

Location:	COLORADO	Slot:	SLOT#07 COWBOY 21-3HZ(2335'FNL & 916'FEL,SEC.21)
Field:	WELD COUNTY (UTM/TRUE NORTH)	Well:	COWBOY 21-3HZ
Facility:	SEC.21-T2N-R67W	Wellbore:	COWBOY 21-3HZ PWB



Plot reference wellpath is COWBOY 21-3H2 PWP Rev-A.0	Grid System: NAD83 / UTM Zone 13 North, US feet
True vertical depths are referenced to PD 564 (26) (RT)	* = Wellpath was transformed from a different geosoidic datum
Measured depths are referenced to PD 564 (26) (RT)	North Reference: True north
PD 564 (26) (RT) to Mean Sea Level: 5067 feet	Scale: True distance
Mean Sea Level to Mud line (at Slot: SLO709) COWBOY 21-3H2/2335 FNL & 916 FSEL SEC.21): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot.	Created by: painsett on 2018-09-27
	Database: WA_DEN_Anadarko_Defn



REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 COWBOY 21-3HZ(2335'FNL & 916'FEL,SEC.21)
Area	COLORADO	Well	COWBOY 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	COWBOY 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	9/27/2018 at 9:33 AM
Convergence at slot	0.08° East	Database/Source file	WA_DEN_Anadarko_Defn/COWBOY_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	-1881.58	-255.57	1671330.02	14572152.40	40°07'28.830"N	104°53'21.890"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 564 (26') (RT) to Facility Vertical Datum	5067.00ft
Horizontal Reference Pt	Slot	PD 564 (26') (RT) to Mean Sea Level	5067.00ft
Vertical Reference Pt	PD 564 (26') (RT)	PD 564 (26') (RT) to Mud Line at Slot (SLOT#07 COWBOY 21-3HZ(2335'FNL & 916'FEL,SEC.21))	5067.00ft
MD Reference Pt	PD 564 (26') (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	0.39°

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 COWBOY 21-3HZ(2335'FNL & 916'FEL,SEC.21)
Area	COLORADO	Well	COWBOY 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	COWBOY 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (213 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	106.490	0.00	0.00	0.00	0.00	1671330.02	14572152.40	40°07'28.830°N	104°53'21.890°W	0.00	
26.00	0.000	106.490	26.00	0.00	0.00	0.00	1671330.02	14572152.40	40°07'28.830°N	104°53'21.890°W	0.00	
133.00	0.350	106.490	133.00	-0.09	-0.09	0.31	1671330.33	14572152.30	40°07'28.829°N	104°53'21.886°W	0.33	FIRST SURFACE MWD+IFR1 SURVEY
165.00	0.400	90.490	165.00	-0.12	-0.12	0.52	1671330.54	14572152.28	40°07'28.829°N	104°53'21.883°W	0.36	
196.00	0.400	90.760	196.00	-0.12	-0.12	0.74	1671330.75	14572152.27	40°07'28.829°N	104°53'21.881°W	0.01	
228.00	0.440	92.160	228.00	-0.12	-0.13	0.97	1671330.99	14572152.27	40°07'28.829°N	104°53'21.878°W	0.13	
260.00	0.570	91.640	260.00	-0.13	-0.14	1.25	1671331.27	14572152.26	40°07'28.829°N	104°53'21.874°W	0.41	
292.00	0.400	117.480	291.99	-0.19	-0.20	1.51	1671331.53	14572152.20	40°07'28.828°N	104°53'21.871°W	0.85	
323.00	0.480	181.020	322.99	-0.36	-0.37	1.60	1671331.62	14572152.02	40°07'28.826°N	104°53'21.869°W	1.51	
355.00	0.790	193.500	354.99	-0.71	-0.72	1.55	1671331.57	14572151.67	40°07'28.823°N	104°53'21.870°W	1.06	
387.00	1.010	204.140	386.99	-1.19	-1.20	1.38	1671331.40	14572151.20	40°07'28.818°N	104°53'21.872°W	0.86	
419.00	1.270	202.380	418.98	-1.77	-1.78	1.13	1671331.15	14572150.62	40°07'28.812°N	104°53'21.875°W	0.82	
451.00	1.540	202.820	450.97	-2.50	-2.50	0.83	1671330.85	14572149.89	40°07'28.805°N	104°53'21.879°W	0.84	
483.00	1.760	209.590	482.96	-3.33	-3.33	0.42	1671330.44	14572149.07	40°07'28.797°N	104°53'21.885°W	0.92	
514.00	1.850	222.680	513.94	-4.11	-4.11	-0.15	1671329.87	14572148.29	40°07'28.789°N	104°53'21.892°W	1.36	
546.00	2.240	227.690	545.92	-4.92	-4.91	-0.97	1671329.06	14572147.49	40°07'28.781°N	104°53'21.902°W	1.34	
578.00	2.550	230.940	577.90	-5.79	-5.78	-1.98	1671328.04	14572146.62	40°07'28.773°N	104°53'21.916°W	1.06	
609.00	2.990	232.520	608.86	-6.73	-6.71	-3.16	1671326.87	14572145.69	40°07'28.764°N	104°53'21.931°W	1.44	
641.00	3.470	233.400	640.81	-7.82	-7.79	-4.60	1671325.43	14572144.60	40°07'28.753°N	104°53'21.949°W	1.51	
673.00	4.000	237.710	672.74	-9.01	-8.97	-6.32	1671323.71	14572143.43	40°07'28.741°N	104°53'21.971°W	1.87	
704.00	4.530	231.820	703.65	-10.36	-10.30	-8.20	1671321.84	14572142.09	40°07'28.728°N	104°53'21.995°W	2.22	
736.00	5.010	225.850	735.54	-12.12	-12.05	-10.19	1671319.85	14572140.33	40°07'28.711°N	104°53'22.021°W	2.16	
768.00	5.760	223.910	767.40	-14.27	-14.18	-12.31	1671317.73	14572138.20	40°07'28.690°N	104°53'22.048°W	2.41	
800.00	6.240	221.630	799.23	-16.74	-16.64	-14.58	1671315.47	14572135.74	40°07'28.666°N	104°53'22.078°W	1.67	
831.00	6.460	223.910	830.04	-19.27	-19.16	-16.91	1671313.14	14572133.23	40°07'28.641°N	104°53'22.108°W	1.08	
863.00	6.990	223.740	861.82	-21.99	-21.86	-19.50	1671310.55	14572130.52	40°07'28.614°N	104°53'22.141°W	1.66	
895.00	7.290	223.910	893.57	-24.88	-24.73	-22.25	1671307.80	14572127.65	40°07'28.586°N	104°53'22.176°W	0.94	
927.00	8.170	224.090	925.28	-28.00	-27.83	-25.24	1671304.82	14572124.55	40°07'28.555°N	104°53'22.215°W	2.75	
958.00	9.140	224.790	955.92	-31.35	-31.16	-28.51	1671301.56	14572121.22	40°07'28.522°N	104°53'22.257°W	3.15	
990.00	9.930	223.560	987.48	-35.18	-34.96	-32.20	1671297.87	14572117.41	40°07'28.485°N	104°53'22.305°W	2.55	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 COWBOY 21-3HZ(2335'FNL & 916'FEL,SEC.21)
Area	COLORADO	Well	COWBOY 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	COWBOY 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (213 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
1022.00	10.460	224.440	1018.98	-39.27	-39.03	-36.14	1671293.94	14572113.33	40°07'28.444"N	104°53'22.355"W	1.73	
1054.00	11.210	223.910	1050.41	-43.62	-43.35	-40.33	1671289.76	14572109.02	40°07'28.402"N	104°53'22.409"W	2.36	
1085.00	11.820	224.700	1080.78	-48.07	-47.78	-44.65	1671285.44	14572104.58	40°07'28.358"N	104°53'22.465"W	2.03	
1117.00	11.950	224.700	1112.10	-52.79	-52.46	-49.29	1671280.81	14572099.90	40°07'28.312"N	104°53'22.524"W	0.41	
1149.00	12.660	224.700	1143.36	-57.67	-57.31	-54.09	1671276.03	14572095.05	40°07'28.264"N	104°53'22.586"W	2.22	
1181.00	13.490	224.440	1174.53	-62.86	-62.46	-59.17	1671270.95	14572089.88	40°07'28.213"N	104°53'22.652"W	2.60	
1212.00	14.190	223.820	1204.63	-68.22	-67.79	-64.33	1671265.80	14572084.56	40°07'28.160"N	104°53'22.718"W	2.31	
1244.00	14.460	223.910	1235.63	-73.96	-73.50	-69.81	1671260.32	14572078.84	40°07'28.104"N	104°53'22.789"W	0.85	
1276.00	14.990	224.440	1266.58	-79.84	-79.33	-75.48	1671254.66	14572073.01	40°07'28.046"N	104°53'22.862"W	1.71	
1307.00	15.560	224.970	1296.49	-85.68	-85.13	-81.23	1671248.93	14572067.20	40°07'27.989"N	104°53'22.936"W	1.89	
1339.00	16.260	223.650	1327.26	-92.00	-91.41	-87.35	1671242.81	14572060.91	40°07'27.927"N	104°53'23.015"W	2.46	
1370.00	17.270	223.120	1356.94	-98.54	-97.91	-93.50	1671236.68	14572054.41	40°07'27.862"N	104°53'23.094"W	3.30	
1402.00	17.840	222.070	1387.45	-105.69	-105.02	-100.03	1671230.16	14572047.30	40°07'27.792"N	104°53'23.178"W	2.04	
1434.00	18.240	220.920	1417.88	-113.15	-112.44	-106.59	1671223.61	14572039.87	40°07'27.719"N	104°53'23.262"W	1.67	
1465.00	18.940	220.750	1447.26	-120.68	-119.92	-113.05	1671217.16	14572032.39	40°07'27.645"N	104°53'23.345"W	2.26	
1497.00	19.420	220.130	1477.49	-128.72	-127.92	-119.87	1671210.35	14572024.38	40°07'27.566"N	104°53'23.433"W	1.63	
1529.00	18.630	219.960	1507.74	-136.75	-135.90	-126.58	1671203.65	14572016.39	40°07'27.487"N	104°53'23.520"W	2.47	
1560.00	18.540	219.520	1537.12	-144.39	-143.50	-132.90	1671197.35	14572008.79	40°07'27.412"N	104°53'23.601"W	0.54	
1591.00	18.850	219.170	1566.49	-152.12	-151.19	-139.20	1671191.06	14572001.10	40°07'27.336"N	104°53'23.682"W	1.06	
1623.00	17.930	219.780	1596.85	-159.96	-158.98	-145.62	1671184.66	14571993.30	40°07'27.259"N	104°53'23.765"W	2.94	
1655.00	18.060	219.780	1627.29	-167.60	-166.58	-151.94	1671178.34	14571985.70	40°07'27.184"N	104°53'23.846"W	0.41	
1687.00	18.540	220.400	1657.67	-175.33	-174.26	-158.41	1671171.89	14571978.01	40°07'27.108"N	104°53'23.929"W	1.62	
1718.00	19.120	220.840	1687.01	-182.96	-181.86	-164.93	1671165.38	14571970.41	40°07'27.033"N	104°53'24.013"W	1.93	
1750.00	19.820	221.270	1717.18	-191.05	-189.90	-171.93	1671158.39	14571962.36	40°07'26.953"N	104°53'24.103"W	2.23	
1782.00	18.860	222.070	1747.37	-199.02	-197.82	-178.98	1671151.36	14571954.44	40°07'26.875"N	104°53'24.194"W	3.11	
1813.00	18.630	223.030	1776.73	-206.40	-205.15	-185.71	1671144.63	14571947.09	40°07'26.803"N	104°53'24.281"W	1.24	
1847.00	18.760	222.860	1808.93	-214.43	-213.13	-193.14	1671137.22	14571939.11	40°07'26.724"N	104°53'24.376"W	0.41	LAST SURFACE MWD+IFR1 SURVEY
1969.00	18.770	222.480	1924.45	-243.46	-241.99	-219.74	1671110.67	14571910.23	40°07'26.439"N	104°53'24.719"W	0.10	FIRST BHGE MWD+IFR1+SC SURVEY
2059.00	18.670	224.250	2009.69	-264.59	-262.99	-239.57	1671090.87	14571889.22	40°07'26.231"N	104°53'24.974"W	0.64	
2148.00	18.690	225.680	2094.00	-284.90	-283.15	-259.71	1671070.76	14571869.03	40°07'26.032"N	104°53'25.233"W	0.52	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 COWBOY 21-3HZ(2335'FNL & 916'FEL,SEC.21)
Area	COLORADO	Well	COWBOY 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	COWBOY 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (213 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
2238.00	18.230	227.670	2179.37	-304.59	-302.71	-280.43	1671050.07	14571849.46	40°07'25.839"N	104°53'25.500"W	0.87	
2327.00	18.570	229.050	2263.82	-323.39	-321.37	-301.43	1671029.11	14571830.78	40°07'25.654"N	104°53'25.770"W	0.62	
2416.00	18.570	233.090	2348.19	-341.34	-339.17	-323.47	1671007.10	14571812.96	40°07'25.478"N	104°53'26.054"W	1.45	
2505.00	18.840	235.920	2432.49	-358.06	-355.73	-346.70	1670983.90	14571796.37	40°07'25.315"N	104°53'26.353"W	1.06	
2595.00	18.150	239.440	2517.85	-373.49	-371.00	-370.81	1670959.82	14571781.08	40°07'25.164"N	104°53'26.663"W	1.46	
2684.00	18.790	242.780	2602.26	-387.27	-384.61	-395.49	1670935.16	14571767.45	40°07'25.029"N	104°53'26.981"W	1.39	
2774.00	19.060	243.300	2687.40	-400.67	-397.84	-421.51	1670909.17	14571754.19	40°07'24.898"N	104°53'27.316"W	0.35	
2863.00	18.850	242.870	2771.57	-413.93	-410.93	-447.29	1670883.42	14571741.08	40°07'24.769"N	104°53'27.648"W	0.28	
2953.00	19.190	241.300	2856.66	-427.84	-424.66	-473.20	1670857.53	14571727.32	40°07'24.633"N	104°53'27.981"W	0.68	
3042.00	19.090	237.350	2940.74	-442.89	-439.54	-498.29	1670832.48	14571712.41	40°07'24.486"N	104°53'28.304"W	1.46	
3132.00	18.930	234.150	3025.84	-459.54	-456.03	-522.51	1670808.28	14571695.90	40°07'24.323"N	104°53'28.616"W	1.17	
3221.00	18.880	231.480	3110.04	-477.12	-473.45	-545.48	1670785.35	14571678.46	40°07'24.151"N	104°53'28.912"W	0.97	
3311.00	19.200	232.170	3195.11	-495.42	-491.60	-568.56	1670762.30	14571660.29	40°07'23.972"N	104°53'29.209"W	0.43	
3400.00	19.300	231.670	3279.14	-513.67	-509.69	-591.66	1670739.23	14571642.17	40°07'23.793"N	104°53'29.506"W	0.22	
3489.00	19.060	230.890	3363.20	-532.11	-527.98	-614.47	1670716.45	14571623.86	40°07'23.612"N	104°53'29.800"W	0.39	
3579.00	19.160	231.010	3448.24	-550.83	-546.55	-637.35	1670693.60	14571605.28	40°07'23.429"N	104°53'30.095"W	0.12	
3668.00	17.560	230.530	3532.70	-568.70	-564.27	-659.07	1670671.91	14571587.53	40°07'23.254"N	104°53'30.374"W	1.81	
3758.00	15.580	229.310	3618.96	-585.34	-580.78	-678.72	1670652.29	14571571.00	40°07'23.091"N	104°53'30.627"W	2.23	
3847.00	15.390	230.380	3704.73	-600.79	-596.11	-696.88	1670634.16	14571555.66	40°07'22.939"N	104°53'30.861"W	0.39	
3937.00	13.350	229.280	3791.91	-615.30	-610.50	-713.95	1670617.11	14571541.25	40°07'22.797"N	104°53'31.081"W	2.29	
4026.00	11.480	230.490	3878.83	-627.73	-622.84	-728.58	1670602.51	14571528.90	40°07'22.675"N	104°53'31.269"W	2.12	
4116.00	10.970	231.520	3967.11	-638.85	-633.87	-742.19	1670588.92	14571517.86	40°07'22.566"N	104°53'31.444"W	0.61	
4205.00	7.450	230.930	4054.94	-647.84	-642.78	-753.30	1670577.82	14571508.94	40°07'22.478"N	104°53'31.587"W	3.96	
4294.00	5.260	230.360	4143.39	-654.13	-649.02	-760.92	1670570.21	14571502.70	40°07'22.416"N	104°53'31.685"W	2.46	
4384.00	2.700	238.050	4233.17	-657.91	-652.77	-765.90	1670565.24	14571498.94	40°07'22.379"N	104°53'31.749"W	2.90	
4473.00	0.360	202.690	4322.13	-659.29	-654.14	-767.79	1670563.35	14571497.57	40°07'22.366"N	104°53'31.774"W	2.71	
4563.00	0.030	267.900	4412.13	-659.56	-654.40	-767.92	1670563.22	14571497.31	40°07'22.363"N	104°53'31.775"W	0.39	
4652.00	0.100	311.940	4501.13	-659.51	-654.35	-768.00	1670563.14	14571497.36	40°07'22.364"N	104°53'31.776"W	0.09	
4742.00	0.150	286.010	4591.13	-659.42	-654.26	-768.17	1670562.97	14571497.44	40°07'22.364"N	104°53'31.778"W	0.08	
4831.00	0.250	279.570	4680.13	-659.36	-654.20	-768.47	1670562.66	14571497.51	40°07'22.365"N	104°53'31.782"W	0.11	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 COWBOY 21-3HZ(2335'FNL & 916'FEL,SEC.21)
Area	COLORADO	Well	COWBOY 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	COWBOY 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (213 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
4921.00	0.130	188.790	4770.13	-659.43	-654.27	-768.68	1670562.46	14571497.44	40°07'22.364"N	104°53'31.785"W	0.31	
5010.00	0.120	197.320	4859.13	-659.62	-654.46	-768.73	1670562.41	14571497.25	40°07'22.362"N	104°53'31.786"W	0.02	
5099.00	0.090	235.800	4948.13	-659.75	-654.58	-768.81	1670562.33	14571497.12	40°07'22.361"N	104°53'31.787"W	0.08	
5189.00	0.070	297.720	5038.13	-659.76	-654.60	-768.92	1670562.22	14571497.11	40°07'22.361"N	104°53'31.788"W	0.09	
5278.00	0.060	28.970	5127.13	-659.70	-654.53	-768.95	1670562.19	14571497.17	40°07'22.362"N	104°53'31.788"W	0.10	
5368.00	0.040	235.810	5217.13	-659.67	-654.51	-768.95	1670562.19	14571497.19	40°07'22.362"N	104°53'31.788"W	0.11	
5457.00	0.040	315.760	5306.13	-659.67	-654.50	-769.00	1670562.14	14571497.20	40°07'22.362"N	104°53'31.789"W	0.06	
5547.00	0.110	0.490	5396.13	-659.56	-654.39	-769.02	1670562.12	14571497.31	40°07'22.363"N	104°53'31.789"W	0.10	
5636.00	0.070	270.400	5485.13	-659.47	-654.31	-769.07	1670562.07	14571497.39	40°07'22.364"N	104°53'31.790"W	0.15	
5726.00	0.060	304.630	5575.13	-659.45	-654.28	-769.16	1670561.98	14571497.42	40°07'22.364"N	104°53'31.791"W	0.04	
5815.00	0.090	132.910	5664.13	-659.47	-654.30	-769.15	1670561.99	14571497.40	40°07'22.364"N	104°53'31.791"W	0.17	
5904.00	0.090	43.370	5753.13	-659.47	-654.30	-769.05	1670562.09	14571497.40	40°07'22.364"N	104°53'31.790"W	0.14	
6083.00	0.060	156.250	5932.13	-659.45	-654.28	-768.92	1670562.22	14571497.42	40°07'22.364"N	104°53'31.788"W	0.07	
6172.00	0.070	256.370	6021.13	-659.50	-654.34	-768.95	1670562.19	14571497.36	40°07'22.364"N	104°53'31.789"W	0.11	
6262.00	0.100	258.450	6111.13	-659.53	-654.37	-769.08	1670562.06	14571497.34	40°07'22.363"N	104°53'31.790"W	0.03	
6440.00	0.070	323.430	6289.13	-659.48	-654.31	-769.30	1670561.84	14571497.39	40°07'22.364"N	104°53'31.793"W	0.05	
6530.00	0.100	14.590	6379.13	-659.36	-654.19	-769.31	1670561.83	14571497.51	40°07'22.365"N	104°53'31.793"W	0.09	
6619.00	0.030	115.930	6468.13	-659.29	-654.13	-769.27	1670561.87	14571497.58	40°07'22.366"N	104°53'31.793"W	0.12	
6708.00	0.030	334.110	6557.13	-659.28	-654.11	-769.26	1670561.88	14571497.59	40°07'22.366"N	104°53'31.793"W	0.06	
6798.00	0.060	205.500	6647.13	-659.30	-654.14	-769.29	1670561.85	14571497.57	40°07'22.366"N	104°53'31.793"W	0.09	
6887.00	0.090	223.650	6736.13	-659.40	-654.23	-769.36	1670561.78	14571497.47	40°07'22.365"N	104°53'31.794"W	0.04	
6976.00	0.030	289.240	6825.13	-659.44	-654.27	-769.43	1670561.71	14571497.43	40°07'22.364"N	104°53'31.795"W	0.09	
7066.00	0.040	160.910	6915.13	-659.46	-654.29	-769.44	1670561.70	14571497.41	40°07'22.364"N	104°53'31.795"W	0.07	
7134.00†	2.023	0.971	6983.11	-658.28	-653.12	-769.41	1670561.72	14571498.59	40°07'22.376"N	104°53'31.794"W	3.03	KOP
7155.00	2.660	0.880	7004.10	-657.43	-652.26	-769.40	1670561.74	14571499.44	40°07'22.384"N	104°53'31.794"W	3.03	
7244.00	12.850	4.820	7092.17	-645.46	-640.30	-768.53	1670562.59	14571511.40	40°07'22.502"N	104°53'31.783"W	11.46	
7334.00	22.560	1.410	7177.80	-618.16	-613.00	-767.27	1670563.82	14571538.69	40°07'22.772"N	104°53'31.767"W	10.85	
7423.00	32.530	353.600	7256.64	-577.21	-572.04	-769.52	1670561.52	14571579.63	40°07'23.177"N	104°53'31.796"W	11.89	
7513.00	40.680	359.010	7328.85	-523.75	-518.56	-772.73	1670558.24	14571633.09	40°07'23.705"N	104°53'31.837"W	9.73	
7602.00	51.400	2.730	7390.55	-459.81	-454.62	-771.57	1670559.32	14571697.00	40°07'24.337"N	104°53'31.822"W	12.41	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 COWBOY 21-3HZ(2335'FNL & 916'FEL,SEC.21)
Area	COLORADO	Well	COWBOY 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	COWBOY 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (213 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
7692.00	61.190	4.560	7440.43	-385.16	-380.00	-766.75	1670564.05	14571771.60	40°07'25.075"N	104°53'31.760"W	11.01	
7781.00	70.740	5.040	7476.64	-304.21	-299.10	-759.94	1670570.75	14571852.48	40°07'25.874"N	104°53'31.673"W	10.74	
7871.00	77.350	4.260	7501.37	-217.96	-212.90	-752.94	1670577.64	14571938.65	40°07'26.726"N	104°53'31.583"W	7.39	
7960.00	88.550	3.660	7512.27	-129.95	-124.92	-746.86	1670583.62	14572026.60	40°07'27.595"N	104°53'31.504"W	12.60	
7984.00†	88.608	3.033	7512.87	-105.99	-100.97	-745.46	1670584.99	14572050.54	40°07'27.832"N	104°53'31.486"W	2.62	LANDING (2436'FNL & 1661'FEL,SEC.21) 40.1243978 -104.8920795
8050.00	88.770	1.310	7514.38	-40.04	-35.04	-742.96	1670587.40	14572116.45	40°07'28.484"N	104°53'31.454"W	2.62	
8098.00†	89.530	1.186	7515.09	7.95	12.95	-741.91	1670588.39	14572164.42	40°07'28.958"N	104°53'31.441"W	1.61	EXIT RADIUS HEEL (2322'FNL & 1658'FEL,SEC.21) 40.1247105 -104.8920669
8139.00	90.180	1.080	7515.19	48.95	53.94	-741.10	1670589.15	14572205.39	40°07'29.363"N	104°53'31.430"W	1.61	
8229.00	90.000	2.710	7515.05	138.91	143.89	-738.12	1670592.01	14572295.31	40°07'30.252"N	104°53'31.392"W	1.82	
8318.00	90.150	3.900	7514.94	227.79	232.74	-732.99	1670597.03	14572384.13	40°07'31.130"N	104°53'31.326"W	1.35	
8408.00	89.970	1.760	7514.84	317.71	322.62	-728.55	1670601.36	14572473.98	40°07'32.018"N	104°53'31.269"W	2.39	
8497.00	90.180	357.800	7514.72	406.68	411.60	-728.89	1670600.91	14572562.93	40°07'32.897"N	104°53'31.273"W	4.46	
8586.00	89.970	357.270	7514.61	495.57	500.52	-732.72	1670596.97	14572651.80	40°07'33.776"N	104°53'31.323"W	0.64	
8676.00	90.120	358.450	7514.54	585.48	590.46	-736.08	1670593.50	14572741.70	40°07'34.665"N	104°53'31.366"W	1.32	
8765.00	90.060	358.850	7514.40	674.44	679.43	-738.18	1670591.29	14572830.64	40°07'35.544"N	104°53'31.393"W	0.45	
8855.00	89.850	357.780	7514.47	764.38	769.39	-740.82	1670588.53	14572920.56	40°07'36.433"N	104°53'31.427"W	1.21	
8944.00	90.090	358.650	7514.52	853.32	858.35	-743.60	1670585.65	14573009.47	40°07'37.312"N	104°53'31.463"W	1.01	
9034.00	89.910	359.790	7514.52	943.30	948.34	-744.82	1670584.32	14573099.43	40°07'38.201"N	104°53'31.479"W	1.28	
9123.00	89.970	359.430	7514.61	1032.29	1037.33	-745.43	1670583.60	14573188.39	40°07'39.081"N	104°53'31.486"W	0.41	
9212.00	90.000	359.030	7514.63	1121.27	1126.33	-746.62	1670582.29	14573277.34	40°07'39.960"N	104°53'31.502"W	0.45	
9302.00	90.000	358.530	7514.63	1211.24	1216.31	-748.54	1670580.27	14573367.28	40°07'40.850"N	104°53'31.526"W	0.56	
9391.00	90.120	357.820	7514.54	1300.17	1305.26	-751.37	1670577.32	14573456.20	40°07'41.729"N	104°53'31.563"W	0.81	
9481.00	90.150	357.970	7514.33	1390.08	1395.20	-754.68	1670573.91	14573546.10	40°07'42.617"N	104°53'31.606"W	0.17	
9570.00	89.880	358.280	7514.30	1479.01	1484.15	-757.59	1670570.89	14573635.01	40°07'43.496"N	104°53'31.643"W	0.46	
9660.00	90.180	356.930	7514.26	1568.91	1574.07	-761.35	1670567.01	14573724.89	40°07'44.385"N	104°53'31.692"W	1.54	
9749.00	90.030	357.030	7514.09	1657.75	1662.95	-766.04	1670562.22	14573813.72	40°07'45.263"N	104°53'31.752"W	0.20	
9838.00	90.090	356.690	7514.00	1746.58	1751.81	-770.92	1670557.23	14573902.55	40°07'46.141"N	104°53'31.815"W	0.39	
9928.00	90.430	356.720	7513.59	1836.39	1841.66	-776.09	1670551.95	14573992.35	40°07'47.029"N	104°53'31.881"W	0.38	
10017.00	90.460	357.790	7512.90	1925.26	1930.56	-780.35	1670547.58	14574081.21	40°07'47.908"N	104°53'31.936"W	1.20	
10107.00	90.460	0.710	7512.18	2015.23	2020.54	-781.53	1670546.29	14574171.15	40°07'48.797"N	104°53'31.951"W	3.24	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 COWBOY 21-3HZ(2335'FNL & 916'FEL,SEC.21)
Area	COLORADO	Well	COWBOY 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	COWBOY 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (213 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
10196.00	90.490	2.850	7511.44	2104.19	2109.49	-778.76	1670548.94	14574260.07	40°07'49.676"N	104°53'31.916"W	2.40	
10285.00	90.430	1.520	7510.72	2193.14	2198.42	-775.37	1670552.22	14574348.96	40°07'50.555"N	104°53'31.872"W	1.50	
10375.00	90.890	1.270	7509.69	2283.12	2288.38	-773.18	1670554.30	14574438.90	40°07'51.444"N	104°53'31.844"W	0.58	
10464.00	90.460	0.980	7508.64	2372.11	2377.36	-771.43	1670555.94	14574527.84	40°07'52.323"N	104°53'31.822"W	0.58	
10554.00	90.460	0.210	7507.92	2462.10	2467.35	-770.50	1670556.76	14574617.80	40°07'53.212"N	104°53'31.810"W	0.86	
10643.00	90.280	359.840	7507.34	2551.10	2556.35	-770.46	1670556.69	14574706.76	40°07'54.092"N	104°53'31.809"W	0.46	
10732.00	90.250	0.520	7506.93	2640.10	2645.35	-770.18	1670556.86	14574795.72	40°07'54.971"N	104°53'31.806"W	0.76	
10822.00	90.060	0.520	7506.69	2730.10	2735.34	-769.36	1670557.56	14574885.68	40°07'55.861"N	104°53'31.795"W	0.21	
10911.00	90.310	1.140	7506.40	2819.09	2824.33	-768.07	1670558.74	14574974.64	40°07'56.740"N	104°53'31.779"W	0.75	
11001.00	90.400	3.200	7505.84	2909.04	2914.26	-764.67	1670562.03	14575064.54	40°07'57.629"N	104°53'31.735"W	2.29	
11090.00	90.430	4.700	7505.20	2997.87	3003.05	-758.54	1670568.05	14575153.29	40°07'58.506"N	104°53'31.656"W	1.69	
11180.00	90.340	5.390	7504.59	3087.57	3092.69	-750.62	1670575.85	14575242.91	40°07'59.392"N	104°53'31.554"W	0.77	
11269.00	90.340	5.910	7504.06	3176.19	3181.26	-741.86	1670584.50	14575331.46	40°08'00.267"N	104°53'31.441"W	0.58	
11358.00	90.180	4.920	7503.66	3264.85	3269.86	-733.46	1670592.79	14575420.03	40°08'01.143"N	104°53'31.333"W	1.13	
11448.00	90.310	1.230	7503.28	3354.73	3359.71	-728.63	1670597.50	14575509.86	40°08'02.031"N	104°53'31.271"W	4.10	
11537.00	90.220	358.000	7502.86	3443.71	3448.70	-729.23	1670596.79	14575598.80	40°08'02.910"N	104°53'31.279"W	3.63	
11627.00	90.340	356.440	7502.42	3533.57	3538.59	-733.60	1670592.32	14575688.65	40°08'03.799"N	104°53'31.335"W	1.74	
11716.00	90.310	355.190	7501.92	3622.28	3627.35	-740.09	1670585.71	14575777.37	40°08'04.676"N	104°53'31.419"W	1.40	
11806.00	90.340	355.270	7501.41	3711.92	3717.04	-747.58	1670578.12	14575867.01	40°08'05.562"N	104°53'31.515"W	0.09	
11895.00	90.180	355.460	7501.00	3800.57	3805.74	-754.77	1670570.82	14575955.67	40°08'06.439"N	104°53'31.608"W	0.28	
11985.00	90.430	357.650	7500.53	3890.37	3895.57	-760.18	1670565.30	14576045.46	40°08'07.326"N	104°53'31.677"W	2.45	
12074.00	90.120	359.570	7500.10	3979.32	3984.54	-762.33	1670563.04	14576134.39	40°08'08.206"N	104°53'31.705"W	2.19	
12163.00	90.060	0.640	7499.96	4068.31	4073.54	-762.17	1670563.09	14576223.35	40°08'09.085"N	104°53'31.703"W	1.20	
12253.00	89.910	359.400	7499.98	4158.31	4163.54	-762.14	1670563.01	14576313.32	40°08'09.974"N	104°53'31.703"W	1.39	
12343.00	90.280	358.230	7499.83	4248.28	4253.52	-764.00	1670561.03	14576403.26	40°08'10.864"N	104°53'31.727"W	1.36	
12432.00	90.180	357.520	7499.48	4337.19	4342.46	-767.30	1670557.63	14576492.15	40°08'11.742"N	104°53'31.769"W	0.81	
12522.00	90.250	357.120	7499.14	4427.06	4432.36	-771.51	1670553.31	14576582.01	40°08'12.631"N	104°53'31.823"W	0.45	
12611.00	90.340	358.550	7498.68	4515.97	4521.29	-774.87	1670549.84	14576670.91	40°08'13.510"N	104°53'31.867"W	1.61	
12700.00	90.250	359.820	7498.22	4604.94	4610.28	-776.14	1670548.46	14576759.86	40°08'14.389"N	104°53'31.883"W	1.43	
12790.00	90.220	0.410	7497.85	4694.94	4700.28	-775.96	1670548.53	14576849.82	40°08'15.278"N	104°53'31.881"W	0.66	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 COWBOY 21-3HZ(2335'FNL & 916'FEL,SEC.21)
Area	COLORADO	Well	COWBOY 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	COWBOY 21-3HZ AWP
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (213 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
12880.00	90.150	1.800	7497.56	4784.93	4790.26	-774.22	1670550.15	14576939.77	40°08'16.168"N	104°53'31.859"W	1.55	
12969.00	90.250	3.210	7497.25	4873.87	4879.17	-770.33	1670553.93	14577028.65	40°08'17.046"N	104°53'31.808"W	1.59	
13059.00	90.280	6.490	7496.83	4963.58	4968.83	-762.72	1670561.42	14577118.29	40°08'17.932"N	104°53'31.711"W	3.64	
13148.00	90.150	7.840	7496.50	5051.96	5057.14	-751.62	1670572.41	14577206.57	40°08'18.805"N	104°53'31.568"W	1.52	
13237.00	90.030	5.590	7496.36	5140.41	5145.52	-741.22	1670582.70	14577294.93	40°08'19.678"N	104°53'31.434"W	2.53	
13327.00	90.180	2.560	7496.20	5230.21	5235.28	-734.82	1670588.98	14577384.66	40°08'20.565"N	104°53'31.351"W	3.37	
13416.00	90.400	1.050	7495.75	5319.18	5324.23	-732.02	1670591.67	14577473.58	40°08'21.444"N	104°53'31.315"W	1.71	
13506.00	90.090	359.020	7495.36	5409.17	5414.23	-731.96	1670591.62	14577563.54	40°08'22.334"N	104°53'31.315"W	2.28	
13684.00	90.220	352.520	7494.88	5586.50	5591.65	-745.09	1670578.28	14577740.87	40°08'24.087"N	104°53'31.484"W	3.65	
13774.00	90.310	354.270	7494.46	5675.83	5681.05	-755.44	1670567.82	14577830.22	40°08'24.971"N	104°53'31.617"W	1.95	
13863.00	90.060	357.990	7494.17	5764.57	5769.83	-761.44	1670561.71	14577918.96	40°08'25.848"N	104°53'31.694"W	4.19	
13952.00	90.060	359.550	7494.08	5853.53	5858.80	-763.35	1670559.69	14578007.90	40°08'26.727"N	104°53'31.719"W	1.75	
14042.00	90.280	1.370	7493.81	5943.52	5948.80	-762.63	1670560.30	14578097.85	40°08'27.616"N	104°53'31.710"W	2.04	
14131.00	90.220	1.780	7493.43	6032.50	6037.76	-760.18	1670562.63	14578186.79	40°08'28.496"N	104°53'31.678"W	0.47	
14221.00	90.220	2.870	7493.08	6122.45	6127.69	-756.53	1670566.17	14578276.68	40°08'29.384"N	104°53'31.631"W	1.21	
14310.00	90.310	3.450	7492.67	6211.34	6216.55	-751.63	1670570.96	14578365.51	40°08'30.262"N	104°53'31.568"W	0.66	
14400.00	90.250	3.210	7492.23	6301.22	6306.40	-746.40	1670576.08	14578455.33	40°08'31.150"N	104°53'31.501"W	0.27	
14489.00	90.340	3.110	7491.77	6390.12	6395.26	-741.49	1670580.87	14578544.16	40°08'32.028"N	104°53'31.438"W	0.15	
14579.00	90.180	1.780	7491.36	6480.06	6485.17	-737.65	1670584.60	14578634.05	40°08'32.917"N	104°53'31.388"W	1.49	
14668.00	90.430	0.400	7490.89	6569.05	6574.15	-735.96	1670586.18	14578723.00	40°08'33.796"N	104°53'31.367"W	1.58	
14758.00	90.250	359.860	7490.35	6659.04	6664.15	-735.76	1670586.27	14578812.96	40°08'34.686"N	104°53'31.364"W	0.63	
14847.00	90.340	0.680	7489.90	6748.04	6753.15	-735.34	1670586.58	14578901.92	40°08'35.565"N	104°53'31.359"W	0.93	
14936.00	90.000	1.860	7489.63	6837.03	6842.13	-733.37	1670588.44	14578990.86	40°08'36.444"N	104°53'31.333"W	1.38	
15026.00	90.120	1.080	7489.54	6927.01	6932.10	-731.06	1670590.64	14579080.80	40°08'37.334"N	104°53'31.304"W	0.88	
15115.00	90.280	1.030	7489.23	7016.01	7021.08	-729.42	1670592.16	14579169.75	40°08'38.213"N	104°53'31.282"W	0.19	
15205.00	90.220	0.310	7488.83	7106.00	7111.07	-728.37	1670593.10	14579259.71	40°08'39.102"N	104°53'31.269"W	0.80	
15294.00	90.280	0.530	7488.45	7195.00	7200.07	-727.71	1670593.64	14579348.67	40°08'39.982"N	104°53'31.261"W	0.26	
15383.00	90.250	3.230	7488.03	7283.96	7289.01	-724.79	1670596.45	14579437.58	40°08'40.861"N	104°53'31.223"W	3.03	
15432.00†	90.212	4.303	7487.84	7332.88	7337.90	-721.58	1670599.61	14579486.46	40°08'41.344"N	104°53'31.182"W	2.19	ENTER RADIUS TOE (259'FNL & 1690'FEL, SEC.16) 40.1448177 -104.8919949
15473.00	90.180	5.200	7487.70	7373.76	7378.76	-718.18	1670602.95	14579527.30	40°08'41.748"N	104°53'31.138"W	2.19	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 COWBOY 21-3HZ(2335'FNL & 916'FEL,SEC.21)
Area	COLORADO	Well	COWBOY 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	COWBOY 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH DATA (213 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
15562.00	90.220	5.750	7487.39	7462.41	7467.36	-709.69	1670611.33	14579615.87	40°08'42.623"N	104°53'31.029"W	0.62	
15614.00	90.280	6.090	7487.16	7514.16	7519.08	-704.32	1670616.63	14579667.58	40°08'43.134"N	104°53'30.960"W	0.66	LAST BHGE MWD+IFR1+SC SURVEY
15638.00	90.280	6.090	7487.04	7538.04	7542.94	-701.78	1670619.14	14579691.44	40°08'43.370"N	104°53'30.927"W	0.00	PTB (54'FNL & 1670'FEL,SEC.16) 40.1453805 -104.8919241

HOLE & CASING SECTIONS - Ref Wellbore: COWBOY 21-3HZ AWB Ref Wellpath: COWBOY 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	26.00	1887.00	1861.00	26.00	1846.81	0.00	0.00	-222.57	-201.88	

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 COWBOY 21-3HZ(2335'FNL & 916'FEL,SEC.21)
Area	COLORADO	Well	COWBOY 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	COWBOY 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

TARGETS								
Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.09-T2N-R67W	0.00	0.40	-29.99	1671300.04	14572152.76	40°07'28.834"N	104°53'22.276"W	polygon
SEC.16-T2N-R67W	0.00	0.40	-29.99	1671300.04	14572152.76	40°07'28.834"N	104°53'22.276"W	polygon
SEC.21-T2N-R67W	0.00	0.40	-29.99	1671300.04	14572152.76	40°07'28.834"N	104°53'22.276"W	polygon
COWBOY 21-3HZ BHL REV-1(51'FNL & 1714'FEL,SEC.16)	7494.00	7545.66	-745.92	1670575.01	14579694.10	40°08'43.397"N	104°53'31.495"W	point
COWBOY 21-3HZ BHL REV-2(51'FNL & 1684'FEL,SEC.16)	7494.00	7545.68	-715.92	1670605.00	14579694.16	40°08'43.397"N	104°53'31.109"W	point
COWBOY 21-3HZ HEEL REV-1(2520'FNL & 1713'FEL,SEC.21)	7505.00	-169.38	-797.89	1670532.66	14571982.09	40°07'27.156"N	104°53'32.161"W	point
COWBOY 21-3HZ HEEL REV-2(2480'FNL & 1683'FEL,SEC.21)	7505.00	-129.38	-767.89	1670562.60	14572022.11	40°07'27.551"N	104°53'31.775"W	point
COWBOY 21-3HZ LANDBOX	7505.00	0.00	0.00	1671330.02	14572152.40	40°07'28.830"N	104°53'21.890"W	polygon
COWBOY 21-3HZ RADIUS 1	7505.00	-322.39	-427.89	1670902.70	14571829.60	40°07'25.644"N	104°53'27.398"W	polygon
COWBOY 21-3HZ RADIUS 2	7505.00	7593.08	-339.01	1670981.70	14579742.00	40°08'43.865"N	104°53'26.255"W	polygon

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 COWBOY 21-3HZ(2335°FNL & 916°FEL,SEC.21)
Area	COLORADO	Well	COWBOY 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	COWBOY 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH COMPOSITION - Ref Wellbore: COWBOY 21-3HZ AWB Ref Wellpath: COWBOY 21-3HZ AWP				
Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
26.00	1847.00	Custom APC ISCWSA REV 2 MWD+IFR1 (approximation)	Custom APC ISCWSA Rev-2 MWD+IFR1 <133 - 1847>	COWBOY 21-3HZ AWB
1847.00	15614.00	Custom APC ISCWSA REV 2 MWD+IFR1+SC (approximation)	BHGE Custom APC ISCWSA Rev-2 MWD+IFR1+SC <1969 - 15614>	COWBOY 21-3HZ AWB
15614.00	15638.00	Blind Drilling (std)	Projection to bit	COWBOY 21-3HZ AWB

REFERENCE WELLPATH IDENTIFICATION			
Operator	KERR-MCGEE OIL & GAS ONSHORE LP (WA)	Slot	SLOT#07 COWBOY 21-3HZ(2335'FNL & 916'FEL,SEC.21)
Area	COLORADO	Well	COWBOY 21-3HZ
Field	WELD COUNTY (UTM/TRUE NORTH)	Wellbore	COWBOY 21-3HZ AWB
Facility	SEC.21-T2N-R67W		

WELLPATH COMMENTS				
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
133.00	0.350	106.490	133.00	FIRST SURFACE MWD+IFR1 SURVEY
1847.00	18.760	222.860	1808.93	LAST SURFACE MWD+IFR1 SURVEY
1969.00	18.770	222.480	1924.45	FIRST BHGE MWD+IFR1+SC SURVEY
7134.00	2.023	0.971	6983.11	KOP
7984.00	88.608	3.033	7512.87	LANDING (2436'FNL & 1661'FEL,SEC.21) 40.1243978 -104.8920795
8098.00	89.530	1.186	7515.09	EXIT RADIUS HEEL (2322'FNL & 1658'FEL,SEC.21) 40.1247105 -104.8920669
15432.00	90.212	4.303	7487.84	ENTER RADIUS TOE_ (259'FNL & 1690'FEL,SEC.16) 40.1448177 -104.8919949
15614.00	90.280	6.090	7487.16	LAST BHGE MWD+IFR1+SC SURVEY
15638.00	90.280	6.090	7487.04	PTB (54'FNL & 1670'FEL,SEC.16) 40.1453805 -104.8919241