.78	-179.97	-175.92	-464.99	1704976.01	14543695.12	40°02'46.861"N	104°46'09.541"W	11.50	
7603.00	65.220	5.230	7404.98	-101.90	-97.91	-458.38	1704982.41	14543773.12	40°02'47.631"N	104°46'09.456"W	10.40	
7692.00	75.850	5.370	7434.59	-18.41	-14.47	-450.63	1704989.94	14543856.54	40°02'48.456"N	104°46'09.356"W	11.94	
7782.00	83.430	5.170	7450.77	69.76	73.62	-442.51	1704997.83	14543944.62	40°02'49.326"N	104°46'09.252"W	8.43	
7872.00	90.180	3.460	7455.78	159.36	163.17	-435.76	1705004.34	14544034.15	40°02'50.211"N	104°46'09.165"W	7.74	LANDING (1188'FSL & 991'FWL,SEC.15) 40.0472810 -104.7692125
7961.00	90.150	358.690	7455.52	248.33	252.13	-434.09	1705005.78	14544123.08	40°02'51.091"N	104°46'09.144"W	5.36	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#17 OJB 15-17HZ(1025'FSL & 1427'FWL,SEC.15)
Area	COLORADO	Well	OJB 15-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	OJB 15-17HZ AWB
Facility	SEC.15-T1N-R66W		

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
8051.00	89.540	357.020	7455.77	338.23	342.06	-437.45	1705002.18	14544212.96	40°02'51.979"N	104°46'09.187"W	1.98	
8141.00	89.690	356.900	7456.37	428.06	431.93	-442.23	1704997.17	14544302.79	40°02'52.867"N	104°46'09.248"W	0.21	
8230.00	89.630	357.190	7456.90	516.89	520.81	-446.82	1704992.35	14544391.62	40°02'53.746"N	104°46'09.307"W	0.33	
8313.00†	89.742	358.580	7457.35	599.80	603.75	-449.88	1704989.08	14544474.52	40°02'54.565"N	104°46'09.347"W	1.68	EXIT RADIUS HEEL (1629'FSL & 976'FWL,SEC.15) 40.0484904 -104.7692630
8319.00	89.750	358.680	7457.38	605.80	609.75	-450.02	1704988.92	14544480.51	40°02'54.625"N	104°46'09.349"W	1.68	
8409.00	89.940	0.100	7457.62	695.78	699.74	-450.98	1704987.72	14544570.47	40°02'55.514"N	104°46'09.361"W	1.59	
8499.00	89.290	359.920	7458.23	785.78	789.74	-450.96	1704987.51	14544660.43	40°02'56.403"N	104°46'09.361"W	0.75	
8588.00	89.480	359.530	7459.18	874.76	878.74	-451.39	1704986.85	14544749.39	40°02'57.283"N	104°46'09.366"W	0.49	
8678.00	90.340	359.310	7459.33	964.75	968.73	-452.30	1704985.70	14544839.34	40°02'58.172"N	104°46'09.378"W	0.99	
8767.00	90.280	358.210	7458.84	1053.70	1057.71	-454.23	1704983.54	14544928.28	40°02'59.051"N	104°46'09.403"W	1.24	
8857.00	90.220	357.700	7458.45	1143.61	1147.65	-457.44	1704980.10	14545018.18	40°02'59.940"N	104°46'09.444"W	0.57	
8946.00	90.090	358.350	7458.21	1232.53	1236.59	-460.51	1704976.80	14545107.08	40°03'00.819"N	104°46'09.484"W	0.74	
9036.00	90.120	359.150	7458.05	1322.49	1326.57	-462.47	1704974.60	14545197.01	40°03'01.708"N	104°46'09.509"W	0.89	
9126.00	89.850	1.400	7458.07	1412.48	1416.56	-462.04	1704974.80	14545286.97	40°03'02.598"N	104°46'09.503"W	2.52	
9215.00	90.060	2.720	7458.14	1501.44	1505.51	-458.84	1704977.77	14545375.89	40°03'03.477"N	104°46'09.462"W	1.50	
9305.00	90.120	3.080	7458.00	1591.36	1595.39	-454.29	1704982.08	14545465.75	40°03'04.365"N	104°46'09.404"W	0.41	
9394.00	89.880	2.560	7458.00	1680.29	1684.28	-449.91	1704986.23	14545554.61	40°03'05.243"N	104°46'09.347"W	0.64	
9483.00	90.370	3.790	7457.80	1769.19	1773.14	-444.98	1704990.92	14545643.45	40°03'06.122"N	104°46'09.284"W	1.49	
9573.00	90.030	4.570	7457.49	1859.01	1862.90	-438.42	1704997.25	14545733.19	40°03'07.009"N	104°46'09.200"W	0.95	
9662.00	90.250	2.950	7457.27	1947.86	1951.71	-432.58	1705002.85	14545821.98	40°03'07.886"N	104°46'09.125"W	1.84	
9752.00	90.000	359.560	7457.08	2037.84	2041.67	-430.61	1705004.59	14545911.91	40°03'08.775"N	104°46'09.099"W	3.78	
9841.00	90.180	358.110	7456.94	2126.80	2130.65	-432.42	1705002.54	14546000.85	40°03'09.655"N	104°46'09.123"W	1.64	
9930.00	90.490	358.060	7456.42	2215.72	2219.60	-435.40	1704999.34	14546089.76	40°03'10.534"N	104°46'09.161"W	0.35	
10020.00	89.940	357.080	7456.08	2305.60	2309.52	-439.21	1704995.29	14546179.63	40°03'11.422"N	104°46'09.210"W	1.25	
10109.00	90.250	0.630	7455.93	2394.55	2398.48	-440.99	1704993.28	14546268.55	40°03'12.301"N	104°46'09.233"W	4.00	
10199.00	90.150	0.710	7455.62	2484.54	2488.48	-439.94	1704994.10	14546358.51	40°03'13.191"N	104°46'09.219"W	0.14	
10288.00	90.180	0.080	7455.36	2573.54	2577.48	-439.32	1704994.48	14546447.48	40°03'14.070"N	104°46'09.212"W	0.71	
10378.00	89.850	359.820	7455.34	2663.54	2667.47	-439.40	1704994.17	14546537.44	40°03'14.960"N	104°46'09.213"W	0.47	
10467.00	89.690	359.060	7455.69	2752.52	2756.47	-440.27	1704993.07	14546626.40	40°03'15.839"N	104°46'09.224"W	0.87	
10557.00	89.820	357.140	7456.08	2842.44	2846.41	-443.26	1704989.85	14546716.30	40°03'16.728"N	104°46'09.262"W	2.14	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#17 OJB 15-17HZ(1025'FSL & 1427'FWL,SEC.15)
Area	COLORADO	Well	OJB 15-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	OJB 15-17HZ AWB
Facility	SEC.15-T1N-R66W		

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
10646.00	89.970	357.100	7456.24	2931.28	2935.30	-447.73	1704985.15	14546805.14	40°03'17.606"N	104°46'09.320"W	0.17	
10735.00	89.910	358.750	7456.33	3020.19	3024.24	-450.95	1704981.69	14546894.03	40°03'18.485"N	104°46'09.361"W	1.86	
10825.00	89.910	0.200	7456.48	3110.17	3114.23	-451.77	1704980.63	14546983.99	40°03'19.375"N	104°46'09.372"W	1.61	
10914.00	90.090	0.950	7456.48	3199.17	3203.23	-450.88	1704981.29	14547072.95	40°03'20.254"N	104°46'09.360"W	0.87	
11004.00	90.090	1.840	7456.33	3289.16	3293.20	-448.69	1704983.25	14547162.89	40°03'21.143"N	104°46'09.332"W	0.99	
11093.00	90.000	1.970	7456.26	3378.13	3382.15	-445.73	1704985.98	14547251.82	40°03'22.022"N	104°46'09.294"W	0.18	
11183.00	89.850	3.320	7456.38	3468.07	3472.05	-441.58	1704989.89	14547341.69	40°03'22.911"N	104°46'09.241"W	1.51	
11272.00	90.090	2.730	7456.43	3556.98	3560.93	-436.88	1704994.36	14547430.54	40°03'23.789"N	104°46'09.180"W	0.72	
11362.00	90.030	0.620	7456.33	3646.96	3650.89	-434.25	1704996.75	14547520.47	40°03'24.678"N	104°46'09.147"W	2.35	
11451.00	90.060	359.500	7456.26	3735.95	3739.88	-434.16	1704996.61	14547609.43	40°03'25.557"N	104°46'09.145"W	1.26	
11541.00	89.750	359.270	7456.41	3825.94	3829.88	-435.12	1704995.41	14547699.39	40°03'26.447"N	104°46'09.158"W	0.43	
11631.00	89.510	359.570	7456.99	3915.92	3919.87	-436.03	1704994.27	14547789.35	40°03'27.336"N	104°46'09.170"W	0.43	
11720.00	90.180	359.540	7457.24	4004.91	4008.87	-436.73	1704993.34	14547878.30	40°03'28.216"N	104°46'09.178"W	0.75	
11809.00	89.850	1.960	7457.21	4093.90	4097.85	-435.56	1704994.28	14547967.26	40°03'29.095"N	104°46'09.164"W	2.74	
11899.00	90.310	3.540	7457.09	4183.82	4187.75	-431.24	1704998.36	14548057.13	40°03'29.983"N	104°46'09.108"W	1.83	
11989.00	90.280	5.080	7456.62	4273.62	4277.49	-424.48	1705004.88	14548146.85	40°03'30.870"N	104°46'09.021"W	1.71	
12078.00	89.940	4.550	7456.45	4362.37	4366.17	-417.01	1705012.12	14548235.52	40°03'31.747"N	104°46'08.925"W	0.71	
12168.00	90.220	3.120	7456.33	4452.21	4455.97	-410.99	1705017.90	14548325.29	40°03'32.634"N	104°46'08.848"W	1.62	
12257.00	89.880	2.610	7456.25	4541.14	4544.86	-406.54	1705022.12	14548414.16	40°03'33.512"N	104°46'08.790"W	0.69	
12347.00	89.660	0.920	7456.61	4631.11	4634.81	-403.77	1705024.65	14548504.08	40°03'34.401"N	104°46'08.755"W	1.89	
12436.00	89.910	358.620	7456.94	4720.10	4723.80	-404.13	1705024.06	14548593.04	40°03'35.281"N	104°46'08.759"W	2.60	
12526.00	89.820	357.240	7457.16	4810.01	4813.74	-407.38	1705020.58	14548682.93	40°03'36.169"N	104°46'08.801"W	1.54	
12615.00	90.060	355.310	7457.25	4898.76	4902.55	-413.16	1705014.57	14548771.69	40°03'37.047"N	104°46'08.876"W	2.19	
12705.00	90.400	0.530	7456.89	4988.64	4992.46	-416.42	1705011.07	14548861.55	40°03'37.936"N	104°46'08.918"W	5.81	
12794.00	90.740	3.920	7456.00	5077.58	5081.38	-412.97	1705014.29	14548950.44	40°03'38.814"N	104°46'08.873"W	3.83	
12884.00	90.580	7.400	7454.97	5167.19	5170.92	-404.10	1705022.93	14549039.97	40°03'39.699"N	104°46'08.759"W	3.87	
12973.00	90.460	10.500	7454.16	5255.21	5258.82	-390.25	1705036.54	14549127.87	40°03'40.568"N	104°46'08.581"W	3.49	
13062.00	90.370	8.910	7453.51	5343.06	5346.54	-375.25	1705051.31	14549215.60	40°03'41.435"N	104°46'08.388"W	1.79	
13152.00	91.170	4.610	7452.30	5432.50	5435.88	-364.66	1705061.66	14549304.94	40°03'42.318"N	104°46'08.252"W	4.86	
13242.00	90.830	1.520	7450.73	5522.38	5525.73	-359.85	1705066.23	14549394.76	40°03'43.206"N	104°46'08.190"W	3.45	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#17 OJB 15-17HZ(1025'FSL & 1427'FWL,SEC.15)
Area	COLORADO	Well	OJB 15-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	OJB 15-17HZ AWB
Facility	SEC.15-T1N-R66W		

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
13331.00	90.920	359.300	7449.37	5611.36	5614.71	-359.21	1705066.64	14549483.71	40°03'44.085"N	104°46'08.182"W	2.50	
13420.00	90.310	355.730	7448.42	5700.22	5703.61	-363.07	1705062.55	14549572.56	40°03'44.963"N	104°46'08.232"W	4.07	
13510.00	90.310	352.280	7447.93	5789.63	5793.10	-372.47	1705052.92	14549661.99	40°03'45.848"N	104°46'08.352"W	3.83	
13599.00	90.180	351.810	7447.55	5877.66	5881.24	-384.79	1705040.38	14549750.07	40°03'46.719"N	104°46'08.511"W	0.55	
13689.00	90.460	353.800	7447.05	5966.85	5970.53	-396.06	1705028.88	14549839.29	40°03'47.601"N	104°46'08.656"W	2.23	
13778.00	90.340	352.090	7446.43	6055.07	6058.85	-406.99	1705017.72	14549927.54	40°03'48.474"N	104°46'08.796"W	1.93	
13868.00	90.120	351.210	7446.06	6144.00	6147.90	-420.06	1705004.43	14550016.52	40°03'49.354"N	104°46'08.965"W	1.01	
13957.00	90.280	355.980	7445.75	6232.32	6236.31	-429.98	1704994.27	14550104.87	40°03'50.228"N	104°46'09.092"W	5.36	
14047.00	90.150	0.240	7445.42	6322.22	6326.24	-432.95	1704991.07	14550194.76	40°03'51.116"N	104°46'09.130"W	4.74	
14136.00	90.620	1.930	7444.82	6411.21	6415.22	-431.26	1704992.53	14550283.71	40°03'51.996"N	104°46'09.109"W	1.97	
14226.00	90.400	3.270	7444.02	6501.15	6505.12	-427.18	1704996.37	14550373.58	40°03'52.884"N	104°46'09.056"W	1.51	
14315.00	90.280	357.630	7443.49	6590.11	6594.08	-426.48	1704996.84	14550462.51	40°03'53.763"N	104°46'09.047"W	6.34	
14405.00	90.580	359.280	7442.81	6680.05	6684.04	-428.91	1704994.18	14550552.43	40°03'54.652"N	104°46'09.079"W	1.86	
14494.00	90.800	1.920	7441.74	6769.03	6773.03	-427.98	1704994.88	14550641.38	40°03'55.532"N	104°46'09.067"W	2.98	
14584.00	90.520	3.400	7440.70	6858.96	6862.92	-423.80	1704998.82	14550731.25	40°03'56.420"N	104°46'09.013"W	1.67	
14674.00	90.460	2.780	7439.93	6948.86	6952.79	-418.95	1705003.43	14550821.09	40°03'57.308"N	104°46'08.950"W	0.69	
14763.00	90.550	3.280	7439.15	7037.77	7041.66	-414.25	1705007.90	14550909.94	40°03'58.186"N	104°46'08.890"W	0.57	
14852.00	90.310	2.130	7438.48	7126.70	7130.55	-410.05	1705011.87	14550998.81	40°03'59.065"N	104°46'08.836"W	1.32	
14942.00	90.250	359.390	7438.04	7216.69	7220.54	-408.85	1705012.83	14551088.76	40°03'59.954"N	104°46'08.821"W	3.05	
15031.00	90.520	356.690	7437.44	7305.60	7309.47	-411.90	1705009.55	14551177.65	40°04'00.833"N	104°46'08.860"W	3.05	
15121.00	90.550	357.800	7436.60	7395.45	7399.36	-416.22	1705005.00	14551267.50	40°04'01.721"N	104°46'08.915"W	1.23	
15210.00	90.490	359.810	7435.79	7484.40	7488.34	-418.08	1705002.91	14551356.43	40°04'02.600"N	104°46'08.939"W	2.26	
15300.00	90.370	0.380	7435.12	7574.40	7578.33	-417.93	1705002.82	14551446.39	40°04'03.490"N	104°46'08.937"W	0.65	
15389.00	89.750	358.080	7435.03	7663.37	7667.32	-419.12	1705001.40	14551535.34	40°04'04.369"N	104°46'08.953"W	2.68	
15479.00	89.780	357.470	7435.40	7753.27	7757.25	-422.62	1704997.67	14551625.22	40°04'05.258"N	104°46'08.998"W	0.68	
15569.00	89.570	357.180	7435.91	7843.13	7847.15	-426.82	1704993.24	14551715.07	40°04'06.146"N	104°46'09.052"W	0.40	
15658.00	89.630	358.270	7436.53	7932.02	7936.08	-430.35	1704989.47	14551803.96	40°04'07.025"N	104°46'09.097"W	1.23	
15748.00	90.460	359.700	7436.46	8021.98	8026.06	-431.95	1704987.64	14551893.90	40°04'07.914"N	104°46'09.118"W	1.84	
15837.00	90.400	2.630	7435.79	8110.97	8115.03	-430.14	1704989.22	14551982.84	40°04'08.793"N	104°46'09.095"W	3.29	
15926.00	90.950	4.820	7434.74	8199.81	8203.83	-424.36	1704994.77	14552071.62	40°04'09.671"N	104°46'09.020"W	2.54	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#17 OJB 15-17HZ(1025'FSL & 1427'FWL,SEC.15)
Area	COLORADO	Well	OJB 15-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	OJB 15-17HZ AWB
Facility	SEC.15-T1N-R66W		

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
16016.00	90.830	6.530	7433.34	8289.43	8293.37	-415.46	1705003.43	14552161.15	40°04'10.556"N	104°46'08.906"W	1.90	
16105.00	91.140	8.310	7431.81	8377.77	8381.61	-403.97	1705014.69	14552249.38	40°04'11.428"N	104°46'08.758"W	2.03	
16195.00	91.110	6.850	7430.04	8467.06	8470.81	-392.10	1705026.32	14552338.57	40°04'12.309"N	104°46'08.605"W	1.62	
16284.00	91.140	4.860	7428.30	8555.65	8559.32	-383.02	1705035.16	14552427.07	40°04'13.184"N	104°46'08.489"W	2.24	
16374.00	91.020	3.420	7426.60	8645.45	8649.07	-376.52	1705041.42	14552516.80	40°04'14.071"N	104°46'08.405"W	1.61	
16463.00	91.080	1.990	7424.97	8734.37	8737.95	-372.32	1705045.39	14552605.66	40°04'14.949"N	104°46'08.351"W	1.61	
16553.00	91.020	0.110	7423.32	8824.35	8827.92	-370.68	1705046.80	14552695.59	40°04'15.838"N	104°46'08.330"W	2.09	
16642.00	90.220	359.740	7422.36	8913.33	8916.91	-370.79	1705046.45	14552784.55	40°04'16.718"N	104°46'08.331"W	0.99	
16732.00	90.250	0.580	7421.99	9003.33	9006.91	-370.54	1705046.47	14552874.51	40°04'17.607"N	104°46'08.328"W	0.93	
16821.00	90.120	2.130	7421.70	9092.32	9095.88	-368.44	1705048.34	14552963.46	40°04'18.486"N	104°46'08.301"W	1.75	
16910.00	89.750	2.640	7421.80	9181.27	9184.80	-364.73	1705051.81	14553052.35	40°04'19.365"N	104°46'08.254"W	0.71	
16913.00†	89.739	2.543	7421.81	9184.27	9187.80	-364.60	1705051.94	14553055.35	40°04'19.395"N	104°46'08.252"W	3.27	ENTER RADIUS TOE (370'FNL & 1061'FWL,SEC.10) 40.0720541 -104.7689588
17000.00	89.420	359.720	7422.45	9271.25	9274.77	-362.88	1705053.43	14553142.29	40°04'20.254"N	104°46'08.230"W	3.27	
17089.00	89.940	358.080	7422.95	9360.21	9363.75	-364.59	1705051.49	14553231.23	40°04'21.134"N	104°46'08.252"W	1.93	
17178.00	89.350	357.440	7423.50	9449.11	9452.68	-368.07	1705047.78	14553320.11	40°04'22.012"N	104°46'08.296"W	0.98	
17268.00	89.480	355.620	7424.42	9538.88	9542.51	-373.51	1705042.10	14553409.89	40°04'22.900"N	104°46'08.367"W	2.03	
17357.00	89.140	355.370	7425.49	9627.54	9631.22	-380.50	1705034.88	14553498.55	40°04'23.777"N	104°46'08.456"W	0.47	
17536.00	89.630	355.760	7427.41	9805.86	9809.68	-394.34	1705020.58	14553676.90	40°04'25.540"N	104°46'08.635"W	0.35	LAST BHGE MWD+IFR1+MSA SURVEY
17583.00	89.630	355.760	7427.72	9852.70	9856.55	-397.82	1705016.98	14553723.74	40°04'26.004"N	104°46'08.679"W	0.00	PTB (299'FSL & 1028'FWL,SEC.03) 40.0738899 -104.7690776

HOLE & CASING SECTIONS - Ref Wellbore: OJB 15-17HZ AWB Ref Wellpath: OJB 15-17HZ 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	1882.00	1856.00	26.00	1859.92	0.00	0.00	-173.49	-149.04

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#17 OJB 15-17HZ(1025'FSL & 1427'FWL,SEC.15)
Area	COLORADO	Well	OJB 15-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	OJB 15-17HZ AWB
Facility	SEC.15-T1N-R66W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.10-T1N-R66W	0.00	104.94	1.17	1705441.24	14543977.08	40°02'49.636"N	104°46'03.547"W	polygon
SEC.15-T1N-R66W	0.00	104.94	1.17	1705441.24	14543977.08	40°02'49.636"N	104°46'03.547"W	polygon
OJB 15-17HZ BHL REV-1(300'FSL & 1060'FWL,SEC.03)	7437.00	9857.69	-365.75	1705049.03	14553724.96	40°04'26.015"N	104°46'08.267"W	point
OJB 15-17HZ HEEL REV-1(1150'FSL & 976'FWL,SEC.15)	7450.00	125.66	-450.72	1704989.48	14543996.62	40°02'49.841"N	104°46'09.358"W	point
OJB 15-17HZ LANDBOX	7450.00	0.00	0.00	1705440.35	14543872.18	40°02'48.599"N	104°46'03.562"W	polygon
OJB 15-17HZ RADIUS 1	7450.00	9559.69	-94.05	1705321.40	14553427.80	40°04'23.070"N	104°46'04.772"W	polygon
OJB 15-17HZ RADIUS 2	7450.00	300.52	-106.31	1705333.30	14544172.30	40°02'51.569"N	104°46'04.929"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: OJB 15-17HZ AWB Ref Wellpath: OJB 15-17HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	1844.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <134 - 1844>	OJB 15-17HZ AWB
1844.00	17536.00	Custom APC ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+MSA <1966 - 17536>	OJB 15-17HZ AWB
17536.00	17583.00	Blind Drilling (std)	Projection to bit	OJB 15-17HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#17 OJB 15-17HZ(1025'FSL & 1427'FWL,SEC.15)
Area	COLORADO	Well	OJB 15-17HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	OJB 15-17HZ AWB
Facility	SEC.15-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
134.00	0.620	122.810	134.00	FIRST SURFACE MWD+IFR1 SURVEY
1844.00	11.470	216.760	1822.69	LAST SURFACE MWD+IFR1 SURVEY
1966.00	12.090	215.910	1942.12	FIRST BHGE MWD+IFR1+MSA SURVEY
6940.00	3.540	6.928	6877.13	KOP
7872.00	90.180	3.460	7455.78	LANDING (1188'FSL & 991'FWL,SEC.15) 40.0472810 -104.7692125
8313.00	89.742	358.580	7457.35	EXIT RADIUS HEEL (1629'FSL & 976'FWL,SEC.15) 40.0484904 -104.7692630
16913.00	89.739	2.543	7421.81	ENTER RADIUS TOE (370'FNL & 1061'FWL,SEC.10) 40.0720541 -104.7689588
17536.00	89.630	355.760	7427.41	LAST BHGE MWD+IFR1+MSA SURVEY
17583.00	89.630	355.760	7427.72	PTB (299'FSL & 1028'FWL,SEC.03) 40.0738899 -104.7690776