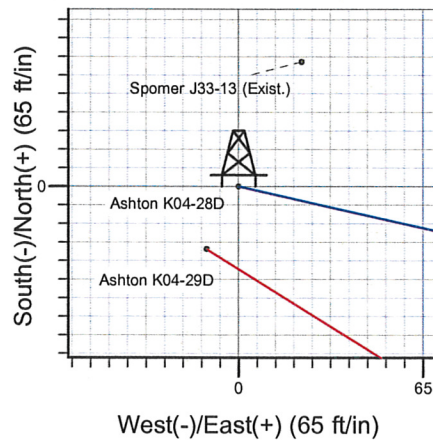
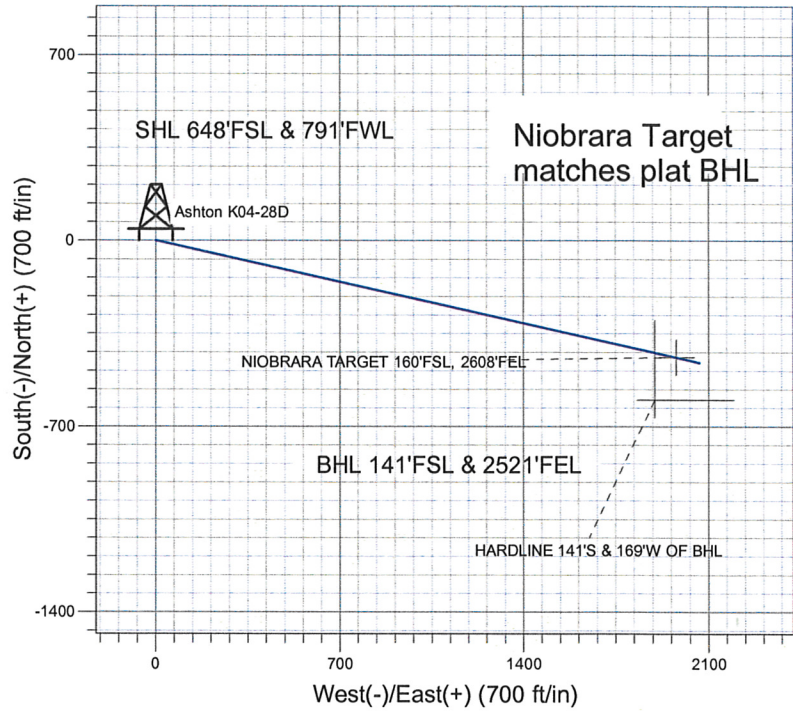
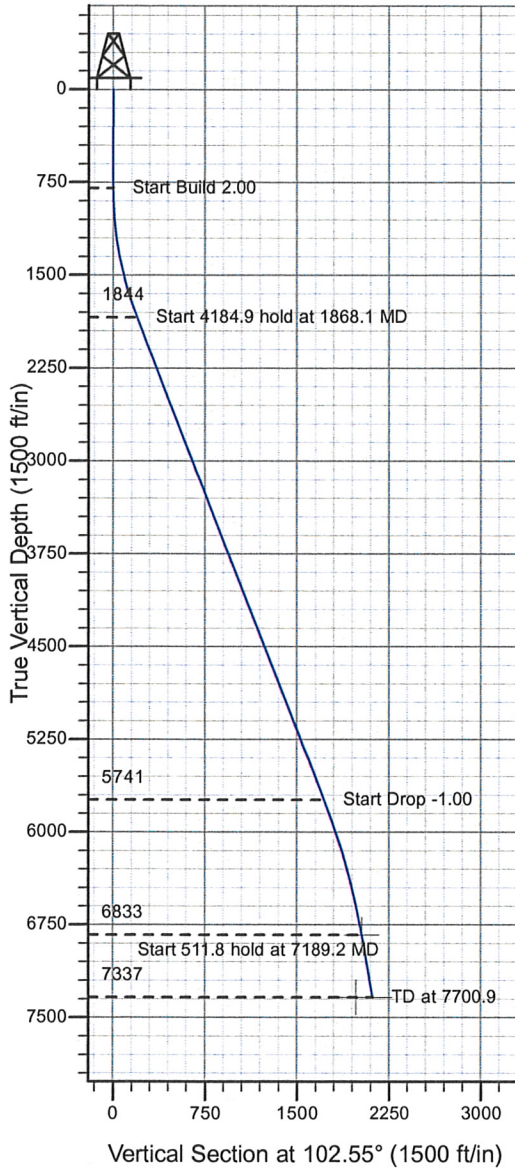


ENSIGN Directional

Well Name:Ashton K04-28D

Surface Location: Ashton K04-28D Pad Sec.33-T5N-R66W
North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
Ground Elevation: 4709.0
+N/-S+E/-W Northing Easting Latitude Longitude Slot
0.0 0.0 1371411.67 3197504.83 40° 21' 2.736 N104° 47' 28.896 W
Original Well Elev WELL @ 4722.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Ashton K04-28D Pad Sec.33-T5N-R66W
Ashton K04-28D
Plan #3 (05-28-09)
11:58, June 04 2009



Azimuths to True North
Magnetic North: 9.12°

Magnetic Field
Strength: 53343.5snT
Dip Angle: 67.09°
Date: 5/8/2009
Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
NIOBRARA TARGET 160'FSL, 2608'FEL	6833.0	-440.6	1979.3	40° 20' 58.381 N	104° 47' 3.331 W	Point
HARDLINE 141'S & 169'W OF BHL	7337.0	-600.6	1897.3	40° 20' 56.800 N	104° 47' 4.391 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	1868.1	21.36	102.55	1843.5	-42.8	192.1	2.00	102.55	196.8	
4	6053.0	21.36	102.55	5740.9	-374.0	1680.1	0.00	0.00	1721.2	
5	7189.2	10.00	102.55	6833.0	-440.6	1979.3	1.00	180.00	2027.8	NIOBRARA TARGET 160'FSL, 2608'FEL
6	7700.9	10.00	102.55	7337.0	-459.9	2066.1	0.00	0.00	2116.7	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.33-T5N-R66W

Ashton K04-28D Pad Sec.33-T5N-R66W

Ashton K04-28D

Wellbore #1

Plan: Plan #3 (05-28-09)

Standard Planning Report

04 June, 2009



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Ashton K04-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4722.0ft (Original Well Elev)
Project:	SEC.33-T5N-R66W	MD Reference:	WELL @ 4722.0ft (Original Well Elev)
Site:	Ashton K04-28D Pad Sec.33-T5N-R66W	North Reference:	True
Well:	Ashton K04-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (05-28-09)		

Project	SEC.33-T5N-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	Ashton K04-28D Pad Sec.33-T5N-R66W				
Site Position:		Northing:	1,371,411.69ft	Latitude:	40° 21' 2.736 N
From:	Lat/Long	Easting:	3,197,504.83ft	Longitude:	104° 47' 28.896 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.46 °

Well	Ashton K04-28D					
Well Position	+N/-S	0.0 ft	Northing:	1,371,411.67 ft	Latitude:	40° 21' 2.736 N
	+E/-W	0.0 ft	Easting:	3,197,504.83 ft	Longitude:	104° 47' 28.896 W
Position Uncertainty	0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,709.0 ft	

Wellbore	Wellbore #1
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	6/9/2008	9.25	67.12	53,438
	IGRF200510	5/8/2009	9.12	67.09	53,344

Design	Plan #3 (05-28-09)
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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	102.55

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	
1,868.1	21.36	102.55	1,843.5	-42.8	192.1	2.00	2.00	0.00	102.55	
6,053.0	21.36	102.55	5,740.9	-374.0	1,680.1	0.00	0.00	0.00	0.00	
7,189.2	10.00	102.55	6,833.0	-440.6	1,979.3	1.00	-1.00	0.00	180.00	NIOBRARA TARGE
7,700.9	10.00	102.55	7,337.0	-459.9	2,066.1	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 K04-28D Pad Sec.33-T5N-R66W
 Well: Ashton K04-28D
 Wellbore: Wellbore #1
 Design: Plan #3 (05-28-09)

Local Co-ordinate Reference: Well Ashton K04-28D
 TVD Reference: WELL @ 4722.0ft (Original Well Elev)
 MD Reference: WELL @ 4722.0ft (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	102.55	840.0	-0.1	0.3	0.3	2.00	2.00	0.00
880.0	1.60	102.55	880.0	-0.2	1.1	1.1	2.00	2.00	0.00
920.0	2.40	102.55	920.0	-0.5	2.5	2.5	2.00	2.00	0.00
960.0	3.20	102.55	959.9	-1.0	4.4	4.5	2.00	2.00	0.00
1,000.0	4.00	102.55	999.8	-1.5	6.8	7.0	2.00	2.00	0.00
1,040.0	4.80	102.55	1,039.7	-2.2	9.8	10.0	2.00	2.00	0.00
1,080.0	5.60	102.55	1,079.6	-3.0	13.3	13.7	2.00	2.00	0.00
1,120.0	6.40	102.55	1,119.3	-3.9	17.4	17.9	2.00	2.00	0.00
1,160.0	7.20	102.55	1,159.1	-4.9	22.0	22.6	2.00	2.00	0.00
1,200.0	8.00	102.55	1,198.7	-6.1	27.2	27.9	2.00	2.00	0.00
1,240.0	8.80	102.55	1,238.3	-7.3	32.9	33.7	2.00	2.00	0.00
1,280.0	9.60	102.55	1,277.8	-8.7	39.2	40.1	2.00	2.00	0.00
1,320.0	10.40	102.55	1,317.1	-10.2	45.9	47.1	2.00	2.00	0.00
1,360.0	11.20	102.55	1,356.4	-11.9	53.3	54.6	2.00	2.00	0.00
1,400.0	12.00	102.55	1,395.6	-13.6	61.1	62.6	2.00	2.00	0.00
1,440.0	12.80	102.55	1,434.7	-15.5	69.5	71.2	2.00	2.00	0.00
1,480.0	13.60	102.55	1,473.6	-17.5	78.4	80.3	2.00	2.00	0.00
1,520.0	14.40	102.55	1,512.4	-19.6	87.9	90.0	2.00	2.00	0.00
1,560.0	15.20	102.55	1,551.1	-21.8	97.8	100.2	2.00	2.00	0.00
1,600.0	16.00	102.55	1,589.6	-24.1	108.3	111.0	2.00	2.00	0.00
1,640.0	16.80	102.55	1,628.0	-26.6	119.3	122.3	2.00	2.00	0.00
1,680.0	17.60	102.55	1,666.2	-29.1	130.9	134.1	2.00	2.00	0.00
1,720.0	18.40	102.55	1,704.3	-31.8	143.0	146.5	2.00	2.00	0.00
1,760.0	19.20	102.55	1,742.1	-34.6	155.5	159.3	2.00	2.00	0.00
1,800.0	20.00	102.55	1,779.8	-37.5	168.6	172.8	2.00	2.00	0.00
1,840.0	20.80	102.55	1,817.3	-40.6	182.2	186.7	2.00	2.00	0.00
1,868.1	21.36	102.55	1,843.5	-42.8	192.1	196.8	2.00	2.00	0.00
1,880.0	21.36	102.55	1,854.6	-43.7	196.3	201.2	0.00	0.00	0.00
1,920.0	21.36	102.55	1,891.9	-46.9	210.6	215.7	0.00	0.00	0.00
1,960.0	21.36	102.55	1,929.1	-50.0	224.8	230.3	0.00	0.00	0.00
2,000.0	21.36	102.55	1,966.4	-53.2	239.0	244.9	0.00	0.00	0.00
2,040.0	21.36	102.55	2,003.6	-56.4	253.2	259.4	0.00	0.00	0.00
2,080.0	21.36	102.55	2,040.9	-59.5	267.5	274.0	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Ashton K04-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4722.0ft (Original Well Elev)
Project:	SEC.33-T5N-R66W	MD Reference:	WELL @ 4722.0ft (Original Well Elev)
Site:	Ashton K04-28D Pad Sec.33-T5N-R66W	North Reference:	True
Well:	Ashton K04-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (05-28-09)		

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	21.36	102.55	2,078.1	-62.7	281.7	288.6	0.00	0.00	0.00
2,160.0	21.36	102.55	2,115.4	-65.9	295.9	303.1	0.00	0.00	0.00
2,200.0	21.36	102.55	2,152.6	-69.0	310.1	317.7	0.00	0.00	0.00
2,240.0	21.36	102.55	2,189.9	-72.2	324.3	332.3	0.00	0.00	0.00
2,280.0	21.36	102.55	2,227.1	-75.4	338.6	346.9	0.00	0.00	0.00
2,320.0	21.36	102.55	2,264.4	-78.5	352.8	361.4	0.00	0.00	0.00
2,360.0	21.36	102.55	2,301.6	-81.7	367.0	376.0	0.00	0.00	0.00
2,400.0	21.36	102.55	2,338.9	-84.9	381.2	390.6	0.00	0.00	0.00
2,440.0	21.36	102.55	2,376.1	-88.0	395.5	405.1	0.00	0.00	0.00
2,480.0	21.36	102.55	2,413.4	-91.2	409.7	419.7	0.00	0.00	0.00
2,520.0	21.36	102.55	2,450.6	-94.4	423.9	434.3	0.00	0.00	0.00
2,560.0	21.36	102.55	2,487.9	-97.5	438.1	448.8	0.00	0.00	0.00
2,600.0	21.36	102.55	2,525.1	-100.7	452.3	463.4	0.00	0.00	0.00
2,640.0	21.36	102.55	2,562.4	-103.9	466.6	478.0	0.00	0.00	0.00
2,680.0	21.36	102.55	2,599.6	-107.0	480.8	492.6	0.00	0.00	0.00
2,720.0	21.36	102.55	2,636.9	-110.2	495.0	507.1	0.00	0.00	0.00
2,760.0	21.36	102.55	2,674.1	-113.4	509.2	521.7	0.00	0.00	0.00
2,800.0	21.36	102.55	2,711.4	-116.5	523.5	536.3	0.00	0.00	0.00
2,840.0	21.36	102.55	2,748.7	-119.7	537.7	550.8	0.00	0.00	0.00
2,880.0	21.36	102.55	2,785.9	-122.9	551.9	565.4	0.00	0.00	0.00
2,920.0	21.36	102.55	2,823.2	-126.0	566.1	580.0	0.00	0.00	0.00
2,960.0	21.36	102.55	2,860.4	-129.2	580.3	594.6	0.00	0.00	0.00
3,000.0	21.36	102.55	2,897.7	-132.4	594.6	609.1	0.00	0.00	0.00
3,040.0	21.36	102.55	2,934.9	-135.5	608.8	623.7	0.00	0.00	0.00
3,080.0	21.36	102.55	2,972.2	-138.7	623.0	638.3	0.00	0.00	0.00
3,120.0	21.36	102.55	3,009.4	-141.9	637.2	652.8	0.00	0.00	0.00
3,160.0	21.36	102.55	3,046.7	-145.0	651.5	667.4	0.00	0.00	0.00
3,200.0	21.36	102.55	3,083.9	-148.2	665.7	682.0	0.00	0.00	0.00
3,240.0	21.36	102.55	3,121.2	-151.4	679.9	696.5	0.00	0.00	0.00
3,280.0	21.36	102.55	3,158.4	-154.5	694.1	711.1	0.00	0.00	0.00
3,320.0	21.36	102.55	3,195.7	-157.7	708.3	725.7	0.00	0.00	0.00
3,360.0	21.36	102.55	3,232.9	-160.8	722.6	740.3	0.00	0.00	0.00
3,400.0	21.36	102.55	3,270.2	-164.0	736.8	754.8	0.00	0.00	0.00
3,440.0	21.36	102.55	3,307.4	-167.2	751.0	769.4	0.00	0.00	0.00
3,480.0	21.36	102.55	3,344.7	-170.3	765.2	784.0	0.00	0.00	0.00
3,520.0	21.36	102.55	3,381.9	-173.5	779.5	798.5	0.00	0.00	0.00
3,560.0	21.36	102.55	3,419.2	-176.7	793.7	813.1	0.00	0.00	0.00
3,600.0	21.36	102.55	3,456.4	-179.8	807.9	827.7	0.00	0.00	0.00
3,640.0	21.36	102.55	3,493.7	-183.0	822.1	842.3	0.00	0.00	0.00
3,680.0	21.36	102.55	3,530.9	-186.2	836.3	856.8	0.00	0.00	0.00
3,720.0	21.36	102.55	3,568.2	-189.3	850.6	871.4	0.00	0.00	0.00
3,760.0	21.36	102.55	3,605.4	-192.5	864.8	886.0	0.00	0.00	0.00
3,800.0	21.36	102.55	3,642.7	-195.7	879.0	900.5	0.00	0.00	0.00
3,840.0	21.36	102.55	3,680.0	-198.8	893.2	915.1	0.00	0.00	0.00
3,880.0	21.36	102.55	3,717.2	-202.0	907.5	929.7	0.00	0.00	0.00
3,920.0	21.36	102.55	3,754.5	-205.2	921.7	944.2	0.00	0.00	0.00
3,960.0	21.36	102.55	3,791.7	-208.3	935.9	958.8	0.00	0.00	0.00
4,000.0	21.36	102.55	3,829.0	-211.5	950.1	973.4	0.00	0.00	0.00
4,040.0	21.36	102.55	3,866.2	-214.7	964.3	988.0	0.00	0.00	0.00
4,080.0	21.36	102.55	3,903.5	-217.8	978.6	1,002.5	0.00	0.00	0.00
4,120.0	21.36	102.55	3,940.7	-221.0	992.8	1,017.1	0.00	0.00	0.00
4,160.0	21.36	102.55	3,978.0	-224.2	1,007.0	1,031.7	0.00	0.00	0.00
4,200.0	21.36	102.55	4,015.2	-227.3	1,021.2	1,046.2	0.00	0.00	0.00
4,240.0	21.36	102.55	4,052.5	-230.5	1,035.5	1,060.8	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Ashton K04-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4722.0ft (Original Well Elev)
Project:	SEC.33-T5N-R66W	MD Reference:	WELL @ 4722.0ft (Original Well Elev)
Site:	Ashton K04-28D Pad Sec.33-T5N-R66W	North Reference:	True
Well:	Ashton K04-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (05-28-09)		

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	21.36	102.55	4,089.7	-233.7	1,049.7	1,075.4	0.00	0.00	0.00	
4,320.0	21.36	102.55	4,127.0	-236.8	1,063.9	1,089.9	0.00	0.00	0.00	
4,360.0	21.36	102.55	4,164.2	-240.0	1,078.1	1,104.5	0.00	0.00	0.00	
4,400.0	21.36	102.55	4,201.5	-243.2	1,092.4	1,119.1	0.00	0.00	0.00	
4,440.0	21.36	102.55	4,238.7	-246.3	1,106.6	1,133.7	0.00	0.00	0.00	
4,480.0	21.36	102.55	4,276.0	-249.5	1,120.8	1,148.2	0.00	0.00	0.00	
4,520.0	21.36	102.55	4,313.2	-252.7	1,135.0	1,162.8	0.00	0.00	0.00	
4,560.0	21.36	102.55	4,350.5	-255.8	1,149.2	1,177.4	0.00	0.00	0.00	
4,600.0	21.36	102.55	4,387.7	-259.0	1,163.5	1,191.9	0.00	0.00	0.00	
4,640.0	21.36	102.55	4,425.0	-262.2	1,177.7	1,206.5	0.00	0.00	0.00	
4,680.0	21.36	102.55	4,462.2	-265.3	1,191.9	1,221.1	0.00	0.00	0.00	
4,720.0	21.36	102.55	4,499.5	-268.5	1,206.1	1,235.7	0.00	0.00	0.00	
4,760.0	21.36	102.55	4,536.7	-271.7	1,220.4	1,250.2	0.00	0.00	0.00	
4,800.0	21.36	102.55	4,574.0	-274.8	1,234.6	1,264.8	0.00	0.00	0.00	
4,840.0	21.36	102.55	4,611.2	-278.0	1,248.8	1,279.4	0.00	0.00	0.00	
4,880.0	21.36	102.55	4,648.5	-281.2	1,263.0	1,293.9	0.00	0.00	0.00	
4,920.0	21.36	102.55	4,685.8	-284.3	1,277.2	1,308.5	0.00	0.00	0.00	
4,960.0	21.36	102.55	4,723.0	-287.5	1,291.5	1,323.1	0.00	0.00	0.00	
5,000.0	21.36	102.55	4,760.3	-290.7	1,305.7	1,337.6	0.00	0.00	0.00	
5,040.0	21.36	102.55	4,797.5	-293.8	1,319.9	1,352.2	0.00	0.00	0.00	
5,080.0	21.36	102.55	4,834.8	-297.0	1,334.1	1,366.8	0.00	0.00	0.00	
5,120.0	21.36	102.55	4,872.0	-300.2	1,348.4	1,381.4	0.00	0.00	0.00	
5,160.0	21.36	102.55	4,909.3	-303.3	1,362.6	1,395.9	0.00	0.00	0.00	
5,200.0	21.36	102.55	4,946.5	-306.5	1,376.8	1,410.5	0.00	0.00	0.00	
5,240.0	21.36	102.55	4,983.8	-309.6	1,391.0	1,425.1	0.00	0.00	0.00	
5,280.0	21.36	102.55	5,021.0	-312.8	1,405.2	1,439.6	0.00	0.00	0.00	
5,320.0	21.36	102.55	5,058.3	-316.0	1,419.5	1,454.2	0.00	0.00	0.00	
5,360.0	21.36	102.55	5,095.5	-319.1	1,433.7	1,468.8	0.00	0.00	0.00	
5,400.0	21.36	102.55	5,132.8	-322.3	1,447.9	1,483.3	0.00	0.00	0.00	
5,440.0	21.36	102.55	5,170.0	-325.5	1,462.1	1,497.9	0.00	0.00	0.00	
5,480.0	21.36	102.55	5,207.3	-328.6	1,476.4	1,512.5	0.00	0.00	0.00	
5,520.0	21.36	102.55	5,244.5	-331.8	1,490.6	1,527.1	0.00	0.00	0.00	
5,560.0	21.36	102.55	5,281.8	-335.0	1,504.8	1,541.6	0.00	0.00	0.00	
5,600.0	21.36	102.55	5,319.0	-338.1	1,519.0	1,556.2	0.00	0.00	0.00	
5,640.0	21.36	102.55	5,356.3	-341.3	1,533.2	1,570.8	0.00	0.00	0.00	
5,680.0	21.36	102.55	5,393.5	-344.5	1,547.5	1,585.3	0.00	0.00	0.00	
5,720.0	21.36	102.55	5,430.8	-347.6	1,561.7	1,599.9	0.00	0.00	0.00	
5,760.0	21.36	102.55	5,468.0	-350.8	1,575.9	1,614.5	0.00	0.00	0.00	
5,800.0	21.36	102.55	5,505.3	-354.0	1,590.1	1,629.1	0.00	0.00	0.00	
5,840.0	21.36	102.55	5,542.5	-357.1	1,604.4	1,643.6	0.00	0.00	0.00	
5,880.0	21.36	102.55	5,579.8	-360.3	1,618.6	1,658.2	0.00	0.00	0.00	
5,920.0	21.36	102.55	5,617.0	-363.5	1,632.8	1,672.8	0.00	0.00	0.00	
5,960.0	21.36	102.55	5,654.3	-366.6	1,647.0	1,687.3	0.00	0.00	0.00	
6,000.0	21.36	102.55	5,691.6	-369.8	1,661.2	1,701.9	0.00	0.00	0.00	
6,040.0	21.36	102.55	5,728.8	-373.0	1,675.5	1,716.5	0.00	0.00	0.00	
6,053.0	21.36	102.55	5,740.9	-374.0	1,680.1	1,721.2	0.00	0.00	0.00	
6,080.0	21.09	102.55	5,766.1	-376.1	1,689.6	1,731.0	1.00	-1.00	0.00	
6,120.0	20.69	102.55	5,803.4	-379.2	1,703.6	1,745.3	1.00	-1.00	0.00	
6,160.0	20.29	102.55	5,840.9	-382.3	1,717.2	1,759.3	1.00	-1.00	0.00	
6,200.0	19.89	102.55	5,878.5	-385.2	1,730.6	1,773.0	1.00	-1.00	0.00	
6,240.0	19.49	102.55	5,916.1	-388.2	1,743.8	1,786.5	1.00	-1.00	0.00	
6,280.0	19.09	102.55	5,953.9	-391.0	1,756.7	1,799.7	1.00	-1.00	0.00	
6,320.0	18.69	102.55	5,991.7	-393.9	1,769.3	1,812.6	1.00	-1.00	0.00	
6,360.0	18.29	102.55	6,029.7	-396.6	1,781.7	1,825.3	1.00	-1.00	0.00	

Database: EDM den0-adp01 Server Data
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.33-T5N-R66W
 Site: Ashton K04-28D Pad Sec.33-T5N-R66W
 Well: Ashton K04-28D
 Wellbore: Wellbore #1
 Design: Plan #3 (05-28-09)

Local Co-ordinate Reference: Well Ashton K04-28D
 TVD Reference: WELL @ 4722.0ft (Original Well Elev)
 MD Reference: WELL @ 4722.0ft (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	17.89	102.55	6,067.7	-399.3	1,793.8	1,837.7	1.00	-1.00	0.00
6,440.0	17.49	102.55	6,105.8	-402.0	1,805.7	1,849.9	1.00	-1.00	0.00
6,480.0	17.09	102.55	6,144.0	-404.5	1,817.3	1,861.8	1.00	-1.00	0.00
6,520.0	16.69	102.55	6,182.3	-407.1	1,828.7	1,873.4	1.00	-1.00	0.00
6,560.0	16.29	102.55	6,220.6	-409.5	1,839.7	1,884.8	1.00	-1.00	0.00
6,600.0	15.89	102.55	6,259.1	-411.9	1,850.6	1,895.9	1.00	-1.00	0.00
6,640.0	15.49	102.55	6,297.6	-414.3	1,861.1	1,906.7	1.00	-1.00	0.00
6,680.0	15.09	102.55	6,336.2	-416.6	1,871.4	1,917.2	1.00	-1.00	0.00
6,720.0	14.69	102.55	6,374.8	-418.8	1,881.5	1,927.5	1.00	-1.00	0.00
6,760.0	14.29	102.55	6,413.5	-421.0	1,891.2	1,937.5	1.00	-1.00	0.00
6,800.0	13.89	102.55	6,452.3	-423.1	1,900.7	1,947.3	1.00	-1.00	0.00
6,840.0	13.49	102.55	6,491.2	-425.2	1,910.0	1,956.7	1.00	-1.00	0.00
6,880.0	13.09	102.55	6,530.1	-427.2	1,918.9	1,965.9	1.00	-1.00	0.00
6,920.0	12.69	102.55	6,569.1	-429.1	1,927.7	1,974.8	1.00	-1.00	0.00
6,960.0	12.29	102.55	6,608.2	-431.0	1,936.1	1,983.5	1.00	-1.00	0.00
7,000.0	11.89	102.55	6,647.3	-432.8	1,944.3	1,991.9	1.00	-1.00	0.00
7,040.0	11.49	102.55	6,686.5	-434.6	1,952.2	2,000.0	1.00	-1.00	0.00
7,080.0	11.09	102.55	6,725.7	-436.3	1,959.8	2,007.8	1.00	-1.00	0.00
7,120.0	10.69	102.55	6,765.0	-437.9	1,967.2	2,015.4	1.00	-1.00	0.00
7,160.0	10.29	102.55	6,804.3	-439.5	1,974.3	2,022.7	1.00	-1.00	0.00
7,189.2	10.00	102.55	6,833.0	-440.6	1,979.3	2,027.8	1.00	-1.00	0.00
NIOBRARA - NIOBRARA TARGET 160°FSL, 2608°FEL									
7,200.0	10.00	102.55	6,843.7	-441.0	1,981.2	2,029.7	0.00	0.00	0.00
7,240.0	10.00	102.55	6,883.1	-442.5	1,988.0	2,036.6	0.00	0.00	0.00
7,280.0	10.00	102.55	6,922.5	-444.0	1,994.7	2,043.6	0.00	0.00	0.00
7,320.0	10.00	102.55	6,961.8	-445.5	2,001.5	2,050.5	0.00	0.00	0.00
7,360.0	10.00	102.55	7,001.2	-447.1	2,008.3	2,057.5	0.00	0.00	0.00
7,400.0	10.00	102.55	7,040.6	-448.6	2,015.1	2,064.4	0.00	0.00	0.00
7,440.0	10.00	102.55	7,080.0	-450.1	2,021.9	2,071.3	0.00	0.00	0.00
7,480.0	10.00	102.55	7,119.4	-451.6	2,028.6	2,078.3	0.00	0.00	0.00
7,520.0	10.00	102.55	7,158.8	-453.1	2,035.4	2,085.2	0.00	0.00	0.00
7,548.6	10.00	102.55	7,187.0	-454.2	2,040.3	2,090.2	0.00	0.00	0.00
CODELL									
7,560.0	10.00	102.55	7,198.2	-454.6	2,042.2	2,092.2	0.00	0.00	0.00
7,600.0	10.00	102.55	7,237.6	-456.1	2,049.0	2,099.1	0.00	0.00	0.00
7,640.0	10.00	102.55	7,277.0	-457.6	2,055.8	2,106.1	0.00	0.00	0.00
7,677.6	10.00	102.55	7,314.1	-459.0	2,062.1	2,112.6	0.00	0.00	0.00
HARDLINE 141°S & 169°W OF BHL									
7,680.0	10.00	102.55	7,316.4	-459.1	2,062.5	2,113.0	0.00	0.00	0.00
7,700.9	10.00	102.55	7,337.0	-459.9	2,066.1	2,116.7	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Ashton K04-28D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4722.0ft (Original Well Elev)
Project:	SEC.33-T5N-R66W	MD Reference:	WELL @ 4722.0ft (Original Well Elev)
Site:	Ashton K04-28D Pad Sec.33-T5N-R66W	North Reference:	True
Well:	Ashton K04-28D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #3 (05-28-09)		

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
NIOBRARA TARGET - plan hits target center - Point	0.00	0.00	6,833.0	-440.6	1,979.3	1,370,986.91	3,199,487.54	40° 20' 58.381 N	104° 47' 3.331 W
HARDLINE 141'S & 1 - plan misses target center by 218.5ft at 7677.6ft MD (7314.1 TVD, -459.0 N, 2062.1 E) - Polygon	0.00	0.00	7,337.0	-600.6	1,897.3	1,370,826.28	3,199,406.78	40° 20' 56.800 N	104° 47' 4.391 W
Point 1			7,337.0	0.0	0.0	1,370,826.28	3,199,406.78		
Point 2			7,337.0	0.0	300.0	1,370,828.68	3,199,706.76		
Point 3			7,337.0	0.0	0.0	1,370,826.28	3,199,406.78		
Point 4			7,337.0	300.0	0.0	1,371,126.26	3,199,404.39		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,189.2	6,833.0	NIOBRARA		0.00	
7,548.6	7,187.0	CODELL		0.00	