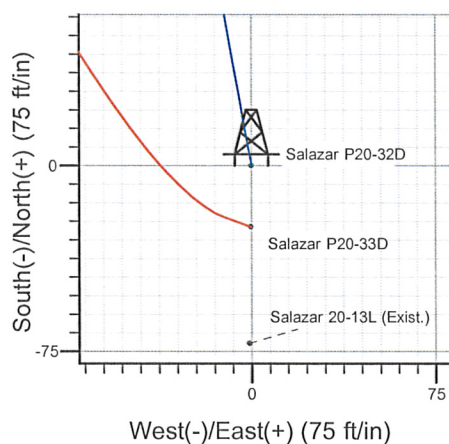
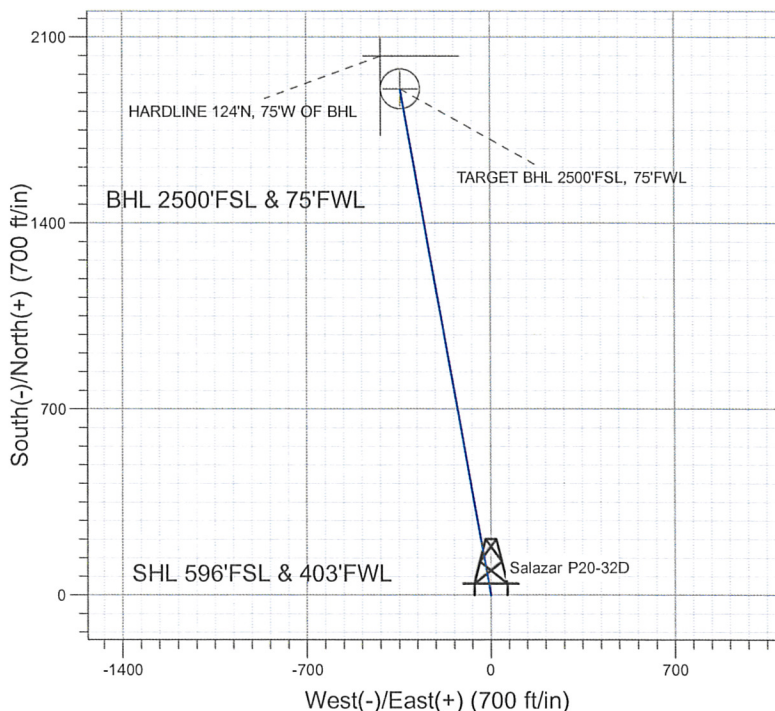
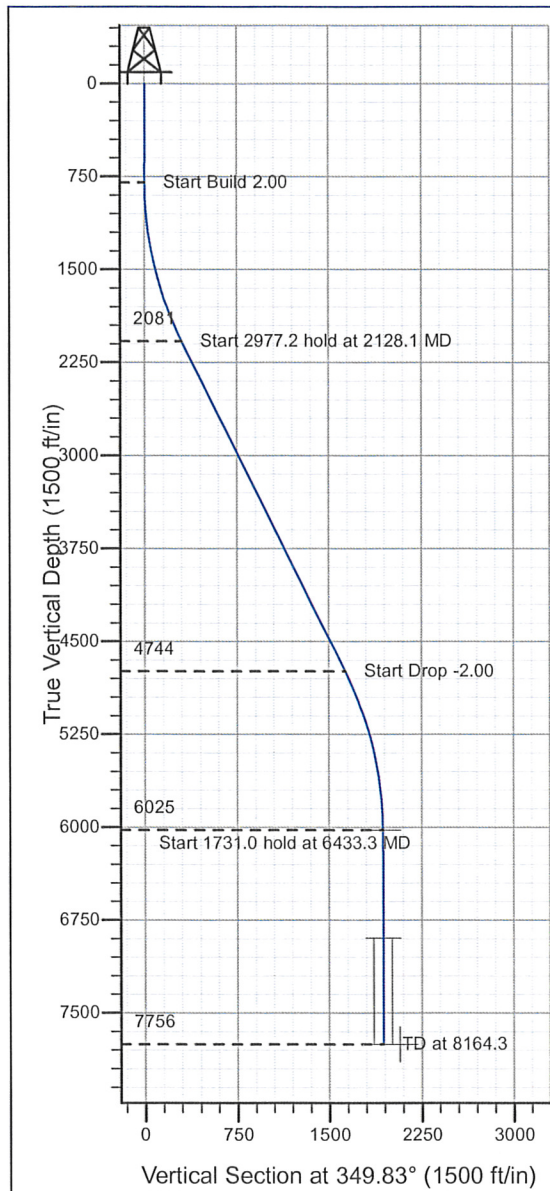


Well Name: Salazar P20-32D

Surface Location: Salazar P20-32D Pad Sec.20-T3N-R67W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4863.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1318357.43 3161487.75 40° 12' 21.035 N 104° 55' 18.570 W
 Original Well Elev WELL @ 4876.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Salazar P20-32D Pad Sec.20-T3N-R67W
 Salazar P20-32D
 Noble Salazar P20-32D Plan #1 11-23-09
 15:34, December 01 2009



Azimuths to True North
 Magnetic North: 9.10°
 Magnetic Field
 Strength: 53195.5snT
 Dip Angle: 66.93°
 Date: 11/23/2009
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 2500'FSL, 75'FWL	6025.0	1905.6	-341.8	40° 12' 39.865 N	104° 55' 22.976 W	Point
TARGET CIRCLE 2500'FSL, 75'FWL	6896.0	1905.6	-341.8	40° 12' 39.866 N	104° 55' 22.976 W	Circle (Radius: 75.0)
HARDLINE 124°N, 75°W OF BHL	7756.0	2029.6	-416.8	40° 12' 41.091 N	104° 55' 23.942 W	Polygon

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.0	
3	2128.1	26.56	349.83	2081.0	297.6	-53.4	2.00	349.83	302.4	
4	5105.3	26.56	349.83	4744.0	1608.0	-288.4	0.00	0.00	1633.6	
5	6433.3	0.00	0.00	6025.0	1905.6	-341.8	2.00	180.00	1936.0	TARGET BHL 2500'FSL, 75'FWL
6	8164.3	0.00	0.00	7756.0	1905.6	-341.8	0.00	0.00	1936.0	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.20-T3N-R67W

Salazar P20-32D Pad Sec.20-T3N-R67W

Salazar P20-32D

Wellbore #1

Plan: Noble Salazar P20-32D Plan #1 11-23-09

Standard Planning Report

01 December, 2009



Database: EDM den0-adp01 Server Data
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.20-T3N-R67W
 Site: Salazar P20-32D Pad Sec.20-T3N-R67W
 Well: Salazar P20-32D
 Wellbore: Wellbore #1
 Design: Noble Salazar P20-32D Plan #1 11-23-09

Local Co-ordinate Reference: Well Salazar P20-32D
 TVD Reference: WELL @ 4876.0ft (Original Well Elev)
 MD Reference: WELL @ 4876.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Project SEC.20-T3N-R67W, Weld County, Colorado

Map System: US State Plane 1983
 Geo Datum: North American Datum 1983
 Map Zone: Colorado Northern Zone

System Datum: Mean Sea Level
 Using geodetic scale factor

Site Salazar P20-32D Pad Sec.20-T3N-R67W

Site Position: Northing: 1,318,357.43 ft Latitude: 40° 12' 21.035 N
 From: Lat/Long Easting: 3,161,487.75 ft Longitude: 104° 55' 18.570 W
 Position Uncertainty: 0.0 ft Slot Radius: " Grid Convergence: 0.37 °

Well Salazar P20-32D

Well Position +N/-S 0.0 ft Northing: 1,318,357.43 ft Latitude: 40° 12' 21.035 N
 +E/-W 0.0 ft Easting: 3,161,487.75 ft Longitude: 104° 55' 18.570 W
 Position Uncertainty 0.0 ft Wellhead Elevation: ft Ground Level: 4,863.0 ft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/23/2009	9.10	66.93	53,195

Design Noble Salazar P20-32D Plan #1 11-23-09

Audit Notes:

Version: Phase: PROTOTYPE Tie On Depth: 0.0

Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	349.83

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
800.0	0.00	0.00	800.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,128.1	26.56	349.83	2,081.0	297.6	-53.4	2.00	2.00	0.00	349.83	
5,105.3	26.56	349.83	4,744.0	1,608.0	-288.4	0.00	0.00	0.00	0.00	
6,433.3	0.00	0.00	6,025.0	1,905.6	-341.8	2.00	-2.00	0.00	180.00	TARGET BHL 250C
8,164.3	0.00	0.00	7,756.0	1,905.6	-341.8	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Salazar P20-32D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4876.0ft (Original Well Elev)
Project:	SEC.20-T3N-R67W	MD Reference:	WELL @ 4876.0ft (Original Well Elev)
Site:	Salazar P20-32D Pad Sec.20-T3N-R67W	North Reference:	True
Well:	Salazar P20-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Salazar P20-32D Plan #1 11-23-09		

Planned 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
40.0	0.00	0.00	40.0	0.0	0.0	0.0	0.00	0.00	0.00
80.0	0.00	0.00	80.0	0.0	0.0	0.0	0.00	0.00	0.00
120.0	0.00	0.00	120.0	0.0	0.0	0.0	0.00	0.00	0.00
160.0	0.00	0.00	160.0	0.0	0.0	0.0	0.00	0.00	0.00
200.0	0.00	0.00	200.0	0.0	0.0	0.0	0.00	0.00	0.00
240.0	0.00	0.00	240.0	0.0	0.0	0.0	0.00	0.00	0.00
280.0	0.00	0.00	280.0	0.0	0.0	0.0	0.00	0.00	0.00
320.0	0.00	0.00	320.0	0.0	0.0	0.0	0.00	0.00	0.00
360.0	0.00	0.00	360.0	0.0	0.0	0.0	0.00	0.00	0.00
400.0	0.00	0.00	400.0	0.0	0.0	0.0	0.00	0.00	0.00
440.0	0.00	0.00	440.0	0.0	0.0	0.0	0.00	0.00	0.00
480.0	0.00	0.00	480.0	0.0	0.0	0.0	0.00	0.00	0.00
520.0	0.00	0.00	520.0	0.0	0.0	0.0	0.00	0.00	0.00
560.0	0.00	0.00	560.0	0.0	0.0	0.0	0.00	0.00	0.00
600.0	0.00	0.00	600.0	0.0	0.0	0.0	0.00	0.00	0.00
640.0	0.00	0.00	640.0	0.0	0.0	0.0	0.00	0.00	0.00
680.0	0.00	0.00	680.0	0.0	0.0	0.0	0.00	0.00	0.00
720.0	0.00	0.00	720.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.00	0.00	760.0	0.0	0.0	0.0	0.00	0.00	0.00
800.0	0.00	0.00	800.0	0.0	0.0	0.0	0.00	0.00	0.00
840.0	0.80	349.83	840.0	0.3	0.0	0.3	2.00	2.00	0.00
880.0	1.60	349.83	880.0	1.1	-0.2	1.1	2.00	2.00	0.00
920.0	2.40	349.83	920.0	2.5	-0.4	2.5	2.00	2.00	0.00
960.0	3.20	349.83	959.9	4.4	-0.8	4.5	2.00	2.00	0.00
1,000.0	4.00	349.83	999.8	6.9	-1.2	7.0	2.00	2.00	0.00
1,040.0	4.80	349.83	1,039.7	9.9	-1.8	10.0	2.00	2.00	0.00
1,080.0	5.60	349.83	1,079.6	13.5	-2.4	13.7	2.00	2.00	0.00
1,120.0	6.40	349.83	1,119.3	17.6	-3.2	17.9	2.00	2.00	0.00
1,160.0	7.20	349.83	1,159.1	22.2	-4.0	22.6	2.00	2.00	0.00
1,200.0	8.00	349.83	1,198.7	27.4	-4.9	27.9	2.00	2.00	0.00
1,240.0	8.80	349.83	1,238.3	33.2	-6.0	33.7	2.00	2.00	0.00
1,280.0	9.60	349.83	1,277.8	39.5	-7.1	40.1	2.00	2.00	0.00
1,320.0	10.40	349.83	1,317.1	46.3	-8.3	47.1	2.00	2.00	0.00
1,360.0	11.20	349.83	1,356.4	53.7	-9.6	54.6	2.00	2.00	0.00
1,400.0	12.00	349.83	1,395.6	61.6	-11.1	62.6	2.00	2.00	0.00
1,440.0	12.80	349.83	1,434.7	70.1	-12.6	71.2	2.00	2.00	0.00
1,480.0	13.60	349.83	1,473.6	79.1	-14.2	80.3	2.00	2.00	0.00
1,520.0	14.40	349.83	1,512.4	88.6	-15.9	90.0	2.00	2.00	0.00
1,560.0	15.20	349.83	1,551.1	98.6	-17.7	100.2	2.00	2.00	0.00
1,600.0	16.00	349.83	1,589.6	109.2	-19.6	111.0	2.00	2.00	0.00
1,640.0	16.80	349.83	1,628.0	120.3	-21.6	122.3	2.00	2.00	0.00
1,680.0	17.60	349.83	1,666.2	132.0	-23.7	134.1	2.00	2.00	0.00
1,720.0	18.40	349.83	1,704.3	144.2	-25.9	146.5	2.00	2.00	0.00
1,760.0	19.20	349.83	1,742.1	156.8	-28.1	159.3	2.00	2.00	0.00
1,800.0	20.00	349.83	1,779.8	170.1	-30.5	172.8	2.00	2.00	0.00
1,840.0	20.80	349.83	1,817.3	183.8	-33.0	186.7	2.00	2.00	0.00
1,880.0	21.60	349.83	1,854.6	198.0	-35.5	201.2	2.00	2.00	0.00
1,920.0	22.40	349.83	1,891.7	212.8	-38.2	216.2	2.00	2.00	0.00
1,960.0	23.20	349.83	1,928.6	228.0	-40.9	231.7	2.00	2.00	0.00
2,000.0	24.00	349.83	1,965.2	243.8	-43.7	247.7	2.00	2.00	0.00
2,040.0	24.80	349.83	2,001.6	260.0	-46.6	264.2	2.00	2.00	0.00
2,080.0	25.60	349.83	2,037.8	276.8	-49.7	281.2	2.00	2.00	0.00
2,120.0	26.40	349.83	2,073.8	294.1	-52.8	298.8	2.00	2.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Salazar P20-32D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4876.0ft (Original Well Elev)
Project:	SEC.20-T3N-R67W	MD Reference:	WELL @ 4876.0ft (Original Well Elev)
Site:	Salazar P20-32D Pad Sec.20-T3N-R67W	North Reference:	True
Well:	Salazar P20-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Salazar P20-32D Plan #1 11-23-09		

Planned 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)
2,128.1	26.56	349.83	2,081.0	297.6	-53.4	302.4	2.00	2.00	0.00
2,160.0	26.56	349.83	2,109.6	311.7	-55.9	316.6	0.00	0.00	0.00
2,200.0	26.56	349.83	2,145.3	329.3	-59.1	334.5	0.00	0.00	0.00
2,240.0	26.56	349.83	2,181.1	346.9	-62.2	352.4	0.00	0.00	0.00
2,280.0	26.56	349.83	2,216.9	364.5	-65.4	370.3	0.00	0.00	0.00
2,320.0	26.56	349.83	2,252.7	382.1	-68.5	388.2	0.00	0.00	0.00
2,360.0	26.56	349.83	2,288.5	399.7	-71.7	406.1	0.00	0.00	0.00
2,400.0	26.56	349.83	2,324.2	417.3	-74.9	424.0	0.00	0.00	0.00
2,440.0	26.56	349.83	2,360.0	434.9	-78.0	441.8	0.00	0.00	0.00
2,480.0	26.56	349.83	2,395.8	452.5	-81.2	459.7	0.00	0.00	0.00
2,520.0	26.56	349.83	2,431.6	470.1	-84.3	477.6	0.00	0.00	0.00
2,560.0	26.56	349.83	2,467.4	487.7	-87.5	495.5	0.00	0.00	0.00
2,600.0	26.56	349.83	2,503.1	505.3	-90.6	513.4	0.00	0.00	0.00
2,640.0	26.56	349.83	2,538.9	522.9	-93.8	531.3	0.00	0.00	0.00
2,680.0	26.56	349.83	2,574.7	540.5	-97.0	549.2	0.00	0.00	0.00
2,720.0	26.56	349.83	2,610.5	558.1	-100.1	567.0	0.00	0.00	0.00
2,760.0	26.56	349.83	2,646.2	575.7	-103.3	584.9	0.00	0.00	0.00
2,800.0	26.56	349.83	2,682.0	593.3	-106.4	602.8	0.00	0.00	0.00
2,840.0	26.56	349.83	2,717.8	611.0	-109.6	620.7	0.00	0.00	0.00
2,880.0	26.56	349.83	2,753.6	628.6	-112.8	638.6	0.00	0.00	0.00
2,920.0	26.56	349.83	2,789.4	646.2	-115.9	656.5	0.00	0.00	0.00
2,960.0	26.56	349.83	2,825.1	663.8	-119.1	674.4	0.00	0.00	0.00
3,000.0	26.56	349.83	2,860.9	681.4	-122.2	692.2	0.00	0.00	0.00
3,040.0	26.56	349.83	2,896.7	699.0	-125.4	710.1	0.00	0.00	0.00
3,080.0	26.56	349.83	2,932.5	716.6	-128.5	728.0	0.00	0.00	0.00
3,120.0	26.56	349.83	2,968.2	734.2	-131.7	745.9	0.00	0.00	0.00
3,160.0	26.56	349.83	3,004.0	751.8	-134.9	763.8	0.00	0.00	0.00
3,200.0	26.56	349.83	3,039.8	769.4	-138.0	781.7	0.00	0.00	0.00
3,240.0	26.56	349.83	3,075.6	787.0	-141.2	799.6	0.00	0.00	0.00
3,280.0	26.56	349.83	3,111.4	804.6	-144.3	817.5	0.00	0.00	0.00
3,320.0	26.56	349.83	3,147.1	822.2	-147.5	835.3	0.00	0.00	0.00
3,360.0	26.56	349.83	3,182.9	839.8	-150.7	853.2	0.00	0.00	0.00
3,400.0	26.56	349.83	3,218.7	857.4	-153.8	871.1	0.00	0.00	0.00
3,440.0	26.56	349.83	3,254.5	875.0	-157.0	889.0	0.00	0.00	0.00
3,480.0	26.56	349.83	3,290.3	892.6	-160.1	906.9	0.00	0.00	0.00
3,520.0	26.56	349.83	3,326.0	910.2	-163.3	924.8	0.00	0.00	0.00
3,560.0	26.56	349.83	3,361.8	927.8	-166.4	942.7	0.00	0.00	0.00
3,600.0	26.56	349.83	3,397.6	945.4	-169.6	960.5	0.00	0.00	0.00
3,640.0	26.56	349.83	3,433.4	963.1	-172.8	978.4	0.00	0.00	0.00
3,680.0	26.56	349.83	3,469.1	980.7	-175.9	996.3	0.00	0.00	0.00
3,720.0	26.56	349.83	3,504.9	998.3	-179.1	1,014.2	0.00	0.00	0.00
3,760.0	26.56	349.83	3,540.7	1,015.9	-182.2	1,032.1	0.00	0.00	0.00
3,800.0	26.56	349.83	3,576.5	1,033.5	-185.4	1,050.0	0.00	0.00	0.00
3,840.0	26.56	349.83	3,612.3	1,051.1	-188.6	1,067.9	0.00	0.00	0.00
3,880.0	26.56	349.83	3,648.0	1,068.7	-191.7	1,085.7	0.00	0.00	0.00
3,920.0	26.56	349.83	3,683.8	1,086.3	-194.9	1,103.6	0.00	0.00	0.00
3,960.0	26.56	349.83	3,719.6	1,103.9	-198.0	1,121.5	0.00	0.00	0.00
4,000.0	26.56	349.83	3,755.4	1,121.5	-201.2	1,139.4	0.00	0.00	0.00
4,040.0	26.56	349.83	3,791.1	1,139.1	-204.3	1,157.3	0.00	0.00	0.00
4,080.0	26.56	349.83	3,826.9	1,156.7	-207.5	1,175.2	0.00	0.00	0.00
4,120.0	26.56	349.83	3,862.7	1,174.3	-210.7	1,193.1	0.00	0.00	0.00
4,160.0	26.56	349.83	3,898.5	1,191.9	-213.8	1,210.9	0.00	0.00	0.00
4,200.0	26.56	349.83	3,934.3	1,209.5	-217.0	1,228.8	0.00	0.00	0.00
4,240.0	26.56	349.83	3,970.0	1,227.1	-220.1	1,246.7	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Salazar P20-32D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4876.0ft (Original Well Elev)
Project:	SEC.20-T3N-R67W	MD Reference:	WELL @ 4876.0ft (Original Well Elev)
Site:	Salazar P20-32D Pad Sec.20-T3N-R67W	North Reference:	True
Well:	Salazar P20-32D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Salazar P20-32D Plan #1 11-23-09		

Planned 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)
4,280.0	26.56	349.83	4,005.8	1,244.7	-223.3	1,264.6	0.00	0.00	0.00
4,320.0	26.56	349.83	4,041.6	1,262.3	-226.4	1,282.5	0.00	0.00	0.00
4,360.0	26.56	349.83	4,077.4	1,279.9	-229.6	1,300.4	0.00	0.00	0.00
4,400.0	26.56	349.83	4,113.2	1,297.6	-232.8	1,318.3	0.00	0.00	0.00
4,440.0	26.56	349.83	4,148.9	1,315.2	-235.9	1,336.1	0.00	0.00	0.00
4,480.0	26.56	349.83	4,184.7	1,332.8	-239.1	1,354.0	0.00	0.00	0.00
4,520.0	26.56	349.83	4,220.5	1,350.4	-242.2	1,371.9	0.00	0.00	0.00
4,560.0	26.56	349.83	4,256.3	1,368.0	-245.4	1,389.8	0.00	0.00	0.00
4,600.0	26.56	349.83	4,292.0	1,385.6	-248.6	1,407.7	0.00	0.00	0.00
4,640.0	26.56	349.83	4,327.8	1,403.2	-251.7	1,425.6	0.00	0.00	0.00
4,680.0	26.56	349.83	4,363.6	1,420.8	-254.9	1,443.5	0.00	0.00	0.00
4,720.0	26.56	349.83	4,399.4	1,438.4	-258.0	1,461.4	0.00	0.00	0.00
4,760.0	26.56	349.83	4,435.2	1,456.0	-261.2	1,479.2	0.00	0.00	0.00
4,800.0	26.56	349.83	4,470.9	1,473.6	-264.3	1,497.1	0.00	0.00	0.00
4,840.0	26.56	349.83	4,506.7	1,491.2	-267.5	1,515.0	0.00	0.00	0.00
4,880.0	26.56	349.83	4,542.5	1,508.8	-270.7	1,532.9	0.00	0.00	0.00
4,920.0	26.56	349.83	4,578.3	1,526.4	-273.8	1,550.8	0.00	0.00	0.00
4,960.0	26.56	349.83	4,614.0	1,544.0	-277.0	1,568.7	0.00	0.00	0.00
5,000.0	26.56	349.83	4,649.8	1,561.6	-280.1	1,586.6	0.00	0.00	0.00
5,040.0	26.56	349.83	4,685.6	1,579.2	-283.3	1,604.4	0.00	0.00	0.00
5,080.0	26.56	349.83	4,721.4	1,596.8	-286.5	1,622.3	0.00	0.00	0.00
5,105.3	26.56	349.83	4,744.0	1,608.0	-288.4	1,633.6	0.00	0.00	0.00
5,120.0	26.27	349.83	4,757.2	1,614.4	-289.6	1,640.2	2.00	-2.00	0.00
5,160.0	25.47	349.83	4,793.2	1,631.6	-292.7	1,657.6	2.00	-2.00	0.00
5,200.0	24.67	349.83	4,829.4	1,648.3	-295.7	1,674.6	2.00	-2.00	0.00
5,240.0	23.87	349.83	4,865.9	1,664.4	-298.6	1,691.0	2.00	-2.00	0.00
5,280.0	23.07	349.83	4,902.6	1,680.1	-301.4	1,706.9	2.00	-2.00	0.00
5,320.0	22.27	349.83	4,939.5	1,695.3	-304.1	1,722.4	2.00	-2.00	0.00
5,360.0	21.47	349.83	4,976.6	1,710.0	-306.7	1,737.3	2.00	-2.00	0.00
5,400.0	20.67	349.83	5,013.9	1,724.1	-309.3	1,751.6	2.00	-2.00	0.00
5,440.0	19.87	349.83	5,051.4	1,737.8	-311.7	1,765.5	2.00	-2.00	0.00
5,480.0	19.07	349.83	5,089.2	1,750.9	-314.1	1,778.8	2.00	-2.00	0.00
5,520.0	18.27	349.83	5,127.1	1,763.5	-316.3	1,791.6	2.00	-2.00	0.00
5,560.0	17.47	349.83	5,165.1	1,775.6	-318.5	1,803.9	2.00	-2.00	0.00
5,600.0	16.67	349.83	5,203.4	1,787.1	-320.6	1,815.6	2.00	-2.00	0.00
5,640.0	15.87	349.83	5,241.8	1,798.1	-322.6	1,826.8	2.00	-2.00	0.00
5,680.0	15.07	349.83	5,280.3	1,808.6	-324.4	1,837.5	2.00	-2.00	0.00
5,720.0	14.27	349.83	5,319.0	1,818.6	-326.2	1,847.6	2.00	-2.00	0.00
5,760.0	13.47	349.83	5,357.8	1,828.0	-327.9	1,857.2	2.00	-2.00	0.00
5,800.0	12.67	349.83	5,396.8	1,836.9	-329.5	1,866.3	2.00	-2.00	0.00
5,840.0	11.87	349.83	5,435.9	1,845.3	-331.0	1,874.8	2.00	-2.00	0.00
5,880.0	11.07	349.83	5,475.1	1,853.1	-332.4	1,882.7	2.00	-2.00	0.00
5,920.0	10.27	349.83	5,514.4	1,860.4	-333.7	1,890.1	2.00	-2.00	0.00
5,960.0	9.47	349.83	5,553.8	1,867.2	-334.9	1,897.0	2.00	-2.00	0.00
6,000.0	8.67	349.83	5,593.3	1,873.4	-336.1	1,903.3	2.00	-2.00	0.00
6,040.0	7.87	349.83	5,632.9	1,879.0	-337.1	1,909.0	2.00	-2.00	0.00
6,080.0	7.07	349.83	5,672.6	1,884.2	-338.0	1,914.2	2.00	-2.00	0.00
6,120.0	6.27	349.83	5,712.3	1,888.7	-338.8	1,918.9	2.00	-2.00	0.00
6,160.0	5.47	349.83	5,752.1	1,892.7	-339.5	1,923.0	2.00	-2.00	0.00
6,200.0	4.67	349.83	5,791.9	1,896.2	-340.2	1,926.5	2.00	-2.00	0.00
6,240.0	3.87	349.83	5,831.8	1,899.2	-340.7	1,929.5	2.00	-2.00	0.00
6,280.0	3.07	349.83	5,871.7	1,901.5	-341.1	1,931.9	2.00	-2.00	0.00
6,320.0	2.27	349.83	5,911.7	1,903.4	-341.4	1,933.7	2.00	-2.00	0.00
6,360.0	1.47	349.83	5,951.7	1,904.6	-341.7	1,935.1	2.00	-2.00	0.00

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.20-T3N-R67W
Site: Salazar P20-32D Pad Sec.20-T3N-R67W
Well: Salazar P20-32D
Wellbore: Wellbore #1
Design: Noble Salazar P20-32D Plan #1 11-23-09

Local Co-ordinate Reference: Well Salazar P20-32D
TVD Reference: WELL @ 4876.0ft (Original Well Elev)
MD Reference: WELL @ 4876.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned 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)
6,400.0	0.67	349.83	5,991.7	1,905.4	-341.8	1,935.8	2.00	-2.00	0.00
6,433.3	0.00	0.00	6,025.0	1,905.6	-341.8	1,936.0	2.00	-2.00	0.00
TARGET BHL 2500'FSL, 75'FWL									
6,440.0	0.00	0.00	6,031.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
6,480.0	0.00	0.00	6,071.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
6,520.0	0.00	0.00	6,111.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
6,560.0	0.00	0.00	6,151.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,191.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
6,640.0	0.00	0.00	6,231.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
6,680.0	0.00	0.00	6,271.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
6,720.0	0.00	0.00	6,311.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
6,760.0	0.00	0.00	6,351.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,391.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
6,840.0	0.00	0.00	6,431.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
6,880.0	0.00	0.00	6,471.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
6,920.0	0.00	0.00	6,511.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
6,960.0	0.00	0.00	6,551.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,591.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,040.0	0.00	0.00	6,631.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,080.0	0.00	0.00	6,671.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,120.0	0.00	0.00	6,711.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,160.0	0.00	0.00	6,751.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,200.0	0.00	0.00	6,791.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,240.0	0.00	0.00	6,831.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,280.0	0.00	0.00	6,871.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,304.3	0.00	0.00	6,896.0	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 2500'FSL, 75'FWL									
7,320.0	0.00	0.00	6,911.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,360.0	0.00	0.00	6,951.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,400.0	0.00	0.00	6,991.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,440.0	0.00	0.00	7,031.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,480.0	0.00	0.00	7,071.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,520.0	0.00	0.00	7,111.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,560.0	0.00	0.00	7,151.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,584.3	0.00	0.00	7,176.0	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
CODELL									
7,600.0	0.00	0.00	7,191.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,640.0	0.00	0.00	7,231.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,680.0	0.00	0.00	7,271.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,720.0	0.00	0.00	7,311.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,760.0	0.00	0.00	7,351.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,800.0	0.00	0.00	7,391.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,840.0	0.00	0.00	7,431.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,880.0	0.00	0.00	7,471.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,920.0	0.00	0.00	7,511.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
7,954.3	0.00	0.00	7,546.0	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
D-SAND									
7,960.0	0.00	0.00	7,551.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
8,000.0	0.00	0.00	7,591.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
8,014.3	0.00	0.00	7,606.0	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
J-SAND									
8,040.0	0.00	0.00	7,631.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
8,080.0	0.00	0.00	7,671.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.20-T3N-R67W
Site: Salazar P20-32D Pad Sec.20-T3N-R67W
Well: Salazar P20-32D
Wellbore: Wellbore #1
Design: Noble Salazar P20-32D Plan #1 11-23-09

Local Co-ordinate Reference: Well Salazar P20-32D
TVD Reference: WELL @ 4876.0ft (Original Well Elev)
MD Reference: WELL @ 4876.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Planned 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)
8,120.0	0.00	0.00	7,711.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
8,160.0	0.00	0.00	7,751.7	1,905.6	-341.8	1,936.0	0.00	0.00	0.00
8,164.3	0.00	0.00	7,756.0	1,905.6	-341.8	1,936.0	0.00	0.00	0.00

HARDLINE 124°N, 75°W OF BHL

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
TARGET BHL 2500'F - plan hits target center - Point	0.00	0.00	6,025.0	1,905.6	-341.8	1,320,260.64	3,161,133.51	40° 12' 39.865 N	104° 55' 22.976 W
TARGET CIRCLE 25' - plan hits target center - Circle (radius 75.0)	0.00	0.00	6,896.0	1,905.6	-341.8	1,320,260.67	3,161,133.55	40° 12' 39.866 N	104° 55' 22.976 W
HARDLINE 124°N, 75° - plan misses target center by 144.9ft at 8164.3ft MD (7756.0 TVD, 1905.6 N, -341.8 E) - Polygon	0.00	0.00	7,756.0	2,029.6	-416.8	1,320,384.17	3,161,057.74	40° 12' 41.091 N	104° 55' 23.942 W
Point 1			7,756.0	0.0	0.0	1,320,384.17	3,161,057.74		
Point 2			7,756.0	0.0	300.0	1,320,386.13	3,161,357.72		
Point 3			7,756.0	0.0	0.0	1,320,384.17	3,161,057.74		
Point 4			7,756.0	-300.0	0.0	1,320,084.19	3,161,059.70		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,304.3	6,896.0	NIOBRARA		0.00	
7,584.3	7,176.0	CODELL		0.00	
7,954.3	7,546.0	D-SAND		0.00	
8,014.3	7,606.0	J-SAND		0.00	