

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: November 30, 2000

**WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

5. Lease Serial No.  
NM-06953

|                                                                                                                                                                                                                                                  |  |                                         |                                                                                                                                                                                                                                                                                                                              |                                      |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|--|
| 1a. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Dry <input type="checkbox"/> Other                                                                                      |  |                                         | 6. If Indian, Allottee or Tribe Name                                                                                                                                                                                                                                                                                         |                                      |  |
| b. Type of Completion <input checked="" type="checkbox"/> New Well <input type="checkbox"/> Work Over <input type="checkbox"/> Deepen <input type="checkbox"/> Plug Back <input type="checkbox"/> Diff. Resvr.<br>Other _____                    |  |                                         | 7. Unit or CA Agreement Name and No.                                                                                                                                                                                                                                                                                         |                                      |  |
| 2. Name of Operator<br>MARATHON OIL COMPANY                                                                                                                                                                                                      |  |                                         | 8. Lease Name and Well No.<br>FEDERAL C 35 4                                                                                                                                                                                                                                                                                 |                                      |  |
| 3. Address P.O. BOX 552<br>MIDLAND, TX 79702                                                                                                                                                                                                     |  |                                         | 9. API Well No.<br>30-015-32453                                                                                                                                                                                                                                                                                              |                                      |  |
| 4. Location of Well (Report location clearly and in accordance with Federal requirements)*<br>At surface SWNE Lot G 2310FNL 1980FEL<br>At top prod interval reported below SWNE Lot H 2481FNL 971FEL<br>At total depth SWNE Lot H 2533FNL 717FEL |  |                                         | 10. Field and Pool, or Exploratory<br>INDIAN BASIN UPPER PENN GAS                                                                                                                                                                                                                                                            |                                      |  |
| 14. Date Spudded<br>03/20/2003                                                                                                                                                                                                                   |  |                                         | 11. Sec., T., R., M., or Block and Survey<br>or Area Sec 35 T21S R23E Mer NMP                                                                                                                                                                                                                                                |                                      |  |
| 15. Date T.D. Reached<br>04/03/2003                                                                                                                                                                                                              |  |                                         | 12. County or Parish<br>EDDY                                                                                                                                                                                                                                                                                                 |                                      |  |
| 16. Date Completed<br><input type="checkbox"/> D & A <input checked="" type="checkbox"/> Ready to Prod.<br>04/18/2003                                                                                                                            |  |                                         | 13. State<br>NM                                                                                                                                                                                                                                                                                                              |                                      |  |
| 17. Elevations (DF, KB, RT, GL)*<br>3945 KB                                                                                                                                                                                                      |  |                                         |                                                                                                                                                                                                                                                                                                                              |                                      |  |
| 18. Total Depth: MD 8465<br>TVD 8284                                                                                                                                                                                                             |  | 19. Plug Back T.D.: MD 8434<br>TVD 8233 |                                                                                                                                                                                                                                                                                                                              | 20. Depth Bridge Plug Set: MD<br>TVD |  |
| 21. Type Electric & Other Mechanical Logs Run (Submit copy of each)<br>SPECTRAL GAMMA RAY NEUTRON DENSITY                                                                                                                                        |  |                                         | 22. Was well cored? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis)<br>Was DST run? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (Submit analysis)<br>Directional Survey? <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes (Submit analysis) |                                      |  |

23. Casing and Liner Record (Report all strings set in well)

| Hole Size | Size/Grade | Wt. (#/ft.) | Top (MD) | Bottom (MD) | Stage Cementer Depth | No. of Sk. & Type of Cement | Slurry Vol. (BBL) | Cement Top* | Amount Pulled |
|-----------|------------|-------------|----------|-------------|----------------------|-----------------------------|-------------------|-------------|---------------|
| 8.750     | 7.000 K-55 | 26.0        | 0        | 75          |                      | 0                           |                   |             |               |
| 12.250    | 9.625 J-55 | 36.0        | 0        | 1242        |                      | 960                         |                   | 0           |               |
| 8.750     | 7.000 K-55 | 23.0        | 75       | 4639        |                      | 0                           |                   |             |               |
| 8.750     | 7.000 K-55 | 26.0        | 4639     | 8465        |                      | 1345                        |                   | 0           |               |

24. Tubing Record

| Size  | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) | Size | Depth Set (MD) | Packer Depth (MD) |
|-------|----------------|-------------------|------|----------------|-------------------|------|----------------|-------------------|
| 2.875 | 8334           |                   |      |                |                   |      |                |                   |

25. Producing Intervals

| Formation     | Top  | Bottom | Perforated Interval | Size | No. Holes | Perf. Status |
|---------------|------|--------|---------------------|------|-----------|--------------|
| A) UPPER PENN | 7506 | 8465   | 7506 TO 7974        |      |           | OPEN         |
| B)            |      |        |                     |      |           |              |
| C)            |      |        |                     |      |           |              |
| D)            |      |        |                     |      |           |              |

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

| Depth Interval | Amount and Type of Material                         |
|----------------|-----------------------------------------------------|
| 7506 TO 7974   | 41,000 GALS OF 17% CCA IN 2' SETTINGS W/125-150 GPF |
|                |                                                     |
|                |                                                     |

28. Production - Interval A

| Date First Produced | Test Date                | Hours Tested      | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity     | Production Method         |
|---------------------|--------------------------|-------------------|-----------------|---------|---------|-----------|-----------------------|-----------------|---------------------------|
| 04/23/2003          | 05/02/2003               | 24                | →               | 2.0     | 1251.0  | 577.0     |                       |                 | ELECTRIC PUMP SUB-SURFACE |
| Choke Size          | Tbg. Press. Flwg. 300 SI | Csg. Press. 130.0 | 24 Hr. Rate →   | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio 625500  | Well Status PGW |                           |

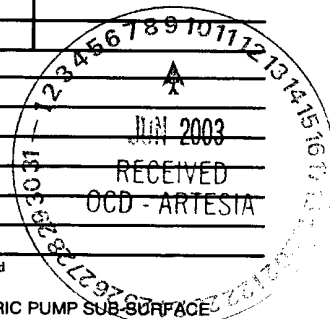
28a. Production - Interval B

| Date First Produced | Test Date            | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|----------------------|--------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
|                     |                      |              | →               |         |         |           |                       |             |                   |
| Choke Size          | Tbg. Press. Flwg. SI | Csg. Press.  | 24 Hr. Rate →   | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio         | Well Status |                   |

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #22566 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\*



## 28b. Production - Interval C

| Date First Produced | Test Date            | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|----------------------|--------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
|                     |                      |              | →               |         |         |           |                       |             |                   |
| Choke Size          | Tbg. Press. Flwg. SI | Csg. Press.  | 24 Hr. Rate     | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio         | Well Status |                   |
|                     |                      |              | →               |         |         |           |                       |             |                   |

## 28c. Production - Interval D

| Date First Produced | Test Date            | Hours Tested | Test Production | Oil BBL | Gas MCF | Water BBL | Oil Gravity Corr. API | Gas Gravity | Production Method |
|---------------------|----------------------|--------------|-----------------|---------|---------|-----------|-----------------------|-------------|-------------------|
|                     |                      |              | →               |         |         |           |                       |             |                   |
| Choke Size          | Tbg. Press. Flwg. SI | Csg. Press.  | 24 Hr. Rate     | Oil BBL | Gas MCF | Water BBL | Gas:Oil Ratio         | Well Status |                   |
|                     |                      |              | →               |         |         |           |                       |             |                   |

## 29. Disposition of Gas(Sold, used for fuel, vented, etc.)

SOLD

## 30. Summary of Porous Zones (Include Aquifers):

Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.

## 31. Formation (Log) Markers

| Formation  | Top  | Bottom | Descriptions, Contents, etc. | Name                                                                                                      | Top Meas. Depth                                                     |
|------------|------|--------|------------------------------|-----------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| UPPER PENN | 7506 | 8465   | DOLOMITE, SHALEY AT BASE     | SAN ANDRES<br>GLORIETA<br>YESO<br>BASE OF BONE SPRING SANDS<br>TUBB<br>ABO<br>WOLFCAMP<br>CISCO<br>CANYON | 474<br>2058<br>2224<br>3866<br>6473<br>6543<br>6560<br>7506<br>7652 |

## 32. Additional remarks (include plugging procedure):

Logs, inclination survey, and deviation survey will be mailed separately.

## 33. Circle enclosed attachments:

- |                                                       |                    |               |                       |
|-------------------------------------------------------|--------------------|---------------|-----------------------|
| 1. Electrical/Mechanical Logs (1 full set req'd.)     | 2. Geologic Report | 3. DST Report | 4. Directional Survey |
| 5. Sundry Notice for plugging and cement verification | 6. Core Analysis   | 7. Other:     |                       |

## 34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):

Electronic Submission #22566 Verified by the BLM Well Information System.  
For MARATHON OIL COMPANY, sent to the Carlsbad

Name (please print) GINNY LARKE

Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission)

Date 05/30/2003

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\* ORIGINAL \*\***

**McVAY DRILLING COMPANY**

Post Office Box 924  
Hobbs, New Mexico 88241  
(505) 397-3311  
FAX: 39-DRILL

**Well Name and Number: Federal "C" 35 #4**

**Location: Sec. 35, T21S, R23E, Eddy County, NM**

**Operator: Marathon**

**Drilling Contractor: McVay Drilling Company**

The undersigned certifies that he is an authorized representative of the drilling contractor who drilled the above described well and that he has conducted deviation tests and obtained the following results:

| Degrees @ Depth |      | Degrees @ Depth |      | Degrees @ Depth |      |
|-----------------|------|-----------------|------|-----------------|------|
| 1/2             | 340  | 5               | 3647 | 14.3            | 5793 |
| 3/4             | 818  | 6 3/4           | 3711 | 15.8            | 6047 |
| 1/4             | 1217 | 14 3/4          | 4058 | 16.7            | 7122 |
| 3/4             | 1521 | 16 3/4          | 4279 | 15.8            | 7565 |
| 1               | 2158 | 17              | 4595 | 15 1/2          | 7947 |
| 1               | 2473 | 17.2            | 4786 | 14 1/4          | 8075 |
| 3/4             | 2914 | 16.9            | 5070 | 16 1/4          | 8138 |
| 1 3/4           | 3395 | 16.9            | 5354 | 15 3/4          | 8264 |
| 3 1/4           | 3584 | 15.4            | 5605 | 15              | 8327 |

**Drilling Contractor: McVay Drilling Company**

By: Jan H. H. H.

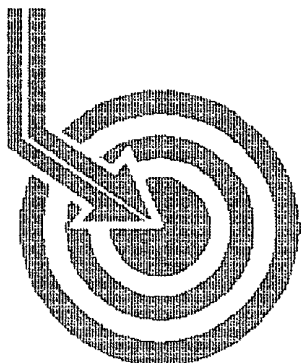
Subscribed and sworn to before me this 8th day of April, 2003

Tim H. H. H.  
Notary Public

My Commission Expires: 8-16-05

Lea County, New Mexico





# Scientific Drilling

MARATHON OIL COMPANY

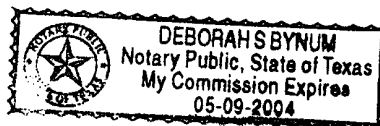
Field: Indian Basin  
Site: Eddy County, NM  
Well: Federal C 35 #4  
Wellpath: VH - Job #32K0303142  
Survey: 03/25/03

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

*Mark Hardy*  
.....Company Representative

Notorized this date 16<sup>th</sup> of April, 2003.

*Deborah Sue Bynum*  
Notary Signature  
County of Midland  
State of Texas



# Scientific Drilling International

## Survey Report

**Company:** MARATHON OIL COMPANY  
**Field:** Indian Basin  
**Site:** Eddy County, NM  
**Well:** Federal C 35 #4  
**Wellpath:** VH - Job #32K0303142

**Date:** 4/16/2003 **Time:** 19:20:02 **Page:** 1  
**Co-ordinate(NE) Reference:** Site: Eddy County, NM, True North  
**Vertical (TVD) Reference:** SITE 0.0 above Mean Sea Level  
**Section (VS) Reference:** Well (0.0E,0.0N,100.1Azi)  
**Survey Calculation Method:** Minimum Curvature

**Survey:** 03/25/03  
 KSRG 0'-3413'

**Start Date:** 4/16/2003

**Company:** Scientific Drilling Internatio  
**Tool:** Keeper

**Engineer:** Angel Guebara

### Survey

| MD<br>ft | Incl<br>deg | Azim<br>deg | TVD<br>ft | VS<br>ft | N/S<br>ft | E/W<br>ft | ClsD<br>ft | ClsA<br>deg | DLS<br>deg/100ft |
|----------|-------------|-------------|-----------|----------|-----------|-----------|------------|-------------|------------------|
| 0.0      | 0.00        | 0.10        | 0.0       | 0.0      | 0.0       | 0.0       | 0.0        | 0.00        | 0.00             |
| 100.0    | 0.35        | 158.43      | 100.0     | 0.2      | -0.3      | 0.1       | 0.3        | 158.43      | 0.35             |
| 200.0    | 0.50        | 152.05      | 200.0     | 0.6      | -1.0      | 0.4       | 1.0        | 155.77      | 0.16             |
| 300.0    | 0.51        | 159.00      | 300.0     | 1.1      | -1.8      | 0.8       | 1.9        | 155.67      | 0.06             |
| 400.0    | 0.41        | 159.27      | 400.0     | 1.5      | -2.5      | 1.1       | 2.7        | 156.69      | 0.10             |
| 500.0    | 0.44        | 169.25      | 500.0     | 1.8      | -3.2      | 1.3       | 3.5        | 158.34      | 0.08             |
| 600.0    | 0.47        | 195.09      | 600.0     | 1.9      | -4.0      | 1.2       | 4.2        | 162.70      | 0.21             |
| 700.0    | 0.44        | 126.09      | 700.0     | 2.2      | -4.6      | 1.4       | 4.8        | 162.61      | 0.51             |
| 800.0    | 0.57        | 150.53      | 800.0     | 2.9      | -5.3      | 2.0       | 5.6        | 159.25      | 0.25             |
| 900.0    | 0.63        | 145.93      | 900.0     | 3.6      | -6.2      | 2.5       | 6.7        | 157.51      | 0.08             |
| 1000.0   | 0.91        | 179.94      | 1000.0    | 4.1      | -7.4      | 2.9       | 7.9        | 158.90      | 0.52             |
| 1100.0   | 0.90        | 181.24      | 1100.0    | 4.4      | -9.0      | 2.8       | 9.4        | 162.45      | 0.02             |
| 1200.0   | 0.99        | 195.76      | 1199.9    | 4.4      | -10.6     | 2.6       | 10.9       | 166.27      | 0.25             |
| 1300.0   | 0.73        | 199.24      | 1299.9    | 4.2      | -12.0     | 2.1       | 12.2       | 169.90      | 0.26             |
| 1400.0   | 0.44        | 218.28      | 1399.9    | 3.9      | -12.9     | 1.7       | 13.0       | 172.54      | 0.35             |
| 1500.0   | 0.42        | 224.06      | 1499.9    | 3.6      | -13.5     | 1.2       | 13.6       | 174.91      | 0.05             |
| 1600.0   | 0.46        | 215.77      | 1599.9    | 3.2      | -14.1     | 0.7       | 14.1       | 177.11      | 0.07             |
| 1700.0   | 0.50        | 208.30      | 1699.9    | 2.9      | -14.8     | 0.3       | 14.8       | 178.95      | 0.07             |
| 1800.0   | 0.52        | 230.91      | 1799.9    | 2.4      | -15.5     | -0.3      | 15.5       | 181.07      | 0.20             |
| 1900.0   | 0.61        | 272.31      | 1899.9    | 1.6      | -15.7     | -1.2      | 15.8       | 184.25      | 0.41             |
| 2000.0   | 0.77        | 272.01      | 1999.9    | 0.4      | -15.7     | -2.4      | 15.9       | 188.60      | 0.16             |
| 2100.0   | 1.02        | 272.29      | 2099.9    | -1.1     | -15.6     | -3.9      | 16.1       | 194.12      | 0.25             |
| 2200.0   | 1.02        | 269.71      | 2199.9    | -2.9     | -15.6     | -5.7      | 16.6       | 200.10      | 0.05             |
| 2300.0   | 0.90        | 278.98      | 2299.9    | -4.5     | -15.5     | -7.4      | 17.1       | 205.48      | 0.20             |
| 2400.0   | 0.66        | 289.32      | 2399.8    | -5.9     | -15.2     | -8.7      | 17.5       | 209.83      | 0.28             |
| 2500.0   | 0.47        | 296.89      | 2499.8    | -6.9     | -14.8     | -9.6      | 17.6       | 213.01      | 0.20             |
| 2600.0   | 0.50        | 311.78      | 2599.8    | -7.6     | -14.3     | -10.3     | 17.6       | 215.74      | 0.13             |
| 2700.0   | 0.70        | 319.29      | 2699.8    | -8.5     | -13.6     | -11.0     | 17.5       | 219.11      | 0.21             |
| 2800.0   | 0.42        | 321.33      | 2799.8    | -9.2     | -12.8     | -11.7     | 17.3       | 222.29      | 0.28             |
| 2900.0   | 1.53        | 246.65      | 2899.8    | -10.6    | -13.1     | -13.1     | 18.5       | 225.13      | 1.48             |
| 3000.0   | 0.54        | 348.78      | 2999.8    | -11.9    | -13.1     | -14.4     | 19.5       | 227.73      | 1.73             |
| 3100.0   | 0.98        | 341.35      | 3099.8    | -12.5    | -11.8     | -14.8     | 19.0       | 231.32      | 0.45             |
| 3200.0   | 0.83        | 331.13      | 3199.8    | -13.3    | -10.4     | -15.4     | 18.6       | 236.00      | 0.22             |
| 3300.0   | 1.31        | 315.56      | 3299.8    | -14.7    | -8.9      | -16.6     | 18.8       | 241.64      | 0.55             |
| 3400.0   | 1.70        | 316.28      | 3399.7    | -16.9    | -7.1      | -18.4     | 19.7       | 249.02      | 0.39             |
| 3413.0   | 1.71        | 321.14      | 3412.7    | -17.2    | -6.8      | -18.7     | 19.8       | 250.06      | 1.11             |



**Scientific  
Drilling**

Field: Indian Basin  
Site: Eddy County, NM  
Well: Federal C 35 #4  
Wellpath: VH - Job #32K0303142  
Survey: 03/25/03

T/M

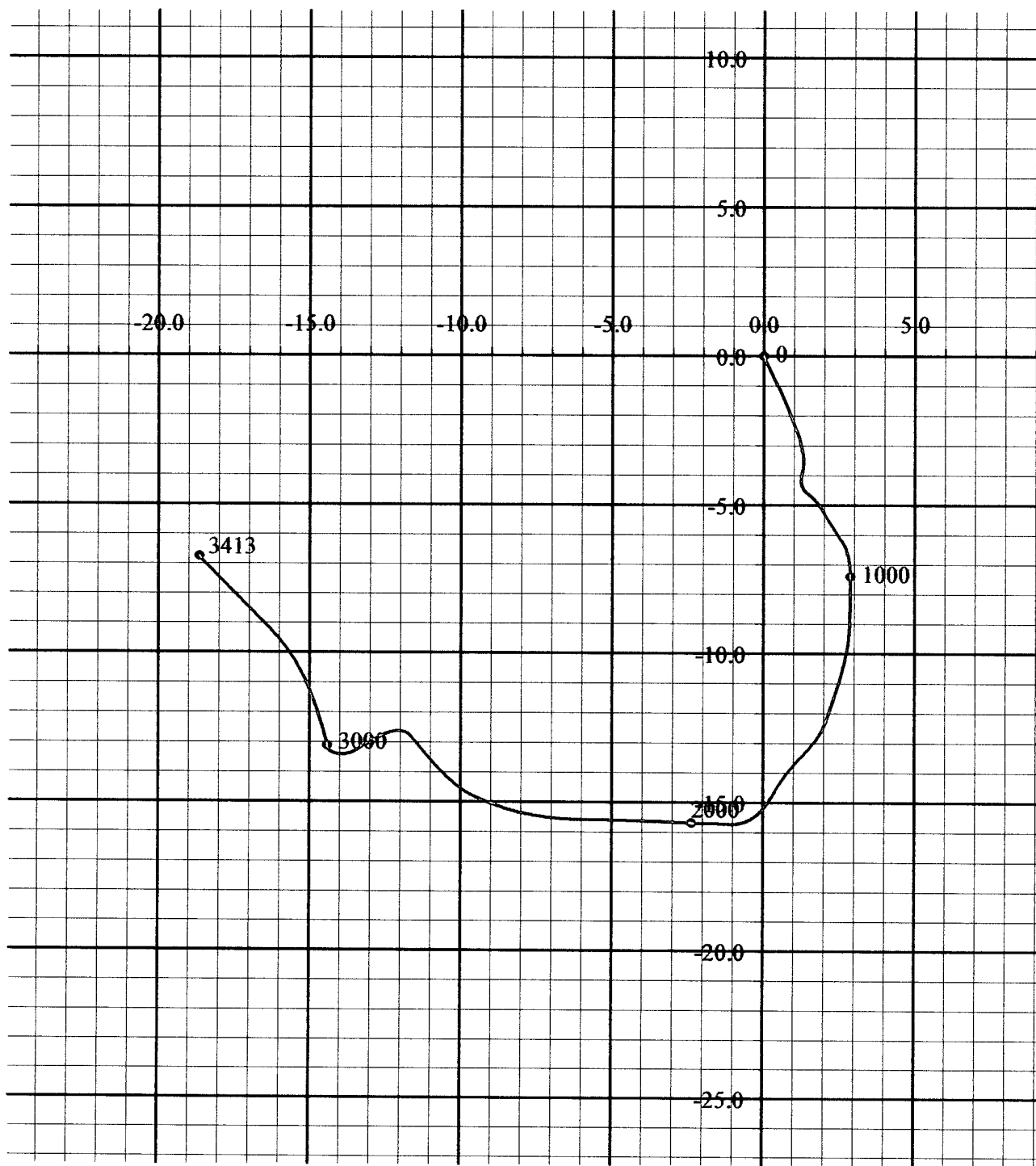


All Angles Relative  
To True North

True North: 0.00  
Magnetic North: 0.00

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

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



\* \* \* N A U T I C A L ( V e r s i o n 4 . 0 1 ) \* \* \*

Well: Federal "C" 35#4

Target Azimuth: 100.14  
Target TVD: 8350

Closure Direction: 100

Calculation Method - Minimum Curvature

| Measured<br>Depth<br>(ft) | Inclination<br>(deg.) | Azimuth<br>(deg.) | True<br>Vertical<br>Depth (ft) | Vertical<br>Section<br>(ft) | North/<br>South<br>(ft) | East/<br>West<br>(ft) | Closure<br>(ft)   | Build<br>Rate<br>(deg/ft) | Walk<br>Rate<br>(deg/ft) | Dogleg<br>Severity<br>(d/100') | Tool<br>Face<br>(deg) |
|---------------------------|-----------------------|-------------------|--------------------------------|-----------------------------|-------------------------|-----------------------|-------------------|---------------------------|--------------------------|--------------------------------|-----------------------|
| 0.00                      | 0.00                  | 0.00              | 0.00                           | 0.00                        | 0.00                    | 0.00                  | <==== Tie-in Data |                           |                          |                                |                       |
| 100.00                    | 0.35                  | 158.43            | 100.00                         | 0.16                        | -0.28                   | 0.11                  | 0.31              | 0.004                     | 1.584                    | 0.35                           | gyro                  |
| 200.00                    | 0.50                  | 152.05            | 200.00                         | 0.59                        | -0.95                   | 0.43                  | 1.05              | 0.002                     | -0.064                   | 0.16                           | gyro                  |
| 300.00                    | 0.51                  | 159.00            | 299.99                         | 1.09                        | -1.75                   | 0.79                  | 1.93              | 0.000                     | 0.069                    | 0.06                           | gyro                  |
| 400.00                    | 0.41                  | 159.27            | 399.99                         | 1.50                        | -2.50                   | 1.08                  | 2.73              | -0.001                    | 0.003                    | 0.10                           | gyro                  |
| 500.00                    | 0.44                  | 169.25            | 499.99                         | 1.82                        | -3.22                   | 1.28                  | 3.46              | 0.000                     | 0.100                    | 0.08                           | gyro                  |
| 600.00                    | 0.47                  | 195.09            | 599.98                         | 1.93                        | -3.99                   | 1.24                  | 4.18              | 0.000                     | 0.258                    | 0.21                           | gyro                  |
| 700.00                    | 0.44                  | 126.09            | 699.98                         | 2.24                        | -4.61                   | 1.45                  | 4.83              | 0.000                     | -0.690                   | 0.52                           | gyro                  |
| 800.00                    | 0.57                  | 150.53            | 799.98                         | 2.90                        | -5.27                   | 2.00                  | 5.64              | 0.001                     | 0.244                    | 0.25                           | gyro                  |
| 900.00                    | 0.63                  | 145.93            | 899.97                         | 3.60                        | -6.16                   | 2.55                  | 6.67              | 0.001                     | -0.046                   | 0.08                           | gyro                  |
| 1,000.00                  | 0.91                  | 179.94            | 999.96                         | 4.12                        | -7.41                   | 2.86                  | 7.94              | 0.003                     | 0.340                    | 0.52                           | gyro                  |
| 1,100.00                  | 0.90                  | 181.24            | 1,099.95                       | 4.38                        | -8.99                   | 2.85                  | 9.43              | 0.000                     | 0.013                    | 0.02                           | gyro                  |
| 1,200.00                  | 0.99                  | 195.76            | 1,199.94                       | 4.42                        | -10.60                  | 2.59                  | 10.92             | 0.001                     | 0.145                    | 0.25                           | gyro                  |
| 1,300.00                  | 0.73                  | 199.24            | 1,299.93                       | 4.24                        | -12.04                  | 2.15                  | 12.23             | -0.003                    | 0.035                    | 0.27                           | gyro                  |
| 1,400.00                  | 0.44                  | 218.28            | 1,399.92                       | 3.95                        | -12.94                  | 1.70                  | 13.05             | -0.003                    | 0.190                    | 0.35                           | gyro                  |
| 1,500.00                  | 0.42                  | 224.06            | 1,499.92                       | 3.57                        | -13.51                  | 1.21                  | 13.56             | 0.000                     | 0.058                    | 0.05                           | gyro                  |
| 1,600.00                  | 0.46                  | 215.77            | 1,599.92                       | 3.19                        | -14.09                  | 0.72                  | 14.11             | 0.000                     | -0.083                   | 0.08                           | gyro                  |
| 1,700.00                  | 0.50                  | 208.30            | 1,699.91                       | 2.88                        | -14.80                  | 0.28                  | 14.81             | 0.000                     | -0.075                   | 0.07                           | gyro                  |
| 1,800.00                  | 0.52                  | 230.91            | 1,799.91                       | 2.45                        | -15.47                  | -0.28                 | 15.48             | 0.000                     | 0.226                    | 0.20                           | gyro                  |
| 1,900.00                  | 0.61                  | 272.31            | 1,899.90                       | 1.62                        | -15.74                  | -1.16                 | 15.78             | 0.001                     | 0.414                    | 0.41                           | gyro                  |
| 2,000.00                  | 0.77                  | 272.01            | 1,999.90                       | 0.43                        | -15.69                  | -2.37                 | 15.87             | 0.002                     | -0.003                   | 0.16                           | gyro                  |
| 2,100.00                  | 1.02                  | 272.29            | 2,099.88                       | -1.12                       | -15.64                  | -3.93                 | 16.12             | 0.003                     | 0.003                    | 0.25                           | gyro                  |
| 2,200.00                  | 1.02                  | 269.71            | 2,199.87                       | -2.87                       | -15.60                  | -5.71                 | 16.62             | 0.000                     | -0.026                   | 0.05                           | gyro                  |
| 2,300.00                  | 0.90                  | 278.98            | 2,299.85                       | -4.53                       | -15.49                  | -7.37                 | 17.15             | -0.001                    | 0.093                    | 0.20                           | gyro                  |
| 2,400.00                  | 0.66                  | 289.32            | 2,399.84                       | -5.89                       | -15.17                  | -8.69                 | 17.49             | -0.002                    | 0.103                    | 0.28                           | gyro                  |
| 2,500.00                  | 0.47                  | 296.89            | 2,499.84                       | -6.85                       | -14.80                  | -9.60                 | 17.64             | -0.002                    | 0.076                    | 0.20                           | gyro                  |
| 2,600.00                  | 0.50                  | 311.78            | 2,599.84                       | -7.61                       | -14.32                  | -10.29                | 17.64             | 0.000                     | 0.149                    | 0.13                           | gyro                  |
| 2,700.00                  | 0.70                  | 319.29            | 2,699.83                       | -8.46                       | -13.57                  | -11.02                | 17.48             | 0.002                     | 0.075                    | 0.21                           | gyro                  |
| 2,800.00                  | 0.42                  | 321.33            | 2,799.83                       | -9.21                       | -12.82                  | -11.65                | 17.32             | -0.003                    | 0.020                    | 0.28                           | gyro                  |
| 2,900.00                  | 1.53                  | 246.65            | 2,899.81                       | -10.60                      | -13.06                  | -13.10                | 18.50             | 0.011                     | -0.747                   | 1.48                           | gyro                  |
| 3,000.00                  | 0.54                  | 348.78            | 2,999.80                       | -11.88                      | -13.13                  | -14.42                | 19.50             | -0.010                    | 1.021                    | 1.73                           | gyro                  |
| 3,100.00                  | 0.98                  | 341.35            | 3,099.79                       | -12.46                      | -11.86                  | -14.78                | 18.95             | 0.004                     | -0.074                   | 0.45                           | gyro                  |
| 3,200.00                  | 0.83                  | 331.13            | 3,199.78                       | -13.33                      | -10.41                  | -15.41                | 18.59             | -0.002                    | -0.102                   | 0.22                           | gyro                  |
| 3,300.00                  | 1.31                  | 315.56            | 3,299.76                       | -14.72                      | -8.96                   | -16.56                | 18.82             | 0.005                     | -0.156                   | 0.56                           | gyro                  |
| 3,400.00                  | 1.70                  | 316.28            | 3,399.73                       | -16.85                      | -7.07                   | -18.38                | 19.69             | 0.004                     | 0.007                    | 0.39                           | gyro                  |
| 3,413.00                  | 1.71                  | 321.14            | 3,412.72                       | -17.15                      | -6.78                   | -18.64                | 19.83             | 0.001                     | 0.374                    | 1.11                           | gyro                  |
| 3,457.00                  | 1.30                  | 343.10            | 3,456.71                       | -17.87                      | -5.79                   | -19.19                | 20.05             | -0.009                    | 0.499                    | 1.59                           | mwd                   |
| 3,521.00                  | 1.60                  | 57.30             | 3,520.69                       | -17.55                      | -4.62                   | -18.65                | 19.21             | 0.005                     | 1.159                    | 2.76                           | mwd                   |
| 3,584.00                  | 3.30                  | 76.60             | 3,583.63                       | -15.24                      | -3.72                   | -16.15                | 16.57             | 0.027                     | 0.306                    | 2.96                           | mwd                   |
| 3,647.00                  | 5.10                  | 87.20             | 3,646.46                       | -10.85                      | -3.16                   | -11.59                | 12.01             | 0.029                     | 0.168                    | 3.10                           | mwd                   |
| 3,711.00                  | 6.70                  | 91.10             | 3,710.12                       | -4.39                       | -3.10                   | -5.01                 | 5.89              | 0.025                     | 0.061                    | 2.58                           | mwd                   |
| 3,773.00                  | 7.80                  | 94.90             | 3,771.62                       | 3.37                        | -3.52                   | 2.80                  | 4.50              | 0.018                     | 0.061                    | 1.93                           | mwd                   |
| 3,837.00                  | 9.50                  | 98.10             | 3,834.89                       | 12.98                       | -4.64                   | 12.35                 | 13.19             | 0.027                     | 0.050                    | 2.76                           | mwd                   |
| 3,899.00                  | 11.20                 | 101.20            | 3,895.88                       | 24.11                       | -6.53                   | 23.33                 | 24.22             | 0.027                     | 0.050                    | 2.88                           | mwd                   |
| 3,963.00                  | 13.50                 | 101.20            | 3,958.40                       | 37.80                       | -9.19                   | 36.75                 | 37.88             | 0.036                     | 0.000                    | 3.59                           | mwd                   |
| 4,026.00                  | 14.90                 | 100.90            | 4,019.47                       | 53.25                       | -12.15                  | 51.92                 | 53.32             | 0.022                     | -0.005                   | 2.23                           | mwd                   |
| 4,090.00                  | 15.50                 | 100.50            | 4,081.23                       | 70.03                       | -15.26                  | 68.41                 | 70.09             | 0.009                     | -0.006                   | 0.95                           | mwd                   |
| 4,154.00                  | 16.90                 | 99.50             | 4,142.69                       | 87.88                       | -18.36                  | 85.99                 | 87.93             | 0.022                     | -0.016                   | 2.23                           | mwd                   |
| 4,217.00                  | 17.40                 | 99.50             | 4,202.89                       | 106.46                      | -21.42                  | 104.31                | 106.49            | 0.008                     | 0.000                    | 0.79                           | mwd                   |
| 4,279.00                  | 16.80                 | 98.40             | 4,262.15                       | 124.68                      | -24.26                  | 122.32                | 124.70            | -0.010                    | -0.018                   | 1.10                           | mwd                   |
| 4,342.00                  | 15.70                 | 98.10             | 4,322.63                       | 142.30                      | -26.79                  | 139.77                | 142.31            | -0.017                    | -0.005                   | 1.75                           | mwd                   |
| 4,406.00                  | 15.50                 | 97.40             | 4,384.27                       | 159.50                      | -29.11                  | 156.82                | 159.50            | -0.003                    | -0.011                   | 0.43                           | mwd                   |
| 4,469.00                  | 16.20                 | 97.40             | 4,444.88                       | 176.68                      | -31.33                  | 173.88                | 176.68            | 0.011                     | 0.000                    | 1.11                           | mwd                   |
| 4,533.00                  | 16.60                 | 97.40             | 4,506.27                       | 194.73                      | -33.66                  | 191.80                | 194.73            | 0.006                     | 0.000                    | 0.62                           | mwd                   |

\* \* \* N A U T I C A L ( V e r s i o n 4 . 0 1 ) \* \* \*

Well: Federal "C" 35#4

Target Azimuth: 100.14  
Target TVD: 8350

Closure Direction: 100

*Calculation Method - Minimum Curvature*

| Measured<br>Depth<br>(ft) | Inclination<br>(deg.) | Azimuth<br>(deg.) | True<br>Vertical<br>Depth (ft) | Vertical<br>Section<br>(ft) | North/<br>South<br>(ft) | East/<br>West<br>(ft) | Closure<br>(ft) | Build<br>Rate<br>(deg/ft) | Walk<br>Rate<br>(deg/ft) | Dogleg<br>Severity<br>(d/100') | Tool<br>Face<br>(deg) |
|---------------------------|-----------------------|-------------------|--------------------------------|-----------------------------|-------------------------|-----------------------|-----------------|---------------------------|--------------------------|--------------------------------|-----------------------|
| 4,595.00                  | 16.90                 | 97.00             | 4,565.64                       | 212.58                      | -35.90                  | 209.53                | 212.58          | 0.005                     | -0.006                   | 0.52                           | mwd                   |
| 4,659.00                  | 17.20                 | 97.00             | 4,626.83                       | 231.32                      | -38.18                  | 228.16                | 231.33          | 0.005                     | 0.000                    | 0.47                           | mwd                   |
| 4,723.00                  | 17.20                 | 98.80             | 4,687.97                       | 250.22                      | -40.78                  | 246.90                | 250.25          | 0.000                     | 0.028                    | 0.83                           | mwd                   |
| 4,786.00                  | 17.20                 | 100.90            | 4,748.15                       | 268.85                      | -43.97                  | 265.25                | 268.87          | 0.000                     | 0.033                    | 0.99                           | mwd                   |
| 4,849.00                  | 17.40                 | 103.40            | 4,808.30                       | 287.57                      | -47.92                  | 283.56                | 287.58          | 0.003                     | 0.040                    | 1.22                           | mwd                   |
| 4,913.00                  | 16.70                 | 103.70            | 4,869.49                       | 306.30                      | -52.31                  | 301.81                | 306.31          | -0.011                    | 0.005                    | 1.10                           | mwd                   |
| 4,976.00                  | 17.10                 | 103.00            | 4,929.77                       | 324.59                      | -56.54                  | 319.62                | 324.59          | 0.006                     | -0.011                   | 0.71                           | mwd                   |
| 5,038.00                  | 16.90                 | 103.00            | 4,989.06                       | 342.69                      | -60.62                  | 337.29                | 342.69          | -0.003                    | 0.000                    | 0.32                           | mwd                   |
| 5,102.00                  | 17.00                 | 103.00            | 5,050.28                       | 361.33                      | -64.81                  | 355.47                | 361.33          | 0.002                     | 0.000                    | 0.16                           | mwd                   |
| 5,165.00                  | 16.90                 | 101.20            | 5,110.54                       | 379.68                      | -68.66                  | 373.42                | 379.68          | -0.002                    | -0.029                   | 0.85                           | mwd                   |
| 5,227.00                  | 16.80                 | 100.50            | 5,169.88                       | 397.65                      | -72.05                  | 391.07                | 397.66          | -0.002                    | -0.011                   | 0.36                           | mwd                   |
| 5,291.00                  | 16.60                 | 98.40             | 5,231.18                       | 416.04                      | -75.07                  | 409.21                | 416.04          | -0.003                    | -0.033                   | 0.99                           | mwd                   |
| 5,354.00                  | 16.90                 | 95.60             | 5,291.51                       | 434.16                      | -77.28                  | 427.23                | 434.16          | 0.005                     | -0.044                   | 1.37                           | mwd                   |
| 5,415.00                  | 16.70                 | 98.10             | 5,349.90                       | 451.76                      | -79.38                  | 444.73                | 451.76          | -0.003                    | 0.041                    | 1.23                           | mwd                   |
| 5,478.00                  | 16.90                 | 98.80             | 5,410.22                       | 469.96                      | -82.05                  | 462.74                | 469.96          | 0.003                     | 0.011                    | 0.45                           | mwd                   |
| 5,541.00                  | 16.80                 | 98.40             | 5,470.51                       | 488.21                      | -84.78                  | 480.80                | 488.22          | -0.002                    | -0.006                   | 0.24                           | mwd                   |
| 5,605.00                  | 16.40                 | 98.80             | 5,531.84                       | 506.49                      | -87.52                  | 498.88                | 506.49          | -0.006                    | 0.006                    | 0.65                           | mwd                   |
| 5,668.00                  | 15.50                 | 99.10             | 5,592.42                       | 523.80                      | -90.21                  | 515.98                | 523.80          | -0.014                    | 0.005                    | 1.43                           | mwd                   |
| 5,731.00                  | 13.80                 | 98.80             | 5,653.37                       | 539.73                      | -92.69                  | 531.72                | 539.73          | -0.027                    | -0.005                   | 2.70                           | mwd                   |
| 5,793.00                  | 14.30                 | 99.50             | 5,713.51                       | 554.78                      | -95.09                  | 546.58                | 554.78          | 0.008                     | 0.011                    | 0.85                           | mwd                   |
| 5,857.00                  | 14.60                 | 99.80             | 5,775.49                       | 570.75                      | -97.76                  | 562.32                | 570.75          | 0.005                     | 0.005                    | 0.48                           | mwd                   |
| 5,919.00                  | 14.90                 | 97.40             | 5,835.45                       | 586.52                      | -100.12                 | 577.92                | 586.53          | 0.005                     | -0.039                   | 1.10                           | mwd                   |
| 5,983.00                  | 15.80                 | 97.40             | 5,897.16                       | 603.45                      | -102.30                 | 594.72                | 603.46          | 0.014                     | 0.000                    | 1.41                           | mwd                   |
| 6,047.00                  | 15.80                 | 97.40             | 5,958.74                       | 620.85                      | -104.55                 | 612.01                | 620.87          | 0.000                     | 0.000                    | 0.00                           | mwd                   |
| 6,110.00                  | 16.20                 | 97.40             | 6,019.30                       | 638.20                      | -106.78                 | 629.23                | 638.22          | 0.006                     | 0.000                    | 0.63                           | mwd                   |
| 6,174.00                  | 16.10                 | 99.10             | 6,080.78                       | 655.99                      | -109.34                 | 646.84                | 656.02          | -0.002                    | 0.027                    | 0.76                           | mwd                   |
| 6,238.00                  | 16.70                 | 100.60            | 6,142.17                       | 674.06                      | -112.43                 | 664.64                | 674.09          | 0.009                     | 0.023                    | 1.15                           | mwd                   |
| 6,301.00                  | 17.20                 | 101.60            | 6,202.44                       | 692.42                      | -115.97                 | 682.67                | 692.45          | 0.008                     | 0.016                    | 0.92                           | mwd                   |
| 6,364.00                  | 17.10                 | 101.20            | 6,262.64                       | 710.99                      | -119.64                 | 700.88                | 711.01          | -0.002                    | -0.006                   | 0.25                           | mwd                   |
| 6,427.00                  | 16.60                 | 103.10            | 6,322.93                       | 729.24                      | -123.48                 | 718.73                | 729.26          | -0.008                    | 0.030                    | 1.18                           | mwd                   |
| 6,490.00                  | 16.70                 | 101.90            | 6,383.29                       | 747.27                      | -127.39                 | 736.35                | 747.29          | 0.002                     | -0.019                   | 0.57                           | mwd                   |
| 6,553.00                  | 17.20                 | 101.60            | 6,443.55                       | 765.63                      | -131.13                 | 754.33                | 765.64          | 0.008                     | -0.005                   | 0.81                           | mwd                   |
| 6,616.00                  | 17.70                 | 100.90            | 6,503.65                       | 784.52                      | -134.81                 | 772.86                | 784.53          | 0.008                     | -0.011                   | 0.86                           | mwd                   |
| 6,680.00                  | 15.90                 | 97.70             | 6,564.92                       | 803.01                      | -137.82                 | 791.10                | 803.02          | -0.028                    | -0.050                   | 3.16                           | mwd                   |
| 6,742.00                  | 14.90                 | 95.30             | 6,624.69                       | 819.44                      | -139.70                 | 807.46                | 819.45          | -0.016                    | -0.039                   | 1.91                           | mwd                   |
| 6,806.00                  | 15.20                 | 96.00             | 6,686.50                       | 836.01                      | -141.34                 | 823.99                | 836.03          | 0.005                     | 0.011                    | 0.55                           | mwd                   |
| 6,869.00                  | 15.40                 | 96.70             | 6,747.27                       | 852.59                      | -143.18                 | 840.52                | 852.62          | 0.003                     | 0.011                    | 0.43                           | mwd                   |
| 6,931.00                  | 15.20                 | 97.70             | 6,807.07                       | 868.93                      | -145.22                 | 856.75                | 868.97          | -0.003                    | 0.016                    | 0.53                           | mwd                   |
| 6,995.00                  | 15.70                 | 100.50            | 6,868.76                       | 885.97                      | -147.93                 | 873.58                | 886.01          | 0.008                     | 0.044                    | 1.40                           | mwd                   |
| 7,058.00                  | 16.30                 | 100.50            | 6,929.32                       | 903.34                      | -151.09                 | 890.65                | 903.37          | 0.010                     | 0.000                    | 0.95                           | mwd                   |
| 7,122.00                  | 16.70                 | 98.80             | 6,990.68                       | 921.51                      | -154.13                 | 908.57                | 921.55          | 0.006                     | -0.027                   | 0.98                           | mwd                   |
| 7,185.00                  | 16.40                 | 95.90             | 7,051.07                       | 939.43                      | -156.43                 | 926.36                | 939.48          | -0.005                    | -0.046                   | 1.39                           | mwd                   |
| 7,249.00                  | 15.30                 | 96.70             | 7,112.64                       | 956.87                      | -158.35                 | 943.73                | 956.93          | -0.017                    | 0.013                    | 1.75                           | mwd                   |
| 7,311.00                  | 15.20                 | 95.60             | 7,172.45                       | 973.14                      | -160.10                 | 959.95                | 973.21          | -0.002                    | -0.018                   | 0.49                           | mwd                   |
| 7,375.00                  | 14.90                 | 97.70             | 7,234.26                       | 989.72                      | -162.02                 | 976.45                | 989.80          | -0.005                    | 0.033                    | 0.97                           | mwd                   |
| 7,438.00                  | 15.40                 | 101.60            | 7,295.07                       | 1,006.18                    | -164.78                 | 992.67                | 1,006.26        | 0.008                     | 0.062                    | 1.80                           | mwd                   |
| 7,501.00                  | 15.10                 | 103.10            | 7,355.85                       | 1,022.74                    | -168.33                 | 1,008.86              | 1,022.81        | -0.005                    | 0.024                    | 0.79                           | mwd                   |
| 7,565.00                  | 15.80                 | 102.30            | 7,417.54                       | 1,039.77                    | -172.07                 | 1,025.49              | 1,039.83        | 0.011                     | -0.013                   | 1.14                           | mwd                   |
| 7,628.00                  | 16.00                 | 102.30            | 7,478.13                       | 1,057.02                    | -175.75                 | 1,042.36              | 1,057.07        | 0.003                     | 0.000                    | 0.32                           | mwd                   |
| 7,692.00                  | 15.90                 | 102.60            | 7,539.67                       | 1,074.59                    | -179.54                 | 1,059.53              | 1,074.63        | -0.002                    | 0.005                    | 0.20                           | mwd                   |
| 7,756.00                  | 16.00                 | 102.00            | 7,601.20                       | 1,092.16                    | -183.29                 | 1,076.71              | 1,092.20        | 0.002                     | -0.009                   | 0.30                           | mwd                   |
| 7,819.00                  | 16.30                 | 101.60            | 7,661.72                       | 1,109.68                    | -186.87                 | 1,093.87              | 1,109.71        | 0.005                     | -0.006                   | 0.51                           | mwd                   |
| 7,883.00                  | 16.40                 | 100.20            | 7,723.13                       | 1,127.69                    | -190.27                 | 1,111.56              | 1,127.72        | 0.002                     | -0.022                   | 0.64                           | mwd                   |
| 7,947.00                  | 15.40                 | 103.30            | 7,784.68                       | 1,145.21                    | -193.83                 | 1,128.72              | 1,145.24        | -0.016                    | 0.048                    | 2.05                           | mwd                   |

\* \* \* N A U T I C A L ( V e r s i o n 4 . 0 1 ) \* \* \*

Well: Federal "C" 35#4

Target Azimuth: 100.14  
Target TVD: 8350

Closure Direction: 100

*Calculation Method - Minimum Curvature*

| Measured<br>Depth<br>(ft) | Inclination<br>(deg.) | Azimuth<br>(deg.) | True<br>Vertical<br>Depth (ft) | Vertical<br>Section<br>(ft) | North/<br>South<br>(ft) | East/<br>West<br>(ft) | Closure<br>(ft) | Build<br>Rate<br>(deg/ft) | Walk<br>Rate<br>(deg/ft) | Dogleg<br>Severity<br>(d/100') | Tool<br>Face<br>(deg) |
|---------------------------|-----------------------|-------------------|--------------------------------|-----------------------------|-------------------------|-----------------------|-----------------|---------------------------|--------------------------|--------------------------------|-----------------------|
| 8,011.00                  | 14.80                 | 101.20            | 7,846.47                       | 1,161.87                    | -197.37                 | 1,145.01              | 1,161.89        | -0.009                    | -0.033                   | 1.27                           | mwd                   |
| 8,075.00                  | 14.40                 | 101.20            | 7,908.40                       | 1,178.00                    | -200.51                 | 1,160.83              | 1,178.02        | -0.006                    | 0.000                    | 0.63                           | mwd                   |
| 8,138.00                  | 16.20                 | 102.30            | 7,969.17                       | 1,194.62                    | -203.90                 | 1,177.10              | 1,194.63        | 0.029                     | 0.017                    | 2.89                           | mwd                   |
| 8,200.00                  | 16.50                 | 102.60            | 8,028.66                       | 1,212.06                    | -207.66                 | 1,194.15              | 1,212.07        | 0.005                     | 0.005                    | 0.50                           | mwd                   |
| 8,264.00                  | 15.80                 | 103.00            | 8,090.13                       | 1,229.84                    | -211.61                 | 1,211.51              | 1,229.85        | -0.011                    | 0.006                    | 1.11                           | mwd                   |
| 8,327.00                  | 15.10                 | 103.00            | 8,150.86                       | 1,246.60                    | -215.38                 | 1,227.86              | 1,246.61        | -0.011                    | 0.000                    | 1.11                           | mwd                   |
| 8,391.00                  | 15.10                 | 102.30            | 8,212.65                       | 1,263.26                    | -219.03                 | 1,244.13              | 1,263.26        | 0.000                     | -0.011                   | 0.28                           | mwd                   |
| 8,465.00                  | 15.10                 | 102.30            | 8,284.09                       | 1,282.52                    | -223.14                 | 1,262.96              | 1,282.52        | 0.000                     | 0.000                    | 0.00                           | proj                  |

Marathon Oil Company  
Fed C35 #4

slot #1  
INDIAN BASIN  
Eddy County New Mexico

S U R V E Y L I S T I N G

by  
Baker Hughes INTEQ

Your ref : MWD  
Our ref : svy2218  
License :

Date printed : 1-May-2003  
Date created : 31-Mar-2003  
Last revised : 1-May-2003

Field is centred on n32 30 0.000,w104 30 0  
Structure is centred on 426886.000,522398.000,999.00000,N

Slot location is n32 26 9.464,w104 34 13.141  
Slot Grid coordinates are N 522398.000, E 426886.000  
Slot local coordinates are 0.00 N 0.00 E

Projection type: mercator - New Mexico East (3001), Spheroid: Clarke - 1866

Reference North is Grid North

Marathon Oil Company  
Fed C35 #4, slot #1  
INDIAN BASIN, Eddy County New Mexico

SURVEY LISTING Page 1  
Your ref : MWD  
Last revised : 1-May-2003

| Measured<br>Depth | Inclin<br>Degrees | Azimuth<br>Degrees | True Vert<br>Depth | R E C T A N G U L A R<br>C O O R D I N A T E S |         | Dogleg<br>Deg/100ft | Vert<br>Sect | G R I D<br>Easting | C O O R D S<br>Northing |
|-------------------|-------------------|--------------------|--------------------|------------------------------------------------|---------|---------------------|--------------|--------------------|-------------------------|
| 3413.00           | 1.71              | 321.14             | 3412.71            | 6.77S                                          | 18.65W  | 0.00                | -17.17       | 426867.35          | 522391.23               |
| 3457.00           | 1.30              | 343.10             | 3456.70            | 5.78S                                          | 19.21W  | 1.59                | -17.89       | 426866.79          | 522392.22               |
| 3521.00           | 1.60              | 57.30              | 3520.68            | 4.60S                                          | 18.67W  | 2.76                | -17.56       | 426867.33          | 522393.40               |
| 3584.00           | 3.30              | 76.60              | 3583.62            | 3.71S                                          | 16.16W  | 2.96                | -15.26       | 426869.84          | 522394.29               |
| 3647.00           | 5.10              | 87.20              | 3646.45            | 3.15S                                          | 11.60W  | 3.10                | -10.86       | 426874.40          | 522394.85               |
| 3711.00           | 6.70              | 91.10              | 3710.11            | 3.08S                                          | 5.03W   | 2.58                | -4.40        | 426880.97          | 522394.92               |
| 3773.00           | 7.80              | 94.90              | 3771.61            | 3.51S                                          | 2.78E   | 1.93                | 3.36         | 426888.78          | 522394.49               |
| 3837.00           | 9.50              | 98.10              | 3834.88            | 4.63S                                          | 12.34E  | 2.76                | 12.96        | 426898.34          | 522393.37               |
| 3899.00           | 11.20             | 101.20             | 3895.87            | 6.52S                                          | 23.31E  | 2.88                | 24.10        | 426909.31          | 522391.48               |
| 3963.00           | 13.50             | 101.20             | 3958.39            | 9.18S                                          | 36.74E  | 3.59                | 37.78        | 426922.74          | 522388.82               |
| 4026.00           | 14.90             | 100.90             | 4019.46            | 12.14S                                         | 51.91E  | 2.23                | 53.23        | 426937.91          | 522385.86               |
| 4090.00           | 15.50             | 100.50             | 4081.22            | 15.25S                                         | 68.39E  | 0.95                | 70.01        | 426954.39          | 522382.75               |
| 4154.00           | 16.90             | 99.50              | 4142.68            | 18.35S                                         | 85.98E  | 2.23                | 87.87        | 426971.98          | 522379.65               |
| 4217.00           | 17.40             | 99.50              | 4202.88            | 21.41S                                         | 104.30E | 0.79                | 106.44       | 426990.30          | 522376.59               |
| 4279.00           | 16.80             | 98.40              | 4262.14            | 24.25S                                         | 122.31E | 1.10                | 124.67       | 427008.31          | 522373.75               |
| 4342.00           | 15.70             | 98.10              | 4322.62            | 26.78S                                         | 139.75E | 1.75                | 142.29       | 427025.75          | 522371.22               |
| 4406.00           | 15.50             | 97.40              | 4384.26            | 29.10S                                         | 156.81E | 0.43                | 159.48       | 427042.81          | 522368.90               |
| 4469.00           | 16.20             | 97.40              | 4444.87            | 31.32S                                         | 173.87E | 1.11                | 176.67       | 427059.87          | 522366.68               |
| 4533.00           | 16.60             | 97.40              | 4506.26            | 33.65S                                         | 191.79E | 0.62                | 194.72       | 427077.79          | 522364.35               |
| 4595.00           | 16.90             | 97.00              | 4565.63            | 35.89S                                         | 209.52E | 0.52                | 212.56       | 427095.52          | 522362.11               |
| 4659.00           | 17.20             | 98.80              | 4626.82            | 38.47S                                         | 228.10E | 0.95                | 231.31       | 427114.10          | 522359.53               |
| 4723.00           | 17.20             | 100.90             | 4687.96            | 41.70S                                         | 246.75E | 0.97                | 250.23       | 427132.75          | 522356.30               |
| 4786.00           | 17.20             | 103.40             | 4748.14            | 45.62S                                         | 264.95E | 1.17                | 268.85       | 427150.95          | 522352.38               |
| 4849.00           | 17.40             | 103.40             | 4808.29            | 49.97S                                         | 283.18E | 0.32                | 287.55       | 427169.18          | 522348.03               |
| 4913.00           | 16.70             | 103.70             | 4869.48            | 54.36S                                         | 301.42E | 1.10                | 306.28       | 427187.42          | 522343.64               |
| 4976.00           | 17.10             | 103.00             | 4929.76            | 58.59S                                         | 319.24E | 0.71                | 324.57       | 427205.24          | 522339.41               |
| 5038.00           | 16.90             | 103.00             | 4989.05            | 62.67S                                         | 336.90E | 0.32                | 342.67       | 427222.90          | 522335.33               |
| 5102.00           | 17.00             | 103.00             | 5050.27            | 66.86S                                         | 355.08E | 0.16                | 361.31       | 427241.08          | 522331.14               |
| 5165.00           | 16.90             | 101.20             | 5110.53            | 70.71S                                         | 373.04E | 0.85                | 379.66       | 427259.04          | 522327.29               |
| 5227.00           | 16.80             | 100.50             | 5169.87            | 74.10S                                         | 390.69E | 0.36                | 397.63       | 427276.69          | 522323.90               |

|         |       |        |         |         |         |      |        |           |           |
|---------|-------|--------|---------|---------|---------|------|--------|-----------|-----------|
| 5291.00 | 16.60 | 98.40  | 5231.17 | 77.12S  | 408.83E | 0.99 | 416.02 | 427294.83 | 522320.88 |
| 5354.00 | 16.90 | 95.60  | 5291.50 | 79.33S  | 426.84E | 1.37 | 434.14 | 427312.84 | 522318.67 |
| 5415.00 | 16.70 | 98.10  | 5349.89 | 81.43S  | 444.35E | 1.23 | 451.74 | 427330.35 | 522316.57 |
| 5478.00 | 16.90 | 98.80  | 5410.21 | 84.10S  | 462.36E | 0.45 | 469.94 | 427348.36 | 522313.90 |
| 5541.00 | 16.80 | 98.40  | 5470.50 | 86.83S  | 480.41E | 0.24 | 488.20 | 427366.41 | 522311.17 |
| 5605.00 | 16.40 | 98.80  | 5531.83 | 89.57S  | 498.49E | 0.65 | 506.47 | 427384.49 | 522308.43 |
| 5668.00 | 15.50 | 99.10  | 5592.41 | 92.26S  | 515.59E | 1.43 | 523.78 | 427401.59 | 522305.74 |
| 5731.00 | 13.80 | 98.80  | 5653.36 | 94.74S  | 531.33E | 2.70 | 539.71 | 427417.33 | 522303.26 |
| 5793.00 | 14.30 | 99.50  | 5713.50 | 97.14S  | 546.19E | 0.85 | 554.76 | 427432.19 | 522300.86 |
| 5857.00 | 14.60 | 99.80  | 5775.48 | 99.81S  | 561.94E | 0.48 | 570.73 | 427447.94 | 522298.19 |
| 5919.00 | 14.90 | 97.40  | 5835.43 | 102.17S | 577.54E | 1.10 | 586.51 | 427463.54 | 522295.83 |
| 5983.00 | 15.80 | 97.40  | 5897.15 | 104.35S | 594.34E | 1.41 | 603.43 | 427480.34 | 522293.65 |
| 6047.00 | 15.80 | 97.40  | 5958.73 | 106.60S | 611.62E | 0.00 | 620.83 | 427497.62 | 522291.40 |
| 6110.00 | 16.20 | 97.40  | 6019.29 | 108.83S | 628.84E | 0.63 | 638.18 | 427514.84 | 522289.17 |
| 6174.00 | 16.10 | 99.10  | 6080.77 | 111.39S | 646.46E | 0.76 | 655.97 | 427532.46 | 522286.61 |
| 6238.00 | 16.70 | 100.60 | 6142.16 | 114.48S | 664.26E | 1.15 | 674.04 | 427550.26 | 522283.52 |
| 6301.00 | 17.20 | 101.60 | 6202.43 | 118.02S | 682.28E | 0.92 | 692.40 | 427568.28 | 522279.98 |
| 6364.00 | 17.10 | 101.20 | 6262.63 | 121.69S | 700.49E | 0.25 | 710.97 | 427586.49 | 522276.31 |
| 6427.00 | 16.60 | 103.10 | 6322.92 | 125.53S | 718.34E | 1.18 | 729.22 | 427604.34 | 522272.47 |
| 6490.00 | 16.70 | 101.90 | 6383.28 | 129.44S | 735.96E | 0.57 | 747.26 | 427621.96 | 522268.56 |

All data in feet unless otherwise stated. Calculation uses minimum curvature method.

Coordinates from slot #1 and TVD from rotary table.

Bottom hole distance is 1279.90 on azimuth 100.11 degrees from wellhead.

Vertical section is from S 0.00 W 0.00 on azimuth 100.14 degrees.

Grid is mercator - New Mexico East (3001).

Grid coordinates in FEET and computed using the Clarke - 1866 spheroid

Presented by Baker Hughes INTEQ

Marathon Oil Company  
Fed C35 #4, slot #1  
INDIAN BASIN, Eddy County New Mexico

SURVEY LISTING Page 2  
Your ref : MWD  
Last revised : 1-May-2003

| Measured<br>Depth | Inclin<br>Degrees | Azimuth<br>Degrees | True Vert<br>Depth | R E C T A N G U L A R<br>C O O R D I N A T E S |          | Dogleg<br>Deg/100ft | Vert<br>Sect | G R I D<br>Easting | C O O R D S<br>Northing |
|-------------------|-------------------|--------------------|--------------------|------------------------------------------------|----------|---------------------|--------------|--------------------|-------------------------|
| 6553.00           | 17.20             | 101.60             | 6443.54            | 133.18S                                        | 753.95E  | 0.81                | 765.62       | 427639.95          | 522264.82               |
| 6616.00           | 17.70             | 100.90             | 6503.64            | 136.86S                                        | 772.48E  | 0.86                | 784.50       | 427658.48          | 522261.14               |
| 6680.00           | 15.90             | 97.70              | 6564.91            | 139.87S                                        | 790.72E  | 3.16                | 802.99       | 427676.72          | 522258.13               |
| 6742.00           | 14.90             | 95.30              | 6624.68            | 141.75S                                        | 807.07E  | 1.91                | 819.42       | 427693.07          | 522256.25               |
| 6806.00           | 15.20             | 96.00              | 6686.49            | 143.39S                                        | 823.61E  | 0.55                | 835.99       | 427709.61          | 522254.61               |
| 6869.00           | 15.40             | 96.70              | 6747.26            | 145.23S                                        | 840.13E  | 0.43                | 852.58       | 427726.13          | 522252.77               |
| 6931.00           | 15.20             | 97.70              | 6807.06            | 147.27S                                        | 856.36E  | 0.53                | 868.91       | 427742.36          | 522250.73               |
| 6995.00           | 15.70             | 100.50             | 6868.75            | 149.98S                                        | 873.19E  | 1.40                | 885.96       | 427759.19          | 522248.02               |
| 7058.00           | 16.30             | 100.50             | 6929.31            | 153.14S                                        | 890.27E  | 0.95                | 903.32       | 427776.27          | 522244.86               |
| 7122.00           | 16.70             | 98.80              | 6990.67            | 156.18S                                        | 908.18E  | 0.98                | 921.50       | 427794.18          | 522241.82               |
| 7185.00           | 16.40             | 95.90              | 7051.06            | 158.48S                                        | 925.98E  | 1.39                | 939.41       | 427811.98          | 522239.52               |
| 7249.00           | 15.30             | 96.70              | 7112.63            | 160.40S                                        | 943.35E  | 1.75                | 956.85       | 427829.35          | 522237.60               |
| 7311.00           | 15.20             | 95.60              | 7172.44            | 162.15S                                        | 959.56E  | 0.49                | 973.12       | 427845.56          | 522235.85               |
| 7375.00           | 14.90             | 97.70              | 7234.25            | 164.07S                                        | 976.07E  | 0.97                | 989.71       | 427862.07          | 522233.93               |
| 7438.00           | 15.40             | 101.60             | 7295.06            | 166.83S                                        | 992.29E  | 1.80                | 1006.16      | 427878.29          | 522231.17               |
| 7501.00           | 15.10             | 103.10             | 7355.84            | 170.38S                                        | 1008.48E | 0.79                | 1022.72      | 427894.48          | 522227.62               |
| 7565.00           | 15.80             | 102.30             | 7417.53            | 174.12S                                        | 1025.11E | 1.14                | 1039.75      | 427911.11          | 522223.88               |
| 7628.00           | 16.00             | 102.30             | 7478.12            | 177.80S                                        | 1041.97E | 0.32                | 1057.00      | 427927.97          | 522220.20               |
| 7692.00           | 15.90             | 102.60             | 7539.66            | 181.59S                                        | 1059.14E | 0.20                | 1074.57      | 427945.14          | 522216.41               |
| 7756.00           | 16.00             | 102.00             | 7601.19            | 185.34S                                        | 1076.33E | 0.30                | 1092.15      | 427962.33          | 522212.66               |
| 7819.00           | 16.30             | 101.60             | 7661.71            | 188.92S                                        | 1093.48E | 0.51                | 1109.66      | 427979.48          | 522209.08               |
| 7883.00           | 16.40             | 100.20             | 7723.12            | 192.32S                                        | 1111.17E | 0.64                | 1127.67      | 427997.17          | 522205.68               |
| 7947.00           | 15.40             | 103.30             | 7784.67            | 195.88S                                        | 1128.33E | 2.05                | 1145.20      | 428014.33          | 522202.12               |
| 8011.00           | 14.80             | 101.20             | 7846.46            | 199.42S                                        | 1144.62E | 1.27                | 1161.85      | 428030.62          | 522198.58               |
| 8075.00           | 14.40             | 101.20             | 7908.39            | 202.56S                                        | 1160.45E | 0.63                | 1177.98      | 428046.45          | 522195.44               |
| 8138.00           | 16.20             | 102.30             | 7969.16            | 205.95S                                        | 1176.72E | 2.89                | 1194.60      | 428062.72          | 522192.05               |
| 8200.00           | 16.50             | 102.60             | 8028.65            | 209.71S                                        | 1193.76E | 0.50                | 1212.04      | 428079.76          | 522188.29               |
| 8264.00           | 15.80             | 103.00             | 8090.12            | 213.66S                                        | 1211.12E | 1.11                | 1229.82      | 428097.12          | 522184.34               |

|         |       |        |         |         |          |      |         |           |           |
|---------|-------|--------|---------|---------|----------|------|---------|-----------|-----------|
| 8327.00 | 15.10 | 103.00 | 8150.85 | 217.43S | 1227.48E | 1.11 | 1246.58 | 428113.48 | 522180.57 |
| 8391.00 | 15.10 | 102.30 | 8212.64 | 221.08S | 1243.74E | 0.28 | 1263.24 | 428129.74 | 522176.92 |
| 8455.00 | 15.10 | 102.30 | 8274.43 | 224.63S | 1260.03E | 0.00 | 1279.90 | 428146.03 | 522173.37 |

All data in feet unless otherwise stated. Calculation uses minimum curvature method.

Coordinates from slot #1 and TVD from rotary table.

Bottom hole distance is 1279.90 on azimuth 100.11 degrees from wellhead.

Vertical section is from S 0.00 W 0.00 on azimuth 100.14 degrees.

Grid is mercator - New Mexico East (3001).

Grid coordinates in FEET and computed using the Clarke - 1866 spheroid

Presented by Baker Hughes INTEQ

Marathon Oil Company  
Fed C35 #4,slot #1  
INDIAN BASIN,Eddy County New Mexico

SURVEY LISTING Page 3  
Your ref : MWD  
Last revised : 1-May-2003

NO PROPOSAL