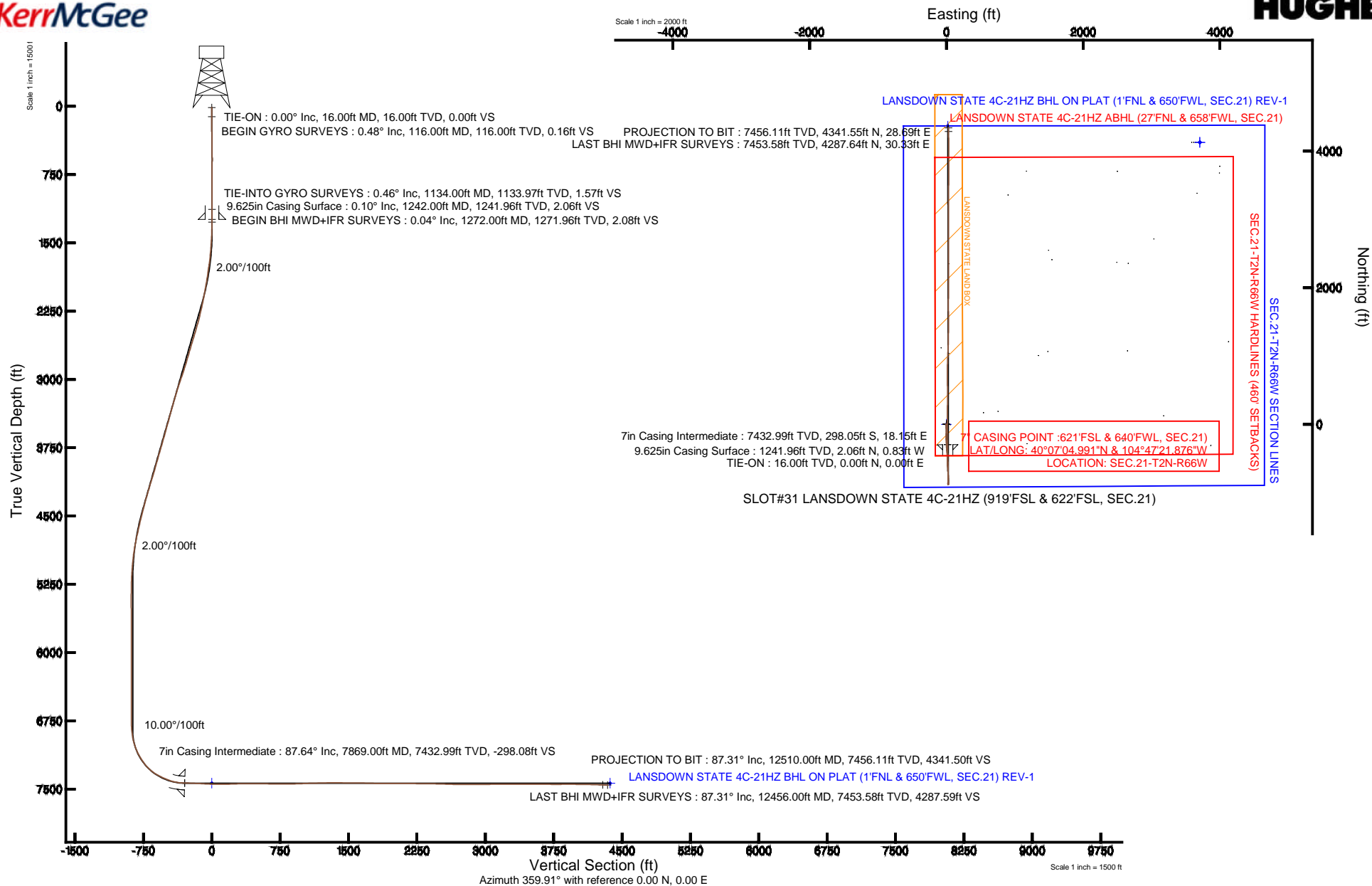


KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#31 LANSDOWN STATE 4C-21HZ (919'FSL & 622'FSL, SEC.21)
Field: WELD COUNTY (KERR MCGEE) Well: LANSDOWN STATE 4C-21HZ
Facility: SEC.21-T2N-R66W Wellbore: LANSDOWN STATE 4C-21HZ PWB

Plot reference wellpath is LANSDOWN STATE 4C-21HZ (REV-A.0) PWP

True vertical depths are referenced to XTREME 20 (16'KB) (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to XTREME 20 (16'KB) (RKB)	North Reference: True north
XTREME 20 (16'KB) (RKB) to Mean Sea Level: 4950 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#31 LANSDOWN STATE 4C-21HZ (919'FSL & 622'FSL, SEC.21)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: ingnjmrr on 7/1/2014



Actual Wellpath Report

LANSDOWN STATE 4C-21HZ AWP

Page 1 of 8

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 LANSDOWN STATE 4C-21HZ (919'FSL & 622'FSL, SEC.
Area	COLORADO	Well	LANSDOWN STATE 4C-21HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	LANSDOWN STATE 4C-21HZ AWB
Facility	SEC.21-T2N-R66W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.0.0
North Reference	True	User	Ingmjmr
Scale	0.999959	Report Generated	7/1/2014 at 3:25:32 PM
Convergence at slot	n/a	Database/Source file	WA_ANADARKO/LANSDOWN_STATE_4C-21HZ_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	-3778.02	-3996.82	3198707.04	1286944.85	40°07'07.936"N	104°47'22.110"W
Facility Reference Pt			3202672.68	1290755.25	40°07'45.274"N	104°46'30.663"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	XTREME 20 (16'KB) (RKB) to Facility Vertical Datum	4950.00ft
Horizontal Reference Pt	Slot	XTREME 20 (16'KB) (RKB) to Mean Sea Level	4950.00ft
Vertical Reference Pt	XTREME 20 (16'KB) (RKB)	XTREME 20 (16'KB) (RKB) to Mud Line at Slot (SLOT#31 LANSDOWN STATE 4C-21HZ (919'FSL & 622'FSL, SEC.21))	4950.00ft
MD Reference Pt	XTREME 20 (16'KB) (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	359.91°

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 LANSDOWN STATE 4C-21HZ (919'FSL & 622'FSL, SEC.
Area	COLORADO	Well	LANSDOWN STATE 4C-21HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	LANSDOWN STATE 4C-21HZ AWB
Facility	SEC.21-T2N-R66W		

WELLPATH DATA (149 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00†	0.000	291.900	0.00	0.00	0.00	0.00	40°07'07.936"N	104°47'22.110"W	0.00	
16.00	0.000	291.900	16.00	0.00	0.00	0.00	40°07'07.936"N	104°47'22.110"W	0.00	TIE-ON
116.00	0.480	291.900	116.00	0.16	0.16	-0.39	40°07'07.938"N	104°47'22.115"W	0.48	BEGIN GYRO SURVEYS
216.00	0.580	49.000	216.00	0.65	0.64	-0.40	40°07'07.942"N	104°47'22.115"W	0.91	
316.00	0.670	302.630	315.99	1.29	1.29	-0.51	40°07'07.949"N	104°47'22.117"W	1.00	
416.00	0.650	13.750	415.99	2.16	2.16	-0.86	40°07'07.957"N	104°47'22.121"W	0.77	
516.00	0.730	22.930	515.98	3.30	3.30	-0.48	40°07'07.969"N	104°47'22.116"W	0.14	
616.00	0.340	185.500	615.98	3.59	3.59	-0.26	40°07'07.971"N	104°47'22.113"W	1.06	
716.00	0.540	251.240	715.98	3.14	3.14	-0.74	40°07'07.967"N	104°47'22.119"W	0.51	
816.00	0.430	211.640	815.97	2.67	2.67	-1.38	40°07'07.962"N	104°47'22.128"W	0.34	
916.00	0.580	158.200	915.97	1.88	1.88	-1.39	40°07'07.955"N	104°47'22.128"W	0.47	
1016.00	0.270	132.190	1015.97	1.25	1.25	-1.02	40°07'07.948"N	104°47'22.123"W	0.36	
1116.00	0.430	25.100	1115.97	1.43	1.43	-0.69	40°07'07.950"N	104°47'22.119"W	0.57	
1134.00	0.460	345.880	1133.97	1.57	1.56	-0.68	40°07'07.951"N	104°47'22.119"W	1.67	TIE-INTO GYRO SURVEYS
1272.00	0.040	240.080	1271.96	2.08	2.08	-0.86	40°07'07.957"N	104°47'22.121"W	0.34	BEGIN BHI MWD+IFR SURVEYS
1365.00	1.900	214.020	1364.95	0.79	0.78	-1.75	40°07'07.944"N	104°47'22.132"W	2.00	
1459.00	3.110	194.650	1458.86	-2.97	-2.98	-3.26	40°07'07.907"N	104°47'22.152"W	1.55	
1555.00	4.480	187.960	1554.64	-9.20	-9.21	-4.44	40°07'07.845"N	104°47'22.167"W	1.50	
1647.00	6.210	185.200	1646.24	-17.71	-17.72	-5.39	40°07'07.761"N	104°47'22.179"W	1.90	
1739.00	7.700	181.110	1737.56	-28.83	-28.84	-5.96	40°07'07.651"N	104°47'22.187"W	1.71	
1831.00	8.350	176.690	1828.66	-41.66	-41.67	-5.69	40°07'07.524"N	104°47'22.183"W	0.97	
1923.00	9.410	173.720	1919.56	-55.81	-55.82	-4.49	40°07'07.384"N	104°47'22.168"W	1.25	
2014.00	10.410	175.840	2009.20	-71.41	-71.41	-3.08	40°07'07.230"N	104°47'22.150"W	1.17	
2106.00	11.300	180.980	2099.55	-88.71	-88.72	-2.63	40°07'07.059"N	104°47'22.144"W	1.43	
2198.00	12.050	182.110	2189.65	-107.32	-107.32	-3.14	40°07'06.875"N	104°47'22.150"W	0.85	
2289.00	13.350	182.500	2278.42	-127.31	-127.31	-3.94	40°07'06.678"N	104°47'22.161"W	1.43	
2381.00	14.770	183.600	2367.66	-149.62	-149.63	-5.14	40°07'06.457"N	104°47'22.176"W	1.57	
2473.00	16.600	181.470	2456.23	-174.46	-174.47	-6.22	40°07'06.212"N	104°47'22.190"W	2.08	
2564.00	16.890	177.030	2543.38	-200.66	-200.67	-5.87	40°07'05.953"N	104°47'22.185"W	1.44	
2656.00	16.320	176.190	2631.54	-226.91	-226.92	-4.31	40°07'05.694"N	104°47'22.166"W	0.67	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 LANSDOWN STATE 4C-21HZ (919'FSL & 622'FSL, SEC.
Area	COLORADO	Well	LANSDOWN STATE 4C-21HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	LANSDOWN STATE 4C-21HZ AWB
Facility	SEC.21-T2N-R66W		

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
2748.00	16.200	174.410	2719.86	-252.58	-252.59	-2.20	40°07'05.440"N	104°47'22.138"W	0.56	
2839.00	16.830	177.130	2807.11	-278.38	-278.38	-0.31	40°07'05.185"N	104°47'22.114"W	1.10	
2931.00	17.610	177.190	2894.99	-305.58	-305.58	1.04	40°07'04.916"N	104°47'22.097"W	0.85	
3022.00	18.880	178.120	2981.41	-334.05	-334.05	2.20	40°07'04.635"N	104°47'22.082"W	1.43	
3114.00	18.350	175.600	3068.60	-363.37	-363.36	3.80	40°07'04.345"N	104°47'22.061"W	1.05	
3205.00	16.970	175.130	3155.31	-390.89	-390.88	6.02	40°07'04.073"N	104°47'22.032"W	1.52	
3297.00	15.310	173.220	3243.68	-416.33	-416.32	8.60	40°07'03.822"N	104°47'21.999"W	1.89	
3388.00	16.250	176.760	3331.25	-440.98	-440.96	10.74	40°07'03.578"N	104°47'21.972"W	1.48	
3480.00	15.310	176.180	3419.78	-465.95	-465.93	12.27	40°07'03.332"N	104°47'21.952"W	1.04	
3572.00	14.990	177.050	3508.58	-489.95	-489.93	13.69	40°07'03.094"N	104°47'21.934"W	0.43	
3664.00	15.840	178.450	3597.27	-514.39	-514.37	14.65	40°07'02.853"N	104°47'21.921"W	1.01	
3755.00	15.710	177.720	3684.85	-539.12	-539.09	15.47	40°07'02.609"N	104°47'21.911"W	0.26	
3846.00	16.280	176.680	3772.32	-564.16	-564.14	16.70	40°07'02.361"N	104°47'21.895"W	0.70	
3938.00	16.060	176.600	3860.68	-589.74	-589.71	18.20	40°07'02.108"N	104°47'21.876"W	0.24	
4030.00	15.650	179.230	3949.18	-614.85	-614.82	19.12	40°07'01.860"N	104°47'21.864"W	0.90	
4121.00	16.330	175.540	4036.67	-639.88	-639.85	20.28	40°07'01.613"N	104°47'21.849"W	1.34	
4213.00	17.360	177.720	4124.72	-666.50	-666.46	21.84	40°07'01.350"N	104°47'21.829"W	1.31	
4298.00	15.930	177.750	4206.15	-690.82	-690.79	22.80	40°07'01.110"N	104°47'21.817"W	1.68	
4383.00	16.910	177.910	4287.69	-714.84	-714.80	23.71	40°07'00.872"N	104°47'21.805"W	1.15	
4468.00	14.460	175.680	4369.52	-737.78	-737.74	24.96	40°07'00.646"N	104°47'21.789"W	2.97	
4554.00	13.480	178.150	4452.97	-758.51	-758.47	26.09	40°07'00.441"N	104°47'21.774"W	1.33	
4638.00	14.310	176.860	4534.51	-778.66	-778.62	26.98	40°07'00.242"N	104°47'21.763"W	1.05	
4724.00	12.580	177.480	4618.15	-798.63	-798.59	27.97	40°07'00.044"N	104°47'21.750"W	2.02	
4809.00	12.480	175.430	4701.13	-817.03	-816.99	29.11	40°06'59.862"N	104°47'21.735"W	0.54	
4894.00	11.350	179.450	4784.30	-834.55	-834.51	29.92	40°06'59.689"N	104°47'21.725"W	1.65	
4979.00	9.020	177.780	4867.95	-849.58	-849.53	30.26	40°06'59.541"N	104°47'21.721"W	2.76	
5064.00	6.460	178.640	4952.17	-861.02	-860.97	30.63	40°06'59.428"N	104°47'21.716"W	3.01	
5149.00	5.120	175.180	5036.74	-869.58	-869.53	31.06	40°06'59.343"N	104°47'21.710"W	1.63	
5234.00	3.300	174.590	5121.50	-875.80	-875.75	31.61	40°06'59.282"N	104°47'21.703"W	2.14	
5320.00	2.120	198.670	5207.41	-879.77	-879.72	31.34	40°06'59.242"N	104°47'21.707"W	1.88	

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 LANDSDOWN STATE 4C-21HZ (919'FSL & 622'FSL, SEC.
Area	COLORADO	Well	LANDSDOWN STATE 4C-21HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	LANDSDOWN STATE 4C-21HZ AWB
Facility	SEC.21-T2N-R66W		

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
5405.00	0.720	180.110	5292.38	-881.79	-881.74	30.83	40°06'59.222"N	104°47'21.713"W	1.71	
5490.00	0.770	188.520	5377.37	-882.89	-882.84	30.75	40°06'59.212"N	104°47'21.714"W	0.14	
5575.00	0.540	4.650	5462.37	-883.06	-883.01	30.69	40°06'59.210"N	104°47'21.715"W	1.54	
5831.00	0.800	297.690	5718.36	-881.02	-880.98	29.21	40°06'59.230"N	104°47'21.734"W	0.30	
6086.00	1.010	263.860	5973.33	-880.43	-880.39	25.40	40°06'59.236"N	104°47'21.783"W	0.22	
6256.00	0.980	260.920	6143.30	-880.81	-880.78	22.47	40°06'59.232"N	104°47'21.821"W	0.03	
6426.00	1.120	247.950	6313.27	-881.66	-881.63	19.50	40°06'59.224"N	104°47'21.859"W	0.16	
6596.00	0.520	297.570	6483.26	-881.92	-881.90	17.27	40°06'59.221"N	104°47'21.888"W	0.52	
6765.00	1.010	81.790	6652.25	-881.36	-881.33	18.07	40°06'59.227"N	104°47'21.877"W	0.87	
6850.00	0.770	68.430	6737.24	-881.04	-881.01	19.34	40°06'59.230"N	104°47'21.861"W	0.37	
6935.00	1.720	20.640	6822.22	-879.64	-879.61	20.32	40°06'59.244"N	104°47'21.848"W	1.57	
6978.00	5.450	4.500	6865.13	-877.00	-876.97	20.71	40°06'59.270"N	104°47'21.843"W	8.90	
7019.00	8.570	4.990	6905.82	-872.02	-871.98	21.13	40°06'59.319"N	104°47'21.838"W	7.61	
7062.00	12.590	4.390	6948.08	-864.15	-864.12	21.77	40°06'59.397"N	104°47'21.830"W	9.35	
7105.00	15.890	4.670	6989.75	-853.61	-853.57	22.60	40°06'59.501"N	104°47'21.819"W	7.68	
7148.00	19.550	3.890	7030.70	-840.56	-840.53	23.57	40°06'59.630"N	104°47'21.807"W	8.53	
7190.00	22.170	3.390	7069.95	-825.64	-825.60	24.52	40°06'59.777"N	104°47'21.794"W	6.25	
7233.00	26.420	2.350	7109.13	-807.97	-807.94	25.39	40°06'59.952"N	104°47'21.783"W	9.93	
7275.00	30.050	1.140	7146.13	-788.12	-788.08	25.98	40°07'00.148"N	104°47'21.776"W	8.75	
7318.00	33.780	359.520	7182.62	-765.39	-765.35	26.10	40°07'00.373"N	104°47'21.774"W	8.90	
7360.00	37.210	359.390	7216.81	-741.01	-740.97	25.86	40°07'00.614"N	104°47'21.777"W	8.17	
7403.00	42.110	358.870	7249.90	-713.58	-713.54	25.44	40°07'00.885"N	104°47'21.783"W	11.42	
7445.00	46.590	357.720	7279.93	-684.24	-684.20	24.55	40°07'01.175"N	104°47'21.794"W	10.84	
7488.00	51.990	357.550	7307.97	-651.68	-651.65	23.21	40°07'01.496"N	104°47'21.811"W	12.56	
7530.00	57.110	358.780	7332.32	-617.49	-617.46	22.12	40°07'01.834"N	104°47'21.825"W	12.42	
7573.00	62.610	359.220	7353.90	-580.33	-580.29	21.48	40°07'02.201"N	104°47'21.834"W	12.82	
7616.00	66.100	359.650	7372.51	-541.57	-541.54	21.10	40°07'02.584"N	104°47'21.838"W	8.17	
7659.00	67.280	358.750	7389.52	-502.08	-502.05	20.55	40°07'02.975"N	104°47'21.846"W	3.35	
7701.00	70.290	358.900	7404.72	-462.94	-462.91	19.74	40°07'03.361"N	104°47'21.856"W	7.17	
7744.00	75.640	359.290	7417.31	-421.85	-421.82	19.10	40°07'03.768"N	104°47'21.864"W	12.47	

Actual Wellpath Report

LANSDOWN STATE 4C-21HZ AWP

Page 5 of 8

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 LANSDOWN STATE 4C-21HZ (919'FSL & 622'FSL, SEC.
Area	COLORADO	Well	LANSDOWN STATE 4C-21HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	LANSDOWN STATE 4C-21HZ AWB
Facility	SEC.21-T2N-R66W		

WELLPATH DATA (149 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7786.00	81.320	359.720	7425.70	-380.71	-380.68	18.74	40°07'04.174"N	104°47'21.869"W	13.56	
7832.00	85.780	359.500	7430.86	-335.02	-334.99	18.43	40°07'04.626"N	104°47'21.873"W	9.71	
7869.00†	87.636	359.620	7432.99	-298.08	-298.05	18.15	40°07'04.991"N	104°47'21.876"W	5.03	7" CASING POINT
7897.00	89.040	359.710	7433.80	-270.09	-270.06	17.99	40°07'05.267"N	104°47'21.878"W	5.03	
7989.00	87.190	358.780	7436.83	-178.15	-178.13	16.77	40°07'06.176"N	104°47'21.894"W	2.25	
8080.00	86.920	359.240	7441.50	-87.28	-87.26	15.20	40°07'07.074"N	104°47'21.914"W	0.59	
8165.00	87.780	359.520	7445.43	-2.38	-2.36	14.29	40°07'07.913"N	104°47'21.926"W	1.06	
8250.00	90.710	0.090	7446.55	82.60	82.62	14.00	40°07'08.753"N	104°47'21.930"W	3.51	
8335.00	91.470	0.580	7444.93	167.58	167.61	14.49	40°07'09.592"N	104°47'21.923"W	1.06	
8420.00	91.620	0.680	7442.64	252.55	252.57	15.43	40°07'10.432"N	104°47'21.911"W	0.21	
8505.00	91.070	0.420	7440.65	337.52	337.54	16.24	40°07'11.272"N	104°47'21.901"W	0.72	
8590.00	90.330	359.910	7439.61	422.51	422.54	16.49	40°07'12.112"N	104°47'21.898"W	1.06	
8675.00	89.630	359.780	7439.64	507.51	507.53	16.26	40°07'12.952"N	104°47'21.901"W	0.84	
8760.00	88.610	358.800	7440.94	592.49	592.52	15.20	40°07'13.791"N	104°47'21.914"W	1.66	
8845.00	89.070	359.940	7442.67	677.47	677.49	14.27	40°07'14.631"N	104°47'21.926"W	1.45	
8931.00	89.750	359.890	7443.55	763.46	763.49	14.14	40°07'15.481"N	104°47'21.928"W	0.79	
9016.00	90.340	1.310	7443.48	848.46	848.48	15.03	40°07'16.321"N	104°47'21.916"W	1.81	
9101.00	92.340	2.100	7441.50	933.39	933.41	17.56	40°07'17.160"N	104°47'21.884"W	2.53	
9186.00	92.060	2.430	7438.23	1018.25	1018.28	20.92	40°07'17.999"N	104°47'21.841"W	0.51	
9272.00	91.600	1.880	7435.49	1104.14	1104.18	24.15	40°07'18.848"N	104°47'21.799"W	0.83	
9356.00	91.540	1.800	7433.19	1188.06	1188.10	26.85	40°07'19.677"N	104°47'21.764"W	0.12	
9441.00	90.950	0.470	7431.34	1273.02	1273.06	28.53	40°07'20.517"N	104°47'21.743"W	1.71	
9526.00	89.530	0.740	7430.98	1358.01	1358.06	29.43	40°07'21.356"N	104°47'21.731"W	1.70	
9612.00	89.190	0.060	7431.94	1444.00	1444.05	30.03	40°07'22.206"N	104°47'21.723"W	0.88	
9697.00	90.000	359.700	7432.54	1529.00	1529.05	29.85	40°07'23.046"N	104°47'21.726"W	1.04	
9782.00	89.230	359.580	7433.12	1614.00	1614.04	29.31	40°07'23.886"N	104°47'21.733"W	0.92	
9867.00	88.420	359.820	7434.86	1698.98	1699.02	28.87	40°07'24.726"N	104°47'21.738"W	0.99	
9952.00	88.640	0.260	7437.04	1783.95	1783.99	28.93	40°07'25.566"N	104°47'21.738"W	0.58	
10038.00	90.270	359.960	7437.86	1869.94	1869.99	29.09	40°07'26.415"N	104°47'21.735"W	1.93	
10122.00	89.780	0.470	7437.82	1953.94	1953.99	29.41	40°07'27.246"N	104°47'21.731"W	0.84	

Actual Wellpath Report

LANSDOWN STATE 4C-21HZ AWP

Page 6 of 8

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 LANSDOWN STATE 4C-21HZ (919'FSL & 622'FSL, SEC.
Area	COLORADO	Well	LANSDOWN STATE 4C-21HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	LANSDOWN STATE 4C-21HZ AWB
Facility	SEC.21-T2N-R66W		

WELLPATH DATA (149 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10207.00	90.330	0.060	7437.74	2038.94	2038.98	29.80	40°07'28.085"N	104°47'21.726"W	0.81	
10293.00	89.780	0.070	7437.66	2124.94	2124.98	29.90	40°07'28.935"N	104°47'21.725"W	0.64	
10378.00	88.920	359.830	7438.62	2209.93	2209.98	29.83	40°07'29.775"N	104°47'21.726"W	1.05	
10463.00	89.350	359.810	7439.90	2294.92	2294.97	29.56	40°07'30.615"N	104°47'21.729"W	0.51	
10548.00	89.350	359.900	7440.87	2379.91	2379.96	29.34	40°07'31.455"N	104°47'21.732"W	0.11	
10632.00	89.130	0.240	7441.98	2463.91	2463.95	29.45	40°07'32.285"N	104°47'21.731"W	0.48	
10718.00	88.270	0.270	7443.93	2549.88	2549.93	29.83	40°07'33.135"N	104°47'21.726"W	1.00	
10803.00	88.080	0.110	7446.64	2634.84	2634.89	30.11	40°07'33.974"N	104°47'21.722"W	0.29	
10887.00	89.040	359.570	7448.75	2718.81	2718.86	29.88	40°07'34.804"N	104°47'21.725"W	1.31	
10973.00	90.550	0.240	7449.06	2804.81	2804.85	29.73	40°07'35.654"N	104°47'21.727"W	1.92	
11058.00	90.300	359.880	7448.43	2889.80	2889.85	29.82	40°07'36.494"N	104°47'21.726"W	0.52	
11143.00	90.730	0.020	7447.66	2974.80	2974.85	29.75	40°07'37.334"N	104°47'21.727"W	0.53	
11228.00	90.700	0.170	7446.60	3059.79	3059.84	29.89	40°07'38.174"N	104°47'21.725"W	0.18	
11313.00	90.890	0.330	7445.42	3144.78	3144.83	30.26	40°07'39.014"N	104°47'21.720"W	0.29	
11398.00	89.840	0.030	7444.88	3229.78	3229.83	30.53	40°07'39.854"N	104°47'21.717"W	1.28	
11483.00	89.930	0.100	7445.05	3314.78	3314.83	30.62	40°07'40.694"N	104°47'21.716"W	0.13	
11568.00	89.960	0.400	7445.13	3399.78	3399.83	30.99	40°07'41.533"N	104°47'21.711"W	0.35	
11653.00	90.670	1.270	7444.67	3484.76	3484.82	32.23	40°07'42.373"N	104°47'21.695"W	1.32	
11739.00	89.560	0.270	7444.49	3570.75	3570.81	33.39	40°07'43.223"N	104°47'21.680"W	1.74	
11824.00	88.670	359.750	7445.81	3655.74	3655.79	33.40	40°07'44.063"N	104°47'21.680"W	1.21	
11909.00	89.810	359.490	7446.94	3740.73	3740.78	32.84	40°07'44.903"N	104°47'21.687"W	1.38	
11994.00	90.430	0.410	7446.76	3825.73	3825.78	32.77	40°07'45.743"N	104°47'21.688"W	1.31	
12079.00	89.960	0.720	7446.47	3910.72	3910.78	33.60	40°07'46.583"N	104°47'21.677"W	0.66	
12164.00	89.630	0.120	7446.77	3995.72	3995.77	34.23	40°07'47.423"N	104°47'21.669"W	0.81	
12249.00	89.110	359.510	7447.71	4080.71	4080.77	33.95	40°07'48.263"N	104°47'21.673"W	0.94	
12334.00	88.730	359.270	7449.31	4165.69	4165.75	33.05	40°07'49.102"N	104°47'21.685"W	0.53	
12419.00	87.690	358.480	7451.96	4250.63	4250.69	31.38	40°07'49.942"N	104°47'21.706"W	1.54	
12456.00	87.310	358.260	7453.58	4287.59	4287.64	30.33	40°07'50.307"N	104°47'21.720"W	1.19	LAST BHI MWD+IFR SURVEYS
12510.00	87.310	358.260	7456.11	4341.50	4341.55	28.69	40°07'50.840"N	104°47'21.741"W	0.00	PROJECTION TO BIT

Actual Wellpath Report

LANSDOWN STATE 4C-21HZ AWP

Page 7 of 8

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 LANSDOWN STATE 4C-21HZ (919'FSL & 622'FSL, SEC.
Area	COLORADO	Well	LANSDOWN STATE 4C-21HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	LANSDOWN STATE 4C-21HZ AWB
Facility	SEC.21-T2N-R66W		

HOLE & CASING SECTIONS -

Ref Wellbore: LANSDOWN STATE 4C-21HZ AWB

Ref Wellpath: LANSDOWN STATE 4C-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]
13.5in Open Hole	16.00	1242.00	1226.00	16.00	1241.96	0.00	0.00	2.06	-0.83
9.625in Casing Surface	16.00	1242.00	1226.00	16.00	1241.96	0.00	0.00	2.06	-0.83
8.75in Open Hole	1242.00	7879.00	6637.00	1241.96	7433.36	2.06	-0.83	-288.06	18.09
7in Casing Intermediate	16.00	7869.00	7853.00	16.00	7432.99	0.00	0.00	-298.05	18.15
6.125in Open Hole	7879.00	12510.00	4631.00	7433.36	7456.11	-288.06	18.09	4341.55	28.69

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.21-T2N-R66W HARDLINES (460' SETBACKS)		-56.00	4129.56	3707.05	3202380.72	1291103.80	40°07'48.742"N	104°46'34.385"W	polygon
SEC.21-T2N-R66W SECTION LINES		-56.00	4129.56	3707.05	3202380.72	1291103.80	40°07'48.742"N	104°46'34.385"W	polygon
LANSDOWN STATE 4C-21HZ BHL ON PLAT (1'FNL & 650'FWL, SEC.21) REV-1		7435.00	4367.49	20.69	3198692.74	1291312.17	40°07'51.096"N	104°47'21.844"W	point
LANSDOWN STATE LAND BOX		7435.00	0.00	0.00	3198707.04	1286944.84	40°07'07.936"N	104°47'22.110"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: LANSDOWN STATE 4C-21HZ AWB Ref Wellpath: LANSDOWN STATE 4C-21HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	1134.00	Generic gyro - continuous (Standard)	MS ENERGY GYRO SURVEYS <116-1134>	LANSDOWN STATE
1134.00	7832.00	NaviTrak (MAGCORR,IFR)	BHI MWD/ NAVITRAK (MAGCORR, IFR) 8.75" HOLE <1272-7832>	LANSDOWN STATE
7832.00	12456.00	NaviTrak (MAGCORR,IFR)	BHI MWD/ NAVITRAK (MAGCORR, IFR) 6.125" HOLE <7897-12456>	LANSDOWN STATE
12456.00	12510.00	Blind Drilling (std)	Projection to bit	LANSDOWN STATE

REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#31 LANSDOWN STATE 4C-21HZ (919'FSL & 622'FSL, SEC.
Area	COLORADO	Well	LANSDOWN STATE 4C-21HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	LANSDOWN STATE 4C-21HZ AWB
Facility	SEC.21-T2N-R66W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
16.00	0.000	291.900	16.00	TIE-ON
116.00	0.480	291.900	116.00	BEGIN GYRO SURVEYS
1134.00	0.460	345.880	1133.97	TIE-INTO GYRO SURVEYS
1272.00	0.040	240.080	1271.96	BEGIN BHI MWD+IFR SURVEYS
7869.00	87.636	359.620	7432.99	7" CASING POINT
12456.00	87.310	358.260	7453.58	LAST BHI MWD+IFR SURVEYS
12510.00	87.310	358.260	7456.11	PROJECTION TO BIT