

# Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 22-T3N-R66W

Morning Fresh 14N-22HZ

Plan A

Plan: Rev A0

## Sperry Drilling Services

### Proposal Report

27 June, 2014

Well Coordinates: 1,322,497.49 N, 3,204,992.92 E (40° 12' 58.77" N, 104° 45' 57.41" W)

Ground Level: 4,886.00 usft

Local Coordinate Origin:

Viewing Datum:

TVDs to System:

North Reference:

Unit System:

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

Centered on Well Morning Fresh 14N-22HZ

RKB = 13' @ 4899.00usft (Ensign 132)

N

True

Dec-Deg - API - US Survey Feet - Custom

**HALLIBURTON**

Project: Weld County, CO (NAD 83)  
 Site: Sec. 22-T3N-R66W  
 Well: Morning Fresh 14N-22HZ  
 Wellbore: Plan A  
 Design: Rev A0

# Anadarko Petroleum Corp.

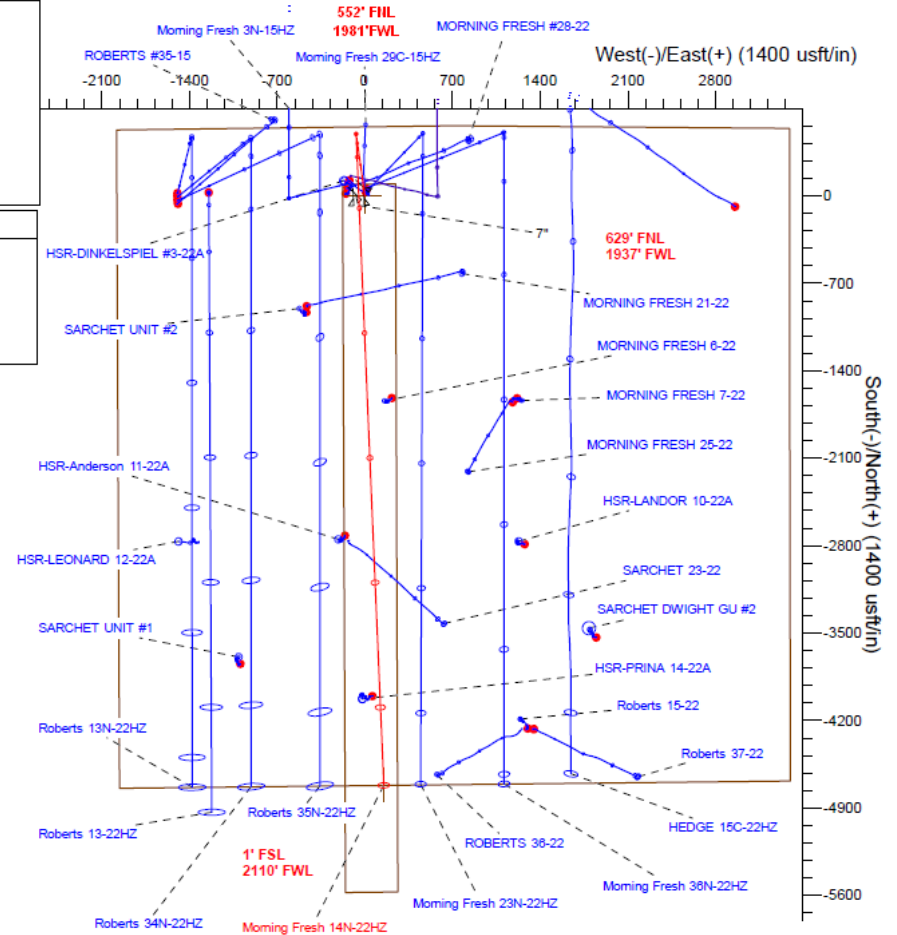
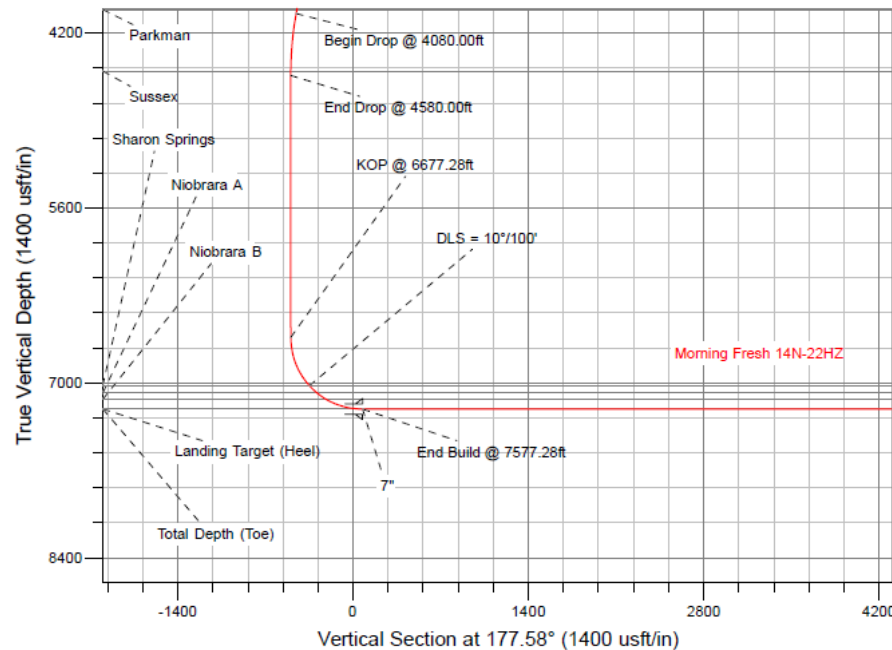
**HALLIBURTON**  
 Sperry Drilling

## SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	904.00	0.20	133.80	903.99	0.25	-0.49	0.00	0.00	-0.27	
2	1000.00	0.00	0.00	999.99	0.13	-0.37	0.21	180.00	-0.15	
3	1200.00	0.00	0.00	1199.99	0.13	-0.37	0.00	0.00	-0.15	
4	1700.00	10.00	352.00	1697.45	43.23	-6.43	2.00	352.00	-43.46	
5	4080.00	10.00	352.00	4041.29	452.49	-63.94	0.00	0.00	-454.79	
6	4580.00	0.00	0.00	4538.76	495.59	-70.00	2.00	180.00	-498.10	
7	6677.28	0.00	0.00	6636.04	495.59	-70.00	0.00	0.00	-498.10	
8	7577.28	90.00	177.58	7209.00	-76.86	-45.79	10.00	177.58	74.85	
9	12224.06	90.00	177.58	7209.00	-4719.49	150.56	0.00	0.00	4721.64	Morning Fresh 14N-22HZ_BHL

## WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Polygon
Morning Fresh 14N-22HZ_LD	0.00	0.00	0.00	40° 12' 58.766 N	104° 45' 57.409 W	Polygon
Morning Fresh 14N-22HZ_SEC	0.00	0.00	0.00	40° 12' 58.766 N	104° 45' 57.409 W	Polygon
Morning Fresh 14N-22HZ_SHL	0.00	0.00	0.00	40° 12' 58.766 N	104° 45' 57.409 W	Polygon
Morning Fresh 14N-22HZ_BHL	7209.00	-4719.49	150.56	40° 12' 12.128 N	104° 45' 55.469 W	Polygon



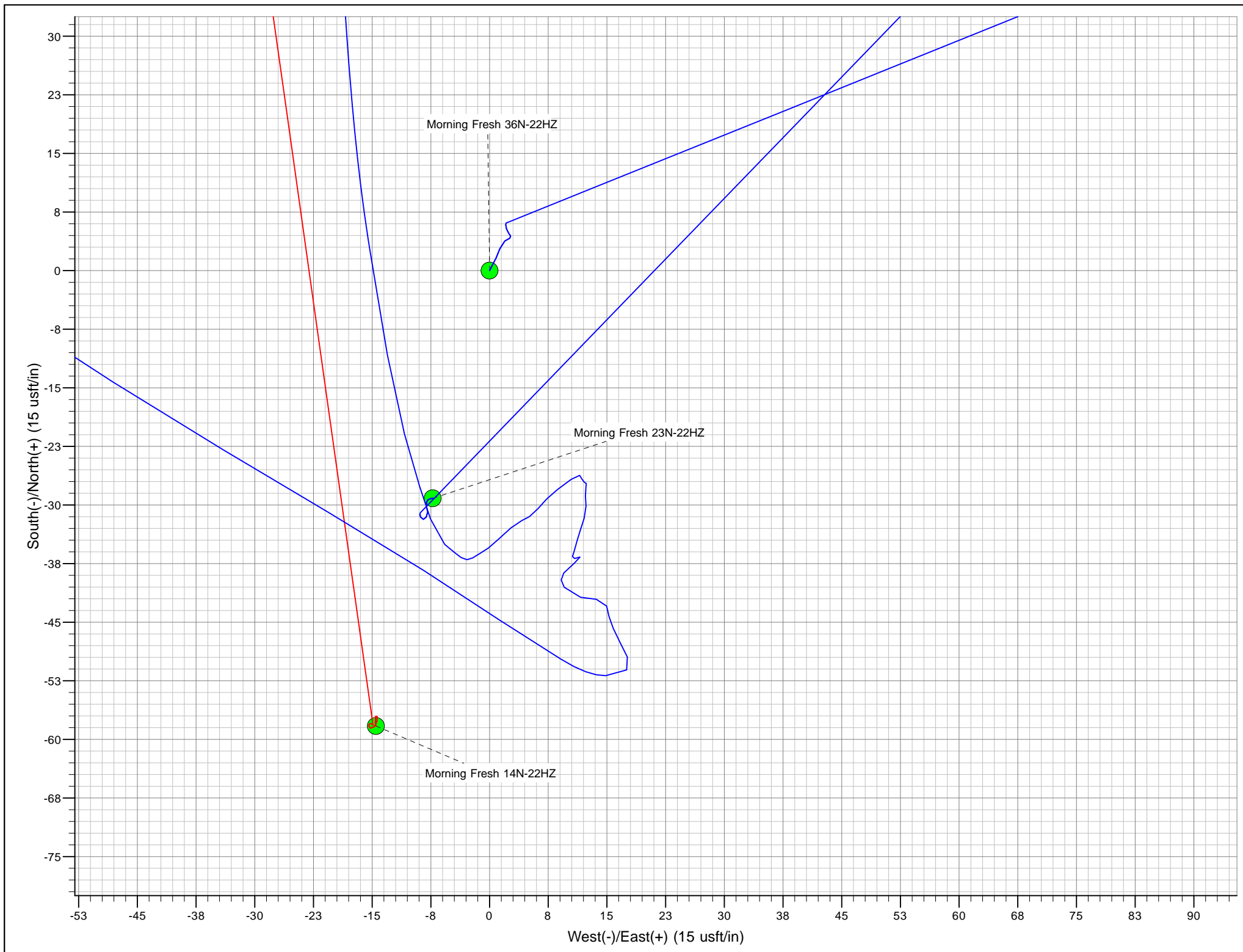
TVD MD  
 6636.04 6677.28 KOP @ 6677.28ft

## WELL DETAILS: Morning Fresh 14N-22HZ

Ground Level: 4886.00  
 RKB = 13' @ 4899.00usft (Ensign 132)

Plan: Rev A0 (Morning Fresh 14N-22HZ/Plan A)

Created By: Clint Eshelman Date: 6/16/2014  
 Reviewed: Date:



**Plan Report for Morning Fresh 14N-22HZ - Rev A0**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
904.00	0.20	133.80	903.99	0.25	-0.49	-0.27	0.00	0.00	0.00	0.00
<b>Tie-On to Gyro Surveys @ 904.00ft - Morning Fresh 14N-22HZ_SHL - Morning Fresh 14N-22HZ_LD - Morning Fresh 14N-22HZ_SEC</b>										
983.70	0.03	133.80	983.69	0.13	-0.37	-0.15	0.21	-0.21	0.00	180.00
<b>9 5/8"</b>										
1,000.00	0.00	0.00	999.99	0.13	-0.37	-0.15	0.21	-0.21	0.00	-180.00
<b>0° INC, 0° AZI @ 1000.00ft</b>										
1,100.00	0.00	0.00	1,099.99	0.13	-0.37	-0.15	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,199.99	0.13	-0.37	-0.15	0.00	0.00	0.00	0.00
<b>Begin Nudge @ 1200.00ft</b>										
1,300.00	2.00	352.00	1,299.97	1.86	-0.61	-1.88	2.00	2.00	0.00	352.00
1,400.00	4.00	352.00	1,399.82	7.04	-1.34	-7.09	2.00	2.00	0.00	0.00
1,500.00	6.00	352.00	1,499.44	15.67	-2.55	-15.76	2.00	2.00	0.00	0.00
1,600.00	8.00	352.00	1,598.69	27.74	-4.25	-27.89	2.00	2.00	0.00	0.00
1,700.00	10.00	352.00	1,697.45	43.23	-6.43	-43.46	2.00	2.00	0.00	0.00
<b>End Nudge @ 1700.00ft</b>										
1,800.00	10.00	352.00	1,795.93	60.42	-8.84	-60.74	0.00	0.00	0.00	0.00
1,900.00	10.00	352.00	1,894.41	77.62	-11.26	-78.03	0.00	0.00	0.00	0.00
2,000.00	10.00	352.00	1,992.89	94.82	-13.68	-95.31	0.00	0.00	0.00	0.00
2,100.00	10.00	352.00	2,091.37	112.01	-16.09	-112.59	0.00	0.00	0.00	0.00
2,200.00	10.00	352.00	2,189.86	129.21	-18.51	-129.87	0.00	0.00	0.00	0.00
2,300.00	10.00	352.00	2,288.34	146.40	-20.93	-147.16	0.00	0.00	0.00	0.00
2,400.00	10.00	352.00	2,386.82	163.60	-23.34	-164.44	0.00	0.00	0.00	0.00
2,500.00	10.00	352.00	2,485.30	180.80	-25.76	-181.72	0.00	0.00	0.00	0.00
2,600.00	10.00	352.00	2,583.78	197.99	-28.18	-199.00	0.00	0.00	0.00	0.00
2,700.00	10.00	352.00	2,682.26	215.19	-30.59	-216.29	0.00	0.00	0.00	0.00
2,800.00	10.00	352.00	2,780.74	232.38	-33.01	-233.57	0.00	0.00	0.00	0.00
2,900.00	10.00	352.00	2,879.22	249.58	-35.43	-250.85	0.00	0.00	0.00	0.00
3,000.00	10.00	352.00	2,977.70	266.77	-37.84	-268.13	0.00	0.00	0.00	0.00
3,100.00	10.00	352.00	3,076.18	283.97	-40.26	-285.42	0.00	0.00	0.00	0.00
3,200.00	10.00	352.00	3,174.66	301.17	-42.68	-302.70	0.00	0.00	0.00	0.00
3,300.00	10.00	352.00	3,273.14	318.36	-45.09	-319.98	0.00	0.00	0.00	0.00
3,400.00	10.00	352.00	3,371.62	335.56	-47.51	-337.26	0.00	0.00	0.00	0.00
3,500.00	10.00	352.00	3,470.11	352.75	-49.93	-354.55	0.00	0.00	0.00	0.00
3,600.00	10.00	352.00	3,568.59	369.95	-52.34	-371.83	0.00	0.00	0.00	0.00
3,700.00	10.00	352.00	3,667.07	387.15	-54.76	-389.11	0.00	0.00	0.00	0.00
3,800.00	10.00	352.00	3,765.55	404.34	-57.18	-406.39	0.00	0.00	0.00	0.00
3,900.00	10.00	352.00	3,864.03	421.54	-59.59	-423.68	0.00	0.00	0.00	0.00
4,000.00	10.00	352.00	3,962.51	438.73	-62.01	-440.96	0.00	0.00	0.00	0.00
4,048.22	10.00	352.00	4,010.00	447.03	-63.18	-449.29	0.00	0.00	0.00	0.00
<b>Parkman</b>										
4,080.00	10.00	352.00	4,041.29	452.49	-63.94	-454.79	0.00	0.00	0.00	0.00
<b>Begin Drop @ 4080.00ft</b>										
4,100.00	9.60	352.00	4,061.00	455.86	-64.42	-458.17	2.00	-2.00	0.00	180.00
4,200.00	7.60	352.00	4,159.87	470.67	-66.50	-473.06	2.00	-2.00	0.00	180.00
4,300.00	5.60	352.00	4,259.20	482.05	-68.10	-484.49	2.00	-2.00	0.00	180.00
4,400.00	3.60	352.00	4,358.88	489.99	-69.21	-492.48	2.00	-2.00	0.00	180.00
4,500.00	1.60	352.00	4,458.77	494.48	-69.85	-496.99	2.00	-2.00	0.00	180.00
4,544.24	0.72	352.00	4,503.00	495.37	-69.97	-497.88	2.00	-2.00	0.00	180.00
<b>Sussex</b>										
4,580.00	0.00	0.00	4,538.76	495.59	-70.00	-498.10	2.00	-2.00	22.37	180.00
<b>End Drop @ 4580.00ft</b>										
4,600.00	0.00	0.00	4,558.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
4,700.00	0.00	0.00	4,658.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
4,800.00	0.00	0.00	4,758.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
4,900.00	0.00	0.00	4,858.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
5,000.00	0.00	0.00	4,958.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
5,100.00	0.00	0.00	5,058.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
5,200.00	0.00	0.00	5,158.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00

**Plan Report for Morning Fresh 14N-22HZ - Rev A0**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
5,300.00	0.00	0.00	5,258.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
5,400.00	0.00	0.00	5,358.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
5,500.00	0.00	0.00	5,458.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
5,600.00	0.00	0.00	5,558.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
5,700.00	0.00	0.00	5,658.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
5,800.00	0.00	0.00	5,758.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
5,900.00	0.00	0.00	5,858.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
6,000.00	0.00	0.00	5,958.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
6,100.00	0.00	0.00	6,058.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
6,200.00	0.00	0.00	6,158.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
6,300.00	0.00	0.00	6,258.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
6,400.00	0.00	0.00	6,358.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
6,500.00	0.00	0.00	6,458.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
6,600.00	0.00	0.00	6,558.76	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
6,677.28	0.00	0.00	6,636.04	495.59	-70.00	-498.10	0.00	0.00	0.00	0.00
<b>KOP @ 6677.28ft</b>										
6,700.00	2.27	177.58	6,658.75	495.14	-69.98	-497.65	10.00	10.00	781.59	177.58
6,800.00	12.27	177.58	6,757.82	482.51	-69.45	-485.01	10.00	10.00	0.00	0.00
6,900.00	22.27	177.58	6,853.19	452.88	-68.19	-455.36	10.00	10.00	0.00	0.00
7,000.00	32.27	177.58	6,941.96	407.16	-66.26	-409.59	10.00	10.00	0.00	0.00
7,096.71	41.94	177.58	7,019.00	348.93	-63.80	-351.32	10.00	10.00	0.00	0.00
<b>Sharon Springs</b>										
7,100.00	42.27	177.58	7,021.44	346.73	-63.71	-349.11	10.00	10.00	0.00	0.00
<b>DLS = 10°/100'</b>										
7,183.62	50.63	177.58	7,079.00	286.23	-61.15	-288.55	10.00	10.00	0.00	0.00
<b>Niobrara A</b>										
7,200.00	52.27	177.58	7,089.21	273.43	-60.61	-275.75	10.00	10.00	0.00	0.00
7,270.87	59.36	177.58	7,129.00	214.89	-58.13	-217.15	10.00	10.00	0.00	0.00
<b>Niobrara B</b>										
7,300.00	62.27	177.58	7,143.20	189.49	-57.05	-191.73	10.00	10.00	0.00	0.00
7,400.00	72.27	177.58	7,181.79	97.45	-53.16	-99.61	10.00	10.00	0.00	0.00
7,500.00	82.27	177.58	7,203.79	0.12	-49.05	-2.19	10.00	10.00	0.00	0.00
7,577.28	90.00	177.58	7,209.00	-76.86	-45.79	74.86	10.00	10.00	0.00	0.00
<b>End Build @ 7577.98ft - Landing Target (Heel) - 7"</b>										
7,600.00	90.00	177.58	7,209.00	-99.56	-44.83	97.58	0.00	0.00	0.00	0.00
7,700.00	90.00	177.58	7,209.00	-199.47	-40.60	197.58	0.00	0.00	0.00	0.00
7,800.00	90.00	177.58	7,209.00	-299.38	-36.38	297.58	0.00	0.00	0.00	0.00
7,900.00	90.00	177.58	7,209.00	-399.29	-32.15	397.58	0.00	0.00	0.00	0.00
8,000.00	90.00	177.58	7,209.00	-499.20	-27.93	497.58	0.00	0.00	0.00	0.00
8,100.00	90.00	177.58	7,209.00	-599.11	-23.70	597.58	0.00	0.00	0.00	0.00
8,200.00	90.00	177.58	7,209.00	-699.02	-19.48	697.58	0.00	0.00	0.00	0.00
8,300.00	90.00	177.58	7,209.00	-798.93	-15.25	797.58	0.00	0.00	0.00	0.00
8,400.00	90.00	177.58	7,209.00	-898.84	-11.03	897.58	0.00	0.00	0.00	0.00
8,500.00	90.00	177.58	7,209.00	-998.75	-6.80	997.58	0.00	0.00	0.00	0.00
8,600.00	90.00	177.58	7,209.00	-1,098.66	-2.58	1,097.58	0.00	0.00	0.00	0.00
8,700.00	90.00	177.58	7,209.00	-1,198.57	1.65	1,197.58	0.00	0.00	0.00	0.00
8,800.00	90.00	177.58	7,209.00	-1,298.49	5.88	1,297.58	0.00	0.00	0.00	0.00
8,900.00	90.00	177.58	7,209.00	-1,398.40	10.10	1,397.58	0.00	0.00	0.00	0.00
9,000.00	90.00	177.58	7,209.00	-1,498.31	14.33	1,497.58	0.00	0.00	0.00	0.00
9,100.00	90.00	177.58	7,209.00	-1,598.22	18.55	1,597.58	0.00	0.00	0.00	0.00
9,200.00	90.00	177.58	7,209.00	-1,698.13	22.78	1,697.58	0.00	0.00	0.00	0.00
9,300.00	90.00	177.58	7,209.00	-1,798.04	27.00	1,797.58	0.00	0.00	0.00	0.00
9,400.00	90.00	177.58	7,209.00	-1,897.95	31.23	1,897.58	0.00	0.00	0.00	0.00
9,500.00	90.00	177.58	7,209.00	-1,997.86	35.45	1,997.58	0.00	0.00	0.00	0.00
9,600.00	90.00	177.58	7,209.00	-2,097.77	39.68	2,097.58	0.00	0.00	0.00	0.00
9,700.00	90.00	177.58	7,209.00	-2,197.68	43.90	2,197.58	0.00	0.00	0.00	0.00
9,800.00	90.00	177.58	7,209.00	-2,297.59	48.13	2,297.58	0.00	0.00	0.00	0.00
9,900.00	90.00	177.58	7,209.00	-2,397.50	52.36	2,397.58	0.00	0.00	0.00	0.00
10,000.00	90.00	177.58	7,209.00	-2,497.41	56.58	2,497.58	0.00	0.00	0.00	0.00

**Plan Report for Morning Fresh 14N-22HZ - Rev A0**

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	Toolface Azimuth (°)
10,100.00	90.00	177.58	7,209.00	-2,597.32	60.81	2,597.58	0.00	0.00	0.00	0.00
10,200.00	90.00	177.58	7,209.00	-2,697.23	65.03	2,697.58	0.00	0.00	0.00	0.00
10,300.00	90.00	177.58	7,209.00	-2,797.15	69.26	2,797.58	0.00	0.00	0.00	0.00
10,400.00	90.00	177.58	7,209.00	-2,897.06	73.48	2,897.58	0.00	0.00	0.00	0.00
10,500.00	90.00	177.58	7,209.00	-2,996.97	77.71	2,997.58	0.00	0.00	0.00	0.00
10,600.00	90.00	177.58	7,209.00	-3,096.88	81.93	3,097.58	0.00	0.00	0.00	0.00
10,700.00	90.00	177.58	7,209.00	-3,196.79	86.16	3,197.58	0.00	0.00	0.00	0.00
10,800.00	90.00	177.58	7,209.00	-3,296.70	90.39	3,297.58	0.00	0.00	0.00	0.00
10,900.00	90.00	177.58	7,209.00	-3,396.61	94.61	3,397.58	0.00	0.00	0.00	0.00
11,000.00	90.00	177.58	7,209.00	-3,496.52	98.84	3,497.58	0.00	0.00	0.00	0.00
11,100.00	90.00	177.58	7,209.00	-3,596.43	103.06	3,597.58	0.00	0.00	0.00	0.00
11,200.00	90.00	177.58	7,209.00	-3,696.34	107.29	3,697.58	0.00	0.00	0.00	0.00
11,300.00	90.00	177.58	7,209.00	-3,796.25	111.51	3,797.58	0.00	0.00	0.00	0.00
11,400.00	90.00	177.58	7,209.00	-3,896.16	115.74	3,897.58	0.00	0.00	0.00	0.00
11,500.00	90.00	177.58	7,209.00	-3,996.07	119.96	3,997.58	0.00	0.00	0.00	0.00
11,600.00	90.00	177.58	7,209.00	-4,095.98	124.19	4,097.58	0.00	0.00	0.00	0.00
11,700.00	90.00	177.58	7,209.00	-4,195.90	128.41	4,197.58	0.00	0.00	0.00	0.00
11,800.00	90.00	177.58	7,209.00	-4,295.81	132.64	4,297.58	0.00	0.00	0.00	0.00
11,900.00	90.00	177.58	7,209.00	-4,395.72	136.87	4,397.58	0.00	0.00	0.00	0.00
12,000.00	90.00	177.58	7,209.00	-4,495.63	141.09	4,497.58	0.00	0.00	0.00	0.00
12,100.00	90.00	177.58	7,209.00	-4,595.54	145.32	4,597.58	0.00	0.00	0.00	0.00
12,200.00	90.00	177.58	7,209.00	-4,695.45	149.54	4,697.58	0.00	0.00	0.00	0.00
12,224.06	90.00	177.58	7,209.00	-4,719.49	150.56	4,721.64	0.00	0.00	0.00	0.00

TD Well @ 12224.95ft - Total Depth (Toe) - Morning Fresh 14N-22HZ\_BHL

**Plan Annotations**

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	+E/-W (usft)	Comment
904.00	903.99	0.25	-0.49	Tie-On to Gyro Surveys @ 904.00ft
1,000.00	999.99	0.13	-0.37	0° INC, 0° AZI @ 1000.00ft
1,200.00	1,199.99	0.13	-0.37	Begin Nudge @ 1200.00ft
1,700.00	1,697.45	43.23	-6.43	End Nudge @ 1700.00ft
4,080.00	4,041.29	452.49	-63.94	Begin Drop @ 4080.00ft
4,580.00	4,538.76	495.59	-70.00	End Drop @ 4580.00ft
6,677.28	6,636.04	495.59	-70.00	KOP @ 6677.28ft
7,100.00	7,021.44	346.73	-63.71	DLS = 10°/100'
7,577.28	7,209.00	-76.86	-45.79	End Build @ 7577.98ft
12,224.06	7,209.00	-4,719.49	150.56	TD Well @ 12224.95ft

**Vertical Section Information**

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (usft)	+E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	177.58	Slot	0.00	0.00	0.00

**Survey tool program**

From (usft)	To (usft)	Survey/Plan	Survey Tool
13.00	904.00	MS Energy Gyros	NS-GYRO-MS
904.00	7,577.28	Rev A0	MWD+IFR1+SC
7,577.28	12,224.06	Rev A0	MWD+IFR1+SC

## Plan Report for Morning Fresh 14N-22HZ - Rev A0

**Casing Details**

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
983.70	983.69	9 5/8"	9-5/8	13-1/2
7,577.28	7,209.00	7"	7	8-3/4

**Formation Details**

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,048.22	4,010.00	Parkman		0.00	
4,544.24	4,503.00	Sussex		0.00	
7,096.71	7,019.00	Sharon Springs		0.00	
7,183.62	7,079.00	Niobrara A		0.00	
7,270.87	7,129.00	Niobrara B		0.00	
7,577.28	7,209.00	Landing Target (Heel)		0.00	
12,224.06	7,209.00	Total Depth (Toe)		0.00	

**Targets associated with this wellbore**

Target Name	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Shape
Morning Fresh 14N-22HZ_SHL	0.00	0.00	0.00	Point
Morning Fresh 14N-22HZ_LD	0.00	0.00	0.00	Polygon
Morning Fresh 14N-22HZ_SEC	0.00	0.00	0.00	Polygon
Morning Fresh 14N-22HZ_BHL	7,209.00	-4,719.49	150.56	Point

**Directional Difficulty Index**

Average Dogleg over Survey:	1.05 °/100usft	Maximum Dogleg over Survey:	10.00 °/100usft at 7,577.98 usft
Net Tortosity applicable to Plans:	1.05 °/100usft	Directional Difficulty Index:	6.192

**Audit Info**

**North Reference Sheet for Sec. 22-T3N-R66W - Morning Fresh 14N-22HZ - 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 = 13' @ 4899.00usft (Ensign 132). Northing and Easting are relative to Morning Fresh 14N-22HZ  
 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: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 0.99995703

Grid Coordinates of Well: 1,322,497.49 usft N, 3,204,992.92 usft E  
 Geographical Coordinates of Well: 40° 12' 58.77" N, 104° 45' 57.41" W  
 Grid Convergence at Surface is: 0.47°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,224.06usft  
 the Bottom Hole Displacement is 4,721.89usft in the Direction of 178.17° ( True).  
 Magnetic Convergence at surface is: -8.05° ( 11 June 2014, , BGGM2014)

