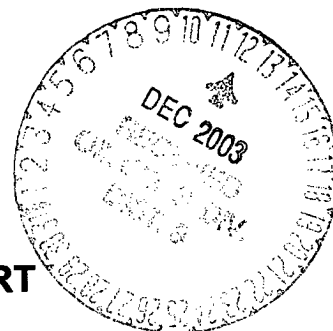


# Schlumberger

6501 S. Fiddler's Green Circle, Suite 400  
Greenwood Village, CO 80111  
(303) 486-3200

30-045-31814

## SUB-SURFACE SURVEY CERTIFICATION REPORT



BP America Inc.  
Company

November 13, 2003  
Date

Lease

Florance GC J 16B  
Well Name

San Juan, New Mexico  
County/State

Survey Depths

174 to 2911 ft

Type of Survey

Measurement While Drilling Surveys

Survey Depths

ft

Type of Survey

Survey Depths

to

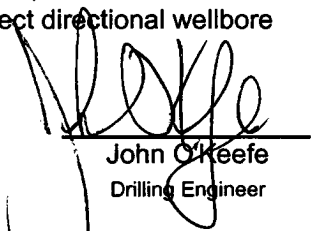
ft

Type of Survey

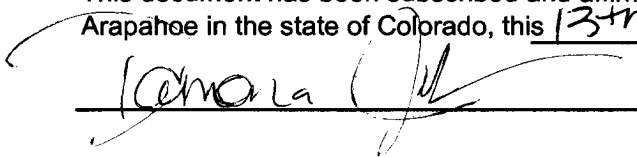
Site Supervisor

B. Richardson

The data submitted in this report conforms to the standards and procedures as set forth by Schlumberger. This report represents a true and correct directional wellbore survey based on original survey data obtained at the well site.

  
John O'Keefe  
Drilling Engineer

This document has been subscribed and affirmed, or sworn before me in the county of Arapahoe in the state of Colorado, this 13th day of NOVEMBER 2003.

  
My commission expires:

4/4/04

**Damara Johnson**  
Notary Public  
State of Colorado  
My Commission Expires  
on 04/04/2004



# Florance GC J 16B Final Surveys Report



|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Report Date:</b> November 7, 2003<br><b>Client:</b> BP America Inc.<br><b>Field:</b> NM, San Juan County (NAD 83 WZ)<br><b>Structure / Slot:</b> BP 06-30N-9W (Florance GC J 16B) / Florance GC J 16B<br><b>Well:</b> Florance GC J 16B<br><b>Borehole:</b> Original Hole<br><b>UWAPI#:</b><br><b>Survey Name / Date:</b> Florance GC J 16B Final Surveys / October 21, 2003<br><b>Tort / AHD / DDI / ERD ratio:</b> 53.113° / 816.12 ft / 4.646 / 0.141<br><b>Grid Coordinate System:</b> NAD83 New Mexico State Planes, Western Zone, US Feet<br><b>Location Lat/Long:</b> N 36 50 35.000, W 107 49 0.000<br><b>Location Grid N/E Y/X:</b> N 2126195.476 ftUS, E 2727968.453 ftUS<br><b>Grid Convergence Angle:</b> +0.00999375°<br><b>Grid Scale Factor:</b> 0.99991669 | <b>Survey / DLS Computation Method:</b> Minimum Curvature / Lubinski<br><b>Vertical Section Azimuth:</b> 218.940°<br><b>Vertical Section Origin:</b> N 0.000 ft, E 0.000 ft<br><b>TVD Reference Datum:</b> RKB<br><b>TVD Reference Elevation:</b> 6427.0 ft relative to MSL<br><b>Sea Bed / Ground Level Elevation:</b> 6413.000 ft relative to MSL<br><b>Magnetic Declination:</b> 10.856°<br><b>Total Field Strength:</b> 51563.020 nT<br><b>Magnetic Dip:</b> 63.757°<br><b>Declination Date:</b> October 21, 2003<br><b>Magnetic Declination Model:</b> BGGM 2003<br><b>North Reference:</b> Grid North<br><b>Total Corr Mag North -&gt; Grid North:</b> +10.846°<br><b>Local Coordinates Referenced To:</b> Well Head |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| Comments                | Measured Depth (ft) | Inclination (deg) | Azimuth (deg) | TVD (ft) | Vertical Section (ft) | NS (ft) | EW (ft) | DLS (deg/100 ft) | Northing (ftUS) | Easting (ftUS) | Latitude       | Longitude       |
|-------------------------|---------------------|-------------------|---------------|----------|-----------------------|---------|---------|------------------|-----------------|----------------|----------------|-----------------|
| Surface                 | 0.00                | 0.00              | 0.00          | 0.00     | 0.00                  | 0.00    | 0.00    | 0.00             | 2126195.48      | 2727968.45     | N 36 50 35.000 | W 107 49 0.000  |
| Begin SLB MWD Surveys   | 174.00              | 0.67              | 67.76         | 174.00   | -0.89                 | 0.39    | 0.94    | 0.39             | 2126195.86      | 2727969.39     | N 36 50 35.004 | W 107 48 59.988 |
|                         | 205.00              | 0.45              | 94.77         | 204.99   | -1.12                 | 0.44    | 1.23    | 1.09             | 2126195.92      | 2727969.68     | N 36 50 35.004 | W 107 48 59.985 |
|                         | 236.00              | 0.55              | 153.12        | 235.99   | -1.13                 | 0.30    | 1.42    | 1.60             | 2126195.78      | 2727969.87     | N 36 50 35.003 | W 107 48 59.983 |
|                         | 267.00              | 0.93              | 176.20        | 266.99   | -0.88                 | -0.08   | 1.50    | 1.53             | 2126195.39      | 2727969.96     | N 36 50 34.999 | W 107 48 59.982 |
|                         | 298.00              | 1.45              | 191.55        | 297.98   | -0.35                 | -0.72   | 1.44    | 1.95             | 2126194.76      | 2727969.89     | N 36 50 34.993 | W 107 48 59.982 |
|                         | 329.00              | 2.03              | 206.87        | 328.97   | 0.54                  | -1.59   | 1.11    | 2.38             | 2126193.88      | 2727969.57     | N 36 50 34.984 | W 107 48 59.986 |
|                         | 360.00              | 2.88              | 215.20        | 359.94   | 1.85                  | -2.72   | 0.42    | 2.97             | 2126192.76      | 2727968.87     | N 36 50 34.973 | W 107 48 59.995 |
|                         | 391.00              | 3.90              | 216.87        | 390.89   | 3.68                  | -4.20   | -0.66   | 3.31             | 2126191.28      | 2727967.79     | N 36 50 34.958 | W 107 49 0.008  |
|                         | 422.00              | 4.55              | 218.97        | 421.80   | 5.97                  | -6.00   | -2.07   | 2.16             | 2126189.48      | 2727966.38     | N 36 50 34.941 | W 107 49 0.025  |
|                         | 454.00              | 5.07              | 221.57        | 453.69   | 8.65                  | -8.04   | -3.81   | 1.76             | 2126187.43      | 2727964.65     | N 36 50 34.920 | W 107 49 0.047  |
|                         | 484.00              | 5.65              | 218.75        | 483.56   | 11.45                 | -10.19  | -5.61   | 2.12             | 2126185.29      | 2727962.84     | N 36 50 34.899 | W 107 49 0.069  |
|                         | 515.00              | 6.88              | 219.00        | 514.37   | 14.83                 | -12.82  | -7.73   | 3.97             | 2126182.66      | 2727960.72     | N 36 50 34.873 | W 107 49 0.095  |
|                         | 548.00              | 7.63              | 220.02        | 547.11   | 19.00                 | -16.03  | -10.39  | 2.31             | 2126179.44      | 2727958.07     | N 36 50 34.841 | W 107 49 0.128  |
|                         | 580.00              | 7.57              | 221.27        | 578.83   | 23.23                 | -19.24  | -13.14  | 0.55             | 2126176.23      | 2727955.31     | N 36 50 34.810 | W 107 49 0.162  |
|                         | 612.00              | 8.10              | 220.97        | 610.53   | 27.59                 | -22.53  | -16.01  | 1.66             | 2126172.95      | 2727952.44     | N 36 50 34.777 | W 107 49 0.197  |
|                         | 644.00              | 8.52              | 220.32        | 642.19   | 32.21                 | -26.04  | -19.02  | 1.34             | 2126169.44      | 2727949.43     | N 36 50 34.743 | W 107 49 0.234  |
|                         | 676.00              | 9.18              | 219.27        | 673.81   | 37.13                 | -29.82  | -22.17  | 2.12             | 2126165.65      | 2727946.28     | N 36 50 34.705 | W 107 49 0.273  |
|                         | 708.00              | 9.73              | 222.22        | 705.38   | 42.39                 | -33.80  | -25.61  | 2.29             | 2126161.68      | 2727942.85     | N 36 50 34.666 | W 107 49 0.315  |
|                         | 739.00              | 10.27             | 219.95        | 735.91   | 47.76                 | -37.86  | -29.14  | 2.16             | 2126157.62      | 2727939.31     | N 36 50 34.626 | W 107 49 0.359  |
|                         | 771.00              | 10.70             | 218.67        | 767.37   | 53.59                 | -42.37  | -32.83  | 1.53             | 2126153.11      | 2727935.63     | N 36 50 34.581 | W 107 49 0.404  |
|                         | 803.00              | 11.25             | 216.97        | 798.79   | 59.68                 | -47.18  | -36.56  | 1.99             | 2126148.30      | 2727931.89     | N 36 50 34.534 | W 107 49 0.450  |
|                         | 835.00              | 11.63             | 216.20        | 830.15   | 66.02                 | -52.28  | -40.34  | 1.28             | 2126143.20      | 2727928.11     | N 36 50 34.483 | W 107 49 0.496  |
|                         | 866.00              | 12.35             | 218.37        | 860.47   | 72.45                 | -57.40  | -44.25  | 2.74             | 2126138.08      | 2727924.21     | N 36 50 34.433 | W 107 49 0.544  |
|                         | 899.00              | 13.05             | 218.35        | 892.67   | 79.71                 | -63.09  | -48.75  | 2.12             | 2126132.39      | 2727919.71     | N 36 50 34.376 | W 107 49 0.600  |
|                         | 931.00              | 13.98             | 218.15        | 923.78   | 87.19                 | -68.96  | -53.38  | 2.91             | 2126126.52      | 2727915.08     | N 36 50 34.318 | W 107 49 0.657  |
|                         | 962.00              | 14.70             | 221.52        | 953.81   | 94.86                 | -74.85  | -58.30  | 3.55             | 2126120.63      | 2727910.16     | N 36 50 34.260 | W 107 49 0.717  |
|                         | 994.00              | 15.48             | 221.77        | 984.71   | 103.18                | -81.07  | -63.84  | 2.45             | 2126114.41      | 2727904.62     | N 36 50 34.198 | W 107 49 0.785  |
|                         | 1122.00             | 16.33             | 219.20        | 1107.81  | 138.24                | -107.76 | -86.59  | 0.86             | 2126087.72      | 2727881.87     | N 36 50 33.935 | W 107 49 1.065  |
|                         | 1249.00             | 17.00             | 218.65        | 1229.48  | 174.66                | -136.10 | -109.47 | 0.54             | 2126059.39      | 2727858.99     | N 36 50 33.655 | W 107 49 1.347  |
|                         | 1376.00             | 18.17             | 219.17        | 1350.54  | 213.03                | -165.95 | -133.57 | 0.93             | 2126029.54      | 2727834.89     | N 36 50 33.359 | W 107 49 1.644  |
|                         | 1503.00             | 18.60             | 218.05        | 1471.06  | 253.08                | -197.25 | -158.56 | 0.44             | 2125998.24      | 2727809.90     | N 36 50 33.050 | W 107 49 1.951  |
|                         | 1631.00             | 19.40             | 218.92        | 1592.08  | 294.75                | -229.86 | -184.50 | 0.66             | 2125965.63      | 2727783.97     | N 36 50 32.727 | W 107 49 2.270  |
|                         | 1758.00             | 18.67             | 218.90        | 1712.14  | 336.17                | -262.10 | -210.52 | 0.57             | 2125933.40      | 2727757.95     | N 36 50 32.409 | W 107 49 2.590  |
|                         | 1884.00             | 18.38             | 219.52        | 1831.61  | 376.20                | -293.11 | -235.82 | 0.28             | 2125902.39      | 2727732.65     | N 36 50 32.102 | W 107 49 2.902  |
|                         | 2012.00             | 19.21             | 220.51        | 1952.78  | 417.43                | -324.69 | -262.34 | 0.69             | 2125870.81      | 2727706.13     | N 36 50 31.790 | W 107 49 3.228  |
|                         | 2139.00             | 18.25             | 218.57        | 2073.06  | 458.20                | -356.13 | -288.31 | 0.90             | 2125839.38      | 2727680.16     | N 36 50 31.479 | W 107 49 3.548  |
|                         | 2267.00             | 19.10             | 221.17        | 2194.32  | 499.17                | -387.56 | -314.60 | 0.93             | 2125807.95      | 2727653.88     | N 36 50 31.168 | W 107 49 3.871  |
|                         | 2394.00             | 17.67             | 221.27        | 2314.83  | 539.20                | -417.69 | -340.99 | 1.13             | 2125777.82      | 2727627.49     | N 36 50 30.871 | W 107 49 4.196  |
|                         | 2522.00             | 18.03             | 223.32        | 2436.67  | 578.36                | -446.70 | -367.40 | 0.57             | 2125748.81      | 2727601.09     | N 36 50 30.584 | W 107 49 4.521  |
|                         | 2649.00             | 18.77             | 227.17        | 2557.18  | 618.18                | -474.90 | -395.87 | 1.12             | 2125720.62      | 2727572.62     | N 36 50 30.305 | W 107 49 4.871  |
|                         | 2776.00             | 18.23             | 225.85        | 2677.62  | 658.12                | -502.62 | -425.10 | 0.54             | 2125692.90      | 2727543.39     | N 36 50 30.031 | W 107 49 5.231  |
| Last SLB MWD Survey     | 2911.00             | 19.58             | 231.77        | 2805.35  | 701.15                | -531.33 | -458.03 | 1.74             | 2125664.19      | 2727510.46     | N 36 50 29.747 | W 107 49 5.636  |
| End Client Assumed Drop | 3564.00             | 0.00              | 231.77        | 3445.71  | 808.88                | -599.71 | -544.83 | 3.00             | 2125595.82      | 2727423.67     | N 36 50 29.071 | W 107 49 6.704  |
| Client Assumed TD       | 5906.00             | 0.00              | 231.77        | 5787.71  | 808.88                | -599.71 | -544.83 | 0.00             | 2125595.82      | 2727423.67     | N 36 50 29.071 | W 107 49 6.704  |

**Survey Type:** Raw Survey

**Survey Error Model:** SLB ISCWSA version 16 \*\*\* 3-D 95.00% Confidence 2.7955 sigma

**Surveying Program:**

**MD From (ft)**

0.00

2911.00

**MD To (ft)**

2911.00

5906.00

**EQU Freq**

Act-Slts SLB\_MWD-STD

Act-Slts SLB\_BLIND