

# Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 3-T5N-R67W

Shurview 13N-3HZ

Plan A Rev 0

Plan: Plan A Rev 0 Permit

## Sperry Drilling Services

## Proposal Report

29 June, 2012

Well Coordinates: 1,398,937.80 N, 3,174,608.42 E (40° 25' 36.45" N, 104° 52' 22.12" W)

Ground Level: 4,888.00 ft

Local Coordinate Origin:

Centered on Well Shurview 13N-3HZ

Viewing Datum:

RKB=17ft @ 4905.00ft (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. 3-T5N-R67W  
 Well: Shurview 13N-3HZ  
 Wellbore: Plan A Rev 0  
 Design: Plan A Rev 0 Permit

# Anadarko Petroleum Corp.

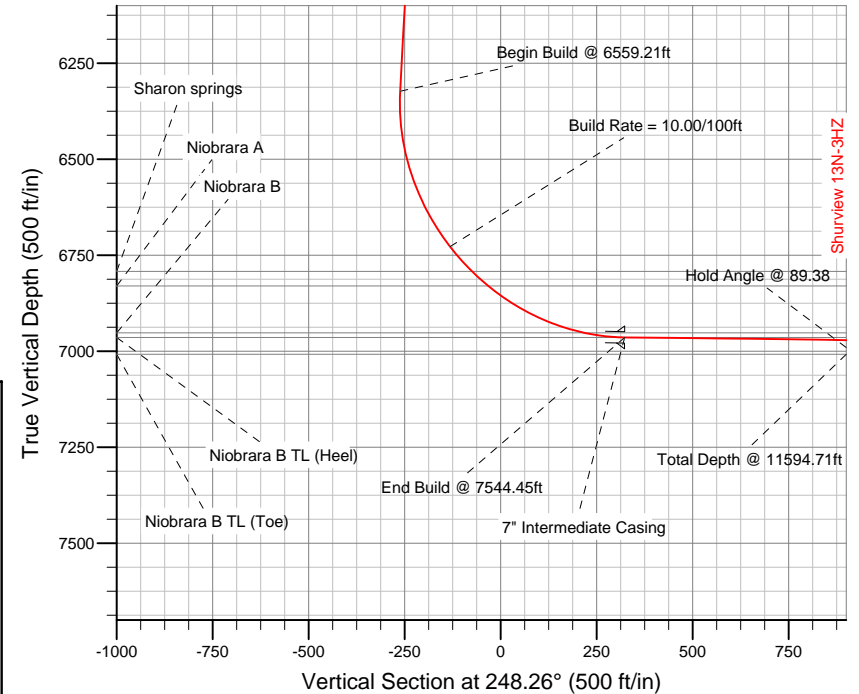
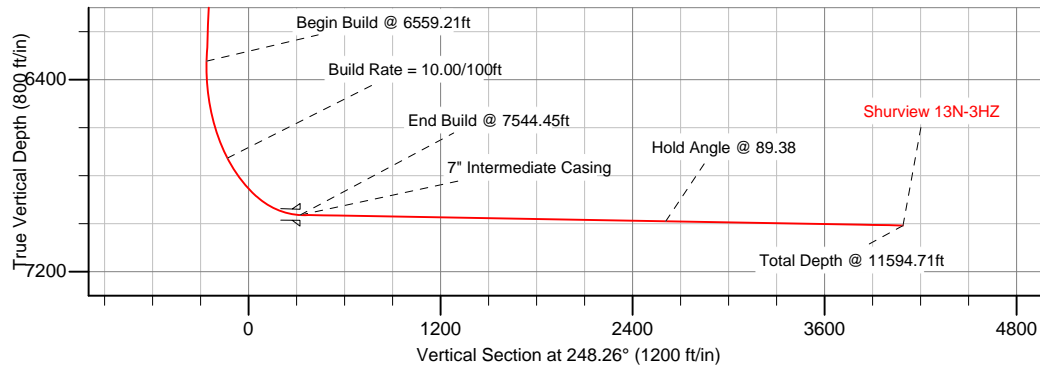
**HALLIBURTON**  
 Sperry Drilling

## 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	1050.00	0.00	0.00	1050.00	0.00	0.00	0.00	0.00	0.00	
3	1940.80	17.82	148.55	1926.51	-117.20	71.68	2.00	148.55	-23.16	
4	6559.21	17.82	148.55	6323.45	-1322.64	808.98	0.00	0.00	-261.43	
5	7544.45	89.38	269.76	6964.00	-1499.00	250.00	10.00	120.15	323.12	Shurview 13N-3HZ_Casing Point
6	11594.71	89.38	269.76	7008.00	-1515.61	-3799.99	0.00	0.00	4091.09	Shurview 13N-3HZ_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Shurview 13N-3HZ_Section Line	0.00	0.00	0.00	40.426791	-104.872810	Polygon
Shurview 13N-3HZ_Setback Line	0.00	0.00	0.00	40.426791	-104.872810	Polygon
Shurview 13N-3HZ_SHL	0.00	0.00	0.00	40.426791	-104.872810	Point
Shurview 13N-3HZ_Casing Point	6964.00	-1499.00	250.00	40.422676	-104.871912	Point
Shurview 13N-3HZ_BHL	7008.00	-1515.61	-3799.99	40.422630	-104.886458	Point

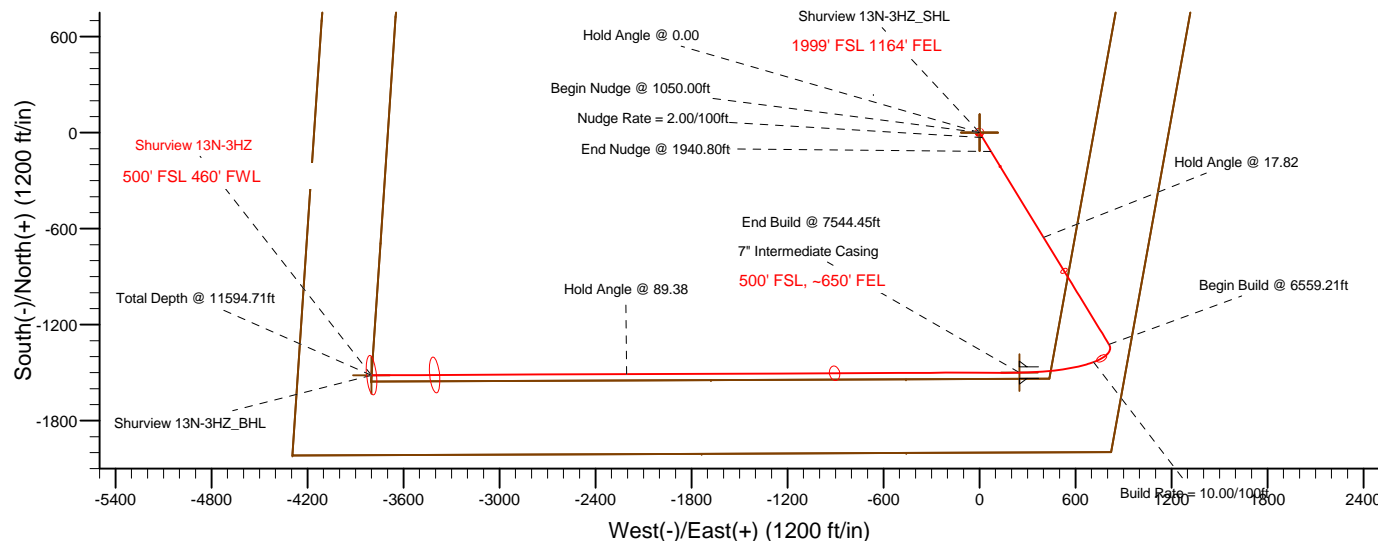


## CASING DETAILS

TVD	MD	Name	Size
6964.00	7544.45	7" Intermediate Casing	7

Northings	Eastings
1,397,440.66	3,174,869.01

**Target Line:**  
**6963.73' TVDkb @ 0' VS Drilling 89.38°**



## WELL DETAILS: Shurview 13N-3HZ

Ground Level: 4888.00 RKB=17ft @ 4905.00ft (Drilling Rig)

Plan: Plan A Rev 0 Permit (Shurview 13N-3HZ/Plan A Rev 0)

Created By: Fred Hartmann Date: 06/28/2012  
 Reviewed: Date:

**Plan Report for Shurview 13N-3HZ - Plan A 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>Tie-On to Surface @ 0.00ft - Shurview 13N-3HZ_SHL - Shurview 13N-3HZ_Section Line - Shurview 13N-3HZ_Setback Line</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
<b>Hold Angle @ 0.00</b>										
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
717.00	0.00	0.00	717.00	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
1,050.00	0.00	0.00	1,050.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Begin Nudge @ 1050.00ft</b>										
1,100.00	1.00	148.55	1,100.00	-0.37	0.23	-0.07	2.00	2.00	0.00	148.55
1,200.00	3.00	148.55	1,199.93	-3.35	2.05	-0.66	2.00	2.00	0.00	0.00
1,300.00	5.00	148.55	1,299.68	-9.30	5.69	-1.84	2.00	2.00	0.00	0.00
1,400.00	7.00	148.55	1,399.13	-18.22	11.14	-3.60	2.00	2.00	0.00	0.00
1,500.00	9.00	148.55	1,498.15	-30.09	18.40	-5.95	2.00	2.00	0.00	0.00
<b>Nudge Rate = 2.00/100ft</b>										
1,600.00	11.00	148.55	1,596.63	-44.90	27.46	-8.87	2.00	2.00	0.00	0.00
1,700.00	13.00	148.55	1,694.44	-62.64	38.31	-12.38	2.00	2.00	0.00	0.00
1,800.00	15.00	148.55	1,791.46	-83.27	50.93	-16.46	2.00	2.00	0.00	0.00
1,900.00	17.00	148.55	1,887.58	-106.79	65.32	-21.11	2.00	2.00	0.00	0.00
1,940.80	17.82	148.55	1,926.51	-117.20	71.68	-23.17	2.00	2.00	0.00	0.00
<b>End Nudge @ 1940.80ft</b>										
2,000.00	17.82	148.55	1,982.88	-132.65	81.14	-26.22	0.00	0.00	0.00	0.00
2,100.00	17.82	148.55	2,078.08	-158.75	97.10	-31.38	0.00	0.00	0.00	0.00
2,200.00	17.82	148.55	2,173.28	-184.85	113.06	-36.54	0.00	0.00	0.00	0.00
2,300.00	17.82	148.55	2,268.49	-210.95	129.03	-41.70	0.00	0.00	0.00	0.00
2,400.00	17.82	148.55	2,363.69	-237.05	144.99	-46.85	0.00	0.00	0.00	0.00
2,500.00	17.82	148.55	2,458.90	-263.16	160.96	-52.01	0.00	0.00	0.00	0.00
2,600.00	17.82	148.55	2,554.10	-289.26	176.92	-57.17	0.00	0.00	0.00	0.00
2,700.00	17.82	148.55	2,649.31	-315.36	192.89	-62.33	0.00	0.00	0.00	0.00
2,800.00	17.82	148.55	2,744.51	-341.46	208.85	-67.49	0.00	0.00	0.00	0.00
2,900.00	17.82	148.55	2,839.72	-367.56	224.81	-72.65	0.00	0.00	0.00	0.00
3,000.00	17.82	148.55	2,934.92	-393.66	240.78	-77.81	0.00	0.00	0.00	0.00
3,100.00	17.82	148.55	3,030.12	-419.76	256.74	-82.97	0.00	0.00	0.00	0.00
3,200.00	17.82	148.55	3,125.33	-445.86	272.71	-88.13	0.00	0.00	0.00	0.00
3,300.00	17.82	148.55	3,220.53	-471.96	288.67	-93.29	0.00	0.00	0.00	0.00
3,400.00	17.82	148.55	3,315.74	-498.06	304.64	-98.44	0.00	0.00	0.00	0.00
3,500.00	17.82	148.55	3,410.94	-524.16	320.60	-103.60	0.00	0.00	0.00	0.00
3,600.00	17.82	148.55	3,506.15	-550.26	336.57	-108.76	0.00	0.00	0.00	0.00
3,619.80	17.82	148.55	3,525.00	-555.43	339.73	-109.78	0.00	0.00	0.00	0.00
<b>Parkman</b>										
3,700.00	17.82	148.55	3,601.35	-576.36	352.53	-113.92	0.00	0.00	0.00	0.00
3,800.00	17.82	148.55	3,696.56	-602.47	368.49	-119.08	0.00	0.00	0.00	0.00
3,900.00	17.82	148.55	3,791.76	-628.57	384.46	-124.24	0.00	0.00	0.00	0.00
4,000.00	17.82	148.55	3,886.96	-654.67	400.42	-129.40	0.00	0.00	0.00	0.00
<b>Hold Angle @ 17.82</b>										
4,100.00	17.82	148.55	3,982.17	-680.77	416.39	-134.56	0.00	0.00	0.00	0.00
4,200.00	17.82	148.55	4,077.37	-706.87	432.35	-139.72	0.00	0.00	0.00	0.00
4,300.00	17.82	148.55	4,172.58	-732.97	448.32	-144.88	0.00	0.00	0.00	0.00
4,337.21	17.82	148.55	4,208.00	-742.68	454.26	-146.79	0.00	0.00	0.00	0.00
<b>Sussex</b>										

**Plan Report for Shurview 13N-3HZ - Plan A 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 (°)
4,400.00	17.82	148.55	4,267.78	-759.07	464.28	-150.03	0.00	0.00	0.00	0.00
4,500.00	17.82	148.55	4,362.99	-785.17	480.24	-155.19	0.00	0.00	0.00	0.00
4,600.00	17.82	148.55	4,458.19	-811.27	496.21	-160.35	0.00	0.00	0.00	0.00
4,700.00	17.82	148.55	4,553.40	-837.37	512.17	-165.51	0.00	0.00	0.00	0.00
4,800.00	17.82	148.55	4,648.60	-863.47	528.14	-170.67	0.00	0.00	0.00	0.00
4,900.00	17.82	148.55	4,743.80	-889.57	544.10	-175.83	0.00	0.00	0.00	0.00
5,000.00	17.82	148.55	4,839.01	-915.68	560.07	-180.99	0.00	0.00	0.00	0.00
5,100.00	17.82	148.55	4,934.21	-941.78	576.03	-186.15	0.00	0.00	0.00	0.00
5,200.00	17.82	148.55	5,029.42	-967.88	592.00	-191.31	0.00	0.00	0.00	0.00
5,300.00	17.82	148.55	5,124.62	-993.98	607.96	-196.46	0.00	0.00	0.00	0.00
5,400.00	17.82	148.55	5,219.83	-1,020.08	623.92	-201.62	0.00	0.00	0.00	0.00
5,500.00	17.82	148.55	5,315.03	-1,046.18	639.89	-206.78	0.00	0.00	0.00	0.00
5,600.00	17.82	148.55	5,410.24	-1,072.28	655.85	-211.94	0.00	0.00	0.00	0.00
5,700.00	17.82	148.55	5,505.44	-1,098.38	671.82	-217.10	0.00	0.00	0.00	0.00
5,800.00	17.82	148.55	5,600.64	-1,124.48	687.78	-222.26	0.00	0.00	0.00	0.00
5,900.00	17.82	148.55	5,695.85	-1,150.58	703.75	-227.42	0.00	0.00	0.00	0.00
6,000.00	17.82	148.55	5,791.05	-1,176.68	719.71	-232.58	0.00	0.00	0.00	0.00
6,100.00	17.82	148.55	5,886.26	-1,202.78	735.67	-237.74	0.00	0.00	0.00	0.00
6,200.00	17.82	148.55	5,981.46	-1,228.88	751.64	-242.90	0.00	0.00	0.00	0.00
6,300.00	17.82	148.55	6,076.67	-1,254.99	767.60	-248.05	0.00	0.00	0.00	0.00
6,400.00	17.82	148.55	6,171.87	-1,281.09	783.57	-253.21	0.00	0.00	0.00	0.00
6,500.00	17.82	148.55	6,267.08	-1,307.19	799.53	-258.37	0.00	0.00	0.00	0.00
6,559.21	17.82	148.55	6,323.45	-1,322.64	808.98	-261.43	0.00	0.00	0.00	0.00
<b>Begin Build @ 6559.21ft</b>										
6,600.00	16.14	161.33	6,362.47	-1,333.34	814.06	-262.18	10.00	-4.10	31.33	120.15
6,700.00	16.09	197.92	6,458.78	-1,359.76	814.25	-252.56	10.00	-0.05	36.60	107.92
6,800.00	21.27	225.12	6,553.66	-1,385.81	797.09	-226.97	10.00	5.18	27.19	72.67
6,900.00	29.00	240.27	6,644.22	-1,410.69	763.10	-186.19	10.00	7.73	15.15	46.84
7,000.00	37.74	249.17	6,727.71	-1,433.65	713.33	-131.45	10.00	8.74	8.91	33.08
<b>Build Rate = 10.00/100ft</b>										
7,086.13	45.63	254.37	6,792.00	-1,451.35	658.94	-74.38	10.00	9.17	6.03	25.61
<b>Sharon springs</b>										
7,100.00	46.92	255.07	6,801.58	-1,453.99	649.27	-64.42	10.00	9.31	5.07	21.72
7,143.28	50.97	257.09	6,830.00	-1,461.83	617.60	-32.10	10.00	9.36	4.66	21.24
<b>Niobrara A</b>										
7,200.00	56.33	259.41	6,863.61	-1,471.10	572.89	12.87	10.00	9.44	4.09	19.91
7,300.00	65.86	262.87	6,911.90	-1,484.44	486.49	98.06	10.00	9.53	3.47	18.54
7,400.00	75.46	265.86	6,944.98	-1,493.62	392.70	188.58	10.00	9.60	2.98	16.85
7,431.10	78.45	266.72	6,952.00	-1,495.58	362.47	217.38	10.00	9.62	2.79	15.86
<b>Niobrara B</b>										
7,500.00	85.09	268.59	6,961.86	-1,498.36	294.38	281.66	10.00	9.64	2.70	15.67
7,544.45	89.38	269.76	6,964.00	-1,499.00	250.00	323.12	10.00	9.64	2.65	15.40
<b>End Build @ 7544.45ft - Niobrara B TL (Heel) - 7" Intermediate Casing - Shurview 13N-3HZ_Casing Point</b>										
7,600.00	89.38	269.76	6,964.60	-1,499.23	194.45	374.80	0.00	0.00	0.00	15.34
7,700.00	89.38	269.76	6,965.69	-1,499.64	94.46	467.83	0.00	0.00	0.00	0.00
7,800.00	89.38	269.76	6,966.78	-1,500.05	-5.54	560.86	0.00	0.00	0.00	0.00
7,900.00	89.38	269.76	6,967.86	-1,500.46	-105.53	653.89	0.00	0.00	0.00	0.00
8,000.00	89.38	269.76	6,968.95	-1,500.87	-205.52	746.92	0.00	0.00	0.00	0.00
8,100.00	89.38	269.76	6,970.04	-1,501.28	-305.52	839.95	0.00	0.00	0.00	0.00
8,200.00	89.38	269.76	6,971.12	-1,501.69	-405.51	932.98	0.00	0.00	0.00	0.00
8,300.00	89.38	269.76	6,972.21	-1,502.10	-505.50	1,026.01	0.00	0.00	0.00	0.00
8,400.00	89.38	269.76	6,973.29	-1,502.51	-605.50	1,119.04	0.00	0.00	0.00	0.00
8,500.00	89.38	269.76	6,974.38	-1,502.92	-705.49	1,212.07	0.00	0.00	0.00	0.00
8,600.00	89.38	269.76	6,975.47	-1,503.33	-805.48	1,305.10	0.00	0.00	0.00	0.00
8,700.00	89.38	269.76	6,976.55	-1,503.74	-905.47	1,398.13	0.00	0.00	0.00	0.00
8,800.00	89.38	269.76	6,977.64	-1,504.15	-1,005.47	1,491.16	0.00	0.00	0.00	0.00
8,900.00	89.38	269.76	6,978.73	-1,504.56	-1,105.46	1,584.19	0.00	0.00	0.00	0.00
9,000.00	89.38	269.76	6,979.81	-1,504.97	-1,205.45	1,677.22	0.00	0.00	0.00	0.00
9,100.00	89.38	269.76	6,980.90	-1,505.38	-1,305.45	1,770.25	0.00	0.00	0.00	0.00

**Plan Report for Shurview 13N-3HZ - Plan A 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 (°)
9,200.00	89.38	269.76	6,981.99	-1,505.79	-1,405.44	1,863.28	0.00	0.00	0.00	0.00
9,300.00	89.38	269.76	6,983.07	-1,506.20	-1,505.43	1,956.31	0.00	0.00	0.00	0.00
9,400.00	89.38	269.76	6,984.16	-1,506.61	-1,605.43	2,049.34	0.00	0.00	0.00	0.00
9,500.00	89.38	269.76	6,985.24	-1,507.02	-1,705.42	2,142.37	0.00	0.00	0.00	0.00
9,600.00	89.38	269.76	6,986.33	-1,507.43	-1,805.41	2,235.40	0.00	0.00	0.00	0.00
9,700.00	89.38	269.76	6,987.42	-1,507.84	-1,905.41	2,328.44	0.00	0.00	0.00	0.00
9,800.00	89.38	269.76	6,988.50	-1,508.25	-2,005.40	2,421.47	0.00	0.00	0.00	0.00
9,900.00	89.38	269.76	6,989.59	-1,508.66	-2,105.39	2,514.50	0.00	0.00	0.00	0.00
10,000.00	89.38	269.76	6,990.68	-1,509.07	-2,205.39	2,607.53	0.00	0.00	0.00	0.00
<b>Hold Angle @ 89.38</b>										
10,100.00	89.38	269.76	6,991.76	-1,509.48	-2,305.38	2,700.56	0.00	0.00	0.00	0.00
10,200.00	89.38	269.76	6,992.85	-1,509.89	-2,405.37	2,793.59	0.00	0.00	0.00	0.00
10,300.00	89.38	269.76	6,993.93	-1,510.30	-2,505.37	2,886.62	0.00	0.00	0.00	0.00
10,400.00	89.38	269.76	6,995.02	-1,510.71	-2,605.36	2,979.65	0.00	0.00	0.00	0.00
10,500.00	89.38	269.76	6,996.11	-1,511.12	-2,705.35	3,072.68	0.00	0.00	0.00	0.00
10,600.00	89.38	269.76	6,997.19	-1,511.53	-2,805.35	3,165.71	0.00	0.00	0.00	0.00
10,700.00	89.38	269.76	6,998.28	-1,511.94	-2,905.34	3,258.74	0.00	0.00	0.00	0.00
10,800.00	89.38	269.76	6,999.37	-1,512.35	-3,005.33	3,351.77	0.00	0.00	0.00	0.00
10,900.00	89.38	269.76	7,000.45	-1,512.76	-3,105.33	3,444.80	0.00	0.00	0.00	0.00
11,000.00	89.38	269.76	7,001.54	-1,513.17	-3,205.32	3,537.83	0.00	0.00	0.00	0.00
11,100.00	89.38	269.76	7,002.63	-1,513.58	-3,305.31	3,630.86	0.00	0.00	0.00	0.00
11,200.00	89.38	269.76	7,003.71	-1,513.99	-3,405.31	3,723.89	0.00	0.00	0.00	0.00
11,300.00	89.38	269.76	7,004.80	-1,514.40	-3,505.30	3,816.92	0.00	0.00	0.00	0.00
11,400.00	89.38	269.76	7,005.88	-1,514.81	-3,605.29	3,909.95	0.00	0.00	0.00	0.00
11,500.00	89.38	269.76	7,006.97	-1,515.23	-3,705.29	4,002.98	0.00	0.00	0.00	0.00
11,594.71	89.38	269.76	7,008.00	-1,515.61	-3,799.99	4,091.09	0.00	0.00	0.00	0.00
<b>Niobrara B TL (Toe) - Shurview 13N-3HZ_BHL</b>										

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
0.00	0.00	0.00	0.00	Tie-On to Surface @ 0.00ft
500.00	500.00	0.00	0.00	Hold Angle @ 0.00
1,050.00	1,050.00	0.00	0.00	Begin Nudge @ 1050.00ft
1,500.00	1,498.15	-30.09	18.40	Nudge Rate = 2.00/100ft
1,940.80	1,926.51	-117.20	71.68	End Nudge @ 1940.80ft
4,000.00	3,886.96	-654.67	400.42	Hold Angle @ 17.82
6,559.21	6,323.45	-1,322.64	808.98	Begin Build @ 6559.21ft
7,000.00	6,727.71	-1,433.65	713.33	Build Rate = 10.00/100ft
7,544.45	6,964.00	-1,499.00	250.00	End Build @ 7544.45ft
10,000.00	6,990.68	-1,509.07	-2,205.39	Hold Angle @ 89.38
11,594.71	7,008.00	-1,515.61	-3,799.99	Total Depth @ 11594.71ft

**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	Shurview 13N-3HZ_BHL	248.26	Slot	0.00	0.00	0.00

**Survey tool program**

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	11,594.71	Plan A Rev 0 Permit	MWD

**Plan Report for Shurview 13N-3HZ - Plan A Rev 0 Permit****Casing Details**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,544.45	6,964.00	7" Intermediate Casing	7	8-3/4

**Formation Details**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
717.00	717.00	Fox Hills		0.00	
3,619.80	3,525.00	Parkman		0.00	
4,337.21	4,208.00	Sussex		0.00	
7,086.13	6,792.00	Sharon springs		0.00	
7,143.28	6,830.00	Niobrara A		0.00	
7,431.10	6,952.00	Niobrara B		0.00	
7,544.45	6,964.00	Niobrara B TL (Heel)		0.00	
11,594.71	7,008.00	Niobrara B TL (Toe)		0.00	

***Targets associated with this wellbore***

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Shurview 13N-3HZ_SHL	0.00	0.00	0.00	Point
Shurview 13N-3HZ_Section Line	0.00	0.00	0.00	Polygon
Shurview 13N-3HZ_Setback Line	0.00	0.00	0.00	Polygon
Shurview 13N-3HZ_BHL	7,008.00	-1,515.61	-3,799.99	Point
Shurview 13N-3HZ_Casing Point	6,964.00	-1,499.00	250.00	Point

## North Reference Sheet for Sec. 3-T5N-R67W - Shurview 13N-3HZ - Plan A 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=17ft @ 4905.00ft (Drilling Rig). Northing and Easting are relative to Shurview 13N-3HZ  
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: 3,000,000.000644ft, False Northing: 1,000,000.001308ft, Scale Reduction: 0.99996155

Grid Coordinates of Well: 1,398,937.796634 ft N, 3,174,608.423871 ft E  
Geographical Coordinates of Well: 40° 25' 36.45" N, 104° 52' 22.12" W  
Grid Convergence at Surface is: 0.41°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,594.71ft  
the Bottom Hole Displacement is 4,091.09ft in the Direction of 248.26° (True).

Magnetic Convergence at surface is: -8.37° (29 June 2012, , BGGM2011)

