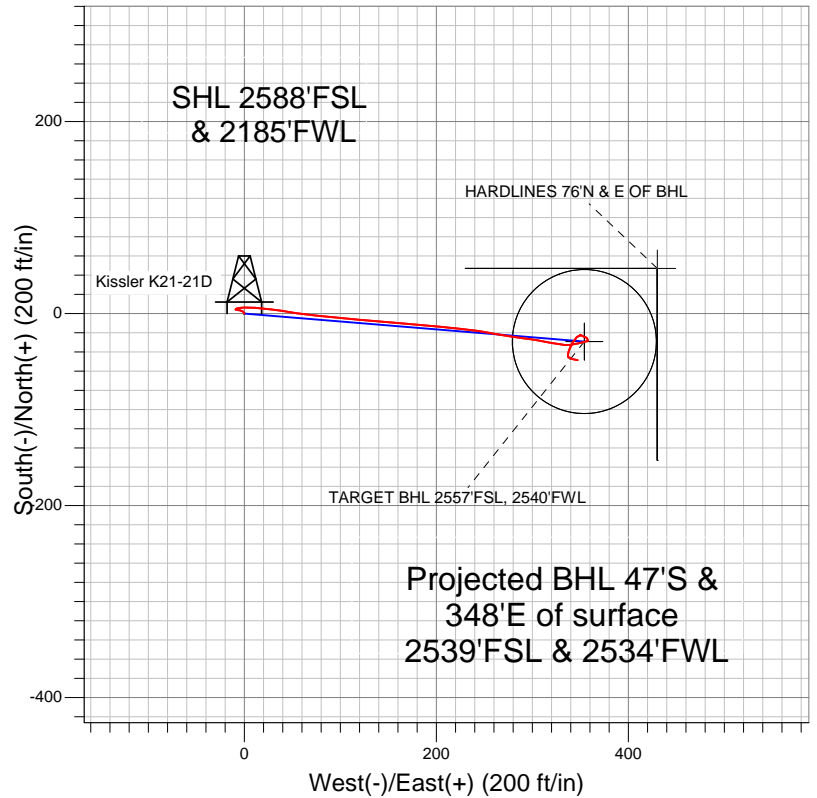


Well Name: Kissler K21-21D

Surface Location: Kissler K21-21D Pad Sec.21-T4N-R66W
North American Datum 1983 US State Plane 1983Colorado Northern Zone
Ground Elevation: 4756.0

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1351840.75	3199700.30	40.296990	-104.784050	
		Original Well Elev				WELL @ 4769.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



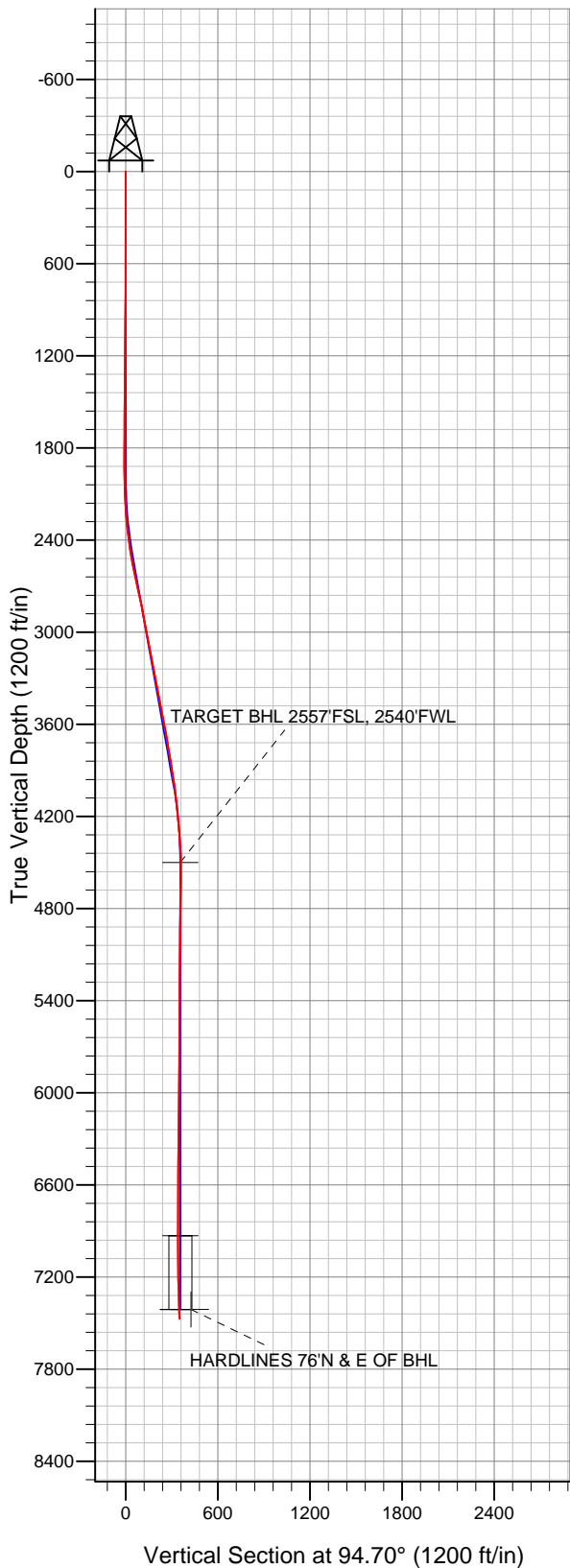
LEGEND

- Survey #1
- Kissler K21-21D, Wellbore #1, Noble Kissler K21-21D Plan #4 (1-16-12) R V0
- Wellbore #1

Final Survey Plot

Projected Final Survey -
7504'MD & 7472'TVD @ 351'VS
2.60 deg Inc 97.9 deg AZ

Project: SEC.21-T4N-R66W
Site: Kissler K21-21D Pad Sec.21-T4N-R66W
Well: Kissler K21-21D
Plan: Wellbore #1





NOBLE ENERGY INC WELD COUNTY CO

SEC.21-T4N-R66W

Kissler K21-21D Pad Sec.21-T4N-R66W

Kissler K21-21D

Wellbore #1

Survey: Survey #1

Standard Survey Report

20 January, 2012



Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Kissler K21-21D
Project:	SEC.21-T4N-R66W	TVD Reference:	WELL @ 4769.0ft (Original Well Elev)
Site:	Kissler K21-21D Pad Sec.21-T4N-R66W	MD Reference:	WELL @ 4769.0ft (Original Well Elev)
Well:	Kissler K21-21D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Project	SEC.21-T4N-R66W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		Using Well Reference Point
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Kissler K21-21D Pad Sec.21-T4N-R66W		
Site Position:		Northing:	1,351,840.75 ft
From:	Lat/Long	Easting:	3,199,700.30 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	40.296990
		Longitude:	-104.784050
		Grid Convergence:	0.46 °

Well	Kissler K21-21D		
Well Position	+N/-S	0.0 ft	Northing: 1,351,840.75 ft
	+E/-W	0.0 ft	Easting: 3,199,700.30 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft
		Latitude:	40.296990
		Longitude:	-104.784050
		Ground Level:	4,756.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	1/16/2012	8.79	66.94	53,014

Design	Wellbore #1				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.0
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.0	0.0	0.0	94.70	

Survey Program	Date	1/20/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
690.0	7,504.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00	
690.0	0.40	327.00	690.0	2.0	-1.3	-1.5	0.06	0.06	0.00	
784.0	0.40	286.70	784.0	2.4	-1.8	-2.0	0.29	0.00	-42.87	
878.0	0.40	287.90	878.0	2.6	-2.4	-2.6	0.01	0.00	1.28	
972.0	0.40	285.00	972.0	2.8	-3.1	-3.3	0.02	0.00	-3.09	
1,067.0	0.50	292.20	1,067.0	3.0	-3.8	-4.0	0.12	0.11	7.58	
1,160.0	0.40	297.80	1,160.0	3.3	-4.4	-4.7	0.12	-0.11	6.02	
1,253.0	0.40	275.60	1,253.0	3.5	-5.0	-5.3	0.17	0.00	-23.87	
1,346.0	0.40	279.70	1,346.0	3.6	-5.7	-6.0	0.03	0.00	4.41	
1,441.0	0.50	267.70	1,441.0	3.6	-6.4	-6.7	0.14	0.11	-12.63	
1,534.0	0.40	302.40	1,534.0	3.8	-7.1	-7.4	0.31	-0.11	37.31	
1,627.0	0.50	274.90	1,627.0	4.0	-7.8	-8.1	0.25	0.11	-29.57	
1,721.0	0.40	261.20	1,721.0	4.0	-8.5	-8.8	0.16	-0.11	-14.57	

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Kissler K21-21D
Project:	SEC.21-T4N-R66W	TVD Reference:	WELL @ 4769.0ft (Original Well Elev)
Site:	Kissler K21-21D Pad Sec.21-T4N-R66W	MD Reference:	WELL @ 4769.0ft (Original Well Elev)
Well:	Kissler K21-21D	North Reference:	True
Wellbore:	Wellbore #1	Survey Calculation Method:	Minimum Curvature
Design:	Wellbore #1	Database:	Landmark

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
1,814.0	0.40	294.40	1,814.0	4.1	-9.1	-9.4	0.25	0.00	35.70
1,909.0	0.60	33.20	1,909.0	4.6	-9.2	-9.5	0.81	0.21	104.00
2,003.0	1.00	71.60	2,003.0	5.3	-8.1	-8.5	0.69	0.43	40.85
2,095.0	2.60	84.20	2,094.9	5.8	-5.3	-5.7	1.78	1.74	13.70
2,189.0	3.40	84.70	2,188.8	6.2	-0.4	-0.9	0.85	0.85	0.53
2,282.0	5.30	93.90	2,281.5	6.2	6.7	6.1	2.17	2.04	9.89
2,376.0	6.90	94.20	2,375.0	5.5	16.6	16.1	1.70	1.70	0.32
2,470.0	8.60	97.20	2,468.1	4.2	29.2	28.8	1.86	1.81	3.19
2,564.0	11.20	99.30	2,560.7	1.8	45.2	44.9	2.79	2.77	2.23
2,658.0	12.30	96.70	2,652.7	-0.8	64.2	64.0	1.30	1.17	-2.77
2,751.0	13.00	96.20	2,743.5	-3.1	84.4	84.4	0.76	0.75	-0.54
2,845.0	11.10	95.30	2,835.4	-5.1	103.9	104.0	2.03	-2.02	-0.96
2,938.0	10.70	93.70	2,926.7	-6.5	121.5	121.6	0.54	-0.43	-1.72
3,033.0	11.10	95.60	3,020.0	-7.9	139.4	139.5	0.57	0.42	2.00
3,127.0	10.90	96.00	3,112.3	-9.7	157.2	157.5	0.23	-0.21	0.43
3,219.0	10.10	93.70	3,202.7	-11.2	173.9	174.2	0.98	-0.87	-2.50
3,313.0	10.60	94.10	3,295.2	-12.3	190.7	191.1	0.54	0.53	0.43
3,406.0	11.10	96.50	3,386.5	-13.9	208.2	208.6	0.72	0.54	2.58
3,499.0	10.80	96.30	3,477.9	-15.9	225.7	226.3	0.33	-0.32	-0.22
3,593.0	11.60	98.60	3,570.1	-18.3	243.8	244.5	0.97	0.85	2.45
3,686.0	10.00	100.20	3,661.4	-21.1	261.0	261.9	1.75	-1.72	1.72
3,780.0	8.90	98.80	3,754.1	-23.7	276.2	277.3	1.20	-1.17	-1.49
3,873.0	9.70	97.20	3,845.9	-25.8	291.1	292.3	0.90	0.86	-1.72
3,967.0	8.80	100.20	3,938.7	-28.0	306.1	307.3	1.09	-0.96	3.19
4,060.0	7.70	99.70	4,030.7	-30.3	319.2	320.6	1.19	-1.18	-0.54
4,154.0	5.70	100.00	4,124.1	-32.2	330.0	331.5	2.13	-2.13	0.32
4,248.0	5.40	84.20	4,217.6	-32.6	339.0	340.5	1.65	-0.32	-16.81
4,342.0	5.20	76.30	4,311.2	-31.1	347.5	348.9	0.80	-0.21	-8.40
4,435.0	3.40	75.60	4,404.0	-29.4	354.3	355.5	1.94	-1.94	-0.75
4,529.0	0.80	68.40	4,497.9	-28.5	357.6	358.8	2.77	-2.77	-7.66
4,531.1	0.78	67.81	4,500.0	-28.5	357.6	358.8	1.10	-1.03	-28.22
TARGET BHL 2557'FSL, 2540'FWL									
4,623.0	0.40	312.70	4,591.9	-28.0	358.0	359.1	1.10	-0.41	-125.23
4,716.0	1.60	343.30	4,684.9	-26.6	357.4	358.4	1.37	1.29	32.90
4,809.0	1.20	294.40	4,777.9	-24.9	356.1	357.0	1.31	-0.43	-52.58
4,902.0	1.20	289.20	4,870.8	-24.2	354.3	355.1	0.12	0.00	-5.59
4,997.0	0.80	295.00	4,965.8	-23.6	352.8	353.5	0.43	-0.42	6.11
5,091.0	0.70	292.30	5,059.8	-23.1	351.6	352.4	0.11	-0.11	-2.87
5,185.0	0.50	305.10	5,153.8	-22.6	350.8	351.5	0.25	-0.21	13.62
5,278.0	0.60	304.60	5,246.8	-22.1	350.0	350.7	0.11	0.11	-0.54
5,372.0	0.40	156.30	5,340.8	-22.2	349.8	350.4	1.03	-0.21	-157.77
5,465.0	0.40	189.50	5,433.8	-22.8	349.8	350.5	0.25	0.00	35.70
5,559.0	0.20	221.80	5,527.8	-23.2	349.7	350.4	0.27	-0.21	34.36
5,652.0	0.60	275.60	5,620.8	-23.3	349.1	349.8	0.55	0.43	57.85
5,747.0	0.80	237.80	5,715.8	-23.6	348.0	348.8	0.52	0.21	-39.79
5,841.0	1.00	253.50	5,809.8	-24.2	346.7	347.5	0.34	0.21	16.70
5,934.0	1.10	198.30	5,902.8	-25.3	345.6	346.5	1.05	0.11	-59.35
6,027.0	0.90	221.30	5,995.8	-26.7	344.9	345.9	0.48	-0.22	24.73
6,121.0	0.90	221.30	6,089.7	-27.8	343.9	345.0	0.00	0.00	0.00
6,214.0	0.90	231.30	6,182.7	-28.8	342.8	344.1	0.17	0.00	10.75
6,307.0	1.30	205.00	6,275.7	-30.2	341.8	343.2	0.68	0.43	-28.28
6,400.0	0.80	196.00	6,368.7	-31.8	341.2	342.7	0.56	-0.54	-9.68
6,494.0	0.80	207.10	6,462.7	-33.0	340.7	342.3	0.16	0.00	11.81
6,588.0	0.90	203.60	6,556.7	-34.2	340.1	341.8	0.12	0.11	-3.72

Company:	NOBLE ENERGY INC WELD COUNTY CO	Local Co-ordinate Reference:	Well Kissler K21-21D
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Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
6,681.0	1.10	208.50	6,649.7	-35.7	339.4	341.2	0.23	0.22	5.27
6,775.0	1.10	206.70	6,743.6	-37.3	338.6	340.5	0.04	0.00	-1.91
6,869.0	1.40	191.40	6,837.6	-39.2	337.9	340.0	0.47	0.32	-16.28
6,963.0	1.50	187.00	6,931.6	-41.6	337.6	339.8	0.16	0.11	-4.68
TARGET CIRCLE 2557'FSL, 2540'FWL									
7,057.0	1.50	188.80	7,025.6	-44.0	337.2	339.7	0.05	0.00	1.92
7,151.0	0.70	123.20	7,119.5	-45.5	337.5	340.1	1.46	-0.85	-69.79
7,244.0	1.10	106.00	7,212.5	-46.1	338.9	341.5	0.51	0.43	-18.49
7,337.0	1.70	116.40	7,305.5	-47.0	340.9	343.7	0.70	0.65	11.18
7,445.7	2.49	99.25	7,414.1	-48.1	344.7	347.5	0.92	0.73	-15.78
HARDLINES 76'N & E OF BHL									
7,459.0	2.60	97.90	7,427.4	-48.1	345.3	348.1	0.92	0.80	-10.16
7,504.0	2.60	97.90	7,472.4	-48.4	347.3	350.1	0.00	0.00	0.00

Checked By: _____	Approved By: _____	Date: _____
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