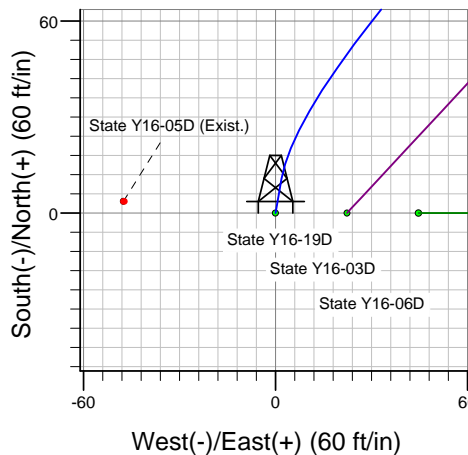
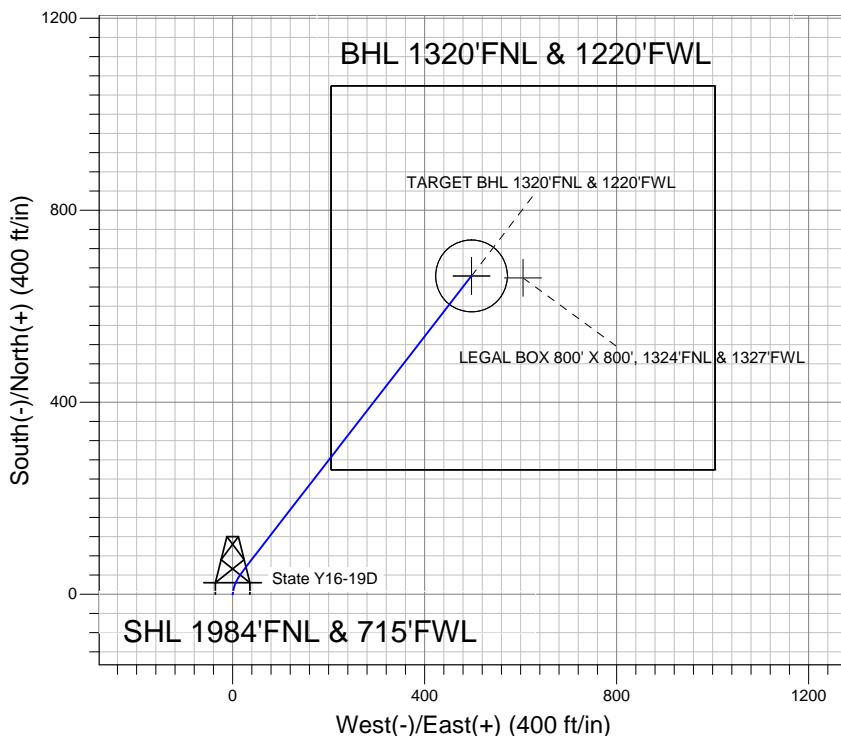
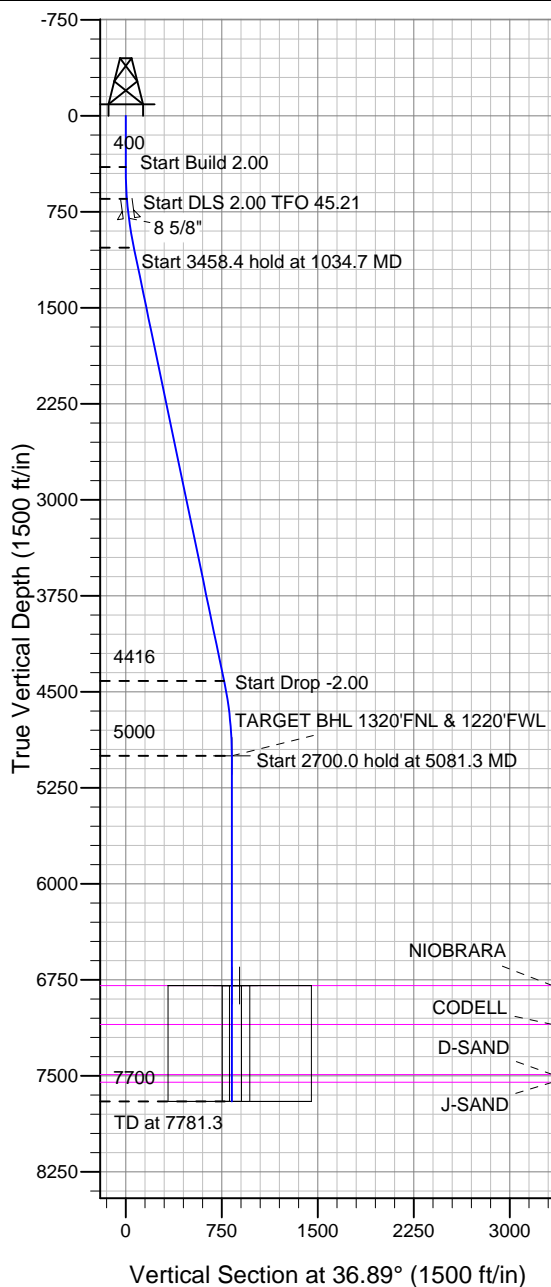


Well Name: State Y16-19D

Surface Location: State Y16-19D Pad Sec.16-T2N-R64W
 North American Datum 1983, US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4912.0
 +N/-S 0.0 +E/-W 0.0 Northing 1295352.30 Easting 3261849.81 Latitude 40.140340 Longitude -104.563390 Slot
 Original Well EleWELL @ 4925.0ft (Original Well Elev)

NOBLE ENERGY INC WELD COUNTY CO



State Y16-19D Pad Sec.16-T2N-R64W
 State Y16-19D
 Noble State Y16-19D Plan #1 (10-3-11)
 8:39, October 04 2011



Azimuths to True North
 Magnetic North: 8.69°
 Magnetic Field
 Strength: 52984.1snT
 Dip Angle: 66.86°
 Date: 10/3/2011
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1320'FNL & 1220'FWL	5000.0	663.0	497.7	40.142160	-104.561610	Point
LEGAL BOX 800' X 800', 1324'FNL & 1327'FWL	6795.0	659.0	604.7	40.142149	-104.561227	Rectangle (Sides: L800.0 W800.0)
TARGET CIRCLE 1320'FNL & 1220'FWL	6795.0	663.0	497.7	40.142160	-104.561610	Circle (Radius: 75.0)

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	400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.0	
3	650.0	5.00	10.00	649.7	10.7	1.9	2.00	10.00	9.7	
4	1034.7	11.76	37.78	1030.2	58.3	28.9	2.00	45.21	64.0	
5	4493.2	11.76	37.78	4416.0	615.5	460.8	0.00	0.00	768.9	
6	5081.3	0.00	0.00	5000.0	663.0	497.7	2.00	180.00	829.0	TARGET BHL 1320'FNL & 1220'FWL
7	7781.3	0.00	0.00	7700.0	663.0	497.7	0.00	0.00	829.0	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.16-T2N-R64W

State Y16-19D Pad Sec.16-T2N-R64W

State Y16-19D

Wellbore #1

Plan: Noble State Y16-19D Plan #1 (10-3-11)

Standard Planning Report

04 October, 2011



Database:	Landmark	Local Co-ordinate Reference:	Well State Y16-19D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4925.0ft (Original Well Elev)
Project:	SEC.16-T2N-R64W	MD Reference:	WELL @ 4925.0ft (Original Well Elev)
Site:	State Y16-19D Pad Sec.16-T2N-R64W	North Reference:	True
Well:	State Y16-19D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble State Y16-19D Plan #1 (10-3-11)		

Project	SEC.16-T2N-R64W, 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						State Y16-19D Pad Sec.16-T2N-R64W											
Site Position:						Northing:			1,295,352.31 ft			Latitude:			40.140340		
From:			Lat/Long			Easting:			3,261,849.81 ft			Longitude:			-104.563390		
Position Uncertainty:			0.0 ft			Slot Radius:			"			Grid Convergence:			0.61 °		

Well	State Y16-19D					
Well Position	+N/-S	0.0 ft	Northing:	1,295,352.30 ft	Latitude:	40.140340
	+E/-W	0.0 ft	Easting:	3,261,849.81 ft	Longitude:	-104.563390
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,912.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	10/3/2011	8.69	66.86	52,984

Design	Noble State Y16-19D Plan #1 (10-3-11)			
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	36.89

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	
400.0	0.00	0.00	400.0	0.0	0.0	0.00	0.00	0.00	0.00	
650.0	5.00	10.00	649.7	10.7	1.9	2.00	2.00	0.00	10.00	
1,034.7	11.76	37.78	1,030.2	58.3	28.9	2.00	1.76	7.22	45.21	
4,493.2	11.76	37.78	4,416.0	615.5	460.8	0.00	0.00	0.00	0.00	
5,081.3	0.00	0.00	5,000.0	663.0	497.7	2.00	-2.00	0.00	180.00	TARGET BHL 132C
7,781.3	0.00	0.00	7,700.0	663.0	497.7	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well State Y16-19D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4925.0ft (Original Well Elev)
Project:	SEC.16-T2N-R64W	MD Reference:	WELL @ 4925.0ft (Original Well Elev)
Site:	State Y16-19D Pad Sec.16-T2N-R64W	North Reference:	True
Well:	State Y16-19D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble State Y16-19D Plan #1 (10-3-11)		

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	0.80	10.00	440.0	0.3	0.0	0.2	2.00	2.00	0.00
480.0	1.60	10.00	480.0	1.1	0.2	1.0	2.00	2.00	0.00
520.0	2.40	10.00	520.0	2.5	0.4	2.2	2.00	2.00	0.00
560.0	3.20	10.00	559.9	4.4	0.8	4.0	2.00	2.00	0.00
600.0	4.00	10.00	599.8	6.9	1.2	6.2	2.00	2.00	0.00
640.0	4.80	10.00	639.7	9.9	1.7	9.0	2.00	2.00	0.00
650.0	5.00	10.00	649.7	10.7	1.9	9.7	2.00	2.00	0.00
680.0	5.44	14.50	679.6	13.4	2.5	12.2	2.00	1.46	14.99
720.0	6.07	19.44	719.4	17.2	3.7	16.0	2.00	1.57	12.36
760.0	6.73	23.44	759.1	21.4	5.3	20.3	2.00	1.66	9.99
800.0	7.42	26.70	798.8	25.8	7.4	25.1	2.00	1.73	8.17
801.2	7.45	26.79	800.0	26.0	7.5	25.2	2.00	1.76	7.39
8 5/8"									
840.0	8.14	29.41	838.4	30.6	9.9	30.4	2.00	1.78	6.75
880.0	8.86	31.68	878.0	35.7	12.9	36.3	2.00	1.82	5.67
920.0	9.60	33.61	917.5	41.1	16.4	42.7	2.00	1.85	4.82
960.0	10.35	35.26	956.9	46.8	20.3	49.6	2.00	1.87	4.13
1,000.0	11.10	36.69	996.2	52.8	24.7	57.1	2.00	1.89	3.58
1,034.7	11.76	37.78	1,030.2	58.3	28.9	64.0	2.00	1.90	3.15
1,040.0	11.76	37.78	1,035.4	59.2	29.5	65.0	0.00	0.00	0.00
1,080.0	11.76	37.78	1,074.5	65.6	34.5	73.2	0.00	0.00	0.00
1,120.0	11.76	37.78	1,113.7	72.0	39.5	81.3	0.00	0.00	0.00
1,160.0	11.76	37.78	1,152.9	78.5	44.5	89.5	0.00	0.00	0.00
1,200.0	11.76	37.78	1,192.0	84.9	49.5	97.7	0.00	0.00	0.00
1,240.0	11.76	37.78	1,231.2	91.4	54.5	105.8	0.00	0.00	0.00
1,280.0	11.76	37.78	1,270.3	97.8	59.5	114.0	0.00	0.00	0.00
1,320.0	11.76	37.78	1,309.5	104.3	64.5	122.1	0.00	0.00	0.00
1,360.0	11.76	37.78	1,348.7	110.7	69.5	130.3	0.00	0.00	0.00
1,400.0	11.76	37.78	1,387.8	117.2	74.5	138.4	0.00	0.00	0.00
1,440.0	11.76	37.78	1,427.0	123.6	79.5	146.6	0.00	0.00	0.00
1,480.0	11.76	37.78	1,466.1	130.0	84.5	154.7	0.00	0.00	0.00
1,520.0	11.76	37.78	1,505.3	136.5	89.5	162.9	0.00	0.00	0.00
1,560.0	11.76	37.78	1,544.5	142.9	94.5	171.0	0.00	0.00	0.00
1,600.0	11.76	37.78	1,583.6	149.4	99.5	179.2	0.00	0.00	0.00
1,640.0	11.76	37.78	1,622.8	155.8	104.5	187.3	0.00	0.00	0.00
1,680.0	11.76	37.78	1,661.9	162.3	109.5	195.5	0.00	0.00	0.00
1,720.0	11.76	37.78	1,701.1	168.7	114.5	203.6	0.00	0.00	0.00
1,760.0	11.76	37.78	1,740.3	175.2	119.5	211.8	0.00	0.00	0.00
1,800.0	11.76	37.78	1,779.4	181.6	124.4	219.9	0.00	0.00	0.00
1,840.0	11.76	37.78	1,818.6	188.0	129.4	228.1	0.00	0.00	0.00
1,880.0	11.76	37.78	1,857.7	194.5	134.4	236.2	0.00	0.00	0.00
1,920.0	11.76	37.78	1,896.9	200.9	139.4	244.4	0.00	0.00	0.00
1,960.0	11.76	37.78	1,936.1	207.4	144.4	252.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Y16-19D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4925.0ft (Original Well Elev)
Project:	SEC.16-T2N-R64W	MD Reference:	WELL @ 4925.0ft (Original Well Elev)
Site:	State Y16-19D Pad Sec.16-T2N-R64W	North Reference:	True
Well:	State Y16-19D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble State Y16-19D Plan #1 (10-3-11)		

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)
2,000.0	11.76	37.78	1,975.2	213.8	149.4	260.7	0.00	0.00	0.00
2,040.0	11.76	37.78	2,014.4	220.3	154.4	268.9	0.00	0.00	0.00
2,080.0	11.76	37.78	2,053.5	226.7	159.4	277.0	0.00	0.00	0.00
2,120.0	11.76	37.78	2,092.7	233.2	164.4	285.2	0.00	0.00	0.00
2,160.0	11.76	37.78	2,131.9	239.6	169.4	293.3	0.00	0.00	0.00
2,200.0	11.76	37.78	2,171.0	246.0	174.4	301.5	0.00	0.00	0.00
2,240.0	11.76	37.78	2,210.2	252.5	179.4	309.6	0.00	0.00	0.00
2,280.0	11.76	37.78	2,249.3	258.9	184.4	317.8	0.00	0.00	0.00
2,320.0	11.76	37.78	2,288.5	265.4	189.4	325.9	0.00	0.00	0.00
2,360.0	11.76	37.78	2,327.7	271.8	194.4	334.1	0.00	0.00	0.00
2,400.0	11.76	37.78	2,366.8	278.3	199.4	342.2	0.00	0.00	0.00
2,440.0	11.76	37.78	2,406.0	284.7	204.4	350.4	0.00	0.00	0.00
2,480.0	11.76	37.78	2,445.1	291.2	209.4	358.5	0.00	0.00	0.00
2,520.0	11.76	37.78	2,484.3	297.6	214.4	366.7	0.00	0.00	0.00
2,560.0	11.76	37.78	2,523.5	304.0	219.4	374.8	0.00	0.00	0.00
2,600.0	11.76	37.78	2,562.6	310.5	224.4	383.0	0.00	0.00	0.00
2,640.0	11.76	37.78	2,601.8	316.9	229.4	391.2	0.00	0.00	0.00
2,680.0	11.76	37.78	2,640.9	323.4	234.4	399.3	0.00	0.00	0.00
2,720.0	11.76	37.78	2,680.1	329.8	239.3	407.5	0.00	0.00	0.00
2,760.0	11.76	37.78	2,719.3	336.3	244.3	415.6	0.00	0.00	0.00
2,800.0	11.76	37.78	2,758.4	342.7	249.3	423.8	0.00	0.00	0.00
2,840.0	11.76	37.78	2,797.6	349.2	254.3	431.9	0.00	0.00	0.00
2,880.0	11.76	37.78	2,836.7	355.6	259.3	440.1	0.00	0.00	0.00
2,920.0	11.76	37.78	2,875.9	362.0	264.3	448.2	0.00	0.00	0.00
2,960.0	11.76	37.78	2,915.1	368.5	269.3	456.4	0.00	0.00	0.00
3,000.0	11.76	37.78	2,954.2	374.9	274.3	464.5	0.00	0.00	0.00
3,040.0	11.76	37.78	2,993.4	381.4	279.3	472.7	0.00	0.00	0.00
3,080.0	11.76	37.78	3,032.5	387.8	284.3	480.8	0.00	0.00	0.00
3,120.0	11.76	37.78	3,071.7	394.3	289.3	489.0	0.00	0.00	0.00
3,160.0	11.76	37.78	3,110.9	400.7	294.3	497.1	0.00	0.00	0.00
3,200.0	11.76	37.78	3,150.0	407.2	299.3	505.3	0.00	0.00	0.00
3,240.0	11.76	37.78	3,189.2	413.6	304.3	513.4	0.00	0.00	0.00
3,280.0	11.76	37.78	3,228.3	420.0	309.3	521.6	0.00	0.00	0.00
3,320.0	11.76	37.78	3,267.5	426.5	314.3	529.8	0.00	0.00	0.00
3,360.0	11.76	37.78	3,306.7	432.9	319.3	537.9	0.00	0.00	0.00
3,400.0	11.76	37.78	3,345.8	439.4	324.3	546.1	0.00	0.00	0.00
3,440.0	11.76	37.78	3,385.0	445.8	329.3	554.2	0.00	0.00	0.00
3,480.0	11.76	37.78	3,424.1	452.3	334.3	562.4	0.00	0.00	0.00
3,520.0	11.76	37.78	3,463.3	458.7	339.3	570.5	0.00	0.00	0.00
3,560.0	11.76	37.78	3,502.5	465.1	344.3	578.7	0.00	0.00	0.00
3,600.0	11.76	37.78	3,541.6	471.6	349.3	586.8	0.00	0.00	0.00
3,640.0	11.76	37.78	3,580.8	478.0	354.2	595.0	0.00	0.00	0.00
3,680.0	11.76	37.78	3,619.9	484.5	359.2	603.1	0.00	0.00	0.00
3,720.0	11.76	37.78	3,659.1	490.9	364.2	611.3	0.00	0.00	0.00
3,760.0	11.76	37.78	3,698.3	497.4	369.2	619.4	0.00	0.00	0.00
3,800.0	11.76	37.78	3,737.4	503.8	374.2	627.6	0.00	0.00	0.00
3,840.0	11.76	37.78	3,776.6	510.3	379.2	635.7	0.00	0.00	0.00
3,880.0	11.76	37.78	3,815.7	516.7	384.2	643.9	0.00	0.00	0.00
3,920.0	11.76	37.78	3,854.9	523.1	389.2	652.0	0.00	0.00	0.00
3,960.0	11.76	37.78	3,894.1	529.6	394.2	660.2	0.00	0.00	0.00
4,000.0	11.76	37.78	3,933.2	536.0	399.2	668.4	0.00	0.00	0.00
4,040.0	11.76	37.78	3,972.4	542.5	404.2	676.5	0.00	0.00	0.00
4,080.0	11.76	37.78	4,011.5	548.9	409.2	684.7	0.00	0.00	0.00
4,120.0	11.76	37.78	4,050.7	555.4	414.2	692.8	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Y16-19D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4925.0ft (Original Well Elev)
Project:	SEC.16-T2N-R64W	MD Reference:	WELL @ 4925.0ft (Original Well Elev)
Site:	State Y16-19D Pad Sec.16-T2N-R64W	North Reference:	True
Well:	State Y16-19D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble State Y16-19D Plan #1 (10-3-11)		

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	11.76	37.78	4,089.9	561.8	419.2	701.0	0.00	0.00	0.00
4,200.0	11.76	37.78	4,129.0	568.3	424.2	709.1	0.00	0.00	0.00
4,240.0	11.76	37.78	4,168.2	574.7	429.2	717.3	0.00	0.00	0.00
4,280.0	11.76	37.78	4,207.3	581.1	434.2	725.4	0.00	0.00	0.00
4,320.0	11.76	37.78	4,246.5	587.6	439.2	733.6	0.00	0.00	0.00
4,360.0	11.76	37.78	4,285.7	594.0	444.2	741.7	0.00	0.00	0.00
4,400.0	11.76	37.78	4,324.8	600.5	449.2	749.9	0.00	0.00	0.00
4,440.0	11.76	37.78	4,364.0	606.9	454.2	758.0	0.00	0.00	0.00
4,480.0	11.76	37.78	4,403.1	613.4	459.2	766.2	0.00	0.00	0.00
4,493.2	11.76	37.78	4,416.0	615.5	460.8	768.9	0.00	0.00	0.00
4,520.0	11.23	37.78	4,442.3	619.7	464.1	774.2	2.00	-2.00	0.00
4,560.0	10.43	37.78	4,481.6	625.7	468.7	781.7	2.00	-2.00	0.00
4,600.0	9.63	37.78	4,521.0	631.2	472.9	788.7	2.00	-2.00	0.00
4,640.0	8.83	37.78	4,560.5	636.2	476.9	795.1	2.00	-2.00	0.00
4,680.0	8.03	37.78	4,600.1	640.9	480.5	801.0	2.00	-2.00	0.00
4,720.0	7.23	37.78	4,639.7	645.0	483.7	806.3	2.00	-2.00	0.00
4,760.0	6.43	37.78	4,679.4	648.8	486.6	811.0	2.00	-2.00	0.00
4,800.0	5.63	37.78	4,719.2	652.1	489.2	815.2	2.00	-2.00	0.00
4,840.0	4.83	37.78	4,759.0	655.0	491.4	818.9	2.00	-2.00	0.00
4,880.0	4.03	37.78	4,798.9	657.4	493.3	821.9	2.00	-2.00	0.00
4,920.0	3.23	37.78	4,838.8	659.4	494.9	824.5	2.00	-2.00	0.00
4,960.0	2.43	37.78	4,878.8	661.0	496.1	826.4	2.00	-2.00	0.00
5,000.0	1.63	37.78	4,918.8	662.1	496.9	827.9	2.00	-2.00	0.00
5,040.0	0.83	37.78	4,958.7	662.8	497.5	828.7	2.00	-2.00	0.00
5,080.0	0.03	37.78	4,998.7	663.0	497.7	829.0	2.00	-2.00	0.00
5,081.3	0.00	0.00	5,000.0	663.0	497.7	829.0	2.00	-2.00	0.00
TARGET BHL 1320'FNL & 1220'FWL									
5,120.0	0.00	0.00	5,038.7	663.0	497.7	829.0	0.00	0.00	0.00
5,160.0	0.00	0.00	5,078.7	663.0	497.7	829.0	0.00	0.00	0.00
5,200.0	0.00	0.00	5,118.7	663.0	497.7	829.0	0.00	0.00	0.00
5,240.0	0.00	0.00	5,158.7	663.0	497.7	829.0	0.00	0.00	0.00
5,280.0	0.00	0.00	5,198.7	663.0	497.7	829.0	0.00	0.00	0.00
5,320.0	0.00	0.00	5,238.7	663.0	497.7	829.0	0.00	0.00	0.00
5,360.0	0.00	0.00	5,278.7	663.0	497.7	829.0	0.00	0.00	0.00
5,400.0	0.00	0.00	5,318.7	663.0	497.7	829.0	0.00	0.00	0.00
5,440.0	0.00	0.00	5,358.7	663.0	497.7	829.0	0.00	0.00	0.00
5,480.0	0.00	0.00	5,398.7	663.0	497.7	829.0	0.00	0.00	0.00
5,520.0	0.00	0.00	5,438.7	663.0	497.7	829.0	0.00	0.00	0.00
5,560.0	0.00	0.00	5,478.7	663.0	497.7	829.0	0.00	0.00	0.00
5,600.0	0.00	0.00	5,518.7	663.0	497.7	829.0	0.00	0.00	0.00
5,640.0	0.00	0.00	5,558.7	663.0	497.7	829.0	0.00	0.00	0.00
5,680.0	0.00	0.00	5,598.7	663.0	497.7	829.0	0.00	0.00	0.00
5,720.0	0.00	0.00	5,638.7	663.0	497.7	829.0	0.00	0.00	0.00
5,760.0	0.00	0.00	5,678.7	663.0	497.7	829.0	0.00	0.00	0.00
5,800.0	0.00	0.00	5,718.7	663.0	497.7	829.0	0.00	0.00	0.00
5,840.0	0.00	0.00	5,758.7	663.0	497.7	829.0	0.00	0.00	0.00
5,880.0	0.00	0.00	5,798.7	663.0	497.7	829.0	0.00	0.00	0.00
5,920.0	0.00	0.00	5,838.7	663.0	497.7	829.0	0.00	0.00	0.00
5,960.0	0.00	0.00	5,878.7	663.0	497.7	829.0	0.00	0.00	0.00
6,000.0	0.00	0.00	5,918.7	663.0	497.7	829.0	0.00	0.00	0.00
6,040.0	0.00	0.00	5,958.7	663.0	497.7	829.0	0.00	0.00	0.00
6,080.0	0.00	0.00	5,998.7	663.0	497.7	829.0	0.00	0.00	0.00
6,120.0	0.00	0.00	6,038.7	663.0	497.7	829.0	0.00	0.00	0.00
6,160.0	0.00	0.00	6,078.7	663.0	497.7	829.0	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Y16-19D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4925.0ft (Original Well Elev)
Project:	SEC.16-T2N-R64W	MD Reference:	WELL @ 4925.0ft (Original Well Elev)
Site:	State Y16-19D Pad Sec.16-T2N-R64W	North Reference:	True
Well:	State Y16-19D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble State Y16-19D Plan #1 (10-3-11)		

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)
6,200.0	0.00	0.00	6,118.7	663.0	497.7	829.0	0.00	0.00	0.00
6,240.0	0.00	0.00	6,158.7	663.0	497.7	829.0	0.00	0.00	0.00
6,280.0	0.00	0.00	6,198.7	663.0	497.7	829.0	0.00	0.00	0.00
6,320.0	0.00	0.00	6,238.7	663.0	497.7	829.0	0.00	0.00	0.00
6,360.0	0.00	0.00	6,278.7	663.0	497.7	829.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,318.7	663.0	497.7	829.0	0.00	0.00	0.00
6,440.0	0.00	0.00	6,358.7	663.0	497.7	829.0	0.00	0.00	0.00
6,480.0	0.00	0.00	6,398.7	663.0	497.7	829.0	0.00	0.00	0.00
6,520.0	0.00	0.00	6,438.7	663.0	497.7	829.0	0.00	0.00	0.00
6,560.0	0.00	0.00	6,478.7	663.0	497.7	829.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,518.7	663.0	497.7	829.0	0.00	0.00	0.00
6,640.0	0.00	0.00	6,558.7	663.0	497.7	829.0	0.00	0.00	0.00
6,680.0	0.00	0.00	6,598.7	663.0	497.7	829.0	0.00	0.00	0.00
6,720.0	0.00	0.00	6,638.7	663.0	497.7	829.0	0.00	0.00	0.00
6,760.0	0.00	0.00	6,678.7	663.0	497.7	829.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,718.7	663.0	497.7	829.0	0.00	0.00	0.00
6,840.0	0.00	0.00	6,758.7	663.0	497.7	829.0	0.00	0.00	0.00
6,876.3	0.00	0.00	6,795.0	663.0	497.7	829.0	0.00	0.00	0.00
NOBRARA - TARGET CIRCLE 1320'FNL & 1220'FWL - LEGAL BOX 800' X 800', 1324'FNL & 1327'FWL									
6,880.0	0.00	0.00	6,798.7	663.0	497.7	829.0	0.00	0.00	0.00
6,920.0	0.00	0.00	6,838.7	663.0	497.7	829.0	0.00	0.00	0.00
6,960.0	0.00	0.00	6,878.7	663.0	497.7	829.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,918.7	663.0	497.7	829.0	0.00	0.00	0.00
7,040.0	0.00	0.00	6,958.7	663.0	497.7	829.0	0.00	0.00	0.00
7,080.0	0.00	0.00	6,998.7	663.0	497.7	829.0	0.00	0.00	0.00
7,120.0	0.00	0.00	7,038.7	663.0	497.7	829.0	0.00	0.00	0.00
7,160.0	0.00	0.00	7,078.7	663.0	497.7	829.0	0.00	0.00	0.00
7,180.3	0.00	0.00	7,099.0	663.0	497.7	829.0	0.00	0.00	0.00
CODELL									
7,200.0	0.00	0.00	7,118.7	663.0	497.7	829.0	0.00	0.00	0.00
7,240.0	0.00	0.00	7,158.7	663.0	497.7	829.0	0.00	0.00	0.00
7,280.0	0.00	0.00	7,198.7	663.0	497.7	829.0	0.00	0.00	0.00
7,320.0	0.00	0.00	7,238.7	663.0	497.7	829.0	0.00	0.00	0.00
7,360.0	0.00	0.00	7,278.7	663.0	497.7	829.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,318.7	663.0	497.7	829.0	0.00	0.00	0.00
7,440.0	0.00	0.00	7,358.7	663.0	497.7	829.0	0.00	0.00	0.00
7,480.0	0.00	0.00	7,398.7	663.0	497.7	829.0	0.00	0.00	0.00
7,520.0	0.00	0.00	7,438.7	663.0	497.7	829.0	0.00	0.00	0.00
7,560.0	0.00	0.00	7,478.7	663.0	497.7	829.0	0.00	0.00	0.00
7,572.3	0.00	0.00	7,491.0	663.0	497.7	829.0	0.00	0.00	0.00
D-SAND									
7,600.0	0.00	0.00	7,518.7	663.0	497.7	829.0	0.00	0.00	0.00
7,631.3	0.00	0.00	7,550.0	663.0	497.7	829.0	0.00	0.00	0.00
J-SAND									
7,640.0	0.00	0.00	7,558.7	663.0	497.7	829.0	0.00	0.00	0.00
7,680.0	0.00	0.00	7,598.7	663.0	497.7	829.0	0.00	0.00	0.00
7,720.0	0.00	0.00	7,638.7	663.0	497.7	829.0	0.00	0.00	0.00
7,760.0	0.00	0.00	7,678.7	663.0	497.7	829.0	0.00	0.00	0.00
7,781.3	0.00	0.00	7,700.0	663.0	497.7	829.0	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well State Y16-19D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4925.0ft (Original Well Elev)
Project:	SEC.16-T2N-R64W	MD Reference:	WELL @ 4925.0ft (Original Well Elev)
Site:	State Y16-19D Pad Sec.16-T2N-R64W	North Reference:	True
Well:	State Y16-19D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble State Y16-19D Plan #1 (10-3-11)		

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									
TARGET BHL 1320'F	0.00	0.00	5,000.0	663.0	497.7	1,296,020.52	3,262,340.42	40.142160	-104.561610
- plan hits target center									
- Point									
TARGET CIRCLE 132	0.00	0.00	6,795.0	663.0	497.7	1,296,020.52	3,262,340.42	40.142160	-104.561610
- plan hits target center									
- Circle (radius 75.0)									
LEGAL BOX 800' X 80	0.00	0.00	6,795.0	659.0	604.7	1,296,017.62	3,262,447.49	40.142149	-104.561227
- plan misses target center by 107.1ft at 6876.3ft MD (6795.0 TVD, 663.0 N, 497.7 E)									
- Rectangle (sides W800.0 H800.0 D905.0)									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
801.2	800.0	8 5/8"	8-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,876.3	6,795.0	NIOBRARA		0.00		
7,180.3	7,099.0	CODELL		0.00		
7,572.3	7,491.0	D-SAND		0.00		
7,631.3	7,550.0	J-SAND		0.00		