



Schneider USX II31-13D
Noble Schneider USX II31-13D Plan #1 (8-10-11)
13:24, August 23 2011
Schneider USX II31-13D Pad Sec.31-T7N-R66W



Azimuths to True North
Magnetic North: 8.89°

Magnetic Field
Strength: 53174.0nT
Dip Angle: 67.14°
Date: 8/10/2011
Model: IGRF2010

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
TARGET BHL 660°FSL, 660°FWL	5900.0	-182.1	-1298.3	40.525310	-104.829820	Point
LEGAL BOX 400' X 400' 661°FSL & 670°FWL	7035.0	-181.1	-1288.3	40.525313	-104.829784	Rectangle (Sides: L400.0 W400.0)
TARGET CIRCLE 660°FSL & 660°FWL	7035.0	-182.1	-1298.3	40.525310	-104.829820	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	700.0	6.00	185.00	699.5	-15.6	-1.4	2.00	185.00	3.5	
4	775.0	6.00	185.00	774.0	-23.4	-2.1	0.00	0.00	5.3	
5	1617.8	16.87	264.94	1602.4	-78.5	-128.6	2.00	99.85	138.3	
6	5240.0	16.87	264.94	5068.8	-171.2	-1175.5	0.00	0.00	1187.9	
7	6083.4	0.00	0.00	5900.0	-182.1	-1298.3	2.00	180.00	1311.0	TARGET BHL 660'FSL, 660'FWL
8	7699.4	0.00	0.00	7516.0	-182.1	-1298.3	0.00	0.00	1311.0	



Directional

**NOBLE ENERGY INC WELD
COUNTY CO**

SEC.31-T7N-R66W

Schneider USX II31-13D Pad Sec.31-T7N-R66W

Schneider USX II31-13D

Wellbore #1

Plan: Noble Schneider USX II31-13D Plan #1 (8-10-11)

Standard Planning Report

23 August, 2011



Database: Landmark
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.31-T7N-R66W
Site: Schneider USX II31-13D Pad
 Sec.31-T7N-R66W
Well: Schneider USX II31-13D
Wellbore: Wellbore #1
Design: Noble Schneider USX II31-13D Plan #1 (8-10-1)

Local Co-ordinate Reference: Well Schneider USX II31-13D
TVD Reference: WELL @ 4919.0ft (Original Well Elev)
MD Reference: WELL @ 4919.0ft (Original Well Elev)
North Reference: True
Survey Calculation Method: Minimum Curvature

Project	SEC.31-T7N-R66W, 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	Schneider USX II31-13D Pad Sec.31-T7N-R66W				
Site Position:		Northing:	1,435,107.12 ft	Latitude:	40.525810
From:	Lat/Long	Easting:	3,187,602.10 ft	Longitude:	-104.825150
Position Uncertainty:	0.0 ft	Slot Radius:	"	Grid Convergence:	0.44 °

Well	Schneider USX II31-13D					
Well Position	+N/-S	0.0 ft	Northing:	1,435,107.11 ft	Latitude:	40.525810
	+E/-W	0.0 ft	Easting:	3,187,602.10 ft	Longitude:	-104.825150
Position Uncertainty		0.0 ft	Wellhead Elevation:	ft	Ground Level:	4,906.0 ft

Wellbore	Wellbore #1				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2010	8/10/2011	8.89	67.14	53,174

Design Noble Schneider USX II31-13D Plan #1 (8-10-11)

Audit Notes:

Version: **Phase:** PROTOTYPE **Tie On Depth:** 0.0

Vertical Section:	Depth From (TVD)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.0	0.0	0.0	262.01

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	
700.0	6.00	185.00	699.5	-15.6	-1.4	2.00	2.00	0.00	185.00	
775.0	6.00	185.00	774.0	-23.4	-2.1	0.00	0.00	0.00	0.00	
1,617.8	16.87	264.94	1,602.4	-78.5	-128.6	2.00	1.29	9.48	99.85	
5,240.0	16.87	264.94	5,068.8	-171.2	-1,175.5	0.00	0.00	0.00	0.00	
6,083.4	0.00	0.00	5,900.0	-182.1	-1,298.3	2.00	-2.00	0.00	180.00	TARGET BHL 660'
7,699.4	0.00	0.00	7,516.0	-182.1	-1,298.3	0.00	0.00	0.00	0.00	

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 Project: SEC.31-T7N-R66W
 Site: Schneider USX II31-13D Pad
 Sec.31-T7N-R66W
 Well: Schneider USX II31-13D
 Wellbore: Wellbore #1
 Design: Noble Schneider USX II31-13D Plan #1 (8-10-1)

Local Co-ordinate Reference: Well Schneider USX II31-13D
 TVD Reference: WELL @ 4919.0ft (Original Well Elev)
 MD Reference: WELL @ 4919.0ft (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	0.80	185.00	440.0	-0.3	0.0	0.1	2.00	2.00	0.00
480.0	1.60	185.00	480.0	-1.1	-0.1	0.3	2.00	2.00	0.00
520.0	2.40	185.00	520.0	-2.5	-0.2	0.6	2.00	2.00	0.00
560.0	3.20	185.00	559.9	-4.4	-0.4	1.0	2.00	2.00	0.00
600.0	4.00	185.00	599.8	-7.0	-0.6	1.6	2.00	2.00	0.00
640.0	4.80	185.00	639.7	-10.0	-0.9	2.3	2.00	2.00	0.00
650.3	5.01	185.00	650.0	-10.9	-1.0	2.5	2.00	2.00	0.00
8 5/8"									
680.0	5.60	185.00	679.6	-13.6	-1.2	3.1	2.00	2.00	0.00
700.0	6.00	185.00	699.5	-15.6	-1.4	3.5	2.00	2.00	0.00
720.0	6.00	185.00	719.3	-17.7	-1.5	4.0	0.00	0.00	0.00
760.0	6.00	185.00	759.1	-21.9	-1.9	4.9	0.00	0.00	0.00
775.0	6.00	185.00	774.0	-23.4	-2.1	5.3	0.00	0.00	0.00
800.0	5.93	189.77	798.9	-26.0	-2.4	6.0	2.00	-0.26	19.08
840.0	5.92	197.52	838.7	-30.0	-3.4	7.5	2.00	-0.04	19.38
880.0	6.01	205.18	878.5	-33.9	-4.9	9.5	2.00	0.22	19.15
920.0	6.20	212.49	918.3	-37.6	-6.9	12.1	2.00	0.48	18.28
960.0	6.48	219.26	958.0	-41.2	-9.5	15.1	2.00	0.71	16.93
1,000.0	6.85	225.39	997.7	-44.6	-12.6	18.7	2.00	0.92	15.32
1,040.0	7.29	230.84	1,037.4	-47.9	-16.3	22.8	2.00	1.09	13.63
1,080.0	7.78	235.65	1,077.1	-51.0	-20.5	27.4	2.00	1.24	12.01
1,120.0	8.32	239.85	1,116.7	-54.0	-25.2	32.5	2.00	1.35	10.52
1,160.0	8.90	243.53	1,156.2	-56.8	-30.5	38.1	2.00	1.45	9.20
1,200.0	9.52	246.76	1,195.7	-59.5	-36.3	44.2	2.00	1.53	8.05
1,240.0	10.15	249.58	1,235.1	-62.0	-42.7	50.9	2.00	1.59	7.07
1,280.0	10.81	252.08	1,274.5	-64.4	-49.5	58.0	2.00	1.65	6.23
1,320.0	11.49	254.28	1,313.7	-66.7	-56.9	65.7	2.00	1.69	5.51
1,360.0	12.18	256.24	1,352.9	-68.7	-64.9	73.8	2.00	1.73	4.90
1,400.0	12.89	257.99	1,391.9	-70.7	-73.3	82.4	2.00	1.76	4.38
1,440.0	13.60	259.57	1,430.8	-72.4	-82.3	91.6	2.00	1.79	3.93
1,480.0	14.32	260.98	1,469.7	-74.1	-91.8	101.2	2.00	1.81	3.54
1,520.0	15.05	262.26	1,508.4	-75.5	-101.9	111.4	2.00	1.83	3.21
1,560.0	15.79	263.43	1,546.9	-76.9	-112.4	122.0	2.00	1.84	2.91
1,600.0	16.53	264.49	1,585.3	-78.0	-123.5	133.1	2.00	1.86	2.66
1,617.8	16.87	264.94	1,602.4	-78.5	-128.6	138.3	2.00	1.87	2.49
1,640.0	16.87	264.94	1,623.6	-79.1	-135.0	144.7	0.00	0.00	0.00
1,680.0	16.87	264.94	1,661.9	-80.1	-146.6	156.3	0.00	0.00	0.00
1,720.0	16.87	264.94	1,700.2	-81.1	-158.1	167.9	0.00	0.00	0.00
1,760.0	16.87	264.94	1,738.5	-82.2	-169.7	179.5	0.00	0.00	0.00
1,800.0	16.87	264.94	1,776.7	-83.2	-181.3	191.1	0.00	0.00	0.00
1,840.0	16.87	264.94	1,815.0	-84.2	-192.8	202.6	0.00	0.00	0.00
1,880.0	16.87	264.94	1,853.3	-85.2	-204.4	214.2	0.00	0.00	0.00

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 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)
1,920.0	16.87	264.94	1,891.6	-86.2	-215.9	225.8	0.00	0.00	0.00
1,960.0	16.87	264.94	1,929.9	-87.3	-227.5	237.4	0.00	0.00	0.00
2,000.0	16.87	264.94	1,968.1	-88.3	-239.1	249.0	0.00	0.00	0.00
2,040.0	16.87	264.94	2,006.4	-89.3	-250.6	260.6	0.00	0.00	0.00
2,080.0	16.87	264.94	2,044.7	-90.3	-262.2	272.2	0.00	0.00	0.00
2,120.0	16.87	264.94	2,083.0	-91.4	-273.7	283.8	0.00	0.00	0.00
2,160.0	16.87	264.94	2,121.3	-92.4	-285.3	295.4	0.00	0.00	0.00
2,200.0	16.87	264.94	2,159.5	-93.4	-296.9	307.0	0.00	0.00	0.00
2,240.0	16.87	264.94	2,197.8	-94.4	-308.4	318.6	0.00	0.00	0.00
2,280.0	16.87	264.94	2,236.1	-95.5	-320.0	330.2	0.00	0.00	0.00
2,320.0	16.87	264.94	2,274.4	-96.5	-331.6	341.7	0.00	0.00	0.00
2,360.0	16.87	264.94	2,312.7	-97.5	-343.1	353.3	0.00	0.00	0.00
2,400.0	16.87	264.94	2,350.9	-98.5	-354.7	364.9	0.00	0.00	0.00
2,440.0	16.87	264.94	2,389.2	-99.6	-366.2	376.5	0.00	0.00	0.00
2,480.0	16.87	264.94	2,427.5	-100.6	-377.8	388.1	0.00	0.00	0.00
2,520.0	16.87	264.94	2,465.8	-101.6	-389.4	399.7	0.00	0.00	0.00
2,560.0	16.87	264.94	2,504.1	-102.6	-400.9	411.3	0.00	0.00	0.00
2,600.0	16.87	264.94	2,542.3	-103.7	-412.5	422.9	0.00	0.00	0.00
2,640.0	16.87	264.94	2,580.6	-104.7	-424.0	434.5	0.00	0.00	0.00
2,680.0	16.87	264.94	2,618.9	-105.7	-435.6	446.1	0.00	0.00	0.00
2,720.0	16.87	264.94	2,657.2	-106.7	-447.2	457.7	0.00	0.00	0.00
2,760.0	16.87	264.94	2,695.4	-107.8	-458.7	469.2	0.00	0.00	0.00
2,800.0	16.87	264.94	2,733.7	-108.8	-470.3	480.8	0.00	0.00	0.00
2,840.0	16.87	264.94	2,772.0	-109.8	-481.8	492.4	0.00	0.00	0.00
2,880.0	16.87	264.94	2,810.3	-110.8	-493.4	504.0	0.00	0.00	0.00
2,920.0	16.87	264.94	2,848.6	-111.8	-505.0	515.6	0.00	0.00	0.00
2,960.0	16.87	264.94	2,886.8	-112.9	-516.5	527.2	0.00	0.00	0.00
3,000.0	16.87	264.94	2,925.1	-113.9	-528.1	538.8	0.00	0.00	0.00
3,040.0	16.87	264.94	2,963.4	-114.9	-539.7	550.4	0.00	0.00	0.00
3,080.0	16.87	264.94	3,001.7	-115.9	-551.2	562.0	0.00	0.00	0.00
3,120.0	16.87	264.94	3,040.0	-117.0	-562.8	573.6	0.00	0.00	0.00
3,160.0	16.87	264.94	3,078.2	-118.0	-574.3	585.2	0.00	0.00	0.00
3,200.0	16.87	264.94	3,116.5	-119.0	-585.9	596.8	0.00	0.00	0.00
3,240.0	16.87	264.94	3,154.8	-120.0	-597.5	608.3	0.00	0.00	0.00
3,280.0	16.87	264.94	3,193.1	-121.1	-609.0	619.9	0.00	0.00	0.00
3,320.0	16.87	264.94	3,231.4	-122.1	-620.6	631.5	0.00	0.00	0.00
3,360.0	16.87	264.94	3,269.6	-123.1	-632.1	643.1	0.00	0.00	0.00
3,400.0	16.87	264.94	3,307.9	-124.1	-643.7	654.7	0.00	0.00	0.00
3,440.0	16.87	264.94	3,346.2	-125.2	-655.3	666.3	0.00	0.00	0.00
3,480.0	16.87	264.94	3,384.5	-126.2	-666.8	677.9	0.00	0.00	0.00
3,520.0	16.87	264.94	3,422.8	-127.2	-678.4	689.5	0.00	0.00	0.00
3,560.0	16.87	264.94	3,461.0	-128.2	-689.9	701.1	0.00	0.00	0.00
3,600.0	16.87	264.94	3,499.3	-129.3	-701.5	712.7	0.00	0.00	0.00
3,640.0	16.87	264.94	3,537.6	-130.3	-713.1	724.3	0.00	0.00	0.00
3,680.0	16.87	264.94	3,575.9	-131.3	-724.6	735.8	0.00	0.00	0.00
3,720.0	16.87	264.94	3,614.1	-132.3	-736.2	747.4	0.00	0.00	0.00
3,760.0	16.87	264.94	3,652.4	-133.4	-747.8	759.0	0.00	0.00	0.00
3,800.0	16.87	264.94	3,690.7	-134.4	-759.3	770.6	0.00	0.00	0.00
3,840.0	16.87	264.94	3,729.0	-135.4	-770.9	782.2	0.00	0.00	0.00
3,880.0	16.87	264.94	3,767.3	-136.4	-782.4	793.8	0.00	0.00	0.00
3,920.0	16.87	264.94	3,805.5	-137.5	-794.0	805.4	0.00	0.00	0.00
3,960.0	16.87	264.94	3,843.8	-138.5	-805.6	817.0	0.00	0.00	0.00
4,000.0	16.87	264.94	3,882.1	-139.5	-817.1	828.6	0.00	0.00	0.00

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 TVD Reference: WELL @ 4919.0ft (Original Well Elev)
 MD Reference: WELL @ 4919.0ft (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)
4,040.0	16.87	264.94	3,920.4	-140.5	-828.7	840.2	0.00	0.00	0.00
4,080.0	16.87	264.94	3,958.7	-141.5	-840.2	851.8	0.00	0.00	0.00
4,120.0	16.87	264.94	3,996.9	-142.6	-851.8	863.4	0.00	0.00	0.00
4,160.0	16.87	264.94	4,035.2	-143.6	-863.4	874.9	0.00	0.00	0.00
4,200.0	16.87	264.94	4,073.5	-144.6	-874.9	886.5	0.00	0.00	0.00
4,240.0	16.87	264.94	4,111.8	-145.6	-886.5	898.1	0.00	0.00	0.00
4,280.0	16.87	264.94	4,150.1	-146.7	-898.0	909.7	0.00	0.00	0.00
4,320.0	16.87	264.94	4,188.3	-147.7	-909.6	921.3	0.00	0.00	0.00
4,360.0	16.87	264.94	4,226.6	-148.7	-921.2	932.9	0.00	0.00	0.00
4,400.0	16.87	264.94	4,264.9	-149.7	-932.7	944.5	0.00	0.00	0.00
4,440.0	16.87	264.94	4,303.2	-150.8	-944.3	956.1	0.00	0.00	0.00
4,480.0	16.87	264.94	4,341.5	-151.8	-955.9	967.7	0.00	0.00	0.00
4,520.0	16.87	264.94	4,379.7	-152.8	-967.4	979.3	0.00	0.00	0.00
4,560.0	16.87	264.94	4,418.0	-153.8	-979.0	990.9	0.00	0.00	0.00
4,600.0	16.87	264.94	4,456.3	-154.9	-990.5	1,002.4	0.00	0.00	0.00
4,640.0	16.87	264.94	4,494.6	-155.9	-1,002.1	1,014.0	0.00	0.00	0.00
4,680.0	16.87	264.94	4,532.8	-156.9	-1,013.7	1,025.6	0.00	0.00	0.00
4,720.0	16.87	264.94	4,571.1	-157.9	-1,025.2	1,037.2	0.00	0.00	0.00
4,760.0	16.87	264.94	4,609.4	-159.0	-1,036.8	1,048.8	0.00	0.00	0.00
4,800.0	16.87	264.94	4,647.7	-160.0	-1,048.3	1,060.4	0.00	0.00	0.00
4,840.0	16.87	264.94	4,686.0	-161.0	-1,059.9	1,072.0	0.00	0.00	0.00
4,880.0	16.87	264.94	4,724.2	-162.0	-1,071.5	1,083.6	0.00	0.00	0.00
4,920.0	16.87	264.94	4,762.5	-163.1	-1,083.0	1,095.2	0.00	0.00	0.00
4,960.0	16.87	264.94	4,800.8	-164.1	-1,094.6	1,106.8	0.00	0.00	0.00
5,000.0	16.87	264.94	4,839.1	-165.1	-1,106.1	1,118.4	0.00	0.00	0.00
5,040.0	16.87	264.94	4,877.4	-166.1	-1,117.7	1,129.9	0.00	0.00	0.00
5,080.0	16.87	264.94	4,915.6	-167.1	-1,129.3	1,141.5	0.00	0.00	0.00
5,120.0	16.87	264.94	4,953.9	-168.2	-1,140.8	1,153.1	0.00	0.00	0.00
5,160.0	16.87	264.94	4,992.2	-169.2	-1,152.4	1,164.7	0.00	0.00	0.00
5,200.0	16.87	264.94	5,030.5	-170.2	-1,164.0	1,176.3	0.00	0.00	0.00
5,240.0	16.87	264.94	5,068.8	-171.2	-1,175.5	1,187.9	0.00	0.00	0.00
5,280.0	16.07	264.94	5,107.1	-172.2	-1,186.8	1,199.2	2.00	-2.00	0.00
5,320.0	15.27	264.94	5,145.6	-173.2	-1,197.6	1,210.0	2.00	-2.00	0.00
5,360.0	14.47	264.94	5,184.3	-174.1	-1,207.8	1,220.3	2.00	-2.00	0.00
5,400.0	13.67	264.94	5,223.1	-175.0	-1,217.5	1,230.0	2.00	-2.00	0.00
5,440.0	12.87	264.94	5,262.0	-175.8	-1,226.6	1,239.1	2.00	-2.00	0.00
5,480.0	12.07	264.94	5,301.1	-176.5	-1,235.2	1,247.8	2.00	-2.00	0.00
5,520.0	11.27	264.94	5,340.2	-177.2	-1,243.3	1,255.8	2.00	-2.00	0.00
5,560.0	10.47	264.94	5,379.5	-177.9	-1,250.8	1,263.4	2.00	-2.00	0.00
5,600.0	9.67	264.94	5,418.9	-178.5	-1,257.8	1,270.4	2.00	-2.00	0.00
5,640.0	8.87	264.94	5,458.4	-179.1	-1,264.2	1,276.8	2.00	-2.00	0.00
5,680.0	8.07	264.94	5,498.0	-179.6	-1,270.0	1,282.7	2.00	-2.00	0.00
5,720.0	7.27	264.94	5,537.6	-180.1	-1,275.4	1,288.0	2.00	-2.00	0.00
5,760.0	6.47	264.94	5,577.3	-180.5	-1,280.1	1,292.8	2.00	-2.00	0.00
5,800.0	5.67	264.94	5,617.1	-180.9	-1,284.3	1,297.0	2.00	-2.00	0.00
5,840.0	4.87	264.94	5,656.9	-181.2	-1,288.0	1,300.7	2.00	-2.00	0.00
5,880.0	4.07	264.94	5,696.8	-181.5	-1,291.1	1,303.8	2.00	-2.00	0.00
5,920.0	3.27	264.94	5,736.7	-181.7	-1,293.6	1,306.3	2.00	-2.00	0.00
5,960.0	2.47	264.94	5,776.7	-181.9	-1,295.6	1,308.3	2.00	-2.00	0.00
6,000.0	1.67	264.94	5,816.6	-182.0	-1,297.1	1,309.8	2.00	-2.00	0.00
6,040.0	0.87	264.94	5,856.6	-182.1	-1,298.0	1,310.7	2.00	-2.00	0.00
6,080.0	0.07	264.94	5,896.6	-182.1	-1,298.3	1,311.0	2.00	-2.00	0.00
6,083.4	0.00	0.00	5,900.0	-182.1	-1,298.3	1,311.0	2.00	-2.00	0.00

Database: Landmark
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.31-T7N-R66W
Site: Schneider USX II31-13D Pad
 Sec.31-T7N-R66W
Well: Schneider USX II31-13D
Wellbore: Wellbore #1
Design: Noble Schneider USX II31-13D Plan #1 (8-10-1)

Local Co-ordinate Reference: Well Schneider USX II31-13D
TVD Reference: WELL @ 4919.0ft (Original Well Elev)
MD Reference: WELL @ 4919.0ft (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)
6,120.0	0.00	0.00	5,936.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,160.0	0.00	0.00	5,976.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,200.0	0.00	0.00	6,016.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,240.0	0.00	0.00	6,056.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,280.0	0.00	0.00	6,096.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,320.0	0.00	0.00	6,136.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,360.0	0.00	0.00	6,176.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,400.0	0.00	0.00	6,216.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,440.0	0.00	0.00	6,256.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,480.0	0.00	0.00	6,296.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,520.0	0.00	0.00	6,336.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,560.0	0.00	0.00	6,376.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,600.0	0.00	0.00	6,416.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,640.0	0.00	0.00	6,456.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,680.0	0.00	0.00	6,496.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,720.0	0.00	0.00	6,536.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,760.0	0.00	0.00	6,576.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,800.0	0.00	0.00	6,616.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,840.0	0.00	0.00	6,656.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,880.0	0.00	0.00	6,696.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,920.0	0.00	0.00	6,736.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
6,960.0	0.00	0.00	6,776.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,000.0	0.00	0.00	6,816.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,040.0	0.00	0.00	6,856.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,080.0	0.00	0.00	6,896.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,120.0	0.00	0.00	6,936.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,160.0	0.00	0.00	6,976.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,200.0	0.00	0.00	7,016.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,218.4	0.00	0.00	7,035.0	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
NIOBRARA									
7,240.0	0.00	0.00	7,056.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,280.0	0.00	0.00	7,096.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,320.0	0.00	0.00	7,136.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,360.0	0.00	0.00	7,176.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,400.0	0.00	0.00	7,216.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,440.0	0.00	0.00	7,256.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,480.0	0.00	0.00	7,296.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,520.0	0.00	0.00	7,336.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,549.4	0.00	0.00	7,366.0	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
CODELL									
7,560.0	0.00	0.00	7,376.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,600.0	0.00	0.00	7,416.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,640.0	0.00	0.00	7,456.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,680.0	0.00	0.00	7,496.6	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00
7,699.4	0.00	0.00	7,516.0	-182.1	-1,298.3	1,311.0	0.00	0.00	0.00

Database: Landmark
Company: NOBLE ENERGY INC WELD COUNTY CO
Project: SEC.31-T7N-R66W
Site: Schneider USX II31-13D Pad
 Sec.31-T7N-R66W
Well: Schneider USX II31-13D
Wellbore: Wellbore #1
Design: Noble Schneider USX II31-13D Plan #1 (8-10-1

Local Co-ordinate Reference: Well Schneider USX II31-13D
TVD Reference: WELL @ 4919.0ft (Original Well Elev)
MD Reference: WELL @ 4919.0ft (Original Well Elev)
North Reference: True

Survey Calculation Method: Minimum Curvature

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' - plan misses target center by 10.0ft at 7218.4ft MD (7035.0 TVD, -182.1 N, -1298.3 E) - Rectangle (sides W400.0 H400.0 D481.0)	0.00	0.00	7,035.0	-181.1	-1,288.3	1,434,916.22	3,186,315.26	40.525313	-104.829784
TARGET BHL 660'FS - plan hits target center - Point	0.00	0.00	5,900.0	-182.1	-1,298.3	1,434,915.12	3,186,305.28	40.525310	-104.829820
TARGET CIRCLE 66' - plan hits target center - Circle (radius 75.0)	0.00	0.00	7,035.0	-182.1	-1,298.3	1,434,915.12	3,186,305.28	40.525310	-104.829820

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
650.3	650.0	8 5/8"	8-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,218.4	7,035.0	NIOBRARA		0.00	
7,549.4	7,366.0	CODELL		0.00	