

REVISED THE NEW MEXICO OIL CONSERVATION COMMISSION

IN THE MATTER OF THE APPLICATION OF SKELLY
OIL COMPANY FOR APPROVAL OF A UNIT AGREEMENT FOR THE SKELLY PENROSE "B" UNIT IN THE
LANGLIE-MATTIX FIELD, LEA COUNTY, NEW MEXICO.)

CASE NO. 325
FILED _____
HEARING _____

APPLICATION

Comes now Skelly Oil Company on behalf of itself and others and respectfully states as follows:

1. That it is an owner and operator of wells in the Skelly Penrose "B" Unit Area of the Langlie-Mattix Field, Lea County, New Mexico.
2. That in order to conduct secondary recovery operations and to increase the amount of ultimate recovery, and thereby aid in the conservation of oil and gas, and in order to protect the correlative rights of all parties in the Unit Area, it is necessary and advisable that the Skelly Penrose "B" Unit in the Langlie-Mattix Field be established and approved.
3. That the area to be included in this Unit is described as follows:

Township 22 South, Range 37 East

E/2 SE/4 Sec. 31
W/2, SE/4, and W/2 NE/4 Sec. 32

Township 23 South, Range 37 East

W/2 NW/4 Sec. 4
All Sec. 5
NE/4 and E/2 SE/4 Sec. 6
E/2 NE/4 Sec. 7
W/2, SE/4, W/2 SW/4 and NE/4 SW/4 Sec. 8
W/2 Sec. 9

and containing 2,612.16 acres, more or less, of both fee and state lands.

4. That the formation sought to be unitized is that interval underlying the Unit Area which is productive of Unitized Substances and the vertical limits of which extend from a point 100 feet above the base of the Seven Rivers formation to the base of the Queen formation; said interval having been heretofore found to occur in Skelly Oil Company's Harrison "B" No. 11 well (located in the SE/4 SW/4 Section 9-T23S-R37E, Lea County, New Mexico) at an indicated depth of from 3,271 feet to 3,663 feet, as recorded on the Frontier Perforators Gamma Ray Neutron log, run No. 1, taken February 9, 1960, said log being measured from a derrick floor elevation of 3,327 feet above sea level.

5. That attached hereto and made a part hereof by reference is a copy of the Unit Agreement for the development and operation of the Skelly Penrose "B" Unit, along with Exhibits B and C, and that contained in said Agreement as Exhibit A is a map showing the Unit Area.

WHEREFORE, PREMISES CONSIDERED, applicant prays that this Commission, after the giving of notice as required by law, set this application down for hearing, and that at the conclusion of said hearing based on the evidence adduced approve the Unit Agreement for the Skelly Penrose "B" Unit, and for such other orders, rules and regulations as may be necessary in the premises.

Respectfully submitted,

SKELLY OIL COMPANY

By George W. Salinger
George W. Salinger

Original
By Ronald J. Jacobs
Ronald J. Jacobs
Its Attorneys

Of Counsel:
L. C. White
Gilbert, White & Gilbert
Santa Fe, New Mexico

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

IN THE MATTER OF THE APPLICATION OF SKELLY OIL COMPANY FOR APPROVAL OF A UNIT AGREEMENT FOR THE SKELLY PENROSE "B" UNIT IN THE LANGLIE-MATTIX FIELD, LEA COUNTY, NEW MEXICO.)

CASE NO. 3257
FILED _____
HEARING _____

APPLICATION

Comes now Skelly Oil Company on behalf of itself and others and respectfully states as follows:

1. That it is an owner and operator of wells in the Skelly Penrose "B" Unit Area of the Langlie-Mattix Field, Lea County, New Mexico.

2. That in order to conduct secondary recovery operations and to increase the amount of ultimate recovery, and thereby aid in the conservation of oil and gas, and in order to protect the correlative rights of all parties in the Unit Area, it is necessary and advisable that the Skelly Penrose "B" Unit in the Langlie-Mattix Field be established and approved.

3. That the area to be included in this Unit is described as follows:

Township 22 South, Range 37 East
E/2 SE/4 Sec. 31
W/2, SE/4, and W/2 NE/4 Sec. 32

Township 23 South, Range 37 East
W/2 NW/4 Sec. 4
All Sec. 5
NE/4 and E/2 SE/4 Sec. 6
N/2 NE/4 Sec. 7
N/2, SE/4, N/2 SW/4 and SE/4 SW/4 Sec. 8
W/2 Sec. 9

and containing 2,612.16 acres, more or less, of both fee and state lands.

4. That the formation sought to be unitized is that interval underlying the Unit Area which is productive of Unitized Substances and the vertical limits of which extend from a point 100 feet above the base of the Seven Rivers formation to the base of the Queen formation; said interval having been heretofore found to occur in Skelly Oil Company's Harrison "B" No. 11 well (located in the SE/4 SW/4 Section 9-T23S-R37E, Lea County, New Mexico) at an indicated depth of from 3,271 feet to 3,663 feet, as recorded on the Frontier Perforators Gamma Ray Neutron log, run No. 1, taken February 9, 1960, said log being measured from a derrick floor elevation of 3,327 feet above sea level.

5. That attached hereto and made a part hereof by reference is a copy of the Unit Agreement for the development and operation of the Skelly Penrose "B" Unit, along with Exhibits B and C, and that contained in said Agreement as Exhibit A is a map showing the Unit Area.

WHEREFORE, PREMISES CONSIDERED, applicant prays that this Commission, after the giving of notice as required by law, set this application down for hearing, and that at the conclusion of said hearing based on the evidence adduced approve the Unit Agreement for the Skelly Penrose "B" Unit, and for such other orders, rules and regulations as may be necessary in the premises.

Respectfully submitted,

SKELLY OIL COMPANY

By (Signed) GEORGE W. SELINGER
George W. Selinger

Original signed by
By R. J. JACOBS
Ronald J. Jacobs
Its Attorneys

Of Counsel:
L. C. White
Gilbert, White & Gilbert
Santa Fe, New Mexico

BEFORE THE NEW MEXICO OIL CONSERVATION COMMISSION

IN THE MATTER OF THE APPLICATION OF SKELLY OIL COMPANY FOR APPROVAL OF A UNIT AGREEMENT FOR THE SKELLY PENROSE "B" UNIT IN THE LANGLIE-MATTIX FIELD, LEA COUNTY, NEW MEXICO.)

CASE NO. 3267
FILED _____
HEARING _____

APPLICATION

Comes now Skelly Oil Company on behalf of itself and others and respectfully states as follows:

- 1. That it is an owner and operator of wells in the Skelly Penrose "B" Unit Area of the Langlie-Mattix Field, Lea County, New Mexico.
- 2. That in order to conduct secondary recovery operations and to increase the amount of ultimate recovery, and thereby aid in the conservation of oil and gas, and in order to protect the correlative rights of all parties in the Unit Area, it is necessary and advisable that the Skelly Penrose "B" Unit in the Langlie-Mattix Field be established and approved.
- 3. That the area to be included in this Unit is described as follows:

Township 22 South, Range 37 East
E/2 SE/4 Sec. 31
W/2, SE/4, and W/2 NE/4 Sec. 32

Township 23 South, Range 37 East
W/2 NW/4 Sec. 4
All Sec. 5
NE/4 and E/2 SE/4 Sec. 6
N/2 NE/4 Sec. 7
N/2, SE/4, N/2 SW/4 and SE/4 SW/4 Sec. 8
W/2 Sec. 9

and containing 2,612.16 acres, more or less, of both fee and state lands.

- 4. That the formation sought to be unitized is that interval underlying the Unit Area which is productive of Unitized Substances and the vertical limits of which extend from a point 100 feet above the base of the Seven Rivers formation to the base of the Queen formation; said interval having been heretofore found to occur in Skelly Oil Company's Harrison "B" No. 11 well (located in the SE/4 SW/4 Section 9-T23S-R37E, Lea County, New Mexico) at an indicated depth of from 3,271 feet to 3,663 feet, as recorded on the Frontier Perforators Gamma Ray Neutron log, run No. 1, taken February 9, 1960, said log being measured from a derrick floor elevation of 3,327 feet above sea level.
- 5. That attached hereto and made a part hereof by reference is a copy of the Unit Agreement for the development and operation of the Skelly Penrose "B" Unit, along with Exhibits B and C, and that contained in said Agreement as Exhibit A is a map showing the Unit Area.

WHEREFORE, PREMISES CONSIDERED, applicant prays that this Commission, after the giving of notice as required by law, set this application down for hearing, and that at the conclusion of said hearing based on the evidence adduced approve the Unit Agreement for the Skelly Penrose "B" Unit, and for such other orders, rules and regulations as may be necessary in the premises.

Respectfully submitted,

SKELLY OIL COMPANY

By (Signed) GEORGE W. SELINGER
George W. Selinger

Original signed by
R. J. JACOBS
By Ronald J. Jacobs
Its Attorneys

Of Counsel
L. C. Crite
Gilbert White & Gilbert
Santa Fe, New Mexico

dearnley-meier reporting service, inc.

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

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-4491 • ALBUQUERQUE, NEW MEXICO

MR. NUTTER: Call Case Number 3257.

MR. DURRETT: Application of Skelly Oil Company for a unit agreement, Lea County, New Mexico.

MR. JACOBS: Ronald J. Jacobs, Tulsa, Oklahoma, for the applicant, Skelly Oil Company. I have one witness-- may he be sworn, please.

* * *

A. H. HURLEY, JR., the witness, having been duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. JACOBS:

Q Please state your full name, by whom you are employed and in what capacity.

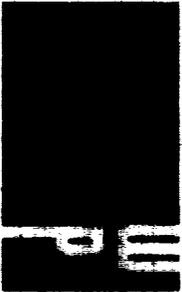
A A. H. Hurley, Jr., Skelly Oil Company, unitization engineer.

Q Have you heretofore testified before the Commission as a unitization engineer?

A I have not.

Q Please briefly outline your experience above the high school level.

A I graduated from the University of Tulsa with a Bachelor of Science degree in petroleum engineering, in 1954. I was employed by Gulf Oil and its subsidiary, Minigrande Oil Company, as a production and reservoir engineer for eight



years, and have since been employed by Skelly for the past three years as reservoir and unitization engineer.

Q In your present capacity as a unitization engineer, do you deal with the formation of units on which Skelly is the operator, or joins as a participant in the units?

A I do.

Q Are you familiar with the unit known as the Skelly Penrose B Unit, Lea County, New Mexico?

A Yes.

Q Did you prepare the unitization agreement for this unit?

A I did.

MR. JACOBS: Are there any questions as to the witness's qualifications?

MR. NUTTER: No, sir. Please proceed.

MR. JACOBS: I hand you what has been marked for identification Exhibit 1, which is unit agreement for the Skelly Penrose B Unit of Lea County, New Mexico. In general, what type of unit agreement is this, Mr. Hurley?

A Basically it is the Federal form unitization instrument, notifications of the API, form agreement.

Q As part of the unitization agreement or unit agreement, as Exhibit A to this agreement there is a map, is there not, showing the unit area?

dearnley-meier reporting service, inc.

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

1170 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-8891 • ALBUQUERQUE, NEW MEXICO

A Yes, sir.

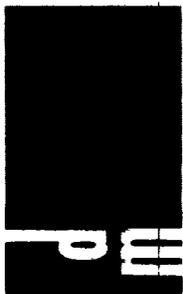
Q Please turn to that, and would you discuss from the map, or read from the application, for the record, the description of the unit area.

A The unit area is outlined as in the legend of Exhibit A to the unit agreement, and do you want the legal description?

Q Yes, please.

A It consists of the following portions of Township 22 South, Range 37 East: The north half of the southeast quarter of Section 31. -- Excuse me--the east half of the southeast quarter of Section 31; the west half of the southeast quarter and the west half of the northeast quarter of Section 32. The following is Township 23 South, 37 East: The west half of the northwest quarter of Section 4; all of Section 5; the northeast quarter and east half of the southeast quarter of Section 6; the north half of the northeast quarter of Section 7; the north half and southeast quarter and north half of the southwest quarter and southeast quarter of the southwest quarter of Section 8, and the west half of Section 9, all in Lea County, New Mexico, containing 2,612.16 acres, more or less.

Q There are both fee and state lands within the unit area, is that correct?



A That is correct.

Q What is the purpose for the formation of this unit, Mr. Hurley?

A The purpose is to conduct secondary recovery operations in the Langley Maddox formation.

Q The unitizing interval is the Langley Maddox formation?

A That's correct. That is a State definition of the Langley Maddox Pool interval.

Q And contained in the unit agreement is a definition of this interval, is that right?

A Yes, sir.

Q Please read that definition of the unitized interval.

A "It is that formation underlying the unit area which is productive of unitized substances in the vertical limits , which extend from a point 100 feet above the base of the Seven Rivers Formation to the base of the Queen Formation, said interval having been heretofore found to occur in Skelly Oil Company's Harrison B Number 11 Well located in the southeast quarter of the southwest quarter of Section 9, Township 23 South, Range 37 East, Lea County, New Mexico, at an indicated depth of from 3,271 feet to 3,663 feet, as recorded on the Frontier Perforator gamma ray neutron log, Run Number 1,

taken February 9, 1960, said log being a measure from a derrick flow elevation of 3,327 feet above sea level."

Q Is there any unusual provision of the unit agreement--is it pretty standard for this type of unit?

A It's the standard form that has been in use, involving State and Federal lands, and is patterned after the East Vista Unit.

Q What is the participation formula contained or included in this agreement?

A It is a two-way formula. First, it is to be in effect until 314,747 barrels of oil have been produced from the unitized formation after April 1, 1963. The Phase 1 formula is 50% current production for the period January 1, 1963 to April 1, 1963, and 50% remaining primary recovery as of April 1, 1963. The Phase 2 portion of the form, which will go into effect after the already mentioned 314,747 barrels has been produced, is based on 100% of ultimate primary recovery.

Q Is it your opinion and feeling that the operators who commit their interest to the unit--that this form will best protect correlative rights of interested parties within the unit?

A It is.

Q The producing interval, you say, is the Langley Maddox Pool. What is the approximate stage of depletion of wells in this area in that pool?

A As of January of this year, the maximum or the most productive well in the unit area was making 7 barrels a day, and we had wells making as low as one-half barrel a day, and the average per well was about three barrels per day. The entire area is approximately 89% depleted by the primary method.

Q It is your opinion, is it not, that it is necessary in order to recover secondary oil, to institute as soon as possible a waterflood operation within the unit area?

A It is.

Q In order to protect the correlative rights of all interested parties within the area, is it your opinion that a unit agreement is necessary because oil will be pushed across normal lease lines?

A That is true.

Q I call your attention to Exhibit 2 on the wall, and let's start with the unit to the north, in more or less a brown color...the Langley Maddox Penrose Sand Unit. Is that unit in effect now?

A Yes, that is operated by Ambassador Oil Corporation --went into effect April 1, 1964.

Q Are they flooding the Langley Maddox Pool at the present time?

A Yes, they have about five wells under injection,

and are expanding to full scale now.

Q Immediately to the west of this unit and to the north of the red unit, the Skelly Penrose B, is another operator flooding the Langley Maddox Pool?

A Yes, all that area to the west is Humble's State N Lease, and under flood at this time.

Q And the red is Skelly Penrose B, which is the subject matter of this application?

A Right.

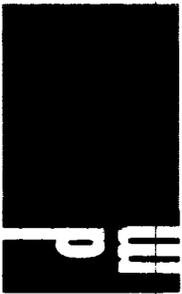
Q What about the unit colored in purple, which is the LA Penrose A?

A That unit received preliminary approval of the US Geological Survey in Washington, and is currently being distributed for sign-up.

Q What about the unit to the south, colored in green, the Skelly Penrose C?

A It is in the engineering stage. An operators' meeting has been held and an engineering committee has been charged with developing plans and operations to proceed with the unit.

Q The entire general area, then, of the Langley Maddox is being flooded now, or is contemplated to be flooded in the very near future, in order to recover secondary oil underlying and within the Langley Maddox Pool?



A Yes.

Q And in your opinion it is necessary to institute secondary recovery means in this area, so that the oil that would not otherwise be recovered, will be recovered?

A That's right.

Q What is the status of the signup in the Skelly Penrose B Unit; and I direct your attention to Exhibit 3.

A Exhibit 3 lists by tracts the current working interest and royalty signup and percentage of total unit signup, based on Phase 2 of the unit participation of the tract; and without going into great detail at this time, we have 92.88020% of all working interest, based on Phase 2 participation, signed under the unit area, and 90.55910% of the royalty under the unit area. We have assumed joinder of the State of New Mexico, based on preliminary approval of the Commissioner.

Q The Commissioner has given preliminary approval to the unit?

A Yes.

Q I notice on Exhibit 3 the anticipated unit total as of July 1st, which is the anticipated effective date of the unit?

A That's right.

Q I notice that you anticipate that 100% of the

working interest will be signed at that time, and in excess of 99.7 royalty interest will be signed at that time.

A Yes.

Q What is that dependent upon?

A There are three owners of both working interest and royalty--J. P. Carson and Mr. Hokum and Mr. Uppham, who are involved both as royalty and working interest owners in Tracts 3, 4, 5 and 6. Mr. Borg, who operates Tracts 4 and 6, has signed this unit agreement, and has agreed on a purchase price, and is currently negotiating to purchase the working interest of these three parties, at which time they have stated that they will sign the unit agreement, which will give us 100% sign-up on Tracts 3, 4, 5 and 6. On Tract 14 we expect Mr. Redburn, who operates the tract, to sign the unit operating agreement before the effective date.

Q By the effective date of the unit, then, the only people who remain unsigned are two small interests, whose interest is being held in suspense because you have been unable to locate these people?

A That is correct.

Q The unit agreement contemplates an absolute effective date of the unit of July 1, 1965?

A Yes.

Q And that is the reason we are here at this time,

seeking approval of the Commission for the unit agreement, so we can attempt to get it effective by that date?

A That is correct.

Q In your opinion, will approval of the unit agreement by the Oil Conservation Commission of New Mexico be in the interests of conservation and help protect correlative rights of all interested parties?

A It will.

MR. JACOBS: That's all the questions we have. I offer Exhibits 1 through 3 in evidence.

MR. NUTTER: Exhibits 1 through 3 will be admitted in evidence. Are there any questions of the witness? -- You have not as yet filed an application for approval of a secondary recovery project?

A No, sir.

Q That will come later on?

A We expect, because of the press of time and because our water supply wasn't quite established until just recently. We expected to get the unit agreement approved and put the unit in operation, and then come to the Commission for approval of the plan.

Q You do have preliminary approval of the Commissioner of Public Lands to the agreement, including the participation formula?

