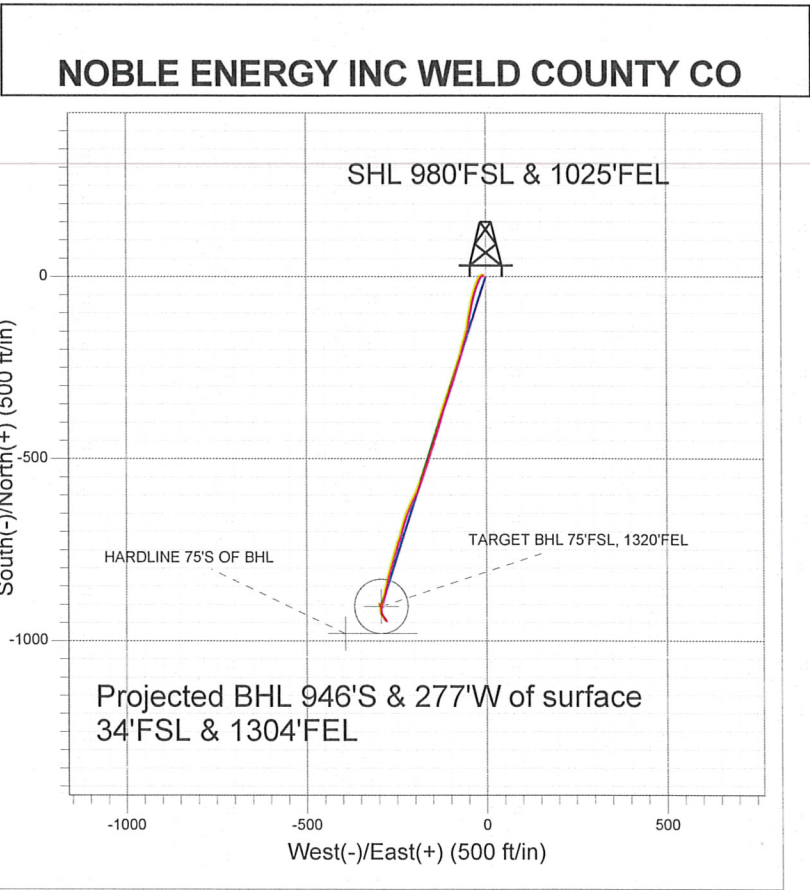
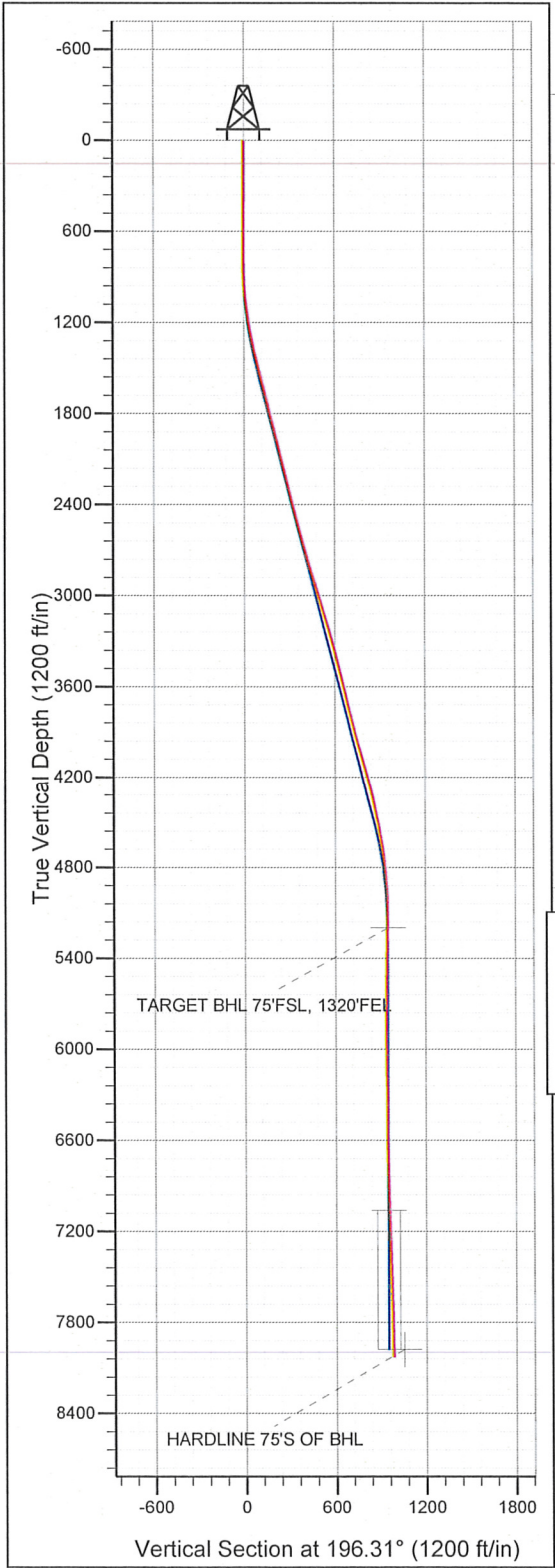




Well Name: **Barclay Farms L11-27D**  
 Surface Location: Barclay Farms Pad Sec.2-T3N-R66W  
 North American Datum 1983, US State Plane 1983 Colorado Northern Zone  
 Ground Elevation: 4925.0  

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude	Slot
0.0	0.0	1334603.42	3212545.85	40° 14' 57.768 N	104° 44' 18.708 W	

 Original Well Elev @ 4938.0ft (Original Well Elev)



**LEGEND**

- Barclay Farms L11-27D, Wellbore #1, Noble Barclay Farms L11-27D Plan #2 (06-16-10) V0
- Wellbore #1
- Survey #1

# Final Survey Plot

Projected Final Survey -  
 8149'MD & 8031'TVD @ 985' VS  
 1.0 deg Inc 147.7 deg AZ

Project: SEC.2-T3N-R66W  
 Site: Barclay Farms Pad Sec.2-T3N-R66W  
 Well: Barclay Farms L11-27D  
 Plan: Wellbore #1

Company: NOBLE ENERGY INC WELD COUNTY CO  
 Project: SEC.2-T3N-R66W  
 Site: Barclay Farms Pad Sec.2-T3N-R66W  
 Well: Barclay Farms L11-27D  
 Wellbore: Wellbore #1  
 Design: Wellbore #1

Local Co-ordinate Reference: Well Barclay Farms L11-27D  
 TVD Reference: WELL @ 4938.0ft (Original Well Elev)  
 MD Reference: WELL @ 4938.0ft (Original Well Elev)  
 North Reference: True  
 Survey Calculation Method: Minimum Curvature  
 Database: Landmark

Project	SEC.2-T3N-R66W		
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	Barclay Farms Pad Sec.2-T3N-R66W				
Site Position:		Northing:	1,334,603.43 ft	Latitude:	40° 14' 57.768 N
From:	Lat/Long	Easting:	3,212,545.85 ft	Longitude:	104° 44' 18.708 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.49 °

Well	Barclay Farms L11-27D					
Well Position	+N/-S	0.0 ft	Northing:	1,334,603.42 ft	Latitude:	40° 14' 57.768 N
	+E/-W	0.0 ft	Easting:	3,212,545.85 ft	Longitude:	104° 44' 18.708 W
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,925.0 ft	

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	6/16/2010	8.97	66.97	53,160

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	196.31	

Survey Program	Date 9/23/2010				
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
733.0	8,149.0	Survey #1 (Wellbore #1)	MWD	MWD - Standard	

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
733.0	1.00	298.10	733.0	3.0	-5.6	-1.3	0.14	0.14	0.00
818.0	1.70	276.50	817.9	3.5	-7.5	-1.2	1.00	0.82	-25.41
904.0	3.50	230.20	903.9	2.0	-10.8	1.2	3.06	2.09	-53.84
989.0	5.80	217.20	988.6	-3.1	-15.4	7.3	2.96	2.71	-15.29
1,074.0	7.00	201.70	1,073.0	-11.3	-19.9	16.5	2.46	1.41	-18.24
1,160.0	8.20	198.60	1,158.3	-22.0	-23.8	27.8	1.47	1.40	-3.60
1,245.0	10.40	200.50	1,242.2	-35.0	-28.5	41.5	2.61	2.59	2.24
1,331.0	12.50	195.00	1,326.5	-51.2	-33.6	58.6	2.75	2.44	-6.40
1,416.0	13.60	190.30	1,409.3	-69.9	-37.7	77.7	1.80	1.29	-5.53
1,502.0	14.80	190.60	1,492.6	-90.7	-41.6	98.7	1.40	1.40	0.35
1,588.0	14.80	191.10	1,575.8	-112.3	-45.7	120.6	0.15	0.00	0.58
1,673.0	14.00	188.20	1,658.1	-133.1	-49.3	141.6	1.27	-0.94	-3.41



Company: NOBLE ENERGY INC WELD COUNTY CO  
Project: SEC.2-T3N-R66W  
Site: Barclay Farms Pad Sec.2-T3N-R66W  
Well: Barclay Farms L11-27D  
Wellbore: Wellbore #1  
Design: Wellbore #1

Local Co-ordinate Reference: Well Barclay Farms L11-27D  
TVD Reference: WELL @ 4938.0ft (Original Well Elev)  
MD Reference: WELL @ 4938.0ft (Original Well Elev)  
North Reference: True  
Survey Calculation Method: Minimum Curvature  
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)
1,759.0	13.50	194.40	1,741.6	-153.1	-53.2	161.9	1.81	-0.58	7.21
1,844.0	14.80	197.00	1,824.1	-173.1	-58.9	182.7	1.70	1.53	3.06
1,930.0	14.40	193.20	1,907.3	-194.0	-64.5	204.3	1.21	-0.47	-4.42
2,015.0	13.90	194.80	1,989.7	-214.2	-69.6	225.1	0.75	-0.59	1.88
2,101.0	13.90	197.10	2,073.2	-234.0	-75.2	245.8	0.64	0.00	2.67
2,187.0	14.00	197.90	2,156.7	-253.8	-81.5	266.5	0.25	0.12	0.93
2,272.0	14.30	199.20	2,239.1	-273.5	-88.1	287.2	0.51	0.35	1.53
2,358.0	14.50	197.70	2,322.4	-293.8	-94.9	308.6	0.49	0.23	-1.74
2,444.0	13.80	195.10	2,405.8	-314.0	-100.8	329.6	1.10	-0.81	-3.02
2,529.0	14.50	200.20	2,488.2	-333.7	-107.1	350.4	1.68	0.82	6.00
2,615.0	15.00	200.00	2,571.4	-354.3	-114.6	372.2	0.58	0.58	-0.23
2,701.0	15.70	195.90	2,654.3	-376.0	-121.6	395.0	1.50	0.81	-4.77
2,786.0	16.10	195.80	2,736.0	-398.4	-128.0	418.3	0.47	0.47	-0.12
2,872.0	16.50	197.20	2,818.6	-421.5	-134.9	442.4	0.65	0.47	1.63
2,957.0	17.40	197.20	2,899.9	-445.2	-142.2	467.2	1.06	1.06	0.00
3,043.0	17.80	197.50	2,981.9	-470.0	-149.9	493.2	0.48	0.47	0.35
3,129.0	16.50	196.50	3,064.0	-494.2	-157.4	518.5	1.55	-1.51	-1.16
3,214.0	15.30	199.30	3,145.8	-516.4	-164.5	541.8	1.68	-1.41	3.29
3,300.0	16.40	199.60	3,228.5	-538.5	-172.3	565.3	1.28	1.28	0.35
3,385.0	15.30	200.50	3,310.3	-560.3	-180.3	588.4	1.33	-1.29	1.06
3,471.0	14.20	199.90	3,393.4	-580.9	-187.8	610.3	1.29	-1.28	-0.70
3,557.0	13.90	204.70	3,476.9	-600.2	-195.7	631.0	1.40	-0.35	5.58
3,642.0	14.50	205.90	3,559.3	-619.0	-204.7	651.6	0.79	0.71	1.41
3,728.0	14.00	204.30	3,642.6	-638.2	-213.6	672.5	0.74	-0.58	-1.86
3,813.0	14.20	198.80	3,725.1	-657.5	-221.2	693.1	1.59	0.24	-6.47
3,899.0	13.80	195.80	3,808.5	-677.3	-227.4	713.9	0.96	-0.47	-3.49
3,985.0	14.10	196.50	3,892.0	-697.2	-233.2	734.7	0.40	0.35	0.81
4,070.0	15.60	199.20	3,974.1	-717.9	-239.9	756.4	1.94	1.76	3.18
4,156.0	17.00	196.60	4,056.7	-740.9	-247.3	780.5	1.84	1.63	-3.02
4,241.0	16.40	196.20	4,138.1	-764.3	-254.2	805.0	0.72	-0.71	-0.47
4,327.0	14.50	195.10	4,221.0	-786.4	-260.4	827.9	2.24	-2.21	-1.28
4,413.0	12.80	197.70	4,304.6	-805.9	-266.1	848.2	2.10	-1.98	3.02
4,498.0	12.30	193.70	4,387.5	-823.6	-271.1	866.6	1.18	-0.59	-4.71
4,584.0	12.20	190.60	4,471.6	-841.5	-274.9	884.8	0.77	-0.12	-3.60
4,669.0	10.50	191.90	4,554.9	-857.9	-278.2	901.5	2.02	-2.00	1.53
4,755.0	9.70	193.70	4,639.6	-872.6	-281.5	916.5	1.00	-0.93	2.09
4,841.0	7.80	193.70	4,724.6	-885.3	-284.6	929.6	2.21	-2.21	0.00
4,926.0	5.80	193.90	4,809.0	-895.1	-287.0	939.7	2.35	-2.35	0.24
5,012.0	3.80	174.80	4,894.7	-902.1	-287.8	946.6	2.95	-2.33	-22.21
5,098.0	2.60	196.50	4,980.5	-906.8	-288.1	951.2	1.96	-1.40	25.23
5,183.0	0.70	242.20	5,065.5	-908.9	-289.1	953.5	2.55	-2.24	53.76
5,269.0	0.90	348.80	5,151.5	-908.5	-289.7	953.3	1.50	0.23	123.95
5,317.6	1.01	346.35	5,200.1	-907.7	-289.9	952.6	0.25	0.23	-5.05
TARGET BHL 75'FSL, 1320'FEL									
5,355.0	1.10	344.80	5,237.5	-907.1	-290.0	952.0	0.25	0.23	-4.13
5,440.0	0.80	348.00	5,322.5	-905.7	-290.4	950.8	0.36	-0.35	3.76
5,526.0	1.10	340.10	5,408.5	-904.3	-290.8	949.6	0.38	0.35	-9.19
5,655.0	0.70	1.00	5,537.4	-902.4	-291.2	947.8	0.40	-0.31	16.20
5,783.0	1.30	326.50	5,665.4	-900.4	-292.0	946.1	0.64	0.47	-26.95
5,912.0	1.00	308.70	5,794.4	-898.5	-293.7	944.8	0.36	-0.23	-13.80
6,040.0	1.00	238.60	5,922.4	-898.3	-295.5	945.2	0.90	0.00	-54.77
6,168.0	0.70	180.30	6,050.4	-899.7	-296.4	946.7	0.68	-0.23	-45.55
6,297.0	1.30	137.10	6,179.4	-901.6	-295.4	948.3	0.72	0.47	-33.49
6,425.0	0.30	42.40	6,307.3	-902.4	-294.2	948.7	1.06	-0.78	-73.98

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Project: SEC.2-T3N-R66W  
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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)
6,554.0	0.30	138.70	6,436.3	-902.4	-293.8	948.6	0.35	0.00	74.65
6,682.0	1.10	166.00	6,564.3	-903.8	-293.3	949.8	0.66	0.63	21.33
6,810.0	1.60	177.10	6,692.3	-906.8	-292.9	952.6	0.44	0.39	8.67
6,939.0	1.40	165.50	6,821.2	-910.1	-292.4	955.6	0.28	-0.16	-8.99
7,068.0	2.00	180.00	6,950.2	-913.9	-292.0	959.1	0.57	0.47	11.24
7,179.4	2.35	184.27	7,061.5	-918.1	-292.2	963.2	0.34	0.31	3.83
TARGET CIRCLE 75'FSL, 1320'FEL									
7,196.0	2.40	184.80	7,078.1	-918.8	-292.2	963.9	0.34	0.32	3.19
7,324.0	2.00	158.10	7,206.0	-923.5	-291.6	968.3	0.85	-0.31	-20.86
7,453.0	2.20	143.60	7,334.9	-927.6	-289.3	971.5	0.44	0.16	-11.24
7,581.0	2.50	146.70	7,462.8	-931.9	-286.3	974.8	0.25	0.23	2.42
7,710.0	2.80	149.80	7,591.7	-937.0	-283.2	978.8	0.26	0.23	2.40
7,838.0	1.40	138.80	7,719.6	-940.9	-280.6	981.8	1.13	-1.09	-8.59
7,966.0	1.10	137.60	7,847.6	-943.0	-278.7	983.3	0.24	-0.23	-0.94
8,095.0	1.00	147.70	7,976.5	-944.8	-277.3	984.7	0.16	-0.08	7.83
HARDLINE 75'S OF BHL									
8,149.0	1.00	147.70	8,030.5	-945.6	-276.8	985.3	0.00	0.00	0.00

Checked By: \_\_\_\_\_ Approved By: \_\_\_\_\_ Date: \_\_\_\_\_