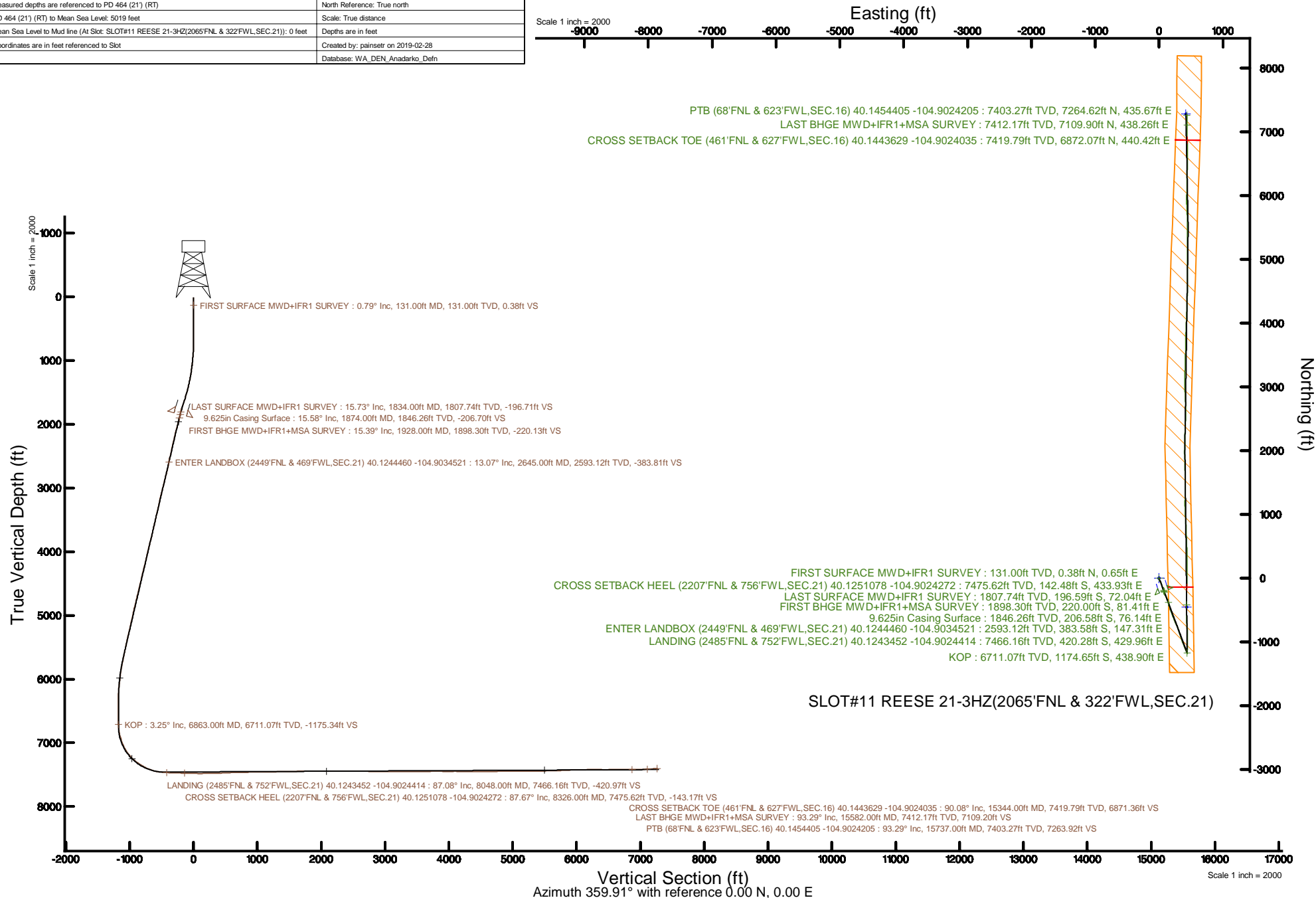


KERR-MCGEE OIL & GAS ONSHORE LP (WA)

Location: COLORADO Slot: SLOT#11 REESE 21-3HZ(2065'FNL & 322'FWL,SEC.21)
Field: WELD COUNTY (UTM/TRUE NORTH) Well: REESE 21-3HZ
Facility: SEC.21-T2N-R67W Wellbore: REESE 21-3HZ PWB

Plot reference wellpath is REESE 21-3HZ 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: 5019 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#11 REESE 21-3HZ(2065'FNL & 322'FWL,SEC.21)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: painsetr on 2019-02-28
	Database: WA_DEN Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 REESE 21-3HZ(2065'FNL & 322'FWL,SEC.21)
Area	COLORADO	Well	REESE 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	REESE 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / UTM Zone 13 North, US feet	Software System	WellArchitect® 5.0
North Reference	True	User	Painsetr
Scale	0.999601	Report Generated	2/28/2019 at 8:24 AM
Convergence at slot	0.07° East	Database/Source file	WA_DEN_Anadarko_Defn/REESE_21-3HZ_AWP.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-1581.07	-4328.67	1667258.18	14572447.68	40°07'31.796"N	104°54'14.324"W
Facility Reference Pt			1671583.13	14574033.54	40°07'47.424"N	104°53'18.600"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	5019.00ft
Horizontal Reference Pt	Slot	PD 464 (21') (RT) to Mean Sea Level	5019.00ft
Vertical Reference Pt	PD 464 (21') (RT)	PD 464 (21') (RT) to Mud Line at Slot (SLOT#11 REESE 21-3HZ (2065'FNL & 322'FWL,SEC.21))	5019.00ft
MD Reference Pt	PD 464 (21') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.91°

Actual Wellpath Report

REESE 21-3HZ AWP

Page 2 of 10

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 REESE 21-3HZ(2065'FNL & 322'FWL,SEC.21)
Area	COLORADO	Well	REESE 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	REESE 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (178 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	59.610	0.00	0.00	0.00	0.00	1667258.18	14572447.68	40°07'31.796"N	104°54'14.324"W	0.00	
21.00	0.000	59.610	21.00	0.00	0.00	0.00	1667258.18	14572447.68	40°07'31.796"N	104°54'14.324"W	0.00	
131.00	0.790	59.610	131.00	0.38	0.38	0.65	1667258.83	14572448.07	40°07'31.800"N	104°54'14.316"W	0.72	FIRST SURFACE MWD+IFR1 SURVEY
226.00	0.970	56.980	225.99	1.15	1.15	1.89	1667260.07	14572448.84	40°07'31.807"N	104°54'14.300"W	0.19	
321.00	0.400	51.790	320.98	1.79	1.80	2.83	1667261.00	14572449.48	40°07'31.814"N	104°54'14.288"W	0.60	
417.00	0.220	65.590	416.98	2.07	2.08	3.26	1667261.43	14572449.77	40°07'31.817"N	104°54'14.282"W	0.20	
512.00	0.790	264.660	511.97	2.09	2.09	2.77	1667260.95	14572449.78	40°07'31.817"N	104°54'14.288"W	1.05	
607.00	1.540	263.430	606.95	1.89	1.89	0.85	1667259.03	14572449.57	40°07'31.815"N	104°54'14.313"W	0.79	
703.00	0.880	281.360	702.93	1.89	1.88	-1.15	1667257.03	14572449.57	40°07'31.815"N	104°54'14.339"W	0.78	
798.00	2.110	201.470	797.91	0.40	0.40	-2.51	1667255.67	14572448.08	40°07'31.800"N	104°54'14.356"W	2.25	
893.00	4.570	175.630	892.74	-5.00	-5.00	-2.86	1667255.33	14572442.68	40°07'31.747"N	104°54'14.361"W	2.97	
989.00	5.930	164.990	988.34	-13.60	-13.61	-1.28	1667256.91	14572434.08	40°07'31.662"N	104°54'14.341"W	1.74	
1083.00	7.780	149.970	1081.67	-23.81	-23.81	3.16	1667261.36	14572423.89	40°07'31.561"N	104°54'14.283"W	2.72	
1178.00	9.450	150.320	1175.60	-36.16	-36.15	10.24	1667268.45	14572411.56	40°07'31.439"N	104°54'14.192"W	1.76	
1273.00	11.380	151.460	1269.03	-51.19	-51.16	18.58	1667276.81	14572396.56	40°07'31.290"N	104°54'14.085"W	2.04	
1368.00	13.490	157.170	1361.80	-69.65	-69.61	27.36	1667285.60	14572378.13	40°07'31.108"N	104°54'13.972"W	2.57	
1463.00	15.690	161.740	1453.73	-92.08	-92.02	35.68	1667293.95	14572355.74	40°07'30.887"N	104°54'13.865"W	2.61	
1559.00	17.050	164.200	1545.84	-117.96	-117.89	43.58	1667301.87	14572329.88	40°07'30.631"N	104°54'13.763"W	1.59	
1653.00	18.630	162.090	1635.31	-145.53	-145.44	51.95	1667310.27	14572302.35	40°07'30.359"N	104°54'13.655"W	1.82	
1749.00	18.110	157.170	1726.43	-173.89	-173.79	62.46	1667320.80	14572274.03	40°07'30.079"N	104°54'13.520"W	1.70	
1834.00	15.730	157.260	1807.74	-196.71	-196.59	72.04	1667330.40	14572251.25	40°07'29.853"N	104°54'13.397"W	2.80	LAST SURFACE MWD+IFR1 SURVEY
1928.00	15.390	159.150	1898.30	-220.13	-220.00	81.41	1667339.79	14572227.86	40°07'29.622"N	104°54'13.276"W	0.65	FIRST BHGE MWD+IFR1+MSA SURVEY
2018.00	16.160	161.390	1984.91	-243.17	-243.03	89.65	1667348.06	14572204.85	40°07'29.394"N	104°54'13.170"W	1.09	
2107.00	15.430	159.930	2070.55	-266.04	-265.89	97.67	1667356.09	14572182.01	40°07'29.168"N	104°54'13.067"W	0.93	
2197.00	14.590	157.480	2157.48	-287.78	-287.61	106.12	1667364.56	14572160.31	40°07'28.954"N	104°54'12.958"W	1.17	
2287.00	13.240	154.840	2244.83	-307.59	-307.41	114.84	1667373.31	14572140.52	40°07'28.758"N	104°54'12.846"W	1.66	
2376.00	14.140	156.850	2331.31	-326.82	-326.63	123.45	1667381.93	14572121.32	40°07'28.568"N	104°54'12.735"W	1.14	
2466.00	13.120	155.670	2418.77	-346.25	-346.05	131.98	1667390.48	14572101.92	40°07'28.376"N	104°54'12.625"W	1.17	
2555.00	13.100	157.380	2505.45	-364.78	-364.56	140.02	1667398.54	14572083.42	40°07'28.193"N	104°54'12.522"W	0.44	
2645.00	13.070	160.690	2593.12	-383.81	-383.58	147.31	1667405.84	14572064.42	40°07'28.005"N	104°54'12.428"W	0.83	ENTER LANDBOX (2449'FNL & 469'FWL,SEC.21) 40.1244460 -104.9034521

Actual Wellpath Report

REESE 21-3HZ AWP

Page 3 of 10



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 REESE 21-3HZ(2065'FNL & 322'FWL,SEC.21)
Area	COLORADO	Well	REESE 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	REESE 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (178 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
2735.00	12.480	165.690	2680.89	-402.85	-402.61	153.08	1667411.63	14572045.40	40°07'27.817"N	104°54'12.353"W	1.39	
2825.00	13.990	165.870	2768.50	-422.83	-422.58	158.14	1667416.71	14572025.44	40°07'27.620"N	104°54'12.288"W	1.68	
2914.00	15.430	164.180	2854.58	-444.66	-444.40	163.99	1667422.58	14572003.63	40°07'27.404"N	104°54'12.213"W	1.69	
3004.00	14.200	164.910	2941.58	-466.85	-466.58	170.13	1667428.74	14571981.47	40°07'27.185"N	104°54'12.134"W	1.38	
3093.00	14.700	164.150	3027.77	-488.26	-487.99	176.06	1667434.69	14571960.08	40°07'26.974"N	104°54'12.058"W	0.60	
3183.00	14.590	158.480	3114.85	-509.81	-509.52	183.33	1667441.99	14571938.57	40°07'26.761"N	104°54'11.964"W	1.60	
3273.00	13.120	159.030	3202.23	-529.90	-529.60	191.15	1667449.82	14571918.50	40°07'26.562"N	104°54'11.863"W	1.64	
3362.00	13.360	161.900	3288.86	-549.12	-548.81	197.96	1667456.65	14571899.31	40°07'26.373"N	104°54'11.776"W	0.79	
3452.00	13.350	160.830	3376.43	-568.83	-568.51	204.60	1667463.31	14571879.63	40°07'26.178"N	104°54'11.690"W	0.27	
3542.00	13.370	158.270	3463.99	-588.32	-587.99	211.86	1667470.59	14571860.16	40°07'25.985"N	104°54'11.597"W	0.66	
3632.00	13.870	157.940	3551.46	-608.00	-607.65	219.77	1667478.51	14571840.51	40°07'25.791"N	104°54'11.495"W	0.56	
3721.00	13.980	156.330	3637.85	-627.74	-627.38	228.09	1667486.85	14571820.80	40°07'25.596"N	104°54'11.388"W	0.45	
3811.00	14.400	160.080	3725.10	-648.24	-647.86	236.27	1667495.05	14571800.34	40°07'25.394"N	104°54'11.283"W	1.12	
3900.00	14.510	160.140	3811.29	-669.14	-668.75	243.83	1667502.63	14571779.46	40°07'25.187"N	104°54'11.185"W	0.12	
3990.00	15.400	157.680	3898.24	-690.81	-690.41	252.20	1667511.02	14571757.82	40°07'24.973"N	104°54'11.078"W	1.21	
4080.00	15.480	154.850	3984.99	-712.75	-712.34	261.84	1667520.68	14571735.91	40°07'24.757"N	104°54'10.953"W	0.84	
4169.00	13.130	149.590	4071.23	-732.24	-731.81	272.00	1667530.86	14571716.46	40°07'24.564"N	104°54'10.823"W	3.01	
4259.00	15.200	158.110	4158.50	-752.03	-751.58	281.58	1667540.46	14571696.71	40°07'24.369"N	104°54'10.699"W	3.26	
4349.00	15.780	158.700	4245.23	-774.39	-773.93	290.42	1667549.32	14571674.38	40°07'24.148"N	104°54'10.585"W	0.67	
4439.00	13.430	159.590	4332.31	-795.60	-795.13	298.52	1667557.43	14571653.20	40°07'23.938"N	104°54'10.481"W	2.62	
4528.00	13.070	162.910	4418.95	-814.92	-814.44	305.08	1667564.01	14571633.90	40°07'23.748"N	104°54'10.397"W	0.95	
4618.00	14.450	163.660	4506.36	-835.43	-834.94	311.23	1667570.18	14571613.42	40°07'23.545"N	104°54'10.318"W	1.55	
4708.00	13.830	162.980	4593.63	-856.50	-856.00	317.53	1667576.51	14571592.37	40°07'23.337"N	104°54'10.236"W	0.71	
4797.00	14.260	160.570	4679.97	-877.02	-876.51	324.29	1667583.29	14571571.88	40°07'23.134"N	104°54'10.149"W	0.82	
4887.00	14.600	160.940	4767.13	-898.21	-897.68	331.69	1667590.70	14571550.72	40°07'22.925"N	104°54'10.054"W	0.39	
4976.00	14.010	160.050	4853.37	-918.95	-918.41	339.03	1667598.06	14571530.01	40°07'22.720"N	104°54'09.960"W	0.71	
5066.00	13.320	161.740	4940.83	-939.05	-938.50	345.99	1667605.04	14571509.94	40°07'22.522"N	104°54'09.870"W	0.89	
5156.00	12.640	164.130	5028.53	-958.37	-957.82	351.93	1667611.00	14571490.63	40°07'22.331"N	104°54'09.794"W	0.96	
5245.00	13.930	159.830	5115.15	-977.81	-977.24	358.29	1667617.38	14571471.22	40°07'22.139"N	104°54'09.712"W	1.82	
5360.00	13.670	158.290	5226.83	-1003.44	-1002.86	368.09	1667627.20	14571445.62	40°07'21.886"N	104°54'09.586"W	0.39	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 REESE 21-3HZ(2065'FNL & 322'FWL,SEC.21)
Area	COLORADO	Well	REESE 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	REESE 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (178 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
5450.00	14.030	157.780	5314.21	-1023.43	-1022.84	376.15	1667635.28	14571425.66	40°07'21.688"N	104°54'09.482"W	0.42	
5539.00	13.090	158.790	5400.73	-1042.83	-1042.22	383.87	1667643.02	14571406.29	40°07'21.497"N	104°54'09.383"W	1.09	
5629.00	12.120	157.800	5488.56	-1061.09	-1060.47	391.13	1667650.30	14571388.06	40°07'21.316"N	104°54'09.289"W	1.10	
5719.00	13.200	159.760	5576.37	-1079.49	-1078.86	398.26	1667657.44	14571369.69	40°07'21.135"N	104°54'09.197"W	1.29	
5808.00	12.400	158.250	5663.16	-1097.91	-1097.27	405.31	1667664.51	14571351.29	40°07'20.953"N	104°54'09.107"W	0.97	
5898.00	11.710	156.480	5751.17	-1115.27	-1114.62	412.54	1667671.75	14571333.96	40°07'20.781"N	104°54'09.014"W	0.87	
5988.00	10.630	156.040	5839.47	-1131.25	-1130.58	419.55	1667678.79	14571318.01	40°07'20.623"N	104°54'08.923"W	1.20	
6077.00	7.580	155.190	5927.33	-1144.09	-1143.41	425.35	1667684.59	14571305.19	40°07'20.497"N	104°54'08.849"W	3.43	
6167.00	7.810	158.050	6016.52	-1155.16	-1154.47	430.13	1667689.38	14571294.14	40°07'20.387"N	104°54'08.787"W	0.50	
6256.00	6.850	161.630	6104.80	-1165.81	-1165.12	434.06	1667693.32	14571283.50	40°07'20.282"N	104°54'08.736"W	1.19	
6346.00	4.660	150.380	6194.34	-1174.09	-1173.39	437.56	1667696.83	14571275.23	40°07'20.200"N	104°54'08.691"W	2.73	
6435.00	2.210	140.110	6283.17	-1178.55	-1177.85	440.45	1667699.72	14571270.78	40°07'20.156"N	104°54'08.654"W	2.83	
6525.00	0.270	114.730	6373.15	-1179.97	-1179.27	441.76	1667701.03	14571269.36	40°07'20.142"N	104°54'08.637"W	2.19	
6614.00	0.260	293.330	6462.15	-1179.98	-1179.28	441.76	1667701.03	14571269.35	40°07'20.142"N	104°54'08.637"W	0.60	
6704.00	0.940	323.890	6552.14	-1179.30	-1178.60	441.14	1667700.41	14571270.03	40°07'20.149"N	104°54'08.645"W	0.81	
6794.00	1.420	318.090	6642.12	-1177.87	-1177.18	439.96	1667699.23	14571271.45	40°07'20.163"N	104°54'08.661"W	0.55	
6863.00†	3.249	345.511	6711.07	-1175.34	-1174.65	438.90	1667698.17	14571273.98	40°07'20.188"N	104°54'08.674"W	3.03	KOP
6883.00	3.830	348.350	6731.03	-1174.14	-1173.44	438.62	1667697.89	14571275.18	40°07'20.200"N	104°54'08.678"W	3.03	
6973.00	9.070	355.960	6820.43	-1164.11	-1163.42	437.51	1667696.77	14571285.21	40°07'20.299"N	104°54'08.692"W	5.89	
7062.00	14.870	8.930	6907.47	-1145.81	-1145.12	438.79	1667698.03	14571303.50	40°07'20.480"N	104°54'08.676"W	7.14	
7152.00	20.130	6.090	6993.28	-1118.99	-1118.29	442.23	1667701.44	14571330.32	40°07'20.745"N	104°54'08.631"W	5.92	
7242.00	27.320	2.480	7075.62	-1082.92	-1082.21	444.77	1667703.94	14571366.39	40°07'21.101"N	104°54'08.599"W	8.15	
7331.00	35.450	1.510	7151.54	-1036.63	-1035.93	446.34	1667705.45	14571412.65	40°07'21.559"N	104°54'08.578"W	9.15	
7421.00	43.410	359.680	7221.00	-979.53	-978.82	446.85	1667705.91	14571469.74	40°07'22.123"N	104°54'08.572"W	8.94	
7511.00	50.690	359.150	7282.28	-913.70	-912.99	446.16	1667705.15	14571535.54	40°07'22.774"N	104°54'08.581"W	8.10	
7600.00	56.910	356.410	7334.82	-841.98	-841.28	443.31	1667702.22	14571607.22	40°07'23.482"N	104°54'08.617"W	7.42	
7690.00	61.960	355.080	7380.58	-764.72	-764.02	437.54	1667696.37	14571684.44	40°07'24.246"N	104°54'08.692"W	5.75	
7779.00	67.960	356.220	7418.23	-684.34	-683.66	431.45	1667690.19	14571764.77	40°07'25.040"N	104°54'08.770"W	6.84	
7869.00	77.960	0.080	7444.58	-598.46	-597.78	428.75	1667687.41	14571850.61	40°07'25.889"N	104°54'08.805"W	11.84	
7959.00	83.640	0.380	7458.96	-509.65	-508.97	429.11	1667687.67	14571939.38	40°07'26.766"N	104°54'08.800"W	6.32	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 REESE 21-3HZ(2065'FNL & 322'FWL,SEC.21)
Area	COLORADO	Well	REESE 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	REESE 21-3HZ AWP
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (178 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
8048.00	87.080	0.710	7466.16	-420.97	-420.28	429.96	1667688.42	14572028.03	40°07'27.643"N	104°54'08.789"W	3.88	LANDING (2485'FNL & 752'FWL,SEC.21) 40.1243452 -104.9024414
8138.00	88.750	0.950	7469.44	-331.04	-330.36	431.26	1667689.62	14572117.93	40°07'28.531"N	104°54'08.772"W	1.87	
8228.00	88.150	0.740	7471.87	-241.09	-240.40	432.59	1667690.85	14572207.85	40°07'29.420"N	104°54'08.755"W	0.71	
8317.00	87.510	0.820	7475.24	-152.16	-151.47	433.80	1667691.96	14572296.74	40°07'30.299"N	104°54'08.740"W	0.72	
8326.00†	87.667	0.845	7475.62	-143.17	-142.48	433.93	1667692.09	14572305.73	40°07'30.388"N	104°54'08.738"W	1.77	CROSS SETBACK HEEL (2207'FNL & 756'FWL,SEC.21) 40.1251078 -104.9024272
8407.00	89.080	1.070	7477.92	-62.22	-61.53	435.28	1667693.35	14572386.65	40°07'31.188"N	104°54'08.721"W	1.77	
8497.00	88.580	0.950	7479.76	27.75	28.44	436.87	1667694.84	14572476.58	40°07'32.077"N	104°54'08.700"W	0.57	
8586.00	90.520	359.940	7480.45	116.73	117.43	437.56	1667695.43	14572565.54	40°07'32.956"N	104°54'08.691"W	2.46	
8676.00	90.190	359.520	7479.90	206.73	207.43	437.13	1667694.91	14572655.50	40°07'33.846"N	104°54'08.697"W	0.59	
8766.00	91.680	359.900	7478.43	296.72	297.41	436.68	1667694.36	14572745.45	40°07'34.735"N	104°54'08.702"W	1.71	
8856.00	91.990	359.130	7475.55	386.67	387.36	435.92	1667693.50	14572835.36	40°07'35.624"N	104°54'08.712"W	0.92	
8945.00	92.180	358.230	7472.31	475.59	476.28	433.87	1667691.36	14572924.24	40°07'36.503"N	104°54'08.739"W	1.03	
9035.00	93.030	357.620	7468.22	565.44	566.12	430.61	1667688.01	14573014.04	40°07'37.390"N	104°54'08.780"W	1.16	
9124.00	91.930	357.940	7464.37	654.29	654.97	427.17	1667684.47	14573102.85	40°07'38.268"N	104°54'08.825"W	1.29	
9214.00	90.760	358.520	7462.25	744.23	744.90	424.39	1667681.59	14573192.75	40°07'39.157"N	104°54'08.861"W	1.45	
9304.00	91.050	357.330	7460.83	834.16	834.83	421.13	1667678.24	14573282.63	40°07'40.046"N	104°54'08.902"W	1.36	
9394.00	91.020	356.510	7459.21	924.02	924.69	416.30	1667673.31	14573372.45	40°07'40.934"N	104°54'08.965"W	0.91	
9483.00	90.560	357.010	7457.98	1012.88	1013.53	411.27	1667668.19	14573461.25	40°07'41.812"N	104°54'09.029"W	0.76	
9573.00	90.250	358.130	7457.34	1102.80	1103.45	407.45	1667664.27	14573551.13	40°07'42.700"N	104°54'09.079"W	1.29	
9663.00	91.040	0.920	7456.33	1192.78	1193.43	406.71	1667663.43	14573641.07	40°07'43.590"N	104°54'09.088"W	3.22	
9752.00	91.920	359.910	7454.03	1281.75	1282.40	407.35	1667663.98	14573730.00	40°07'44.469"N	104°54'09.080"W	1.50	
9842.00	91.330	0.710	7451.48	1371.71	1372.36	407.84	1667664.37	14573819.93	40°07'45.358"N	104°54'09.074"W	1.10	
9931.00	91.990	0.070	7448.90	1460.67	1461.32	408.44	1667664.88	14573908.86	40°07'46.237"N	104°54'09.066"W	1.03	
10021.00	90.100	0.130	7447.26	1550.65	1551.30	408.60	1667664.94	14573998.80	40°07'47.126"N	104°54'09.064"W	2.10	
10111.00	90.440	358.880	7446.84	1640.64	1641.29	407.82	1667664.06	14574088.76	40°07'48.015"N	104°54'09.074"W	1.44	
10200.00	90.590	358.490	7446.04	1729.62	1730.27	405.78	1667661.93	14574177.69	40°07'48.895"N	104°54'09.100"W	0.47	
10290.00	90.650	358.560	7445.06	1819.59	1820.23	403.46	1667659.51	14574267.62	40°07'49.784"N	104°54'09.130"W	0.10	
10379.00	90.330	358.350	7444.30	1908.56	1909.19	401.06	1667657.02	14574356.54	40°07'50.663"N	104°54'09.161"W	0.43	
10469.00	90.240	0.760	7443.85	1998.55	1999.18	400.36	1667656.22	14574446.50	40°07'51.552"N	104°54'09.170"W	2.68	
10559.00	90.670	0.450	7443.14	2088.54	2089.18	401.31	1667657.08	14574536.45	40°07'52.441"N	104°54'09.157"W	0.59	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 REESE 21-3HZ(2065'FNL & 322'FWL,SEC.21)
Area	COLORADO	Well	REESE 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	REESE 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (178 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
10648.00	89.730	1.940	7442.83	2177.51	2178.15	403.17	1667658.84	14574625.40	40°07'53.321"N	104°54'09.133"W	1.98	
10738.00	89.790	2.550	7443.20	2267.43	2268.08	406.70	1667662.26	14574715.29	40°07'54.209"N	104°54'09.088"W	0.68	
10828.00	89.360	2.610	7443.87	2357.33	2357.99	410.75	1667666.22	14574805.17	40°07'55.098"N	104°54'09.036"W	0.48	
10918.00	89.670	1.090	7444.63	2447.28	2447.94	413.65	1667669.02	14574895.08	40°07'55.987"N	104°54'08.998"W	1.72	
11007.00	89.610	0.430	7445.19	2536.26	2536.93	414.83	1667670.11	14574984.04	40°07'56.866"N	104°54'08.983"W	0.74	
11097.00	89.410	0.270	7445.96	2626.26	2626.92	415.38	1667670.56	14575074.00	40°07'57.755"N	104°54'08.976"W	0.28	
11187.00	89.520	358.830	7446.80	2716.25	2716.91	414.68	1667669.75	14575163.95	40°07'58.645"N	104°54'08.985"W	1.60	
11277.00	89.900	359.090	7447.26	2806.24	2806.90	413.04	1667668.02	14575253.90	40°07'59.534"N	104°54'09.006"W	0.51	
11366.00	89.330	355.050	7447.86	2895.11	2895.76	408.49	1667663.38	14575342.72	40°08'00.412"N	104°54'09.065"W	4.58	
11456.00	89.350	357.650	7448.89	2984.92	2985.56	402.77	1667657.56	14575432.48	40°08'01.300"N	104°54'09.138"W	2.89	
11546.00	88.840	0.590	7450.32	3074.89	3075.53	401.38	1667656.08	14575522.41	40°08'02.189"N	104°54'09.156"W	3.32	
11635.00	89.590	2.250	7451.54	3163.85	3164.49	403.59	1667658.19	14575611.34	40°08'03.068"N	104°54'09.128"W	2.05	
11725.00	90.350	1.930	7451.58	3253.78	3254.43	406.87	1667661.37	14575701.24	40°08'03.957"N	104°54'09.086"W	0.92	
11815.00	91.100	1.390	7450.44	3343.73	3344.38	409.48	1667663.88	14575791.17	40°08'04.845"N	104°54'09.052"W	1.03	
11905.00	90.280	1.700	7449.36	3433.69	3434.34	411.90	1667666.21	14575881.09	40°08'05.734"N	104°54'09.021"W	0.97	
11995.00	90.980	0.850	7448.37	3523.65	3524.31	413.91	1667668.11	14575971.03	40°08'06.624"N	104°54'08.995"W	1.22	
12084.00	90.210	0.890	7447.45	3612.63	3613.30	415.26	1667669.37	14576059.98	40°08'07.503"N	104°54'08.977"W	0.87	
12174.00	90.320	0.640	7447.03	3702.62	3703.29	416.46	1667670.47	14576149.93	40°08'08.392"N	104°54'08.962"W	0.30	
12264.00	90.470	1.860	7446.41	3792.60	3793.26	418.42	1667672.34	14576239.88	40°08'09.281"N	104°54'08.937"W	1.37	
12353.00	89.070	2.150	7446.77	3881.53	3882.21	421.54	1667675.35	14576328.79	40°08'10.160"N	104°54'08.897"W	1.61	
12443.00	90.020	2.540	7447.48	3971.45	3972.13	425.22	1667678.94	14576418.67	40°08'11.049"N	104°54'08.849"W	1.14	
12533.00	90.550	2.430	7447.03	4061.35	4062.04	429.12	1667682.74	14576508.56	40°08'11.937"N	104°54'08.799"W	0.60	
12622.00	89.190	2.220	7447.24	4150.27	4150.97	432.73	1667686.25	14576597.45	40°08'12.816"N	104°54'08.752"W	1.55	
12712.00	89.130	1.620	7448.55	4240.21	4240.91	435.75	1667689.17	14576687.35	40°08'13.705"N	104°54'08.714"W	0.67	
12801.00	89.950	1.530	7449.27	4329.17	4329.87	438.19	1667691.52	14576776.28	40°08'14.584"N	104°54'08.682"W	0.93	
12891.00	90.150	1.090	7449.19	4419.14	4419.84	440.25	1667693.48	14576866.23	40°08'15.473"N	104°54'08.656"W	0.54	
12981.00	91.410	0.870	7447.97	4509.11	4509.82	441.79	1667694.92	14576956.17	40°08'16.362"N	104°54'08.636"W	1.42	
13071.00	89.580	0.240	7447.19	4599.10	4599.81	442.66	1667695.70	14577046.12	40°08'17.252"N	104°54'08.624"W	2.15	
13160.00	90.070	359.450	7447.46	4688.10	4688.81	442.42	1667695.36	14577135.08	40°08'18.131"N	104°54'08.628"W	1.04	
13250.00	90.820	358.970	7446.76	4778.09	4778.79	441.18	1667694.02	14577225.03	40°08'19.020"N	104°54'08.643"W	0.99	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 REESE 21-3HZ(2065'FNL & 322'FWL,SEC.21)
Area	COLORADO	Well	REESE 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	REESE 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (178 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
13340.00	89.530	0.850	7446.49	4868.08	4868.79	441.04	1667693.78	14577314.99	40°08'19.910"N	104°54'08.645"W	2.53	
13429.00	90.180	0.560	7446.71	4957.07	4957.78	442.13	1667694.78	14577403.95	40°08'20.789"N	104°54'08.631"W	0.80	
13519.00	90.670	359.830	7446.04	5047.07	5047.78	442.44	1667694.99	14577493.91	40°08'21.679"N	104°54'08.627"W	0.98	
13609.00	91.480	359.650	7444.36	5137.05	5137.76	442.03	1667694.49	14577583.86	40°08'22.568"N	104°54'08.632"W	0.92	
13699.00	90.040	1.330	7443.16	5227.03	5227.74	442.80	1667695.16	14577673.80	40°08'23.457"N	104°54'08.623"W	2.46	
13788.00	90.180	0.200	7442.99	5316.02	5316.73	443.99	1667696.25	14577762.76	40°08'24.336"N	104°54'08.607"W	1.28	
13878.00	90.680	0.400	7442.32	5406.02	5406.73	444.46	1667696.62	14577852.72	40°08'25.226"N	104°54'08.601"W	0.60	
13967.00	91.190	359.840	7440.86	5495.00	5495.72	444.65	1667696.71	14577941.67	40°08'26.105"N	104°54'08.599"W	0.85	
14057.00	90.980	358.680	7439.16	5584.98	5585.69	443.49	1667695.45	14578031.61	40°08'26.994"N	104°54'08.614"W	1.31	
14147.00	91.850	357.970	7436.94	5674.92	5675.62	440.86	1667692.73	14578121.50	40°08'27.883"N	104°54'08.647"W	1.25	
14236.00	92.730	357.220	7433.38	5763.77	5764.47	437.12	1667688.90	14578210.31	40°08'28.761"N	104°54'08.695"W	1.30	
14326.00	92.620	358.700	7429.18	5853.62	5854.32	433.92	1667685.61	14578300.11	40°08'29.649"N	104°54'08.737"W	1.65	
14416.00	92.120	359.910	7425.46	5943.53	5944.23	432.83	1667684.42	14578389.99	40°08'30.537"N	104°54'08.751"W	1.45	
14505.00	91.020	1.560	7423.02	6032.49	6033.18	433.97	1667685.47	14578478.91	40°08'31.416"N	104°54'08.736"W	2.23	
14595.00	91.590	1.060	7420.97	6122.44	6123.14	436.03	1667687.42	14578568.83	40°08'32.305"N	104°54'08.709"W	0.84	
14685.00	89.760	1.050	7419.91	6212.41	6213.11	437.69	1667688.98	14578658.77	40°08'33.195"N	104°54'08.688"W	2.03	
14775.00	90.410	0.690	7419.78	6302.40	6303.10	439.06	1667690.25	14578748.73	40°08'34.084"N	104°54'08.670"W	0.83	
14865.00	89.050	0.740	7420.20	6392.38	6393.09	440.18	1667691.28	14578838.68	40°08'34.973"N	104°54'08.656"W	1.51	
14954.00	90.720	359.940	7420.38	6481.38	6482.08	440.71	1667691.71	14578927.64	40°08'35.853"N	104°54'08.649"W	2.08	
15044.00	89.920	0.160	7419.88	6571.37	6572.08	440.78	1667691.69	14579017.60	40°08'36.742"N	104°54'08.648"W	0.92	
15134.00	91.190	359.780	7419.00	6661.37	6662.08	440.74	1667691.55	14579107.56	40°08'37.631"N	104°54'08.649"W	1.47	
15223.00	89.190	359.950	7418.71	6750.36	6751.07	440.53	1667691.24	14579196.52	40°08'38.511"N	104°54'08.651"W	2.26	
15313.00	89.560	359.980	7419.69	6840.36	6841.07	440.47	1667691.09	14579286.48	40°08'39.400"N	104°54'08.652"W	0.41	
15344.00†	90.076	359.841	7419.79	6871.36	6872.07	440.42	1667691.01	14579317.46	40°08'39.706"N	104°54'08.653"W	1.72	CROSS SETBACK TOE (461'FNL & 627'FWL,SEC.16) 40.1443629 -104.9024035
15402.00	91.040	359.580	7419.22	6929.35	6930.06	440.13	1667690.65	14579375.44	40°08'40.279"N	104°54'08.656"W	1.72	
15492.00	92.330	359.500	7416.58	7019.31	7020.02	439.41	1667689.83	14579465.35	40°08'41.168"N	104°54'08.666"W	1.44	
15582.00	93.290	359.040	7412.17	7109.20	7109.90	438.26	1667688.59	14579555.20	40°08'42.057"N	104°54'08.680"W	1.18	LAST BHGE MWD+IFR1+MSA SURVEY
15737.00	93.290	359.040	7403.27	7263.92	7264.62	435.67	1667685.83	14579709.86	40°08'43.586"N	104°54'08.714"W	0.00	PTB (68'FNL & 623'FWL,SEC.16) 40.1454405 -104.9024205

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 REESE 21-3HZ(2065'FNL & 322'FWL,SEC.21)
Area	COLORADO	Well	REESE 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	REESE 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

HOLE & CASING SECTIONS - Ref Wellbore: REESE 21-3HZ AWB Ref Wellpath: REESE 21-3HZ 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	1874.00	1853.00	21.00	1846.26	0.00	0.00	-206.58	76.14

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.16-T2N-R67W	-48.00	-299.40	4043.17	1671300.04	14572152.76	40°07'28.834"N	104°53'22.276"W	polygon
SEC.21-T2N-R67W	-48.00	-299.40	4043.17	1671300.04	14572152.76	40°07'28.834"N	104°53'22.276"W	polygon
REESE 21-3HZ BHL REV-1(53'FNL & 607'FWL,SEC.16)	7419.00	7279.76	419.88	1667670.03	14579724.97	40°08'43.735"N	104°54'08.917"W	point
REESE 21-3HZ HEEL REV-1(2620'FNL & 741'FWL,SEC.21)	7458.00	-554.41	432.32	1667690.92	14571893.96	40°07'26.317"N	104°54'08.759"W	point
REESE 21-3HZ HEEL REV-2(2520'FNL & 741'FWL,SEC.21)	7458.00	-454.41	432.32	1667690.81	14571993.92	40°07'27.305"N	104°54'08.759"W	point
Reese 22-21HZ SU 2 LANDBOX	7458.00	0.00	0.00	1667258.18	14572447.68	40°07'31.796"N	104°54'14.324"W	polygon
Reese 22-21HZ SU 2 SETBACK 1	7458.00	0.00	0.00	1667258.18	14572447.68	40°07'31.796"N	104°54'14.324"W	polygon
Reese 22-21HZ SU 2 SETBACK 2	7458.00	0.00	0.00	1667258.18	14572447.68	40°07'31.796"N	104°54'14.324"W	polygon

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 REESE 21-3HZ(2065'FNL & 322'FWL,SEC.21)
Area	COLORADO	Well	REESE 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	REESE 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH COMPOSITION - Ref Wellbore: REESE 21-3HZ AWB Ref Wellpath: REESE 21-3HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
21.00	1834.00	Custom APC_ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC_ISCWSA Rev-2 MWD+IFR1 <131 - 1834>	REESE 21-3HZ AWB
1834.00	15582.00	Custom APC_ISCWSA REV 2 MWD+IFR1+MSA (approximation)	BHGE Custom APC_ISCWSA Rev-2 MWD+IFR1+MSA <1928 - 15582>	REESE 21-3HZ AWB
15582.00	15737.00	Blind Drilling (std)	Projection to bit	REESE 21-3HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#11 REESE 21-3HZ(2065'FNL & 322'FWL,SEC.21)
Area	COLORADO	Well	REESE 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	REESE 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
131.00	0.790	59.610	131.00	FIRST SURFACE MWD+IFR1 SURVEY
1834.00	15.730	157.260	1807.74	LAST SURFACE MWD+IFR1 SURVEY
1928.00	15.390	159.150	1898.30	FIRST BHGE MWD+IFR1+MSA SURVEY
2645.00	13.070	160.690	2593.12	ENTER LANDBOX (2449'FNL & 469'FWL,SEC.21) 40.1244460 -104.9034521
6863.00	3.249	345.511	6711.07	KOP
8048.00	87.080	0.710	7466.16	LANDING (2485'FNL & 752'FWL,SEC.21) 40.1243452 -104.9024414
8326.00	87.667	0.845	7475.62	CROSS SETBACK HEEL (2207'FNL & 756'FWL,SEC.21) 40.1251078 -104.9024272
15344.00	90.076	359.841	7419.79	CROSS SETBACK TOE (461'FNL & 627'FWL,SEC.16) 40.1443629 -104.9024035
15582.00	93.290	359.040	7412.17	LAST BHGE MWD+IFR1+MSA SURVEY
15737.00	93.290	359.040	7403.27	PTB (68'FNL & 623'FWL,SEC.16) 40.1454405 -104.9024205