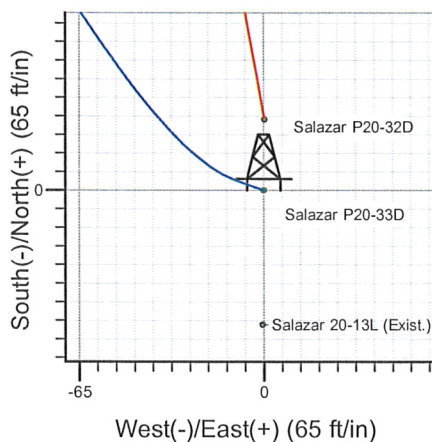
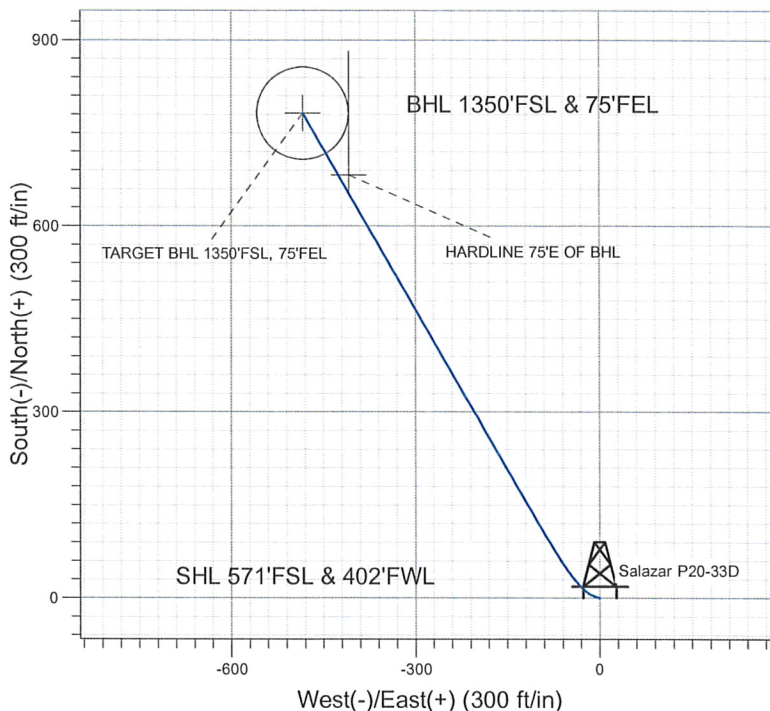
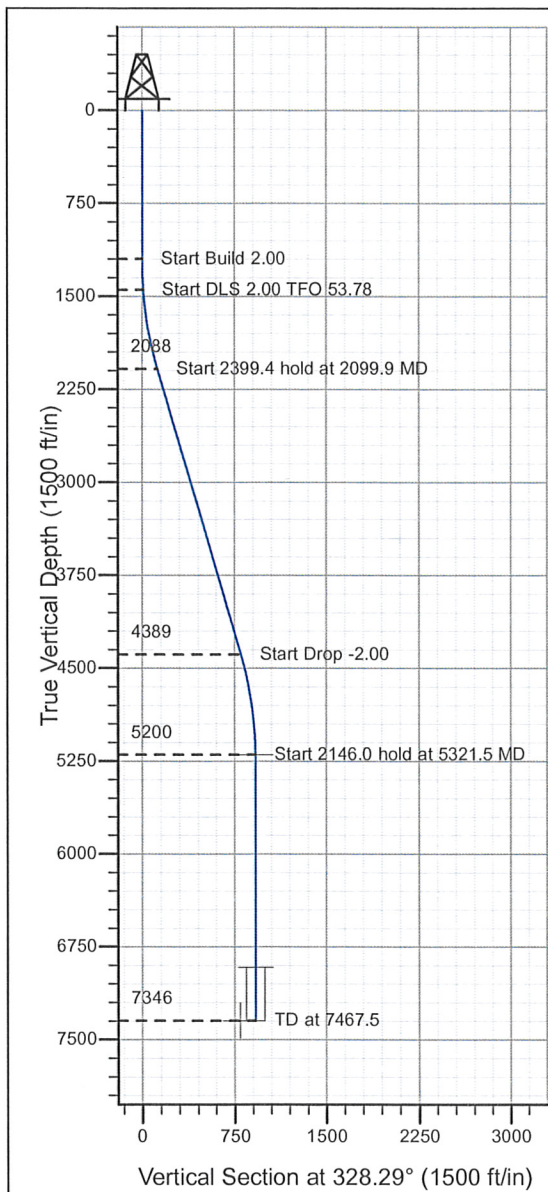


Well Name: Salazar P20-33D

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 1318332.65 3161487.63 40° 12' 20.790 N 104° 55' 18.574 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 P20-33D
 Noble Salazar P20-33D Plan #1 11-23-09
 15:46, December 01 2009



Azimuths to True North
 Magnetic North: 9.10°
 Magnetic Field
 Strength: 53195.4snT
 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 1350'FSL, 75'FEL	5200.0	782.1	-483.2	40° 12' 28.519 N	104° 55' 24.802 W	Point
TARGET CIRCLE 1350'FSL, 75'FEL	6916.0	782.1	-483.2	40° 12' 28.519 N	104° 55' 24.801 W	Circle (Radius: 75.0)
HARDLINE 75'E OF BHL	7346.0	682.1	-408.2	40° 12' 27.530 N	104° 55' 23.835 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	1200.0	0.00	0.00	1200.0	0.0	0.0	0.00	0.00	0.0	
3	1450.0	5.00	290.00	1449.7	3.7	-10.2	2.00	290.00	8.6	
4	2099.9	16.45	329.86	2087.8	93.4	-83.4	2.00	53.78	123.2	
5	4499.2	16.45	329.86	4389.0	680.8	-424.4	0.00	0.00	802.2	
6	5321.5	0.00	0.00	5200.0	782.1	-483.2	2.00	180.00	919.4	TARGET BHL 1350'FSL, 75'FEL
7	7467.5	0.00	0.00	7346.0	782.1	-483.2	0.00	0.00	919.4	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.20-T3N-R67W

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

Salazar P20-33D

Wellbore #1

Plan: Noble Salazar P20-33D Plan #1 11-23-09

Standard Planning Report

01 December, 2009



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Salazar P20-33D
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 P20-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Salazar P20-33D Plan #1 11-23-09		

Project	SEC.20-T3N-R67W, Weld County, Colorado		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site		Salazar P20-32D Pad Sec.20-T3N-R67W			
Site Position:		Northing:	1,318,357.43ft	Latitude:	40° 12' 21.035 N
From:	Lat/Long	Easting:	3,161,487.75ft	Longitude:	104° 55' 18.570 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.37 °

Well	Salazar P20-33D					
Well Position	+N/-S	-24.8 ft	Northing:	1,318,332.65 ft	Latitude:	40° 12' 20.790 N
	+E/-W	-0.3 ft	Easting:	3,161,487.63 ft	Longitude:	104° 55' 18.574 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,863.0 ft

Wellbore	Wellbore #1				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	11/23/2009	9.10	66.93	53,195

Design	Noble Salazar P20-33D Plan #1 11-23-09				
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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	328.29	

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	
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,450.0	5.00	290.00	1,449.7	3.7	-10.2	2.00	2.00	0.00	290.00	
2,099.9	16.45	329.86	2,087.8	93.4	-83.4	2.00	1.76	6.13	53.78	
4,499.2	16.45	329.86	4,389.0	680.8	-424.4	0.00	0.00	0.00	0.00	
5,321.5	0.00	0.00	5,200.0	782.1	-483.2	2.00	-2.00	0.00	180.00	TARGET BHL 135C
7,467.5	0.00	0.00	7,346.0	782.1	-483.2	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Salazar P20-33D
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 P20-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Salazar P20-33D 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	0.00	0.00	840.0	0.0	0.0	0.0	0.00	0.00	0.00
880.0	0.00	0.00	880.0	0.0	0.0	0.0	0.00	0.00	0.00
920.0	0.00	0.00	920.0	0.0	0.0	0.0	0.00	0.00	0.00
960.0	0.00	0.00	960.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
1,040.0	0.00	0.00	1,040.0	0.0	0.0	0.0	0.00	0.00	0.00
1,080.0	0.00	0.00	1,080.0	0.0	0.0	0.0	0.00	0.00	0.00
1,120.0	0.00	0.00	1,120.0	0.0	0.0	0.0	0.00	0.00	0.00
1,160.0	0.00	0.00	1,160.0	0.0	0.0	0.0	0.00	0.00	0.00
1,200.0	0.00	0.00	1,200.0	0.0	0.0	0.0	0.00	0.00	0.00
1,240.0	0.80	290.00	1,240.0	0.1	-0.3	0.2	2.00	2.00	0.00
1,280.0	1.60	290.00	1,280.0	0.4	-1.0	0.9	2.00	2.00	0.00
1,320.0	2.40	290.00	1,320.0	0.9	-2.4	2.0	2.00	2.00	0.00
1,360.0	3.20	290.00	1,359.9	1.5	-4.2	3.5	2.00	2.00	0.00
1,400.0	4.00	290.00	1,399.8	2.4	-6.6	5.5	2.00	2.00	0.00
1,440.0	4.80	290.00	1,439.7	3.4	-9.4	7.9	2.00	2.00	0.00
1,450.0	5.00	290.00	1,449.7	3.7	-10.2	8.6	2.00	2.00	0.00
1,480.0	5.38	295.17	1,479.6	4.8	-12.7	10.8	2.00	1.25	17.24
1,520.0	5.94	300.99	1,519.4	6.6	-16.2	14.2	2.00	1.40	14.54
1,560.0	6.54	305.77	1,559.1	9.0	-19.8	18.1	2.00	1.52	11.95
1,600.0	7.19	309.71	1,598.8	12.0	-23.6	22.6	2.00	1.62	9.86
1,640.0	7.87	313.00	1,638.5	15.4	-27.5	27.6	2.00	1.69	8.21
1,680.0	8.56	315.76	1,678.1	19.4	-31.6	33.1	2.00	1.74	6.90
1,720.0	9.27	318.11	1,717.6	24.0	-35.8	39.2	2.00	1.78	5.86
1,760.0	10.00	320.12	1,757.0	29.0	-40.2	45.8	2.00	1.81	5.03
1,800.0	10.74	321.85	1,796.4	34.6	-44.8	53.0	2.00	1.84	4.35
1,840.0	11.48	323.37	1,835.6	40.7	-49.4	60.6	2.00	1.86	3.79
1,880.0	12.23	324.71	1,874.8	47.4	-54.3	68.8	2.00	1.88	3.33
1,920.0	12.99	325.89	1,913.8	54.6	-59.2	77.6	2.00	1.89	2.95
1,960.0	13.75	326.94	1,952.7	62.3	-64.3	86.8	2.00	1.91	2.63
2,000.0	14.52	327.88	1,991.5	70.5	-69.6	96.6	2.00	1.92	2.36
2,040.0	15.29	328.73	2,030.2	79.3	-75.0	106.9	2.00	1.92	2.13
2,080.0	16.06	329.50	2,068.7	88.6	-80.5	117.7	2.00	1.93	1.93

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Salazar P20-33D
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 P20-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Salazar P20-33D 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)
2,099.9	16.45	329.86	2,087.8	93.4	-83.4	123.2	2.00	1.94	1.80
2,120.0	16.45	329.86	2,107.1	98.3	-86.2	128.9	0.00	0.00	0.00
2,160.0	16.45	329.86	2,145.4	108.1	-91.9	140.2	0.00	0.00	0.00
2,200.0	16.45	329.86	2,183.8	117.9	-97.6	151.6	0.00	0.00	0.00
2,240.0	16.45	329.86	2,222.2	127.7	-103.3	162.9	0.00	0.00	0.00
2,280.0	16.45	329.86	2,260.5	137.5	-109.0	174.2	0.00	0.00	0.00
2,320.0	16.45	329.86	2,298.9	147.2	-114.6	185.5	0.00	0.00	0.00
2,360.0	16.45	329.86	2,337.3	157.0	-120.3	196.8	0.00	0.00	0.00
2,400.0	16.45	329.86	2,375.6	166.8	-126.0	208.2	0.00	0.00	0.00
2,440.0	16.45	329.86	2,414.0	176.6	-131.7	219.5	0.00	0.00	0.00
2,480.0	16.45	329.86	2,452.3	186.4	-137.4	230.8	0.00	0.00	0.00
2,520.0	16.45	329.86	2,490.7	196.2	-143.1	242.1	0.00	0.00	0.00
2,560.0	16.45	329.86	2,529.1	206.0	-148.8	253.4	0.00	0.00	0.00
2,600.0	16.45	329.86	2,567.4	215.8	-154.4	264.8	0.00	0.00	0.00
2,640.0	16.45	329.86	2,605.8	225.6	-160.1	276.1	0.00	0.00	0.00
2,680.0	16.45	329.86	2,644.2	235.4	-165.8	287.4	0.00	0.00	0.00
2,720.0	16.45	329.86	2,682.5	245.2	-171.5	298.7	0.00	0.00	0.00
2,760.0	16.45	329.86	2,720.9	255.0	-177.2	310.0	0.00	0.00	0.00
2,800.0	16.45	329.86	2,759.3	264.8	-182.9	321.4	0.00	0.00	0.00
2,840.0	16.45	329.86	2,797.6	274.6	-188.6	332.7	0.00	0.00	0.00
2,880.0	16.45	329.86	2,836.0	284.4	-194.2	344.0	0.00	0.00	0.00
2,920.0	16.45	329.86	2,874.3	294.1	-199.9	355.3	0.00	0.00	0.00
2,960.0	16.45	329.86	2,912.7	303.9	-205.6	366.6	0.00	0.00	0.00
3,000.0	16.45	329.86	2,951.1	313.7	-211.3	378.0	0.00	0.00	0.00
3,040.0	16.45	329.86	2,989.4	323.5	-217.0	389.3	0.00	0.00	0.00
3,080.0	16.45	329.86	3,027.8	333.3	-222.7	400.6	0.00	0.00	0.00
3,120.0	16.45	329.86	3,066.2	343.1	-228.4	411.9	0.00	0.00	0.00
3,160.0	16.45	329.86	3,104.5	352.9	-234.0	423.2	0.00	0.00	0.00
3,200.0	16.45	329.86	3,142.9	362.7	-239.7	434.6	0.00	0.00	0.00
3,240.0	16.45	329.86	3,181.2	372.5	-245.4	445.9	0.00	0.00	0.00
3,280.0	16.45	329.86	3,219.6	382.3	-251.1	457.2	0.00	0.00	0.00
3,320.0	16.45	329.86	3,258.0	392.1	-256.8	468.5	0.00	0.00	0.00
3,360.0	16.45	329.86	3,296.3	401.9	-262.5	479.8	0.00	0.00	0.00
3,400.0	16.45	329.86	3,334.7	411.7	-268.2	491.2	0.00	0.00	0.00
3,440.0	16.45	329.86	3,373.1	421.5	-273.8	502.5	0.00	0.00	0.00
3,480.0	16.45	329.86	3,411.4	431.2	-279.5	513.8	0.00	0.00	0.00
3,520.0	16.45	329.86	3,449.8	441.0	-285.2	525.1	0.00	0.00	0.00
3,560.0	16.45	329.86	3,488.2	450.8	-290.9	536.4	0.00	0.00	0.00
3,600.0	16.45	329.86	3,526.5	460.6	-296.6	547.8	0.00	0.00	0.00
3,640.0	16.45	329.86	3,564.9	470.4	-302.3	559.1	0.00	0.00	0.00
3,680.0	16.45	329.86	3,603.2	480.2	-308.0	570.4	0.00	0.00	0.00
3,720.0	16.45	329.86	3,641.6	490.0	-313.6	581.7	0.00	0.00	0.00
3,760.0	16.45	329.86	3,680.0	499.8	-319.3	593.0	0.00	0.00	0.00
3,800.0	16.45	329.86	3,718.3	509.6	-325.0	604.4	0.00	0.00	0.00
3,840.0	16.45	329.86	3,756.7	519.4	-330.7	615.7	0.00	0.00	0.00
3,880.0	16.45	329.86	3,795.1	529.2	-336.4	627.0	0.00	0.00	0.00
3,920.0	16.45	329.86	3,833.4	539.0	-342.1	638.3	0.00	0.00	0.00
3,960.0	16.45	329.86	3,871.8	548.8	-347.8	649.6	0.00	0.00	0.00
4,000.0	16.45	329.86	3,910.2	558.6	-353.4	661.0	0.00	0.00	0.00
4,040.0	16.45	329.86	3,948.5	568.4	-359.1	672.3	0.00	0.00	0.00
4,080.0	16.45	329.86	3,986.9	578.1	-364.8	683.6	0.00	0.00	0.00
4,120.0	16.45	329.86	4,025.2	587.9	-370.5	694.9	0.00	0.00	0.00
4,160.0	16.45	329.86	4,063.6	597.7	-376.2	706.2	0.00	0.00	0.00
4,200.0	16.45	329.86	4,102.0	607.5	-381.9	717.6	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Salazar P20-33D
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 P20-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Salazar P20-33D 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)
4,240.0	16.45	329.86	4,140.3	617.3	-387.6	728.9	0.00	0.00	0.00
4,280.0	16.45	329.86	4,178.7	627.1	-393.2	740.2	0.00	0.00	0.00
4,320.0	16.45	329.86	4,217.1	636.9	-398.9	751.5	0.00	0.00	0.00
4,360.0	16.45	329.86	4,255.4	646.7	-404.6	762.8	0.00	0.00	0.00
4,400.0	16.45	329.86	4,293.8	656.5	-410.3	774.2	0.00	0.00	0.00
4,440.0	16.45	329.86	4,332.2	666.3	-416.0	785.5	0.00	0.00	0.00
4,480.0	16.45	329.86	4,370.5	676.1	-421.7	796.8	0.00	0.00	0.00
4,499.2	16.45	329.86	4,389.0	680.8	-424.4	802.2	0.00	0.00	0.00
4,520.0	16.03	329.86	4,408.9	685.8	-427.3	808.0	2.00	-2.00	0.00
4,560.0	15.23	329.86	4,447.4	695.1	-432.7	818.8	2.00	-2.00	0.00
4,600.0	14.43	329.86	4,486.1	704.0	-437.9	829.0	2.00	-2.00	0.00
4,640.0	13.63	329.86	4,524.9	712.4	-442.7	838.7	2.00	-2.00	0.00
4,680.0	12.83	329.86	4,563.8	720.3	-447.3	847.9	2.00	-2.00	0.00
4,720.0	12.03	329.86	4,602.9	727.7	-451.7	856.5	2.00	-2.00	0.00
4,760.0	11.23	329.86	4,642.1	734.7	-455.7	864.6	2.00	-2.00	0.00
4,800.0	10.43	329.86	4,681.4	741.2	-459.5	872.1	2.00	-2.00	0.00
4,840.0	9.63	329.86	4,720.8	747.2	-463.0	879.0	2.00	-2.00	0.00
4,880.0	8.83	329.86	4,760.2	752.8	-466.2	885.4	2.00	-2.00	0.00
4,920.0	8.03	329.86	4,799.8	757.8	-469.1	891.3	2.00	-2.00	0.00
4,960.0	7.23	329.86	4,839.4	762.4	-471.8	896.6	2.00	-2.00	0.00
5,000.0	6.43	329.86	4,879.2	766.6	-474.2	901.4	2.00	-2.00	0.00
5,040.0	5.63	329.86	4,918.9	770.2	-476.3	905.6	2.00	-2.00	0.00
5,080.0	4.83	329.86	4,958.8	773.3	-478.1	909.2	2.00	-2.00	0.00
5,120.0	4.03	329.86	4,998.7	776.0	-479.7	912.3	2.00	-2.00	0.00
5,160.0	3.23	329.86	5,038.6	778.2	-481.0	914.8	2.00	-2.00	0.00
5,200.0	2.43	329.86	5,078.5	779.9	-482.0	916.8	2.00	-2.00	0.00
5,240.0	1.63	329.86	5,118.5	781.1	-482.7	918.2	2.00	-2.00	0.00
5,280.0	0.83	329.86	5,158.5	781.9	-483.1	919.1	2.00	-2.00	0.00
5,320.0	0.03	329.86	5,198.5	782.1	-483.2	919.4	2.00	-2.00	0.00
5,321.5	0.00	0.00	5,200.0	782.1	-483.2	919.4	2.00	-2.00	0.00
TARGET BHL 1350'FSL, 75'FEL									
5,360.0	0.00	0.00	5,238.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,400.0	0.00	0.00	5,278.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,440.0	0.00	0.00	5,318.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,480.0	0.00	0.00	5,358.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,520.0	0.00	0.00	5,398.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,560.0	0.00	0.00	5,438.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,600.0	0.00	0.00	5,478.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,640.0	0.00	0.00	5,518.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,680.0	0.00	0.00	5,558.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,720.0	0.00	0.00	5,598.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,760.0	0.00	0.00	5,638.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,678.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,840.0	0.00	0.00	5,718.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,880.0	0.00	0.00	5,758.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,920.0	0.00	0.00	5,798.5	782.1	-483.2	919.4	0.00	0.00	0.00
5,960.0	0.00	0.00	5,838.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,878.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,040.0	0.00	0.00	5,918.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,080.0	0.00	0.00	5,958.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,120.0	0.00	0.00	5,998.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,160.0	0.00	0.00	6,038.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,078.5	782.1	-483.2	919.4	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 P20-33D
 Wellbore: Wellbore #1
 Design: Noble Salazar P20-33D Plan #1 11-23-09

Local Co-ordinate Reference: Well Salazar P20-33D
 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)
6,240.0	0.00	0.00	6,118.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,280.0	0.00	0.00	6,158.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,320.0	0.00	0.00	6,198.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,360.0	0.00	0.00	6,238.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,278.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,440.0	0.00	0.00	6,318.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,480.0	0.00	0.00	6,358.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,520.0	0.00	0.00	6,398.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,560.0	0.00	0.00	6,438.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,600.0	0.00	0.00	6,478.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,640.0	0.00	0.00	6,518.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,680.0	0.00	0.00	6,558.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,720.0	0.00	0.00	6,598.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,760.0	0.00	0.00	6,638.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,800.0	0.00	0.00	6,678.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,840.0	0.00	0.00	6,718.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,880.0	0.00	0.00	6,758.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,920.0	0.00	0.00	6,798.5	782.1	-483.2	919.4	0.00	0.00	0.00
6,960.0	0.00	0.00	6,838.5	782.1	-483.2	919.4	0.00	0.00	0.00
7,000.0	0.00	0.00	6,878.5	782.1	-483.2	919.4	0.00	0.00	0.00
7,037.5	0.00	0.00	6,916.0	782.1	-483.2	919.4	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 1350'FSL, 75'FEL									
7,040.0	0.00	0.00	6,918.5	782.1	-483.2	919.4	0.00	0.00	0.00
7,080.0	0.00	0.00	6,958.5	782.1	-483.2	919.4	0.00	0.00	0.00
7,120.0	0.00	0.00	6,998.5	782.1	-483.2	919.4	0.00	0.00	0.00
7,160.0	0.00	0.00	7,038.5	782.1	-483.2	919.4	0.00	0.00	0.00
7,200.0	0.00	0.00	7,078.5	782.1	-483.2	919.4	0.00	0.00	0.00
7,240.0	0.00	0.00	7,118.5	782.1	-483.2	919.4	0.00	0.00	0.00
7,280.0	0.00	0.00	7,158.5	782.1	-483.2	919.4	0.00	0.00	0.00
7,317.5	0.00	0.00	7,196.0	782.1	-483.2	919.4	0.00	0.00	0.00
CODELL									
7,320.0	0.00	0.00	7,198.5	782.1	-483.2	919.4	0.00	0.00	0.00
7,360.0	0.00	0.00	7,238.5	782.1	-483.2	919.4	0.00	0.00	0.00
7,400.0	0.00	0.00	7,278.5	782.1	-483.2	919.4	0.00	0.00	0.00
7,440.0	0.00	0.00	7,318.5	782.1	-483.2	919.4	0.00	0.00	0.00
7,467.5	0.00	0.00	7,346.0	782.1	-483.2	919.4	0.00	0.00	0.00
HARDLINE 75'E OF BHL									

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Local Co-ordinate Reference: Well Salazar P20-33D
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 MD Reference: WELL @ 4876.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
HARDLINE 75'E OF E	0.00	0.00	7,346.0	682.1	-408.2	1,319,012.05	3,161,075.01	40° 12' 27.530 N	104° 55' 23.835 W
- plan misses target center by 125.1ft at 7467.5ft MD (7346.0 TVD, 782.1 N, -483.2 E)									
- Polygon									
Point 1			7,346.0	0.0	0.0	1,319,012.05	3,161,075.01		
Point 2			7,346.0	200.0	0.0	1,319,212.03	3,161,073.71		
TARGET BHL 1350°F	0.00	0.00	5,200.0	782.1	-483.2	1,319,111.59	3,160,999.31	40° 12' 28.519 N	104° 55' 24.802 W
- plan hits target center									
- Point									
TARGET CIRCLE 13'	0.00	0.00	6,916.0	782.1	-483.2	1,319,111.55	3,160,999.36	40° 12' 28.519 N	104° 55' 24.801 W
- plan misses target center by 0.1ft at 7037.5ft MD (6916.0 TVD, 782.1 N, -483.2 E)									
- Circle (radius 75.0)									

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,037.5	6,916.0	NIOBRARA		0.00	
7,317.5	7,196.0	CODELL		0.00	