

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)

Sec. 10-T2N-R65W

Cook 37C-3HZ

Plan C Rev 0

Design: Actual Field Surveys

Sperry Drilling Services Standard Report

12 November, 2012

Well Coordinates: 1,297,682.60 N, 3,237,838.64 E (40° 08' 50.64" N, 104° 38' 57.08" W)

Ground Level: 4,869.00 ft

Local Coordinate Origin:

Centered on Well Cook 37C-3HZ

Viewing Datum:

RKB=25 @ 4894.00ft (HP 308)

TVDs to System:

N

North Reference:

True

Unit System:

API - US Survey Feet - Custom

Geodetic Scale Factor Applied

Version: 2003.16 Build: 43I

HALLIBURTON

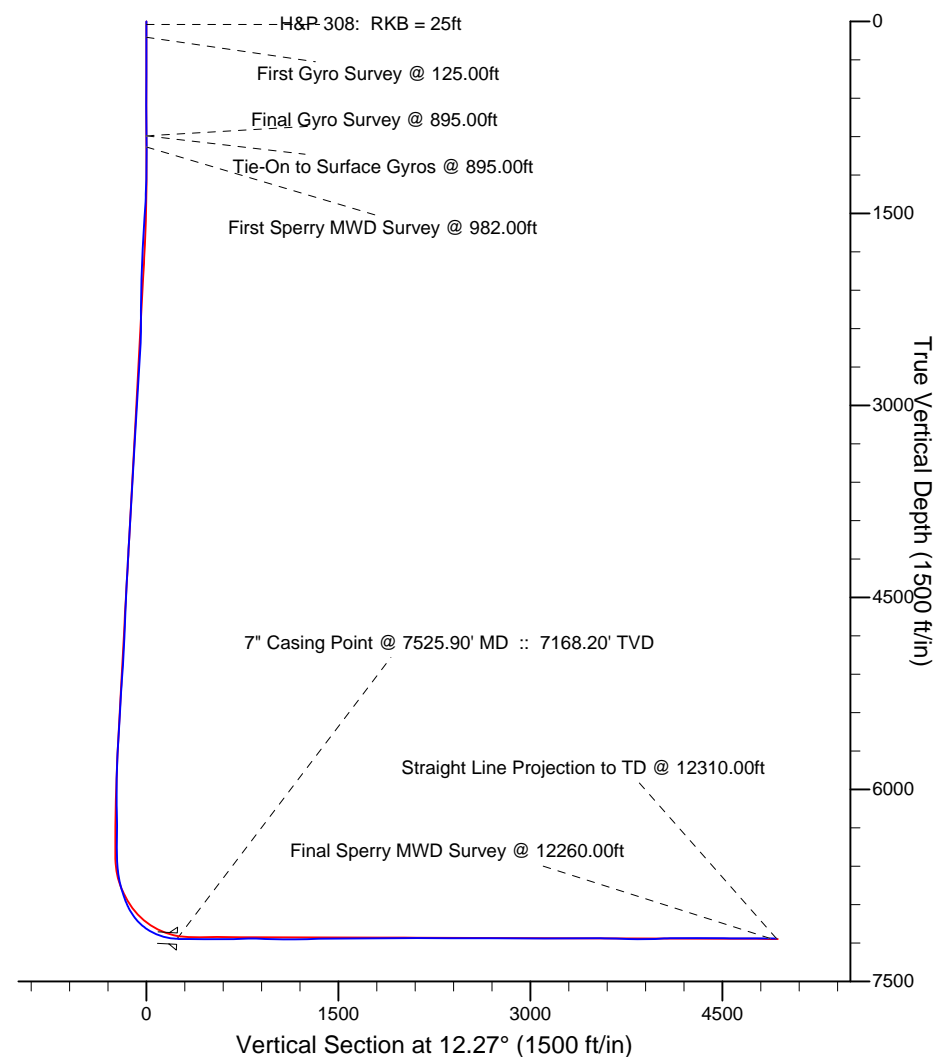
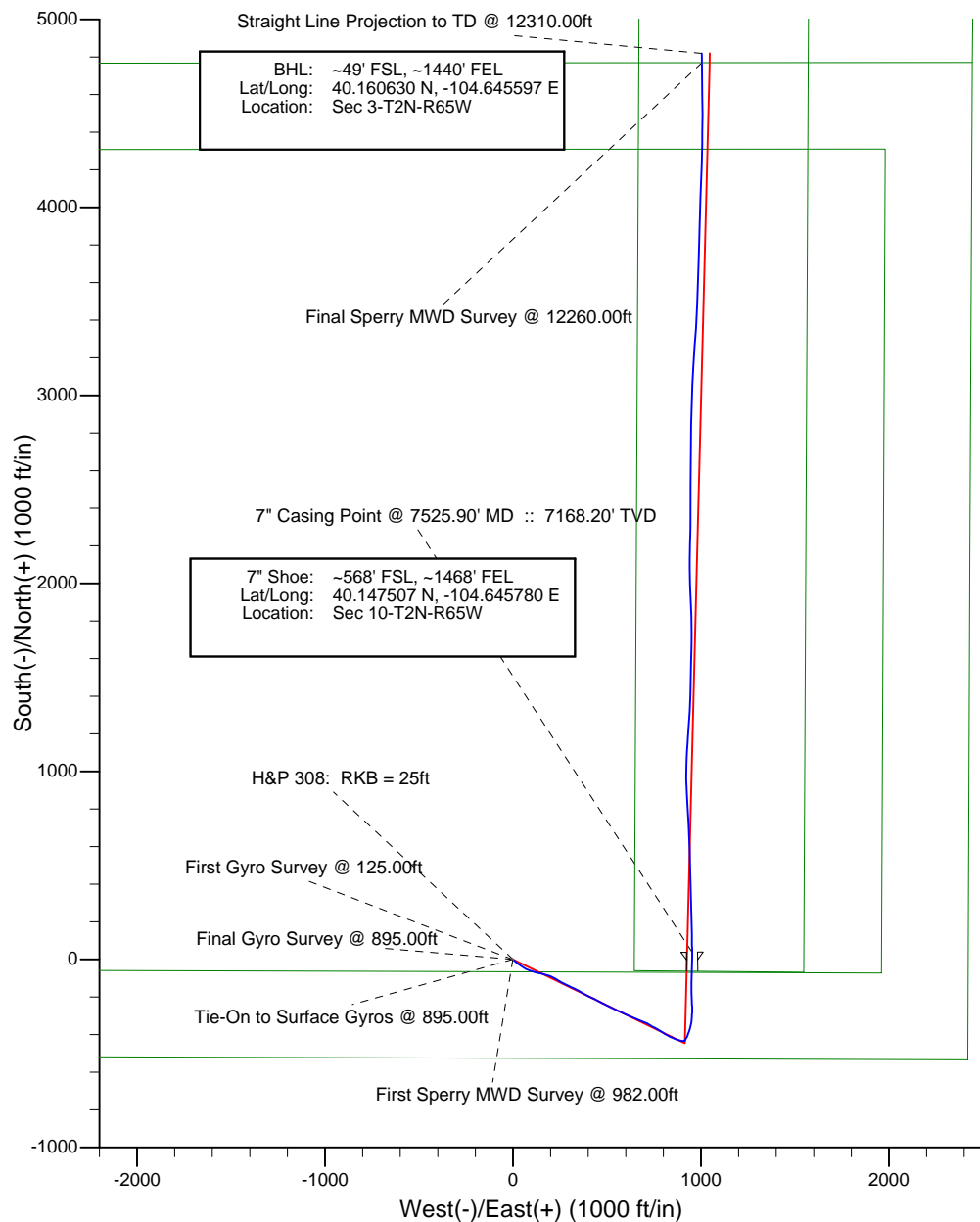
Project: Weld County, CO (NAD 83)
Site: Sec. 10-T2N-R65W
Well: Cook 37C-3HZ



HALLIBURTON
Sperry Drilling

LEGEND

- △ Cook 37C-3HZ, Plan C Rev 0, Plan C Rev 0 Proposal V0
- Actual Field Surveys



Design Report for Cook 37C-3HZ - 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
25.00	0.00	0.00	25.00	0.00	0.00	0.00	0.00
H&P 308: RKB = 25ft							
125.00	0.03	266.19	125.00	0.00	-0.03	-0.01	0.03
First Gyro Survey @ 125.00ft							
225.00	0.22	153.07	225.00	-0.17	0.03	-0.16	0.23
325.00	0.24	86.16	325.00	-0.33	0.33	-0.25	0.25
425.00	0.10	161.17	425.00	-0.40	0.57	-0.27	0.23
525.00	0.21	356.09	525.00	-0.30	0.58	-0.17	0.31
625.00	0.19	4.86	625.00	0.05	0.58	0.17	0.04
725.00	0.26	273.83	725.00	0.23	0.37	0.30	0.32
825.00	0.36	300.31	825.00	0.40	-0.12	0.37	0.17
895.00	0.30	294.92	894.99	0.59	-0.48	0.47	0.10
Final Gyro Survey @ 895.00ft - Tie-On to Surface Gyros @ 895.00ft							
982.00	0.19	3.11	981.99	0.83	-0.68	0.67	0.33
First Sperry MWD Survey @ 982.00ft							
1,012.00	0.49	328.30	1,011.99	0.99	-0.74	0.81	1.17
1,104.00	0.36	319.15	1,103.99	1.54	-1.14	1.26	0.16
1,196.00	1.67	131.13	1,195.98	0.88	-0.32	0.79	2.20
1,288.00	3.58	142.68	1,287.88	-2.29	2.43	-1.72	2.14
1,380.00	5.52	126.65	1,379.59	-7.21	7.72	-5.41	2.50
1,472.00	7.80	128.40	1,470.96	-13.73	16.17	-9.99	2.49
1,565.00	8.56	124.75	1,563.02	-21.60	26.80	-15.41	0.99
1,657.00	8.70	127.09	1,653.97	-29.70	37.98	-20.95	0.41
1,750.00	9.97	123.09	1,745.74	-38.34	50.33	-26.77	1.53
1,842.00	9.49	122.26	1,836.42	-46.73	63.42	-32.19	0.54
1,934.00	9.99	110.70	1,927.10	-53.60	77.30	-35.96	2.19
2,026.00	10.95	109.01	2,017.57	-59.27	93.03	-38.15	1.10
2,118.00	12.38	109.34	2,107.67	-65.38	110.59	-40.39	1.56
2,211.00	11.81	100.09	2,198.61	-70.35	129.37	-41.26	2.17
2,303.00	12.85	103.08	2,288.49	-74.31	148.61	-41.05	1.33
2,396.00	12.77	105.98	2,379.17	-79.48	168.56	-41.86	0.70
2,488.00	13.90	108.98	2,468.69	-85.88	188.79	-43.81	1.44
2,580.00	12.10	112.22	2,558.33	-93.12	208.16	-46.77	2.11
2,673.00	12.17	121.98	2,649.26	-102.00	225.50	-51.76	2.20
2,768.00	13.27	119.83	2,741.93	-112.73	243.46	-58.43	1.26
2,862.00	13.31	117.47	2,833.41	-123.08	262.42	-64.53	0.58
2,957.00	13.97	115.85	2,925.74	-133.13	282.44	-70.09	0.80
3,052.00	12.28	116.77	3,018.25	-142.68	301.78	-75.31	1.79
3,146.00	13.78	115.67	3,109.83	-152.03	320.80	-80.41	1.62
3,241.00	11.82	114.33	3,202.46	-160.94	339.86	-85.07	2.09
3,336.00	12.84	120.90	3,295.27	-170.37	357.79	-90.48	1.82
3,430.00	10.29	121.76	3,387.36	-180.16	373.89	-96.62	2.72
3,524.00	11.94	118.59	3,479.59	-189.23	389.57	-102.15	1.87
3,619.00	13.94	115.64	3,572.18	-198.89	408.52	-107.56	2.22
3,713.00	12.69	113.80	3,663.65	-207.95	428.17	-112.25	1.40
3,808.00	14.94	118.01	3,755.90	-217.91	448.53	-117.66	2.59
3,903.00	12.55	116.51	3,848.17	-228.27	468.58	-123.52	2.54
3,998.00	10.57	117.50	3,941.24	-236.91	485.55	-128.35	2.09
4,093.00	14.06	116.81	4,034.04	-246.14	503.58	-133.54	3.68

Design Report for Cook 37C-3HZ - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
4,187.00	13.22	116.29	4,125.39	-256.05	523.41	-139.01	0.90
4,282.00	12.13	115.80	4,218.07	-265.20	542.14	-143.98	1.15
4,377.00	13.45	115.34	4,310.71	-274.28	561.11	-148.82	1.39
4,472.00	13.07	114.75	4,403.18	-283.50	580.85	-153.64	0.42
4,567.00	12.64	111.83	4,495.80	-291.86	600.25	-157.69	0.82
4,662.00	14.78	116.09	4,588.09	-301.06	620.79	-162.31	2.49
4,756.00	14.44	114.51	4,679.05	-311.19	642.22	-167.66	0.56
4,851.00	13.23	110.36	4,771.29	-319.89	663.19	-171.70	1.65
4,946.00	12.54	106.92	4,863.90	-326.68	683.25	-174.07	1.09
5,041.00	12.72	115.12	4,956.61	-334.12	702.59	-177.24	1.90
5,136.00	14.06	122.11	5,049.03	-344.69	721.83	-183.48	2.21
5,231.00	13.30	118.72	5,141.34	-356.08	741.19	-190.49	1.16
5,326.00	11.55	119.07	5,234.11	-365.95	759.09	-196.34	1.84
5,422.00	9.72	118.87	5,328.46	-374.53	774.59	-201.43	1.91
5,517.00	11.15	122.03	5,421.88	-383.28	789.40	-206.83	1.62
5,612.00	11.62	122.15	5,515.01	-393.24	805.29	-213.19	0.50
5,707.00	12.18	119.82	5,607.97	-403.32	822.08	-219.47	0.78
5,802.00	9.34	115.43	5,701.29	-411.61	837.74	-224.25	3.11
5,897.00	11.25	114.31	5,794.76	-418.74	853.15	-227.94	2.02
5,992.00	10.06	109.06	5,888.12	-425.26	869.44	-230.85	1.62
6,087.00	8.49	104.48	5,981.88	-429.73	884.07	-232.11	1.82
6,183.00	5.58	103.87	6,077.15	-432.62	895.47	-232.51	3.03
6,278.00	4.23	90.48	6,171.80	-433.75	903.46	-231.93	1.85
6,373.00	2.53	69.99	6,266.63	-433.06	908.93	-230.09	2.17
6,468.00	0.49	101.60	6,361.60	-432.43	911.30	-228.97	2.24
6,563.00	0.82	113.27	6,456.59	-432.78	912.32	-229.09	0.37
6,626.00	0.67	132.70	6,519.59	-433.21	913.01	-229.36	0.46
6,658.00	1.55	42.47	6,551.58	-433.01	913.44	-229.08	5.28
6,690.00	3.72	30.96	6,583.54	-431.81	914.26	-227.73	6.95
6,722.00	5.90	27.32	6,615.43	-429.45	915.55	-225.16	6.88
6,753.00	8.16	29.76	6,646.20	-426.13	917.37	-221.52	7.35
6,785.00	9.87	32.08	6,677.80	-421.83	919.96	-216.77	5.46
6,817.00	11.77	28.79	6,709.23	-416.65	922.99	-211.06	6.24
6,848.00	13.82	26.19	6,739.46	-410.55	926.14	-204.44	6.87
6,880.00	16.16	22.83	6,770.37	-403.02	929.56	-196.35	7.80
6,912.00	18.01	19.19	6,800.95	-394.24	932.91	-187.06	6.68
6,944.00	18.94	18.05	6,831.31	-384.63	936.15	-176.98	3.12
6,975.00	19.88	17.18	6,860.54	-374.81	939.26	-166.72	3.17
7,007.00	22.79	15.56	6,890.35	-363.64	942.54	-155.11	9.28
7,039.00	26.14	14.46	6,919.47	-350.84	945.96	-141.88	10.56
7,070.00	29.49	8.90	6,946.89	-336.68	948.85	-127.43	13.66
7,102.00	33.52	5.87	6,974.17	-320.10	950.97	-110.78	13.53
7,134.00	37.36	3.14	7,000.24	-301.61	952.41	-92.40	12.98
7,166.00	41.97	1.09	7,024.86	-281.21	953.14	-72.31	14.97
7,197.00	46.59	359.56	7,047.05	-259.57	953.25	-51.14	15.30
7,229.00	51.46	357.64	7,068.03	-235.43	952.65	-27.68	15.88
7,261.00	55.45	357.92	7,087.08	-209.75	951.65	-2.79	12.49
7,292.00	59.60	357.58	7,103.72	-183.62	950.62	22.52	13.42
7,324.00	63.80	358.13	7,118.89	-155.47	949.57	49.80	13.21
7,356.00	67.83	0.99	7,132.00	-126.29	949.36	78.27	15.00
7,387.00	70.81	1.92	7,142.95	-97.30	950.10	106.76	10.01

Design Report for Cook 37C-3HZ - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
7,419.00	74.23	2.25	7,152.56	-66.80	951.21	136.79	10.73
7,451.00	79.39	2.26	7,159.86	-35.68	952.44	167.46	16.13
7,490.00	84.23	0.11	7,165.41	2.90	953.23	205.33	13.56
7,525.90	86.86	359.81	7,168.20	38.69	953.20	240.30	7.39
7" Casing Point @ 7525.90' MD :: 7168.20' TVD							
7,561.00	89.44	359.51	7,169.33	73.77	952.99	274.53	7.39
7,624.00	89.51	359.04	7,169.91	136.76	952.20	335.92	0.75
7,719.00	89.63	358.31	7,170.62	231.73	950.00	428.25	0.78
7,814.00	90.06	358.33	7,170.88	326.69	947.21	520.45	0.45
7,908.00	90.74	358.63	7,170.22	420.65	944.72	611.74	0.79
8,003.00	91.24	358.43	7,168.58	515.61	942.28	704.01	0.57
8,098.00	91.05	357.70	7,166.68	610.53	939.08	796.09	0.79
8,193.00	88.08	357.28	7,167.40	705.43	934.92	887.94	3.16
8,287.00	88.27	356.55	7,170.40	799.24	929.86	978.54	0.80
8,382.00	89.07	357.06	7,172.60	894.07	924.57	1,070.07	1.00
8,477.00	91.05	0.28	7,172.50	989.03	922.36	1,162.39	3.98
8,571.00	91.67	2.71	7,170.27	1,082.96	924.81	1,254.70	2.67
8,666.00	90.80	4.60	7,168.22	1,177.74	930.87	1,348.61	2.19
8,761.00	90.74	3.62	7,166.95	1,272.48	937.68	1,442.64	1.03
8,855.00	90.49	2.37	7,165.94	1,366.35	942.59	1,535.40	1.36
8,950.00	89.57	1.22	7,165.89	1,461.30	945.56	1,628.82	1.55
9,045.00	91.05	1.40	7,165.37	1,556.27	947.74	1,722.08	1.57
9,139.00	91.30	0.87	7,163.44	1,650.23	949.60	1,814.29	0.62
9,234.00	91.05	359.86	7,161.50	1,745.21	950.20	1,907.23	1.10
9,329.00	88.58	357.74	7,161.80	1,840.17	948.21	1,999.61	3.43
9,423.00	89.69	357.90	7,163.22	1,934.09	944.64	2,090.62	1.19
9,518.00	89.69	358.59	7,163.74	2,029.05	941.73	2,182.79	0.73
9,613.00	90.19	0.15	7,163.84	2,124.04	940.68	2,275.39	1.72
9,707.00	90.25	1.73	7,163.48	2,218.02	942.23	2,367.56	1.68
9,802.00	89.69	0.66	7,163.52	2,313.00	944.21	2,460.79	1.27
9,897.00	89.94	359.84	7,163.83	2,408.00	944.62	2,553.71	0.90
9,992.00	90.62	0.88	7,163.37	2,502.99	945.22	2,646.66	1.31
10,086.00	89.07	359.54	7,163.62	2,596.99	945.56	2,738.58	2.18
10,181.00	89.88	0.99	7,164.49	2,691.98	946.00	2,831.50	1.75
10,276.00	90.19	0.35	7,164.43	2,786.97	947.11	2,924.56	0.75
10,370.00	90.43	1.83	7,163.93	2,880.95	948.90	3,016.77	1.60
10,465.00	89.51	2.39	7,163.98	2,975.88	952.40	3,110.28	1.13
10,560.00	88.70	1.78	7,165.46	3,070.81	955.86	3,203.78	1.07
10,654.00	90.62	3.84	7,166.02	3,164.68	960.46	3,296.49	3.00
10,749.00	91.42	3.65	7,164.33	3,259.47	966.67	3,390.42	0.87
10,844.00	90.31	4.20	7,162.89	3,354.23	973.17	3,484.41	1.30
10,939.00	88.33	2.47	7,164.02	3,449.05	978.70	3,578.24	2.77
11,034.00	88.39	1.72	7,166.74	3,543.95	982.17	3,671.71	0.79
11,129.00	88.89	1.89	7,168.99	3,638.88	985.16	3,765.10	0.56
11,224.00	89.20	1.75	7,170.58	3,733.82	988.17	3,858.52	0.36
11,319.00	92.29	1.81	7,169.34	3,828.75	991.12	3,951.91	3.25
11,414.00	92.72	1.28	7,165.19	3,923.63	993.68	4,045.16	0.72
11,509.00	89.88	2.64	7,163.03	4,018.53	996.93	4,138.59	3.31
11,604.00	90.49	2.11	7,162.73	4,113.45	1,000.87	4,232.18	0.85
11,699.00	90.00	1.61	7,162.32	4,208.40	1,003.95	4,325.62	0.74
11,794.00	89.69	1.16	7,162.58	4,303.37	1,006.25	4,418.91	0.58

Design Report for Cook 37C-3HZ - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
11,889.00	88.76	0.41	7,163.86	4,398.35	1,007.55	4,512.00	1.26
11,984.00	89.81	0.17	7,165.05	4,493.34	1,008.03	4,604.92	1.13
12,080.00	90.43	359.50	7,164.85	4,589.34	1,007.75	4,698.67	0.95
12,172.00	89.51	359.19	7,164.90	4,681.33	1,006.70	4,788.34	1.06
12,260.00	89.81	358.85	7,165.42	4,769.32	1,005.20	4,874.00	0.52
Final Sperry MWD Survey @ 12260.00ft							
12,310.00	89.81	358.85	7,165.58	4,819.31	1,004.19	4,922.63	0.00
Straight Line Projection to TD @ 12310.00ft							

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
25.00	25.00	0.00	0.00	H&P 308: RKB = 25ft
125.00	125.00	0.00	-0.03	First Gyro Survey @ 125.00ft
895.00	894.99	0.59	-0.48	Final Gyro Survey @ 895.00ft
895.00	894.99	0.59	-0.48	Tie-On to Surface Gyros @ 895.00ft
982.00	981.99	0.83	-0.68	First Sperry MWD Survey @ 982.00ft
12,260.00	7,165.42	4,769.32	1,005.20	Final Sperry MWD Survey @ 12260.00ft
12,310.00	7,165.58	4,819.31	1,004.19	Straight Line Projection to TD @ 12310.00ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin		Start TVD (ft)
				+N/-S (ft)	+E/-W (ft)	
Target	Cook 37C-3HZ_BHL revised ReLoc	12.27	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
25.00	895.00	Surface Gyros	NS-GYRO-MS
982.00	7,490.00	Sperry MWD Surveys - Vert/Build	MWD+SC
7,561.00	12,260.00	Sperry MWD Surveys - Lateral	MWD+SC

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,525.90	7,168.20	7" Casing Point @ 7525.90' MD :: 7168.20' TVD	7	8-3/4

Design Report for Cook 37C-3HZ - 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
Cook 37C-3HZ_BHL	0.00	0.00	7,169.00	4,820.23	1,147.91	1,302,513.42	3,238,940.21	40.160633	-104.645083
- actual wellpath misses target center by 143.75ft at 12308.05ft MD (7165.58 TVD, 4817.36 N, 1004.23 E)									
- Point									
Cook 37C-3HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,297,682.60	3,237,838.64	40.147401	-104.649190
- actual wellpath hits target center									
- Polygon									
Point 1			2,419.26	-533.27		1,297,172.59	3,240,262.81		
Point 2			2,430.45	2,118.18		1,299,823.91	3,240,248.56		
Point 3			2,443.40	4,771.04		1,302,476.67	3,240,236.05		
Point 4			2,470.23	7,417.92		1,305,123.57	3,240,237.49		
Point 5			2,512.79	9,897.24		1,307,603.08	3,240,256.26		
Point 6			-134.29	9,914.23		1,307,594.67	3,237,609.24		
Point 7			-2,781.31	9,930.94		1,307,585.99	3,234,962.30		
Point 8			-2,805.76	7,423.22		1,305,078.25	3,234,961.91		
Point 9			-2,831.67	4,767.88		1,302,422.90	3,234,961.48		
Point 10			-2,871.68	2,112.42		1,299,767.28	3,234,946.95		
Point 11			-2,925.08	-515.83		1,297,138.75	3,234,918.77		
Point 12			-253.05	-524.51		1,297,155.71	3,237,590.65		
Cook 37C-3HZ_BHL	0.00	0.00	7,169.00	5,230.24	1,147.91	1,302,923.39	3,238,936.27	40.161758	-104.645083
- actual wellpath misses target center by 435.35ft at 12310.00ft MD (7165.58 TVD, 4819.31 N, 1004.19 E)									
- Point									
Cook 37C-3HZ_Sett	0.00	0.00	0.00	0.00	0.00	1,297,682.60	3,237,838.64	40.147401	-104.649190
- actual wellpath hits target center									
- Polygon									
Point 1			1,960.09	-71.75		1,297,629.66	3,239,799.25		
Point 2			1,970.42	2,117.68		1,299,819.00	3,239,788.57		
Point 3			1,980.76	4,310.74		1,302,011.97	3,239,777.87		
Point 4			-199.25	4,309.43		1,301,989.74	3,237,598.06		
Point 5			-2,378.53	4,308.13		1,301,967.53	3,235,418.99		
Point 6			-2,411.60	2,112.92		1,299,772.20	3,235,406.98		
Point 7			-2,455.65	-57.33		1,297,601.72	3,235,383.76		
Point 8			-247.93	-64.50		1,297,615.73	3,237,591.35		
Cook 37C-3HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,297,682.60	3,237,838.64	40.147401	-104.649190
- actual wellpath hits target center									
- Polygon									
Point 1			-2,831.67	4,767.88		1,302,422.90	3,234,961.48		
Point 2			2,443.40	4,771.04		1,302,476.67	3,240,236.05		
Cook 37C-3HZ_SHL	0.00	0.00	0.00	0.00	0.00	1,297,682.60	3,237,838.64	40.147401	-104.649190
- actual wellpath hits target center									
- Point									
Cook 37C-3HZ_BHL	0.00	0.00	7,169.00	4,820.23	1,047.91	1,302,512.46	3,238,840.21	40.160633	-104.645441
- actual wellpath misses target center by 43.86ft at 12310.00ft MD (7165.58 TVD, 4819.31 N, 1004.19 E)									
- Point									
Cook 37C-3HZ_Sett	0.00	0.00	0.00	0.00	0.00	1,297,682.60	3,237,838.64	40.147401	-104.649190
- actual wellpath hits target center									
- Polygon									
Point 1			1,988.04	5,230.78		1,302,932.00	3,239,776.32		
Point 2			2,010.28	7,418.32		1,305,119.56	3,239,777.57		
Point 3			2,044.90	9,440.12		1,307,141.51	3,239,792.79		
Point 4			-139.54	9,454.07		1,307,134.50	3,237,608.41		
Point 5			-2,325.65	9,468.02		1,307,127.48	3,235,422.36		
Point 6			-2,345.62	7,422.92		1,305,082.37	3,235,422.01		
Point 7			-2,367.12	5,228.18		1,302,887.61	3,235,421.57		
Point 8			-188.77	5,229.48		1,302,909.81	3,237,599.72		
Cook 37C-3HZ_Lane	0.00	0.00	0.00	0.00	0.00	1,297,682.60	3,237,838.64	40.147401	-104.649190
- actual wellpath hits target center									
- Polygon									
Point 1			673.67	5,649.10		1,303,337.67	3,238,458.05		
Point 2			645.65	-59.12		1,297,629.68	3,238,484.80		
Point 3			1,547.65	-67.78		1,297,629.68	3,239,386.81		

Design Report for Cook 37C-3HZ - Actual Field Surveys

Point 4	1,575.66	5,640.45	1,303,337.67	3,239,360.05
---------	----------	----------	--------------	--------------

North Reference Sheet for Sec. 10-T2N-R65W - Cook 37C-3HZ - Plan C 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=25 @ 4894.00ft (HP 308). Northing and Easting are relative to Cook 37C-3HZ

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: 0.99995846

Grid Coordinates of Well: 1,297,682.60 ft N, 3,237,838.64 ft E

Geographical Coordinates of Well: 40° 08' 50.64" N, 104° 38' 57.08" W

Grid Convergence at Surface is: 0.55°

Based upon Minimum Curvature type calculations, at a Measured Depth of 12,310.00ft
the Bottom Hole Displacement is 4,922.82ft in the Direction of 11.77° (True).

Magnetic Convergence at surface is: -8.09° (1 November 2012, , BGGM2012)

