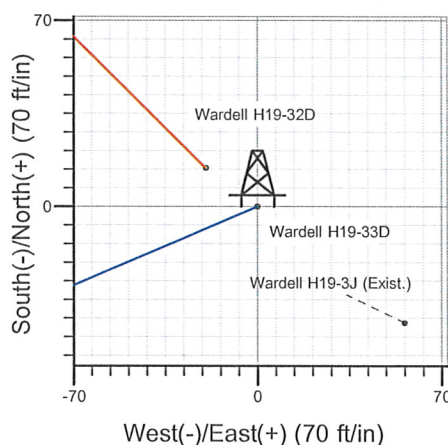
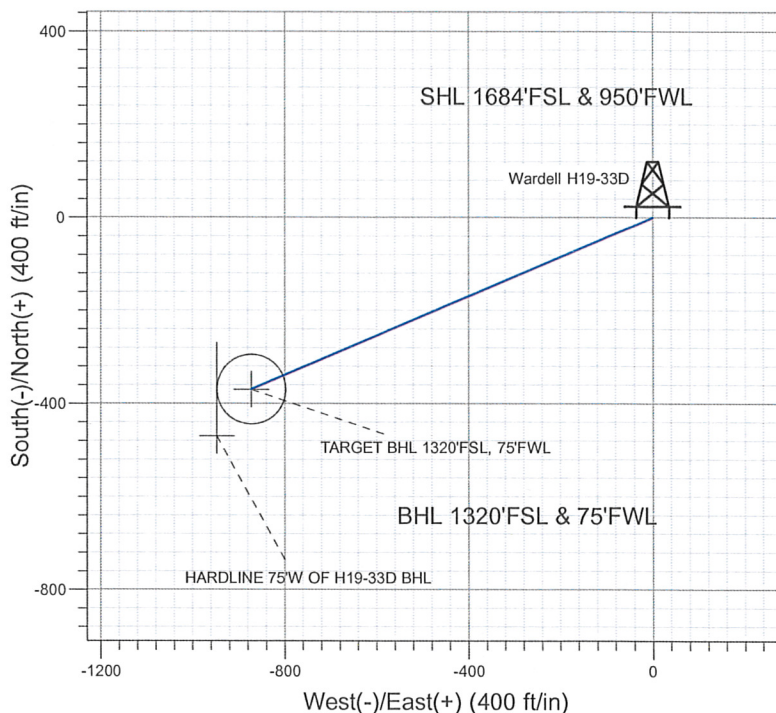
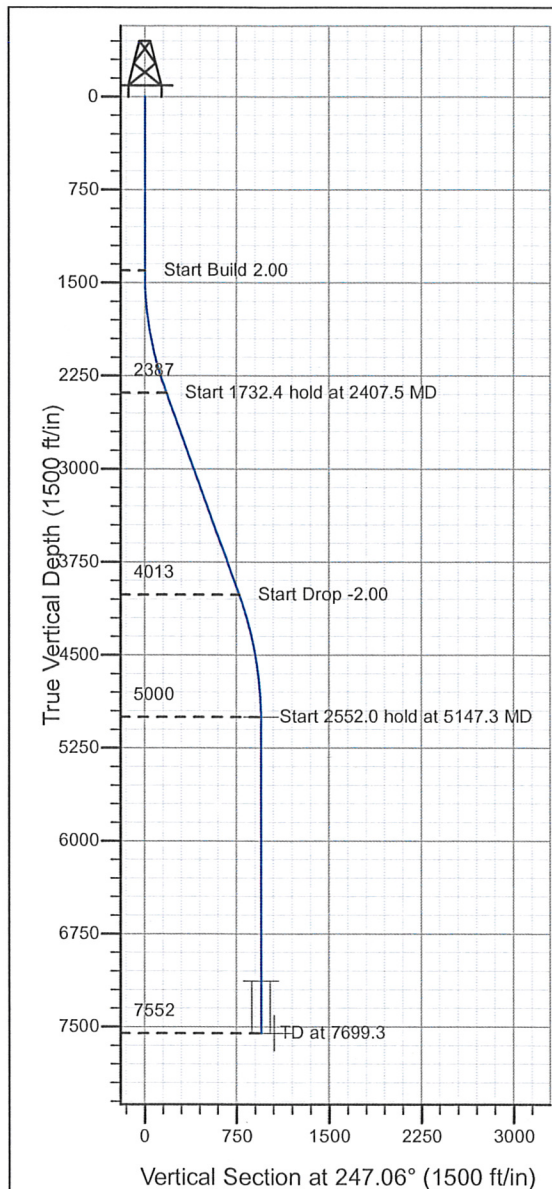


Well Name: Wardell H19-33D

Surface Location: Wardell H19-32D Pad Sec.19-T3N-R65W
 North American Datum 1983 , US State Plane 1983 , Colorado Northern Zone
 Ground Elevation: 4989.0
 +N/-S+E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1319695.76 3219988.95 40° 12' 29.808 N 104° 42' 44.424 W
 Original Well Elev WELL @ 5002.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



Wardell H19-32D Pad Sec.19-T3N-R65W
 Wardell H19-33D
 Noble Wardell H19-33D Plan #2 (12-15-09)
 14:00, December 15 2009



Azimuths to True North
 Magnetic North: 9.04°
 Magnetic Field
 Strength: 53255.8snT
 Dip Angle: 66.98°
 Date: 7/14/2009
 Model: IGRF200510

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1320'FSL, 75'FWL	5000.0	-369.2	-872.5	40° 12' 26.159 N	104° 42' 55.669 W	Point
TARGET CIRCLE 1320'FSL, 75'FWL	7132.0	-369.2	-872.5	40° 12' 26.159 N	104° 42' 55.669 W	Circle (Radius: 75.0)
HARDLINE 75'W OF H19-33D BHL	7552.0	-469.2	-947.5	40° 12' 25.171 N	104° 42' 56.636 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	1400.0	0.00	0.00	1400.0	0.0	0.0	0.00	0.00	0.0	
3	2407.5	20.15	247.06	2386.8	-68.3	-161.5	2.00	247.06	175.3	
4	4139.8	20.15	247.06	4013.2	-300.9	-711.0	0.00	0.00	772.1	
5	5147.3	0.00	0.00	5000.0	-369.2	-872.5	2.00	180.00	947.4	TARGET BHL 1320'FSL, 75'FWL
6	7699.3	0.00	0.00	7552.0	-369.2	-872.5	0.00	0.00	947.4	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.19-T3N-R65W

Wardell H19-32D Pad Sec.19-T3N-R65W

Wardell H19-33D

Wellbore #1

Plan: Noble Wardell H19-33D Plan #2 (12-15-09)

Standard Planning Report

15 December, 2009



Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Wardell H19-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 5002.0ft (Original Well Elev)
Project:	SEC.19-T3N-R65W	MD Reference:	WELL @ 5002.0ft (Original Well Elev)
Site:	Wardell H19-32D Pad Sec.19-T3N-R65W	North Reference:	True
Well:	Wardell H19-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Wardell H19-33D Plan #2 (12-15-09)		

Project	SEC.19-T3N-R65W, 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	Wardell H19-32D Pad Sec.19-T3N-R65W				
Site Position:		Northing:	1,319,655.62 ft	Latitude:	40° 12' 29.412 N
From:	Lat/Long	Easting:	3,219,980.93 ft	Longitude:	104° 42' 44.532 W
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.51 °

Well	Wardell H19-33D					
Well Position	+N/-S	40.1 ft	Northing:	1,319,695.76 ft	Latitude:	40° 12' 29.808 N
	+E/-W	8.4 ft	Easting:	3,219,988.95 ft	Longitude:	104° 42' 44.424 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,989.0 ft

Wellbore	Wellbore #1				
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Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	7/14/2009	9.04	66.98	53,256

Design	Noble Wardell H19-33D Plan #2 (12-15-09)				
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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	247.06

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	
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.00	0.00	0.00	0.00	
2,407.5	20.15	247.06	2,386.8	-68.3	-161.5	2.00	2.00	0.00	247.06	
4,139.8	20.15	247.06	4,013.2	-300.9	-711.0	0.00	0.00	0.00	0.00	
5,147.3	0.00	0.00	5,000.0	-369.2	-872.5	2.00	-2.00	0.00	180.00	TARGET BHL 132C
7,699.3	0.00	0.00	7,552.0	-369.2	-872.5	0.00	0.00	0.00	0.00	

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Wardell H19-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 5002.0ft (Original Well Elev)
Project:	SEC.19-T3N-R65W	MD Reference:	WELL @ 5002.0ft (Original Well Elev)
Site:	Wardell H19-32D Pad Sec.19-T3N-R65W	North Reference:	True
Well:	Wardell H19-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Wardell H19-33D Plan #2 (12-15-09)		

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	0.00	0.00	1,240.0	0.0	0.0	0.0	0.00	0.00	0.00
1,280.0	0.00	0.00	1,280.0	0.0	0.0	0.0	0.00	0.00	0.00
1,320.0	0.00	0.00	1,320.0	0.0	0.0	0.0	0.00	0.00	0.00
1,360.0	0.00	0.00	1,360.0	0.0	0.0	0.0	0.00	0.00	0.00
1,400.0	0.00	0.00	1,400.0	0.0	0.0	0.0	0.00	0.00	0.00
1,440.0	0.80	247.06	1,440.0	-0.1	-0.3	0.3	2.00	2.00	0.00
1,480.0	1.60	247.06	1,480.0	-0.4	-1.0	1.1	2.00	2.00	0.00
1,520.0	2.40	247.06	1,520.0	-1.0	-2.3	2.5	2.00	2.00	0.00
1,560.0	3.20	247.06	1,559.9	-1.7	-4.1	4.5	2.00	2.00	0.00
1,600.0	4.00	247.06	1,599.8	-2.7	-6.4	7.0	2.00	2.00	0.00
1,640.0	4.80	247.06	1,639.7	-3.9	-9.3	10.0	2.00	2.00	0.00
1,680.0	5.60	247.06	1,679.6	-5.3	-12.6	13.7	2.00	2.00	0.00
1,720.0	6.40	247.06	1,719.3	-7.0	-16.4	17.9	2.00	2.00	0.00
1,760.0	7.20	247.06	1,759.1	-8.8	-20.8	22.6	2.00	2.00	0.00
1,800.0	8.00	247.06	1,798.7	-10.9	-25.7	27.9	2.00	2.00	0.00
1,840.0	8.80	247.06	1,838.3	-13.1	-31.1	33.7	2.00	2.00	0.00
1,880.0	9.60	247.06	1,877.8	-15.6	-36.9	40.1	2.00	2.00	0.00
1,920.0	10.40	247.06	1,917.1	-18.3	-43.3	47.1	2.00	2.00	0.00
1,960.0	11.20	247.06	1,956.4	-21.3	-50.2	54.6	2.00	2.00	0.00
2,000.0	12.00	247.06	1,995.6	-24.4	-57.7	62.6	2.00	2.00	0.00
2,040.0	12.80	247.06	2,034.7	-27.7	-65.6	71.2	2.00	2.00	0.00
2,080.0	13.60	247.06	2,073.6	-31.3	-74.0	80.3	2.00	2.00	0.00
2,120.0	14.40	247.06	2,112.4	-35.1	-82.9	90.0	2.00	2.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Wardell H19-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 5002.0ft (Original Well Elev)
Project:	SEC.19-T3N-R65W	MD Reference:	WELL @ 5002.0ft (Original Well Elev)
Site:	Wardell H19-32D Pad Sec.19-T3N-R65W	North Reference:	True
Well:	Wardell H19-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Wardell H19-33D Plan #2 (12-15-09)		

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)
2,160.0	15.20	247.06	2,151.1	-39.1	-92.3	100.2	2.00	2.00	0.00
2,200.0	16.00	247.06	2,189.6	-43.2	-102.2	111.0	2.00	2.00	0.00
2,240.0	16.80	247.06	2,228.0	-47.6	-112.6	122.3	2.00	2.00	0.00
2,280.0	17.60	247.06	2,266.2	-52.3	-123.5	134.1	2.00	2.00	0.00
2,320.0	18.40	247.06	2,304.3	-57.1	-134.9	146.5	2.00	2.00	0.00
2,360.0	19.20	247.06	2,342.1	-62.1	-146.8	159.3	2.00	2.00	0.00
2,400.0	20.00	247.06	2,379.8	-67.3	-159.1	172.8	2.00	2.00	0.00
2,407.5	20.15	247.06	2,386.8	-68.3	-161.5	175.3	2.00	2.00	0.00
2,440.0	20.15	247.06	2,417.4	-72.7	-171.8	186.5	0.00	0.00	0.00
2,480.0	20.15	247.06	2,454.9	-78.1	-184.5	200.3	0.00	0.00	0.00
2,520.0	20.15	247.06	2,492.5	-83.4	-197.2	214.1	0.00	0.00	0.00
2,560.0	20.15	247.06	2,530.0	-88.8	-209.9	227.9	0.00	0.00	0.00
2,600.0	20.15	247.06	2,567.6	-94.2	-222.5	241.7	0.00	0.00	0.00
2,640.0	20.15	247.06	2,605.1	-99.5	-235.2	255.4	0.00	0.00	0.00
2,680.0	20.15	247.06	2,642.7	-104.9	-247.9	269.2	0.00	0.00	0.00
2,720.0	20.15	247.06	2,680.2	-110.3	-260.6	283.0	0.00	0.00	0.00
2,760.0	20.15	247.06	2,717.8	-115.7	-273.3	296.8	0.00	0.00	0.00
2,800.0	20.15	247.06	2,755.3	-121.0	-286.0	310.5	0.00	0.00	0.00
2,840.0	20.15	247.06	2,792.9	-126.4	-298.7	324.3	0.00	0.00	0.00
2,880.0	20.15	247.06	2,830.4	-131.8	-311.4	338.1	0.00	0.00	0.00
2,920.0	20.15	247.06	2,868.0	-137.1	-324.1	351.9	0.00	0.00	0.00
2,960.0	20.15	247.06	2,905.5	-142.5	-336.8	365.7	0.00	0.00	0.00
3,000.0	20.15	247.06	2,943.1	-147.9	-349.4	379.4	0.00	0.00	0.00
3,040.0	20.15	247.06	2,980.7	-153.2	-362.1	393.2	0.00	0.00	0.00
3,080.0	20.15	247.06	3,018.2	-158.6	-374.8	407.0	0.00	0.00	0.00
3,120.0	20.15	247.06	3,055.8	-164.0	-387.5	420.8	0.00	0.00	0.00
3,160.0	20.15	247.06	3,093.3	-169.3	-400.2	434.6	0.00	0.00	0.00
3,200.0	20.15	247.06	3,130.9	-174.7	-412.9	448.3	0.00	0.00	0.00
3,240.0	20.15	247.06	3,168.4	-180.1	-425.6	462.1	0.00	0.00	0.00
3,280.0	20.15	247.06	3,206.0	-185.5	-438.3	475.9	0.00	0.00	0.00
3,320.0	20.15	247.06	3,243.5	-190.8	-451.0	489.7	0.00	0.00	0.00
3,360.0	20.15	247.06	3,281.1	-196.2	-463.6	503.4	0.00	0.00	0.00
3,400.0	20.15	247.06	3,318.6	-201.6	-476.3	517.2	0.00	0.00	0.00
3,440.0	20.15	247.06	3,356.2	-206.9	-489.0	531.0	0.00	0.00	0.00
3,480.0	20.15	247.06	3,393.7	-212.3	-501.7	544.8	0.00	0.00	0.00
3,520.0	20.15	247.06	3,431.3	-217.7	-514.4	558.6	0.00	0.00	0.00
3,560.0	20.15	247.06	3,468.8	-223.0	-527.1	572.3	0.00	0.00	0.00
3,600.0	20.15	247.06	3,506.4	-228.4	-539.8	586.1	0.00	0.00	0.00
3,640.0	20.15	247.06	3,543.9	-233.8	-552.5	599.9	0.00	0.00	0.00
3,680.0	20.15	247.06	3,581.5	-239.2	-565.2	613.7	0.00	0.00	0.00
3,720.0	20.15	247.06	3,619.0	-244.5	-577.8	627.5	0.00	0.00	0.00
3,760.0	20.15	247.06	3,656.6	-249.9	-590.5	641.2	0.00	0.00	0.00
3,800.0	20.15	247.06	3,694.1	-255.3	-603.2	655.0	0.00	0.00	0.00
3,840.0	20.15	247.06	3,731.7	-260.6	-615.9	668.8	0.00	0.00	0.00
3,880.0	20.15	247.06	3,769.2	-266.0	-628.6	682.6	0.00	0.00	0.00
3,920.0	20.15	247.06	3,806.8	-271.4	-641.3	696.3	0.00	0.00	0.00
3,960.0	20.15	247.06	3,844.3	-276.7	-654.0	710.1	0.00	0.00	0.00
4,000.0	20.15	247.06	3,881.9	-282.1	-666.7	723.9	0.00	0.00	0.00
4,040.0	20.15	247.06	3,919.4	-287.5	-679.4	737.7	0.00	0.00	0.00
4,080.0	20.15	247.06	3,957.0	-292.8	-692.0	751.5	0.00	0.00	0.00
4,120.0	20.15	247.06	3,994.6	-298.2	-704.7	765.2	0.00	0.00	0.00
4,139.8	20.15	247.06	4,013.2	-300.9	-711.0	772.1	0.00	0.00	0.00
4,160.0	19.75	247.06	4,032.1	-303.6	-717.4	779.0	2.00	-2.00	0.00
4,200.0	18.95	247.06	4,069.9	-308.7	-729.6	792.2	2.00	-2.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Wardell H19-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 5002.0ft (Original Well Elev)
Project:	SEC.19-T3N-R65W	MD Reference:	WELL @ 5002.0ft (Original Well Elev)
Site:	Wardell H19-32D Pad Sec.19-T3N-R65W	North Reference:	True
Well:	Wardell H19-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Wardell H19-33D Plan #2 (12-15-09)		

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	18.15	247.06	4,107.8	-313.7	-741.3	804.9	2.00	-2.00	0.00
4,280.0	17.35	247.06	4,145.9	-318.4	-752.5	817.1	2.00	-2.00	0.00
4,320.0	16.55	247.06	4,184.2	-323.0	-763.3	828.8	2.00	-2.00	0.00
4,360.0	15.75	247.06	4,222.6	-327.3	-773.5	839.9	2.00	-2.00	0.00
4,400.0	14.95	247.06	4,261.1	-331.4	-783.2	850.5	2.00	-2.00	0.00
4,440.0	14.15	247.06	4,299.9	-335.4	-792.5	860.5	2.00	-2.00	0.00
4,480.0	13.35	247.06	4,338.7	-339.1	-801.2	870.0	2.00	-2.00	0.00
4,520.0	12.55	247.06	4,377.7	-342.5	-809.5	879.0	2.00	-2.00	0.00
4,560.0	11.75	247.06	4,416.8	-345.8	-817.3	887.4	2.00	-2.00	0.00
4,600.0	10.95	247.06	4,456.0	-348.9	-824.5	895.3	2.00	-2.00	0.00
4,640.0	10.15	247.06	4,495.3	-351.7	-831.2	902.6	2.00	-2.00	0.00
4,680.0	9.35	247.06	4,534.8	-354.4	-837.5	909.4	2.00	-2.00	0.00
4,720.0	8.55	247.06	4,574.3	-356.8	-843.2	915.6	2.00	-2.00	0.00
4,760.0	7.75	247.06	4,613.9	-359.0	-848.4	921.3	2.00	-2.00	0.00
4,800.0	6.95	247.06	4,653.6	-361.0	-853.1	926.4	2.00	-2.00	0.00
4,840.0	6.15	247.06	4,693.3	-362.8	-857.3	930.9	2.00	-2.00	0.00
4,880.0	5.35	247.06	4,733.1	-364.3	-861.0	934.9	2.00	-2.00	0.00
4,920.0	4.55	247.06	4,772.9	-365.7	-864.2	938.4	2.00	-2.00	0.00
4,960.0	3.75	247.06	4,812.8	-366.8	-866.9	941.3	2.00	-2.00	0.00
5,000.0	2.95	247.06	4,852.8	-367.7	-869.0	943.6	2.00	-2.00	0.00
5,040.0	2.15	247.06	4,892.7	-368.4	-870.6	945.4	2.00	-2.00	0.00
5,080.0	1.35	247.06	4,932.7	-368.9	-871.8	946.6	2.00	-2.00	0.00
5,120.0	0.55	247.06	4,972.7	-369.2	-872.4	947.3	2.00	-2.00	0.00
5,147.3	0.00	0.00	5,000.0	-369.2	-872.5	947.4	2.00	-2.00	0.00
TARGET BHL 1320'FSL, 75'FWL									
5,160.0	0.00	0.00	5,012.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,200.0	0.00	0.00	5,052.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,240.0	0.00	0.00	5,092.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,280.0	0.00	0.00	5,132.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,320.0	0.00	0.00	5,172.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,360.0	0.00	0.00	5,212.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,400.0	0.00	0.00	5,252.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,440.0	0.00	0.00	5,292.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,480.0	0.00	0.00	5,332.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,520.0	0.00	0.00	5,372.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,560.0	0.00	0.00	5,412.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,600.0	0.00	0.00	5,452.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,640.0	0.00	0.00	5,492.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,680.0	0.00	0.00	5,532.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,720.0	0.00	0.00	5,572.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,760.0	0.00	0.00	5,612.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,800.0	0.00	0.00	5,652.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,840.0	0.00	0.00	5,692.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,880.0	0.00	0.00	5,732.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,920.0	0.00	0.00	5,772.7	-369.2	-872.5	947.4	0.00	0.00	0.00
5,960.0	0.00	0.00	5,812.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,000.0	0.00	0.00	5,852.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,040.0	0.00	0.00	5,892.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,080.0	0.00	0.00	5,932.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,120.0	0.00	0.00	5,972.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,160.0	0.00	0.00	6,012.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,200.0	0.00	0.00	6,052.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,240.0	0.00	0.00	6,092.7	-369.2	-872.5	947.4	0.00	0.00	0.00

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Wardell H19-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 5002.0ft (Original Well Elev)
Project:	SEC.19-T3N-R65W	MD Reference:	WELL @ 5002.0ft (Original Well Elev)
Site:	Wardell H19-32D Pad Sec.19-T3N-R65W	North Reference:	True
Well:	Wardell H19-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Wardell H19-33D Plan #2 (12-15-09)		

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)
6,280.0	0.00	0.00	6,132.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,320.0	0.00	0.00	6,172.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,360.0	0.00	0.00	6,212.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,400.0	0.00	0.00	6,252.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,440.0	0.00	0.00	6,292.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,480.0	0.00	0.00	6,332.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,520.0	0.00	0.00	6,372.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,560.0	0.00	0.00	6,412.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,600.0	0.00	0.00	6,452.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,640.0	0.00	0.00	6,492.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,680.0	0.00	0.00	6,532.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,720.0	0.00	0.00	6,572.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,760.0	0.00	0.00	6,612.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,800.0	0.00	0.00	6,652.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,840.0	0.00	0.00	6,692.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,880.0	0.00	0.00	6,732.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,920.0	0.00	0.00	6,772.7	-369.2	-872.5	947.4	0.00	0.00	0.00
6,960.0	0.00	0.00	6,812.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,000.0	0.00	0.00	6,852.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,040.0	0.00	0.00	6,892.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,080.0	0.00	0.00	6,932.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,120.0	0.00	0.00	6,972.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,160.0	0.00	0.00	7,012.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,200.0	0.00	0.00	7,052.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,240.0	0.00	0.00	7,092.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,279.3	0.00	0.00	7,132.0	-369.2	-872.5	947.4	0.00	0.00	0.00
NIOBRARA - TARGET CIRCLE 1320'FSL, 75'FWL									
7,280.0	0.00	0.00	7,132.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,320.0	0.00	0.00	7,172.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,360.0	0.00	0.00	7,212.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,400.0	0.00	0.00	7,252.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,440.0	0.00	0.00	7,292.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,480.0	0.00	0.00	7,332.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,520.0	0.00	0.00	7,372.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,549.3	0.00	0.00	7,402.0	-369.2	-872.5	947.4	0.00	0.00	0.00
CODELL									
7,560.0	0.00	0.00	7,412.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,600.0	0.00	0.00	7,452.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,640.0	0.00	0.00	7,492.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,680.0	0.00	0.00	7,532.7	-369.2	-872.5	947.4	0.00	0.00	0.00
7,699.3	0.00	0.00	7,552.0	-369.2	-872.5	947.4	0.00	0.00	0.00
HARDLINE 75'W OF H19-33D BHL									

Database:	EDM den0-adp01 Server Data	Local Co-ordinate Reference:	Well Wardell H19-33D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 5002.0ft (Original Well Elev)
Project:	SEC.19-T3N-R65W	MD Reference:	WELL @ 5002.0ft (Original Well Elev)
Site:	Wardell H19-32D Pad Sec.19-T3N-R65W	North Reference:	True
Well:	Wardell H19-33D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Wardell H19-33D Plan #2 (12-15-09)		

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
TARGET CIRCLE 132' - plan hits target center - Circle (radius 75.0)	0.00	0.00	7,132.0	-369.2	-872.5	1,319,318.84	3,219,119.80	40° 12' 26.159 N	104° 42' 55.669 W
TARGET BHL 1320'F - plan hits target center - Point	0.00	0.00	5,000.0	-369.2	-872.5	1,319,318.84	3,219,119.80	40° 12' 26.159 N	104° 42' 55.669 W
HARDLINE 75'W OF I - plan misses target center by 125.0ft at 7699.3ft MD (7552.0 TVD, -369.2 N, -872.5 E) - Polygon	0.00	0.00	7,552.0	-469.2	-947.5	1,319,218.18	3,219,045.70	40° 12' 25.171 N	104° 42' 56.636 W
Point 1			7,552.0	0.0	0.0	1,319,218.18	3,219,045.70		
Point 2			7,552.0	200.0	0.0	1,319,418.17	3,219,043.92		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
7,279.3	7,132.0	NIOBRARA		0.00		
7,549.3	7,402.0	CODELL		0.00		