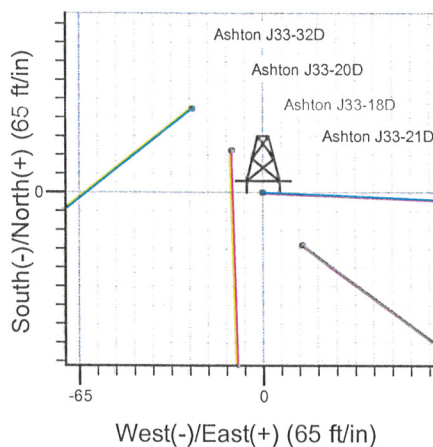
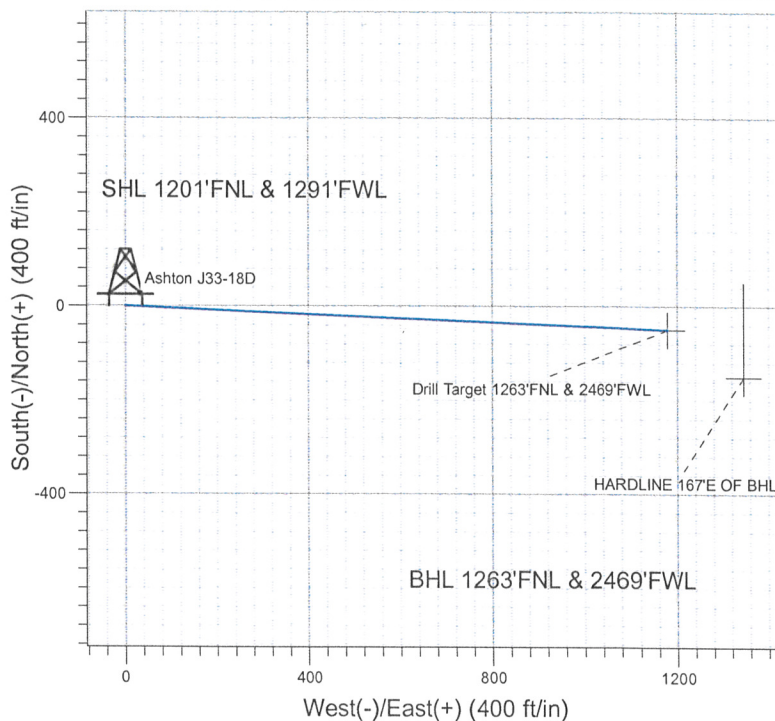
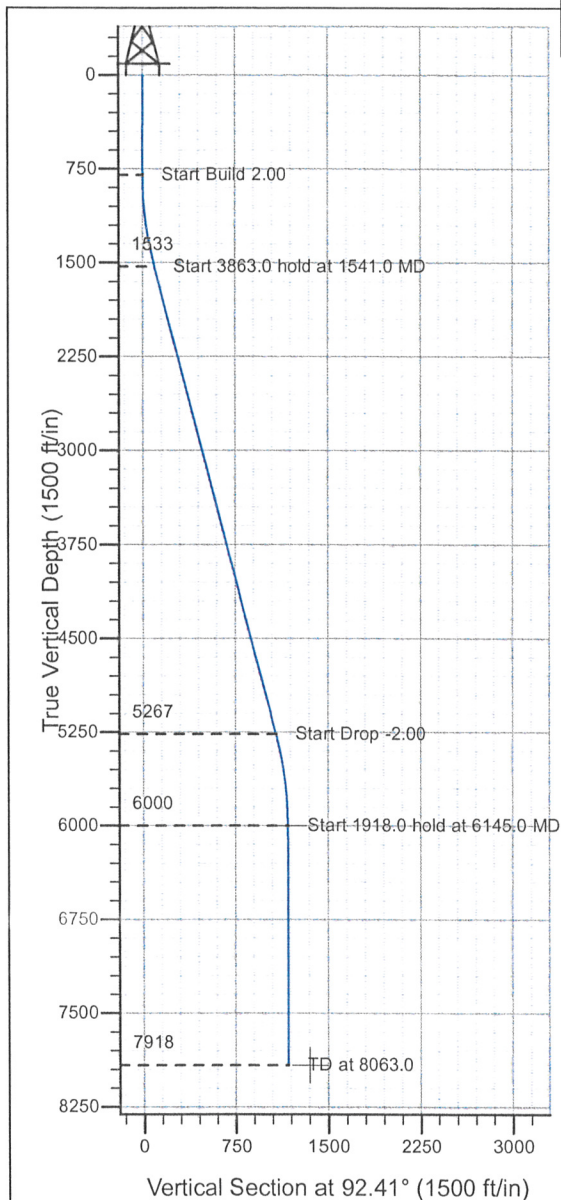


Well Name: Ashton J33-18D

Surface Location: Ashton J33-18D Pad SEC.33-T5N-R66W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4805.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1374767.19 3197993.58 40° 21' 35.856 N 104° 47' 22.236 W
 Original Well Elev WELL @ 4818.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Ashton J33-18D Pad SEC.33-T5N-R66W
 Ashton J33-18D
 Plan #3 (08-04-09)
 16:58, August 11 2009



Azimuths to True North
 Magnetic North: 9.09°

Magnetic Field
 Strength: 53320.8nT
 Dip Angle: 67.08°
 Date: 8/11/2009
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Drill Target 1263'FNL & 2469'FWL	6000.0	-49.5	1177.6	40° 21' 35.366 N	104° 47' 7.024 W	Point
HARDLINE 167'E OF BHL	7918.0	-149.5	1344.6	40° 21' 34.378 N	104° 47' 4.867 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	1541.0	14.82	92.41	1532.8	-4.0	95.2	2.00	92.41	95.3	
4	5404.0	14.82	92.41	5267.2	-45.5	1082.4	0.00	0.00	1083.4	
5	6145.0	0.00	0.00	6000.0	-49.5	1177.6	2.00	180.00	1178.7	Drill Target 1263'FNL & 2469'FWL
6	8063.0	0.00	0.00	7918.0	-49.5	1177.6	0.00	0.00	1178.7	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.33-T5N-R66W

Ashton J33-18D Pad SEC.33-T5N-R66W

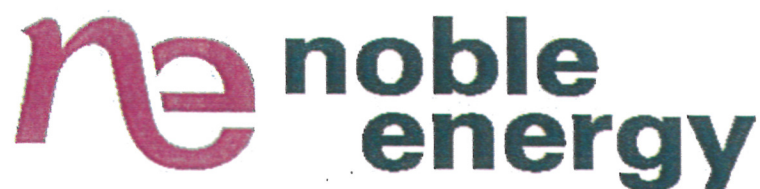
Ashton J33-18D

Ashton J33-18D

Plan: Plan #3 (08-04-09)

Standard Planning Report

11 August, 2009



Database: EDM den0-adp01 Server Data
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.33-T5N-R66W
 Site: Ashton J33-18D Pad SEC.33-T5N-R66W
 Well: Ashton J33-18D
 Wellbore: Ashton J33-18D
 Design: Plan #3 (08-04-09)

Local Co-ordinate Reference: Well Ashton J33-18D
 TVD Reference: WELL @ 4818.0ft (Original Well Elev)
 MD Reference: WELL @ 4818.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Project SEC.33-T5N-R66W, 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 Well Reference Point
 Using geodetic scale factor

Site Ashton J33-18D Pad SEC.33-T5N-R66W

Site Position: Northing: 1,375,448.93 ft Latitude: 40° 21' 42.552 N
 From: Lat/Long Easting: 3,198,506.45 ft Longitude: 104° 47' 15.540 W
 Position Uncertainty: 0.0 ft Slot Radius: " Grid Convergence: 0.46 °

Well Ashton J33-18D

Well Position +N/-S -677.6 ft Northing: 1,374,767.19 ft Latitude: 40° 21' 35.856 N
 +E/-W -518.3 ft Easting: 3,197,993.58 ft Longitude: 104° 47' 22.236 W
 Position Uncertainty 0.0 ft Wellhead Elevation: ft Ground Level: 4,805.0 ft

Wellbore Ashton J33-18D

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/4/2008	9.25	67.12	53,443
	IGRF200510	8/11/2009	9.09	67.08	53,321

Design Plan #3 (08-04-09)

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	92.41

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	
1,541.0	14.82	92.41	1,532.8	-4.0	95.2	2.00	2.00	0.00	92.41	
5,404.0	14.82	92.41	5,267.2	-45.5	1,082.4	0.00	0.00	0.00	0.00	
6,145.0	0.00	0.00	6,000.0	-49.5	1,177.6	2.00	-2.00	0.00	180.00	Drill Target 1263'FT
8,063.0	0.00	0.00	7,918.0	-49.5	1,177.6	0.00	0.00	0.00	0.00	

Database: EDM den0-adp01 Server Data
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.33-T5N-R66W
 Site: Ashton J33-18D Pad SEC.33-T5N-R66W
 Well: Ashton J33-18D
 Wellbore: Ashton J33-18D
 Design: Plan #3 (08-04-09)

Local Co-ordinate Reference: Well Ashton J33-18D
 TVD Reference: WELL @ 4818.0ft (Original Well Elev)
 MD Reference: WELL @ 4818.0ft (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)
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	92.41	840.0	0.0	0.3	0.3	2.00	2.00	0.00
880.0	1.60	92.41	880.0	0.0	1.1	1.1	2.00	2.00	0.00
920.0	2.40	92.41	920.0	-0.1	2.5	2.5	2.00	2.00	0.00
960.0	3.20	92.41	959.9	-0.2	4.5	4.5	2.00	2.00	0.00
1,000.0	4.00	92.41	999.8	-0.3	7.0	7.0	2.00	2.00	0.00
1,040.0	4.80	92.41	1,039.7	-0.4	10.0	10.0	2.00	2.00	0.00
1,080.0	5.60	92.41	1,079.6	-0.6	13.7	13.7	2.00	2.00	0.00
1,120.0	6.40	92.41	1,119.3	-0.7	17.8	17.9	2.00	2.00	0.00
1,160.0	7.20	92.41	1,159.1	-0.9	22.6	22.6	2.00	2.00	0.00
1,200.0	8.00	92.41	1,198.7	-1.2	27.9	27.9	2.00	2.00	0.00
1,240.0	8.80	92.41	1,238.3	-1.4	33.7	33.7	2.00	2.00	0.00
1,280.0	9.60	92.41	1,277.8	-1.7	40.1	40.1	2.00	2.00	0.00
1,320.0	10.40	92.41	1,317.1	-2.0	47.0	47.1	2.00	2.00	0.00
1,360.0	11.20	92.41	1,356.4	-2.3	54.5	54.6	2.00	2.00	0.00
1,400.0	12.00	92.41	1,395.6	-2.6	62.5	62.6	2.00	2.00	0.00
1,440.0	12.80	92.41	1,434.7	-3.0	71.1	71.2	2.00	2.00	0.00
1,480.0	13.60	92.41	1,473.6	-3.4	80.3	80.3	2.00	2.00	0.00
1,520.0	14.40	92.41	1,512.4	-3.8	89.9	90.0	2.00	2.00	0.00
1,541.0	14.82	92.41	1,532.8	-4.0	95.2	95.3	2.00	2.00	0.00
1,560.0	14.82	92.41	1,551.1	-4.2	100.1	100.2	0.00	0.00	0.00
1,600.0	14.82	92.41	1,589.8	-4.6	110.3	110.4	0.00	0.00	0.00
1,640.0	14.82	92.41	1,628.5	-5.1	120.5	120.6	0.00	0.00	0.00
1,680.0	14.82	92.41	1,667.1	-5.5	130.7	130.9	0.00	0.00	0.00
1,720.0	14.82	92.41	1,705.8	-5.9	141.0	141.1	0.00	0.00	0.00
1,760.0	14.82	92.41	1,744.5	-6.4	151.2	151.3	0.00	0.00	0.00
1,800.0	14.82	92.41	1,783.1	-6.8	161.4	161.5	0.00	0.00	0.00
1,840.0	14.82	92.41	1,821.8	-7.2	171.6	171.8	0.00	0.00	0.00
1,880.0	14.82	92.41	1,860.5	-7.6	181.8	182.0	0.00	0.00	0.00
1,920.0	14.82	92.41	1,899.2	-8.1	192.1	192.2	0.00	0.00	0.00
1,960.0	14.82	92.41	1,937.8	-8.5	202.3	202.5	0.00	0.00	0.00
2,000.0	14.82	92.41	1,976.5	-8.9	212.5	212.7	0.00	0.00	0.00
2,040.0	14.82	92.41	2,015.2	-9.4	222.7	222.9	0.00	0.00	0.00
2,080.0	14.82	92.41	2,053.8	-9.8	233.0	233.2	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Ashton J33-18D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4818.0ft (Original Well Elev)
Project:	SEC.33-T5N-R66W	MD Reference:	WELL @ 4818.0ft (Original Well Elev)
Site:	Ashton J33-18D Pad SEC.33-T5N-R66W	North Reference:	True
Well:	Ashton J33-18D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Ashton J33-18D		
Design:	Plan #3 (08-04-09)		

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)
2,120.0	14.82	92.41	2,092.5	-10.2	243.2	243.4	0.00	0.00	0.00
2,160.0	14.82	92.41	2,131.2	-10.7	253.4	253.6	0.00	0.00	0.00
2,200.0	14.82	92.41	2,169.8	-11.1	263.6	263.9	0.00	0.00	0.00
2,240.0	14.82	92.41	2,208.5	-11.5	273.8	274.1	0.00	0.00	0.00
2,280.0	14.82	92.41	2,247.2	-11.9	284.1	284.3	0.00	0.00	0.00
2,320.0	14.82	92.41	2,285.9	-12.4	294.3	294.6	0.00	0.00	0.00
2,360.0	14.82	92.41	2,324.5	-12.8	304.5	304.8	0.00	0.00	0.00
2,400.0	14.82	92.41	2,363.2	-13.2	314.7	315.0	0.00	0.00	0.00
2,440.0	14.82	92.41	2,401.9	-13.7	325.0	325.2	0.00	0.00	0.00
2,480.0	14.82	92.41	2,440.5	-14.1	335.2	335.5	0.00	0.00	0.00
2,520.0	14.82	92.41	2,479.2	-14.5	345.4	345.7	0.00	0.00	0.00
2,560.0	14.82	92.41	2,517.9	-14.9	355.6	355.9	0.00	0.00	0.00
2,600.0	14.82	92.41	2,556.5	-15.4	365.9	366.2	0.00	0.00	0.00
2,640.0	14.82	92.41	2,595.2	-15.8	376.1	376.4	0.00	0.00	0.00
2,680.0	14.82	92.41	2,633.9	-16.2	386.3	386.6	0.00	0.00	0.00
2,720.0	14.82	92.41	2,672.5	-16.7	396.5	396.9	0.00	0.00	0.00
2,760.0	14.82	92.41	2,711.2	-17.1	406.7	407.1	0.00	0.00	0.00
2,800.0	14.82	92.41	2,749.9	-17.5	417.0	417.3	0.00	0.00	0.00
2,840.0	14.82	92.41	2,788.6	-18.0	427.2	427.6	0.00	0.00	0.00
2,880.0	14.82	92.41	2,827.2	-18.4	437.4	437.8	0.00	0.00	0.00
2,920.0	14.82	92.41	2,865.9	-18.8	447.6	448.0	0.00	0.00	0.00
2,960.0	14.82	92.41	2,904.6	-19.2	457.9	458.3	0.00	0.00	0.00
3,000.0	14.82	92.41	2,943.2	-19.7	468.1	468.5	0.00	0.00	0.00
3,040.0	14.82	92.41	2,981.9	-20.1	478.3	478.7	0.00	0.00	0.00
3,080.0	14.82	92.41	3,020.6	-20.5	488.5	488.9	0.00	0.00	0.00
3,120.0	14.82	92.41	3,059.2	-21.0	498.7	499.2	0.00	0.00	0.00
3,160.0	14.82	92.41	3,097.9	-21.4	509.0	509.4	0.00	0.00	0.00
3,200.0	14.82	92.41	3,136.6	-21.8	519.2	519.6	0.00	0.00	0.00
3,240.0	14.82	92.41	3,175.2	-22.3	529.4	529.9	0.00	0.00	0.00
3,280.0	14.82	92.41	3,213.9	-22.7	539.6	540.1	0.00	0.00	0.00
3,320.0	14.82	92.41	3,252.6	-23.1	549.9	550.3	0.00	0.00	0.00
3,360.0	14.82	92.41	3,291.3	-23.5	560.1	560.6	0.00	0.00	0.00
3,400.0	14.82	92.41	3,329.9	-24.0	570.3	570.8	0.00	0.00	0.00
3,440.0	14.82	92.41	3,368.6	-24.4	580.5	581.0	0.00	0.00	0.00
3,480.0	14.82	92.41	3,407.3	-24.8	590.7	591.3	0.00	0.00	0.00
3,520.0	14.82	92.41	3,445.9	-25.3	601.0	601.5	0.00	0.00	0.00
3,560.0	14.82	92.41	3,484.6	-25.7	611.2	611.7	0.00	0.00	0.00
3,600.0	14.82	92.41	3,523.3	-26.1	621.4	622.0	0.00	0.00	0.00
3,640.0	14.82	92.41	3,561.9	-26.5	631.6	632.2	0.00	0.00	0.00
3,680.0	14.82	92.41	3,600.6	-27.0	641.9	642.4	0.00	0.00	0.00
3,720.0	14.82	92.41	3,639.3	-27.4	652.1	652.6	0.00	0.00	0.00
3,760.0	14.82	92.41	3,677.9	-27.8	662.3	662.9	0.00	0.00	0.00
3,800.0	14.82	92.41	3,716.6	-28.3	672.5	673.1	0.00	0.00	0.00
3,840.0	14.82	92.41	3,755.3	-28.7	682.7	683.3	0.00	0.00	0.00
3,880.0	14.82	92.41	3,794.0	-29.1	693.0	693.6	0.00	0.00	0.00
3,920.0	14.82	92.41	3,832.6	-29.6	703.2	703.8	0.00	0.00	0.00
3,960.0	14.82	92.41	3,871.3	-30.0	713.4	714.0	0.00	0.00	0.00
4,000.0	14.82	92.41	3,910.0	-30.4	723.6	724.3	0.00	0.00	0.00
4,040.0	14.82	92.41	3,948.6	-30.8	733.9	734.5	0.00	0.00	0.00
4,080.0	14.82	92.41	3,987.3	-31.3	744.1	744.7	0.00	0.00	0.00
4,120.0	14.82	92.41	4,026.0	-31.7	754.3	755.0	0.00	0.00	0.00
4,160.0	14.82	92.41	4,064.6	-32.1	764.5	765.2	0.00	0.00	0.00
4,200.0	14.82	92.41	4,103.3	-32.6	774.7	775.4	0.00	0.00	0.00
4,240.0	14.82	92.41	4,142.0	-33.0	785.0	785.7	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.33-T5N-R66W
 Site: Ashton J33-18D Pad SEC.33-T5N-R66W
 Well: Ashton J33-18D
 Wellbore: Ashton J33-18D
 Design: Plan #3 (08-04-09)

Local Co-ordinate Reference: Well Ashton J33-18D
 TVD Reference: WELL @ 4818.0ft (Original Well Elev)
 MD Reference: WELL @ 4818.0ft (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)
4,280.0	14.82	92.41	4,180.7	-33.4	795.2	795.9	0.00	0.00	0.00
4,320.0	14.82	92.41	4,219.3	-33.9	805.4	806.1	0.00	0.00	0.00
4,360.0	14.82	92.41	4,258.0	-34.3	815.6	816.4	0.00	0.00	0.00
4,400.0	14.82	92.41	4,296.7	-34.7	825.9	826.6	0.00	0.00	0.00
4,440.0	14.82	92.41	4,335.3	-35.1	836.1	836.8	0.00	0.00	0.00
4,480.0	14.82	92.41	4,374.0	-35.6	846.3	847.0	0.00	0.00	0.00
4,520.0	14.82	92.41	4,412.7	-36.0	856.5	857.3	0.00	0.00	0.00
4,560.0	14.82	92.41	4,451.3	-36.4	866.7	867.5	0.00	0.00	0.00
4,600.0	14.82	92.41	4,490.0	-36.9	877.0	877.7	0.00	0.00	0.00
4,640.0	14.82	92.41	4,528.7	-37.3	887.2	888.0	0.00	0.00	0.00
4,680.0	14.82	92.41	4,567.3	-37.7	897.4	898.2	0.00	0.00	0.00
4,720.0	14.82	92.41	4,606.0	-38.1	907.6	908.4	0.00	0.00	0.00
4,760.0	14.82	92.41	4,644.7	-38.6	917.9	918.7	0.00	0.00	0.00
4,800.0	14.82	92.41	4,683.4	-39.0	928.1	928.9	0.00	0.00	0.00
4,840.0	14.82	92.41	4,722.0	-39.4	938.3	939.1	0.00	0.00	0.00
4,880.0	14.82	92.41	4,760.7	-39.9	948.5	949.4	0.00	0.00	0.00
4,920.0	14.82	92.41	4,799.4	-40.3	958.7	959.6	0.00	0.00	0.00
4,960.0	14.82	92.41	4,838.0	-40.7	969.0	969.8	0.00	0.00	0.00
5,000.0	14.82	92.41	4,876.7	-41.2	979.2	980.1	0.00	0.00	0.00
5,040.0	14.82	92.41	4,915.4	-41.6	989.4	990.3	0.00	0.00	0.00
5,080.0	14.82	92.41	4,954.0	-42.0	999.6	1,000.5	0.00	0.00	0.00
5,120.0	14.82	92.41	4,992.7	-42.4	1,009.9	1,010.7	0.00	0.00	0.00
5,160.0	14.82	92.41	5,031.4	-42.9	1,020.1	1,021.0	0.00	0.00	0.00
5,200.0	14.82	92.41	5,070.0	-43.3	1,030.3	1,031.2	0.00	0.00	0.00
5,240.0	14.82	92.41	5,108.7	-43.7	1,040.5	1,041.4	0.00	0.00	0.00
5,280.0	14.82	92.41	5,147.4	-44.2	1,050.7	1,051.7	0.00	0.00	0.00
5,320.0	14.82	92.41	5,186.1	-44.6	1,061.0	1,061.9	0.00	0.00	0.00
5,360.0	14.82	92.41	5,224.7	-45.0	1,071.2	1,072.1	0.00	0.00	0.00
5,400.0	14.82	92.41	5,263.4	-45.5	1,081.4	1,082.4	0.00	0.00	0.00
5,404.0	14.82	92.41	5,267.2	-45.5	1,082.4	1,083.4	0.00	0.00	0.00
5,440.0	14.10	92.41	5,302.1	-45.9	1,091.4	1,092.4	2.00	-2.00	0.00
5,480.0	13.30	92.41	5,341.0	-46.3	1,100.9	1,101.8	2.00	-2.00	0.00
5,520.0	12.50	92.41	5,380.0	-46.6	1,109.8	1,110.8	2.00	-2.00	0.00
5,560.0	11.70	92.41	5,419.1	-47.0	1,118.2	1,119.2	2.00	-2.00	0.00
5,600.0	10.90	92.41	5,458.3	-47.3	1,126.0	1,127.0	2.00	-2.00	0.00
5,640.0	10.10	92.41	5,497.6	-47.6	1,133.3	1,134.3	2.00	-2.00	0.00
5,680.0	9.30	92.41	5,537.1	-47.9	1,140.0	1,141.0	2.00	-2.00	0.00
5,720.0	8.50	92.41	5,576.6	-48.2	1,146.2	1,147.2	2.00	-2.00	0.00
5,760.0	7.70	92.41	5,616.2	-48.4	1,151.8	1,152.9	2.00	-2.00	0.00
5,800.0	6.90	92.41	5,655.9	-48.6	1,156.9	1,157.9	2.00	-2.00	0.00
5,840.0	6.10	92.41	5,695.6	-48.8	1,161.4	1,162.5	2.00	-2.00	0.00
5,880.0	5.30	92.41	5,735.4	-49.0	1,165.4	1,166.4	2.00	-2.00	0.00
5,920.0	4.50	92.41	5,775.3	-49.1	1,168.8	1,169.9	2.00	-2.00	0.00
5,960.0	3.70	92.41	5,815.2	-49.2	1,171.7	1,172.7	2.00	-2.00	0.00
6,000.0	2.90	92.41	5,855.1	-49.3	1,174.0	1,175.0	2.00	-2.00	0.00
6,040.0	2.10	92.41	5,895.0	-49.4	1,175.7	1,176.8	2.00	-2.00	0.00
6,080.0	1.30	92.41	5,935.0	-49.5	1,176.9	1,177.9	2.00	-2.00	0.00
6,120.0	0.50	92.41	5,975.0	-49.5	1,177.5	1,178.6	2.00	-2.00	0.00
6,145.0	0.00	0.00	6,000.0	-49.5	1,177.6	1,178.7	2.00	-2.00	-370.01
Drill Target 1263'FNL & 2469'FWL									
6,160.0	0.00	0.00	6,015.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,200.0	0.00	0.00	6,055.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,240.0	0.00	0.00	6,095.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.33-T5N-R66W
 Site: Ashton J33-18D Pad SEC.33-T5N-R66W
 Well: Ashton J33-18D
 Wellbore: Ashton J33-18D
 Design: Plan #3 (08-04-09)

Local Co-ordinate Reference: Well Ashton J33-18D
 TVD Reference: WELL @ 4818.0ft (Original Well Elev)
 MD Reference: WELL @ 4818.0ft (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)
6,280.0	0.00	0.00	6,135.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,320.0	0.00	0.00	6,175.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,360.0	0.00	0.00	6,215.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,400.0	0.00	0.00	6,255.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,440.0	0.00	0.00	6,295.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,480.0	0.00	0.00	6,335.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,520.0	0.00	0.00	6,375.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,560.0	0.00	0.00	6,415.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,600.0	0.00	0.00	6,455.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,640.0	0.00	0.00	6,495.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,680.0	0.00	0.00	6,535.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,720.0	0.00	0.00	6,575.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,760.0	0.00	0.00	6,615.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,800.0	0.00	0.00	6,655.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,840.0	0.00	0.00	6,695.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,880.0	0.00	0.00	6,735.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,920.0	0.00	0.00	6,775.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
6,960.0	0.00	0.00	6,815.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,000.0	0.00	0.00	6,855.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,040.0	0.00	0.00	6,895.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,080.0	0.00	0.00	6,935.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,083.0	0.00	0.00	6,938.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
Niobrara									
7,120.0	0.00	0.00	6,975.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,160.0	0.00	0.00	7,015.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,200.0	0.00	0.00	7,055.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,240.0	0.00	0.00	7,095.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,280.0	0.00	0.00	7,135.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,320.0	0.00	0.00	7,175.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,360.0	0.00	0.00	7,215.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,400.0	0.00	0.00	7,255.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,418.0	0.00	0.00	7,273.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
Codell									
7,440.0	0.00	0.00	7,295.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,480.0	0.00	0.00	7,335.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,520.0	0.00	0.00	7,375.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,560.0	0.00	0.00	7,415.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,600.0	0.00	0.00	7,455.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,640.0	0.00	0.00	7,495.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,680.0	0.00	0.00	7,535.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,720.0	0.00	0.00	7,575.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,760.0	0.00	0.00	7,615.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,800.0	0.00	0.00	7,655.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,837.0	0.00	0.00	7,692.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
D-Sand									
7,840.0	0.00	0.00	7,695.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,880.0	0.00	0.00	7,735.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,913.0	0.00	0.00	7,768.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
J-Sand									
7,920.0	0.00	0.00	7,775.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
7,960.0	0.00	0.00	7,815.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
8,000.0	0.00	0.00	7,855.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
8,040.0	0.00	0.00	7,895.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00
8,063.0	0.00	0.00	7,918.0	-49.5	1,177.6	1,178.7	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Ashton J33-18D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4818.0ft (Original Well Elev)
Project:	SEC.33-T5N-R66W	MD Reference:	WELL @ 4818.0ft (Original Well Elev)
Site:	Ashton J33-18D Pad SEC.33-T5N-R66W	North Reference:	True
Well:	Ashton J33-18D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Ashton J33-18D		
Design:	Plan #3 (08-04-09)		

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)
HARDLINE 167'E OF BHL									

Targets
Target Name

- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- Shape									
Drill Target 1263'FNL	0.00	0.00	6,000.0	-49.5	1,177.6	1,374,727.13	3,199,171.52	40° 21' 35.366 N	104° 47' 7.024 W
- plan hits target center									
- Point									
HARDLINE 167'E OF	0.00	0.00	7,918.0	-149.5	1,344.6	1,374,628.48	3,199,339.27	40° 21' 34.378 N	104° 47' 4.867 W
- plan misses target center by 194.6ft at 8063.0ft MD (7918.0 TVD, -49.5 N, 1177.6 E)									
- Polygon									
Point 1			7,918.0	0.0	0.0	1,374,628.48	3,199,339.27		
Point 2			7,918.0	200.0	0.0	1,374,828.46	3,199,337.67		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,083.0	6,938.0	Niobrara		0.00	
7,418.0	7,273.0	Codell		0.00	
7,837.0	7,692.0	D-Sand		0.00	
7,913.0	7,768.0	J-Sand		0.00	