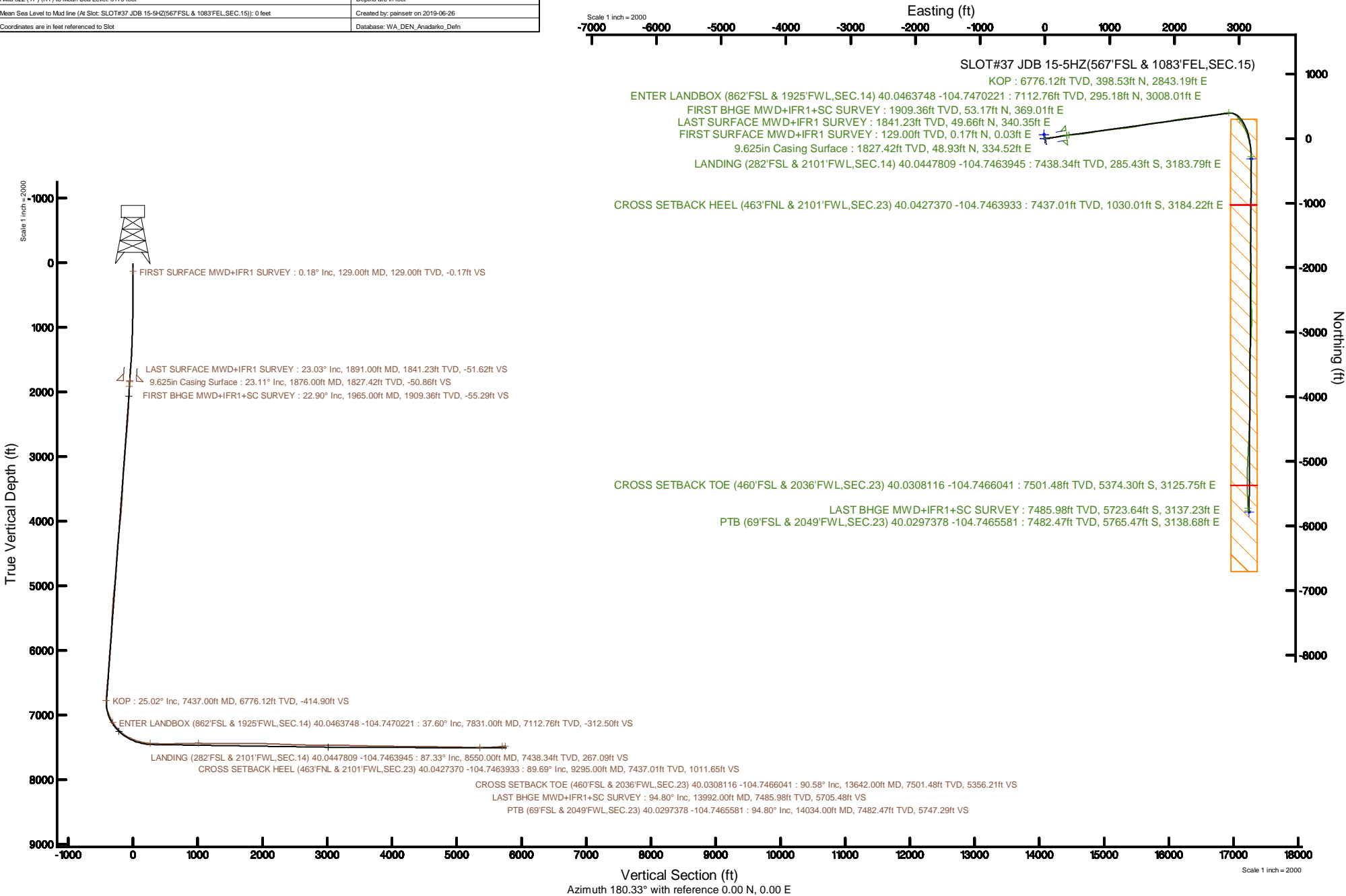


# KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#37 JDB 15-5HZ(567'FSL & 1083'FEL,SEC.15)  
Field: WELD COUNTY (UTM/TRUE NORTH) Well: JDB 15-5HZ  
Facility: SEC.15-T1N-R66W Wellbore: JDB 15-5HZ PWB

Plot reference wellpath is JDB 15-5HZ PWP Rev-A.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to Akita 522 (17) (RT)	North Reference: True north
Measured depths are referenced to Akita 522 (17) (RT)	Scale: True distance
Akita 522 (17) (RT) to Mean Sea Level: 5170 feet	Depths are in feet
Mean Sea Level to Mud line (At Slot: SLOT#37 JDB 15-5HZ(567'FSL & 1083'FEL,SEC.15)): 0 feet	Created by: painsetr on 2019-06-26
Coordinates are in feet referenced to Slot	Database: WA_DEN_Anadarko_Defn





# Actual Wellpath Report

JDB 15-5HZ AWP

Page 1 of 7



## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#37 JDB 15-5HZ(567'FSL & 1083'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-5HZ AWB
Facility	SEC.15-T1N-R66W		

## REPORT SETUP INFORMATION

Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 5.1
North Reference	True	User	Painsetr
Scale	0.999605	Report Generated	6/26/2019 at 10:18:18 AM
Convergence at slot	0.16° East	Database/Source file	WA_DEN_Anadarko_Defn/JDB_15-5HZ_AWP.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-701.71	2766.83	1708209.45	14543417.80	40°02'44.034"N	104°45'27.958"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	Akita 522 (17') (RT) to Facility Vertical Datum	5170.00ft
Horizontal Reference Pt	Slot	Akita 522 (17') (RT) to Mean Sea Level	5170.00ft
Vertical Reference Pt	Akita 522 (17') (RT)	Akita 522 (17') (RT) to Mud Line at Slot (SLOT#37 JDB 15-5HZ (567'FSL & 1083'FEL,SEC.15))	5170.00ft
MD Reference Pt	Akita 522 (17') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	180.33°

# Actual Wellpath Report

JDB 15-5HZ AWP

Page 2 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#37 JDB 15-5HZ(567'FSL & 1083'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-5HZ AWB
Facility	SEC.15-T1N-R66W		

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	8.790	0.00	0.00	0.00	0.00	1708209.45	14543417.80	40°02'44.034"N	104°45'27.958"W	0.00	
17.00	0.000	8.790	17.00	0.00	0.00	0.00	1708209.45	14543417.80	40°02'44.034"N	104°45'27.958"W	0.00	
129.00	0.180	8.790	129.00	-0.17	0.17	0.03	1708209.48	14543417.98	40°02'44.036"N	104°45'27.957"W	0.16	FIRST SURFACE MWD+IFR1 SURVEY
224.00	0.400	355.260	224.00	-0.65	0.65	0.02	1708209.47	14543418.45	40°02'44.040"N	104°45'27.957"W	0.24	
320.00	1.230	59.680	319.99	-1.51	1.51	0.88	1708210.33	14543419.31	40°02'44.049"N	104°45'27.946"W	1.16	
415.00	1.710	81.830	414.96	-2.24	2.22	3.17	1708212.61	14543420.03	40°02'44.056"N	104°45'27.917"W	0.77	
511.00	3.740	90.270	510.85	-2.46	2.41	7.72	1708217.16	14543420.23	40°02'44.058"N	104°45'27.858"W	2.15	
606.00	5.890	87.630	605.50	-2.69	2.60	15.69	1708225.12	14543420.44	40°02'44.060"N	104°45'27.756"W	2.27	
701.00	5.980	89.740	700.00	-2.97	2.82	25.50	1708234.94	14543420.69	40°02'44.062"N	104°45'27.630"W	0.25	
795.00	8.000	85.780	793.29	-3.54	3.33	36.93	1708246.35	14543421.23	40°02'44.067"N	104°45'27.483"W	2.21	
890.00	9.620	83.410	887.17	-5.02	4.72	51.41	1708260.82	14543422.66	40°02'44.081"N	104°45'27.297"W	1.75	
986.00	11.290	83.230	981.57	-7.15	6.75	68.71	1708278.11	14543424.74	40°02'44.101"N	104°45'27.074"W	1.74	
1081.00	11.380	81.830	1074.72	-9.68	9.18	87.22	1708296.61	14543427.21	40°02'44.125"N	104°45'26.836"W	0.30	
1176.00	13.140	82.880	1167.55	-12.47	11.85	107.21	1708316.59	14543429.94	40°02'44.151"N	104°45'26.579"W	1.87	
1270.00	14.990	82.530	1258.73	-15.50	14.76	129.87	1708339.23	14543432.90	40°02'44.180"N	104°45'26.288"W	1.97	
1366.00	16.960	81.300	1351.02	-19.39	18.49	156.02	1708365.36	14543436.71	40°02'44.217"N	104°45'25.951"W	2.08	
1461.00	17.970	79.280	1441.64	-24.37	23.31	184.12	1708393.43	14543441.60	40°02'44.264"N	104°45'25.590"W	1.24	
1556.00	20.610	79.020	1531.29	-30.46	29.22	214.94	1708424.22	14543447.60	40°02'44.323"N	104°45'25.194"W	2.78	
1650.00	22.320	79.980	1618.77	-36.91	35.48	248.76	1708458.01	14543453.94	40°02'44.385"N	104°45'24.759"W	1.86	
1745.00	22.150	80.510	1706.71	-43.21	41.57	284.19	1708493.41	14543460.13	40°02'44.445"N	104°45'24.303"W	0.28	
1840.00	23.290	82.180	1794.33	-48.92	47.08	320.46	1708529.65	14543465.73	40°02'44.499"N	104°45'23.837"W	1.38	
1891.00	23.030	83.060	1841.23	-51.62	49.66	340.35	1708549.53	14543468.36	40°02'44.525"N	104°45'23.581"W	0.85	LAST SURFACE MWD+IFR1 SURVEY
1965.00	22.900	82.960	1909.36	-55.29	53.17	369.01	1708578.17	14543471.95	40°02'44.559"N	104°45'23.213"W	0.18	FIRST BHGE MWD+IFR1+SC SURVEY
2052.00	25.750	83.970	1988.63	-59.56	57.23	404.61	1708613.74	14543476.11	40°02'44.600"N	104°45'22.755"W	3.31	
2139.00	26.530	86.480	2066.73	-62.96	60.41	442.80	1708651.91	14543479.39	40°02'44.631"N	104°45'22.264"W	1.56	
2313.00	26.760	85.470	2222.25	-68.89	65.89	520.64	1708729.70	14543485.08	40°02'44.685"N	104°45'21.263"W	0.29	
2401.00	27.530	83.640	2300.56	-72.93	69.71	560.60	1708769.64	14543489.00	40°02'44.723"N	104°45'20.749"W	1.29	
2488.00	26.520	82.920	2378.06	-77.78	74.33	599.86	1708808.87	14543493.73	40°02'44.768"N	104°45'20.245"W	1.22	
2576.00	27.300	81.840	2456.53	-83.29	79.61	639.33	1708848.31	14543499.12	40°02'44.821"N	104°45'19.737"W	1.05	
2664.00	25.680	80.770	2535.29	-89.44	85.54	678.13	1708887.08	14543505.15	40°02'44.879"N	104°45'19.238"W	1.92	
2751.00	27.720	80.710	2613.01	-95.95	91.83	716.71	1708925.62	14543511.54	40°02'44.941"N	104°45'18.742"W	2.35	
2839.00	25.880	78.780	2691.56	-103.22	98.87	755.75	1708964.63	14543518.69	40°02'45.011"N	104°45'18.240"W	2.31	
2926.00	27.280	81.180	2769.36	-110.19	105.62	794.08	1709002.93	14543525.54	40°02'45.078"N	104°45'17.747"W	2.03	
3014.00	27.530	82.420	2847.49	-116.20	111.40	834.17	1709042.98	14543531.42	40°02'45.135"N	104°45'17.232"W	0.71	
3101.00	28.330	82.720	2924.35	-121.70	116.66	874.58	1709083.36	14543536.80	40°02'45.187"N	104°45'16.712"W	0.93	
3189.00	26.020	81.930	3002.63	-127.28	122.02	914.40	1709123.16	14543542.26	40°02'45.240"N	104°45'16.200"W	2.66	
3276.00	27.070	81.360	3080.46	-133.16	127.67	952.87	1709161.59	14543548.01	40°02'45.296"N	104°45'15.705"W	1.24	
3363.00	28.240	81.490	3157.52	-139.41	133.69	992.80	1709201.49	14543554.14	40°02'45.355"N	104°45'15.192"W	1.35	
3450.00	25.740	80.840	3235.04	-145.69	139.75	1031.81	1709240.47	14543560.30	40°02'45.415"N	104°45'14.690"W	2.89	
3538.00	27.840	83.880	3313.59	-151.15	144.98	1071.11	1709279.74	14543565.64	40°02'45.467"N	104°45'14.185"W	2.85	
3625.00	29.130	84.900	3390.06	-155.43	149.03	1112.41	1709321.01	14543569.80	40°02'45.506"N	104°45'13.654"W	1.58	
3713.00	26.910	84.900	3467.74	-159.35	152.70	1153.58	1709362.16	14543573.58	40°02'45.543"N	104°45'13.125"W	2.52	
3801.00	28.260	84.360	3545.74	-163.40	156.52	1194.15	1709402.70	14543577.51	40°02'45.581"N	104°45'12.603"W	1.56	
3888.00	25.530	84.800	3623.32	-167.35	160.25	1233.32	1709441.85	14543581.34	40°02'45.617"N	104°45'12.099"W	3.15	
3975.00	26.850	81.800	3701.39	-172.07	164.75	1271.44	1709479.94	14543585.94	40°02'45.662"N	104°45'11.609"W	2.15	

# Actual Wellpath Report

JDB 15-5HZ AWP

Page 3 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#37 JDB 15-5HZ(567'FSL & 1083'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-5HZ AWB
Facility	SEC.15-T1N-R66W		

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
4063.00	28.350	82.400	3779.37	-177.90	170.35	1311.83	1709520.29	14543591.65	40°02'45.717"N	104°45'11.090"W	1.73	
4150.00	28.330	81.090	3855.95	-184.06	176.27	1352.70	1709561.13	14543597.68	40°02'45.776"N	104°45'10.564"W	0.72	
4237.00	28.380	79.470	3932.51	-191.27	183.25	1393.42	1709601.81	14543604.77	40°02'45.845"N	104°45'10.041"W	0.89	
4325.00	28.870	79.070	4009.75	-199.36	191.10	1434.84	1709643.20	14543612.73	40°02'45.922"N	104°45'09.508"W	0.60	
4413.00	26.320	79.310	4087.74	-207.24	198.75	1474.88	1709683.20	14543620.48	40°02'45.998"N	104°45'08.993"W	2.90	
4500.00	27.820	76.220	4165.21	-215.88	207.16	1513.55	1709721.83	14543629.00	40°02'46.081"N	104°45'08.496"W	2.36	
4588.00	27.920	77.470	4243.00	-225.47	216.52	1553.60	1709761.84	14543638.46	40°02'46.173"N	104°45'07.981"W	0.67	
4675.00	28.400	81.350	4319.71	-233.23	224.06	1593.95	1709802.15	14543646.10	40°02'46.248"N	104°45'07.462"W	2.18	
4763.00	26.270	80.820	4397.88	-239.72	230.31	1633.86	1709842.04	14543652.46	40°02'46.309"N	104°45'06.949"W	2.44	
4850.00	28.700	83.090	4475.05	-245.53	235.90	1673.62	1709881.76	14543658.15	40°02'46.365"N	104°45'06.438"W	3.04	
4938.00	27.900	83.500	4552.54	-250.64	240.77	1715.05	1709923.16	14543663.14	40°02'46.413"N	104°45'05.905"W	0.94	
5051.00	25.910	84.080	4653.30	-256.48	246.31	1765.88	1709973.95	14543668.81	40°02'46.467"N	104°45'05.251"W	1.78	
5138.00	27.630	81.710	4730.97	-261.57	251.18	1804.75	1710012.80	14543673.79	40°02'46.516"N	104°45'04.752"W	2.33	
5225.00	28.580	81.260	4807.71	-267.87	257.25	1845.28	1710053.30	14543679.97	40°02'46.576"N	104°45'04.230"W	1.12	
5312.00	27.330	80.560	4884.56	-274.54	263.69	1885.56	1710093.54	14543686.51	40°02'46.639"N	104°45'03.713"W	1.49	
5400.00	29.110	79.820	4962.10	-281.88	270.78	1926.56	1710134.50	14543693.72	40°02'46.709"N	104°45'03.185"W	2.06	
5488.00	27.580	79.030	5039.55	-289.77	278.45	1967.63	1710175.53	14543701.48	40°02'46.785"N	104°45'02.657"W	1.79	
5575.00	26.500	79.300	5117.04	-297.43	285.88	2006.47	1710214.34	14543709.02	40°02'46.858"N	104°45'02.158"W	1.25	
5663.00	27.420	81.820	5195.47	-304.19	292.41	2045.82	1710253.66	14543715.66	40°02'46.923"N	104°45'01.652"W	1.67	
5750.00	25.040	82.730	5273.51	-309.59	297.59	2083.92	1710291.73	14543720.94	40°02'46.974"N	104°45'01.162"W	2.77	
5838.00	26.160	81.670	5352.87	-314.97	302.76	2121.59	1710329.37	14543726.21	40°02'47.025"N	104°45'00.678"W	1.37	
5925.00	27.380	81.870	5430.54	-320.80	308.37	2160.37	1710368.12	14543731.92	40°02'47.080"N	104°45'00.179"W	1.41	
6012.00	29.550	85.640	5507.03	-325.50	312.83	2201.57	1710409.29	14543736.49	40°02'47.124"N	104°44'59.649"W	3.24	
6100.00	27.590	86.120	5584.31	-328.77	315.86	2243.54	1710451.24	14543739.63	40°02'47.154"N	104°44'59.109"W	2.24	
6187.00	27.790	83.050	5661.35	-332.82	319.67	2283.78	1710491.45	14543743.56	40°02'47.192"N	104°44'58.592"W	1.66	
6275.00	29.000	83.650	5738.76	-337.90	324.52	2325.35	1710532.98	14543748.51	40°02'47.240"N	104°44'58.057"W	1.41	
6363.00	25.640	83.410	5816.93	-342.68	329.06	2365.47	1710573.08	14543753.16	40°02'47.285"N	104°44'57.542"W	3.82	
6450.00	27.060	79.890	5894.90	-348.53	334.70	2403.66	1710611.23	14543758.90	40°02'47.340"N	104°44'57.051"W	2.43	
6538.00	26.940	80.540	5973.31	-355.55	341.49	2443.03	1710650.57	14543765.79	40°02'47.407"N	104°44'56.544"W	0.36	
6625.00	26.390	81.410	6051.05	-361.90	347.61	2481.58	1710689.10	14543772.02	40°02'47.468"N	104°44'56.048"W	0.78	
6713.00	27.790	83.370	6129.40	-367.42	352.90	2521.30	1710728.78	14543777.42	40°02'47.520"N	104°44'55.538"W	1.89	
6800.00	28.600	82.840	6206.08	-372.59	357.84	2562.11	1710769.56	14543782.46	40°02'47.569"N	104°44'55.013"W	0.97	
6888.00	26.020	84.600	6284.26	-377.26	362.28	2602.23	1710809.65	14543787.01	40°02'47.613"N	104°44'54.497"W	3.07	
6975.00	26.730	81.230	6362.21	-382.26	367.06	2640.57	1710847.96	14543791.90	40°02'47.660"N	104°44'54.004"W	1.90	
7063.00	27.440	78.900	6440.56	-389.41	373.98	2680.03	1710887.39	14543798.92	40°02'47.728"N	104°44'53.497"W	1.45	
7151.00	27.440	80.500	6518.66	-396.89	381.23	2719.92	1710927.25	14543806.28	40°02'47.800"N	104°44'52.984"W	0.84	
7239.00	25.630	81.930	6597.39	-403.13	387.25	2758.77	1710966.06	14543812.40	40°02'47.859"N	104°44'52.484"W	2.18	
7326.00	26.010	81.470	6675.70	-408.82	392.72	2796.26	1711003.53	14543817.97	40°02'47.913"N	104°44'52.002"W	0.49	
7414.00	24.640	83.350	6755.24	-414.02	397.71	2833.57	1711040.80	14543823.06	40°02'47.963"N	104°44'51.522"W	1.81	
7437.00†	25.021	86.904	6776.12	-414.90	398.53	2843.19	1711050.42	14543823.90	40°02'47.971"N	104°44'51.399"W	6.70	KOP
7501.00	26.500	96.170	6833.78	-414.25	397.72	2870.91	1711078.13	14543823.17	40°02'47.963"N	104°44'51.042"W	6.70	
7588.00	30.850	118.120	6910.31	-401.84	385.08	2910.01	1711117.25	14543810.64	40°02'47.838"N	104°44'50.540"W	13.02	
7676.00	32.550	128.980	6985.24	-376.51	359.53	2948.34	1711155.64	14543785.21	40°02'47.585"N	104°44'50.047"W	6.76	
7763.00	34.540	138.410	7057.79	-343.51	326.34	2982.94	1711190.31	14543752.12	40°02'47.257"N	104°44'49.602"W	6.40	
7831.00†	37.598	143.751	7112.76	-312.50	295.18	3008.01	1711215.46	14543721.04	40°02'46.949"N	104°44'49.280"W	6.45	ENTER LANDBOX (862'FSL & 1925'FWL,SEC.14) 40.0463748 -104.7470221

# Actual Wellpath Report

JDB 15-5HZ AWP

Page 4 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#37 JDB 15-5HZ(567'FSL & 1083'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-5HZ AWB
Facility	SEC.15-T1N-R66W		

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
7851.00	38.540	145.180	7128.51	-302.50	285.14	3015.18	1711222.65	14543711.03	40°02'46.850"N	104°44'49.187"W	6.45	
7938.00	44.180	150.330	7193.80	-254.03	236.50	3045.69	1711253.28	14543662.48	40°02'46.369"N	104°44'48.795"W	7.57	
8025.00	51.160	155.210	7252.37	-197.01	179.31	3074.95	1711282.69	14543605.40	40°02'45.804"N	104°44'48.419"W	9.03	
8113.00	55.650	156.220	7304.82	-132.79	114.92	3103.99	1711311.88	14543541.11	40°02'45.168"N	104°44'48.046"W	5.18	
8200.00	64.700	162.240	7348.08	-62.43	44.40	3130.54	1711338.61	14543470.70	40°02'44.471"N	104°44'47.705"W	12.00	
8288.00	69.880	166.340	7382.05	15.55	-33.71	3152.45	1711360.73	14543392.68	40°02'43.699"N	104°44'47.423"W	7.29	
8375.00	71.970	169.200	7410.49	95.80	-114.06	3169.85	1711378.34	14543312.41	40°02'42.905"N	104°44'47.199"W	3.93	
8463.00	82.030	175.710	7430.28	180.59	-198.91	3180.99	1711389.71	14543227.62	40°02'42.066"N	104°44'47.056"W	13.51	
8550.00	87.330	180.570	7438.34	267.09	-285.43	3183.79	1711392.74	14543141.14	40°02'41.211"N	104°44'47.020"W	8.25	LANDING (282'FSL & 2101'FWL,SEC.14) 40.0447809 -104.7463945
8638.00	87.280	179.910	7442.48	354.99	-373.34	3183.42	1711392.61	14543053.27	40°02'40.343"N	104°44'47.025"W	0.75	
8726.00	90.010	181.380	7444.56	442.96	-461.29	3182.43	1711391.86	14542965.34	40°02'39.473"N	104°44'47.038"W	3.52	
8813.00	90.070	180.730	7444.50	529.95	-548.28	3180.82	1711390.49	14542878.39	40°02'38.614"N	104°44'47.059"W	0.75	
8901.00	90.330	178.920	7444.20	617.94	-636.27	3181.09	1711391.00	14542790.43	40°02'37.744"N	104°44'47.056"W	2.08	
8988.00	91.120	176.910	7443.09	704.85	-723.20	3184.26	1711394.40	14542703.54	40°02'36.885"N	104°44'47.015"W	2.48	
9076.00	90.980	178.710	7441.48	792.75	-811.12	3187.62	1711398.00	14542615.67	40°02'36.016"N	104°44'46.972"W	2.05	
9163.00	91.890	181.070	7439.30	879.71	-898.09	3187.79	1711398.40	14542528.74	40°02'35.157"N	104°44'46.970"W	2.91	
9250.00	90.850	181.950	7437.22	966.67	-985.03	3185.50	1711396.35	14542441.83	40°02'34.298"N	104°44'47.000"W	1.57	
9295.00†	89.694	181.296	7437.01	1011.65	-1030.01	3184.22	1711395.20	14542396.86	40°02'33.853"N	104°44'47.016"W	2.95	CROSS SETBACK HEEL (463'FNL & 2101'FWL,SEC.23) 40.0427370 -104.7463933
9338.00	88.590	180.670	7437.65	1054.65	-1073.00	3183.48	1711394.58	14542353.89	40°02'33.428"N	104°44'47.026"W	2.95	
9425.00	89.150	181.310	7439.37	1141.62	-1159.97	3181.98	1711393.31	14542266.95	40°02'32.569"N	104°44'47.045"W	0.98	
9513.00	90.330	181.630	7439.77	1229.60	-1247.94	3179.72	1711391.29	14542179.01	40°02'31.700"N	104°44'47.074"W	1.39	
9600.00	89.420	180.680	7439.96	1316.59	-1334.92	3177.97	1711389.78	14542092.06	40°02'30.840"N	104°44'47.097"W	1.51	
9687.00	90.820	180.340	7439.78	1403.59	-1421.91	3177.20	1711389.24	14542005.10	40°02'29.980"N	104°44'47.107"W	1.66	
9775.00	89.390	180.320	7439.61	1491.59	-1509.91	3176.69	1711388.97	14541917.14	40°02'29.111"N	104°44'47.114"W	1.63	
9862.00	91.550	180.190	7438.90	1578.58	-1596.90	3176.30	1711388.82	14541830.18	40°02'28.251"N	104°44'47.119"W	2.49	
9950.00	89.950	180.570	7437.75	1666.57	-1684.89	3175.72	1711388.48	14541742.23	40°02'27.382"N	104°44'47.126"W	1.87	
10037.00	87.620	178.820	7439.59	1753.53	-1771.86	3176.18	1711389.18	14541655.29	40°02'26.522"N	104°44'47.121"W	3.35	
10125.00	88.920	178.370	7442.25	1841.45	-1859.79	3178.34	1711391.57	14541567.40	40°02'25.653"N	104°44'47.093"W	1.56	
10212.00	90.480	177.620	7442.71	1928.37	-1946.73	3181.38	1711394.85	14541480.50	40°02'24.794"N	104°44'47.054"W	1.99	
10300.00	89.150	179.050	7442.99	2016.32	-2034.69	3183.94	1711397.65	14541392.59	40°02'23.925"N	104°44'47.021"W	2.22	
10387.00	87.750	180.780	7445.34	2103.28	-2121.65	3184.07	1711398.01	14541305.66	40°02'23.065"N	104°44'47.020"W	2.56	
10475.00	88.870	180.260	7447.94	2191.24	-2209.61	3183.27	1711397.45	14541217.74	40°02'22.196"N	104°44'47.030"W	1.40	
10562.00	87.130	179.240	7450.97	2278.17	-2296.55	3183.65	1711398.07	14541130.83	40°02'21.337"N	104°44'47.025"W	2.32	
10649.00	88.050	178.760	7454.63	2365.07	-2383.46	3185.16	1711399.82	14541043.96	40°02'20.478"N	104°44'47.006"W	1.19	
10737.00	88.250	179.160	7457.47	2453.00	-2471.40	3186.76	1711401.66	14540956.06	40°02'19.609"N	104°44'46.986"W	0.51	
10824.00	88.210	178.580	7460.16	2539.93	-2558.34	3188.48	1711403.61	14540869.16	40°02'18.750"N	104°44'46.964"W	0.67	
10912.00	88.280	179.940	7462.86	2627.87	-2646.29	3189.61	1711404.98	14540781.25	40°02'17.881"N	104°44'46.949"W	1.55	
10999.00	88.810	179.980	7465.07	2714.84	-2733.26	3189.67	1711405.28	14540694.31	40°02'17.021"N	104°44'46.949"W	0.61	
11087.00	90.760	178.370	7465.40	2802.82	-2821.24	3190.94	1711406.78	14540606.37	40°02'16.152"N	104°44'46.933"W	2.87	
11174.00	89.610	182.450	7465.11	2889.80	-2908.22	3190.32	1711406.40	14540519.42	40°02'15.292"N	104°44'46.941"W	4.87	
11261.00	90.350	182.290	7465.14	2976.74	-2995.14	3186.72	1711403.04	14540432.52	40°02'14.433"N	104°44'46.987"W	0.87	
11348.00	88.310	183.190	7466.16	3063.65	-3082.03	3182.56	1711399.12	14540345.66	40°02'13.575"N	104°44'47.041"W	2.56	
11436.00	89.420	182.570	7467.91	3151.54	-3169.90	3178.14	1711394.94	14540257.81	40°02'12.706"N	104°44'47.098"W	1.44	
11523.00	89.750	181.980	7468.54	3238.49	-3256.83	3174.69	1711391.72	14540170.91	40°02'11.847"N	104°44'47.142"W	0.78	
11611.00	88.280	182.640	7470.05	3326.42	-3344.74	3171.14	1711388.42	14540083.02	40°02'10.978"N	104°44'47.188"W	1.83	

# Actual Wellpath Report

JDB 15-5HZ AWP

Page 5 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#37 JDB 15-5HZ(567'FSL & 1083'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-5HZ AWB
Facility	SEC.15-T1N-R66W		

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
11698.00	89.480	179.650	7471.75	3413.39	-3431.70	3169.40	1711386.92	14539996.10	40°02'10.119"N	104°44'47.210"W	3.70	
11786.00	88.780	180.400	7473.09	3501.37	-3519.69	3169.37	1711387.12	14539908.14	40°02'09.250"N	104°44'47.211"W	1.17	
11873.00	87.590	181.010	7475.84	3588.33	-3606.63	3168.30	1711386.29	14539821.23	40°02'08.390"N	104°44'47.225"W	1.54	
11961.00	88.410	180.590	7478.91	3676.27	-3694.57	3167.07	1711385.30	14539733.32	40°02'07.521"N	104°44'47.241"W	1.05	
12048.00	89.070	180.240	7480.82	3763.25	-3781.55	3166.44	1711384.90	14539646.38	40°02'06.662"N	104°44'47.249"W	0.86	
12136.00	89.390	177.960	7482.01	3851.21	-3869.52	3167.82	1711386.52	14539558.44	40°02'05.792"N	104°44'47.231"W	2.62	
12223.00	89.950	179.780	7482.51	3938.18	-3956.50	3169.54	1711388.48	14539471.50	40°02'04.933"N	104°44'47.210"W	2.19	
12311.00	88.300	180.510	7483.85	4026.17	-4044.49	3169.31	1711388.49	14539383.55	40°02'04.063"N	104°44'47.213"W	2.05	
12398.00	89.040	180.660	7485.87	4113.14	-4131.46	3168.43	1711387.84	14539296.61	40°02'03.204"N	104°44'47.224"W	0.87	
12485.00	89.870	180.360	7486.70	4200.14	-4218.45	3167.65	1711387.30	14539209.65	40°02'02.344"N	104°44'47.234"W	1.01	
12572.00	88.710	182.720	7487.78	4287.10	-4305.40	3165.31	1711385.20	14539122.73	40°02'01.485"N	104°44'47.264"W	3.02	
12660.00	89.350	182.430	7489.27	4375.02	-4393.30	3161.36	1711381.49	14539034.85	40°02'00.616"N	104°44'47.315"W	0.80	
12747.00	90.010	181.500	7489.75	4461.98	-4480.25	3158.38	1711378.75	14538947.94	40°01'59.757"N	104°44'47.354"W	1.31	
12835.00	90.080	182.400	7489.68	4549.95	-4568.20	3155.38	1711375.99	14538860.01	40°01'58.888"N	104°44'47.393"W	1.03	
12923.00	89.750	183.220	7489.81	4637.86	-4656.09	3151.07	1711371.92	14538772.14	40°01'58.019"N	104°44'47.448"W	1.00	
13010.00	88.420	183.670	7491.20	4724.72	-4742.92	3145.84	1711366.93	14538685.34	40°01'57.161"N	104°44'47.515"W	1.61	
13097.00	89.240	183.360	7492.98	4811.57	-4829.74	3140.51	1711361.84	14538598.54	40°01'56.303"N	104°44'47.584"W	1.01	
13185.00	90.590	182.000	7493.11	4899.49	-4917.64	3136.39	1711357.96	14538510.66	40°01'55.435"N	104°44'47.637"W	2.18	
13273.00	87.960	182.320	7494.22	4987.43	-5005.56	3133.08	1711354.89	14538422.77	40°01'54.566"N	104°44'47.680"W	3.01	
13360.00	88.020	182.410	7497.28	5074.32	-5092.43	3129.49	1711351.54	14538335.92	40°01'53.707"N	104°44'47.726"W	0.12	
13447.00	88.280	181.630	7500.08	5161.24	-5179.33	3126.43	1711348.71	14538249.05	40°01'52.849"N	104°44'47.766"W	0.94	
13535.00	89.560	179.590	7501.74	5249.21	-5267.30	3125.49	1711348.01	14538161.11	40°01'51.979"N	104°44'47.778"W	2.74	
13622.00	90.530	180.110	7501.67	5336.21	-5354.30	3125.72	1711348.48	14538074.14	40°01'51.120"N	104°44'47.775"W	1.27	
13642.00†	90.576	179.708	7501.48	5356.21	-5374.30	3125.75	1711348.56	14538054.15	40°01'50.922"N	104°44'47.775"W	2.02	CROSS SETBACK TOE (460'FSL & 2036'FWL,SEC.23) 40.0308116 -104.7466041
13710.00	90.730	178.340	7500.71	5424.18	-5442.28	3126.91	1711349.90	14537986.20	40°01'50.250"N	104°44'47.760"W	2.02	
13798.00	92.100	177.950	7498.53	5512.09	-5530.21	3129.75	1711352.99	14537898.32	40°01'49.381"N	104°44'47.724"W	1.62	
13885.00	93.830	177.590	7494.03	5598.89	-5617.02	3133.14	1711356.61	14537811.55	40°01'48.523"N	104°44'47.680"W	2.03	
13992.00	94.800	178.010	7485.98	5705.48	-5723.64	3137.23	1711360.99	14537704.98	40°01'47.470"N	104°44'47.628"W	0.99	LAST BHGE MWD+IFR1+SC SURVEY
14034.00	94.800	178.010	7482.47	5747.29	-5765.47	3138.68	1711362.56	14537663.18	40°01'47.056"N	104°44'47.609"W	0.00	PTB (69'FSL & 2049'FWL,SEC.23) 40.0297378 -104.7465581

HOLE & CASING SECTIONS - Ref Wellbore: JDB 15-5HZ AWB Ref Wellpath: JDB 15-5HZ 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	17.00	1876.00	1859.00	17.00	1827.42	0.00	0.00	48.93	334.52

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#37 JDB 15-5HZ(567'FSL & 1083'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-5HZ 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.14-T1N-R66W	0.00	58.29	-14.28	1708195.02	14543476.03	40°02'44.610"N	104°45'28.141"W	polygon
SEC.23-T1N-R66W	0.00	58.29	-14.28	1708195.02	14543476.03	40°02'44.610"N	104°45'28.141"W	polygon
JDB 15-5HZ HEEL REV-1(255'FSL & 2106'FWL,SEC.14)	7457.00	-314.91	3186.46	1711395.49	14543111.68	40°02'40.920"N	104°44'46.986"W	point
JDB 15-5HZ BHL REV-1(50'FSL & 2065'FWL,SEC.23)	7510.00	-5783.62	3154.95	1711378.87	14537645.07	40°01'46.877"N	104°44'47.400"W	point
JDB 15-5HZ LANDBOX	7510.00	0.00	0.00	1708209.45	14543417.80	40°02'44.034"N	104°45'27.958"W	polygon
JDB 15-5HZ SETBACK 1	7510.00	0.00	0.00	1708209.45	14543417.80	40°02'44.034"N	104°45'27.958"W	polygon
JDB 15-5HZ SETBACK 2	7510.00	0.00	0.00	1708209.45	14543417.80	40°02'44.034"N	104°45'27.958"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: JDB 15-5HZ AWB Ref Wellpath: JDB 15-5HZ AWP						
Start MD [ft]	End MD [ft]	Positional Uncertainty Model		Log Name/Comment		Wellbore
17.00	1891.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)		Custom APC ISCWSA Rev-2 MWD+IFR1 <129 - 1891>		JDB 15-5HZ AWB
1891.00	13992.00	Custom APC_ISCWSA REV 2 MWD+IFR1+SC (approximation)		BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1965 - 13992>		JDB 15-5HZ AWB
13992.00	14034.00	Blind Drilling (std)		Projection to bit		JDB 15-5HZ AWB

## REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#37 JDB 15-5HZ(567'FSL & 1083'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-5HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-5HZ AWB
Facility	SEC.15-T1N-R66W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
129.00	0.180	8.790	129.00	FIRST SURFACE MWD+IFR1 SURVEY
1891.00	23.030	83.060	1841.23	LAST SURFACE MWD+IFR1 SURVEY
1965.00	22.900	82.960	1909.36	FIRST BHGE MWD+IFR1+SC SURVEY
7437.00	25.021	86.904	6776.12	KOP
7831.00	37.598	143.751	7112.76	ENTER LANDBOX (862'FSL & 1925'FWL,SEC.14) 40.0463748 -104.7470221
8550.00	87.330	180.570	7438.34	LANDING (282'FSL & 2101'FWL,SEC.14) 40.0447809 -104.7463945
9295.00	89.694	181.296	7437.01	CROSS SETBACK HEEL (463'FNL & 2101'FWL,SEC.23) 40.0427370 -104.7463933
13642.00	90.576	179.708	7501.48	CROSS SETBACK TOE (460'FSL & 2036'FWL,SEC.23) 40.0308116 -104.7466041
13992.00	94.800	178.010	7485.98	LAST BHGE MWD+IFR1+SC SURVEY
14034.00	94.800	178.010	7482.47	PTB (69'FSL & 2049'FWL,SEC.23) 40.0297378 -104.7465581