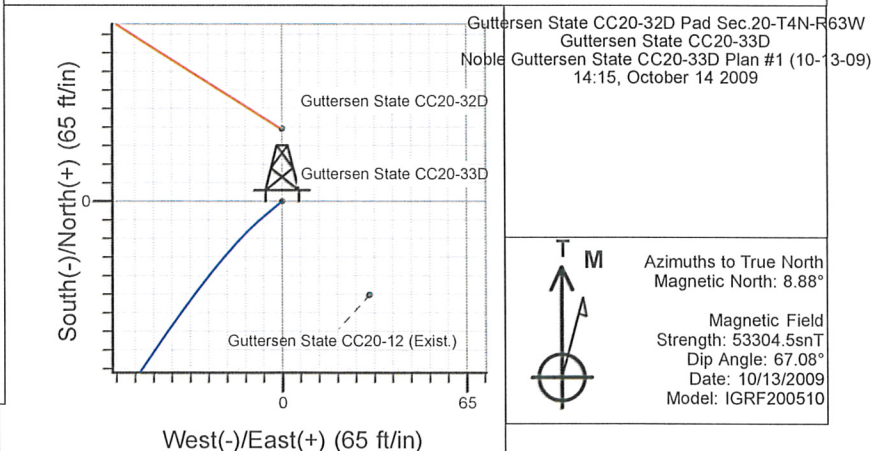
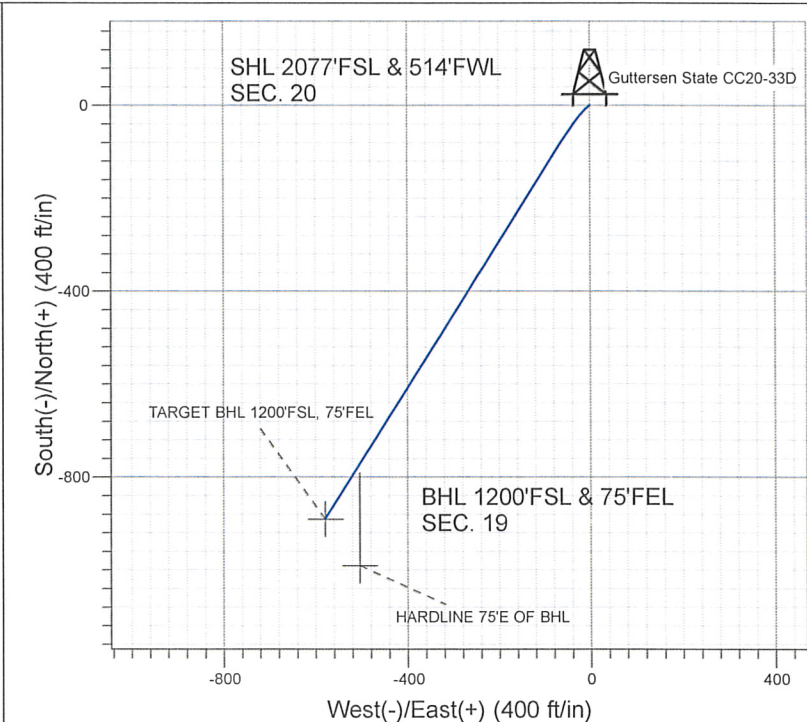
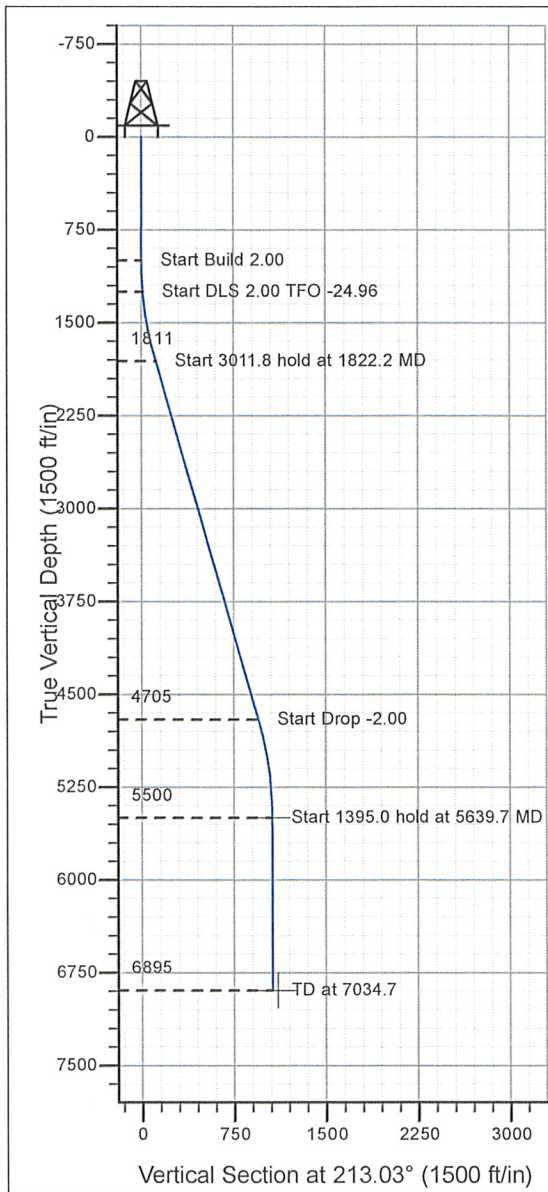


Well Name:Guttersen State CC20-33D

Surface Location: Guttersen State CC20-32D Pad Sec.20-T4N-R63W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4712.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1352396.08 3287521.82 40° 17' 46.104 N 104° 28' 9.120 W
 Original Well Elev WELL @ 4725.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Azimuths to True North
 Magnetic North: 8.88°
 Magnetic Field
 Strength: 53304.5snT
 Dip Angle: 67.08°
 Date: 10/13/2009
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1200'FSL, 75'FEL	5500.0	-890.7	-579.1	40° 17' 37.302 N	104° 28' 16.593 W	Point
HARDLINE 75'E OF BHL	6895.0	-990.7	-504.1	40° 17' 36.314 N	104° 28' 15.625 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	1000.0	0.00	0.00	1000.0	0.0	0.0	0.00	0.00	0.0	
3	1250.0	5.00	230.00	1249.7	-7.0	-8.4	2.00	230.00	10.4	
4	1822.2	16.11	212.45	1811.4	-90.3	-70.3	2.00	-24.96	114.0	
5	4834.0	16.11	212.45	4704.9	-795.7	-518.7	0.00	0.00	949.9	
6	5639.7	0.00	0.00	5500.0	-890.7	-579.1	2.00	180.00	1062.4	TARGET BHL 1200'FSL, 75'FEL
7	7034.7	0.00	0.00	6895.0	-890.7	-579.1	0.00	0.00	1062.4	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.20-T4N-R63W

Guttersen State CC20-32D Pad Sec.20-T4N-R63W

Guttersen State CC20-33D

Wellbore #1

Plan: Noble Guttersen State CC20-33D Plan #1 (10-13-09)

Standard Planning Report

14 October, 2009



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Guttersen State CC20-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4725.0ft (Original Well Elev)
Project:	SEC.20-T4N-R63W	MD Reference:	WELL @ 4725.0ft (Original Well Elev)
Site:	Guttersen State CC20-32D Pad Sec.20-T4N-R63W	North Reference:	True
Well:	Guttersen State CC20-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Guttersen State CC20-33D Plan #1 (10-		

Project	SEC.20-T4N-R63W, 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	Guttersen State CC20-32D Pad Sec.20-T4N-R63W				
Site Position:		Northing:	1,352,421.59 ft	Latitude:	40° 17' 46.356 N
From:	Lat/Long	Easting:	3,287,521.52 ft	Longitude:	104° 28' 9.120 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.67 °

Well	Guttersen State CC20-33D					
Well Position	+N/-S	-25.5 ft	Northing:	1,352,396.08 ft	Latitude:	40° 17' 46.104 N
	+E/-W	0.0 ft	Easting:	3,287,521.82 ft	Longitude:	104° 28' 9.120 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,712.0 ft

Wellbore	Wellbore #1				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	10/13/2009	8.88	67.08	53,304

Design	Noble Guttersen State CC20-33D Plan #1 (10-13-09)				
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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	213.03	

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	
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,250.0	5.00	230.00	1,249.7	-7.0	-8.4	2.00	2.00	0.00	230.00	
1,822.2	16.11	212.45	1,811.4	-90.3	-70.3	2.00	1.94	-3.07	-24.96	
4,834.0	16.11	212.45	4,704.9	-795.7	-518.7	0.00	0.00	0.00	0.00	
5,639.7	0.00	0.00	5,500.0	-890.7	-579.1	2.00	-2.00	0.00	180.00	TARGET BHL 120C
7,034.7	0.00	0.00	6,895.0	-890.7	-579.1	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Guttersen State CC20-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4725.0ft (Original Well Elev)
Project:	SEC.20-T4N-R63W	MD Reference:	WELL @ 4725.0ft (Original Well Elev)
Site:	Guttersen State CC20-32D Pad Sec.20-T4N-R63W	North Reference:	True
Well:	Guttersen State CC20-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Guttersen State CC20-33D Plan #1 (10-		

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	0.80	230.00	1,040.0	-0.2	-0.2	0.3	2.00	2.00	0.00
1,080.0	1.60	230.00	1,080.0	-0.7	-0.9	1.1	2.00	2.00	0.00
1,120.0	2.40	230.00	1,120.0	-1.6	-1.9	2.4	2.00	2.00	0.00
1,160.0	3.20	230.00	1,159.9	-2.9	-3.4	4.3	2.00	2.00	0.00
1,200.0	4.00	230.00	1,199.8	-4.5	-5.3	6.7	2.00	2.00	0.00
1,240.0	4.80	230.00	1,239.7	-6.5	-7.7	9.6	2.00	2.00	0.00
1,250.0	5.00	230.00	1,249.7	-7.0	-8.4	10.4	2.00	2.00	0.00
1,280.0	5.55	227.38	1,279.6	-8.8	-10.4	13.1	2.00	1.83	-8.73
1,320.0	6.30	224.61	1,319.3	-11.7	-13.4	17.1	2.00	1.87	-6.94
1,360.0	7.06	222.42	1,359.1	-15.1	-16.6	21.7	2.00	1.90	-5.46
1,400.0	7.82	220.66	1,398.7	-19.0	-20.0	26.8	2.00	1.92	-4.40
1,440.0	8.60	219.22	1,438.3	-23.3	-23.7	32.5	2.00	1.93	-3.62
1,480.0	9.37	218.01	1,477.8	-28.2	-27.6	38.7	2.00	1.94	-3.02
1,520.0	10.15	216.98	1,517.3	-33.6	-31.7	45.4	2.00	1.95	-2.56
1,560.0	10.94	216.10	1,556.6	-39.5	-36.1	52.8	2.00	1.96	-2.20
1,600.0	11.72	215.34	1,595.8	-45.9	-40.6	60.6	2.00	1.96	-1.91
1,640.0	12.51	214.67	1,634.9	-52.7	-45.5	69.0	2.00	1.97	-1.67
1,680.0	13.30	214.08	1,673.9	-60.1	-50.5	77.9	2.00	1.97	-1.48
1,720.0	14.09	213.56	1,712.8	-68.0	-55.8	87.4	2.00	1.98	-1.31
1,760.0	14.88	213.09	1,751.5	-76.3	-61.3	97.4	2.00	1.98	-1.18
1,800.0	15.67	212.66	1,790.1	-85.2	-67.0	107.9	2.00	1.98	-1.06
1,822.2	16.11	212.45	1,811.4	-90.3	-70.3	114.0	2.00	1.98	-0.98
1,840.0	16.11	212.45	1,828.5	-94.5	-72.9	119.0	0.00	0.00	0.00
1,880.0	16.11	212.45	1,867.0	-103.9	-78.9	130.1	0.00	0.00	0.00
1,920.0	16.11	212.45	1,905.4	-113.2	-84.8	141.2	0.00	0.00	0.00
1,960.0	16.11	212.45	1,943.8	-122.6	-90.8	152.3	0.00	0.00	0.00
2,000.0	16.11	212.45	1,982.2	-132.0	-96.7	163.4	0.00	0.00	0.00

Database: EDM den0-adp01 Server Data
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.20-T4N-R63W
 Site: Gutttersen State CC20-32D Pad
 Sec.20-T4N-R63W
 Well: Gutttersen State CC20-33D
 Wellbore: Wellbore #1
 Design: Noble Gutttersen State CC20-33D Plan #1 (10-

Local Co-ordinate Reference: Well Gutttersen State CC20-33D
 TVD Reference: WELL @ 4725.0ft (Original Well Elev)
 MD Reference: WELL @ 4725.0ft (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)
2,040.0	16.11	212.45	2,020.7	-141.3	-102.7	174.5	0.00	0.00	0.00
2,080.0	16.11	212.45	2,059.1	-150.7	-108.6	185.6	0.00	0.00	0.00
2,120.0	16.11	212.45	2,097.5	-160.1	-114.6	196.7	0.00	0.00	0.00
2,160.0	16.11	212.45	2,136.0	-169.4	-120.6	207.8	0.00	0.00	0.00
2,200.0	16.11	212.45	2,174.4	-178.8	-126.5	218.9	0.00	0.00	0.00
2,240.0	16.11	212.45	2,212.8	-188.2	-132.5	230.0	0.00	0.00	0.00
2,280.0	16.11	212.45	2,251.2	-197.5	-138.4	241.1	0.00	0.00	0.00
2,320.0	16.11	212.45	2,289.7	-206.9	-144.4	252.2	0.00	0.00	0.00
2,360.0	16.11	212.45	2,328.1	-216.3	-150.3	263.3	0.00	0.00	0.00
2,400.0	16.11	212.45	2,366.5	-225.7	-156.3	274.4	0.00	0.00	0.00
2,440.0	16.11	212.45	2,405.0	-235.0	-162.2	285.5	0.00	0.00	0.00
2,480.0	16.11	212.45	2,443.4	-244.4	-168.2	296.6	0.00	0.00	0.00
2,520.0	16.11	212.45	2,481.8	-253.8	-174.2	307.7	0.00	0.00	0.00
2,560.0	16.11	212.45	2,520.2	-263.1	-180.1	318.8	0.00	0.00	0.00
2,600.0	16.11	212.45	2,558.7	-272.5	-186.1	329.9	0.00	0.00	0.00
2,640.0	16.11	212.45	2,597.1	-281.9	-192.0	341.0	0.00	0.00	0.00
2,680.0	16.11	212.45	2,635.5	-291.2	-198.0	352.1	0.00	0.00	0.00
2,720.0	16.11	212.45	2,674.0	-300.6	-203.9	363.2	0.00	0.00	0.00
2,760.0	16.11	212.45	2,712.4	-310.0	-209.9	374.3	0.00	0.00	0.00
2,800.0	16.11	212.45	2,750.8	-319.3	-215.9	385.4	0.00	0.00	0.00
2,840.0	16.11	212.45	2,789.2	-328.7	-221.8	396.5	0.00	0.00	0.00
2,880.0	16.11	212.45	2,827.7	-338.1	-227.8	407.6	0.00	0.00	0.00
2,920.0	16.11	212.45	2,866.1	-347.4	-233.7	418.7	0.00	0.00	0.00
2,960.0	16.11	212.45	2,904.5	-356.8	-239.7	429.8	0.00	0.00	0.00
3,000.0	16.11	212.45	2,943.0	-366.2	-245.6	440.9	0.00	0.00	0.00
3,040.0	16.11	212.45	2,981.4	-375.6	-251.6	452.0	0.00	0.00	0.00
3,080.0	16.11	212.45	3,019.8	-384.9	-257.5	463.1	0.00	0.00	0.00
3,120.0	16.11	212.45	3,058.2	-394.3	-263.5	474.2	0.00	0.00	0.00
3,160.0	16.11	212.45	3,096.7	-403.7	-269.5	485.3	0.00	0.00	0.00
3,200.0	16.11	212.45	3,135.1	-413.0	-275.4	496.4	0.00	0.00	0.00
3,240.0	16.11	212.45	3,173.5	-422.4	-281.4	507.5	0.00	0.00	0.00
3,280.0	16.11	212.45	3,212.0	-431.8	-287.3	518.6	0.00	0.00	0.00
3,320.0	16.11	212.45	3,250.4	-441.1	-293.3	529.7	0.00	0.00	0.00
3,360.0	16.11	212.45	3,288.8	-450.5	-299.2	540.8	0.00	0.00	0.00
3,400.0	16.11	212.45	3,327.2	-459.9	-305.2	551.9	0.00	0.00	0.00
3,440.0	16.11	212.45	3,365.7	-469.2	-311.1	563.0	0.00	0.00	0.00
3,480.0	16.11	212.45	3,404.1	-478.6	-317.1	574.1	0.00	0.00	0.00
3,520.0	16.11	212.45	3,442.5	-488.0	-323.1	585.2	0.00	0.00	0.00
3,560.0	16.11	212.45	3,481.0	-497.3	-329.0	596.3	0.00	0.00	0.00
3,600.0	16.11	212.45	3,519.4	-506.7	-335.0	607.4	0.00	0.00	0.00
3,640.0	16.11	212.45	3,557.8	-516.1	-340.9	618.5	0.00	0.00	0.00
3,680.0	16.11	212.45	3,596.2	-525.4	-346.9	629.6	0.00	0.00	0.00
3,720.0	16.11	212.45	3,634.7	-534.8	-352.8	640.7	0.00	0.00	0.00
3,760.0	16.11	212.45	3,673.1	-544.2	-358.8	651.8	0.00	0.00	0.00
3,800.0	16.11	212.45	3,711.5	-553.6	-364.8	662.9	0.00	0.00	0.00
3,840.0	16.11	212.45	3,750.0	-562.9	-370.7	674.0	0.00	0.00	0.00
3,880.0	16.11	212.45	3,788.4	-572.3	-376.7	685.1	0.00	0.00	0.00
3,920.0	16.11	212.45	3,826.8	-581.7	-382.6	696.2	0.00	0.00	0.00
3,960.0	16.11	212.45	3,865.2	-591.0	-388.6	707.3	0.00	0.00	0.00
4,000.0	16.11	212.45	3,903.7	-600.4	-394.5	718.4	0.00	0.00	0.00
4,040.0	16.11	212.45	3,942.1	-609.8	-400.5	729.5	0.00	0.00	0.00
4,080.0	16.11	212.45	3,980.5	-619.1	-406.4	740.6	0.00	0.00	0.00
4,120.0	16.11	212.45	4,019.0	-628.5	-412.4	751.7	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Guttersen State CC20-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4725.0ft (Original Well Elev)
Project:	SEC.20-T4N-R63W	MD Reference:	WELL @ 4725.0ft (Original Well Elev)
Site:	Guttersen State CC20-32D Pad Sec.20-T4N-R63W	North Reference:	True
Well:	Guttersen State CC20-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Guttersen State CC20-33D Plan #1 (10-		

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)
4,160.0	16.11	212.45	4,057.4	-637.9	-418.4	762.8	0.00	0.00	0.00
4,200.0	16.11	212.45	4,095.8	-647.2	-424.3	773.9	0.00	0.00	0.00
4,240.0	16.11	212.45	4,134.2	-656.6	-430.3	785.0	0.00	0.00	0.00
4,280.0	16.11	212.45	4,172.7	-666.0	-436.2	796.1	0.00	0.00	0.00
4,320.0	16.11	212.45	4,211.1	-675.3	-442.2	807.2	0.00	0.00	0.00
4,360.0	16.11	212.45	4,249.5	-684.7	-448.1	818.3	0.00	0.00	0.00
4,400.0	16.11	212.45	4,288.0	-694.1	-454.1	829.4	0.00	0.00	0.00
4,440.0	16.11	212.45	4,326.4	-703.5	-460.0	840.5	0.00	0.00	0.00
4,480.0	16.11	212.45	4,364.8	-712.8	-466.0	851.6	0.00	0.00	0.00
4,520.0	16.11	212.45	4,403.2	-722.2	-472.0	862.7	0.00	0.00	0.00
4,560.0	16.11	212.45	4,441.7	-731.6	-477.9	873.8	0.00	0.00	0.00
4,600.0	16.11	212.45	4,480.1	-740.9	-483.9	884.9	0.00	0.00	0.00
4,640.0	16.11	212.45	4,518.5	-750.3	-489.8	896.0	0.00	0.00	0.00
4,680.0	16.11	212.45	4,557.0	-759.7	-495.8	907.1	0.00	0.00	0.00
4,720.0	16.11	212.45	4,595.4	-769.0	-501.7	918.2	0.00	0.00	0.00
4,760.0	16.11	212.45	4,633.8	-778.4	-507.7	929.3	0.00	0.00	0.00
4,800.0	16.11	212.45	4,672.2	-787.8	-513.7	940.4	0.00	0.00	0.00
4,834.0	16.11	212.45	4,704.9	-795.7	-518.7	949.9	0.00	0.00	0.00
4,840.0	15.99	212.45	4,710.7	-797.1	-519.6	951.5	2.00	-2.00	0.00
4,880.0	15.19	212.45	4,749.2	-806.2	-525.4	962.3	2.00	-2.00	0.00
4,920.0	14.39	212.45	4,787.9	-814.8	-530.9	972.5	2.00	-2.00	0.00
4,960.0	13.59	212.45	4,826.7	-823.0	-536.0	982.2	2.00	-2.00	0.00
5,000.0	12.79	212.45	4,865.6	-830.7	-540.9	991.3	2.00	-2.00	0.00
5,040.0	11.99	212.45	4,904.7	-837.9	-545.5	999.9	2.00	-2.00	0.00
5,080.0	11.19	212.45	4,943.9	-844.7	-549.9	1,007.9	2.00	-2.00	0.00
5,120.0	10.39	212.45	4,983.2	-851.0	-553.9	1,015.4	2.00	-2.00	0.00
5,160.0	9.59	212.45	5,022.6	-856.9	-557.6	1,022.3	2.00	-2.00	0.00
5,200.0	8.79	212.45	5,062.0	-862.3	-561.0	1,028.7	2.00	-2.00	0.00
5,240.0	7.99	212.45	5,101.6	-867.2	-564.2	1,034.6	2.00	-2.00	0.00
5,280.0	7.19	212.45	5,141.3	-871.7	-567.0	1,039.9	2.00	-2.00	0.00
5,320.0	6.39	212.45	5,181.0	-875.7	-569.5	1,044.6	2.00	-2.00	0.00
5,360.0	5.59	212.45	5,220.8	-879.2	-571.8	1,048.8	2.00	-2.00	0.00
5,400.0	4.79	212.45	5,260.6	-882.3	-573.7	1,052.4	2.00	-2.00	0.00
5,440.0	3.99	212.45	5,300.5	-884.8	-575.4	1,055.5	2.00	-2.00	0.00
5,480.0	3.19	212.45	5,340.4	-887.0	-576.7	1,058.0	2.00	-2.00	0.00
5,520.0	2.39	212.45	5,380.4	-888.6	-577.8	1,059.9	2.00	-2.00	0.00
5,560.0	1.59	212.45	5,420.3	-889.8	-578.5	1,061.3	2.00	-2.00	0.00
5,600.0	0.79	212.45	5,460.3	-890.5	-578.9	1,062.1	2.00	-2.00	0.00
5,639.7	0.00	0.00	5,500.0	-890.7	-579.1	1,062.4	2.00	-2.00	0.00
TARGET BHL 1200'FSL, 75'FEL									
5,640.0	0.00	0.00	5,500.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
5,680.0	0.00	0.00	5,540.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
5,720.0	0.00	0.00	5,580.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
5,760.0	0.00	0.00	5,620.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,660.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
5,840.0	0.00	0.00	5,700.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
5,880.0	0.00	0.00	5,740.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
5,920.0	0.00	0.00	5,780.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
5,960.0	0.00	0.00	5,820.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,860.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,040.0	0.00	0.00	5,900.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,080.0	0.00	0.00	5,940.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,120.0	0.00	0.00	5,980.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Guttersen State CC20-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4725.0ft (Original Well Elev)
Project:	SEC.20-T4N-R63W	MD Reference:	WELL @ 4725.0ft (Original Well Elev)
Site:	Guttersen State CC20-32D Pad Sec.20-T4N-R63W	North Reference:	True
Well:	Guttersen State CC20-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Guttersen State CC20-33D Plan #1 (10-		

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)
6,160.0	0.00	0.00	6,020.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,060.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,240.0	0.00	0.00	6,100.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,280.0	0.00	0.00	6,140.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,320.0	0.00	0.00	6,180.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,360.0	0.00	0.00	6,220.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,260.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,440.0	0.00	0.00	6,300.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,480.0	0.00	0.00	6,340.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,520.0	0.00	0.00	6,380.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,560.0	0.00	0.00	6,420.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,593.7	0.00	0.00	6,454.0	-890.7	-579.1	1,062.4	0.00	0.00	0.00
NIOBRARA									
6,600.0	0.00	0.00	6,460.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,640.0	0.00	0.00	6,500.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,680.0	0.00	0.00	6,540.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,720.0	0.00	0.00	6,580.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,760.0	0.00	0.00	6,620.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,800.0	0.00	0.00	6,660.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,840.0	0.00	0.00	6,700.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,880.0	0.00	0.00	6,740.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,884.7	0.00	0.00	6,745.0	-890.7	-579.1	1,062.4	0.00	0.00	0.00
CODELL									
6,920.0	0.00	0.00	6,780.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
6,960.0	0.00	0.00	6,820.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
7,000.0	0.00	0.00	6,860.3	-890.7	-579.1	1,062.4	0.00	0.00	0.00
7,034.7	0.00	0.00	6,895.0	-890.7	-579.1	1,062.4	0.00	0.00	0.00
HARDLINE 75'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
HARDLINE 75'E OF E		0.00	0.00	6,895.0	-990.7	-504.1	1,351,399.64	3,287,029.29	40° 17' 36.314 N	104° 28' 15.625 W
- plan misses target center by 125.0ft at 7034.7ft MD (6895.0 TVD, -890.7 N, -579.1 E)										
- Polygon										
Point 1				6,895.0	0.0	0.0	1,351,399.64	3,287,029.29		
Point 2				6,895.0	200.0	0.0	1,351,599.61	3,287,026.97		
TARGET BHL 1200'F		0.00	0.00	5,500.0	-890.7	-579.1	1,351,498.74	3,286,953.14	40° 17' 37.302 N	104° 28' 16.593 W
- plan hits target center										
- Point										

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,593.7	6,454.0	NIOBRARA		0.00	
6,884.7	6,745.0	CODELL		0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Guttersen State CC20-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4725.0ft (Original Well Elev)
Project:	SEC.20-T4N-R63W	MD Reference:	WELL @ 4725.0ft (Original Well Elev)
Site:	Guttersen State CC20-32D Pad Sec.20-T4N-R63W	North Reference:	True
Well:	Guttersen State CC20-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Guttersen State CC20-33D Plan #1 (10-		