

2671

50th YEAR

**THE PURE OIL COMPANY**

SOUTHERN PRODUCING DIVISION • MIDLAND DISTRICT EXPLORATION  
P. O. BOX 671 • MIDLAND, TEXAS 79701 • AREA CODE 915-MU 2-3725

March 5, 1965

Mr. Guyton B. Hays  
Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico

Attention: Mrs. Marian M. Rhea,  
Supervisor Unit Division

RE: Application for Initial  
Participating Areas for the  
Wolfcamp Formation and  
Siluro-Devonian Formation,  
Red Hills Unit  
No. 14-08-0001-8496  
Lea County, New Mexico

Gentlemen:

Enclosed are the following:

1. Ten (10) copies of Composite Application for Approval of the captioned participating areas.
2. Two (2) copies each of Geological and Engineering Reports covering the Wolfcamp Formation and the Siluro-Devonian Formation.

If you find our application in order, would you please indicate your approval by executing nine (9) copies thereof, returning such nine (9) copies to the attention of the undersigned. Upon return thereof, we will submit them to the U.S.G.S. for their approval, and upon complete execution, we will furnish you with two fully executed copies.

Page 2  
Mr. Guyton B. Hays  
Commissioner of Public Lands  
March 5, 1965

The enclosed Geological and Engineering Reports are to be retained in your file.

Very truly yours,

THE PURE OIL COMPANY

ORIGINAL SIGNED BY

E. B. WHITE

E. B. White

EDW:nd  
Encls.

cc: United States Geological Survey  
P. O. Drawer 1857  
Roswell, New Mexico  
Attn: Mr. John A. Anderson  
Regional Oil and Gas Supervisor

New Mexico Oil Conservation Commission (2 encls.)  
P. O. Box 2088  
Santa Fe, New Mexico  
Attn: Mr. A. L. Porter, Jr.

IN RE: Red Hills Unit Area,  
No. 14-08-0001-8496  
Lea County, New Mexico

Composite Application for  
Approval of:

- (1) Initial Participating Area  
for the Wolfcamp Formation
- (2) Initial Participating Area  
for the Siluro-Devonian Formation

TO THE DIRECTOR OF THE UNITED STATES GEOLOGICAL SURVEY  
TO THE COMMISSIONER OF PUBLIC LANDS, STATE OF NEW MEXICO

The Pure Oil Company, as Unit Operator, under that certain Unit Agreement for the Red Hills Unit Area, approved by the Acting Director, United States Geological Survey, effective January 22, 1963, and pursuant to the provisions of Section 11 of said Unit Agreement requiring the establishment of initial participating areas, respectfully submits for the approval of the Director of the United States Geological Survey and the Commissioner of Public Lands, State of New Mexico the selections of the following described lands to constitute the following:

1. INITIAL PARTICIPATING AREA FOR THE WOLFCAMP FORMATION, to wit:

<u>Township 25 South, Range 33 East, N.M.P.M.</u>	<u>Acres</u>
Section 32: All	640
Section 33: All	640
<u>Township 26 South, Range 33 East, N.M.P.M.</u>	
Section 4: All	640
Section 5: All	640

containing 2560 acres, more or less.

2. INITIAL PARTICIPATING AREA FOR THE SILURO-DEVONIAN FORMATION, to wit:

<u>Township 25 South, Range 33 East, N.M.P.M.</u>	<u>Acres</u>
Section 32: All	640
Section 33: All	640
<u>Township 26 South, Range 33 East, N.M.P.M.</u>	
Section 4: All	640
Section 5: All	640

containing 2560 acres, more or less,

and in support of this composite application, Applicant attaches hereto and makes a part hereof the following:

- (a) A map, marked Exhibit "A", showing thereon the boundary of the entire Unit Area;

RECEIVED  
MAR 8 9 18 AM '65  
STATE LAND OFFICE  
SANTA FE, N.M.

- (b) A map, marked Exhibit "B", showing the pertinent portion of the Unit Area and boundary lines thereof and showing thereon the boundary lines of the proposed INITIAL PARTICIPATING AREA OF THE WOLFCAMP FORMATION;
- (c) A Schedule, marked Exhibit "C", showing the various lands entitled to participate in the unitized substances produced from the WOLFCAMP FORMATION, with the percentage of each lease or tract indicated thereon;
- (d) A map, marked Exhibit "D", showing the pertinent portion of the Unit Area and boundary lines thereof and showing thereon the boundary lines of the proposed INITIAL PARTICIPATING AREA OF THE SILURO-DEVONIAN FORMATION;
- (e) A Schedule, marked Exhibit "E", showing the various lands entitled to participate in the unitized substances produced from the SILURO-DEVONIAN FORMATION, with the percentage of each lease or tract indicated thereon;

Applicant has submitted separately, in triplicate to the Director and in duplicate to the Commissioner, its geological and engineering reports with attached exhibits supporting each of the proposed participating areas. Additionally, data in exhibit form accompanied our letter of December 1, 1964, addressed to the Commissioner with copies to the Director, setting forth the production and engineering information which resulted in the determination that the unit well #1 is a well capable of producing unitized substances in paying quantities under the terms of the Unit Agreement.

The proposed INITIAL PARTICIPATING AREA FOR THE WOLFCAMP FORMATION is predicated upon the knowledge and information first obtained upon the completion in paying quantities under the terms of the Unit Agreement on December 26, 1964, of Unit Well No. 1 in the SW/4 SE/4 of Section 32, Township 25 South, Range 33 East, N.M.P.M., with an initial production of 9 MMCFGPD, plus 38 barrels of condensate per MM, on 17/64" and 18/64" chokes, FTP 5100 lbs., from the Wolfcamp Formation at 13,440 to 13,512 feet, and 13,622 to 13,667 feet. On subsequent four (4) point test the Wolfcamp zone potentialled for a CAOF of 15.75 MMCFGPD, plus 40 barrels of condensate per MM. The effective



date of this initial participating area shall be 7:00 A.M., December 26, 1964, pursuant to Section 11 of the Unit Agreement.

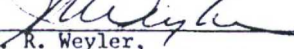
The proposed INITIAL PARTICIPATING AREA FOR THE SILURO-DEVONIAN FORMATION is predicated upon the knowledge and information first obtained from the two (2) point test conducted from perforations at 17,476 to 17,492 feet, and 17,523 to 17,544 feet in the Unit Well No. 1, in SW/4 SE/4 Section 32, Township 25 South, Range 33 East, N.M.P.M., on September 3, 1964. On this production test the Unit Well No. 1 flowed at the rate of 7.8 MMCFGPD on 20/64" choke, FTP 4850 lbs. for 5½ hours, and flowed at rate of 10.4 MMCFGPD on 24/64" choke, FTP 4370 lbs. for 3 hours. SITP 5900 lbs. in 2½ hrs. Based on this data, calculated open flow was 25 MMCFGPD. The effective date of this initial participating area shall be 7:00 A.M., September 3, 1964, pursuant to Section 11 of the Unit Agreement.

Consequently, Applicant respectfully requests that the Director and the Commissioner approve:

- (1) The lands described in 1 above to constitute the INITIAL PARTICIPATING AREA FOR THE WOLFCAMP FORMATION, to be effective as of 7:00 A.M., December 26, 1964;
- (2) The lands described in 2 above to constitute the INITIAL PARTICIPATING AREA FOR THE SILURO-DEVONIAN FORMATION, to be effective as of 7:00 A.M., September 3, 1964.


Dated this 5th day of March, 1965.

THE PURE OIL COMPANY

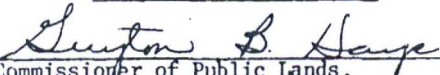
By   
J. R. Weyler,  
District Operations Superintendent

Address: P. O. Box 671  
Midland, Texas

APPROVED APR 26 1965, 1965

  
ACTING Director, United States Geological Survey

APPROVED March 10, 1965

  
Commissioner of Public Lands,  
State of New Mexico

cc: New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

CONSENT, RATIFICATION AND JOINDER  
RED HILLS UNIT AGREEMENT  
LEA COUNTY, NEW MEXICO

SEP 22 PM 1 00

The undersigned, whether one or more, hereby acknowledges receipt of a copy of the Unit Agreement for the Development and Operation of the Red Hills Unit Area embracing lands situated in Lea County, New Mexico, which said Agreement is dated as of November 20, 1962, and acknowledges that the undersigned has read the same and is familiar with the terms and conditions thereof. The undersigned also being the owner of the leasehold, royalty or other interest in the lands or minerals embraces in said unit area, as indicated on the schedule attached to said Unit Agreement as Exhibit "B", does hereby commit all of said interest to the Red Hills Unit Agreement and does hereby consent thereto and ratify all of the terms and provisions thereof, exactly the same as if the undersigned had executed the original of said Unit Agreement or a counterpart thereof.

IN WITNESS WHEREOF, this instrument is executed by the undersigned as of the date set forth in the respective acknowledgments.

DATE: JANUARY 4, 1963

Mary Etta Killingsworth  
MARY ETTA KILLINGSWORTH, INDIVIDUALLY AND AS  
INDEPENDENT EXECUTRIX OF THE ESTATE OF G. F.  
KILLINGSWORTH, DECEASED.

Frank L. Killingsworth  
FRANK L. KILLINGSWORTH

E. Lewis Killingsworth  
E. LEWIS KILLINGSWORTH

Cecile J. Killingsworth  
CECILE J. KILLINGSWORTH

Alma B. Killingsworth  
ALMA B. KILLINGSWORTH

Charlotte Frances Killingsworth  
CHARLOTTE FRANCES WELDON, JR.

John H. Killingsworth  
JOHN H. KILLINGSWORTH

V. H. Weldon, Jr.  
V. H. WELDON, JR.

Norma Jean Killingsworth  
NORMA JEAN KILLINGSWORTH

Margaret Elizabeth Burns  
MARGARET ELIZABETH BURNS

George Etta Emerson  
GEORGE ETTA EMERSON

Robert B. Burns  
ROBERT B. BURNS

Marvin C. Emerson  
MARVIN C. EMERSON

HEIRS AND DEVISEES OF G. F. KILLINGSWORTH, DECEASED.

ADDRESS: 135 NORTH MAIN  
SEMINOLE, OKLAHOMA

STATE OF OKLAHOMA )  
COUNTY OF SEMINOLE ) SS

The foregoing instrument was acknowledged before me this 4th day of January, 1963, by MARY ETTA KILLINGSWORTH, INDIVIDUALLY AND AS INDEPENDENT EXECUTRIX OF THE ESTATE OF G. F. KILLINGSWORTH, DECEASED.

Marie E. Wester  
NOTARY PUBLIC  
The undersigned, the owner of the corresponding working interest in the lands affected and covered hereby, does hereby consent to the foregoing CONSENT, RATIFICATION AND JOINDER.

MY COMMISSION EXPIRES: 1-20-63

UNION OIL COMPANY OF CALIFORNIA  
(Successor by merger to The Pure Oil Company)  
Date: 9-17-65 By McGaughey  
Agent and Attorney-in-Fact

STATE OF OKLAHOMA )  
 ) SS  
COUNTY OF SEMINOLE )

The foregoing instrument was acknowledged before me this 4th day of  
JANUARY, 1963, by FRANK L. KILLINGSWORTH AND WIFE,  
CECILE J. KILLINGSWORTH

James E. Hester  
NOTARY PUBLIC

MY COMMISSION EXPIRES:

1-20-63

STATE OF OKLAHOMA )  
 ) SS  
COUNTY OF OKLAHOMA )

The foregoing instrument was acknowledged before me this 6th day of  
JANUARY, 1963, by E. LEWIS KILLINGSWORTH AND  
WIFE, ALMA B. KILLINGSWORTH

James C. Torrey  
NOTARY PUBLIC

MY COMMISSION EXPIRES:

June 17, 1966

STATE OF TEXAS )  
 ) SS  
COUNTY OF HARRIS )

The foregoing instrument was acknowledged before me this 11th day of  
JANUARY, 1963, by CHARLOTTE FRANCES WELDON, JR. AND  
HUSBAND, W. H. WELDON, JR.

William H. Stubblefield  
NOTARY PUBLIC

MY COMMISSION EXPIRES:  
William H. Stubblefield  
Notary Public in and for Harris County, Texas  
My Commission Expires June 1, 1963

STATE OF OKLAHOMA )  
 ) SS  
COUNTY OF POTTAWATOMIE )

The foregoing instrument was acknowledged before me this 5th day of  
JANUARY, 1963, by JOHN H. KILLINGSWORTH AND WIFE,  
NORMA JEAN KILLINGSWORTH

John H. Killingsworth  
NOTARY PUBLIC

MY COMMISSION EXPIRES:

7-16-64



STATE OF OKLAHOMA )  
 ) SS  
COUNTY OF OKLAHOMA )

The foregoing instrument was acknowledged before me this 6<sup>th</sup> day of  
JANUARY, 1963, by MARGARET ELIZABETH BURNS AND  
HUSBAND, ROBERT B. BURNS

Laurie C. Dancy  
NOTARY PUBLIC

MY COMMISSION EXPIRES:

June 27, 1966

STATE OF OKLAHOMA )  
 ) SS  
COUNTY OF OKLAHOMA )

The foregoing instrument was acknowledged before me this 6<sup>th</sup> day of  
JANUARY, 1963, by GEORGE ETTA EMERSON AND HUSBAND  
MARVIN C. EMERSON

Laurie C. Dancy  
NOTARY PUBLIC

MY COMMISSION EXPIRES:

June 17, 1966





# THE PURE OIL COMPANY

SOUTHERN PRODUCING DIVISION

MIDLAND DISTRICT

P. O. BOX 621 • MIDLAND, TEXAS 79701 • AREA CODE 915 - MU 2-3725  
A DIVISION OF UNITED OIL COMPANY OF CALIFORNIA

September 20, 1945

United States Geological Survey  
Oil and Gas Operations  
P. O. Drawer 1857  
Roswell, New Mexico  
Attn: Mr. Carl C. Traywick

Commissioner of Public Lands  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico  
Attn: Mrs. Marian H. Rhea

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico  
Attn: Mr. A. L. Porter, Jr.

Re: Tracts 61, 62, 63  
Red Hills Unit  
Lea County, New Mexico

Gentlemen:

Enclosed are four (4) counterpart copies to the U.S.C.S.; two (2) counterpart copies to the Commission; and one (1) counterpart copy to the N.M.O.C.C., of CONSENT, RATIFICATION AND JOINDER, RED HILLS UNIT AGREEMENT, LEA COUNTY, NEW MEXICO, executed by Mary Etta Killingsworth et al, and with all counterpart copies bearing the consent of this Company to their joinder. Also enclosed, in the same number of copies, are revised pages 14 and 15, and additional pages 16, 17 and 18 of Exhibit C of the Unit Agreement, reflecting the correct ownerships of the Tracts listed thereon.

This Consent, Ratification and Joinder will be treated as a subsequent joinder under the provisions of Section 20 of the Unit Agreement. Such Consent, Ratification and Joinder covers and affects an undivided 1/3 of the working interest in the captioned Tracts.

May the record show that the parties signatory to the enclosed instrument executed same prior to the effective date (January 22, 1963) of the Unit Agreement. However, the Unit Operator inadvertently failed to timely file same with the agencies and also failed to correct Exhibit "B" of the Unit Agreement accordingly. The subject interest owned and claimed by Mary Etta Killingsworth et al necessarily reduced the ownership claimed by all other mineral owners (except Frank Knappenberger) under the captioned Tracts. We attempted to explain this situation with our letter of September 7, 1965, and the enclosure therewith of the draft of revised Exhibits "C" and "E" to the Approved Application for Initial Participating Areas. Inasmuch as we did not furnish the N.M.O.C.C. a copy of said letter and draft, we enclose copies of same for their file.

In the event you find the enclosures and our additional explanations satisfactory, we respectfully request your approval of the Subsequent Joinder of Mary Etta Killingsworth et al, same to be effective October 1, 1965; and your approval of the revised Exhibits "C" and "E" of the Approved Application for Initial Participating Areas, with such revisions to be effective September 1, 1965, at 7:00 A.M.

Very truly yours,

UNION OIL COMPANY OF CALIFORNIA  
(Successor by Merger to  
The Pure Oil Company)

E. B. White

ESW:ad  
Encls.

RECEIVED  
OIL COMPANY  
SEP 22 PM 1 03

A DIVISION OF UNION OIL COMPANY OF CALIFORNIA

September 7, 1965

United States Geological Survey  
Oil and Gas Operations  
P. O. Drawer 1857  
Roswell, New Mexico

Attention: Mr. Carl C. Traywick

RE: Red Hills Unit Area  
(Initial Participating Areas  
for Wolfcamp and Siluro-  
Devonian Formations)  
Lea County, New Mexico

Gentlemen:

Relative to our recent telephone conversation with Mr. Traywick, we enclose a draft of the proposed revisions to Exhibits "C" and "E" of approved application for initial participating areas for the captioned.

These revisions are necessary as this Company has released two (2) fee oil and gas leases (Jerald M. Schuman et al Lease and T. E. Coulter Lease) covering partial interests in Tracts 51 and 52. The working interests in said leases were considered committed to the unit; however, the royalty interests under said leases were not committed to the unit. Your records should also reflect that certain unleased mineral interests owned by Sol A. Yeager and Barbara Ann Whitten in Tracts 51 and 52 were never committed to the unit.

There now remains in Tracts 51 and 52 two (2) oil and gas leases (M. E. Killingsworth et al Lease covering an undivided 6 1/2% interest, and Frank Knappenberger Lease covering an undivided 6 1/2% interest) which collectively cover 12 1/2% of the working interests in each said Tract. The royalty owners under the M. E. Killingsworth Lease have previously ratified the Unit Agreement. The royalty owner under the Knappenberger Lease refused to ratify the Unit Agreement.

9-10-65 NOTE: U.S.G.S. says we did not file the Killingsworth  
Ratification with them. We will do this and  
correct applicable pages of Exhibit "B" of Unit  
Agreement  
EAC



Our calculations of the revised Tract Participation percentages on the enclosure are based on the assumption that Tracts 51 and 52 will remain qualified and committed to the extent of 12½% of the working interest therein and thereby entitle such Tracts to the participations shown in said enclosure.

We recognize that there may now be some question as to the qualifications of these Tracts since this Company is now unable to control a majority of the working interest therein. We cannot find or interpret any applicable provisions, including Section 31, in the Unit Agreement to cover this situation. We do feel that the total disqualification of these Tracts would tend to be discriminatory toward the royalty owners under the M. E. Killingsworth Lease, since they originally ratified the Unit Agreement in good faith.

The commitment status of such Tracts could also change in the future because, upon release of the Schuman and Coulter Leases, we proposed to them that they commit to the Unit Agreement and Operating Agreement as "owners of unleased minerals", with such commitment to be on a negotiated but fair and non-discriminatory basis, subject to the approval of all parties and agencies concerned.

With copy of this letter, we are furnishing the State Land Office a copy of our proposed revisions. We would appreciate the comments and suggestions of both interested agencies. In this connection, please feel free to call the undersigned collect at MUTual 2-3725, Midland, Texas.

Very truly yours,

UNION OIL COMPANY OF CALIFORNIA

E. B. White

EBW:md  
Encl.

cc: Commissioner of Public Lands (w/encl.)  
State of New Mexico  
P. O. Box 1148  
Santa Fe, New Mexico  
Attn: Mrs. Marian M. Rhea



50th YEAR



## THE PURE OIL COMPANY

SOUTHERN PRODUCING DIVISION • MIDLAND DISTRICT EXPLORATION  
P. O. BOX 671 • MIDLAND, TEXAS 79701 • AREA CODE 915-MU 2-3725

June 25, 1965

Mr. Guyton B. Hayes  
Commissioner of Public Lands  
P. O. Box 1148  
Santa Fe, New Mexico

Mr. John A. Anderson  
Supervisor, Oil and Gas Operations  
United States Geological Survey  
P. O. Drawer 1857  
Roswell, New Mexico

RE: RED HILLS UNIT  
LEA COUNTY, NEW MEXICO

Gentlemen:

To you, Mr. Hayes, we are attaching two executed copies, and to you, Mr. Anderson, we are attaching four executed copies, of our INITIAL PLAN OF DEVELOPMENT AND OPERATION for the captioned unit area.

Will each of you please examine the plan and, if it meets with your approval, will each of you please denote your approval by dating, signing and returning to us one copy.

Very truly yours,

THE PURE OIL COMPANY

M. T. Peyton  
Land Department

MTP/1

cc: Oil Conservation Commission  
State of New Mexico  
Santa Fe, New Mexico  
Encl. - One executed copy of plan

INITIAL PLAN OF DEVELOPMENT AND OPERATION  
FOR  
RED HILLS UNIT AREA  
LEA COUNTY, NEW MEXICO

TO: The Commissioner of Public Lands  
State of New Mexico  
Santa Fe, New Mexico

Supervisor, Oil and Gas Operations  
United States Geological Survey  
Roswell, New Mexico

The Pure Oil Company, as Unit Operator for the Red Hills Unit, pursuant to the provisions of Section 10 of the Unit Agreement for the Development and Operation of the Red Hills Unit Area, respectfully submits for the approval of the State Land Commissioner and of the Supervisor, this Plan of Development and Operation for the unitized land for the period January 1, 1965 to December 31, 1965.

On February 24, 1963, the Red Hills Unit #1 was spudded at a location 330 feet from the south line and 2310 feet from the east line of Section 32, Township 25 South, Range 33 East, Lea County, New Mexico. After reaching total depth in basement rocks, the Red Hills Unit #1 was plugged back to test shows of gas encountered in the Siluro-Devonian Formation as no significant shows of hydrocarbons were encountered below such formation. The Siluro-Devonian Formation was perforated in the interval of 17,476 feet to 17,544 feet and after stimulation, produced, on September 3, 1964, at a calculated open flow potential of 25,000 MCF of gas per day. Inasmuch as the Siluro-Devonian produced "sour gas" and no market is readily available for such "sour gas", this formation is presently plugged off. However, an Initial Participating Area, encompassing Sections 32 and 33, Township 25 South, Range 33 East, and Sections 4 and 5, Township 26 South, Range 33 East, was approved for this formation, effective as of September 3, 1964.

Subsequent to the above testing, the Pennsylvanian Formation was perforated in the intervals from 14,607 feet to 14,788 feet and 14,840 feet to 14,864 feet. After stimulation, this formation flowed on a four point test, a COAF of 26,500 MCF gas per day. Subsequently, this formation plugged itself off,

presumably with formation debris. Due to mechanical restrictions and possible hazards, attempts to put this formation back on production were curtailed. Consequently, this formation is not presently producing and an Initial Participating Area has not been established therefor.

Subsequent to production testing the Pennsylvanian Formation, the Wolfcamp Formation was perforated in the interval between 13,440 feet and 13,667 feet and was completed for a GAOF of 15,750 MCF gas per day, plus 40 barrels of condensate per million. An Initial Participating Area, encompassing Sections 32 and 33, Township 25 South, Range 33 East, and Sections 4 and 5, Township 26 South, Range 33 East, was approved for this formation, effective as of December 26, 1964.

Presently, and since the completion from the Wolfcamp Formation, the working interest participants in the Red Hills Unit Well No. 1 have been delivering gas from said formation to a market provided by El Paso Natural Gas Company. From December 26, 1964 to date, gas deliveries have averaged approximately 8 MMCFG per day from said formation. Some gas from the Pennsylvanian Formation was also delivered to this market, but production ceased due to the plugging off of the formation as above mentioned.

We shall continue producing gas to this market and at the same time gather additional reservoir data therefrom. Additionally, at such time in the future as it may become economically feasible, we would contemplate the reworking of the Pennsylvanian Zone in order to restore production therefrom.

We plan the commencement of a second test well no later than the last quarter of the current year. Such test well will be located 990 feet from West line and 1980 feet from South line of Section 22, Township 25 South, Range 33 East. This second test well will be drilled to a depth of 18,500 feet to test the Siluro-Devonian Formation and all other prospective formations thereabove. Based on geological data obtained from the drilling of the No. 1 Red Hills Unit well and upon additional geophysical data obtained