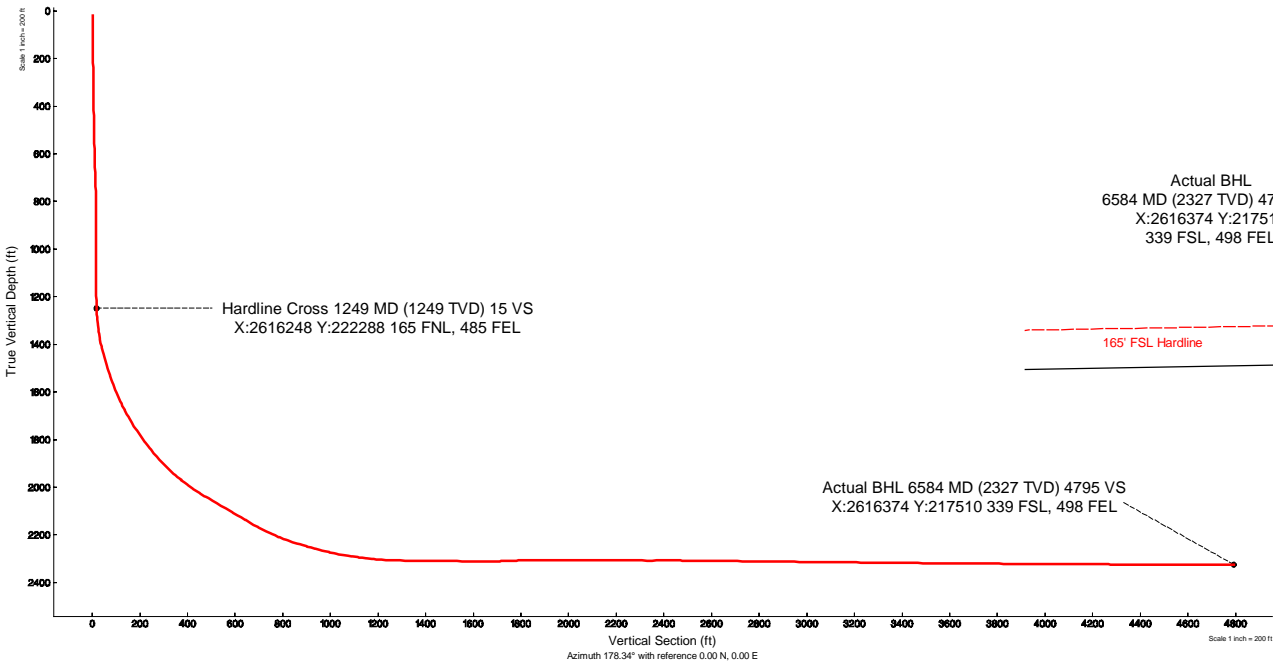
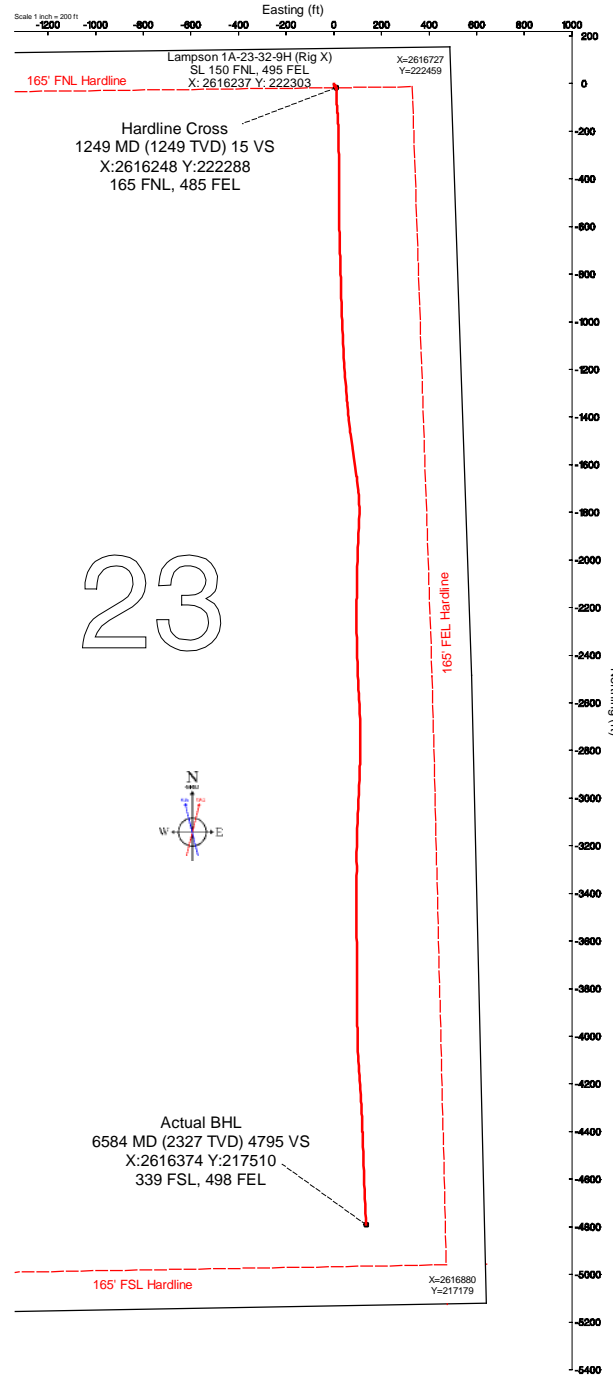


Nemaha Oil and Gas

Lampson 1A-23-32-9H (Nomac 23) (Final)
 Lampson 1A-23-32-9H (Nomac 23)
 Chautauqua County, KS

Plot reference wellpath is Plan 2		Grid System: NAD27 / Lambert Kansas SP, Southern Zone (1502), US feet				
True vertical depths are referenced to Nomac 23 (RKB)		North Reference: Grid north				
Measured depths are referenced to Nomac 23 (RKB)		Scale: True distance				
Nomac 23 (RKB) to Mean Sea Level: 1079 feet		Depths are in feet				
Mean Sea Level to Mud line (At Slot: Lampson 1A-23-32-9H (Nomac 23)): -1063 feet		Created by: fermikj on 3/7/2013				
Coordinates are in feet referenced to Slot						
Location Information						
Facility Name		Grid East (US ft)	Grid North (US ft)	Latitude	Longitude	
Lampson 1A-23-32-9H Sec 23-32S-9E		2616237.000	222303.000	37°15'28.708"N	96°22'57.118"W	
Slot	Local N (ft)	Local E (ft)	Grid East (US ft)	Grid North (US ft)	Latitude	Longitude
Lampson 1A-23-32-9H (Nomac 23)	0.00	0.00	2616237.000	222303.000	37°15'28.708"N	96°22'57.118"W
Nomac 23 (RKB) to Mud line (At Slot: Lampson 1A-23-32-9H (Nomac 23))				16ft		
Mean Sea Level to Mud line (At Slot: Lampson 1A-23-32-9H (Nomac 23))				-1063ft		
Nomac 23 (RKB) to Mean Sea Level				1079ft		

Actual BHL
6584 MD (2327 TVD) 4795 VS
X:2616374 Y:217510
339 FSL, 498 FEL





Actual Wellpath Report

Nemaha Oil and Gas Lampson 1A-23-32-9H (Nomac 23)_Final Surveys.

Page 1 of 5

REFERENCE WELLPATH IDENTIFICATION			
Operator	Nemaha Oil and Gas	Slot	Lampson 1A-23-32-9H (Nomac 23)
Area	Kansas	Well	SL (150 FNL, 495 FEL)
Field	Chautauqua County, KS	Wellbore	Lampson 1A-23-32-9H (Nomac 23) Actual
Facility	Lampson 1A-23-32-9H Sec 23-32S-9E		

REPORT SETUP INFORMATION			
Projection System	NAD27 / Lambert Kansas SP, Southern Zone (1502), US feet		
North Reference	Grid	Software System	WellArchitect 3.0.0
Convergence at slot	1.30° East	User	Burnranj
Scale	1	Report Generated	3/25/2013 at 5:49:00 PM
Wellbore last revised	02-20-2013	Database/Source file	Oklahoma City

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	2616237.00	222303.00	37°15'28.708"N	96°22'57.118"W
Facility Reference Pt			2616237.00	222303.00	37°15'28.708"N	96°22'57.118"W
Field Reference Pt			2646856.10	192342.92	37°10'25.526"N	96°16'47.322"W

WELLPATH DATUM			
Calculation method	Minimum curvature	Nomac 23 (RKB) to Facility Vertical Datum	16.00ft
Horizontal Reference Pt	Slot	Nomac 23 (RKB) to Mean Sea Level	1079.00ft
Vertical Reference Pt	Nomac 23 (RKB)	Nomac 23 (RKB) to Mud Line at Slot (Lampson 1A-23-32-9H (Nomac 23))	16.00ft
MD Reference Pt	Nomac 23 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	178.34°



Actual Wellpath Report

BAKER HUGHES

Nemaha Oil and Gas Lampson 1A-23-32-9H (Nomac 23)_Final Surveys.

Page 2 of 5

REFERENCE WELLPATH IDENTIFICATION				
Operator	Nemaha Oil and Gas		Slot	Lampson 1A-23-32-9H (Nomac 23)
Area	Kansas		Well	SL (150 FNL, 495 FEL)
Field	Chautauqua County, KS		Wellbore	Lampson 1A-23-32-9H (Nomac 23) Actual
Facility	Lampson 1A-23-32-9H Sec 23-32S-9E			

WELLPATH DATA (126 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]	DLS [°/100ft]	Comments
0.00	0.000	143.120	0.00	0.00	0.00	0.00	2616237.00	222303.00	0.00	
16.00	0.000	143.120	16.00	0.00	0.00	0.00	2616237.00	222303.00	0.00	
780.00	2.310	143.120	779.79	12.58	-12.32	9.24	2616246.24	222290.68	0.30	
843.00	0.510	121.710	842.77	13.77	-13.48	10.24	2616247.24	222289.52	2.93	
907.00	0.320	250.180	906.77	13.98	-13.69	10.32	2616247.32	222289.31	1.18	
970.00	0.410	152.910	969.77	14.24	-13.95	10.25	2616247.25	222289.05	0.87	
1033.00	0.110	87.080	1032.77	14.44	-14.15	10.42	2616247.42	222288.85	0.60	
1097.00	0.130	8.380	1096.77	14.37	-14.07	10.49	2616247.49	222288.93	0.24	
1159.00	0.070	174.110	1158.77	14.34	-14.04	10.50	2616247.50	222288.96	0.32	
1190.00	0.060	126.000	1189.77	14.37	-14.07	10.52	2616247.52	222288.93	0.17	
1222.00	0.520	177.250	1221.77	14.52	-14.23	10.54	2616247.54	222288.77	1.51	
1249.00	2.148	178.183	1248.76	15.15	-14.85	10.56	2616247.56	222288.15	6.03	Hardline Cross 1249 MD (1249 TVD) 15 VS X:2616248 Y:222288 165 FNL, 485 FEL
1254.00	2.450	178.220	1253.76	15.35	-15.05	10.57	2616247.57	222287.95	6.03	
1285.00	4.650	178.160	1284.70	17.27	-16.97	10.63	2616247.63	222286.03	7.10	
1317.00	6.600	178.780	1316.54	20.41	-20.11	10.71	2616247.71	222282.89	6.10	
1349.00	8.870	179.310	1348.25	24.72	-24.41	10.78	2616247.78	222278.59	7.10	
1381.00	10.850	179.200	1379.77	30.19	-29.89	10.85	2616247.85	222273.11	6.19	
1412.00	13.180	178.560	1410.09	36.65	-36.34	10.98	2616247.98	222266.66	7.53	
1444.00	14.870	178.250	1441.14	44.40	-44.10	11.20	2616248.20	222258.90	5.29	
1476.00	16.740	178.330	1471.92	53.12	-52.81	11.46	2616248.46	222250.19	5.84	
1507.00	17.740	177.570	1501.53	62.30	-61.99	11.79	2616248.79	222241.01	3.31	
1539.00	18.810	176.700	1531.92	72.34	-72.01	12.29	2616249.29	222230.99	3.45	
1571.00	20.350	175.890	1562.07	83.05	-82.71	12.99	2616249.99	222220.29	4.89	
1603.00	22.330	175.290	1591.87	94.68	-94.32	13.88	2616250.88	222208.68	6.22	
1635.00	23.740	175.100	1621.32	107.19	-106.80	14.93	2616251.93	222196.20	4.41	
1666.00	25.220	175.230	1649.53	120.01	-119.60	16.01	2616253.01	222183.40	4.78	
1698.00	27.340	176.240	1678.22	134.16	-133.72	17.06	2616254.06	222169.28	6.77	
1730.00	29.630	177.060	1706.35	149.42	-148.96	17.95	2616254.95	222154.04	7.26	
1762.00	31.640	177.690	1733.88	165.72	-165.25	18.70	2616255.70	222137.75	6.36	
1793.00	33.400	177.830	1760.02	182.38	-181.90	19.35	2616256.35	222121.10	5.68	
1825.00	35.150	178.340	1786.46	200.40	-199.91	19.95	2616256.95	222103.09	5.54	
1857.00	37.020	178.950	1812.32	219.25	-218.75	20.39	2616257.39	222084.25	5.95	
1888.00	38.840	179.130	1836.77	238.30	-237.80	20.71	2616257.71	222065.20	5.88	
1920.00	40.380	179.330	1861.42	258.70	-258.20	20.98	2616257.98	222044.80	4.83	
1952.00	42.650	179.220	1885.38	279.91	-279.41	21.25	2616258.25	222023.59	7.10	
1984.00	44.580	179.140	1908.55	301.98	-301.48	21.57	2616258.57	222001.52	6.03	
2015.00	46.590	179.210	1930.24	324.12	-323.62	21.89	2616258.89	221979.38	6.49	
2047.00	49.020	179.370	1951.73	347.82	-347.32	22.18	2616259.18	221955.68	7.60	
2078.00	51.050	179.400	1971.64	371.58	-371.08	22.43	2616259.43	221931.92	6.55	
2110.00	53.660	179.480	1991.19	396.91	-396.42	22.68	2616259.68	221906.58	8.16	
2142.00	55.780	179.500	2009.67	423.02	-422.54	22.91	2616259.91	221880.46	6.63	
2173.00	58.340	179.870	2026.52	449.03	-448.55	23.06	2616260.06	221854.45	8.32	
2205.00	59.740	180.080	2042.98	476.46	-475.99	23.07	2616260.07	221827.01	4.41	
2236.00	59.730	179.820	2058.61	503.22	-502.76	23.09	2616260.09	221800.24	0.73	
2268.00	59.840	179.730	2074.71	530.87	-530.42	23.20	2616260.20	221772.58	0.42	



Actual Wellpath Report

BAKER HUGHES

Nemaha Oil and Gas Lampson 1A-23-32-9H (Nomac 23)_Final Surveys.

Page 3 of 5

REFERENCE WELLPATH IDENTIFICATION			
Operator	Nemaha Oil and Gas	Slot	Lampson 1A-23-32-9H (Nomac 23)
Area	Kansas	Well	SL (150 FNL, 495 FEL)
Field	Chautauqua County, KS	Wellbore	Lampson 1A-23-32-9H (Nomac 23) Actual
Facility	Lampson 1A-23-32-9H Sec 23-32S-9E		

WELLPATH DATA (126 stations)										
MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Comments
2300.00	59.810	179.570	2090.80	558.52	-558.08	23.37	2616260.37	221744.92	0.44	
2331.00	59.810	179.280	2106.39	585.31	-584.87	23.64	2616260.64	221718.13	0.81	
2363.00	59.780	178.890	2122.49	612.97	-612.53	24.08	2616261.08	221690.47	1.06	
2395.00	59.800	178.670	2138.59	640.62	-640.17	24.67	2616261.67	221662.83	0.60	
2426.00	59.870	178.500	2154.16	667.42	-666.97	25.33	2616262.33	221636.03	0.53	
2458.00	61.360	178.300	2169.87	695.30	-694.84	26.11	2616263.11	221608.16	4.69	
2490.00	63.270	178.220	2184.73	723.64	-723.16	26.97	2616263.97	221579.84	5.97	
2521.00	65.770	178.320	2198.07	751.62	-751.13	27.81	2616264.81	221551.87	8.07	
2553.00	67.810	178.240	2210.68	781.03	-780.53	28.70	2616265.70	221522.47	6.38	
2585.00	69.390	178.540	2222.35	810.82	-810.31	29.53	2616266.53	221492.69	5.01	
2616.00	71.550	178.500	2232.72	840.04	-839.51	30.29	2616267.29	221463.49	6.97	
2648.00	73.000	178.500	2242.46	870.52	-869.98	31.09	2616268.09	221433.02	4.53	
2680.00	74.190	178.190	2251.50	901.21	-900.67	31.97	2616268.97	221402.33	3.83	
2712.00	75.310	178.040	2259.91	932.09	-931.52	32.99	2616269.99	221371.48	3.53	
2743.00	76.360	177.940	2267.50	962.14	-961.56	34.04	2616271.04	221341.44	3.40	
2775.00	77.430	177.600	2274.75	993.31	-992.70	35.25	2616272.25	221310.30	3.50	
2807.00	78.910	177.340	2281.31	1024.62	-1023.99	36.64	2616273.64	221279.01	4.69	
2838.00	80.010	177.370	2286.98	1055.10	-1054.44	38.04	2616275.04	221248.56	3.55	
2870.00	81.530	177.250	2292.12	1086.67	-1085.99	39.53	2616276.53	221217.01	4.76	
2902.00	82.410	177.530	2296.59	1118.36	-1117.64	40.97	2616277.97	221185.36	2.88	
2933.00	83.020	176.770	2300.52	1149.10	-1148.35	42.50	2616279.50	221154.65	3.13	
2965.00	84.420	176.020	2304.02	1180.89	-1180.09	44.50	2616281.50	221122.91	4.96	
2996.00	85.990	175.510	2306.61	1211.75	-1210.90	46.78	2616283.78	221092.10	5.32	
3059.00	89.080	175.910	2309.32	1274.61	-1273.66	51.49	2616288.49	221029.34	4.95	
3123.00	88.830	175.090	2310.49	1338.52	-1337.45	56.51	2616293.51	220965.55	1.34	
3186.00	89.570	173.820	2311.37	1401.37	-1400.15	62.59	2616299.59	220902.85	2.33	
3249.00	89.850	173.140	2311.68	1464.14	-1462.74	69.75	2616306.75	220840.26	1.17	
3313.00	89.050	171.760	2312.30	1527.80	-1526.18	78.16	2616315.16	220776.82	2.49	
3376.00	88.340	171.340	2313.73	1590.34	-1588.48	87.41	2616324.41	220714.52	1.31	
3440.00	90.400	171.710	2314.44	1653.88	-1651.77	96.84	2616333.84	220651.23	3.27	
3503.00	93.020	174.550	2312.56	1716.58	-1714.28	104.37	2616341.37	220588.72	6.13	
3567.00	91.690	179.380	2309.93	1780.49	-1778.11	107.76	2616344.76	220524.89	7.82	
3630.00	90.340	182.310	2308.81	1843.41	-1841.09	106.83	2616343.83	220461.91	5.12	
3694.00	91.200	182.980	2307.95	1907.22	-1905.01	103.88	2616340.88	220397.99	1.70	
3757.00	89.510	182.340	2307.56	1970.04	-1967.94	100.95	2616337.95	220335.06	2.87	
3821.00	90.180	181.010	2307.73	2033.93	-2031.91	99.08	2616336.08	220271.09	2.33	
3884.00	89.350	180.920	2307.99	2096.86	-2094.90	98.02	2616335.02	220208.10	1.33	
3947.00	90.000	181.210	2308.35	2159.79	-2157.89	96.85	2616333.85	220145.11	1.13	
4011.00	89.540	180.610	2308.61	2223.73	-2221.88	95.83	2616332.83	220081.12	1.18	
4074.00	88.830	179.020	2309.50	2286.70	-2284.87	96.04	2616333.04	220018.13	2.76	
4137.00	90.430	178.220	2309.91	2349.69	-2347.85	97.55	2616334.55	219955.15	2.84	
4201.00	90.180	178.320	2309.57	2413.69	-2411.82	99.49	2616336.49	219891.18	0.42	
4264.00	89.260	177.630	2309.88	2476.69	-2474.78	101.71	2616338.71	219828.22	1.83	
4313.00	89.510	177.830	2310.40	2525.68	-2523.74	103.65	2616340.65	219779.26	0.65	
4348.00	89.380	177.270	2310.74	2560.68	-2558.70	105.15	2616342.15	219744.30	1.64	



Actual Wellpath Report

Nemaha Oil and Gas Lampson 1A-23-32-9H (Nomac 23)_Final Surveys.

REFERENCE WELLPATH IDENTIFICATION			
Operator	Nemaha Oil and Gas	Slot	Lampson 1A-23-32-9H (Nomac 23)
Area	Kansas	Well	SL (150 FNL, 495 FEL)
Field	Chautauqua County, KS	Wellbore	Lampson 1A-23-32-9H (Nomac 23) Actual
Facility	Lampson 1A-23-32-9H Sec 23-32S-9E		

WELLPATH DATA (126 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	DLS [°/100ft]	Comments
4407.00	89.350	176.660	2311.39	2619.66	-2617.62	108.27	2616345.27	219685.38	1.04	
4467.00	89.350	177.750	2312.08	2679.64	-2677.54	111.20	2616348.20	219625.46	1.82	
4526.00	89.350	179.800	2312.74	2738.63	-2736.52	112.46	2616349.46	219566.48	3.47	
4586.00	89.380	181.010	2313.41	2798.59	-2796.52	112.03	2616349.03	219506.49	2.02	
4647.00	89.410	181.740	2314.05	2859.50	-2857.49	110.57	2616347.57	219445.51	1.20	
4710.00	89.350	182.580	2314.74	2922.35	-2920.44	108.20	2616345.20	219382.56	1.34	
4773.00	89.320	182.590	2315.47	2985.18	-2983.38	105.36	2616342.36	219319.62	0.05	
4862.00	89.380	182.210	2316.48	3073.95	-3072.29	101.63	2616338.63	219230.71	0.43	
4925.00	89.480	182.470	2317.10	3136.79	-3135.24	99.06	2616336.06	219167.76	0.44	
4989.00	89.450	180.950	2317.70	3200.68	-3199.20	97.15	2616334.15	219103.80	2.38	
5052.00	89.380	179.690	2318.34	3263.63	-3262.20	96.80	2616333.80	219040.80	2.00	
5116.00	89.410	180.290	2319.02	3327.60	-3326.19	96.81	2616333.81	218976.81	0.94	
5179.00	89.450	180.930	2319.65	3390.55	-3389.19	96.14	2616333.14	218913.81	1.02	
5242.00	89.380	180.720	2320.29	3453.49	-3452.18	95.23	2616332.23	218850.82	0.35	
5305.00	89.080	179.590	2321.14	3516.45	-3515.17	95.06	2616332.06	218787.83	1.86	
5369.00	89.660	178.060	2321.84	3580.44	-3579.15	96.37	2616333.37	218723.85	2.56	
5433.00	89.450	178.600	2322.34	3644.44	-3643.12	98.24	2616335.24	218659.88	0.91	
5496.00	90.030	180.470	2322.62	3707.42	-3706.12	98.75	2616335.75	218596.89	3.11	
5559.00	89.480	180.940	2322.89	3770.37	-3769.11	97.97	2616334.97	218533.89	1.15	
5623.00	89.450	179.340	2323.49	3834.33	-3833.10	97.82	2616334.82	218469.90	2.50	
5686.00	89.450	179.070	2324.09	3897.32	-3896.10	98.69	2616335.69	218406.91	0.43	
5749.00	89.820	179.530	2324.50	3960.31	-3959.09	99.46	2616336.46	218343.91	0.94	
5812.00	89.820	178.650	2324.69	4023.30	-4022.08	100.46	2616337.46	218280.92	1.40	
5875.00	89.630	176.750	2325.00	4086.30	-4085.03	102.99	2616339.99	218217.97	3.03	
5939.00	90.060	176.380	2325.17	4150.26	-4148.91	106.82	2616343.82	218154.09	0.89	
6002.00	89.380	175.570	2325.48	4213.21	-4211.75	111.24	2616348.24	218091.25	1.68	
6065.00	89.540	176.780	2326.07	4276.16	-4274.61	115.45	2616352.45	218028.39	1.94	
6129.00	89.690	177.720	2326.50	4340.15	-4338.53	118.52	2616355.52	217964.47	1.49	
6192.00	89.540	177.650	2326.92	4403.14	-4401.48	121.06	2616358.06	217901.52	0.26	
6255.00	89.480	177.940	2327.46	4466.14	-4464.43	123.49	2616360.49	217838.57	0.47	
6319.00	89.720	178.360	2327.91	4530.13	-4528.40	125.55	2616362.55	217774.60	0.76	
6382.00	89.510	177.770	2328.33	4593.13	-4591.36	127.68	2616364.68	217711.64	0.99	
6444.00	91.970	177.530	2327.53	4655.12	-4653.30	130.22	2616367.22	217649.70	3.99	
6508.00	89.660	177.520	2326.62	4719.10	-4717.23	132.98	2616369.98	217585.78	3.61	
6559.00	89.750	176.590	2326.89	4770.08	-4768.16	135.60	2616372.60	217534.84	1.83	
6584.00	89.750	176.590	2326.99	4795.07	-4793.11	137.09	2616374.09	217509.89	0.00	Actual BHL 6584 MD (2327 TVD) 4795 VS X:2616374 Y:217510 339 FSL, 498 FEL



Actual Wellpath Report

Nemaha Oil and Gas Lampson 1A-23-32-9H (Nomac 23)_Final Surveys.

REFERENCE WELLPATH IDENTIFICATION

Operator	Nemaha Oil and Gas	Slot	Lampson 1A-23-32-9H (Nomac 23)
Area	Kansas	Well	SL (150 FNL, 495 FEL)
Field	Chautauqua County, KS	Wellbore	Lampson 1A-23-32-9H (Nomac 23) Actual
Facility	Lampson 1A-23-32-9H Sec 23-32S-9E		

TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
Lampson 1A-23-32-9H PBHL 165 FSL 495 FEL Sec 23		2283.35	-4967.00	144.00	2616381.00	217336.00	37°14'39.578"N	96°22'56.733"W	point

WELLPATH COMPOSITION - Ref Wellbore: Lampson 1A-23-32-9H (Nomac 23) Actual Ref Wellpath: AWP - Final

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
16.00	6559.00	Autotrak Short (Magcorr)	INTEQ MWD	Lampson 1A-23-32-9H (Nomac 23) Actual
6559.00	6584.00	Blind Drilling (std)	Projection to bit	Lampson 1A-23-32-9H (Nomac 23) Actual