



**Gyrodata Incorporated**

3811 S. Co. Rd. 1285

Odessa, TX. 79765

915/561-8458

Fax: 915/563-7982

SUR: E-11-22s-37e  
1905/W & 440/W  
30-025-10218

BHL: F-11-22s-37e  
1948/W & 2129/W

**SURVEY REPORT**

**MARATHON OIL**

**LOU WORTHAN #9**

**KEY #96**

**LEA COUNTY, NEW MEXICO**

**MD0401GMW183**

**APRIL 10, 2001**

 **ORIGINAL**



**Gyrodata Incorporated**  
3811 S. Co. Rd. 1285  
Odessa, TX. 79765

915/561-8458  
Fax: 915/563-7982

April 16, 2001

Drilling Department  
Marathon Oil  
125 W. Missouri Ave.  
Midland, Texas 79701

Re: **Lou Worthan #9**  
**Lea County, New Mexico**

Enclosed, please find one (1) original, four (4) copies, and one (1) disk of the completed survey of the above referenced well.

We would like to take this opportunity to thank you for using Gyrodata, and we look forward to serving you in the future.

Sincerely,

A handwritten signature in black ink, appearing to read "Ruben Clemence", written over the printed name.

Ruben Clemence  
Operations Manager

RC:jt

# A Gyrodata Directional Survey

for

Marathon Oil Company

Well: LOU WORTHAN #9, 2-7/8" DRILLPIPE  
Location: KEY #96, LEA COUNTY, NEW MEXICO

Job Number: MD0401GMW183

Run Date: 4/10/01 4:00:00 PM

Surveyor: Mike Shepherd

Calculation Method: MINIMUM CURVATURE

Survey Latitude: 32.408000 deg. N

Azimuth Correction:

Gyro: Bearings are Relative to True North

Proposed Well Direction: 92.300 deg

Vertical Section Calculated from Well Head Location

Closure Calculated from Well Head Location

Horizontal Coordinates Calculated from Well Head Location

# A Gyrodata Directional Survey

Marathon Oil Company  
 Well: LOU WORTHAN #9, 2-7/8" DRILLPIPE  
 Location: KEY #96, LEA COUNTY, NEW MEXICO  
 Job Number: MD0401GMW183

| MEASURED<br>DEPTH<br>feet                                                                                                                                   | I N C L<br>deg. | A Z I M U T H<br>deg. | V E R T I C A L<br>S E C T I O N<br>feet | D O G L E G<br>S E V E R I T Y<br>deg./<br>100 ft. | V E R T I C A L<br>D E P T H<br>feet | C L O S U R E<br>D I S T. A Z I M U T H<br>feet deg. | H O R I Z O N T A L<br>C O O R D I N A T E S<br>feet |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------|-----------------------|------------------------------------------|----------------------------------------------------|--------------------------------------|------------------------------------------------------|------------------------------------------------------|
| 0.0                                                                                                                                                         | 0.00            | 0.00                  | 0.0                                      | 0.00                                               | 0.0                                  | 0.0 0.0                                              | 0.00 N 0.00 E                                        |
| -----<br>0 - 5606 FT RATE GYROSCOPIC MULTISHOT SURVEY RUN INSIDE 2-7/8" DRILLPIPE<br>ALL MEASUREMENTS AND COORDINATES REFERENCED TO KEY #96 R.K.B.<br>----- |                 |                       |                                          |                                                    |                                      |                                                      |                                                      |
| 100.0                                                                                                                                                       | 0.94            | 28.19                 | 0.4                                      | 0.94                                               | 100.0                                | 0.8 28.2                                             | 0.72 N 0.39 E                                        |
| 200.0                                                                                                                                                       | 0.65            | 26.64                 | 1.0                                      | 0.29                                               | 200.0                                | 2.2 27.8                                             | 1.96 N 1.03 E                                        |
| 300.0                                                                                                                                                       | 0.54            | 21.50                 | 1.3                                      | 0.13                                               | 300.0                                | 3.2 26.7                                             | 2.90 N 1.46 E                                        |
| 400.0                                                                                                                                                       | 0.53            | 22.82                 | 1.7                                      | 0.01                                               | 400.0                                | 4.2 25.7                                             | 3.77 N 1.81 E                                        |
| 500.0                                                                                                                                                       | 0.50            | 22.64                 | 2.0                                      | 0.04                                               | 500.0                                | 5.1 25.1                                             | 4.60 N 2.16 E                                        |
| 600.0                                                                                                                                                       | 0.28            | 25.93                 | 2.2                                      | 0.21                                               | 600.0                                | 5.8 25.0                                             | 5.22 N 2.43 E                                        |
| 700.0                                                                                                                                                       | 0.24            | 31.67                 | 2.4                                      | 0.05                                               | 700.0                                | 6.2 25.3                                             | 5.62 N 2.65 E                                        |
| 800.0                                                                                                                                                       | 0.18            | 6.75                  | 2.5                                      | 0.11                                               | 800.0                                | 6.6 25.0                                             | 5.96 N 2.78 E                                        |
| 900.0                                                                                                                                                       | 0.13            | 29.42                 | 2.6                                      | 0.08                                               | 900.0                                | 6.8 24.7                                             | 6.22 N 2.86 E                                        |
| 1000.0                                                                                                                                                      | 0.08            | 7.66                  | 2.7                                      | 0.07                                               | 1000.0                               | 7.0 24.6                                             | 6.39 N 2.92 E                                        |
| 1100.0                                                                                                                                                      | 0.10            | 44.99                 | 2.7                                      | 0.06                                               | 1100.0                               | 7.2 24.7                                             | 6.52 N 3.00 E                                        |
| 1200.0                                                                                                                                                      | 0.12            | 119.75                | 2.9                                      | 0.14                                               | 1200.0                               | 7.3 25.7                                             | 6.53 N 3.15 E                                        |
| 1300.0                                                                                                                                                      | 0.21            | 125.74                | 3.1                                      | 0.10                                               | 1300.0                               | 7.2 28.0                                             | 6.37 N 3.39 E                                        |
| 1400.0                                                                                                                                                      | 0.28            | 129.16                | 3.5                                      | 0.07                                               | 1400.0                               | 7.2 31.4                                             | 6.11 N 3.73 E                                        |
| 1500.0                                                                                                                                                      | 0.34            | 136.50                | 3.9                                      | 0.07                                               | 1500.0                               | 7.1 35.7                                             | 5.74 N 4.13 E                                        |
| 1600.0                                                                                                                                                      | 0.35            | 104.02                | 4.4                                      | 0.19                                               | 1600.0                               | 7.2 40.4                                             | 5.45 N 4.63 E                                        |
| 1700.0                                                                                                                                                      | 0.47            | 101.38                | 5.1                                      | 0.12                                               | 1700.0                               | 7.5 45.2                                             | 5.29 N 5.33 E                                        |
| 1800.0                                                                                                                                                      | 0.61            | 85.75                 | 6.0                                      | 0.20                                               | 1800.0                               | 8.2 50.0                                             | 5.25 N 6.26 E                                        |
| 1900.0                                                                                                                                                      | 0.73            | 79.65                 | 7.2                                      | 0.13                                               | 1899.9                               | 9.2 53.9                                             | 5.41 N 7.42 E                                        |
| 2000.0                                                                                                                                                      | 0.84            | 76.68                 | 8.5                                      | 0.13                                               | 1999.9                               | 10.4 57.0                                            | 5.69 N 8.76 E                                        |

# A Gyrodata Directional Survey

Marathon Oil Company  
Well: LOU WORTHAN #9, 2-7/8" DRILLPIPE  
Location: KEY #96, LEA COUNTY, NEW MEXICO  
Job Number: MD0401GMW183

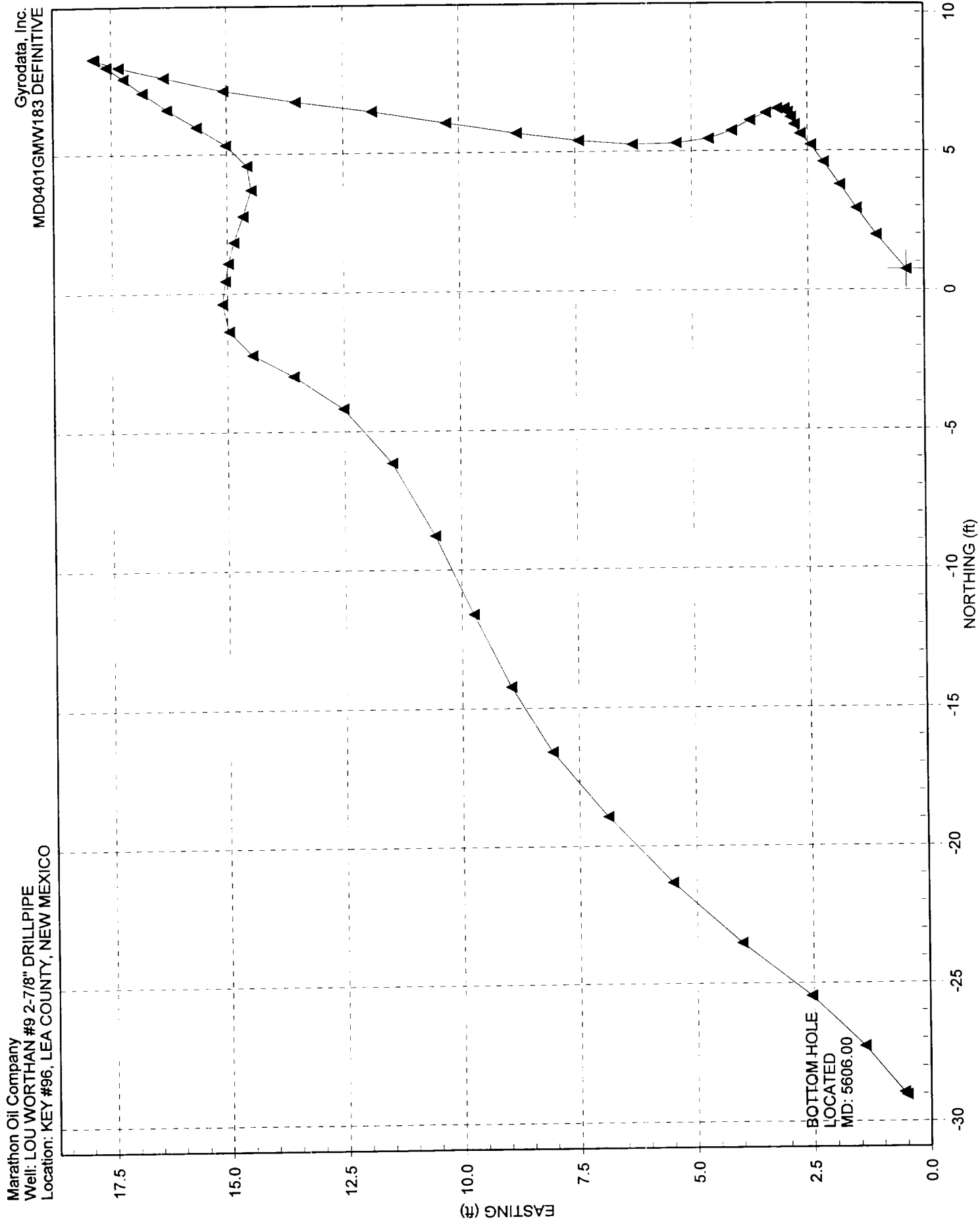
| MEASURED<br>DEPTH<br>feet | I N C L<br>deg. | A Z I M U T H<br>deg. | V E R T I C A L<br>S E C T I O N<br>feet | D O G L E G<br>S E V E R I T Y<br>deg./<br>100 ft. | V E R T I C A L<br>D E P T H<br>feet | C L O S U R E<br>D I S T . A Z I M U T H<br>feet deg. | H O R I Z O N T A L<br>C O O R D I N A T E S<br>feet |
|---------------------------|-----------------|-----------------------|------------------------------------------|----------------------------------------------------|--------------------------------------|-------------------------------------------------------|------------------------------------------------------|
| 2100.0                    | 0.95            | 74.67                 | 10.0                                     | 0.11                                               | 2099.9                               | 11.9 59.4                                             | 6.08 N 10.27 E                                       |
| 2200.0                    | 0.95            | 75.24                 | 11.6                                     | 0.01                                               | 2199.9                               | 13.5 61.3                                             | 6.51 N 11.87 E                                       |
| 2300.0                    | 0.98            | 79.92                 | 13.2                                     | 0.09                                               | 2299.9                               | 15.2 63.1                                             | 6.87 N 13.51 E                                       |
| 2400.0                    | 0.87            | 69.06                 | 14.8                                     | 0.21                                               | 2399.9                               | 16.7 64.2                                             | 7.29 N 15.06 E                                       |
| 2500.0                    | 0.72            | 70.78                 | 16.0                                     | 0.15                                               | 2499.9                               | 18.1 64.6                                             | 7.76 N 16.36 E                                       |
| 2600.0                    | 0.47            | 67.43                 | 17.0                                     | 0.25                                               | 2599.9                               | 19.1 64.9                                             | 8.13 N 17.33 E                                       |
| 2700.0                    | 0.22            | 50.99                 | 17.5                                     | 0.27                                               | 2699.9                               | 19.7 64.8                                             | 8.41 N 17.86 E                                       |
| 2800.0                    | 0.17            | 232.61                | 17.5                                     | 0.40                                               | 2799.9                               | 19.8 64.7                                             | 8.44 N 17.89 E                                       |
| 2900.0                    | 0.31            | 220.88                | 17.3                                     | 0.14                                               | 2899.9                               | 19.4 65.2                                             | 8.14 N 17.59 E                                       |
| 3000.0                    | 0.32            | 221.99                | 16.9                                     | 0.01                                               | 2999.9                               | 18.9 65.8                                             | 7.73 N 17.23 E                                       |
| 3100.0                    | 0.43            | 216.74                | 16.5                                     | 0.11                                               | 3099.9                               | 18.3 66.8                                             | 7.22 N 16.82 E                                       |
| 3200.0                    | 0.50            | 224.44                | 16.0                                     | 0.10                                               | 3199.9                               | 17.6 67.9                                             | 6.61 N 16.29 E                                       |
| 3300.0                    | 0.53            | 225.84                | 15.4                                     | 0.03                                               | 3299.9                               | 16.7 69.1                                             | 5.97 N 15.65 E                                       |
| 3400.0                    | 0.51            | 221.54                | 14.8                                     | 0.05                                               | 3399.9                               | 15.9 70.5                                             | 5.31 N 15.02 E                                       |
| 3500.0                    | 0.51            | 200.96                | 14.4                                     | 0.18                                               | 3499.8                               | 15.3 72.6                                             | 4.56 N 14.56 E                                       |
| 3600.0                    | 0.54            | 170.53                | 14.3                                     | 0.28                                               | 3599.8                               | 14.9 75.7                                             | 3.68 N 14.48 E                                       |
| 3700.0                    | 0.56            | 168.03                | 14.5                                     | 0.03                                               | 3699.8                               | 14.9 79.4                                             | 2.73 N 14.66 E                                       |
| 3800.0                    | 0.52            | 167.85                | 14.8                                     | 0.03                                               | 3799.8                               | 15.0 83.0                                             | 1.81 N 14.86 E                                       |
| 3900.0                    | 0.35            | 175.47                | 14.9                                     | 0.18                                               | 3899.8                               | 15.0 86.0                                             | 1.06 N 14.98 E                                       |
| 4000.0                    | 0.36            | 172.73                | 15.0                                     | 0.02                                               | 3999.8                               | 15.0 88.3                                             | 0.44 N 15.04 E                                       |
| 4100.0                    | 0.58            | 177.31                | 15.1                                     | 0.22                                               | 4099.8                               | 15.1 91.5                                             | 0.38 S 15.11 E                                       |
| 4200.0                    | 0.57            | 199.06                | 15.0                                     | 0.22                                               | 4199.8                               | 15.0 95.2                                             | 1.36 S 14.97 E                                       |
| 4300.0                    | 0.59            | 221.61                | 14.5                                     | 0.23                                               | 4299.8                               | 14.6 98.7                                             | 2.21 S 14.46 E                                       |
| 4400.0                    | 0.77            | 234.16                | 13.7                                     | 0.23                                               | 4399.8                               | 13.9 102.4                                            | 2.99 S 13.58 E                                       |

# A Gyrodata Directional Survey

Marathon Oil Company  
Well: LOU WORTHAN #9, 2-7/8" DRILLPIPE  
Location: KEY #96, LEA COUNTY, NEW MEXICO  
Job Number: MD0401GMW183

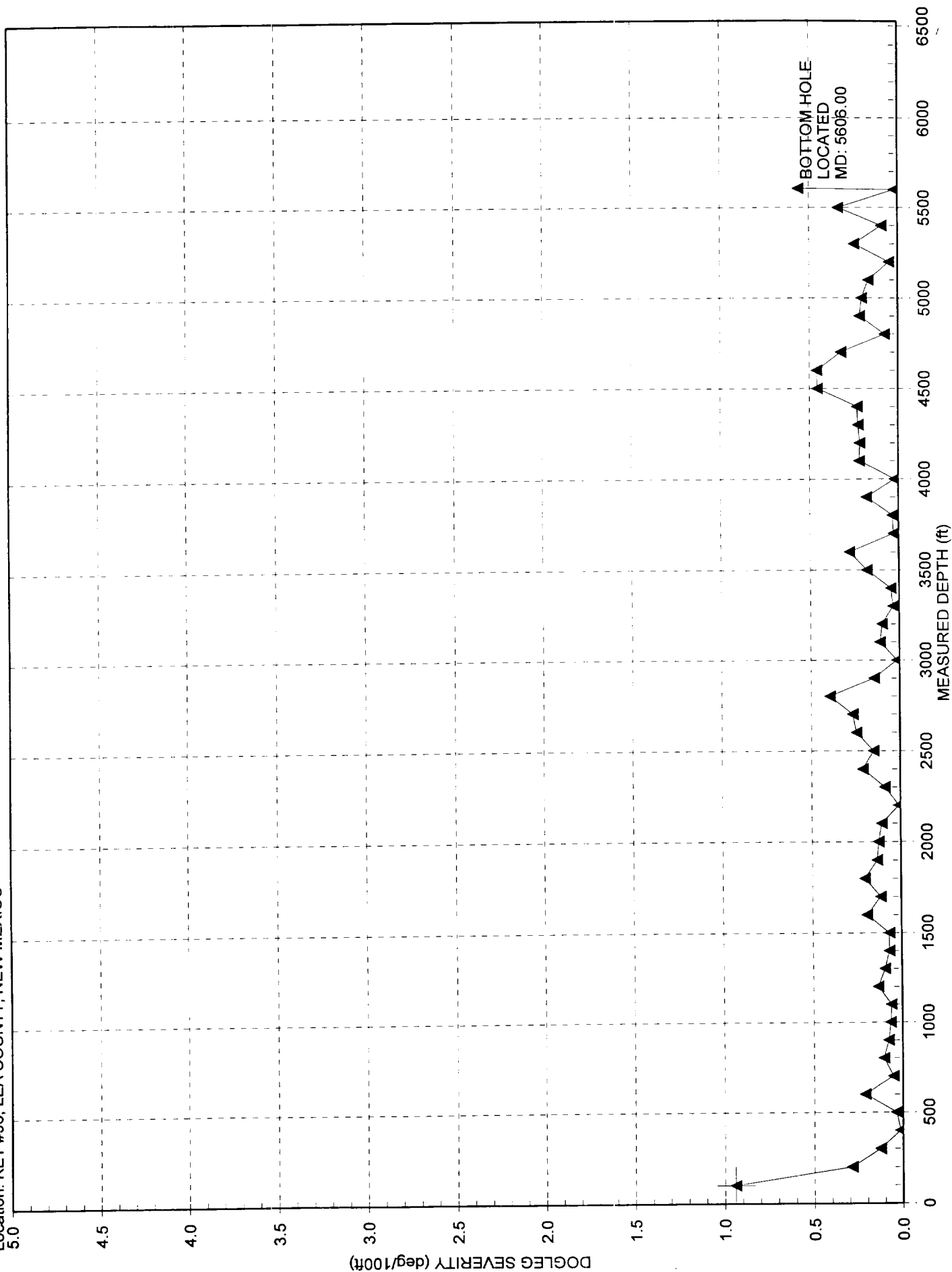
| MEASURED<br>DEPTH<br>feet | IN C L<br>deg. | AZIMUTH<br>deg. | VERTICAL<br>SECTION<br>feet | DOGLEG<br>SEVERITY<br>deg./<br>100 ft. | VERTICAL<br>DEPTH<br>feet | CLOSURE<br>DIST. AZIMUTH<br>feet deg. | HORIZONTAL<br>COORDINATES<br>feet |
|---------------------------|----------------|-----------------|-----------------------------|----------------------------------------|---------------------------|---------------------------------------|-----------------------------------|
| 4500.0                    | 1.08           | 213.27          | 12.7                        | 0.46                                   | 4499.8                    | 13.2 108.4                            | 4.17 S 12.52 E                    |
| 4600.0                    | 1.49           | 203.77          | 11.7                        | 0.46                                   | 4599.8                    | 13.0 118.2                            | 6.15 S 11.47 E                    |
| 4700.0                    | 1.71           | 195.07          | 10.9                        | 0.32                                   | 4699.7                    | 13.7 129.7                            | 8.78 S 10.56 E                    |
| 4800.0                    | 1.67           | 197.31          | 10.2                        | 0.08                                   | 4799.7                    | 15.2 140.0                            | 11.61 S 9.74 E                    |
| 4900.0                    | 1.45           | 196.39          | 9.5                         | 0.22                                   | 4899.7                    | 16.8 147.8                            | 14.22 S 8.95 E                    |
| 5000.0                    | 1.45           | 204.49          | 8.7                         | 0.21                                   | 4999.6                    | 18.4 154.1                            | 16.59 S 8.07 E                    |
| 5100.0                    | 1.57           | 209.03          | 7.6                         | 0.17                                   | 5099.6                    | 20.1 160.0                            | 18.94 S 6.88 E                    |
| 5200.0                    | 1.59           | 210.58          | 6.4                         | 0.05                                   | 5199.5                    | 22.0 165.5                            | 21.33 S 5.51 E                    |
| 5300.0                    | 1.44           | 218.07          | 5.0                         | 0.25                                   | 5299.5                    | 23.9 170.3                            | 23.51 S 4.03 E                    |
| 5400.0                    | 1.36           | 216.25          | 3.6                         | 0.09                                   | 5399.5                    | 25.6 174.3                            | 25.47 S 2.55 E                    |
| 5500.0                    | 1.09           | 206.84          | 2.5                         | 0.34                                   | 5499.5                    | 27.3 177.0                            | 27.27 S 1.41 E                    |
| 5600.0                    | 1.07           | 206.45          | 1.7                         | 0.02                                   | 5599.4                    | 29.0 178.9                            | 28.96 S 0.57 E                    |
| 5606.0                    | 1.04           | 207.53          | 1.7                         | 0.56                                   | 5605.4                    | 29.1 179.0                            | 29.06 S 0.52 E                    |

Final Station Closure: Distance: 29.06 ft Az: 178.98 deg.



Marathon Oil Company  
Well: LOU WORTHAN #9 2-7/8" DRILLPIPE  
Location: KEY #96, LEA COUNTY, NEW MEXICO

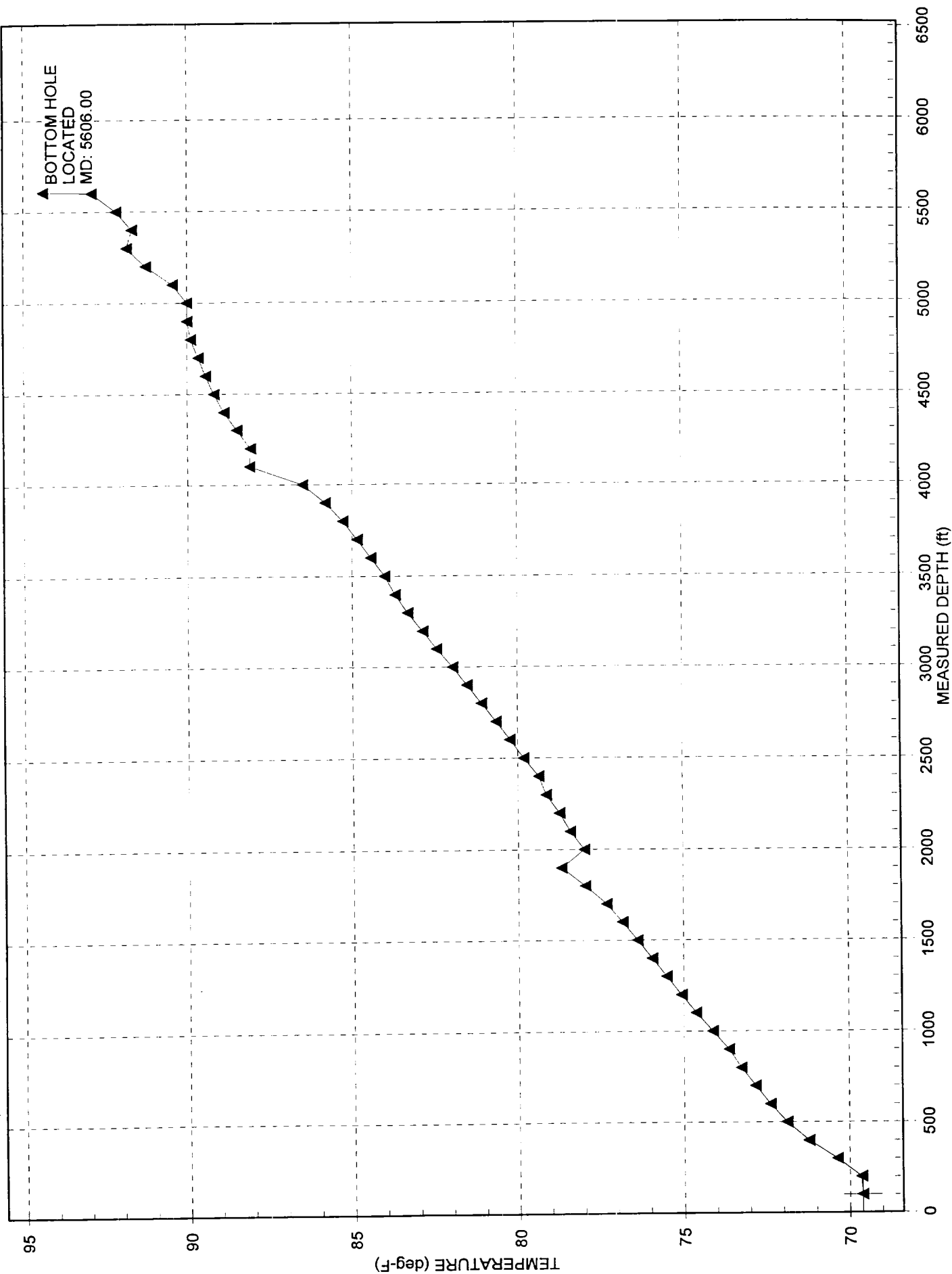
Gyrodatta, Inc.  
MD0401GMW183 DEFINITIVE





Marathon Oil Company  
Well: LOU WORTHAN #9 2-7/8" DRILLPIPE  
Location: KEY #96, LEA COUNTY, NEW MEXICO

Gyrodatta, Inc.  
MD0401GMW183 DEFINITIVE



# Well Completion Report



Marathon Oil company  
Lou Worthan #9  
Lea County, New Mexico

Monday, April 24, 2000

# Marathon Oil Company



Lou Worthan #9

slot #1  
Drinkard  
LEA COUNTY, NEW MEXICO

## SURVEY LISTING

by  
Baker Hughes INTEQ

Your ref : MWD Survey  
Our ref : svy1648  
License :

Date printed : 23-Apr-2001  
Date created : 4-Apr-2001  
Last revised : 23-Apr-2001

Field is centred on n32 25 0.000,w103 1 0.000,-105  
Structure is centred on n32 25 0.000,w103 10 0.000,-105

Slot location is n32 25 0.000,w103 10 0.000  
Slot Grid coordinates are N 3588154.734, E 672400.539  
Slot local coordinates are 0.00 N 0.00 E

Projection type: mercator - UTM, Spheroid: Hayford

Reference North is True North



INTEQ

2105 Market Street  
Midland, Texas 79703  
Tel. (915) 694-9517  
Fax (915) 694-5648

| Measured<br>Depth | Inclin.<br>Degrees | Azimuth<br>Degrees | True Vert<br>Depth | RECTANGULAR<br>COORDINATES |         | Dogleg<br>Deg/100ft |
|-------------------|--------------------|--------------------|--------------------|----------------------------|---------|---------------------|
| 0.00              | 0.00               | 0.00               | 0.00               | 0.00 N                     | 0.00 E  | 0.00                |
| 100.00            | 0.94               | 28.19              | 100.00             | 0.72 N                     | 0.39 E  | 0.94                |
| 200.00            | 0.65               | 26.64              | 199.99             | 1.95 N                     | 1.03 E  | 0.29                |
| 300.00            | 0.54               | 21.50              | 299.98             | 2.90 N                     | 1.46 E  | 0.12                |
| 400.00            | 0.53               | 22.82              | 399.98             | 3.76 N                     | 1.81 E  | 0.02                |
| 500.00            | 0.50               | 22.64              | 499.97             | 4.59 N                     | 2.16 E  | 0.03                |
| 600.00            | 0.28               | 25.93              | 599.97             | 5.21 N                     | 2.43 E  | 0.22                |
| 700.00            | 0.24               | 31.67              | 699.97             | 5.61 N                     | 2.65 E  | 0.05                |
| 800.00            | 0.18               | 6.75               | 799.97             | 5.95 N                     | 2.78 E  | 0.11                |
| 900.00            | 0.13               | 29.42              | 899.97             | 6.20 N                     | 2.85 E  | 0.08                |
| 1000.00           | 0.08               | 7.66               | 999.97             | 6.37 N                     | 2.92 E  | 0.06                |
| 1100.00           | 0.10               | 44.99              | 1099.97            | 6.50 N                     | 2.99 E  | 0.06                |
| 1200.00           | 0.12               | 119.75             | 1199.97            | 6.51 N                     | 3.14 E  | 0.13                |
| 1300.00           | 0.21               | 125.74             | 1299.97            | 6.35 N                     | 3.38 E  | 0.09                |
| 1400.00           | 0.28               | 129.16             | 1399.97            | 6.09 N                     | 3.72 E  | 0.07                |
| 1500.00           | 0.34               | 136.50             | 1499.96            | 5.72 N                     | 4.11 E  | 0.07                |
| 1600.00           | 0.35               | 104.02             | 1599.96            | 5.43 N                     | 4.61 E  | 0.19                |
| 1700.00           | 0.47               | 101.38             | 1699.96            | 5.28 N                     | 5.31 E  | 0.12                |
| 1800.00           | 0.61               | 85.75              | 1799.96            | 5.23 N                     | 6.24 E  | 0.20                |
| 1900.00           | 0.73               | 79.65              | 1899.95            | 5.39 N                     | 7.40 E  | 0.14                |
| 2000.00           | 0.84               | 76.68              | 1999.94            | 5.67 N                     | 8.74 E  | 0.12                |
| 2100.00           | 0.95               | 74.67              | 2099.93            | 6.06 N                     | 10.25 E | 0.11                |
| 2200.00           | 0.95               | 75.24              | 2199.91            | 6.49 N                     | 11.85 E | 0.01                |
| 2300.00           | 0.98               | 79.92              | 2299.90            | 6.85 N                     | 13.50 E | 0.08                |
| 2400.00           | 0.87               | 69.06              | 2399.89            | 7.27 N                     | 15.05 E | 0.21                |
| 2500.00           | 0.72               | 70.78              | 2499.88            | 7.75 N                     | 16.35 E | 0.15                |
| 2600.00           | 0.47               | 67.43              | 2599.87            | 8.11 N                     | 17.32 E | 0.25                |
| 2700.00           | 0.22               | 50.99              | 2699.87            | 8.39 N                     | 17.85 E | 0.27                |
| 2800.00           | 0.17               | 232.61             | 2799.87            | 8.42 N                     | 17.88 E | 0.39                |
| 2900.00           | 0.31               | 220.88             | 2899.87            | 8.13 N                     | 17.59 E | 0.15                |
| 3000.00           | 0.32               | 221.99             | 2999.87            | 7.72 N                     | 17.22 E | 0.01                |
| 3100.00           | 0.43               | 216.74             | 3099.86            | 7.21 N                     | 16.81 E | 0.12                |
| 3200.00           | 0.50               | 224.44             | 3199.86            | 6.60 N                     | 16.28 E | 0.09                |
| 3300.00           | 0.53               | 225.84             | 3299.86            | 5.96 N                     | 15.64 E | 0.03                |
| 3400.00           | 0.51               | 221.54             | 3399.85            | 5.31 N                     | 15.02 E | 0.04                |



INTEQ

2105 Market Street  
Midland, Texas 79703  
Tel. (915) 694-9517  
Fax (915) 694-5648

|         |       |        |         |         |          |       |
|---------|-------|--------|---------|---------|----------|-------|
| 3500.00 | 0.51  | 200.96 | 3499.85 | 4.56 N  | 14.56 E  | 0.18  |
| 3600.00 | 0.54  | 170.53 | 3599.85 | 3.68 N  | 14.48 E  | 0.28  |
| 3700.00 | 0.56  | 168.03 | 3699.84 | 2.74 N  | 14.66 E  | 0.03  |
| 3800.00 | 0.52  | 167.85 | 3799.84 | 1.81 N  | 14.86 E  | 0.04  |
| 3900.00 | 0.35  | 175.47 | 3899.83 | 1.07 N  | 14.98 E  | 0.18  |
| 4000.00 | 0.36  | 172.73 | 3999.83 | 0.45 N  | 15.04 E  | 0.02  |
| 4100.00 | 0.58  | 177.31 | 4099.83 | 0.37 S  | 15.10 E  | 0.22  |
| 4200.00 | 0.57  | 199.06 | 4199.82 | 1.34 S  | 14.97 E  | 0.22  |
| 4300.00 | 0.59  | 221.61 | 4299.82 | 2.20 S  | 14.46 E  | 0.23  |
| 4400.00 | 0.77  | 234.16 | 4399.81 | 2.98 S  | 13.57 E  | 0.23  |
| 4500.00 | 1.08  | 213.27 | 4499.80 | 4.16 S  | 12.51 E  | 0.45  |
| 4600.00 | 1.49  | 203.77 | 4599.77 | 6.14 S  | 11.47 E  | 0.46  |
| 4700.00 | 1.71  | 195.07 | 4699.73 | 8.77 S  | 10.56 E  | 0.33  |
| 4800.00 | 1.67  | 197.31 | 4799.69 | 11.60 S | 9.74 E   | 0.08  |
| 4900.00 | 1.45  | 196.39 | 4899.65 | 14.20 S | 8.95 E   | 0.22  |
| 5000.00 | 1.45  | 204.49 | 4999.62 | 16.57 S | 8.07 E   | 0.20  |
| 5100.00 | 1.57  | 209.03 | 5099.59 | 18.92 S | 6.88 E   | 0.17  |
| 5200.00 | 1.59  | 210.58 | 5199.55 | 21.31 S | 5.51 E   | 0.05  |
| 5300.00 | 1.44  | 218.07 | 5299.51 | 23.49 S | 4.03 E   | 0.25  |
| 5400.00 | 1.36  | 216.25 | 5399.48 | 25.44 S | 2.55 E   | 0.09  |
| 5500.00 | 1.09  | 206.84 | 5499.46 | 27.25 S | 1.42 E   | 0.34  |
| 5600.00 | 1.07  | 206.45 | 5599.44 | 28.93 S | 0.57 E   | 0.02  |
| 5606.00 | 1.04  | 207.53 | 5605.44 | 29.03 S | 0.52 E   | 0.60  |
| 5626.00 | 4.90  | 109.70 | 5625.42 | 29.48 S | 1.24 E   | 25.73 |
| 5636.00 | 8.60  | 108.00 | 5635.35 | 29.85 S | 2.36 E   | 37.05 |
| 5642.00 | 11.00 | 105.30 | 5641.26 | 30.14 S | 3.34 E   | 40.72 |
| 5662.00 | 19.20 | 99.30  | 5660.55 | 31.18 S | 8.43 E   | 41.68 |
| 5681.00 | 26.20 | 100.10 | 5678.07 | 32.42 S | 15.65 E  | 36.88 |
| 5702.00 | 35.00 | 95.40  | 5696.13 | 33.80 S | 26.23 E  | 43.40 |
| 5722.00 | 43.60 | 91.20  | 5711.60 | 34.49 S | 38.87 E  | 44.99 |
| 5742.00 | 52.10 | 90.20  | 5725.00 | 34.66 S | 53.68 E  | 42.66 |
| 5767.00 | 63.30 | 89.10  | 5738.34 | 34.52 S | 74.78 E  | 44.95 |
| 5787.00 | 72.80 | 87.70  | 5745.81 | 34.00 S | 93.30 E  | 47.94 |
| 5797.00 | 77.60 | 87.00  | 5748.36 | 33.55 S | 102.95 E | 48.47 |
| 5806.00 | 82.40 | 86.60  | 5749.93 | 33.05 S | 111.80 E | 53.51 |
| 5822.00 | 86.60 | 88.10  | 5751.46 | 32.32 S | 127.70 E | 27.86 |
| 5840.00 | 85.80 | 88.40  | 5752.65 | 31.77 S | 145.66 E | 4.75  |



# INTEQ

2105 Market Street  
Midland, Texas 79703  
Tel. (915) 694-9517  
Fax (915) 694-5648

|         |       |       |         |         |           |       |
|---------|-------|-------|---------|---------|-----------|-------|
| 5872.00 | 85.10 | 88.10 | 5755.19 | 30.80 S | 177.54 E  | 2.38  |
| 5903.00 | 88.40 | 88.10 | 5756.95 | 29.77 S | 203.47 E  | 10.65 |
| 5935.00 | 93.30 | 88.40 | 5756.47 | 28.79 S | 240.44 E  | 15.34 |
| 5965.00 | 93.10 | 88.10 | 5754.80 | 27.88 S | 270.38 E  | 1.20  |
| 5998.00 | 93.00 | 87.70 | 5753.04 | 26.67 S | 303.31 E  | 1.25  |
| 6030.00 | 93.30 | 88.40 | 5751.28 | 25.58 S | 335.24 E  | 2.38  |
| 6061.00 | 93.10 | 88.40 | 5749.55 | 24.72 S | 363.18 E  | 0.65  |
| 6093.00 | 91.10 | 88.80 | 5748.38 | 23.94 S | 398.15 E  | 6.37  |
| 6124.00 | 90.90 | 88.10 | 5747.84 | 23.10 S | 429.13 E  | 2.35  |
| 6155.00 | 89.80 | 87.40 | 5747.65 | 21.88 S | 460.11 E  | 4.21  |
| 6188.00 | 90.40 | 88.10 | 5747.59 | 20.59 S | 493.08 E  | 2.79  |
| 6219.00 | 92.60 | 89.50 | 5746.78 | 19.94 S | 524.06 E  | 8.41  |
| 6251.00 | 93.60 | 90.50 | 5745.05 | 19.94 S | 556.01 E  | 4.42  |
| 6283.00 | 87.70 | 89.80 | 5744.69 | 20.02 S | 588.00 E  | 18.57 |
| 6298.00 | 85.10 | 89.50 | 5745.63 | 19.93 S | 602.97 E  | 17.45 |
| 6314.00 | 85.00 | 89.50 | 5747.01 | 19.79 S | 618.91 E  | 0.63  |
| 6346.00 | 89.40 | 90.50 | 5748.57 | 19.79 S | 650.86 E  | 14.10 |
| 6378.00 | 93.90 | 91.60 | 5747.65 | 20.38 S | 682.83 E  | 14.48 |
| 6409.00 | 94.40 | 92.30 | 5745.41 | 21.43 S | 713.73 E  | 2.77  |
| 6441.00 | 96.60 | 93.30 | 5742.34 | 22.98 S | 745.55 E  | 7.55  |
| 6472.00 | 98.80 | 93.00 | 5738.19 | 24.67 S | 776.22 E  | 7.16  |
| 6504.00 | 99.00 | 93.30 | 5733.24 | 26.41 S | 807.79 E  | 1.12  |
| 6535.00 | 98.50 | 93.70 | 5728.52 | 28.28 S | 838.37 E  | 2.06  |
| 6567.00 | 97.00 | 93.70 | 5724.21 | 30.33 S | 870.01 E  | 4.69  |
| 6599.00 | 97.00 | 93.00 | 5720.31 | 32.18 S | 901.71 E  | 2.17  |
| 6630.00 | 97.30 | 93.00 | 5716.45 | 33.79 S | 932.43 E  | 0.97  |
| 6662.00 | 97.40 | 92.60 | 5712.36 | 35.34 S | 964.13 E  | 1.28  |
| 6693.00 | 98.10 | 92.00 | 5708.18 | 36.57 S | 994.82 E  | 2.96  |
| 6725.00 | 98.30 | 91.90 | 5703.61 | 37.65 S | 1026.48 E | 0.70  |
| 6756.00 | 98.40 | 91.60 | 5699.11 | 38.59 S | 1057.13 E | 1.01  |
| 6788.00 | 97.20 | 91.60 | 5694.77 | 39.47 S | 1038.82 E | 3.75  |
| 6820.00 | 97.50 | 90.90 | 5690.67 | 40.17 S | 1120.55 E | 2.36  |
| 6851.00 | 95.10 | 91.20 | 5687.27 | 40.73 S | 1151.36 E | 7.80  |
| 6883.00 | 95.20 | 90.90 | 5684.40 | 41.32 S | 1133.22 E | 0.98  |
| 6915.00 | 94.70 | 90.90 | 5681.64 | 41.82 S | 1215.10 E | 1.56  |
| 6946.00 | 94.70 | 90.90 | 5679.10 | 42.30 S | 1245.99 E | 0.00  |
| 6978.00 | 93.70 | 90.90 | 5676.75 | 42.80 S | 1277.90 E | 3.12  |
| 7009.00 | 94.00 | 90.20 | 5674.67 | 43.10 S | 1308.83 E | 2.45  |



INTEQ

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Midland, Texas 79703  
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|         |       |       |         |         |           |      |
|---------|-------|-------|---------|---------|-----------|------|
| 7041.00 | 95.10 | 89.80 | 5672.13 | 43.10 S | 1340.73 E | 3.66 |
| 7072.00 | 95.30 | 89.80 | 5669.32 | 42.99 S | 1371.60 E | 0.65 |
| 7104.00 | 93.70 | 90.90 | 5666.81 | 43.19 S | 1403.50 E | 6.06 |
| 7136.00 | 92.80 | 90.50 | 5665.00 | 43.58 S | 1435.45 E | 3.08 |
| 7167.00 | 92.90 | 90.20 | 5663.46 | 43.77 S | 1466.41 E | 1.02 |
| 7199.00 | 93.60 | 90.50 | 5661.64 | 43.96 S | 1498.36 E | 2.38 |
| 7230.00 | 93.80 | 90.50 | 5659.64 | 44.23 S | 1529.29 E | 0.65 |
| 7262.00 | 93.60 | 90.20 | 5657.58 | 44.43 S | 1561.22 E | 1.13 |
| 7294.00 | 94.00 | 89.80 | 5655.46 | 44.43 S | 1593.15 E | 1.77 |
| 7325.00 | 94.40 | 89.10 | 5653.19 | 44.13 S | 1624.07 E | 2.60 |
| 7357.00 | 95.30 | 88.40 | 5650.48 | 43.43 S | 1655.94 E | 3.56 |
| 7389.00 | 95.90 | 88.80 | 5647.36 | 42.66 S | 1687.78 E | 2.25 |

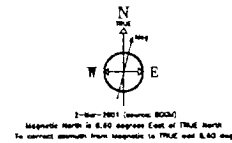
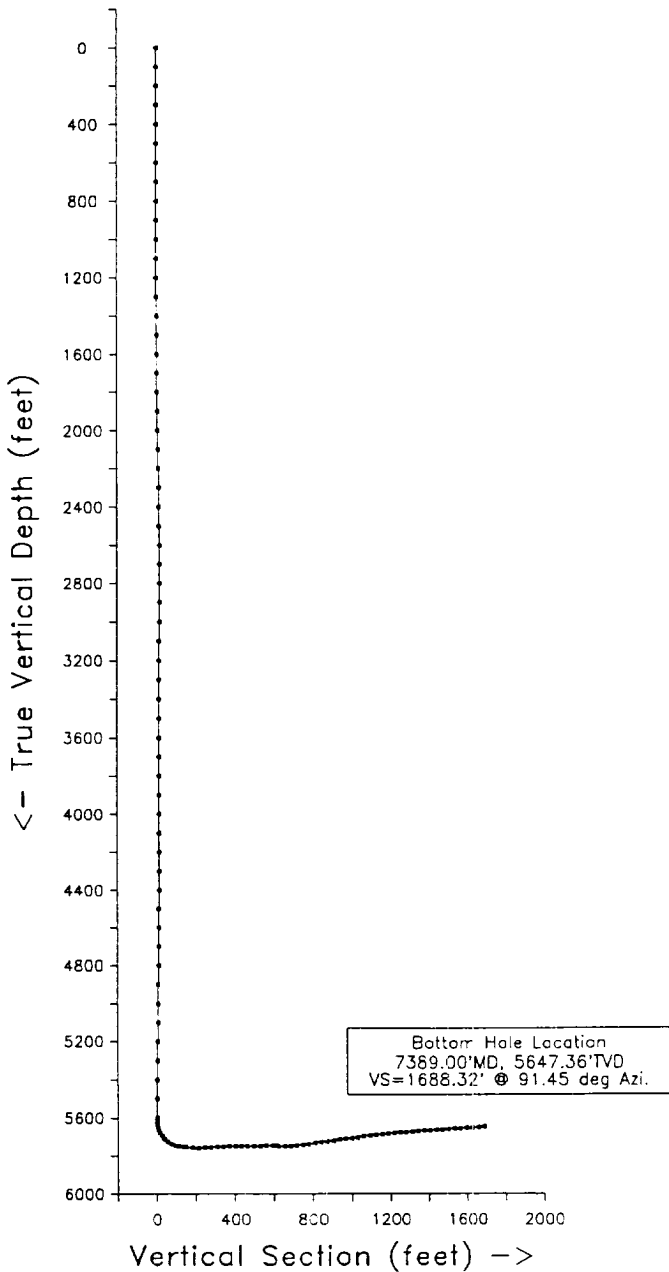
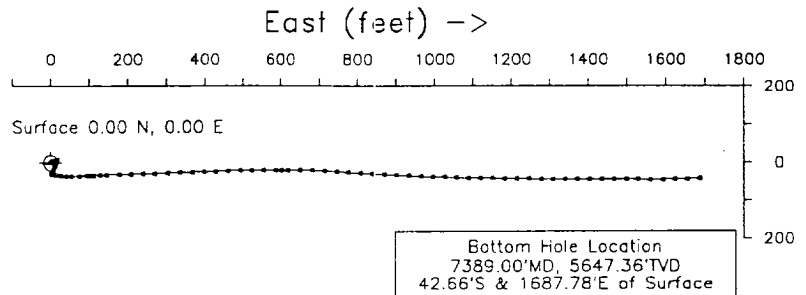
# Marathon Oil Company

Structure : Lou Worthan #9

Slot : slot #1

Field : Drinkard

Location : LEA COUNTY, NEW MEXICO



Azimuth 91.45 with reference 0.00 N, 0.00 E from slot #1

**BAKER  
HUGHES**

INTEQ

Created by fontenot  
Date plotted : 23-Apr-2001  
Plot Reference is MWD Survey.  
Coordinates are in feet reference slot #1.  
True Vertical Depths are reference rotary table.

--- Baker Hughes INTEQ ---