

## Directional Survey Data

Version 1

## CORRECTION:

| DATE       | MEASURED DEPTH | ANGLE | DIRECTION AZIMUTH | WOB               | RPM | Bit IADC | BHA            | TVD     | VERTICAL SECTION | COORDINATES |         | DOG LEG SEVERITY | REMARKS            |
|------------|----------------|-------|-------------------|-------------------|-----|----------|----------------|---------|------------------|-------------|---------|------------------|--------------------|
|            |                |       |                   |                   |     |          |                |         |                  | N or S      | E or W  |                  |                    |
|            | 0              | 0.00  | 0.0               |                   |     |          |                | 0.0     | 0.0              | N 0.0       | E 0.0   | 0.00             |                    |
| 10/22/1997 | 275            | 0.75  | 100.0             | 50                | 80  |          | 60' pendulum   | 275.0   | 1.8              | S 0.3       | E 1.8   | 0.27             | azimuth assumed    |
|            | 360            | 0.25  | 100.0             |                   |     |          |                | 360.0   | 2.5              | S 0.4       | E 2.5   | 0.39             | azimuth assumed    |
| 10/23/1997 | 855            | 0.25  | 100.0             | 50                | 60  |          | 60' pendulum   | 855.0   | 4.6              | S 0.8       | E 4.6   | 0.00             | azimuth assumed    |
|            | 1,358          | 0.75  | 100.0             |                   |     |          |                | 1,358.0 | 9.0              | S 1.6       | E 9.0   | 0.10             | azimuth assumed    |
| 10/24/1997 | 1,827          | 0.75  | 100.0             | 50                | 60  |          |                | 1,826.9 | 15.0             | S 2.6       | E 15.0  | 0.00             | azimuth assumed    |
|            | 2,297          | 1.00  | 100.0             |                   |     |          |                | 2,296.9 | 22.1             | S 3.9       | E 22.1  | 0.05             | azimuth assumed    |
| 10/25/1997 | 2,810          | 0.75  | 100.0             |                   |     |          |                | 2,809.8 | 29.8             | S 5.3       | E 29.8  | 0.05             | Set 8-5/8" @ 2810' |
| 10/26/1997 | 3,296          | 2.50  | 100.0             | 40                | 60  | 517      | packed         | 3,295.6 | 43.4             | S 7.6       | E 43.4  | 0.36             |                    |
| 10/27/1997 | 3,675          | 4.00  | 111.0             |                   |     |          |                | 3,674.0 | 63.8             | S 13.8      | E 63.8  | 0.43             |                    |
|            | 3,770          | 4.25  | 106.0             | 40                | 60  |          |                | 3,768.7 | 70.3             | S 16.0      | E 70.3  | 0.46             |                    |
| 10/28/1997 | 3,928          | 4.50  | 107.0             | 25                | 60  | 527      | 60/90 pendulum | 3,926.3 | 81.9             | S 19.4      | E 81.9  | 0.17             |                    |
|            | 4,026          | 4.25  | 119.0             |                   |     |          |                | 4,024.0 | 88.7             | S 22.3      | E 88.7  | 0.97             |                    |
|            | 4,120          | 3.75  | 111.0             |                   |     |          |                | 4,117.8 | 94.6             | S 25.1      | E 94.6  | 0.80             |                    |
| 10/29/1997 | 4,210          | 3.25  | 117.0             | 50                | 60  |          |                | 4,207.6 | 99.7             | S 27.3      | E 99.7  | 0.69             |                    |
|            | 4,528          | 3.00  | 124.0             |                   |     |          |                | 4,525.1 | 114.6            | S 36.0      | E 114.6 | 0.14             |                    |
| 10/30/1997 | 5,029          | 2.75  | 148.0             | 50                | 60  |          |                | 5,025.5 | 131.8            | S 53.6      | E 131.8 | 0.24             |                    |
| 10/31/1997 | 5,504          | 3.00  | 156.0             | 50                | 60  |          |                | 5,499.9 | 142.9            | S 74.6      | E 142.9 | 0.10             |                    |
|            | 5,975          | 2.75  | 129.0             |                   |     |          |                | 5,970.3 | 156.7            | S 92.9      | E 156.7 | 0.29             |                    |
| 11/2/1997  | 6,466          | 2.25  | 94.0              | 50                | 60  | 627      | 60/90 pendulum | 6,460.9 | 175.5            | S 101.0     | E 175.5 | 0.32             |                    |
| 11/5/1997  | 7,000          | 6.22  | 74.9              |                   |     |          |                | 6,993.4 | 200.9            | S 97.0      | E 200.9 | 0.78             | Gyro coordinates   |
|            | 7,078          | 5.90  | 108.5             |                   |     |          | motor run      | 7,070.9 | 208.8            | S 97.2      | E 208.8 | 4.50             |                    |
|            | 7,181          | 5.70  | 164.8             |                   |     |          |                | 7,173.5 | 215.1            | S 103.8     | E 215.1 | 5.31             |                    |
|            | 7,385          | 7.50  | 195.0             |                   |     |          | core assembly  | 7,376.2 | 214.4            | S 126.4     | E 214.4 | 1.89             |                    |
|            | 7,508          | 7.50  | 195.0             |                   |     |          |                | 7,498.1 | 210.2            | S 141.9     | E 210.2 | 0.00             |                    |
| ELD        | Monument (Abo) |       | LEASE:            | Monument 12 State |     |          | WELL #         | 16      |                  |             |         |                  |                    |