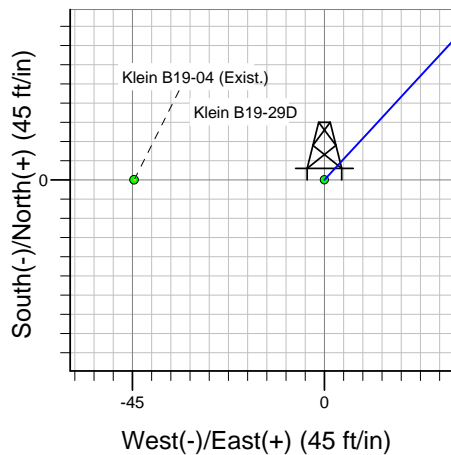
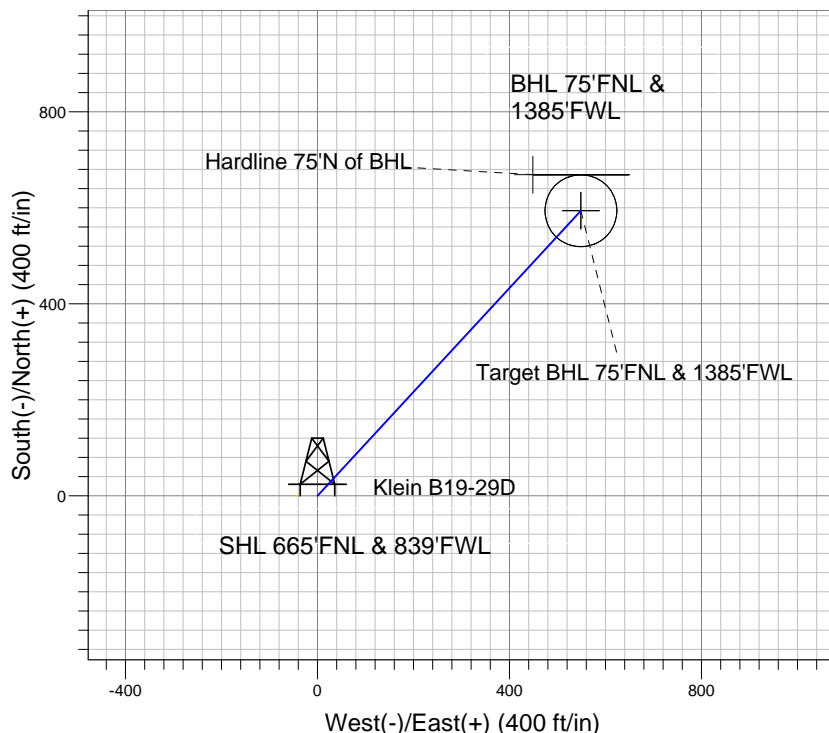
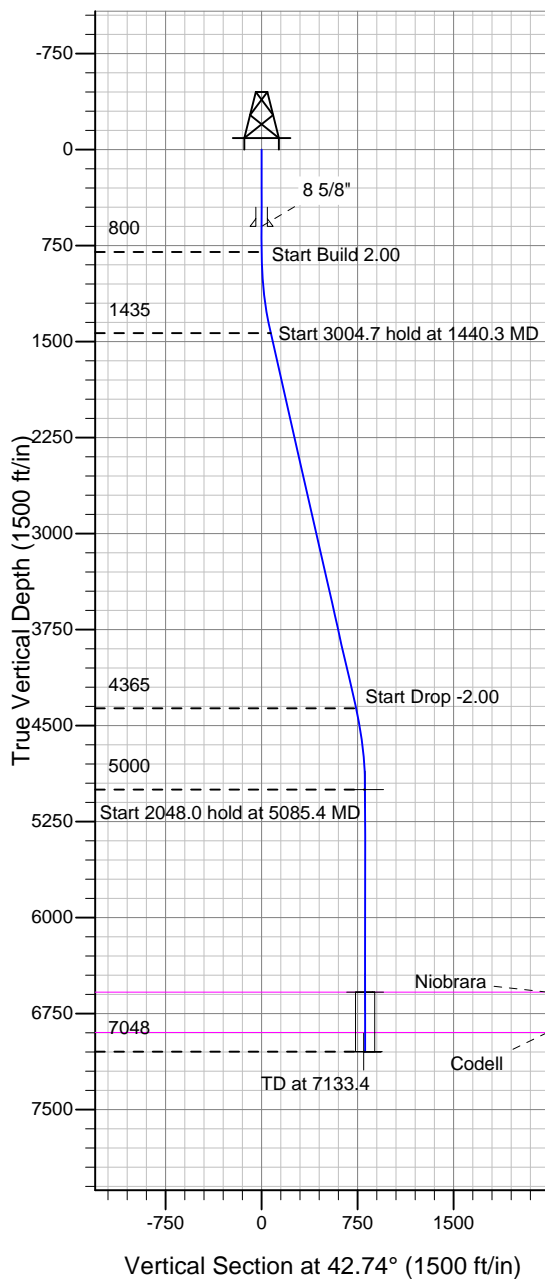


NOBLE ENERGY INC WELD COUNTY CO



Klein B19-29D
Noble Klein B19-29D Plan #1 (8-12-10)
8:55, August 16 2010



Azimuths to True North
Magnetic North: 8.89°
Magnetic Field
Strength: 53235.2snT
Dip Angle: 67.10°
Date: 8/10/2010
Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Target BHL 75'FNL & 1385'FWL	5000.0	593.8	548.8	40° 23' 29.976 N	104° 35' 48.876 W	Point
Target Circle 75'FNL & 1385'FWL	6583.0	593.8	548.8	40° 23' 29.976 N	104° 35' 48.876 W	Circle (Radius: 75.0)
Hardline 75'N of BHL	7048.0	668.8	448.8	40° 23' 30.717 N	104° 35' 50.168 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	1440.3	12.81	42.74	1435.0	52.3	48.4	2.00	42.74	71.3	
4	4445.0	12.81	42.74	4365.0	541.5	500.4	0.00	0.00	737.3	
5	5085.4	0.00	0.00	5000.0	593.8	548.8	2.00	180.00	808.6	Target BHL 75'FNL & 1385'FWL
6	7133.4	0.00	0.00	7048.0	593.8	548.8	0.00	0.00	808.6	



NOBLE ENERGY INC WELD COUNTY CO

SEC.19-T5N-R64W

Klein B19-29D Pad Sec.19-T5N-R64W

Klein B19-29D

Wellbore #1

Plan: Noble Klein B19-29D Plan #1 (8-12-10)

Standard Planning Report

16 August, 2010

Database:	Landmark	Local Co-ordinate Reference:	Well Klein B19-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4643.0ft (Original Well Elev)
Project:	SEC.19-T5N-R64W	MD Reference:	WELL @ 4643.0ft (Original Well Elev)
Site:	Klein B19-29D Pad Sec.19-T5N-R64W	North Reference:	True
Well:	Klein B19-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Klein B19-29D Plan #1 (8-12-10)		

Project	SEC.19-T5N-R64W, Weld County, CO		
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 Klein B19-29D Pad Sec.19-T5N-R64W					
Site Position:		Northing:		1,386,203.73 ft	
From: Lat/Long		Easting:		3,251,003.84 ft	
Position Uncertainty: 0.0 ft		Slot Radius:		"	
				Latitude: 40° 23' 24.108 N	
				Longitude: 104° 35' 55.968 W	
				Grid Convergence: 0.58 °	

Well	Klein B19-29D					
Well Position	+N-S	0.0 ft	Northing:	1,386,203.71 ft	Latitude:	40° 23' 24.108 N
	+E-W	0.0 ft	Easting:	3,251,003.84 ft	Longitude:	104° 35' 55.968 W
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,630.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/10/2010	8.89	67.10	53,235

Design	Noble Klein B19-29D Plan #1 (8-12-10)			
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	42.74

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	
1,440.3	12.81	42.74	1,435.0	52.3	48.4	2.00	2.00	0.00	42.74	
4,445.0	12.81	42.74	4,365.0	541.5	500.4	0.00	0.00	0.00	0.00	
5,085.4	0.00	0.00	5,000.0	593.8	548.8	2.00	-2.00	0.00	180.00	Target BHL 75°FNL
7,133.4	0.00	0.00	7,048.0	593.8	548.8	0.00	0.00	0.00	0.00	

Database:	Landmark	Local Co-ordinate Reference:	Well Klein B19-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4643.0ft (Original Well Elev)
Project:	SEC.19-T5N-R64W	MD Reference:	WELL @ 4643.0ft (Original Well Elev)
Site:	Klein B19-29D Pad Sec.19-T5N-R64W	North Reference:	True
Well:	Klein B19-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Klein B19-29D Plan #1 (8-12-10)		

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
8 5/8"									
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	42.74	840.0	0.2	0.2	0.3	2.00	2.00	0.00
880.0	1.60	42.74	880.0	0.8	0.8	1.1	2.00	2.00	0.00
920.0	2.40	42.74	920.0	1.8	1.7	2.5	2.00	2.00	0.00
960.0	3.20	42.74	959.9	3.3	3.0	4.5	2.00	2.00	0.00
1,000.0	4.00	42.74	999.8	5.1	4.7	7.0	2.00	2.00	0.00
1,040.0	4.80	42.74	1,039.7	7.4	6.8	10.0	2.00	2.00	0.00
1,080.0	5.60	42.74	1,079.6	10.0	9.3	13.7	2.00	2.00	0.00
1,120.0	6.40	42.74	1,119.3	13.1	12.1	17.9	2.00	2.00	0.00
1,160.0	7.20	42.74	1,159.1	16.6	15.3	22.6	2.00	2.00	0.00
1,200.0	8.00	42.74	1,198.7	20.5	18.9	27.9	2.00	2.00	0.00
1,240.0	8.80	42.74	1,238.3	24.8	22.9	33.7	2.00	2.00	0.00
1,280.0	9.60	42.74	1,277.8	29.5	27.2	40.1	2.00	2.00	0.00
1,320.0	10.40	42.74	1,317.1	34.6	31.9	47.1	2.00	2.00	0.00
1,360.0	11.20	42.74	1,356.4	40.1	37.0	54.6	2.00	2.00	0.00
1,400.0	12.00	42.74	1,395.6	46.0	42.5	62.6	2.00	2.00	0.00
1,440.0	12.80	42.74	1,434.7	52.3	48.3	71.2	2.00	2.00	0.00
1,440.3	12.81	42.74	1,435.0	52.3	48.4	71.3	2.00	2.00	0.00
1,480.0	12.81	42.74	1,473.7	58.8	54.3	80.1	0.00	0.00	0.00
1,520.0	12.81	42.74	1,512.7	65.3	60.4	88.9	0.00	0.00	0.00
1,560.0	12.81	42.74	1,551.7	71.8	66.4	97.8	0.00	0.00	0.00
1,600.0	12.81	42.74	1,590.7	78.3	72.4	106.7	0.00	0.00	0.00
1,640.0	12.81	42.74	1,629.7	84.8	78.4	115.5	0.00	0.00	0.00
1,680.0	12.81	42.74	1,668.7	91.4	84.4	124.4	0.00	0.00	0.00
1,720.0	12.81	42.74	1,707.7	97.9	90.4	133.3	0.00	0.00	0.00
1,760.0	12.81	42.74	1,746.7	104.4	96.5	142.1	0.00	0.00	0.00
1,800.0	12.81	42.74	1,785.7	110.9	102.5	151.0	0.00	0.00	0.00
1,840.0	12.81	42.74	1,824.7	117.4	108.5	159.9	0.00	0.00	0.00
1,880.0	12.81	42.74	1,863.7	123.9	114.5	168.7	0.00	0.00	0.00
1,920.0	12.81	42.74	1,902.7	130.4	120.5	177.6	0.00	0.00	0.00
1,960.0	12.81	42.74	1,941.8	136.9	126.5	186.5	0.00	0.00	0.00
2,000.0	12.81	42.74	1,980.8	143.5	132.6	195.3	0.00	0.00	0.00
2,040.0	12.81	42.74	2,019.8	150.0	138.6	204.2	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Klein B19-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4643.0ft (Original Well Elev)
Project:	SEC.19-T5N-R64W	MD Reference:	WELL @ 4643.0ft (Original Well Elev)
Site:	Klein B19-29D Pad Sec.19-T5N-R64W	North Reference:	True
Well:	Klein B19-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Klein B19-29D Plan #1 (8-12-10)		

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)
2,080.0	12.81	42.74	2,058.8	156.5	144.6	213.1	0.00	0.00	0.00
2,120.0	12.81	42.74	2,097.8	163.0	150.6	221.9	0.00	0.00	0.00
2,160.0	12.81	42.74	2,136.8	169.5	156.6	230.8	0.00	0.00	0.00
2,200.0	12.81	42.74	2,175.8	176.0	162.6	239.7	0.00	0.00	0.00
2,240.0	12.81	42.74	2,214.8	182.5	168.7	248.5	0.00	0.00	0.00
2,280.0	12.81	42.74	2,253.8	189.0	174.7	257.4	0.00	0.00	0.00
2,320.0	12.81	42.74	2,292.8	195.5	180.7	266.3	0.00	0.00	0.00
2,360.0	12.81	42.74	2,331.8	202.1	186.7	275.1	0.00	0.00	0.00
2,400.0	12.81	42.74	2,370.8	208.6	192.7	284.0	0.00	0.00	0.00
2,440.0	12.81	42.74	2,409.8	215.1	198.8	292.9	0.00	0.00	0.00
2,480.0	12.81	42.74	2,448.8	221.6	204.8	301.7	0.00	0.00	0.00
2,520.0	12.81	42.74	2,487.8	228.1	210.8	310.6	0.00	0.00	0.00
2,560.0	12.81	42.74	2,526.8	234.6	216.8	319.5	0.00	0.00	0.00
2,600.0	12.81	42.74	2,565.8	241.1	222.8	328.3	0.00	0.00	0.00
2,640.0	12.81	42.74	2,604.8	247.6	228.8	337.2	0.00	0.00	0.00
2,680.0	12.81	42.74	2,643.8	254.2	234.9	346.1	0.00	0.00	0.00
2,720.0	12.81	42.74	2,682.8	260.7	240.9	354.9	0.00	0.00	0.00
2,760.0	12.81	42.74	2,721.9	267.2	246.9	363.8	0.00	0.00	0.00
2,800.0	12.81	42.74	2,760.9	273.7	252.9	372.7	0.00	0.00	0.00
2,840.0	12.81	42.74	2,799.9	280.2	258.9	381.5	0.00	0.00	0.00
2,880.0	12.81	42.74	2,838.9	286.7	264.9	390.4	0.00	0.00	0.00
2,920.0	12.81	42.74	2,877.9	293.2	271.0	399.3	0.00	0.00	0.00
2,960.0	12.81	42.74	2,916.9	299.7	277.0	408.1	0.00	0.00	0.00
3,000.0	12.81	42.74	2,955.9	306.3	283.0	417.0	0.00	0.00	0.00
3,040.0	12.81	42.74	2,994.9	312.8	289.0	425.9	0.00	0.00	0.00
3,080.0	12.81	42.74	3,033.9	319.3	295.0	434.7	0.00	0.00	0.00
3,120.0	12.81	42.74	3,072.9	325.8	301.1	443.6	0.00	0.00	0.00
3,160.0	12.81	42.74	3,111.9	332.3	307.1	452.5	0.00	0.00	0.00
3,200.0	12.81	42.74	3,150.9	338.8	313.1	461.3	0.00	0.00	0.00
3,240.0	12.81	42.74	3,189.9	345.3	319.1	470.2	0.00	0.00	0.00
3,280.0	12.81	42.74	3,228.9	351.8	325.1	479.1	0.00	0.00	0.00
3,320.0	12.81	42.74	3,267.9	358.3	331.1	487.9	0.00	0.00	0.00
3,360.0	12.81	42.74	3,306.9	364.9	337.2	496.8	0.00	0.00	0.00
3,400.0	12.81	42.74	3,345.9	371.4	343.2	505.7	0.00	0.00	0.00
3,440.0	12.81	42.74	3,384.9	377.9	349.2	514.5	0.00	0.00	0.00
3,480.0	12.81	42.74	3,423.9	384.4	355.2	523.4	0.00	0.00	0.00
3,520.0	12.81	42.74	3,462.9	390.9	361.2	532.3	0.00	0.00	0.00
3,560.0	12.81	42.74	3,502.0	397.4	367.2	541.1	0.00	0.00	0.00
3,600.0	12.81	42.74	3,541.0	403.9	373.3	550.0	0.00	0.00	0.00
3,640.0	12.81	42.74	3,580.0	410.4	379.3	558.9	0.00	0.00	0.00
3,680.0	12.81	42.74	3,619.0	417.0	385.3	567.7	0.00	0.00	0.00
3,720.0	12.81	42.74	3,658.0	423.5	391.3	576.6	0.00	0.00	0.00
3,760.0	12.81	42.74	3,697.0	430.0	397.3	585.5	0.00	0.00	0.00
3,800.0	12.81	42.74	3,736.0	436.5	403.3	594.3	0.00	0.00	0.00
3,840.0	12.81	42.74	3,775.0	443.0	409.4	603.2	0.00	0.00	0.00
3,880.0	12.81	42.74	3,814.0	449.5	415.4	612.1	0.00	0.00	0.00
3,920.0	12.81	42.74	3,853.0	456.0	421.4	620.9	0.00	0.00	0.00
3,960.0	12.81	42.74	3,892.0	462.5	427.4	629.8	0.00	0.00	0.00
4,000.0	12.81	42.74	3,931.0	469.1	433.4	638.7	0.00	0.00	0.00
4,040.0	12.81	42.74	3,970.0	475.6	439.5	647.5	0.00	0.00	0.00
4,080.0	12.81	42.74	4,009.0	482.1	445.5	656.4	0.00	0.00	0.00
4,120.0	12.81	42.74	4,048.0	488.6	451.5	665.3	0.00	0.00	0.00
4,160.0	12.81	42.74	4,087.0	495.1	457.5	674.1	0.00	0.00	0.00
4,200.0	12.81	42.74	4,126.0	501.6	463.5	683.0	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Klein B19-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4643.0ft (Original Well Elev)
Project:	SEC.19-T5N-R64W	MD Reference:	WELL @ 4643.0ft (Original Well Elev)
Site:	Klein B19-29D Pad Sec.19-T5N-R64W	North Reference:	True
Well:	Klein B19-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Klein B19-29D Plan #1 (8-12-10)		

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)
4,240.0	12.81	42.74	4,165.0	508.1	469.5	691.9	0.00	0.00	0.00
4,280.0	12.81	42.74	4,204.0	514.6	475.6	700.7	0.00	0.00	0.00
4,320.0	12.81	42.74	4,243.0	521.1	481.6	709.6	0.00	0.00	0.00
4,360.0	12.81	42.74	4,282.0	527.7	487.6	718.5	0.00	0.00	0.00
4,400.0	12.81	42.74	4,321.1	534.2	493.6	727.3	0.00	0.00	0.00
4,440.0	12.81	42.74	4,360.1	540.7	499.6	736.2	0.00	0.00	0.00
4,445.0	12.81	42.74	4,365.0	541.5	500.4	737.3	0.00	0.00	0.00
4,480.0	12.11	42.74	4,399.1	547.0	505.5	744.8	2.00	-2.00	0.00
4,520.0	11.31	42.74	4,438.3	553.0	511.0	753.0	2.00	-2.00	0.00
4,560.0	10.51	42.74	4,477.6	558.6	516.2	760.5	2.00	-2.00	0.00
4,600.0	9.71	42.74	4,516.9	563.7	520.9	767.5	2.00	-2.00	0.00
4,640.0	8.91	42.74	4,556.4	568.5	525.3	774.0	2.00	-2.00	0.00
4,680.0	8.11	42.74	4,596.0	572.8	529.3	779.9	2.00	-2.00	0.00
4,720.0	7.31	42.74	4,635.6	576.8	533.0	785.3	2.00	-2.00	0.00
4,760.0	6.51	42.74	4,675.3	580.3	536.2	790.1	2.00	-2.00	0.00
4,800.0	5.71	42.74	4,715.1	583.4	539.1	794.4	2.00	-2.00	0.00
4,840.0	4.91	42.74	4,754.9	586.1	541.6	798.1	2.00	-2.00	0.00
4,880.0	4.11	42.74	4,794.8	588.4	543.8	801.2	2.00	-2.00	0.00
4,920.0	3.31	42.74	4,834.7	590.3	545.5	803.8	2.00	-2.00	0.00
4,960.0	2.51	42.74	4,874.7	591.8	546.9	805.8	2.00	-2.00	0.00
5,000.0	1.71	42.74	4,914.6	592.9	547.9	807.3	2.00	-2.00	0.00
5,040.0	0.91	42.74	4,954.6	593.6	548.5	808.2	2.00	-2.00	0.00
5,080.0	0.11	42.74	4,994.6	593.8	548.8	808.6	2.00	-2.00	0.00
5,085.4	0.00	0.00	5,000.0	593.8	548.8	808.6	2.00	-2.00	0.00
Target BHL 75'FNL & 1385'FWL									
5,120.0	0.00	0.00	5,034.6	593.8	548.8	808.6	0.00	0.00	0.00
5,160.0	0.00	0.00	5,074.6	593.8	548.8	808.6	0.00	0.00	0.00
5,200.0	0.00	0.00	5,114.6	593.8	548.8	808.6	0.00	0.00	0.00
5,240.0	0.00	0.00	5,154.6	593.8	548.8	808.6	0.00	0.00	0.00
5,280.0	0.00	0.00	5,194.6	593.8	548.8	808.6	0.00	0.00	0.00
5,320.0	0.00	0.00	5,234.6	593.8	548.8	808.6	0.00	0.00	0.00
5,360.0	0.00	0.00	5,274.6	593.8	548.8	808.6	0.00	0.00	0.00
5,400.0	0.00	0.00	5,314.6	593.8	548.8	808.6	0.00	0.00	0.00
5,440.0	0.00	0.00	5,354.6	593.8	548.8	808.6	0.00	0.00	0.00
5,480.0	0.00	0.00	5,394.6	593.8	548.8	808.6	0.00	0.00	0.00
5,520.0	0.00	0.00	5,434.6	593.8	548.8	808.6	0.00	0.00	0.00
5,560.0	0.00	0.00	5,474.6	593.8	548.8	808.6	0.00	0.00	0.00
5,600.0	0.00	0.00	5,514.6	593.8	548.8	808.6	0.00	0.00	0.00
5,640.0	0.00	0.00	5,554.6	593.8	548.8	808.6	0.00	0.00	0.00
5,680.0	0.00	0.00	5,594.6	593.8	548.8	808.6	0.00	0.00	0.00
5,720.0	0.00	0.00	5,634.6	593.8	548.8	808.6	0.00	0.00	0.00
5,760.0	0.00	0.00	5,674.6	593.8	548.8	808.6	0.00	0.00	0.00
5,800.0	0.00	0.00	5,714.6	593.8	548.8	808.6	0.00	0.00	0.00
5,840.0	0.00	0.00	5,754.6	593.8	548.8	808.6	0.00	0.00	0.00
5,880.0	0.00	0.00	5,794.6	593.8	548.8	808.6	0.00	0.00	0.00
5,920.0	0.00	0.00	5,834.6	593.8	548.8	808.6	0.00	0.00	0.00
5,960.0	0.00	0.00	5,874.6	593.8	548.8	808.6	0.00	0.00	0.00
6,000.0	0.00	0.00	5,914.6	593.8	548.8	808.6	0.00	0.00	0.00
6,040.0	0.00	0.00	5,954.6	593.8	548.8	808.6	0.00	0.00	0.00
6,080.0	0.00	0.00	5,994.6	593.8	548.8	808.6	0.00	0.00	0.00
6,120.0	0.00	0.00	6,034.6	593.8	548.8	808.6	0.00	0.00	0.00
6,160.0	0.00	0.00	6,074.6	593.8	548.8	808.6	0.00	0.00	0.00
6,200.0	0.00	0.00	6,114.6	593.8	548.8	808.6	0.00	0.00	0.00
6,240.0	0.00	0.00	6,154.6	593.8	548.8	808.6	0.00	0.00	0.00

Database:	Landmark	Local Co-ordinate Reference:	Well Klein B19-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4643.0ft (Original Well Elev)
Project:	SEC.19-T5N-R64W	MD Reference:	WELL @ 4643.0ft (Original Well Elev)
Site:	Klein B19-29D Pad Sec.19-T5N-R64W	North Reference:	True
Well:	Klein B19-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Klein B19-29D Plan #1 (8-12-10)		

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)
6,280.0	0.00	0.00	6,194.6	593.8	548.8	808.6	0.00	0.00	0.00
6,320.0	0.00	0.00	6,234.6	593.8	548.8	808.6	0.00	0.00	0.00
6,360.0	0.00	0.00	6,274.6	593.8	548.8	808.6	0.00	0.00	0.00
6,400.0	0.00	0.00	6,314.6	593.8	548.8	808.6	0.00	0.00	0.00
6,440.0	0.00	0.00	6,354.6	593.8	548.8	808.6	0.00	0.00	0.00
6,480.0	0.00	0.00	6,394.6	593.8	548.8	808.6	0.00	0.00	0.00
6,520.0	0.00	0.00	6,434.6	593.8	548.8	808.6	0.00	0.00	0.00
6,560.0	0.00	0.00	6,474.6	593.8	548.8	808.6	0.00	0.00	0.00
6,600.0	0.00	0.00	6,514.6	593.8	548.8	808.6	0.00	0.00	0.00
6,640.0	0.00	0.00	6,554.6	593.8	548.8	808.6	0.00	0.00	0.00
6,668.4	0.00	0.00	6,583.0	593.8	548.8	808.6	0.00	0.00	0.00
Niobrara - Target Circle 75'FNL & 1385'FWL									
6,680.0	0.00	0.00	6,594.6	593.8	548.8	808.6	0.00	0.00	0.00
6,720.0	0.00	0.00	6,634.6	593.8	548.8	808.6	0.00	0.00	0.00
6,760.0	0.00	0.00	6,674.6	593.8	548.8	808.6	0.00	0.00	0.00
6,800.0	0.00	0.00	6,714.6	593.8	548.8	808.6	0.00	0.00	0.00
6,840.0	0.00	0.00	6,754.6	593.8	548.8	808.6	0.00	0.00	0.00
6,880.0	0.00	0.00	6,794.6	593.8	548.8	808.6	0.00	0.00	0.00
6,920.0	0.00	0.00	6,834.6	593.8	548.8	808.6	0.00	0.00	0.00
6,960.0	0.00	0.00	6,874.6	593.8	548.8	808.6	0.00	0.00	0.00
6,983.4	0.00	0.00	6,898.0	593.8	548.8	808.6	0.00	0.00	0.00
Codell									
7,000.0	0.00	0.00	6,914.6	593.8	548.8	808.6	0.00	0.00	0.00
7,040.0	0.00	0.00	6,954.6	593.8	548.8	808.6	0.00	0.00	0.00
7,080.0	0.00	0.00	6,994.6	593.8	548.8	808.6	0.00	0.00	0.00
7,120.0	0.00	0.00	7,034.6	593.8	548.8	808.6	0.00	0.00	0.00
7,133.4	0.00	0.00	7,048.0	593.8	548.8	808.6	0.00	0.00	0.00
Hardline 75'N of BHL									

Targets

Target Name	Dip Angle	Dip Dir.	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
- hit/miss target	(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)		
- Shape									
Target Circle 75'FNL & - plan hits target - Circle (radius 75.0)	0.00	0.00	6,583.0	593.8	548.8	1,386,803.08	3,251,546.51	40° 23' 29.976 N	104° 35' 48.876 W
Target BHL 75'FNL & - plan hits target - Point	0.00	0.00	5,000.0	593.8	548.8	1,386,803.08	3,251,546.51	40° 23' 29.976 N	104° 35' 48.876 W
Hardline 75'N of BHL - plan misses by 125.0ft at 7133.4ft MD (7048.0 TVD, 593.8 N, 548.8 E) - Polygon	0.00	0.00	7,048.0	668.8	448.8	1,386,877.04	3,251,445.80	40° 23' 30.717 N	104° 35' 50.168 W
Point 1			7,048.0	0.0	0.0	1,386,877.04	3,251,445.80		
Point 2			7,048.0	0.0	200.0	1,386,879.07	3,251,645.78		

Database:	Landmark	Local Co-ordinate Reference:	Well Klein B19-29D
Company:	NOBLE ENERGY INC WELD COUNTY CO	TVD Reference:	WELL @ 4643.0ft (Original Well Elev)
Project:	SEC.19-T5N-R64W	MD Reference:	WELL @ 4643.0ft (Original Well Elev)
Site:	Klein B19-29D Pad Sec.19-T5N-R64W	North Reference:	True
Well:	Klein B19-29D	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Noble Klein B19-29D Plan #1 (8-12-10)		

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
600.0	600.0	8 5/8"	8-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
6,668.4	6,583.0	Niobrara		0.00		
6,983.4	6,898.0	Codell		0.00		