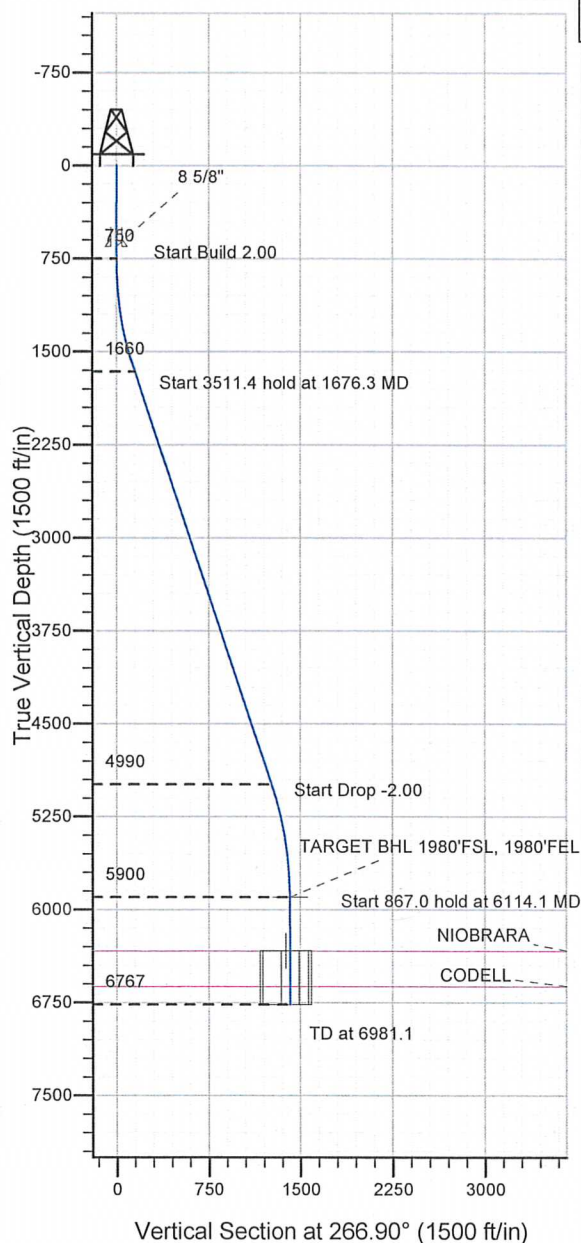
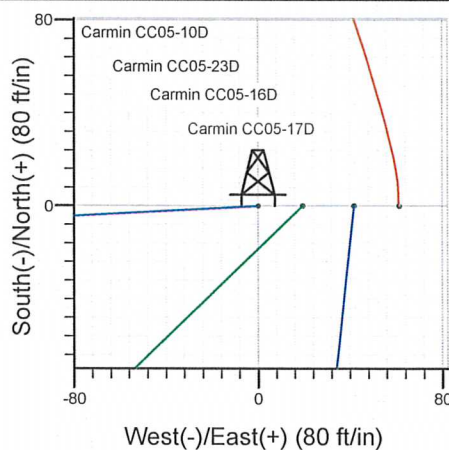
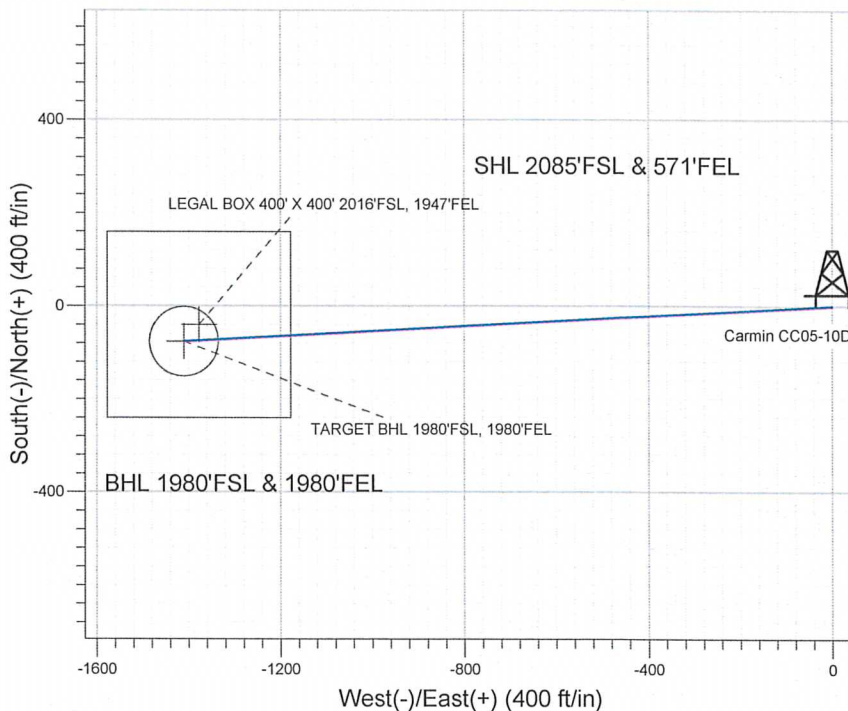


Well Name: Carmin CC05-10D

Surface Location: Carmin CC05-23D Pad Sec.5-T4N-R63W
 North American Datum 1983 US State Plane 1983 Colorado Northern Zone
 Ground Elevation: 4653.0
 +N/-S +E/-W Northing Easting Latitude Longitude Slot
 0.0 0.0 1368245.84 3291430.02 40.339520 -104.454520
 Original Well Elev WELL @ 4666.0ft (Original Well Elev)



NOBLE ENERGY INC WELD COUNTY CO



Carmin CC05-23D Pad Sec.5-T4N-R63W
 Carmin CC05-10D
 Noble Carmin CC05-10D Plan #1 (3-29-11)
 8:06, March 31 2011



Azimuths to True North
 Magnetic North: 8.72°

Magnetic Field
 Strength: 53157.1snT
 Dip Angle: 67.06°
 Date: 3/29/2011
 Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 1980'FSL, 1980'FEL	5900.0	-76.4	-1410.6	40.339310	-104.459580	Point
LEGAL BOX 400' X 400' 2016'FSL, 1947'FEL	6331.0	-40.4	-1377.6	40.339409	-104.459462	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 1980'FSL & 1980'FEL	6331.0	-76.4	-1410.6	40.339310	-104.459580	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	750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.0	
3	1676.3	18.53	266.90	1660.3	-8.0	-148.2	2.00	266.90	148.5	
4	5187.8	18.53	266.90	4989.7	-68.4	-1262.3	0.00	0.00	1264.2	
5	6114.1	0.00	0.00	5900.0	-76.4	-1410.6	2.00	180.00	1412.7	TARGET BHL 1980'FSL, 1980'FEL
6	6981.1	0.00	0.00	6767.0	-76.4	-1410.6	0.00	0.00	1412.7	



Directional

NOBLE ENERGY INC WELD COUNTY CO

SEC.5-T4N-R63W

Carmin CC05-23D Pad Sec.5-T4N-R63W

Carmin CC05-10D

Wellbore #1

Plan: Noble Carmin CC05-10D Plan #1 (3-29-11)

Standard Planning Report

31 March, 2011



Database: Landmark
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.5-T4N-R63W
 Site: Carmin CC05-23D Pad Sec.5-T4N-R63W
 Well: Carmin CC05-10D
 Wellbore: Wellbore #1
 Design: Noble Carmin CC05-10D Plan #1 (3-29-11)

Local Co-ordinate Reference: Well Carmin CC05-10D
 TVD Reference: WELL @ 4666.0ft (Original Well Elev)
 MD Reference: WELL @ 4666.0ft (Original Well Elev)
 North Reference: True
 Survey Calculation Method: Minimum Curvature

Project	SEC.5-T4N-R63W, 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	Carmin CC05-23D Pad Sec.5-T4N-R63W				
Site Position:		Northing:	1,368,246.09ft	Latitude:	40.339520
From:	Lat/Long	Easting:	3,291,449.53ft	Longitude:	-104.454450
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.68 °

Well	Carmin CC05-10D					
Well Position	+N/-S	0.0 ft	Northing:	1,368,245.84 ft	Latitude:	40.339520
	+E/-W	-19.5 ft	Easting:	3,291,430.02 ft	Longitude:	-104.454520
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,653.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	3/29/2011	8.72	67.06	53,157

Design	Noble Carmin CC05-10D Plan #1 (3-29-11)			
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	266.90

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	
750.0	0.00	0.00	750.0	0.0	0.0	0.00	0.00	0.00	0.00	
1,676.3	18.53	266.90	1,660.3	-8.0	-148.2	2.00	2.00	0.00	266.90	
5,187.8	18.53	266.90	4,989.7	-68.4	-1,262.3	0.00	0.00	0.00	0.00	
6,114.1	0.00	0.00	5,900.0	-76.4	-1,410.6	2.00	-2.00	0.00	180.00	TARGET BHL 198C
6,981.1	0.00	0.00	6,767.0	-76.4	-1,410.6	0.00	0.00	0.00	0.00	

Database: Landmark
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.5-T4N-R63W
 Site: Carmin CC05-23D Pad Sec.5-T4N-R63W
 Well: Carmin CC05-10D
 Wellbore: Wellbore #1
 Design: Noble Carmin CC05-10D Plan #1 (3-29-11)

Local Co-ordinate Reference: Well Carmin CC05-10D
 TVD Reference: WELL @ 4666.0ft (Original Well Elev)
 MD Reference: WELL @ 4666.0ft (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
650.0	0.00	0.00	650.0	0.0	0.0	0.0	0.00	0.00	0.00
8 5/8"									
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
750.0	0.00	0.00	750.0	0.0	0.0	0.0	0.00	0.00	0.00
760.0	0.20	266.90	760.0	0.0	0.0	0.0	2.00	2.00	0.00
800.0	1.00	266.90	800.0	0.0	-0.4	0.4	2.00	2.00	0.00
840.0	1.80	266.90	840.0	-0.1	-1.4	1.4	2.00	2.00	0.00
880.0	2.60	266.90	880.0	-0.2	-2.9	2.9	2.00	2.00	0.00
920.0	3.40	266.90	919.9	-0.3	-5.0	5.0	2.00	2.00	0.00
960.0	4.20	266.90	959.8	-0.4	-7.7	7.7	2.00	2.00	0.00
1,000.0	5.00	266.90	999.7	-0.6	-10.9	10.9	2.00	2.00	0.00
1,040.0	5.80	266.90	1,039.5	-0.8	-14.6	14.7	2.00	2.00	0.00
1,080.0	6.60	266.90	1,079.3	-1.0	-19.0	19.0	2.00	2.00	0.00
1,120.0	7.40	266.90	1,119.0	-1.3	-23.8	23.9	2.00	2.00	0.00
1,160.0	8.20	266.90	1,158.6	-1.6	-29.2	29.3	2.00	2.00	0.00
1,200.0	9.00	266.90	1,198.2	-1.9	-35.2	35.3	2.00	2.00	0.00
1,240.0	9.80	266.90	1,237.6	-2.3	-41.7	41.8	2.00	2.00	0.00
1,280.0	10.60	266.90	1,277.0	-2.6	-48.8	48.9	2.00	2.00	0.00
1,320.0	11.40	266.90	1,316.2	-3.1	-56.4	56.5	2.00	2.00	0.00
1,360.0	12.20	266.90	1,355.4	-3.5	-64.6	64.7	2.00	2.00	0.00
1,400.0	13.00	266.90	1,394.4	-4.0	-73.3	73.4	2.00	2.00	0.00
1,440.0	13.80	266.90	1,433.3	-4.5	-82.6	82.7	2.00	2.00	0.00
1,480.0	14.60	266.90	1,472.1	-5.0	-92.4	92.5	2.00	2.00	0.00
1,520.0	15.40	266.90	1,510.8	-5.6	-102.7	102.9	2.00	2.00	0.00
1,560.0	16.20	266.90	1,549.3	-6.2	-113.6	113.7	2.00	2.00	0.00
1,600.0	17.00	266.90	1,587.6	-6.8	-125.0	125.2	2.00	2.00	0.00
1,640.0	17.80	266.90	1,625.8	-7.4	-136.9	137.1	2.00	2.00	0.00
1,676.3	18.53	266.90	1,660.3	-8.0	-148.2	148.5	2.00	2.00	0.00
1,680.0	18.53	266.90	1,663.8	-8.1	-149.4	149.6	0.00	0.00	0.00
1,720.0	18.53	266.90	1,701.7	-8.8	-162.1	162.3	0.00	0.00	0.00
1,760.0	18.53	266.90	1,739.6	-9.5	-174.8	175.0	0.00	0.00	0.00
1,800.0	18.53	266.90	1,777.5	-10.2	-187.5	187.8	0.00	0.00	0.00
1,840.0	18.53	266.90	1,815.5	-10.8	-200.2	200.5	0.00	0.00	0.00
1,880.0	18.53	266.90	1,853.4	-11.5	-212.9	213.2	0.00	0.00	0.00
1,920.0	18.53	266.90	1,891.3	-12.2	-225.6	225.9	0.00	0.00	0.00
1,960.0	18.53	266.90	1,929.2	-12.9	-238.2	238.6	0.00	0.00	0.00

Database: Landmark
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.5-T4N-R63W
 Site: Carmin CC05-23D Pad Sec.5-T4N-R63W
 Well: Carmin CC05-10D
 Wellbore: Wellbore #1
 Design: Noble Carmin CC05-10D Plan #1 (3-29-11)

Local Co-ordinate Reference: Well Carmin CC05-10D
 TVD Reference: WELL @ 4666.0ft (Original Well Elev)
 MD Reference: WELL @ 4666.0ft (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)
2,000.0	18.53	266.90	1,967.2	-13.6	-250.9	251.3	0.00	0.00	0.00
2,040.0	18.53	266.90	2,005.1	-14.3	-263.6	264.0	0.00	0.00	0.00
2,080.0	18.53	266.90	2,043.0	-15.0	-276.3	276.7	0.00	0.00	0.00
2,120.0	18.53	266.90	2,080.9	-15.7	-289.0	289.4	0.00	0.00	0.00
2,160.0	18.53	266.90	2,118.9	-16.4	-301.7	302.1	0.00	0.00	0.00
2,200.0	18.53	266.90	2,156.8	-17.0	-314.4	314.9	0.00	0.00	0.00
2,240.0	18.53	266.90	2,194.7	-17.7	-327.1	327.6	0.00	0.00	0.00
2,280.0	18.53	266.90	2,232.7	-18.4	-339.8	340.3	0.00	0.00	0.00
2,320.0	18.53	266.90	2,270.6	-19.1	-352.5	353.0	0.00	0.00	0.00
2,360.0	18.53	266.90	2,308.5	-19.8	-365.2	365.7	0.00	0.00	0.00
2,400.0	18.53	266.90	2,346.4	-20.5	-377.8	378.4	0.00	0.00	0.00
2,440.0	18.53	266.90	2,384.4	-21.2	-390.5	391.1	0.00	0.00	0.00
2,480.0	18.53	266.90	2,422.3	-21.9	-403.2	403.8	0.00	0.00	0.00
2,520.0	18.53	266.90	2,460.2	-22.5	-415.9	416.5	0.00	0.00	0.00
2,560.0	18.53	266.90	2,498.1	-23.2	-428.6	429.2	0.00	0.00	0.00
2,600.0	18.53	266.90	2,536.1	-23.9	-441.3	442.0	0.00	0.00	0.00
2,640.0	18.53	266.90	2,574.0	-24.6	-454.0	454.7	0.00	0.00	0.00
2,680.0	18.53	266.90	2,611.9	-25.3	-466.7	467.4	0.00	0.00	0.00
2,720.0	18.53	266.90	2,649.9	-26.0	-479.4	480.1	0.00	0.00	0.00
2,760.0	18.53	266.90	2,687.8	-26.7	-492.1	492.8	0.00	0.00	0.00
2,800.0	18.53	266.90	2,725.7	-27.4	-504.8	505.5	0.00	0.00	0.00
2,840.0	18.53	266.90	2,763.6	-28.0	-517.5	518.2	0.00	0.00	0.00
2,880.0	18.53	266.90	2,801.6	-28.7	-530.1	530.9	0.00	0.00	0.00
2,920.0	18.53	266.90	2,839.5	-29.4	-542.8	543.6	0.00	0.00	0.00
2,960.0	18.53	266.90	2,877.4	-30.1	-555.5	556.3	0.00	0.00	0.00
3,000.0	18.53	266.90	2,915.3	-30.8	-568.2	569.0	0.00	0.00	0.00
3,040.0	18.53	266.90	2,953.3	-31.5	-580.9	581.8	0.00	0.00	0.00
3,080.0	18.53	266.90	2,991.2	-32.2	-593.6	594.5	0.00	0.00	0.00
3,120.0	18.53	266.90	3,029.1	-32.9	-606.3	607.2	0.00	0.00	0.00
3,160.0	18.53	266.90	3,067.1	-33.5	-619.0	619.9	0.00	0.00	0.00
3,200.0	18.53	266.90	3,105.0	-34.2	-631.7	632.6	0.00	0.00	0.00
3,240.0	18.53	266.90	3,142.9	-34.9	-644.4	645.3	0.00	0.00	0.00
3,280.0	18.53	266.90	3,180.8	-35.6	-657.1	658.0	0.00	0.00	0.00
3,320.0	18.53	266.90	3,218.8	-36.3	-669.7	670.7	0.00	0.00	0.00
3,360.0	18.53	266.90	3,256.7	-37.0	-682.4	683.4	0.00	0.00	0.00
3,400.0	18.53	266.90	3,294.6	-37.7	-695.1	696.1	0.00	0.00	0.00
3,440.0	18.53	266.90	3,332.5	-38.4	-707.8	708.9	0.00	0.00	0.00
3,480.0	18.53	266.90	3,370.5	-39.0	-720.5	721.6	0.00	0.00	0.00
3,520.0	18.53	266.90	3,408.4	-39.7	-733.2	734.3	0.00	0.00	0.00
3,560.0	18.53	266.90	3,446.3	-40.4	-745.9	747.0	0.00	0.00	0.00
3,600.0	18.53	266.90	3,484.3	-41.1	-758.6	759.7	0.00	0.00	0.00
3,640.0	18.53	266.90	3,522.2	-41.8	-771.3	772.4	0.00	0.00	0.00
3,680.0	18.53	266.90	3,560.1	-42.5	-784.0	785.1	0.00	0.00	0.00
3,720.0	18.53	266.90	3,598.0	-43.2	-796.7	797.8	0.00	0.00	0.00
3,760.0	18.53	266.90	3,636.0	-43.9	-809.3	810.5	0.00	0.00	0.00
3,800.0	18.53	266.90	3,673.9	-44.5	-822.0	823.2	0.00	0.00	0.00
3,840.0	18.53	266.90	3,711.8	-45.2	-834.7	836.0	0.00	0.00	0.00
3,880.0	18.53	266.90	3,749.7	-45.9	-847.4	848.7	0.00	0.00	0.00
3,920.0	18.53	266.90	3,787.7	-46.6	-860.1	861.4	0.00	0.00	0.00
3,960.0	18.53	266.90	3,825.6	-47.3	-872.8	874.1	0.00	0.00	0.00
4,000.0	18.53	266.90	3,863.5	-48.0	-885.5	886.8	0.00	0.00	0.00
4,040.0	18.53	266.90	3,901.5	-48.7	-898.2	899.5	0.00	0.00	0.00
4,080.0	18.53	266.90	3,939.4	-49.4	-910.9	912.2	0.00	0.00	0.00
4,120.0	18.53	266.90	3,977.3	-50.1	-923.6	924.9	0.00	0.00	0.00

Database: Landmark
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.5-T4N-R63W
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Local Co-ordinate Reference: Well Carmin CC05-10D
 TVD Reference: WELL @ 4666.0ft (Original Well Elev)
 MD Reference: WELL @ 4666.0ft (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)
4,160.0	18.53	266.90	4,015.2	-50.7	-936.3	937.6	0.00	0.00	0.00
4,200.0	18.53	266.90	4,053.2	-51.4	-948.9	950.3	0.00	0.00	0.00
4,240.0	18.53	266.90	4,091.1	-52.1	-961.6	963.0	0.00	0.00	0.00
4,280.0	18.53	266.90	4,129.0	-52.8	-974.3	975.8	0.00	0.00	0.00
4,320.0	18.53	266.90	4,166.9	-53.5	-987.0	988.5	0.00	0.00	0.00
4,360.0	18.53	266.90	4,204.9	-54.2	-999.7	1,001.2	0.00	0.00	0.00
4,400.0	18.53	266.90	4,242.8	-54.9	-1,012.4	1,013.9	0.00	0.00	0.00
4,440.0	18.53	266.90	4,280.7	-55.6	-1,025.1	1,026.6	0.00	0.00	0.00
4,480.0	18.53	266.90	4,318.6	-56.2	-1,037.8	1,039.3	0.00	0.00	0.00
4,520.0	18.53	266.90	4,356.6	-56.9	-1,050.5	1,052.0	0.00	0.00	0.00
4,560.0	18.53	266.90	4,394.5	-57.6	-1,063.2	1,064.7	0.00	0.00	0.00
4,600.0	18.53	266.90	4,432.4	-58.3	-1,075.9	1,077.4	0.00	0.00	0.00
4,640.0	18.53	266.90	4,470.4	-59.0	-1,088.5	1,090.1	0.00	0.00	0.00
4,680.0	18.53	266.90	4,508.3	-59.7	-1,101.2	1,102.9	0.00	0.00	0.00
4,720.0	18.53	266.90	4,546.2	-60.4	-1,113.9	1,115.6	0.00	0.00	0.00
4,760.0	18.53	266.90	4,584.1	-61.1	-1,126.6	1,128.3	0.00	0.00	0.00
4,800.0	18.53	266.90	4,622.1	-61.7	-1,139.3	1,141.0	0.00	0.00	0.00
4,840.0	18.53	266.90	4,660.0	-62.4	-1,152.0	1,153.7	0.00	0.00	0.00
4,880.0	18.53	266.90	4,697.9	-63.1	-1,164.7	1,166.4	0.00	0.00	0.00
4,920.0	18.53	266.90	4,735.8	-63.8	-1,177.4	1,179.1	0.00	0.00	0.00
4,960.0	18.53	266.90	4,773.8	-64.5	-1,190.1	1,191.8	0.00	0.00	0.00
5,000.0	18.53	266.90	4,811.7	-65.2	-1,202.8	1,204.5	0.00	0.00	0.00
5,040.0	18.53	266.90	4,849.6	-65.9	-1,215.5	1,217.2	0.00	0.00	0.00
5,080.0	18.53	266.90	4,887.6	-66.6	-1,228.2	1,230.0	0.00	0.00	0.00
5,120.0	18.53	266.90	4,925.5	-67.2	-1,240.8	1,242.7	0.00	0.00	0.00
5,160.0	18.53	266.90	4,963.4	-67.9	-1,253.5	1,255.4	0.00	0.00	0.00
5,187.8	18.53	266.90	4,989.7	-68.4	-1,262.3	1,264.2	0.00	0.00	0.00
5,200.0	18.28	266.90	5,001.3	-68.6	-1,266.2	1,268.1	2.00	-2.00	0.00
5,240.0	17.48	266.90	5,039.4	-69.3	-1,278.5	1,280.3	2.00	-2.00	0.00
5,280.0	16.68	266.90	5,077.6	-69.9	-1,290.2	1,292.1	2.00	-2.00	0.00
5,320.0	15.88	266.90	5,116.0	-70.5	-1,301.4	1,303.3	2.00	-2.00	0.00
5,360.0	15.08	266.90	5,154.6	-71.1	-1,312.1	1,314.0	2.00	-2.00	0.00
5,400.0	14.28	266.90	5,193.3	-71.7	-1,322.2	1,324.1	2.00	-2.00	0.00
5,440.0	13.48	266.90	5,232.1	-72.2	-1,331.8	1,333.7	2.00	-2.00	0.00
5,480.0	12.68	266.90	5,271.1	-72.7	-1,340.8	1,342.8	2.00	-2.00	0.00
5,520.0	11.88	266.90	5,310.2	-73.1	-1,349.3	1,351.3	2.00	-2.00	0.00
5,560.0	11.08	266.90	5,349.4	-73.6	-1,357.2	1,359.2	2.00	-2.00	0.00
5,600.0	10.28	266.90	5,388.7	-74.0	-1,364.7	1,366.7	2.00	-2.00	0.00
5,640.0	9.48	266.90	5,428.1	-74.3	-1,371.5	1,373.5	2.00	-2.00	0.00
5,680.0	8.68	266.90	5,467.6	-74.7	-1,377.8	1,379.8	2.00	-2.00	0.00
5,720.0	7.88	266.90	5,507.2	-75.0	-1,383.6	1,385.6	2.00	-2.00	0.00
5,760.0	7.08	266.90	5,546.8	-75.3	-1,388.8	1,390.8	2.00	-2.00	0.00
5,800.0	6.28	266.90	5,586.5	-75.5	-1,393.4	1,395.5	2.00	-2.00	0.00
5,840.0	5.48	266.90	5,626.3	-75.7	-1,397.5	1,399.6	2.00	-2.00	0.00
5,880.0	4.68	266.90	5,666.2	-75.9	-1,401.0	1,403.1	2.00	-2.00	0.00
5,920.0	3.88	266.90	5,706.1	-76.1	-1,404.0	1,406.1	2.00	-2.00	0.00
5,960.0	3.08	266.90	5,746.0	-76.2	-1,406.4	1,408.5	2.00	-2.00	0.00
6,000.0	2.28	266.90	5,785.9	-76.3	-1,408.3	1,410.4	2.00	-2.00	0.00
6,040.0	1.48	266.90	5,825.9	-76.4	-1,409.6	1,411.7	2.00	-2.00	0.00
6,080.0	0.68	266.90	5,865.9	-76.4	-1,410.4	1,412.5	2.00	-2.00	0.00
6,114.1	0.00	0.00	5,900.0	-76.4	-1,410.6	1,412.7	2.00	-2.00	0.00
TARGET BHL 1980'FSL, 1980'FEL									
6,120.0	0.00	0.00	5,905.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,160.0	0.00	0.00	5,945.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00

Database: Landmark
 Company: NOBLE ENERGY INC WELD COUNTY CO
 Project: SEC.5-T4N-R63W
 Site: Carmin CC05-23D Pad Sec.5-T4N-R63W
 Well: Carmin CC05-10D
 Wellbore: Wellbore #1
 Design: Noble Carmin CC05-10D Plan #1 (3-29-11)

Local Co-ordinate Reference: Well Carmin CC05-10D
 TVD Reference: WELL @ 4666.0ft (Original Well Elev)
 MD Reference: WELL @ 4666.0ft (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)
6,200.0	0.00	0.00	5,985.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,240.0	0.00	0.00	6,025.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,280.0	0.00	0.00	6,065.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,320.0	0.00	0.00	6,105.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,360.0	0.00	0.00	6,145.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,400.0	0.00	0.00	6,185.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,440.0	0.00	0.00	6,225.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,480.0	0.00	0.00	6,265.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,520.0	0.00	0.00	6,305.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,545.1	0.00	0.00	6,331.0	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
NIOBRARA - LEGAL BOX 400' X 400' 2016'FSL, 1947'FEL - TARGET CIRCLE 1980'FSL & 1980'FEL									
6,560.0	0.00	0.00	6,345.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,600.0	0.00	0.00	6,385.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,640.0	0.00	0.00	6,425.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,680.0	0.00	0.00	6,465.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,720.0	0.00	0.00	6,505.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,760.0	0.00	0.00	6,545.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,800.0	0.00	0.00	6,585.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,831.1	0.00	0.00	6,617.0	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
CODELL									
6,840.0	0.00	0.00	6,625.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,880.0	0.00	0.00	6,665.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,920.0	0.00	0.00	6,705.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,960.0	0.00	0.00	6,745.9	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00
6,981.1	0.00	0.00	6,767.0	-76.4	-1,410.6	1,412.7	0.00	0.00	0.00

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
LEGAL BOX 400' X 400'	0.00	0.00	6,331.0	-40.4	-1,377.6	1,368,189.21	3,290,053.05	40.339409	-104.459462
- plan misses target center by 48.9ft at 6545.1ft MD (6331.0 TVD, -76.4 N, -1410.6 E)									
- Rectangle (sides W400.0 H400.0 D436.0)									
TARGET BHL 1980'F	0.00	0.00	5,900.0	-76.4	-1,410.6	1,368,152.78	3,290,020.50	40.339310	-104.459580
- plan hits target center									
- Point									
TARGET CIRCLE 1980'F	0.00	0.00	6,331.0	-76.4	-1,410.6	1,368,152.78	3,290,020.50	40.339310	-104.459580
- plan hits target center									
- Circle (radius 75.0)									

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
650.0	650.0	8 5/8"	8-5/8	12-1/4

Database: Landmark
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.5-T4N-R63W
Site: Carmin CC05-23D Pad Sec.5-T4N-R63W
Well: Carmin CC05-10D
Wellbore: Wellbore #1
Design: Noble Carmin CC05-10D Plan #1 (3-29-11)

Local Co-ordinate Reference: Well Carmin CC05-10D
TVD Reference: WELL @ 4666.0ft (Original Well Elev)
MD Reference: WELL @ 4666.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
6,545.1	6,331.0	NIOBRARA		0.00	
6,831.1	6,617.0	CODELL		0.00	