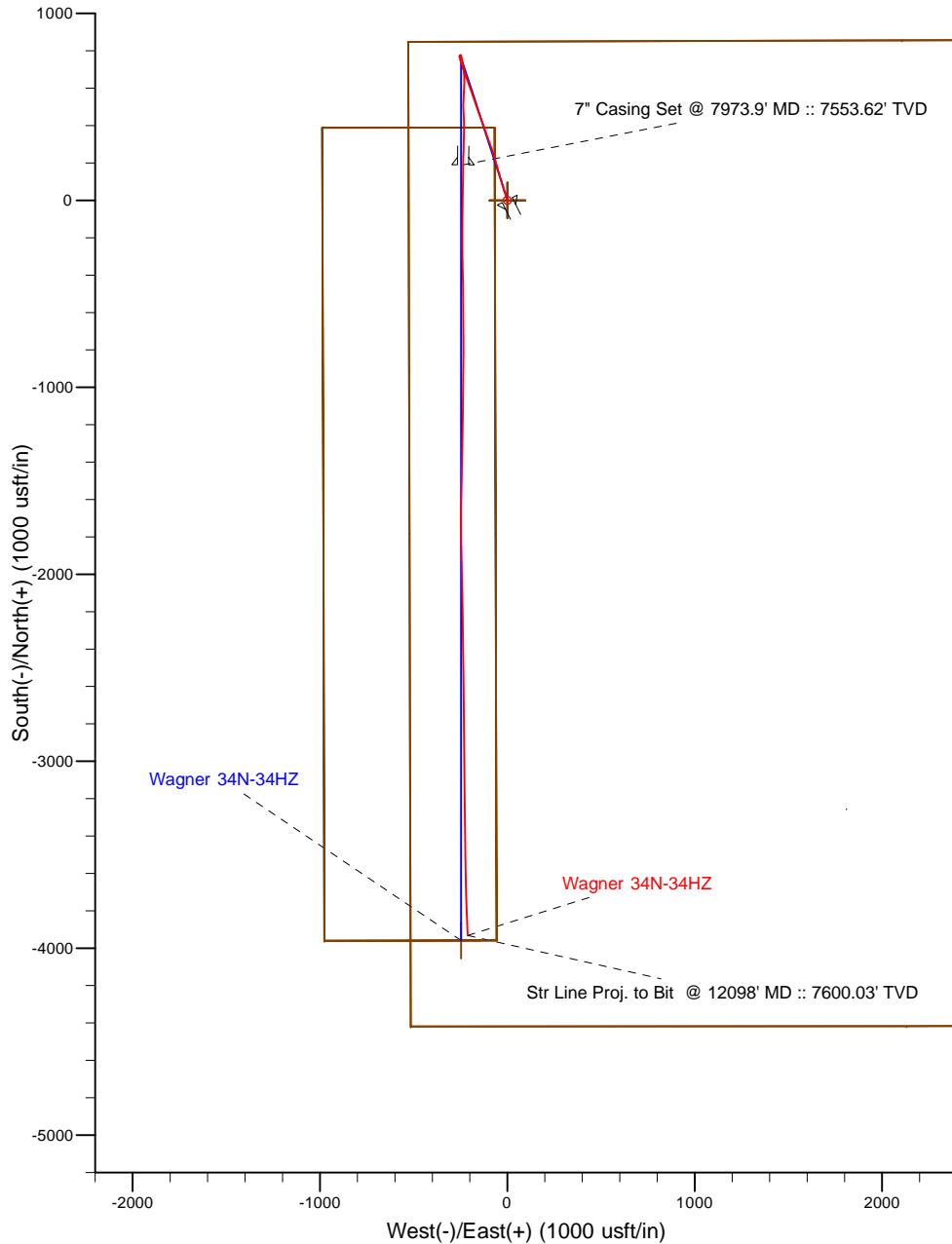
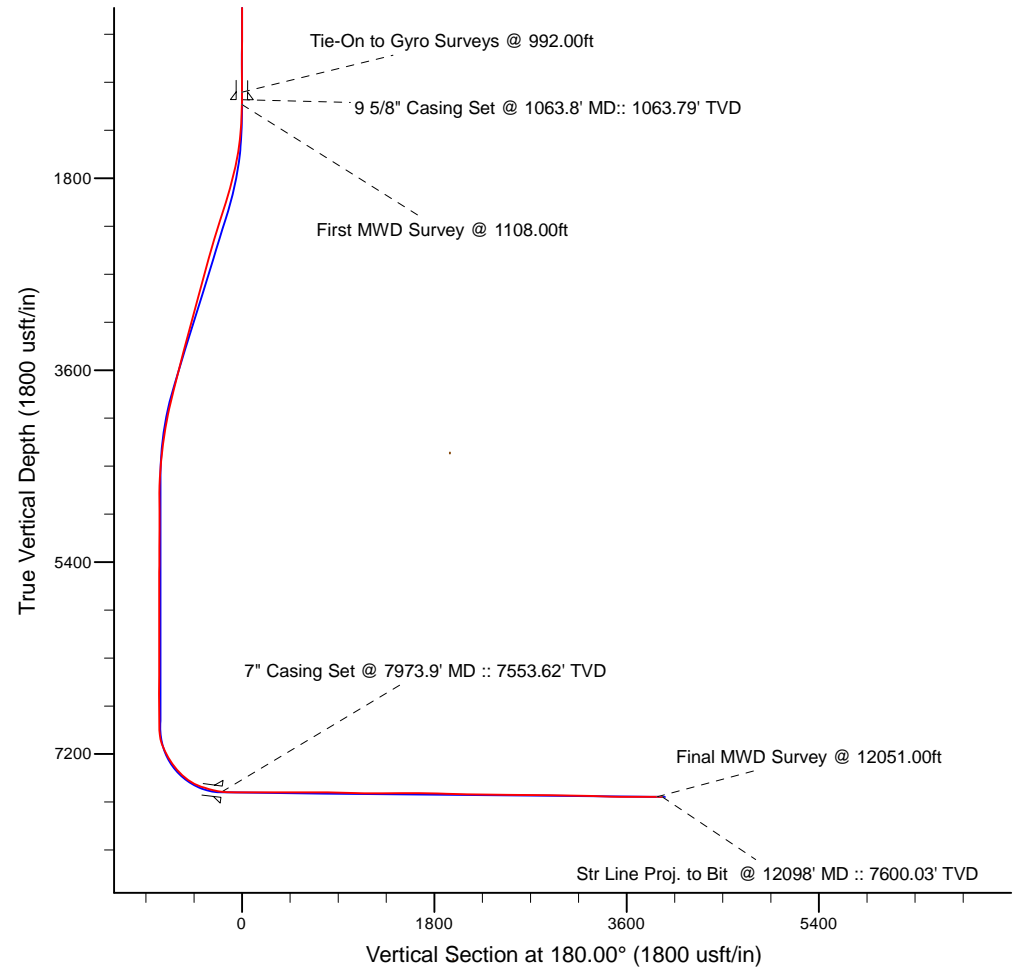


Project: Weld County, CO (NAD 83)
 Site: Sec. 34-T1N-R67W
 Well: Wagner 34N-34HZ
 Wellbore: Plan C
 Design: Actual Field Surveys



LEGEND

- ▣ Wagner 34N-34HZ, Plan C, Rev C0 V0
- ▣ Actual Field Surveys



7" Casing: ~658.26' FNL, ~291.62' FWL
 Lat/Long: 40.013018 N, -104.884991 E
 State Planes - CO Northern: 1,248,186.22' N, 3,172,262.68' E
 Location: Sec. 34-T1N-R67W

BHL: ~486.41' FSL, ~304.84' FWL
 Lat/Long: 40.001701 N, -104.884907 E
 State Planes - CO Northern: 1,244,063.95' N, 3,172,314.95' E
 Location: Sec. 34-T1N-R67W

WELL DETAILS: Wagner 34N-34HZ	
Ground Level:	5060.00
RKB = 16' @ 5076.00usft (Xtreme 22)	
Design: Actual Field Surveys (Wagner 34N-34HZ/Plan C)	
Created By: Clint Eshelman	Date: 12/9/2013
Reviewed: _____	Date: _____

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 34-T1N-R67W

Wagner 34N-34HZ

Plan C

Design: Actual Field Surveys

Sperry Drilling Services

Standard Report

09 December, 2013

Well Coordinates: 1,247,997.07 N, 3,172,499.03 E (40° 00' 44.98" N, 104° 53' 02.95" W)

Ground Level: 5,060.00 usft

Local Coordinate Origin:

Centered on Well Wagner 34N-34HZ

Viewing Datum:

RKB = 16' @ 5076.00usft (Xtreme 22)

TVDs to System:

N

North Reference:

True

Unit System:

API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

HALLIBURTON

Design Report for Wagner 34N-34HZ - Actual Field Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
16.00	0.00	0.00	16.00	0.00	0.00	0.00	0.00
116.00	0.34	101.07	116.00	-0.06	0.29	0.06	0.34
216.00	0.34	2.24	216.00	0.18	0.59	-0.18	0.52
316.00	0.26	306.48	316.00	0.61	0.42	-0.61	0.29
416.00	0.13	152.56	416.00	0.65	0.29	-0.65	0.38
516.00	0.32	46.93	516.00	0.74	0.55	-0.74	0.38
616.00	0.12	148.57	616.00	0.84	0.81	-0.84	0.36
716.00	0.28	29.96	716.00	0.96	0.98	-0.96	0.35
816.00	0.47	303.68	815.99	1.40	0.77	-1.40	0.53
916.00	0.08	203.64	915.99	1.56	0.40	-1.56	0.49
992.00	0.15	6.37	991.99	1.61	0.39	-1.61	0.30
Tie-On to Gyro Surveys @ 992.00ft							
1,063.80	0.29	333.59	1,063.79	1.87	0.31	-1.87	0.26
9 5/8" Casing Set @ 1063.8' MD:: 1063.79' TVD							
1,108.00	0.40	326.41	1,107.99	2.10	0.18	-2.10	0.26
First MWD Survey @ 1108.00ft							
1,298.00	3.97	348.87	1,297.82	9.11	-1.46	-9.11	1.90
1,487.00	7.75	335.80	1,485.81	27.16	-7.95	-27.16	2.11
1,676.00	12.67	343.66	1,671.77	58.70	-19.01	-58.70	2.70
1,858.00	15.67	344.79	1,848.21	101.58	-31.08	-101.58	1.66
2,041.00	17.65	343.94	2,023.52	152.09	-45.24	-152.09	1.09
2,224.00	18.51	342.61	2,197.48	206.47	-61.59	-206.47	0.52
2,408.00	17.80	342.26	2,372.32	261.13	-78.89	-261.13	0.39
2,591.00	15.99	340.34	2,547.42	311.51	-95.90	-311.51	1.03
2,775.00	16.81	340.50	2,723.93	360.46	-113.31	-360.46	0.45
2,957.00	15.18	340.65	2,898.88	407.75	-129.99	-407.75	0.90
3,141.00	15.64	339.92	3,076.26	453.78	-146.48	-453.78	0.27
3,312.00	16.17	340.87	3,240.72	497.92	-162.20	-497.92	0.35
3,484.00	15.43	340.18	3,406.22	542.08	-177.81	-542.08	0.44
3,655.00	15.25	342.14	3,571.13	584.88	-192.42	-584.88	0.32
3,826.00	16.09	340.17	3,735.77	628.58	-207.36	-628.58	0.58
3,997.00	13.53	339.25	3,901.08	669.59	-222.48	-669.59	1.50
4,169.00	11.58	343.13	4,068.96	704.92	-234.62	-704.92	1.23
4,340.00	8.11	338.14	4,237.42	732.55	-244.10	-732.55	2.09
4,512.00	6.72	343.55	4,407.98	753.47	-251.47	-753.47	0.90
4,683.00	3.80	359.15	4,578.25	768.73	-254.38	-768.73	1.89
4,854.00	0.57	201.12	4,749.14	773.61	-254.77	-773.61	2.53
5,025.00	0.42	97.77	4,920.13	772.73	-254.46	-772.73	0.46
5,196.00	0.35	73.36	5,091.13	772.79	-253.34	-772.79	0.10
5,368.00	0.42	22.26	5,263.12	773.53	-252.60	-773.53	0.20
5,539.00	0.53	324.06	5,434.12	774.75	-252.82	-774.75	0.28
5,710.00	2.00	69.19	5,605.08	776.45	-250.50	-776.45	1.29
5,882.00	0.54	144.12	5,777.04	776.86	-247.22	-776.86	1.12
6,053.00	0.28	145.11	5,948.04	775.86	-246.51	-775.86	0.15
6,224.00	0.04	100.45	6,119.04	775.51	-246.21	-775.51	0.15
6,395.00	0.26	299.29	6,290.04	775.69	-246.49	-775.69	0.17
6,567.00	0.74	318.91	6,462.03	776.71	-247.56	-776.71	0.29
6,738.00	0.26	122.15	6,633.03	777.34	-247.95	-777.34	0.58
6,910.00	0.35	144.35	6,805.03	776.71	-247.32	-776.71	0.09

Design Report for Wagner 34N-34HZ - Actual Field Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
7,081.00	1.46	162.16	6,976.00	774.21	-246.35	-774.21	0.66
7,124.00	7.03	171.91	7,018.87	771.08	-245.81	-771.08	13.02
7,167.00	12.81	169.26	7,061.21	763.78	-244.55	-763.78	13.48
7,209.00	19.02	167.83	7,101.58	752.51	-242.24	-752.51	14.81
7,252.00	23.56	169.16	7,141.63	737.21	-239.14	-737.21	10.62
7,295.00	26.94	169.70	7,180.52	719.18	-235.78	-719.18	7.88
7,338.00	30.22	172.74	7,218.28	698.86	-232.67	-698.86	8.34
7,381.00	32.48	175.93	7,255.00	676.60	-230.48	-676.60	6.52
7,424.00	34.45	178.34	7,290.87	652.92	-229.31	-652.92	5.53
7,467.00	38.35	180.47	7,325.47	627.42	-229.07	-627.42	9.53
7,510.00	42.08	183.98	7,358.31	599.69	-230.18	-599.69	10.15
7,552.00	45.45	183.33	7,388.64	570.70	-232.03	-570.70	8.09
7,595.00	48.95	182.23	7,417.85	539.19	-233.55	-539.19	8.35
7,638.00	54.85	179.47	7,444.37	505.38	-234.02	-505.38	14.62
7,681.00	60.90	177.99	7,467.23	468.99	-233.19	-468.99	14.37
7,724.00	65.22	178.14	7,486.71	430.69	-231.90	-430.69	10.05
7,767.00	69.52	179.14	7,503.25	391.02	-230.96	-391.02	10.23
7,809.00	72.67	181.40	7,516.86	351.29	-231.16	-351.29	9.06
7,852.00	75.22	181.50	7,528.75	309.99	-232.20	-309.99	5.93
7,895.00	76.43	181.74	7,539.28	268.31	-233.38	-268.31	2.87
7,938.00	79.65	181.17	7,548.19	226.27	-234.45	-226.27	7.60
7,973.90	82.93	180.76	7,553.62	190.79	-235.05	-190.79	9.21
7" Casing Set @ 7973.9' MD :: 7553.62' TVD							
7,980.00	83.49	180.69	7,554.34	184.73	-235.12	-184.73	9.21
8,025.00	87.10	181.05	7,558.03	139.90	-235.80	-139.90	8.06
8,110.00	90.09	181.07	7,560.12	54.95	-237.38	-54.95	3.52
8,282.00	90.15	180.51	7,559.76	-117.04	-239.75	117.04	0.33
8,453.00	89.75	179.52	7,559.91	-288.03	-239.79	288.03	0.62
8,624.00	90.43	178.96	7,559.64	-459.02	-237.52	459.02	0.52
8,795.00	90.03	178.84	7,558.95	-629.98	-234.24	629.98	0.24
8,966.00	89.35	180.38	7,559.88	-800.97	-233.08	800.97	0.98
9,138.00	88.55	180.78	7,563.03	-972.93	-234.82	972.93	0.52
9,309.00	88.49	180.61	7,567.44	-1,143.86	-236.89	1,143.86	0.11
9,481.00	91.23	181.31	7,567.86	-1,315.82	-239.77	1,315.82	1.64
9,652.00	89.94	181.71	7,566.12	-1,486.75	-244.28	1,486.75	0.79
9,823.00	89.23	180.45	7,567.36	-1,657.71	-247.50	1,657.71	0.85
9,994.00	88.92	179.18	7,570.12	-1,828.68	-246.95	1,828.68	0.76
10,165.00	87.63	177.91	7,575.27	-1,999.54	-242.61	1,999.54	1.06
10,337.00	90.09	179.44	7,578.69	-2,171.44	-238.64	2,171.44	1.68
10,508.00	89.26	179.42	7,579.66	-2,342.43	-236.94	2,342.43	0.49
10,680.00	88.92	178.90	7,582.39	-2,514.39	-234.41	2,514.39	0.36
10,851.00	89.54	179.54	7,584.69	-2,685.36	-232.09	2,685.36	0.52
11,023.00	89.88	179.46	7,585.56	-2,857.35	-230.59	2,857.35	0.20
11,194.00	88.86	179.45	7,587.44	-3,028.33	-228.96	3,028.33	0.60
11,365.00	88.24	179.82	7,591.77	-3,199.27	-227.87	3,199.27	0.42
11,536.00	88.18	179.05	7,597.11	-3,370.17	-226.18	3,370.17	0.45
11,708.00	89.29	179.14	7,600.90	-3,542.11	-223.47	3,542.11	0.65
11,879.00	90.43	178.53	7,601.32	-3,713.07	-219.99	3,713.07	0.76
12,051.00	90.28	177.25	7,600.26	-3,884.94	-213.66	3,884.94	0.75
Final MWD Survey @ 12051.00ft							
12,098.00	90.28	177.25	7,600.03	-3,931.89	-211.40	3,931.89	0.00

Design Report for Wagner 34N-34HZ - Actual Field Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)
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Str Line Proj. to Bit @ 12098' MD :: 7600.03' TVD

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
992.00	991.99	1.61	0.39	Tie-On to Gyro Surveys @ 992.00ft
1,108.00	1,107.99	2.10	0.18	First MWD Survey @ 1108.00ft
12,051.00	7,600.26	-3,884.94	-213.66	Final MWD Survey @ 12051.00ft
12,098.00	7,600.03	-3,931.89	-211.40	Str Line Proj. to Bit @ 12098' MD :: 7600.03' TVD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (usft)
				+N/_S (usft)	+E/-W (usft)	
User	No Target (Freehand)	180.00	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
16.00	992.00	MS Energy Gyros	NS-GYRO-MS
1,108.00	8,025.00	Vertical/Build Surveys	MWD+IFR1+SC
8,110.00	12,051.00	MWD Lateral Surveys	MWD+IFR1+SC

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,063.80	1,063.79	9 5/8" Casing Set @ 1063.8' MD:: 1063.79' TVD	9-5/8	13-1/2
7,973.90	7,553.62	7" Casing Set @ 7973.9' MD :: 7553.62' TVD	7	8-3/4

Design Report for Wagner 34N-34HZ - Actual Field Surveys**Wellbore Targets**

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Wagner 34N-34HZ_LC - actual wellpath hits target center - Polygon	0.00	0.00	0.00	0.00	0.00	1,247,997.08	3,172,499.03	40° 0' 44.978 N	104° 53' 2.947 W
Point 1				0.00	388.07	-987.26	1,248,378.27	3,171,509.14	
Point 2				0.00	389.59	-67.22	1,248,386.18	3,172,429.11	
Point 3				0.00	-1,778.96	-61.09	1,246,217.80	3,172,450.30	
Point 4				0.00	-3,958.16	-56.19	1,244,038.76	3,172,470.34	
Point 5				0.00	-3,959.15	-976.22	1,244,031.38	3,171,550.37	
Point 6				0.00	-1,779.70	-981.13	1,246,210.67	3,171,530.32	
Wagner 34N-34HZ_SF - actual wellpath hits target center - Point	0.00	0.00	0.00	0.00	0.00	1,247,997.08	3,172,499.03	40° 0' 44.978 N	104° 53' 2.947 W
Wagner 34N-34HZ_SE - actual wellpath hits target center - Polygon	0.00	0.00	0.00	0.00	0.00	1,247,997.08	3,172,499.03	40° 0' 44.978 N	104° 53' 2.947 W
Point 1				0.00	848.11	-528.53	1,248,841.47	3,171,964.65	
Point 2				0.00	856.70	2,106.72	1,248,868.36	3,174,599.68	
Point 3				0.00	864.62	4,741.93	1,248,894.58	3,177,234.68	
Point 4				0.00	-1,775.19	4,760.44	1,246,255.05	3,177,271.52	
Point 5				0.00	-4,414.34	4,777.95	1,243,616.18	3,177,307.36	
Point 6				0.00	-4,416.26	2,131.12	1,243,595.88	3,174,660.70	
Point 7				0.00	-4,418.58	-515.16	1,243,575.18	3,172,014.59	
Point 8				0.00	-1,779.27	-521.11	1,246,214.29	3,171,990.31	
Wagner 34N-34HZ_BF - actual wellpath misses target center by 43.80usft at 12098.00usft MD (7600.03 TVD, -3931.89 N, -211.40 E) - Point	0.00	0.00	7,602.00	-3,958.35	-246.26	1,244,037.25	3,172,280.28	40° 0' 5.861 N	104° 53' 6.112 W

Directional Difficulty Index

Average Dogleg over Survey:	1.46 °/100usft	Maximum Dogleg over Survey:	14.81 °/100usft at 7,209.00 usft
Net Tortousity applicable to Plans:	0.20 °/100usft	Directional Difficulty Index:	6.193

Audit Info

North Reference Sheet for Sec. 34-T1N-R67W - Wagner 34N-34HZ - Plan C

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

Vertical Depths are relative to RKB = 16' @ 5076.00usft (Xtreme 22). Northing and Easting are relative to Wagner 34N-34HZ

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° 30' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:40° 47' 0.000 N°

False Easting: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 0.99996544

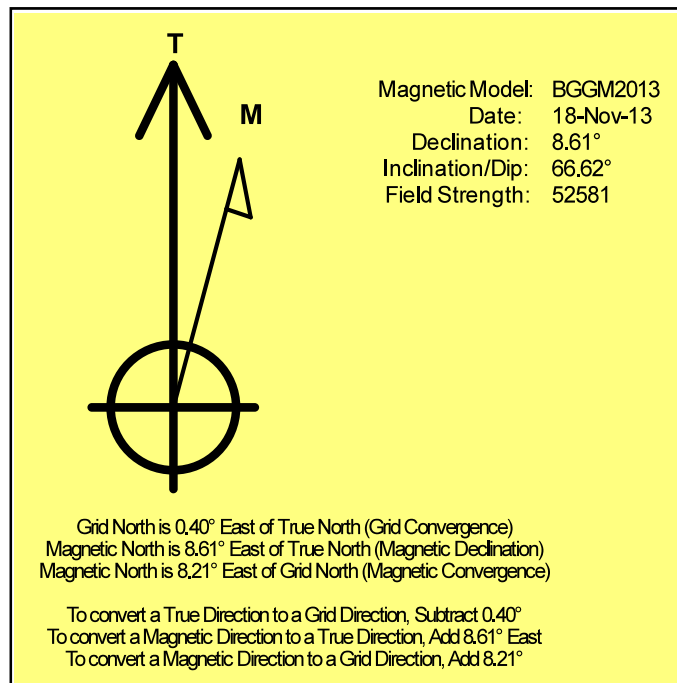
Grid Coordinates of Well: 1,247,997.07 usft N, 3,172,499.03 usft E

Geographical Coordinates of Well: 40° 00' 44.98" N, 104° 53' 02.95" W

Grid Convergence at Surface is: 0.40°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,098.00usft
the Bottom Hole Displacement is 3,937.57usft in the Direction of 183.08° (True).

Magnetic Convergence at surface is: -8.21° (18 November 2013, , BGGM2013)



Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 34-T1N-R67W

Wagner 34N-34HZ

Plan C

Design: Actual Field Surveys

Sperry Drilling Services

Geodetic Report

09 December, 2013

Well Coordinates: 1,247,997.07 N, 3,172,499.03 E (40° 00' 44.98" N, 104° 53' 02.95" W)

Ground Level: 5,060.00 usft

Local Coordinate Origin:

Centered on Well Wagner 34N-34HZ

Viewing Datum:

RKB = 16' @ 5076.00usft (Xtreme 22)

TVDs to System:

N

North Reference:

True

Unit System:

Dec-Deg - API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 5000.1 Build: 70

HALLIBURTON

Design Report for Wagner 34N-34HZ - Actual Field Surveys

Measured			Vertical	Local Coordinates		Geographic Coordinates		UTM Coordinates	
Depth (usft)	Inclination (°)	Azimuth (°)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Latitude (usft)	Longitude (usft)	Northing (usft)	Easting (usft)
0.00	0.00	0.00	0.00	0.00	0.00	40.012494	-104.884152	1,247,997.07	3,172,499.03
16.00	0.00	0.00	16.00	0.00	0.00	40.012494	-104.884152	1,247,997.07	3,172,499.03
116.00	0.34	101.07	116.00	-0.06	0.29	40.012494	-104.884151	1,247,997.02	3,172,499.33
216.00	0.34	2.24	216.00	0.18	0.59	40.012495	-104.884150	1,247,997.26	3,172,499.63
316.00	0.26	306.48	316.00	0.61	0.42	40.012496	-104.884151	1,247,997.69	3,172,499.45
416.00	0.13	152.56	416.00	0.65	0.29	40.012496	-104.884151	1,247,997.72	3,172,499.32
516.00	0.32	46.93	516.00	0.74	0.55	40.012496	-104.884150	1,247,997.82	3,172,499.58
616.00	0.12	148.57	616.00	0.84	0.81	40.012496	-104.884149	1,247,997.92	3,172,499.84
716.00	0.28	29.96	716.00	0.96	0.98	40.012497	-104.884149	1,247,998.04	3,172,500.01
816.00	0.47	303.68	815.99	1.40	0.77	40.012498	-104.884150	1,247,998.48	3,172,499.79
916.00	0.08	203.64	915.99	1.56	0.40	40.012498	-104.884151	1,247,998.64	3,172,499.42
992.00	0.15	6.37	991.99	1.61	0.39	40.012499	-104.884151	1,247,998.69	3,172,499.41
1,063.80	0.29	333.59	1,063.79	1.87	0.31	40.012499	-104.884151	1,247,998.95	3,172,499.34
1,108.00	0.40	326.41	1,107.99	2.10	0.18	40.012500	-104.884152	1,247,999.18	3,172,499.20
1,298.00	3.97	348.87	1,297.82	9.11	-1.46	40.012519	-104.884157	1,248,006.17	3,172,497.51
1,487.00	7.75	335.80	1,485.81	27.16	-7.95	40.012569	-104.884181	1,248,024.18	3,172,490.90
1,676.00	12.67	343.66	1,671.77	58.70	-19.01	40.012655	-104.884220	1,248,055.63	3,172,479.62
1,858.00	15.67	344.79	1,848.21	101.58	-31.08	40.012773	-104.884263	1,248,098.43	3,172,467.25
2,041.00	17.65	343.94	2,023.52	152.09	-45.24	40.012912	-104.884314	1,248,148.84	3,172,452.74
2,224.00	18.51	342.61	2,197.48	206.47	-61.59	40.013061	-104.884372	1,248,203.11	3,172,436.01
2,408.00	17.80	342.26	2,372.32	261.13	-78.89	40.013211	-104.884434	1,248,257.64	3,172,418.33
2,591.00	15.99	340.34	2,547.42	311.51	-95.90	40.013349	-104.884495	1,248,307.90	3,172,400.98
2,775.00	16.81	340.50	2,723.93	360.46	-113.31	40.013484	-104.884557	1,248,356.73	3,172,383.23
2,957.00	15.18	340.65	2,898.88	407.75	-129.99	40.013613	-104.884616	1,248,403.90	3,172,366.22
3,141.00	15.64	339.92	3,076.26	453.78	-146.48	40.013740	-104.884675	1,248,449.81	3,172,349.41
3,312.00	16.17	340.87	3,240.72	497.92	-162.20	40.013861	-104.884731	1,248,493.84	3,172,333.38
3,484.00	15.43	340.18	3,406.22	542.08	-177.81	40.013982	-104.884787	1,248,537.89	3,172,317.47
3,655.00	15.25	342.14	3,571.13	584.88	-192.42	40.014100	-104.884839	1,248,580.59	3,172,302.56
3,826.00	16.09	340.17	3,735.77	628.58	-207.36	40.014220	-104.884893	1,248,624.18	3,172,287.33
3,997.00	13.53	339.25	3,901.08	669.59	-222.48	40.014332	-104.884947	1,248,665.07	3,172,271.91
4,169.00	11.58	343.13	4,068.96	704.92	-234.62	40.014429	-104.884990	1,248,700.33	3,172,259.53
4,340.00	8.11	338.14	4,237.42	732.55	-244.10	40.014505	-104.885024	1,248,727.89	3,172,249.86
4,512.00	6.72	343.55	4,407.98	753.47	-251.47	40.014562	-104.885050	1,248,748.75	3,172,242.35
4,683.00	3.80	359.15	4,578.25	768.73	-254.38	40.014604	-104.885060	1,248,763.99	3,172,239.33
4,854.00	0.57	201.12	4,749.14	773.61	-254.77	40.014618	-104.885062	1,248,768.86	3,172,238.90
5,025.00	0.42	97.77	4,920.13	772.73	-254.46	40.014615	-104.885061	1,248,767.99	3,172,239.22
5,196.00	0.35	73.36	5,091.13	772.79	-253.34	40.014615	-104.885057	1,248,768.06	3,172,240.34
5,368.00	0.42	22.26	5,263.12	773.53	-252.60	40.014617	-104.885054	1,248,768.80	3,172,241.08
5,539.00	0.53	324.06	5,434.12	774.75	-252.82	40.014621	-104.885055	1,248,770.02	3,172,240.85
5,710.00	2.00	69.19	5,605.08	776.45	-250.50	40.014625	-104.885047	1,248,771.74	3,172,243.16
5,882.00	0.54	144.12	5,777.04	776.86	-247.22	40.014627	-104.885035	1,248,772.17	3,172,246.44
6,053.00	0.28	145.11	5,948.04	775.86	-246.51	40.014624	-104.885032	1,248,771.18	3,172,247.15

Design Report for Wagner 34N-34HZ - Actual Field Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Geographic Coordinates		UTM Coordinates	
				+N/-S (usft)	+E/-W (usft)	Latitude (usft)	Longitude (usft)	Northing (usft)	Easting (usft)
6,224.00	0.04	100.45	6,119.04	775.51	-246.21	40.014623	-104.885031	1,248,770.83	3,172,247.46
6,395.00	0.26	299.29	6,290.04	775.69	-246.49	40.014623	-104.885032	1,248,771.00	3,172,247.17
6,567.00	0.74	318.91	6,462.03	776.71	-247.56	40.014626	-104.885036	1,248,772.02	3,172,246.10
6,738.00	0.26	122.15	6,633.03	777.34	-247.95	40.014628	-104.885037	1,248,772.65	3,172,245.70
6,910.00	0.35	144.35	6,805.03	776.71	-247.32	40.014626	-104.885035	1,248,772.02	3,172,246.34
7,081.00	1.46	162.16	6,976.00	774.21	-246.35	40.014619	-104.885032	1,248,769.53	3,172,247.33
7,124.00	7.03	171.91	7,018.87	771.08	-245.81	40.014611	-104.885030	1,248,766.40	3,172,247.89
7,167.00	12.81	169.26	7,061.21	763.78	-244.55	40.014591	-104.885025	1,248,759.11	3,172,249.20
7,209.00	19.02	167.83	7,101.58	752.51	-242.24	40.014560	-104.885017	1,248,747.86	3,172,251.59
7,252.00	23.56	169.16	7,141.63	737.21	-239.14	40.014518	-104.885006	1,248,732.58	3,172,254.79
7,295.00	26.94	169.70	7,180.52	719.18	-235.78	40.014468	-104.884994	1,248,714.57	3,172,258.27
7,338.00	30.22	172.74	7,218.28	698.86	-232.67	40.014412	-104.884983	1,248,694.27	3,172,261.52
7,381.00	32.48	175.93	7,255.00	676.60	-230.48	40.014351	-104.884975	1,248,672.03	3,172,263.86
7,424.00	34.45	178.34	7,290.87	652.92	-229.31	40.014286	-104.884971	1,248,648.37	3,172,265.20
7,467.00	38.35	180.47	7,325.47	627.42	-229.07	40.014216	-104.884970	1,248,622.86	3,172,265.62
7,510.00	42.08	183.98	7,358.31	599.69	-230.18	40.014140	-104.884974	1,248,595.13	3,172,264.70
7,552.00	45.45	183.33	7,388.64	570.70	-232.03	40.014061	-104.884981	1,248,566.13	3,172,263.06
7,595.00	48.95	182.23	7,417.85	539.19	-233.55	40.013974	-104.884986	1,248,534.61	3,172,261.76
7,638.00	54.85	179.47	7,444.37	505.38	-234.02	40.013881	-104.884988	1,248,500.80	3,172,261.52
7,681.00	60.90	177.99	7,467.23	468.99	-233.19	40.013781	-104.884985	1,248,464.42	3,172,262.60
7,724.00	65.22	178.14	7,486.71	430.69	-231.90	40.013676	-104.884980	1,248,426.12	3,172,264.16
7,767.00	69.52	179.14	7,503.25	391.02	-230.96	40.013567	-104.884977	1,248,386.47	3,172,265.37
7,809.00	72.67	181.40	7,516.86	351.29	-231.16	40.013458	-104.884978	1,248,346.74	3,172,265.45
7,852.00	75.22	181.50	7,528.75	309.99	-232.20	40.013345	-104.884981	1,248,305.43	3,172,264.69
7,895.00	76.43	181.74	7,539.28	268.31	-233.38	40.013231	-104.884985	1,248,263.75	3,172,263.80
7,938.00	79.65	181.17	7,548.19	226.27	-234.45	40.013115	-104.884989	1,248,221.70	3,172,263.03
7,973.90	82.93	180.76	7,553.62	190.79	-235.05	40.013018	-104.884991	1,248,186.22	3,172,262.68
7,980.00	83.49	180.69	7,554.34	184.73	-235.12	40.013001	-104.884992	1,248,180.16	3,172,262.64
8,025.00	87.10	181.05	7,558.03	139.90	-235.80	40.012878	-104.884994	1,248,135.33	3,172,262.27
8,110.00	90.09	181.07	7,560.12	54.95	-237.38	40.012645	-104.885000	1,248,050.37	3,172,261.29
8,282.00	90.15	180.51	7,559.76	-117.04	-239.75	40.012173	-104.885008	1,247,878.38	3,172,260.11
8,453.00	89.75	179.52	7,559.91	-288.03	-239.79	40.011703	-104.885008	1,247,707.39	3,172,261.26
8,624.00	90.43	178.96	7,559.64	-459.02	-237.52	40.011234	-104.885000	1,247,536.44	3,172,264.71
8,795.00	90.03	178.84	7,558.95	-629.98	-234.24	40.010765	-104.884988	1,247,365.50	3,172,269.18
8,966.00	89.35	180.38	7,559.88	-800.97	-233.08	40.010295	-104.884984	1,247,194.53	3,172,271.53
9,138.00	88.55	180.78	7,563.03	-972.93	-234.82	40.009823	-104.884991	1,247,022.57	3,172,270.99
9,309.00	88.49	180.61	7,567.44	-1,143.86	-236.89	40.009354	-104.884998	1,246,851.63	3,172,270.10
9,481.00	91.23	181.31	7,567.86	-1,315.82	-239.77	40.008882	-104.885008	1,246,679.67	3,172,268.41
9,652.00	89.94	181.71	7,566.12	-1,486.75	-244.28	40.008413	-104.885024	1,246,508.72	3,172,265.09
9,823.00	89.23	180.45	7,567.36	-1,657.71	-247.50	40.007944	-104.885036	1,246,337.75	3,172,263.06
9,994.00	88.92	179.18	7,570.12	-1,828.68	-246.95	40.007474	-104.885034	1,246,166.79	3,172,264.80
10,165.00	87.63	177.91	7,575.27	-1,999.54	-242.61	40.007005	-104.885018	1,245,995.97	3,172,270.32

Design Report for Wagner 34N-34HZ - Actual Field Surveys

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	Local Coordinates		Geographic Coordinates		UTM Coordinates	
				+N/-S (usft)	+E/-W (usft)	Latitude (usft)	Longitude (usft)	Northing (usft)	Easting (usft)
10,337.00	90.09	179.44	7,578.69	-2,171.44	-238.64	40.006533	-104.885004	1,245,824.10	3,172,275.49
10,508.00	89.26	179.42	7,579.66	-2,342.43	-236.94	40.006064	-104.884998	1,245,653.14	3,172,278.38
10,680.00	88.92	178.90	7,582.39	-2,514.39	-234.41	40.005592	-104.884989	1,245,481.20	3,172,282.10
10,851.00	89.54	179.54	7,584.69	-2,685.36	-232.09	40.005123	-104.884981	1,245,310.26	3,172,285.61
11,023.00	89.88	179.46	7,585.56	-2,857.35	-230.59	40.004650	-104.884975	1,245,138.29	3,172,288.31
11,194.00	88.86	179.45	7,587.44	-3,028.33	-228.96	40.004181	-104.884970	1,244,967.34	3,172,291.12
11,365.00	88.24	179.82	7,591.77	-3,199.27	-227.87	40.003712	-104.884966	1,244,796.41	3,172,293.40
11,536.00	88.18	179.05	7,597.11	-3,370.17	-226.18	40.003243	-104.884960	1,244,625.53	3,172,296.27
11,708.00	89.29	179.14	7,600.90	-3,542.11	-223.47	40.002771	-104.884950	1,244,453.62	3,172,300.18
11,879.00	90.43	178.53	7,601.32	-3,713.07	-219.99	40.002301	-104.884938	1,244,282.70	3,172,304.84
12,051.00	90.28	177.25	7,600.26	-3,884.94	-213.66	40.001830	-104.884915	1,244,110.87	3,172,312.37
12,098.00	90.28	177.25	7,600.03	-3,931.89	-211.40	40.001701	-104.884907	1,244,063.95	3,172,314.95

Design Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
992.00	991.99	1.61	0.39	Tie-On to Gyro Surveys @ 992.00ft
1,108.00	1,107.99	2.10	0.18	First MWD Survey @ 1108.00ft
12,051.00	7,600.26	-3,884.94	-213.66	Final MWD Survey @ 12051.00ft
12,098.00	7,600.03	-3,931.89	-211.40	Str Line Proj. to Bit @ 12098' MD :: 7600.03' TVD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (usft)	Origin +E/-W (usft)	Start TVD (usft)
User	No Target (Freehand)	180.00	Slot	0.00	0.00	0.00

Survey tool program

From (usft)	To (usft)	Survey/Plan	Survey Tool
16.00	992.00	MS Energy Gyros	NS-GYRO-MS
1,108.00	8,025.00	Vertical/Build Surveys	MWD+IFR1+SC
8,110.00	12,051.00	MWD Lateral Surveys	MWD+IFR1+SC

Design Report for Wagner 34N-34HZ - Actual Field Surveys

Casing Details

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
1,063.80	1,063.79	9 5/8" Casing Set @ 1063.8' MD:: 1063.79' TVD	9-5/8	13-1/2
7,973.90	7,553.62	7" Casing Set @ 7973.9' MD :: 7553.62' TVD	7	8-3/4

Design Targets

Shape	Target Name	TVD (')	Northing (')	Easting (')	+N/-S	+E/-W	Created	Updated
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Directional Difficulty Index

Average Dogleg over Survey:	1.46 °/100usft	Maximum Dogleg over Survey:	14.81 °/100usft at 7,209.00 usft
Net Tortosity applicable to Plans:	0.20 °/100usft	Directional Difficulty Index:	6.193

Audit Info

North Reference Sheet for Sec. 34-T1N-R67W - Wagner 34N-34HZ - Plan C

All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.

Vertical Depths are relative to RKB = 16' @ 5076.00usft (Xtreme 22). Northing and Easting are relative to Wagner 34N-34HZ

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 -105.500000°, Longitude Origin:0.000000°, Latitude Origin:40.783333°

False Easting: 3,000,000.00usft, False Northing: 1,000,000.00usft, Scale Reduction: 0.99996544

Grid Coordinates of Well: 1,247,997.07 usft N, 3,172,499.03 usft E

Geographical Coordinates of Well: 40° 00' 44.98" N, 104° 53' 02.95" W

Grid Convergence at Surface is: 0.40°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,098.00usft

the Bottom Hole Displacement is 3,937.57usft in the Direction of 183.08° (True).

Magnetic Convergence at surface is: -8.21° (18 November 2013, , BGGM2013)

