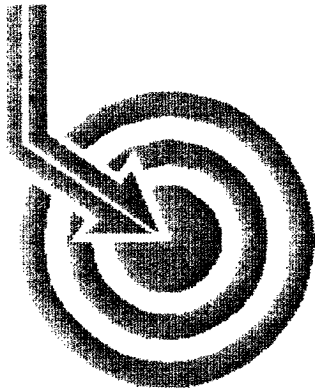
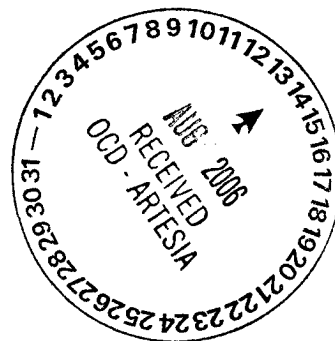




# Scientific Drilling



## E.O.G.

Field: Rio Grande  
Site: Eddy County, NM  
Well: Rio Grande 23 Fed #3  
Wellpath: VH - Job #32K0506392  
Survey: 05/15/06

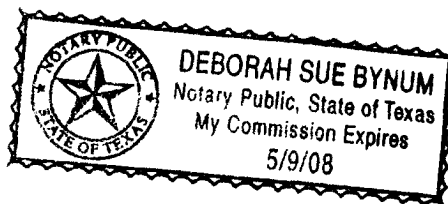
This survey is correct to the best of my knowledge  
and is supported by actual field data.

.....*R. Hart*.....Company Representative

Notorized this date 20<sup>th</sup> of June, 2006.

*Deborah Sue Bynum*

Notary Signature  
County of Midland  
State of Texas





# Scientific Drilling International Survey Report

Company: E.O.G.  
Field: Rio Grande  
Site: Eddy County, NM  
Well: Rio Grande 23 Fed #3  
Wellpath: VH - Job #32K0506392

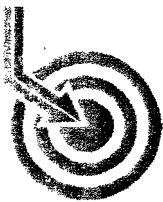
Date: 06/20/2006 Time: 19:21:34 Page: 1  
Co-ordinate(NE) Reference: Site: Eddy County, NM, Grid North  
Vertical (TVD) Reference: SITE 0.0  
Section (VS) Reference: Well (0.00N,0.00E,0.35Azi)  
Survey Calculation Method: Minimum Curvature Db: Sybase

Survey: 05/15/06  
KSRG 0'-3850'  
Company: Scientific Drilling Internatio  
Tool: Keeper;Keeper Surface Readout Gyro

Start Date: 05/15/2006  
Engineer: Guebara/Carter w/Signal  
Tied-to: From Surface

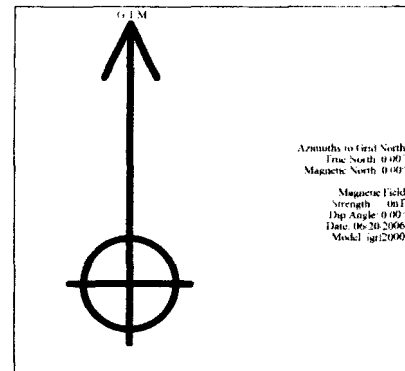
## Survey

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | VS<br>ft | N/S<br>ft | E/W<br>ft | DLS<br>deg/100ft | ClsD<br>ft | ClsA<br>deg |
|----------|-------------|-------------|-----------|----------|-----------|-----------|------------------|------------|-------------|
| 0.00     | 0.00        | 0.12        | 0.00      | 0.00     | 0.00      | 0.00      | 0.00             | 0.00       | 0.00        |
| 100.00   | 0.27        | 144.29      | 100.00    | -0.19    | -0.19     | 0.14      | 0.27             | 0.24       | 144.29      |
| 200.00   | 0.46        | 138.48      | 200.00    | -0.68    | -0.68     | 0.54      | 0.19             | 0.87       | 141.62      |
| 300.00   | 0.76        | 140.23      | 299.99    | -1.49    | -1.49     | 1.23      | 0.30             | 1.94       | 140.49      |
| 400.00   | 1.01        | 169.59      | 399.98    | -2.86    | -2.87     | 1.82      | 0.51             | 3.40       | 147.69      |
| 500.00   | 1.46        | 172.43      | 499.96    | -4.99    | -5.00     | 2.14      | 0.45             | 5.44       | 156.81      |
| 600.00   | 1.20        | 163.86      | 599.93    | -7.25    | -7.27     | 2.60      | 0.33             | 7.72       | 160.31      |
| 700.00   | 1.28        | 192.73      | 699.91    | -9.35    | -9.36     | 2.65      | 0.62             | 9.73       | 164.22      |
| 800.00   | 1.38        | 194.46      | 799.88    | -11.61   | -11.62    | 2.10      | 0.11             | 11.81      | 169.76      |
| 900.00   | 1.40        | 195.79      | 899.85    | -13.95   | -13.96    | 1.47      | 0.04             | 14.04      | 174.01      |
| 1000.00  | 1.01        | 208.00      | 999.83    | -15.91   | -15.91    | 0.72      | 0.46             | 15.93      | 177.41      |
| 1100.00  | 1.11        | 206.02      | 1099.81   | -17.56   | -17.56    | -0.12     | 0.11             | 17.56      | 180.39      |
| 1200.00  | 1.08        | 204.03      | 1199.79   | -19.30   | -19.29    | -0.93     | 0.05             | 19.32      | 182.75      |
| 1300.00  | 0.98        | 211.62      | 1299.78   | -20.89   | -20.88    | -1.76     | 0.17             | 20.96      | 184.82      |
| 1400.00  | 1.03        | 218.19      | 1399.76   | -22.33   | -22.32    | -2.76     | 0.13             | 22.49      | 187.06      |
| 1500.00  | 0.93        | 213.58      | 1499.75   | -23.72   | -23.70    | -3.77     | 0.13             | 24.00      | 189.03      |
| 1600.00  | 0.76        | 208.38      | 1599.74   | -24.99   | -24.96    | -4.53     | 0.19             | 25.37      | 190.29      |
| 1700.00  | 0.39        | 197.46      | 1699.73   | -25.90   | -25.87    | -4.95     | 0.38             | 26.34      | 190.83      |
| 1800.00  | 0.29        | 255.10      | 1799.73   | -26.29   | -26.26    | -5.30     | 0.34             | 26.79      | 191.40      |
| 1900.00  | 0.23        | 271.94      | 1899.73   | -26.35   | -26.32    | -5.74     | 0.10             | 26.94      | 192.31      |
| 2000.00  | 0.37        | 258.28      | 1999.73   | -26.41   | -26.38    | -6.26     | 0.16             | 27.11      | 193.35      |
| 2100.00  | 0.40        | 251.57      | 2099.73   | -26.59   | -26.55    | -6.91     | 0.05             | 27.43      | 194.58      |
| 2200.00  | 0.40        | 233.06      | 2199.72   | -26.92   | -26.87    | -7.52     | 0.13             | 27.90      | 195.63      |
| 2300.00  | 0.40        | 215.89      | 2299.72   | -27.41   | -27.36    | -8.00     | 0.12             | 28.51      | 196.30      |
| 2400.00  | 0.18        | 289.24      | 2399.72   | -27.65   | -27.59    | -8.35     | 0.39             | 28.83      | 196.84      |
| 2500.00  | 0.42        | 278.32      | 2499.72   | -27.54   | -27.49    | -8.86     | 0.25             | 28.88      | 197.87      |
| 2600.00  | 0.41        | 304.65      | 2599.72   | -27.29   | -27.23    | -9.52     | 0.19             | 28.85      | 199.27      |
| 2700.00  | 0.41        | 316.79      | 2699.71   | -26.83   | -26.77    | -10.06    | 0.09             | 28.60      | 200.60      |
| 2800.00  | 0.24        | 265.43      | 2799.71   | -26.59   | -26.53    | -10.51    | 0.32             | 28.53      | 201.62      |
| 2900.00  | 0.20        | 292.89      | 2899.71   | -26.54   | -26.47    | -10.88    | 0.11             | 28.62      | 202.35      |
| 3000.00  | 0.18        | 323.70      | 2999.71   | -26.35   | -26.28    | -11.14    | 0.10             | 28.54      | 202.97      |
| 3100.00  | 0.15        | 99.15       | 3099.71   | -26.24   | -26.17    | -11.10    | 0.31             | 28.43      | 202.98      |
| 3200.00  | 0.27        | 311.95      | 3199.71   | -26.10   | -26.04    | -11.15    | 0.40             | 28.32      | 203.18      |
| 3300.00  | 0.13        | 292.88      | 3299.71   | -25.90   | -25.84    | -11.43    | 0.15             | 28.25      | 203.86      |
| 3400.00  | 0.63        | 133.01      | 3399.71   | -26.23   | -26.17    | -11.13    | 0.75             | 28.43      | 203.04      |
| 3500.00  | 0.24        | 109.02      | 3499.70   | -26.67   | -26.61    | -10.53    | 0.42             | 28.62      | 201.59      |
| 3600.00  | 1.02        | 114.13      | 3599.70   | -27.10   | -27.04    | -9.52     | 0.78             | 28.67      | 199.39      |
| 3700.00  | 0.69        | 130.88      | 3699.69   | -27.85   | -27.80    | -8.25     | 0.41             | 29.00      | 196.53      |
| 3800.00  | 0.83        | 85.25       | 3799.68   | -28.18   | -28.13    | -7.07     | 0.60             | 29.01      | 194.11      |
| 3850.00  | 0.35        | 74.69       | 3849.68   | -28.10   | -28.06    | -6.57     | 0.98             | 28.82      | 193.17      |



Scientific  
Drilling

Field: Rio Grande  
Site: Eddy County, NM  
Well: Rio Grande 23 Fed #3  
Wellpath: VH - Job #32K0506392  
Survey: 05/15/06



West(-)/East(+) [5ft/in]

South(-)/North(+) [5ft/in]

