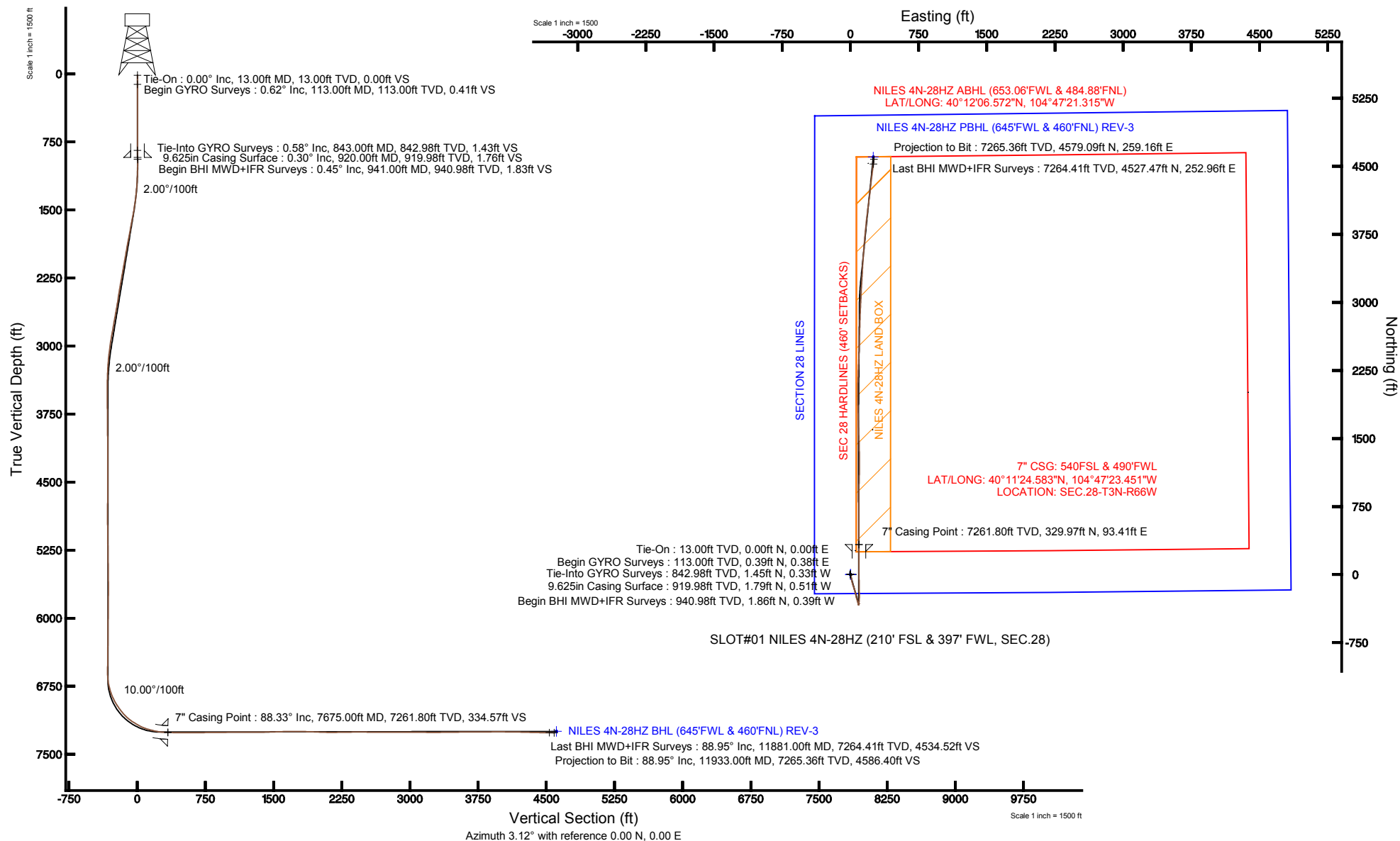


KERR-MCGEE OIL & GAS ONSHORE LP

Location: COLORADO Slot: SLOT#01 NILES 4N-28HZ (210' FSL & 397' FWL, SEC.28)
Field: WELD COUNTY (KERR MCGEE) Well: NILES 4N-28HZ
Facility: SEC.28-T3N-R66W Wellbore: NILES 4N-28HZ PWB

Plot reference wellpath is NILES 4N-28HZ (REV-E.0) PWP

True vertical depths are referenced to ENSIGN 145 (RT)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to ENSIGN 145 (RT)	North Reference: True north
ENSIGN 145 (RT) to Mean Sea Level: 4947.3 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#01 NILES 4N-28HZ (210' FSL & 397' FWL, SEC.28)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: wilsje02 on 3/21/2013





Actual Wellpath Report

NILES 4N-28HZ AWP

Page 1 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 NILES 4N-28HZ (210' FSL & 397' FWL, SEC.28)
Area	COLORADO	Well	NILES 4N-28HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NILES 4N-28HZ AWB
Facility	SEC.28-T3N-R66W		

REPORT SETUP INFORMATION

Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 3.0.2
North Reference	True	User	Wilsjef02
Scale	0.999957	Report Generated	3/21/2013 at 10:37:15
Convergence at slot	0.46° East	Database/Source file	WellArchitectDB/NILES_4N-28HZ_AWB.xml

WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.16	3198304.10	1312582.33	40°11'21.322"N	104°47'24.655"W
Facility Reference Pt			3198303.94	1312582.33	40°11'21.322"N	104°47'24.657"W
Field Reference Pt			3197771.84	1268891.29	40°04'09.600"N	104°47'36.000"W

WELLPATH DATUM

Calculation method	Minimum curvature	ENSIGN 145 (RT) to Facility Vertical Datum	4947.30ft
Horizontal Reference Pt	Slot	ENSIGN 145 (RT) to Mean Sea Level	4947.30ft
Vertical Reference Pt	ENSIGN 145 (RT)	ENSIGN 145 (RT) to Mud Line at Slot (SLOT#01 NILES 4N-28HZ (210' FSL & 397' FWL, SEC.28))	4947.30ft
MD Reference Pt	ENSIGN 145 (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	3.24°



Actual Wellpath Report

NILES 4N-28HZ AWP

Page 2 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 NILES 4N-28HZ (210' FSL & 397' FWL, SEC.28)
Area	COLORADO	Well	NILES 4N-28HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NILES 4N-28HZ AWB
Facility	SEC.28-T3N-R66W		

WELLPATH DATA (148 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	44.540	0.00	0.00	0.00	0.00	40°11'21.322"N	104°47'24.655"W	0.00	
13.00	0.000	44.540	13.00	0.00	0.00	0.00	40°11'21.322"N	104°47'24.655"W	0.00	Tie-On
113.00	0.620	44.540	113.00	0.41	0.39	0.38	40°11'21.326"N	104°47'24.650"W	0.62	Begin GYRO Surveys
213.00	0.380	7.950	212.99	1.14	1.10	0.80	40°11'21.333"N	104°47'24.645"W	0.39	
313.00	0.370	249.550	312.99	1.34	1.32	0.55	40°11'21.335"N	104°47'24.648"W	0.64	
413.00	0.350	202.050	412.99	0.93	0.92	0.13	40°11'21.331"N	104°47'24.653"W	0.29	
513.00	0.390	167.400	512.99	0.31	0.30	0.09	40°11'21.325"N	104°47'24.654"W	0.22	
613.00	0.360	71.010	612.99	0.10	0.07	0.46	40°11'21.323"N	104°47'24.649"W	0.56	
713.00	0.500	335.490	712.99	0.61	0.57	0.58	40°11'21.328"N	104°47'24.648"W	0.64	
813.00	0.630	303.700	812.98	1.27	1.28	-0.06	40°11'21.335"N	104°47'24.656"W	0.33	
843.00	0.580	301.580	842.98	1.43	1.45	-0.33	40°11'21.336"N	104°47'24.659"W	0.18	Tie-Into GYRO Surveys
941.00	0.450	67.270	940.98	1.83	1.86	-0.39	40°11'21.340"N	104°47'24.660"W	0.94	Begin BHI MWD+IFR Surveys
971.00	0.570	65.670	970.98	1.95	1.96	-0.15	40°11'21.341"N	104°47'24.657"W	0.40	
1063.00	1.290	161.860	1062.97	1.20	1.17	0.59	40°11'21.334"N	104°47'24.647"W	1.59	
1155.00	2.620	172.780	1154.91	-1.83	-1.90	1.18	40°11'21.303"N	104°47'24.640"W	1.49	
1247.00	4.640	164.790	1246.72	-7.43	-7.58	2.42	40°11'21.247"N	104°47'24.624"W	2.26	
1339.00	6.670	164.801	1338.27	-16.03	-16.33	4.79	40°11'21.161"N	104°47'24.593"W	2.21	
1430.00	8.500	166.330	1428.47	-27.48	-27.97	7.77	40°11'21.046"N	104°47'24.555"W	2.02	
1522.00	10.420	173.100	1519.22	-42.18	-42.83	10.38	40°11'20.899"N	104°47'24.521"W	2.41	
1614.00	11.140	169.560	1609.60	-59.00	-59.83	12.99	40°11'20.731"N	104°47'24.488"W	1.06	
1706.00	10.380	168.550	1699.98	-75.66	-76.70	16.24	40°11'20.564"N	104°47'24.446"W	0.85	
1798.00	11.590	163.920	1790.29	-92.40	-93.70	20.45	40°11'20.396"N	104°47'24.392"W	1.63	
1890.00	11.110	162.040	1880.49	-109.38	-111.01	25.74	40°11'20.225"N	104°47'24.323"W	0.66	
1985.00	10.200	160.490	1973.85	-125.67	-127.65	31.37	40°11'20.061"N	104°47'24.251"W	1.00	
2080.00	10.990	163.170	2067.23	-141.94	-144.25	36.80	40°11'19.897"N	104°47'24.181"W	0.98	
2175.00	10.110	160.880	2160.63	-158.15	-160.79	42.16	40°11'19.733"N	104°47'24.112"W	1.03	
2270.00	10.900	167.240	2254.04	-174.50	-177.43	46.87	40°11'19.569"N	104°47'24.051"W	1.48	
2364.00	10.400	165.530	2346.42	-191.12	-194.31	50.95	40°11'19.402"N	104°47'23.998"W	0.63	
2459.00	8.980	163.940	2440.06	-206.29	-209.74	55.15	40°11'19.249"N	104°47'23.944"W	1.52	
2554.00	9.910	167.650	2533.77	-221.16	-224.85	58.95	40°11'19.100"N	104°47'23.895"W	1.17	
2649.00	10.320	170.610	2627.30	-237.34	-241.23	62.08	40°11'18.938"N	104°47'23.855"W	0.70	
2744.00	10.650	162.130	2720.72	-253.84	-257.99	66.17	40°11'18.773"N	104°47'23.802"W	1.66	
2839.00	10.470	163.000	2814.11	-270.12	-274.60	71.38	40°11'18.608"N	104°47'23.735"W	0.25	
2934.00	10.290	165.240	2907.55	-286.29	-291.06	76.07	40°11'18.446"N	104°47'23.675"W	0.47	
3028.00	8.930	162.390	3000.23	-301.10	-306.13	80.42	40°11'18.297"N	104°47'23.619"W	1.53	
3123.00	6.650	155.980	3094.35	-312.88	-318.18	84.89	40°11'18.178"N	104°47'23.561"W	2.56	
3218.00	5.090	160.640	3188.85	-321.66	-327.18	88.52	40°11'18.089"N	104°47'23.514"W	1.72	
3313.00	2.900	153.270	3283.61	-327.63	-333.31	91.00	40°11'18.028"N	104°47'23.482"W	2.36	
3407.00	0.900	141.140	3377.56	-330.24	-336.01	92.53	40°11'18.002"N	104°47'23.463"W	2.16	
3502.00	0.260	23.730	3472.55	-330.59	-336.39	93.09	40°11'17.998"N	104°47'23.456"W	1.10	
3597.00	0.300	142.480	3567.55	-330.58	-336.39	93.33	40°11'17.998"N	104°47'23.452"W	0.51	
3692.00	0.650	327.000	3662.55	-330.33	-336.13	93.19	40°11'18.000"N	104°47'23.454"W	1.00	
3787.00	0.780	313.150	3757.55	-329.48	-335.24	92.42	40°11'18.009"N	104°47'23.464"W	0.23	
3882.00	0.770	307.430	3852.54	-328.71	-334.41	91.44	40°11'18.017"N	104°47'23.477"W	0.08	
3976.00	0.830	305.980	3946.53	-327.99	-333.63	90.39	40°11'18.025"N	104°47'23.490"W	0.07	



Actual Wellpath Report

NILES 4N-28HZ AWP

Page 3 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 NILES 4N-28HZ (210' FSL & 397' FWL, SEC.28)
Area	COLORADO	Well	NILES 4N-28HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NILES 4N-28HZ AWB
Facility	SEC.28-T3N-R66W		

WELLPATH DATA (148 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4071.00	0.930	303.780	4041.52	-327.22	-332.79	89.19	40°11'18.033"N	104°47'23.506"W	0.11	
4166.00	0.250	128.470	4136.51	-326.95	-332.49	88.71	40°11'18.036"N	104°47'23.512"W	1.24	
4261.00	0.230	190.760	4231.51	-327.26	-332.81	88.84	40°11'18.033"N	104°47'23.510"W	0.26	
4356.00	0.370	278.150	4326.51	-327.42	-332.95	88.50	40°11'18.032"N	104°47'23.515"W	0.45	
4451.00	0.730	284.600	4421.51	-327.28	-332.76	87.61	40°11'18.034"N	104°47'23.526"W	0.38	
4546.00	0.170	90.680	4516.50	-327.15	-332.61	87.17	40°11'18.035"N	104°47'23.532"W	0.94	
4640.00	0.270	116.980	4610.50	-327.23	-332.71	87.50	40°11'18.034"N	104°47'23.528"W	0.15	
4735.00	0.410	128.530	4705.50	-327.52	-333.02	87.97	40°11'18.031"N	104°47'23.522"W	0.16	
4830.00	0.590	159.310	4800.50	-328.16	-333.69	88.41	40°11'18.024"N	104°47'23.516"W	0.33	
4925.00	0.500	44.540	4895.50	-328.30	-333.85	88.87	40°11'18.023"N	104°47'23.510"W	0.97	
5020.00	0.580	15.890	4990.49	-327.52	-333.10	89.29	40°11'18.030"N	104°47'23.504"W	0.29	
5115.00	0.700	21.160	5085.49	-326.50	-332.09	89.63	40°11'18.040"N	104°47'23.500"W	0.14	
5209.00	0.760	28.260	5179.48	-325.39	-331.01	90.14	40°11'18.051"N	104°47'23.494"W	0.12	
5304.00	0.890	36.260	5274.47	-324.20	-329.86	90.87	40°11'18.062"N	104°47'23.484"W	0.18	
5399.00	0.730	28.490	5369.46	-323.03	-328.73	91.60	40°11'18.073"N	104°47'23.475"W	0.20	
5494.00	0.830	22.360	5464.45	-321.83	-327.56	92.15	40°11'18.085"N	104°47'23.468"W	0.14	
5589.00	0.830	26.110	5559.44	-320.55	-326.31	92.71	40°11'18.097"N	104°47'23.460"W	0.06	
5684.00	0.520	306.870	5654.44	-319.68	-325.43	92.67	40°11'18.106"N	104°47'23.461"W	0.94	
5778.00	1.290	234.030	5748.43	-320.11	-325.80	91.47	40°11'18.102"N	104°47'23.476"W	1.32	
5873.00	1.080	228.320	5843.41	-321.42	-327.02	89.94	40°11'18.090"N	104°47'23.496"W	0.25	
5968.00	0.890	255.420	5938.39	-322.27	-327.80	88.55	40°11'18.083"N	104°47'23.514"W	0.52	
6063.00	0.500	125.170	6033.39	-322.72	-328.23	88.18	40°11'18.078"N	104°47'23.519"W	1.34	
6158.00	0.460	152.610	6128.38	-323.27	-328.80	88.69	40°11'18.073"N	104°47'23.512"W	0.24	
6253.00	0.710	166.280	6223.38	-324.16	-329.71	89.01	40°11'18.064"N	104°47'23.508"W	0.30	
6348.00	0.710	164.470	6318.37	-325.28	-330.85	89.31	40°11'18.053"N	104°47'23.504"W	0.02	
6443.00	0.690	150.250	6413.37	-326.32	-331.92	89.75	40°11'18.042"N	104°47'23.499"W	0.18	
6538.00	0.670	167.480	6508.36	-327.33	-332.96	90.15	40°11'18.032"N	104°47'23.493"W	0.22	
6600.00	0.750	173.880	6570.35	-328.08	-333.71	90.27	40°11'18.024"N	104°47'23.492"W	0.18	
6632.00	0.500	161.500	6602.35	-328.42	-334.05	90.34	40°11'18.021"N	104°47'23.491"W	0.88	
6696.00	4.780	7.080	6666.28	-326.01	-331.67	90.76	40°11'18.044"N	104°47'23.486"W	8.18	
6727.00	8.140	5.810	6697.08	-322.53	-328.20	91.14	40°11'18.079"N	104°47'23.481"W	10.85	
6759.00	11.840	7.430	6728.59	-316.99	-322.69	91.79	40°11'18.133"N	104°47'23.472"W	11.59	
6791.00	14.240	7.760	6759.76	-309.79	-315.54	92.75	40°11'18.204"N	104°47'23.460"W	7.50	
6822.00	15.580	8.310	6789.72	-301.84	-307.64	93.87	40°11'18.282"N	104°47'23.446"W	4.35	
6854.00	18.570	8.960	6820.31	-292.49	-298.35	95.28	40°11'18.374"N	104°47'23.427"W	9.36	
6886.00	21.680	4.650	6850.35	-281.51	-287.42	96.55	40°11'18.482"N	104°47'23.411"W	10.76	
6917.00	24.990	0.930	6878.81	-269.24	-275.17	97.12	40°11'18.603"N	104°47'23.404"W	11.68	
6964.00	28.390	1.350	6920.80	-248.14	-254.06	97.55	40°11'18.811"N	104°47'23.398"W	7.25	
7012.00	32.910	0.400	6962.08	-223.70	-229.60	97.91	40°11'19.053"N	104°47'23.393"W	9.47	
7059.00	36.220	357.690	7000.78	-197.12	-202.95	97.44	40°11'19.316"N	104°47'23.399"W	7.76	
7107.00	39.990	358.310	7038.55	-167.63	-173.35	96.41	40°11'19.609"N	104°47'23.413"W	7.89	
7154.00	43.810	359.340	7073.52	-136.34	-141.98	95.78	40°11'19.919"N	104°47'23.421"W	8.26	
7201.00	48.920	358.860	7105.95	-102.42	-107.98	95.24	40°11'20.255"N	104°47'23.428"W	10.90	
7248.00	55.210	359.790	7134.83	-65.46	-70.93	94.81	40°11'20.621"N	104°47'23.433"W	13.47	
7296.00	58.760	0.080	7160.97	-25.28	-30.69	94.77	40°11'21.019"N	104°47'23.434"W	7.41	



Actual Wellpath Report

NILES 4N-28HZ AWP

Page 4 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 NILES 4N-28HZ (210' FSL & 397' FWL, SEC.28)
Area	COLORADO	Well	NILES 4N-28HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NILES 4N-28HZ AWB
Facility	SEC.28-T3N-R66W		

WELLPATH DATA (148 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
7343.00	61.500	359.230	7184.38	15.39	10.06	94.52	40°11'21.421"N	104°47'23.437"W	6.04	
7391.00	67.180	359.350	7205.16	58.53	53.31	93.99	40°11'21.849"N	104°47'23.444"W	11.84	
7423.00	70.130	359.390	7216.80	88.27	83.11	93.66	40°11'22.143"N	104°47'23.448"W	9.22	
7454.00	72.700	359.340	7226.68	117.58	112.49	93.33	40°11'22.434"N	104°47'23.452"W	8.29	
7486.00	75.510	359.510	7235.45	148.29	143.26	93.03	40°11'22.738"N	104°47'23.456"W	8.80	
7518.00	77.580	359.890	7242.89	179.35	174.38	92.86	40°11'23.045"N	104°47'23.458"W	6.57	
7549.00	79.380	0.260	7249.08	209.68	204.75	92.90	40°11'23.345"N	104°47'23.458"W	5.92	
7581.00	82.020	0.100	7254.25	241.21	236.33	93.00	40°11'23.657"N	104°47'23.457"W	8.26	
7612.00	84.100	0.180	7258.00	271.93	267.10	93.08	40°11'23.961"N	104°47'23.456"W	6.71	
7631.00	86.020	0.330	7259.63	290.84	286.03	93.16	40°11'24.149"N	104°47'23.455"W	10.14	
7675.00†	88.334	0.315	7261.80	334.72	329.97	93.41	40°11'24.583"N	104°47'23.451"W	5.26	7" Casing Point
7689.00	89.070	0.310	7262.12	348.70	343.97	93.48	40°11'24.721"N	104°47'23.450"W	5.26	
7784.00	88.850	0.030	7263.84	443.55	438.95	93.77	40°11'25.660"N	104°47'23.447"W	0.37	
7878.00	89.780	359.700	7264.97	537.38	532.94	93.55	40°11'26.589"N	104°47'23.450"W	1.05	
7973.00	90.830	359.860	7264.46	632.20	627.94	93.18	40°11'27.527"N	104°47'23.454"W	1.12	
8068.00	91.010	359.930	7262.94	727.03	722.93	93.01	40°11'28.466"N	104°47'23.457"W	0.20	
8163.00	90.520	359.880	7261.67	821.86	817.92	92.85	40°11'29.405"N	104°47'23.459"W	0.52	
8258.00	90.640	0.810	7260.71	916.73	912.91	93.42	40°11'30.343"N	104°47'23.451"W	0.99	
8353.00	90.360	1.170	7259.88	1011.65	1007.89	95.06	40°11'31.282"N	104°47'23.430"W	0.48	
8448.00	90.180	1.540	7259.43	1106.60	1102.87	97.31	40°11'32.221"N	104°47'23.401"W	0.43	
8543.00	90.060	0.400	7259.23	1201.53	1197.85	98.92	40°11'33.159"N	104°47'23.380"W	1.21	
8638.00	90.330	358.990	7258.91	1296.34	1292.85	98.41	40°11'34.098"N	104°47'23.387"W	1.51	
8732.00	91.100	359.380	7257.73	1390.10	1386.83	97.07	40°11'35.027"N	104°47'23.404"W	0.92	
8827.00	91.320	357.510	7255.73	1484.74	1481.77	94.50	40°11'35.965"N	104°47'23.437"W	1.98	
8922.00	91.600	358.130	7253.31	1579.28	1576.67	90.88	40°11'36.903"N	104°47'23.484"W	0.72	
9017.00	91.260	358.390	7250.94	1673.90	1671.59	88.00	40°11'37.841"N	104°47'23.521"W	0.45	
9112.00	89.010	358.260	7250.71	1768.54	1766.55	85.22	40°11'38.779"N	104°47'23.557"W	2.37	
9207.00	88.510	358.330	7252.77	1863.16	1861.48	82.40	40°11'39.717"N	104°47'23.593"W	0.53	
9301.00	87.490	359.470	7256.05	1956.84	1955.41	80.59	40°11'40.645"N	104°47'23.616"W	1.63	
9396.00	88.270	0.950	7259.56	2051.63	2050.34	80.94	40°11'41.583"N	104°47'23.612"W	1.76	
9491.00	90.520	2.110	7260.57	2146.58	2145.29	83.48	40°11'42.522"N	104°47'23.579"W	2.66	
9586.00	90.770	2.080	7259.50	2241.55	2240.22	86.95	40°11'43.460"N	104°47'23.535"W	0.27	
9681.00	91.260	2.410	7257.81	2336.52	2335.13	90.67	40°11'44.398"N	104°47'23.487"W	0.62	
9775.00	90.030	2.020	7256.76	2430.50	2429.05	94.31	40°11'45.326"N	104°47'23.440"W	1.37	
9870.00	89.040	1.360	7257.53	2525.46	2524.01	97.11	40°11'46.264"N	104°47'23.404"W	1.25	
9965.00	88.920	1.580	7259.22	2620.40	2618.96	99.54	40°11'47.203"N	104°47'23.372"W	0.26	
10060.00	90.150	1.400	7259.99	2715.35	2713.92	102.01	40°11'48.141"N	104°47'23.340"W	1.31	
10155.00	90.150	1.980	7259.74	2810.32	2808.88	104.82	40°11'49.079"N	104°47'23.304"W	0.61	
10250.00	90.270	2.040	7259.39	2905.29	2903.82	108.15	40°11'50.018"N	104°47'23.261"W	0.14	
10344.00	89.960	3.090	7259.20	2999.29	2997.73	112.35	40°11'50.946"N	104°47'23.207"W	1.16	
10439.00	89.590	2.610	7259.58	3094.28	3092.61	117.08	40°11'51.883"N	104°47'23.146"W	0.64	
10534.00	89.780	3.050	7260.10	3189.28	3187.49	121.77	40°11'52.821"N	104°47'23.086"W	0.50	
10629.00	90.060	3.550	7260.23	3284.28	3282.33	127.24	40°11'53.758"N	104°47'23.015"W	0.60	
10724.00	90.550	3.140	7259.73	3379.28	3377.17	132.78	40°11'54.695"N	104°47'22.944"W	0.67	
10819.00	90.830	3.990	7258.58	3474.27	3471.98	138.69	40°11'55.632"N	104°47'22.868"W	0.94	



Actual Wellpath Report

NILES 4N-28HZ AWP

Page 5 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 NILES 4N-28HZ (210' FSL & 397' FWL, SEC.28)
Area	COLORADO	Well	NILES 4N-28HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NILES 4N-28HZ AWB
Facility	SEC.28-T3N-R66W		

WELLPATH DATA (148 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Latitude	Longitude	DLS [°/100ft]	Comments
10913.00	91.080	3.790	7257.01	3568.25	3565.75	145.06	40°11'56.559"N	104°47'22.786"W	0.34	
11008.00	89.960	5.620	7256.15	3663.21	3660.42	152.85	40°11'57.494"N	104°47'22.685"W	2.26	
11103.00	90.180	4.760	7256.04	3758.15	3755.03	161.45	40°11'58.429"N	104°47'22.574"W	0.93	
11198.00	90.520	6.320	7255.46	3853.07	3849.58	170.62	40°11'59.363"N	104°47'22.456"W	1.68	
11293.00	90.580	6.270	7254.54	3947.93	3944.00	181.03	40°12'00.297"N	104°47'22.322"W	0.08	
11387.00	88.920	7.110	7254.95	4041.75	4037.36	191.98	40°12'01.219"N	104°47'22.181"W	1.98	
11482.00	89.440	7.550	7256.31	4136.50	4131.57	204.10	40°12'02.150"N	104°47'22.025"W	0.72	
11577.00	88.580	6.280	7257.96	4231.29	4225.86	215.54	40°12'03.082"N	104°47'21.877"W	1.61	
11672.00	88.330	6.730	7260.52	4326.10	4320.22	226.30	40°12'04.014"N	104°47'21.739"W	0.54	
11767.00	89.240	7.940	7262.53	4420.83	4414.41	238.42	40°12'04.945"N	104°47'21.582"W	1.59	
11861.00	88.920	6.900	7264.04	4514.57	4507.61	250.56	40°12'05.866"N	104°47'21.426"W	1.16	
11881.00	88.950	6.850	7264.41	4534.53	4527.47	252.96	40°12'06.062"N	104°47'21.395"W	0.29	Last BHI MWD+IFR Surveys
11933.00	88.950	6.850	7265.36	4586.41	4579.09	259.16	40°12'06.572"N	104°47'21.315"W	0.00	Projection to Bit

HOLE & CASING SECTIONS - Ref Wellbore: NILES 4N-28HZ AWB Ref Wellpath: NILES 4N-28HZ 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	13.00	920.00	907.00	13.00	919.98	0.00	0.00	1.79	-0.51
9.625in Casing Surface	13.00	920.00	907.00	13.00	919.98	0.00	0.00	1.79	-0.51
8.75in Open Hole	920.00	7685.00	6765.00	919.98	7262.05	1.79	-0.51	339.97	93.46
7in Casing Intermediate	13.00	7675.00	7662.00	13.00	7261.80	0.00	0.00	329.97	93.41
6.125in Open Hole	7675.00	11933.00	4258.00	7261.80	7265.36	329.97	93.41	4579.09	259.16



Actual Wellpath Report

NILES 4N-28HZ AWP

Page 6 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 NILES 4N-28HZ (210' FSL & 397' FWL, SEC.28)
Area	COLORADO	Well	NILES 4N-28HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NILES 4N-28HZ AWB
Facility	SEC.28-T3N-R66W		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SECTION 28 LINES		0.00	0.00	0.00	3198304.10	1312582.33	40°11'21.322"N	104°47'24.655"W	polygon
NILES 4N-28HZ BHL ON PLAT (495'FWL & 460'FNL) REV-1		7194.00	4603.93	101.10	3198368.34	1317186.72	40°12'06.818"N	104°47'23.352"W	point
NILES 4N-28HZ LAND BOX		7206.00	0.00	0.00	3198304.10	1312582.33	40°11'21.322"N	104°47'24.655"W	polygon
NILES 4N-28HZ BHL (645'FWL & 460'FNL) REV-3		7250.00	4603.97	251.10	3198518.33	1317187.96	40°12'06.818"N	104°47'21.419"W	point
NILES 4N-28HZ BHL ON PLAT (495'FWL & 460'FNL) REV-2		7250.00	4603.97	101.10	3198368.34	1317186.76	40°12'06.818"N	104°47'23.352"W	point
SEC 28 HARDLINES (460' SETBACKS)		7300.30	0.00	0.00	3198304.10	1312582.33	40°11'21.322"N	104°47'24.655"W	polygon

WELLPATH COMPOSITION - Ref Wellbore: NILES 4N-28HZ AWB Ref Wellpath: NILES 4N-28HZ AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
13.00	843.00	Generic gyro - continuous (Standard)	LIGHTNING WIRELINE GYRO <113-843>	NILES 4N-28HZ AWB
843.00	7631.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 8 3/4" HOLE <941-7631>	NILES 4N-28HZ AWB
7631.00	11881.00	NaviTrak (MAGCORR,IFR)	BHI MWD+IFR SURVEYS 6 1/8" HOLE <7689-11881>	NILES 4N-28HZ AWB
11881.00	11933.00	Blind Drilling (std)	Projection to bit	NILES 4N-28HZ AWB



Actual Wellpath Report

NILES 4N-28HZ AWP

Page 7 of 7



REFERENCE WELLPATH IDENTIFICATION

Operator	KERR-MCGEE OIL & GAS ONSHORE LP	Slot	SLOT#01 NILES 4N-28HZ (210' FSL & 397' FWL, SEC.28)
Area	COLORADO	Well	NILES 4N-28HZ
Field	WELD COUNTY (KERR MCGEE)	Wellbore	NILES 4N-28HZ AWB
Facility	SEC.28-T3N-R66W		

WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
13.00	0.000	44.540	13.00	Tie-On
113.00	0.620	44.540	113.00	Begin GYRO Surveys
843.00	0.580	301.580	842.98	Tie-Into GYRO Surveys
941.00	0.450	67.270	940.98	Begin BHI MWD+IFR Surveys
7675.00	88.334	0.315	7261.80	7" Casing Point
11881.00	88.950	6.850	7264.41	Last BHI MWD+IFR Surveys
11933.00	88.950	6.850	7265.36	Projection to Bit