

# Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 18-T3N-R67W

Elliott 4C-18HZ

Plan A

Plan: Plan A0 Proposal

## Sperry Drilling Services

# Proposal Report

26 August, 2013

Well Coordinates: 1,327,651.86 N, 3,160,462.20 E (40° 13' 52.95" N, 104° 55' 31.01" W)

Ground Level: 4,836.00 ft

Local Coordinate Origin: Centered on Well Elliott 4C-18HZ

Viewing Datum: RKB = 17' @ 4853.00ft (Drilling Rig)

TVDs to System: N

North Reference: True

Unit System: API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 2003.16 Build: 431

**HALLIBURTON**

Project: Weld County, CO (NAD 83)  
 Site: Sec. 18-T3N-R67W  
 Well: Elliott 4C-18HZ  
 Wellbore: Plan A  
 Design: Plan A0 Proposal

# Anadarko Petroleum Corp.

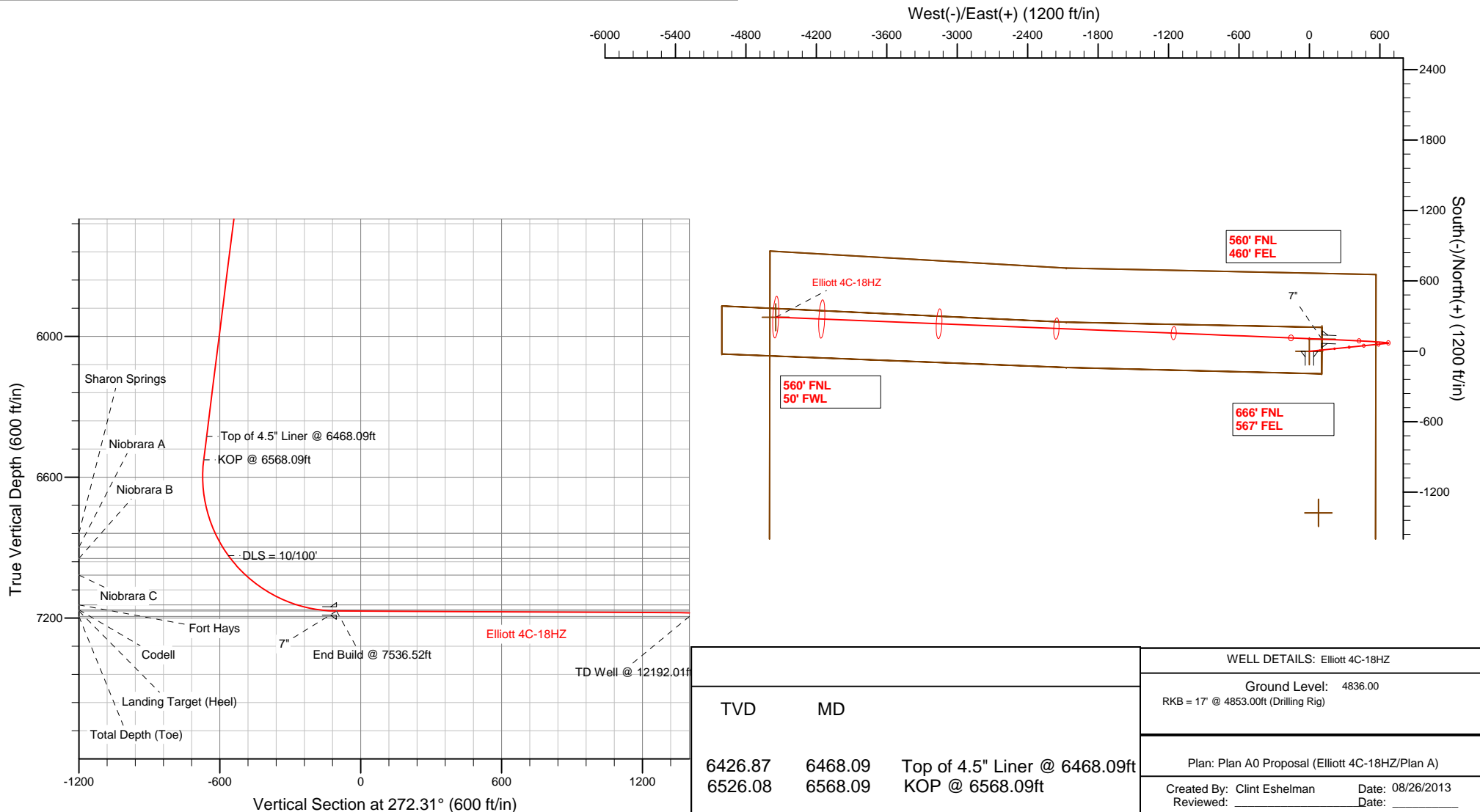


### SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	
3	1359.98	7.20	84.09	1359.04	2.33	22.47	2.00	84.09	-22.36	
4	6568.09	7.20	84.09	6526.08	69.52	671.72	0.00	0.00	-668.37	
5	7536.52	89.72	272.31	7170.00	103.83	106.94	10.00	-171.73	-102.67	Elliott 4C-18HZ_CP
6	12192.01	89.72	272.31	7193.00	291.13	-4544.73	0.00	0.00	4552.77	Elliott 4C-18HZ_BHL

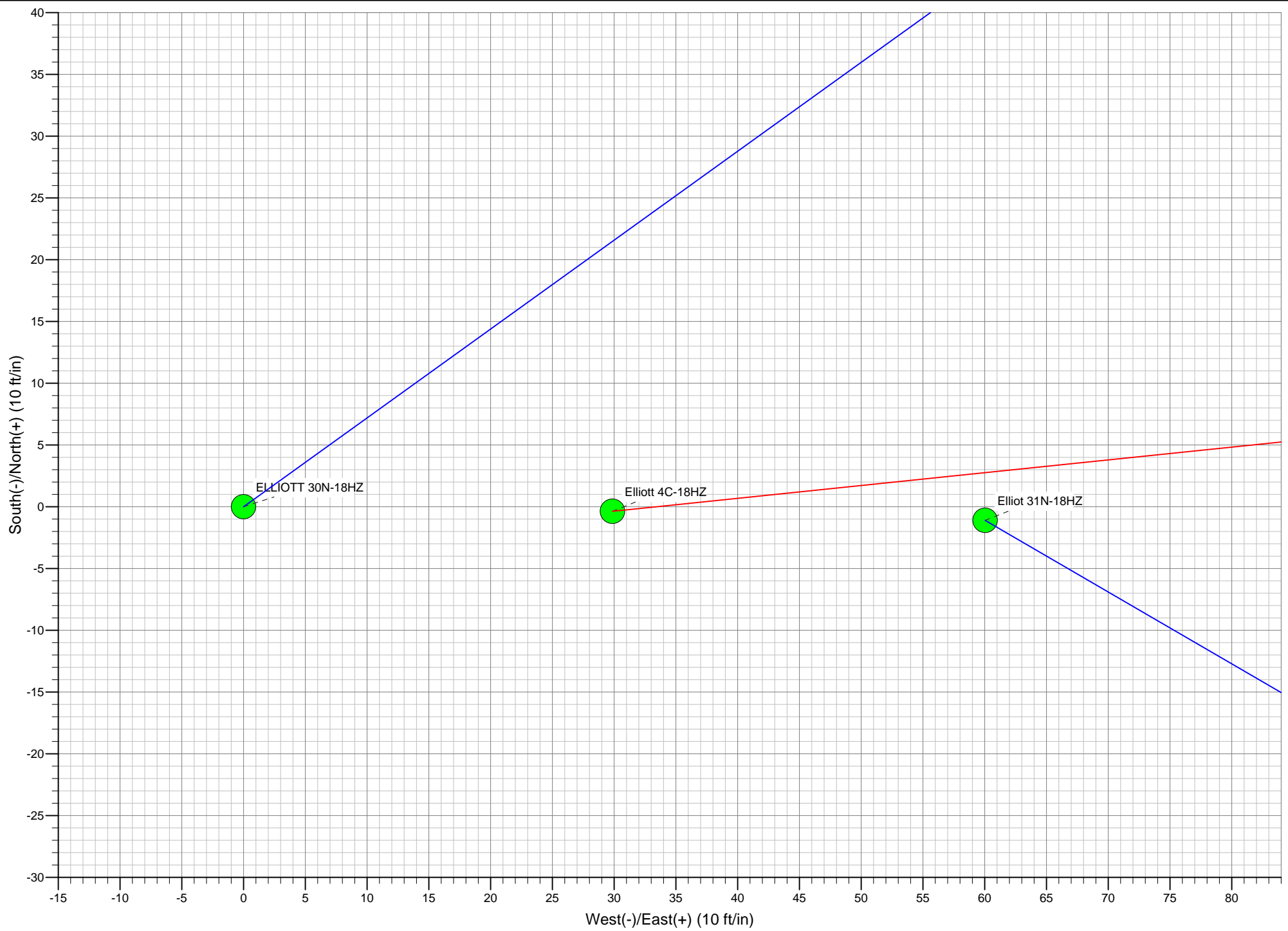
### WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Elliott 4C-18HZ_LD	0.00	-1376.69	77.91	40.227596	-104.925002	Polygon
Elliott 4C-18HZ_SHL	0.00	0.00	0.00	40.231375	-104.925281	Point
ELLIOTT_SEC	0.00	-1376.69	77.91	40.227596	-104.925002	Polygon
Elliott 4C-18HZ_CP	7170.00	103.83	106.94	40.231660	-104.924898	Point
Elliott 4C-18HZ_BHL	7193.00	291.13	-4544.73	40.232173	-104.941558	Point



WELL DETAILS: Elliott 4C-18HZ		
Ground Level: 4836.00 RKB = 17' @ 4853.00ft (Drilling Rig)		
Plan: Plan A0 Proposal (Elliott 4C-18HZ/Plan A)		
Created By: Clint Eshelman	Date: 08/26/2013	
Reviewed:	Date:	

TVD	MD	Target
6426.87	6468.09	Top of 4.5" Liner @ 6468.09ft
6526.08	6568.09	KOP @ 6568.09ft



**Plan Report for Elliott 4C-18HZ - Plan A0 Proposal**

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)	Toolface Azimuth (°)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>ELLIOTT_SEC - Elliott 4C-18HZ_LD - Elliott 4C-18HZ_SHL</b>										
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
750.00	0.00	0.00	750.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills Base</b>										
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>										
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Begin Nudge @ 1000.00ft</b>										
1,100.00	2.00	84.09	1,099.98	0.18	1.74	-1.73	2.00	2.00	0.00	84.09
1,200.00	4.00	84.09	1,199.84	0.72	6.94	-6.91	2.00	2.00	0.00	0.00
1,300.00	6.00	84.09	1,299.45	1.62	15.61	-15.53	2.00	2.00	0.00	0.00
1,359.98	7.20	84.09	1,359.03	2.33	22.47	-22.36	2.00	2.00	0.00	0.00
<b>End Nudge @ 1359.98ft</b>										
1,400.00	7.20	84.09	1,398.74	2.84	27.46	-27.32	0.00	0.00	0.00	0.00
1,500.00	7.20	84.09	1,497.95	4.13	39.92	-39.72	0.00	0.00	0.00	0.00
1,600.00	7.20	84.09	1,597.16	5.42	52.39	-52.13	0.00	0.00	0.00	0.00
1,700.00	7.20	84.09	1,696.37	6.71	64.85	-64.53	0.00	0.00	0.00	0.00
1,800.00	7.20	84.09	1,795.58	8.00	77.32	-76.94	0.00	0.00	0.00	0.00
1,900.00	7.20	84.09	1,894.80	9.29	89.79	-89.34	0.00	0.00	0.00	0.00
2,000.00	7.20	84.09	1,994.01	10.58	102.25	-101.74	0.00	0.00	0.00	0.00
2,100.00	7.20	84.09	2,093.22	11.87	114.72	-114.15	0.00	0.00	0.00	0.00
2,200.00	7.20	84.09	2,192.43	13.16	127.19	-126.55	0.00	0.00	0.00	0.00
2,300.00	7.20	84.09	2,291.64	14.45	139.65	-138.96	0.00	0.00	0.00	0.00
2,400.00	7.20	84.09	2,390.85	15.74	152.12	-151.36	0.00	0.00	0.00	0.00
2,500.00	7.20	84.09	2,490.06	17.03	164.58	-163.76	0.00	0.00	0.00	0.00
2,600.00	7.20	84.09	2,589.28	18.32	177.05	-176.17	0.00	0.00	0.00	0.00
2,700.00	7.20	84.09	2,688.49	19.61	189.52	-188.57	0.00	0.00	0.00	0.00
2,800.00	7.20	84.09	2,787.70	20.90	201.98	-200.98	0.00	0.00	0.00	0.00
2,900.00	7.20	84.09	2,886.91	22.19	214.45	-213.38	0.00	0.00	0.00	0.00
3,000.00	7.20	84.09	2,986.12	23.48	226.91	-225.78	0.00	0.00	0.00	0.00
3,100.00	7.20	84.09	3,085.33	24.77	239.38	-238.19	0.00	0.00	0.00	0.00
3,200.00	7.20	84.09	3,184.55	26.06	251.85	-250.59	0.00	0.00	0.00	0.00
3,300.00	7.20	84.09	3,283.76	27.35	264.31	-263.00	0.00	0.00	0.00	0.00
3,400.00	7.20	84.09	3,382.97	28.64	276.78	-275.40	0.00	0.00	0.00	0.00
3,500.00	7.20	84.09	3,482.18	29.93	289.25	-287.80	0.00	0.00	0.00	0.00
3,570.37	7.20	84.09	3,552.00	30.84	298.02	-296.53	0.00	0.00	0.00	0.00
<b>Parkman</b>										
3,600.00	7.20	84.09	3,581.39	31.22	301.71	-300.21	0.00	0.00	0.00	0.00
3,700.00	7.20	84.09	3,680.60	32.51	314.18	-312.61	0.00	0.00	0.00	0.00
3,800.00	7.20	84.09	3,779.81	33.80	326.64	-325.02	0.00	0.00	0.00	0.00
3,900.00	7.20	84.09	3,879.03	35.09	339.11	-337.42	0.00	0.00	0.00	0.00
4,000.00	7.20	84.09	3,978.24	36.38	351.58	-349.82	0.00	0.00	0.00	0.00
4,027.98	7.20	84.09	4,006.00	36.75	355.06	-353.29	0.00	0.00	0.00	0.00
<b>Sussex</b>										
4,100.00	7.20	84.09	4,077.45	37.67	364.04	-362.23	0.00	0.00	0.00	0.00
4,200.00	7.20	84.09	4,176.66	38.96	376.51	-374.63	0.00	0.00	0.00	0.00
4,300.00	7.20	84.09	4,275.87	40.25	388.97	-387.04	0.00	0.00	0.00	0.00
4,400.00	7.20	84.09	4,375.08	41.54	401.44	-399.44	0.00	0.00	0.00	0.00
4,500.00	7.20	84.09	4,474.30	42.83	413.91	-411.84	0.00	0.00	0.00	0.00

**Plan Report for Elliott 4C-18HZ - Plan A0 Proposal**

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)	Toolface Azimuth (°)
4,600.00	7.20	84.09	4,573.51	44.12	426.37	-424.25	0.00	0.00	0.00	0.00
4,700.00	7.20	84.09	4,672.72	45.41	438.84	-436.65	0.00	0.00	0.00	0.00
4,800.00	7.20	84.09	4,771.93	46.71	451.31	-449.06	0.00	0.00	0.00	0.00
4,900.00	7.20	84.09	4,871.14	48.00	463.77	-461.46	0.00	0.00	0.00	0.00
5,000.00	7.20	84.09	4,970.35	49.29	476.24	-473.86	0.00	0.00	0.00	0.00
5,100.00	7.20	84.09	5,069.57	50.58	488.70	-486.27	0.00	0.00	0.00	0.00
5,200.00	7.20	84.09	5,168.78	51.87	501.17	-498.67	0.00	0.00	0.00	0.00
5,300.00	7.20	84.09	5,267.99	53.16	513.64	-511.08	0.00	0.00	0.00	0.00
5,400.00	7.20	84.09	5,367.20	54.45	526.10	-523.48	0.00	0.00	0.00	0.00
5,500.00	7.20	84.09	5,466.41	55.74	538.57	-535.88	0.00	0.00	0.00	0.00
5,600.00	7.20	84.09	5,565.62	57.03	551.03	-548.29	0.00	0.00	0.00	0.00
5,700.00	7.20	84.09	5,664.83	58.32	563.50	-560.69	0.00	0.00	0.00	0.00
5,800.00	7.20	84.09	5,764.05	59.61	575.97	-573.10	0.00	0.00	0.00	0.00
5,900.00	7.20	84.09	5,863.26	60.90	588.43	-585.50	0.00	0.00	0.00	0.00
6,000.00	7.20	84.09	5,962.47	62.19	600.90	-597.90	0.00	0.00	0.00	0.00
6,100.00	7.20	84.09	6,061.68	63.48	613.37	-610.31	0.00	0.00	0.00	0.00
6,200.00	7.20	84.09	6,160.89	64.77	625.83	-622.71	0.00	0.00	0.00	0.00
6,300.00	7.20	84.09	6,260.10	66.06	638.30	-635.12	0.00	0.00	0.00	0.00
6,400.00	7.20	84.09	6,359.32	67.35	650.76	-647.52	0.00	0.00	0.00	0.00
6,468.09	7.20	84.09	6,426.87	68.23	659.25	-655.97	0.00	0.00	0.00	0.00
<b>Top of 4.5" Liner @ 6468.09ft</b>										
6,500.00	7.20	84.09	6,458.53	68.64	663.23	-659.92	0.00	0.00	0.00	0.00
6,568.09	7.20	84.09	6,526.08	69.52	671.72	-668.37	0.00	0.00	0.00	0.00
<b>KOP @ 6568.09ft</b>										
6,600.00	4.07	77.61	6,557.83	69.96	674.81	-671.44	10.00	-9.81	-20.32	-171.73
6,700.00	6.15	281.93	6,657.67	71.84	673.03	-669.59	10.00	2.08	-155.68	-165.27
6,800.00	16.10	275.88	6,755.67	74.37	653.95	-650.42	10.00	9.95	-6.05	-9.69
6,889.08	24.99	274.52	6,839.00	77.13	622.84	-619.23	10.00	9.99	-1.53	-3.73
<b>Sharon Springs</b>										
6,900.00	26.08	274.41	6,848.86	77.49	618.15	-614.52	10.00	9.99	-0.97	-2.45
6,956.15	31.70	273.97	6,898.00	79.47	591.10	-587.42	10.00	9.99	-0.78	-2.35
<b>Niobrara A</b>										
7,000.00	36.08	273.72	6,934.39	81.10	566.72	-562.99	10.00	9.99	-0.58	-1.97
<b>DLS = 10/100'</b>										
7,014.50	37.53	273.65	6,946.00	81.66	558.05	-554.30	10.00	10.00	-0.50	-1.75
<b>Niobrara B</b>										
7,100.00	46.07	273.30	7,009.68	85.10	501.21	-497.38	10.00	10.00	-0.41	-1.70
7,110.66	47.14	273.26	7,017.00	85.54	493.48	-489.63	10.00	10.00	-0.34	-1.43
<b>Niobrara C</b>										
7,200.00	56.07	273.00	7,072.43	89.35	423.63	-419.69	10.00	10.00	-0.30	-1.41
7,300.00	66.07	272.76	7,120.75	93.72	336.33	-332.28	10.00	10.00	-0.24	-1.25
7,366.04	72.67	272.62	7,144.00	96.62	274.63	-270.51	10.00	10.00	-0.21	-1.13
<b>Fort Hays</b>										
7,400.00	76.07	272.56	7,153.15	98.10	241.96	-237.81	10.00	10.00	-0.19	-1.08
7,463.54	82.42	272.44	7,165.00	100.82	179.63	-175.42	10.00	10.00	-0.19	-1.06
<b>Codell</b>										
7,500.00	86.07	272.37	7,168.66	102.34	143.39	-139.15	10.00	10.00	-0.18	-1.04
7,536.52	89.72	272.31	7,170.00	103.83	106.94	-102.67	10.00	10.00	-0.18	-1.04
<b>End Build @ 7536.52ft - Landing Target (Heel) - 7" - Elliot 4C-18HZ_CP</b>										
7,600.00	89.72	272.31	7,170.31	106.38	43.51	-39.18	0.00	0.00	0.00	-1.03
7,700.00	89.72	272.31	7,170.81	110.41	-56.41	60.81	0.00	0.00	0.00	0.00
7,800.00	89.72	272.31	7,171.30	114.43	-156.33	160.81	0.00	0.00	0.00	0.00
7,900.00	89.72	272.31	7,171.80	118.45	-256.25	260.81	0.00	0.00	0.00	0.00
8,000.00	89.72	272.31	7,172.29	122.48	-356.16	360.81	0.00	0.00	0.00	0.00
8,100.00	89.72	272.31	7,172.78	126.50	-456.08	460.81	0.00	0.00	0.00	0.00
8,200.00	89.72	272.31	7,173.28	130.52	-556.00	560.81	0.00	0.00	0.00	0.00
8,300.00	89.72	272.31	7,173.77	134.55	-655.92	660.81	0.00	0.00	0.00	0.00
8,400.00	89.72	272.31	7,174.27	138.57	-755.83	760.81	0.00	0.00	0.00	0.00
8,500.00	89.72	272.31	7,174.76	142.59	-855.75	860.80	0.00	0.00	0.00	0.00

**Plan Report for Elliott 4C-18HZ - Plan A0 Proposal**

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)	Toothface Azimuth (°)
8,600.00	89.72	272.31	7,175.25	146.62	-955.67	960.80	0.00	0.00	0.00	0.00
8,700.00	89.72	272.31	7,175.75	150.64	-1,055.59	1,060.80	0.00	0.00	0.00	0.00
8,800.00	89.72	272.31	7,176.24	154.66	-1,155.51	1,160.80	0.00	0.00	0.00	0.00
8,900.00	89.72	272.31	7,176.74	158.69	-1,255.42	1,260.80	0.00	0.00	0.00	0.00
9,000.00	89.72	272.31	7,177.23	162.71	-1,355.34	1,360.80	0.00	0.00	0.00	0.00
9,100.00	89.72	272.31	7,177.72	166.73	-1,455.26	1,460.80	0.00	0.00	0.00	0.00
9,200.00	89.72	272.31	7,178.22	170.76	-1,555.18	1,560.80	0.00	0.00	0.00	0.00
9,300.00	89.72	272.31	7,178.71	174.78	-1,655.10	1,660.79	0.00	0.00	0.00	0.00
9,400.00	89.72	272.31	7,179.21	178.80	-1,755.01	1,760.79	0.00	0.00	0.00	0.00
9,500.00	89.72	272.31	7,179.70	182.83	-1,854.93	1,860.79	0.00	0.00	0.00	0.00
9,600.00	89.72	272.31	7,180.19	186.85	-1,954.85	1,960.79	0.00	0.00	0.00	0.00
9,700.00	89.72	272.31	7,180.69	190.87	-2,054.77	2,060.79	0.00	0.00	0.00	0.00
9,800.00	89.72	272.31	7,181.18	194.90	-2,154.68	2,160.79	0.00	0.00	0.00	0.00
9,900.00	89.72	272.31	7,181.68	198.92	-2,254.60	2,260.79	0.00	0.00	0.00	0.00
10,000.00	89.72	272.31	7,182.17	202.94	-2,354.52	2,360.79	0.00	0.00	0.00	0.00
10,100.00	89.72	272.31	7,182.66	206.97	-2,454.44	2,460.79	0.00	0.00	0.00	0.00
10,200.00	89.72	272.31	7,183.16	210.99	-2,554.36	2,560.78	0.00	0.00	0.00	0.00
10,300.00	89.72	272.31	7,183.65	215.01	-2,654.27	2,660.78	0.00	0.00	0.00	0.00
10,400.00	89.72	272.31	7,184.15	219.04	-2,754.19	2,760.78	0.00	0.00	0.00	0.00
10,500.00	89.72	272.31	7,184.64	223.06	-2,854.11	2,860.78	0.00	0.00	0.00	0.00
10,600.00	89.72	272.31	7,185.13	227.08	-2,954.03	2,960.78	0.00	0.00	0.00	0.00
10,700.00	89.72	272.31	7,185.63	231.11	-3,053.94	3,060.78	0.00	0.00	0.00	0.00
10,800.00	89.72	272.31	7,186.12	235.13	-3,153.86	3,160.78	0.00	0.00	0.00	0.00
10,900.00	89.72	272.31	7,186.62	239.15	-3,253.78	3,260.78	0.00	0.00	0.00	0.00
11,000.00	89.72	272.31	7,187.11	243.18	-3,353.70	3,360.77	0.00	0.00	0.00	0.00
11,100.00	89.72	272.31	7,187.61	247.20	-3,453.62	3,460.77	0.00	0.00	0.00	0.00
11,200.00	89.72	272.31	7,188.10	251.22	-3,553.53	3,560.77	0.00	0.00	0.00	0.00
11,300.00	89.72	272.31	7,188.59	255.25	-3,653.45	3,660.77	0.00	0.00	0.00	0.00
11,400.00	89.72	272.31	7,189.09	259.27	-3,753.37	3,760.77	0.00	0.00	0.00	0.00
11,500.00	89.72	272.31	7,189.58	263.29	-3,853.29	3,860.77	0.00	0.00	0.00	0.00
11,600.00	89.72	272.31	7,190.08	267.31	-3,953.20	3,960.77	0.00	0.00	0.00	0.00
11,700.00	89.72	272.31	7,190.57	271.34	-4,053.12	4,060.77	0.00	0.00	0.00	0.00
11,800.00	89.72	272.31	7,191.06	275.36	-4,153.04	4,160.76	0.00	0.00	0.00	0.00
11,900.00	89.72	272.31	7,191.56	279.38	-4,252.96	4,260.76	0.00	0.00	0.00	0.00
12,000.00	89.72	272.31	7,192.05	283.41	-4,352.88	4,360.76	0.00	0.00	0.00	0.00
12,100.00	89.72	272.31	7,192.55	287.43	-4,452.79	4,460.76	0.00	0.00	0.00	0.00
12,192.01	89.72	272.31	7,193.00	291.13	-4,544.73	4,552.77	0.00	0.00	0.00	0.00

TD Well @ 12192.01ft - Elliot 4C-18HZ\_BHL

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,000.00	1,000.00	0.00	0.00	Begin Nudge @ 1000.00ft
1,359.98	1,359.03	2.33	22.47	End Nudge @ 1359.98ft
6,468.09	6,426.87	68.23	659.25	Top of 4.5" Liner @ 6468.09ft
6,568.09	6,526.08	69.52	671.72	KOP @ 6568.09ft
7,000.00	6,934.39	81.10	566.72	DLS = 10/100'
7,536.52	7,170.00	103.83	106.94	End Build @ 7536.52ft
12,192.01	7,193.00	291.13	-4,544.73	TD Well @ 12192.01ft

**Plan Report for Elliott 4C-18HZ - Plan A0 Proposal****Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	Origin +E/-W (ft)	Start TVD (ft)
User	No Target (Freehand)	272.31	Slot	0.00	0.00	0.00

**Survey tool program**

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,536.52	Plan A0 Proposal	MWD
7,536.52	12,192.01	Plan A0 Proposal	MWD

**Casing Details**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
800.00	800.00	9 5/8"	9-5/8	13-1/2
7,536.52	7,170.00	7"	7	8-3/4

**Formation Details**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
750.00	750.00	Fox Hills Base			
3,570.37	3,552.00	Parkman			
4,027.98	4,006.00	Sussex			
6,889.08	6,839.00	Sharon Springs			
6,956.15	6,898.00	Niobrara A			
7,014.50	6,946.00	Niobrara B			
7,110.66	7,017.00	Niobrara C			
7,366.04	7,144.00	Fort Hays			
7,463.54	7,165.00	Codell			
7,536.52	7,170.00	Landing Target (Heel)			
12,192.01	7,193.00	Total Depth (Toe)			

**Targets associated with this wellbore**

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Elliott 4C-18HZ_CP	7,170.00	103.83	106.94	Point
ELLIOTT_SEC	0.00	-1,376.69	77.91	Polygon
Elliott 4C-18HZ_LD	0.00	-1,376.69	77.91	Polygon
Elliott 4C-18HZ_SHL	0.00	0.00	0.00	Point
Elliott 4C-18HZ_BHL	7,193.00	291.13	-4,544.73	Point

**North Reference Sheet for Sec. 18-T3N-R67W - Elliott 4C-18HZ - 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 = 17' @ 4853.00ft (Drilling Rig). Northing and Easting are relative to Elliott 4C-18HZ  
 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: 3,000,000.00ft, False Northing: 1,000,000.00ft, Scale Reduction: 0.99995690

Grid Coordinates of Well: 1,327,651.86 ft N, 3,160,462.20 ft E  
 Geographical Coordinates of Well: 40° 13' 52.95" N, 104° 55' 31.01" W  
 Grid Convergence at Surface is: 0.37°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,192.01ft  
 the Bottom Hole Displacement is 4,554.04ft in the Direction of 273.67° (True).  
 Magnetic Convergence at surface is: -8.30° (21 August 2013, , BGGM2013)

