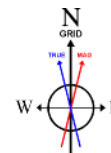


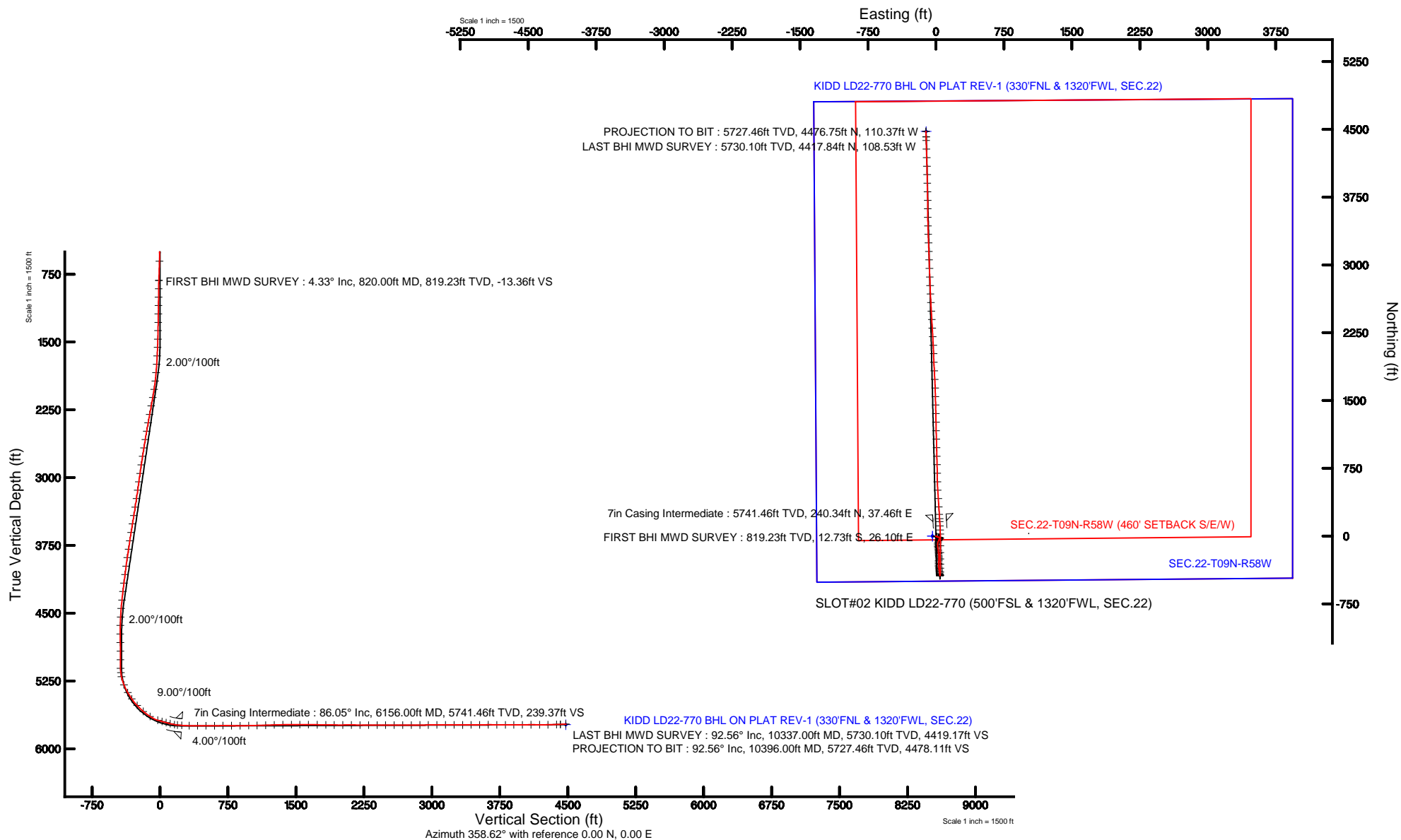
# NOBLE ENERGY, INC

Location: COLORADO Slot: SLOT#02 KIDD LD22-770 (500'FSL & 1320'FWL, SEC.22)  
Field: WELD COUNTY (NOBLE NAD 83 GRID) Well: KIDD LD22-770 API 123-41590  
Facility: SEC.22-T09N-R58W Wellbore: KIDD LD22-770 PWB

Plot reference wellpath is KIDD LD22-770 (REV-A.0) PWP	
True vertical depths are referenced to H&P 326 (RKB)	Grid System: NAD83 / Lambert Colorado SP, Northern Zone (501), US feet
Measured depths are referenced to H&P 326 (RKB)	North Reference: Grid north
H&P 326 (RKB) to Mean Sea Level: 4851 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot: SLOT#02 KIDD LD22-770 (500'FSL & 1320'FWL, SEC.22)): 0 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: adamkat on 9/17/2015



BGGM (1945.0 to 2017.0) Dip: 67.39° Field: 52890.5 nT  
Magnetic North is 8.01 degrees East of True North (at 8/17/2015)  
Grid North is 1.06 degrees East of True North  
To correct azimuth from True to Grid subtract 1.06 degrees  
To correct azimuth from Magnetic to Grid add 6.95 degrees



REFERENCE WELLPATH IDENTIFICATION			
Operator	NOBLE ENERGY, INC	Slot	SLOT#02 KIDD LD22-770 (500'FSL & 1320'FWL, SEC.22)
Area	COLORADO	Well	KIDD LD22-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	KIDD LD22-770 AWB
Facility	SEC.22-T09N-R58W		

REPORT SETUP INFORMATION			
Projection System	NAD83 / Lambert Colorado SP, Northern Zone (501), US feet	Software System	WellArchitect® 4.1.1
North Reference	Grid	User	Adamkat
Scale	0.999992	Report Generated	9/17/2015 at 9:57:05 AM
Convergence at slot	1.06° East	Database/Source file	WA_DEN_Denver_Defn/KIDD_LD22-770_AWB.xml

WELLPATH LOCATION						
	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.72	38.79	3455973.30	1513323.33	40°43'51.060"N	103°51'16.884"W
Facility Reference Pt			3455934.50	1513322.61	40°43'51.060"N	103°51'17.388"W
Field Reference Pt			3000000.00	4454105.15	48°46'34.315"N	105°30'00.000"W

WELLPATH DATUM			
Calculation method	Minimum curvature	H&P 326 (RKB) to Facility Vertical Datum	4851.00ft
Horizontal Reference Pt	Slot	H&P 326 (RKB) to Mean Sea Level	4851.00ft
Vertical Reference Pt	H&P 326 (RKB)	H&P 326 (RKB) to Mud Line at Slot (SLOT#02 KIDD LD22-770 (500'FSL & 1320'FWL, SEC.22))	4851.00ft
MD Reference Pt	H&P 326 (RKB)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	358.62°



# Actual Wellpath Report

KIDD LD22-770 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 KIDD LD22-770 (500'FSL & 1320'FWL, SEC.22)
Area	COLORADO	Well	KIDD LD22-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	KIDD LD22-770 AWB
Facility	SEC.22-T09N-R58W		

## WELLPATH DATA (107 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
820.00	4.330	116.010	819.23	-13.36	-12.73	26.10	0.38	FIRST BHI MWD SURVEY
913.00	3.530	95.330	912.01	-15.31	-14.54	32.10	1.74	
1005.00	1.830	100.460	1003.91	-15.94	-15.07	36.37	1.86	
1098.00	1.070	162.540	1096.88	-17.08	-16.17	38.09	1.75	
1191.00	1.180	172.710	1189.86	-18.87	-17.95	38.47	0.24	
1284.00	1.120	151.920	1282.85	-20.63	-19.70	39.02	0.45	
1376.00	1.210	150.210	1374.83	-22.29	-21.33	39.93	0.10	
1469.00	1.180	166.090	1467.81	-24.09	-23.11	40.64	0.36	
1561.00	2.390	191.610	1559.76	-26.88	-25.91	40.49	1.54	
1655.00	3.380	199.460	1653.64	-31.38	-30.45	39.17	1.13	
1748.00	4.350	209.350	1746.43	-36.98	-36.11	36.53	1.26	
1842.00	5.440	205.370	1840.09	-44.02	-43.24	32.87	1.21	
1934.00	7.360	202.830	1931.51	-53.29	-52.61	28.71	2.11	
2028.00	8.970	198.610	2024.55	-65.67	-65.11	24.04	1.83	
2120.00	10.140	190.460	2115.28	-80.33	-79.87	20.28	1.94	
2214.00	10.500	180.830	2207.77	-96.99	-96.57	18.65	1.87	
2309.00	10.440	172.330	2301.19	-114.20	-113.76	19.68	1.63	
2403.00	10.140	170.880	2393.68	-130.86	-130.37	22.12	0.42	
2497.00	10.000	171.100	2486.23	-147.15	-146.60	24.70	0.15	
2592.00	9.350	176.920	2579.88	-163.05	-162.46	26.39	1.24	
2686.00	9.150	175.910	2672.66	-178.14	-177.54	27.33	0.27	
2780.00	8.920	174.770	2765.49	-192.88	-192.25	28.53	0.31	
2875.00	8.450	172.700	2859.40	-207.17	-206.51	30.09	0.59	
2970.00	7.940	171.960	2953.43	-220.63	-219.93	31.89	0.55	
3064.00	7.640	183.430	3046.57	-233.31	-232.59	32.43	1.68	
3158.00	8.210	181.150	3139.67	-246.24	-245.54	31.92	0.69	
3252.00	8.590	182.570	3232.66	-259.95	-259.27	31.47	0.46	
3347.00	8.730	182.540	3326.58	-274.22	-273.56	30.83	0.15	
3441.00	9.060	183.300	3419.45	-288.71	-288.07	30.09	0.37	
3536.00	9.260	184.860	3513.24	-303.77	-303.15	29.01	0.34	
3632.00	9.610	177.720	3607.94	-319.46	-318.86	28.68	1.27	
3725.00	8.270	175.710	3699.81	-333.90	-333.28	29.48	1.48	
3819.00	8.480	171.730	3792.81	-347.53	-346.89	30.99	0.66	
3913.00	8.590	169.170	3885.77	-361.34	-360.64	33.30	0.42	
4008.00	7.810	175.090	3979.80	-374.78	-374.04	35.19	1.21	
4102.00	7.040	171.910	4073.01	-386.87	-386.11	36.55	0.93	
4197.00	7.080	172.500	4167.29	-398.48	-397.67	38.13	0.09	
4291.00	6.700	173.930	4260.61	-409.70	-408.87	39.47	0.44	
4385.00	6.090	171.820	4354.03	-420.12	-419.26	40.76	0.70	
4480.00	4.650	176.900	4448.61	-428.97	-428.09	41.68	1.59	
4574.00	2.880	179.330	4542.40	-435.14	-434.26	41.91	1.89	
4668.00	1.120	172.540	4636.34	-438.42	-437.53	42.06	1.89	
4763.00	0.650	51.640	4731.33	-439.02	-438.12	42.60	1.64	
4857.00	1.080	58.790	4825.32	-438.26	-437.33	43.78	0.47	
4952.00	0.560	60.410	4920.31	-437.59	-436.63	44.95	0.55	

### REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 KIDD LD22-770 (500'FSL & 1320'FWL, SEC.22)
Area	COLORADO	Well	KIDD LD22-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	KIDD LD22-770 AWB
Facility	SEC.22-T09N-R58W		

### WELLPATH DATA (107 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
5046.00	0.400	56.270	5014.31	-437.20	-436.23	45.62	0.17	
5141.00	1.280	8.690	5109.30	-435.98	-434.99	46.06	1.11	
5191.00	6.790	4.520	5159.16	-432.48	-431.49	46.38	11.03	
5235.00	11.180	6.000	5202.60	-425.66	-424.65	47.03	9.99	
5330.00	22.460	3.060	5293.40	-398.35	-397.28	48.96	11.90	
5425.00	30.500	358.680	5378.37	-356.07	-354.99	49.38	8.70	
5508.00	34.700	359.270	5448.28	-311.37	-310.29	48.59	5.07	
5602.00	43.010	358.850	5521.41	-252.45	-251.38	47.61	8.84	
5697.00	49.390	1.770	5587.14	-183.97	-182.86	48.07	7.07	
5791.00	56.440	0.960	5643.79	-109.11	-107.94	49.83	7.53	
5886.00	72.220	358.640	5684.81	-23.78	-22.60	49.42	16.75	
5933.00	74.690	358.300	5698.20	21.27	22.44	48.21	5.30	
5980.00	75.260	357.920	5710.38	66.66	67.81	46.72	1.44	
6027.00	75.230	357.770	5722.35	112.11	113.22	45.01	0.32	
6075.00	79.880	356.210	5732.69	158.94	160.02	42.54	10.19	
6108.00	84.030	356.450	5737.31	191.59	192.62	40.45	12.60	
6239.00	89.540	356.280	5744.65	322.23	323.10	32.16	4.21	
6332.00	89.850	355.780	5745.15	415.13	415.87	25.72	0.63	
6424.00	89.880	356.750	5745.37	507.05	507.68	19.73	1.05	
6518.00	90.430	358.340	5745.11	601.03	601.59	15.70	1.79	
6611.00	90.890	359.640	5744.04	694.02	694.56	14.06	1.48	
6706.00	88.150	358.340	5744.84	789.01	789.53	12.39	3.19	
6800.00	90.620	358.570	5745.85	882.99	883.49	9.86	2.64	
6895.00	91.390	358.590	5744.18	977.98	978.44	7.50	0.81	
6989.00	91.540	358.370	5741.78	1071.95	1072.38	5.01	0.28	
7083.00	91.600	358.460	5739.20	1165.91	1166.31	2.41	0.12	
7178.00	91.850	359.280	5736.34	1260.87	1261.25	0.54	0.90	
7272.00	90.460	358.540	5734.45	1354.84	1355.21	-1.25	1.68	
7367.00	90.370	358.580	5733.76	1449.84	1450.17	-3.64	0.10	
7461.00	89.970	358.500	5733.48	1543.84	1544.14	-6.03	0.43	
7556.00	90.060	358.090	5733.45	1638.84	1639.10	-8.86	0.44	
7651.00	88.800	357.330	5734.40	1733.82	1734.02	-12.66	1.55	
7746.00	89.570	356.620	5735.75	1828.77	1828.87	-17.67	1.10	
7840.00	89.230	357.080	5736.73	1922.72	1922.73	-22.83	0.61	
7935.00	90.370	358.980	5737.07	2017.71	2017.66	-26.10	2.33	
8029.00	90.030	356.720	5736.74	2111.69	2111.59	-29.62	2.43	
8124.00	89.050	356.870	5737.50	2206.64	2206.44	-34.94	1.04	
8218.00	89.940	356.600	5738.33	2300.58	2300.28	-40.29	0.99	
8313.00	89.540	356.730	5738.76	2395.53	2395.12	-45.82	0.44	
8407.00	90.220	356.650	5738.96	2489.47	2488.96	-51.24	0.73	
8501.00	89.750	357.240	5738.98	2583.43	2582.83	-56.25	0.80	
8596.00	90.550	357.300	5738.73	2678.40	2677.72	-60.78	0.84	
8690.00	90.620	357.930	5737.77	2772.39	2771.63	-64.69	0.67	
8785.00	89.880	357.870	5737.36	2867.38	2866.57	-68.17	0.78	
8879.00	90.800	357.740	5736.80	2961.36	2960.49	-71.77	0.99	

## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 KIDD LD22-770 (500'FSL & 1320'FWL, SEC.22)
Area	COLORADO	Well	KIDD LD22-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	KIDD LD22-770 AWB
Facility	SEC.22-T09N-R58W		

## WELLPATH DATA (107 stations)

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	DLS [°/100ft]	Comments
8974.00	90.830	358.360	5735.45	3056.35	3055.43	-75.00	0.65	
9068.00	89.630	357.870	5735.07	3150.34	3149.38	-78.09	1.38	
9162.00	89.110	357.850	5736.11	3244.33	3243.30	-81.60	0.55	
9257.00	90.180	357.700	5736.69	3339.32	3338.23	-85.29	1.14	
9351.00	90.650	358.620	5736.01	3433.31	3432.18	-88.31	1.10	
9446.00	90.550	359.490	5735.02	3528.30	3527.16	-89.88	0.92	
9540.00	90.090	359.660	5734.49	3622.28	3621.15	-90.57	0.52	
9634.00	89.050	359.250	5735.20	3716.27	3715.15	-91.47	1.19	
9729.00	89.910	358.580	5736.06	3811.26	3810.12	-93.27	1.15	
9823.00	89.780	359.170	5736.32	3905.26	3904.10	-95.11	0.64	
9918.00	91.290	358.710	5735.43	4000.25	3999.08	-96.87	1.66	
10012.00	89.940	358.360	5734.42	4094.25	4093.04	-99.27	1.48	
10106.00	89.570	358.170	5734.82	4188.24	4187.00	-102.12	0.44	
10200.00	91.170	358.610	5734.22	4282.24	4280.96	-104.76	1.77	
10295.00	91.850	358.360	5731.71	4377.20	4375.89	-107.27	0.76	
10337.00	92.560	358.210	5730.10	4419.17	4417.84	-108.53	1.73	LAST BHI MWD SURVEY
10396.00	92.560	358.210	5727.46	4478.11	4476.75	-110.37	0.00	PROJECTION TO BIT

## HOLE & CASING SECTIONS - Ref Wellbore: KIDD LD22-770 AWB Ref Wellpath: KIDD LD22-770 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]
8.75in Open Hole	768.00	6168.00	5400.00	767.37	5742.23	-11.05	22.65	252.29	36.71
7in Casing Intermediate	30.00	6156.00	6126.00	30.00	5741.46	0.00	0.00	240.34	37.46
6.125in Open Hole	6168.00	10396.00	4228.00	5742.23	5727.46	252.29	36.71	4476.75	-110.37

## TARGETS

Name	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
SEC.22-T09N-R58W	-1.00	-0.72	-38.79	3455934.50	1513322.61	40°43'51.060"N	103°51'17.388"W	polygon
KIDD LD22-770 BHL ON PLAT REV-1 (330'FNL & 1320'FWL, SEC.22)	5734.00	4476.43	-108.01	3455865.29	1517799.71	40°44'35.304"N	103°51'17.208"W	point
SEC.22-T09N-R58W (460' SETBACK S/E/W)	5834.00	-0.72	-38.79	3455934.50	1513322.61	40°43'51.060"N	103°51'17.388"W	polygon

## WELLPATH COMPOSITION - Ref Wellbore: KIDD LD22-770 AWB Ref Wellpath: KIDD LD22-770 AWP

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment
30.00	606.00	Drift Indicator - Estimated Azimuth (Standard)	INC ONLY SURVEYS PROVIDED BY NOBLE <342 - 606>
606.00	6108.00	NaviTrak (MagCorr)	BHI MWD NAVITRAK (MAGCORR) 8 3/4" VERTICAL/CURVE <820 - 6108
6108.00	10337.00	NaviTrak (Standard)	BHI MWD NAVITRAK (MAGCORR) 6 1/8" LATERAL <6108 - 10337>
10337.00	10396.00	Blind Drilling (std)	Projection to bit



# Actual Wellpath Report

KIDD LD22-770 AWP

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## REFERENCE WELLPATH IDENTIFICATION

Operator	NOBLE ENERGY, INC	Slot	SLOT#02 KIDD LD22-770 (500'FSL & 1320'FWL, SEC.22)
Area	COLORADO	Well	KIDD LD22-770
Field	WELD COUNTY (NOBLE NAD 83 GRID)	Wellbore	KIDD LD22-770 AWB
Facility	SEC.22-T09N-R58W		

## WELLPATH COMMENTS

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Comment
820.00	4.330	116.010	819.23	FIRST BHI MWD SURVEY
10337.00	92.560	358.210	5730.10	LAST BHI MWD SURVEY
10396.00	92.560	358.210	5727.46	PROJECTION TO BIT