HALLIBURTON

Sperry Drilling

END OF WELL REPORT

For

Anadarko Petroleum Corp.

Nichols 26C-5HZ
Sec. 8-T2N-R65W
Weld County, CO

Job #9798960

TABLE OF CONTENTS

Section 1

Contents: Surveys

SPERRY-SUN DRILLING SERVICES

CERTIFIED SURVEY WORK SHEET

OPERATOR:	Anadarko
WELL:	Nichols 26C-5HZ
FIELD:	Wattenburg
RIG:	HP 308
LEGALS:	
COUNTY:	Weld
STATE:	Colorado
CAL. METHOD:	Minimum Curvature
MAG. DECL. APPLIED:	8.65°
VERTICAL SEC. DIR. :	2.24°

SSDS Job Number	CA-MJ-0009798960
Start Date of Job :	12/15/2012
End Date of Job :	12/23/2012
Lead Directional D	Jeff Nicholas
Other SSDS DD's :	Jordan Timbs
SSDS MWD Engine	Ryan White
	Drew Perry

	Main Hole ==========		1st Side Track =		2nd Side Track ==		3rd Side Track =====		4th Side Track ======	
ESS Survey	0.00	Tie On		Tie On		Tie On		Tie On		
First Survey Depth	25.00	Gyro								
Last Survey Depth	833.00									
KOP Depth/Sidetrack MD	6649.00	KOP		KOP-ST		KOP-ST2		KOP-ST3		
First Survey Depth	920.00	MWD		MWD		MWD		MWD		
Last Survey Depth	14204.00	MWD		MWD		MWD		MWD		
Bit Extrapolation to TD	14246.00	T.D.		T.D.		T.D.		T.D.		

The following Sperry Sun Drilling Services personnel listed below, do certify the above survey information to be true and accurate.

Print Name : Jeff Nicholas	Print Name :	Print Name :
Sign Name :	Sign Name :	Sign Name :
Print Name :	Print Name :	Print Name :
Sign Name :	Sign Name :	Sign Name :

Examples of Survey Types:		
	TieOn	Tie On to Surface Casing (Assumed Vertical), Tie On to existing MWD Survey (prior drilled hole)
	MWD	Sperry Sun Drilling Services (SSDS) Measurement While Drilling (MWD) Survey's
	ESS	Sperry Sun Drilling Services (SSDS) Electronic Survey System (ESS) Survey's
	Gyro	Gyro Survey's ; Provided by third party vendor, or by Sperry Sun Drilling Services (SSDS)
	SS	Single Shot (SS) Survey's ; Provided by Sperry Sun Drilling Services (SSDS) or third party vendor.

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)
Sec. 8-T2N-R65W
Nichols 26C-5HZ

Plan C Rev 0

Design: Actual Field Surveys

Sperry Drilling Services

Standard Report

02 January, 2013

Well Coordinates: 1,299,909.43 N, 3,229,123.46 E (40° 09' 13.46" N, 104° 40' 49.05" W)
Ground Level: 4,893.00 ft

Local Coordinate Origin:	Centered on Well Nichols 26C-5HZ
Viewing Datum:	RKB=25 @ 4918.00ft (Drilling Rig)
TVDs to System:	N
North Reference:	True
Unit System:	API - US Survey Feet - Custom

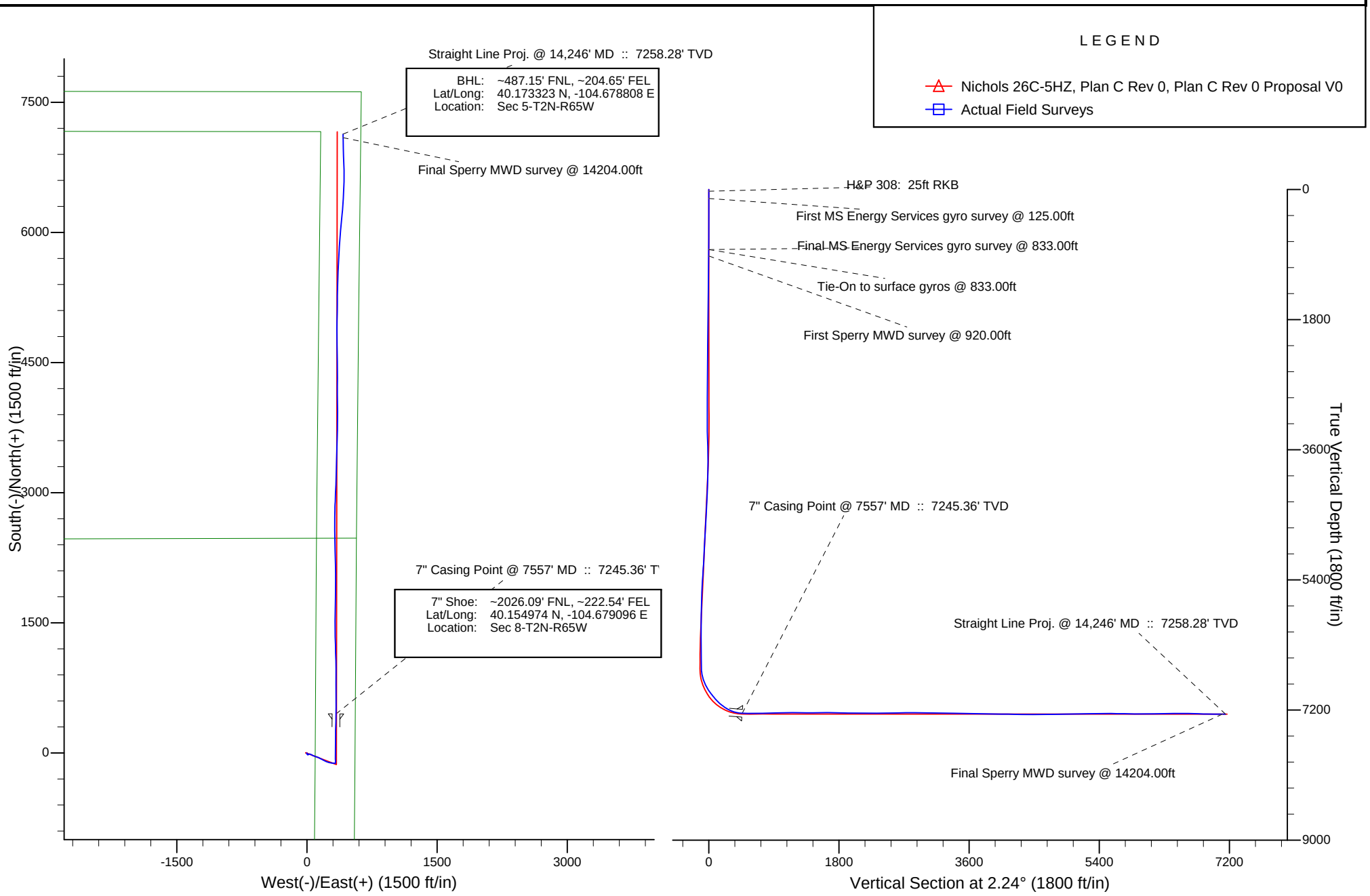
Geodetic Scale Factor Applied
Version: 2003.16 Build: 43I

HALLIBURTON

Project: Weld County, CO (NAD 83)
Site: Sec. 8-T2N-R65W
Well: Nichols 26C-5HZ

Anadarko Petroleum Corporation

HALLIBURTON
Sperry Drilling



Design Report for Nichols 26C-5HZ - 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: 25ft RKB							
125.00	0.65	281.40	125.00	0.11	-0.56	0.09	0.65
First MS Energy Services gyro survey @ 125.00ft							
225.00	0.39	246.73	224.99	0.09	-1.42	0.03	0.40
325.00	0.42	231.51	324.99	-0.27	-2.02	-0.35	0.11
425.00	0.15	325.62	424.99	-0.39	-2.39	-0.49	0.46
525.00	0.20	346.24	524.99	-0.12	-2.50	-0.21	0.08
625.00	0.15	180.68	624.99	-0.08	-2.54	-0.18	0.35
725.00	0.07	307.06	724.99	-0.17	-2.59	-0.27	0.20
825.00	0.13	272.29	824.99	-0.13	-2.76	-0.24	0.08
833.00	0.25	278.63	832.99	-0.13	-2.78	-0.24	1.52
Final MS Energy Services gyro survey @ 833.00ft - Tie-On to surface gyros @ 833.00ft							
920.00	0.52	158.25	919.99	-0.46	-2.82	-0.57	0.78
First Sperry MWD survey @ 920.00ft							
1,012.00	0.73	207.01	1,011.98	-1.37	-2.94	-1.49	0.60
1,104.00	0.93	159.37	1,103.97	-2.60	-2.94	-2.71	0.76
1,196.00	1.01	167.88	1,195.96	-4.09	-2.50	-4.18	0.18
1,288.00	1.56	189.55	1,287.94	-6.11	-2.54	-6.21	0.79
1,380.00	0.87	147.36	1,379.92	-7.94	-2.37	-8.02	1.18
1,472.00	0.70	153.89	1,471.91	-9.03	-1.75	-9.09	0.21
1,564.00	0.94	135.62	1,563.90	-10.07	-0.97	-10.11	0.38
1,656.00	0.70	135.93	1,655.89	-11.02	-0.06	-11.01	0.26
1,748.00	1.07	126.37	1,747.88	-11.93	1.03	-11.88	0.43
1,840.00	0.33	111.56	1,839.87	-12.54	1.97	-12.45	0.82
1,932.00	0.04	260.40	1,931.87	-12.64	2.18	-12.55	0.40
2,023.00	1.20	131.55	2,022.87	-13.28	2.86	-13.16	1.35
2,115.00	0.51	157.96	2,114.86	-14.30	3.74	-14.14	0.84
2,210.00	0.61	179.44	2,209.85	-15.19	3.90	-15.03	0.24
2,305.00	0.31	191.39	2,304.85	-15.95	3.85	-15.79	0.33
2,399.00	0.15	167.28	2,398.85	-16.32	3.83	-16.16	0.20
2,494.00	0.73	140.26	2,493.84	-16.91	4.25	-16.73	0.63
2,589.00	0.90	134.26	2,588.83	-17.89	5.17	-17.68	0.20
2,684.00	0.94	124.92	2,683.82	-18.86	6.34	-18.60	0.16
2,778.00	0.44	142.57	2,777.82	-19.59	7.19	-19.29	0.57
2,873.00	0.52	181.35	2,872.81	-20.31	7.40	-20.00	0.34
2,968.00	0.83	88.17	2,967.81	-20.72	8.08	-20.39	1.06
3,063.00	0.77	99.08	3,062.80	-20.80	9.40	-20.41	0.17
3,158.00	1.08	100.61	3,157.79	-21.06	10.91	-20.62	0.33
3,253.00	0.36	76.74	3,252.78	-21.16	12.08	-20.67	0.81
3,347.00	0.72	51.40	3,346.77	-20.72	12.83	-20.20	0.45
3,442.00	1.24	36.61	3,441.76	-19.52	13.91	-18.97	0.60
3,536.00	1.20	18.16	3,535.74	-17.77	14.82	-17.18	0.42
3,630.00	1.22	16.82	3,629.72	-15.88	15.42	-15.26	0.04
3,725.00	2.13	58.10	3,724.68	-13.98	17.21	-13.29	1.53
3,820.00	2.57	73.33	3,819.60	-12.44	20.75	-11.61	0.80
3,915.00	4.39	97.36	3,914.43	-12.29	26.40	-11.25	2.42
4,010.00	6.16	107.30	4,009.02	-14.27	34.87	-12.90	2.09
4,105.00	8.07	118.45	4,103.29	-18.96	45.60	-17.16	2.47

Design Report for Nichols 26C-5HZ - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
4,199.00	7.79	116.79	4,196.39	-24.98	57.09	-22.73	0.38
4,294.00	6.64	114.89	4,290.64	-30.19	67.82	-27.51	1.24
4,389.00	9.48	111.15	4,384.69	-35.33	80.10	-32.17	3.04
4,483.00	8.94	109.78	4,477.48	-40.59	94.19	-36.87	0.62
4,577.00	7.84	106.39	4,570.47	-44.87	107.22	-40.64	1.28
4,672.00	9.13	106.66	4,664.43	-48.86	120.65	-44.10	1.36
4,767.00	9.04	118.14	4,758.25	-54.54	134.46	-49.24	1.91
4,862.00	7.77	119.53	4,852.22	-61.23	146.62	-55.44	1.35
4,956.00	6.79	116.76	4,945.46	-66.86	157.12	-60.66	1.11
5,051.00	5.93	113.73	5,039.88	-71.37	166.62	-64.79	0.97
5,146.00	9.41	118.08	5,134.02	-77.00	177.97	-69.97	3.71
5,241.00	7.57	119.43	5,227.97	-83.73	190.27	-76.22	1.95
5,336.00	9.23	116.94	5,321.95	-90.26	202.52	-82.26	1.79
5,430.00	8.39	114.59	5,414.84	-96.53	215.47	-88.02	0.97
5,525.00	7.26	112.88	5,508.95	-101.74	227.31	-92.77	1.21
5,620.00	8.57	108.87	5,603.05	-106.37	239.54	-96.91	1.50
5,714.00	7.50	105.04	5,696.12	-110.23	252.09	-100.27	1.27
5,809.00	9.52	101.70	5,790.07	-113.43	265.77	-102.94	2.19
5,904.00	7.32	97.00	5,884.04	-115.76	279.47	-104.73	2.42
5,999.00	8.48	94.43	5,978.14	-117.04	292.46	-105.50	1.28
6,093.00	6.45	94.75	6,071.34	-118.01	304.64	-105.99	2.16
6,188.00	5.17	95.85	6,165.85	-118.89	314.21	-106.50	1.35
6,283.00	2.36	83.60	6,260.64	-119.11	320.41	-106.47	3.06
6,378.00	2.06	84.39	6,355.57	-118.72	324.06	-105.94	0.32
6,472.00	0.98	52.03	6,449.53	-118.06	326.37	-105.19	1.42
6,567.00	0.99	44.22	6,544.52	-116.97	327.59	-104.06	0.14
6,599.00	0.70	74.70	6,576.52	-116.72	327.97	-103.80	1.64
6,630.00	0.50	49.87	6,607.51	-116.59	328.25	-103.65	1.04
6,662.00	2.97	11.50	6,639.50	-115.68	328.53	-102.74	8.11
6,693.00	6.78	1.60	6,670.38	-113.07	328.74	-100.11	12.54
6,725.00	10.51	359.77	6,702.01	-108.26	328.78	-95.31	11.69
6,757.00	13.93	357.42	6,733.28	-101.49	328.59	-88.55	10.80
6,788.00	17.33	356.29	6,763.13	-93.15	328.13	-80.24	11.01
6,820.00	19.59	357.66	6,793.48	-83.04	327.60	-70.15	7.19
6,851.00	22.23	358.25	6,822.44	-71.98	327.21	-59.12	8.54
6,883.00	25.45	359.55	6,851.70	-59.05	326.97	-46.21	10.20
6,914.00	28.65	0.81	6,879.31	-44.96	327.02	-32.12	10.49
6,946.00	31.33	1.19	6,907.02	-28.96	327.30	-16.13	8.40
6,978.00	34.06	0.47	6,933.95	-11.68	327.55	1.15	8.62
7,009.00	36.23	0.35	6,959.30	6.16	327.68	18.98	7.00
7,041.00	38.03	359.26	6,984.81	25.48	327.61	38.28	5.99
7,072.00	39.32	0.54	7,009.01	44.85	327.58	57.64	4.90
7,104.00	39.16	1.15	7,033.80	65.09	327.87	77.87	1.31
7,135.00	41.23	359.67	7,057.47	85.09	328.01	97.87	7.35
7,167.00	44.61	0.18	7,080.90	106.88	327.99	119.64	10.62
7,198.00	48.20	1.11	7,102.28	129.32	328.24	142.07	11.78
7,230.00	50.63	1.21	7,123.09	153.62	328.74	166.37	7.60
7,261.00	52.88	1.33	7,142.28	177.96	329.28	190.71	7.26
7,293.00	55.53	1.52	7,161.00	203.90	329.92	216.66	8.30
7,325.00	58.64	0.55	7,178.38	230.76	330.40	243.52	10.05
7,356.00	61.89	359.74	7,193.76	257.67	330.47	270.41	10.73

Design Report for Nichols 26C-5HZ - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
7,388.00	65.81	0.71	7,207.86	286.39	330.59	299.11	12.55
7,420.00	69.78	2.10	7,219.95	316.00	331.32	328.73	13.04
7,451.00	74.76	1.95	7,229.39	345.50	332.36	358.25	16.07
7,483.00	78.88	0.78	7,236.68	376.64	333.10	389.39	13.36
7,511.00	81.68	0.70	7,241.41	404.24	333.45	416.98	10.00
7,540.00	84.48	0.58	7,244.90	433.02	333.78	445.75	9.66
7,557.00	85.71	0.46	7,246.36	449.96	333.93	462.68	7.26
7" Casing Point @ 7557' MD :: 7245.36' TVD							
7,618.00	90.12	0.04	7,248.58	510.90	334.20	523.59	7.26
7,710.00	91.11	0.48	7,247.59	602.89	334.61	615.53	1.18
7,802.00	91.36	359.91	7,245.61	694.87	334.93	707.45	0.68
7,893.00	91.48	359.95	7,243.35	785.84	334.82	798.35	0.14
7,985.00	90.93	359.76	7,241.42	877.82	334.58	890.25	0.63
8,077.00	90.93	359.50	7,239.92	969.81	333.99	982.14	0.28
8,169.00	90.37	358.50	7,238.88	1,061.79	332.38	1,073.98	1.25
8,261.00	89.94	358.66	7,238.63	1,153.76	330.10	1,165.79	0.50
8,353.00	89.26	358.91	7,239.27	1,245.73	328.15	1,257.62	0.79
8,445.00	89.57	358.48	7,240.21	1,337.70	326.06	1,349.44	0.58
8,536.00	90.68	358.83	7,240.01	1,428.68	323.92	1,440.26	1.28
8,628.00	91.05	0.19	7,238.62	1,520.66	323.14	1,532.15	1.53
8,720.00	91.17	1.40	7,236.84	1,612.63	324.41	1,624.10	1.32
8,812.00	88.46	1.16	7,237.14	1,704.60	326.47	1,716.07	2.96
8,904.00	88.70	0.95	7,239.42	1,796.56	328.16	1,808.03	0.35
8,995.00	88.46	0.76	7,241.67	1,887.52	329.52	1,898.97	0.34
9,087.00	89.07	0.37	7,243.66	1,979.49	330.42	1,990.91	0.79
9,179.00	89.32	359.50	7,244.95	2,071.48	330.32	2,082.83	0.98
9,271.00	89.32	358.78	7,246.04	2,163.47	328.94	2,174.68	0.78
9,363.00	90.74	358.44	7,245.99	2,255.44	326.71	2,266.50	1.59
9,455.00	91.30	357.72	7,244.36	2,347.37	323.63	2,358.24	0.99
9,547.00	90.31	359.41	7,243.06	2,439.33	321.32	2,450.03	2.13
9,639.00	91.11	358.53	7,241.92	2,531.30	319.67	2,541.88	1.29
9,731.00	90.56	0.89	7,240.58	2,623.28	319.20	2,633.77	2.63
9,822.00	91.05	0.61	7,239.30	2,714.27	320.39	2,724.73	0.62
9,914.00	90.56	1.12	7,238.01	2,806.25	321.78	2,816.69	0.77
10,006.00	88.52	2.56	7,238.75	2,898.19	324.74	2,908.68	2.71
10,101.00	88.52	2.19	7,241.20	2,993.08	328.67	3,003.65	0.39
10,196.00	89.07	2.41	7,243.20	3,087.98	332.48	3,098.63	0.62
10,291.00	89.14	1.81	7,244.68	3,182.90	335.98	3,193.61	0.64
10,385.00	90.31	1.20	7,245.14	3,276.87	338.45	3,287.60	1.40
10,480.00	89.94	1.30	7,244.93	3,371.84	340.52	3,382.59	0.40
10,575.00	88.21	2.13	7,246.46	3,466.78	343.36	3,477.57	2.02
10,669.00	88.70	1.40	7,249.00	3,560.70	346.26	3,571.53	0.94
10,764.00	88.95	1.59	7,250.94	3,655.65	348.74	3,666.50	0.33
10,859.00	88.70	1.03	7,252.89	3,750.61	350.91	3,761.47	0.65
10,954.00	88.58	0.81	7,255.15	3,845.57	352.43	3,856.42	0.26
11,048.00	89.38	359.02	7,256.82	3,939.55	352.29	3,950.32	2.09
11,144.00	89.38	359.13	7,257.86	4,035.53	350.74	4,046.17	0.11
11,238.00	89.07	359.73	7,259.13	4,129.52	349.81	4,140.04	0.72
11,333.00	89.32	0.25	7,260.47	4,224.51	349.79	4,234.96	0.61
11,428.00	89.07	0.22	7,261.80	4,319.50	350.18	4,329.89	0.27
11,523.00	90.37	359.25	7,262.26	4,414.49	349.74	4,424.80	1.71

Design Report for Nichols 26C-5HZ - Actual Field Surveys

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
11,618.00	90.31	359.48	7,261.70	4,509.48	348.69	4,519.68	0.25
11,712.00	89.94	358.94	7,261.50	4,603.47	347.39	4,613.54	0.70
11,807.00	90.25	359.31	7,261.34	4,698.46	345.94	4,708.40	0.51
11,902.00	91.17	0.08	7,260.16	4,793.45	345.44	4,803.30	1.26
11,996.00	90.93	0.23	7,258.44	4,887.44	345.69	4,897.22	0.30
12,091.00	90.86	1.13	7,256.95	4,982.42	346.82	4,992.17	0.95
12,186.00	91.11	0.63	7,255.32	5,077.39	348.28	5,087.13	0.59
12,281.00	90.93	0.32	7,253.63	5,172.37	349.06	5,182.07	0.38
12,375.00	90.80	0.76	7,252.21	5,266.36	349.95	5,276.02	0.49
12,470.00	90.99	1.27	7,250.73	5,361.33	351.63	5,370.99	0.57
12,565.00	90.68	1.91	7,249.34	5,456.28	354.27	5,465.97	0.75
12,660.00	89.26	2.62	7,249.39	5,551.21	358.02	5,560.97	1.67
12,754.00	89.26	2.51	7,250.61	5,645.10	362.23	5,654.96	0.12
12,849.00	89.14	3.08	7,251.93	5,739.98	366.86	5,749.94	0.61
12,944.00	89.51	3.85	7,253.05	5,834.80	372.60	5,844.91	0.90
13,039.00	89.51	3.83	7,253.86	5,929.58	378.97	5,939.87	0.02
13,134.00	89.94	5.07	7,254.32	6,024.29	386.34	6,034.80	1.38
13,229.00	90.43	6.23	7,254.01	6,118.83	395.69	6,129.63	1.33
13,323.00	90.43	5.24	7,253.31	6,212.36	405.08	6,223.45	1.05
13,418.00	90.86	3.59	7,252.24	6,307.06	412.39	6,318.37	1.79
13,513.00	91.36	3.53	7,250.40	6,401.86	418.29	6,413.33	0.53
13,608.00	91.11	2.82	7,248.35	6,496.69	423.55	6,508.29	0.79
13,702.00	88.45	0.86	7,248.71	6,590.63	426.57	6,602.28	3.51
13,797.00	87.96	359.08	7,251.69	6,685.58	426.52	6,697.15	1.94
13,892.00	87.96	358.65	7,255.07	6,780.50	424.64	6,791.93	0.45
13,987.00	89.20	358.04	7,257.42	6,875.43	421.90	6,886.68	1.45
14,082.00	89.81	358.25	7,258.24	6,970.38	418.82	6,981.43	0.68
14,176.00	89.88	358.75	7,258.50	7,064.34	416.36	7,075.23	0.54
14,204.00	90.25	358.45	7,258.47	7,092.34	415.68	7,103.17	1.70
Final Sperry MWD survey @ 14204.00ft							
14,246.00	90.25	358.45	7,258.28	7,134.32	414.54	7,145.08	0.00
Straight Line Proj. @ 14,246' MD :: 7258.28' TVD							

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
25.00	25.00	0.00	0.00	H&P 308: 25ft RKB
125.00	125.00	0.11	-0.56	First MS Energy Services gyro survey @ 125.00ft
833.00	832.99	-0.13	-2.78	Final MS Energy Services gyro survey @ 833.00ft
833.00	832.99	-0.13	-2.78	Tie-On to surface gyros @ 833.00ft
920.00	919.99	-0.46	-2.82	First Sperry MWD survey @ 920.00ft
14,204.00	7,258.47	7,092.34	415.68	Final Sperry MWD survey @ 14204.00ft
14,246.00	7,258.28	7,134.32	414.54	Straight Line Proj. @ 14,246' MD :: 7258.28' TVD

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	Origin +E/-W (ft)	Start TVD (ft)
Target	Nichols 26C-5HZ_BHL	2.24	Slot	0.00	0.00	0.00

Design Report for Nichols 26C-5HZ - Actual Field Surveys

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
25.00	833.00	MS Energy Services - Surface Gyros	NS-GYRO-MS
920.00	7,540.00	Sperry MWD Surveys - Vert/Build	MWD+IFR1+SC
7,618.00	14,204.00	Sperry MWD Survey - Lateral	MWD+IFR1+SC

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,557.00	7,246.36	7" Casing Point @ 7557' MD :: 7245.36' TVD	7	8-3/4

Design Report for Nichols 26C-5HZ - 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
Nichols 26C-5HZ_S	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1				-4,630.80	7,626.88	1,307,492.86	3,224,422.55		
Point 2				-4,659.62	5,112.01	1,304,977.93	3,224,416.98		
Point 3				-4,695.99	2,462.76	1,302,328.57	3,224,405.10		
Point 4				-4,721.30	-185.42	1,299,680.38	3,224,404.27		
Point 5				-4,746.55	-2,833.51	1,297,032.28	3,224,403.50		
Point 6				-2,107.93	-2,833.64	1,297,056.54	3,227,041.90		
Point 7				530.56	-2,834.14	1,297,080.43	3,229,680.17		
Point 8				552.27	-199.21	1,299,715.34	3,229,677.53		
Point 9				569.11	2,476.46	1,302,390.94	3,229,669.63		
Point 10				595.88	5,103.79	1,305,018.29	3,229,672.11		
Point 11				624.80	7,621.22	1,307,535.78	3,229,677.76		
Point 12				-2,003.01	7,624.05	1,307,514.32	3,227,050.15		
Nichols 26C-5HZ_S	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1				-4,695.99	2,462.76	1,302,328.57	3,224,405.10		
Point 2				-2,063.43	2,469.52	1,302,359.67	3,227,037.38		
Point 3				569.11	2,476.46	1,302,390.94	3,229,669.63		
Nichols 26C-5HZ_SI	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Point									
Nichols 26C-5HZ_SI	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1				-4,176.03	7,166.37	1,307,036.59	3,224,881.54		
Point 2				-4,199.58	5,111.29	1,304,981.47	3,224,876.99		
Point 3				-4,229.60	2,923.98	1,302,794.06	3,224,867.19		
Point 4				-4,240.35	2,003.91	1,301,873.97	3,224,864.95		
Point 5				-4,261.28	-186.62	1,299,683.43	3,224,864.27		
Point 6				-4,282.13	-2,373.52	1,297,496.53	3,224,863.63		
Point 7				-2,104.07	-2,373.62	1,297,516.56	3,227,041.51		
Point 8				74.32	-2,374.03	1,297,536.28	3,229,219.72		
Point 9				92.25	-198.01	1,299,712.29	3,229,217.53		
Point 10				106.18	2,015.22	1,301,925.46	3,229,211.00		
Point 11				113.74	2,935.29	1,302,845.52	3,229,210.06		
Point 12				135.84	5,104.51	1,305,014.76	3,229,212.11		
Point 13				159.47	7,161.70	1,307,072.00	3,229,216.72		
Point 14				-2,008.40	7,164.04	1,307,054.30	3,227,049.01		
Nichols 26C-5HZ_S	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1				-4,721.30	-185.42	1,299,680.38	3,224,404.27		
Point 2				552.27	-199.21	1,299,715.34	3,229,677.53		
Nichols 26C-5HZ_W	0.00	0.00	7,258.30	5,634.22	346.35	1,305,546.37	3,229,417.70	40.169205	-104.679052
- actual wellpath misses target center by 17.27ft at 12742.52ft MD (7250.46 TVD, 5633.63 N, 361.73 E)									
- Point									
Nichols 26C-5HZ_BI	0.00	0.00	7,259.00	7,161.71	280.57	1,307,073.12	3,229,337.81	40.173398	-104.679287
- actual wellpath misses target center by 136.74ft at 14246.00ft MD (7258.28 TVD, 7134.32 N, 414.54 E)									
- Point									

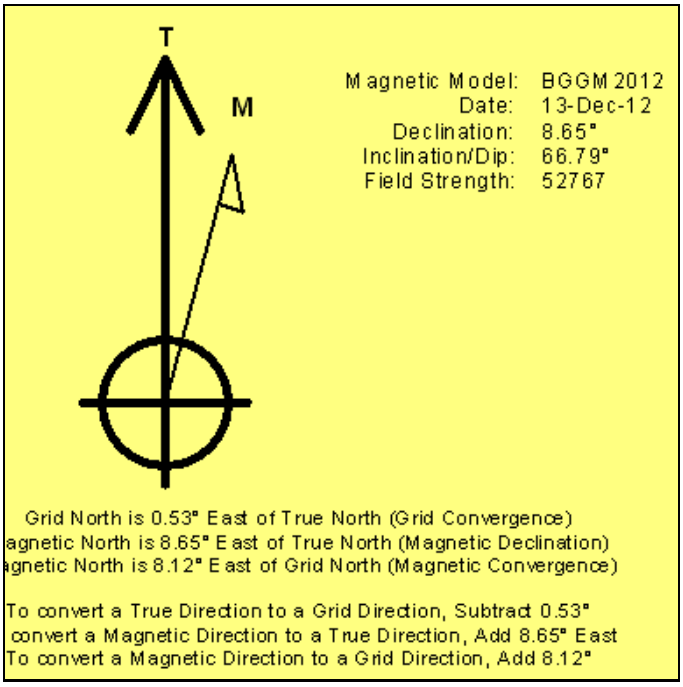
North Reference Sheet for Sec. 8-T2N-R65W - Nichols 26C-5HZ - Plan C Rev 0

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 @ 4918.00ft (Drilling Rig). Northing and Easting are relative to Nichols 26C-5HZ
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: 0.99995827

Grid Coordinates of Well: 1,299,909.43 ft N, 3,229,123.46 ft E
Geographical Coordinates of Well: 40° 09' 13.46" N, 104° 40' 49.05" W
Grid Convergence at Surface is: 0.53°

Based upon Minimum Curvature type calculations, at a Measured Depth of 14,246.00ft
the Bottom Hole Displacement is 7,146.35ft in the Direction of 3.33° (True).

Magnetic Convergence at surface is: -8.12° (13 December 2012, , BGGM2012)



Anadarko Petroleum Corp.

Weld County, CO (NAD 83)
Sec. 8-T2N-R65W
Nichols 26C-5HZ
Plan C Rev 0

Design: Actual Field Surveys

Survey Report - Geographic

02 January, 2013

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	**Local Co-ordinate Reference:**	Well Nichols 26C-5HZ
Project:	Weld County, CO (NAD 83)	**TVD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Site:	Sec. 8-T2N-R65W	**MD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Well:	Nichols 26C-5HZ	**North Reference:**	True
Wellbore:	Plan C 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. 8-T2N-R65W

Site Position:		**Northing:**	1,299,927.50 ft	**Latitude:**	40.153788
From:	Lat/Long	**Easting:**	3,229,147.33 ft	**Longitude:**	-104.680205
Position Uncertainty:	0.00 ft	**Slot Radius:**	"	**Grid Convergence:**	0.53 °

Well Nichols 26C-5HZ

Well Position	**+N/-S**	0.00 ft	**Northing:**	1,299,909.43 ft	**Latitude:**	40.153739
	+E/-W	0.00 ft	**Easting:**	3,229,123.46 ft	**Longitude:**	-104.680291
Position Uncertainty		3.28 ft	**Wellhead Elevation:**	ft	**Ground Level:**	4,893.00 ft

Wellbore Plan C Rev 0

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2012	2012-12-13	8.65	66.79	52,767

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	2.24

Survey Program **Date** 2013-01-02

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
25.00	833.00	MS Energy Services - Surface Gyros (Plar	NS-GYRO-MS	North sensing gyrocompassing m/s
920.00	7,540.00	Sperry MWD Surveys - Vert/Build (Plan C	MWD+IFR1+SC	Fixed:v2:crustal field dec & axial correction
7,618.00	14,204.00	Sperry MWD Survey - Lateral (Plan C Rev	MWD+IFR1+SC	Fixed:v2:crustal field dec & axial correction

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	**Local Co-ordinate Reference:**	Well Nichols 26C-5HZ
Project:	Weld County, CO (NAD 83)	**TVD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Site:	Sec. 8-T2N-R65W	**MD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Well:	Nichols 26C-5HZ	**North Reference:**	True
Wellbore:	Plan C 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	1,299,909.43	3,229,123.46	40.153739	-104.680291
25.00	0.00	0.00	25.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
H&P 308: 25ft RKB									
125.00	0.65	281.40	125.00	0.11	-0.56	1,299,909.53	3,229,122.90	40.153739	-104.680293
First MS Energy Services gyro survey @ 125.00ft									
225.00	0.39	246.73	224.99	0.09	-1.42	1,299,909.50	3,229,122.04	40.153739	-104.680296
325.00	0.42	231.51	324.99	-0.27	-2.02	1,299,909.14	3,229,121.44	40.153738	-104.680298
425.00	0.15	325.62	424.99	-0.39	-2.39	1,299,909.01	3,229,121.08	40.153738	-104.680300
525.00	0.20	346.24	524.99	-0.12	-2.50	1,299,909.29	3,229,120.96	40.153739	-104.680300
625.00	0.15	180.68	624.99	-0.08	-2.54	1,299,909.33	3,229,120.92	40.153739	-104.680300
725.00	0.07	307.06	724.99	-0.17	-2.59	1,299,909.23	3,229,120.87	40.153739	-104.680300
825.00	0.13	272.29	824.99	-0.13	-2.76	1,299,909.27	3,229,120.71	40.153739	-104.680301
833.00	0.25	278.63	832.99	-0.13	-2.78	1,299,909.28	3,229,120.68	40.153739	-104.680301
Final MS Energy Services gyro survey @ 833.00ft - Tie-On to surface gyros @ 833.00ft									
920.00	0.52	158.25	919.99	-0.46	-2.82	1,299,908.94	3,229,120.64	40.153738	-104.680301
First Sperry MWD survey @ 920.00ft									
1,012.00	0.73	207.01	1,011.98	-1.37	-2.94	1,299,908.03	3,229,120.54	40.153735	-104.680301
1,104.00	0.93	159.37	1,103.97	-2.60	-2.94	1,299,906.81	3,229,120.55	40.153732	-104.680302
1,196.00	1.01	167.88	1,195.96	-4.09	-2.50	1,299,905.32	3,229,120.99	40.153728	-104.680300
1,288.00	1.56	189.55	1,287.94	-6.11	-2.54	1,299,903.29	3,229,120.97	40.153722	-104.680300
1,380.00	0.87	147.36	1,379.92	-7.94	-2.37	1,299,901.47	3,229,121.16	40.153717	-104.680299
1,472.00	0.70	153.89	1,471.91	-9.03	-1.75	1,299,900.38	3,229,121.79	40.153714	-104.680297
1,564.00	0.94	135.62	1,563.90	-10.07	-0.97	1,299,899.34	3,229,122.58	40.153711	-104.680294
1,656.00	0.70	135.93	1,655.89	-11.02	-0.06	1,299,898.41	3,229,123.51	40.153709	-104.680291
1,748.00	1.07	126.37	1,747.88	-11.93	1.03	1,299,897.51	3,229,124.60	40.153706	-104.680287
1,840.00	0.33	111.56	1,839.87	-12.54	1.97	1,299,896.91	3,229,125.54	40.153705	-104.680284
1,932.00	0.04	260.40	1,931.87	-12.64	2.18	1,299,896.81	3,229,125.76	40.153704	-104.680283
2,023.00	1.20	131.55	2,022.87	-13.28	2.86	1,299,896.18	3,229,126.44	40.153703	-104.680281
2,115.00	0.51	157.96	2,114.86	-14.30	3.74	1,299,895.17	3,229,127.33	40.153700	-104.680278
2,210.00	0.61	179.44	2,209.85	-15.19	3.90	1,299,894.27	3,229,127.50	40.153697	-104.680277
2,305.00	0.31	191.39	2,304.85	-15.95	3.85	1,299,893.51	3,229,127.46	40.153695	-104.680277
2,399.00	0.15	167.28	2,398.85	-16.32	3.83	1,299,893.14	3,229,127.44	40.153694	-104.680277
2,494.00	0.73	140.26	2,493.84	-16.91	4.25	1,299,892.56	3,229,127.86	40.153693	-104.680276
2,589.00	0.90	134.26	2,588.83	-17.89	5.17	1,299,891.58	3,229,128.79	40.153690	-104.680273
2,684.00	0.94	124.92	2,683.82	-18.86	6.34	1,299,890.63	3,229,129.97	40.153687	-104.680268
2,778.00	0.44	142.57	2,777.82	-19.59	7.19	1,299,889.91	3,229,130.83	40.153685	-104.680265
2,873.00	0.52	181.35	2,872.81	-20.31	7.40	1,299,889.19	3,229,131.05	40.153683	-104.680265
2,968.00	0.83	88.17	2,967.81	-20.72	8.08	1,299,888.79	3,229,131.73	40.153682	-104.680262
3,063.00	0.77	99.08	3,062.80	-20.80	9.40	1,299,888.72	3,229,133.05	40.153682	-104.680257
3,158.00	1.08	100.61	3,157.79	-21.06	10.91	1,299,888.47	3,229,134.56	40.153681	-104.680252
3,253.00	0.36	76.74	3,252.78	-21.16	12.08	1,299,888.38	3,229,135.73	40.153681	-104.680248
3,347.00	0.72	51.40	3,346.77	-20.72	12.83	1,299,888.83	3,229,136.48	40.153682	-104.680245
3,442.00	1.24	36.61	3,441.76	-19.52	13.91	1,299,890.03	3,229,137.55	40.153685	-104.680241
3,536.00	1.20	18.16	3,535.74	-17.77	14.82	1,299,891.79	3,229,138.44	40.153690	-104.680238
3,630.00	1.22	16.82	3,629.72	-15.88	15.42	1,299,893.69	3,229,139.02	40.153695	-104.680236
3,725.00	2.13	58.10	3,724.68	-13.98	17.21	1,299,895.61	3,229,140.80	40.153701	-104.680229
3,820.00	2.57	73.33	3,819.60	-12.44	20.75	1,299,897.19	3,229,144.32	40.153705	-104.680217
3,915.00	4.39	97.36	3,914.43	-12.29	26.40	1,299,897.38	3,229,149.97	40.153705	-104.680197
4,010.00	6.16	107.30	4,009.02	-14.27	34.87	1,299,895.48	3,229,158.46	40.153700	-104.680166
4,105.00	8.07	118.45	4,103.29	-18.96	45.60	1,299,890.89	3,229,169.23	40.153687	-104.680128
4,199.00	7.79	116.79	4,196.39	-24.98	57.09	1,299,884.98	3,229,180.77	40.153670	-104.680087
4,294.00	6.64	114.89	4,290.64	-30.19	67.82	1,299,879.86	3,229,191.55	40.153656	-104.680048
4,389.00	9.48	111.15	4,384.69	-35.33	80.10	1,299,874.84	3,229,203.88	40.153642	-104.680004
4,483.00	8.94	109.78	4,477.48	-40.59	94.19	1,299,869.71	3,229,218.02	40.153628	-104.679954
4,577.00	7.84	106.39	4,570.47	-44.87	107.22	1,299,865.55	3,229,231.08	40.153616	-104.679907

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	**Local Co-ordinate Reference:**	Well Nichols 26C-5HZ
Project:	Weld County, CO (NAD 83)	**TVD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Site:	Sec. 8-T2N-R65W	**MD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Well:	Nichols 26C-5HZ	**North Reference:**	True
Wellbore:	Plan C 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
4,672.00	9.13	106.66	4,664.43	-48.86	120.65	1,299,861.68	3,229,244.55	40.153605	-104.679859
4,767.00	9.04	118.14	4,758.25	-54.54	134.46	1,299,856.13	3,229,258.41	40.153589	-104.679810
4,862.00	7.77	119.53	4,852.22	-61.23	146.62	1,299,849.56	3,229,270.64	40.153571	-104.679766
4,956.00	6.79	116.76	4,945.46	-66.86	157.12	1,299,844.02	3,229,281.18	40.153555	-104.679729
5,051.00	5.93	113.73	5,039.88	-71.37	166.62	1,299,839.61	3,229,290.73	40.153543	-104.679695
5,146.00	9.41	118.08	5,134.02	-77.00	177.97	1,299,834.08	3,229,302.13	40.153528	-104.679654
5,241.00	7.57	119.43	5,227.97	-83.73	190.27	1,299,827.46	3,229,314.49	40.153509	-104.679610
5,336.00	9.23	116.94	5,321.95	-90.26	202.52	1,299,821.05	3,229,326.79	40.153491	-104.679567
5,430.00	8.39	114.59	5,414.84	-96.53	215.47	1,299,814.90	3,229,339.81	40.153474	-104.679520
5,525.00	7.26	112.88	5,508.95	-101.74	227.31	1,299,809.79	3,229,351.69	40.153460	-104.679478
5,620.00	8.57	108.87	5,603.05	-106.37	239.54	1,299,805.28	3,229,363.96	40.153447	-104.679434
5,714.00	7.50	105.04	5,696.12	-110.23	252.09	1,299,801.54	3,229,376.55	40.153436	-104.679389
5,809.00	9.52	101.70	5,790.07	-113.43	265.77	1,299,798.47	3,229,390.26	40.153428	-104.679340
5,904.00	7.32	97.00	5,884.04	-115.76	279.47	1,299,796.26	3,229,403.98	40.153421	-104.679291
5,999.00	8.48	94.43	5,978.14	-117.04	292.46	1,299,795.10	3,229,416.98	40.153418	-104.679245
6,093.00	6.45	94.75	6,071.34	-118.01	304.64	1,299,794.24	3,229,429.16	40.153415	-104.679201
6,188.00	5.17	95.85	6,165.85	-118.89	314.21	1,299,793.45	3,229,438.74	40.153413	-104.679167
6,283.00	2.36	83.60	6,260.64	-119.11	320.41	1,299,793.29	3,229,444.95	40.153412	-104.679145
6,378.00	2.06	84.39	6,355.57	-118.72	324.06	1,299,793.71	3,229,448.59	40.153413	-104.679132
6,472.00	0.98	52.03	6,449.53	-118.06	326.37	1,299,794.39	3,229,450.90	40.153415	-104.679123
6,567.00	0.99	44.22	6,544.52	-116.97	327.59	1,299,795.49	3,229,452.10	40.153418	-104.679119
6,599.00	0.70	74.70	6,576.52	-116.72	327.97	1,299,795.74	3,229,452.48	40.153419	-104.679118
6,630.00	0.50	49.87	6,607.51	-116.59	328.25	1,299,795.88	3,229,452.76	40.153419	-104.679117
6,662.00	2.97	11.50	6,639.50	-115.68	328.53	1,299,796.79	3,229,453.03	40.153421	-104.679116
6,693.00	6.78	1.60	6,670.38	-113.07	328.74	1,299,799.41	3,229,453.21	40.153429	-104.679115
6,725.00	10.51	359.77	6,702.01	-108.26	328.78	1,299,804.22	3,229,453.21	40.153442	-104.679115
6,757.00	13.93	357.42	6,733.28	-101.49	328.59	1,299,810.98	3,229,452.96	40.153460	-104.679116
6,788.00	17.33	356.29	6,763.13	-93.15	328.13	1,299,819.32	3,229,452.42	40.153483	-104.679117
6,820.00	19.59	357.66	6,793.48	-83.04	327.60	1,299,829.43	3,229,451.80	40.153511	-104.679119
6,851.00	22.23	358.25	6,822.44	-71.98	327.21	1,299,840.48	3,229,451.31	40.153541	-104.679120
6,883.00	25.45	359.55	6,851.70	-59.05	326.97	1,299,853.40	3,229,450.95	40.153577	-104.679121
6,914.00	28.65	0.81	6,879.31	-44.96	327.02	1,299,867.50	3,229,450.87	40.153616	-104.679121
6,946.00	31.33	1.19	6,907.02	-28.96	327.30	1,299,883.49	3,229,451.00	40.153659	-104.679120
6,978.00	34.06	0.47	6,933.95	-11.68	327.55	1,299,900.77	3,229,451.09	40.153707	-104.679119
7,009.00	36.23	0.35	6,959.30	6.16	327.68	1,299,918.62	3,229,451.05	40.153756	-104.679119
7,041.00	38.03	359.26	6,984.81	25.48	327.61	1,299,937.93	3,229,450.80	40.153809	-104.679119
7,072.00	39.32	0.54	7,009.01	44.85	327.58	1,299,957.30	3,229,450.59	40.153862	-104.679119
7,104.00	39.16	1.15	7,033.80	65.09	327.87	1,299,977.54	3,229,450.70	40.153918	-104.679118
7,135.00	41.23	359.67	7,057.47	85.09	328.01	1,299,997.54	3,229,450.66	40.153973	-104.679118
7,167.00	44.61	0.18	7,080.90	106.88	327.99	1,300,019.33	3,229,450.43	40.154032	-104.679118
7,198.00	48.20	1.11	7,102.28	129.32	328.24	1,300,041.77	3,229,450.48	40.154094	-104.679117
7,230.00	50.63	1.21	7,123.09	153.62	328.74	1,300,066.07	3,229,450.75	40.154161	-104.679115
7,261.00	52.88	1.33	7,142.28	177.96	329.28	1,300,090.41	3,229,451.06	40.154227	-104.679113
7,293.00	55.53	1.52	7,161.00	203.90	329.92	1,300,116.36	3,229,451.47	40.154299	-104.679111
7,325.00	58.64	0.55	7,178.38	230.76	330.40	1,300,143.22	3,229,451.70	40.154372	-104.679109
7,356.00	61.89	359.74	7,193.76	257.67	330.47	1,300,170.13	3,229,451.52	40.154446	-104.679109
7,388.00	65.81	0.71	7,207.86	286.39	330.59	1,300,198.85	3,229,451.37	40.154525	-104.679108
7,420.00	69.78	2.10	7,219.95	316.00	331.32	1,300,228.47	3,229,451.83	40.154606	-104.679106
7,451.00	74.76	1.95	7,229.39	345.50	332.36	1,300,257.97	3,229,452.60	40.154687	-104.679102
7,483.00	78.88	0.78	7,236.68	376.64	333.10	1,300,289.12	3,229,453.05	40.154773	-104.679099
7,511.00	81.68	0.70	7,241.41	404.24	333.45	1,300,316.71	3,229,453.15	40.154849	-104.679098
7,540.00	84.48	0.58	7,244.90	433.02	333.78	1,300,345.50	3,229,453.21	40.154928	-104.679097
7,557.00	85.71	0.46	7,246.36	449.96	333.93	1,300,362.43	3,229,453.20	40.154974	-104.679096
7" Casing Point @ 7557' MD :: 7245.36' TVD									
7,618.00	90.12	0.04	7,248.58	510.90	334.20	1,300,423.37	3,229,452.91	40.155141	-104.679095

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	**Local Co-ordinate Reference:**	Well Nichols 26C-5HZ
Project:	Weld County, CO (NAD 83)	**TVD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Site:	Sec. 8-T2N-R65W	**MD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Well:	Nichols 26C-5HZ	**North Reference:**	True
Wellbore:	Plan C 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
7,710.00	91.11	0.48	7,247.59	602.89	334.61	1,300,515.36	3,229,452.47	40.155394	-104.679094
7,802.00	91.36	359.91	7,245.61	694.87	334.93	1,300,607.34	3,229,451.94	40.155646	-104.679093
7,893.00	91.48	359.95	7,243.35	785.84	334.82	1,300,698.30	3,229,450.98	40.155896	-104.679093
7,985.00	90.93	359.76	7,241.42	877.82	334.58	1,300,790.27	3,229,449.90	40.156149	-104.679094
8,077.00	90.93	359.50	7,239.92	969.81	333.99	1,300,882.24	3,229,448.46	40.156401	-104.679096
8,169.00	90.37	358.50	7,238.88	1,061.79	332.38	1,300,974.20	3,229,446.00	40.156654	-104.679102
8,261.00	89.94	358.66	7,238.63	1,153.76	330.10	1,301,066.14	3,229,442.87	40.156906	-104.679110
8,353.00	89.26	358.91	7,239.27	1,245.73	328.15	1,301,158.09	3,229,440.07	40.157159	-104.679117
8,445.00	89.57	358.48	7,240.21	1,337.70	326.06	1,301,250.03	3,229,437.13	40.157411	-104.679125
8,536.00	90.68	358.83	7,240.01	1,428.68	323.92	1,301,340.98	3,229,434.15	40.157661	-104.679132
8,628.00	91.05	0.19	7,238.62	1,520.66	323.14	1,301,432.95	3,229,432.51	40.157913	-104.679135
8,720.00	91.17	1.40	7,236.84	1,612.63	324.41	1,301,524.92	3,229,432.94	40.158166	-104.679130
8,812.00	88.46	1.16	7,237.14	1,704.60	326.47	1,301,616.90	3,229,434.14	40.158418	-104.679123
8,904.00	88.70	0.95	7,239.42	1,796.56	328.16	1,301,708.87	3,229,434.99	40.158671	-104.679117
8,995.00	88.46	0.76	7,241.67	1,887.52	329.52	1,301,799.83	3,229,435.50	40.158920	-104.679112
9,087.00	89.07	0.37	7,243.66	1,979.49	330.42	1,301,891.81	3,229,435.56	40.159173	-104.679109
9,179.00	89.32	359.50	7,244.95	2,071.48	330.32	1,301,983.79	3,229,434.61	40.159425	-104.679109
9,271.00	89.32	358.78	7,246.04	2,163.47	328.94	1,302,075.75	3,229,432.37	40.159678	-104.679114
9,363.00	90.74	358.44	7,245.99	2,255.44	326.71	1,302,167.69	3,229,429.29	40.159930	-104.679122
9,455.00	91.30	357.72	7,244.36	2,347.37	323.63	1,302,259.59	3,229,425.36	40.160183	-104.679133
9,547.00	90.31	359.41	7,243.06	2,439.33	321.32	1,302,351.52	3,229,422.21	40.160435	-104.679141
9,639.00	91.11	358.53	7,241.92	2,531.30	319.67	1,302,443.47	3,229,419.70	40.160687	-104.679147
9,731.00	90.56	0.89	7,240.58	2,623.28	319.20	1,302,535.44	3,229,418.39	40.160940	-104.679149
9,822.00	91.05	0.61	7,239.30	2,714.27	320.39	1,302,626.43	3,229,418.74	40.161190	-104.679145
9,914.00	90.56	1.12	7,238.01	2,806.25	321.78	1,302,718.41	3,229,419.28	40.161442	-104.679140
10,006.00	88.52	2.56	7,238.75	2,898.19	324.74	1,302,810.37	3,229,421.38	40.161695	-104.679129
10,101.00	88.52	2.19	7,241.20	2,993.08	328.67	1,302,905.29	3,229,424.44	40.161955	-104.679115
10,196.00	89.07	2.41	7,243.20	3,087.98	332.48	1,303,000.22	3,229,427.37	40.162216	-104.679101
10,291.00	89.14	1.81	7,244.68	3,182.90	335.98	1,303,095.17	3,229,429.99	40.162476	-104.679089
10,385.00	90.31	1.20	7,245.14	3,276.87	338.45	1,303,189.15	3,229,431.59	40.162734	-104.679080
10,480.00	89.94	1.30	7,244.93	3,371.84	340.52	1,303,284.13	3,229,432.79	40.162995	-104.679073
10,575.00	88.21	2.13	7,246.46	3,466.78	343.36	1,303,379.09	3,229,434.75	40.163255	-104.679062
10,669.00	88.70	1.40	7,249.00	3,560.70	346.26	1,303,473.03	3,229,436.78	40.163513	-104.679052
10,764.00	88.95	1.59	7,250.94	3,655.65	348.74	1,303,567.99	3,229,438.38	40.163774	-104.679043
10,859.00	88.70	1.03	7,252.89	3,750.61	350.91	1,303,662.96	3,229,439.67	40.164034	-104.679035
10,954.00	88.58	0.81	7,255.15	3,845.57	352.43	1,303,757.93	3,229,440.32	40.164295	-104.679030
11,048.00	89.38	359.02	7,256.82	3,939.55	352.29	1,303,851.90	3,229,439.31	40.164553	-104.679031
11,144.00	89.38	359.13	7,257.86	4,035.53	350.74	1,303,947.86	3,229,436.87	40.164817	-104.679036
11,238.00	89.07	359.73	7,259.13	4,129.52	349.81	1,304,041.83	3,229,435.07	40.165075	-104.679039
11,333.00	89.32	0.25	7,260.47	4,224.51	349.79	1,304,136.81	3,229,434.17	40.165335	-104.679039
11,428.00	89.07	0.22	7,261.80	4,319.50	350.18	1,304,231.80	3,229,433.69	40.165596	-104.679038
11,523.00	90.37	359.25	7,262.26	4,414.49	349.74	1,304,326.78	3,229,432.37	40.165857	-104.679040
11,618.00	90.31	359.48	7,261.70	4,509.48	348.69	1,304,421.75	3,229,430.44	40.166118	-104.679043
11,712.00	89.94	358.94	7,261.50	4,603.47	347.39	1,304,515.72	3,229,428.27	40.166376	-104.679048
11,807.00	90.25	359.31	7,261.34	4,698.46	345.94	1,304,610.69	3,229,425.94	40.166636	-104.679053
11,902.00	91.17	0.08	7,260.16	4,793.45	345.44	1,304,705.67	3,229,424.56	40.166897	-104.679055
11,996.00	90.93	0.23	7,258.44	4,887.44	345.69	1,304,799.65	3,229,423.95	40.167155	-104.679054
12,091.00	90.86	1.13	7,256.95	4,982.42	346.82	1,304,894.63	3,229,424.20	40.167416	-104.679050
12,186.00	91.11	0.63	7,255.32	5,077.39	348.28	1,304,989.61	3,229,424.78	40.167677	-104.679045
12,281.00	90.93	0.32	7,253.63	5,172.37	349.06	1,305,084.59	3,229,424.69	40.167937	-104.679042
12,375.00	90.80	0.76	7,252.21	5,266.36	349.95	1,305,178.57	3,229,424.70	40.168195	-104.679039
12,470.00	90.99	1.27	7,250.73	5,361.33	351.63	1,305,273.56	3,229,425.51	40.168456	-104.679033
12,565.00	90.68	1.91	7,249.34	5,456.28	354.27	1,305,368.52	3,229,427.26	40.168717	-104.679023
12,660.00	89.26	2.62	7,249.39	5,551.21	358.02	1,305,463.47	3,229,430.14	40.168977	-104.679010
12,754.00	89.26	2.51	7,250.61	5,645.10	362.23	1,305,557.40	3,229,433.48	40.169235	-104.678995

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	**Local Co-ordinate Reference:**	Well Nichols 26C-5HZ
Project:	Weld County, CO (NAD 83)	**TVD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Site:	Sec. 8-T2N-R65W	**MD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Well:	Nichols 26C-5HZ	**North Reference:**	True
Wellbore:	Plan C 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
12,849.00	89.14	3.08	7,251.93	5,739.98	366.86	1,305,652.31	3,229,437.23	40.169495	-104.678978
12,944.00	89.51	3.85	7,253.05	5,834.80	372.60	1,305,747.18	3,229,442.10	40.169756	-104.678958
13,039.00	89.51	3.83	7,253.86	5,929.58	378.97	1,305,842.01	3,229,447.58	40.170016	-104.678935
13,134.00	89.94	5.07	7,254.32	6,024.29	386.34	1,305,936.78	3,229,454.08	40.170276	-104.678909
13,229.00	90.43	6.23	7,254.01	6,118.83	395.69	1,306,031.40	3,229,462.56	40.170535	-104.678875
13,323.00	90.43	5.24	7,253.31	6,212.36	405.08	1,306,125.00	3,229,471.08	40.170792	-104.678842
13,418.00	90.86	3.59	7,252.24	6,307.06	412.39	1,306,219.77	3,229,477.52	40.171052	-104.678815
13,513.00	91.36	3.53	7,250.40	6,401.86	418.29	1,306,314.62	3,229,482.54	40.171312	-104.678794
13,608.00	91.11	2.82	7,248.35	6,496.69	423.55	1,306,409.49	3,229,486.92	40.171573	-104.678775
13,702.00	88.45	0.86	7,248.71	6,590.63	426.57	1,306,503.45	3,229,489.07	40.171830	-104.678765
13,797.00	87.96	359.08	7,251.69	6,685.58	426.52	1,306,598.39	3,229,488.15	40.172091	-104.678765
13,892.00	87.96	358.65	7,255.07	6,780.50	424.64	1,306,693.28	3,229,485.39	40.172352	-104.678771
13,987.00	89.20	358.04	7,257.42	6,875.43	421.90	1,306,788.18	3,229,481.77	40.172612	-104.678781
14,082.00	89.81	358.25	7,258.24	6,970.38	418.82	1,306,883.09	3,229,477.82	40.172873	-104.678792
14,176.00	89.88	358.75	7,258.50	7,064.34	416.36	1,306,977.02	3,229,474.49	40.173131	-104.678801
14,204.00	90.25	358.45	7,258.47	7,092.34	415.68	1,307,005.01	3,229,473.54	40.173208	-104.678804
Final Sperry MWD survey @ 14204.00ft									
14,246.00	90.25	358.45	7,258.28	7,134.32	414.54	1,307,046.98	3,229,472.02	40.173323	-104.678808
Straight Line Proj. @ 14,246' MD :: 7258.28' TVD									

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	**Local Co-ordinate Reference:**	Well Nichols 26C-5HZ
Project:	Weld County, CO (NAD 83)	**TVD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Site:	Sec. 8-T2N-R65W	**MD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Well:	Nichols 26C-5HZ	**North Reference:**	True
Wellbore:	Plan C Rev 0	**Survey Calculation Method:**	Minimum Curvature
Design:	Actual Field Surveys	**Database:**	EDM 2003.16 Single User Db

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
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	7,626.88	-4,630.80	1,307,492.86	3,224,422.55		
Point 2			0.00	5,112.01	-4,659.62	1,304,977.93	3,224,416.98		
Point 3			0.00	2,462.76	-4,695.99	1,302,328.57	3,224,405.10		
Point 4			0.00	-185.42	-4,721.30	1,299,680.38	3,224,404.27		
Point 5			0.00	-2,833.51	-4,746.55	1,297,032.28	3,224,403.50		
Point 6			0.00	-2,833.64	-2,107.93	1,297,056.54	3,227,041.90		
Point 7			0.00	-2,834.14	530.56	1,297,080.43	3,229,680.17		
Point 8			0.00	-199.21	552.27	1,299,715.34	3,229,677.53		
Point 9			0.00	2,476.46	569.11	1,302,390.94	3,229,669.63		
Point 10			0.00	5,103.79	595.88	1,305,018.29	3,229,672.11		
Point 11			0.00	7,621.22	624.80	1,307,535.78	3,229,677.76		
Point 12			0.00	7,624.05	-2,003.01	1,307,514.32	3,227,050.15		
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	2,462.76	-4,695.99	1,302,328.57	3,224,405.10		
Point 2			0.00	2,469.52	-2,063.43	1,302,359.67	3,227,037.38		
Point 3			0.00	2,476.46	569.11	1,302,390.94	3,229,669.63		
Nichols 26C-5HZ_SHL	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Point									
Nichols 26C-5HZ_SB	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	7,166.37	-4,176.03	1,307,036.59	3,224,881.54		
Point 2			0.00	5,111.29	-4,199.58	1,304,981.47	3,224,876.99		
Point 3			0.00	2,923.98	-4,229.60	1,302,794.06	3,224,867.19		
Point 4			0.00	2,003.91	-4,240.35	1,301,873.97	3,224,864.95		
Point 5			0.00	-186.62	-4,261.28	1,299,683.43	3,224,864.27		
Point 6			0.00	-2,373.52	-4,282.13	1,297,496.53	3,224,863.63		
Point 7			0.00	-2,373.62	-2,104.07	1,297,516.56	3,227,041.51		
Point 8			0.00	-2,374.03	74.32	1,297,536.28	3,229,219.72		
Point 9			0.00	-198.01	92.25	1,299,712.29	3,229,217.53		
Point 10			0.00	2,015.22	106.18	1,301,925.46	3,229,211.00		
Point 11			0.00	2,935.29	113.74	1,302,845.52	3,229,210.06		
Point 12			0.00	5,104.51	135.84	1,305,014.76	3,229,212.11		
Point 13			0.00	7,161.70	159.47	1,307,072.00	3,229,216.72		
Point 14			0.00	7,164.04	-2,008.40	1,307,054.30	3,227,049.01		
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	-185.42	-4,721.30	1,299,680.38	3,224,404.27		
Point 2			0.00	-199.21	552.27	1,299,715.34	3,229,677.53		
Nichols 26C-5HZ_WP	0.00	0.00	7,258.30	5,634.22	346.35	1,305,546.37	3,229,417.70	40.169205	-104.679052
- actual wellpath misses target center by 17.27ft at 12742.52ft MD (7250.46 TVD, 5633.63 N, 361.73 E)									
- Point									
Nichols 26C-5HZ_BHL	0.00	0.00	7,259.00	7,161.71	280.57	1,307,073.12	3,229,337.81	40.173398	-104.679287
- actual wellpath misses target center by 136.74ft at 14246.00ft MD (7258.28 TVD, 7134.32 N, 414.54 E)									
- Point									

Company:	Anadarko Petroleum Corp.	**Local Co-ordinate Reference:**	Well Nichols 26C-5HZ
Project:	Weld County, CO (NAD 83)	**TVD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Site:	Sec. 8-T2N-R65W	**MD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Well:	Nichols 26C-5HZ	**North Reference:**	True
Wellbore:	Plan C Rev 0	**Survey Calculation Method:**	Minimum Curvature
Design:	Actual Field Surveys	**Database:**	EDM 2003.16 Single User Db

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
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	7,626.88	-4,630.80	1,307,492.86	3,224,422.55		
Point 2			0.00	5,112.01	-4,659.62	1,304,977.93	3,224,416.98		
Point 3			0.00	2,462.76	-4,695.99	1,302,328.57	3,224,405.10		
Point 4			0.00	-185.42	-4,721.30	1,299,680.38	3,224,404.27		
Point 5			0.00	-2,833.51	-4,746.55	1,297,032.28	3,224,403.50		
Point 6			0.00	-2,833.64	-2,107.93	1,297,056.54	3,227,041.90		
Point 7			0.00	-2,834.14	530.56	1,297,080.43	3,229,680.17		
Point 8			0.00	-199.21	552.27	1,299,715.34	3,229,677.53		
Point 9			0.00	2,476.46	569.11	1,302,390.94	3,229,669.63		
Point 10			0.00	5,103.79	595.88	1,305,018.29	3,229,672.11		
Point 11			0.00	7,621.22	624.80	1,307,535.78	3,229,677.76		
Point 12			0.00	7,624.05	-2,003.01	1,307,514.32	3,227,050.15		
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	2,462.76	-4,695.99	1,302,328.57	3,224,405.10		
Point 2			0.00	2,469.52	-2,063.43	1,302,359.67	3,227,037.38		
Point 3			0.00	2,476.46	569.11	1,302,390.94	3,229,669.63		
Nichols 26C-5HZ_SHL	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Point									
Nichols 26C-5HZ_SB	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	7,166.37	-4,176.03	1,307,036.59	3,224,881.54		
Point 2			0.00	5,111.29	-4,199.58	1,304,981.47	3,224,876.99		
Point 3			0.00	2,923.98	-4,229.60	1,302,794.06	3,224,867.19		
Point 4			0.00	2,003.91	-4,240.35	1,301,873.97	3,224,864.95		
Point 5			0.00	-186.62	-4,261.28	1,299,683.43	3,224,864.27		
Point 6			0.00	-2,373.52	-4,282.13	1,297,496.53	3,224,863.63		
Point 7			0.00	-2,373.62	-2,104.07	1,297,516.56	3,227,041.51		
Point 8			0.00	-2,374.03	74.32	1,297,536.28	3,229,219.72		
Point 9			0.00	-198.01	92.25	1,299,712.29	3,229,217.53		
Point 10			0.00	2,015.22	106.18	1,301,925.46	3,229,211.00		
Point 11			0.00	2,935.29	113.74	1,302,845.52	3,229,210.06		
Point 12			0.00	5,104.51	135.84	1,305,014.76	3,229,212.11		
Point 13			0.00	7,161.70	159.47	1,307,072.00	3,229,216.72		
Point 14			0.00	7,164.04	-2,008.40	1,307,054.30	3,227,049.01		
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	-185.42	-4,721.30	1,299,680.38	3,224,404.27		
Point 2			0.00	-199.21	552.27	1,299,715.34	3,229,677.53		
Nichols 26C-5HZ_WP	0.00	0.00	7,258.30	5,634.22	346.35	1,305,546.37	3,229,417.70	40.169205	-104.679052
- actual wellpath misses target center by 17.27ft at 12742.52ft MD (7250.46 TVD, 5633.63 N, 361.73 E)									
- Point									
Nichols 26C-5HZ_BHL	0.00	0.00	7,259.00	7,161.71	280.57	1,307,073.12	3,229,337.81	40.173398	-104.679287
- actual wellpath misses target center by 136.74ft at 14246.00ft MD (7258.28 TVD, 7134.32 N, 414.54 E)									
- Point									

Casing Points

Company:	Anadarko Petroleum Corp.	**Local Co-ordinate Reference:**	Well Nichols 26C-5HZ
Project:	Weld County, CO (NAD 83)	**TVD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Site:	Sec. 8-T2N-R65W	**MD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Well:	Nichols 26C-5HZ	**North Reference:**	True
Wellbore:	Plan C Rev 0	**Survey Calculation Method:**	Minimum Curvature
Design:	Actual Field Surveys	**Database:**	EDM 2003.16 Single User Db

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
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	7,626.88	-4,630.80	1,307,492.86	3,224,422.55		
Point 2			0.00	5,112.01	-4,659.62	1,304,977.93	3,224,416.98		
Point 3			0.00	2,462.76	-4,695.99	1,302,328.57	3,224,405.10		
Point 4			0.00	-185.42	-4,721.30	1,299,680.38	3,224,404.27		
Point 5			0.00	-2,833.51	-4,746.55	1,297,032.28	3,224,403.50		
Point 6			0.00	-2,833.64	-2,107.93	1,297,056.54	3,227,041.90		
Point 7			0.00	-2,834.14	530.56	1,297,080.43	3,229,680.17		
Point 8			0.00	-199.21	552.27	1,299,715.34	3,229,677.53		
Point 9			0.00	2,476.46	569.11	1,302,390.94	3,229,669.63		
Point 10			0.00	5,103.79	595.88	1,305,018.29	3,229,672.11		
Point 11			0.00	7,621.22	624.80	1,307,535.78	3,229,677.76		
Point 12			0.00	7,624.05	-2,003.01	1,307,514.32	3,227,050.15		
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	2,462.76	-4,695.99	1,302,328.57	3,224,405.10		
Point 2			0.00	2,469.52	-2,063.43	1,302,359.67	3,227,037.38		
Point 3			0.00	2,476.46	569.11	1,302,390.94	3,229,669.63		
Nichols 26C-5HZ_SHL	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Point									
Nichols 26C-5HZ_SB	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	7,166.37	-4,176.03	1,307,036.59	3,224,881.54		
Point 2			0.00	5,111.29	-4,199.58	1,304,981.47	3,224,876.99		
Point 3			0.00	2,923.98	-4,229.60	1,302,794.06	3,224,867.19		
Point 4			0.00	2,003.91	-4,240.35	1,301,873.97	3,224,864.95		
Point 5			0.00	-186.62	-4,261.28	1,299,683.43	3,224,864.27		
Point 6			0.00	-2,373.52	-4,282.13	1,297,496.53	3,224,863.63		
Point 7			0.00	-2,373.62	-2,104.07	1,297,516.56	3,227,041.51		
Point 8			0.00	-2,374.03	74.32	1,297,536.28	3,229,219.72		
Point 9			0.00	-198.01	92.25	1,299,712.29	3,229,217.53		
Point 10			0.00	2,015.22	106.18	1,301,925.46	3,229,211.00		
Point 11			0.00	2,935.29	113.74	1,302,845.52	3,229,210.06		
Point 12			0.00	5,104.51	135.84	1,305,014.76	3,229,212.11		
Point 13			0.00	7,161.70	159.47	1,307,072.00	3,229,216.72		
Point 14			0.00	7,164.04	-2,008.40	1,307,054.30	3,227,049.01		
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	-185.42	-4,721.30	1,299,680.38	3,224,404.27		
Point 2			0.00	-199.21	552.27	1,299,715.34	3,229,677.53		
Nichols 26C-5HZ_WP	0.00	0.00	7,258.30	5,634.22	346.35	1,305,546.37	3,229,417.70	40.169205	-104.679052
- actual wellpath misses target center by 17.27ft at 12742.52ft MD (7250.46 TVD, 5633.63 N, 361.73 E)									
- Point									
Nichols 26C-5HZ_BHL	0.00	0.00	7,259.00	7,161.71	280.57	1,307,073.12	3,229,337.81	40.173398	-104.679287
- actual wellpath misses target center by 136.74ft at 14246.00ft MD (7258.28 TVD, 7134.32 N, 414.54 E)									
- Point									

Measured Depth	Vertical Depth			Casing Diameter	Hole Diameter	

Halliburton Company

Survey Report - Geographic

Company:	Anadarko Petroleum Corp.	**Local Co-ordinate Reference:**	Well Nichols 26C-5HZ
Project:	Weld County, CO (NAD 83)	**TVD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Site:	Sec. 8-T2N-R65W	**MD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Well:	Nichols 26C-5HZ	**North Reference:**	True
Wellbore:	Plan C Rev 0	**Survey Calculation Method:**	Minimum Curvature
Design:	Actual Field Surveys	**Database:**	EDM 2003.16 Single User Db

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
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	7,626.88	-4,630.80	1,307,492.86	3,224,422.55		
Point 2			0.00	5,112.01	-4,659.62	1,304,977.93	3,224,416.98		
Point 3			0.00	2,462.76	-4,695.99	1,302,328.57	3,224,405.10		
Point 4			0.00	-185.42	-4,721.30	1,299,680.38	3,224,404.27		
Point 5			0.00	-2,833.51	-4,746.55	1,297,032.28	3,224,403.50		
Point 6			0.00	-2,833.64	-2,107.93	1,297,056.54	3,227,041.90		
Point 7			0.00	-2,834.14	530.56	1,297,080.43	3,229,680.17		
Point 8			0.00	-199.21	552.27	1,299,715.34	3,229,677.53		
Point 9			0.00	2,476.46	569.11	1,302,390.94	3,229,669.63		
Point 10			0.00	5,103.79	595.88	1,305,018.29	3,229,672.11		
Point 11			0.00	7,621.22	624.80	1,307,535.78	3,229,677.76		
Point 12			0.00	7,624.05	-2,003.01	1,307,514.32	3,227,050.15		
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	2,462.76	-4,695.99	1,302,328.57	3,224,405.10		
Point 2			0.00	2,469.52	-2,063.43	1,302,359.67	3,227,037.38		
Point 3			0.00	2,476.46	569.11	1,302,390.94	3,229,669.63		
Nichols 26C-5HZ_SHL	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Point									
Nichols 26C-5HZ_SB	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	7,166.37	-4,176.03	1,307,036.59	3,224,881.54		
Point 2			0.00	5,111.29	-4,199.58	1,304,981.47	3,224,876.99		
Point 3			0.00	2,923.98	-4,229.60	1,302,794.06	3,224,867.19		
Point 4			0.00	2,003.91	-4,240.35	1,301,873.97	3,224,864.95		
Point 5			0.00	-186.62	-4,261.28	1,299,683.43	3,224,864.27		
Point 6			0.00	-2,373.52	-4,282.13	1,297,496.53	3,224,863.63		
Point 7			0.00	-2,373.62	-2,104.07	1,297,516.56	3,227,041.51		
Point 8			0.00	-2,374.03	74.32	1,297,536.28	3,229,219.72		
Point 9			0.00	-198.01	92.25	1,299,712.29	3,229,217.53		
Point 10			0.00	2,015.22	106.18	1,301,925.46	3,229,211.00		
Point 11			0.00	2,935.29	113.74	1,302,845.52	3,229,210.06		
Point 12			0.00	5,104.51	135.84	1,305,014.76	3,229,212.11		
Point 13			0.00	7,161.70	159.47	1,307,072.00	3,229,216.72		
Point 14			0.00	7,164.04	-2,008.40	1,307,054.30	3,227,049.01		
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	0.00	0.00	1,299,909.43	3,229,123.46	40.153739	-104.680291
- actual wellpath hits target center									
- Polygon									
Point 1			0.00	-185.42	-4,721.30	1,299,680.38	3,224,404.27		
Point 2			0.00	-199.21	552.27	1,299,715.34	3,229,677.53		
Nichols 26C-5HZ_WP	0.00	0.00	7,258.30	5,634.22	346.35	1,305,546.37	3,229,417.70	40.169205	-104.679052
- actual wellpath misses target center by 17.27ft at 12742.52ft MD (7250.46 TVD, 5633.63 N, 361.73 E)									
- Point									
Nichols 26C-5HZ_BHL	0.00	0.00	7,259.00	7,161.71	280.57	1,307,073.12	3,229,337.81	40.173398	-104.679287
- actual wellpath misses target center by 136.74ft at 14246.00ft MD (7258.28 TVD, 7134.32 N, 414.54 E)									
- Point									

(ft)	(ft)	Name	(")	(")
7,557.00	7,246.36	7" Casing Point @ 7557' MD :: 7245.36' TVD	7	8-3/4

Company:	Anadarko Petroleum Corp.	**Local Co-ordinate Reference:**	Well Nichols 26C-5HZ
Project:	Weld County, CO (NAD 83)	**TVD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Site:	Sec. 8-T2N-R65W	**MD Reference:**	RKB=25 @ 4918.00ft (Drilling Rig)
Well:	Nichols 26C-5HZ	**North Reference:**	True
Wellbore:	Plan C Rev 0	**Survey Calculation Method:**	Minimum Curvature
Design:	Actual Field Surveys	**Database:**	EDM 2003.16 Single User Db

Design Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
25.00	25.00	0.00	0.00	H&P 308: 25ft RKB
125.00	125.00	0.11	-0.56	First MS Energy Services gyro survey @ 125.00ft
833.00	832.99	-0.13	-2.78	Final MS Energy Services gyro survey @ 833.00ft
833.00	832.99	-0.13	-2.78	Tie-On to surface gyros @ 833.00ft
920.00	919.99	-0.46	-2.82	First Sperry MWD survey @ 920.00ft
14,204.00	7,258.47	7,092.34	415.68	Final Sperry MWD survey @ 14204.00ft
14,246.00	7,258.28	7,134.32	414.54	Straight Line Proj. @ 14,246' MD :: 7258.28' TVD

Checked By: _____ Approved By: _____ Date: _____

Section 2

Contents: Proposal Data

Anadarko Petroleum Corp.

Weld County, CO (NAD 83)
Sec. 8-T2N-R65W
Nichols 26C-5HZ

Plan C Rev 0

Plan: Plan C Rev 0 Proposal

Sperry Drilling Services

Proposal Report

12 December, 2012

Well Coordinates: 1,299,909.43 N, 3,229,123.46 E (40° 09' 13.46" N, 104° 40' 49.05" W)
Ground Level: 4,893.00 ft

Local Coordinate Origin:	Centered on Well Nichols 26C-5HZ
Viewing Datum:	RKB=25 @ 4918.00ft (Drilling Rig)
TVDs to System:	N
North Reference:	True
Unit System:	API - US Survey Feet - Custom

Geodetic Scale Factor Applied
Version: 2003.16 Build: 43I

HALLIBURTON

Project: Weld County, CO (NAD 83)
Site: Sec. 8-T2N-R65W
Well: Nichols 26C-5HZ
Wellbore: Plan C Rev 0
Design: Plan C Rev 0 Proposal

Anadarko Petroleum Corp.

HALLIBURTON
Sperry Drilling

SECTION DETAILS

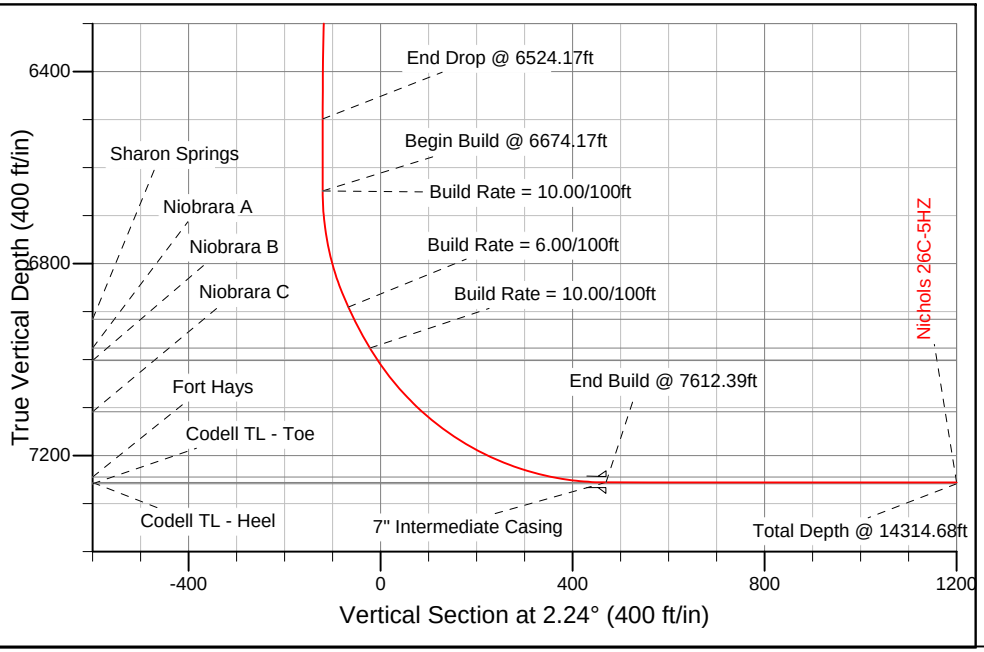
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	833.00	0.25	278.63	832.99	-0.13	-2.78	0.00	0.00	-0.24	
2	3400.00	0.25	278.63	3399.97	1.55	-13.86	0.00	0.00	1.01	
3	3812.22	8.00	111.00	3810.88	-8.61	12.08	2.00	-168.00	-8.13	
4	6124.17	8.00	111.00	6100.34	-123.92	312.47	0.00	0.00	-111.59	
5	6524.17	0.00	0.00	6499.04	-133.91	338.50	2.00	180.00	-120.55	
6	6674.17	0.00	0.00	6649.04	-133.91	338.50	0.00	0.00	-120.55	
7	6923.97	24.98	0.08	6891.00	-80.31	338.57	10.00	0.08	-67.00	
8	7020.16	30.75	0.08	6976.00	-35.37	338.64	6.00	0.00	-22.09	
9	7612.39	89.97	0.08	7256.00	456.77	339.31	10.00	0.00	469.70	
10	12789.85	89.97	0.08	7258.30	5634.22	346.35	0.00	0.00	5643.46	Nichols 26C-5HZ_WPtgt 1
11	14314.68	89.97	0.08	7258.98	7159.05	348.42	0.00	0.00	7167.20	Nichols 26C-5HZ_BHL

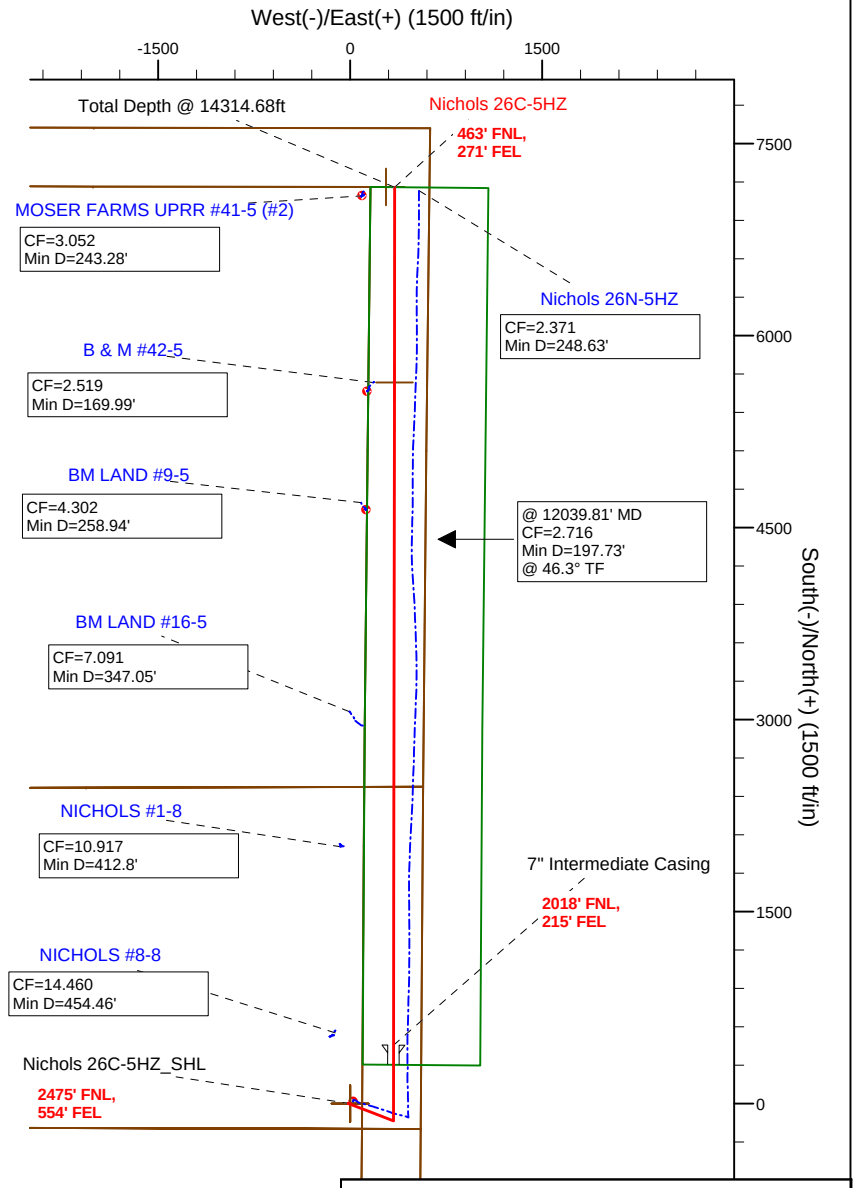
WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude	Shape
Nichols 26C-5HZ_SB	0.00	0.00	0.00	40.153739	-104.680291	Polygon
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	40.153739	-104.680291	Polygon
Nichols 26C-5HZ_Sec8/5	0.00	0.00	0.00	40.153739	-104.680291	Polygon
Nichols 26C-5HZ_Sec8-1/2	0.00	0.00	0.00	40.153739	-104.680291	Polygon
Nichols 26C-5HZ_SHL	0.00	0.00	0.00	40.153739	-104.680291	Point
Nichols 26C-5HZ_WPtgt 1	7258.30	5634.22	346.35	40.169205	-104.679052	Point
Nichols 26C-5HZ_BHL	7259.00	7161.71	280.57	40.173398	-104.679287	Point

Target Line:

7255.42' TVDkb @ 0' VS Drilling 89.97°





WELL DETAILS: Nichols 26C-5HZ

Ground Level: 4893.00 RKB=25 @ 4918.00ft (Drilling Rig)

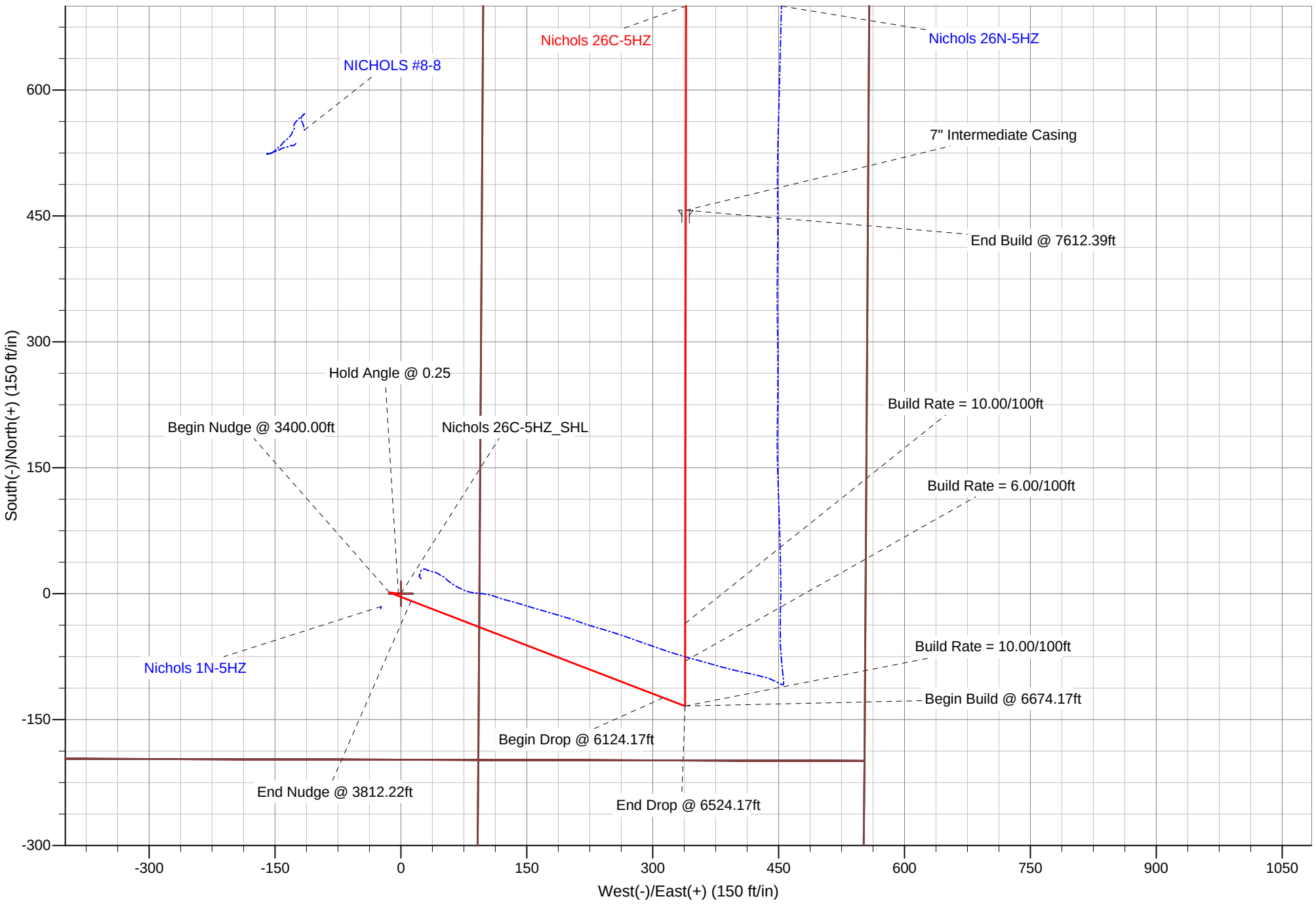
Plan: Plan C Rev 0 Proposal (Nichols 26C-5HZ/Plan C Rev 0)

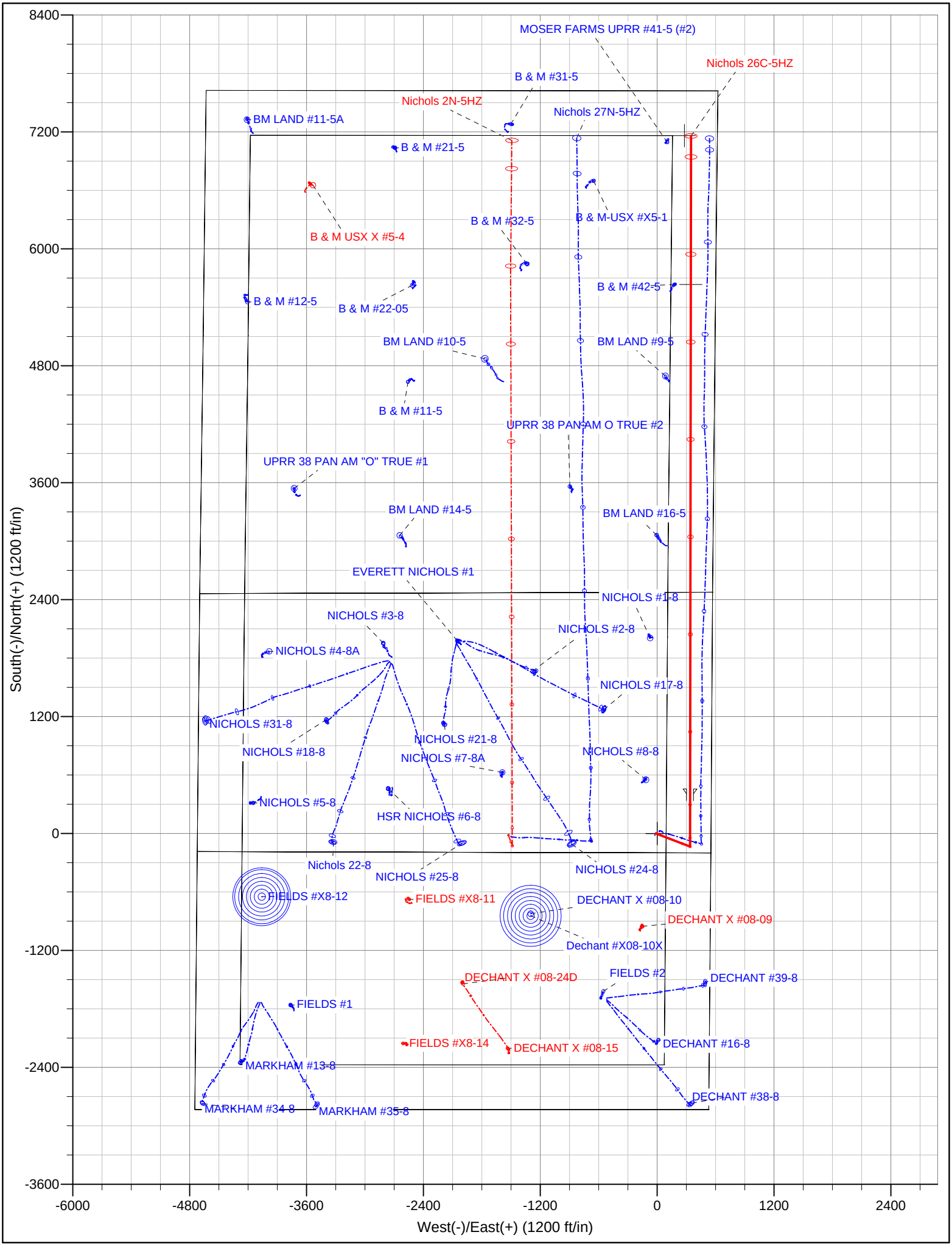
Created By: Fred Hartmann Date: 12/11/2012
Reviewed: _____ Date: _____

Project: Weld County, CO (NAD 83)
Site: Sec. 8-T2N-R65W
Well: Nichols 26C-5HZ
Wellbore: Plan C Rev 0
Design: Plan C Rev 0 Proposal

Anadarko Petroleum Corp.

HALLIBURTON
Sperry Drilling

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Nichols 26C-5HZ
B & M #31-5
Nichols 2N-5HZ
Nichols 27N-5HZ
BM LAND #11-5A
B & M #21-5
B & M USX X #5-4
B & M #32-5
B & M-USX #X5-1
B & M #42-5
B & M #12-5
B & M #22-05
BM LAND #10-5
BM LAND #9-5
B & M #11-5
UPRR 38 PAN AM O TRUE #2
UPRR 38 PAN AM "O" TRUE #1
BM LAND #14-5
BM LAND #16-5
EVERETT NICHOLS #1
NICHOLS #1-8
NICHOLS #3-8
NICHOLS #2-8
NICHOLS #4-8A
NICHOLS #17-8
NICHOLS #31-8
NICHOLS #21-8
NICHOLS #18-8
NICHOLS #7-8A
NICHOLS #8-8
NICHOLS #5-8
HSR NICHOLS #6-8
Nichols 22-8
NICHOLS #25-8
NICHOLS #24-8
FIELDS #X8-12
FIELDS #X8-11
DECHANT X #08-10
DECHANT X #08-09
Dechant #X08-10X
DECHANT X #08-24D
FIELDS #2
DECHANT #39-8
FIELDS #1
FIELDS #X8-14
DECHANT X #08-15
DECHANT #16-8
MARKHAM #13-8
DECHANT #38-8
MARKHAM #34-8
MARKHAM #35-8
8400
7200
6000
4800
3600
2400
1200
0
-1200
-2400
-3600
-6000
-4800
-3600
-2400
-1200
0
1200
2400
South(-)/North(+) (1200 ft/in)
West(-)/East(+) (1200 ft/in)

Plan Report for Nichols 26C-5HZ - Plan C Rev 0 Proposal

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
833.00	0.25	278.63	832.99	-0.13	-2.78	-0.24	0.00	0.00	0.00	0.00
900.00	0.25	278.63	899.99	-0.08	-3.07	-0.20	0.00	0.00	0.00	0.00
Hold Angle @ 0.25										
1,000.00	0.25	278.63	999.99	-0.02	-3.50	-0.15	0.00	0.00	0.00	0.00
1,100.00	0.25	278.63	1,099.99	0.05	-3.93	-0.11	0.00	0.00	0.00	0.00
1,200.00	0.25	278.63	1,199.99	0.11	-4.37	-0.06	0.00	0.00	0.00	0.00
1,300.00	0.25	278.63	1,299.99	0.18	-4.80	-0.01	0.00	0.00	0.00	0.00
1,400.00	0.25	278.63	1,399.98	0.24	-5.23	0.04	0.00	0.00	0.00	0.00
1,500.00	0.25	278.63	1,499.98	0.31	-5.66	0.09	0.00	0.00	0.00	0.00
1,600.00	0.25	278.63	1,599.98	0.38	-6.09	0.14	0.00	0.00	0.00	0.00
1,700.00	0.25	278.63	1,699.98	0.44	-6.52	0.19	0.00	0.00	0.00	0.00
1,800.00	0.25	278.63	1,799.98	0.51	-6.95	0.23	0.00	0.00	0.00	0.00
1,900.00	0.25	278.63	1,899.98	0.57	-7.39	0.28	0.00	0.00	0.00	0.00
2,000.00	0.25	278.63	1,999.98	0.64	-7.82	0.33	0.00	0.00	0.00	0.00
2,100.00	0.25	278.63	2,099.98	0.70	-8.25	0.38	0.00	0.00	0.00	0.00
2,200.00	0.25	278.63	2,199.98	0.77	-8.68	0.43	0.00	0.00	0.00	0.00
2,300.00	0.25	278.63	2,299.98	0.83	-9.11	0.48	0.00	0.00	0.00	0.00
2,400.00	0.25	278.63	2,399.97	0.90	-9.54	0.53	0.00	0.00	0.00	0.00
2,500.00	0.25	278.63	2,499.97	0.97	-9.97	0.57	0.00	0.00	0.00	0.00
2,600.00	0.25	278.63	2,599.97	1.03	-10.40	0.62	0.00	0.00	0.00	0.00
2,700.00	0.25	278.63	2,699.97	1.10	-10.84	0.67	0.00	0.00	0.00	0.00
2,800.00	0.25	278.63	2,799.97	1.16	-11.27	0.72	0.00	0.00	0.00	0.00
2,900.00	0.25	278.63	2,899.97	1.23	-11.70	0.77	0.00	0.00	0.00	0.00
3,000.00	0.25	278.63	2,999.97	1.29	-12.13	0.82	0.00	0.00	0.00	0.00
3,100.00	0.25	278.63	3,099.97	1.36	-12.56	0.87	0.00	0.00	0.00	0.00
3,200.00	0.25	278.63	3,199.97	1.42	-12.99	0.91	0.00	0.00	0.00	0.00
3,300.00	0.25	278.63	3,299.97	1.49	-13.42	0.96	0.00	0.00	0.00	0.00
3,400.00	0.25	278.63	3,399.97	1.55	-13.86	1.01	0.00	0.00	0.00	0.00
Begin Nudge @ 3400.00ft										
3,500.00	1.76	112.33	3,499.95	1.00	-12.65	0.51	2.00	1.51	-166.30	-168.00
3,600.00	3.76	111.42	3,599.83	-0.77	-8.19	-1.09	2.00	2.00	-0.90	-1.70
3,700.00	5.76	111.15	3,699.48	-3.78	-0.46	-3.79	2.00	2.00	-0.28	-0.79
3,800.00	7.76	111.01	3,798.78	-8.01	10.52	-7.59	2.00	2.00	-0.13	-0.52
3,812.22	8.00	111.00	3,810.89	-8.61	12.08	-8.13	2.00	2.00	-0.10	-0.39
End Nudge @ 3812.22ft										
3,900.00	8.00	111.00	3,897.81	-12.99	23.48	-12.06	0.00	0.00	0.00	0.00
4,000.00	8.00	111.00	3,996.84	-17.97	36.48	-16.53	0.00	0.00	0.00	0.00
4,100.00	8.00	111.00	4,095.87	-22.96	49.47	-21.01	0.00	0.00	0.00	0.00
4,200.00	8.00	111.00	4,194.89	-27.95	62.46	-25.48	0.00	0.00	0.00	0.00
4,300.00	8.00	111.00	4,293.92	-32.94	75.46	-29.96	0.00	0.00	0.00	0.00
4,400.00	8.00	111.00	4,392.95	-37.92	88.45	-34.43	0.00	0.00	0.00	0.00
4,500.00	8.00	111.00	4,491.97	-42.91	101.44	-38.91	0.00	0.00	0.00	0.00
4,508.11	8.00	111.00	4,500.00	-43.32	102.50	-39.27	0.00	0.00	0.00	0.00
Sussex										
4,600.00	8.00	111.00	4,591.00	-47.90	114.44	-43.38	0.00	0.00	0.00	0.00
4,700.00	8.00	111.00	4,690.03	-52.89	127.43	-47.86	0.00	0.00	0.00	0.00
4,800.00	8.00	111.00	4,789.05	-57.87	140.42	-52.33	0.00	0.00	0.00	0.00
4,900.00	8.00	111.00	4,888.08	-62.86	153.41	-56.81	0.00	0.00	0.00	0.00
5,000.00	8.00	111.00	4,987.11	-67.85	166.41	-61.28	0.00	0.00	0.00	0.00
5,100.00	8.00	111.00	5,086.13	-72.84	179.40	-65.76	0.00	0.00	0.00	0.00
5,200.00	8.00	111.00	5,185.16	-77.82	192.39	-70.23	0.00	0.00	0.00	0.00
5,300.00	8.00	111.00	5,284.19	-82.81	205.39	-74.71	0.00	0.00	0.00	0.00
5,400.00	8.00	111.00	5,383.21	-87.80	218.38	-79.18	0.00	0.00	0.00	0.00
5,500.00	8.00	111.00	5,482.24	-92.79	231.37	-83.66	0.00	0.00	0.00	0.00
5,600.00	8.00	111.00	5,581.27	-97.77	244.36	-88.13	0.00	0.00	0.00	0.00
5,700.00	8.00	111.00	5,680.29	-102.76	257.36	-92.61	0.00	0.00	0.00	0.00
5,800.00	8.00	111.00	5,779.32	-107.75	270.35	-97.08	0.00	0.00	0.00	0.00
5,900.00	8.00	111.00	5,878.35	-112.74	283.34	-101.56	0.00	0.00	0.00	0.00

Plan Report for Nichols 26C-5HZ - Plan C Rev 0 Proposal

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
6,000.00	8.00	111.00	5,977.38	-117.72	296.34	-106.03	0.00	0.00	0.00	0.00
6,100.00	8.00	111.00	6,076.40	-122.71	309.33	-110.51	0.00	0.00	0.00	0.00
6,124.17	8.00	111.00	6,100.34	-123.92	312.47	-111.59	0.00	0.00	0.00	0.00
Begin Drop @ 6124.17ft										
6,200.00	6.48	111.00	6,175.56	-127.34	321.39	-114.66	2.00	-2.00	0.00	180.00
6,300.00	4.48	111.00	6,275.10	-130.77	330.31	-117.74	2.00	-2.00	0.00	180.00
6,400.00	2.48	111.00	6,374.91	-132.94	335.99	-119.69	2.00	-2.00	0.00	180.00
6,500.00	0.48	111.00	6,474.87	-133.87	338.40	-120.52	2.00	-2.00	0.00	180.00
6,524.17	0.00	111.00	6,499.04	-133.91	338.50	-120.55	2.00	-2.00	0.00	180.00
End Drop @ 6524.17ft										
6,600.00	0.00	0.00	6,574.87	-133.91	338.50	-120.55	0.00	0.00	0.00	-180.00
6,674.17	0.00	0.00	6,649.04	-133.91	338.50	-120.55	0.00	0.00	0.00	0.00
Begin Build @ 6674.17ft - Build Rate = 10.00/100ft										
6,700.00	2.58	0.08	6,674.86	-133.33	338.50	-119.97	10.00	10.00	0.00	0.08
6,800.00	12.58	0.08	6,773.86	-120.15	338.52	-106.80	10.00	10.00	0.00	0.00
6,900.00	22.58	0.08	6,869.07	-89.98	338.56	-76.66	10.00	10.00	0.00	0.00
6,923.97	24.98	0.08	6,891.00	-80.31	338.57	-67.00	10.00	10.00	0.00	0.00
Build Rate = 6.00/100ft										
6,951.74	26.65	0.08	6,916.00	-68.22	338.59	-54.91	6.00	6.00	0.00	0.00
Sharon Springs										
7,000.00	29.54	0.08	6,958.57	-45.50	338.62	-32.21	6.00	6.00	0.00	0.00
7,020.16	30.75	0.08	6,976.00	-35.37	338.64	-22.09	6.00	6.00	0.00	0.00
Build Rate = 10.00/100ft - Niobrara A										
7,050.92	33.83	0.08	7,002.00	-18.94	338.66	-5.67	10.00	10.00	0.00	0.00
Niobrara B										
7,100.00	38.74	0.08	7,041.55	10.09	338.70	23.34	10.00	10.00	0.00	0.00
7,192.90	48.03	0.08	7,109.00	73.83	338.79	87.03	10.00	10.00	0.00	0.00
Niobrara C										
7,200.00	48.74	0.08	7,113.72	79.14	338.79	92.34	10.00	10.00	0.00	0.00
7,300.00	58.74	0.08	7,172.79	159.66	338.91	172.81	10.00	10.00	0.00	0.00
7,400.00	68.74	0.08	7,216.99	249.22	339.03	262.30	10.00	10.00	0.00	0.00
7,500.00	78.74	0.08	7,244.96	345.10	339.16	358.11	10.00	10.00	0.00	0.00
7,500.20	78.74	0.08	7,245.00	345.30	339.16	358.31	0.00	0.00	0.00	1.09
Fort Hays										
7,600.00	88.74	0.08	7,255.86	444.38	339.29	457.32	10.02	10.02	0.00	0.00
7,612.39	89.97	0.08	7,256.00	456.77	339.31	469.70	10.00	10.00	0.00	0.00
End Build @ 7612.39ft - 7" Intermediate Casing										
7,613.96	89.97	0.08	7,256.00	458.34	339.31	471.27	0.03	0.03	0.00	0.00
Codell TL - Heel										
7,700.00	89.97	0.08	7,256.04	544.38	339.43	557.25	0.00	0.00	0.00	0.00
7,800.00	89.97	0.08	7,256.08	644.38	339.57	657.17	0.00	0.00	0.00	0.00
7,900.00	89.97	0.08	7,256.13	744.38	339.70	757.10	0.00	0.00	0.00	0.00
8,000.00	89.97	0.08	7,256.17	844.38	339.84	857.03	0.00	0.00	0.00	0.00
8,100.00	89.97	0.08	7,256.22	944.38	339.97	956.96	0.00	0.00	0.00	0.00
8,200.00	89.97	0.08	7,256.26	1,044.37	340.11	1,056.89	0.00	0.00	0.00	0.00
8,300.00	89.97	0.08	7,256.30	1,144.37	340.25	1,156.82	0.00	0.00	0.00	0.00
8,400.00	89.97	0.08	7,256.35	1,244.37	340.38	1,256.75	0.00	0.00	0.00	0.00
8,500.00	89.97	0.08	7,256.39	1,344.37	340.52	1,356.67	0.00	0.00	0.00	0.00
8,600.00	89.97	0.08	7,256.44	1,444.37	340.65	1,456.60	0.00	0.00	0.00	0.00
8,700.00	89.97	0.08	7,256.48	1,544.37	340.79	1,556.53	0.00	0.00	0.00	0.00
8,800.00	89.97	0.08	7,256.53	1,644.37	340.93	1,656.46	0.00	0.00	0.00	0.00
8,900.00	89.97	0.08	7,256.57	1,744.37	341.06	1,756.39	0.00	0.00	0.00	0.00
9,000.00	89.97	0.08	7,256.62	1,844.37	341.20	1,856.32	0.00	0.00	0.00	0.00
9,100.00	89.97	0.08	7,256.66	1,944.37	341.33	1,956.25	0.00	0.00	0.00	0.00
9,200.00	89.97	0.08	7,256.70	2,044.37	341.47	2,056.17	0.00	0.00	0.00	0.00
9,300.00	89.97	0.08	7,256.75	2,144.37	341.61	2,156.10	0.00	0.00	0.00	0.00
9,400.00	89.97	0.08	7,256.79	2,244.37	341.74	2,256.03	0.00	0.00	0.00	0.00
9,500.00	89.97	0.08	7,256.84	2,344.37	341.88	2,355.96	0.00	0.00	0.00	0.00

Plan Report for Nichols 26C-5HZ - Plan C Rev 0 Proposal

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	Toolface Azimuth (°)
9,600.00	89.97	0.08	7,256.88	2,444.37	342.01	2,455.89	0.00	0.00	0.00	0.00
9,700.00	89.97	0.08	7,256.93	2,544.37	342.15	2,555.82	0.00	0.00	0.00	0.00
9,800.00	89.97	0.08	7,256.97	2,644.37	342.29	2,655.75	0.00	0.00	0.00	0.00
9,900.00	89.97	0.08	7,257.02	2,744.37	342.42	2,755.67	0.00	0.00	0.00	0.00
10,000.00	89.97	0.08	7,257.06	2,844.37	342.56	2,855.60	0.00	0.00	0.00	0.00
10,100.00	89.97	0.08	7,257.10	2,944.37	342.69	2,955.53	0.00	0.00	0.00	0.00
10,200.00	89.97	0.08	7,257.15	3,044.37	342.83	3,055.46	0.00	0.00	0.00	0.00
10,300.00	89.97	0.08	7,257.19	3,144.37	342.96	3,155.39	0.00	0.00	0.00	0.00
10,400.00	89.97	0.08	7,257.24	3,244.37	343.10	3,255.32	0.00	0.00	0.00	0.00
10,500.00	89.97	0.08	7,257.28	3,344.37	343.24	3,355.25	0.00	0.00	0.00	0.00
10,600.00	89.97	0.08	7,257.33	3,444.37	343.37	3,455.17	0.00	0.00	0.00	0.00
10,700.00	89.97	0.08	7,257.37	3,544.37	343.51	3,555.10	0.00	0.00	0.00	0.00
10,800.00	89.97	0.08	7,257.42	3,644.37	343.64	3,655.03	0.00	0.00	0.00	0.00
10,900.00	89.97	0.08	7,257.46	3,744.37	343.78	3,754.96	0.00	0.00	0.00	0.00
11,000.00	89.97	0.08	7,257.50	3,844.37	343.92	3,854.89	0.00	0.00	0.00	0.00
11,100.00	89.97	0.08	7,257.55	3,944.37	344.05	3,954.82	0.00	0.00	0.00	0.00
11,200.00	89.97	0.08	7,257.59	4,044.37	344.19	4,054.75	0.00	0.00	0.00	0.00
11,300.00	89.97	0.08	7,257.64	4,144.37	344.32	4,154.67	0.00	0.00	0.00	0.00
11,400.00	89.97	0.08	7,257.68	4,244.37	344.46	4,254.60	0.00	0.00	0.00	0.00
11,500.00	89.97	0.08	7,257.73	4,344.37	344.60	4,354.53	0.00	0.00	0.00	0.00
11,600.00	89.97	0.08	7,257.77	4,444.37	344.73	4,454.46	0.00	0.00	0.00	0.00
11,700.00	89.97	0.08	7,257.82	4,544.37	344.87	4,554.39	0.00	0.00	0.00	0.00
11,800.00	89.97	0.08	7,257.86	4,644.37	345.00	4,654.32	0.00	0.00	0.00	0.00
11,900.00	89.97	0.08	7,257.90	4,744.37	345.14	4,754.25	0.00	0.00	0.00	0.00
12,000.00	89.97	0.08	7,257.95	4,844.37	345.28	4,854.17	0.00	0.00	0.00	0.00
12,100.00	89.97	0.08	7,257.99	4,944.37	345.41	4,954.10	0.00	0.00	0.00	0.00
12,200.00	89.97	0.08	7,258.04	5,044.37	345.55	5,054.03	0.00	0.00	0.00	0.00
12,300.00	89.97	0.08	7,258.08	5,144.37	345.68	5,153.96	0.00	0.00	0.00	0.00
12,400.00	89.97	0.08	7,258.13	5,244.37	345.82	5,253.89	0.00	0.00	0.00	0.00
12,500.00	89.97	0.08	7,258.17	5,344.37	345.96	5,353.82	0.00	0.00	0.00	0.00
12,600.00	89.97	0.08	7,258.22	5,444.37	346.09	5,453.75	0.00	0.00	0.00	0.00
12,700.00	89.97	0.08	7,258.26	5,544.37	346.23	5,553.67	0.00	0.00	0.00	0.00
12,789.85	89.97	0.08	7,258.30	5,634.22	346.35	5,643.46	0.00	0.00	0.00	0.00
Nichols 26C-5HZ_WPtgt 1										
12,800.00	89.97	0.08	7,258.30	5,644.37	346.36	5,653.60	0.00	0.00	0.00	0.00
12,900.00	89.97	0.08	7,258.35	5,744.37	346.50	5,753.53	0.00	0.00	0.00	0.00
13,000.00	89.97	0.08	7,258.39	5,844.37	346.64	5,853.46	0.00	0.00	0.00	0.00
13,100.00	89.97	0.08	7,258.44	5,944.37	346.77	5,953.39	0.00	0.00	0.00	0.00
13,200.00	89.97	0.08	7,258.48	6,044.37	346.91	6,053.32	0.00	0.00	0.00	0.00
13,300.00	89.97	0.08	7,258.53	6,144.37	347.04	6,153.25	0.00	0.00	0.00	0.00
13,400.00	89.97	0.08	7,258.57	6,244.37	347.18	6,253.17	0.00	0.00	0.00	0.00
13,500.00	89.97	0.08	7,258.62	6,344.37	347.32	6,353.10	0.00	0.00	0.00	0.00
13,600.00	89.97	0.08	7,258.66	6,444.37	347.45	6,453.03	0.00	0.00	0.00	0.00
13,700.00	89.97	0.08	7,258.70	6,544.37	347.59	6,552.96	0.00	0.00	0.00	0.00
13,800.00	89.97	0.08	7,258.75	6,644.37	347.72	6,652.89	0.00	0.00	0.00	0.00
13,900.00	89.97	0.08	7,258.79	6,744.37	347.86	6,752.82	0.00	0.00	0.00	0.00
14,000.00	89.97	0.08	7,258.84	6,844.37	348.00	6,852.75	0.00	0.00	0.00	0.00
14,100.00	89.97	0.08	7,258.88	6,944.37	348.13	6,952.67	0.00	0.00	0.00	0.00
14,200.00	89.97	0.08	7,258.93	7,044.37	348.27	7,052.60	0.00	0.00	0.00	0.00
14,300.00	89.97	0.08	7,258.97	7,144.37	348.40	7,152.53	0.00	0.00	0.00	0.00
14,314.67	89.97	0.08	7,258.98	7,159.04	348.42	7,167.19	0.00	0.00	0.00	0.00
Codell TL - Toe										
14,314.68	89.97	0.08	7,258.98	7,159.05	348.42	7,167.20	0.01	0.00	0.00	0.00
Total Depth @ 14314.68ft - Nichols 26C-5HZ_BHL										

Plan Report for Nichols 26C-5HZ - Plan C Rev 0 Proposal

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
900.00	899.99	-0.08	-3.07	Hold Angle @ 0.25
3,400.00	3,399.97	1.55	-13.86	Begin Nudge @ 3400.00ft
3,812.22	3,810.89	-8.61	12.08	End Nudge @ 3812.22ft
6,124.17	6,100.34	-123.92	312.47	Begin Drop @ 6124.17ft
6,524.17	6,499.04	-133.91	338.50	End Drop @ 6524.17ft
6,674.17	6,649.04	-133.91	338.50	Begin Build @ 6674.17ft
6,674.17	6,649.04	-133.91	338.50	Build Rate = 10.00/100ft
6,923.97	6,891.00	-80.31	338.57	Build Rate = 6.00/100ft
7,020.16	6,976.00	-35.37	338.64	Build Rate = 10.00/100ft
7,612.39	7,256.00	456.77	339.31	End Build @ 7612.39ft
14,314.68	7,258.98	7,159.05	348.42	Total Depth @ 14314.68ft

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/_S (ft)	Origin +E/-W (ft)	Start TVD (ft)
Target	Nichols 26C-5HZ_BHL	2.24	Slot	0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
25.00	833.00	MS Energy Services - Surface Gyros	NS-GYRO-MS
833.00	7,612.39	Plan C Rev 0 Proposal	MWD+IFR1+SC
7,612.39	14,314.68	Plan C Rev 0 Proposal	MWD+IFR1+SC

Casing Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
7,612.39	7,256.00	7" Intermediate Casing	7	8-3/4

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
4,508.11	4,500.00	Sussex			
6,951.74	6,916.00	Sharon Springs			
7,020.16	6,976.00	Niobrara A			
7,050.92	7,002.00	Niobrara B			
7,192.90	7,109.00	Niobrara C			
7,500.20	7,245.00	Fort Hays			
7,613.96	7,256.00	Codell TL - Heel			
14,314.67	7,258.98	Codell TL - Toe		0.00	

Plan Report for Nichols 26C-5HZ - Plan C Rev 0 Proposal

Targets associated with this wellbore

Target Name	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Shape
Nichols 26C-5HZ_Sec	0.00	0.00	0.00	Polygon
Nichols 26C-5HZ_Sec8/5	0.00	0.00	0.00	Polygon
Nichols 26C-5HZ_SHL	0.00	0.00	0.00	Point
Nichols 26C-5HZ_SB	0.00	0.00	0.00	Polygon
Nichols 26C-5HZ_Sec8-1/2	0.00	0.00	0.00	Polygon
Nichols 26C-5HZ_LD	0.00	0.00	0.00	Polygon
Nichols 26C-5HZ_WPtgt 1	7,258.30	5,634.22	346.35	Point
Nichols 26C-5HZ_BHL	7,259.00	7,161.71	280.57	Point

North Reference Sheet for Sec. 8-T2N-R65W - Nichols 26C-5HZ - Plan C Rev 0

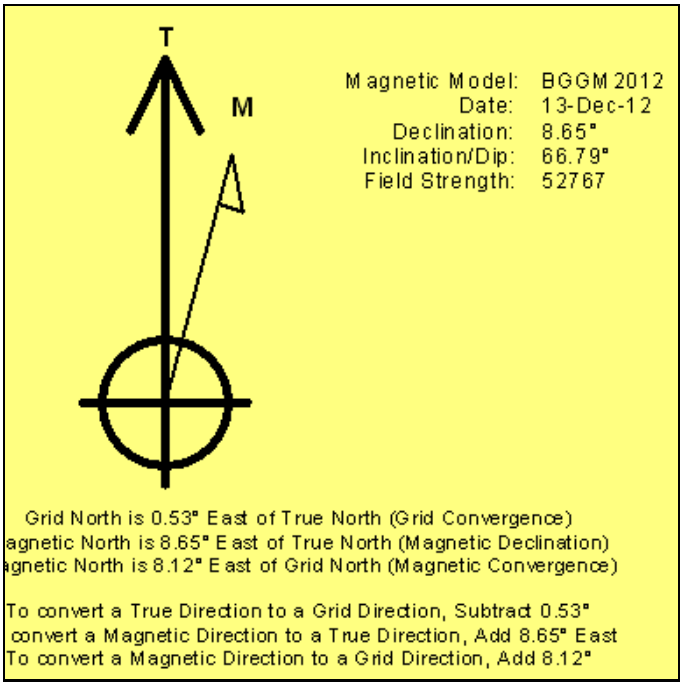
All data is in US Feet unless otherwise stated. Directions and Coordinates are relative to True North Reference.
Vertical Depths are relative to RKB=25 @ 4918.00ft (Drilling Rig). Northing and Easting are relative to Nichols 26C-5HZ
Coordinate System is US State Plane 1983, Colorado Northern Zone using datum North American Datum 1983, ellipsoid GRS 1980

Projection method is Lambert Conformal Conic (2 parallel)
Central Meridian is -105.50°, Longitude Origin:0.000000°, Latitude Origin:40.783333°
False Easting: 3,000,000.00ft, False Northing: 1,000,000.00ft, Scale Reduction: 0.99995827

Grid Coordinates of Well: 1,299,909.43 ft N, 3,229,123.46 ft E
Geographical Coordinates of Well: 40° 09' 13.46" N, 104° 40' 49.05" W
Grid Convergence at Surface is: 0.53°

Based upon Minimum Curvature type calculations, at a Measured Depth of 14,314.68ft
the Bottom Hole Displacement is 7,167.52ft in the Direction of 2.79° (True).

Magnetic Convergence at surface is: -8.12° (13 December 2012, , BGGM2012)



Section 3

Contents: BHA Reports, BHA Schematics, Motor Performance Reports, & Survey & Drilling Parameters.

HALLIBURTON | Sperry Drilling

WELL INFORMATION

BHA Report

IADC Rig BHA# 1

Run# 0100

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

Date In : 12/15/2012 **MD In (ft)** : 905 **TVD In (ft)** : 905 **Date Out :** 12/18/2012 **MD Out (ft)** : 7589 **TVD Out (ft)** : 7248

BIT DATA

Bit Number		: 1	**Nozzles**		: 5x15
Bit Size	**(in)**	: 8.750	**TFA**	**(in2)**	: 0.8629
Manufacturer		: Baker / Hughes Christensen	**Dull Grade In**		: NEW
Model		: DP505F	**Dull Grade Out**		: 1-3-WT-GS-X-X-BT-TD
Serial Number		: 7141466			

MOTOR DATA

Motor Number	:	**Bend (deg)**	: 1.83
OD (in)	: 6.750	**Nozzles (32nd)**	: 0.0
Manufacturer	: Sperry Drilling	**Avg Diff Press**	: 476.17
Model	: SperryDrill	**Cumul Cir Hrs**	: 59.00
Serial Number	: 675-1205		

COMPONENT DATA

Item #	Description	Serial Number	OD (in)	ID (in)	Gauge (in)	Weight (lbpf)	Top Connection	Length (ft)	Bit - Center Blade (ft)
1	PDC Hughes DP505F 5x15	7141466	6.000	1.750	8.750	87.20	P 4-1/2" REG	0.89	
2	6 3/4" SperryDrill Lobe 6/7 - 5.0 stg	675-1205	6.750	4.498		87.63	B 4-1/2" IF	26.91	
3	Flex Collar	SD45513	6.563	2.875		93.15	B 4-1/2" IF	29.96	
4	HOS	11341350	6.830	2.875		102.74	B 4-1/2" IF	6.32	
5	Pony Flex Collar	11011431	6.810	2.875		102.01	B 4-1/2" IF	18.70	
6	Flex Collar	SD 42654	6.750	2.875		99.83	B 4-1/2" IF	30.91	
7	X-Over Sub IFxXH	11896535	6.710	2.750		100.27	B 4-1/2" XH	3.95	
8	21 Jts 4.5 DP		4.500	3.826		19.09		664.25	
9	X-Over Sub		6.750	2.875		99.83		4.00	
10	45 Jts 4" HWDP		4.500	2.750		41.00		1378.49	
							Total:	2164.38	

PERFORMANCE Section A

Parameter		Min	Max	Avg
WOB	(klb) :	3	26	17
RPM	(rpm) :	20	75	54
Flow	(gpm) :	420	600	540
SPP	(psig) :	900	3770	3156

Activity		Hours
Drilling	:	39.54
Reaming	:	1.09
Circ-Other	:	18.37
Total	:	59.00

BHA Weight		(klb)
in Air (Total)	:	11.27
in Mud (Total)	:	N/A
in Air (Bel Jars)	:	N/A
in Mud (Bel Jars)	:	N/A

BHA WEIGHT CALCULATION MESSAGE

Jar not found. Could not calculate weight below jars. Mud Weight not valid could not calculate BHA weight in mud.

PERFORMANCE Section B

		In	Out
Inclination	(deg)	0.41	88.02
Azimuth	(deg)	163.50	0.21

*Values are interpolated/ extrapolated

		Distance (ft)	ROP (fph)	Build (°/100')	Turn (°/100')	DLS (°/100')
Oriented	:	956	46	n/a	n/a	9.25
Rotating	:	5728	308	8.97	-7.60	0.00
Total	:	6684	169	1.31	0.00	1.32

SURVEY STATIONS

	Depth (ft)	Inclination (deg)	Azimuth (deg)
Start	920.00	0.52	158.25
Final	7540.00	84.48	0.49

COMMENTS

Probe to Bit = 44
Bit to Gamma = 64.73
Bit to Res = 57.74
Rev per gal = 1.00
Float OD = 3.5
Flow Range= 125-315 gal
Bit to Bend= 3.42
RFO= 48.18

OBJECTIVES

To drill the vertical and build section in one run.

RESULTS

The assembly performed as expected yielding build rates ranging from11-17°/100 in the build section.

RECOMMENDATIONS

OTHER

BHA Schematic

Anadarko Petroleum Corp.

Nichols 26C-5HZ

IADC Rig BHA # : 1

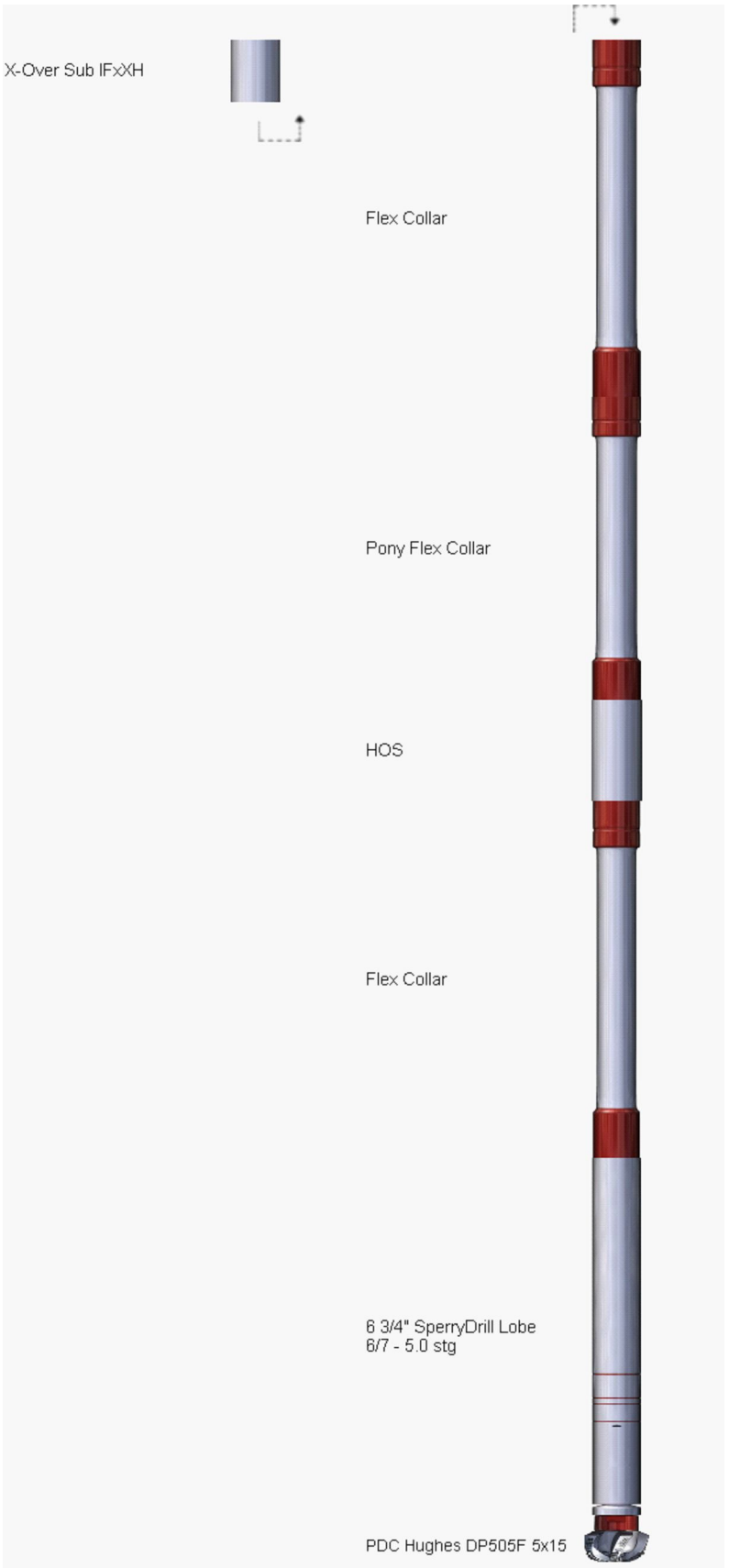
Run # : 100

Drillstring : Drillstring

COMPONENT DATA

OD (in)	Length (ft)	Description
6.000	0.89	PDC Hughes DP505F 5x15 (Gauge: 8.750 in)
6.750	26.91	6 3/4" SperryDrill Lobe 6/7 - 5.0 stg
6.563	29.96	Flex Collar
6.830	6.32	HOS
6.810	18.70	Pony Flex Collar
6.750	30.91	Flex Collar
6.710	3.95	X-Over Sub IFxXH
4.500	664.25	21 Jts 4.5 DP
6.750	4.00	X-Over Sub
4.500	1378.49	45 Jts 4" HWDP

*Pos: Measured as distance from bottom of the component.



HALLIBURTON | Sperry Drilling

WELL INFORMATION

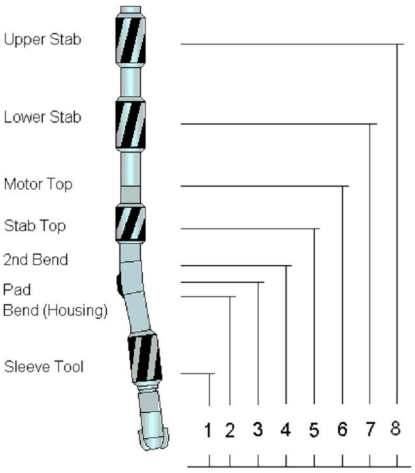
Motor Performance Report

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

SUMMARY

BHA Number	: 1	**Depth In/Out**	**(ft)**	:	905.00 / 7589.00
Run Number	: 0100	**Date In/Out**		:	12/15/2012 / 12/18/2012
Bit Number	: 1	**Hole Size**	**(in)**	:	8.750

MOTOR CONFIGURATION



	DFB (ft)	Component	Yes/No	Type	Value
1		Sleeve Stab	No		
2	3.92	Bent Housing	Yes	Fixed	1.83° bend
3		Bent Housing Pad	No		
4		2nd Bent Housing	No		
5		Sleeve Stab	No		
6	27.80	Motor Top	Yes		
7		Lower String Stab	No		
8		Upper String Stab	No		

MOTOR PARAMETERS

Serial Number	: 675-1205			**Lobe Config**	: 6:7
Motor Run #	:			**Stat Elastomer**	: Nitrile
OD (in)	: 6.750	**ID (in)**	: 4.498	**Short Brg Pack**	: Yes
Flex Collar Used	: Yes				
Rotor Nozzle (32nd)	: 0.000				

		Arr	Ret
Pick Up Sub	:	Yes	No
Bit Box Protr	:	Yes	No

MOTOR RUN DATA

Directional Driller(s) : Jesse Kysar,Jordan Timbs,Jeff Nicholas

Application Details : Medium Radius

Max Dogleg While Rotating	**(°/100')**	: 2.53	**RPM**		: 60.00	**Motor Stalled**	: Yes
Max Dogleg Overpulled In	**(°/100')**	:	**Force**	**(klb)**	:	**Float Valve**	: Yes
Max Dogleg Pushed Through	**(°/100')**	:	**Force**	**(klb)**	:	**DP Filter**	: Yes

Inc Start/End	**(deg)**	: 0.41 / 88.023		**Interval Oriented / Rot.**	**(ft)**	: 956.00 / 5728.00	
Hole Azimuth Start / End	**(deg)**	: 163.496 / 0.207		**Directional Perf Ori / Rot**	**(°/100')**	: 0.00 / 0.00	
Jarring Occurred		:					

HOURS

Existing Hrs	: 0.00	**Circ Hrs**	: 18.37	**Total Hrs This Run**	: 59.00
Drilling Hrs	: 39.54	**Reaming Hrs**	: 1.09	**New Cumulative Hrs**	: 59.00

DRILLING DATA

	Diff Press (psig)	RPM	Rotn Torque (ft-lb)	Drag Up/Down (klb)	WOB (klb)	ROP Oriented (fph)	ROP Rotated (fph)
Avg	476.17	54	5113.53	119.94 / 103.32	17.09	46	308
Max	420.00	75	7400.00	145.00 / 120.00	26.00	97	690

PRE-RUN TESTS

Motor Tested Pre-Run		: No		**with Bit/MWD**		:	No / No
Dump Sub Operating		: No		**Brg Play**		: 1.00	
Flow 1	**(gpm)**	:		**Pressure 1**	**(psig)**	:	
Flow 2	**(gpm)**	:		**Pressure 2**	**(psig)**	:	
Driveshaft Rotation Observed		: No					
Bearing Leakage Observed		: No					

POST-RUN TESTS

Motor Tested Post-Run		: No		**with Bit/MWD**		:	No / No
Dump Sub Operating		: No		**Brg Play**		: 1.00	
Flow 1	**(gpm)**	:		**Pressure 1**	**(psig)**	:	
Flow 2	**(gpm)**	:		**Pressure 2**	**(psig)**	:	
Driveshaft Rotation Observed		: Yes		**Fluid Flushed**		: No	
Bearing Leakage Observed		: No		**Fluid Used**		:	
DriveShaft Rotated to Drain Mud		: Yes					

MUD DATA

Type		:		**Mud Wt**	**(ppg)**	:	
Name		:		**pH**		:	
% Oil / Water		: /		**% Solid**		:	
DH Temp Avg / Max	**(degF)**	: 117.88 / 154.00		**% Sand**		:	
SPP Start / End	**(gpm)**	: 900.00 / 3770.00		**PV**	**(cP)**	:	
Flow Rate Avg / Max	**(gpm)**	: 540.14 / 600.00		**YP**	**(lhf2)**	:	
Chloride Content	**(ppm)**	:					

BIT DATA

Bit Number		: 1	**Nozzles**		: 5x15
Bit Size	**(in)**	: 8.750	**TFA**	**(in2)**	: 0.8629
Manufacturer		: Baker / Hughes Christensen	**Gauge Length**	**(in)**	: 0.410
Model		: DP505F	**Dull Grade In**		: NEW
Serial Number		: 7141466	**Dull Grade Out**		: 1-3-WT-GS-X-X-BT-TD
Existing Bit Hrs		: 0.00	**Existing Ream Hrs**		: 0.00
Cum Drilling Hrs		: 39.54	**Cum Ream Hrs**		: 1.09

PERFORMANCE

Service Interrupt	: No	**Trip For Failure**	: No
LIH	: No	**Service Interrupt Hrs**	:
Problem Date	: 12/19/2012		

COMMENTS

Motor performed well. Strong output in the curve.

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Drilling Activity

Customer	: Anadarko Petroleum Corp.	**North Ref**		: True
Well Name	: Nichols 26C-5HZ	**Declination**	**(deg)**	: 8.65
Job Number	: CA-XX-0009798960	**Vert Sec Dir**	**(deg)**	: 2.24
Rig Name	: H&P 308			
Field Name	: Wattenburg			
Country	: USA			

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	
833.0	0.25	278.63	832.99	0.00	-0.13	-2.78	0.00	0.00	0.00										100	
905.0										905	915	ROT		20	5	420	900	167	100	
915.0										915	969	ROT		40	5	600	2000	167	100	
920.0	0.52	158.25	919.99	-0.58	-0.47	-2.82	0.78	0.31	0.00										100	
969.0										969	1061	ROT		60	15	600	2300	613	100	
1012.0	0.73	207.01	1011.98	-1.49	-1.38	-2.93	0.60	0.23	0.00										100	
1061.0										1061	1153	ROT		60	15	600	2300	690	100	
1104.0	0.93	159.37	1103.98	-2.71	-2.60	-2.94	0.76	0.22	0.00										100	
1153.0										1153	1245	ROT		70	20	600	2300	690	100	
1196.0	1.01	167.88	1195.96	-4.19	-4.09	-2.50	0.18	0.09	0.00										100	
1245.0										1245	1337	ROT		70	20	600	2300	690	100	
1288.0	1.56	189.55	1287.94	-6.21	-6.12	-2.54	0.79	0.60	0.00										100	
1337.0										1337	1429	ROT		70	20	600	2300	613	100	
1380.0	0.87	147.36	1379.92	-8.03	-7.94	-2.37	1.18	-0.75	0.00										100	
1429.0										1429	1521	ROT		70	22	600	2300	425	100	
1472.0	0.70	153.89	1471.91	-9.10	-9.03	-1.75	0.21	-0.18	0.00										100	
1521.0										1521	1613	ROT		70	22	600	2300	552	100	
1564.0	0.94	135.62	1563.90	-10.11	-10.08	-0.97	0.38	0.26	0.00										100	
1613.0										1613	1705	ROT		70	22	600	2300	460	100	
1656.0	0.70	135.93	1655.89	-11.01	-11.02	-0.05	0.26	-0.26	0.00										100	
1705.0										1705	1797	ROT		70	22	600	2300	552	100	

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	
1748.0	1.07	126.37	1747.88	-11.89	-11.93	1.03	0.43	0.40	0.00										100	
1797.0										1797	1889	ROT		70	22	600	2300	460	100	
1840.0	0.33	111.56	1839.87	-12.45	-12.54	1.97	0.82	-0.80	0.00										100	
1889.0										1889	1981	ROT		70	22	600	2300	460	100	
1932.0	0.04	260.40	1931.87	-12.55	-12.64	2.18	0.40	-0.32	0.00										100	
1981.0										1981	2072	ROT		70	22	600	2300	455	100	
2023.0	1.20	131.55	2022.87	-13.16	-13.28	2.86	1.35	1.27	0.00										100	
2072.0										2072	2164	ROT		70	22	600	2300	460	100	
2115.0	0.51	157.96	2114.86	-14.14	-14.30	3.74	0.84	-0.75	0.00										100	
2164.0										2164	2259	ROT		70	22	600	2300	518	100	
2210.0	0.61	179.44	2209.85	-15.03	-15.20	3.90	0.24	0.11	0.00										100	
2259.0										2259	2354	ROT		70	22	600	2300	475	100	
2305.0	0.31	191.39	2304.85	-15.79	-15.95	3.86	0.33	-0.32	0.00										100	
2354.0										2354	2448	ROT		75	23	600	3175	513	100	
2399.0	0.15	167.28	2398.85	-16.16	-16.32	3.83	0.20	-0.17	0.00										100	
2448.0										2448	2543	ROT		75	17	600	3150	475	100	
2494.0	0.73	140.26	2493.84	-16.73	-16.91	4.25	0.63	0.61	0.00										100	
2543.0										2543	2638	ROT		75	17	600	3150	438	100	
2589.0	0.90	134.26	2588.83	-17.68	-17.90	5.17	0.20	0.18	0.00										100	
2638.0										2638	2733	ROT		75	17	600	3150	438	100	
2684.0	0.94	124.92	2683.82	-18.60	-18.86	6.34	0.16	0.04	0.00										100	
2733.0										2733	2827	ROT		70	17	600	3150	470	100	
2778.0	0.44	142.57	2777.82	-19.30	-19.59	7.19	0.57	-0.53	0.00										100	
2827.0										2827	2922	ROT		70	17	600	3150	518	100	
2873.0	0.52	181.35	2872.81	-20.01	-20.31	7.41	0.34	0.08	0.00										100	
2922.0										2922	3017	ROT		70	16	600	3225	380	100	
2968.0	0.83	88.17	2967.81	-20.39	-20.72	8.08	1.06	0.33	0.00										100	
3017.0										3017	3112	ROT		70	16	600	3225	407	100	
3063.0	0.77	99.08	3062.80	-20.42	-20.80	9.40	0.17	-0.06	0.00										100	
3112.0										3112	3207	ROT		70	16	600	3225	407	100	
3158.0	1.08	100.61	3157.79	-20.62	-21.07	10.91	0.33	0.33	0.00										100	
3207.0										3207	3302	ROT		70	26	600	3275	335	100	

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	
3253.0	0.36	76.74	3252.78	-20.67	-21.16	12.08	0.81	-0.76	0.00										100	
3302.0										3302	3396	ROT		70	26	600	3275	352	100	
3347.0	0.72	51.40	3346.77	-20.21	-20.73	12.83	0.45	0.38	0.00										100	
3396.0										3396	3491	ROT		70	26	600	3275	335	100	
3442.0	1.24	36.61	3441.76	-18.97	-19.53	13.91	0.60	0.55	0.00										100	
3491.0										3491	3557	ROT		70	18	424	2000	233	100	
3536.0	1.20	18.16	3535.74	-17.18	-17.78	14.82	0.42	-0.04	0.00										100	
3557.0										3557	3585	ROT		70	18	600	3425	249	100	
3585.0										3585	3679	ROT		70	23	600	3450		100	
3630.0	1.22	16.82	3629.72	-15.27	-15.88	15.42	0.04	0.02	0.00										100	
3679.0										3679	3689	110M			3	600	2900	40	100	
3689.0										3689	3774	ROT		70	18	600	3325	340	100	
3725.0	2.13	58.10	3724.68	-13.30	-13.98	17.21	1.53	0.96	0.00										100	
3774.0										3774	3786	110M			3	600	2900	60	100	
3786.0										3786	3869	ROT		70	18	600	3325	311	100	
3820.0	2.57	73.33	3819.60	-11.62	-12.44	20.75	0.80	0.46	0.00										100	
3869.0										3869	3885	110M			3	600	2900	64	100	
3885.0										3885	3964	ROT		55	18	600	3325	316	100	
3915.0	4.39	97.36	3914.43	-11.25	-12.29	26.40	2.42	1.92	0.00										100	
3964.0										3964	3982	110M			3	600	2900	49	100	
3982.0										3982	4059	ROT		55	18	600	3325	355	100	
4010.0	6.16	107.30	4009.02	-12.90	-14.28	34.87	2.09	1.86	0.00										100	
4059.0										4059	4079	15G			10	600	2950	71	100	
4079.0										4079	4154	ROT		55	25	600	3600	346	100	
4105.0	8.07	118.45	4103.29	-17.17	-18.97	45.60	2.47	2.01	11.74										100	
4154.0										4154	4248	ROT		60	25	600	3600	352	100	
4199.0	7.79	116.79	4196.39	-22.73	-24.98	57.09	0.38	-0.30	-1.77										100	
4248.0										4248	4343	ROT		60	25	600	3600	317	100	
4294.0	6.64	114.89	4290.64	-27.52	-30.20	67.82	1.24	-1.21	-2.00										100	
4343.0										4343	4365	0G			10	600	2950	88	100	
4365.0										4365	4438	ROT		60	25	600	3600	365	100	
4389.0	9.48	111.15	4384.69	-32.17	-35.33	80.10	3.04	2.99	-3.94										100	

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	
4438.0										4438	4532	ROT		60	22	600	3550	403	100	
4483.0	8.94	109.78	4477.48	-36.88	-40.60	94.19	0.62	-0.57	-1.46										100	
4532.0										4532	4626	ROT		60	22	600	3550	403	100	
4577.0	7.84	106.39	4570.47	-40.65	-44.88	107.22	1.28	-1.17	-3.61										100	
4626.0										4626	4648	30G			10	600	2950	53	100	
4648.0										4648	4721	ROT		60	22	600	3550	365	100	
4672.0	9.13	106.66	4664.43	-44.11	-48.87	120.65	1.36	1.36	0.28										100	
4721.0										4721	4730	90G			10	595	3000	49	100	
4730.0										4730	4816	ROT		50	17	595	3525	369	100	
4767.0	9.04	118.14	4758.25	-49.25	-54.55	134.46	1.91	-0.09	12.08										100	
4816.0										4816	4911	ROT		60	17	595	3525	380	100	
4862.0	7.77	119.53	4852.22	-55.46	-61.23	146.63	1.35	-1.34	1.46										100	
4911.0										4911	5005	ROT		60	17	595	3525	352	100	
4956.0	6.79	116.76	4945.46	-60.68	-66.87	157.12	1.11	-1.04	-2.95										100	
5005.0										5005	5100	ROT		50	21	424	2475	163	100	
5051.0	5.93	113.73	5039.88	-64.80	-71.37	166.62	0.97	-0.91	-3.19										100	
5100.0										5100	5122	20G			9	590	3000	31	100	
5122.0										5122	5195	ROT		50	21	590	3525	274	100	
5146.0	9.41	118.08	5134.02	-69.99	-77.00	177.97	3.71	3.66	4.58										100	
5195.0										5195	5290	ROT		50	21	590	3525	271	100	
5241.0	7.57	119.43	5227.97	-76.23	-83.73	190.28	1.95	-1.94	1.42										100	
5290.0										5290	5310	0G			9	590	3150	75	100	
5310.0										5310	5385	ROT		50	21	590	3525	214	100	
5336.0	9.23	116.94	5321.95	-82.28	-90.26	202.52	1.79	1.75	-2.62										100	
5385.0										5385	5479	ROT		50	21	590	3525	282	100	
5430.0	8.39	114.59	5414.84	-88.03	-96.53	215.48	0.97	-0.89	-2.50										100	
5479.0										5479	5574	ROT		50	21	590	3525	228	100	
5525.0	7.26	112.88	5508.95	-92.79	-101.75	227.31	1.21	-1.19	-1.80										100	
5574.0										5574	5594	0G			9	590	3150	40	100	
5594.0										5594	5669	ROT		50	21	590	3525	250	100	
5620.0	8.57	108.87	5603.05	-96.93	-106.37	239.54	1.50	1.38	-4.22										100	
5669.0										5669	5763	ROT		50	21	590	3525	256	100	

SURVEY										STEERING					DRILLING PARAMETERS					
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5714.0	7.50	105.04	5696.12	-100.29	-110.23	252.09	1.27	-1.14	-4.07										100	
5763.0										5763	5783	0G			9	590	3150	48	100	
5783.0										5783	5858	ROT		50	21	590	3525	237	100	
5809.0	9.52	101.70	5790.07	-102.96	-113.43	265.77	2.19	2.13	-3.52										100	
5858.0										5858	5953	ROT		50	21	590	3525	219	100	
5904.0	7.32	97.00	5884.04	-104.75	-115.76	279.47	2.42	-2.32	-4.95										100	
5953.0										5953	5973	0G			9	590	3150	41	100	
5973.0										5973	6048	ROT		50	21	590	3525	167	100	
5999.0	8.48	94.43	5978.14	-105.52	-117.04	292.46	1.28	1.22	-2.71										100	
6048.0										6048	6142	ROT		70	21	590	3525	235	100	
6093.0	6.45	94.75	6071.34	-106.02	-118.01	304.64	2.16	-2.16	0.34										100	
6142.0										6142	6237	ROT		70	21	590	3525	335	100	
6188.0	5.17	95.85	6165.85	-106.52	-118.89	314.21	1.35	-1.35	1.16										100	
6237.0										6237	6247	180G			9	590	3150	60	100	
6247.0										6247	6332	ROT		70	21	590	3525	268	100	
6283.0	2.36	83.60	6260.64	-106.50	-119.11	320.42	3.06	-2.96	0.00										100	
6332.0										6332	6427	ROT		70	21	590	3525	285	100	
6378.0	2.06	84.39	6355.57	-105.97	-118.73	324.06	0.32	-0.32	0.00										100	
6427.0										6427	6434	290M			9	590	3150	35	100	
6434.0										6434	6521	ROT		70	21	590	3525	261	100	
6472.0	0.98	52.03	6449.53	-105.22	-118.07	326.38	1.42	-1.15	0.00										100	
6521.0										6521	6616	ROT		70	21	590	3525	237	100	
6567.0	0.99	44.22	6544.52	-104.08	-116.98	327.59	0.14	0.01	0.00										100	
6599.0	0.70	74.70	6576.52	-103.82	-116.73	327.97	1.64	-0.91	0.00										100	
6616.0										6616	6649	ROT		70	21	590	3525	220	100	
6630.0	0.50	49.87	6607.51	-103.67	-116.59	328.26	1.04	-0.65	0.00										100	
6649.0										6649	6711	0M			9	450	2950	29	100	
6662.0	2.97	11.50	6639.50	-102.76	-115.69	328.53	8.11	7.72	0.00										100	
6693.0	6.78	1.54	6670.38	-100.14	-113.07	328.74	12.54	12.29	0.00										100	
6711.0										6711	6740	0G			9	450	2950	62	100	
6725.0	10.51	359.77	6702.01	-95.33	-108.26	328.78	11.68	11.66	-5.53										100	
6740.0										6740	6743	ROT		30	10	450	3100		100	

SURVEY										STEERING					DRILLING PARAMETERS					
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6743.0										6743	6771	20G			7	450	2950	38	100	
6757.0	13.93	357.42	6733.28	-88.57	-101.49	328.59	10.80	10.69	-7.34										100	
6771.0										6771	6774	ROT		30	8	450	3100	90	100	
6774.0										6774	6801	20G			19	450	3100	74	100	
6788.0	17.33	356.29	6763.13	-80.26	-93.16	328.12	11.01	10.97	-3.65										100	
6801.0										6801	6806	ROT		30	8	450	3100	100	100	
6806.0										6806	6832	30G			19	450	3100	71	100	
6820.0	19.59	357.66	6793.48	-70.17	-83.04	327.60	7.19	7.06	4.28										100	
6832.0										6832	6837	ROT		30	8	450	3100	75	100	
6837.0										6837	6863	30G			19	450	3100	97	100	
6851.0	22.23	358.25	6822.44	-59.14	-71.98	327.21	8.54	8.52	1.90										100	
6863.0										6863	6869	ROT		30	8	450	3100	180	100	
6869.0										6869	6895	30G			19	450	3100	82	100	
6883.0	25.45	359.55	6851.70	-46.23	-59.05	326.97	10.20	10.06	4.06										100	
6895.0										6895	6900	ROT		30	16	450	3200	150	100	
6900.0										6900	6926	30G			19	450	3100	97	100	
6914.0	28.65	0.81	6879.31	-32.14	-44.96	327.02	10.49	10.32	4.06										100	
6926.0										6926	6932	ROT		30	16	450	3200	120	100	
6932.0										6932	6955	20G			19	450	3100	81	100	
6946.0	31.33	1.19	6907.02	-16.15	-28.97	327.30	8.40	8.38	1.19										100	
6955.0										6955	6963	ROT		30	16	450	3200	160	100	
6963.0										6963	6981	20G			19	450	3100	64	100	
6978.0	34.06	0.47	6933.95	1.13	-11.69	327.55	8.62	8.53	-2.25										100	
6981.0										6981	6995	ROT		30	16	450	3200	56	100	
6995.0										6995	7010	20G			19	450	3100	53	100	
7009.0	36.23	0.35	6959.30	18.96	6.16	327.67	7.00	7.00	-0.39										100	
7010.0										7010	7027	ROT		30	16	450	3200	85	100	
7027.0										7027	7042	20G			19	450	3100	56	100	
7041.0	38.03	359.26	6984.81	38.26	25.47	327.60	5.99	5.62	-3.41										100	
7042.0										7042	7058	ROT		30	16	450	3200	107	100	
7058.0										7058	7073	20G			19	450	3100	29	100	
7072.0	39.32	0.54	7009.01	57.61	44.84	327.57	4.90	4.16	4.13										100	

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	
7073.0										7073	7090	ROT		30	16	450	3200	93	100	
7090.0										7090	7121	ROT		30	16	450	3200	109	100	
7104.0	39.16	1.15	7033.80	77.85	65.08	327.87	1.31	-0.50	1.91										100	
7121.0										7121	7141	20G			19	450	3100	24	100	
7135.0	41.23	359.67	7057.47	97.84	85.09	328.01	7.35	6.68	-4.77										100	
7141.0										7141	7153	ROT		30	16	450	3200	144	100	
7153.0										7153	7179	20G			19	450	3100	58	100	
7167.0	44.61	0.18	7080.90	119.61	106.87	327.98	10.62	10.56	1.59										100	
7179.0										7179	7184	ROT		30	16	450	3200	75	100	
7184.0										7184	7207	20G			19	450	3100	32	100	
7198.0	48.20	1.11	7102.28	142.05	129.32	328.24	11.78	11.58	3.00										100	
7207.0										7207	7216	ROT		30	16	450	3200	108	100	
7216.0										7216	7233	20G			19	450	3100	32	100	
7230.0	50.63	1.21	7123.09	166.35	153.62	328.73	7.60	7.59	0.31										100	
7233.0										7233	7247	ROT		30	16	450	3200	140	100	
7247.0										7247	7265	0G			19	480	3000	47	100	
7261.0	52.88	1.33	7142.28	190.69	177.95	329.27	7.26	7.26	0.39										100	
7265.0										7265	7279	ROT		30	16	450	3200	70	100	
7279.0										7279	7301	0G			19	500	3550	53	100	
7293.0	55.53	1.52	7161.00	216.64	203.90	329.92	8.30	8.28	0.59										100	
7301.0										7301	7310	ROT		30	16	500	3770	45	100	
7310.0										7310	7337	-10G			19	500	3550	44	100	
7325.0	58.64	0.55	7178.38	243.49	230.76	330.40	10.05	9.72	-3.03										100	
7337.0										7337	7342	ROT		30	16	500	3770	50	100	
7342.0										7342	7368	-10G			19	500	3550	33	100	
7356.0	61.89	359.74	7193.76	270.39	257.67	330.47	10.73	10.48	-2.61										100	
7368.0										7368	7374	ROT		30	16	500	3770	72	100	
7374.0										7374	7401	10G			19	500	3550	40	100	
7388.0	65.81	0.71	7207.86	299.09	286.39	330.58	12.55	12.25	3.03										100	
7401.0										7401	7405	ROT		30	16	500	3770	40	100	
7405.0										7405	7435	10G			19	500	3600	44	100	
7420.0	69.78	2.10	7219.95	328.71	316.00	331.31	13.04	12.41	4.34										100	

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	
7435.0										7435	7437	ROT		30	16	500	3770	20	100	
7437.0										7437	7462	0G			19	500	3600	42	100	
7451.0	74.76	1.95	7229.39	358.22	345.50	332.36	16.07	16.06	-0.48										100	
7462.0										7462	7469	ROT		30	16	500	3770	84	100	
7469.0										7469	7496	-20G			19	500	3600	34	100	
7483.0	78.88	0.78	7236.68	389.37	376.64	333.10	13.36	12.87	-3.66										100	
7496.0										7496	7500	ROT		30	16	500	3770	48	100	
7500.0										7500	7527	-10G			19	500	3600	34	100	
7511.0	81.68	0.70	7241.41	416.96	404.23	333.45	10.00	10.00	-0.29										100	
7527.0										7527	7532	ROT		30	16	500	3770	48	100	
7532.0										7532	7564	0G			19	500	3600	34	100	
7540.0	84.48	0.49	7244.90	445.73	433.02	333.75	9.68	9.66	-0.72										100	
7564.0										7564	7589	0G			19	500	3600	75	100	

WARRANTY

HALLIBURTON | Sperry Drilling

WELL INFORMATION

BHA Report

IADC Rig BHA# 2

Run# 0200

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

Date In : 12/20/2012 **MD In (ft)** : 7589 **TVD In (ft)** : 7248 **Date Out :** 12/23/2012 **MD Out (ft)** : 14246 **TVD Out (ft)** : 7258

BIT DATA

Bit Number		: 2	**Nozzles**		: 5x16
Bit Size	**(in)**	: 6.125	**TFA**	**(in2)**	: 0.9817
Manufacturer		: HDBS	**Dull Grade In**		: NEW
Model		: FXD54	**Dull Grade Out**		: 1-1-NO-A-XX-NO-TD
Serial Number		: 11816359			

MOTOR DATA

Motor Number	: 2	**Bend (deg)**	: 1.50
OD (in)	: 5.000	**Nozzles (32nd)**	: 0.0
Manufacturer	: Sperry Drilling	**Avg Diff Press**	: 667.87
Model	: GeoForce	**Cumul Cir Hrs**	: 61.56
Serial Number	: 500-900		

COMPONENT DATA

Item #	Description	Serial Number	OD (in)	ID (in)	Gauge (in)	Weight (lbpf)	Top Connection	Length (ft)	Bit - Center Blade (ft)
1	Security PDC FXD54 5x16's	11816359	6.125	1.500	6.125	94.39	P 3-1/2" REG	0.74	
2	5" GeoForce Lobe 5/6 - 9.1 stg	500-900	5.000	3.120		52.94	B 3-1/2" IF	29.91	
3	Pony Collar	DR-8425	4.625	2.688		37.92	B 3-1/2" IF	7.94	
4	DM	10743045	4.670	2.550		39.73	B 3-1/2" IF	8.18	
5	SP-4	90350107	4.750	1.250		48.20	B 3-1/2" IF	24.48	
6	Inline Stabilizer (ILS)	CP1524939	4.630	2.438	5.875	41.48	B 3-1/2" IF	3.58	72.50
7	TM	10507567	4.810	2.600		40.79	B 3-1/2" IF	11.20	
8	X-Over Sub	DR-8922	4.730	2.500		43.16		3.04	
9	2 JTS 4" DP		4.000	3.240		17.09		63.11	
10	Ghost Reamer	SD802343	5.000	2.688	5.750	69.16		7.36	153.91
11	60 JTS 4" DP		4.000	3.240		17.09		1895.65	
12	Agitator	1113894-15	5.000	2.000		56.21		11.55	
13	Shock Sub	1266994-1	5.000	2.000		56.21		11.14	
14	171 JTS 4" DP		4.000	3.240		17.09		5407.15	
15	93 JTS 4" HWDP		4.000	2.563		29.70		2848.88	
							Total:	10333.91	

PERFORMANCE Section A

Parameter		Min	Max	Avg
WOB	(klb) :	7	26	16
RPM	(rpm) :	10	80	65
Flow	(gpm) :	250	300	279
SPP	(psig) :	3150	4275	3855

Activity		Hours
Drilling	:	42.73
Reaming	:	2.01
Circ-Other	:	16.82
Total	:	61.56

BHA Weight		(klb)
in Air (Total)	:	4.20
in Mud (Total)	:	N/A
in Air (Bel Jars)	:	N/A
in Mud (Bel Jars)	:	N/A

BHA WEIGHT CALCULATION MESSAGE

Jar not found. Could not calculate weight below jars. Mud Weight not valid could not calculate BHA weight in mud.

PERFORMANCE Section B

		In	Out
Inclination	(deg)	88.02	90.80
Azimuth	(deg)	0.21	358.00

*Values are interpolated/ extrapolated

		Distance (ft)	ROP (fph)	Build (°/100')	Turn (°/100')	DLS (°/100')
Oriented	:	351	28	n/a	n/a	0.00
Rotating	:	6306	209	0.00	0.00	0.00
Total	:	6657	156	0.04	-0.03	0.05

SURVEY STATIONS

	Depth (ft)	Inclination (deg)	Azimuth (deg)
Start	7618.00	90.12	0.04
Final	14204.00	90.25	358.45

COMMENTS

Probe to Bit = 42.00'
Bit to Gamma = 63.64'
Bit to Res = 56.58'
Rev per gal = 1.00
Float OD = 3.5"
Flow Range = 125-315 gal
Bit to Bend = 3.43'
RFO = 123.56 deg

OBJECTIVES

Drill lateral to a MD of approximately 14246' in one run.

RESULTS

Overall the assembly performed as expected. However at times the assembly would build, drop, and turn throughout the lateral while in rotary. This could be attributed to geological structures as the seismic data indicates multiple faults along the well path. Changing formations may have been a factor as the target TVD changes multiples times.

RECOMMENDATIONS

OTHER

BHA Schematic

Anadarko Petroleum Corp.

Nichols 26C-5HZ

IADC Rig BHA # : 2

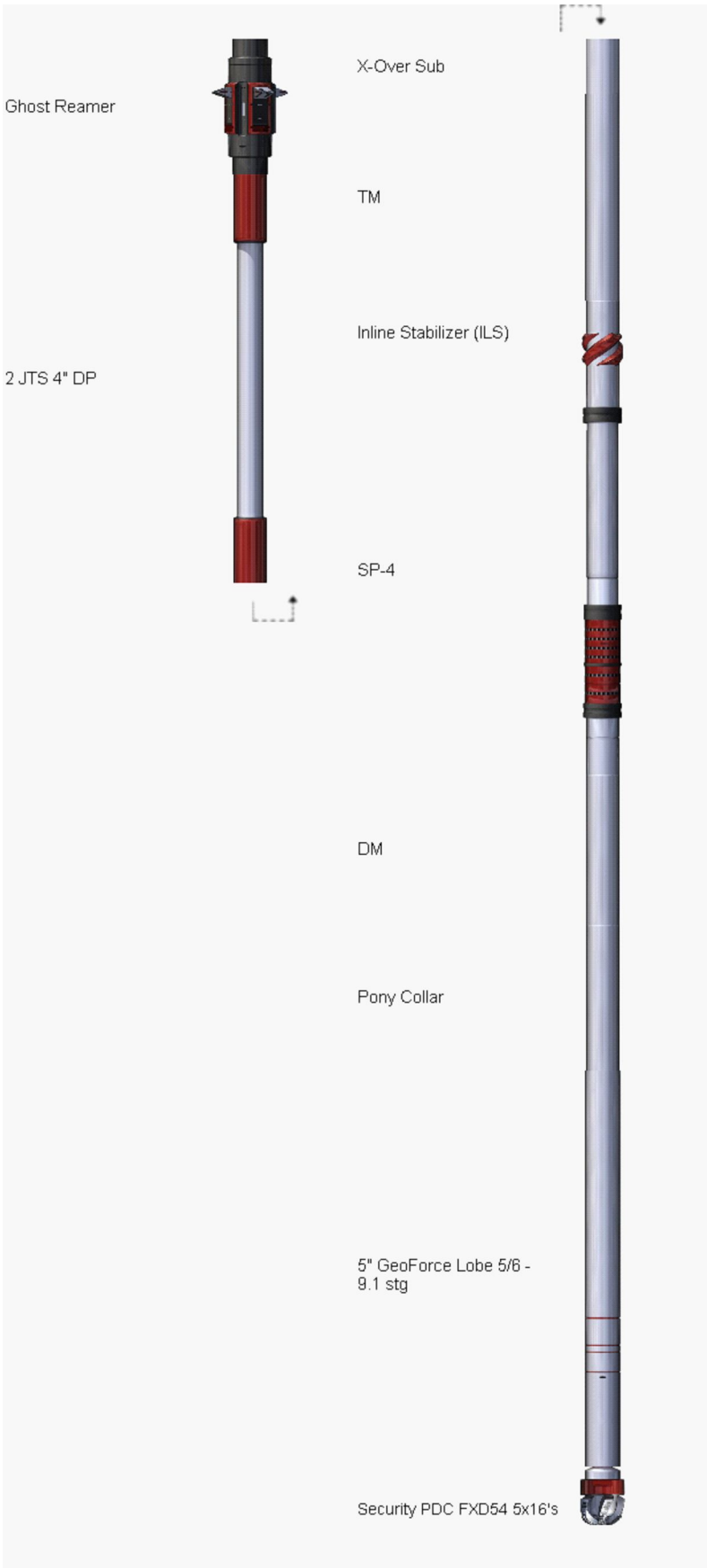
Run # : 200

Drillstring : Drillstring

COMPONENT DATA

OD (in)	Length (ft)	Description
6.125	0.74	Security PDC FXD54 5x16's (Gauge: 6.125 in)
5.000	29.91	5" GeoForce Lobe 5/6 - 9.1 stg
4.625	7.94	Pony Collar
4.670	8.18	DM
4.750	24.48	SP-4
4.630	3.58	Inline Stabilizer (ILS) (Gauge: 5.875 in, Pos*: 1.25 ft)
4.810	11.20	TM
4.730	3.04	X-Over Sub
4.000	63.11	2 JTS 4" DP
5.000	7.36	Ghost Reamer (Gauge: 5.750 in)
4.000	1895.65	60 JTS 4" DP
5.000	11.55	Agitator
5.000	11.14	Shock Sub
4.000	5407.15	171 JTS 4" DP
4.000	2848.88	93 JTS 4" HWDP

*Pos: Measured as distance from bottom of the component.



HALLIBURTON | Sperry Drilling

WELL INFORMATION

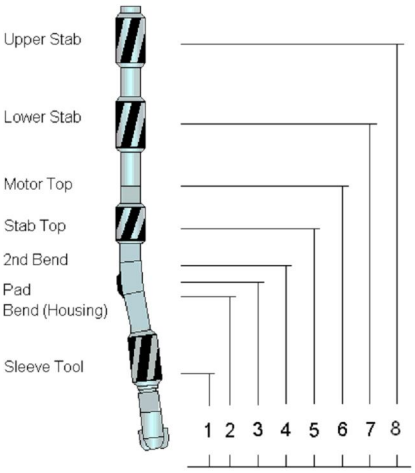
Motor Performance Report

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

SUMMARY

BHA Number	:	2	**Depth In/Out**	**(ft)**	: 7589.00 / 14246.00
Run Number	:	0200	**Date In/Out**		: 12/20/2012 / 12/23/2012
Bit Number	:	2	**Hole Size**	**(in)**	: 6.125

MOTOR CONFIGURATION



	DFB (ft)	Component	Yes/No	Type	Value
1		Sleeve Stab	No		
2	4.17	Bent Housing	Yes	Fixed	1.50° bend
3		Bent Housing Pad	No		
4		2nd Bent Housing	No		
5		Sleeve Stab	No		
6	30.65	Motor Top	Yes		
7	72.50	Lower String Stab	Yes	Reg	Gauge = 5.875 in
8		Upper String Stab	No		

MOTOR PARAMETERS

Serial Number	: 500-900		**Lobe Config**	: 5:6	
Motor Run #	: 2		**Stat Elastomer**	: Nitrile	
OD (in)	: 5.000	**ID (in)** : 3.120	**Short Brg Pack**	: Yes	
Flex Collar Used	: No			**Arr**	**Ret**
Rotor Nozzle (32nd)	: 0.000		**Pick Up Sub**	: No	No
			Bit Box Protr	: Yes	Yes

MOTOR RUN DATA

Directional Driller(s)	: Jeff Nicholas,Jordan Timbs						
Application Details	: Horizontal						
Max Dogleg While Rotating	**(°/100')**	:	**RPM**		: 50.00	**Motor Stalled**	: No
Max Dogleg Overpulled In	**(°/100')**	:	**Force**	**(klb)**	:	**Float Valve**	: Yes
Max Dogleg Pushed Through	**(°/100')**	:	**Force**	**(klb)**	:	**DP Filter**	: Yes

Inc Start/End	**(deg)**	: 88.023 / 90.805		**Interval Oriented / Rot.**	**(ft)**	: 351.00 / 6306.00	
Hole Azimuth Start / End	**(deg)**	: 0.207 / 358.00		**Directional Perf Ori / Rot**	**(°/100')**	: 0.00 / 0.00	
Jarring Occurred		:					

HOURS

Existing Hrs	: 0.00	**Circ Hrs**	: 16.82	**Total Hrs This Run**	: 61.56
Drilling Hrs	: 42.73	**Reaming Hrs**	: 2.01	**New Cumulative Hrs**	: 61.56

DRILLING DATA

	Diff Press (psig)	RPM	Rotn Torque (ft-lb)	Drag Up/Down (klb)	WOB (klb)	ROP Oriented (fph)	ROP Rotated (fph)
Avg	667.87	65	7891.58	200.18 / 70.87	16.41	28	209
Max	475.00	80	12000.00	230.00 / 120.00	26.00	65	376

PRE-RUN TESTS

Motor Tested Pre-Run		: No		**with Bit/MWD**		: No / No	
Dump Sub Operating		: No		**Brg Play**		: 1.00	
Flow 1	**(gpm)**	: 250.00		**Pressure 1**	**(psig)**	: 890.00	
Flow 2	**(gpm)**	:		**Pressure 2**	**(psig)**	:	
Driveshaft Rotation Observed		: No					
Bearing Leakage Observed		: No					

POST-RUN TESTS

Motor Tested Post-Run		: No		**with Bit/MWD**		: No / No	
Dump Sub Operating		: No		**Brg Play**		: 1.00	
Flow 1	**(gpm)**	:		**Pressure 1**	**(psig)**	:	
Flow 2	**(gpm)**	:		**Pressure 2**	**(psig)**	:	
Driveshaft Rotation Observed		: Yes		**Fluid Flushed**		: No	
Bearing Leakage Observed		: No		**Fluid Used**		:	
DriveShaft Rotated to Drain Mud		: Yes					

MUD DATA

Type		:		**Mud Wt**	**(ppg)**	:	
Name		:		**pH**		:	
% Oil / Water		: /		**% Solid**		:	
DH Temp Avg / Max	**(degF)**	: 230.61 / 246.00		**% Sand**		:	
SPP Start / End	**(gpm)**	: 3150.00 / 4275.00		**PV**	**(cP)**	:	
Flow Rate Avg / Max	**(gpm)**	: 279.34 / 300.00		**YP**	**(lhf2)**	:	
Chloride Content	**(ppm)**	:					

BIT DATA

Bit Number		: 2	**Nozzles**		: 5x16
Bit Size	(in)	: 6.125	**TFA**	(in2)	: 0.9817
Manufacturer		: HDBS	**Gauge Length**	(in)	: 0.180
Model		: FXD54	**Dull Grade In**		: NEW
Serial Number		: 11816359	**Dull Grade Out**		: 2-2-WT-S-XX-BT-TD
Existing Bit Hrs		: 0.00	**Existing Ream Hrs**		: 0.00
Cum Drilling Hrs		: 42.73	**Cum Ream Hrs**		: 2.01

PERFORMANCE

Service Interrupt	: No	**Trip For Failure**	: No
LIH	: No	**Service Interrupt Hrs**	:
Problem Date	: 12/20/2012		

COMMENTS

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Drilling Activity

Customer	: Anadarko Petroleum Corp.	**North Ref**		: True
Well Name	: Nichols 26C-5HZ	**Declination**	**(deg)**	: 8.65
Job Number	: CA-XX-0009798960	**Vert Sec Dir**	**(deg)**	: 2.24
Rig Name	: H&P 308			
Field Name	: Wattenburg			
Country	: USA			

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	
833.0	0.25	278.63	832.99	0.00	-0.13	-2.78	0.00	0.00	0.00										200	
7589.0										7589	7660	ROT		10	8	300	3330	58	200	
7618.0	90.12	0.04	7248.58	523.57	510.90	334.11	7.25	7.23	-0.58										200	
7660.0										7660	7737	ROT		10	8	300	3330	201	200	
7710.0	91.11	0.48	7247.59	615.50	602.89	334.53	1.18	1.08	0.48										200	
7737.0										7737	7752	ROT		10	12	300	3330	129	200	
7752.0										7752	7844	ROT		16	18	300	3540	197	200	
7802.0	91.36	359.91	7245.61	707.42	694.87	334.84	0.68	0.27	-0.62										200	
7844.0										7844	7935	ROT		60	19	300	3425	152	200	
7893.0	91.48	359.95	7243.35	798.32	785.84	334.73	0.14	0.13	0.04										200	
7935.0										7935	8027	ROT		80	15	300	3425	162	200	First stand of night tower
7985.0	90.93	359.76	7241.42	890.22	877.82	334.50	0.63	-0.60	-0.21										200	
8027.0										8027	8119	ROT		80	24	300	4000	251	200	
8077.0	90.93	359.50	7239.92	982.11	969.80	333.90	0.28	0.00	-0.28										200	
8119.0										8119	8211	ROT		80	24	300	4100	251	200	
8169.0	90.37	358.50	7238.88	1073.96	1061.78	332.30	1.25	-0.61	-1.09										200	
8211.0										8211	8217	150G			8	300	3150	30	200	

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	
8217.0										8217	8303	ROT		80	24	300	4100	258	200	Hard rotating stall at 20:10; pressure limiter kicked out pumps; reduced diff limiter from 1100 to 950 psi
8261.0	89.94	358.66	7238.63	1165.77	1153.75	330.02	0.50	-0.47	0.17										200	
8303.0										8303	8310	150G			8	300	3150	42	200	
8310.0										8310	8395	ROT		80	17	300	3650	283	200	Second hard rotating stall at 21:08; reduced diff from 950 to 750 psi
8353.0	89.26	358.91	7239.27	1257.60	1245.73	328.07	0.79	-0.74	0.27										200	
8395.0										8395	8484	ROT		80	14	300	4100	191	200	
8445.0	89.57	358.48	7240.21	1349.42	1337.70	325.97	0.58	0.34	-0.47										200	
8484.0										8484	8578	ROT		80	14	300	4100	201	200	
8536.0	90.68	358.83	7240.01	1440.24	1428.67	323.84	1.28	1.22	0.38										200	
8578.0										8578	8592	160G			8	296	3150	65	200	
8592.0										8592	8670	ROT		80	19	296	3850	223	200	Two more stalls; footage drilled since fault at 7914MD have been against the Fort Hays / Codell contact
8628.0	91.05	0.19	7238.63	1532.12	1520.66	323.05	1.53	0.40	1.48										200	
8670.0										8670	8685	160G			20	296	3350	64	200	
8685.0										8685	8762	ROT		80	19	296	3850	201	200	Pump limiter brought down to 3900 psi to counteract stalls
8720.0	91.17	1.40	7236.84	1624.07	1612.63	324.33	1.32	0.13	1.32										200	
8762.0										8762	8782	180G			20	291	3250	63	200	

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	Comment
8782.0										8782	8854	ROT		80	14	296	3850	227	200	Hard rotating stall against the bottom of the Fort Hays at 00:37; pumps kicked out by limiter / Cut RPM's to 75 / Called DD ROC - confirmed drilling parameters
8812.0	88.46	1.16	7237.14	1716.05	1704.60	326.38	2.96	-2.95	-0.26										200	
8854.0										8854	8946	ROT		70	22	296	4100	173	200	Broke through into Codell; staging diff from 750 back up to 1100 psi; increasing pressure limiter back to 4200 psi / Stick-slip, cut RPM's to 70
8904.0	88.70	0.95	7239.42	1808.00	1796.55	328.07	0.35	0.26	-0.23										200	
8946.0										8946	9037	ROT		70	26	293	4100	248	200	Doubled P-rates, stabilized surface torque / large increase in drag - increased lube from 2 to 3%, began back reaming stands
8995.0	88.46	0.76	7241.67	1898.95	1887.52	329.43	0.34	-0.26	-0.21										200	
9037.0										9037	9129	ROT		55	23	293	4150	197	200	Cut RPM's to 55
9087.0	89.07	0.37	7243.66	1990.89	1979.49	330.34	0.79	0.66	-0.42										200	
9129.0										9129	9221	ROT		55	23	293	4150	190	200	Staged diff more gradually
9179.0	89.32	359.50	7244.95	2082.80	2071.48	330.23	0.98	0.27	-0.95										200	

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	Comment
9221.0										9221	9313	ROT		65	24	276	3975	184	200	Cut diff back from 1100 to 950 psi / Called ROC over continuous stalls
9271.0	89.32	358.78	7246.04	2174.66	2163.46	328.85	0.78	0.00	-0.78										200	
9313.0										9313	9323	50G			26	276	3500	60	200	
9323.0										9323	9405	ROT		70	24	283	3975	129	200	Increased RPM's for hole cleaning / two hard rotating stalls, pumps killed / Diff cut back to 750 psi / gamma/res indicate possible fault into Carlile-called geology / blew a nail - pressure limiter down to 4K
9363.0	90.74	358.44	7245.99	2266.48	2255.43	326.62	1.59	1.54	-0.37										200	
9405.0										9405	9497	ROT		80	14	283	3800	204	200	Increased RPM's, reduced stick-slip / Last stand of night tower
9455.0	91.30	357.72	7244.36	2358.22	2347.37	323.54	0.99	0.61	-0.78										200	
9497.0										9497	9515	120G			26	276	3500	57	200	
9515.0										9515	9589	ROT		70	14	283	3800	342	200	Reiterated to driller on best drilling practices
9547.0	90.31	359.41	7243.06	2450.01	2439.32	321.24	2.13	-1.08	1.84										200	
9589.0										9589	9681	ROT		70	14	283	3800	221	200	
9639.0	91.11	358.53	7241.92	2541.86	2531.30	319.58	1.29	0.87	-0.96										200	

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	Comment
9681.0										9681	9701	120G			26	276	3500	60	200	After slide increased rotary to facilitate a decrease in inclination
9701.0										9701	9773	ROT		60	16	283	3800	227	200	
9731.0	90.56	0.89	7240.58	2633.75	2623.28	319.12	2.63	-0.60	2.57										200	
9773.0										9773	9864	ROT		60	16	283	3800	210	200	Reiterated to driller on best drilling practices
9822.0	91.05	0.61	7239.30	2724.71	2714.26	320.31	0.62	0.54	-0.31										200	
9864.0										9864	9876	180G			26	276	3500	38	200	Change Target
9876.0										9876	9927	ROT		60	16	283	3800	219	200	
9914.0	90.56	1.12	7238.01	2816.67	2806.24	321.70	0.77	-0.53	0.55										200	
9927.0										9927	9937	180G			26	276	3400	38	200	
9937.0										9937	9956	ROT		70	20	283	4044	163	200	
9956.0										9956	9969	180G			26	276	3400	30	200	
9969.0										9969	10048	ROT		70	20	283	4044	197	200	
10006.0	88.52	2.56	7238.75	2908.66	2898.19	324.65	2.71	-2.22	1.57										200	
10048.0										10048	10143	ROT		70	20	283	4044	219	200	
10101.0	88.52	2.19	7241.20	3003.63	2993.07	328.59	0.39	0.00	-0.39										200	
10143.0										10143	10238	ROT		70	20	283	4044	204	200	
10196.0	89.07	2.41	7243.20	3098.61	3087.98	332.40	0.62	0.58	0.23										200	
10238.0										10238	10333	ROT		70	20	283	4115	237	200	
10291.0	89.14	1.81	7244.69	3193.60	3182.90	335.89	0.64	0.07	-0.63										200	
10333.0										10333	10427	ROT		70	20	283	4115	209	200	
10385.0	90.31	1.20	7245.14	3287.58	3276.86	338.36	1.40	1.24	-0.65										200	
10427.0										10427	10438	180G			26	276	3429	30	200	Change Target
10438.0										10438	10522	ROT		70	20	283	4115	187	200	
10480.0	89.94	1.30	7244.93	3382.57	3371.84	340.44	0.40	-0.39	0.11										200	
10522.0										10522	10535	180G			26	276	3429	24	200	
10535.0										10535	10617	ROT		70	20	283	4050	164	200	Pressure spike in rotary/1232 psi
10575.0	88.21	2.13	7246.46	3477.55	3466.78	343.28	2.02	-1.82	0.87										200	

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	Comment
10617.0										10617	10653	ROT		70	23	280	4050	180	200	
10653.0										10653	10711	ROT		70	23	280	4050	249	200	
10669.0	88.70	1.40	7249.00	3571.51	3560.70	346.17	0.94	0.52	-0.78										200	
10711.0										10711	10806	ROT		70	25	280	4050	204	200	
10764.0	88.95	1.59	7250.95	3666.48	3655.65	348.65	0.33	0.26	0.20										200	
10806.0										10806	10901	ROT		70	25	280	4050	219	200	
10859.0	88.70	1.03	7252.89	3761.45	3750.60	350.82	0.65	-0.26	-0.59										200	
10901.0										10901	10996	ROT		60	25	280	4050	211	200	
10954.0	88.58	0.81	7255.15	3856.40	3845.56	352.35	0.26	-0.13	-0.23										200	
10996.0										10996	11008	-15G			20	276	3375	40	200	First stand of night tower
11008.0										11008	11090	ROT		60	15	270	3975	289	200	Improving consistency of nutshell to help transfer weight to bottom / drastically increased ROP and gamma/res indicate Codell
11048.0	89.38	359.02	7256.82	3950.30	3939.55	352.21	2.09	0.85	-1.90										200	
11090.0										11090	11186	ROT		55	18	270	4125	339	200	Dropped rotary and increased diff to 950 to get more WOB to build angle / very strong drilling - Codell is 10ft low (7257 TVD) of target line
11144.0	89.38	359.13	7257.86	4046.15	4035.53	350.66	0.11	0.00	0.11										200	
11186.0										11186	11280	ROT		75	19	270	4125	376	200	
11238.0	89.07	359.73	7259.13	4140.03	4129.51	349.72	0.72	-0.33	0.64										200	
11280.0										11280	11375	ROT		75	19	270	4125	300	200	
11333.0	89.32	0.25	7260.47	4234.94	4224.50	349.71	0.61	0.26	0.55										200	
11375.0										11375	11409	ROT		75	21	276	4275	340	200	Blew nail on Pump 2
11409.0										11409	11470	ROT		75	18	276	4225	282	200	Switched to Pump 1

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	Comment
11428.0	89.07	0.22	7261.80	4329.88	4319.49	350.09	0.27	-0.26	-0.03										200	
11470.0										11470	11486	0G			14	270	3400	56	200	
11486.0										11486	11565	ROT		75	15	270	4100	316	200	Brought down strokes to maintain pump limiter at 4200 psi
11523.0	90.37	359.25	7262.27	4424.78	4414.49	349.66	1.71	1.37	-1.02										200	
11565.0										11565	11578	ROT		75	15	270	4100	260	200	Switch back to Pump 1 for better detection
11578.0										11578	11621	ROT		75	17	269	4175	323	200	
11618.0	90.31	359.48	7261.70	4519.66	4509.48	348.60	0.25	-0.06	0.24										200	
11621.0										11621	11660	ROT		75	17	269	4175	334	200	
11660.0										11660	11754	ROT		75	15	269	4150	282	200	
11712.0	89.94	358.94	7261.50	4613.53	4603.47	347.31	0.70	-0.39	-0.57										200	
11754.0										11754	11849	ROT		65	18	269	4175	271	200	13k torque limiter kicked out rotary; possible deflection off the bottom of the Fort Hays
11807.0	90.25	359.31	7261.34	4708.39	4698.46	345.86	0.51	0.33	0.39										200	
11849.0										11849	11944	ROT		65	14	266	4000	285	200	
11902.0	91.17	0.08	7260.16	4803.28	4793.45	345.35	1.26	0.97	0.81										200	
11944.0										11944	12038	ROT		80	14	266	4100	269	200	
11996.0	90.93	0.23	7258.44	4897.21	4887.43	345.60	0.30	-0.26	0.16										200	
12038.0										12038	12133	ROT		80	14	266	4100	271	200	
12091.0	90.86	1.13	7256.96	4992.16	4982.41	346.73	0.95	-0.07	0.95										200	
12133.0										12133	12228	ROT		80	14	266	4100	300	200	
12186.0	91.11	0.63	7255.32	5087.12	5077.39	348.19	0.59	0.26	-0.53										200	
12228.0										12228	12323	ROT		75	17	265	4050	285	200	
12281.0	90.93	0.32	7253.63	5182.06	5172.37	348.98	0.38	-0.19	-0.33										200	
12323.0										12323	12417	ROT		75	17	265	4050	297	200	
12375.0	90.80	0.76	7252.21	5276.00	5266.35	349.86	0.49	-0.14	0.47										200	
12417.0										12417	12512	ROT		75	16	250	3850	317	200	

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	
12470.0	90.99	1.27	7250.73	5370.97	5361.33	351.55	0.57	0.20	0.54										200	
12512.0										12512	12522	180G			14	266	3425	21	200	
12522.0										12522	12607	ROT		75	16	266	4025	268	200	
12565.0	90.68	1.91	7249.34	5465.95	5456.28	354.18	0.75	-0.33	0.67										200	
12607.0										12607	12627	ROT		75	16	266	4025	240	200	
12627.0										12627	12641	-160G			15	266	3350	35	200	Last stand of night tower
12641.0										12641	12702	ROT		75	16	266	4025	244	200	
12660.0	89.26	2.62	7249.39	5560.95	5551.20	357.94	1.67	-1.49	0.75										200	
12702.0										12702	12796	ROT		75	16	266	4025	235	200	
12754.0	89.26	2.51	7250.61	5654.94	5645.10	362.14	0.12	0.00	-0.12										200	
12796.0										12796	12891	ROT		75	12	266	4025	211	200	
12849.0	89.14	3.08	7251.94	5749.93	5739.98	366.77	0.61	-0.13	0.60										200	
12891.0										12891	12986	ROT		75	12	266	4025	228	200	
12944.0	89.51	3.85	7253.05	5844.90	5834.80	372.52	0.90	0.39	0.81										200	
12986.0										12986	13081	ROT		75	13	272	4050	335	200	First stand of night tower
13039.0	89.51	3.83	7253.87	5939.86	5929.58	378.88	0.02	0.00	-0.02										200	
13081.0										13081	13101	ROT		75	13	272	4050	240	200	
13101.0										13101	13115	-90G			15	272	3400	16	200	
13115.0										13115	13176	ROT		75	13	272	4050	333	200	
13134.0	89.94	5.07	7254.32	6034.78	6024.29	386.25	1.38	0.45	1.31										200	
13176.0										13176	13210	ROT		75	13	272	4050	291	200	
13210.0										13210	13228	-90G			15	272	3400	24	200	Completely unable to slide drill string / weight will not transfer to bit / trying high concentration lube sweep
13228.0										13228	13271	ROT		75	13	272	4050	215	200	
13229.0	90.43	6.23	7254.02	6129.61	6118.83	395.60	1.33	0.52	1.22										200	

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	Comment
13271.0										13271	13365	ROT		55	16	272	4050	269	200	Rolled one down without slide to check for potential offset issues / decreased rotary to attempt to reduce pull
13323.0	90.43	5.24	7253.31	6223.43	6212.35	404.99	1.05	0.00	-1.05										200	
13365.0										13365	13460	ROT		55	13	272	4150	259	200	Rolled a second one to see if results could be dublicated
13418.0	90.86	3.59	7252.24	6318.36	6307.06	412.31	1.79	0.45	-1.74										200	
13460.0										13460	13555	ROT		55	13	272	4150	173	200	
13513.0	91.36	3.53	7250.40	6413.31	6401.86	418.20	0.53	0.53	-0.06										200	
13555.0										13555	13590	ROT		55	13	272	4150	210	200	
13590.0										13590	13604	-135G			15	272	3500	10	200	Got stuck coming out of slide, had to rotate free
13604.0										13604	13672	ROT		50	13	272	4150		200	
13608.0	91.11	2.82	7248.35	6508.28	6496.69	423.46	0.79	-0.26	-0.75										200	
13672.0										13672	13682	-90G			15	291	4000	11	200	Increased flow through agitator in attempt to get weight to the bit
13682.0										13682	13695	ROT		50	13	272	4150	78	200	
13695.0										13695	13703	-90G			15	291	4000	12	200	
13702.0	88.45	0.86	7248.71	6602.26	6590.63	426.48	3.51	-2.83	-2.09										200	
13703.0										13703	13744	ROT		50	7	269	3700	154	200	
13744.0										13744	13767	ROT		50	7	269	3700	173	200	
13767.0										13767	13782	-90G			15	291	4000	32	200	Difficult to hold TF slide most likely not effective
13782.0										13782	13792	ROT		50	7	269	3700	60	200	

SURVEY										STEERING					DRILLING PARAMETERS					
Measured Depth (ft)	Incl Angle (deg)	Azi Dir (deg)	Vertical Depth (ft)	Vertical Section (ft)	Coordinates N/S (ft)	Coordinates E/W (ft)	DLS (°/100')	Build Rate (°/100')	Turn Rate (°/100')	Slide/Rotate From (ft)	Slide/Rotate To (ft)	Tool Face (deg)		RPM	WOB (klb)	Flow Rate (gpm)	Stand Pipe (psig)	ROP (fph)	Comment Run	Comment
13792.0										13792	13802	-90G			15	291	4000	30	200	Difficult to hold TF
13797.0	87.96	359.08	7251.69	6697.14	6685.58	426.43	1.94	-0.52	-1.87										200	
13802.0										13802	13839	ROT		50	7	269	3700	117	200	Rotate 10' to re-set TF
13839.0										13839	13857	-130G			15	291	4000	18	200	
13857.0										13857	13900	ROT		50	7	269	3700	117	200	
13892.0	87.96	358.65	7255.07	6791.91	6780.50	424.55	0.45	0.00	-0.45										200	
13900.0										13900	13915	0G			15	291	4000	26	200	
13915.0										13915	13934	ROT		50	7	269	3700	88	200	
13934.0										13934	13961	ROT		50	7	269	3700	147	200	
13961.0										13961	13969	0G			15	291	4000	40	200	
13969.0										13969	14029	ROT		50	7	269	3700	164	200	
13987.0	89.20	358.04	7257.43	6886.66	6875.43	421.81	1.45	1.31	-0.64										200	
14029.0										14029	14124	ROT		50	7	269	3700	178	200	
14082.0	89.81	358.25	7258.25	6981.41	6970.37	418.73	0.68	0.64	0.22										200	
14124.0										14124	14218	ROT		50	7	269	3700	125	200	
14176.0	89.88	358.75	7258.50	7075.21	7064.34	416.27	0.54	0.07	0.53										200	
14204.0	90.25	358.45	7258.47	7103.16	7092.33	415.59	1.70	1.32	-1.07										200	
14218.0										14218	14246	ROT		50	7	269	3700	84	200	TD

WARRANTY

Section 4

Contents: Daily Morning Reports

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Daily Drilling Report

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

CURRENT STATUS Report # 1 Date : 12/11/2012

Total Depth	(ft)	: 0.00	**Casing Depth**	(ft)	:	**Customer Reps**	:
Depth Last 24	(ft)	: 0.00	**Casing Diameter**	(in)	:	**Customer Reps**	:
Hole Size	(in)	:	**Casing ID**	(in)	:	**SDS Reps**	: Jesse Kysar
						SDS Reps	: Jordan Timbs
						SDS Reps	:

LAST SURVEY

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)

LAST FORMATION TOP

Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels 10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:00	24.00			12	Reamer Run

COMMENTS

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Daily Drilling Report

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

CURRENT STATUS Report # 2 Date : 12/12/2012

Total Depth	**(ft)**	: 0.00	**Casing Depth**	**(ft)**	:	**Customer Reps**	:	
Depth Last 24	**(ft)**	: 0.00	**Casing Diameter**	**(in)**	:	**Customer Reps**	:	
Hole Size	**(in)**	:	**Casing ID**	**(in)**	:	**SDS Reps**	:	Jesse Kysar
						SDS Reps	:	Jordan Timbs
						SDS Reps	:	

LAST SURVEY

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)

LAST FORMATION TOP

Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels 10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:00	24.00			12	Run casing

COMMENTS

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Daily Drilling Report

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

CURRENT STATUS Report # 3 Date : 12/13/2012

Total Depth	**(ft)**	: 0.00	**Casing Depth**	**(ft)**	:	**Customer Reps**	:	
Depth Last 24	**(ft)**	: 0.00	**Casing Diameter**	**(in)**	:	**Customer Reps**	:	
Hole Size	**(in)**	:	**Casing ID**	**(in)**	:	**SDS Reps**	:	Jesse Kysar
						SDS Reps	:	Jordan Timbs
						SDS Reps	:	

LAST SURVEY

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)

LAST FORMATION TOP

Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels 10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:00	24.00			12	Run casing

COMMENTS

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Daily Drilling Report

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

CURRENT STATUS Report # 4 Date : 12/14/2012

Total Depth	**(ft)**	: 0.00	**Casing Depth**	**(ft)**	:	**Customer Reps**	:	
Depth Last 24	**(ft)**	: 0.00	**Casing Diameter**	**(in)**	:	**Customer Reps**	:	
Hole Size	**(in)**	:	**Casing ID**	**(in)**	:	**SDS Reps**	:	Jesse Kysar
						SDS Reps	:	Jordan Timbs
						SDS Reps	:	

LAST SURVEY

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)

LAST FORMATION TOP

Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels 10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	11:00	11.00			12	cement casing
11:00	00:00	13.00			1	Nipple down Skid rig

COMMENTS

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Daily Drilling Report

Customer	: Anadarko Petroleum Corp.
Well Name	: Nichols 26C-5HZ
Job Number	: CA-XX-0009798960
Rig Name	: H&P 308
Field Name	: Wattenburg
Country	: USA

CURRENT STATUS Report # 5 Date : 12/15/2012

Total Depth	(ft)	: 3491.00	**Casing Depth**	(ft)	: 1000.00	**Customer Reps**	:
Depth Last 24	(ft)	: 2586.00	**Casing Diameter**	(in)	: 9.625	**Customer Reps**	:
Hole Size	(in)	: 0.000	**Casing ID**	(in)	: 8.281	**SDS Reps**	: Jesse Kysar
						SDS Reps	: Jordan Timbs
						SDS Reps	:

LAST SURVEY

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)
3442.00	1.24	36.61	3441.76	23.98	2.24

LAST FORMATION TOP

Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

Well: 9798960 Run: 0100 - 2164.38 ft;PDC Hughes DP505F 5x15, 6 3/4" SperryDrill Lobe 6/7 - 5.0 stg, Flex Collar, HOS, Pony Flex Collar, Flex Collar, X-Over Sub IFxXH, 21 Jts 4.5 DP, X-Over Sub, 45 Jts 4" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels 10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	02:00	2.00			14	Nipple up BOP
02:00	06:10	4.17			15	Test BOP
06:10	06:30	0.33		100	6c	Pick up Motor and make up bit
06:30	07:00	0.50		100	90	Miscellaneous rig work
07:00	07:47	0.78		100	6c	Finish picking up tools
07:47	08:30	0.72	905.00	100	6a	Trip in
08:30	11:20	2.83	905.00	100	8	Miscellaneous rig work
11:20	11:45	0.42	905.00	100	26	Drill Float
11:45	12:19	0.57	905.00	100	21	Drill cement
12:19	12:25	0.10	905.00	100	27	Drill Shoe

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
12:25	12:48	0.38	969.00	100	2a	Rotate
12:48	13:00	0.20	969.00	100	5	C/S
13:00	13:09	0.15	1061.00	100	2a	Rotate
13:09	13:19	0.17	1061.00	100	5	C/S
13:19	13:27	0.13	1153.00	100	2a	Rotate
13:27	13:42	0.25	1153.00	100	5	C/S
13:42	13:50	0.13	1245.00	100	2a	Rotate
13:50	14:00	0.17	1245.00	100	5	C/S
14:00	14:08	0.13	1337.00	100	2a	Rotate
14:08	14:18	0.17	1337.00	100	5	C/S
14:18	14:27	0.15	1429.00	100	2a	Rotate
14:27	14:37	0.17	1429.00	100	5	C/S
14:37	14:50	0.22	1521.00	100	2a	Rotate
14:50	15:00	0.17	1521.00	100	5	C/S
15:00	15:10	0.17	1613.00	100	2a	Rotate
15:10	15:18	0.13	1613.00	100	5	C/S
15:18	15:30	0.20	1705.00	100	2a	Rotate
15:30	15:42	0.20	1705.00	100	5	C/S
15:42	15:52	0.17	1797.00	100	2a	Rotate
15:52	16:03	0.18	1797.00	100	5	C/S
16:03	16:15	0.20	1889.00	100	2a	Rotate
16:15	16:25	0.17	1889.00	100	5	C/S
16:25	16:37	0.20	1981.00	100	2a	Rotate
16:37	16:48	0.18	1981.00	100	5	C/S
16:48	17:00	0.20	2072.00	100	2a	Rotate
17:00	17:10	0.17	2072.00	100	5	C/S
17:10	17:22	0.20	2164.00	100	2a	Rotate
17:22	17:34	0.20	2164.00	100	5	C/S
17:34	17:45	0.18	2259.00	100	2a	Rotate
17:45	17:55	0.17	2259.00	100	5	C/S
17:55	18:07	0.20	2354.00	100	2a	Rotate
18:07	18:31	0.40	2354.00	100	5	C/S
18:31	18:42	0.18	2448.00	100	2a	Rotate
18:42	18:56	0.23	2448.00	100	5	C/S
18:56	19:08	0.20	2543.00	100	2a	Rotate
19:08	19:17	0.15	2543.00	100	5	C/S
19:17	19:30	0.22	2638.00	100	2a	Rotate
19:30	19:37	0.12	2638.00	100	5	C/S
19:37	19:50	0.22	2733.00	100	2a	Rotate
19:50	19:57	0.12	2733.00	100	5	C/S
19:57	20:09	0.20	2827.00	100	2a	Rotate
20:09	20:20	0.18	2827.00	100	5	C/S
20:20	20:31	0.18	2922.00	100	2a	Rotate

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
20:31	20:38	0.12	2922.00	100	5	C/S
20:38	20:53	0.25	3017.00	100	2a	Rotate
20:53	21:00	0.12	3017.00	100	5	C/S
21:00	21:14	0.23	3112.00	100	2a	Rotate
21:14	21:22	0.13	3112.00	100	5	C/S
21:22	21:36	0.23	3207.00	100	2a	Rotate
21:36	21:54	0.30	3207.00	100	5	C/S
21:54	22:11	0.28	3302.00	100	2a	Rotate
22:11	22:28	0.28	3302.00	100	5	C/S
22:28	22:44	0.27	3396.00	100	2a	Rotate
22:44	22:53	0.15	3396.00	100	5	C/S
22:53	23:10	0.28	3491.00	100	2a	Rotate
23:10	00:00	0.83	3491.00	100	8	Down for pumps

COMMENTS

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Daily Drilling Report

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

CURRENT STATUS Report # 6 Date : 12/16/2012

Total Depth	(ft)	: 4248.00	**Casing Depth**	(ft)	: 1000.00	**Customer Reps**	:	
Depth Last 24	(ft)	: 757.00	**Casing Diameter**	(in)	: 9.625	**Customer Reps**	:	
Hole Size	(in)	: 0.000	**Casing ID**	(in)	: 8.281	**SDS Reps**	:	Jesse Kysar
						SDS Reps	:	Jordan Timbs
						SDS Reps	:	

LAST SURVEY

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)
4199.00	7.79	116.79	4196.39	62.32	2.24

LAST FORMATION TOP

Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

Well: 9798960 Run: 0100 - 2164.38 ft;PDC Hughes DP505F 5x15, 6 3/4" SperryDrill Lobe 6/7 - 5.0 stg, Flex Collar, HOS, Pony Flex Collar, Flex Collar, X-Over Sub IFxXH, 21 Jts 4.5 DP, X-Over Sub, 45 Jts 4" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels 10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	01:02	1.03	3491.00	100	8	Down for pumps
01:02	01:06	0.07	3491.00	100	5	C/S
01:06	01:23	0.28	3557.00	100	2a	Rotate
01:23	19:37	18.23	3557.00	100	8	Trip to shoe / repair top drive / trip in
19:37	19:44	0.12	3586.00	100	2a	Rotate
19:44	19:52	0.13	3586.00	100	5	C/S
19:52	20:07	0.25	3679.00	100	2a	Rotate
20:07	20:14	0.12	3679.00	100	5	C/S
20:14	20:29	0.25	3689.00	100	2b	Slide 10' @ 110M
20:29	20:44	0.25	3774.00	100	2a	Rotate

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
20:44	20:51	0.12	3774.00	100	5	C/S
20:51	21:03	0.20	3786.00	100	2b	Slide 12' @ 110M
21:03	21:19	0.27	3869.00	100	2a	Rotate
21:19	21:26	0.12	3869.00	100	5	C/S
21:26	21:41	0.25	3885.00	100	2b	Slide 16' @ 110M
21:41	21:51	0.17	3885.00	100	5	Reshoot survey
21:51	22:06	0.25	3964.00	100	2a	Rotate
22:06	22:18	0.20	3964.00	100	5	C/S
22:18	22:40	0.37	3982.00	100	2b	Slide 18' @ 110M
22:40	22:53	0.22	4059.00	100	2a	Rotate
22:53	23:01	0.13	4059.00	100	5	C/S
23:01	23:18	0.28	4079.00	100	2b	Slide 20' @ 15R
23:18	23:31	0.22	4154.00	100	2a	Rotate
23:31	23:41	0.17	4154.00	100	5	C/S
23:41	23:57	0.27	4248.00	100	2a	Rotate
23:57	00:00	0.05	4248.00	100	5	C/S

COMMENTS

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Daily Drilling Report

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

CURRENT STATUS Report # 7 Date : 12/17/2012

Total Depth	(ft)	: 6995.00	**Casing Depth**	(ft)	: 1000.00	**Customer Reps**	:	
Depth Last 24	(ft)	: 2747.00	**Casing Diameter**	(in)	: 9.625	**Customer Reps**	:	
Hole Size	(in)	: 0.000	**Casing ID**	(in)	: 8.281	**SDS Reps**	:	Jordan Timbs
						SDS Reps	:	
						SDS Reps	:	

LAST SURVEY

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)
6978.00	34.06	0.47	6933.95	327.76	2.24

LAST FORMATION TOP

Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

Well: 9798960 Run: 0100 - 2164.38 ft;PDC Hughes DP505F 5x15, 6 3/4" SperryDrill Lobe 6/7 - 5.0 stg, Flex Collar, HOS, Pony Flex Collar, Flex Collar, X-Over Sub IFxXH, 21 Jts 4.5 DP, X-Over Sub, 45 Jts 4" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels 10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:05	0.08	4248.00	100	5	C/S
00:05	00:23	0.30	4343.00	100	2a	Rotate
00:23	00:30	0.12	4343.00	100	5	C/S
00:30	00:45	0.25	4365.00	100	2b	Slide 22' @ HS
00:45	00:57	0.20	4438.00	100	2a	Rotate
00:57	01:05	0.13	4438.00	100	5	C/S
01:05	01:19	0.23	4532.00	100	2a	Rotate
01:19	01:27	0.13	4532.00	100	5	C/S
01:27	01:41	0.23	4626.00	100	2a	Rotate
01:41	01:48	0.12	4626.00	100	5	C/S

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
01:48	02:13	0.42	4648.00	100	2b	Slide 22' @ 30R
02:13	02:25	0.20	4721.00	100	2a	Rotate
02:25	02:34	0.15	4721.00	100	5	C/S
02:34	02:45	0.18	4730.00	100	2b	Slide 9' @ 90R
02:45	02:59	0.23	4816.00	100	2a	Rotate
02:59	03:15	0.27	4816.00	100	5	C/S
03:15	03:30	0.25	4911.00	100	2a	Rotate
03:30	03:39	0.15	4911.00	100	5	C/S
03:39	03:55	0.27	5005.00	100	2a	Rotate
03:55	04:08	0.22	5005.00	100	5	C/S
04:08	04:43	0.58	5100.00	100	2a	Rotate
04:43	04:52	0.15	5100.00	100	5	C/S
04:52	05:34	0.70	5122.00	100	2b	Slide 22' @ 20R
05:34	05:50	0.27	5195.00	100	2a	Rotate
05:50	06:04	0.23	5195.00	100	5	C/S
06:04	06:25	0.35	5290.00	100	2a	Rotate
06:25	06:34	0.15	5290.00	100	5	C/S
06:34	06:50	0.27	5310.00	100	2b	Slide 20' @ HS
06:50	07:11	0.35	5385.00	100	2a	Rotate
07:11	07:21	0.17	5385.00	100	5	C/S
07:21	07:41	0.33	5479.00	100	2a	Rotate
07:41	07:50	0.15	5479.00	100	5	C/S
07:50	07:58	0.13	5479.00	100	90	Mis rig work
07:58	08:23	0.42	5574.00	100	2a	Rotate
08:23	08:32	0.15	5574.00	100	5	C/S
08:32	09:02	0.50	5594.00	100	2b	Slide 20' @ HS
09:02	09:20	0.30	5669.00	100	2a	Rotate
09:20	09:29	0.15	5669.00	100	5	C/S
09:29	09:51	0.37	5763.00	100	2a	Rotate
09:51	10:00	0.15	5763.00	100	5	C/S
10:00	10:25	0.42	5783.00	100	2b	Slide 20' @ HS
10:25	10:44	0.32	5858.00	100	2a	Rotate
10:44	10:54	0.17	5858.00	100	5	C/S
10:54	11:20	0.43	5953.00	100	2a	Rotate
11:20	11:35	0.25	5953.00	100	5	C/S
11:35	12:04	0.48	5973.00	100	2b	Slide 20' @ HS
12:04	12:31	0.45	6048.00	100	2a	Rotate
12:31	12:42	0.18	6048.00	100	5	C/S
12:42	13:06	0.40	6142.00	100	2a	Rotate
13:06	13:16	0.17	6142.00	100	5	C/S
13:16	13:33	0.28	6237.00	100	2a	Rotate
13:33	13:44	0.18	6237.00	100	5	C/S
13:44	13:54	0.17	6247.00	100	2b	Slide 10' LS

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
13:54	14:13	0.32	6332.00	100	2a	Rotate
14:13	14:25	0.20	6332.00	100	5	C/S
14:25	14:45	0.33	6427.00	100	2a	Rotate
14:45	14:55	0.17	6427.00	100	5	C/S
14:55	15:07	0.20	6434.00	100	2b	Slide 7' @ 290M
15:07	15:27	0.33	6521.00	100	2a	Rotate
15:27	15:40	0.22	6521.00	100	5	C/S
15:40	16:04	0.40	6616.00	100	2a	Rotate
16:04	16:13	0.15	6616.00	100	5	C/S
16:13	16:22	0.15	6649.00	100	2a	Rotate
16:22	18:29	2.12	6711.00	100	2b	Slide 62' @ 0M
18:29	18:50	0.35	6711.00	100	5	C/S
18:50	19:18	0.47	6740.00	100	2b	Slide 29' @ 0M/0G
19:18	19:22	0.07	6742.00	100	2a	Rotate
19:22	19:28	0.10	6742.00	100	5	Survey
19:28	19:30	0.03	6743.00	100	2a	Rotate
19:30	20:14	0.73	6771.00	100	2b	Slide 28'
20:14	20:16	0.03	6774.00	100	2a	Rotate
20:16	20:19	0.05	6774.00	100	5	Survey
20:19	20:41	0.37	6801.00	100	2b	Slide 27'
20:41	20:44	0.05	6806.00	100	2a	Rotate
20:44	20:53	0.15	6806.00	100	5	C/S
20:53	21:15	0.37	6832.00	100	2b	Slide 26'
21:15	21:19	0.07	6837.00	100	2a	Rotate
21:19	21:28	0.15	6837.00	100	5	Survey
21:28	21:44	0.27	6863.00	100	2b	Slide 26'
21:44	21:46	0.03	6869.00	100	2a	Rotate
21:46	21:57	0.18	6869.00	100	5	Survey
21:57	22:16	0.32	6895.00	100	2b	Slide 26'
22:16	22:18	0.03	6900.00	100	2a	Rotate
22:18	22:28	0.17	6900.00	100	5	C/S
22:28	22:44	0.27	6926.00	100	2b	Slide 26'
22:44	22:47	0.05	6932.00	100	2a	Rotate
22:47	22:56	0.15	6932.00	100	5	Survey
22:56	23:13	0.28	6955.00	100	2b	Slide 23'
23:13	23:16	0.05	6963.00	100	2a	Rotate
23:16	23:28	0.20	6963.00	100	5	Survey
23:28	23:45	0.28	6981.00	100	2b	Slide 18'
23:45	00:00	0.25	6995.00	100	2a	Rotate

COMMENTS

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Daily Drilling Report

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

CURRENT STATUS Report # 8 Date : 12/18/2012

Total Depth	(ft)	: 7589.00	**Casing Depth**	(ft)	: 1000.00	**Customer Reps**	:	
Depth Last 24	(ft)	: 594.00	**Casing Diameter**	(in)	: 9.625	**Customer Reps**	:	
Hole Size	(in)	: 0.000	**Casing ID**	(in)	: 8.281	**SDS Reps**	:	Jeff Nicholas
						SDS Reps	:	Jordan Timbs
						SDS Reps	:	

LAST SURVEY

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)
7540.00	84.48	0.49	7244.90	546.71	2.24

LAST FORMATION TOP

Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

Well: 9798960 Run: 0100 - 2164.38 ft;PDC Hughes DP505F 5x15, 6 3/4" SperryDrill Lobe 6/7 - 5.0 stg, Flex Collar, HOS, Pony Flex Collar, Flex Collar, X-Over Sub IFxXH, 21 Jts 4.5 DP, X-Over Sub, 45 Jts 4" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels 10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:12	0.20	6995.00	100	5	C/S
00:12	00:29	0.28	7010.00	100	2b	Slide 15'
00:29	00:41	0.20	7027.00	100	2a	Rotate
00:41	01:03	0.37	7027.00	100	5	Survey
01:03	01:19	0.27	7042.00	100	2b	Slide 15'
01:19	01:28	0.15	7058.00	100	2a	Rotate
01:28	01:34	0.10	7058.00	100	5	C/S
01:34	02:05	0.52	7073.00	100	2b	Slide 15'
02:05	02:16	0.18	7090.00	100	2a	Rotate
02:16	02:28	0.20	7090.00	100	5	Survey

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
02:28	02:45	0.28	7121.00	100	2a	Rotate
02:45	02:52	0.12	7121.00	100	5	C/S
02:52	03:43	0.85	7141.00	100	2b	Slide 20'
03:43	03:48	0.08	7153.00	100	2a	Rotate
03:48	03:55	0.12	7153.00	100	5	Survey
03:55	04:22	0.45	7179.00	100	2b	Slide 26'
04:22	04:26	0.07	7184.00	100	2a	Rotate
04:26	04:40	0.23	7184.00	100	5	C/S
04:40	05:23	0.72	7207.00	100	2b	Slide 23'
05:23	05:28	0.08	7216.00	100	2a	Rotate
05:28	05:35	0.12	7216.00	100	5	Survey
05:35	06:07	0.53	7233.00	100	2b	Slide 17'
06:07	06:13	0.10	7247.00	100	2a	Rotate
06:13	06:30	0.28	7247.00	100	5	Survey
06:30	06:53	0.38	7265.00	100	2b	18' @ HS
06:53	07:05	0.20	7279.00	100	2a	Rotate
07:05	07:27	0.37	7279.00	100	5	C/S
07:27	07:52	0.42	7301.00	100	2b	22' @ HS
07:52	08:04	0.20	7310.00	100	2a	Rotate
08:04	08:13	0.15	7310.00	100	5	Survey
08:13	08:50	0.62	7337.00	100	2b	27' @ 10L
08:50	08:56	0.10	7342.00	100	2a	Rotate
08:56	09:06	0.17	7342.00	100	5	Survey
09:06	09:54	0.80	7368.00	100	2b	26' @ 10L
09:54	09:59	0.08	7374.00	100	2a	Rotate
09:59	10:23	0.40	7374.00	100	5	C/S
10:23	11:04	0.68	7401.00	100	2b	27' @ 10R
11:04	11:10	0.10	7405.00	100	2a	Rotate
11:10	11:20	0.17	7405.00	100	5	Survey
11:20	12:01	0.68	7435.00	100	2b	30' @ 10R
12:01	12:07	0.10	7437.00	100	2a	Rotate
12:07	12:15	0.13	7437.00	100	5	C/S
12:15	12:51	0.60	7462.00	100	2b	25' @ HS
12:51	12:56	0.08	7469.00	100	2a	Rotate
12:56	13:17	0.35	7469.00	100	5	C/S
13:17	14:04	0.78	7496.00	100	2b	27' @ 20L
14:04	14:09	0.08	7500.00	100	2a	Rotate
14:09	14:34	0.42	7500.00	100	5	Survey
14:34	14:56	0.37	7516.00	100	2b	16' @ 10L
14:56	15:07	0.18	7518.00	100	2a	Check Shot
15:07	15:29	0.37	7532.00	100	2a	Rotate
15:29	15:53	0.40	7532.00	100	5	Survey
15:53	16:16	0.38	7564.00	100	2b	28' @ HS

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
16:16	16:25	0.15	7564.00	100	5	C/S
16:25	16:51	0.43	7564.00	100	8	Rig Repair
16:51	17:11	0.33	7589.00	100	2b	21' @ HS/TD
17:11	17:20	0.15	7589.00	100	5	Survey
17:20	18:58	1.63	7589.00	100	5	Pump high vis sweep
18:58	22:20	3.37	7589.00	100	6e	TOOH
22:20	23:20	1.00	7589.00	100	6c	LD tools
23:20	00:00	0.67	7589.00	100	12	Casing break

COMMENTS

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Daily Drilling Report

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

CURRENT STATUS Report # 9 Date : 12/19/2012

Total Depth	**(ft)**	: 7589.00	**Casing Depth**	**(ft)**	: 1000.00	**Customer Reps**	: Levi Hancock
Depth Last 24	**(ft)**	: 0.00	**Casing Diameter**	**(in)**	: 9.625	**Customer Reps**	: Terry Bradshaw
Hole Size	**(in)**	: 0.000	**Casing ID**	**(in)**	: 8.281	**SDS Reps**	: Jeff Nicholas
						SDS Reps	: Jordan Timbs
						SDS Reps	:

LAST SURVEY

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)
7540.00	84.48	0.49	7244.90	546.71	2.24

LAST FORMATION TOP

Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

Well: 9798960 Run: 0100 - 2164.38 ft;PDC Hughes DP505F 5x15, 6 3/4" SperryDrill Lobe 6/7 - 5.0 stg, Flex Collar, HOS, Pony Flex Collar, Flex Collar, X-Over Sub IFxXH, 21 Jts 4.5 DP, X-Over Sub, 45 Jts 4" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels 10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:00	24.00	7589.00	100	12	Casing break

COMMENTS

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Daily Drilling Report

Customer	: Anadarko Petroleum Corp.
Well Name	: Nichols 26C-5HZ
Job Number	: CA-XX-0009798960
Rig Name	: H&P 308
Field Name	: Wattenburg
Country	: USA

CURRENT STATUS Report # 10 Date : 12/20/2012

Total Depth	(ft)	: 8762.00	**Casing Depth**	(ft)	: 7577.00	**Customer Reps**	: Levi Hancock
Depth Last 24	(ft)	: 1173.00	**Casing Diameter**	(in)	: 7.000	**Customer Reps**	: Terry Bradshaw
Hole Size	(in)	: 0.000	**Casing ID**	(in)	: 6.652	**SDS Reps**	: Jeff Nicholas
						SDS Reps	: Jordan Timbs
						SDS Reps	:

LAST SURVEY

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)
8720.00	91.17	1.40	7236.84	1644.92	2.24

LAST FORMATION TOP

Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

Well: 9798960 Run: 0100 - 2164.38 ft;PDC Hughes DP505F 5x15, 6 3/4" SperryDrill Lobe 6/7 - 5.0 stg, Flex Collar, HOS, Pony Flex Collar, Flex Collar, X-Over Sub IFxXH, 21 Jts 4.5 DP, X-Over Sub, 45 Jts 4" HWDP
Well: 9798960 Run: 0200 - 10333.91 ft;Security PDC FXD54 5x16's, 5" GeoForce Lobe 5/6 - 9.1 stg, Pony Collar, Inline Stabilizer (ILS), TM, X-Over Sub, 2 JTS 4" DP, Ghost Reamer, 60 JTS 4" DP, Agitator, Shock Sub, 171 JTS 4" DP, 93 JTS 4" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels 10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	02:00	2.00	7589.00	100	12	Casing break
02:00	04:25	2.42	7589.00	200	6c	PU tools
04:25	05:25	1.00	7589.00	200	30d	MWD download
05:25	07:00	1.58	7589.00	200	6a	TIH
07:00	07:30	0.50	7589.00	200	5	Test MWD
07:30	12:20	4.83	7589.00	200	6a	TIH/Contact Cement
12:20	14:16	1.93	7589.00	200	21	Drill Cement/Shoe @ 7577
14:16	15:30	1.23	7660.00	200	2a	Rotate

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
15:30	15:40	0.17	7660.00	200	5	C/S
15:40	16:03	0.38	7737.00	200	2a	Rotate
16:03	16:21	0.30	7737.00	200	8	Compressor Down
16:21	16:28	0.12	7752.00	200	2a	Rotate
16:28	16:39	0.18	7752.00	200	5	C/S
16:39	17:07	0.47	7844.00	200	2a	Rotate
17:07	17:17	0.17	7844.00	200	5	C/S
17:17	17:53	0.60	7935.00	200	2a	Rotate
17:53	18:03	0.17	7935.00	200	5	C/S
18:03	18:37	0.57	8027.00	200	2a	Rotate
18:37	18:46	0.15	8027.00	200	5	C/S
18:46	19:08	0.37	8119.00	200	2a	Rotate
19:08	19:17	0.15	8119.00	200	5	C/S
19:17	19:39	0.37	8211.00	200	2a	Rotate
19:39	19:47	0.13	8211.00	200	5	C/S
19:47	19:59	0.20	8217.00	200	2b	Slide 6' @ 150R
19:59	20:19	0.33	8303.00	200	2a	Rotate
20:19	20:26	0.12	8303.00	200	5	C/S
20:26	20:36	0.17	8310.00	200	2b	Slide 7' @ 135R
20:36	20:54	0.30	8395.00	200	2a	Rotate
20:54	21:02	0.13	8395.00	200	5	C/S
21:02	21:30	0.47	8484.00	200	2a	Rotate
21:30	21:38	0.13	8484.00	200	5	C/S
21:38	22:06	0.47	8578.00	200	2a	Rotate
22:06	22:20	0.23	8578.00	200	5	C/S
22:20	22:33	0.22	8592.00	200	2b	Slide 14' @ 160R
22:33	22:54	0.35	8670.00	200	2a	Rotate
22:54	23:03	0.15	8670.00	200	5	C/S
23:03	23:17	0.23	8685.00	200	2b	Slide 15' @ 160R
23:17	23:40	0.38	8762.00	200	2a	Rotate
23:40	23:53	0.22	8762.00	200	7	Rig service
23:53	00:00	0.12	8762.00	200	5	C/S/Slow pumps

COMMENTS

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Daily Drilling Report

Customer	: Anadarko Petroleum Corp.
Well Name	: Nichols 26C-5HZ
Job Number	: CA-XX-0009798960
Rig Name	: H&P 308
Field Name	: Wattenburg
Country	: USA

CURRENT STATUS Report # 11 Date : 12/21/2012

Total Depth	(ft)	: 11621.00	**Casing Depth**	(ft)	: 7577.00	**Customer Reps**	: Levi Hancock
Depth Last 24	(ft)	: 2859.00	**Casing Diameter**	(in)	: 7.000	**Customer Reps**	: Terry Bradshaw
Hole Size	(in)	: 0.000	**Casing ID**	(in)	: 6.652	**SDS Reps**	: Jeff Nicholas
						SDS Reps	: Jordan Timbs
						SDS Reps	:

LAST SURVEY

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)
11618.00	90.31	359.48	7261.70	4522.93	2.24

LAST FORMATION TOP

Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

Well: 9798960 Run: 0200 - 10333.91 ft;Security PDC FXD54 5x16's, 5" GeoForce Lobe 5/6 - 9.1 stg, Pony Collar, Inline Stabilizer (ILS), TM, X-Over Sub, 2 JTS 4" DP, Ghost Reamer, 60 JTS 4" DP, Agitator, Shock Sub, 171 JTS 4" DP, 93 JTS 4" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels 10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:10	0.17	8762.00	200	5	C/S/Fix stroke counter
00:10	00:29	0.32	8782.00	200	2b	Slide 20' @ LS
00:29	00:48	0.32	8854.00	200	2a	Rotate
00:48	00:59	0.18	8854.00	200	5	C/S
00:59	01:31	0.53	8946.00	200	2a	Rotate
01:31	01:39	0.13	8946.00	200	5	C/S
01:39	02:01	0.37	9037.00	200	2a	Rotate
02:01	02:06	0.08	9037.00	200	3a	Back ream
02:06	02:13	0.12	9037.00	200	5	C/S
02:13	02:41	0.47	9129.00	200	2a	Rotate

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
02:41	02:49	0.13	9129.00	200	5	C/S
02:49	03:18	0.48	9221.00	200	2a	Rotate
03:18	03:26	0.13	9221.00	200	5	C/S
03:26	03:56	0.50	9313.00	200	2a	Rotate
03:56	04:11	0.25	9313.00	200	5	C/S
04:11	04:21	0.17	9323.00	200	2b	Slide 10' @ 50R
04:21	04:59	0.63	9405.00	200	2a	Rotate
04:59	05:09	0.17	9405.00	200	5	C/S
05:09	05:36	0.45	9497.00	200	2a	Rotate
05:36	05:45	0.15	9497.00	200	5	C/S
05:45	06:04	0.32	9515.00	200	2b	Slide 18' @ 120R
06:04	06:17	0.22	9589.00	200	2a	Rotate
06:17	06:29	0.20	9589.00	200	5	C/S
06:29	06:54	0.42	9681.00	200	2a	Rotate
06:54	07:11	0.28	9681.00	200	5	C/S
07:11	07:31	0.33	9701.00	200	2b	20' @ 120R
07:31	07:50	0.32	9773.00	200	2a	Rotate
07:50	08:00	0.17	9773.00	200	5	C/S
08:00	08:26	0.43	9864.00	200	2a	Rotate
08:26	08:35	0.15	9864.00	200	5	C/S
08:35	08:54	0.32	9876.00	200	2b	12' @ 180/Target Change
08:54	09:08	0.23	9927.00	200	2a	Rotate
09:08	09:13	0.08	9927.00	200	5	Check Shot
09:13	09:29	0.27	9937.00	200	2b	Same Stand 10' @ 180
09:29	09:36	0.12	9956.00	200	2a	Rotate
09:36	09:45	0.15	9956.00	200	5	C/S
09:45	10:11	0.43	9969.00	200	2b	13' @ 180
10:11	10:35	0.40	10048.00	200	2a	Rotate
10:35	10:45	0.17	10048.00	200	5	C/S
10:45	11:11	0.43	10143.00	200	2a	Rotate
11:11	11:20	0.15	10143.00	200	5	C/S
11:20	11:48	0.47	10238.00	200	2a	Rotate
11:48	12:05	0.28	10238.00	200	5	C/S
12:05	12:29	0.40	10333.00	200	2a	Rotate
12:29	12:39	0.17	10333.00	200	5	C/S
12:39	13:06	0.45	10427.00	200	2a	Rotate
13:06	13:16	0.17	10427.00	200	5	C/S
13:16	13:38	0.37	10438.00	200	2b	11' @ 180/Target Change
13:38	14:05	0.45	10522.00	200	2a	Rotate
14:05	14:20	0.25	10522.00	200	5	C/S
14:20	14:53	0.55	10535.00	200	2b	13' @ 180
14:53	15:23	0.50	10617.00	200	2a	Rotate
15:23	15:33	0.17	10617.00	200	5	C/S

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
15:33	15:45	0.20	10653.00	200	2a	Rotate
15:45	16:03	0.30	10653.00	200	8	Rig Repair
16:03	16:17	0.23	10711.00	200	2a	Rotate
16:17	16:26	0.15	10711.00	200	5	C/S
16:26	16:54	0.47	10806.00	200	2a	Rotate
16:54	17:10	0.27	10806.00	200	5	C/S
17:10	17:36	0.43	10901.00	200	2a	Rotate
17:36	17:46	0.17	10901.00	200	5	C/S
17:46	18:13	0.45	10996.00	200	2a	Rotate
18:13	18:24	0.18	10996.00	200	5	C/S
18:24	18:42	0.30	11008.00	200	2b	Slide 12' @ 15L
18:42	18:59	0.28	11090.00	200	2a	Rotate
18:59	19:08	0.15	11090.00	200	5	C/S
19:08	19:25	0.28	11186.00	200	2a	Rotate
19:25	21:09	1.73	11186.00	200	33a	Hole cleaning at 4000+' VS
21:09	21:16	0.12	11186.00	200	5	C/S
21:16	21:31	0.25	11280.00	200	2a	Rotate
21:31	21:39	0.13	11280.00	200	5	C/S
21:39	21:58	0.32	11375.00	200	2a	Rotate
21:58	22:06	0.13	11375.00	200	5	C/S
22:06	22:12	0.10	11409.00	200	2a	Rotate
22:12	22:21	0.15	11409.00	200	8	Blew a nail on pump 2
22:21	22:34	0.22	11470.00	200	2a	Rotate
22:34	22:41	0.12	11470.00	200	5	C/S
22:41	22:58	0.28	11486.00	200	2b	Slide 16' @ HS
22:58	23:13	0.25	11565.00	200	2a	Rotate
23:13	23:26	0.22	11565.00	200	7	Rig service / SPR on Pump 1
23:26	23:37	0.18	11565.00	200	5	C/S
23:37	23:41	0.07	11565.00	200	5	SPR on Pump 2
23:41	23:44	0.05	11578.00	200	2a	Rotate
23:44	23:52	0.13	11578.00	200	90	Swap pumps
23:52	00:00	0.13	11621.00	200	2a	Rotate

COMMENTS

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Daily Drilling Report

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

CURRENT STATUS Report # 12 Date : 12/22/2012

Total Depth	(ft)	: 13460.00	**Casing Depth**	(ft)	: 7577.00	**Customer Reps**	: Levi Hancock
Depth Last 24	(ft)	: 1839.00	**Casing Diameter**	(in)	: 7.000	**Customer Reps**	: Terry Bradshaw
Hole Size	(in)	: 0.000	**Casing ID**	(in)	: 6.652	**SDS Reps**	: Jeff Nicholas
						SDS Reps	: Jordan Timbs
						SDS Reps	:

LAST SURVEY

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)
13418.00	90.86	3.59	7252.24	6320.52	2.24

LAST FORMATION TOP

Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

Well: 9798960 Run: 0200 - 10333.91 ft;Security PDC FXD54 5x16's, 5" GeoForce Lobe 5/6 - 9.1 stg, Pony Collar, Inline Stabilizer (ILS), TM, X-Over Sub, 2 JTS 4" DP, Ghost Reamer, 60 JTS 4" DP, Agitator, Shock Sub, 171 JTS 4" DP, 93 JTS 4" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels 10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:07	0.12	11660.00	200	2a	Rotate
00:07	00:15	0.13	11660.00	200	5	C/S
00:15	00:35	0.33	11754.00	200	2a	Rotate
00:35	00:46	0.18	11754.00	200	5	C/S
00:46	01:07	0.35	11849.00	200	2a	Rotate
01:07	01:19	0.20	11849.00	200	5	C/S
01:19	01:39	0.33	11944.00	200	2a	Rotate
01:39	01:46	0.12	11944.00	200	5	C/S
01:46	02:07	0.35	12038.00	200	2a	Rotate
02:07	02:18	0.18	12038.00	200	5	C/S

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
02:18	02:39	0.35	12133.00	200	2a	Rotate
02:39	02:46	0.12	12133.00	200	5	C/S
02:46	03:05	0.32	12228.00	200	2a	Rotate
03:05	03:12	0.12	12228.00	200	5	C/S
03:12	03:32	0.33	12323.00	200	2a	Rotate
03:32	03:40	0.13	12323.00	200	5	C/S
03:40	03:59	0.32	12417.00	200	2a	Rotate
03:59	04:07	0.13	12417.00	200	5	C/S
04:07	04:25	0.30	12512.00	200	2a	Rotate
04:25	04:33	0.13	12512.00	200	5	C/S
04:33	05:01	0.47	12522.00	200	2b	Slide 10' @ LS
05:01	05:20	0.32	12607.00	200	2a	Rotate
05:20	05:28	0.13	12607.00	200	5	C/S
05:28	05:33	0.08	12627.00	200	2a	Rotate
05:33	05:57	0.40	12641.00	200	2b	Slide 14' @ 160L
05:57	06:12	0.25	12702.00	200	2a	Rotate
06:12	06:22	0.17	12702.00	200	5	C/S
06:22	06:46	0.40	12796.00	200	2a	Rotate
06:46	06:56	0.17	12796.00	200	5	C/S
06:56	07:23	0.45	12891.00	200	2a	Rotate
07:23	07:32	0.15	12891.00	200	5	C/S
07:32	07:57	0.42	12986.00	200	2a	Rotate
07:57	10:04	2.12	12986.00	200	5	Circulate to clean hole
10:04	13:11	3.12	12986.00	200	6d	Short trip to shoe
13:11	14:30	1.32	12986.00	200	9	CDL
14:30	20:01	5.52	12986.00	200	6d	TIH
20:01	20:12	0.18	12986.00	200	5	C/S
20:12	20:29	0.28	13081.00	200	2a	Rotate
20:29	20:37	0.13	13081.00	200	5	C/S
20:37	20:42	0.08	13101.00	200	2a	Rotate
20:42	21:33	0.85	13115.00	200	2b	Slide 14' @ 90L
21:33	21:44	0.18	13176.00	200	2a	Rotate
21:44	21:52	0.13	13176.00	200	5	C/S
21:52	21:59	0.12	13210.00	200	2a	Rotate
21:59	22:44	0.75	13228.00	200	2b	Slide 18' @ 90L
22:44	22:56	0.20	13271.00	200	2a	Rotate
22:56	23:07	0.18	13271.00	200	5	C/S
23:07	23:28	0.35	13365.00	200	2a	Rotate
23:28	23:38	0.17	13365.00	200	5	C/S
23:38	00:00	0.37	13460.00	200	2a	Rotate

COMMENTS

HALLIBURTON | Sperry Drilling

WELL INFORMATION

Daily Drilling Report

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

CURRENT STATUS Report # 13 Date : 12/23/2012

Total Depth	(ft)	: 14246.00	**Casing Depth**	(ft)	: 7577.00	**Customer Reps**	: Levi Hancock
Depth Last 24	(ft)	: 786.00	**Casing Diameter**	(in)	: 7.000	**Customer Reps**	: Terry Bradshaw
Hole Size	(in)	: 0.000	**Casing ID**	(in)	: 6.652	**SDS Reps**	: Jeff Nicholas
						SDS Reps	: Jordan Timbs
						SDS Reps	:

LAST SURVEY

Depth (ft)	Inc (deg)	Azi (deg)	TVD (ft)	Displ (ft)	Direct (deg)
14204.00	90.25	358.45	7258.47	7104.50	2.24

LAST FORMATION TOP

Formation Name	MD Top (ft)	TVD Top (ft)

BHA SUMMARY

Well: 9798960 Run: 0200 - 10333.91 ft;Security PDC FXD54 5x16's, 5" GeoForce Lobe 5/6 - 9.1 stg, Pony Collar, Inline Stabilizer (ILS), TM, X-Over Sub, 2 JTS 4" DP, Ghost Reamer, 60 JTS 4" DP, Agitator, Shock Sub, 171 JTS 4" DP, 93 JTS 4" HWDP

MUD DATA

Type	Weight (ppg)	FV (spqt)	PV (cP)	YP (lhf2)	Gels 10 sec	10 Min	30 sec	30 min	(lhf2)

Flowline	Weight Out (ppg)	FV Out (spqt)	Solids (%)	Sand (%)	Oil (%)	Fluid Loss (mptm)	pH

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
00:00	00:09	0.15	13460.00	200	5	C/S
00:09	00:18	0.15	13460.00	200	5	SPR
00:18	00:51	0.55	13555.00	200	2a	Rotate
00:51	01:01	0.17	13555.00	200	5	C/S
01:01	01:11	0.17	13590.00	200	2a	Rotate
01:11	02:36	1.42	13604.00	200	2b	Slide 14' @ 135L
02:36	02:53	0.28	13650.00	200	2a	Rotate
02:53	03:01	0.13	13650.00	200	5	C/S
03:01	03:12	0.18	13672.00	200	2a	Rotate
03:12	04:05	0.88	13682.00	200	2b	Slide 10' @ 90L

TIME BREAKDOWN

From	To	Hours	TMD (ft)	Run	Activity	Activity Description
04:05	04:15	0.17	13695.00	200	2a	Rotate
04:15	04:54	0.65	13703.00	200	2b	Slide 8' @ 90L
04:54	05:10	0.27	13744.00	200	2a	Rotate
05:10	05:19	0.15	13744.00	200	5	C/S
05:19	05:27	0.13	13767.00	200	2a	Rotate
05:27	05:51	0.40	13767.00	200	5	Orient TF
05:51	06:19	0.47	13782.00	200	2b	15' @ 90L/Difficult to hold TF slide most likely not effective
06:19	06:29	0.17	13792.00	200	2a	Rotate 10' to re-set TF
06:29	06:49	0.33	13802.00	200	2b	10' @ 60L/Difficult to hold TF
06:49	07:08	0.32	13839.00	200	2a	Rotate
07:08	07:19	0.18	13839.00	200	5	C/S
07:19	08:19	1.00	13857.00	200	2b	18' @ 130L
08:19	08:41	0.37	13900.00	200	2a	Rotate
08:41	08:45	0.07	13900.00	200	5	Check Shot
08:45	09:20	0.58	13915.00	200	2b	15' @ HS
09:20	09:33	0.22	13934.00	200	2a	Rotate
09:33	09:42	0.15	13934.00	200	5	C/S
09:42	09:53	0.18	13961.00	200	2a	Rotate
09:53	09:59	0.10	13961.00	200	5	Check Shot
09:59	10:11	0.20	13969.00	200	2b	8' @ HS
10:11	10:33	0.37	14029.00	200	2a	Rotate
10:33	10:44	0.18	14029.00	200	5	C/S
10:44	11:16	0.53	14124.00	200	2a	Rotate
11:16	11:18	0.03	14124.00	200	5	C/S
11:18	12:03	0.75	14218.00	200	2a	Rotate
12:03	12:13	0.17	14218.00	200	5	C/S
12:13	12:33	0.33	14246.00	200	2a	Rotate/TD
12:33	12:39	0.10	14246.00	200	5	C/S
12:39	22:00	9.35	14246.00	200	6b	TOOH
22:00	22:24	0.40	14246.00	200	6e	TOOH
22:24	23:07	0.72	14246.00	200	30d	MWD download
23:07	23:50	0.72	14246.00	200	6c	LD tools
23:50	00:00	0.17	14246.00	200	12	Run liner

COMMENTS

Section 5

Contents: Graphics

HALLIBURTON | Sperry Drilling

WELL INFORMATION

End of Well Report

Customer	:	Anadarko Petroleum Corp.
Well Name	:	Nichols 26C-5HZ
Job Number	:	CA-XX-0009798960
Rig Name	:	H&P 308
Field Name	:	Wattenburg
Country	:	USA

DIRECTIONAL DRILLERS

Driller 1	:	Jeff Nicholas	**Driller 3**	:	Jordan Timbs
Driller 2	:	Jesse Kysar	**Driller 4**	:	

JOB OBJECTIVES

JOB SUMMARY

BHA SUMMARY

BHA CHART

Run #	Bit #	Motor #	Hole Size (in)	MD In (ft)	MD Out (ft)	TVD In (ft)	TVD Out (ft)	Inc In (deg)	Inc Out (deg)	Azi In (deg)	Azi Out (deg)	Time Drilling (hr)	Time Circ (hr)
0100	1			905.00	7589.00	904.99	7248.10	0.41	88.02	163.50	0.21	39.54	18.37
0200	2	2		7589.00	14246.00	7248.10	7258.08	88.02	90.80	0.21	358.00	42.73	16.82

MOTOR / ROTARY STEERABLE RUN SUMMARY

MOTOR / ROTARY STEERABLE CHART

Motor #	Manufacturer	Model	Lobe	OD (in)	Gauge (in)	Bend (deg)	DLS (Ori) (°/100')	DLS (Rot) (°/100')	ROP (Ori) (fph)	ROP (Rot) (fph)

MOTOR / ROTARY STEERABLE CHART

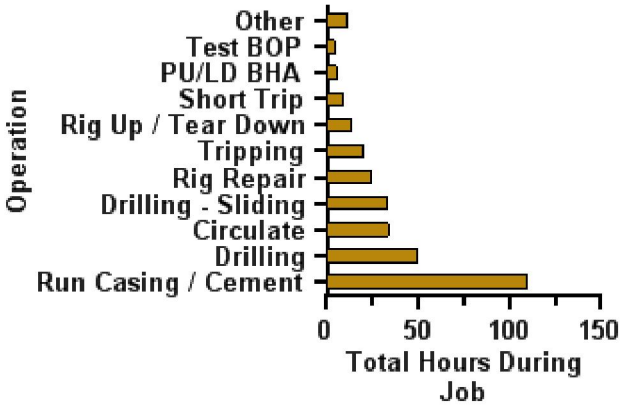
Motor #	Manufacturer	Model	Lobe	OD (in)	Gauge (in)	Bend (deg)	DLS (Ori) (°/100')	DLS (Rot) (°/100')	ROP (Ori) (fph)	ROP (Rot) (fph)
	Sperry Drilling	SperryDrill	6:7	6.750		1.83	9.25	0.00	45.68	307.77
2	Sperry Drilling	GeoForce	5:6	5.000		1.50	0.00	0.00	27.83	209.39

BIT RUN SUMMARY

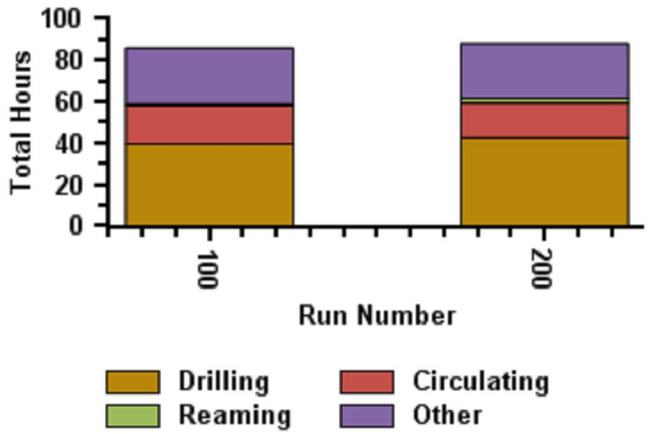
BIT CHART

Bit #	Manufacturer	Style	Gauge (in)	Gauge Length (in)	Nozzles	TFA (in2)	Dull Grades I O D L B G O R	Footage (ft)	Time Drilling (hr)	ROP (fph)
1	Baker / Hughes Christensen	DP505F	8.750	0.410	5x15	0.863	1-3-WT-GS-X-X-BT-TD	6684.00	39.54	169.05
2	HDBS	FXD54	6.125	0.180	5x16	0.982	1-1-NO-A-XX-NO-TD	6657.00	42.73	155.79

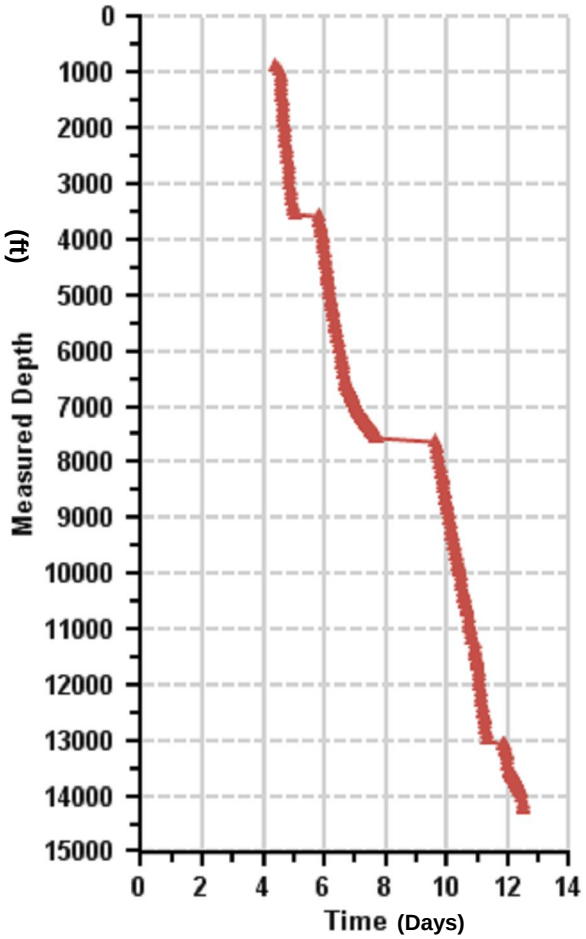
HOURS BY OPERATION



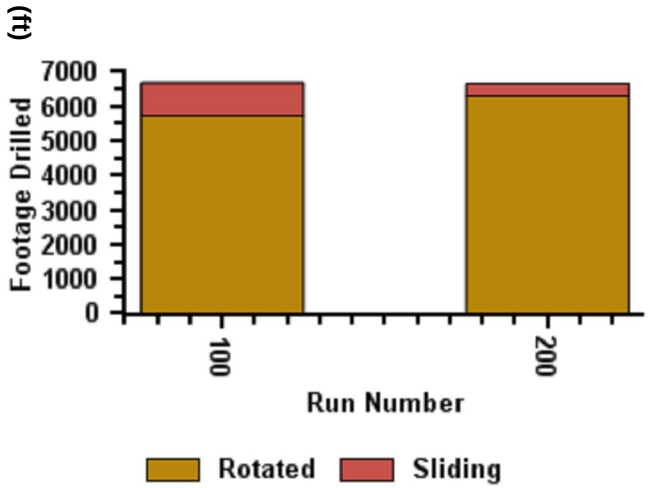
HOURS PER RUN



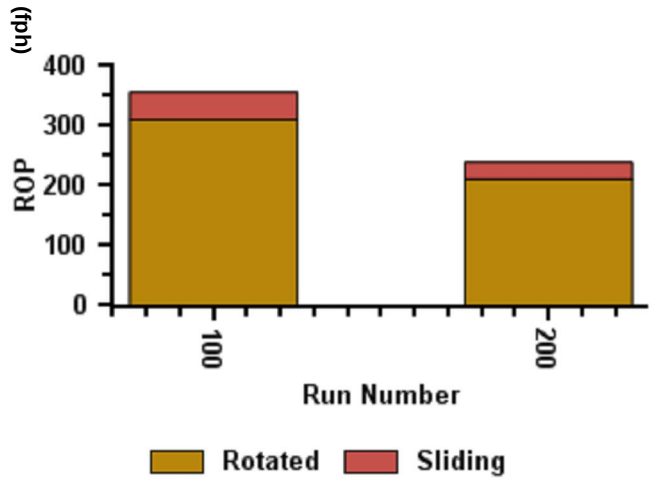
DAY vs DEPTH



FOOTAGE PER RUN



AVERAGE ROP PER RUN



SURFACE HOLE SECTION

INTERMEDIATE HOLE SECTION 1

INTERMEDIATE HOLE SECTION 2

PRODUCTION HOLE SECTION