

CASE 3450: Application of RAY  
SMITH DRLG. CO. for a waterflood  
project, Eddy County, New Mexico.

Case Number

3450

Application

Transcripts.

Small Exhibits

ETC.

GOVERNOR  
JACK M. CAMPBELL  
CHAIRMAN

State of New Mexico  
**Oil Conservation Commission**



LAND COMMISSIONER  
GUYTON B. HAYS  
MEMBER

STATE GEOLOGIST  
A. L. PORTER, JR.  
SECRETARY - DIRECTOR

P. O. BOX 2088  
SANTA FE

September 12, 1966

Mr. Paul W. Eaton  
Hinkle, Bondurant & Christy  
Attorneys at Law  
Post Office Box 10  
Roswell, New Mexico

Re: Case No. 3450  
Order No. R-3112  
Applicant:  
RAY SMITH DRILLING CO.

Dear Sir:

Enclosed herewith is a copy of the above-referenced Commission order recently entered in the subject case. Letter pertaining to conditions of approval and maximum allowable to follow.

Very truly yours,

*A. L. Porter, Jr.*  
A. L. PORTER, Jr.  
Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x  
Artesia OCC x  
Aztec OCC       

Other Mr. Frank Irby

OIL CONSERVATION COMMISSION

P. O. BOX 2082

SANTA FE, NEW MEXICO

October 18, 1966

C  
Mr. Paul Eaton  
Hinkle, Bondurant & Christy  
Attorneys at Law  
Post Office Box 10  
Roswell, New Mexico

O  
Dear Sir:

P  
Reference is made to Commission Order No. R-3112, recently entered in Case No. 3450, approving the Ray Smith Shugart 18-Queen Waterflood Project.

P  
Injection is to be through the three authorized water injection wells, each of which shall be equipped with tubing and a packer, said packers to be located as near to the uppermost perforation as is practicable.

Y  
As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 252 barrels per day when the Southeast New Mexico waterflood allowable factor is 42.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned commission offices by letter of any change in

OIL CONSERVATION COMMISSION  
P. O. BOX 2068  
SANTA FE, NEW MEXICO

-2-

Mr. Paul Eaton  
Roswell, New Mexico

the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

C Your cooperation in keeping the commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.  
Secretary-Director

O  
P ALP/DSH/ir  
cc: Mr. Frank Ivy  
State Engineer Office  
Santa Fe, New Mexico

Y  
Oil Conservation Commission Offices in Hobbs and Artesia

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 3450  
Order No. R-3112

APPLICATION OF RAY SMITH DRILLING  
COMPANY FOR A WATERFLOOD PROJECT,  
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 7, 1966,  
at Santa Fe, New Mexico, before Examiner Daniel S. Mutter.

NOW, on this 12th day of September, 1966, the Commission, a  
quorum being present, having considered the testimony, the record,  
and the recommendations of the Examiner, and being fully advised  
in the premises,

FINDS:

- (1) That due public notice having been given as required by  
law, the Commission has jurisdiction of this cause and the subject  
matter thereof.
- (2) That the applicant, Ray Smith Drilling Company, seeks  
permission to institute a waterflood project in the Shugart 18-  
Queen Unit Area, Shugart Pool, by the injection of water into  
the Queen formation through three injection wells in Section 13,  
Township 18 South, Range 30 East, and Section 18, Township 18  
South, Range 31 East, NMPM, Eddy County, New Mexico.
- (3) That the wells in the project area are in an advanced  
state of depletion and should properly be classified as "stripper"  
wells.
- (4) That the proposed waterflood project should result in  
the recovery of otherwise unrecoverable oil, thereby preventing  
waste.

CASE No. 3450  
Order No. R-3112

(5) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Ray Smith Drilling Company, is hereby authorized to institute a waterflood project in the Shugart 18-Queen Unit Area, Shugart Pool, by the injection of water into the Queen formation through the following-described wells in Eddy County, New Mexico:

TOWNSHIP 18 SOUTH, RANGE 30 EAST, NMPM  
Ray Smith-Canfield Federal Well No. 1,  
Unit I of Section 13

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM  
Ray Smith-Kenwood Federal "A" Well  
No. 1, Unit E of Section 18  
Ray Smith-Kenwood Federal Well No. 2,  
Unit N of Section 18

(2) That the subject waterflood project is hereby designated the Shugart 18-Queen Waterflood project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.



STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

*Jack M. Campbell*  
JACK M. CAMPBELL, Chairman

*Guyton B. Hays*  
GUYTON B. HAYS, Member

*A. L. Porter, Jr.*  
A. L. PORTER, Jr., Member & Secretary

esr/

DOCKET: EXAMINER HEARING - WEDNESDAY - SEPTEMBER 7, 1966

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

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The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

CASE 3439: (Continued from the August 3, 1966 Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Scanlon and Shepard and all other interested parties to show cause why the following Scanlon and Shepard wells in Township 20 North, Range 9 West, McKinley County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program: Santa Fe Pacific Railroad Lease: Wells Nos. 1, 3, 4, 5, 7, and 8, all in Unit P, No. 10 in Unit H, and No. 2 in Unit L, all in Section 21; Well No. 6 in Unit L and Nos. 9 and 12 in Unit M of Section 22 and Nos. 11 and 13 in Unit D of Section 27. Ray Well No. 1 in Unit, C, State Wells Nos. 1 and 2 in Unit A, and State K-1883 No. 1 in Unit B, all in Section 28.

CASE 3440: (Continued from the August 3, 1966 Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Osborn & Weir, and all interested parties, to show cause why the following Osborn & Weir wells in Township 20 North, Range 9 West, McKinley County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program: Scanlon Well No. 17 in Unit P of Section 21 and Nos. 14 and 18 in Unit M of Section 22; Scanlon Ray Wells No. 5 in Unit A and No. 6 in Unit C of Section 28.

CASE 3441: (Continued from the August 3, 1966 Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit LaMar Trucking, Inc., and all interested parties, to show cause why their State Well No. 1 located 495 feet from the North and West lines of Section 28, Township 20 North, Range 9 West, McKinley County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 3449: Application of Ray Smith Drilling Company for a unit agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of its Shugart 18-Queen Unit Area comprising 264 acres, more or less, of Federal land in Township 18 South, Ranges 30 and 31 East, Eddy County, New Mexico.

CASE 3450: Application of Ray Smith Drilling Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project on its Shugart 18-Queen Unit Area by the injection of water into three wells located in Section 13, Township 18 South, Range 30 East, and Section 18, Township 18 South, Range 31 East, Shugart Pool, Eddy County, New Mexico.



September 7, 1966 Examiner Hearing

- CASE 3451: Application of Ernest A. Hanson for a dual completion, acreage rededication and an administrative procedure for multiple completions, Lea County, New Mexico. Applicant, in the above-styled cause seeks authority to complete his Max Gutman Well No. 1 located in Unit M of Section 19, Township 22 South, Range 38 East, Lea County, New Mexico, as an oil-oil dual completion (conventional) for the production of oil from the Blinebry Oil Pool and from an undesignated Granite Wash Pool through parallel strings of tubing. Applicant further seeks rededication to the Blinebry Oil Pool of the SW/4 SW/4 of Section 19, Township 22 South, Range 38 East, for the subject well; this acreage is presently dedicated as a part of a 160-acre standard proration unit in the Blinebry Gas Pool to Gulf Oil Corporation's Max Gutman Well No. 1 located in Unit N of said Section 19. Applicant further seeks the establishment of an administrative procedure for the dedication and rededication of acreage from oil to gas, or from gas to oil, and for the dual completion in any combination as to the San Andres, Paddock, Blinebry Oil, Tubb Oil, Drinkard and Granite Wash formations in the area of the subject well.
- CASE 3452: Application of Union Oil Company of California for an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Commission Rule 104 to permit the completion in the Pennsylvanian formation of its Red Hills Unit Well No. 2 located at an unorthodox Pennsylvanian location 990 feet from the North line and 1650 feet from the East line of Section 5, Township 26 South, Range 33 East, Red Hills Pennsylvanian Gas Pool, Lea County, New Mexico. Said well is presently projected and drilling to the Wolfcamp formation by authority of Commission Order No. R-3073.
- CASE 3453: Application of Samedan Oil Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause seeks approval of the dual completion (conventional) of its J. H. Moore "B" Well No. 1 located in Unit E of Section 25, Township 11 South, Range 32 East, Lea County, New Mexico, to produce oil from the Moore Pennsylvanian and Moore Devonian Pools through parallel strings of tubing.
- CASE 3454: Application of Yates Petroleum Corporation for pool consolidation and extension, Eddy County, New Mexico. Applicant, in the above-styled cause seeks the consolidation of Four Mile-San Andres Pool and the Penasco-San Andres Pool, Eddy County, New Mexico, into one pool, and for vertical extension of said pool to include both the San Andres and the Yeso formations.

CURTIS W. MEWBOURNE  
CONSULTING PETROLEUM ENGINEER  
FIDELITY UNION LIFE BUILDING  
DALLAS, TEXAS 75201

August 12, 1966

Case 3450

MAILED 11 11 66

66 AUG 16 AM 7 42

New Mexico Oil Conservation Commission  
P.O. Box 2088  
Santa Fe, New Mexico

Attention: Mr. D. S. Nutter, Chief Engineer

Re: Ray Smith Drilling Company  
Shugart 18-Queen Unit  
Eddy County, New Mexico

Gentlemen:

Before the New Mexico Oil Conservation Commission comes now Ray Smith Drilling Company for approval of the Shugart 18-Queen Unit, Eddy County, New Mexico and in support of its application, includes the following:

1. Copy of the Unit Agreement.
2. Certification by the United States Geological Survey.
3. Logs of the proposed injection wells.
4. A plat showing the location of the proposed injection wells and all other wells within the area.

Operators have joined together to form the Shugart 18-Queen Unit for the purpose of conducting secondary recovery operations by waterflooding. Ray Smith Drilling Company has been selected as the Unit Operator. The zone to be waterflooded is the Queen Sand at an approximate depth of 3,000 feet. Fresh water will be purchased from the Double Eagle Corp. of New Mexico and will be injected at an estimated surface pressure of 700 psi. It is anticipated that an average of 300 barrels per day will be injected. The following wells will be used as injection wells:

1. Ray Smith - Canfield Federal #1
2. Ray Smith - Kenwood Federal #1
3. Ray Smith - Kenwood Federal "A" #1

This Unit covers only the Queen Sand, as set out in Section 2, Paragraph "G" of the Unit Agreement. Formation of this Unit will facilitate secondary recovery. Support of this application will prevent waste and protect correlative rights. Ray Smith Drilling Company requests a hearing for:

1. Authorization of Unit Agreement.
2. Authorization to inject water for secondary recovery.

Ray Smith Drilling Company requests that this application be set before the Commission or one of its examiners and that the Commission enter its Order, approving this application.

Very truly yours,

Curtis W. Mewbourne

CWM:  
Enc.

Docket  
mailed  
8-25-66

[illegible]



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
GEOLOGICAL SURVEY  
WASHINGTON, D.C. 20242

RECEIVED

JUL 23 1966

U. S. GEOLOGICAL SURVEY  
ROSWELL, NEW MEXICO

JUL 25 1966

*Coal 3450*

Ray Smith Drilling Company  
3300 Republic National Bank Building  
Dallas, Texas 75201

Gentlemen:

On July 21, 1966, Arthur A. Baker, Acting Director of the Geological Survey, approved the Shugart 18 - Queen unit agreement, Eddy County, New Mexico, filed by your company as unit operator. The agreement has been designated No. 14-08-0001-8795, and is effective as of August 1, 1966.

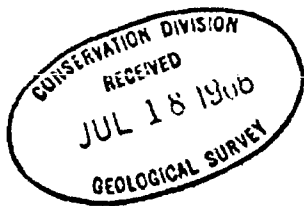
Enclosed is one copy of the approved unit agreement for your records. We request that you furnish all interested principals with whatever evidence of this approval is deemed appropriate.

Sincerely yours,

*H. J. Duncan*

For the Director

Enclosure



CERTIFICATION--DETERMINATION

14-08-0001 8795

Pursuant to the authority vested in the Secretary of Interior, under the act approved February 25, 1920, 41 Stat. 437, as amended, 30 U. S. C. secs. 181, et seq., and delegated to the Director of the Geological Survey pursuant to Departmental Order No. 2365 of October 8, 1947, I do hereby:

A. Approve the attached agreement for the development and operation of the Shugart 18-Queen Unit Area, State of New Mexico.

B. Certify and determine that the unit plan of development and operation contemplated in the attached agreement is necessary and advisable in the public interest for the purpose of more properly conserving the natural resources.

C. Certify and determine that the drilling, producing, rental, minimum royalty, and royalty requirements of all Federal leases committed to said agreement are hereby established, altered, changed, or revoked to conform with the terms and conditions of this agreement.

Dated JUL 21 1966.

*John D. Basher*  
ACTING Director, United States Geological Survey

RECEIVED

APR 25 1966

EDDY COUNTY, NEW MEXICO

UNIT AGREEMENT  
SHUGART 18- QUEEN UNIT  
EDDY COUNTY, NEW MEXICO

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EXHIBIT "A" (Map of Unit Area)

EXHIBIT "B" (Schedule of Ownership)

Certification - Determination

UNIT AGREEMENT  
FOR THE DEVELOPMENT AND OPERATION OF THE  
SHUGART 18 - QUEEN UNIT  
EDDY COUNTY, NEW MEXICO

THIS AGREEMENT, entered into as of the 1st day of November, 1965,  
by and between the parties subscribing, ratifying or consenting hereto, and  
herein referred to as "parties hereto",

WITNESSETH: That,

WHEREAS, the parties hereto are the owners of working, royalty or  
other oil or gas interests in the land subject to this Agreement; and

WHEREAS, the Oil Conservation Commission of the State of New Mexico  
is authorized by law (Chap. 72, Laws of 1935, as amended by Chap. 193,  
Laws of 1937, Chap. 166, Laws of 1941, and Chap. 168, Laws of 1949)  
to approve this Agreement, and the conservation provisions hereof; and

WHEREAS, THE Mineral Leasing Act of February 25, 1920, (41 Stat.  
437, as amended, 30 U.S.C. Sections 181 et seq.) authorizes Federal  
leessees and their representatives to unite with each other or jointly or  
separately with others in collectively adopting and operating a cooperative  
or unit plan of development or operation of any oil or gas pool, field or like  
area or any part thereof for the purpose of more properly conserving the  
natural resources thereof whenever determined and certified by the Secretary  
of the Interior to be necessary or advisable in the public interest; and

WHEREAS, the parties hereto hold sufficient interests in the Shugart 18 -  
Queen Unit Area covering the land hereinafter described to give reasonably effec-  
tive control of operation therein; and

WHEREAS, it is the purpose of the parties hereto, to enable institution  
and consummation of secondary recovery operations, conserve natural re-  
sources, prevent waste and secure the other benefits obtainable through deve-  
lopment and operation of the area subject to this Agreement under the terms,  
conditions and limitations herein set forth.

NOW THEREFORE, in consideration of the premises and the promises herein contained, the parties hereto commit to this Agreement their entire respective interests in the below defined Unit Area, and agree severally among themselves as follows:

SECTION 1. ENABLING ACT AND REGULATIONS: The Mineral Leasing Act of February 25, 1920, as amended, supra, and all valid, pertinent regulations, including operating and unit plan regulations, heretofore issued thereunder and valid, pertinent and reasonable regulations hereafter issued thereunder are accepted and made a part of this Agreement as to Federal lands, provided such regulations are not inconsistent with the terms of this Agreement; and as to non-Federal lands, the oil and gas operating regulations in effect as of the effective date hereof governing drilling and producing operations, not inconsistent with the terms hereof or the laws of the State in which the non-Federal land is located, are hereby accepted and made a part of this Agreement.

SECTION 2. UNIT AREA AND DEFINITIONS: For the purpose of this Agreement, the following terms and expressions as used herein shall mean:

(a) "Unit Area" is defined as those lands specified on Exhibit "A" hereof, and such land is hereby designated and recognized as constituting the Unit Area; the lands described in said Exhibit "A" are described as follows:

Township 18 South, Range 30 East, N.M.P.M.  
Section 13: N 1/2 SE 1/4

Township 18 South, Range 31 East, N.M.P.M.  
Section 18: lots 2, 3, 4, E 1/2 SW 1/4

containing 264.07 acres, more or less, in Eddy  
County, New Mexico.

(b) "Commission" is defined as the Oil Conservation Commission  
of the State of New Mexico.

(c) "Director" is defined as the Director of the United States Geological Survey.

(d) "Secretary" is defined as the Secretary of the Interior of the  
United States of America.



(e) "Department" is defined as the Department of the Interior of the United States of America.

(f) "Supervisor" is defined as the Oil and Gas Supervisor, Branch of Oil and Gas Operations of the United States Geological Survey.

(g) "The Unitized Formation" is defined as that portion of the Queen Sand formation which is encountered between the depths of 3,080 feet and 3,114 feet on the Gamma Ray-Neutron log of the Ray Smith Kenwood-Federal well No. 3, located in lot 3 (NW 1/4 SW 1/4) Section 18, Township 18 South, Range 31 East, N.M.P.M., Eddy County, New Mexico, insofar as the same lies within the Unit Area, under lands committed to this Agreement.

(h) "Unitized Substances" is defined as and shall mean all oil, gas, gaseous substances, sulphur contained in gas, condensate, distillate and all associated and constituent liquids or liquefiable hydrocarbons within or produced from the Unitized Formation.

(i) "Working Interest" is defined as the right to search for, produce and acquire Unitized Substances whether held as an incident or ownership of mineral fee simple title, under an oil and gas lease, or otherwise held.

(j) "Working Interest Owner" is defined as and shall mean any party hereto owning a Working Interest, including a carried working interest owner, holding an interest in Unitized Substances by virtue of a lease, operating agreement, fee title or otherwise, which interest is chargeable with and obligated to pay or bear either in cash or out of production, or otherwise, all or a portion of the cost of drilling, developing and producing the Unitized Substance from the Unitized Formation and operating hereof hereunder.

(k) "Royalty Interest" or "Royalty" is defined as an interest reserved by the lessor in an oil and gas lease. Specifically defined as not being a royalty interest is a working interest, overriding royalty interest, production payment interest, or net profits contract.

(l) "Royalty Owner" is defined as and shall mean the owner of a Royalty Interest.

(m) "Unit Operating Agreement" is defined as and shall mean any agreement or agreements (whether one or more) entered into (separately or collectively) by and between the Unit Operator and the Working Interest Owners as provided in Section 10, infra, and shall be styled "Unit Operating Agreement, Shugart 18 - Queen Unit, Eddy County, New Mexico".

(n) "Paying Quantities" is defined as production of Unitized Substances in quantities sufficient to pay for the cost of producing same from wells on the Unitized land.

(o) "Unit Manager" is defined as the person or corporation appointed by the Working Interest Owners to perform the duties of the Unit Operator until the selection and qualification of a successor Unit Operator as provided for in Section 9 hereof.

(p) "Tract" is defined as each parcel of land described as such and given a Tract number in Exhibit "B".

(q) "Tract Participation" is defined as the percentages of Unitized Substances allocated hereunder to a Tract. The Tract Participation of the several Tracts within the Unit Area is shown on Exhibit "B" attached hereto.

(r) "Tract Current Production" is defined as the cumulative total number of barrels of oil produced from the Unitized Formation under such committed Tract during the period from August 1, 1964, to January 31, 1965, inclusively, as officially reported to the Commission.

(s) "Unit Area Current Production" is defined as the total Tract Current Production of all Tracts within the Unit Area that are effectively committed to this Agreement in accordance with the provisions hereof.

(t) "Tract Acre-Feet" is defined as the acre-feet of net pay within the Unitized Formation underlying such committed Tract as heretofore determined and agreed upon by the parties hereto.

(u) "Unit Area Acre-Feet" is defined as the total Tract Acre-Feet of all Tracts within the Unit Area that are effectively committed to this Agreement in accordance with the provisions hereof.

SECTION 3. EXHIBITS: Exhibit "A" attached hereto is a map showing, to the extent known to the Unit Operator, the Unit Area and the boundaries and identity of tracts and leases in said Unit Area. Exhibit "B" attached hereto is a schedule showing, to the extent known to the Unit Operator, the acreage comprising each tract, percentage ownership of each Working Interest Owner in each tract, and the percentage of participation each tract has in the Unit Area. However, nothing herein or in said schedule or map shall be construed as a representation by any party hereto as to the ownership of any interest other than such interest or interests as are shown in said map or schedule as owned by such party. Exhibits "A" and "B" shall be revised by the Unit Operator whenever changes render such revision necessary, and not less than six copies thereof shall be filed with the Supervisor.

SECTION 4. EXPANSION: The above described Unit Area may when practicable be expanded to include therein any additional tract or tracts regarded as reasonably necessary or advisable for the purposes of this Agreement. Such expansion shall be effected in the following manner:

(a) The Working Interest Owner or Owners of a tract or tracts desiring to bring such tract or tracts into this Unit, shall file an application therefor with Unit Operator requesting such admission.

(b) Unit Operator shall circulate a notice to each Working Interest Owner affected by the proposed expansion, setting out the basis for admission, the unit participation to be assigned to such tract or tracts, and other pertinent data. After negotiation (at Working Interest Owners' meeting or otherwise) if 90 percent of the Working Interest Owners on the basis of unit participation have agreed to such tract or tracts being brought into the Unit, then Unit Operator shall:

(1) After preliminary concurrence by the Director, prepare a notice of proposed expansion describing the contemplated changes in the boundaries of the Unit Area, the reason therefor, the basis for admission of the additional tract or tracts, the unit participation to be assigned thereto and the proposed effective date thereof, preferably the first day of the month subsequent to the date of notice; and

(2) Deliver copies of said notice to the Supervisor, and each Working Interest Owner (mailing copy of such notice to the last known address of each such Working Interest Owner) and to each lessee and lessor whose interests are affected, advising such parties that thirty (30) days will be allowed for submission to the Unit Operator of any objection to such proposed expansion; and

(3) File, upon the expiration of said thirty (30) day period as set out in (2) immediately above and provided that objections of not more than 10 percent of the Working Interest Owners have been filed thereto, with the Supervisor the following: (a) Comprehensive statement as to mailing such notice of expansion; (b) An application for such expansion; (c) An instrument containing the appropriate joinders in compliance with the participation requirements of Section 14, infra; and (d) A copy of any objections received.

The expansion shall, after due consideration of all pertinent information and upon approval by the Director, become effective as of the date prescribed in the notice thereof or on such other date as set by the Director in the order or instrument approving such expansion.

SECTION 5. CONTRACTION: When practicable, the Unit Area shall be contracted to exclude land from this Unit Agreement whenever such contraction is necessary or advisable to conform with the purposes of this Agreement. Such contraction shall be effected in the following manner:

(a) Unit Operator, with concurrence of at least 80 percent of the Working Interest Owners, on the basis of unit participation and with preliminary concurrence of the Director, shall prepare a notice of contraction describing the contemplated changes in the boundaries of the Unit Area, the reasons therefor, and the proposed effective date thereof, preferably the first day of a month subsequent to the date of notice.

(b) Said notice shall be delivered to the Supervisor, and copies thereof mailed to the last known address of each Working Interest Owner, lessee, and Royalty Owner whose interests are affected, advising that 30 days will be allowed for submission to the Unit Operator of any objections.

(c) Upon expiration of the 30 day period provided in the preceding item (b) hereof, Unit Operator shall file with the Supervisor, a comprehensive statement as to the mailing of the notice of contraction and a copy of any objections thereto which have been filed with the Unit Operator, together with an application in sufficient number, for approval of such contraction.

(d) After due consideration of all pertinent information, the contraction, upon approval by the Director, shall become effective as of the date prescribed in the notice thereof.

SECTION 6. UNITIZED LANDS AND UNITIZED SUBSTANCES: All land committed to this Agreement as to the Unitized Formation as heretofore defined, shall constitute the land referred to herein as "unitized land" or "land subject to this Agreement". All Unitized Substances as heretofore defined, in or produced from the Unitized Formation are hereby unitized under the terms of this Agreement, together with the pertinent surface rights.

Nothing herein shall be construed to unitize, pool, or in any way affect the oil, gas, and other minerals contained in or that may be produced from any formation other than the Unitized Formation.

SECTION 7. UNIT OPERATOR: RAY SMITH DRILLING COMPANY, Dallas, Texas, is hereby designated as Unit Operator, and by signing this instrument as Unit Operator it agrees and consents to accept the duties and obligations of Unit Operator for the operation, development and production of Unitized Substances as herein provided. Whenever reference is made herein to the Unit Operator, such reference means the Unit Operator acting in that capacity and not as an owner of interests in Unitized Substances, and the term "Working Interest Owner" when used herein shall include or refer to Unit Operator as the owner of a Working Interest when such an interest is owned by it.

SECTION 8. RESIGNATION OR REMOVAL OF UNIT OPERATOR: Unit Operator shall have the right to resign at any time, but such resignation shall not become effective so as to release Unit Operator from the duties and obligations of Unit Operator and terminate Unit Operator's rights as such for a period of six (6) months after written notice of intention to resign has been given by Unit Operator to all Working Interest Owners and the Director, unless a new Unit Operator shall have taken over and assumed the duties and obligations of Unit Operator prior to the expiration of said period.

The Unit Operator may, upon default or failure in the performance of its duties or obligations hereunder, be subject to removal by the affirmative vote of the owners of 75 percent of the committed Working Interest (on the basis of Unit participation) exclusive of the Working Interest owned by the Unit Operator. Such removal shall be effective upon notice thereof to the Director.

In all such instances of resignation or removal, until a successor to Unit Operator is selected and approved as hereinafter provided, the Working Interest Owners shall be jointly responsible

for the performance of the duties of the Unit Operator and shall, not later than thirty (30) days before such resignation or removal becomes effective, appoint a Unit Manager to represent them in any action to be taken hereunder.

The resignation or removal of Unit Operator under this Agreement shall not terminate its right, title or interest as the owner of a Working Interest or other interest in Unitized Substances, but upon the resignation or removal of Unit Operator becoming effective, such Unit Operator shall deliver possession of all wells, equipment, books, and records, materials, appurtenances and any other assets, used in conducting the Unit operations and owned by the Working Interest Owners (including any and all data and information which it might have gained or assembled by reason of its operation of the Unit Area) to the new duly qualified successor Unit Operator or to the Unit Manager if no such new Unit Operator is elected, to be used for the purpose of conducting Unit operations hereunder. Nothing herein shall be construed as authorizing removal of any material, equipment and appurtenances needed for the preservation of any wells. Nothing herein contained shall be construed to relieve or discharge any Unit Operator who resigns or is removed hereunder for any liability or duties accruing or performable by it prior to the effective date of such resignation or removal.

SECTION 9. SUCCESSOR UNIT OPERATOR: Whenever the Unit Operator shall tender its resignation as Unit Operator or shall be removed as hereinabove provided, the Working Interest Owners shall by affirmative vote of at least 75 percent of their voting interests, based upon the percentages of participation assigned to tracts in the Unit Area, select a successor Unit Operator.

shall be deposited with said Unit Operator, and together with this Agreement, shall constitute and define the rights, privileges and obligations of Unit Operator. Nothing herein, however, shall be construed to transfer title to any land or to any lease or operating agreement, it being understood that under this Agreement the Unit Operator, in its capacity as Unit Operator, shall exercise the rights of possession and use vested in the parties hereto only for the purposes herein specified.

SECTION 12 PLAN OF OPERATIONS: It is recognized and agreed by the parties hereto that all of the land subjects to this Agreement is reasonably proved to be productive of Unitized Substances in paying quantities and that the object and purpose of this Agreement is to formulate and to put into effect a secondary recovery project in order to effect additional recovery of Unitized Substances, prevent waste and conserve natural resources. The parties hereto agree that the Unit Operator may, subject to the consent and approval of a plan of operation by the Working Interest Owners and the Supervisor, inject into the Unitized Formation, through any well or wells completed therein, brine, water, air, gas, oil, liquefied petroleum gas, and any other substance or a combination of any of said substances, whether produced from the Unit Area or not, and that the location of input wells and the rates of injection therein and the rate of production shall be governed by standards of good geologic and petroleum engineering practices and conservation methods. After commencement of secondary operations, Unit Operator shall furnish the Supervisor monthly, injection and production reports for each well in the Unit. The Working Interest Owners and the Supervisor, shall be furnished periodical reports on the progress of the plan of operation and any revisions or changes thereto; provided however, that any revisions of the plan of operation involving a deviation from the initial plan of operation shall be subject to the prior consent and approval of the Working Interest Owners and the Supervisor.

The initial plan of operation shall be filed with the Supervisor concurrently with the filing of this Unit Agreement for final approval. Said initial plan of operation and all revisions thereof shall be as complete and adequate as the Supervisor may determine to be necessary for timely operation consistent herewith. Reasonable diligence shall be exercised in complying with the obligations of the approved plan of operation.

Notwithstanding anything to the contrary herein contained, the Unit Operator shall commence secondary recovery operations on the Unit Area within six (6) months after the effective date of this Agreement, or any extension thereof approved by the Director, or this Agreement shall terminate automatically, in which latter event Unit Operator shall notify all interested parties. After such operations are commenced, Unit Operator shall carry on such operations as would a reasonable prudent operator under the same or similar circumstances.

SECTION 13. TRACT PARTICIPATION: In Exhibit "B" attached hereto, there are listed and numbered the various tracts within the Unit Area and set forth opposite each tract is a figure which represents the percentage of participation allocated to each tract in the Unit Area calculated on the basis of 100 percent tract commitment. The participation percentage of each tract was determined as follows

$$\begin{aligned} & 10\% \times \frac{\text{Tract Current Production}}{\text{Unit Area Current Production}} \\ & \text{Plus } 90\% \times \frac{\text{Tract Acre-Feet}}{\text{Unit Area Acre-Feet}} \\ & = \text{participation percentage of each committed Tract.} \end{aligned}$$



SECTION 14. TRACTS QUALIFIED FOR UNIT PARTICIPATION: On

and after the effective date hereof the tracts within the Unit Area which shall be entitled to participation in the production of Unitized Substances therefrom shall be those tracts within the Unit Area and more particularly described in said Exhibit "B" that are qualified as follows:

(a) Each and all of those tracts as to which Working Interest Owners owning 100% of the Working Interest in said tract and Record Owners owning 100% of the Record Interest in said tract have subscribed, ratified or consented to this Agreement; and

(b) Each and all of those tracts as to which Working Interest Owners owning not less than 100% of the Working Interest therein and Record Owners owning not less than 85% of the Record Interest therein have executed this Agreement, and in which the Working Interest Owners in said tract have agreed to indemnify and hold harmless all other parties hereto, in a manner satisfactory to 85% of the Working Interest Owners qualified under 14 (a), against any and all claims and demands that may be made by the nonjoining Record Owners on account of the commitment and joinder of such tract to the Unit Agreement, and operation thereof under such conditions on the basis herein provided, and as to which 85% of the Working Interest Owners qualified under 14 (a), exclusive of the Working Interest Owner submitting such tract, have approved the commitment of such tract to this Unit Agreement.

If, on the effective date of this Agreement, there is any tract or tracts which have not been qualified as above provided, then such tract or tracts shall not be entitled to participate hereunder. Unit Operator shall, when submitting this Agreement for final approval by Director, file therewith or as soon thereafter as practicable, a schedule of those tracts which have been qualified under this Agreement and are entitled to participate in the production from the Unit Area hereunder. Said schedule shall set forth opposite each such tract the lease number or assignment number, the owner of record of the lease, and the percentages of participation of such tract which shall be computed according to the participation formula set out in Section 13 (Tract Participation) above. This schedule of participation shall be a part of Exhibit "B" and upon approval by the Supervisor shall become a part of this Agreement and shall govern the allocation of production of Unitized Substances until a revised Exhibit "B" is approved by the Supervisor or the Director.

SECTION 15. ALLOCATION OF UNITIZED SUBSTANCES: All Unitized Substances produced and saved (less, save and except any part of such Unitized Substances used in conformity with good operating practices on unitized land for drilling, operating, camp, and other production or development purposes and for pressure maintenance or unavoidable loss) shall be apportioned among and allocated to the committed tracts within the Unit Area in accordance with the respective tract participation effective hereunder during the respective periods such Unitized Substances were produced, as set forth in the schedules of participation in Exhibit "B". The amount of Unitized Substances so allocated to each tract, and only that amount, (regardless of whether it be more or less than the amount of the actual production of Unitized Substances from the well or wells, if any, on such tract) shall, for all intents, uses and purposes, be deemed to have been produced from such tract.

The Unitized Substances allocated to each tract shall be distributed among, or accounted for to the parties executing, consenting to or ratifying this Agreement entitled to share in the production from such tract in the same manner, in the same proportions, and upon the same conditions, as they would have participated and shared in the production from such tracts, or in the proceeds thereof, had this Agreement not been entered into; and with the same legal force and effect.

No tract committed to this Agreement and qualified for participation as above provided shall be subsequently excluded from participation hereunder on account of depletion of Unitized Substances and nothing herein contained shall be construed as requiring any retroactive adjustment for production obtained prior to the effective date of the joinder of any tract.

If the Working Interest and the Royalty Interest in any tract are divided with respect to separate parcels or portions of such tract and owned severally by different persons, the percentage participation assigned to such tract shall, in the absence of a recordable instrument executed by all owners and furnished to Unit Operation fixing the divisions of ownership, be divided among such parcels

or portions in proportion to the number of surface acres in each.

The Unitized Substances allocated to each tract shall be delivered in kind to the respective Working Interest Owners and parties entitled thereto by virtue of the ownership of oil and gas rights therein or by purchase from such owners. Each Working Interest Owner and the parties entitled thereto shall have the continuing right to receive such production in kind at a common point within the Unit Area and to sell or dispose of the same as it sees fit. Each such party shall have the right to construct, maintain and operate all necessary facilities for that purpose on unitized land, provided the same are so constructed, maintained and operated as not to interfere with operations carried on pursuant hereto. Subject to Section 16 hereof, any extra expenditure incurred by Unit Operator by reason of the delivery in kind of any portion of the Unitized Substances shall be borne by the party receiving the same in kind. In the event any party hereto shall fail to take or otherwise adequately dispose of its proportionate share of the production from the Unit Area currently as and when produced, then so long as such conditions continue, Unit Operator, for the account and at the expense of such party and in order to avoid curtailing the operation of the Unit Area, may sell or otherwise dispose of such production to itself or others on a day-to-day basis at not less than the prevailing market price in the area for like production, and the account of such party shall be charged therewith as having received such production. The net proceeds, if any, of the Unitized Substances so disposed of by Unit Operator shall be paid to the party entitled thereto.

Any party receiving in kind or separately disposing of all or any part of the Unitized Substances allocated to any tract, or receiving the proceeds therefrom if the same is sold or purchased by Unit Operator, shall be responsible for the payment of all Royalty on the lease or leases and tracts contributed by it and received

into the Unit, and each such party shall hold each other party hereto harmless against all claims, demands and causes of action for such Royalty on the lease or leases and tracts contributed by it and received into the Unitized land.

If, after the effective date of this Agreement, there is any tract or tracts that are subsequently committed hereto, as provided in Section 4 (Expansion) hereof, or any tract or tracts within the Unit Area not committed hereto as the effective date hereof but which are subsequently committed hereto under the provisions of Section 31 (Nonjoinder and Subsequent Joinder), or if any tract is excluded from the Unit Area as provided for in Section 30 (Loss of Title), the schedules of participation as shown in Exhibit "B", subject to Section 13 (Tract Participation) or section 31 (Nonjoinder and Subsequent Joinder), whichever is appropriate, shall be revised by the Unit Operator and distributed to the Working Interest Owners, the Supervisor, and the Director to show the new percentages of participation of all the then effectively committed tracts; and the revised schedules, upon approval by the Supervisor or the Director, shall govern all the allocation of production from and after the effective date thereof until a new schedule is so approved. In any such new schedule, the Tract Participation of the previously qualified tracts shall remain in the same ratio one to the other.

SECTION 16. ROYALTY SETTLEMENT: The United States of America and all Royalty Owners who, under an existing contract, are entitled to take in kind a share of the substances produced from any tract unitized hereunder, shall continue to be entitled to such right to take in kind their share of the Unitized Substances allocated to such tract, and Unit Operator shall make deliveries of such Royalty share taken in kind in conformity with the applicable contracts, laws and regulations. Settlement for Royalty Interest not taken in kind shall be made by Working Interest Owners responsible therefor under existing contracts, laws and regulations, on or before the last day of each month for Unitized Substances

produced during the preceeding calendar month; provided, however, that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any Royalty due under their leases, except that such Royalty shall be computed in accordance with the terms of this Unit Agreement.

If gas obtained from lands not subject to this Agreement is introduced into the Unitized Formation, for use in repressuring, stimulation of production or increasing ultimate recovery in conformity with a plan approved pursuant to Section 12 (Plan of Operations), a like amount of gas, less appropriate deductions for loss from any cause, may be withdrawn from the Unitized Formation, Royalty free as to dry gas but not as to the products extracted therefrom; provided such withdrawal shall be pursuant to such conditions and formulas as may be prescribed or approved by the Supervisor and provided further that such right of withdrawal shall terminate as of the effective date of termination of the Unit Agreement. If liquefied petroleum bases obtained from lands or formations not subject to this agreement be injected into the Unitized Formation for the purpose of increasing ultimate recovery, which shall be in conformance with a plan first approved by the Supervisor, part or all of such liquefied petroleum gases may be withdrawn royalty free pursuant to such conditions and formulas as may be prescribed or approved by the Supervisor.

Royalty due the United States shall be computed as provided in the operating regulations and paid in value or delivered in kind as to all Unitized Substances on the basis of the amounts thereof allocated to the Unitized Federal land as provided herein at the rates specified in the respective Federal leases or at such lower rate or rates as may be authorized by law or regulation; provided, that for leases on which the royalty rate depends on the daily average production per well, said average production shall be determined in accordance with the operating regulation as though the unitized lands were a single consolidated lease.

Each Royalty Owner (other than the United States of America) that executes this Agreement represents and warrants that it is the owner of a Royalty Interest in a tract or tracts within the Unit Area as its interest appears in Exhibit "B" attached hereto. If any Royalty Interest in a tract or tracts should be lost by title

failure or otherwise in whole or in part, during the term of this Agreement, then the Royalty Interest of the party representing himself to be the owner thereof shall be reduced proportionately and the interest of all parties shall be adjusted accordingly.

SECTION 17. RENTAL SETTLEMENT: Rentals or minimum royalties due on leases committed hereto shall be paid by Working Interest Owners responsible therefor under existing contracts, laws and regulations, provided that nothing herein contained shall operate to relieve the lessees of any land from their respective lease obligations for the payment of any rentals or minimum royalty in lieu thereof, due under their leases. Rental or minimum royalty for lands of the United States of America subject to this Agreement shall be paid at the rate specified in the respective leases from the United States of America, unless rental or minimum royalty is waived, suspended, or reduced by law or by approval of the Secretary or his duly authorized representative.

SECTION 18. CONSERVATION: Operations hereunder and production of Unitized Substances shall be conducted to provide for the most economical and efficient recovery of said substances without waste, as defined by or pursuant to Federal and State laws and regulations.

SECTION 19. DRAINAGE: The Unit Operator shall take appropriate and adequate measures to prevent drainage of Unitized Substances from unitized land by wells on land not subject to this Agreement or, with prior consent of the Director, pursuant to applicable regulations, pay a fair and reasonable compensatory royalty as determined by the Supervisor.

SECTION 20. LEASES AND CONTRACTS CONFIRMED AND EXTENDED: The terms, conditions and provisions of all leases, subleases and other contracts relating to exploration, drilling, development or operation for oil or gas on lands committed to this Agreement are hereby expressly modified and amended to the extent necessary to make the same conform to the provisions hereof, but otherwise to remain in full force and effect, and the parties hereto hereby consent that the Secretary by his approval hereof, or by the approval hereof by

his duly authorized representatives, does hereby establish, alter, change or revoke the drilling, producing, rental, minimum royalty and royalty requirements of Federal leases committed hereto and the regulations in respect thereto to conform said requirements to the provisions of this Agreement.

Without limiting the generality of the foregoing, all leases, subleases and contracts are particularly modified in accordance with the following:

(a) The development and operation of lands subject to this Agreement under the terms hereof shall be deemed full performance of all obligations for development and operation with respect to each and every part or separately owned tract subject to this Agreement, regardless of whether there is any development of any particular part or tract of the Unit Area, notwithstanding anything to the contrary in any lease, operating agreement or other contract by and between the parties hereto, or their respective predecessors in interest, or any of them.

(b) Drilling, producing or secondary recovery operations performed hereunder upon any tract of unitized lands shall be accepted and deemed to be performed upon and for the benefit of each and every tract of unitized land, and no lease shall be deemed to expire by reason of failure to drill or produce wells situated on land therein embraced.

(c) Suspension of drilling or producing operations on all unitized lands pursuant to direction or consent of the Secretary of his duly authorized representative, shall be deemed to constitute such suspension pursuant to such direction or consent as to each and every tract of unitized lands.

(d) Any Federal lease for a fixed term of twenty (20) years or any renewal thereof or any part of such lease which is made subject to this Agreement shall continue in force beyond the term provided therein until the termination hereof. Any other Federal lease committed hereto shall continue in force beyond the term so provided therein or by law as to the committed land so long as such lease remains committed hereto, or in the event actual drilling operations are commenced on unitized land, in accordance with the provisions of this Agreement, prior to the end of the primary term of such lease and are being diligently prosecuted at that time, such lease shall be extended for two years and so long thereafter as oil or gas is produced in paying quantities in accordance with the provisions of the Mineral Leasing Act Revision of 1960.

(e) Each sublease or contract relating to the operation and development of unitized substances from lands of the United States committed to this agreement, which by its terms would expire prior to the time at which the underlying lease, as extended by the immediately preceding paragraph, will expire,

is hereby extended beyond any such term so provided therein so that it shall be continued in full force and effect for and during the term of the underlying lease as such term is herein extended.

(f) The segregation of any Federal lease committed to this Agreement is governed by the following provision in the fourth paragraph of Section 17 (j) of the Mineral Leasing Act as amended by the Act of September 2, 1960, (74 Stat. 781-784): "Any (Federal) lease heretofore or hereafter committed to any such (unit) plan embracing lands that are in part within and in part outside of the area covered by any such plan shall be segregated into separate leases as to the lands committed and the lands not committed as of the effective date of unitization: Provided, however, that any such lease as to the nonunitized portion shall continue in force and effect for the term thereof but not for less than two years from the date of such segregation and so long thereafter as oil or gas is produced in paying quantities".

SECTION 21. CORRECTION OF ERRORS: It is hereby agreed by all parties to this Agreement that Unit Operator is empowered to correct any mathematical or clerical errors which may exist in the pertinent exhibits to this Agreement; provided, however, that correction of any error other than mathematical or clerical shall be made by Unit Operation only after first having obtained approval of Working Interest Owners, and the Supervisor.

SECTION 22. COVENANTS RUN WITH LAND: The covenants herein shall be construed to be covenants running with the land with respect to the interest of the parties hereto and their successors in interest until this Agreement terminates, and any grant, transfer or conveyance of interest in land or leases subject hereto shall be and hereby is conditioned upon the assumption of all privileges and obligations hereunder by the grantee, transferee or other successor in interest. No assignment or transfer of any Working Interest subject hereto shall be binding upon Unit Operator until the first day of the calendar month after Unit Operator is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument of transfer; and no assignment or transfer of any Royalty Interest subject hereto shall be binding upon the Working Interest Owner responsible therefor until the first day of the calendar month after said Working Interest Owner is furnished with the original, or acceptable photostatic or certified copy, of the recorded instrument of transfer.



SECTION 23. EFFECTIVE DATE AND TERM: This Agreement shall

become binding upon each party who executes or ratifies it as of the date of execution or ratification by such party and shall become effective as of 7 a. m. on the first day of the month next following:

(a) The execution or ratification of this Agreement and the Unit Operating Agreement by Working Interest Owners owning a combined unit participation of at least 75%, and the execution or ratification of this Agreement by Record Interest, in said Unit Area; and

(b) The approval of this Agreement by the Secretary or his duly authorized representative..

(c) The filing for record in Eddy County, New Mexico, of a certificate to the effect that provision (a) and (b) of this section have been complied with and stating further the effective date and the location of the governmental agency offices where copies of this Agreement are filed.

If (a), (b) and (c) above are not accomplished on or before January 1, 1967, this Agreement shall ipso facto expire on said date (hereinafter called "expiration date") and thereafter be of no further force or effect, unless prior thereto this Agreement has been executed or ratified by Working Interest Owners owning a combined unit participation of at least 75%, and the Working Interest Owners owning a combined unit participation of at least 75% committed to this Agreement have decided to extend said expiration date for a period not to exceed six (6) months (hereinafter called "extended expiration date"). If said expiration date is so extended and (a), (b) and (c) are not accomplished on or before said extended expiration date, this Agreement shall be ipso facto expire on said extended expiration date and thereafter be of no further force and effect. For the purpose of this Section, ownership shall be computed on the basis of the Unit Operating Agreement.

Unit Operator shall, within thirty (30) days after the effective date of this Agreement, file for record in the offices where a counterpart of this Agreement is recorded, a certificate to the effect that this Agreement has become effective to its terms and stating further the effective date..

The terms of this Agreement shall be for and during the time that Unitized Substances are produced in paying quantities from the Unit Area and as long thereafter as diligent drilling, reworking or other operations (including secondary recovery operations) are prosecuted thereon without cessation of more than ninety (90) consecutive days, unless sooner terminated by Working Interest Owners in the manner hereinafter provided.

This Agreement may be terminated with the approval of the Director of Working Interest Owners owning 85% unit participation whenever such Working Interest Owners determine that Unit operations are no longer profitable, feasible, or in the interest of conservation. Notice of any such termination shall be given by Unit Operator to all parties hereto.

Upon termination of this Agreement, the further development and operation of the Unit Area as a Unit shall be abandoned, Unit operations shall cease, and thereafter the parties hereto shall be governed by the terms and provisions of the leases and contracts affecting the separate tracts.

If not otherwise covered by the leases unitized under this Agreement, Royalty Owners hereby grant Working Interest Owners a period of six (6) months after termination of this Agreement in which to salvage, sell, distribute or otherwise dispose of the personal property and facilities used in connection with Unit operations.

**SECTION 24. RATE OF PROSPECTING, DEVELOPMENT AND PRODUCTION:**

All production and the disposal thereof shall be in conformity with allocations and quotas made or fixed by any duly authorized person or regulatory body under any Federal or State statute. The Director is hereby vested with authority to alter or modify from time to time, at his discretion, the rate of prospecting and development and within the limits made or fixed by the Commission to alter or modify the quantity and rate of production under this Agreement, such authority being hereby limited to alteration or modification in the public interest, the purpose thereof and the public interest to be served thereby to be stated in the order of alteration or modification.

Powers in this Section vested in the Director shall only be exercised after notice to Unit Operator and opportunity for hearing to be held not less than fifteen days from notice.

**SECTION 25. NONDISCRIMINATION:** In connection with the performance of work under this agreement, the operator agrees to comply with all of the provisions of Section 202 (1) to (7) inclusive, of Executive Order 11246 (30 F.R. 12319), which are hereby incorporated by reference to this Agreement.

**SECTION 26, APPEARANCES:** Unit Operator shall have the right to appear for or on behalf of any and all interests affected hereby

before the Department, and the Commission and to appeal from any order issued under the rules and regulations of the Department, or the Commission, or to apply for relief from any of said rules and regulations or in any proceedings relative to the operations before the Department, or the Commission, or any other legally constituted authority; provided, however, that any other interested party shall also have the right at his or its own expenses to be heard in any such proceeding.

SECTION 27. NOTICES: All notices, demands, objections or statements required hereunder to be given or rendered to the parties hereto shall be deemed fully given if made in writing and personally delivered to the party or parties or sent by postpaid certified mail, addressed to such party or parties at their respective addresses set forth in connection with the signatures hereto or to the ratification or consent hereof or to such other address as any such party or parties may have furnished in writing to the party sending the notice, demand or statement.

SECTION 28. NO WAIVER OF CERTAIN RIGHTS: Nothing in this Agreement contained shall be construed as a waiver by any party hereto of the right to assert any legal or constitutional right or defense as to the validity or invalidity of any law of the State wherein said unitized lands are located, or rules or regulations issued thereunder in any way affecting such party, or as a waiver by any such party of any right beyond his or its authority to waive.

SECTION 29. UNAVOIDABLE DELAY: All obligations under this Agreement requiring the Unit Operator to commence or continue secondary recovery operations or to operate on or produce Unitized Substances from any of the lands covered by this Agreement shall be suspended while, but only so long as the Unit Operator despite the exercise of due care and diligence, is prevented from complying with such obligations, in whole or in part, by strikes, acts of God, Federal, State or municipal law or agency, unavoidable accident, uncontrollable delays in transportation, inability to obtain necessary

materials in open market, or other matters beyond the reasonable control of the Unit Operator whether similar to matters herein enumerated or not.

SECTION 30. LOSS OF TITLE: In the event title to any tract of unitized land shall fail so as to render the tract inoperable under this Agreement and the true owner cannot be induced to join this Unit Agreement, such tract shall be automatically regarded as not committed hereto and there shall be such readjustment of future costs and benefits as may be required on account of the loss of such title. In the event of a dispute as to title as to any Royalty, Working Interest or other interest subject thereto, payment or delivery on account thereof may be withheld without liability or interest until the dispute is finally settled; provided, that as to Federal land or leases, no payments of funds due the United States of America shall be withheld, but such funds shall be deposited as directed by the Supervisor, to be held as unearned money pending final settlement of the title dispute, and then applied as earned or returned in accordance with such final settlement.

Unit Operator as such is relieved from any responsibility for any defect or failure of any title hereunder.

SECTION 31. NONJOINDER AND SUBSEQUENT JOINDER: If the owner of any substantial interest in a tract within the Unit Area fails or refuses to subscribe, ratify, or consent in writing to this Agreement, the Working Interest Owner in that tract who has executed or ratified this Agreement may withdraw said tract from this Agreement by written notice to the Director, and Unit Operator prior to the effective date of this Agreement. Joinder by any Royalty Owner, at any time, must be accompanied by appropriate joinder of the corresponding Working Interest Owner in order for the interest of such Royalty Owner to be regarded as effectively committed. Joinder to the Unit Agreement by a Working Interest Owner, at any time, must be accompanied by appropriate joinder to the Unit Operating Agreement in order for such interest to be regarded as effectively committed to this Unit Agreement.

Any oil or gas interest in the Unitized Formations underlying the Unit Area not committed hereto prior to submission of this Agreement to the Director for final approval may thereafter be committed hereto upon compliance with the applicable provisions of this Section and of Section 14 (Tracts Qualified for Unit Participation) hereof, at any time up to the effective date hereof and for a period to and including six (6) months thereafter, on the same basis of participation as provided in Section 13 (Tract Participation), by the owner or owners thereof subscribing, ratifying, or consenting in writing to this Agreement and, if the interest is a Working Interest, by the owner of such interest subscribing also to the Unit Operating Agreement.

It is understood and agreed, however, that from and after six (6) months from the effective date hereof the right of subsequent joinder as provided in this Section shall be subject to such requirements or approvals and on such basis as may be agreed upon by ninety (90%) percent of the Working Interest Owners (based upon the percentages of participation in the Unit Area). Such joinder by a proposed Working Interest Owner must be evidenced by his execution or ratification of this Agreement and the Unit Operating Agreement. Such joinder by a proposed Royalty Owner must be evidenced by his execution, ratification or consent of this Agreement and must be consented to in writing by the Working Interest Owner responsible for the payment of any benefits that may accrue hereunder in behalf of such proposed Royalty Owner. Except as may be otherwise herein provided, subsequent joinder to this Agreement shall be effective at 7:00 a.m. as of the first day of the month following the filing with the Supervisor of duly executed counterparts of any and all documents necessary to establish effective commitment of any tract or interest to this Agreement, unless objection to such joinder by the Director is duly made within sixty (60) days after such filing.

SECTION 32. COUNTERPARTS: This Agreement may be executed in any number of counterparts, no one of which needs to be executed by all parties and may be ratified or consented to by separate instrument in writing specifically referring hereto, and shall be binding upon

all those parties who have executed such a counterpart, ratification or consent hereto with the same force and effect as if all parties had signed the same document, and regardless of whether or not it is executed by all other parties owning or claiming an interest in the lands within the above described Unit Area.

SECTION 33. TAXES: Each party hereto shall, for its own account, render and pay its share of any taxes levied against or measured by the amount or value of the Unitized Substances produced from the unitized land; provided, however, that if it is required or if it be determined that the Unit Operator or the several Working Interest Owners must pay or advance said taxes for the account of the parties hereto, it is hereby expressly agreed that the parties so paying or advancing said taxes shall be reimbursed therefor by the parties hereto, including Royalty Owners, who may be responsible for the taxes on their respective allocated share of said Unitized Substances. . No such taxes shall be charged to the United States nor to any lessor who has a contract with a lessee which requires his lessee to pay such taxes.

SECTION 34. CONFLICT OF SUPERVISION: Neither the Unit Operator nor the Working Interest Owners, nor any of them, shall be subject to any forfeiture, termination or expiration of any rights hereunder or under any leases or contracts subject hereto, or to any penalty or liability on account of delay or failure in whole or in part to comply with any applicable provisions thereof to the extent that the said Unit Operator or the Working Interest Owners, or any of them, are hindered, delayed or prevented from complying therewith by reason of failure of the Unit Operator to obtain, in the exercise of due diligence, the concurrence of proper representatives of the United States and proper representatives of the State of New Mexico in and about any matters or things concerning which it is required herein that such concurrence be obtained. The parties hereto and the Commission agree that all powers and authority vested in the Commission in and

by any provisions of this Agreement are vested in the Commission and shall be exercised by it pursuant to the provisions of the laws of the State of New Mexico and subject in any case to appeal or judicial review as may now or hereafter be provided by the laws of the State of New Mexico.

SECTION 35. BORDER AGREEMENTS: Subject to the approval of the Supervisor, the Unit Operator, with concurrence of sixty (60%) percent of the Working Interest Owners, based upon the percentages of participation in the Unit Area, may enter into a border protection agreement or agreements with the Working Interest Owners of adjacent lands along the boundaries of the Unit Area with respect to the operations in the border area for the maximum ultimate recovery, conservation purposes and proper protection of the parties and interests.

SECTION 36. NO PARTNERSHIP: It is expressly agreed that the relation of the parties hereto is that of independent contractors and nothing in this Agreement contained, expressed or implied, or any operations conducted hereunder, shall create or be deemed to create a partnership or association between the parties hereto or any of them.

SECTION 37. OIL IN LEASE TANKAGE ON EFFECTIVE DATE: Unit Operator shall make a proper and timely gauge of all lease and other tanks within the Unit Area in order to ascertain the amount of merchantable oil in such tanks, above the pipe line connections, as of 7:00 a.m. on the effective date hereof. All such oil as is a part of the prior allowable of the well or wells from which the same was produced shall be and remain the property of the Working Interest Owners entitled thereto the same as if the Unit had not been formed, and such Working Interest Owners shall promptly remove said oil from the Unit Area. Any such oil not so removed may be sold by the Unit Operator for the account of such Working Interest Owners, subject to the payment of all Royalty to Royalty Owners under the terms and provisions of the applicable lease or leases and

other contracts. All such oil and gas as is in excess of the prior allowable of the well or wells from which the same was produced shall be regarded and treated the same as Unitized Substances produced after the effective date hereof. If, as of the effective date hereof, any tract is overproduced with respect to the allowable of the well or wells on that tract and the amount of such overproduction has been sold or otherwise disposed of, such over production shall be regarded and included as a part of the Unitized Substances produced after the effective date hereof and the amount thereof charged to such tract as having been delivered to the persons entitled to Unitized Substances allocated to such tract.

SECTION 38. PERSONAL PROPERTY EXCEPTED: All lease and well equipment, materials, and other facilities heretofore or hereafter placed by any of the Working Interest Owners on the lands subject to this Agreement shall be deemed to be and shall remain personal property belonging to and may be removed by the Working Interest Owners (subject to the provisions of Section 12). The rights and interests therein as among Working Interest Owners are covered by the Unit Operating Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed and have set opposite their respective names the date of execution.

DATE: <u>April 4, 1966</u>	APCO OIL CORPORATION By: <u>[Signature]</u> Attest: <u>Majorie Whipple</u> Vice President BY: <u>Majorie Whipple</u> Asst. Secretary <i>KLD</i> ADDRESS: <u>Liberty Bank Building</u> <u>Oklahoma City, Oklahoma</u> <i>ETM</i>
DATE: <u>April 8, 1966</u>	BY: <u>[Signature]</u> ADDRESS: <u>14421 14<sup>th</sup> Avenue</u> <u>Dallas, Texas</u>
DATE: <u>11 April</u>	BY: <u>Ben F. Mitchell MD</u> ADDRESS: <u>3707 GASTON Ave</u> <u>Dallas, Texas</u>
DATE: _____	BY: _____ ADDRESS: _____
UNIT OPERATOR AND/OR WORKING INTEREST OWNERS.	RAY SMITH, OPERATOR <u>0</u>
DATE: <u>April 19, 1966</u>	BY: <u>[Signature]</u> ADDRESS: <u>3300 Republic Bank Building</u> <u>Dallas, Texas</u>
ROYALTY OWNER.	

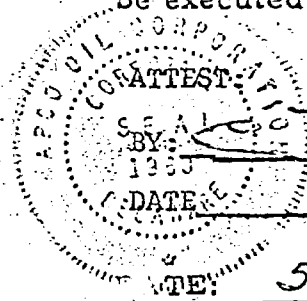


other contracts. All such oil and gas as is in excess of the prior allowable of the well or wells from which the same was produced shall be regarded and treated the same as Unitized Substances produced after the effective date hereof. If, as of the effective date hereof, any tract is overproduced with respect to the allowable of the well or wells on that tract and the amount of such overproduction has been sold or otherwise disposed of, such over production shall be regarded and included as a part of the Unitized Substances produced after the effective date hereof and the amount thereof charged to such tract as having been delivered to the persons entitled to Unitized Substances allocated to such tract.

SECTION 38. PERSONAL PROPERTY EXCEPTED: All lease and well equipment, materials, and other facilities heretofore or hereafter placed by any of the Working Interest Owners on the lands subject to this Agreement shall be deemed to be and shall remain personal property belonging to and may be removed by the Working Interest Owners (subject to the provisions of Section 12). The rights and interests therein as among Working Interest Owners are covered by the Unit Operating Agreement.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed and have set opposite their respective names the date of execution.

LESSEES OF RECORD



BY: T. McClure  
ASSIST. Secretary  
DATE: June 7, 1966  
DATE: 5-31-66

APCO OIL CORPORATION  
BY: K.C. Anderson Vice President  
ADDRESS: Liberty Bank Bldg., Okla. City, Okla.

DATE: 6-13-66  
DATE: 6-13-66

BY: [Signature] (TRP)  
ADDRESS: P.O. Box 1165  
Grants Pass, Oregon  
BY: [Signature] (LBB)  
ADDRESS: P. O. Box 935  
Midland, Texas

BY: [Signature] (JH)  
ADDRESS: P. O. Box 935  
Midland, Texas

UNIT OPERATOR AND/OR WORKING INTEREST OWNERS.

DATE: \_\_\_\_\_ BY: \_\_\_\_\_  
ADDRESS: \_\_\_\_\_

ROYALTY OWNER.

THE STATE OF TEXAS Y  
COUNTY OF DALLAS Y

RECEIVED  
JUN 18 1966  
U. S. DEPT. OF JUSTICE  
RECORDS & COMM. DIV.

BEFORE ME, the undersigned authority, on this day personally appeared RAYMOND THOMASSON, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE on this the 8th day of April, A.D., 1966.

My commission expires 6/1/66

Reid Goodman  
Notary Public in and for Dallas  
County, Texas

THE STATE OF TEXAS Y  
COUNTY OF DALLAS Y

BEFORE ME, the undersigned authority, on this day personally appeared BEN F. MITCHEL, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE on this the 11th day of April, A.D., 1966.

My commission expires 6/1/66

Larry J. Vinson  
Notary Public in and for Dallas  
County, Texas

THE STATE OF TEXAS Y  
COUNTY OF DALLAS Y

BEFORE ME, the undersigned authority, on this day personally appeared RAY SMITH, known to me to be the person whose name is subscribed to the foregoing instrument, and acknowledged to me that he executed the same for the purposes and consideration therein expressed.

GIVEN UNDER MY HAND AND SEAL OF OFFICE on this the 19th day of April, A.D., 1966.

My commission expires 6/1/66

Nell M. Heflin  
Nell M. Heflin, Notary Public in  
and for Dallas County, Texas

### Corporation Acknowledgment

RECEIVED  
JUN 10 1964  
U.S. DEPT. OF JUSTICE  
FEDERAL BUREAU OF INVESTIGATION  
WASHINGTON, D.C.

James H. Harnett  
Notary Public in and for Oklahoma  
County, Oklahoma

7-2-68

### Single Acknowledgment.

Notary Public in and for Josephine  
County, Oregon

4-17-67

in and for Josephine  
gon

MY COMMISSION EXPIRES APR 7 1957

Dana L. Roper  
Notary Public in and for Midland  
County, Texas

6-1-67

EXHIBIT "A"  
SUGART 18-QUEEN UNIT  
EDDY COUNTY, NEW MEXICO

T 18 S

R-31-E

SECTION 18

RAY SMITH  
Kenwood "A"  
TRACT 2  
LC-029393 (d)  
7-1-72

APCO  
Ginsberg  
TRACT 3-A  
LC-029393 (d)  
1-1-70

RAY SMITH  
Kenwood  
TRACT 3  
LC-029393 (f)  
RENEWAL DATE 1-1-70

R-30-E

SECTION 13

RAY SMITH  
CANFIELD  
TRACT 1  
NM-0263393  
RENEWAL DATE 9-1-70

740  
280

EXHIBIT "B"  
TO  
UNIT AGREEMENT  
SHUGART 18-QUEEN UNIT  
EDDY COUNTY, NEW MEXICO

TRACT NO.	LAND DESCRIPTION	NUMBER OF ACRES	LEASE NO. & RENEWAL DATE	BASIC ROYALTY & PERCENTAGE	LESSEE OF RECORD	W.I. OWNER & PERCENTAGE	TRACT PERCENTAGE PARTICIPATION
1	N/2 SE/4 SEC. 13, T18S, R30E Eddy Co., N.M.	80.00	NMO 263393 9-1-70	U.S. - ALL	Lewis Burleson-1/2 Jack Huff-1/2	Ben F. Mitchel - 12.50 Raymond Thomassen-12.50 RAY SMITH - 75.00	14.729
2	Lct 2, Sec. 18, T18S, R31E Eddy Co., N.M.	34.59	LCO 29393(d) 7-1-72	U.S. - ALL	Kenwood Oil-93.25% T. R. Parker-6.75%	Ben F. Mitchel - 12.50 Raymond Thomassen-12.50 RAY SMITH - 75.00	9.214
3	Lcts 3, 4, SE/4 SW/4 Sec. 18 T18S, R31E, Eddy Co., N.M.	109.48	LCO 29393(f) 1-1-70	U.S. - ALL	Kenwood Oil Co.	Ben F. Mitchel - 12.50 Raymond Thomassen-12.50 RAY SMITH - 75.00	51.223
3-A	NE/4 of SW/4, Sec. 18, T18S, R31E Eddy Co., N.M.	40.00	LCO 29393(f) 1-1-70	U.S. - ALL	Kenwood Oil Co.	APCO Oil Corporation - Raymond Thomassen - 100.00	24.824

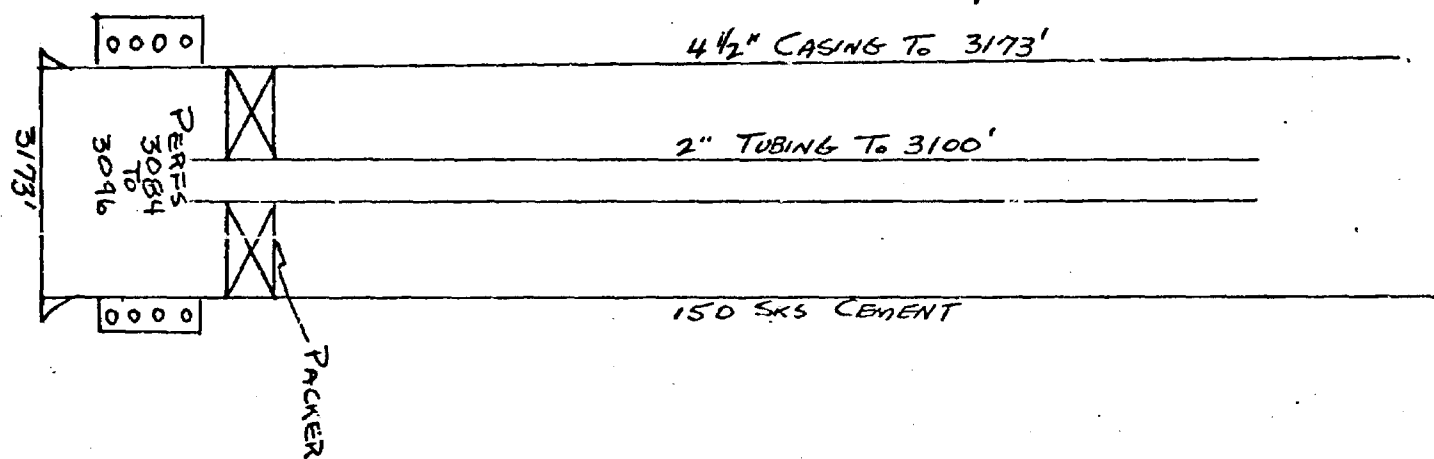
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5.41  
10.52  
75.93  
280.00

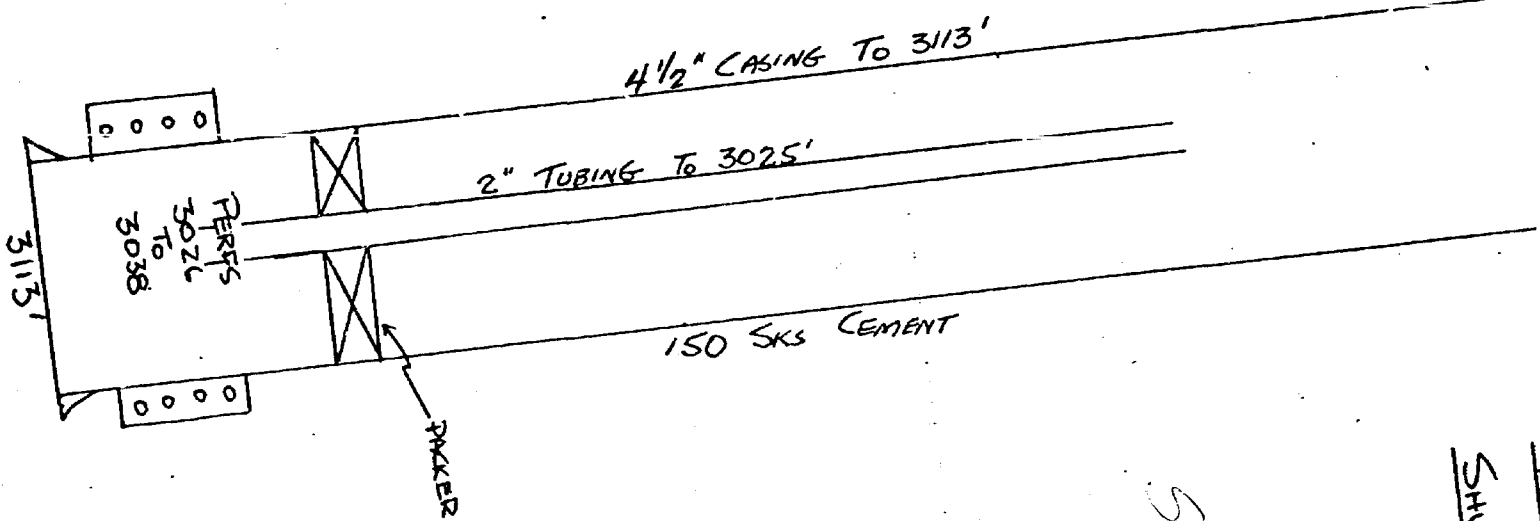
RAY SMITH DRILL CO.

CANFIELD # 1

SHUGART 18-QUEEN UNIT



BY M.V.



RAY SMITH DRILL CO.  
KENWOOD A-1  
SHUGART 18-QUEEN UNIT

5  
 8 3/4  
 125  
 2000

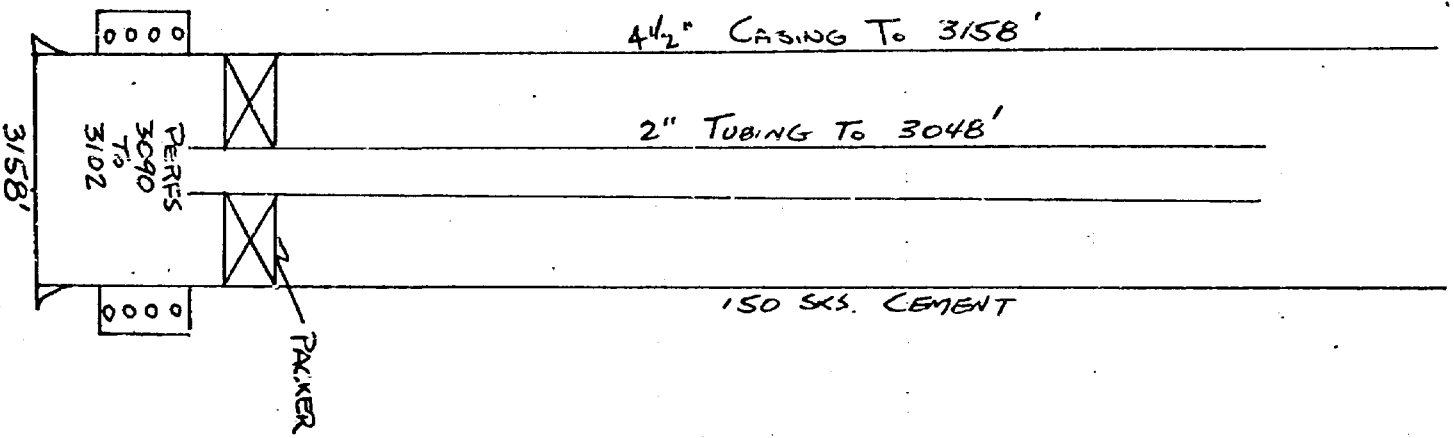
613

RAY SMITH DRILLING CO.

KEWOOD #2

SHUGART 18-QUEEN UNIT

Sp. 18-Queen  
7 5/8" 4 700' +  
1 5/8" with cement  
Circ.



244



CURTIS W. MEWBOURNE  
CONSULTING PETROLEUM ENGINEER  
FIDELITY UNION LIFE BUILDING  
DALLAS, TEXAS 75201

August 12, 1966

State Engineer Office  
Capital Building  
Santa Fe, New Mexico

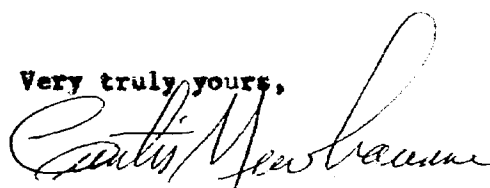
Re: Ray Smith Drilling Co.  
Shugart 18-Queen Unit  
Eddy County, New Mexico

Gentlemen:

Ray Smith Drilling Co. has made application to the New Mexico Oil Conservation Commission for authorization of Unit Agreement and authorization to inject water for secondary recovery of the subject Unit. Attached is a copy of the Application, complete with all attachments.

Thank you very much.

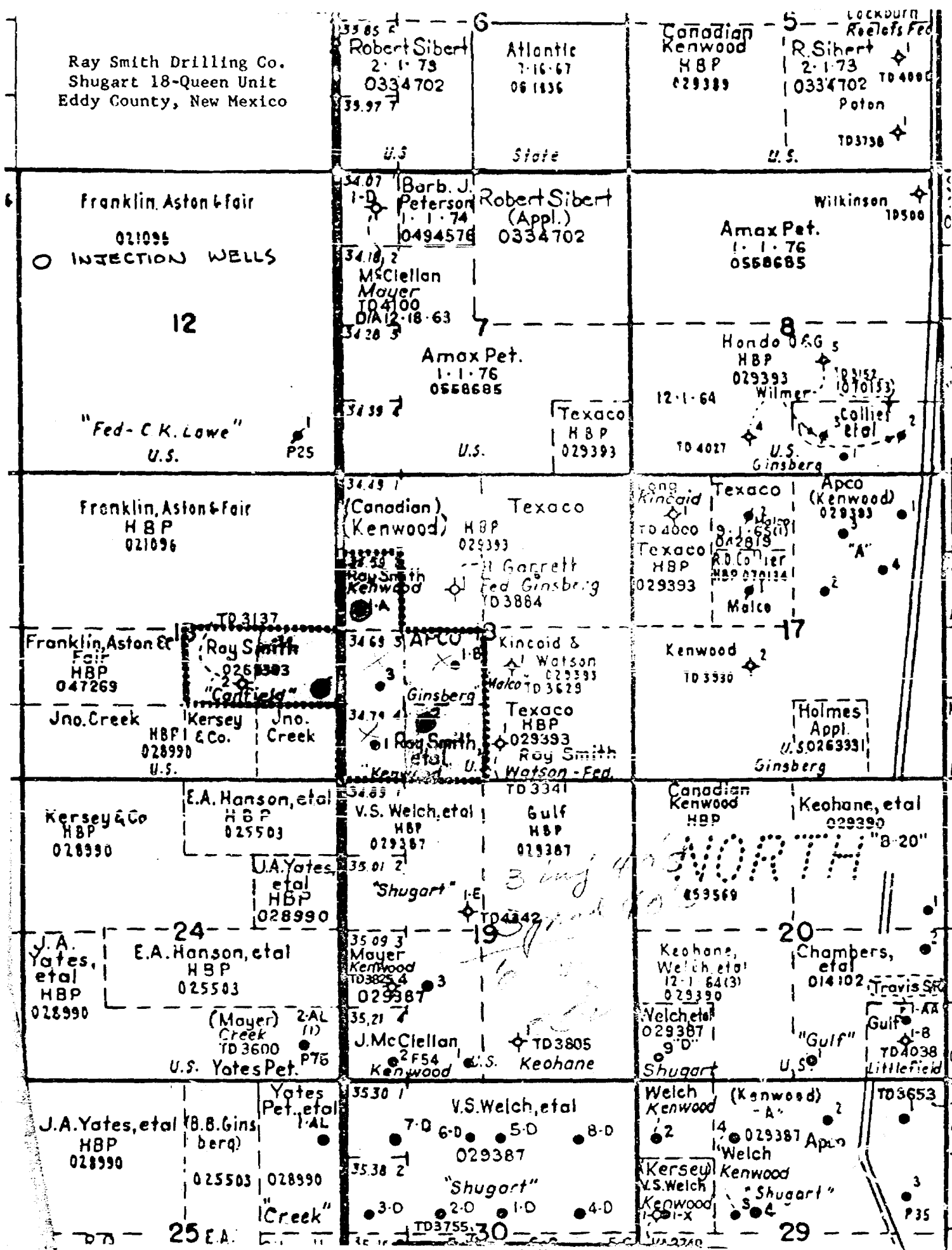
Very truly yours,



Curtis W. Mewbourne

CWM:vm

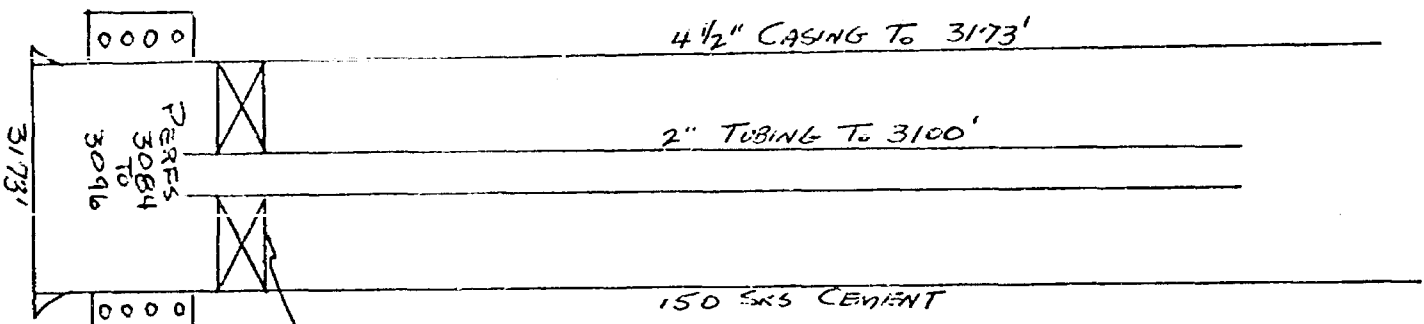
Attachments



RAY SMITH DRILL CO.

CANFIELD # 1

SHUGART 18-QUEEN UNIT



BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

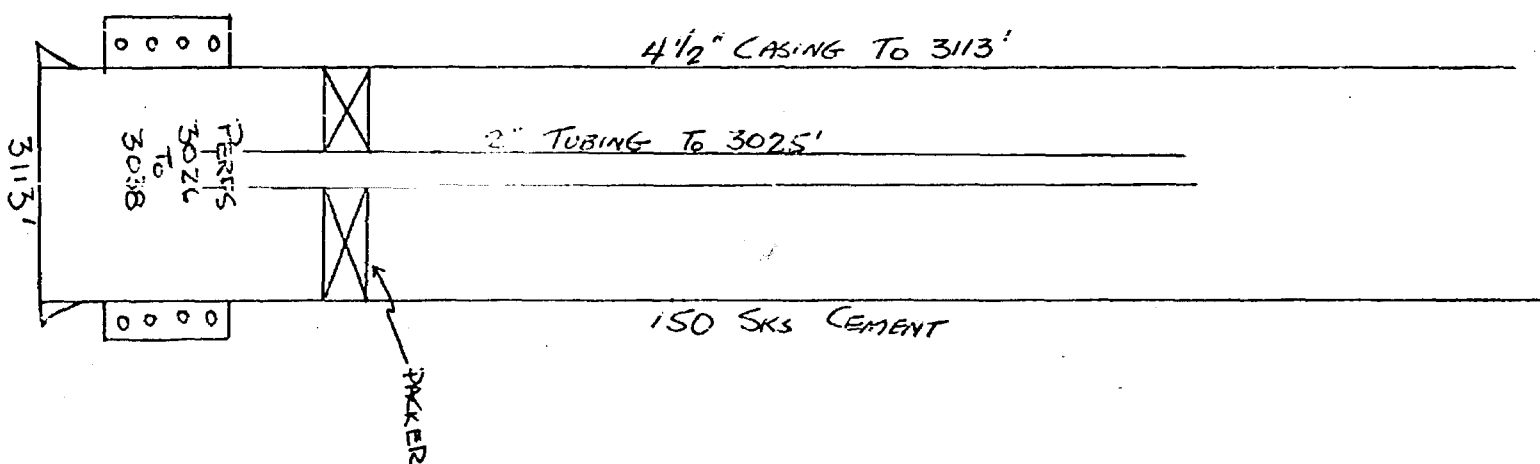
EXHIBIT NO. 2

CASE NO. 3449, 3451

RAY SMITH DRED CO.

KEUWOOD A-1

SHUGART 18-QUEEN UNIT

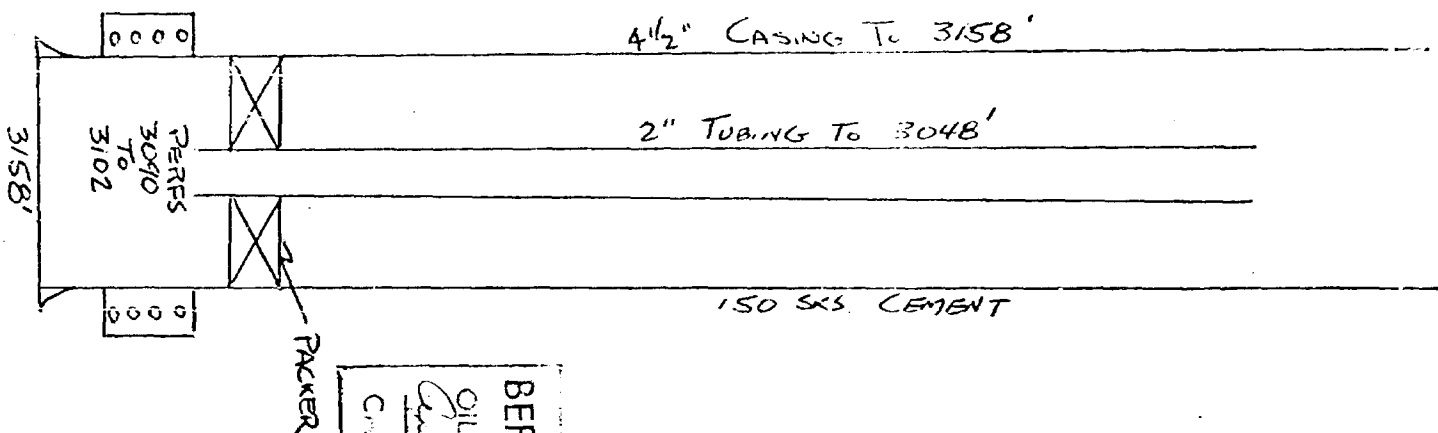


BEFORE EXAMINER NUTTER	
OIL CONSERVATION COMMISSION	
EXHIBIT NO.	30250
CASE NO.	30250

RAY SMITH DRILLING CO.

KEUWOOD #2

SHUGART 18-QUEEN UNIT



BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 4  
CASE NO. 8447 3450

dearnley-meier reporting service, inc.

SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

BEFORE THE NEW MEXICO  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
September 7, 1966

EXAMINER HEARING

IN THE MATTER OF:

Application of Ray Smith Drilling  
Company for a unit agreement, Eddy  
County, New Mexico.

and

Application of Ray Smith Drilling  
Company for a waterflood project,  
Eddy County, New Mexico.

CASE NUMBER  
3449

CASE NUMBER  
3450  
(Consolidated)

BEFORE:

DANIEL S. NUTTER, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: The next case will be Case 3449.

MR. HATCH: Application of Ray Smith Drilling Company for a unit agreement, Eddy County, New Mexico.

MR. EATON: Paul M. Eaton, Junior, of the firm of Hinkle, Bondurant and Christie representing Ray Smith Drilling Company.

MR. NUTTER: Mr. Eaton, would it be feasible to consolidate the following case, also, with this case?

MR. EATON: Mr. Examiner, it sure would. I request that both cases be consolidated.

MR. NUTTER: We will now call Case 3450.

MR. HATCH: Application of Ray Smith Drilling Company for a waterflood project, Eddy County, New Mexico.

MR. NUTTER: Case 3449 and Case 3450 will be consolidated for the purposes of testimony. Will you proceed, Mr. Eaton?

MR. EATON: Yes, sir. At the outset, Mr. Examiner, we would request that the application be amended in one minor respect. The application refers to three injection wells by name. The second well being the Kenwood Federal Number 1.

That is a typographical error and should be Kenwood Federal Number 2 and we request that the Examiner permit us to amend the application in that respect.

MR. NUTTER: Mr. Eaton, we have already amended

your application.

MR. EATON: I knew you would catch it.

MR. NUTTER: Thank you.

MR. EATON: We have one witness to be sworn, Mr. Examiner, Mr. Curtis Mewbourne.

(Witness sworn.)

CURTIS W. MEWBOURNE

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. EATON:

Q Will you please state your name, address, and your occupation?

A Curtis W. Mewbourne; Fidelity Union Life Building, Dallas, Texas; consulting petroleum engineer.

Q What is your relationship, Mr. Mewbourne, to Ray Smith Drilling Company?

A I serve on a retainer basis as a consulting petroleum engineer for the Ray Smith Drilling Company.

Q Do you manage the company's oil operations?

A I do.

Q On a consulting basis.

A Yes.

Q Have you previously testified before the New Mexico



Oil Conservation?

A I have not.

Q Mr. Mewbourne, will you please advise the Examiner of your education and professional experience in connection with the oil industry?

A I'm a 1957 petroleum engineering graduate of the University of Oklahoma. I was employed immediately thereafter by the Arkansas Fuel Oil Corporation, Shreveport, Louisiana; worked as a petroleum engineer in the Louisiana Gulf Coast area. Arkansas Fuel was merged into the Cities Service Oil Company, at which time I was transferred to Bartlesville, Oklahoma, worked as a supervisor of waterflood flood operations in the West Texas Panhandle and Western Kansas area.

I was then employed with the First National Bank in Dallas for four years in appraisals, evaluations and oil loans. I then entered the general practice of consulting engineer.

Q How long have you been in the private practice as a consulting petroleum engineer?

A One and a half years.

Q Are you a member of any professional associations in connection with your profession?

A The Society of Petroleum Engineers of AIMETAPI and several other industry groups.

MR. EATON: Mr. Examiner, are his qualifications acceptable?

MR. NUTTER: They are.

MR. EATON: Thank you.

MR. NUTTER: Proceed.

Q (By Mr. Eaton) Are you familiar with the matters contained in the application of Ray Smith Drilling Company in Cases 3449 and 3450?

A I am.

Q Did you prepare those applications yourself, Mr. Mewbourne?

A I did.

Q Attached to the application is a copy of the Shugart 18-Queen Unit Agreement, is that correct?

A Yes, sir.

Q Are you familiar with the area described in the Unit Agreement and with the Unit Agreement, itself?

A I am.

Q What area is covered by the Unit Agreement?

A Portions of Section 13, 18 South, 30 East, and portions of Section 18, 18 South, 31 East, Eddy County, New Mexico.

Q Approximately how many acres are in the Unit?

A Approximately 264 acres.

Q What is the purpose of this Unit Agreement?

A This Unit Agreement serves to consolidate various leases and operators into a united project for purposes of secondary recovery by waterflooding.

Q Are all of the lands in the Unit Area Federal lands?

A They are.

Q There are no State or fee land?

A There are not.

Q Has the Unit Agreement been submitted to the Director of the United States Geological Survey for his approval?

A It has.

Q Has he approved the Unit Agreement?

A The Unit Agreement was approved on July 21st, 1966 by the Acting Director of the United States Geological Survey.

Q That approval shows on the exhibit attached to the application?

A It does.

Q Are you familiar with the working interest ownership and the overriding royalty ownership under the leases embraced in the unit?

A I am.

Q Have all such owners either executed or ratified

the Unit Agreement?

A One hundred per cent of all working interests, royalty owners, lessees of record production payment holders have executed the Unit Agreement.

Q What is the effective date of the Unit Agreement?

A The effective date is 7:00 A.M. of the first day of the month following; first the execution or ratification of the Agreement by seventy-five per cent of the working interest owners; second, approval of this Agreement by the Director of the Geological Survey; and third, the filing for record in Eddy County, New Mexico of a certificate to the effect that Provisions 1 and 2 have been complied with.

Q You have testified already that the first two conditions have already occurred. Has the certificate which you testified to been filed in Eddy County, New Mexico?

A No.

Q If the Commission approves this subject Unit, do you intend to promptly file for record, in Eddy County, notification of existence of the Unit?

A Yes.

Q Under the terms of the Unit Agreement, itself, when must you commence your secondary recovery operations?

A Within six months.

Q When do you actually intend to commence the

the Unit Agreement?

A One hundred per cent of all working interests, royalty owners, lessees of record production payment holders have executed the Unit Agreement.

Q What is the effective date of the Unit Agreement?

A The effective date is 7:00 A.M. of the first day of the month following; first the execution or ratification of the Agreement by seventy-five per cent of the working interest owners; second, approval of this Agreement by the Director of the Geological Survey; and third, the filing for record in Eddy County, New Mexico of a certificate to the effect that Provisions 1 and 2 have been complied with.

Q You have testified already that the first two conditions have already occurred. Has the certificate which you testified to been filed in Eddy County, New Mexico?

A No.

Q If the Commission approves this subject Unit, do you intend to promptly file for record, in Eddy County, notification of existence of the Unit?

A Yes.

Q Under the terms of the Unit Agreement, itself, when must you commence your secondary recovery operations?

A Within six months.

Q When do you actually intend to commence the



operations, assuming you, first, obtain Commission approval?

A Immediately upon approval by the Commission.

(Whereupon, Applicant's Exhibits 1, 2, 3 and 4 were marked for identification.)

Q Mr. Mewbourne, I hand you what has been marked Exhibit 1, and ask you to state what it portrays?

A Exhibit 1 outlines the Unit Area in red, and the three wells circled in red are the proposed injection wells. Also included are the three producing wells and one dry hole within the Unit Area.

Q Is Exhibit 1 identical with the plat attached to the application of Ray Smith Drilling Company?

A It is.

Q Mr. Mewbourne, there are several other circles depicted within the Unit boundaries. What do those circles represent?

A Those represent producing wells and a dry hole, the circles, other than the proposed injection wells.

Q Are the proposed injection wells producing at this time?

A They are.

Q Are there any producing wells located adjacent to and outside the Unit Area?

A No.

Q Does the Unit Area include all productive leases in the field?

A It does.

Q Does Exhibit 1 reflect the location of other wells, including drilling wells and dry holes within two miles of the Unit Area?

A It does.

Q Are all -- you may have answered this question -- are all six wells within the Unit Area producing at this time?

A They are.

Q What formation are they producing from and from what depth?

A The six wells are producing from the Queen Sand at approximately 3,000 feet.

Q Do you have any information as to the thickness of the Queen Sand in the Unit Area?

A Approximately eight feet average.

Q Would you please state when these productive wells were drilled and give us their production history?

A The field was discovered in what is now the Abco-Ginsberg Federal Number 1, in March 1940. It was potentialled for forty-five barrels per day. There was no drilling in the area until 1962, when Ray Smith Drilling Company completed the remaining five wells in the Unit Area with potentials varying

between forty-three and sixty-four barrels per day after fracturing. Production then declined at a rapid rate to the current advanced stage of completion.

Q What is the current production from these wells?

A Approximately three barrels per day per well.

Q In your opinion, would you classify those wells as stripper or marginal wells?

A I would.

Q If the proposed secondary recovery project is not initiated very soon, what will be the effect on these six producing wells?

A These wells are very rapidly approaching an economic limit and would shortly thereafter have to be plugged and abandoned, should not secondary recovery operations be started.

Q How do you propose to institute and conduct the secondary recovery operation?

A The three proposed injection wells shown on Exhibit 1 will be converted from oil production to water injection and fresh water purchased from the Double Eagle Corporation of New Mexico will be injection under tubing and packer into the Queen Sand.

Q Have logs on the three injection wells been previously furnished to the Commission and to the State Engineer as attached to the application?



A They have.

Q What circumstances dictated your selection of the Canfield Federal Number 1, the Kenwood Federal Number 2 and the Kenwood Federal A Number 1 as the injection wells?

A They were selected to give the optimum sweep of water injection in an effort to maximize the oil recovery.

Q Directing your attention to the three proposed injection wells, have you caused to be prepared diagramatic exhibits on each well designed to show casing and cement program?

A I have.

Q I hand you what has been marked as Exhibits 2, 3 and 4, and ask you to explain what they portray?

A Exhibit 2 is Canfield Number 1. It shows that four and a half inch casing was set to 3173 cemented with 150 sacks of cement. Not shown is the surface casing which was seven and five-eighths run to 1700 feet and circulated with 250 sacks of cement.

Exhibit Number 3 is the Kenwood A-1, which shows four and a half inch casing was run to 3113 and cemented with 150 sacks of cement. Not shown is surface casing which was eight and five-eighths inch casing run to 725 feet, circulated with 200 sacks of cement. The Kenwood Number 2 is Exhibit Number 4. It portrays four and a half inch casing to 3,158

feet, cemented with 150 sacks of cement. Not shown is surface casing which was seven and five-eighths inch run to 700 feet and circulated with cement.

Also shown on each exhibit is the perforated interval.

Q Mr. Mewbourne, is the tubing in these wells lined?

A It is not.

Q Do you anticipate any problems because it is not lined?

A We do not.

Q Why is that?

A We propose injecting fresh water purchased from Double Eagle Corporation and don't anticipate serious corrosion problems.

Q How much water do you propose to inject through the three wells?

A Approximately 300 barrels per day for the total Unit.

Q I assume that there will be produced water obtained from this project?

A That's correct.

Q Will the produced water be recycled through the injection wells?

A It will.

Q How soon after you begin the flood do you expect a response?

A Approximately six months.

Q Can you estimate the amount of oil which you reasonably expect to recover from this proposed flood?

A Approximately 100,000 barrels.

Q Does the Unit Area comprise, in your opinion, all of the land necessary to carry out an efficient, effective flood of the Queen Sand in this area?

A Yes.

Q In your opinion, will the proposed waterflood project be in the interest of conservation and prevention of waste?

A It will.

Q In your opinion, will the correlative rights of all interested parties be protected under the proposed project?

A Yes.

Q In your opinion, will the proposed project result in the maximum recovery of oil from this area?

A It will.

MR. EATON: Mr. Examiner, we move for admission of the applicant's Exhibits 1 through 4.

MR. NUTTER: Applicant's Exhibits 1 through 4 will be admitted in evidence.

(Whereupon, Applicant's Exhibits 1 through 4 were admitted into evidence.)

MR. EATON: That is all the questions we have of this witness.

MR. NUTTER: Does anyone have any questions of this witness?

MR. IRBY: I have one.

MR. NUTTER: Mr. Irby.

MR. IRBY: I would like to ask the witness if the Kenwood Federal Number 1 shown on the application should be Kenwood Federal Number 2.

A That's correct, it should.

MR. IRBY: Thank you.

MR. NUTTER: Was that all the questions you had?

MR. IRBY: Yes.

CROSS EXAMINATION

BY MR. NUTTER:

Q Your application stated that an average of 300 barrels will be injected?

A No. That's the total project, the average for the three wells.

Q That's the average, then, of 100 barrels a day for the three wells?

A Yes.

Q You anticipate 300 barrels and your injection pressure will be approximately 700 pounds PSI?

A Initially, yes, sir.

Q What is the cumulative preliminary production from these six wells, Mr. Mewbcurne?

A As of the first of July, 114,552 barrels.

Q That's at 7-1-66?

A Yes, sir.

Q Have all of the wells produced approximately the same amount or did the one well have a one or two year head start?

A Yes, sir. With the exception of the initial well that was drilled in 1940, it has a higher cumulative production than the other five.

Q You anticipate your secondary will be approximately 100,000 barrels or in the range of one to one as far as the primary is concerned?

A Yes, sir.

Q And you realize that according to Rule 701, you would have six 40-acre tracts as far as allowable computation would be concerned?

A Yes, sir.

MR. NUTTER: Any other questions of Mr. Mewbourne?

He may be excused.

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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

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1203 FIRST NATIONAL BANK EAST • PHONE 256-1291 • ALBUQUERQUE, NEW MEXICO

PAGE

16

(Witness excused.)

Eaton?

MR. NUTTER: Do you have anything further, Mr.

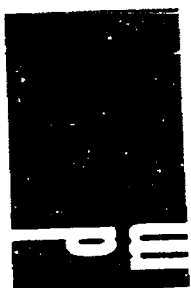
MR. EATON: No more testimony.

MR. NUTTER: Does anyone have anything they wish  
to offer in Case 3449 or 3450? We'll take the cases under  
advisement.

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STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached transcript of hearing was reported by me in stenotype and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

*Ada Dearnley*  
NOTARY PUBLIC

My Commission Expires:

June 19, 1967

I do hereby certify that the foregoing is a true and correct copy of the original as the same appears in the files of the  
9/7 66

3449 & 3450

*Deanna*  
New Mexico Oil Conservation Commission