

# Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 18-T3N-R67W

Elliot 5C-18HZ

Plan A0

Plan: Plan A0 Proposal

## Sperry Drilling Services

## Proposal Report

26 August, 2013

Well Coordinates: 1,326,275.76 N, 3,160,549.02 E (40° 13' 39.35" N, 104° 55' 30.01" W)

Ground Level: 4,822.00 ft

Local Coordinate Origin:

Centered on Well Elliot 5C-18HZ

Viewing Datum:

RKB = 17' @ 4839.00ft (Drilling Rig)

TVDs to System:

N

North Reference:

True

Unit System:

API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 2003.16 Build: 43I

**HALLIBURTON**

Project: Weld County, CO (NAD 83)  
 Site: Sec. 18-T3N-R67W  
 Well: Elliot 5C-18HZ  
 Wellbore: Plan A0  
 Design: Plan A0 Proposal

# Anadarko Petroleum Corp.

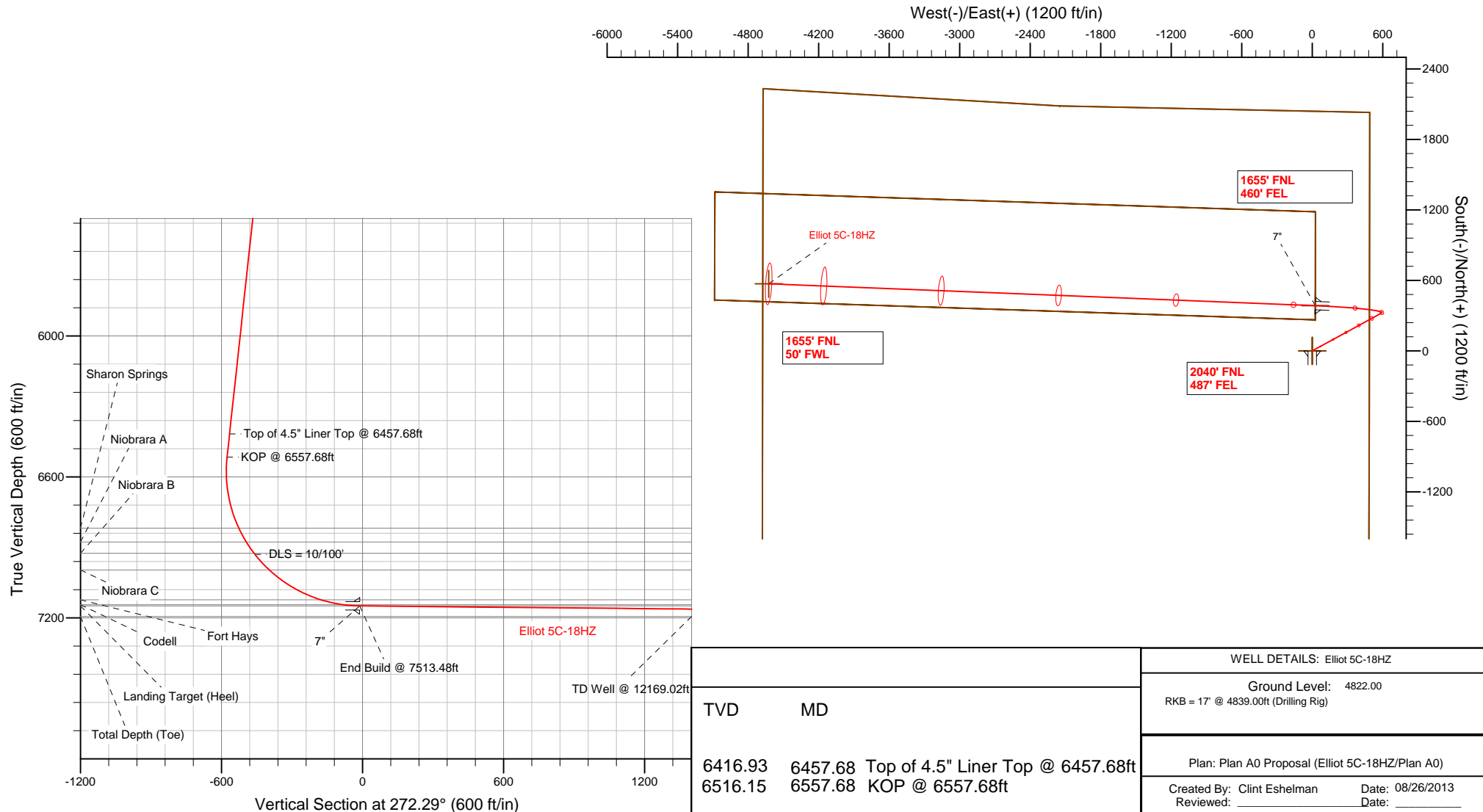


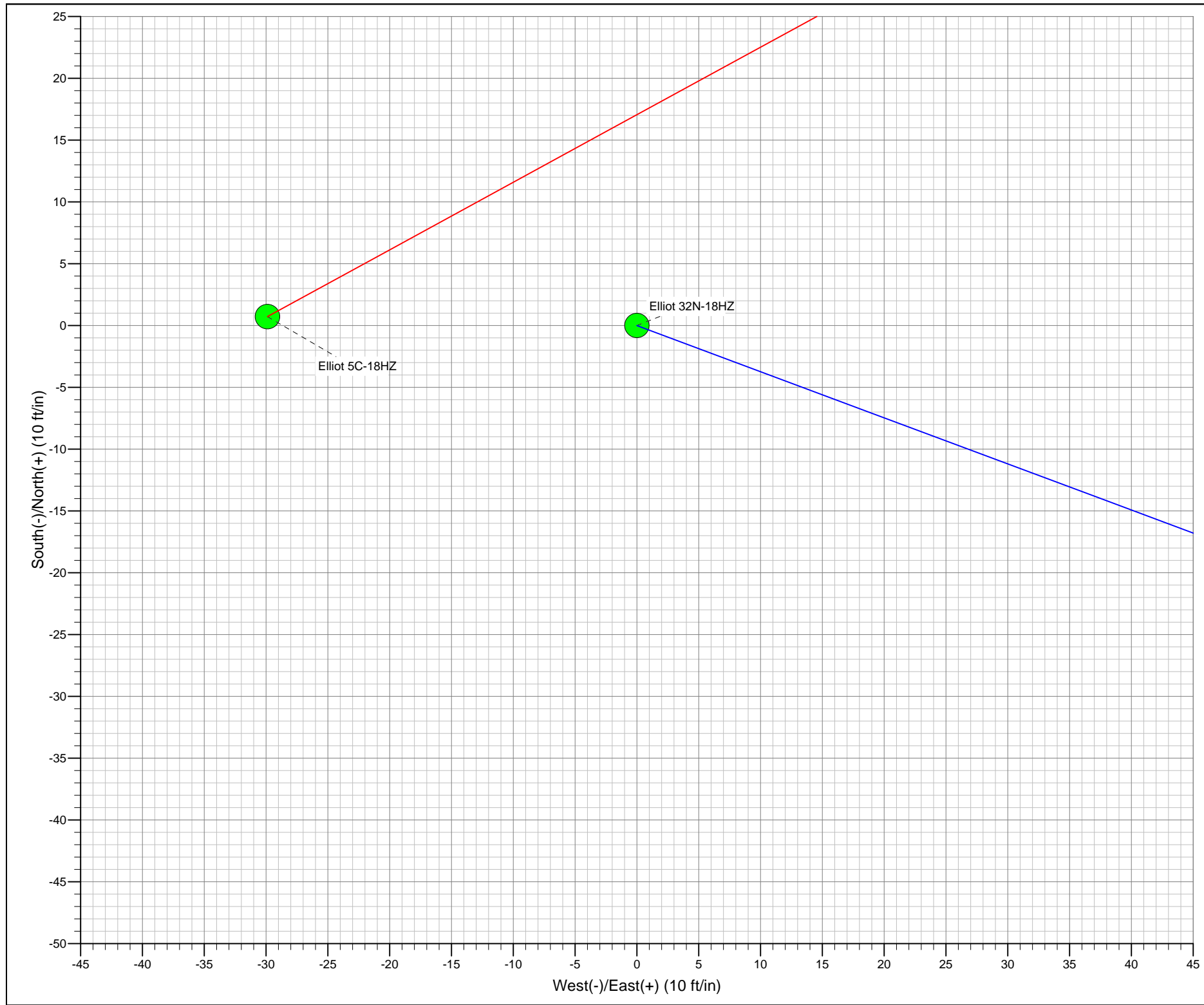
## SECTION DETAILS

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	986.00	0.00	0.00	986.00	0.00	0.00	0.00	0.00	0.00	
3	1343.74	7.15	61.35	1342.81	10.69	19.58	2.00	61.35	-19.13	
4	6557.68	7.15	61.35	6516.16	322.08	589.45	0.00	0.00	-576.11	
5	7513.48	89.45	272.29	7149.00	385.07	27.36	10.00	-148.89	-11.96	Elliot 5C-18HZ_CP
6	12169.02	89.45	272.29	7194.00	571.29	-4624.23	0.00	0.00	4643.37	Elliot 5C-18HZ_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Elliot 5C-18HZ_LD	0.00	0.00	0.00	40.227596	-104.925002	Polygon
Elliot 5C-18HZ_SHL	0.00	0.00	0.00	40.227596	-104.925002	Point
ELLIOTT_SEC	0.00	0.00	0.00	40.227596	-104.925002	Polygon
Elliot 5C-18HZ_CP	7149.00	385.07	27.36	40.228653	-104.924904	Point
Elliot 5C-18HZ_BHL	7194.00	571.29	-4624.23	40.229163	-104.941563	Point





**Plan Report for Elliot 5C-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 - Elliot 5C-18HZ_LD - Elliot 5C-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
736.00	0.00	0.00	736.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills Base</b>										
786.00	0.00	0.00	786.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>										
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
986.00	0.00	0.00	986.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Begin Nudge @ 986.00ft</b>										
1,000.00	0.28	61.35	1,000.00	0.01	0.03	-0.03	2.00	2.00	0.00	61.35
1,100.00	2.28	61.35	1,099.97	1.08	1.99	-1.95	2.00	2.00	0.00	0.00
1,200.00	4.28	61.35	1,199.80	3.83	7.01	-6.85	2.00	2.00	0.00	0.00
1,300.00	6.28	61.35	1,299.37	8.24	15.09	-14.74	2.00	2.00	0.00	0.00
1,343.74	7.15	61.35	1,342.81	10.69	19.58	-19.13	2.00	2.00	0.00	0.00
<b>End Nudge @ 1343.74ft</b>										
1,400.00	7.15	61.35	1,398.63	14.05	25.72	-25.14	0.00	0.00	0.00	0.00
1,500.00	7.15	61.35	1,497.85	20.02	36.65	-35.82	0.00	0.00	0.00	0.00
1,600.00	7.15	61.35	1,597.08	26.00	47.58	-46.51	0.00	0.00	0.00	0.00
1,700.00	7.15	61.35	1,696.30	31.97	58.51	-57.19	0.00	0.00	0.00	0.00
1,800.00	7.15	61.35	1,795.52	37.94	69.44	-67.87	0.00	0.00	0.00	0.00
1,900.00	7.15	61.35	1,894.74	43.91	80.37	-78.55	0.00	0.00	0.00	0.00
2,000.00	7.15	61.35	1,993.96	49.89	91.30	-89.24	0.00	0.00	0.00	0.00
2,100.00	7.15	61.35	2,093.18	55.86	102.23	-99.92	0.00	0.00	0.00	0.00
2,200.00	7.15	61.35	2,192.40	61.83	113.16	-110.60	0.00	0.00	0.00	0.00
2,300.00	7.15	61.35	2,291.62	67.80	124.09	-121.28	0.00	0.00	0.00	0.00
2,400.00	7.15	61.35	2,390.85	73.77	135.02	-131.97	0.00	0.00	0.00	0.00
2,500.00	7.15	61.35	2,490.07	79.75	145.95	-142.65	0.00	0.00	0.00	0.00
2,600.00	7.15	61.35	2,589.29	85.72	156.88	-153.33	0.00	0.00	0.00	0.00
2,700.00	7.15	61.35	2,688.51	91.69	167.81	-164.01	0.00	0.00	0.00	0.00
2,800.00	7.15	61.35	2,787.73	97.66	178.74	-174.70	0.00	0.00	0.00	0.00
2,900.00	7.15	61.35	2,886.95	103.64	189.67	-185.38	0.00	0.00	0.00	0.00
3,000.00	7.15	61.35	2,986.17	109.61	200.60	-196.06	0.00	0.00	0.00	0.00
3,100.00	7.15	61.35	3,085.40	115.58	211.53	-206.74	0.00	0.00	0.00	0.00
3,200.00	7.15	61.35	3,184.62	121.55	222.46	-217.43	0.00	0.00	0.00	0.00
3,300.00	7.15	61.35	3,283.84	127.52	233.39	-228.11	0.00	0.00	0.00	0.00
3,400.00	7.15	61.35	3,383.06	133.50	244.32	-238.79	0.00	0.00	0.00	0.00
3,500.00	7.15	61.35	3,482.28	139.47	255.25	-249.47	0.00	0.00	0.00	0.00
3,549.10	7.15	61.35	3,531.00	142.40	260.62	-254.72	0.00	0.00	0.00	0.00
<b>Parkman</b>										
3,600.00	7.15	61.35	3,581.50	145.44	266.18	-260.16	0.00	0.00	0.00	0.00
3,700.00	7.15	61.35	3,680.72	151.41	277.11	-270.84	0.00	0.00	0.00	0.00
3,800.00	7.15	61.35	3,779.94	157.38	288.04	-281.52	0.00	0.00	0.00	0.00
3,900.00	7.15	61.35	3,879.17	163.36	298.97	-292.20	0.00	0.00	0.00	0.00
4,000.00	7.15	61.35	3,978.39	169.33	309.90	-302.88	0.00	0.00	0.00	0.00
4,006.66	7.15	61.35	3,985.00	169.73	310.63	-303.60	0.00	0.00	0.00	0.00
<b>Sussex</b>										
4,100.00	7.15	61.35	4,077.61	175.30	320.83	-313.57	0.00	0.00	0.00	0.00
4,200.00	7.15	61.35	4,176.83	181.27	331.76	-324.25	0.00	0.00	0.00	0.00
4,300.00	7.15	61.35	4,276.05	187.25	342.69	-334.93	0.00	0.00	0.00	0.00

## Plan Report for Elliot 5C-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 (°)
4,400.00	7.15	61.35	4,375.27	193.22	353.62	-345.61	0.00	0.00	0.00	0.00
4,500.00	7.15	61.35	4,474.49	199.19	364.55	-356.30	0.00	0.00	0.00	0.00
4,600.00	7.15	61.35	4,573.72	205.16	375.48	-366.98	0.00	0.00	0.00	0.00
4,700.00	7.15	61.35	4,672.94	211.13	386.41	-377.66	0.00	0.00	0.00	0.00
4,800.00	7.15	61.35	4,772.16	217.11	397.34	-388.34	0.00	0.00	0.00	0.00
4,900.00	7.15	61.35	4,871.38	223.08	408.27	-399.03	0.00	0.00	0.00	0.00
5,000.00	7.15	61.35	4,970.60	229.05	419.20	-409.71	0.00	0.00	0.00	0.00
5,100.00	7.15	61.35	5,069.82	235.02	430.13	-420.39	0.00	0.00	0.00	0.00
5,200.00	7.15	61.35	5,169.04	241.00	441.06	-431.07	0.00	0.00	0.00	0.00
5,300.00	7.15	61.35	5,268.26	246.97	451.99	-441.76	0.00	0.00	0.00	0.00
5,400.00	7.15	61.35	5,367.49	252.94	462.91	-452.44	0.00	0.00	0.00	0.00
5,500.00	7.15	61.35	5,466.71	258.91	473.84	-463.12	0.00	0.00	0.00	0.00
5,600.00	7.15	61.35	5,565.93	264.88	484.77	-473.80	0.00	0.00	0.00	0.00
5,700.00	7.15	61.35	5,665.15	270.86	495.70	-484.49	0.00	0.00	0.00	0.00
5,800.00	7.15	61.35	5,764.37	276.83	506.63	-495.17	0.00	0.00	0.00	0.00
5,900.00	7.15	61.35	5,863.59	282.80	517.56	-505.85	0.00	0.00	0.00	0.00
6,000.00	7.15	61.35	5,962.81	288.77	528.49	-516.53	0.00	0.00	0.00	0.00
6,100.00	7.15	61.35	6,062.04	294.75	539.42	-527.21	0.00	0.00	0.00	0.00
6,200.00	7.15	61.35	6,161.26	300.72	550.35	-537.90	0.00	0.00	0.00	0.00
6,300.00	7.15	61.35	6,260.48	306.69	561.28	-548.58	0.00	0.00	0.00	0.00
6,400.00	7.15	61.35	6,359.70	312.66	572.21	-559.26	0.00	0.00	0.00	0.00
6,457.68	7.15	61.35	6,416.93	316.11	578.52	-565.42	0.00	0.00	0.00	0.00
<b>Top of 4.5" Liner Top @ 6457.68ft</b>										
6,500.00	7.15	61.35	6,458.92	318.63	583.14	-569.94	0.00	0.00	0.00	0.00
6,557.68	7.15	61.35	6,516.15	322.08	589.45	-576.11	0.00	0.00	0.00	0.00
<b>KOP @ 6557.68ft</b>										
6,600.00	4.15	29.56	6,558.27	324.68	592.52	-579.07	10.00	-7.10	-75.10	-148.89
6,700.00	8.89	296.59	6,657.79	331.30	587.38	-573.67	10.00	4.74	-92.97	-117.25
6,800.00	18.46	283.40	6,754.86	338.45	565.01	-551.04	10.00	9.56	-13.20	-24.60
6,868.04	25.16	280.15	6,818.00	343.50	540.27	-526.11	10.00	9.85	-4.77	-11.73
<b>Sharon Springs</b>										
6,900.00	28.32	279.13	6,846.54	345.90	526.09	-511.85	10.00	9.90	-3.19	-8.71
6,935.20	31.81	278.22	6,877.00	348.55	508.66	-494.33	10.00	9.92	-2.57	-7.80
<b>Niobrara A</b>										
6,993.61	37.61	277.06	6,925.00	352.95	475.71	-461.22	10.00	9.94	-2.00	-7.01
<b>Niobrara B</b>										
7,000.00	38.25	276.95	6,930.04	353.42	471.81	-457.31	10.00	9.95	-1.70	-6.05
<b>DLS = 10/100'</b>										
7,089.88	47.20	275.68	6,996.00	360.07	411.26	-396.55	10.00	9.95	-1.41	-5.97
<b>Niobrara C</b>										
7,100.00	48.20	275.56	7,002.81	360.80	403.81	-389.07	10.00	9.96	-1.18	-5.03
7,200.00	58.17	274.55	7,062.66	367.80	324.16	-309.21	10.00	9.97	-1.01	-4.95
7,300.00	68.14	273.74	7,107.76	374.21	235.28	-220.14	10.00	9.97	-0.81	-4.34
7,345.49	72.68	273.41	7,123.00	376.88	192.52	-177.31	10.00	9.98	-0.73	-3.98
<b>Fort Hays</b>										
7,400.00	78.12	273.03	7,136.73	379.84	139.87	-124.58	10.00	9.98	-0.69	-3.86
7,443.00	82.41	272.75	7,144.00	381.98	97.56	-82.21	10.00	9.98	-0.66	-3.77
<b>Codell</b>										
7,500.00	88.10	272.38	7,148.71	384.52	40.83	-25.43	10.00	9.98	-0.65	-3.72
7,513.48	89.45	272.29	7,149.00	385.07	27.36	-11.96	10.00	9.98	-0.64	-3.69
<b>End Build @ 7513.48ft - Landing Target (Heel) - 7" - Elliot 5C-18HZ_CP</b>										
7,600.00	89.45	272.29	7,149.84	388.53	-59.08	74.56	0.00	0.00	0.00	-3.69
7,700.00	89.45	272.29	7,150.80	392.53	-159.00	174.56	0.00	0.00	0.00	0.00
7,800.00	89.45	272.29	7,151.77	396.53	-258.91	274.55	0.00	0.00	0.00	0.00
7,900.00	89.45	272.29	7,152.74	400.53	-358.83	374.55	0.00	0.00	0.00	0.00
8,000.00	89.45	272.29	7,153.70	404.53	-458.74	474.54	0.00	0.00	0.00	0.00
8,100.00	89.45	272.29	7,154.67	408.53	-558.66	574.54	0.00	0.00	0.00	0.00
8,200.00	89.45	272.29	7,155.64	412.53	-658.58	674.53	0.00	0.00	0.00	0.00
8,300.00	89.45	272.29	7,156.60	416.53	-758.49	774.53	0.00	0.00	0.00	0.00

**Plan Report for Elliot 5C-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 (°)
8,400.00	89.45	272.29	7,157.57	420.53	-858.41	874.52	0.00	0.00	0.00	0.00
8,500.00	89.45	272.29	7,158.54	424.53	-958.32	974.52	0.00	0.00	0.00	0.00
8,600.00	89.45	272.29	7,159.50	428.53	-1,058.24	1,074.51	0.00	0.00	0.00	0.00
8,700.00	89.45	272.29	7,160.47	432.53	-1,158.15	1,174.51	0.00	0.00	0.00	0.00
8,800.00	89.45	272.29	7,161.44	436.53	-1,258.07	1,274.51	0.00	0.00	0.00	0.00
8,900.00	89.45	272.29	7,162.40	440.53	-1,357.98	1,374.50	0.00	0.00	0.00	0.00
9,000.00	89.45	272.29	7,163.37	444.53	-1,457.90	1,474.50	0.00	0.00	0.00	0.00
9,100.00	89.45	272.29	7,164.34	448.53	-1,557.81	1,574.49	0.00	0.00	0.00	0.00
9,200.00	89.45	272.29	7,165.30	452.53	-1,657.73	1,674.49	0.00	0.00	0.00	0.00
9,300.00	89.45	272.29	7,166.27	456.53	-1,757.64	1,774.48	0.00	0.00	0.00	0.00
9,400.00	89.45	272.29	7,167.23	460.53	-1,857.56	1,874.48	0.00	0.00	0.00	0.00
9,500.00	89.45	272.29	7,168.20	464.53	-1,957.47	1,974.47	0.00	0.00	0.00	0.00
9,600.00	89.45	272.29	7,169.17	468.53	-2,057.39	2,074.47	0.00	0.00	0.00	0.00
9,700.00	89.45	272.29	7,170.13	472.53	-2,157.30	2,174.46	0.00	0.00	0.00	0.00
9,800.00	89.45	272.29	7,171.10	476.53	-2,257.22	2,274.46	0.00	0.00	0.00	0.00
9,900.00	89.45	272.29	7,172.07	480.53	-2,357.14	2,374.45	0.00	0.00	0.00	0.00
10,000.00	89.45	272.29	7,173.03	484.53	-2,457.05	2,474.45	0.00	0.00	0.00	0.00
10,100.00	89.45	272.29	7,174.00	488.53	-2,556.97	2,574.44	0.00	0.00	0.00	0.00
10,200.00	89.45	272.29	7,174.97	492.53	-2,656.88	2,674.44	0.00	0.00	0.00	0.00
10,300.00	89.45	272.29	7,175.93	496.53	-2,756.80	2,774.44	0.00	0.00	0.00	0.00
10,400.00	89.45	272.29	7,176.90	500.53	-2,856.71	2,874.43	0.00	0.00	0.00	0.00
10,500.00	89.45	272.29	7,177.87	504.53	-2,956.63	2,974.43	0.00	0.00	0.00	0.00
10,600.00	89.45	272.29	7,178.83	508.53	-3,056.54	3,074.42	0.00	0.00	0.00	0.00
10,700.00	89.45	272.29	7,179.80	512.53	-3,156.46	3,174.42	0.00	0.00	0.00	0.00
10,800.00	89.45	272.29	7,180.77	516.53	-3,256.37	3,274.41	0.00	0.00	0.00	0.00
10,900.00	89.45	272.29	7,181.73	520.53	-3,356.29	3,374.41	0.00	0.00	0.00	0.00
11,000.00	89.45	272.29	7,182.70	524.53	-3,456.20	3,474.40	0.00	0.00	0.00	0.00
11,100.00	89.45	272.29	7,183.67	528.53	-3,556.12	3,574.40	0.00	0.00	0.00	0.00
11,200.00	89.45	272.29	7,184.63	532.53	-3,656.03	3,674.39	0.00	0.00	0.00	0.00
11,300.00	89.45	272.29	7,185.60	536.53	-3,755.95	3,774.39	0.00	0.00	0.00	0.00
11,400.00	89.45	272.29	7,186.57	540.53	-3,855.86	3,874.38	0.00	0.00	0.00	0.00
11,500.00	89.45	272.29	7,187.53	544.53	-3,955.78	3,974.38	0.00	0.00	0.00	0.00
11,600.00	89.45	272.29	7,188.50	548.53	-4,055.70	4,074.37	0.00	0.00	0.00	0.00
11,700.00	89.45	272.29	7,189.47	552.53	-4,155.61	4,174.37	0.00	0.00	0.00	0.00
11,800.00	89.45	272.29	7,190.43	556.53	-4,255.53	4,274.36	0.00	0.00	0.00	0.00
11,900.00	89.45	272.29	7,191.40	560.53	-4,355.44	4,374.36	0.00	0.00	0.00	0.00
12,000.00	89.45	272.29	7,192.37	564.53	-4,455.36	4,474.36	0.00	0.00	0.00	0.00
12,100.00	89.45	272.29	7,193.33	568.53	-4,555.27	4,574.35	0.00	0.00	0.00	0.00
12,169.02	89.45	272.29	7,194.00	571.29	-4,624.23	4,643.37	0.00	0.00	0.00	0.00

**Total Depth (Toe) - Elliot 5C-18HZ\_BHL****Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N-S (ft)	+E-W (ft)	
986.00	986.00	0.00	0.00	Begin Nudge @ 986.00ft
1,343.74	1,342.81	10.69	19.58	End Nudge @ 1343.74ft
6,457.68	6,416.93	316.11	578.52	Top of 4.5" Liner Top @ 6457.68ft
6,557.68	6,516.15	322.08	589.45	KOP @ 6557.68ft
7,000.00	6,930.04	353.42	471.81	DLS = 10/100'
7,513.48	7,149.00	385.07	27.36	End Build @ 7513.48ft
12,169.02	7,194.00	571.29	-4,624.23	TD Well @ 12169.02ft

## Plan Report for Elliot 5C-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)	272.29	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	7,513.48	Plan A0 Proposal	MWD
7,513.48	12,169.02	Plan A0 Proposal	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
786.00	786.00	9 5/8"	9-5/8	13-1/2
7,513.48	7,149.00	7"	7	8-3/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
736.00	736.00	Fox Hills Base			
3,549.10	3,531.00	Parkman			
4,006.66	3,985.00	Sussex			
6,868.04	6,818.00	Sharon Springs			
6,935.20	6,877.00	Niobrara A			
6,993.61	6,925.00	Niobrara B			
7,089.88	6,996.00	Niobrara C			
7,345.49	7,123.00	Fort Hays			
7,443.00	7,144.00	Codell			
7,513.48	7,149.00	Landing Target (Heel)			
12,169.02	7,194.00	Total Depth (Toe)			

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Elliot 5C-18HZ_SHL	0.00	0.00	0.00	Point
Elliot 5C-18HZ_BHL	7,194.00	571.29	-4,624.23	Point
ELLIOTT_SEC	0.00	0.00	0.00	Polygon
Elliot 5C-18HZ_CP	7,149.00	385.07	27.36	Point
Elliot 5C-18HZ_LD	0.00	0.00	0.00	Polygon

## North Reference Sheet for Sec. 18-T3N-R67W - Elliot 5C-18HZ - Plan A0

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' @ 4839.00ft (Drilling Rig). Northing and Easting are relative to Elliot 5C-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: 0.99995693

Grid Coordinates of Well: 1,326,275.76 ft N, 3,160,549.02 ft E  
 Geographical Coordinates of Well: 40° 13' 39.35" N, 104° 55' 30.01" W  
 Grid Convergence at Surface is: 0.37°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,169.02ft  
 the Bottom Hole Displacement is 4,659.39ft in the Direction of 277.04° (True).

Magnetic Convergence at surface is: -8.30° (21 August 2013, , BGGM2013)

