

ConocoPhillips Piceance Basin

Piceance Basin (Sam)

NPF E06 596(actual)

CP11A-06 E06 596 (Phase One) Slot 27 - #27

Wellbore

Design: Wellbore

Sperry Drilling Services

Standard Report

04 January, 2008

Well Coordinates: 125,460.02 N, 1,235,983.25 E (39° 38' 44.38" N, 108° 12' 48.21" W)

Ground Level: 8,333.98 ft

Local Coordinate Origin: Centered on Well CP11A-06 E06 596 (Phase One) S

Viewing Datum: RKB @ 8358.98ft

TVDs to System: N

North Reference: Grid

Unit System: Mixed API

Version: 2003.16 Build: 42

HALLIBURTON

Design Report for CP11A-06 E06 596 (Phase One) Slot 27 - Wellbore

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
70.00	0.56	63.55	70.00	0.30	0.42	-0.11	0.00
Green River							
241.00	4.10	142.30	240.85	-4.17	4.91	5.75	2.36
339.00	4.90	143.20	338.54	-10.29	9.56	13.21	0.82
430.00	5.60	142.00	429.16	-16.90	14.62	21.27	0.78
524.00	6.20	143.00	522.66	-24.57	20.50	30.62	0.65
615.00	6.60	141.20	613.10	-32.57	26.73	40.43	0.49
706.00	6.90	144.00	703.47	-41.07	33.22	50.78	0.49
797.00	6.20	145.70	793.87	-49.55	39.20	60.93	0.80
890.00	5.20	151.30	886.41	-57.39	44.06	70.05	1.23
985.00	5.00	154.90	981.04	-64.92	47.88	78.47	0.40
1,076.00	5.50	152.50	1,071.65	-72.38	51.58	86.78	0.60
1,169.00	6.00	151.40	1,164.19	-80.60	55.96	96.06	0.55
1,262.00	6.50	150.20	1,256.63	-89.44	60.91	106.12	0.56
1,355.00	6.70	156.90	1,349.02	-98.99	65.65	116.78	0.85
1,451.00	7.20	160.30	1,444.31	-109.81	69.88	128.38	0.67
1,546.00	7.70	161.30	1,538.51	-121.44	73.92	140.67	0.54
1,637.00	7.30	160.30	1,628.73	-132.66	77.83	152.52	0.46
1,738.00	7.40	159.50	1,728.90	-144.79	82.27	165.43	0.14
1,826.00	7.20	160.70	1,816.19	-155.31	86.07	176.59	0.29
1,918.00	7.20	161.70	1,907.46	-166.22	89.79	188.09	0.14
1,994.00	7.40	163.90	1,982.85	-175.45	92.64	197.70	0.45
2,046.00	7.23	164.28	2,034.42	-181.81	94.46	204.27	0.33
10 3/4"							
2,088.00	7.10	164.60	2,076.10	-186.86	95.86	209.46	0.33
2,183.00	6.40	163.40	2,170.44	-197.60	98.94	220.55	0.75
2,279.00	6.10	161.60	2,265.87	-207.56	102.07	230.95	0.37
2,372.00	6.70	161.10	2,358.29	-217.39	105.39	241.28	0.65
2,469.00	6.00	160.60	2,454.69	-227.52	108.91	251.99	0.72
2,564.00	6.60	161.00	2,549.12	-237.37	112.34	262.39	0.63
2,630.00	6.60	160.24	2,614.68	-244.52	114.85	269.96	0.13
Wasatch							
2,660.00	6.60	159.90	2,644.48	-247.76	116.03	273.40	0.13
2,755.00	6.60	159.40	2,738.85	-258.00	119.82	284.31	0.06
2,855.00	6.40	158.50	2,838.21	-268.57	123.89	295.62	0.22
2,943.00	7.00	159.30	2,925.61	-278.15	127.58	305.88	0.69
3,038.00	7.40	159.20	3,019.86	-289.28	131.80	317.78	0.42
3,131.00	8.00	159.20	3,112.02	-300.93	136.23	330.23	0.65
3,230.00	8.70	159.20	3,209.97	-314.37	141.33	344.60	0.71
3,325.00	9.00	159.70	3,303.84	-328.05	146.46	359.20	0.33
3,414.00	9.20	159.20	3,391.72	-341.23	151.40	373.26	0.24
3,510.00	10.30	158.70	3,486.33	-356.40	157.24	389.51	1.15
3,614.00	10.90	158.50	3,588.55	-374.22	164.23	408.64	0.58
3,708.00	10.90	158.90	3,680.86	-390.78	170.68	426.40	0.08
3,802.00	12.00	159.50	3,772.98	-408.22	177.30	445.05	1.18
3,896.00	12.40	159.30	3,864.86	-426.82	184.29	464.90	0.43
3,992.00	11.90	158.60	3,958.71	-445.67	191.55	485.09	0.54
4,088.00	12.20	160.50	4,052.60	-464.45	198.55	505.11	0.52
4,181.00	11.90	160.10	4,143.55	-482.73	205.09	524.49	0.33
4,278.00	12.00	160.20	4,238.44	-501.62	211.91	544.54	0.11

Design Report for CP11A-06 E06 596 (Phase One) Slot 27 - Wellbore

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
4,372.00	12.20	160.40	4,330.36	-520.17	218.55	564.22	0.22
4,467.00	12.40	160.60	4,423.18	-539.25	225.31	584.42	0.22
4,562.00	12.80	161.10	4,515.89	-558.83	232.10	605.09	0.44
4,655.00	12.90	161.60	4,606.56	-578.42	238.72	625.72	0.16
4,750.00	12.60	160.20	4,699.22	-598.23	245.58	646.63	0.45
4,846.00	12.00	160.20	4,793.01	-617.48	252.50	667.05	0.62
4,940.00	12.00	160.90	4,884.96	-635.90	259.01	686.56	0.15
5,035.00	11.60	161.20	4,977.95	-654.28	265.32	705.94	0.43
5,131.00	11.10	158.30	5,072.07	-672.00	271.85	724.80	0.79
5,225.00	11.00	158.40	5,164.33	-688.75	278.49	742.81	0.11
5,323.00	10.60	156.60	5,260.59	-705.71	285.52	761.17	0.53
5,417.00	10.10	156.50	5,353.06	-721.21	292.24	778.06	0.53
5,514.00	9.30	156.50	5,448.68	-736.19	298.75	794.40	0.82
5,605.00	8.50	157.00	5,538.58	-749.13	304.31	808.48	0.88
5,701.00	7.90	158.00	5,633.60	-761.78	309.56	822.17	0.64
5,798.00	7.60	158.20	5,729.71	-773.91	314.44	835.25	0.31
5,893.00	7.50	160.30	5,823.89	-785.58	318.86	847.72	0.31
5,987.00	7.70	160.70	5,917.06	-797.30	323.01	860.13	0.22
6,079.00	7.50	160.50	6,008.26	-808.78	327.05	872.27	0.22
6,173.00	7.50	160.70	6,101.45	-820.35	331.13	884.52	0.03
6,269.00	7.50	160.60	6,196.63	-832.17	335.28	897.02	0.01
6,365.00	7.60	160.60	6,291.80	-844.07	339.47	909.61	0.10
6,460.00	7.40	159.40	6,385.98	-855.72	343.71	921.99	0.27
6,549.00	7.20	158.60	6,474.26	-866.28	347.76	933.30	0.25
6,645.00	6.20	155.70	6,569.61	-876.61	352.09	944.49	1.10
6,650.00	6.16	155.93	6,574.58	-877.10	352.31	945.03	0.91
Ohio Creek							
6,739.00	5.50	160.60	6,663.12	-885.48	355.67	954.06	0.91
6,837.00	4.70	162.80	6,760.73	-893.75	358.42	962.74	0.84
6,890.00	4.41	165.21	6,813.56	-897.79	359.58	966.92	0.65
WF							
6,931.00	4.20	167.30	6,854.45	-900.78	360.31	969.96	0.65
7,027.00	2.60	167.30	6,950.27	-906.34	361.57	975.56	1.67
7,120.00	1.90	167.30	7,043.20	-909.90	362.37	979.16	0.75
7,214.00	1.40	175.80	7,137.16	-912.57	362.80	981.78	0.59
7,283.00	1.10	178.60	7,206.15	-914.07	362.87	983.19	0.44
7,336.00	1.18	186.79	7,259.13	-915.12	362.82	984.14	0.35
7"							
7,395.00	1.30	194.50	7,318.12	-916.37	362.58	985.20	0.35
7,491.00	1.50	205.30	7,414.09	-918.56	361.77	986.90	0.34
7,585.00	1.50	209.00	7,508.06	-920.75	360.65	988.47	0.10
7,680.00	1.70	211.40	7,603.02	-923.04	359.31	990.06	0.22
7,776.00	2.00	214.20	7,698.97	-925.64	357.63	991.80	0.33
7,966.00	2.30	219.50	7,888.84	-931.33	353.34	995.35	0.19
8,059.00	2.40	220.50	7,981.76	-934.25	350.89	997.08	0.12
8,153.00	2.90	230.00	8,075.66	-937.27	347.79	998.66	0.71
8,249.00	3.20	232.40	8,171.52	-940.47	343.81	1,000.04	0.34
8,342.00	3.50	233.40	8,264.37	-943.75	339.47	1,001.36	0.33
8,439.00	3.50	232.40	8,361.18	-947.32	334.75	1,002.81	0.06
8,534.00	3.60	234.00	8,456.00	-950.84	330.04	1,004.21	0.15
8,631.00	3.80	239.30	8,552.80	-954.27	324.81	1,005.32	0.41

Design Report for CP11A-06 E06 596 (Phase One) Slot 27 - Wellbore

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)
8,724.00	3.80	238.40	8,645.60	-957.46	319.53	1,006.20	0.06
8,819.00	4.10	241.80	8,740.37	-960.71	313.86	1,006.98	0.40
8,914.00	4.40	245.40	8,835.11	-963.83	307.55	1,007.39	0.42
9,007.00	4.90	241.00	8,927.80	-967.25	300.84	1,007.90	0.66
9,294.00	5.40	239.90	9,213.64	-979.96	278.43	1,010.85	0.18
9,389.00	5.40	239.20	9,308.22	-984.49	270.73	1,012.01	0.07
9,486.00	5.60	238.00	9,404.78	-989.34	262.79	1,013.37	0.24
9,567.61	5.51	239.14	9,486.00	-993.46	256.05	1,014.53	0.17
Cameo							
9,579.00	5.50	239.30	9,497.34	-994.02	255.11	1,014.68	0.17
9,673.00	5.90	240.70	9,590.87	-998.68	247.02	1,015.81	0.45
9,768.00	6.60	241.50	9,685.31	-1,003.68	237.97	1,016.87	0.74
9,865.00	6.60	243.40	9,781.67	-1,008.83	228.08	1,017.75	0.23
9,959.00	6.80	243.10	9,875.02	-1,013.77	218.29	1,018.47	0.22
10,053.00	6.60	242.40	9,968.38	-1,018.79	208.54	1,019.28	0.23
10,149.00	6.50	243.00	10,063.76	-1,023.81	198.81	1,020.10	0.13
10,243.00	6.50	243.70	10,157.15	-1,028.58	189.30	1,020.78	0.08
10,337.00	6.70	242.70	10,250.53	-1,033.46	179.66	1,021.50	0.25
10,349.56	6.74	242.73	10,263.00	-1,034.13	178.35	1,021.61	0.31
Rollins							
10,433.00	7.00	242.90	10,345.84	-1,038.69	169.47	1,022.34	0.31
10,525.00	7.20	241.90	10,437.14	-1,043.96	159.40	1,023.25	0.26
10,715.00	7.30	245.40	10,625.62	-1,054.59	137.92	1,024.65	0.24
10,813.00	7.50	243.00	10,722.80	-1,060.09	126.56	1,025.27	0.38
10,879.79	7.78	241.22	10,789.00	-1,064.24	118.71	1,026.03	0.55
U Sego							
10,908.00	7.90	240.50	10,816.95	-1,066.12	115.35	1,026.44	0.55
11,023.00	8.80	240.80	10,930.73	-1,074.30	100.79	1,028.28	0.78
11,097.00	8.70	244.00	11,003.87	-1,079.52	90.82	1,029.19	0.67
11,181.00	9.20	246.90	11,086.84	-1,084.94	78.94	1,029.53	0.80
11,307.00	8.60	249.10	11,211.33	-1,092.25	60.87	1,029.20	0.55
11,371.00	8.00	244.90	11,274.66	-1,095.84	52.37	1,029.19	1.33
11,487.00	5.80	238.20	11,389.81	-1,102.36	40.07	1,030.38	2.02
11,541.00	5.00	237.00	11,443.57	-1,105.08	35.78	1,031.21	1.50
Projection							

Vertical Section Information

Angle Type	Target	Azimuth (°)	Origin Type	Origin +N/-S (ft)	Origin +E/-W (ft)	Start TVD (ft)
User	No Target (Freehand)	157.00		0.00	0.00	0.00

Survey tool program

From (ft)	To (ft)	Survey/Plan	Survey Tool
241.00	11,541.00	Survey #1	MWD

Design Report for CP11A-06 E06 596 (Phase One) Slot 27 - Wellbore**Casing Details**

Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (in)	Hole Diameter (in)
2,046.00	2,034.42	10 3/4"	10.750	17.500
7,336.00	7,259.13	7"	7.000	7.500

Formation Details

Measured Depth (ft)	Vertical Depth (ft)	TVDSS (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
			Wasatch G	ShaleSiliceous		
	11,500.00	3,141.02	TD	Sand+Shale	0.00	
70.00	70.00	-8,288.98	Green River	Sand+Shale		
2,630.00	2,614.68	-5,744.31	Wasatch	Shale	0.00	
6,650.00	6,574.58	-1,784.41	Ohio Creek	Sand+Shale	0.00	
6,890.00	6,813.56	-1,545.42	WF	Sand	0.00	
9,567.61	9,486.00	1,127.02	Cameo	yxN1TSfnOi2Get1w	0.00	
10,349.56	10,263.00	1,904.02	Rollins	yxN1TSfnOi2Get1w	0.00	
10,879.79	10,789.00	2,430.02	U Sego	Sand+Shale	0.00	

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
TD Target 11135	0.00	0.00	11,353.98	-970.00	242.00	124,490.02	1,236,225.25	39° 38' 34.873 N	108° 12' 44.740 W
- actual wellpath misses by 235.96ft at 11422.59ft MD (11325.80 TVD, -1098.82 N, 46.33 E)									
- Circle (radius 100.00)									
10deg Limit	0.00	0.00	11,501.00	-1,113.00	17.00	124,347.02	1,236,000.25	39° 38' 33.392 N	108° 12' 47.558 W
- actual wellpath misses by 60.94ft at 11541.00ft MD (11443.57 TVD, -1105.08 N, 35.78 E)									
- Rectangle (sides W50.00 H0.00 D0.00)									
Rollins	0.00	360.00	10,263.00	-1,034.00	178.00	124,426.02	1,236,161.25	39° 38' 34.221 N	108° 12' 45.532 W
- actual wellpath hits target									
- Point									

North Reference Sheet for NPF E06 596(actual) - CP11A-06 E06 596 (Phase One) Slot 27 - Wellbore

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

Vertical Depths are relative to RKB @ 8358.98ft. Northing and Easting are relative to CP11A-06 E06 596 (Phase One) Slot 27 - Slot #27

Coordinate System is US State Plane 1927 (Exact solution), Colorado North 501 using datum NAD 1927 (NADCON CONUS), ellipsoid Clarke 1866

Projection method is Lambert Conformal Conic (2 parallel)

Central Meridian is 105° 30' 0.000 W°, Longitude Origin:0° 0' 0.000 E°, Latitude Origin:40° 47' 0.000 N°

False Easting: 2,000,000.00ft, False Northing: 0.00ft, Scale Reduction: 1.00001222

Grid Coordinates of Well: 125,460.02 ft N, 1,235,983.25 ft E

Geographical Coordinates of Well: 39° 38' 44.38" N, 108° 12' 48.21" W

Grid Convergence at Surface is: -1.75°

Based upon Minimum Curvature type calculations, at a Measured Depth of 11,541.00ft
the Bottom Hole Displacement is 1,105.66ft in the Direction of 178.15° (Grid).

Magnetic Convergence at surface is: -12.70° (27 November 2007, , BGGM2007)

