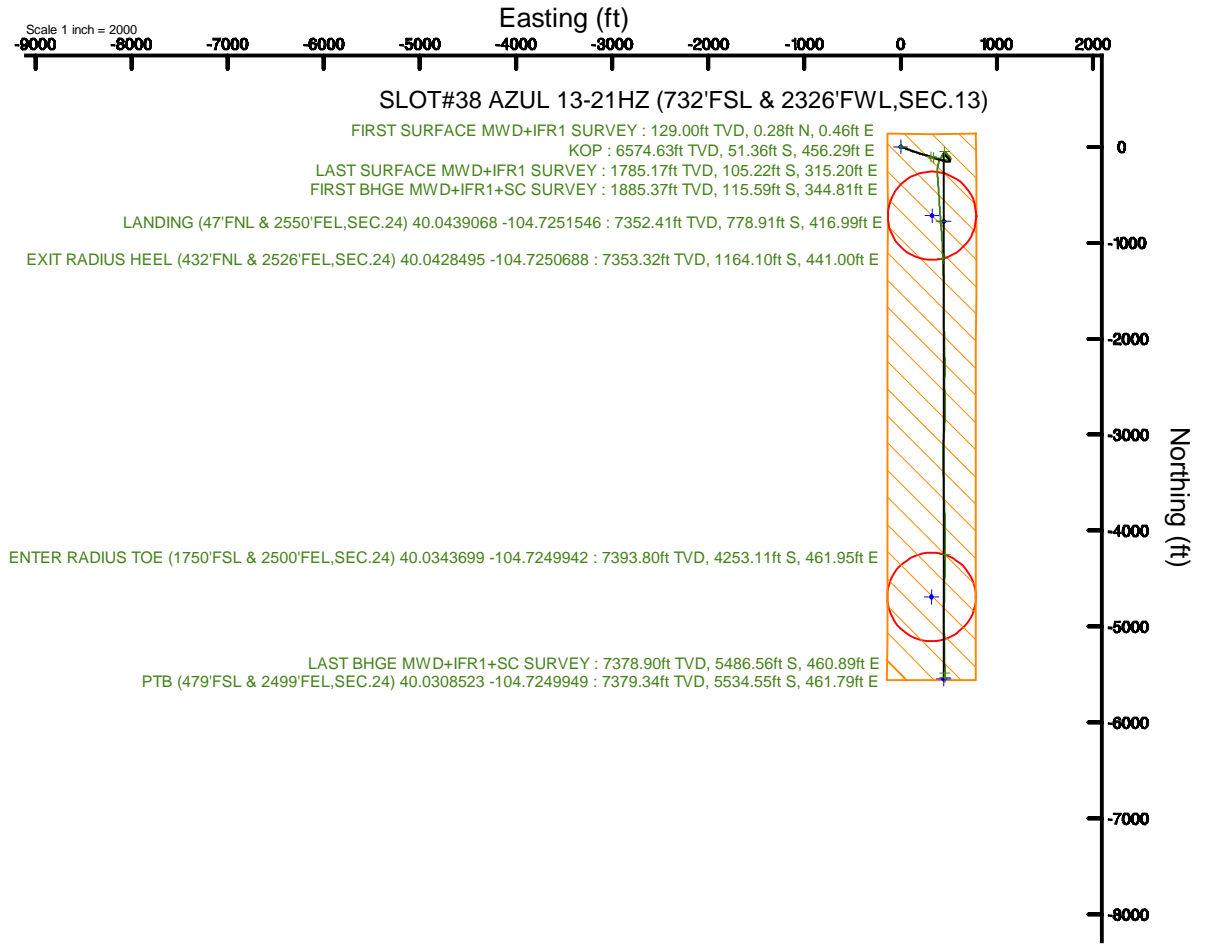
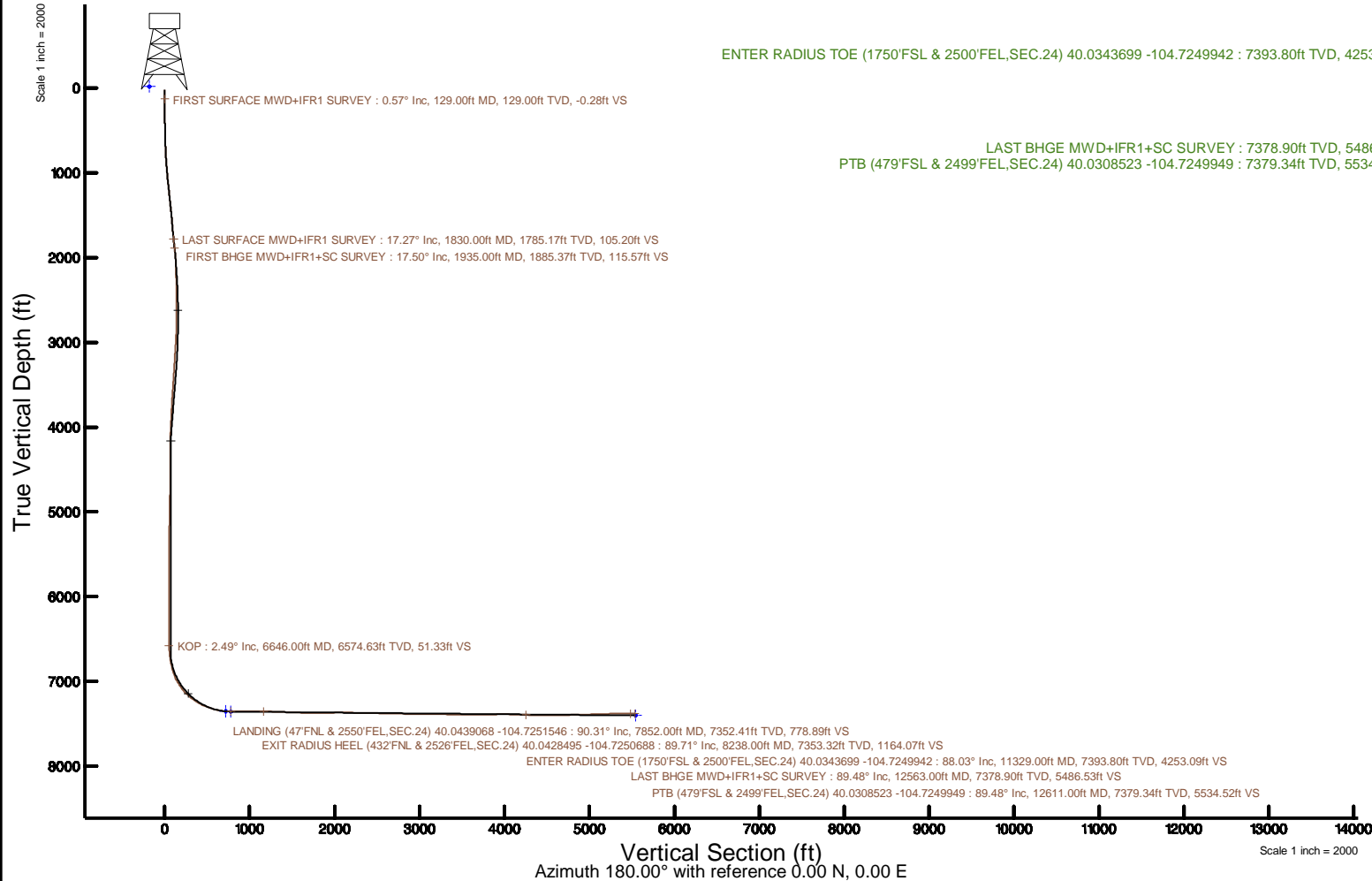


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#38 AZUL 13-21HZ (732'FSL & 2326'FWL,SEC.13)
Field: WELD COUNTY (UTM/TRUE NORTH)Well: AZUL 13-21HZ
Facility: SEC.13-T1N-R66W Wellbore: AZUL 13-21HZ PWB

Plot reference wellpath is AZUL 13-21HZ PWP Rev-A.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to PD 464 (21) (RT)	* = Wellpath was transformed from a different geodetic datum
Measured depths are referenced to PD 464 (21) (RT)	North Reference: True north
PD 464 (21) (RT) to Mean Sea Level: 5071 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#38 AZUL 13-21HZ (732'FSL & 2326'FWL,SEC.13)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2018-05-31
	Database: WA, DEN, Anadarko, Defn



Actual Wellpath Report

AZUL 13-21HZ AWP

Page 1 of 7

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#38 AZUL 13-21HZ (732'FSL & 2326'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-21HZ AWB
Facility	SEC.13-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	0.999607	Report Generated	5/31/2018 at 7:59 AM
Convergence at slot	0.18° East	Database/Source file	WA_DEN_Anadarko_Defn/AZUL_13-21HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-4338.28	-564.93	1716918.91	14543617.81	40°02'45.762"N	104°43'35.918"W
Facility Reference Pt			1717470.20	14547956.10	40°03'28.634"N	104°43'28.654"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 464 (21') (RT) to Facility Vertical Datum	5071.00ft
Horizontal Reference Pt	Slot	PD 464 (21') (RT) to Mean Sea Level	5071.00ft
Vertical Reference Pt	PD 464 (21') (RT)	PD 464 (21') (RT) to Mud Line at Slot (SLOT#38 AZUL 13-21HZ (732'FSL & 2326'FWL,SEC.13))	5071.00ft
MD Reference Pt	PD 464 (21') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	180.00°

Actual Wellpath Report

AZUL 13-21HZ AWP

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REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#38 AZUL 13-21HZ (732'FSL & 2326'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-21HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (181 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	0.00	59.080	0.00	0.00	0.00	0.00	1716918.91	14543617.80	40°02'45.762"N	104°43'35.918"W	0.00	
21.00	0.000	59.080	21.00	0.00	0.00	0.00	1716918.91	14543617.80	40°02'45.762"N	104°43'35.918"W	0.00	
129.00	0.570	59.080	129.00	-0.28	0.28	0.46	1716919.37	14543618.08	40°02'45.765"N	104°43'35.912"W	0.53	FIRST SURFACE MWD+IFR1 SURVEY
161.00	0.530	83.250	161.00	-0.38	0.38	0.74	1716919.65	14543618.18	40°02'45.766"N	104°43'35.908"W	0.73	
192.00	0.130	174.830	192.00	-0.36	0.36	0.89	1716919.80	14543618.16	40°02'45.766"N	104°43'35.907"W	1.77	
224.00	0.040	216.580	224.00	-0.31	0.31	0.89	1716919.80	14543618.12	40°02'45.765"N	104°43'35.907"W	0.32	
255.00	0.350	91.070	255.00	-0.30	0.30	0.97	1716919.88	14543618.11	40°02'45.765"N	104°43'35.905"W	1.21	
287.00	0.570	177.990	287.00	-0.14	0.14	1.08	1716919.99	14543617.95	40°02'45.763"N	104°43'35.904"W	2.04	
318.00	0.920	156.110	317.99	0.24	-0.24	1.18	1716920.10	14543617.57	40°02'45.760"N	104°43'35.903"W	1.44	
350.00	0.880	158.310	349.99	0.70	-0.70	1.38	1716920.29	14543617.11	40°02'45.755"N	104°43'35.900"W	0.17	
381.00	1.580	140.380	380.98	1.25	-1.25	1.74	1716920.65	14543616.56	40°02'45.750"N	104°43'35.896"W	2.55	
413.00	2.370	109.880	412.96	1.82	-1.82	2.64	1716921.56	14543615.99	40°02'45.744"N	104°43'35.884"W	4.03	
445.00	2.940	110.320	444.93	2.33	-2.33	4.04	1716922.95	14543615.49	40°02'45.739"N	104°43'35.866"W	1.78	
476.00	3.600	106.710	475.88	2.89	-2.89	5.71	1716924.63	14543614.94	40°02'45.733"N	104°43'35.845"W	2.23	
508.00	5.100	103.550	507.79	3.51	-3.51	8.06	1716926.98	14543614.32	40°02'45.727"N	104°43'35.814"W	4.75	
539.00	5.360	100.820	538.66	4.10	-4.10	10.82	1716929.74	14543613.74	40°02'45.721"N	104°43'35.779"W	1.16	
571.00	5.670	103.810	570.51	4.76	-4.76	13.82	1716932.74	14543613.09	40°02'45.715"N	104°43'35.740"W	1.32	
603.00	6.680	104.520	602.32	5.60	-5.60	17.16	1716936.08	14543612.26	40°02'45.707"N	104°43'35.697"W	3.17	
635.00	7.120	105.310	634.09	6.59	-6.59	20.87	1716939.80	14543611.28	40°02'45.697"N	104°43'35.650"W	1.41	
667.00	7.250	106.010	665.84	7.67	-7.67	24.73	1716943.65	14543610.21	40°02'45.686"N	104°43'35.600"W	0.49	
699.00	7.290	105.480	697.58	8.77	-8.77	28.63	1716947.55	14543609.12	40°02'45.675"N	104°43'35.550"W	0.24	
730.00	7.600	109.610	728.32	9.98	-9.99	32.45	1716951.38	14543607.92	40°02'45.663"N	104°43'35.501"W	1.99	
762.00	8.750	109.000	759.99	11.49	-11.49	36.75	1716955.68	14543606.43	40°02'45.648"N	104°43'35.446"W	3.60	
794.00	9.580	111.810	791.59	13.27	-13.27	41.52	1716960.46	14543604.67	40°02'45.631"N	104°43'35.384"W	2.95	
826.00	9.760	109.170	823.13	15.15	-15.15	46.55	1716965.49	14543602.80	40°02'45.612"N	104°43'35.319"W	1.50	
857.00	10.330	110.230	853.66	16.97	-16.98	51.64	1716970.59	14543601.00	40°02'45.594"N	104°43'35.254"W	1.93	
889.00	10.410	111.280	885.13	19.01	-19.02	57.03	1716975.98	14543598.97	40°02'45.574"N	104°43'35.185"W	0.64	
921.00	11.120	110.050	916.57	21.12	-21.12	62.62	1716981.57	14543596.88	40°02'45.553"N	104°43'35.113"W	2.33	
953.00	12.220	110.760	947.91	23.38	-23.38	68.69	1716987.64	14543594.64	40°02'45.531"N	104°43'35.035"W	3.47	
984.00	13.490	111.900	978.13	25.89	-25.89	75.11	1716994.07	14543592.15	40°02'45.506"N	104°43'34.952"W	4.18	
1016.00	14.550	111.720	1009.18	28.77	-28.77	82.31	1717001.28	14543589.30	40°02'45.478"N	104°43'34.860"W	3.32	
1048.00	15.030	110.840	1040.12	31.73	-31.74	89.92	1717008.89	14543586.36	40°02'45.448"N	104°43'34.762"W	1.66	
1080.00	15.470	112.950	1070.99	34.87	-34.88	97.73	1717016.71	14543583.24	40°02'45.417"N	104°43'34.661"W	2.21	
1111.00	16.130	113.480	1100.82	38.20	-38.21	105.49	1717024.47	14543579.94	40°02'45.384"N	104°43'34.562"W	2.18	
1143.00	16.830	112.600	1131.50	41.75	-41.76	113.84	1717032.83	14543576.41	40°02'45.349"N	104°43'34.454"W	2.32	
1175.00	16.880	110.050	1162.13	45.12	-45.13	122.48	1717041.48	14543573.07	40°02'45.316"N	104°43'34.343"W	2.32	
1206.00	17.140	107.330	1191.77	48.03	-48.03	131.07	1717050.08	14543570.19	40°02'45.287"N	104°43'34.233"W	2.70	
1238.00	17.580	107.860	1222.32	50.91	-50.92	140.17	1717059.18	14543567.34	40°02'45.259"N	104°43'34.116"W	1.46	
1270.00	17.840	107.680	1252.80	53.88	-53.89	149.44	1717068.46	14543564.39	40°02'45.229"N	104°43'33.996"W	0.83	
1302.00	17.800	107.420	1283.26	56.84	-56.84	158.78	1717077.80	14543561.47	40°02'45.200"N	104°43'33.876"W	0.28	
1334.00	17.970	107.590	1313.72	59.79	-59.80	168.15	1717087.18	14543558.54	40°02'45.171"N	104°43'33.756"W	0.56	
1365.00	17.930	107.770	1343.21	62.69	-62.70	177.25	1717096.29	14543555.67	40°02'45.142"N	104°43'33.639"W	0.22	
1397.00	18.150	109.260	1373.64	65.84	-65.85	186.65	1717105.69	14543552.56	40°02'45.111"N	104°43'33.518"W	1.60	
1429.00	18.720	109.790	1403.99	69.22	-69.23	196.19	1717115.23	14543549.20	40°02'45.078"N	104°43'33.395"W	1.86	
1460.00	19.200	108.820	1433.31	72.55	-72.56	205.69	1717124.74	14543545.90	40°02'45.045"N	104°43'33.273"W	1.85	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#38 AZUL 13-21HZ (732'FSL & 2326'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-21HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (181 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
1492.00	18.940	106.800	1463.56	75.75	-75.76	215.64	1717134.70	14543542.74	40°02'45.013"N	104°43'33.145"W	2.22	
1523.00	19.030	105.750	1492.87	78.57	-78.58	225.32	1717144.39	14543539.94	40°02'44.985"N	104°43'33.021"W	1.14	
1555.00	19.340	105.480	1523.09	81.40	-81.42	235.45	1717154.52	14543537.14	40°02'44.957"N	104°43'32.891"W	1.01	
1587.00	17.750	105.570	1553.43	84.13	-84.14	245.26	1717164.33	14543534.45	40°02'44.931"N	104°43'32.764"W	4.97	
1619.00	17.010	105.660	1583.97	86.70	-86.71	254.46	1717173.54	14543531.91	40°02'44.905"N	104°43'32.646"W	2.31	
1650.00	17.310	104.960	1613.59	89.11	-89.13	263.29	1717182.36	14543529.52	40°02'44.881"N	104°43'32.533"W	1.17	
1682.00	17.490	104.690	1644.12	91.56	-91.57	272.54	1717191.62	14543527.10	40°02'44.857"N	104°43'32.414"W	0.62	
1714.00	17.800	104.600	1674.62	94.01	-94.03	281.92	1717201.01	14543524.68	40°02'44.833"N	104°43'32.293"W	0.97	
1746.00	18.110	107.060	1705.06	96.70	-96.72	291.41	1717210.50	14543522.02	40°02'44.806"N	104°43'32.171"W	2.56	
1777.00	17.450	110.140	1734.58	99.72	-99.73	300.38	1717219.48	14543519.03	40°02'44.776"N	104°43'32.056"W	3.71	
1809.00	17.310	110.760	1765.12	103.06	-103.07	309.34	1717228.44	14543515.72	40°02'44.743"N	104°43'31.940"W	0.73	
1830.00	17.270	109.440	1785.17	105.20	-105.22	315.20	1717234.30	14543513.60	40°02'44.722"N	104°43'31.865"W	1.88	LAST SURFACE MWD+IFR1 SURVEY
1935.00	17.500	109.170	1885.37	115.57	-115.59	344.81	1717263.93	14543503.32	40°02'44.620"N	104°43'31.484"W	0.23	FIRST BHGE MWD+IFR1+SC SURVEY
2025.00	16.710	109.260	1971.39	124.28	-124.30	369.80	1717288.95	14543494.69	40°02'44.534"N	104°43'31.163"W	0.88	
2114.00	16.220	99.010	2056.76	130.45	-130.47	394.16	1717313.32	14543488.60	40°02'44.473"N	104°43'30.850"W	3.31	
2204.00	12.070	95.160	2144.02	133.26	-133.28	415.96	1717335.11	14543485.85	40°02'44.445"N	104°43'30.570"W	4.73	
2294.00	11.650	95.570	2232.09	134.99	-135.01	434.37	1717353.53	14543484.18	40°02'44.428"N	104°43'30.333"W	0.48	
2384.00	11.060	92.600	2320.33	136.26	-136.29	452.04	1717371.19	14543482.96	40°02'44.415"N	104°43'30.106"W	0.92	
2473.00	8.980	98.050	2407.97	137.62	-137.65	467.45	1717386.60	14543481.65	40°02'44.402"N	104°43'29.907"W	2.57	
2563.00	6.510	97.040	2497.14	139.23	-139.26	479.47	1717398.62	14543480.08	40°02'44.386"N	104°43'29.753"W	2.75	
2653.00	5.920	95.080	2586.62	140.27	-140.29	489.16	1717408.30	14543479.07	40°02'44.376"N	104°43'29.628"W	0.70	
2742.00	5.290	79.090	2675.19	139.90	-139.92	497.76	1717416.90	14543479.47	40°02'44.379"N	104°43'29.518"W	1.88	
2832.00	4.730	76.370	2764.85	138.24	-138.26	505.44	1717424.57	14543481.15	40°02'44.396"N	104°43'29.419"W	0.68	
2922.00	4.140	73.830	2854.58	136.46	-136.48	512.16	1717431.29	14543482.95	40°02'44.413"N	104°43'29.332"W	0.69	
3011.00	3.730	32.270	2943.39	133.11	-133.14	516.80	1717435.91	14543486.30	40°02'44.446"N	104°43'29.273"W	3.16	
3101.00	3.820	6.140	3033.20	127.66	-127.68	518.68	1717437.78	14543491.76	40°02'44.500"N	104°43'29.249"W	1.90	
3191.00	3.420	4.750	3123.02	122.00	-122.03	519.22	1717438.30	14543497.42	40°02'44.556"N	104°43'29.242"W	0.45	
3280.00	3.910	329.000	3211.85	116.75	-116.78	517.88	1717436.94	14543502.66	40°02'44.608"N	104°43'29.259"W	2.58	
3370.00	4.540	318.800	3301.61	111.44	-111.47	513.95	1717433.00	14543507.96	40°02'44.660"N	104°43'29.309"W	1.09	
3460.00	3.760	319.030	3391.37	106.53	-106.56	509.67	1717428.71	14543512.85	40°02'44.709"N	104°43'29.365"W	0.87	
3549.00	6.080	320.210	3480.03	100.71	-100.74	504.74	1717423.76	14543518.66	40°02'44.766"N	104°43'29.428"W	2.61	
3639.00	5.320	317.780	3569.59	93.96	-93.98	498.89	1717417.89	14543525.39	40°02'44.833"N	104°43'29.503"W	0.89	
3728.00	4.840	316.810	3658.24	88.16	-88.19	493.55	1717412.53	14543531.16	40°02'44.890"N	104°43'29.572"W	0.55	
3818.00	4.520	310.310	3747.94	83.10	-83.13	488.24	1717407.21	14543536.21	40°02'44.940"N	104°43'29.640"W	0.69	
3908.00	3.660	311.650	3837.71	78.90	-78.92	483.39	1717402.35	14543540.40	40°02'44.982"N	104°43'29.702"W	0.96	
3997.00	4.820	315.370	3926.46	74.35	-74.38	478.64	1717397.59	14543544.93	40°02'45.027"N	104°43'29.764"W	1.34	
4087.00	3.500	305.820	4016.23	70.05	-70.08	473.76	1717392.69	14543549.21	40°02'45.069"N	104°43'29.826"W	1.65	
4177.00	2.670	307.600	4106.10	67.16	-67.19	469.87	1717388.80	14543552.08	40°02'45.098"N	104°43'29.876"W	0.93	
4266.00	2.260	301.460	4195.01	64.98	-65.01	466.73	1717385.65	14543554.25	40°02'45.120"N	104°43'29.917"W	0.55	
4356.00	1.490	295.610	4284.96	63.55	-63.58	464.16	1717383.08	14543555.68	40°02'45.134"N	104°43'29.950"W	0.88	
4446.00	1.320	286.920	4374.94	62.75	-62.77	462.11	1717381.03	14543556.48	40°02'45.142"N	104°43'29.976"W	0.30	
4535.00	1.340	273.620	4463.91	62.38	-62.41	460.09	1717379.01	14543556.84	40°02'45.145"N	104°43'30.002"W	0.35	
4625.00	1.500	233.620	4553.89	63.01	-63.04	458.10	1717377.02	14543556.20	40°02'45.139"N	104°43'30.028"W	1.09	
4715.00	0.850	50.710	4643.88	63.29	-63.31	457.66	1717376.59	14543555.92	40°02'45.136"N	104°43'30.033"W	2.61	
4805.00	0.630	36.760	4733.87	62.47	-62.49	458.48	1717377.40	14543556.74	40°02'45.144"N	104°43'30.023"W	0.31	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#38 AZUL 13-21HZ (732'FSL & 2326'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-21HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (181 stations) † = interpolated/extrapolated station												Comments
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]	
4894.00	0.700	22.410	4822.87	61.58	-61.60	458.98	1717377.89	14543557.64	40°02'45.153"N	104°43'30.016"W	0.20	
4984.00	0.800	16.610	4912.86	60.47	-60.49	459.37	1717378.28	14543558.75	40°02'45.164"N	104°43'30.011"W	0.14	
5073.00	0.980	23.480	5001.85	59.17	-59.20	459.85	1717378.76	14543560.04	40°02'45.177"N	104°43'30.005"W	0.23	
5163.00	2.000	352.230	5091.82	56.91	-56.93	459.94	1717378.84	14543562.31	40°02'45.199"N	104°43'30.004"W	1.41	
5253.00	1.430	319.910	5181.78	54.49	-54.52	459.01	1717377.90	14543564.72	40°02'45.223"N	104°43'30.016"W	1.22	
5343.00	1.330	311.300	5271.75	52.95	-52.97	457.50	1717376.39	14543566.26	40°02'45.238"N	104°43'30.035"W	0.26	
5432.00	1.370	299.680	5360.73	51.74	-51.76	455.80	1717374.69	14543567.46	40°02'45.250"N	104°43'30.057"W	0.31	
5522.00	0.970	296.380	5450.71	50.87	-50.89	454.18	1717373.07	14543568.33	40°02'45.259"N	104°43'30.078"W	0.45	
5612.00	0.440	311.350	5540.70	50.30	-50.32	453.24	1717372.12	14543568.89	40°02'45.265"N	104°43'30.090"W	0.62	
5701.00	0.280	71.160	5629.70	50.00	-50.03	453.19	1717372.07	14543569.19	40°02'45.268"N	104°43'30.091"W	0.71	
5791.00	0.460	87.980	5719.70	49.92	-49.94	453.76	1717372.64	14543569.27	40°02'45.268"N	104°43'30.083"W	0.23	
5881.00	0.400	104.220	5809.70	49.98	-50.01	454.42	1717373.31	14543569.21	40°02'45.268"N	104°43'30.075"W	0.15	
5971.00	0.590	76.730	5899.69	49.96	-49.98	455.18	1717374.06	14543569.24	40°02'45.268"N	104°43'30.065"W	0.33	
6060.00	0.900	79.220	5988.69	49.72	-49.74	456.31	1717375.19	14543569.48	40°02'45.270"N	104°43'30.051"W	0.35	
6150.00	1.020	301.690	6078.68	49.17	-49.19	456.32	1717375.20	14543570.03	40°02'45.276"N	104°43'30.050"W	1.99	
6240.00	0.680	270.030	6168.67	48.75	-48.77	455.11	1717373.99	14543570.45	40°02'45.280"N	104°43'30.066"W	0.63	
6330.00	0.720	252.260	6258.67	48.92	-48.94	454.04	1717372.92	14543570.28	40°02'45.278"N	104°43'30.080"W	0.24	
6419.00	0.360	165.530	6347.66	49.36	-49.38	453.57	1717372.45	14543569.83	40°02'45.274"N	104°43'30.086"W	0.88	
6509.00	0.650	124.940	6437.66	49.92	-49.95	454.06	1717372.94	14543569.27	40°02'45.268"N	104°43'30.080"W	0.49	
6598.00	1.200	96.000	6526.65	50.31	-50.33	455.40	1717374.29	14543568.89	40°02'45.265"N	104°43'30.062"W	0.79	
6646.00†	2.492	158.138	6574.63	51.33	-51.36	456.29	1717375.18	14543567.87	40°02'45.254"N	104°43'30.051"W	4.59	KOP
6687.00	4.240	170.490	6615.55	53.65	-53.68	456.87	1717375.77	14543565.55	40°02'45.231"N	104°43'30.043"W	4.59	
6777.00	7.290	215.040	6705.13	61.62	-61.64	454.14	1717373.06	14543557.58	40°02'45.153"N	104°43'30.079"W	5.78	
6866.00	14.100	213.940	6792.53	75.25	-75.27	444.84	1717363.80	14543543.93	40°02'45.018"N	104°43'30.198"W	7.65	
6956.00	19.760	211.270	6878.60	97.37	-97.39	430.81	1717349.85	14543521.78	40°02'44.800"N	104°43'30.379"W	6.35	
7046.00	26.170	208.170	6961.42	127.90	-127.92	413.52	1717332.66	14543491.20	40°02'44.498"N	104°43'30.601"W	7.25	
7135.00	34.500	198.750	7038.21	169.17	-169.19	396.12	1717315.39	14543449.90	40°02'44.090"N	104°43'30.825"W	10.75	
7225.00	41.210	185.590	7109.35	222.96	-222.98	385.00	1717304.44	14543396.10	40°02'43.558"N	104°43'30.968"W	11.63	
7314.00	49.270	177.190	7172.02	285.98	-286.00	383.80	1717303.43	14543333.10	40°02'42.936"N	104°43'30.983"W	11.25	
7404.00	54.700	176.060	7227.43	356.73	-356.75	388.00	1717307.85	14543262.39	40°02'42.236"N	104°43'30.929"W	6.11	
7494.00	64.520	175.790	7272.91	434.07	-434.09	393.52	1717313.60	14543185.09	40°02'41.472"N	104°43'30.858"W	10.91	
7583.00	69.390	175.750	7307.73	515.72	-515.74	399.56	1717319.89	14543103.49	40°02'40.665"N	104°43'30.781"W	5.47	
7673.00	77.290	177.410	7333.52	601.72	-601.74	404.67	1717325.26	14543017.54	40°02'39.815"N	104°43'30.715"W	8.95	
7762.00	84.020	176.030	7347.96	689.34	-689.36	409.70	1717330.56	14542929.97	40°02'38.949"N	104°43'30.650"W	7.71	
7852.00	90.310	174.670	7352.41	778.89	-778.91	416.99	1717338.12	14542840.48	40°02'38.065"N	104°43'30.556"W	7.15	LANDING (47'FNL & 2550'FEL,SEC.24) 40.0439068 -104.7251546
7942.00	89.540	175.870	7352.53	868.58	-868.60	424.41	1717345.81	14542750.85	40°02'37.178"N	104°43'30.461"W	1.58	
8031.00	90.030	175.510	7352.86	957.33	-957.35	431.10	1717352.77	14542662.16	40°02'36.301"N	104°43'30.375"W	0.68	
8121.00	89.780	178.220	7353.01	1047.18	-1047.21	436.02	1717357.97	14542572.36	40°02'35.413"N	104°43'30.312"W	3.02	
8210.00	89.940	177.100	7353.23	1136.11	-1136.13	439.65	1717361.87	14542483.48	40°02'34.534"N	104°43'30.265"W	1.27	
8238.00†	89.710	177.399	7353.32	1164.07	-1164.10	441.00	1717363.30	14542455.53	40°02'34.258"N	104°43'30.248"W	1.35	EXIT RADIUS HEEL (432'FNL & 2526'FEL,SEC.24) 40.0428495 -104.7250688
8300.00	89.200	178.060	7353.91	1226.02	-1226.05	443.45	1717365.95	14542393.61	40°02'33.646"N	104°43'30.216"W	1.35	
8390.00	87.630	179.540	7356.40	1315.96	-1315.99	445.34	1717368.11	14542303.71	40°02'32.757"N	104°43'30.192"W	2.40	
8479.00	86.520	178.060	7360.94	1404.82	-1404.85	447.20	1717370.24	14542214.89	40°02'31.879"N	104°43'30.168"W	2.08	
8569.00	87.930	179.260	7365.29	1494.69	-1494.71	449.30	1717372.62	14542125.07	40°02'30.991"N	104°43'30.141"W	2.06	
8659.00	89.020	179.990	7367.69	1584.65	-1584.68	449.89	1717373.48	14542035.14	40°02'30.102"N	104°43'30.134"W	1.46	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#38 AZUL 13-21HZ (732'FSL & 2326'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-21HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (181 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
8748.00	90.000	180.250	7368.45	1673.65	-1673.67	449.70	1717373.57	14541946.18	40°02'29.222"N	104°43'30.136"W	1.14	
8838.00	89.720	179.940	7368.67	1763.65	-1763.67	449.55	1717373.69	14541856.22	40°02'28.333"N	104°43'30.138"W	0.46	
8928.00	90.060	178.750	7368.84	1853.64	-1853.66	450.58	1717375.00	14541766.26	40°02'27.444"N	104°43'30.125"W	1.38	
9017.00	90.490	178.790	7368.42	1942.62	-1942.64	452.49	1717377.18	14541677.33	40°02'26.564"N	104°43'30.100"W	0.49	
9107.00	91.050	178.420	7367.21	2032.58	-2032.61	454.68	1717379.65	14541587.41	40°02'25.675"N	104°43'30.072"W	0.75	
9197.00	89.690	178.420	7366.63	2122.55	-2122.57	457.16	1717382.40	14541497.49	40°02'24.786"N	104°43'30.040"W	1.51	
9286.00	89.080	178.830	7367.58	2211.51	-2211.54	459.30	1717384.81	14541408.56	40°02'23.907"N	104°43'30.013"W	0.83	
9376.00	88.490	180.490	7369.49	2301.49	-2301.51	459.83	1717385.62	14541318.62	40°02'23.018"N	104°43'30.006"W	1.96	
9465.00	89.040	180.690	7371.41	2390.46	-2390.49	458.92	1717384.98	14541229.68	40°02'22.139"N	104°43'30.018"W	0.66	
9555.00	88.430	179.740	7373.39	2480.44	-2480.46	458.58	1717384.92	14541139.74	40°02'21.249"N	104°43'30.022"W	1.25	
9645.00	88.710	179.870	7375.64	2570.41	-2570.43	458.88	1717385.50	14541049.81	40°02'20.360"N	104°43'30.018"W	0.34	
9734.00	88.920	179.530	7377.48	2659.39	-2659.41	459.35	1717386.24	14540960.86	40°02'19.481"N	104°43'30.012"W	0.45	
9824.00	88.590	178.810	7379.44	2749.36	-2749.38	460.65	1717387.82	14540870.94	40°02'18.592"N	104°43'29.995"W	0.88	
9913.00	87.690	181.760	7382.33	2838.30	-2838.32	460.21	1717387.65	14540782.03	40°02'17.713"N	104°43'30.001"W	3.46	
10003.00	89.570	183.470	7384.48	2928.17	-2928.20	456.11	1717383.82	14540692.18	40°02'16.825"N	104°43'30.054"W	2.82	
10093.00	90.280	185.900	7384.60	3017.86	-3017.89	448.76	1717376.75	14540602.50	40°02'15.938"N	104°43'30.148"W	2.81	
10182.00	89.260	180.070	7384.95	3106.70	-3106.73	444.12	1717372.39	14540513.68	40°02'15.061"N	104°43'30.208"W	6.65	
10272.00	89.140	179.720	7386.21	3196.70	-3196.72	444.29	1717372.83	14540423.73	40°02'14.171"N	104°43'30.206"W	0.41	
10361.00	89.290	180.390	7387.43	3285.69	-3285.71	444.20	1717373.02	14540334.77	40°02'13.292"N	104°43'30.207"W	0.77	
10451.00	88.370	178.920	7389.27	3375.66	-3375.69	444.75	1717373.84	14540244.83	40°02'12.403"N	104°43'30.200"W	1.93	
10541.00	90.220	180.040	7390.37	3465.65	-3465.67	445.56	1717374.93	14540154.89	40°02'11.513"N	104°43'30.190"W	2.40	
10630.00	90.030	179.450	7390.18	3554.64	-3554.67	445.96	1717375.60	14540065.93	40°02'10.634"N	104°43'30.185"W	0.70	
10720.00	89.510	176.780	7390.54	3644.59	-3644.61	448.92	1717378.83	14539976.03	40°02'09.745"N	104°43'30.147"W	3.02	
10810.00	90.890	176.740	7390.23	3734.44	-3734.46	454.00	1717384.19	14539886.23	40°02'08.857"N	104°43'30.081"W	1.53	
10899.00	90.710	176.810	7388.98	3823.29	-3823.31	459.01	1717389.47	14539797.43	40°02'07.979"N	104°43'30.017"W	0.22	
10989.00	90.890	178.510	7387.73	3913.20	-3913.23	462.68	1717393.42	14539707.56	40°02'07.090"N	104°43'29.970"W	1.90	
11079.00	89.690	180.910	7387.27	4003.19	-4003.22	463.14	1717394.15	14539617.61	40°02'06.201"N	104°43'29.964"W	2.98	
11168.00	88.830	180.280	7388.42	4092.18	-4092.20	462.22	1717393.50	14539528.66	40°02'05.322"N	104°43'29.976"W	1.20	
11258.00	87.690	180.090	7391.15	4182.14	-4182.16	461.93	1717393.48	14539438.74	40°02'04.433"N	104°43'29.979"W	1.28	
11329.00†	88.033	179.875	7393.80	4253.09	-4253.11	461.95	1717393.72	14539367.81	40°02'03.732"N	104°43'29.979"W	0.57	ENTER RADIUS TOE (1750'FSL & 2500'FEL, SEC.24) 40.0343699 -104.7249942
11347.00	88.120	179.820	7394.41	4271.08	-4271.10	462.00	1717393.83	14539349.83	40°02'03.554"N	104°43'29.979"W	0.57	
11437.00	88.770	180.870	7396.85	4361.04	-4361.06	461.45	1717393.56	14539259.90	40°02'02.665"N	104°43'29.986"W	1.37	
11526.00	89.750	181.290	7398.00	4450.01	-4450.04	459.78	1717392.16	14539170.96	40°02'01.786"N	104°43'30.007"W	1.20	
11616.00	90.000	181.240	7398.20	4539.99	-4540.02	457.79	1717390.45	14539081.01	40°02'00.896"N	104°43'30.033"W	0.28	
11705.00	90.920	181.880	7397.48	4628.96	-4628.98	455.37	1717388.30	14538992.07	40°02'00.017"N	104°43'30.064"W	1.26	
11795.00	91.350	181.380	7395.70	4718.90	-4718.92	452.81	1717386.02	14538902.16	40°01'59.128"N	104°43'30.097"W	0.73	
11885.00	91.290	180.770	7393.63	4808.86	-4808.88	451.12	1717384.61	14538812.23	40°01'58.239"N	104°43'30.118"W	0.68	
11974.00	91.540	180.030	7391.43	4897.83	-4897.85	450.50	1717384.26	14538723.29	40°01'57.360"N	104°43'30.126"W	0.88	
12064.00	92.060	179.410	7388.60	4987.78	-4987.81	450.94	1717384.97	14538633.38	40°01'56.471"N	104°43'30.121"W	0.90	
12153.00	92.250	179.020	7385.25	5076.71	-5076.74	452.16	1717386.46	14538544.49	40°01'55.592"N	104°43'30.105"W	0.49	
12243.00	91.260	178.980	7382.50	5166.66	-5166.68	453.73	1717388.31	14538454.58	40°01'54.704"N	104°43'30.085"W	1.10	
12333.00	91.320	178.770	7380.47	5256.62	-5256.64	455.49	1717390.35	14538364.67	40°01'53.815"N	104°43'30.062"W	0.24	
12422.00	90.740	178.610	7378.87	5345.58	-5345.60	457.53	1717392.66	14538275.75	40°01'52.935"N	104°43'30.036"W	0.68	
12512.00	89.690	178.540	7378.53	5435.55	-5435.57	459.76	1717395.17	14538185.82	40°01'52.046"N	104°43'30.007"W	1.17	
12563.00	89.480	178.930	7378.90	5486.53	-5486.56	460.89	1717396.45	14538134.86	40°01'51.542"N	104°43'29.993"W	0.87	LAST BHGE MWD+IFR1+SC SURVEY

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#38 AZUL 13-21HZ (732'FSL & 2326'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-21HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH DATA (181 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]
12611.00	89.480	178.930	7379.34	5534.52	-5534.55	461.79	1717397.50	14538086.89	40°01'51.068"N	104°43'29.981"W	0.00

HOLE & CASING SECTIONS - Ref Wellbore: AZUL 13-21HZ AWB Ref Wellpath: AZUL 13-21HZ 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	21.00	1869.00	1848.00	21.00	1822.40	0.00	0.00	-109.07	326.14		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.24-T1N-R66W	-17.00	181.06	-1166.40	1715752.42	14543795.21	40°02'47.551"N	104°43'50.916"W	polygon
AZUL 13-21HZ LANDBOX	7351.00	0.00	0.00	1716918.91	14543617.80	40°02'45.762"N	104°43'35.918"W	polygon
AZUL 13-21HZ RADIUS 1	7351.00	-4691.27	320.82	1717254.00	14538929.40	40°01'59.402"N	104°43'31.794"W	polygon
AZUL 13-21HZ RADIUS 2	7351.00	-718.79	326.61	1717247.60	14542900.30	40°02'38.659"N	104°43'31.718"W	polygon
AZUL 13-21HZ HEEL REV-1(50'FNL & 2518'FEL,SEC.24)	7355.00	-778.46	449.37	1717370.49	14542841.03	40°02'38.069"N	104°43'30.140"W	point
AZUL 13-21HZ BHL REV-1(468'FSL & 2512'FEL,SEC.24)	7401.00	-5545.59	449.15	1717384.89	14538075.81	40°01'50.959"N	104°43'30.144"W	point

WELLPATH COMPOSITION - Ref Wellbore: AZUL 13-21HZ AWB Ref Wellpath: AZUL 13-21HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	1830.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <129 - 1830>	AZUL 13-21HZ AWB
1830.00	12563.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1935 - 12563>	AZUL 13-21HZ AWB
12563.00	12611.00	Blind Drilling (std)	Projection to bit	AZUL 13-21HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#38 AZUL 13-21HZ (732'FSL & 2326'FWL,SEC.13)
Area	COLORADO	Well	AZUL 13-21HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	AZUL 13-21HZ AWB
Facility	SEC.13-T1N-R66W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
129.00	0.570	59.080	129.00	FIRST SURFACE MWD+IFR1 SURVEY
1830.00	17.270	109.440	1785.17	LAST SURFACE MWD+IFR1 SURVEY
1935.00	17.500	109.170	1885.37	FIRST BHGE MWD+IFR1+SC SURVEY
6646.00	2.492	158.138	6574.63	KOP
7852.00	90.310	174.670	7352.41	LANDING (47'FNL & 2550'FEL,SEC.24) 40.0439068 -104.7251546
8238.00	89.710	177.399	7353.32	EXIT RADIUS HEEL (432'FNL & 2526'FEL,SEC.24) 40.0428495 -104.7250688
11329.00	88.033	179.875	7393.80	ENTER RADIUS TOE (1750'FSL & 2500'FEL,SEC.24) 40.0343699 -104.7249942
12563.00	89.480	178.930	7378.90	LAST BHGE MWD+IFR1+SC SURVEY
12611.00	89.480	178.930	7379.34	PTB (479'FSL & 2499'FEL,SEC.24) 40.0308523 -104.7249949