

# Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 19-T3N-R66W

Harris 38N-18HZX

Plan A

Plan: Rev A0

## Sperry Drilling Services

### Proposal Report

13 September, 2013

Well Coordinates: 1,318,398.87 N, 3,191,673.70 E (40° 12' 19.32" N, 104° 48' 49.51" W)

Ground Level: 4,865.00 usft

Local Coordinate Origin:

Centered on Well Harris 38N-18HZX

Viewing Datum:

RKB = 16' @ 4881.00usft (Xtreme 22)

TVDs to System:

N

North Reference:

True

Unit System:

Dec-Deg - API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

**HALLIBURTON**

Project: Weld County, CO (NAD 83)  
Site: Sec. 19-T3N-R66W  
Well: Harris 38N-18HZX  
Wellbore: Plan A  
Design: Rev A0



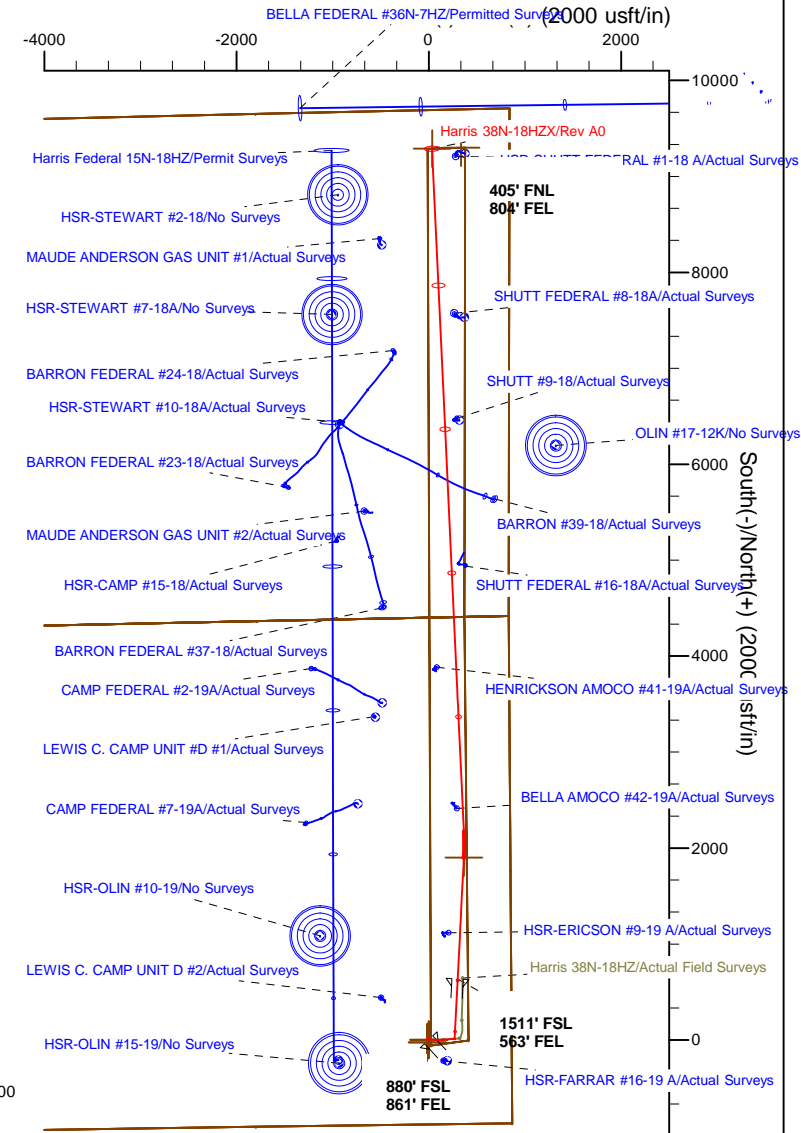
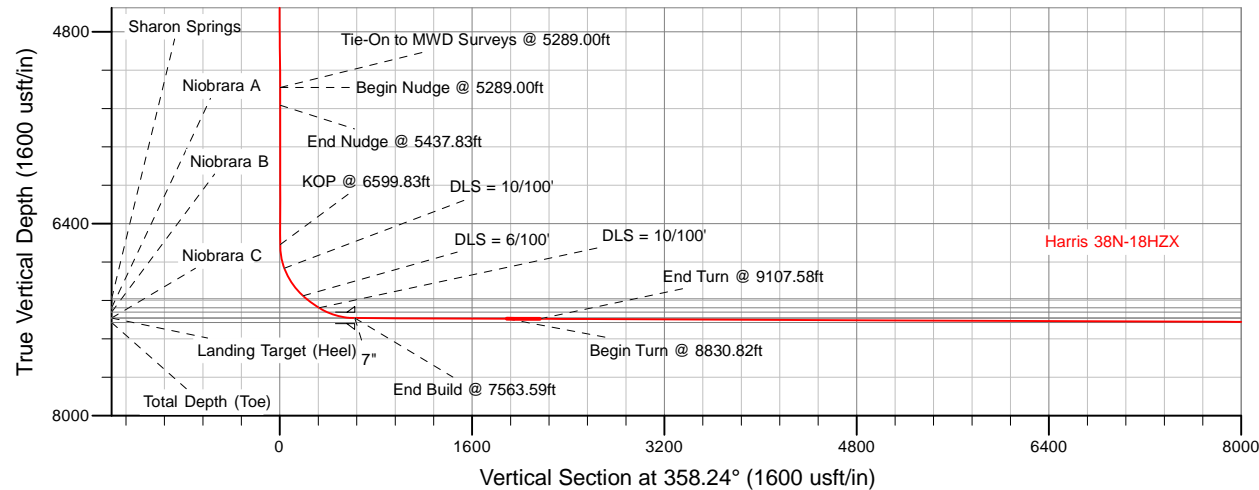
HALLIBURTON  
Sperry Drilling

#### SECTION DETAILS

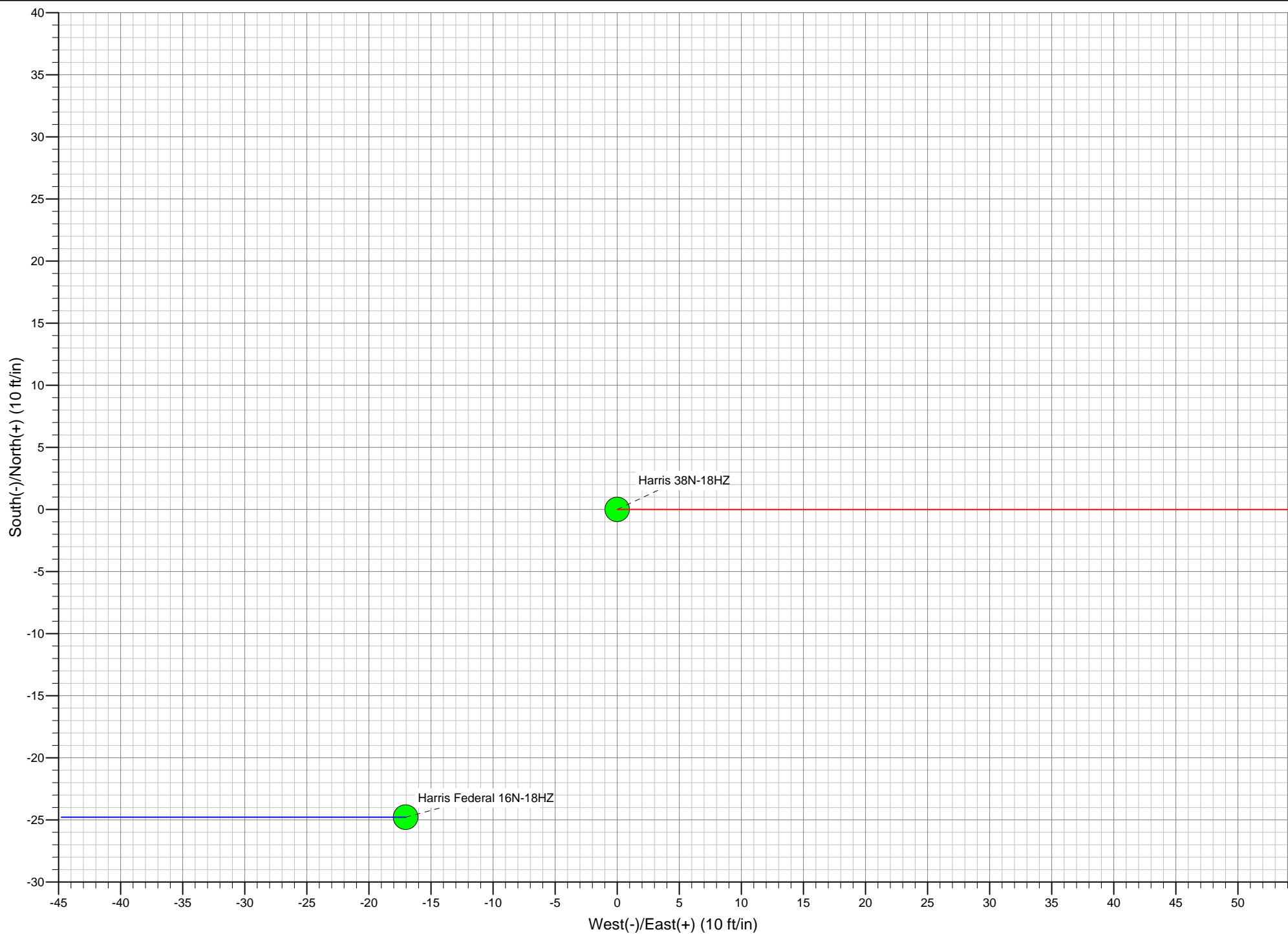
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Target
1	5289.00	8.93	87.13	5265.22	11.43	257.28	0.00	0.00	3.53	
2	5437.83	0.00	0.00	5413.45	12.01	268.84	6.00	180.00	3.75	
3	6599.83	0.00	0.00	6575.45	12.01	268.84	0.00	0.00	3.75	
4	7082.47	48.26	2.92	7003.00	203.30	278.60	10.00	2.92	194.65	
5	7248.07	58.20	2.92	7102.00	335.62	285.35	6.00	0.00	326.70	
6	7563.59	89.75	2.87	7188.00	634.68	300.47	10.00	-0.09	625.15	
7	8830.82	89.75	2.87	7193.49	1900.30	364.02	0.00	0.00	1888.22	Harris 38N-18HZ_tgt1
8	9107.58	89.76	357.34	7194.68	2176.96	364.54	2.00	-89.97	2164.73	
9	6226.56	89.76	357.34	7225.00	9288.20	34.04	0.00	0.00	9282.77	Harris 38N-18HZ_Bottom Hole Location

#### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
HARRIS 38N-18HZ_LD	0.00	-24.76	-17.04	40.205298	-104.813814	Polygon
HARRIS 38N-18HZ_SEC	0.00	-24.76	-17.04	40.205298	-104.813814	Polygon
Harris 38N-18HZ_SHL	0.00	0.00	0.00	40.205366	-104.813753	Point
Harris 38N-18HZ_tgt1	7193.49	1900.30	364.02	40.210582	-104.812450	Point
Harris 38N-18HZ_Bottom Hole Location	7225.00	9288.20	34.04	40.230862	-104.813631	Point



WELL DETAILS: Harris 38N-18HZX	
TVD	MD
6575.45	6599.83
KOP @ 6599.83ft	
Ground Level: 4865.00 RKB = 16" @ 4881.00usft (Xtreme 22)	
Plan: Rev A0 (Harris 38N-18HZX/Plan A)	
Created By: Clint Eshelman Date: 09/13/2013	



**Plan Report for Harris 38N-18HZX - Rev A0**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
5,289.00	8.93	87.13	5,265.22	11.43	257.28	3.53	0.00	0.00	0.00	0.00
<b>Tie-On to MWD Surveys @ 5289.00ft - Begin Nudge @ 5289.00ft - HARRIS 38N-18HZ_SEC - HARRIS 38N-18HZ_LD - Harris 38N-18HZ_SHL</b>										
5,300.00	8.27	87.13	5,276.09	11.52	258.92	3.56	6.00	-6.00	0.00	180.00
5,400.00	2.27	87.13	5,375.63	11.98	268.09	3.74	6.00	-6.00	0.00	-180.00
5,437.83	0.00	87.13	5,413.45	12.01	268.84	3.75	6.00	-6.00	0.00	180.00
<b>End Nudge @ 5437.83ft</b>										
5,500.00	0.00	0.00	5,475.62	12.01	268.84	3.75	0.00	0.00	0.00	-180.00
5,600.00	0.00	0.00	5,575.62	12.01	268.84	3.75	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,675.62	12.01	268.84	3.75	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,775.62	12.01	268.84	3.75	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,875.62	12.01	268.84	3.75	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,975.62	12.01	268.84	3.75	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,075.62	12.01	268.84	3.75	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,175.62	12.01	268.84	3.75	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,275.62	12.01	268.84	3.75	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,375.62	12.01	268.84	3.75	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,475.62	12.01	268.84	3.75	0.00	0.00	0.00	0.00
6,599.83	0.00	0.00	6,575.45	12.01	268.84	3.75	0.00	0.00	0.00	0.00
<b>KOP @ 6599.83ft</b>										
6,600.00	0.00	2.92	6,575.62	12.01	268.84	3.75	0.00	0.00	0.00	2.92
6,700.00	10.02	2.92	6,675.11	20.74	269.28	12.46	10.02	10.02	0.00	2.92
6,800.00	20.02	2.92	6,771.57	46.58	270.60	38.25	10.00	10.00	0.00	0.00
<b>DLS = 10/100'</b>										
6,900.00	30.02	2.92	6,862.07	88.76	272.75	80.34	10.00	10.00	0.00	0.00
7,000.00	40.02	2.92	6,943.87	145.99	275.67	137.46	10.00	10.00	0.00	0.00
7,082.47	48.26	2.92	7,003.00	203.30	278.60	194.65	10.00	10.00	0.00	0.00
<b>DLS = 6/100'</b>										
7,100.00	49.32	2.92	7,014.55	216.47	279.27	207.79	6.00	6.00	0.00	0.00
7,120.90	50.57	2.92	7,028.00	232.45	280.08	223.74	6.00	6.00	0.00	0.00
<b>Sharon Springs</b>										
7,200.00	55.32	2.92	7,075.65	295.47	283.30	286.63	6.00	6.00	0.00	0.00
7,248.07	58.20	2.92	7,102.00	335.62	285.35	326.70	6.00	6.00	0.00	0.00
<b>DLS = 10/100' - Niobrara A</b>										
7,300.00	63.39	2.91	7,127.33	380.88	287.65	371.86	10.00	10.00	-0.02	-0.09
7,327.37	66.13	2.91	7,139.00	405.60	288.91	396.54	10.00	10.00	-0.02	-0.08
<b>Niobrara B</b>										
7,400.00	73.39	2.90	7,164.11	473.61	292.35	464.41	10.00	10.00	-0.01	-0.08
7,500.00	83.39	2.88	7,184.20	571.32	297.29	561.92	10.00	10.00	-0.01	-0.08
7,563.15	89.71	2.87	7,188.00	634.24	300.45	624.72	10.00	10.00	-0.01	-0.07
<b>Niobrara C</b>										
7,563.59	89.75	2.87	7,188.00	634.68	300.47	625.15	10.00	10.00	-0.01	-0.07
<b>End Build @ 7563.59ft - Landing Target (Heel) - 7"</b>										
7,600.00	89.75	2.87	7,188.16	671.04	302.30	661.44	0.00	0.00	0.00	-0.07
7,700.00	89.75	2.87	7,188.59	770.92	307.31	761.12	0.00	0.00	0.00	0.00
7,800.00	89.75	2.87	7,189.03	870.79	312.33	860.79	0.00	0.00	0.00	0.00
7,900.00	89.75	2.87	7,189.46	970.66	317.34	960.46	0.00	0.00	0.00	0.00
8,000.00	89.75	2.87	7,189.89	1,070.54	322.36	1,060.13	0.00	0.00	0.00	0.00
8,100.00	89.75	2.87	7,190.33	1,170.41	327.37	1,159.80	0.00	0.00	0.00	0.00
8,200.00	89.75	2.87	7,190.76	1,270.28	332.39	1,259.48	0.00	0.00	0.00	0.00
8,300.00	89.75	2.87	7,191.19	1,370.16	337.40	1,359.15	0.00	0.00	0.00	0.00
8,400.00	89.75	2.87	7,191.62	1,470.03	342.42	1,458.82	0.00	0.00	0.00	0.00
8,500.00	89.75	2.87	7,192.06	1,569.90	347.43	1,558.49	0.00	0.00	0.00	0.00
8,600.00	89.75	2.87	7,192.49	1,669.78	352.45	1,658.16	0.00	0.00	0.00	0.00
8,700.00	89.75	2.87	7,192.92	1,769.65	357.46	1,757.84	0.00	0.00	0.00	0.00
8,800.00	89.75	2.87	7,193.36	1,869.52	362.47	1,857.51	0.00	0.00	0.00	0.00
8,830.82	89.75	2.87	7,193.49	1,900.30	364.02	1,888.22	0.00	0.00	0.00	0.00
<b>Begin Turn @ 8830.82ft - Harris 38N-18HZ_tgt1</b>										

**Plan Report for Harris 38N-18HZX - Rev A0**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
8,900.00	89.75	1.49	7,193.79	1,969.43	366.65	1,957.24	2.00	0.00	-2.00	-89.97
9,000.00	89.75	359.49	7,194.22	2,069.42	367.51	2,057.16	2.00	0.00	-2.00	-89.96
9,100.00	89.76	357.49	7,194.65	2,169.38	364.88	2,157.15	2.00	0.00	-2.00	-89.95
9,107.58	89.76	357.34	7,194.68	2,176.95	364.54	2,164.73	2.00	0.00	-2.00	-89.95
<b>End Turn @ 9107.58ft</b>										
9,200.00	89.76	357.34	7,195.07	2,269.27	360.25	2,257.14	0.00	0.00	0.00	-89.95
9,300.00	89.76	357.34	7,195.50	2,369.16	355.60	2,357.13	0.00	0.00	0.00	0.00
9,400.00	89.76	357.34	7,195.93	2,469.06	350.96	2,457.11	0.00	0.00	0.00	0.00
9,500.00	89.76	357.34	7,196.35	2,568.95	346.32	2,557.10	0.00	0.00	0.00	0.00
9,600.00	89.76	357.34	7,196.78	2,668.84	341.68	2,657.09	0.00	0.00	0.00	0.00
9,700.00	89.76	357.34	7,197.20	2,768.73	337.03	2,757.07	0.00	0.00	0.00	0.00
9,800.00	89.76	357.34	7,197.63	2,868.62	332.39	2,857.06	0.00	0.00	0.00	0.00
9,900.00	89.76	357.34	7,198.05	2,968.51	327.75	2,957.05	0.00	0.00	0.00	0.00
10,000.00	89.76	357.34	7,198.48	3,068.40	323.11	3,057.03	0.00	0.00	0.00	0.00
10,100.00	89.76	357.34	7,198.91	3,168.30	318.46	3,157.02	0.00	0.00	0.00	0.00
10,200.00	89.76	357.34	7,199.33	3,268.19	313.82	3,257.01	0.00	0.00	0.00	0.00
10,300.00	89.76	357.34	7,199.76	3,368.08	309.18	3,356.99	0.00	0.00	0.00	0.00
10,400.00	89.76	357.34	7,200.18	3,467.97	304.54	3,456.98	0.00	0.00	0.00	0.00
10,500.00	89.76	357.34	7,200.61	3,567.86	299.89	3,556.97	0.00	0.00	0.00	0.00
10,600.00	89.76	357.34	7,201.04	3,667.75	295.25	3,656.95	0.00	0.00	0.00	0.00
10,700.00	89.76	357.34	7,201.46	3,767.64	290.61	3,756.94	0.00	0.00	0.00	0.00
10,800.00	89.76	357.34	7,201.89	3,867.53	285.97	3,856.93	0.00	0.00	0.00	0.00
10,900.00	89.76	357.34	7,202.31	3,967.43	281.32	3,956.91	0.00	0.00	0.00	0.00
11,000.00	89.76	357.34	7,202.74	4,067.32	276.68	4,056.90	0.00	0.00	0.00	0.00
11,100.00	89.76	357.34	7,203.17	4,167.21	272.04	4,156.89	0.00	0.00	0.00	0.00
11,200.00	89.76	357.34	7,203.59	4,267.10	267.40	4,256.87	0.00	0.00	0.00	0.00
11,300.00	89.76	357.34	7,204.02	4,366.99	262.75	4,356.86	0.00	0.00	0.00	0.00
11,400.00	89.76	357.34	7,204.44	4,466.88	258.11	4,456.85	0.00	0.00	0.00	0.00
11,500.00	89.76	357.34	7,204.87	4,566.77	253.47	4,556.83	0.00	0.00	0.00	0.00
11,600.00	89.76	357.34	7,205.30	4,666.66	248.83	4,656.82	0.00	0.00	0.00	0.00
11,700.00	89.76	357.34	7,205.72	4,766.56	244.18	4,756.81	0.00	0.00	0.00	0.00
11,800.00	89.76	357.34	7,206.15	4,866.45	239.54	4,856.79	0.00	0.00	0.00	0.00
11,900.00	89.76	357.34	7,206.57	4,966.34	234.90	4,956.78	0.00	0.00	0.00	0.00
12,000.00	89.76	357.34	7,207.00	5,066.23	230.26	5,056.77	0.00	0.00	0.00	0.00
12,100.00	89.76	357.34	7,207.42	5,166.12	225.61	5,156.75	0.00	0.00	0.00	0.00
12,200.00	89.76	357.34	7,207.85	5,266.01	220.97	5,256.74	0.00	0.00	0.00	0.00
12,300.00	89.76	357.34	7,208.28	5,365.90	216.33	5,356.73	0.00	0.00	0.00	0.00
12,400.00	89.76	357.34	7,208.70	5,465.79	211.69	5,456.71	0.00	0.00	0.00	0.00
12,500.00	89.76	357.34	7,209.13	5,565.69	207.04	5,556.70	0.00	0.00	0.00	0.00
12,600.00	89.76	357.34	7,209.55	5,665.58	202.40	5,656.69	0.00	0.00	0.00	0.00
12,700.00	89.76	357.34	7,209.98	5,765.47	197.76	5,756.67	0.00	0.00	0.00	0.00
12,800.00	89.76	357.34	7,210.41	5,865.36	193.12	5,856.66	0.00	0.00	0.00	0.00
12,900.00	89.76	357.34	7,210.83	5,965.25	188.47	5,956.65	0.00	0.00	0.00	0.00
13,000.00	89.76	357.34	7,211.26	6,065.14	183.83	6,056.63	0.00	0.00	0.00	0.00
13,100.00	89.76	357.34	7,211.68	6,165.03	179.19	6,156.62	0.00	0.00	0.00	0.00
13,200.00	89.76	357.34	7,212.11	6,264.92	174.55	6,256.61	0.00	0.00	0.00	0.00
13,300.00	89.76	357.34	7,212.54	6,364.82	169.90	6,356.59	0.00	0.00	0.00	0.00
13,400.00	89.76	357.34	7,212.96	6,464.71	165.26	6,456.58	0.00	0.00	0.00	0.00
13,500.00	89.76	357.34	7,213.39	6,564.60	160.62	6,556.57	0.00	0.00	0.00	0.00
13,600.00	89.76	357.34	7,213.81	6,664.49	155.98	6,656.56	0.00	0.00	0.00	0.00
13,700.00	89.76	357.34	7,214.24	6,764.38	151.33	6,756.54	0.00	0.00	0.00	0.00
13,800.00	89.76	357.34	7,214.67	6,864.27	146.69	6,856.53	0.00	0.00	0.00	0.00
13,900.00	89.76	357.34	7,215.09	6,964.16	142.05	6,956.52	0.00	0.00	0.00	0.00
14,000.00	89.76	357.34	7,215.52	7,064.05	137.41	7,056.50	0.00	0.00	0.00	0.00
14,100.00	89.76	357.34	7,215.94	7,163.95	132.76	7,156.49	0.00	0.00	0.00	0.00
14,200.00	89.76	357.34	7,216.37	7,263.84	128.12	7,256.48	0.00	0.00	0.00	0.00
14,300.00	89.76	357.34	7,216.79	7,363.73	123.48	7,356.46	0.00	0.00	0.00	0.00
14,400.00	89.76	357.34	7,217.22	7,463.62	118.84	7,456.45	0.00	0.00	0.00	0.00
14,500.00	89.76	357.34	7,217.65	7,563.51	114.19	7,556.44	0.00	0.00	0.00	0.00
14,600.00	89.76	357.34	7,218.07	7,663.40	109.55	7,656.42	0.00	0.00	0.00	0.00

**Plan Report for Harris 38N-18HZX - Rev A0**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
14,700.00	89.76	357.34	7,218.50	7,763.29	104.91	7,756.41	0.00	0.00	0.00	0.00
14,800.00	89.76	357.34	7,218.92	7,863.18	100.27	7,856.40	0.00	0.00	0.00	0.00
14,900.00	89.76	357.34	7,219.35	7,963.08	95.63	7,956.38	0.00	0.00	0.00	0.00
15,000.00	89.76	357.34	7,219.78	8,062.97	90.98	8,056.37	0.00	0.00	0.00	0.00
15,100.00	89.76	357.34	7,220.20	8,162.86	86.34	8,156.36	0.00	0.00	0.00	0.00
15,200.00	89.76	357.34	7,220.63	8,262.75	81.70	8,256.34	0.00	0.00	0.00	0.00
15,300.00	89.76	357.34	7,221.05	8,362.64	77.06	8,356.33	0.00	0.00	0.00	0.00
15,400.00	89.76	357.34	7,221.48	8,462.53	72.41	8,456.32	0.00	0.00	0.00	0.00
15,500.00	89.76	357.34	7,221.91	8,562.42	67.77	8,556.30	0.00	0.00	0.00	0.00
15,600.00	89.76	357.34	7,222.33	8,662.31	63.13	8,656.29	0.00	0.00	0.00	0.00
15,700.00	89.76	357.34	7,222.76	8,762.21	58.49	8,756.28	0.00	0.00	0.00	0.00
15,800.00	89.76	357.34	7,223.18	8,862.10	53.84	8,856.26	0.00	0.00	0.00	0.00
15,900.00	89.76	357.34	7,223.61	8,961.99	49.20	8,956.25	0.00	0.00	0.00	0.00
16,000.00	89.76	357.34	7,224.04	9,061.88	44.56	9,056.24	0.00	0.00	0.00	0.00
16,100.00	89.76	357.34	7,224.46	9,161.77	39.92	9,156.22	0.00	0.00	0.00	0.00
16,200.00	89.76	357.34	7,224.89	9,261.66	35.27	9,256.21	0.00	0.00	0.00	0.00
16,226.56	89.76	357.34	7,225.00	9,288.19	34.04	9,282.77	0.00	0.00	0.00	0.00

TD Well @ 16226.56ft - Harris 38N-18HZ\_Bottom Hole Location

**Plan Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
5,289.00	5,265.22	11.43	257.28	Tie-On to MWD Surveys @ 5289.00ft
5,289.00	5,265.22	11.43	257.28	Begin Nudge @ 5289.00ft
5,437.83	5,413.45	12.01	268.84	End Nudge @ 5437.83ft
6,599.83	6,575.45	12.01	268.84	KOP @ 6599.83ft
6,800.00	6,771.57	46.58	270.60	DLS = 10/100'
7,082.47	7,003.00	203.30	278.60	DLS = 6/100'
7,248.07	7,102.00	335.62	285.35	DLS = 10/100'
7,563.59	7,188.00	634.68	300.47	End Build @ 7563.59ft
8,830.82	7,193.49	1,900.30	364.02	Begin Turn @ 8830.82ft
9,107.58	7,194.68	2,176.95	364.54	End Turn @ 9107.58ft
16,226.56	7,225.00	9,288.19	34.04	TD Well @ 16226.56ft

**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (usft)	Origin +E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	358.24	Slot	0.00	0.00	7,225.00

**Survey tool program**

From (usft)	To (usft)	Survey/Plan	Survey Tool
16.00	541.00	MS Energy Gyros	NS-GYRO-MS
735.00	5,289.00	MWD Vertical/Build Surveys	MWD+IFR1+SC
5,289.00	7,563.59	Rev A0	MWD+IFR1+SC
7,563.59	16,226.56	Rev A0	MWD+IFR1+SC

## Plan Report for Harris 38N-18HZX - Rev A0

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
635.20	635.19	9 5/8"	9-5/8	13-1/2
7,563.59	7,188.00	7"	7	8-3/4

Formation Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
7,120.90	7,028.00	Sharon Springs		0.00	
7,248.07	7,102.00	Niobrara A		0.00	
7,327.37	7,139.00	Niobrara B		0.00	
7,563.15	7,188.00	Niobrara C		0.00	
7,563.59	7,188.00	Landing Target (Heel)		0.00	
16,226.56	7,225.00	Total Depth (Toe)		0.00	

*Targets associated with this wellbore*

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
HARRIS 38N-18HZ_SEC	0.00	-24.76	-17.04	Polygon
HARRIS 38N-18HZ_LD	0.00	-24.76	-17.04	Polygon
Harris 38N-18HZ_SHL	0.00	0.00	0.00	Point
Harris 38N-18HZ_tgt1	7,193.49	1,900.30	364.02	Point
Harris 38N-18HZ_Bottom Hole Location	7,225.00	9,288.20	34.04	Point

Directional Difficulty Index

Average Dogleg over Survey:	0.95 °/100usft	Maximum Dogleg over Survey:	10.00 °/100usft at 7,082.47 usft
Net Tortousity applicable to Plans:	0.95 °/100usft	Directional Difficulty Index:	6.609

Audit Info

North Reference Sheet for Sec. 19-T3N-R66W - Harris 38N-18HZX - Plan A

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.  
Vertical Depths are relative to RKB = 16' @ 4881.00usft (Xtreme 22). Northing and Easting are relative to Harris 38N-18HZX  
Coordinate System is US State Plane 1983, Colorado Northern Zone using datum North American Datum 1983, ellipsoid GRS 1980  
Projection method is Lambert Conformal Conic (2 parallel)  
Central Meridian is -105.50°, Longitude Origin:0.000000°, Latitude Origin:40.783333°  
False Easting: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 0.99995716

Grid Coordinates of Well: 1,318,398.87 usft N, 3,191,673.70 usft E  
Geographical Coordinates of Well: 40° 12' 19.32" N, 104° 48' 49.51" W  
Grid Convergence at Surface is: 0.44°

Based upon Minimum Curvature type calculations, at a Measured Depth of 16,226.56usft  
the Bottom Hole Displacement is 9,288.26usft in the Direction of 0.21° (True).  
Magnetic Convergence at surface is: -8.16° (13 September 2013, BGGM2013)

