

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 14-T3N-R66W

Ferge 29C-14HZ

Plan A Rev 0

Plan: Plan A Rev 0 Permit

Sperry Drilling Services

Proposal Report

23 July, 2012

Well Coordinates: 1,323,360.56 N, 3,209,524.67 E (40° 13' 06.92" N, 104° 44' 58.90" W)

Ground Level: 4,914.00 ft

Local Coordinate Origin:

Centered on Well Ferge 29C-14HZ

Viewing Datum:

RKB=16ft @ 4930.00ft (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. 14-T3N-R66W
Well: Ferge 29C-14HZ
Wellbore: Plan A Rev 0
Design: Plan A Rev 0 Permit

Anadarko Petroleum Corp.

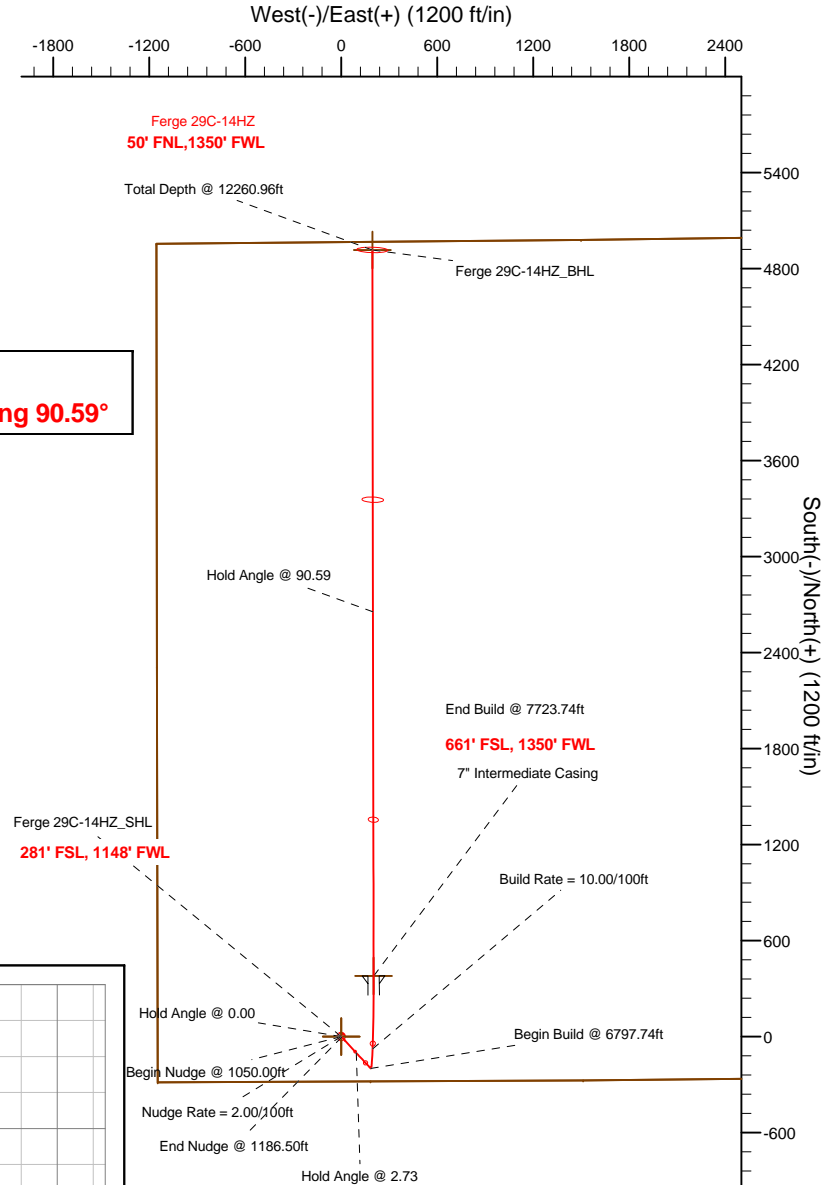
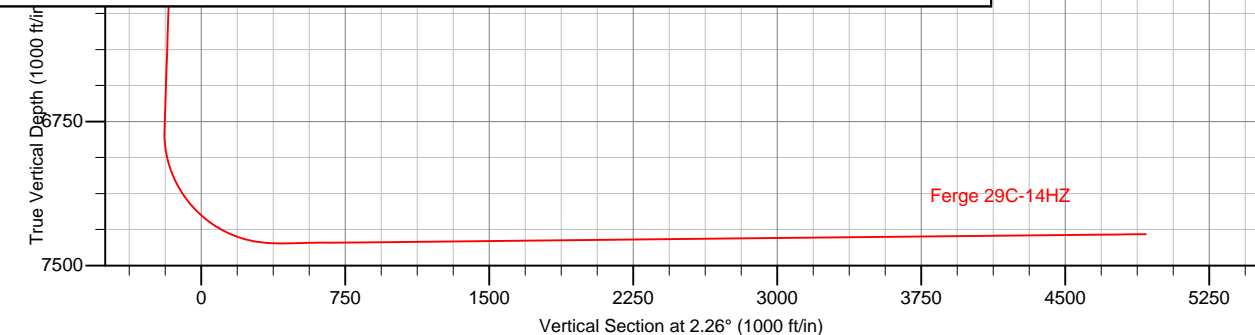
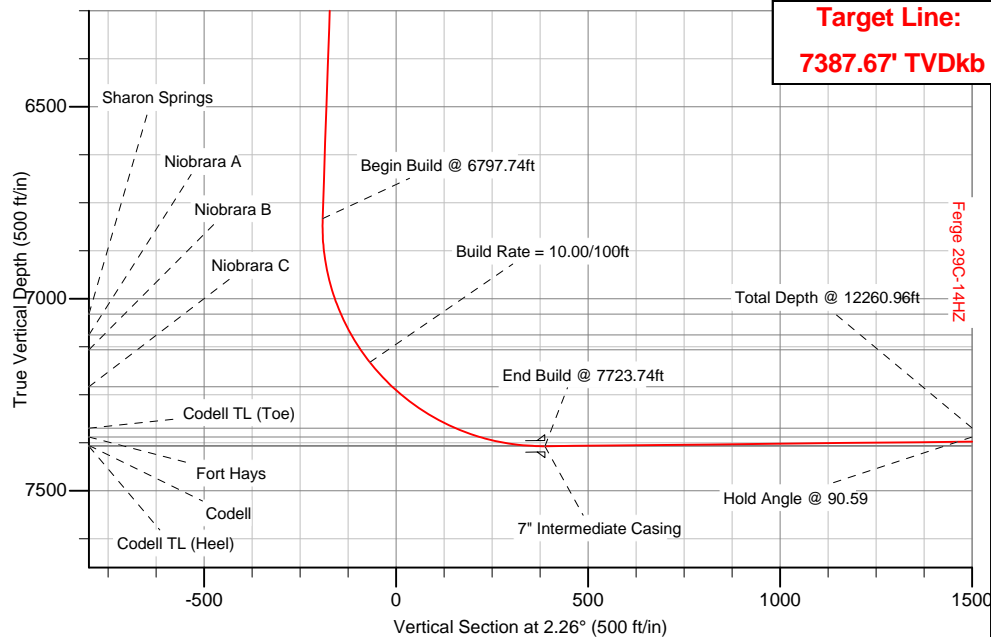
HALLIBURTON
Sperry Drilling

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	1186.50	2.73	137.23	1186.45	-2.39	2.21	2.00	137.23	-2.30	
4	6797.74	2.73	137.23	6791.32	-198.57	183.69	0.00	0.00	-191.18	
5	7723.74	90.59	359.90	7384.00	380.00	202.00	10.00	-137.28	387.66	Ferge 29C-14HZ_Casing Point
6	12260.96	90.59	359.90	7337.00	4916.96	193.77	0.00	0.00	4920.78	Ferge 29C-14HZ_BHL

WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Ferge 29C-14HZ_Section Lines	0.00	0.00	0.00	40.218589	-104.749694	Polygon
Ferge 29C-14HZ_SHL	0.00	0.00	0.00	40.218589	-104.749694	Point
Ferge 29C-14HZ_BHL	7337.00	4916.96	193.77	40.232086	-104.749000	Point
Ferge 29C-14HZ_Casing Point	7384.00	380.00	202.00	40.219632	-104.748971	Point



WELL DETAILS: Ferge 29C-14HZ

Ground Level: 4914.00 RKB=16ft @ 4930.00ft (Drilling Rig)

Plan: Plan A Rev 0 Permit (Ferge 29C-14HZ/Plan A Rev 0)

Created By: Fred Hartmann Date: 07/23/2012
Reviewed: Date:

Plan Report for Ferge 29C-14HZ - 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
Ferge 29C-14HZ_SHL - Ferge 29C-14HZ_Section Lines										
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
Hold Angle @ 0.00										
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Fox Hills										
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
Begin Nudge @ 1050.00ft										
1,100.00	1.00	137.23	1,100.00	-0.32	0.30	-0.31	2.00	2.00	0.00	137.23
Nudge Rate = 2.00/100ft										
1,186.50	2.73	137.23	1,186.45	-2.39	2.21	-2.30	2.00	2.00	0.00	0.00
End Nudge @ 1186.50ft										
1,200.00	2.73	137.23	1,199.93	-2.86	2.64	-2.75	0.00	0.00	0.00	0.00
1,300.00	2.73	137.23	1,299.82	-6.36	5.88	-6.12	0.00	0.00	0.00	0.00
1,400.00	2.73	137.23	1,399.71	-9.85	9.11	-9.48	0.00	0.00	0.00	0.00
1,500.00	2.73	137.23	1,499.59	-13.35	12.35	-12.85	0.00	0.00	0.00	0.00
1,600.00	2.73	137.23	1,599.48	-16.84	15.58	-16.22	0.00	0.00	0.00	0.00
1,700.00	2.73	137.23	1,699.37	-20.34	18.82	-19.58	0.00	0.00	0.00	0.00
1,800.00	2.73	137.23	1,799.25	-23.84	22.05	-22.95	0.00	0.00	0.00	0.00
1,900.00	2.73	137.23	1,899.14	-27.33	25.28	-26.32	0.00	0.00	0.00	0.00
2,000.00	2.73	137.23	1,999.03	-30.83	28.52	-29.68	0.00	0.00	0.00	0.00
2,100.00	2.73	137.23	2,098.91	-34.33	31.75	-33.05	0.00	0.00	0.00	0.00
2,200.00	2.73	137.23	2,198.80	-37.82	34.99	-36.41	0.00	0.00	0.00	0.00
2,300.00	2.73	137.23	2,298.68	-41.32	38.22	-39.78	0.00	0.00	0.00	0.00
2,400.00	2.73	137.23	2,398.57	-44.81	41.46	-43.15	0.00	0.00	0.00	0.00
2,500.00	2.73	137.23	2,498.46	-48.31	44.69	-46.51	0.00	0.00	0.00	0.00
2,600.00	2.73	137.23	2,598.34	-51.81	47.93	-49.88	0.00	0.00	0.00	0.00
2,700.00	2.73	137.23	2,698.23	-55.30	51.16	-53.25	0.00	0.00	0.00	0.00
2,800.00	2.73	137.23	2,798.12	-58.80	54.39	-56.61	0.00	0.00	0.00	0.00
2,900.00	2.73	137.23	2,898.00	-62.30	57.63	-59.98	0.00	0.00	0.00	0.00
3,000.00	2.73	137.23	2,997.89	-65.79	60.86	-63.34	0.00	0.00	0.00	0.00
3,100.00	2.73	137.23	3,097.78	-69.29	64.10	-66.71	0.00	0.00	0.00	0.00
3,200.00	2.73	137.23	3,197.66	-72.78	67.33	-70.08	0.00	0.00	0.00	0.00
3,300.00	2.73	137.23	3,297.55	-76.28	70.57	-73.44	0.00	0.00	0.00	0.00
3,400.00	2.73	137.23	3,397.44	-79.78	73.80	-76.81	0.00	0.00	0.00	0.00
3,500.00	2.73	137.23	3,497.32	-83.27	77.03	-80.18	0.00	0.00	0.00	0.00
3,600.00	2.73	137.23	3,597.21	-86.77	80.27	-83.54	0.00	0.00	0.00	0.00
3,700.00	2.73	137.23	3,697.10	-90.27	83.50	-86.91	0.00	0.00	0.00	0.00
3,800.00	2.73	137.23	3,796.98	-93.76	86.74	-90.27	0.00	0.00	0.00	0.00
3,900.00	2.73	137.23	3,896.87	-97.26	89.97	-93.64	0.00	0.00	0.00	0.00
3,930.17	2.73	137.23	3,927.00	-98.31	90.95	-94.66	0.00	0.00	0.00	0.00
Parkman										
4,000.00	2.73	137.23	3,996.76	-100.76	93.21	-97.01	0.00	0.00	0.00	0.00
Hold Angle @ 2.73										
4,100.00	2.73	137.23	4,096.64	-104.25	96.44	-100.37	0.00	0.00	0.00	0.00
4,200.00	2.73	137.23	4,196.53	-107.75	99.67	-103.74	0.00	0.00	0.00	0.00
4,300.00	2.73	137.23	4,296.41	-111.24	102.91	-107.11	0.00	0.00	0.00	0.00
4,400.00	2.73	137.23	4,396.30	-114.74	106.14	-110.47	0.00	0.00	0.00	0.00
4,465.77	2.73	137.23	4,462.00	-117.04	108.27	-112.69	0.00	0.00	0.00	0.00
Sussex										

Plan Report for Ferge 29C-14HZ - 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 (°)
4,500.00	2.73	137.23	4,496.19	-118.24	109.38	-113.84	0.00	0.00	0.00	0.00
4,600.00	2.73	137.23	4,596.07	-121.73	112.61	-117.20	0.00	0.00	0.00	0.00
4,700.00	2.73	137.23	4,695.96	-125.23	115.85	-120.57	0.00	0.00	0.00	0.00
4,800.00	2.73	137.23	4,795.85	-128.73	119.08	-123.94	0.00	0.00	0.00	0.00
4,900.00	2.73	137.23	4,895.73	-132.22	122.32	-127.30	0.00	0.00	0.00	0.00
5,000.00	2.73	137.23	4,995.62	-135.72	125.55	-130.67	0.00	0.00	0.00	0.00
5,100.00	2.73	137.23	5,095.51	-139.21	128.78	-134.04	0.00	0.00	0.00	0.00
5,200.00	2.73	137.23	5,195.39	-142.71	132.02	-137.40	0.00	0.00	0.00	0.00
5,300.00	2.73	137.23	5,295.28	-146.21	135.25	-140.77	0.00	0.00	0.00	0.00
5,400.00	2.73	137.23	5,395.17	-149.70	138.49	-144.13	0.00	0.00	0.00	0.00
5,500.00	2.73	137.23	5,495.05	-153.20	141.72	-147.50	0.00	0.00	0.00	0.00
5,600.00	2.73	137.23	5,594.94	-156.70	144.96	-150.87	0.00	0.00	0.00	0.00
5,700.00	2.73	137.23	5,694.83	-160.19	148.19	-154.23	0.00	0.00	0.00	0.00
5,800.00	2.73	137.23	5,794.71	-163.69	151.42	-157.60	0.00	0.00	0.00	0.00
5,900.00	2.73	137.23	5,894.60	-167.18	154.66	-160.96	0.00	0.00	0.00	0.00
6,000.00	2.73	137.23	5,994.49	-170.68	157.89	-164.33	0.00	0.00	0.00	0.00
6,100.00	2.73	137.23	6,094.37	-174.18	161.13	-167.70	0.00	0.00	0.00	0.00
6,200.00	2.73	137.23	6,194.26	-177.67	164.36	-171.06	0.00	0.00	0.00	0.00
6,300.00	2.73	137.23	6,294.15	-181.17	167.60	-174.43	0.00	0.00	0.00	0.00
6,400.00	2.73	137.23	6,394.03	-184.67	170.83	-177.80	0.00	0.00	0.00	0.00
6,500.00	2.73	137.23	6,493.92	-188.16	174.06	-181.16	0.00	0.00	0.00	0.00
6,600.00	2.73	137.23	6,593.80	-191.66	177.30	-184.53	0.00	0.00	0.00	0.00
6,700.00	2.73	137.23	6,693.69	-195.16	180.53	-187.89	0.00	0.00	0.00	0.00
6,797.74	2.73	137.23	6,791.32	-198.57	183.69	-191.18	0.00	0.00	0.00	0.00
Begin Build @ 6797.74ft										
6,800.00	2.57	133.81	6,793.58	-198.65	183.77	-191.26	9.99	-7.14	-151.27	-137.28
6,900.00	8.42	12.52	6,893.24	-193.03	186.98	-185.52	10.00	5.86	-121.29	-133.87
7,000.00	18.31	5.52	6,990.42	-170.19	190.09	-162.57	10.00	9.89	-7.00	-12.74
7,053.11	23.60	4.16	7,040.00	-151.27	191.66	-143.60	10.00	9.96	-2.57	-5.90
Sharon Springs										
7,100.00	28.28	3.36	7,082.15	-130.81	193.00	-123.11	10.00	9.97	-1.70	-4.63
7,113.54	29.63	3.17	7,094.00	-124.27	193.37	-116.56	10.00	9.98	-1.38	-3.91
Niobrara A										
7,159.50	34.21	2.64	7,133.00	-100.00	194.60	-92.26	10.00	9.98	-1.16	-3.75
Niobrara B										
7,200.00	38.26	2.26	7,165.66	-76.09	195.62	-68.33	10.00	9.99	-0.93	-3.29
Build Rate = 10.00/100ft										
7,286.07	46.85	1.65	7,229.00	-17.97	197.58	-10.18	10.00	9.99	-0.71	-2.99
Niobrara C										
7,300.00	48.25	1.57	7,238.40	-7.70	197.87	0.10	10.00	9.99	-0.59	-2.54
7,400.00	58.24	1.06	7,298.17	72.30	199.68	80.11	10.00	9.99	-0.51	-2.48
7,500.00	68.23	0.66	7,343.15	161.46	201.00	169.25	10.00	9.99	-0.41	-2.18
7,551.23	73.35	0.47	7,360.00	209.82	201.48	217.60	10.00	9.99	-0.36	-1.99
Fort Hays										
7,600.00	78.23	0.30	7,371.97	257.08	201.79	264.83	10.00	9.99	-0.34	-1.93
7,669.54	85.18	0.07	7,382.00	325.85	202.02	333.55	10.00	9.99	-0.33	-1.89
Codell										
7,700.00	88.22	359.97	7,383.75	356.26	202.03	363.94	10.00	9.99	-0.32	-1.86
7,723.74	90.59	359.90	7,384.00	380.00	202.00	387.66	10.00	9.99	-0.32	-1.85
End Build @ 7723.74ft - Codell TL (Heel) - 7" Intermediate Casing - Ferge 29C-14HZ_Casing Point										
7,800.00	90.59	359.90	7,383.21	456.25	201.86	463.85	0.00	0.00	0.00	-1.85
7,900.00	90.59	359.90	7,382.17	556.25	201.68	563.76	0.00	0.00	0.00	0.00
8,000.00	90.59	359.90	7,381.14	656.24	201.50	663.67	0.00	0.00	0.00	0.00
8,100.00	90.59	359.90	7,380.10	756.23	201.32	763.58	0.00	0.00	0.00	0.00
8,200.00	90.59	359.90	7,379.07	856.23	201.14	863.49	0.00	0.00	0.00	0.00
8,300.00	90.59	359.90	7,378.03	956.22	200.96	963.39	0.00	0.00	0.00	0.00
8,400.00	90.59	359.90	7,376.99	1,056.22	200.77	1,063.30	0.00	0.00	0.00	0.00
8,500.00	90.59	359.90	7,375.96	1,156.21	200.59	1,163.21	0.00	0.00	0.00	0.00

Plan Report for Ferge 29C-14HZ - 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 (°)
8,600.00	90.59	359.90	7,374.92	1,256.21	200.41	1,263.12	0.00	0.00	0.00	0.00
8,700.00	90.59	359.90	7,373.89	1,356.20	200.23	1,363.03	0.00	0.00	0.00	0.00
8,800.00	90.59	359.90	7,372.85	1,456.20	200.05	1,462.94	0.00	0.00	0.00	0.00
8,900.00	90.59	359.90	7,371.82	1,556.19	199.87	1,562.85	0.00	0.00	0.00	0.00
9,000.00	90.59	359.90	7,370.78	1,656.18	199.69	1,662.76	0.00	0.00	0.00	0.00
9,100.00	90.59	359.90	7,369.74	1,756.18	199.50	1,762.67	0.00	0.00	0.00	0.00
9,200.00	90.59	359.90	7,368.71	1,856.17	199.32	1,862.58	0.00	0.00	0.00	0.00
9,300.00	90.59	359.90	7,367.67	1,956.17	199.14	1,962.49	0.00	0.00	0.00	0.00
9,400.00	90.59	359.90	7,366.64	2,056.16	198.96	2,062.40	0.00	0.00	0.00	0.00
9,500.00	90.59	359.90	7,365.60	2,156.16	198.78	2,162.31	0.00	0.00	0.00	0.00
9,600.00	90.59	359.90	7,364.56	2,256.15	198.60	2,262.22	0.00	0.00	0.00	0.00
9,700.00	90.59	359.90	7,363.53	2,356.15	198.42	2,362.13	0.00	0.00	0.00	0.00
9,800.00	90.59	359.90	7,362.49	2,456.14	198.24	2,462.04	0.00	0.00	0.00	0.00
9,900.00	90.59	359.90	7,361.46	2,556.13	198.05	2,561.95	0.00	0.00	0.00	0.00
10,000.00	90.59	359.90	7,360.42	2,656.13	197.87	2,661.86	0.00	0.00	0.00	0.00
Hold Angle @ 90.59										
10,100.00	90.59	359.90	7,359.38	2,756.12	197.69	2,761.77	0.00	0.00	0.00	0.00
10,200.00	90.59	359.90	7,358.35	2,856.12	197.51	2,861.68	0.00	0.00	0.00	0.00
10,300.00	90.59	359.90	7,357.31	2,956.11	197.33	2,961.59	0.00	0.00	0.00	0.00
10,400.00	90.59	359.90	7,356.28	3,056.11	197.15	3,061.50	0.00	0.00	0.00	0.00
10,500.00	90.59	359.90	7,355.24	3,156.10	196.97	3,161.41	0.00	0.00	0.00	0.00
10,600.00	90.59	359.90	7,354.21	3,256.10	196.78	3,261.32	0.00	0.00	0.00	0.00
10,700.00	90.59	359.90	7,353.17	3,356.09	196.60	3,361.23	0.00	0.00	0.00	0.00
10,800.00	90.59	359.90	7,352.13	3,456.08	196.42	3,461.14	0.00	0.00	0.00	0.00
10,900.00	90.59	359.90	7,351.10	3,556.08	196.24	3,561.05	0.00	0.00	0.00	0.00
11,000.00	90.59	359.90	7,350.06	3,656.07	196.06	3,660.96	0.00	0.00	0.00	0.00
11,100.00	90.59	359.90	7,349.03	3,756.07	195.88	3,760.87	0.00	0.00	0.00	0.00
11,200.00	90.59	359.90	7,347.99	3,856.06	195.70	3,860.78	0.00	0.00	0.00	0.00
11,300.00	90.59	359.90	7,346.95	3,956.06	195.52	3,960.69	0.00	0.00	0.00	0.00
11,400.00	90.59	359.90	7,345.92	4,056.05	195.33	4,060.60	0.00	0.00	0.00	0.00
11,500.00	90.59	359.90	7,344.88	4,156.05	195.15	4,160.51	0.00	0.00	0.00	0.00
11,600.00	90.59	359.90	7,343.85	4,256.04	194.97	4,260.42	0.00	0.00	0.00	0.00
11,700.00	90.59	359.90	7,342.81	4,356.04	194.79	4,360.33	0.00	0.00	0.00	0.00
11,800.00	90.59	359.90	7,341.77	4,456.03	194.61	4,460.24	0.00	0.00	0.00	0.00
11,900.00	90.59	359.90	7,340.74	4,556.02	194.43	4,560.15	0.00	0.00	0.00	0.00
12,000.00	90.59	359.90	7,339.70	4,656.02	194.25	4,660.06	0.00	0.00	0.00	0.00
12,100.00	90.59	359.90	7,338.67	4,756.01	194.07	4,759.97	0.00	0.00	0.00	0.00
12,200.00	90.59	359.90	7,337.63	4,856.01	193.88	4,859.88	0.00	0.00	0.00	0.00
12,260.95	90.59	359.90	7,337.00	4,916.95	193.77	4,920.77	0.00	0.00	0.00	0.00
Codell TL (Toe)										
12,260.96	90.59	359.90	7,337.00	4,916.96	193.77	4,920.78	0.00	0.00	0.00	0.00
Ferge 29C-14HZ_BHL										

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Comment
600.00	600.00	0.00	0.00	Hold Angle @ 0.00
1,050.00	1,050.00	0.00	0.00	Begin Nudge @ 1050.00ft
1,100.00	1,100.00	-0.32	0.30	Nudge Rate = 2.00/100ft
1,186.50	1,186.45	-2.39	2.21	End Nudge @ 1186.50ft
4,000.00	3,996.76	-100.76	93.21	Hold Angle @ 2.73
6,797.74	6,791.32	-198.57	183.69	Begin Build @ 6797.74ft
7,200.00	7,165.66	-76.09	195.62	Build Rate = 10.00/100ft
7,723.74	7,384.00	380.00	202.00	End Build @ 7723.74ft
10,000.00	7,360.42	2,656.13	197.87	Hold Angle @ 90.59
12,260.96	7,337.00	4,916.96	193.77	Total Depth @ 12260.96ft

Plan Report for Ferge 29C-14HZ - Plan A Rev 0 Permit

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (ft)	Origin +E/-W (ft)	Start TVD (ft)
Target	Ferge 29C-14HZ_BHL	2.26	Slot	0.00	0.00	7,337.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
0.00	12,260.96	Plan A Rev 0 Permit	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,723.74	7,384.00	7" Intermediate Casing	7	8-3/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
700.00	700.00	Fox Hills		0.00	
3,930.17	3,927.00	Parkman		0.00	
4,465.77	4,462.00	Sussex		0.00	
7,053.11	7,040.00	Sharon Springs		0.00	
7,113.54	7,094.00	Niobrara A		0.00	
7,159.50	7,133.00	Niobrara B		0.00	
7,286.07	7,229.00	Niobrara C		0.00	
7,551.23	7,360.00	Fort Hays		0.00	
7,669.54	7,382.00	Codell		0.00	
7,723.74	7,384.00	Codell TL (Heel)		0.00	
12,260.95	7,337.00	Codell TL (Toe)		0.00	

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Ferge 29C-14HZ_Section Lines	0.00	0.00	0.00	Polygon
Ferge 29C-14HZ_BHL	7,337.00	4,916.96	193.77	Point
Ferge 29C-14HZ_Casing Point	7,384.00	380.00	202.00	Point
Ferge 29C-14HZ_SHL	0.00	0.00	0.00	Point

North Reference Sheet for Sec. 14-T3N-R66W - Ferge 29C-14HZ - 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=16ft @ 4930.00ft (Drilling Rig). Northing and Easting are relative to Ferge 29C-14HZ

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: 0.99995700

Grid Coordinates of Well: 1,323,360.563151 ft N, 3,209,524.668457 ft E

Geographical Coordinates of Well: 40° 13' 06.92" N, 104° 44' 58.90" W

Grid Convergence at Surface is: 0.48°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,260.96ft
the Bottom Hole Displacement is 4,920.78ft in the Direction of 2.26° (True).

Magnetic Convergence at surface is: -8.20° (23 July 2012, , BGGM2011)

