

Project: Weld County, CO (NAD 83)  
Site: Sec. 18-T1N-R65W  
Well: PETTINGER 4NE-18HZ  
Wellbore: Plan A0  
Design: Plan A0 - PERMIT



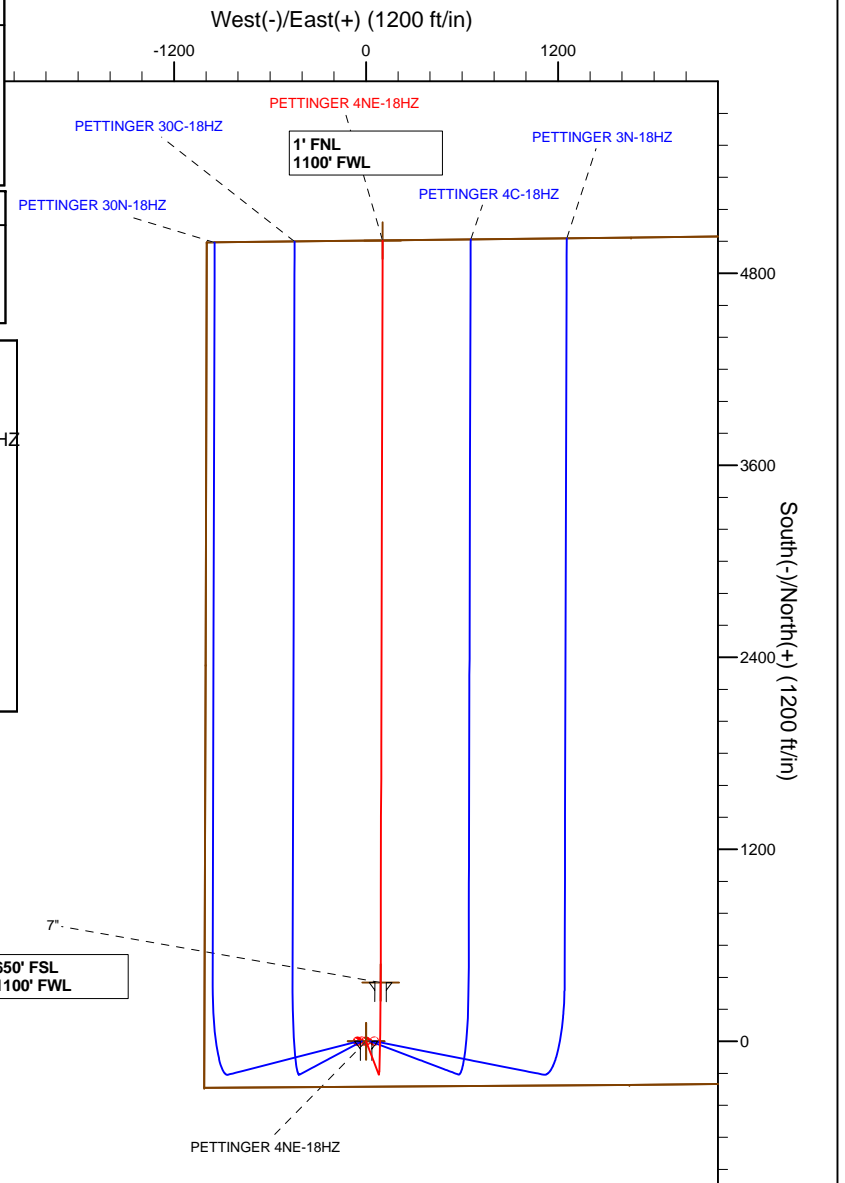
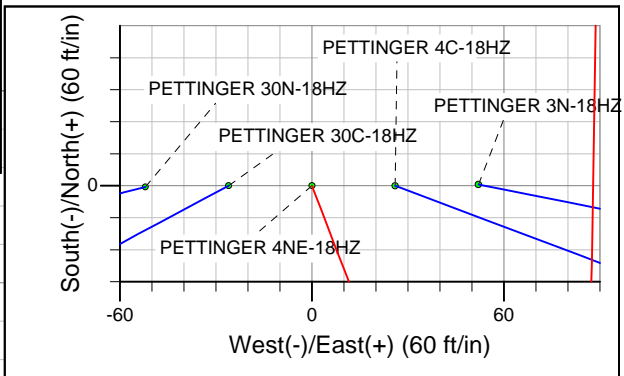
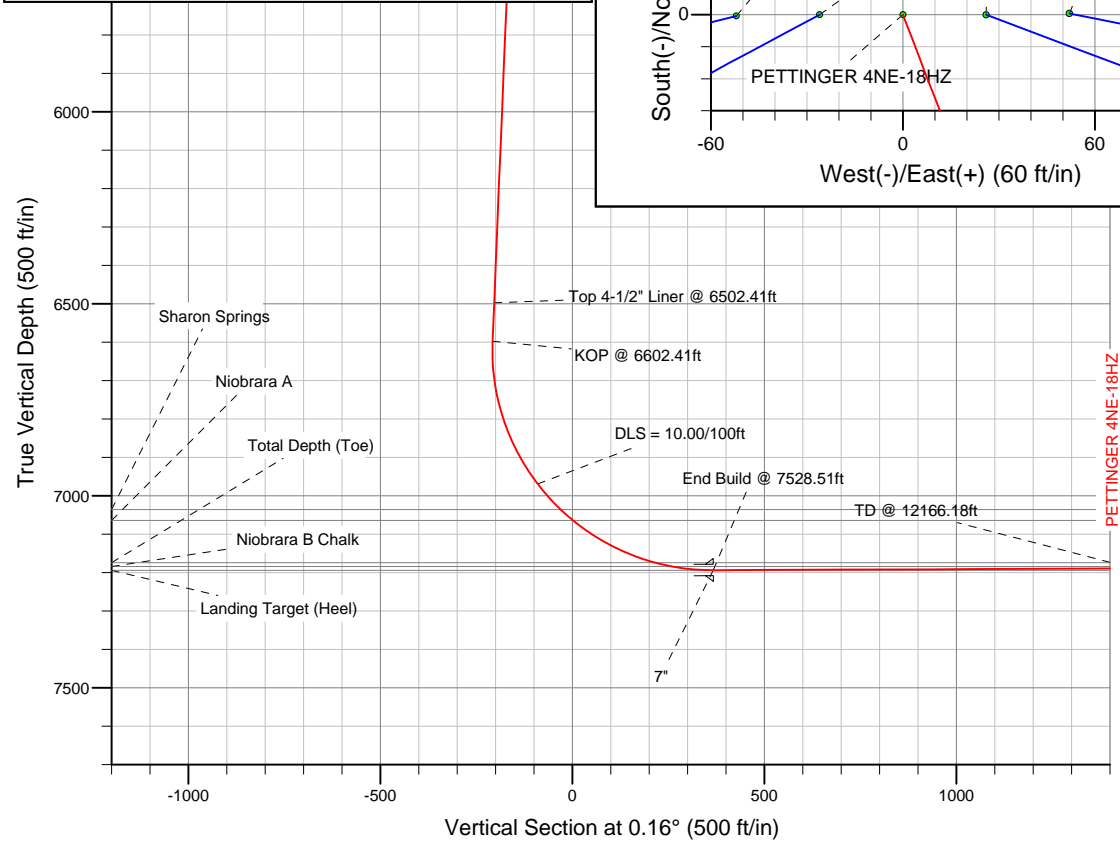
SECTION DETAILS

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	1500.00	0.00	0.00	1500.00	0.00	0.00	0.00	0.00	0.00	
3	1626.66	2.53	158.99	1626.62	-2.61	1.00	2.00	158.99	-2.61	
4	6602.41	2.53	158.99	6597.51	-207.91	79.87	0.00	0.00	-207.69	
5	7528.51	90.25	0.16	7194.00	367.00	91.00	10.00	-158.81	367.25	PETTINGER 4NE-18HZ_tgt
6	12166.18	90.25	0.16	7174.00	5004.61	103.57	0.00	0.00	5004.88	PETTINGER 4NE-18HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
PETTINGER 4NE-18HZ_Sec	0.00	0.00	0.00	40.044890	-104.712434	Polygon
PETTINGER 4NE-18HZ_SHL	0.00	0.00	0.00	40.044890	-104.712434	Point
PETTINGER 4NE-18HZ_BHL	7174.00	5004.61	103.57	40.058628	-104.712064	Point
PETTINGER 4NE-18HZ_tgt	7194.00	367.00	91.00	40.045897	-104.712109	Point

MD	TVD	
6502.41	6497.60	Top 4-1/2" Liner @ 6502.41ft
6602.41	6597.51	KOP @ 6602.41ft



WELL DETAILS: PETTINGER 4NE-18HZ	
Ground Level:	5007.00
RKB = 17 @ 5024.00ft (Drilling Rig)	
Plan: Plan A0 - PERMIT (PETTINGER 4NE-18HZ/Plan A0)	
Created By: Fred Hartmann Date: 07/22/2013	

# Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 18-T1N-R65W

PETTINGER 4NE-18HZ

Plan A0

Plan: Plan A0 - PERMIT

## Sperry Drilling Services

## Proposal Report

22 July, 2013

Well Coordinates: 1,260,178.27 N, 3,220,491.31 E (40° 02' 41.60" N, 104° 42' 44.76" W)

Ground Level: 5,007.00 ft

Local Coordinate Origin:

Centered on Well PETTINGER 4NE-18HZ

Viewing Datum:

RKB = 17 @ 5024.00ft (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**

**Plan Report for PETTINGER 4NE-18HZ - Plan A0 - 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
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
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
1,180.00	0.00	0.00	1,180.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>9 5/8"</b>										
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Begin Nudge @ 1500.00ft</b>										
1,600.00	2.00	158.99	1,599.98	-1.63	0.63	-1.63	2.00	2.00	0.00	158.99
1,626.66	2.53	158.99	1,626.62	-2.61	1.00	-2.61	2.00	2.00	0.00	0.00
<b>End Nudge @ 1626.66ft</b>										
1,700.00	2.53	158.99	1,699.89	-5.64	2.17	-5.63	0.00	0.00	0.00	0.00
1,800.00	2.53	158.99	1,799.79	-9.77	3.75	-9.75	0.00	0.00	0.00	0.00
1,900.00	2.53	158.99	1,899.69	-13.89	5.34	-13.88	0.00	0.00	0.00	0.00
2,000.00	2.53	158.99	1,999.59	-18.02	6.92	-18.00	0.00	0.00	0.00	0.00
2,100.00	2.53	158.99	2,099.50	-22.14	8.51	-22.12	0.00	0.00	0.00	0.00
2,200.00	2.53	158.99	2,199.40	-26.27	10.09	-26.24	0.00	0.00	0.00	0.00
2,300.00	2.53	158.99	2,299.30	-30.40	11.68	-30.36	0.00	0.00	0.00	0.00
2,400.00	2.53	158.99	2,399.20	-34.52	13.26	-34.48	0.00	0.00	0.00	0.00
2,500.00	2.53	158.99	2,499.11	-38.65	14.85	-38.61	0.00	0.00	0.00	0.00
2,600.00	2.53	158.99	2,599.01	-42.77	16.43	-42.73	0.00	0.00	0.00	0.00
2,700.00	2.53	158.99	2,698.91	-46.90	18.02	-46.85	0.00	0.00	0.00	0.00
2,800.00	2.53	158.99	2,798.81	-51.03	19.60	-50.97	0.00	0.00	0.00	0.00
2,900.00	2.53	158.99	2,898.71	-55.15	21.19	-55.09	0.00	0.00	0.00	0.00
3,000.00	2.53	158.99	2,998.62	-59.28	22.77	-59.21	0.00	0.00	0.00	0.00
3,100.00	2.53	158.99	3,098.52	-63.40	24.36	-63.34	0.00	0.00	0.00	0.00
3,200.00	2.53	158.99	3,198.42	-67.53	25.94	-67.46	0.00	0.00	0.00	0.00
3,300.00	2.53	158.99	3,298.32	-71.66	27.53	-71.58	0.00	0.00	0.00	0.00
3,400.00	2.53	158.99	3,398.23	-75.78	29.11	-75.70	0.00	0.00	0.00	0.00
3,500.00	2.53	158.99	3,498.13	-79.91	30.70	-79.82	0.00	0.00	0.00	0.00
3,600.00	2.53	158.99	3,598.03	-84.03	32.28	-83.94	0.00	0.00	0.00	0.00
3,700.00	2.53	158.99	3,697.93	-88.16	33.87	-88.06	0.00	0.00	0.00	0.00
3,800.00	2.53	158.99	3,797.83	-92.29	35.45	-92.19	0.00	0.00	0.00	0.00
3,900.00	2.53	158.99	3,897.74	-96.41	37.04	-96.31	0.00	0.00	0.00	0.00
4,000.00	2.53	158.99	3,997.64	-100.54	38.62	-100.43	0.00	0.00	0.00	0.00
4,100.00	2.53	158.99	4,097.54	-104.66	40.21	-104.55	0.00	0.00	0.00	0.00
4,184.54	2.53	158.99	4,182.00	-108.15	41.55	-108.04	0.00	0.00	0.00	0.00
<b>Parkman</b>										
4,200.00	2.53	158.99	4,197.44	-108.79	41.79	-108.67	0.00	0.00	0.00	0.00
4,300.00	2.53	158.99	4,297.35	-112.92	43.38	-112.79	0.00	0.00	0.00	0.00
4,400.00	2.53	158.99	4,397.25	-117.04	44.96	-116.92	0.00	0.00	0.00	0.00
4,500.00	2.53	158.99	4,497.15	-121.17	46.55	-121.04	0.00	0.00	0.00	0.00
4,562.91	2.53	158.99	4,560.00	-123.76	47.54	-123.63	0.00	0.00	0.00	0.00
<b>Sussex</b>										
4,600.00	2.53	158.99	4,597.05	-125.29	48.13	-125.16	0.00	0.00	0.00	0.00
4,700.00	2.53	158.99	4,696.96	-129.42	49.72	-129.28	0.00	0.00	0.00	0.00
4,800.00	2.53	158.99	4,796.86	-133.55	51.30	-133.40	0.00	0.00	0.00	0.00

**Plan Report for PETTINGER 4NE-18HZ - Plan A0 - 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 (°)
4,900.00	2.53	158.99	4,896.76	-137.67	52.89	-137.52	0.00	0.00	0.00	0.00
5,000.00	2.53	158.99	4,996.66	-141.80	54.47	-141.65	0.00	0.00	0.00	0.00
5,100.00	2.53	158.99	5,096.56	-145.92	56.06	-145.77	0.00	0.00	0.00	0.00
5,200.00	2.53	158.99	5,196.47	-150.05	57.64	-149.89	0.00	0.00	0.00	0.00
5,300.00	2.53	158.99	5,296.37	-154.18	59.23	-154.01	0.00	0.00	0.00	0.00
5,400.00	2.53	158.99	5,396.27	-158.30	60.81	-158.13	0.00	0.00	0.00	0.00
5,500.00	2.53	158.99	5,496.17	-162.43	62.40	-162.25	0.00	0.00	0.00	0.00
5,600.00	2.53	158.99	5,596.08	-166.55	63.98	-166.37	0.00	0.00	0.00	0.00
5,700.00	2.53	158.99	5,695.98	-170.68	65.57	-170.50	0.00	0.00	0.00	0.00
5,800.00	2.53	158.99	5,795.88	-174.81	67.15	-174.62	0.00	0.00	0.00	0.00
5,900.00	2.53	158.99	5,895.78	-178.93	68.74	-178.74	0.00	0.00	0.00	0.00
6,000.00	2.53	158.99	5,995.68	-183.06	70.32	-182.86	0.00	0.00	0.00	0.00
6,100.00	2.53	158.99	6,095.59	-187.18	71.91	-186.98	0.00	0.00	0.00	0.00
6,200.00	2.53	158.99	6,195.49	-191.31	73.49	-191.10	0.00	0.00	0.00	0.00
6,300.00	2.53	158.99	6,295.39	-195.44	75.08	-195.23	0.00	0.00	0.00	0.00
6,400.00	2.53	158.99	6,395.29	-199.56	76.66	-199.35	0.00	0.00	0.00	0.00
6,500.00	2.53	158.99	6,495.20	-203.69	78.25	-203.47	0.00	0.00	0.00	0.00
6,502.41	2.53	158.99	6,497.60	-203.79	78.28	-203.57	0.00	0.00	0.00	0.00
<b>Top 4-1/2" Liner @ 6502.41ft</b>										
6,600.00	2.53	158.99	6,595.10	-207.81	79.83	-207.59	0.00	0.00	0.00	0.00
6,602.41	2.53	158.99	6,597.51	-207.91	79.87	-207.69	0.00	0.00	0.00	0.00
<b>KOP @ 6602.41ft</b>										
6,700.00	7.45	7.18	6,694.87	-203.64	81.44	-203.41	10.00	5.04	-155.56	-158.81
6,800.00	17.42	3.08	6,792.40	-182.20	83.06	-181.97	10.00	9.97	-4.10	-7.08
6,900.00	27.41	1.93	6,884.73	-144.15	84.64	-143.92	10.00	9.99	-1.15	-3.06
7,000.00	37.41	1.36	6,969.05	-90.65	86.13	-90.41	10.00	10.00	-0.57	-1.99
<b>DLS = 10.00/100ft</b>										
7,090.05	46.41	1.03	7,036.00	-30.57	87.37	-30.33	10.00	10.00	-0.36	-1.51
<b>Sharon Springs</b>										
7,100.00	47.40	1.00	7,042.80	-23.31	87.50	-23.07	10.00	10.00	-0.30	-1.26
7,132.34	50.64	0.91	7,064.00	1.10	87.91	1.34	10.00	10.00	-0.28	-1.24
<b>Niobrara A</b>										
7,200.00	57.40	0.74	7,103.73	55.81	88.69	56.06	10.00	10.00	-0.24	-1.18
7,300.00	67.40	0.54	7,150.00	144.31	89.68	144.56	10.00	10.00	-0.20	-1.09
7,400.00	77.40	0.36	7,180.20	239.51	90.43	239.76	10.00	10.00	-0.18	-0.99
7,418.80	79.28	0.33	7,184.00	257.92	90.54	258.17	10.00	10.00	-0.17	-0.94
<b>Niobrara B Chalk</b>										
7,500.00	87.40	0.20	7,193.41	338.50	90.91	338.76	10.00	10.00	-0.16	-0.93
7,528.51	90.25	0.16	7,194.00	367.00	91.00	367.25	10.00	10.00	-0.16	-0.92
<b>End Build @ 7528.51ft - Landing Target (Heel) - 7" - PETTINGER 4NE-18HZ_tgt</b>										
7,600.00	90.25	0.16	7,193.69	438.49	91.19	438.75	0.00	0.00	0.00	-0.92
7,700.00	90.25	0.16	7,193.26	538.49	91.46	538.75	0.00	0.00	0.00	0.00
7,800.00	90.25	0.16	7,192.83	638.49	91.74	638.74	0.00	0.00	0.00	0.00
7,900.00	90.25	0.16	7,192.40	738.49	92.01	738.74	0.00	0.00	0.00	0.00
8,000.00	90.25	0.16	7,191.97	838.49	92.28	838.74	0.00	0.00	0.00	0.00
8,100.00	90.25	0.16	7,191.54	938.49	92.55	938.74	0.00	0.00	0.00	0.00
8,200.00	90.25	0.16	7,191.10	1,038.49	92.82	1,038.74	0.00	0.00	0.00	0.00
8,300.00	90.25	0.16	7,190.67	1,138.48	93.09	1,138.74	0.00	0.00	0.00	0.00
8,400.00	90.25	0.16	7,190.24	1,238.48	93.36	1,238.74	0.00	0.00	0.00	0.00
8,500.00	90.25	0.16	7,189.81	1,338.48	93.63	1,338.74	0.00	0.00	0.00	0.00
8,600.00	90.25	0.16	7,189.38	1,438.48	93.90	1,438.74	0.00	0.00	0.00	0.00
8,700.00	90.25	0.16	7,188.95	1,538.48	94.18	1,538.74	0.00	0.00	0.00	0.00
8,800.00	90.25	0.16	7,188.52	1,638.48	94.45	1,638.74	0.00	0.00	0.00	0.00
8,900.00	90.25	0.16	7,188.09	1,738.48	94.72	1,738.73	0.00	0.00	0.00	0.00
9,000.00	90.25	0.16	7,187.65	1,838.48	94.99	1,838.73	0.00	0.00	0.00	0.00
9,100.00	90.25	0.16	7,187.22	1,938.47	95.26	1,938.73	0.00	0.00	0.00	0.00
9,200.00	90.25	0.16	7,186.79	2,038.47	95.53	2,038.73	0.00	0.00	0.00	0.00
9,300.00	90.25	0.16	7,186.36	2,138.47	95.80	2,138.73	0.00	0.00	0.00	0.00
9,400.00	90.25	0.16	7,185.93	2,238.47	96.07	2,238.73	0.00	0.00	0.00	0.00

**Plan Report for PETTINGER 4NE-18HZ - Plan A0 - 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 (°)
9,500.00	90.25	0.16	7,185.50	2,338.47	96.34	2,338.73	0.00	0.00	0.00	0.00
9,600.00	90.25	0.16	7,185.07	2,438.47	96.62	2,438.73	0.00	0.00	0.00	0.00
9,700.00	90.25	0.16	7,184.64	2,538.47	96.89	2,538.73	0.00	0.00	0.00	0.00
9,800.00	90.25	0.16	7,184.20	2,638.46	97.16	2,638.73	0.00	0.00	0.00	0.00
9,900.00	90.25	0.16	7,183.77	2,738.46	97.43	2,738.73	0.00	0.00	0.00	0.00
10,000.00	90.25	0.16	7,183.34	2,838.46	97.70	2,838.72	0.00	0.00	0.00	0.00
10,100.00	90.25	0.16	7,182.91	2,938.46	97.97	2,938.72	0.00	0.00	0.00	0.00
10,200.00	90.25	0.16	7,182.48	3,038.46	98.24	3,038.72	0.00	0.00	0.00	0.00
10,300.00	90.25	0.16	7,182.05	3,138.46	98.51	3,138.72	0.00	0.00	0.00	0.00
10,400.00	90.25	0.16	7,181.62	3,238.46	98.78	3,238.72	0.00	0.00	0.00	0.00
10,500.00	90.25	0.16	7,181.19	3,338.46	99.05	3,338.72	0.00	0.00	0.00	0.00
10,600.00	90.25	0.16	7,180.75	3,438.45	99.33	3,438.72	0.00	0.00	0.00	0.00
10,700.00	90.25	0.16	7,180.32	3,538.45	99.60	3,538.72	0.00	0.00	0.00	0.00
10,800.00	90.25	0.16	7,179.89	3,638.45	99.87	3,638.72	0.00	0.00	0.00	0.00
10,900.00	90.25	0.16	7,179.46	3,738.45	100.14	3,738.72	0.00	0.00	0.00	0.00
11,000.00	90.25	0.16	7,179.03	3,838.45	100.41	3,838.71	0.00	0.00	0.00	0.00
11,100.00	90.25	0.16	7,178.60	3,938.45	100.68	3,938.71	0.00	0.00	0.00	0.00
11,200.00	90.25	0.16	7,178.17	4,038.45	100.95	4,038.71	0.00	0.00	0.00	0.00
11,300.00	90.25	0.16	7,177.74	4,138.45	101.22	4,138.71	0.00	0.00	0.00	0.00
11,400.00	90.25	0.16	7,177.30	4,238.44	101.49	4,238.71	0.00	0.00	0.00	0.00
11,500.00	90.25	0.16	7,176.87	4,338.44	101.77	4,338.71	0.00	0.00	0.00	0.00
11,600.00	90.25	0.16	7,176.44	4,438.44	102.04	4,438.71	0.00	0.00	0.00	0.00
11,700.00	90.25	0.16	7,176.01	4,538.44	102.31	4,538.71	0.00	0.00	0.00	0.00
11,800.00	90.25	0.16	7,175.58	4,638.44	102.58	4,638.71	0.00	0.00	0.00	0.00
11,900.00	90.25	0.16	7,175.15	4,738.44	102.85	4,738.71	0.00	0.00	0.00	0.00
12,000.00	90.25	0.16	7,174.72	4,838.44	103.12	4,838.71	0.00	0.00	0.00	0.00
12,100.00	90.25	0.16	7,174.29	4,938.44	103.39	4,938.70	0.00	0.00	0.00	0.00
12,166.17	90.25	0.16	7,174.00	5,004.60	103.57	5,004.87	0.00	0.00	0.00	0.00
<b>Total Depth (Toe)</b>										
12,166.18	90.25	0.16	7,174.00	5,004.61	103.57	5,004.88	0.00	0.00	0.00	0.00
<b>PETTINGER 4NE-18HZ_BHL</b>										

**Plan Annotations**

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
1,500.00	1,500.00	0.00	0.00	Begin Nudge @ 1500.00ft
1,626.66	1,626.62	-2.61	1.00	End Nudge @ 1626.66ft
6,502.41	6,497.60	-203.79	78.28	Top 4-1/2" Liner @ 6502.41ft
6,602.41	6,597.51	-207.91	79.87	KOP @ 6602.41ft
7,000.00	6,969.05	-90.65	86.13	DLS = 10.00/100ft
7,528.51	7,194.00	367.00	91.00	End Build @ 7528.51ft
12,166.18	7,174.00	5,004.61	103.57	TD @ 12166.18ft

**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
User	No Target (Freehand)	0.16	Slot	0.00	0.00	0.00

**Survey tool program**

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	12,166.18	Plan A0 - PERMIT	MWD

**Plan Report for PETTINGER 4NE-18HZ - Plan A0 - PERMIT****Casing Details**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
1,180.00	1,180.00	9 5/8"	9-5/8	13-1/2
7,528.51	7,194.00	7"	7	8-3/4

**Formation Details**

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,184.54	4,182.00	Parkman		0.00	
4,562.91	4,560.00	Sussex		0.00	
7,090.05	7,036.00	Sharon Springs		0.00	
7,132.34	7,064.00	Niobrara A		0.00	
7,418.80	7,184.00	Niobrara B Chalk		0.00	
7,528.51	7,194.00	Landing Target (Heel)		0.00	
12,166.17	7,174.00	Total Depth (Toe)		0.00	

***Targets associated with this wellbore***

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
PETTINGER 4NE-18HZ_SHL	0.00	0.00	0.00	Point
PETTINGER 4NE-18HZ_BHL	7,174.00	5,004.61	103.57	Point
PETTINGER 4NE-18HZ_tgt	7,194.00	367.00	91.00	Point
PETTINGER 4NE-18HZ_Sec	0.00	0.00	0.00	Polygon

## North Reference Sheet for Sec. 18-T1N-R65W - PETTINGER 4NE-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 @ 5024.00ft (Drilling Rig). Northing and Easting are relative to PETTINGER 4NE-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: 0.99996327

Grid Coordinates of Well: 1,260,178.27 ft N, 3,220,491.31 ft E

Geographical Coordinates of Well: 40° 02' 41.60" N, 104° 42' 44.76" W

Grid Convergence at Surface is: 0.51°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,166.18ft  
the Bottom Hole Displacement is 5,005.68ft in the Direction of 1.19° (True).

Magnetic Convergence at surface is: -8.04° (22 July 2013, , BGGM2013)

