

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 3-T2N-R65W

Cannon 15N-W3HZ

Plan D Rev 0

Design: Actual Field Surveys

Sperry Drilling Services

Standard Report

13 September, 2012

Well Coordinates: 1,307,381.04 N, 3,238,001.00 E (40° 10' 26.47" N, 104° 38' 53.79" W)

Ground Level: 4,839.00 ft

Local Coordinate Origin:

Centered on Well Cannon 15N-W3HZ

Viewing Datum:

RKB=16ft @ 4855.00ft (Xtreme 22)

TVDs to System:

N

North Reference:

True

Unit System:

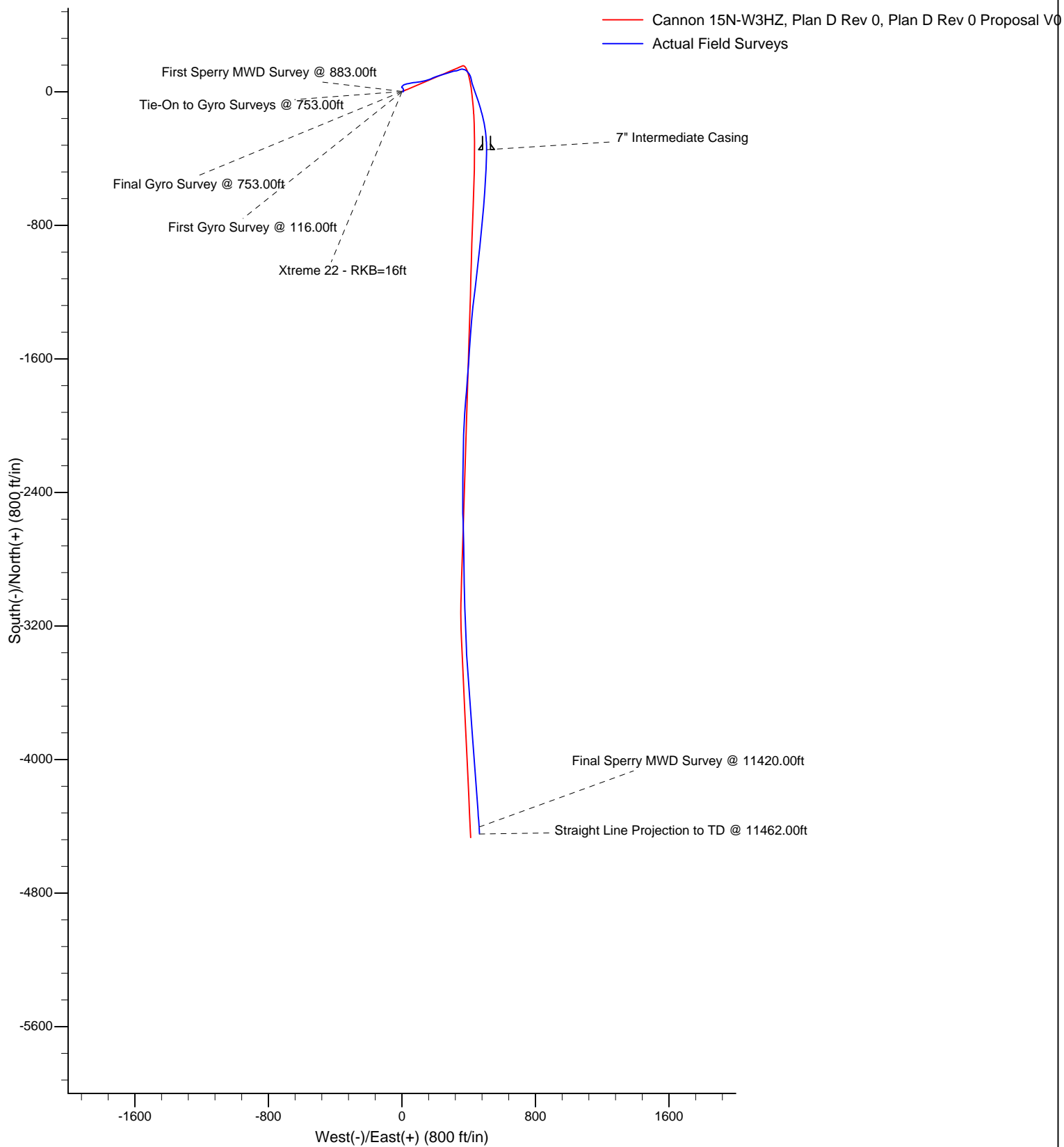
API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 2003.16 Build: 43I

HALLIBURTON

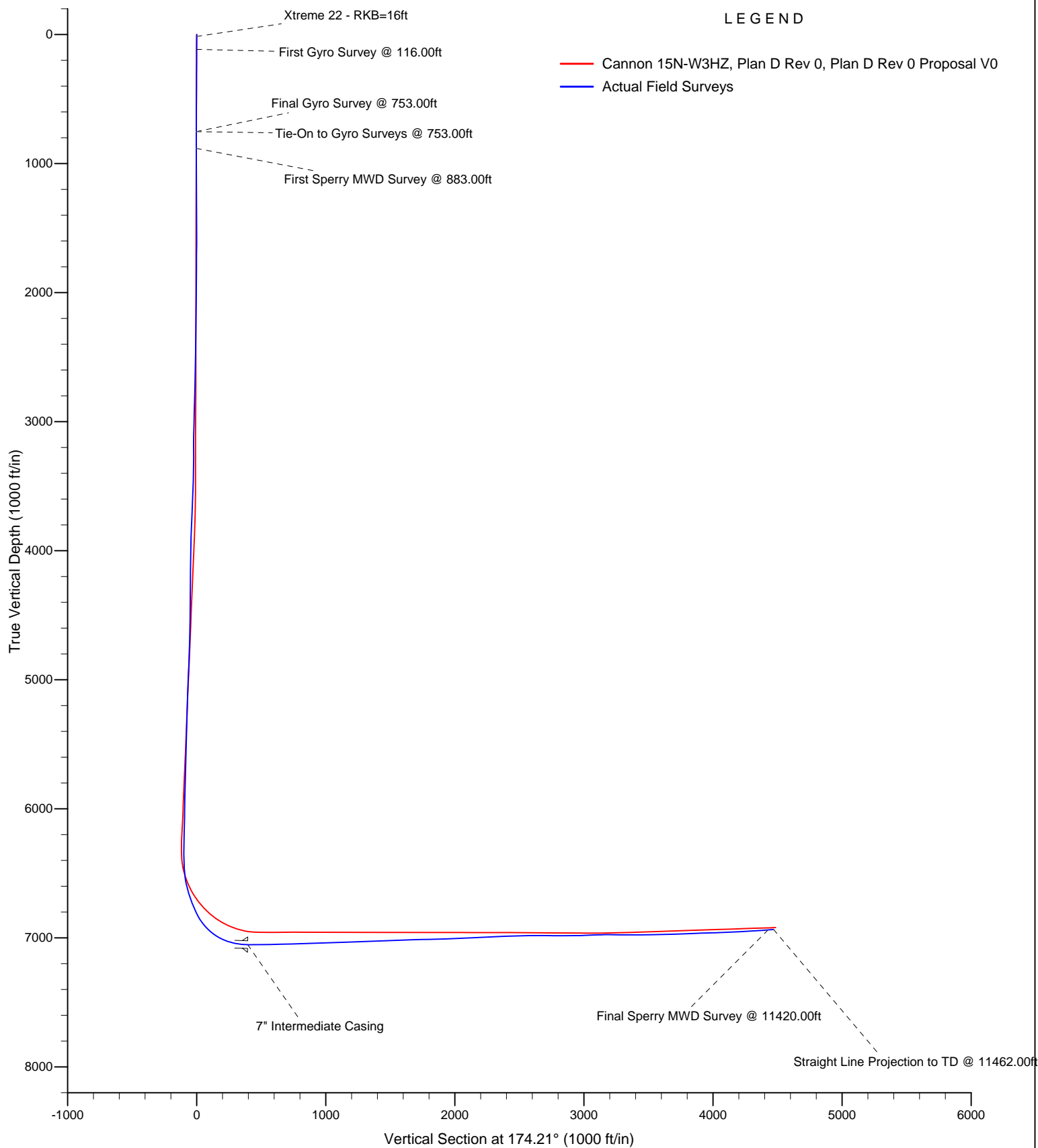
LEGEND



Project: Weld County, CO (NAD 83)
Site: Sec. 3-T2N-R65W
Well: Cannon 15N-W3HZ

Anadarko Petroleum Corp.

HALLIBURTON
Sperry Drilling



Design Report for Cannon 15N-W3HZ - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
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
Xtreme 22 - RKB=16ft							
116.00	0.14	52.00	116.00	0.08	0.10	-0.07	0.14
First Gyro Survey @ 116.00ft							
216.00	0.41	55.39	216.00	0.35	0.49	-0.30	0.27
316.00	0.63	359.18	316.00	1.11	0.77	-1.02	0.53
416.00	0.31	238.70	415.99	1.52	0.53	-1.45	0.83
516.00	0.46	57.55	515.99	1.59	0.64	-1.52	0.77
616.00	0.46	333.02	615.99	2.16	0.80	-2.07	0.62
716.00	0.28	114.12	715.99	2.42	0.84	-2.32	0.70
753.00	0.49	68.62	752.99	2.44	1.07	-2.32	0.96
Final Gyro Survey @ 753.00ft - Tie-On to Gyro Surveys @ 753.00ft							
883.00	0.47	81.32	882.98	2.73	2.11	-2.50	0.08
First Sperry MWD Survey @ 883.00ft							
975.00	0.47	90.65	974.98	2.78	2.86	-2.47	0.08
1,067.00	0.17	167.68	1,066.98	2.64	3.27	-2.30	0.50
1,159.00	0.32	173.02	1,158.98	2.25	3.33	-1.90	0.16
1,250.00	0.11	141.22	1,249.98	1.93	3.42	-1.58	0.26
1,342.00	0.48	146.52	1,341.98	1.54	3.68	-1.16	0.40
1,434.00	0.71	143.05	1,433.97	0.76	4.24	-0.33	0.25
1,526.00	0.39	130.26	1,525.97	0.11	4.82	0.38	0.37
1,618.00	1.76	59.56	1,617.95	0.62	6.28	0.02	1.82
1,710.00	0.86	38.48	1,709.93	1.88	7.93	-1.07	1.09
1,802.00	0.83	58.76	1,801.92	2.76	8.93	-1.85	0.32
1,894.00	1.18	56.62	1,893.90	3.63	10.29	-2.57	0.38
1,986.00	0.16	317.97	1,985.90	4.25	10.99	-3.11	1.32
2,061.00	0.23	354.29	2,060.90	4.47	10.91	-3.35	0.18
2,154.00	0.33	271.26	2,153.89	4.67	10.62	-3.57	0.41
2,245.00	0.61	11.27	2,244.89	5.15	10.45	-4.06	0.82
2,331.00	1.26	19.65	2,330.88	6.49	10.86	-5.36	0.77
2,417.00	1.26	338.59	2,416.86	8.26	10.83	-7.12	1.03
2,502.00	1.16	341.95	2,501.84	9.94	10.22	-8.86	0.14
2,588.00	1.01	348.20	2,587.83	11.51	9.80	-10.47	0.22
2,674.00	1.66	350.46	2,673.80	13.48	9.44	-12.46	0.76
2,759.00	1.38	329.23	2,758.77	15.58	8.71	-14.62	0.73
2,845.00	1.53	346.35	2,844.75	17.58	7.91	-16.69	0.53
2,931.00	1.31	346.34	2,930.72	19.65	7.41	-18.81	0.26
3,017.00	1.24	335.41	3,016.70	21.46	6.79	-20.66	0.29
3,102.00	0.98	318.77	3,101.68	22.84	5.93	-22.12	0.48
3,188.00	1.14	299.47	3,187.67	23.81	4.70	-23.22	0.45
3,274.00	1.23	296.33	3,273.65	24.64	3.12	-24.20	0.13
3,360.00	0.99	274.76	3,359.63	25.11	1.56	-24.83	0.56
3,445.00	0.94	314.01	3,444.62	25.66	0.32	-25.50	0.76
3,531.00	1.97	358.44	3,530.60	27.63	-0.22	-27.51	1.69
3,616.00	3.22	24.46	3,615.51	31.26	0.72	-31.03	1.99
3,702.00	4.49	42.53	3,701.32	35.94	4.00	-35.35	2.03
3,788.00	5.70	55.95	3,786.98	40.81	9.81	-39.61	1.97
3,874.00	6.00	72.73	3,872.54	44.54	17.65	-42.53	2.01
3,960.00	7.99	76.50	3,957.89	47.27	27.75	-44.23	2.37

Design Report for Cannon 15N-W3HZ - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
4,046.00	9.99	76.81	4,042.83	50.37	40.83	-45.99	2.33
4,132.00	10.11	79.73	4,127.51	53.41	55.52	-47.54	0.61
4,217.00	9.20	83.17	4,211.31	55.55	69.60	-48.24	1.27
4,303.00	10.50	83.75	4,296.04	57.22	84.22	-48.43	1.52
4,389.00	9.73	82.64	4,380.70	59.01	99.22	-48.69	0.92
4,474.00	10.07	77.64	4,464.44	61.52	113.60	-49.73	1.09
4,560.00	9.63	76.81	4,549.17	64.77	127.95	-51.52	0.54
4,646.00	9.15	76.98	4,634.02	67.95	141.61	-53.31	0.56
4,731.00	7.51	77.27	4,718.12	70.70	153.62	-54.83	1.93
4,817.00	7.42	67.83	4,803.39	74.03	164.24	-57.07	1.43
4,903.00	7.74	63.22	4,888.64	78.74	174.56	-60.71	0.80
4,989.00	9.00	69.17	4,973.73	83.74	186.01	-64.53	1.78
5,074.00	8.33	69.22	5,057.76	88.29	197.98	-67.85	0.79
5,159.00	6.91	68.85	5,142.00	92.32	208.51	-70.79	1.67
5,245.00	7.19	70.47	5,227.35	95.98	218.41	-73.44	0.40
5,331.00	7.82	73.08	5,312.62	99.48	229.08	-75.85	0.83
5,416.00	8.60	73.32	5,396.74	102.99	240.70	-78.16	0.92
5,502.00	7.18	76.12	5,481.93	106.13	252.07	-80.13	1.71
5,588.00	7.10	74.09	5,567.26	108.87	262.40	-81.82	0.31
5,673.00	8.36	69.41	5,651.49	112.49	273.24	-84.32	1.66
5,759.00	8.43	73.06	5,736.57	116.52	285.12	-87.14	0.62
5,845.00	8.47	71.83	5,821.63	120.33	297.17	-89.71	0.22
5,930.00	6.74	79.10	5,905.88	123.23	308.02	-91.50	2.32
6,016.00	7.14	81.64	5,991.25	124.96	318.26	-92.19	0.59
6,102.00	7.35	75.25	6,076.57	127.14	328.87	-93.28	0.97
6,188.00	8.44	68.20	6,161.75	130.88	340.05	-95.88	1.69
6,241.00	6.58	71.45	6,214.30	133.29	346.54	-97.62	3.60
6,284.00	5.98	72.51	6,257.04	134.75	351.01	-98.62	1.42
6,327.00	6.08	79.81	6,299.80	135.83	355.39	-99.25	1.80
6,369.00	5.97	87.03	6,341.57	136.33	359.76	-99.31	1.82
6,412.00	6.53	101.63	6,384.32	135.96	364.39	-98.47	3.91
6,455.00	7.50	102.46	6,427.00	134.86	369.52	-96.86	2.27
6,499.00	8.00	105.00	6,470.59	133.45	375.29	-94.87	1.38
6,541.00	9.51	121.70	6,512.11	130.86	381.06	-91.72	7.00
6,585.00	13.80	132.95	6,555.20	125.38	388.00	-85.56	10.99
6,626.00	15.14	137.43	6,594.90	118.10	395.20	-77.60	4.26
6,669.00	18.21	146.64	6,636.09	108.35	402.70	-67.14	9.40
6,712.00	19.31	155.93	6,676.82	96.24	409.29	-54.43	7.40
6,755.00	21.13	166.40	6,717.18	82.21	414.02	-39.99	9.40
6,804.00	22.85	168.86	6,762.61	64.29	417.93	-21.77	3.98
6,847.00	24.72	165.24	6,801.96	47.40	421.84	-4.57	5.52
6,889.00	30.94	159.39	6,839.09	28.78	427.88	14.56	16.16
6,932.00	36.34	160.03	6,874.88	6.45	436.13	37.62	12.59
6,975.00	42.10	161.07	6,908.18	-19.18	445.17	64.03	13.48
7,018.00	47.03	161.96	6,938.80	-47.80	454.72	93.46	11.56
7,061.00	53.27	162.51	6,966.34	-79.22	464.78	125.74	14.54
7,103.00	58.71	164.23	6,989.83	-112.57	474.72	159.92	13.39
7,146.00	65.08	166.06	7,010.08	-149.21	484.43	197.36	15.28
7,189.00	70.39	168.95	7,026.36	-188.05	493.01	236.87	13.83
7,232.00	76.37	172.08	7,038.66	-228.67	499.78	277.96	15.56
7,275.00	81.13	175.00	7,047.05	-270.56	504.51	320.12	12.92

Design Report for Cannon 15N-W3HZ - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
7,305.00	86.66	177.13	7,050.24	-300.31	506.56	349.92	19.74
7,351.00	88.46	179.66	7,052.20	-346.24	507.85	395.75	6.74
7" Intermediate Casing							
7,395.00	90.19	182.07	7,052.72	-390.23	507.18	439.44	6.74
7,438.00	90.37	182.41	7,052.51	-433.19	505.50	482.02	0.90
7,524.00	91.23	183.30	7,051.30	-519.08	501.22	567.03	1.44
7,609.00	90.93	183.44	7,049.70	-603.92	496.23	650.93	0.40
7,695.00	91.48	185.19	7,047.89	-689.65	489.76	735.57	2.14
7,781.00	91.73	184.89	7,045.48	-775.28	482.21	820.01	0.46
7,867.00	92.53	185.94	7,042.29	-860.84	474.10	904.31	1.53
7,952.00	92.35	186.61	7,038.67	-945.25	464.82	987.35	0.82
8,038.00	91.11	185.39	7,036.07	-1,030.74	455.84	1,071.50	2.01
8,123.00	92.22	187.26	7,033.60	-1,115.18	446.47	1,154.56	2.55
8,209.00	91.54	187.24	7,030.78	-1,200.45	435.63	1,238.30	0.79
8,295.00	91.36	185.76	7,028.60	-1,285.86	425.89	1,322.29	1.73
8,381.00	92.23	184.80	7,025.91	-1,371.46	417.99	1,406.65	1.51
8,467.00	92.72	184.27	7,022.20	-1,457.11	411.19	1,491.18	0.84
8,552.00	92.47	183.88	7,018.35	-1,541.80	405.16	1,574.83	0.54
8,638.00	91.98	183.73	7,015.01	-1,627.55	399.45	1,659.56	0.61
8,724.00	91.55	184.24	7,012.36	-1,713.30	393.48	1,744.27	0.78
8,809.00	91.30	184.88	7,010.25	-1,798.00	386.73	1,827.86	0.80
8,895.00	91.48	185.14	7,008.17	-1,883.65	379.23	1,912.31	0.37
8,981.00	92.28	182.31	7,005.34	-1,969.41	373.65	1,997.08	3.41
9,066.00	92.16	181.82	7,002.04	-2,054.29	370.59	2,081.21	0.60
9,152.00	92.16	181.54	6,998.80	-2,140.20	368.07	2,166.42	0.33
9,238.00	92.72	180.75	6,995.14	-2,226.10	366.36	2,251.71	1.12
9,323.00	93.09	180.02	6,990.83	-2,310.99	365.79	2,336.11	0.97
9,409.00	92.72	180.41	6,986.48	-2,396.88	365.47	2,421.53	0.63
9,494.00	90.93	179.94	6,983.77	-2,481.83	365.20	2,506.02	2.18
9,580.00	90.31	178.33	6,982.85	-2,567.81	366.49	2,591.69	2.00
9,666.00	89.88	178.62	6,982.71	-2,653.78	368.78	2,677.45	0.60
9,752.00	89.32	178.42	6,983.31	-2,739.75	371.00	2,763.21	0.69
9,837.00	90.12	180.42	6,983.72	-2,824.74	371.86	2,847.85	2.53
9,923.00	90.87	178.71	6,982.98	-2,910.73	372.52	2,933.47	2.16
10,008.00	92.53	178.55	6,980.46	-2,995.67	374.55	3,018.17	1.97
10,094.00	92.23	178.01	6,976.89	-3,081.55	377.13	3,103.88	0.71
10,180.00	89.51	177.93	6,975.59	-3,167.48	380.17	3,189.68	3.16
10,266.00	89.69	177.84	6,976.19	-3,253.42	383.34	3,275.50	0.24
10,351.00	90.00	177.76	6,976.42	-3,338.36	386.61	3,360.33	0.38
10,437.00	89.81	175.72	6,976.56	-3,424.21	391.50	3,446.24	2.38
10,523.00	91.54	176.52	6,975.54	-3,510.01	397.33	3,532.19	2.22
10,609.00	91.42	175.59	6,973.32	-3,595.77	403.24	3,618.11	1.08
10,694.00	91.36	175.87	6,971.25	-3,680.51	409.57	3,703.06	0.33
10,780.00	92.04	175.32	6,968.71	-3,766.22	416.17	3,788.99	1.02
10,866.00	92.47	175.18	6,965.32	-3,851.86	423.29	3,874.91	0.53
10,896.00	92.79	175.88	6,963.94	-3,881.73	425.62	3,904.87	2.56
10,927.00	91.86	176.68	6,962.69	-3,912.64	427.63	3,935.82	3.95
10,951.00	91.79	175.90	6,961.93	-3,936.58	429.19	3,959.80	3.25
10,981.00	91.36	176.69	6,961.10	-3,966.50	431.12	3,989.76	2.99
11,011.00	91.79	176.76	6,960.28	-3,996.44	432.84	4,019.72	1.45
11,037.00	91.85	175.20	6,959.45	-4,022.37	434.66	4,045.70	5.98

Design Report for Cannon 15N-W3HZ - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
11,067.00	91.79	175.29	6,958.50	-4,052.25	437.14	4,075.68	0.37
11,097.00	92.47	176.13	6,957.38	-4,082.14	439.38	4,105.65	3.59
11,123.00	92.72	176.21	6,956.20	-4,108.06	441.12	4,131.60	1.01
11,153.00	92.96	175.43	6,954.71	-4,137.94	443.30	4,161.55	2.73
11,183.00	92.96	175.53	6,953.16	-4,167.81	445.67	4,191.51	0.34
11,208.00	93.15	176.07	6,951.83	-4,192.71	447.50	4,216.46	2.29
11,238.00	93.40	175.42	6,950.12	-4,222.57	449.72	4,246.40	2.34
11,268.00	93.34	175.58	6,948.35	-4,252.43	452.07	4,276.34	0.60
11,294.00	93.21	176.13	6,946.87	-4,278.32	453.94	4,302.29	2.15
11,324.00	93.59	175.44	6,945.09	-4,308.18	456.15	4,332.22	2.61
11,354.00	94.02	176.04	6,943.10	-4,338.04	458.37	4,362.15	2.47
11,380.00	94.03	176.01	6,941.27	-4,363.91	460.17	4,388.07	0.12
11,420.00	94.01	176.29	6,938.47	-4,403.72	462.85	4,427.95	0.69
Final Sperry MWD Survey @ 11420.00ft							
11,462.00	94.01	176.29	6,935.53	-4,445.53	465.56	4,469.82	0.01
Straight Line Projection to TD @ 11462.00ft							

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
16.00	16.00	0.00	0.00	Xtreme 22 - RKB=16ft
116.00	116.00	0.08	0.10	First Gyro Survey @ 116.00ft
753.00	752.99	2.44	1.07	Final Gyro Survey @ 753.00ft
753.00	752.99	2.44	1.07	Tie-On to Gyro Surveys @ 753.00ft
883.00	882.98	2.73	2.11	First Sperry MWD Survey @ 883.00ft
11,420.00	6,938.47	-4,403.72	462.85	Final Sperry MWD Survey @ 11420.00ft
11,462.00	6,935.53	-4,445.53	465.56	Straight Line Projection to TD @ 11462.00ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
User	Cannon 15N-W3HZ_BHL	174.21	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
16.00	753.00	Surface Gyros	NS-GYRO-MS
975.00	7,305.00	Sperry MWD Surveys	MWD
7,395.00	11,462.00	Sperry MWD Surveys - Lateral	MWD

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,351.00	7,052.20	7" Intermediate Casing	7	8-3/4

Design Report for Cannon 15N-W3HZ - Actual Field Surveys**Targets**

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Cannon 15N-W3HZ_	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- actual wellpath hits target center									
- Polygon									
Point 1				474.95	-244.01	1,307,141.61	3,238,478.26		
Point 2				75.95	-240.18	1,307,141.61	3,238,079.25		
Point 3				15.31	-4,449.58	1,302,932.00	3,238,059.05		
Point 4				414.31	-4,453.41	1,302,932.00	3,238,458.05		
Cannon 15N-W3HZ_	0.00	0.00	6,956.79	-882.34	420.76	1,306,502.82	3,238,430.20	40.171597	-104.646770
- actual wellpath misses target center by 98.36ft at 7897.81ft MD (7040.94 TVD, -891.45 N, 470.85 E)									
- Point									
Cannon 15N-W3HZ_	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- actual wellpath hits target center									
- Polygon									
Point 1				2,257.38	200.37	1,307,603.07	3,240,256.26		
Point 2				-389.70	217.39	1,307,594.67	3,237,609.25		
Point 3				-3,036.73	234.14	1,307,585.99	3,234,962.29		
Point 4				-3,061.21	-2,273.59	1,305,078.25	3,234,961.90		
Point 5				-3,087.14	-4,928.93	1,302,422.89	3,234,961.48		
Point 6				2,187.93	-4,925.83	1,302,476.66	3,240,236.05		
Point 7				2,214.79	-2,278.94	1,305,123.57	3,240,237.49		
Cannon 15N-W3HZ_	0.00	0.00	6,920.51	-4,466.99	412.54	1,302,918.40	3,238,456.41	40.161757	-104.646800
- actual wellpath misses target center by 59.13ft at 11462.00ft MD (6935.53 TVD, -4445.53 N, 465.56 E)									
- Point									
Cannon 15N-W3HZ_	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- actual wellpath hits target center									
- Point									
Cannon 15N-W3HZ_	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- actual wellpath hits target center									
- Polygon									
Point 1				1,789.44	-256.65	1,307,141.60	3,239,792.75		
Point 2				-392.61	-242.62	1,307,134.67	3,237,610.76		
Point 3				-2,581.21	-228.77	1,307,127.50	3,235,422.22		
Point 4				-2,601.17	-2,274.05	1,305,082.21	3,235,421.90		
Point 5				-2,622.60	-4,468.65	1,302,887.59	3,235,421.55		
Point 6				1,732.56	-4,466.09	1,302,931.98	3,239,776.31		
Point 7				1,754.75	-2,278.47	1,305,119.62	3,239,777.48		
Cannon 15N-W3HZ_	0.00	0.00	6,963.58	-3,028.03	355.00	1,304,356.69	3,238,385.06	40.165707	-104.647006
- actual wellpath misses target center by 25.63ft at 10040.44ft MD (6979.06 TVD, -3028.06 N, 375.43 E)									
- Point									
Cannon 15N-W3HZ_	0.00	0.00	6,959.49	-2,382.05	374.79	1,305,002.80	3,238,398.64	40.167480	-104.646935
- actual wellpath misses target center by 29.17ft at 9395.52ft MD (6987.12 TVD, -2383.42 N, 365.56 E)									
- Point									

North Reference Sheet for Sec. 3-T2N-R65W - Cannon 15N-W3HZ - Plan D 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 @ 4855.00ft (Xtreme 22). Northing and Easting are relative to Cannon 15N-W3HZ

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: 3,000,000.00ft, False Northing: 1,000,000.00ft, Scale Reduction: 0.99995774

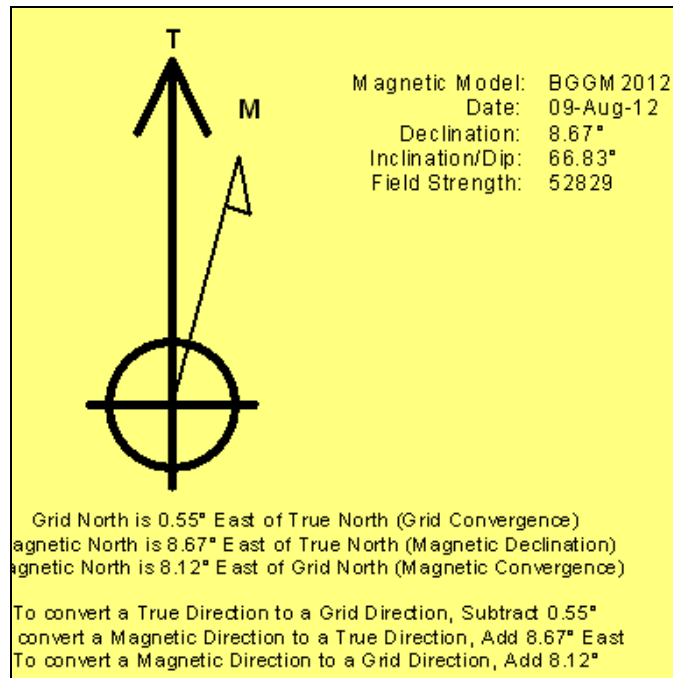
Grid Coordinates of Well: 1,307,381.04 ft N, 3,238,001.00 ft E

Geographical Coordinates of Well: 40° 10' 26.47" N, 104° 38' 53.79" W

Grid Convergence at Surface is: 0.55°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,462.00ft
the Bottom Hole Displacement is 4,469.84ft in the Direction of 174.02° (True).

Magnetic Convergence at surface is: -8.12° (9 August 2012, , BGGM2012)



Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 3-T2N-R65W

Cannon 15N-W3HZ

Plan D Rev 0

Design: Actual Field Surveys

Survey Report - Geographic

13 September, 2012

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Cannon 15N-W3HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Site:	Sec. 3-T2N-R65W	MD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Well:	Cannon 15N-W3HZ	North Reference:	True
Wellbore:	Plan D Rev 0	Survey Calculation Method:	Minimum Curvature
Design:	Actual Field Surveys	Database:	EDM 2003.16 Single User Db

Project	Weld County, CO (NAD 83)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	Colorado Northern Zone		Using geodetic scale factor

Site	Sec. 3-T2N-R65W				
Site Position:		Northing:	1,307,311.71 ft	Latitude:	40.173779
From:	Lat/Long	Easting:	3,239,877.08 ft	Longitude:	-104.641565
Position Uncertainty:	0.00 ft	Slot Radius:	"	Grid Convergence:	0.55 °

Well	Cannon 15N-W3HZ					
Well Position	+N-S	0.00 ft	Northing:	1,307,381.04 ft	Latitude:	40.174019
	+E-W	0.00 ft	Easting:	3,238,001.00 ft	Longitude:	-104.648276
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	4,839.00 ft

Wellbore	Plan D Rev 0				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2012	8/9/2012	8.67	66.83	52,829

Design	Actual Field Surveys				
Audit Notes:					
Version:	1.0	Phase:	ACTUAL	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)	
	0.00	0.00	0.00	174.21	

Survey Program	Date	9/13/2012			
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
16.00	753.00	Surface Gyros (Plan D Rev 0)	NS-GYRO-MS	North sensing gyrocompassing m/s	
975.00	7,305.00	Sperry MWD Surveys (Plan D Rev 0)	MWD	Fixed:v2:standard declination	
7,395.00	11,462.00	Sperry MWD Surveys - Lateral (Plan D Re	MWD	Fixed:v2:standard declination	

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Cannon 15N-W3HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Site:	Sec. 3-T2N-R65W	MD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Well:	Cannon 15N-W3HZ	North Reference:	True
Wellbore:	Plan D Rev 0	Survey Calculation Method:	Minimum Curvature
Design:	Actual Field Surveys	Database:	EDM 2003.16 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
16.00	0.00	0.00	16.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
Xtreme 22 - RKB=16ft									
116.00	0.14	52.00	116.00	0.08	0.10	1,307,381.11	3,238,001.10	40.174019	-104.648276
First Gyro Survey @ 116.00ft									
216.00	0.41	55.39	216.00	0.35	0.49	1,307,381.40	3,238,001.49	40.174020	-104.648274
316.00	0.63	359.18	316.00	1.11	0.77	1,307,382.15	3,238,001.77	40.174022	-104.648273
416.00	0.31	238.70	415.99	1.52	0.53	1,307,382.56	3,238,001.52	40.174023	-104.648274
516.00	0.46	57.55	515.99	1.59	0.64	1,307,382.63	3,238,001.63	40.174023	-104.648274
616.00	0.46	333.02	615.99	2.16	0.80	1,307,383.21	3,238,001.78	40.174025	-104.648273
716.00	0.28	114.12	715.99	2.42	0.84	1,307,383.47	3,238,001.82	40.174026	-104.648273
753.00	0.49	68.62	752.99	2.44	1.07	1,307,383.49	3,238,002.05	40.174026	-104.648272
Final Gyro Survey @ 753.00ft - Tie-On to Gyro Surveys @ 753.00ft									
883.00	0.47	81.32	882.98	2.73	2.11	1,307,383.78	3,238,003.09	40.174026	-104.648268
First Sperry MWD Survey @ 883.00ft									
975.00	0.47	90.65	974.98	2.78	2.86	1,307,383.84	3,238,003.84	40.174027	-104.648266
1,067.00	0.17	167.68	1,066.98	2.64	3.27	1,307,383.71	3,238,004.25	40.174026	-104.648264
1,159.00	0.32	173.02	1,158.98	2.25	3.33	1,307,383.32	3,238,004.31	40.174025	-104.648264
1,250.00	0.11	141.22	1,249.98	1.93	3.42	1,307,383.00	3,238,004.40	40.174024	-104.648264
1,342.00	0.48	146.52	1,341.98	1.54	3.68	1,307,382.61	3,238,004.67	40.174023	-104.648263
1,434.00	0.71	143.05	1,433.97	0.76	4.24	1,307,381.84	3,238,005.24	40.174021	-104.648261
1,526.00	0.39	130.26	1,525.97	0.11	4.82	1,307,381.19	3,238,005.82	40.174019	-104.648259
1,618.00	1.76	59.56	1,617.95	0.62	6.28	1,307,381.72	3,238,007.28	40.174021	-104.648254
1,710.00	0.86	38.48	1,709.93	1.88	7.93	1,307,382.99	3,238,008.91	40.174024	-104.648248
1,802.00	0.83	58.76	1,801.92	2.76	8.93	1,307,383.89	3,238,009.90	40.174027	-104.648244
1,894.00	1.18	56.62	1,893.90	3.63	10.29	1,307,384.77	3,238,011.25	40.174029	-104.648239
1,986.00	0.16	317.97	1,985.90	4.25	10.99	1,307,385.39	3,238,011.95	40.174031	-104.648237
2,061.00	0.23	354.29	2,060.90	4.47	10.91	1,307,385.62	3,238,011.87	40.174031	-104.648237
2,154.00	0.33	271.26	2,153.89	4.67	10.62	1,307,385.80	3,238,011.58	40.174032	-104.648238
2,245.00	0.61	11.27	2,244.89	5.15	10.45	1,307,386.28	3,238,011.41	40.174033	-104.648239
2,331.00	1.26	19.65	2,330.88	6.49	10.86	1,307,387.63	3,238,011.80	40.174037	-104.648237
2,417.00	1.26	338.59	2,416.86	8.26	10.83	1,307,389.40	3,238,011.76	40.174042	-104.648237
2,502.00	1.16	341.95	2,501.84	9.94	10.22	1,307,391.08	3,238,011.13	40.174046	-104.648239
2,588.00	1.01	348.20	2,587.83	11.51	9.80	1,307,392.64	3,238,010.69	40.174051	-104.648241
2,674.00	1.66	350.46	2,673.80	13.48	9.44	1,307,394.61	3,238,010.31	40.174056	-104.648242
2,759.00	1.38	329.23	2,758.77	15.58	8.71	1,307,396.70	3,238,009.56	40.174062	-104.648245
2,845.00	1.53	346.35	2,844.75	17.58	7.91	1,307,398.70	3,238,008.74	40.174067	-104.648248
2,931.00	1.31	346.34	2,930.72	19.65	7.41	1,307,400.76	3,238,008.22	40.174073	-104.648249
3,017.00	1.24	335.41	3,016.70	21.46	6.79	1,307,402.56	3,238,007.58	40.174078	-104.648252
3,102.00	0.98	318.77	3,101.68	22.84	5.93	1,307,403.93	3,238,006.71	40.174082	-104.648255
3,188.00	1.14	299.47	3,187.67	23.81	4.70	1,307,404.89	3,238,005.47	40.174084	-104.648259
3,274.00	1.23	296.33	3,273.65	24.64	3.12	1,307,405.71	3,238,003.89	40.174087	-104.648265
3,360.00	0.99	274.76	3,359.63	25.11	1.56	1,307,406.16	3,238,002.32	40.174088	-104.648270
3,445.00	0.94	314.01	3,444.62	25.66	0.32	1,307,406.70	3,238,001.08	40.174089	-104.648275
3,531.00	1.97	358.44	3,530.60	27.63	-0.22	1,307,408.66	3,238,000.51	40.174095	-104.648277
3,616.00	3.22	24.46	3,615.51	31.26	0.72	1,307,412.30	3,238,001.43	40.174105	-104.648273
3,702.00	4.49	42.53	3,701.32	35.94	4.00	1,307,417.01	3,238,004.66	40.174118	-104.648262
3,788.00	5.70	55.95	3,786.98	40.81	9.81	1,307,421.94	3,238,010.43	40.174131	-104.648241
3,874.00	6.00	72.73	3,872.54	44.54	17.65	1,307,425.74	3,238,018.22	40.174141	-104.648213
3,960.00	7.99	76.50	3,957.89	47.27	27.75	1,307,428.57	3,238,028.30	40.174149	-104.648177
4,046.00	9.99	76.81	4,042.83	50.37	40.83	1,307,431.79	3,238,041.34	40.174157	-104.648130
4,132.00	10.11	79.73	4,127.51	53.41	55.52	1,307,434.98	3,238,056.00	40.174166	-104.648077
4,217.00	9.20	83.17	4,211.31	55.55	69.60	1,307,437.25	3,238,070.07	40.174171	-104.648027
4,303.00	10.50	83.75	4,296.04	57.22	84.22	1,307,439.07	3,238,084.67	40.174176	-104.647975
4,389.00	9.73	82.64	4,380.70	59.01	99.22	1,307,440.99	3,238,099.65	40.174181	-104.647921

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Cannon 15N-W3HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Site:	Sec. 3-T2N-R65W	MD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Well:	Cannon 15N-W3HZ	North Reference:	True
Wellbore:	Plan D Rev 0	Survey Calculation Method:	Minimum Curvature
Design:	Actual Field Surveys	Database:	EDM 2003.16 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
4,474.00	10.07	77.64	4,464.44	61.52	113.60	1,307,443.64	3,238,114.00	40.174188	-104.647869
4,560.00	9.63	76.81	4,549.17	64.77	127.95	1,307,447.03	3,238,128.32	40.174197	-104.647818
4,646.00	9.15	76.98	4,634.02	67.95	141.61	1,307,450.34	3,238,141.95	40.174205	-104.647769
4,731.00	7.51	77.27	4,718.12	70.70	153.62	1,307,453.20	3,238,153.93	40.174213	-104.647726
4,817.00	7.42	67.83	4,803.39	74.03	164.24	1,307,456.64	3,238,164.52	40.174222	-104.647688
4,903.00	7.74	63.22	4,888.64	78.74	174.56	1,307,461.44	3,238,174.79	40.174235	-104.647651
4,989.00	9.00	69.17	4,973.73	83.74	186.01	1,307,466.56	3,238,186.20	40.174249	-104.647610
5,074.00	8.33	69.22	5,057.76	88.29	197.98	1,307,471.22	3,238,198.12	40.174261	-104.647568
5,159.00	6.91	68.85	5,142.00	92.32	208.51	1,307,475.35	3,238,208.61	40.174272	-104.647530
5,245.00	7.19	70.47	5,227.35	95.98	218.41	1,307,479.11	3,238,218.47	40.174282	-104.647494
5,331.00	7.82	73.08	5,312.62	99.48	229.08	1,307,482.71	3,238,229.11	40.174292	-104.647456
5,416.00	8.60	73.32	5,396.74	102.99	240.70	1,307,486.33	3,238,240.69	40.174302	-104.647415
5,502.00	7.18	76.12	5,481.93	106.13	252.07	1,307,489.58	3,238,252.04	40.174310	-104.647374
5,588.00	7.10	74.09	5,567.26	108.87	262.40	1,307,492.42	3,238,262.34	40.174318	-104.647337
5,673.00	8.36	69.41	5,651.49	112.49	273.24	1,307,496.14	3,238,273.14	40.174328	-104.647298
5,759.00	8.43	73.06	5,736.57	116.52	285.12	1,307,500.29	3,238,284.98	40.174339	-104.647256
5,845.00	8.47	71.83	5,821.63	120.33	297.17	1,307,504.21	3,238,296.99	40.174349	-104.647213
5,930.00	6.74	79.10	5,905.88	123.23	308.02	1,307,507.21	3,238,307.81	40.174357	-104.647174
6,016.00	7.14	81.64	5,991.25	124.96	318.26	1,307,509.04	3,238,318.04	40.174362	-104.647137
6,102.00	7.35	75.25	6,076.57	127.14	328.87	1,307,511.32	3,238,328.62	40.174368	-104.647099
6,188.00	8.44	68.20	6,161.75	130.88	340.05	1,307,515.17	3,238,339.77	40.174378	-104.647059
6,241.00	6.58	71.45	6,214.30	133.29	346.54	1,307,517.65	3,238,346.23	40.174385	-104.647036
6,284.00	5.98	72.51	6,257.04	134.75	351.01	1,307,519.15	3,238,350.69	40.174389	-104.647020
6,327.00	6.08	79.81	6,299.80	135.83	355.39	1,307,520.27	3,238,355.06	40.174392	-104.647004
6,369.00	5.97	87.03	6,341.57	136.33	359.76	1,307,520.81	3,238,359.42	40.174393	-104.646989
6,412.00	6.53	101.63	6,384.32	135.96	364.39	1,307,520.48	3,238,364.06	40.174392	-104.646972
6,455.00	7.50	102.46	6,427.00	134.86	369.52	1,307,519.43	3,238,369.20	40.174389	-104.646954
6,499.00	8.00	105.00	6,470.59	133.45	375.29	1,307,518.08	3,238,374.97	40.174385	-104.646933
6,541.00	9.51	121.70	6,512.11	130.86	381.06	1,307,515.55	3,238,380.78	40.174378	-104.646912
6,585.00	13.80	132.95	6,555.20	125.38	388.00	1,307,510.13	3,238,387.77	40.174363	-104.646888
6,626.00	15.14	137.43	6,594.90	118.10	395.20	1,307,502.92	3,238,395.04	40.174343	-104.646862
6,669.00	18.21	146.64	6,636.09	108.35	402.70	1,307,493.25	3,238,402.63	40.174316	-104.646835
6,712.00	19.31	155.93	6,676.82	96.24	409.29	1,307,481.20	3,238,409.34	40.174283	-104.646811
6,755.00	21.13	166.40	6,717.18	82.21	414.02	1,307,467.22	3,238,414.20	40.174245	-104.646794
6,804.00	22.85	168.86	6,762.61	64.29	417.93	1,307,449.34	3,238,418.28	40.174195	-104.646780
6,847.00	24.72	165.24	6,801.96	47.40	421.84	1,307,432.49	3,238,422.35	40.174149	-104.646766
6,889.00	30.94	159.39	6,839.09	28.78	427.88	1,307,413.93	3,238,428.57	40.174098	-104.646745
6,932.00	36.34	160.03	6,874.88	6.45	436.13	1,307,391.67	3,238,437.03	40.174037	-104.646715
6,975.00	42.10	161.07	6,908.18	-19.18	445.17	1,307,366.13	3,238,446.31	40.173966	-104.646683
7,018.00	47.03	161.96	6,938.80	-47.80	454.72	1,307,337.61	3,238,456.14	40.173888	-104.646649
7,061.00	53.27	162.51	6,966.34	-79.22	464.78	1,307,306.29	3,238,466.50	40.173801	-104.646613
7,103.00	58.71	164.23	6,989.83	-112.57	474.72	1,307,273.04	3,238,476.77	40.173710	-104.646577
7,146.00	65.08	166.06	7,010.08	-149.21	484.43	1,307,236.49	3,238,486.82	40.173609	-104.646543
7,189.00	70.39	168.95	7,026.36	-188.05	493.01	1,307,197.74	3,238,495.78	40.173503	-104.646512
7,232.00	76.37	172.08	7,038.66	-228.67	499.78	1,307,157.19	3,238,502.94	40.173391	-104.646488
7,275.00	81.13	175.00	7,047.05	-270.56	504.51	1,307,115.35	3,238,508.07	40.173276	-104.646471
7,305.00	86.66	177.13	7,050.24	-300.31	506.56	1,307,085.62	3,238,510.40	40.173195	-104.646463
7,351.00	88.46	179.66	7,052.20	-346.24	507.85	1,307,039.71	3,238,512.13	40.173069	-104.646459
7" Intermediate Casing									
7,395.00	90.19	182.07	7,052.72	-390.23	507.18	1,306,995.72	3,238,511.89	40.172948	-104.646461
7,438.00	90.37	182.41	7,052.51	-433.19	505.50	1,306,952.74	3,238,510.62	40.172830	-104.646467
7,524.00	91.23	183.30	7,051.30	-519.08	501.22	1,306,866.82	3,238,507.17	40.172594	-104.646482
7,609.00	90.93	183.44	7,049.70	-603.92	496.23	1,306,781.94	3,238,502.99	40.172361	-104.646500
7,695.00	91.48	185.19	7,047.89	-689.65	489.76	1,306,696.15	3,238,497.34	40.172126	-104.646523
7,781.00	91.73	184.89	7,045.48	-775.28	482.21	1,306,610.46	3,238,490.61	40.171891	-104.646551

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Cannon 15N-W3HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Site:	Sec. 3-T2N-R65W	MD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Well:	Cannon 15N-W3HZ	North Reference:	True
Wellbore:	Plan D Rev 0	Survey Calculation Method:	Minimum Curvature
Design:	Actual Field Surveys	Database:	EDM 2003.16 Single User Db

Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
7,867.00	92.53	185.94	7,042.29	-860.84	474.10	1,306,524.83	3,238,483.33	40.171656	-104.646580
7,952.00	92.35	186.61	7,038.67	-945.25	464.82	1,306,440.33	3,238,474.86	40.171424	-104.646613
8,038.00	91.11	185.39	7,036.07	-1,030.74	455.84	1,306,354.77	3,238,466.70	40.171190	-104.646645
8,123.00	92.22	187.26	7,033.60	-1,115.18	446.47	1,306,270.24	3,238,458.15	40.170958	-104.646678
8,209.00	91.54	187.24	7,030.78	-1,200.45	435.63	1,306,184.88	3,238,448.12	40.170724	-104.646717
8,295.00	91.36	185.76	7,028.60	-1,285.86	425.89	1,306,099.38	3,238,439.21	40.170489	-104.646752
8,381.00	92.23	184.80	7,025.91	-1,371.46	417.99	1,306,013.72	3,238,432.12	40.170254	-104.646780
8,467.00	92.72	184.27	7,022.20	-1,457.11	411.19	1,305,928.01	3,238,426.16	40.170019	-104.646805
8,552.00	92.47	183.88	7,018.35	-1,541.80	405.16	1,305,843.26	3,238,420.93	40.169787	-104.646826
8,638.00	91.98	183.73	7,015.01	-1,627.55	399.45	1,305,757.47	3,238,416.05	40.169551	-104.646847
8,724.00	91.55	184.24	7,012.36	-1,713.30	393.48	1,305,671.67	3,238,410.91	40.169316	-104.646868
8,809.00	91.30	184.88	7,010.25	-1,798.00	386.73	1,305,586.91	3,238,404.97	40.169083	-104.646892
8,895.00	91.48	185.14	7,008.17	-1,883.65	379.23	1,305,501.20	3,238,398.29	40.168848	-104.646919
8,981.00	92.28	182.31	7,005.34	-1,969.41	373.65	1,305,415.39	3,238,393.53	40.168613	-104.646939
9,066.00	92.16	181.82	7,002.04	-2,054.29	370.59	1,305,330.48	3,238,391.29	40.168380	-104.646950
9,152.00	92.16	181.54	6,998.80	-2,140.20	368.07	1,305,244.57	3,238,389.60	40.168144	-104.646959
9,238.00	92.72	180.75	6,995.14	-2,226.10	366.36	1,305,158.65	3,238,388.71	40.167908	-104.646965
9,323.00	93.09	180.02	6,990.83	-2,310.99	365.79	1,305,073.77	3,238,388.96	40.167675	-104.646967
9,409.00	92.72	180.41	6,986.48	-2,396.88	365.47	1,304,987.88	3,238,389.46	40.167439	-104.646968
9,494.00	90.93	179.94	6,983.77	-2,481.83	365.20	1,304,902.93	3,238,390.01	40.167206	-104.646969
9,580.00	90.31	178.33	6,982.85	-2,567.81	366.49	1,304,816.97	3,238,392.13	40.166970	-104.646965
9,666.00	89.88	178.62	6,982.71	-2,653.78	368.78	1,304,731.03	3,238,395.24	40.166734	-104.646956
9,752.00	89.32	178.42	6,983.31	-2,739.75	371.00	1,304,645.09	3,238,398.29	40.166498	-104.646949
9,837.00	90.12	180.42	6,983.72	-2,824.74	371.86	1,304,560.12	3,238,399.96	40.166265	-104.646945
9,923.00	90.87	178.71	6,982.98	-2,910.73	372.52	1,304,474.14	3,238,401.44	40.166029	-104.646943
10,008.00	92.53	178.55	6,980.46	-2,995.67	374.55	1,304,389.23	3,238,404.29	40.165796	-104.646936
10,094.00	92.23	178.01	6,976.89	-3,081.55	377.13	1,304,303.38	3,238,407.69	40.165560	-104.646927
10,180.00	89.51	177.93	6,975.59	-3,167.48	380.17	1,304,217.49	3,238,411.56	40.165324	-104.646916
10,266.00	89.69	177.84	6,976.19	-3,253.42	383.34	1,304,131.59	3,238,415.56	40.165088	-104.646904
10,351.00	90.00	177.76	6,976.42	-3,338.36	386.61	1,304,046.69	3,238,419.64	40.164855	-104.646893
10,437.00	89.81	175.72	6,976.56	-3,424.21	391.50	1,303,960.89	3,238,425.36	40.164619	-104.646875
10,523.00	91.54	176.52	6,975.54	-3,510.01	397.33	1,303,875.16	3,238,432.01	40.164384	-104.646854
10,609.00	91.42	175.59	6,973.32	-3,595.77	403.24	1,303,789.46	3,238,438.75	40.164149	-104.646833
10,694.00	91.36	175.87	6,971.25	-3,680.51	409.57	1,303,704.79	3,238,445.88	40.163916	-104.646811
10,780.00	92.04	175.32	6,968.71	-3,766.22	416.17	1,303,619.15	3,238,453.31	40.163681	-104.646787
10,866.00	92.47	175.18	6,965.32	-3,851.86	423.29	1,303,533.59	3,238,461.25	40.163446	-104.646762
10,896.00	92.79	175.88	6,963.94	-3,881.73	425.62	1,303,503.74	3,238,463.87	40.163364	-104.646753
10,927.00	91.86	176.68	6,962.69	-3,912.64	427.63	1,303,472.85	3,238,466.18	40.163279	-104.646746
10,951.00	91.79	175.90	6,961.93	-3,936.58	429.19	1,303,448.93	3,238,467.96	40.163213	-104.646740
10,981.00	91.36	176.69	6,961.10	-3,966.50	431.12	1,303,419.02	3,238,470.18	40.163131	-104.646733
11,011.00	91.79	176.76	6,960.28	-3,996.44	432.84	1,303,389.10	3,238,472.19	40.163049	-104.646727
11,037.00	91.85	175.20	6,959.45	-4,022.37	434.66	1,303,363.20	3,238,474.26	40.162977	-104.646721
11,067.00	91.79	175.29	6,958.50	-4,052.25	437.14	1,303,333.35	3,238,477.03	40.162895	-104.646712
11,097.00	92.47	176.13	6,957.38	-4,082.14	439.38	1,303,303.48	3,238,479.56	40.162813	-104.646704
11,123.00	92.72	176.21	6,956.20	-4,108.06	441.12	1,303,277.58	3,238,481.54	40.162742	-104.646698
11,153.00	92.96	175.43	6,954.71	-4,137.94	443.30	1,303,247.72	3,238,484.01	40.162660	-104.646690
11,183.00	92.96	175.53	6,953.16	-4,167.81	445.67	1,303,217.88	3,238,486.66	40.162578	-104.646681
11,208.00	93.15	176.07	6,951.83	-4,192.71	447.50	1,303,193.00	3,238,488.73	40.162510	-104.646675
11,238.00	93.40	175.42	6,950.12	-4,222.57	449.72	1,303,163.16	3,238,491.24	40.162428	-104.646667
11,268.00	93.34	175.58	6,948.35	-4,252.43	452.07	1,303,133.33	3,238,493.87	40.162346	-104.646659
11,294.00	93.21	176.13	6,946.87	-4,278.32	453.94	1,303,107.46	3,238,496.00	40.162275	-104.646652
11,324.00	93.59	175.44	6,945.09	-4,308.18	456.15	1,303,077.61	3,238,498.49	40.162193	-104.646644
11,354.00	94.02	176.04	6,943.10	-4,338.04	458.37	1,303,047.79	3,238,501.00	40.162111	-104.646636
11,380.00	94.03	176.01	6,941.27	-4,363.91	460.17	1,303,021.93	3,238,503.04	40.162040	-104.646630

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Cannon 15N-W3HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Site:	Sec. 3-T2N-R65W	MD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Well:	Cannon 15N-W3HZ	North Reference:	True
Wellbore:	Plan D Rev 0	Survey Calculation Method:	Minimum Curvature
Design:	Actual Field Surveys	Database:	EDM 2003.16 Single User Db

Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (ft)	Map Easting (ft)	Latitude	Longitude
11,420.00	94.01	176.29	6,938.47	-4,403.72	462.85	1,302,982.15	3,238,506.10	40.161931	-104.646620
Final Sperry MWD Survey @ 11420.00ft									
11,462.00	94.01	176.29	6,935.53	-4,445.53	465.56	1,302,940.37	3,238,509.22	40.161816	-104.646610
Straight Line Projection to TD @ 11462.00ft									

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Cannon 15N-W3HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Site:	Sec. 3-T2N-R65W	MD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Well:	Cannon 15N-W3HZ	North Reference:	True
Wellbore:	Plan D Rev 0	Survey Calculation Method:	Minimum Curvature
Design:	Actual Field Surveys	Database:	EDM 2003.16 Single User Db

Targets

Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N-S (ft)	+E-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Cannon 15N-W3HZ_L	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Polygon										
Point 1				0.00	-244.01	474.95	1,307,141.61	3,238,478.26		
Point 2				0.00	-240.18	75.95	1,307,141.61	3,238,079.25		
Point 3				0.00	-4,449.58	15.31	1,302,932.00	3,238,059.05		
Point 4				0.00	-4,453.41	414.31	1,302,932.00	3,238,458.05		
Cannon 15N-W3HZ_V	- actual wellpath misses target center by 98.36ft at 7897.81ft MD (7040.94 TVD, -891.45 N, 470.85 E)	0.00	0.00	6,956.79	-882.34	420.76	1,306,502.82	3,238,430.20	40.171597	-104.646770
- Point										
Cannon 15N-W3HZ_ξ	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Polygon										
Point 1				0.00	200.37	2,257.38	1,307,603.07	3,240,256.26		
Point 2				0.00	217.39	-389.70	1,307,594.67	3,237,609.25		
Point 3				0.00	234.14	-3,036.73	1,307,585.99	3,234,962.29		
Point 4				0.00	-2,273.59	-3,061.21	1,305,078.25	3,234,961.90		
Point 5				0.00	-4,928.93	-3,087.14	1,302,422.89	3,234,961.48		
Point 6				0.00	-4,925.83	2,187.93	1,302,476.66	3,240,236.05		
Point 7				0.00	-2,278.94	2,214.79	1,305,123.57	3,240,237.49		
Cannon 15N-W3HZ_E	- actual wellpath misses target center by 59.13ft at 11462.00ft MD (6935.53 TVD, -4445.53 N, 465.56 E)	0.00	0.00	6,920.51	-4,466.99	412.54	1,302,918.40	3,238,456.41	40.161757	-104.646800
- Point										
Cannon 15N-W3HZ_ξ	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Point										
Cannon 15N-W3HZ_ξ	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Polygon										
Point 1				0.00	-256.65	1,789.44	1,307,141.60	3,239,792.75		
Point 2				0.00	-242.62	-392.61	1,307,134.67	3,237,610.76		
Point 3				0.00	-228.77	-2,581.21	1,307,127.50	3,235,422.22		
Point 4				0.00	-2,274.05	-2,601.17	1,305,082.21	3,235,421.90		
Point 5				0.00	-4,468.65	-2,622.60	1,302,887.59	3,235,421.55		
Point 6				0.00	-4,466.09	1,732.56	1,302,931.98	3,239,776.31		
Point 7				0.00	-2,278.47	1,754.75	1,305,119.62	3,239,777.48		
Cannon 15N-W3HZ_V	- actual wellpath misses target center by 25.63ft at 10040.44ft MD (6979.06 TVD, -3028.06 N, 375.43 E)	0.00	0.00	6,963.58	-3,028.03	355.00	1,304,356.69	3,238,385.06	40.165707	-104.647006
- Point										
Cannon 15N-W3HZ_V	- actual wellpath misses target center by 29.17ft at 9395.52ft MD (6987.12 TVD, -2383.42 N, 365.56 E)	0.00	0.00	6,959.49	-2,382.05	374.79	1,305,002.80	3,238,398.64	40.167480	-104.646935
- Point										

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,351.00	7,052.20	7" Intermediate Casing	7	8-3/4

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Cannon 15N-W3HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Site:	Sec. 3-T2N-R65W	MD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Well:	Cannon 15N-W3HZ	North Reference:	True
Wellbore:	Plan D Rev 0	Survey Calculation Method:	Minimum Curvature
Design:	Actual Field Surveys	Database:	EDM 2003.16 Single User Db

Targets

Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N-S (ft)	+E-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Cannon 15N-W3HZ_L	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Polygon										
Point 1				0.00	-244.01	474.95	1,307,141.61	3,238,478.26		
Point 2				0.00	-240.18	75.95	1,307,141.61	3,238,079.25		
Point 3				0.00	-4,449.58	15.31	1,302,932.00	3,238,059.05		
Point 4				0.00	-4,453.41	414.31	1,302,932.00	3,238,458.05		
Cannon 15N-W3HZ_V	- actual wellpath misses target center by 98.36ft at 7897.81ft MD (7040.94 TVD, -891.45 N, 470.85 E)	0.00	0.00	6,956.79	-882.34	420.76	1,306,502.82	3,238,430.20	40.171597	-104.646770
- Point										
Cannon 15N-W3HZ_ξ	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Polygon										
Point 1				0.00	200.37	2,257.38	1,307,603.07	3,240,256.26		
Point 2				0.00	217.39	-389.70	1,307,594.67	3,237,609.25		
Point 3				0.00	234.14	-3,036.73	1,307,585.99	3,234,962.29		
Point 4				0.00	-2,273.59	-3,061.21	1,305,078.25	3,234,961.90		
Point 5				0.00	-4,928.93	-3,087.14	1,302,422.89	3,234,961.48		
Point 6				0.00	-4,925.83	2,187.93	1,302,476.66	3,240,236.05		
Point 7				0.00	-2,278.94	2,214.79	1,305,123.57	3,240,237.49		
Cannon 15N-W3HZ_E	- actual wellpath misses target center by 59.13ft at 11462.00ft MD (6935.53 TVD, -4445.53 N, 465.56 E)	0.00	0.00	6,920.51	-4,466.99	412.54	1,302,918.40	3,238,456.41	40.161757	-104.646800
- Point										
Cannon 15N-W3HZ_ξ	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Point										
Cannon 15N-W3HZ_ξ	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Polygon										
Point 1				0.00	-256.65	1,789.44	1,307,141.60	3,239,792.75		
Point 2				0.00	-242.62	-392.61	1,307,134.67	3,237,610.76		
Point 3				0.00	-228.77	-2,581.21	1,307,127.50	3,235,422.22		
Point 4				0.00	-2,274.05	-2,601.17	1,305,082.21	3,235,421.90		
Point 5				0.00	-4,468.65	-2,622.60	1,302,887.59	3,235,421.55		
Point 6				0.00	-4,466.09	1,732.56	1,302,931.98	3,239,776.31		
Point 7				0.00	-2,278.47	1,754.75	1,305,119.62	3,239,777.48		
Cannon 15N-W3HZ_V	- actual wellpath misses target center by 25.63ft at 10040.44ft MD (6979.06 TVD, -3028.06 N, 375.43 E)	0.00	0.00	6,963.58	-3,028.03	355.00	1,304,356.69	3,238,385.06	40.165707	-104.647006
- Point										
Cannon 15N-W3HZ_V	- actual wellpath misses target center by 29.17ft at 9395.52ft MD (6987.12 TVD, -2383.42 N, 365.56 E)	0.00	0.00	6,959.49	-2,382.05	374.79	1,305,002.80	3,238,398.64	40.167480	-104.646935
- Point										

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,351.00	7,052.20	7" Intermediate Casing	7	8-3/4

Design Annotations

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Cannon 15N-W3HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Site:	Sec. 3-T2N-R65W	MD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Well:	Cannon 15N-W3HZ	North Reference:	True
Wellbore:	Plan D Rev 0	Survey Calculation Method:	Minimum Curvature
Design:	Actual Field Surveys	Database:	EDM 2003.16 Single User Db

Targets

Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Cannon 15N-W3HZ_L	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Polygon										
Point 1				0.00	-244.01	474.95	1,307,141.61	3,238,478.26		
Point 2				0.00	-240.18	75.95	1,307,141.61	3,238,079.25		
Point 3				0.00	-4,449.58	15.31	1,302,932.00	3,238,059.05		
Point 4				0.00	-4,453.41	414.31	1,302,932.00	3,238,458.05		
Cannon 15N-W3HZ_V	- actual wellpath misses target center by 98.36ft at 7897.81ft MD (7040.94 TVD, -891.45 N, 470.85 E)	0.00	0.00	6,956.79	-882.34	420.76	1,306,502.82	3,238,430.20	40.171597	-104.646770
- Point										
Cannon 15N-W3HZ_ξ	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Polygon										
Point 1				0.00	200.37	2,257.38	1,307,603.07	3,240,256.26		
Point 2				0.00	217.39	-389.70	1,307,594.67	3,237,609.25		
Point 3				0.00	234.14	-3,036.73	1,307,585.99	3,234,962.29		
Point 4				0.00	-2,273.59	-3,061.21	1,305,078.25	3,234,961.90		
Point 5				0.00	-4,928.93	-3,087.14	1,302,422.89	3,234,961.48		
Point 6				0.00	-4,925.83	2,187.93	1,302,476.66	3,240,236.05		
Point 7				0.00	-2,278.94	2,214.79	1,305,123.57	3,240,237.49		
Cannon 15N-W3HZ_E	- actual wellpath misses target center by 59.13ft at 11462.00ft MD (6935.53 TVD, -4445.53 N, 465.56 E)	0.00	0.00	6,920.51	-4,466.99	412.54	1,302,918.40	3,238,456.41	40.161757	-104.646800
- Point										
Cannon 15N-W3HZ_ξ	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Point										
Cannon 15N-W3HZ_ξ	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Polygon										
Point 1				0.00	-256.65	1,789.44	1,307,141.60	3,239,792.75		
Point 2				0.00	-242.62	-392.61	1,307,134.67	3,237,610.76		
Point 3				0.00	-228.77	-2,581.21	1,307,127.50	3,235,422.22		
Point 4				0.00	-2,274.05	-2,601.17	1,305,082.21	3,235,421.90		
Point 5				0.00	-4,468.65	-2,622.60	1,302,887.59	3,235,421.55		
Point 6				0.00	-4,466.09	1,732.56	1,302,931.98	3,239,776.31		
Point 7				0.00	-2,278.47	1,754.75	1,305,119.62	3,239,777.48		
Cannon 15N-W3HZ_V	- actual wellpath misses target center by 25.63ft at 10040.44ft MD (6979.06 TVD, -3028.06 N, 375.43 E)	0.00	0.00	6,963.58	-3,028.03	355.00	1,304,356.69	3,238,385.06	40.165707	-104.647006
- Point										
Cannon 15N-W3HZ_V	- actual wellpath misses target center by 29.17ft at 9395.52ft MD (6987.12 TVD, -2383.42 N, 365.56 E)	0.00	0.00	6,959.49	-2,382.05	374.79	1,305,002.80	3,238,398.64	40.167480	-104.646935
- Point										

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,351.00	7,052.20	7" Intermediate Casing	7	8-3/4
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	+E/-W (ft)	Comment
16.00	16.00	0.00	0.00	Xtreme 22 - RKB=16ft

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Cannon 15N-W3HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Site:	Sec. 3-T2N-R65W	MD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Well:	Cannon 15N-W3HZ	North Reference:	True
Wellbore:	Plan D Rev 0	Survey Calculation Method:	Minimum Curvature
Design:	Actual Field Surveys	Database:	EDM 2003.16 Single User Db

Targets

Target Name	- hit/miss target	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N-S (ft)	+E-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Cannon 15N-W3HZ_L	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Polygon										
Point 1				0.00	-244.01	474.95	1,307,141.61	3,238,478.26		
Point 2				0.00	-240.18	75.95	1,307,141.61	3,238,079.25		
Point 3				0.00	-4,449.58	15.31	1,302,932.00	3,238,059.05		
Point 4				0.00	-4,453.41	414.31	1,302,932.00	3,238,458.05		
Cannon 15N-W3HZ_V	- actual wellpath misses target center by 98.36ft at 7897.81ft MD (7040.94 TVD, -891.45 N, 470.85 E)	0.00	0.00	6,956.79	-882.34	420.76	1,306,502.82	3,238,430.20	40.171597	-104.646770
- Point										
Cannon 15N-W3HZ_ξ	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Polygon										
Point 1				0.00	200.37	2,257.38	1,307,603.07	3,240,256.26		
Point 2				0.00	217.39	-389.70	1,307,594.67	3,237,609.25		
Point 3				0.00	234.14	-3,036.73	1,307,585.99	3,234,962.29		
Point 4				0.00	-2,273.59	-3,061.21	1,305,078.25	3,234,961.90		
Point 5				0.00	-4,928.93	-3,087.14	1,302,422.89	3,234,961.48		
Point 6				0.00	-4,925.83	2,187.93	1,302,476.66	3,240,236.05		
Point 7				0.00	-2,278.94	2,214.79	1,305,123.57	3,240,237.49		
Cannon 15N-W3HZ_E	- actual wellpath misses target center by 59.13ft at 11462.00ft MD (6935.53 TVD, -4445.53 N, 465.56 E)	0.00	0.00	6,920.51	-4,466.99	412.54	1,302,918.40	3,238,456.41	40.161757	-104.646800
- Point										
Cannon 15N-W3HZ_ξ	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Point										
Cannon 15N-W3HZ_ξ	- actual wellpath hits target center	0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019	-104.648276
- Polygon										
Point 1				0.00	-256.65	1,789.44	1,307,141.60	3,239,792.75		
Point 2				0.00	-242.62	-392.61	1,307,134.67	3,237,610.76		
Point 3				0.00	-228.77	-2,581.21	1,307,127.50	3,235,422.22		
Point 4				0.00	-2,274.05	-2,601.17	1,305,082.21	3,235,421.90		
Point 5				0.00	-4,468.65	-2,622.60	1,302,887.59	3,235,421.55		
Point 6				0.00	-4,466.09	1,732.56	1,302,931.98	3,239,776.31		
Point 7				0.00	-2,278.47	1,754.75	1,305,119.62	3,239,777.48		
Cannon 15N-W3HZ_V	- actual wellpath misses target center by 25.63ft at 10040.44ft MD (6979.06 TVD, -3028.06 N, 375.43 E)	0.00	0.00	6,963.58	-3,028.03	355.00	1,304,356.69	3,238,385.06	40.165707	-104.647006
- Point										
Cannon 15N-W3HZ_V	- actual wellpath misses target center by 29.17ft at 9395.52ft MD (6987.12 TVD, -2383.42 N, 365.56 E)	0.00	0.00	6,959.49	-2,382.05	374.79	1,305,002.80	3,238,398.64	40.167480	-104.646935
- Point										

Casing Points

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,351.00	7,052.20	7" Intermediate Casing	7	8-3/4
116.00	116.00	0.08	0.10	First Gyro Survey @ 116.00ft
753.00	752.99	2.44	1.07	Final Gyro Survey @ 753.00ft
753.00	752.99	2.44	1.07	Tie-On to Gyro Surveys @ 753.00ft
883.00	882.98	2.73	2.11	First Sperry MWD Survey @ 883.00ft
11,420.00	6,938.47	-4,403.72	462.85	Final Sperry MWD Survey @ 11420.00ft

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Cannon 15N-W3HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Site:	Sec. 3-T2N-R65W	MD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Well:	Cannon 15N-W3HZ	North Reference:	True
Wellbore:	Plan D Rev 0	Survey Calculation Method:	Minimum Curvature
Design:	Actual Field Surveys	Database:	EDM 2003.16 Single User Db

Targets									
Target Name	- hit/miss target	Dip Angle	Dip Dir.	TVD	+N-S	+E-W	Northing	Easting	
- Shape		(°)	(°)	(ft)	(ft)	(ft)	(ft)	(ft)	
									Latitude Longitude
Cannon 15N-W3HZ_L		0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019 -104.648276
- actual wellpath hits target center									
- Polygon									
Point 1				0.00	-244.01	474.95	1,307,141.61	3,238,478.26	
Point 2				0.00	-240.18	75.95	1,307,141.61	3,238,079.25	
Point 3				0.00	-4,449.58	15.31	1,302,932.00	3,238,059.05	
Point 4				0.00	-4,453.41	414.31	1,302,932.00	3,238,458.05	
Cannon 15N-W3HZ_V		0.00	0.00	6,956.79	-882.34	420.76	1,306,502.82	3,238,430.20	40.171597 -104.646770
- actual wellpath misses target center by 98.36ft at 7897.81ft MD (7040.94 TVD, -891.45 N, 470.85 E)									
- Point									
Cannon 15N-W3HZ_ξ		0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019 -104.648276
- actual wellpath hits target center									
- Polygon									
Point 1				0.00	200.37	2,257.38	1,307,603.07	3,240,256.26	
Point 2				0.00	217.39	-389.70	1,307,594.67	3,237,609.25	
Point 3				0.00	234.14	-3,036.73	1,307,585.99	3,234,962.29	
Point 4				0.00	-2,273.59	-3,061.21	1,305,078.25	3,234,961.90	
Point 5				0.00	-4,928.93	-3,087.14	1,302,422.89	3,234,961.48	
Point 6				0.00	-4,925.83	2,187.93	1,302,476.66	3,240,236.05	
Point 7				0.00	-2,278.94	2,214.79	1,305,123.57	3,240,237.49	
Cannon 15N-W3HZ_E		0.00	0.00	6,920.51	-4,466.99	412.54	1,302,918.40	3,238,456.41	40.161757 -104.646800
- actual wellpath misses target center by 59.13ft at 11462.00ft MD (6935.53 TVD, -4445.53 N, 465.56 E)									
- Point									
Cannon 15N-W3HZ_ξ		0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019 -104.648276
- actual wellpath hits target center									
- Point									
Cannon 15N-W3HZ_ξ		0.00	0.00	0.00	0.00	0.00	1,307,381.04	3,238,001.00	40.174019 -104.648276
- actual wellpath hits target center									
- Polygon									
Point 1				0.00	-256.65	1,789.44	1,307,141.60	3,239,792.75	
Point 2				0.00	-242.62	-392.61	1,307,134.67	3,237,610.76	
Point 3				0.00	-228.77	-2,581.21	1,307,127.50	3,235,422.22	
Point 4				0.00	-2,274.05	-2,601.17	1,305,082.21	3,235,421.90	
Point 5				0.00	-4,468.65	-2,622.60	1,302,887.59	3,235,421.55	
Point 6				0.00	-4,466.09	1,732.56	1,302,931.98	3,239,776.31	
Point 7				0.00	-2,278.47	1,754.75	1,305,119.62	3,239,777.48	
Cannon 15N-W3HZ_V		0.00	0.00	6,963.58	-3,028.03	355.00	1,304,356.69	3,238,385.06	40.165707 -104.647006
- actual wellpath misses target center by 25.63ft at 10040.44ft MD (6979.06 TVD, -3028.06 N, 375.43 E)									
- Point									
Cannon 15N-W3HZ_V		0.00	0.00	6,959.49	-2,382.05	374.79	1,305,002.80	3,238,398.64	40.167480 -104.646935
- actual wellpath misses target center by 29.17ft at 9395.52ft MD (6987.12 TVD, -2383.42 N, 365.56 E)									
- Point									

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
7,351.00	7,052.20	7" Intermediate Casing	7	8-3/4	
11,462.00	6,935.53	-4,445.53 465.56	Straight Line Projection to TD @ 11462.00ft		

Checked By: _____	Approved By: _____	Date: _____
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Halliburton Company
Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	Local Co-ordinate Reference:	Well Cannon 15N-W3HZ
Project:	Weld County, CO (NAD 83)	TVD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Site:	Sec. 3-T2N-R65W	MD Reference:	RKB=16ft @ 4855.00ft (Xtreme 22)
Well:	Cannon 15N-W3HZ	North Reference:	True
Wellbore:	Plan D Rev 0	Survey Calculation Method:	Minimum Curvature
Design:	Actual Field Surveys	Database:	EDM 2003.16 Single User Db