

# Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 8 T2N-R66W

Kunzman 3C-5HZ

Plan B Rev 0

Plan: Plan B Rev 0 Permit

## Sperry Drilling Services

## Proposal Report

26 November, 2012

Well Coordinates: 1,301,807.49 N, 3,194,525.04 E (40° 09' 35.14" N, 104° 48' 14.44" W)

Ground Level: 4,858.00 ft

Local Coordinate Origin:

Centered on Well Kunzman 3C-5HZ

Viewing Datum:

RKB=17 @ 4875.00ft (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. 8 T2N-R66W  
 Well: Kunzman 3C-5HZ  
 Wellbore: Plan B Rev 0  
 Design: Plan B Rev 0 Permit

# Anadarko Petroleum Corp.

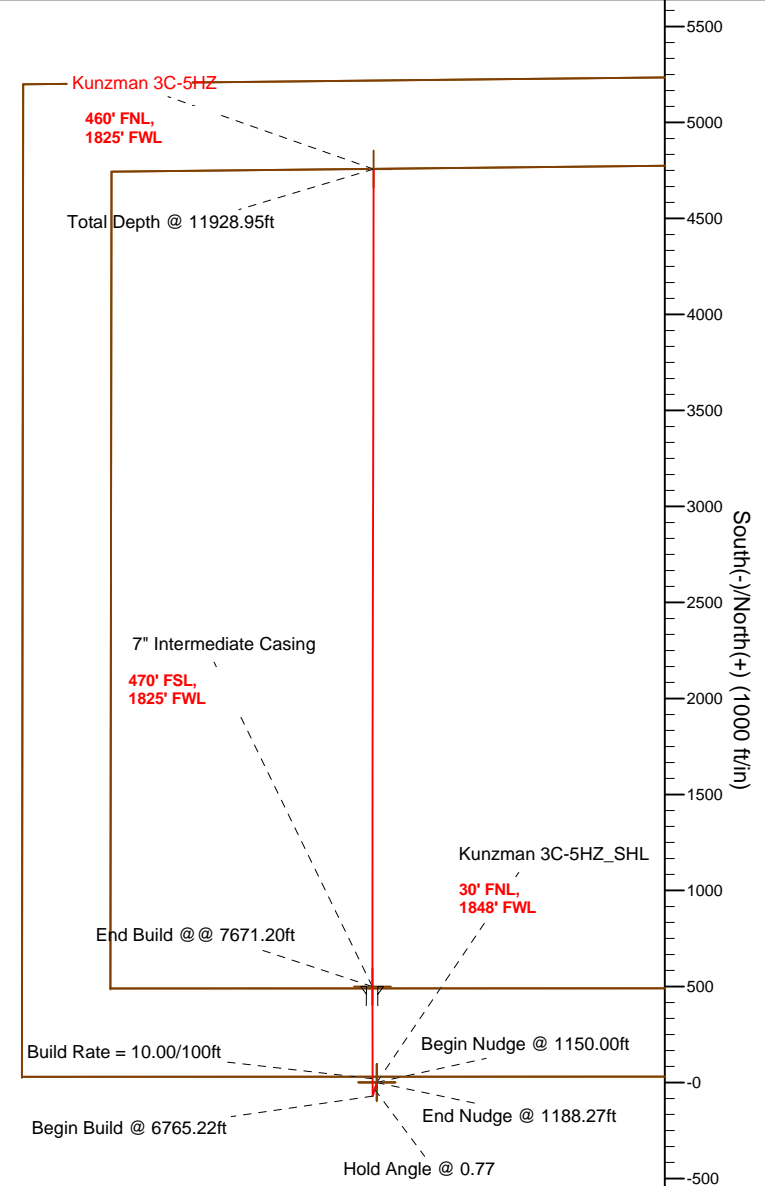
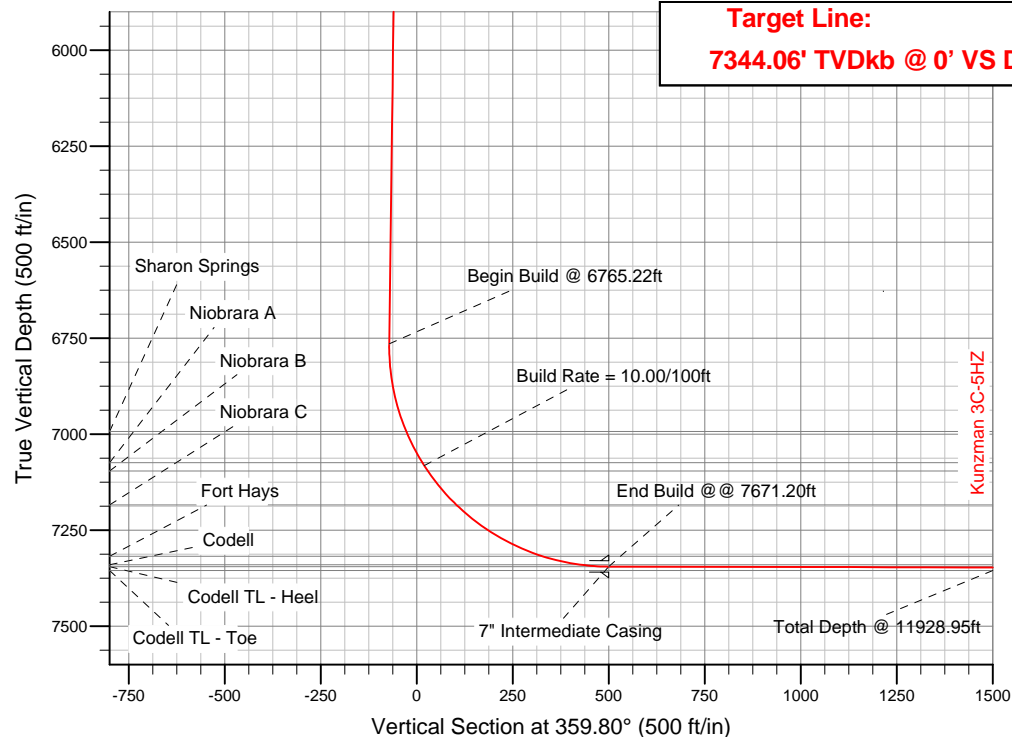
**HALLIBURTON**  
 Sperry Drilling

## 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	1150.00	0.00	0.00	1150.00	0.00	0.00	0.00	0.00	0.00	
3	1188.27	0.77	196.80	1188.27	-0.24	-0.07	2.00	196.80	-0.24	
4	6765.22	0.77	196.80	6764.72	-71.57	-21.61	0.00	0.00	-71.49	
5	7671.20	89.87	0.08	7345.00	500.00	-23.00	10.00	163.28	500.08	Kunzman 3C-5HZ_CP
6	11928.95	89.87	0.08	7355.00	4757.73	-16.77	0.00	0.00	4757.76	Kunzman 3C-5HZ_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Kunzman 3C-5HZ_SB	0.00	0.00	0.00	40.159761	-104.804011	Polygon
Kunzman 3C-5HZ_Sec	0.00	0.00	0.00	40.159761	-104.804011	Polygon
Kunzman 3C-5HZ_SHL	0.00	0.00	0.00	40.159761	-104.804011	Point
Kunzman 3C-5HZ_CP	7345.00	500.00	-23.00	40.161133	-104.804093	Point
Kunzman 3C-5HZ_BHL	7355.00	4757.73	-16.77	40.172821	-104.804071	Point



## WELL DETAILS: Kunzman 3C-5HZ

Ground Level: 4858.00 RKB=17 @ 4875.00ft (Drilling Rig)

Plan: Plan B Rev 0 Permit (Kunzman 3C-5HZ/Plan B Rev 0)

Created By: Fred Hartmann Date: 11/19/2012  
 Reviewed: Date:

**Plan Report for Kunzman 3C-5HZ - Plan B Rev 0 Permit**

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>Kunzman 3C-5HZ_SB - Kunzman 3C-5HZ_SHL - Kunzman 3C-5HZ_Sec</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
707.00	0.00	0.00	707.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Fox Hills</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
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,150.00	0.00	0.00	1,150.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Begin Nudge @ 1150.00ft</b>										
1,188.27	0.77	196.80	1,188.27	-0.24	-0.07	-0.24	2.00	2.00	0.00	196.80
<b>End Nudge @ 1188.27ft</b>										
1,200.00	0.77	196.80	1,200.00	-0.39	-0.12	-0.39	0.00	0.00	0.00	0.00
1,300.00	0.77	196.80	1,299.99	-1.67	-0.51	-1.67	0.00	0.00	0.00	0.00
1,400.00	0.77	196.80	1,399.98	-2.95	-0.89	-2.95	0.00	0.00	0.00	0.00
1,500.00	0.77	196.80	1,499.97	-4.23	-1.28	-4.23	0.00	0.00	0.00	0.00
1,600.00	0.77	196.80	1,599.96	-5.51	-1.66	-5.50	0.00	0.00	0.00	0.00
1,700.00	0.77	196.80	1,699.95	-6.79	-2.05	-6.78	0.00	0.00	0.00	0.00
1,800.00	0.77	196.80	1,799.94	-8.07	-2.44	-8.06	0.00	0.00	0.00	0.00
1,900.00	0.77	196.80	1,899.94	-9.35	-2.82	-9.34	0.00	0.00	0.00	0.00
2,000.00	0.77	196.80	1,999.93	-10.63	-3.21	-10.61	0.00	0.00	0.00	0.00
2,100.00	0.77	196.80	2,099.92	-11.90	-3.59	-11.89	0.00	0.00	0.00	0.00
2,200.00	0.77	196.80	2,199.91	-13.18	-3.98	-13.17	0.00	0.00	0.00	0.00
2,300.00	0.77	196.80	2,299.90	-14.46	-4.37	-14.45	0.00	0.00	0.00	0.00
2,400.00	0.77	196.80	2,399.89	-15.74	-4.75	-15.72	0.00	0.00	0.00	0.00
2,500.00	0.77	196.80	2,499.88	-17.02	-5.14	-17.00	0.00	0.00	0.00	0.00
2,600.00	0.77	196.80	2,599.87	-18.30	-5.53	-18.28	0.00	0.00	0.00	0.00
2,700.00	0.77	196.80	2,699.86	-19.58	-5.91	-19.56	0.00	0.00	0.00	0.00
2,800.00	0.77	196.80	2,799.86	-20.86	-6.30	-20.83	0.00	0.00	0.00	0.00
2,900.00	0.77	196.80	2,899.85	-22.14	-6.68	-22.11	0.00	0.00	0.00	0.00
3,000.00	0.77	196.80	2,999.84	-23.41	-7.07	-23.39	0.00	0.00	0.00	0.00
3,100.00	0.77	196.80	3,099.83	-24.69	-7.46	-24.67	0.00	0.00	0.00	0.00
3,200.00	0.77	196.80	3,199.82	-25.97	-7.84	-25.94	0.00	0.00	0.00	0.00
3,300.00	0.77	196.80	3,299.81	-27.25	-8.23	-27.22	0.00	0.00	0.00	0.00
3,400.00	0.77	196.80	3,399.80	-28.53	-8.62	-28.50	0.00	0.00	0.00	0.00
3,500.00	0.77	196.80	3,499.79	-29.81	-9.00	-29.78	0.00	0.00	0.00	0.00
3,600.00	0.77	196.80	3,599.78	-31.09	-9.39	-31.05	0.00	0.00	0.00	0.00
3,700.00	0.77	196.80	3,699.77	-32.37	-9.77	-32.33	0.00	0.00	0.00	0.00
3,800.00	0.77	196.80	3,799.77	-33.65	-10.16	-33.61	0.00	0.00	0.00	0.00
3,900.00	0.77	196.80	3,899.76	-34.92	-10.55	-34.89	0.00	0.00	0.00	0.00
3,922.25	0.77	196.80	3,922.00	-35.21	-10.63	-35.17	0.00	0.00	0.00	0.00
<b>Parkman</b>										
4,000.00	0.77	196.80	3,999.75	-36.20	-10.93	-36.16	0.00	0.00	0.00	0.00
<b>Hold Angle @ 0.77</b>										
4,100.00	0.77	196.80	4,099.74	-37.48	-11.32	-37.44	0.00	0.00	0.00	0.00
4,200.00	0.77	196.80	4,199.73	-38.76	-11.70	-38.72	0.00	0.00	0.00	0.00
4,300.00	0.77	196.80	4,299.72	-40.04	-12.09	-40.00	0.00	0.00	0.00	0.00
4,322.28	0.77	196.80	4,322.00	-40.33	-12.18	-40.28	0.00	0.00	0.00	0.00
<b>Sussex</b>										
4,400.00	0.77	196.80	4,399.71	-41.32	-12.48	-41.28	0.00	0.00	0.00	0.00

**Plan Report for Kunzman 3C-5HZ - Plan B Rev 0 Permit**

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 (°)
4,500.00	0.77	196.80	4,499.70	-42.60	-12.86	-42.55	0.00	0.00	0.00	0.00
4,600.00	0.77	196.80	4,599.69	-43.88	-13.25	-43.83	0.00	0.00	0.00	0.00
4,700.00	0.77	196.80	4,699.69	-45.16	-13.64	-45.11	0.00	0.00	0.00	0.00
4,800.00	0.77	196.80	4,799.68	-46.43	-14.02	-46.39	0.00	0.00	0.00	0.00
4,900.00	0.77	196.80	4,899.67	-47.71	-14.41	-47.66	0.00	0.00	0.00	0.00
5,000.00	0.77	196.80	4,999.66	-48.99	-14.79	-48.94	0.00	0.00	0.00	0.00
5,100.00	0.77	196.80	5,099.65	-50.27	-15.18	-50.22	0.00	0.00	0.00	0.00
5,200.00	0.77	196.80	5,199.64	-51.55	-15.57	-51.50	0.00	0.00	0.00	0.00
5,300.00	0.77	196.80	5,299.63	-52.83	-15.95	-52.77	0.00	0.00	0.00	0.00
5,400.00	0.77	196.80	5,399.62	-54.11	-16.34	-54.05	0.00	0.00	0.00	0.00
5,500.00	0.77	196.80	5,499.61	-55.39	-16.73	-55.33	0.00	0.00	0.00	0.00
5,600.00	0.77	196.80	5,599.61	-56.67	-17.11	-56.61	0.00	0.00	0.00	0.00
5,700.00	0.77	196.80	5,699.60	-57.94	-17.50	-57.88	0.00	0.00	0.00	0.00
5,800.00	0.77	196.80	5,799.59	-59.22	-17.88	-59.16	0.00	0.00	0.00	0.00
5,900.00	0.77	196.80	5,899.58	-60.50	-18.27	-60.44	0.00	0.00	0.00	0.00
6,000.00	0.77	196.80	5,999.57	-61.78	-18.66	-61.72	0.00	0.00	0.00	0.00
6,100.00	0.77	196.80	6,099.56	-63.06	-19.04	-62.99	0.00	0.00	0.00	0.00
6,200.00	0.77	196.80	6,199.55	-64.34	-19.43	-64.27	0.00	0.00	0.00	0.00
6,300.00	0.77	196.80	6,299.54	-65.62	-19.81	-65.55	0.00	0.00	0.00	0.00
6,400.00	0.77	196.80	6,399.53	-66.90	-20.20	-66.83	0.00	0.00	0.00	0.00
6,500.00	0.77	196.80	6,499.52	-68.18	-20.59	-68.10	0.00	0.00	0.00	0.00
6,600.00	0.77	196.80	6,599.52	-69.45	-20.97	-69.38	0.00	0.00	0.00	0.00
6,700.00	0.77	196.80	6,699.51	-70.73	-21.36	-70.66	0.00	0.00	0.00	0.00
6,765.22	0.77	196.80	6,764.72	-71.57	-21.61	-71.49	0.00	0.00	0.00	0.00
<b>Begin Build @ 6765.22ft</b>										
6,800.00	2.75	355.50	6,799.49	-70.96	-21.74	-70.88	10.00	5.72	456.29	163.28
6,900.00	12.75	359.11	6,898.45	-57.50	-22.10	-57.42	10.00	9.99	3.61	4.59
6,999.38	22.68	359.56	6,993.00	-27.30	-22.42	-27.22	10.00	10.00	0.45	1.00
<b>Sharon Springs</b>										
7,000.00	22.75	359.56	6,993.57	-27.06	-22.43	-26.98	10.00	10.00	0.26	0.57
7,090.58	31.80	359.73	7,074.00	14.41	-22.67	14.49	10.00	10.00	0.19	0.57
<b>Niobrara A</b>										
7,100.00	32.75	359.74	7,081.96	19.44	-22.70	19.52	10.00	10.00	0.13	0.42
<b>Build Rate = 10.00/100ft</b>										
7,116.85	34.43	359.76	7,096.00	28.76	-22.74	28.84	10.00	10.00	0.13	0.41
<b>Niobrara B</b>										
7,200.00	42.75	359.85	7,160.93	80.58	-22.91	80.66	10.00	10.00	0.10	0.39
7,232.26	45.97	359.87	7,184.00	103.13	-22.97	103.21	10.00	10.00	0.08	0.32
<b>Niobrara C</b>										
7,300.00	52.75	359.92	7,228.09	154.50	-23.06	154.58	10.00	10.00	0.07	0.31
7,400.00	62.75	359.97	7,281.39	238.96	-23.14	239.04	10.00	10.00	0.05	0.28
7,495.95	72.34	0.01	7,318.00	327.53	-23.15	327.61	10.00	10.00	0.05	0.25
<b>Fort Hays</b>										
7,500.00	72.75	0.02	7,319.22	331.39	-23.15	331.47	10.00	10.00	0.04	0.23
7,596.79	82.42	0.06	7,340.00	425.80	-23.09	425.88	10.00	10.00	0.04	0.23
<b>Codell</b>										
7,600.00	82.75	0.06	7,340.41	428.99	-23.09	429.07	10.00	10.00	0.04	0.22
7,671.20	89.87	0.08	7,345.00	500.00	-23.00	500.08	10.00	10.00	0.04	0.22
<b>End Build @ 7671.20ft - Codell TL - Heel - 7" Intermediate Casing - Kunzman 3C-5HZ_CP</b>										
7,700.00	89.87	0.08	7,345.07	528.80	-22.96	528.88	0.00	0.00	0.00	0.22
7,800.00	89.87	0.08	7,345.30	628.80	-22.81	628.87	0.00	0.00	0.00	0.00
7,900.00	89.87	0.08	7,345.54	728.80	-22.67	728.87	0.00	0.00	0.00	0.00
8,000.00	89.87	0.08	7,345.77	828.80	-22.52	828.87	0.00	0.00	0.00	0.00
8,100.00	89.87	0.08	7,346.01	928.80	-22.37	928.87	0.00	0.00	0.00	0.00
8,200.00	89.87	0.08	7,346.24	1,028.80	-22.23	1,028.87	0.00	0.00	0.00	0.00
8,300.00	89.87	0.08	7,346.48	1,128.80	-22.08	1,128.87	0.00	0.00	0.00	0.00
8,400.00	89.87	0.08	7,346.71	1,228.80	-21.93	1,228.87	0.00	0.00	0.00	0.00
8,500.00	89.87	0.08	7,346.95	1,328.80	-21.79	1,328.86	0.00	0.00	0.00	0.00
8,600.00	89.87	0.08	7,347.18	1,428.79	-21.64	1,428.86	0.00	0.00	0.00	0.00

**Plan Report for Kunzman 3C-5HZ - Plan B Rev 0 Permit**

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 (°)
8,700.00	89.87	0.08	7,347.42	1,528.79	-21.49	1,528.86	0.00	0.00	0.00	0.00
8,800.00	89.87	0.08	7,347.65	1,628.79	-21.35	1,628.86	0.00	0.00	0.00	0.00
8,900.00	89.87	0.08	7,347.89	1,728.79	-21.20	1,728.86	0.00	0.00	0.00	0.00
9,000.00	89.87	0.08	7,348.12	1,828.79	-21.05	1,828.86	0.00	0.00	0.00	0.00
9,100.00	89.87	0.08	7,348.36	1,928.79	-20.91	1,928.85	0.00	0.00	0.00	0.00
9,200.00	89.87	0.08	7,348.59	2,028.79	-20.76	2,028.85	0.00	0.00	0.00	0.00
9,300.00	89.87	0.08	7,348.83	2,128.79	-20.62	2,128.85	0.00	0.00	0.00	0.00
9,400.00	89.87	0.08	7,349.06	2,228.79	-20.47	2,228.85	0.00	0.00	0.00	0.00
9,500.00	89.87	0.08	7,349.30	2,328.79	-20.32	2,328.85	0.00	0.00	0.00	0.00
9,600.00	89.87	0.08	7,349.53	2,428.79	-20.18	2,428.85	0.00	0.00	0.00	0.00
9,700.00	89.87	0.08	7,349.76	2,528.79	-20.03	2,528.85	0.00	0.00	0.00	0.00
9,800.00	89.87	0.08	7,350.00	2,628.79	-19.88	2,628.84	0.00	0.00	0.00	0.00
9,900.00	89.87	0.08	7,350.23	2,728.79	-19.74	2,728.84	0.00	0.00	0.00	0.00
10,000.00	89.87	0.08	7,350.47	2,828.79	-19.59	2,828.84	0.00	0.00	0.00	0.00
10,100.00	89.87	0.08	7,350.70	2,928.79	-19.44	2,928.84	0.00	0.00	0.00	0.00
10,200.00	89.87	0.08	7,350.94	3,028.79	-19.30	3,028.84	0.00	0.00	0.00	0.00
10,300.00	89.87	0.08	7,351.17	3,128.79	-19.15	3,128.84	0.00	0.00	0.00	0.00
10,400.00	89.87	0.08	7,351.41	3,228.79	-19.01	3,228.83	0.00	0.00	0.00	0.00
10,500.00	89.87	0.08	7,351.64	3,328.79	-18.86	3,328.83	0.00	0.00	0.00	0.00
10,600.00	89.87	0.08	7,351.88	3,428.79	-18.71	3,428.83	0.00	0.00	0.00	0.00
10,700.00	89.87	0.08	7,352.11	3,528.79	-18.57	3,528.83	0.00	0.00	0.00	0.00
10,800.00	89.87	0.08	7,352.35	3,628.79	-18.42	3,628.83	0.00	0.00	0.00	0.00
10,900.00	89.87	0.08	7,352.58	3,728.79	-18.27	3,728.83	0.00	0.00	0.00	0.00
11,000.00	89.87	0.08	7,352.82	3,828.79	-18.13	3,828.83	0.00	0.00	0.00	0.00
11,100.00	89.87	0.08	7,353.05	3,928.79	-17.98	3,928.82	0.00	0.00	0.00	0.00
11,200.00	89.87	0.08	7,353.29	4,028.79	-17.83	4,028.82	0.00	0.00	0.00	0.00
11,300.00	89.87	0.08	7,353.52	4,128.78	-17.69	4,128.82	0.00	0.00	0.00	0.00
11,400.00	89.87	0.08	7,353.76	4,228.78	-17.54	4,228.82	0.00	0.00	0.00	0.00
11,500.00	89.87	0.08	7,353.99	4,328.78	-17.40	4,328.82	0.00	0.00	0.00	0.00
11,600.00	89.87	0.08	7,354.23	4,428.78	-17.25	4,428.82	0.00	0.00	0.00	0.00
11,700.00	89.87	0.08	7,354.46	4,528.78	-17.10	4,528.82	0.00	0.00	0.00	0.00
11,800.00	89.87	0.08	7,354.70	4,628.78	-16.96	4,628.81	0.00	0.00	0.00	0.00
11,900.00	89.87	0.08	7,354.93	4,728.78	-16.81	4,728.81	0.00	0.00	0.00	0.00
11,928.95	89.87	0.08	7,355.00	4,757.73	-16.77	4,757.76	0.00	0.00	0.00	0.00

Codell TL - Toe - Kunzman 3C-5HZ\_BHL

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
1,150.00	1,150.00	0.00	0.00	Begin Nudge @ 1150.00ft
1,188.27	1,188.27	-0.24	-0.07	End Nudge @ 1188.27ft
4,000.00	3,999.75	-36.20	-10.93	Hold Angle @ 0.77
6,765.22	6,764.72	-71.57	-21.61	Begin Build @ 6765.22ft
7,100.00	7,081.96	19.44	-22.70	Build Rate = 10.00/100ft
7,671.20	7,345.00	500.00	-23.00	End Build @ 7671.20ft
11,928.95	7,355.00	4,757.73	-16.77	Total Depth @ 11928.95ft

**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (ft)	+E/-W (ft)	Start TVD (ft)
Target	Kunzman 3C-5HZ_BHL	359.80	Slot	0.00	0.00	0.00

**Plan Report for Kunzman 3C-5HZ - Plan B Rev 0 Permit****Survey tool program**

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	11,928.95	Plan B Rev 0 Permit	MWD

**Casing Details**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,671.20	7,345.00	7" Intermediate Casing	7	8-3/4

**Formation Details**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
707.00	707.00	Fox Hills		0.00	
3,922.25	3,922.00	Parkman		0.00	
4,322.28	4,322.00	Sussex		0.00	
6,999.38	6,993.00	Sharon Springs		0.00	
7,090.58	7,074.00	Niobrara A		0.00	
7,116.85	7,096.00	Niobrara B		0.00	
7,232.26	7,184.00	Niobrara C		0.00	
7,495.95	7,318.00	Fort Hays		0.00	
7,596.79	7,340.00	Codell		0.00	
7,671.20	7,345.00	Codell TL - Heel		0.00	
11,928.95	7,355.00	Codell TL - Toe		0.00	

***Targets associated with this wellbore***

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Kunzman 3C-5HZ_SB	0.00	0.00	0.00	Polygon
Kunzman 3C-5HZ_SHL	0.00	0.00	0.00	Point
Kunzman 3C-5HZ_CP	7,345.00	500.00	-23.00	Point
Kunzman 3C-5HZ_Sec	0.00	0.00	0.00	Polygon
Kunzman 3C-5HZ_BHL	7,355.00	4,757.73	-16.77	Point

## North Reference Sheet for Sec. 8 T2N-R66W - Kunzman 3C-5HZ - Plan B Rev 0

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 @ 4875.00ft (Drilling Rig). Northing and Easting are relative to Kunzman 3C-5HZ

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: 0.99995810

Grid Coordinates of Well: 1,301,807.49 ft N, 3,194,525.04 ft E

Geographical Coordinates of Well: 40° 09' 35.14" N, 104° 48' 14.44" W

Grid Convergence at Surface is: 0.45°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,928.95ft  
the Bottom Hole Displacement is 4,757.76ft in the Direction of 359.80° (True).

Magnetic Convergence at surface is: -8.27° (26 November 2012, , BGGM2012)

