

MARTIN YATES III  
742-1185  
FRANK W. YATES  
742-1186



105 SOUTH FOURTH STREET  
ARTESIA, NEW MEXICO 88210  
TELEPHONE (505) 748-1471

S. P. YATES  
CHAIRMAN OF THE BOARD  
JOHN A. YATES  
PRESIDENT  
PEYTON YATES  
EXECUTIVE VICE PRESIDENT  
RANDY G. PATTERSON  
SECRETARY  
DENNIS G. KINSEY  
TREASURER

November 25, 1997

Marathon Oil Company  
P.O. Box 552  
Midland, Texas 79702-0552

Attention: Tim Robertson

RE: Garvin 22 State No. 1  
Township 18 South, Range 28 East, NMPM  
Section 22: S/2  
Eddy County, New Mexico

Gentlemen:

Enclosed please find returned to you one (1) original executed AFE for the captioned well. Also enclosed are original signature and notary pages for the corresponding Operating Agreement. If you need anything further, please contact me.

Thank you.

Very truly yours

YATES PETROLEUM CORPORATION

Robert Bullock  
Landman

RB/ljf  
enclosures

BEFORE THE  
OIL CONSERVATION COMMISSION  
Case No. 11909 Exhibit No. 6  
Submitted By:  
**Marathon Oil Company**  
Hearing Date: January 22, 1998

ARTICLE XVI.  
MISCELLANEOUS

This agreement shall be binding upon and shall inure to the benefit of the parties hereto and to their respective heirs, devisees, legal representatives, successors and assigns

This instrument may be executed in any number of counterparts, each of which shall be considered an original for all purposes.

IN WITNESS WHEREOF, this agreement shall be effective as of 12th day of November, 1997.

OPERATOR  
MARATHON OIL COMPANY

E. C. Potter  
E. C. Potter, Attorney-in-Fact

NON OPERATORS  
LOUIS DREYFUS NATURAL GAS CORP. ATLANTIC RICHFIELD COMPANY

By: \_\_\_\_\_  
Its: \_\_\_\_\_

By: \_\_\_\_\_  
Its: \_\_\_\_\_

CHEVRON USA, INC.

YATES PETROLEUM CORPORATION

By: \_\_\_\_\_  
Its: \_\_\_\_\_

Peyton Yates  
By: Peyton Yates  
Its: Attorney-in-Fact

EXXON CORPORATION

MARSHALL & WINSTON, INC.

By: \_\_\_\_\_  
Its: \_\_\_\_\_

By: \_\_\_\_\_  
Its: \_\_\_\_\_

PETRO-QUEST EXPLORATION

LOGRO CORPORATION

By: \_\_\_\_\_  
Its: \_\_\_\_\_

By: \_\_\_\_\_  
Its: \_\_\_\_\_

Signature page for Operating Agreement covering S/2 Section 22, T-18-S, R-28-E, N.M.P.M., Eddy County, New Mexico. Initial well is Garvin 22 State No. 1.

Region Mid-Continent Region  
Field/Prospect Travis  
Lease/Facility Levin 22 State No. 1

| SOURCE                             | QUANTITY | DESCRIPTION                                 | ACCT. CAT. -<br>FEATURE NO. | C<br>O<br>N<br>D | ESTIMATED<br>COST |
|------------------------------------|----------|---------------------------------------------|-----------------------------|------------------|-------------------|
| SURFACE EQUIPMENT - TANGIBLE       |          |                                             |                             |                  |                   |
|                                    |          | Line Pipe                                   | 83-22                       | I                | 1,600             |
|                                    |          | Transportation, Other                       | 83-126                      |                  | 2,500             |
|                                    |          | Pumping Unit                                | 83-141                      |                  |                   |
|                                    |          | Pumping Equipment - Rod Pump                | 83-143                      |                  |                   |
|                                    |          | Flowing Plunger Lift Equipment              | 83-146                      |                  |                   |
|                                    |          | Submersible Pump - Electric                 | 83-149                      |                  |                   |
|                                    |          | Submersible Pump - Hydraulic                | 83-152                      |                  |                   |
|                                    |          | Gas Lift Equipment                          | 83-155                      |                  |                   |
|                                    |          | Pumps                                       | 83-158                      |                  |                   |
|                                    |          | Tanks                                       | 83-176                      |                  | 10,000            |
|                                    |          | Metering Equipment                          | 83-190                      |                  | 4,000             |
|                                    |          | Instrumentation                             | 83-194                      |                  |                   |
|                                    |          | Electrical Equipment, Other                 | 83-201                      |                  |                   |
|                                    |          | Valves                                      | 83-205                      | I                | 2,500             |
|                                    |          | Miscellaneous Materials                     | 83-217                      | I                | 10,000            |
|                                    |          | Contract Labor, Electrical                  | 83-229                      |                  |                   |
|                                    |          | Contract Labor, Welding                     | 83-233                      |                  | 1,000             |
|                                    |          | Contract Labor, Other                       | 83-237                      |                  | 4,000             |
|                                    |          | Contract Services, Other                    | 83-240                      |                  | 2,000             |
|                                    |          | Compressor Installation                     | 83-365                      |                  |                   |
|                                    |          | Dehydration                                 | 83-376                      |                  | 10,000            |
|                                    |          | Crude Oil Treaters                          | 83-378                      |                  |                   |
|                                    |          | Separator                                   | 83-380                      |                  | 12,000            |
|                                    |          | Vapor Recovery Units                        | 83-386                      |                  |                   |
|                                    |          | Free Water Knockouts                        | 83-388                      |                  |                   |
|                                    |          | Regulatory Compliance (Includes Permitting) | 83-685                      |                  |                   |
|                                    |          | Company Labor & Burden                      | 83-750                      |                  | 2,000             |
| TOTAL SURFACE EQUIPMENT - TANGIBLE |          |                                             |                             |                  | \$ 61,600         |

| ENVIRON. COSTS          | SUMMARY OF ESTIMATED DRILLING WELL COSTS                    |            | (  | x) |
|-------------------------|-------------------------------------------------------------|------------|----|----|
| *****                   | Total Drilling Cost                                         | \$ 491,400 | \$ |    |
| Spill Cleanup 41 _____% | Total Completion Cost                                       | \$ 312,000 | \$ |    |
| Remediation 42 _____%   | Total Surface Equipment                                     | \$ 61,600  | \$ |    |
| Air 43 _____%           | Grand Total Cost                                            | \$ 865,000 | \$ |    |
| Water 44 _____%         | Marathon's Share of Grand Total Cost to be Booked This Year |            | \$ |    |
| Solid Waste 45 _____%   | If Wildcat Well, Give Marathon's Share of Dry Hole Cost     |            | \$ |    |
| Other 47 _____%         |                                                             |            |    |    |
| Non-ENV _____%          |                                                             |            |    |    |
| Total 100%              |                                                             |            |    |    |

PARTICIPANT APPROVAL

Participant Name: Yates Petroleum Corporation 11.28472 % RB  
Signature: [Signature]  
Title: Attorney-in-Fact  
Date: 11/25/97

ILLEGIBLE

AC 915 684-6373

**MARSHALL & WINSTON, INC.**  
P O BOX 50880  
MIDLAND, TEXAS 79710-0880

December 8, 1997

Marathon Oil Company  
P. O. Box 552  
Midland, Texas 79702-0552

Attention: Mr. Tim Robertson

Re: Garvin "22" State No. 1 Well  
S/2 of Section 22, Township  
18 South, Range 28 East,  
Eddy County, New Mexico

Dear Mr. Robertson:

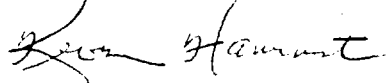
Concerning the above captioned well, enclosed please find the following:

1. Executed signature page to the operating agreement of November 12, 1997.
2. Executed AFE for the captioned well.
3. Information Request Letter.

With the working interests in the well having been adjusted to a beneficial interest basis, you inform me that the net revenue interests will be essentially pooled and the net revenue interest rate will be the same for all parties. Of course, should a proration unit be of size less than 320 acres, the working interest owners shall share in the burdens of the lands within the unit.

Should anything additional be needed, you are welcome to contact me.

Very truly yours,



Kevin Hammit  
Land Manager

KH:glh

Enclosures

RECEIVED

DEC 10 1997

MARATHON OIL COMPANY  
LAND DEPARTMENT

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ARTICLE XVI.  
MISCELLANEOUS

This agreement shall be binding upon and shall inure to the benefit of the parties hereto and to their respective heirs, devisees, legal representatives, successors and assigns.

This instrument may be executed in any number of counterparts, each of which shall be considered an original for all purposes.

IN WITNESS WHEREOF, this agreement shall be effective as of 12th day of November, 1997.

OPERATOR  
MARATHON OIL COMPANY

*E. C. Potter*

E. C. Potter, Attorney-in-Fact

NON-OPERATORS  
LOUIS DREYFUS NATURAL GAS CORP. ATLANTIC RICHFIELD COMPANY

By: \_\_\_\_\_  
Its: \_\_\_\_\_

By: \_\_\_\_\_  
Its: \_\_\_\_\_

CHEVRON USA, INC.

YATES PETROLEUM CORPORATION

By: \_\_\_\_\_  
Its: \_\_\_\_\_

By: \_\_\_\_\_  
Its: \_\_\_\_\_

EXXON CORPORATION

MARSHALL & WINSTON, INC.

*William S. Marshall*

By: \_\_\_\_\_  
Its: \_\_\_\_\_

By: William S. Marshall  
Its: President

PETRO-QUEST EXPLORATION

LOGRO CORPORATION

By: \_\_\_\_\_  
Its: \_\_\_\_\_

By: \_\_\_\_\_  
Its: \_\_\_\_\_

Signature page for Operating Agreement covering S/2 Section 22, T-18-S, R-28-E, N.M.P.M., Eddy County, New Mexico. Initial well is Garvin 22 State No. 1.

MARATHON OIL COMPANY  
AUTHORITY FOR EXPENDITURE  
DETAIL OF ESTIMATED WELL COSTS

AFE NO. \_\_\_\_\_  
DATE October 31, 1997

Region Mid-Continent Region  
Field/Prospect Travis  
Lease/Facility Garvin "22" State No. 1

| SOURCE                             | QUANTITY | DESCRIPTION                                 | ACCT. CAT. -<br>FEATURE<br>NO. | C<br>O<br>N<br>D | ESTIMATED<br>COST |
|------------------------------------|----------|---------------------------------------------|--------------------------------|------------------|-------------------|
| SURFACE EQUIPMENT - TANGIBLE       |          |                                             |                                |                  |                   |
|                                    |          | Line Pipe                                   | 83-27                          | I                | 1,600             |
|                                    |          | Transportation, Other                       | 83-126                         |                  | 2,500             |
|                                    |          | Pumping Unit                                | 83-141                         |                  |                   |
|                                    |          | Pumping Equipment - Rod Pump                | 83-143                         |                  |                   |
|                                    |          | Flowing/Plunger Lift Equipment              | 83-146                         |                  |                   |
|                                    |          | Submersible Pump - Electric                 | 83-149                         |                  |                   |
|                                    |          | Submersible Pump - Hydraulic                | 83-152                         |                  |                   |
|                                    |          | Gas Lift Equipment                          | 83-155                         |                  |                   |
|                                    |          | Pumps                                       | 83-158                         |                  |                   |
|                                    |          | Tanks                                       | 83-170                         |                  | 10,000            |
|                                    |          | Metering Equipment                          | 83-190                         |                  | 4,000             |
|                                    |          | Instrumentation                             | 83-194                         |                  |                   |
|                                    |          | Electrical Equipment, Other                 | 83-201                         |                  |                   |
|                                    |          | Valves                                      | 83-205                         | I                | 2,500             |
|                                    |          | Miscellaneous Materials                     | 83-217                         | I                | 10,000            |
|                                    |          | Contract Labor, Electrical                  | 83-229                         |                  |                   |
|                                    |          | Contract Labor, Welding                     | 83-233                         |                  | 1,000             |
|                                    |          | Contract Labor, Other                       | 83-237                         |                  | 4,000             |
|                                    |          | Contract Services, Other                    | 83-240                         |                  | 2,000             |
|                                    |          | Compressor Installation                     | 83-365                         |                  |                   |
|                                    |          | Dehydration                                 | 83-376                         |                  | 10,000            |
|                                    |          | Crude Oil Treaters                          | 83-378                         |                  |                   |
|                                    |          | Separator                                   | 83-380                         |                  | 12,000            |
|                                    |          | Vapor Recovery Units                        | 83-386                         |                  |                   |
|                                    |          | Free Water Knockouts                        | 83-388                         |                  |                   |
|                                    |          | Regulatory Compliance (Includes Permitting) | 83-685                         |                  |                   |
|                                    |          | Company Labor & Burden                      | 83-750                         |                  | 2,000             |
| TOTAL SURFACE EQUIPMENT - TANGIBLE |          |                                             |                                |                  | \$ 61,600         |

| ENVIRON. COSTS           | SUMMARY OF ESTIMATED DRILLING WELL COSTS                    | (          | %) |
|--------------------------|-------------------------------------------------------------|------------|----|
| *****                    | Total Drilling Cost                                         | \$ 491,400 | \$ |
| Spill Cleanup 41 _____ % | Total Completion Cost                                       | \$ 312,000 | \$ |
| Remediation 42 _____ %   | Total Surface Equipment                                     | \$ 61,600  | \$ |
| Air 43 _____ %           | Grand Total Cost                                            | \$ 865,000 | \$ |
| Water 44 _____ %         | Marathon's Share of Grand Total Cost to be Booked This Year | \$         |    |
| Solid Waste 45 _____ %   | If Wildcat Well, Give Marathon's Share of Dry Hole Cost     | \$         |    |
| Other 47 _____ %         |                                                             |            |    |
| Non-ENV _____ %          |                                                             |            |    |
| Total 100%               |                                                             |            |    |

PARTICIPANT APPROVAL  
Participant Name: MARSHALL & WINSTON, INC.  
Signature: William S. Marshall  
Title: President  
Date: 12-1-97

WI-7.0985490



## Petro-Quest Exploration

P.O. Box 10016 • Midland, Texas 79702  
Main: (915) 683-9841 • Fax: (915) 683-9844

**Mark W. Hoffmann**  
General Partner  
(915) 683-6275

December 10, 1997

Marathon Oil Company  
P.O. Box 552  
Midland, Texas 79702-0552

Attn: Mr. Tim Robertson

Re: Garvin 22 State No. 1  
S/2 Section 2, T18S-R28E,  
Eddy County, New Mexico

Dear Tim,

Enclosed is an executed AFE and JOA for the referenced well. Also enclosed is a copy of Petro-Quest's geological requirements for your drilling and production department.

If you have any questions or need any additional information, please give me a call.

Sincerely,

PETRO-QUEST EXPLORATION

A handwritten signature in black ink, appearing to read 'Mark W. Hoffmann', written in a cursive style.

Mark W. Hoffmann  
General Partner

marath2.h97

RECEIVED

DEC 11 1997

MARATHON OIL COMPANY  
DRILLING DEPARTMENT

FROM : Logno Corporation

PHONE NO. : 214 964 3319

Nov. 10 1997 11:54PM P5

MARATHON OIL COMPANY  
AUTHORITY FOR EXPENDITURE  
DETAIL OF ESTIMATED WELL COSTS

AFE NO. \_\_\_\_\_  
DATE October 31, 1997

Region Mid-Continent Region  
Field/Prospect Travis  
Lease/Facility Garvin "22" State No. 1

| SOURCE                             | QUANTITY | DESCRIPTION                                 | ACCT. CAT. -<br>FEATURE<br>NO. | C<br>O<br>N<br>D | ESTIMATED<br>COST |
|------------------------------------|----------|---------------------------------------------|--------------------------------|------------------|-------------------|
| SURFACE EQUIPMENT - TANGIBLE       |          |                                             |                                |                  |                   |
|                                    |          | Line Pipe                                   | 83-227                         |                  | 2,800             |
|                                    |          | Transportation, Other                       | 83-126                         |                  | 1,000             |
|                                    |          | Pumping Unit                                | 83-141                         |                  |                   |
|                                    |          | Pumping Equipment - Rod Pump                | 83-143                         |                  |                   |
|                                    |          | Flowing/Plunger Lift Equipment              | 83-146                         |                  |                   |
|                                    |          | Submersible Pump - Electric                 | 83-149                         |                  |                   |
|                                    |          | Submersible Pump - Hydraulic                | 83-152                         |                  |                   |
|                                    |          | Gas Lift Equipment                          | 83-155                         |                  |                   |
|                                    |          | Pumps                                       | 83-158                         |                  |                   |
|                                    |          | Tanks                                       | 83-170                         |                  | 10,000            |
|                                    |          | Metering Equipment                          | 83-190                         |                  | 4,000             |
|                                    |          | Instrumentation                             | 83-194                         |                  |                   |
|                                    |          | Electrical Equipment, Other                 | 83-201                         |                  |                   |
|                                    |          | Valves                                      | 83-205                         | I                | 2,500             |
|                                    |          | Miscellaneous Materials                     | 83-217                         | I                | 10,000            |
|                                    |          | Contract Labor, Electrical                  | 83-229                         |                  |                   |
|                                    |          | Contract Labor, Welding                     | 83-233                         |                  | 1,000             |
|                                    |          | Contract Labor, Other                       | 83-237                         |                  | 4,000             |
|                                    |          | Contract Services, Other                    | 83-240                         |                  | 2,000             |
|                                    |          | Compressor Installation                     | 83-265                         |                  |                   |
|                                    |          | Dehydration                                 | 83-376                         |                  | 10,000            |
|                                    |          | Crude Oil Treaters                          | 83-378                         |                  |                   |
|                                    |          | Separator                                   | 83-380                         |                  | 12,000            |
|                                    |          | Vapor Recovery Units                        | 83-386                         |                  |                   |
|                                    |          | Free Water Knockouts                        | 83-388                         |                  |                   |
|                                    |          | Regulatory Compliance (Includes Permitting) | 83-685                         |                  |                   |
|                                    |          | Company Labor & Burden                      | 83-750                         |                  | 2,000             |
| TOTAL SURFACE EQUIPMENT - TANGIBLE |          |                                             |                                |                  | \$ 61,600         |

| ENVIRON. COSTS          | SUMMARY OF ESTIMATED DRILLING WELL COSTS                    | (          | %) |
|-------------------------|-------------------------------------------------------------|------------|----|
| Spill Cleanup 41 _____% | Total Drilling Cost                                         | \$ 491,400 | \$ |
| Remediation 42 _____%   | Total Completion Cost                                       | \$ 312,000 | \$ |
| Air 43 _____%           | Total Surface Equipment                                     | \$ 61,600  | \$ |
| Water 44 _____%         | Grand Total Cost                                            | \$ 865,000 | \$ |
| Solid Waste 45 _____%   | Marathon's Share of Grand Total Cost to be Booked This Year | \$         |    |
| Other 47 _____%         | If Wildcat Well, Give Marathon's Share of Dry Hole Cost     | \$         |    |
| Non-FMV _____%          |                                                             |            |    |
| Total 100%              |                                                             |            |    |

PARTICIPANT APPROVAL

Participant Name: \_\_\_\_\_  
Signature: Mark W. Hoffmann  
Title: \_\_\_\_\_  
Date: 12/15/97

ILLEGIBLE

PETRO-QUEST EXPLORATION  
MARK W. HOFFMANN  
GENERAL PARTNER

ARTICLE XVI.  
MISCELLANEOUS

This agreement shall be binding upon and shall inure to the benefit of the parties hereto and to their respective heirs, devisees, legal representatives, successors and assigns.

This instrument may be executed in any number of counterparts, each of which shall be considered an original for all purposes.

IN WITNESS WHEREOF, this agreement shall be effective as of 12th day of November, 1997.

OPERATOR

MARATHON OIL COMPANY

*E. C. Potter*

E. C. Potter, Attorney-in-Fact

NON-OPERATORS

LOUIS DREYFUS NATURAL GAS CORP.

ATLANTIC RICHFIELD COMPANY

By:  
Its:

By:  
Its:

CHEVRON USA, INC.

YATES PETROLEUM CORPORATION

By:  
Its:

By:  
Its:

EXXON CORPORATION

MARSHALL & WINSTON, INC.

By:  
Its:

By:  
Its:

PETRO-QUEST EXPLORATION

LOGRO CORPORATION

*Mark W. Hoffmann*  
By: MARK W. HOFFMANN  
Its: GENERAL PARTNER

By:  
Its:

Signature page for Operating Agreement covering S/2 Section 22, T-18-S, R-28-E, N.M.P.M., Eddy County, New Mexico. Initial well is Garvin 22 State No. 1.

14000 Oscar Springs Parkw. Telephone 405 744-1000  
Suite 600 Fax 405 749-9305  
Oklahoma City, Oklahoma  
73104-2600



December 22, 1997

Marathon Oil Company  
P.O. Box 552  
Midland, Texas 79702-0552

ATTN: Tim Robertson

RE: Garvin 22 State No. 1  
S/2 Section 22-18S-28E  
Eddy County, New Mexico

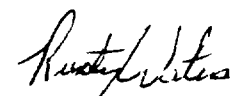
Gentlemen:

Louis Dreyfus Natural Gas Corp. hereby elects to participate in the above referenced Garvin 22 State No. 1 well. Please find enclosed an executed AFE and Well Requirement Sheet.

Louis Dreyfus Natural Gas Corp. will provide their own well control insurance.

Sincerely,

LOUIS DREYFUS NATURAL GAS CORP.

  
Rusty Waters  
District Landman

RW/eeo  
cc: John Lennon

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RECEIVED

DEC 29 1997

OKLAHOMA OIL & GAS  
LAND SECURITY

MARATHON OIL COMPANY  
AUTHORITY FOR EXPENDITURE  
DETAIL OF ESTIMATED WELL COSTS

AFE NO. \_\_\_\_\_  
DATE October 31, 1997

Region Mid-Continent Region  
Field/Prospect Travis  
Lease/facility Garvin "22" State No. 1

| SOURCE                             | QUANTITY | DESCRIPTION                                 | ACCT. CAT. -<br>FEATURE<br>NO. | C<br>O<br>N<br>D | ESTIMATED<br>COST |
|------------------------------------|----------|---------------------------------------------|--------------------------------|------------------|-------------------|
| =====                              |          |                                             |                                |                  |                   |
| SURFACE EQUIPMENT - TANGIBLE       |          |                                             |                                |                  |                   |
|                                    |          | Line Pipe                                   | 83-27                          | I                | 1,600             |
|                                    |          | Transportation, Other                       | 83-126                         |                  | 2,500             |
|                                    |          | Pumping Unit                                | 83-141                         |                  |                   |
|                                    |          | Pumping Equipment - Rod Pump                | 83-143                         |                  |                   |
|                                    |          | Flowing/Plunger Lift Equipment              | 83-146                         |                  |                   |
|                                    |          | Submersible Pump - Electric                 | 83-149                         |                  |                   |
|                                    |          | Submersible Pump Hydraulic                  | 83-152                         |                  |                   |
|                                    |          | Gas Lift Equipment                          | 83-155                         |                  |                   |
|                                    |          | Pumps                                       | 83-158                         |                  |                   |
|                                    |          | Tanks                                       | 83-170                         |                  | 10,000            |
|                                    |          | Metering Equipment                          | 83-190                         |                  | 4,000             |
|                                    |          | Instrumentation                             | 83-194                         |                  |                   |
|                                    |          | Electrical Equipment, Other                 | 83-201                         |                  |                   |
|                                    |          | Valves                                      | 83-205                         | I                | 2,500             |
|                                    |          | Miscellaneous Materials                     | 83-217                         | I                | 10,000            |
|                                    |          | Contract Labor, Electrical                  | 83-229                         |                  |                   |
|                                    |          | Contract Labor, Welding                     | 83-233                         |                  | 1,000             |
|                                    |          | Contract Labor, Other                       | 83-237                         |                  | 4,000             |
|                                    |          | Contract Services, Other                    | 83-240                         |                  | 2,000             |
|                                    |          | Compressor Installation                     | 83-365                         |                  |                   |
|                                    |          | Dehydration                                 | 83-376                         |                  | 10,000            |
|                                    |          | Crude Oil Treaters                          | 83-378                         |                  |                   |
|                                    |          | Separator                                   | 83-380                         |                  | 12,000            |
|                                    |          | Vapor Recovery Units                        | 83-386                         |                  |                   |
|                                    |          | Free Water Knockouts                        | 83-388                         |                  |                   |
|                                    |          | Regulatory Compliance (Includes Permitting) | 83-685                         |                  |                   |
|                                    |          | Company Labor & Burden                      | 83-750                         |                  | 2,000             |
| TOTAL SURFACE EQUIPMENT - TANGIBLE |          |                                             |                                |                  | \$ 61,600         |

| ENVIRON. COSTS           | SUMMARY OF ESTIMATED DRILLING WELL COSTS                    | (          | %)       |
|--------------------------|-------------------------------------------------------------|------------|----------|
| =====                    |                                                             |            |          |
| Spill Cleanup 41 _____ % | Total Drilling Cost                                         | \$ 491,400 | \$ _____ |
| Remediation 42 _____ %   | Total Completion Cost                                       | \$ 312,000 | \$ _____ |
| Air 43 _____ %           | Total Surface Equipment                                     | \$ 61,600  | \$ _____ |
| Water 44 _____ %         | Grand Total Cost                                            | \$ 865,000 | \$ _____ |
| Solid Waste 45 _____ %   |                                                             |            |          |
| Other 47 _____ %         | Marathon's Share of Grand Total Cost to be Booked This Year |            | \$ _____ |
| Non-ENV _____ %          | If Wildcat Well, Give Marathon's Share of Dry Hole Cost     |            | \$ _____ |
| Total 100%               |                                                             |            |          |

PARTICIPANT APPROVAL

Participant Name: LOUIS DREYFUS NATURAL GAS CORP.  
Signature: Ronnie K. Irani  
Title: Executive Vice President  
Date: 12/19/97

10M  
JBL

FROM : Marathron Corporation

PHONE NO. : 214 964 3319

Jan. 12 1998 11:18AM P1

MARATHRON OIL COMPANY  
AUTHORITY FOR EXPENDITURE  
DETAIL OF ESTIMATED WELL COSTSAPP NO. \_\_\_\_\_  
DATE OCTOBER 31, 1997Region Mid-Continent Region  
Field/Prospect GRAYS  
Lease/Facility GRAY 1117 LEASE, NO.

| QUANTITY                           | DESCRIPTION                                 | UNIT   | ESTIMATED COST |
|------------------------------------|---------------------------------------------|--------|----------------|
| SURFACE EQUIPMENT - TANGIBLE       |                                             |        |                |
|                                    | Line Pipe                                   | 33-125 | 3,000          |
|                                    | Transportation, Other                       | 33-126 | 7,500          |
|                                    | Pumping Unit                                | 33-141 |                |
|                                    | Pumping Equipment - Rod Pump                | 33-143 |                |
|                                    | Flowing/Plugging/Lift Equipment             | 33-144 |                |
|                                    | Submersible Pump - Electrical               | 33-145 |                |
|                                    | Submersible Pump - Hydraulic                | 33-152 |                |
|                                    | Gas Lift Equipment                          | 33-155 |                |
|                                    | Pumps                                       | 33-158 |                |
|                                    | Leaks                                       | 33-170 | 10,000         |
|                                    | Metering Equipment                          | 33-180 | 5,000          |
|                                    | Instrumentation                             | 33-184 |                |
|                                    | Electrical Equipment, Other                 | 33-201 |                |
|                                    | Valves                                      | 33-205 | 7,500          |
|                                    | Miscellaneous Materials                     | 33-217 | 10,000         |
|                                    | Contract Labor, Electrical                  | 33-229 |                |
|                                    | Contract Labor, Welding                     | 33-233 | 1,000          |
|                                    | Contract Labor, Other                       | 33-237 | 4,000          |
|                                    | Contract Services, Other                    | 33-240 | 2,000          |
|                                    | Compressor Installation                     | 33-265 |                |
|                                    | Dehydration                                 | 33-376 | 10,000         |
|                                    | Crude Oil Treaters                          | 33-378 |                |
|                                    | Separator                                   | 33-390 | 12,000         |
|                                    | Vapor Recovery Units                        | 33-386 |                |
|                                    | Free Water Knockouts                        | 33-388 |                |
|                                    | Regulatory Compliance (includes Permitting) | 33-685 |                |
|                                    | Company Labor & Burden                      | 33-750 | 2,000          |
| TOTAL SURFACE EQUIPMENT - TANGIBLE |                                             |        | \$ 61,600      |

## ENVIRON COSTS

Spill Cleanup 41 \_\_\_\_\_ %  
Remediation 42 \_\_\_\_\_ %  
Air 43 \_\_\_\_\_ %  
Water 44 \_\_\_\_\_ %  
Solid Waste 45 \_\_\_\_\_ %  
Other 47 \_\_\_\_\_ %  
Non-ENV \_\_\_\_\_ %

Total 100%

## SUMMARY OF ESTIMATED DRILLING WELL COSTS

|                                                             |            |    |
|-------------------------------------------------------------|------------|----|
| Total Drilling Cost                                         | \$ 491,400 | \$ |
| Total Completion Cost                                       | \$ 112,000 | \$ |
| Total Surface Equipment                                     | \$ 61,600  | \$ |
| Grand Total Cost                                            | \$ 665,000 | \$ |
| Marathon's Share of Grand Total Cost to be booked this year | \$         |    |
| In Wildcat well, Give Marathon's Share of Dry Hole Cost     | \$         |    |

## PARTICIPANT APPROVAL

Participating Party Marathron Corporation  
Signature [Signature]  
Title President  
Date 11/12/98

|                             |      |                        |                     |
|-----------------------------|------|------------------------|---------------------|
| Post-It® Fax Note           | 7671 | Date <u>11/12/98</u>   | # of Pages <u>4</u> |
| To <u>Tim Robertson</u>     |      | From <u>David Faye</u> |                     |
| Company <u>Marathron</u>    |      | Co. <u></u>            |                     |
| Phone # <u>972 964-0608</u> |      |                        |                     |
| Fax # <u>972 964-3319</u>   |      |                        |                     |

ILLEGIBLE

## A.A.P.L. FORM 610 - MODEL FORM OPERATING AGREEMENT - 1982

ARTICLE XVI.  
MISCELLANEOUS

This agreement shall be binding upon and shall inure to the benefit of the parties hereto and to their respective heirs, devisees, legal representatives, successors and assigns.

This instrument may be executed in any number of counterparts, each of which shall be considered an original for all purposes.

IN WITNESS WHEREOF, this agreement shall be effective as of 12th day of November, 1997.

## OPERATOR

MARATHON OIL COMPANY



E. C. Potter, Attorney-in-Fact

## NON OPERATORS

LOUIS DREYFUS NATURAL GAS CORP.

ATLANTIC RICHFIELD COMPANY

By:

Its:

By:

Its:

CHEVRON USA, INC.

YATES PETROLEUM CORPORATION

By:

Its:

By:

Its:

EXXON CORPORATION

MARSHALL &amp; WINSTON, INC.

By:

Its:

By:

Its:

PETRO-OUEST EXPLORATION

LOGRO CORPORATION

By:

Its:

By:

Its:

Signature page for Operating Agreement covering S/2 Section 20, T-18-S, R-28-E, N.M.P.M., Eddy County, New Mexico. Initial well is Garvin 22 State No. 1.

**ILLEGIBLE**