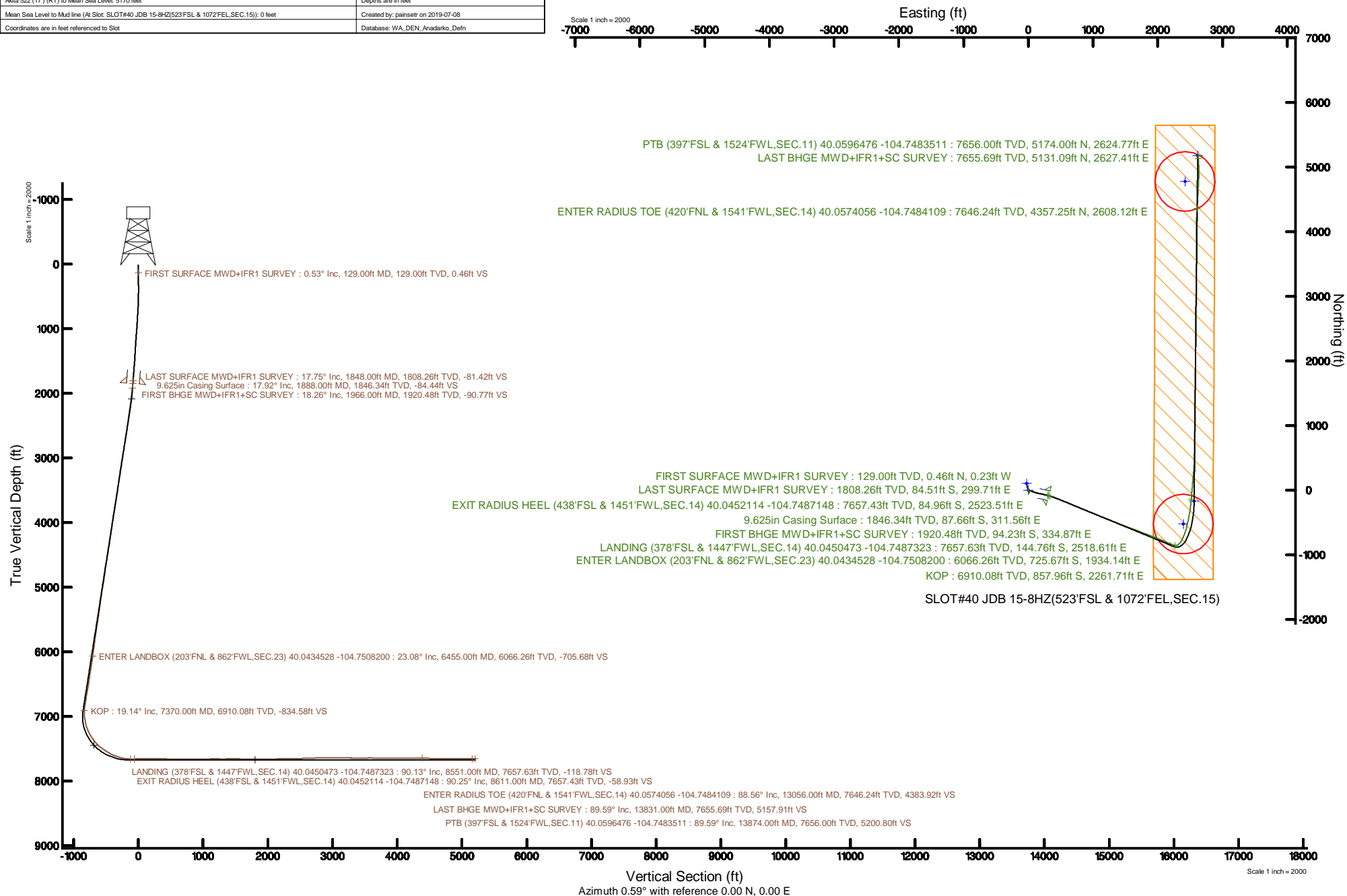


Location:	COLORADO	Slot:	SLOT#40 JDB 15-8HZ(523'FSL & 1072'FEL,SEC.15)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	JDB 15-8HZ
Facility:	SEC.15-T1N-R66W	Wellbore:	JDB 15-8HZ PWB



Plot reference wellpath is JOB 15-9H2 P/WP 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#40 JOB 15-9H2/523FSL & 1072FEL,SEC.15): 0 feet	Created by: pansetir on 2019-07-08
Coordinates are in feet referenced to Slot	Database: WA_DEN_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#40 JDB 15-8HZ(523'FSL & 1072'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-8HZ 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	7/8/2019 at 12:58:24 PM
Convergence at slot	0.16° East	Database/Source file	WA_DEN_Anadarko_Defn/JDB_15-8HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-745.43	2777.47	1708220.21	14543374.13	40°02'43.602"N	104°45'27.821"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#40 JDB 15-8HZ (523'FSL & 1072'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	0.59°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#40 JDB 15-8HZ(523'FSL & 1072'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-8HZ AWP
Facility	SEC.15-T1N-R66W		

WELLPATH DATA (163 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	333.200	0.00	0.00	0.00	0.00	1708220.21	14543374.13	40°02'43.602"N	104°45'27.821"W	0.00	
17.00	0.000	333.200	17.00	0.00	0.00	0.00	1708220.21	14543374.13	40°02'43.602"N	104°45'27.821"W	0.00	
129.00	0.530	333.200	129.00	0.46	0.46	-0.23	1708219.97	14543374.59	40°02'43.607"N	104°45'27.824"W	0.47	FIRST SURFACE MWD+IFR1 SURVEY
224.00	0.620	6.950	223.99	1.36	1.36	-0.37	1708219.83	14543375.50	40°02'43.615"N	104°45'27.826"W	0.36	
320.00	1.320	75.590	319.98	2.16	2.16	0.76	1708220.96	14543376.29	40°02'43.623"N	104°45'27.811"W	1.29	
415.00	2.150	93.610	414.94	2.35	2.32	3.60	1708223.80	14543376.46	40°02'43.625"N	104°45'27.774"W	1.04	
511.00	3.650	114.960	510.82	1.00	0.91	8.17	1708228.37	14543375.07	40°02'43.611"N	104°45'27.716"W	1.90	
606.00	5.230	114.080	605.53	-1.98	-2.13	14.87	1708235.07	14543372.04	40°02'43.581"N	104°45'27.630"W	1.66	
701.00	8.000	112.770	699.89	-6.20	-6.46	24.92	1708245.13	14543367.75	40°02'43.538"N	104°45'27.500"W	2.92	
795.00	8.440	113.640	792.92	-11.37	-11.75	37.27	1708257.49	14543362.48	40°02'43.486"N	104°45'27.342"W	0.49	
890.00	9.670	112.940	886.73	-17.13	-17.66	51.00	1708271.23	14543356.62	40°02'43.427"N	104°45'27.165"W	1.30	
986.00	11.470	110.660	981.10	-23.47	-24.17	67.36	1708287.60	14543350.16	40°02'43.363"N	104°45'26.955"W	1.92	
1081.00	12.660	108.720	1074.00	-29.96	-30.84	86.06	1708306.31	14543343.53	40°02'43.297"N	104°45'26.714"W	1.32	
1176.00	14.150	107.400	1166.41	-36.55	-37.66	107.00	1708327.26	14543336.78	40°02'43.230"N	104°45'26.445"W	1.60	
1270.00	15.030	105.030	1257.38	-42.91	-44.26	129.74	1708350.01	14543330.25	40°02'43.165"N	104°45'26.153"W	1.13	
1366.00	16.610	101.430	1349.74	-48.60	-50.20	155.21	1708375.49	14543324.37	40°02'43.106"N	104°45'25.825"W	1.94	
1461.00	17.890	101.870	1440.47	-54.01	-55.90	182.80	1708403.08	14543318.76	40°02'43.050"N	104°45'25.470"W	1.35	
1556.00	18.900	103.190	1530.61	-60.22	-62.41	212.06	1708432.35	14543312.33	40°02'42.985"N	104°45'25.094"W	1.15	
1650.00	18.240	103.890	1619.72	-66.92	-69.41	241.16	1708461.46	14543305.40	40°02'42.916"N	104°45'24.720"W	0.74	
1745.00	17.580	104.680	1710.11	-73.83	-76.62	269.47	1708489.78	14543298.28	40°02'42.845"N	104°45'24.356"W	0.74	
1848.00	17.750	104.590	1808.26	-81.42	-84.51	299.71	1708520.03	14543290.47	40°02'42.767"N	104°45'23.967"W	0.17	LAST SURFACE MWD+IFR1 SURVEY
1966.00	18.260	106.270	1920.48	-90.77	-94.23	334.87	1708555.20	14543280.86	40°02'42.671"N	104°45'23.515"W	0.62	FIRST BHGE MWD+IFR1+SC SURVEY
2053.00	21.720	109.450	2002.23	-99.66	-103.41	363.14	1708583.48	14543271.75	40°02'42.580"N	104°45'23.151"W	4.17	
2140.00	21.130	109.370	2083.22	-109.91	-113.97	393.11	1708613.47	14543261.28	40°02'42.476"N	104°45'22.766"W	0.68	
2227.00	23.420	111.470	2163.72	-121.12	-125.50	424.00	1708644.38	14543249.84	40°02'42.362"N	104°45'22.369"W	2.79	
2314.00	22.690	111.090	2243.77	-133.16	-137.87	455.75	1708676.15	14543237.56	40°02'42.240"N	104°45'21.961"W	0.86	
2402.00	22.050	110.710	2325.15	-144.78	-149.82	487.04	1708707.45	14543225.70	40°02'42.121"N	104°45'21.558"W	0.75	
2489.00	21.350	110.650	2405.98	-155.83	-161.18	517.13	1708737.57	14543214.43	40°02'42.009"N	104°45'21.171"W	0.81	
2577.00	22.610	109.740	2487.58	-166.88	-172.54	548.04	1708768.50	14543203.15	40°02'41.897"N	104°45'20.774"W	1.48	
2665.00	22.570	111.330	2568.83	-178.41	-184.39	579.70	1708800.17	14543191.39	40°02'41.780"N	104°45'20.367"W	0.70	
2752.00	21.740	111.420	2649.41	-190.05	-196.35	610.25	1708830.74	14543179.52	40°02'41.662"N	104°45'19.974"W	0.95	
2840.00	22.330	115.650	2730.99	-202.92	-209.54	640.49	1708861.01	14543166.42	40°02'41.531"N	104°45'19.585"W	1.92	
2926.00	21.420	115.020	2810.79	-216.34	-223.26	669.45	1708890.00	14543152.79	40°02'41.396"N	104°45'19.213"W	1.09	
3015.00	22.300	112.020	2893.40	-229.23	-236.46	699.83	1708920.40	14543139.67	40°02'41.265"N	104°45'18.822"W	1.60	
3102.00	24.320	114.110	2973.29	-242.41	-249.97	731.49	1708952.08	14543126.25	40°02'41.132"N	104°45'18.415"W	2.51	
3190.00	23.210	113.730	3053.83	-256.46	-264.35	763.91	1708984.53	14543111.97	40°02'40.990"N	104°45'17.998"W	1.27	
3277.00	21.970	112.870	3134.15	-269.36	-277.57	794.60	1709015.24	14543098.83	40°02'40.859"N	104°45'17.604"W	1.47	
3364.00	20.580	113.270	3215.22	-281.43	-289.94	823.64	1709044.30	14543086.55	40°02'40.737"N	104°45'17.230"W	1.61	
3451.00	21.510	111.310	3296.42	-292.97	-301.78	852.55	1709073.23	14543074.79	40°02'40.620"N	104°45'16.859"W	1.34	
3539.00	21.910	111.420	3378.18	-304.51	-313.64	882.86	1709103.57	14543063.02	40°02'40.502"N	104°45'16.469"W	0.46	
3626.00	23.450	111.050	3458.45	-316.34	-325.78	914.13	1709134.86	14543050.97	40°02'40.382"N	104°45'16.067"W	1.78	
3714.00	21.840	109.700	3539.66	-327.82	-337.59	945.89	1709166.63	14543039.25	40°02'40.266"N	104°45'15.659"W	1.92	
3802.00	23.050	113.580	3621.00	-339.90	-350.00	977.09	1709197.85	14543026.93	40°02'40.143"N	104°45'15.257"W	2.17	
3889.00	21.640	112.960	3701.46	-352.66	-363.07	1007.47	1709228.26	14543013.94	40°02'40.014"N	104°45'14.867"W	1.64	
3976.00	23.000	114.580	3781.94	-365.68	-376.40	1037.70	1709258.51	14543000.70	40°02'39.882"N	104°45'14.478"W	1.72	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#40 JDB 15-8HZ(523'FSL & 1072'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-8HZ AWB
Facility	SEC.15-T1N-R66W		

WELLPATH DATA (163 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	23.260	112.460	3861.95	-378.99	-390.03	1069.03	1709289.87	14542987.16	40°02'39.747"N	104°45'14.075"W	1.00	
4151.00	24.410	111.140	3942.44	-391.84	-403.23	1102.05	1709322.91	14542974.06	40°02'39.617"N	104°45'13.651"W	1.44	
4238.00	22.280	110.320	4022.32	-403.72	-415.44	1134.29	1709355.17	14542961.94	40°02'39.496"N	104°45'13.236"W	2.48	
4326.00	22.300	112.820	4103.74	-415.67	-427.71	1165.32	1709386.22	14542949.76	40°02'39.375"N	104°45'12.837"W	1.08	
4414.00	23.930	111.290	4184.68	-428.30	-440.67	1197.34	1709418.27	14542936.90	40°02'39.247"N	104°45'12.425"W	1.97	
4501.00	20.950	111.300	4265.08	-440.03	-452.73	1228.28	1709449.22	14542924.93	40°02'39.128"N	104°45'12.028"W	3.43	
4589.00	22.870	109.980	4346.72	-451.28	-464.29	1259.01	1709479.98	14542913.46	40°02'39.013"N	104°45'11.633"W	2.25	
4676.00	24.120	113.490	4426.51	-463.81	-477.15	1291.21	1709512.19	14542900.69	40°02'38.886"N	104°45'11.219"W	2.16	
4764.00	22.600	113.230	4507.30	-477.31	-490.99	1323.24	1709544.25	14542886.94	40°02'38.750"N	104°45'10.807"W	1.73	
4851.00	24.830	111.160	4586.95	-490.17	-504.18	1355.64	1709576.67	14542873.85	40°02'38.619"N	104°45'10.390"W	2.74	
4939.00	22.350	111.390	4667.58	-502.60	-516.95	1388.45	1709609.51	14542861.17	40°02'38.493"N	104°45'09.968"W	2.82	
5051.00	22.820	109.710	4771.00	-517.28	-532.04	1428.73	1709649.81	14542846.19	40°02'38.344"N	104°45'09.450"W	0.71	
5138.00	22.070	111.200	4851.41	-528.56	-543.64	1459.85	1709680.95	14542834.68	40°02'38.229"N	104°45'09.050"W	1.08	
5225.00	24.670	112.480	4931.26	-541.08	-556.50	1491.87	1709712.99	14542821.92	40°02'38.102"N	104°45'08.639"W	3.04	
5313.00	24.140	111.180	5011.40	-554.25	-570.02	1525.62	1709746.77	14542808.49	40°02'37.968"N	104°45'08.205"W	0.86	
5400.00	24.860	111.070	5090.57	-566.91	-583.02	1559.27	1709780.44	14542795.58	40°02'37.840"N	104°45'07.772"W	0.83	
5488.00	22.380	109.550	5171.19	-578.83	-595.28	1592.33	1709813.51	14542783.42	40°02'37.719"N	104°45'07.347"W	2.90	
5575.00	22.780	110.350	5251.52	-589.90	-606.68	1623.73	1709844.93	14542772.11	40°02'37.606"N	104°45'06.943"W	0.58	
5663.00	22.390	109.890	5332.77	-601.20	-618.31	1655.46	1709876.68	14542760.57	40°02'37.491"N	104°45'06.535"W	0.49	
5750.00	22.030	110.890	5413.32	-612.34	-629.76	1686.29	1709907.53	14542749.21	40°02'37.378"N	104°45'06.139"W	0.60	
5838.00	22.990	112.480	5494.61	-624.47	-642.22	1717.59	1709938.85	14542736.84	40°02'37.255"N	104°45'05.736"W	1.29	
5925.00	22.590	111.180	5574.82	-636.68	-654.75	1748.87	1709970.15	14542724.40	40°02'37.131"N	104°45'05.334"W	0.74	
6012.00	22.560	112.920	5655.15	-648.90	-667.29	1779.82	1710001.13	14542711.95	40°02'37.007"N	104°45'04.936"W	0.77	
6100.00	22.030	110.610	5736.58	-660.96	-679.67	1810.82	1710032.14	14542699.66	40°02'36.885"N	104°45'04.538"W	1.16	
6188.00	20.750	110.240	5818.51	-671.85	-690.88	1840.89	1710062.24	14542688.54	40°02'36.774"N	104°45'04.151"W	1.46	
6275.00	21.940	109.800	5899.54	-682.38	-701.71	1870.64	1710092.01	14542677.79	40°02'36.667"N	104°45'03.768"W	1.38	
6363.00	21.770	111.850	5981.22	-693.71	-713.36	1901.26	1710122.64	14542666.23	40°02'36.552"N	104°45'03.375"W	0.89	
6451.00	23.050	109.380	6062.57	-705.17	-725.15	1932.66	1710154.06	14542654.53	40°02'36.435"N	104°45'02.971"W	1.81	
6455.00†	23.076	109.380	6066.26	-705.68	-725.67	1934.14	1710155.54	14542654.02	40°02'36.430"N	104°45'02.952"W	0.64	ENTER LANDBOX (203'FNL & 862'FWL,SEC.23) 40.0434528 -104.7508200
6538.00	23.610	109.380	6142.46	-716.27	-736.58	1965.16	1710186.58	14542643.19	40°02'36.322"N	104°45'02.553"W	0.64	
6625.00	23.190	111.760	6222.31	-728.07	-748.71	1997.51	1710218.95	14542631.15	40°02'36.202"N	104°45'02.137"W	1.19	
6713.00	22.690	114.210	6303.35	-741.13	-762.10	2029.08	1710250.54	14542617.86	40°02'36.070"N	104°45'01.731"W	1.22	
6800.00	22.780	110.850	6383.59	-753.68	-774.97	2060.12	1710281.61	14542605.07	40°02'35.943"N	104°45'01.332"W	1.50	
6888.00	23.220	109.800	6464.60	-765.29	-786.91	2092.37	1710313.87	14542593.23	40°02'35.825"N	104°45'00.918"W	0.68	
6976.00	23.450	113.510	6545.40	-777.82	-799.77	2124.75	1710346.28	14542580.46	40°02'35.698"N	104°45'00.501"W	1.69	
7063.00	23.090	115.330	6625.33	-791.70	-813.98	2156.04	1710377.60	14542566.34	40°02'35.557"N	104°45'00.099"W	0.92	
7151.00	23.090	113.770	6706.28	-805.71	-828.32	2187.43	1710409.01	14542552.10	40°02'35.415"N	104°44'59.695"W	0.70	
7239.00	21.700	112.910	6787.64	-818.68	-841.61	2218.21	1710439.81	14542538.90	40°02'35.284"N	104°44'59.300"W	1.62	
7326.00	20.840	112.090	6868.71	-830.46	-853.69	2247.36	1710468.99	14542526.90	40°02'35.165"N	104°44'58.925"W	1.05	
7370.00†	19.141	100.588	6910.08	-834.58	-857.96	2261.71	1710483.35	14542522.67	40°02'35.122"N	104°44'58.740"W	9.72	KOP
7414.00	18.270	87.510	6951.77	-835.47	-858.98	2275.70	1710497.33	14542521.68	40°02'35.112"N	104°44'58.560"W	9.72	
7501.00	18.220	63.440	7034.51	-828.52	-852.30	2301.53	1710523.13	14542528.43	40°02'35.178"N	104°44'58.228"W	8.60	
7589.00	19.400	50.000	7117.85	-812.72	-836.75	2325.04	1710546.59	14542544.04	40°02'35.332"N	104°44'57.926"W	5.09	
7676.00	27.500	37.800	7197.65	-787.27	-811.53	2348.47	1710569.95	14542569.31	40°02'35.581"N	104°44'57.625"W	10.81	
7764.00	32.340	28.770	7273.94	-750.30	-774.81	2372.28	1710593.64	14542606.09	40°02'35.944"N	104°44'57.319"W	7.50	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#40 JDB 15-8HZ(523'FSL & 1072'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-8HZ AWP
Facility	SEC.15-T1N-R66W		

WELLPATH DATA (163 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	36.850	24.050	7345.55	-705.82	-730.55	2394.13	1710615.36	14542650.38	40°02'36.381"N	104°44'57.038"W	6.03	
7938.00	44.280	19.430	7411.61	-653.06	-678.01	2414.90	1710635.98	14542702.97	40°02'36.901"N	104°44'56.771"W	9.21	
8026.00	50.900	16.120	7470.93	-591.01	-616.15	2434.62	1710655.53	14542764.85	40°02'37.512"N	104°44'56.517"W	8.02	
8113.00	56.520	13.090	7522.41	-523.00	-548.32	2452.23	1710672.94	14542832.70	40°02'38.182"N	104°44'56.290"W	7.04	
8201.00	61.150	11.480	7567.94	-449.28	-474.76	2468.22	1710688.73	14542906.27	40°02'38.909"N	104°44'56.085"W	5.49	
8288.00	67.010	10.530	7605.96	-372.35	-397.98	2483.13	1710703.43	14542983.06	40°02'39.668"N	104°44'55.893"W	6.81	
8376.00	73.870	10.090	7635.40	-290.67	-316.45	2497.96	1710718.02	14543064.60	40°02'40.474"N	104°44'55.702"W	7.81	
8463.00	83.310	6.340	7652.60	-206.24	-232.15	2510.08	1710729.91	14543148.90	40°02'41.307"N	104°44'55.546"W	11.64	
8551.00	90.130	4.810	7657.63	-118.78	-144.76	2518.61	1710738.20	14543236.28	40°02'42.170"N	104°44'55.436"W	7.94	LANDING (378'FSL & 1447'FWL,SEC.14) 40.0450473 -104.7487323
8611.00†	90.247	4.569	7657.43	-58.93	-84.96	2523.51	1710742.94	14543296.07	40°02'42.761"N	104°44'55.373"W	0.45	EXIT RADIUS HEEL (438'FSL & 1451'FWL,SEC.14) 40.0452114 -104.7487148
8638.00	90.300	4.460	7657.30	-31.99	-58.05	2525.64	1710744.99	14543322.98	40°02'43.027"N	104°44'55.346"W	0.45	
8726.00	90.240	5.180	7656.89	55.77	29.64	2533.03	1710752.14	14543410.65	40°02'43.894"N	104°44'55.251"W	0.82	
8814.00	90.250	4.570	7656.51	143.52	117.32	2540.51	1710759.38	14543498.32	40°02'44.760"N	104°44'55.154"W	0.69	
8901.00	90.790	4.280	7655.72	230.32	204.06	2547.22	1710765.85	14543585.04	40°02'45.617"N	104°44'55.068"W	0.70	
8989.00	89.510	4.950	7655.49	318.10	291.77	2554.30	1710772.69	14543672.73	40°02'46.484"N	104°44'54.977"W	1.64	
9076.00	88.870	2.410	7656.72	404.96	378.57	2559.89	1710778.04	14543759.52	40°02'47.342"N	104°44'54.905"W	3.01	
9164.00	89.220	2.270	7658.19	492.90	466.49	2563.48	1710781.39	14543847.41	40°02'48.211"N	104°44'54.859"W	0.43	
9251.00	89.840	2.180	7658.90	579.87	553.42	2566.86	1710784.53	14543934.31	40°02'49.070"N	104°44'54.815"W	0.72	
9338.00	90.480	2.740	7658.66	666.82	640.34	2570.59	1710788.02	14544021.21	40°02'49.929"N	104°44'54.767"W	0.98	
9426.00	90.610	0.730	7657.82	754.79	728.29	2573.25	1710790.45	14544109.13	40°02'50.798"N	104°44'54.733"W	2.29	
9513.00	89.450	0.000	7657.78	841.79	815.29	2573.81	1710790.77	14544196.09	40°02'51.658"N	104°44'54.725"W	1.58	
9601.00	89.640	359.300	7658.48	929.77	903.28	2573.27	1710789.99	14544284.05	40°02'52.527"N	104°44'54.732"W	0.82	
9688.00	90.280	359.690	7658.54	1016.76	990.28	2572.50	1710788.99	14544371.01	40°02'53.387"N	104°44'54.742"W	0.86	
9775.00	91.120	359.920	7657.47	1103.74	1077.27	2572.21	1710788.45	14544457.96	40°02'54.247"N	104°44'54.745"W	1.00	
9863.00	89.560	359.800	7656.95	1191.73	1165.26	2571.99	1710788.00	14544545.92	40°02'55.116"N	104°44'54.748"W	1.78	
9950.00	89.530	0.760	7657.64	1278.73	1252.26	2572.42	1710788.19	14544632.89	40°02'55.976"N	104°44'54.743"W	1.10	
10038.00	90.820	0.880	7657.37	1366.72	1340.25	2573.68	1710789.21	14544720.84	40°02'56.845"N	104°44'54.726"W	1.47	
10125.00	90.530	0.620	7656.35	1453.72	1427.23	2574.82	1710790.11	14544807.80	40°02'57.705"N	104°44'54.711"W	0.45	
10212.00	88.930	0.720	7656.76	1540.71	1514.22	2575.83	1710790.89	14544894.76	40°02'58.565"N	104°44'54.698"W	1.84	
10300.00	89.530	1.250	7657.94	1628.70	1602.20	2577.35	1710792.16	14544982.70	40°02'59.434"N	104°44'54.679"W	0.91	
10388.00	89.350	0.430	7658.80	1716.70	1690.19	2578.64	1710793.21	14545070.66	40°03'00.304"N	104°44'54.662"W	0.95	
10475.00	89.620	0.440	7659.58	1803.69	1777.18	2579.30	1710793.64	14545157.62	40°03'01.163"N	104°44'54.653"W	0.31	
10563.00	89.950	0.940	7659.91	1891.69	1865.17	2580.36	1710794.46	14545245.58	40°03'02.033"N	104°44'54.640"W	0.68	
10650.00	90.050	1.000	7659.91	1978.69	1952.16	2581.83	1710795.69	14545332.53	40°03'02.892"N	104°44'54.621"W	0.13	
10737.00	91.270	0.510	7658.91	2065.68	2039.15	2582.98	1710796.60	14545419.49	40°03'03.752"N	104°44'54.606"W	1.51	
10825.00	91.780	359.500	7656.57	2153.64	2127.11	2582.98	1710796.37	14545507.42	40°03'04.621"N	104°44'54.606"W	1.29	
10912.00	90.650	0.600	7654.73	2240.62	2214.09	2583.06	1710796.21	14545594.36	40°03'05.481"N	104°44'54.604"W	1.81	
11000.00	90.320	1.190	7653.98	2328.61	2302.08	2584.43	1710797.34	14545682.32	40°03'06.350"N	104°44'54.587"W	0.77	
11087.00	90.130	0.360	7653.64	2415.61	2389.07	2585.61	1710798.28	14545769.28	40°03'07.210"N	104°44'54.571"W	0.98	
11175.00	92.130	0.660	7651.90	2503.59	2477.04	2586.39	1710798.83	14545857.22	40°03'08.079"N	104°44'54.561"W	2.30	
11261.00	92.660	359.320	7648.31	2589.51	2562.97	2586.38	1710798.58	14545943.11	40°03'08.929"N	104°44'54.561"W	1.67	
11349.00	91.070	359.930	7645.45	2677.44	2650.91	2585.80	1710797.76	14546031.02	40°03'09.798"N	104°44'54.569"W	1.94	
11436.00	91.420	359.720	7643.56	2764.42	2737.89	2585.54	1710797.26	14546117.96	40°03'10.657"N	104°44'54.572"W	0.47	
11524.00	89.500	2.340	7642.85	2852.40	2825.86	2587.12	1710798.60	14546205.90	40°03'11.527"N	104°44'54.551"W	3.69	
11611.00	89.520	1.530	7643.59	2939.37	2912.81	2590.06	1710801.30	14546292.82	40°03'12.386"N	104°44'54.514"W	0.93	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#40 JDB 15-8HZ(523'FSL & 1072'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-8HZ AWB
Facility	SEC.15-T1N-R66W		

WELLPATH DATA (163 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]
11699.00	90.100	1.710	7643.89	3027.36	3000.77	2592.55	1710803.55	14546380.76	40°03'13.255"N	104°44'54.481"W	0.69
11786.00	90.580	1.600	7643.37	3114.34	3087.74	2595.06	1710805.83	14546467.69	40°03'14.114"N	104°44'54.449"W	0.57
11874.00	89.470	0.680	7643.33	3202.33	3175.72	2596.81	1710807.34	14546555.64	40°03'14.984"N	104°44'54.426"W	1.64
11961.00	89.590	0.550	7644.04	3289.33	3262.71	2597.74	1710808.03	14546642.60	40°03'15.844"N	104°44'54.414"W	0.20
12049.00	89.870	359.730	7644.46	3377.33	3350.71	2597.96	1710808.01	14546730.56	40°03'16.713"N	104°44'54.411"W	0.98
12136.00	90.120	0.030	7644.47	3464.32	3437.71	2597.78	1710807.59	14546817.53	40°03'17.573"N	104°44'54.414"W	0.45
12224.00	90.440	359.530	7644.04	3552.31	3525.70	2597.44	1710807.01	14546905.49	40°03'18.442"N	104°44'54.418"W	0.67
12311.00	89.220	1.070	7644.29	3639.30	3612.70	2597.89	1710807.23	14546992.45	40°03'19.302"N	104°44'54.412"W	2.26
12399.00	87.390	359.290	7646.90	3727.25	3700.65	2598.17	1710807.27	14547080.37	40°03'20.171"N	104°44'54.408"W	2.90
12486.00	90.300	359.170	7648.65	3814.20	3787.62	2597.00	1710805.87	14547167.30	40°03'21.031"N	104°44'54.423"W	3.35
12573.00	90.300	359.410	7648.20	3901.18	3874.61	2595.92	1710804.55	14547254.25	40°03'21.890"N	104°44'54.437"W	0.28
12660.00	91.150	359.060	7647.09	3988.15	3961.59	2594.76	1710803.15	14547341.20	40°03'22.750"N	104°44'54.452"W	1.06
12748.00	90.070	1.250	7646.16	4076.13	4049.58	2595.00	1710803.15	14547429.15	40°03'23.620"N	104°44'54.448"W	2.77
12835.00	90.990	1.440	7645.35	4163.12	4136.55	2597.04	1710804.96	14547516.09	40°03'24.479"N	104°44'54.422"W	1.08
12923.00	89.410	3.200	7645.05	4251.07	4224.47	2600.60	1710808.28	14547603.99	40°03'25.348"N	104°44'54.376"W	2.69
13010.00	89.850	3.260	7645.61	4337.98	4311.33	2605.51	1710812.94	14547690.83	40°03'26.206"N	104°44'54.313"W	0.51
13056.00†	88.564	3.255	7646.24	4383.92	4357.25	2608.12	1710815.43	14547736.73	40°03'26.660"N	104°44'54.279"W	2.80
13098.00	87.390	3.250	7647.73	4425.85	4399.16	2610.50	1710817.70	14547778.63	40°03'27.074"N	104°44'54.249"W	2.80
13186.00	87.790	3.350	7651.43	4513.68	4486.94	2615.56	1710822.52	14547866.38	40°03'27.942"N	104°44'54.183"W	0.47
13272.00	88.810	3.360	7653.98	4599.54	4572.75	2620.59	1710827.31	14547952.18	40°03'28.790"N	104°44'54.119"W	1.19
13359.00	89.870	2.860	7654.98	4686.45	4659.61	2625.31	1710831.79	14548039.02	40°03'29.648"N	104°44'54.058"W	1.35
13448.00	91.210	3.510	7654.14	4775.35	4748.47	2630.26	1710836.49	14548127.85	40°03'30.526"N	104°44'53.994"W	1.67
13535.00	90.270	1.850	7653.02	4862.28	4835.36	2634.32	1710840.32	14548214.72	40°03'31.385"N	104°44'53.942"W	2.19
13623.00	90.150	0.490	7652.70	4950.27	4923.34	2636.12	1710841.88	14548302.67	40°03'32.254"N	104°44'53.918"W	1.55
13710.00	88.610	357.200	7653.64	5037.21	5010.31	2634.37	1710839.89	14548389.60	40°03'33.114"N	104°44'53.941"W	4.18
13798.00	89.180	356.400	7655.33	5125.00	5098.15	2629.46	1710834.74	14548477.39	40°03'33.982"N	104°44'54.004"W	1.12
13831.00	89.590	356.480	7655.69	5157.91	5131.09	2627.41	1710832.61	14548510.31	40°03'34.307"N	104°44'54.030"W	1.27
13874.00	89.590	356.480	7656.00	5200.80	5174.00	2624.77	1710829.85	14548553.20	40°03'34.731"N	104°44'54.064"W	0.00

HOLE & CASING SECTIONS - Ref Wellbore: JDB 15-8HZ AWB Ref Wellpath: JDB 15-8HZ 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	1888.00	1871.00	17.00	1846.34	0.00	0.00	-87.66	311.56

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#40 JDB 15-8HZ(523'FSL & 1072'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-8HZ 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	102.00	-24.92	1708195.02	14543476.03	40°02'44.610"N	104°45'28.141"W	polygon
JDB 15-8HZ BHL REV-1(400'FSL & 1517'FWL,SEC.11)	7672.00	5176.70	2617.81	1710822.89	14548555.88	40°03'34.758"N	104°44'54.154"W	point
JDB 15-8HZ HEEL REV-1(355'FSL & 1492'FWL,SEC.14)	7675.00	-170.72	2562.65	1710782.30	14543210.45	40°02'41.914"N	104°44'54.870"W	point
JDB 15-8HZ LANDBOX	7675.00	0.00	0.00	1708220.21	14543374.13	40°02'43.602"N	104°45'27.821"W	polygon
JDB 15-8HZ RADIUS 1	7675.00	-525.85	2394.32	1710615.00	14542855.00	40°02'38.404"N	104°44'57.035"W	polygon
JDB 15-8HZ RADIUS 2	7675.00	4777.40	2421.36	1710627.60	14548156.20	40°03'30.812"N	104°44'56.681"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: JDB 15-8HZ AWB					Ref Wellpath: JDB 15-8HZ AWP	
Start MD [ft]	End MD [ft]	Positional Uncertainty Model		Log Name/Comment		Wellbore
17.00	1848.00	Custom APC	ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <129 - 1848>		JDB 15-8HZ AWB
1848.00	13831.00	Custom APC	ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1966 - 13831>		JDB 15-8HZ AWB
13831.00	13874.00	Blind Drilling	(std)	Projection to bit		JDB 15-8HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#40 JDB 15-8HZ(523'FSL & 1072'FEL,SEC.15)
Area	COLORADO	Well	JDB 15-8HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	JDB 15-8HZ AWB
Facility	SEC.15-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
129.00	0.530	333.200	129.00	FIRST SURFACE MWD+IFR1 SURVEY
1848.00	17.750	104.590	1808.26	LAST SURFACE MWD+IFR1 SURVEY
1966.00	18.260	106.270	1920.48	FIRST BHGE MWD+IFR1+SC SURVEY
6455.00	23.076	109.380	6066.26	ENTER LANDBOX (203'FNL & 862'FWL,SEC.23) 40.0434528 -104.7508200
7370.00	19.141	100.588	6910.08	KOP
8551.00	90.130	4.810	7657.63	LANDING (378'FSL & 1447'FWL,SEC.14) 40.0450473 -104.7487323
8611.00	90.247	4.569	7657.43	EXIT RADIUS HEEL (438'FSL & 1451'FWL,SEC.14) 40.0452114 -104.7487148
13056.00	88.564	3.255	7646.24	ENTER RADIUS TOE (420'FNL & 1541'FWL,SEC.14) 40.0574056 -104.7484109
13831.00	89.590	356.480	7655.69	LAST BHGE MWD+IFR1+SC SURVEY
13874.00	89.590	356.480	7656.00	PTB (397'FSL & 1524'FWL,SEC.11) 40.0596476 -104.7483511