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** MEMBERS IDAHO BAR
†† MEMBERS COLORADO BAR

*** MEMBERS NEW MEXICO AND CALIFORNIA BARS
††† MEMBERS IOWA BAR

**** MEMBERS FLORIDA AND MICHIGAN BARS
†††† MEMBERS DISTRICT OF COLUMBIA BAR

January 13, 1998

New Mexico Oil and Gas Conservation Division
PO Box 6429
Santa Fe, NM 87505

Attn: Miss Florine Davidson

Dear Florine:

Enclosed are three copies of the Application of Shahara Oil LLC. Would you please file the same and place the matter for hearing before an examiner at the earliest possible date.

Appreciating your courtesy, we are

Very truly yours,



Paul A. Cooter

PAC\smb
enclosure

BEFORE THE
OIL CONSERVATION DIVISION
NEW MEXICO DEPARTMENT OF ENERGY, MINERALS AND NATURAL RESOURCES

IN THE MATTER OF THE APPLICATION OF
SHAHARA OIL, LLC, FOR (1) APPROVAL OF THE
PROPOSED SHAHARA STATE UNIT, (2) CREATION
OF A WATERFLOOD AND TERTIARY RECOVERY PROJECT
(3) APPROVAL OF TWO UNORTHODOX OIL WELL
LOCATIONS, AND (4) QUALIFICATION OF THAT
PROJECT FOR THE RECOVERED OIL TAX RATE,
LEA COUNTY, NEW MEXICO.

CASE NO. 11923

APPLICATION

SHAHARA OIL, LLC, a New Mexico limited liability company, the "Applicant," whose address is 207 W. McKay, Carlsbad, New Mexico 88220, applies for an Order (1) approving the Shahara State Unit in Lea County, New Mexico, covering the land and formations hereafter described, (2) creating a secondary waterflood and tertiary recovery project using micro-organisms for enhanced recovery of oil from that Unit, (3) approving two new proposed unorthodox oil well locations for producing wells along the west edge of the Unit, and (4) qualifying that project for the recovered oil tax rate pursuant to the "New Mexico Enhanced Oil Recovery Act." In support thereof, Applicant states:

1. Applicant is the general partner of Mountaineer Limited Partnership, which owns the majority (90.6775%) working interest in the operating rights under the following described land (the Unit Area) in Lea County, New Mexico, to wit:

Township 17 South, Range 33 East, N.M.P.M.

Section 16: $W\frac{1}{2}$

containing 320 acres, more or less, from the surface to a depth of 5500 feet beneath the surface, which land is included in that certain Oil and Gas Lease dated September 11, 1933, bearing Serial Number B-2148, from the State of New Mexico, lessor, to Phillips Petroleum Company, lessee.

2. The Unitized Formations shall be the Grayburg/San Andres formations, the vertical limits of which extend from approximately 4100 feet below the surface to a lower depth of 5500 feet within the Unit Area.

3. The Unit Area has heretofore been operated under an informal working interest unit (letter) agreement dated September 5, 1985 which established the Tract Participation as set forth in Section 12 of the Unit Agreement, limited, however, to the depths from the surface to 4600 feet under the $N\frac{1}{2}SW\frac{1}{4}$ and $SE\frac{1}{4}SW\frac{1}{4}$, 4800 feet under the $NW\frac{1}{4}$, and 5200 feet under the $SW\frac{1}{4}SW\frac{1}{4}$ of said Section 16. The participation formula, as so set forth in the Unit Agreement, allocates the produced and unitized oil and other hydrocarbons on a fair, reasonable, and equitable basis.

4. A copy of the proposed Unit Agreement, which designates Applicant the Unit Operator, is filed with this Application, marked Exhibit 1. Applicant believes that the terms and provisions thereof are fair, reasonable and equitable to all owners of interests.

5. The portion of the Unitized Formation included within the Unit Area has heretofore been reasonably defined by development and can be adequately controlled by Unit operations.

6. By converting certain presently producing wells within the Unit Area now known as the Phillips State Wells Nos. 1, 3, 4, 5, 6, 7 and 8 into injection wells, Applicant proposes to inject water with micro-organisms into the Unitized Formation. The Phillips State No. 2 Well located in unit D (NW/4NW/4) of said Section 16 is now a duly permitted injection well; it will remain an injection well under Unit operations. A copy of the Oil Conservation Division's (the "Division") Form C-108 with its attachments is filed herewith, marked Exhibit 2.

7. As part of Unit operations, Applicant intends to eventually drill a maximum of 12 new producing wells, two of which will be at unorthodox locations along the west edge of the Unit under a cooperative unit line agreement with The Wiser Oil Company, unit operator of the Caprock Maljamar Unit which adjoins the proposed Unit Area to the west. A copy of that agreement with its exhibits is filed herewith, marked Exhibit 3. Those two unorthodox location wells will be the Phillips State No. 100 Well located 1320' FNL and 10' FWL of said Section 16 and the Phillips State No. 101 Well located 2640' FNL and 10' FWL of said Section 16.

8. Produced water from the Unit will be delivered to The Wiser Oil Company, which will return the same with additional make-up water (as may be required for Unit operations) under pressure, to which Unit Operator will add the micro-organisms before injecting the same into the Unitized Formation through the injection wells.

9. The method of operation proposed in the Unit Operating Agreement which is filed herewith, marked Exhibit 4, will prevent waste and result, with reasonable probability, in the

increased recovery of substantially more oil from the Unitized Formations than would otherwise be recovered.

10. The estimated additional costs of conducting Unit operations are estimated to be \$6,257,000, which sum includes both capital expenditures of \$3,731,000 and operating costs of \$2,526,000. The estimated value of the additional production to be recovered thereby as a result of the proposed project is \$14,400,000.

WHEREFORE, Applicant requests that this Application be set for hearing before one of the Division's Hearing Examiners at the earliest possible date, and that after such hearing, the Division enter its Order approving (i) the Unit Agreement and Unit Operating Agreement providing for the unitized management, operation, and further development of the Unitized Formations within the Unit Area, (ii) the injection of water (with added micro-organisms) into the Unitized Formations, (iii) the drilling of two additional oil wells at unorthodox locations along the west edge of the Unit, and (iv) the enhanced oil recovery project as heretofore described, qualifying this waterflood and tertiary recovery project for the recovered oil tax rate pursuant to the "New Mexico Enhanced Oil Recovery Act."

Respectfully submitted,

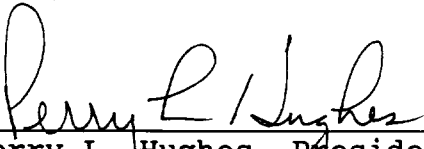
KEMP, SMITH, DUNCAN & HAMMOND, P.C.



By _____
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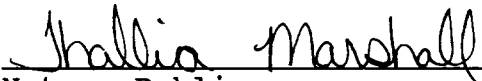
STATE OF NEW MEXICO
COUNTY OF EDDY

The undersigned Perry L. Hughes, being duly sworn upon his oath, states that he is the president of Shahara Oil LLC, a New Mexico limited liability company, that he is familiar with the matters and facts set forth in the foregoing Application, and that the same are true and correct.



Perry L. Hughes, President

Subscribed and sworn to this 17th day of December, 1997.



Notary Public

My commission expires:

November 6, 2000

**EXHIBITS FOR SHAHARA OIL'S
W/2 SECTION 16 UNIT**

ATTACHED TO THE APPLICATION:

1. Unit Agreement with Ratifications (15 - all WI and ORRI owners except Dale McCarter and Norwest Bank, Trustee)
2. Form C-108 with following listed attachments
Statement (2 p)
A) Map - Area of Review
A-1) Enlarged Map - Development Plan
B) Well Data and Schematic Diagrams of Proposed Injection Wells (4 p)
C) Well Data for Wells within the Area of Review (3 p)
D) Well Data & Schematic Diagram of Plugged and Abandoned Well Bores within the Area of Review (10 p)
3. Cooperative Unit Line Well and Unit Line Infill Drilling Agreement between The Wiser Oil Company and Shahara Oil, with attached Operating Agreement
4. Unit Operating Agreement with Ratifications (6 - all WI owners except McCarter)

NEW EXHIBITS:

5. McCarter's Ratifications (2 - Unit Agreement and Unit Operating Agreement)
6. Structure Map
7. Cross-Section (A-A')
8. Cross-Section (B-B')
9. Area Map with injection pressures of other area wells
10. Applications for Permit to Drill and Well Location and Acreage Dedication Plats for Phillips State Wells Nos. 9, 10, 11, 12, 13, 14, 15, 100, 101
11. Approval by Wiser Oil (12/8/97) of revised locations for Wells Nos. 100 and 101
12. Pressurized Water Sale Agreement between Wiser Oil and Shahara Oil
13. Financial Summary and Summary of Redevelopment Costs