CASE 3692: Application of SKELLY for A WATERFLOOD EXPANSION, LEA COUNTY, NEW MEXICO.

Case //o.

Application, Transcript,

5 mall Exhibits, Etc.



BRUCE KING GOVERNOR LARRY KEHOE

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501 I505) 827-2434

December 11, 1979

C. L. Wade Drawer DD Levelland, Texas 79336

> Re: Case No. 3692 Order No. R-3124

Dear Mr. Wade:

By authority granted me in Order No. R-3124, you are hereby authorized to increase the surface injection pressure on:

- (a) Lovington Paddock Unit Well No. 53 in Unit A of Section 6, Township 17 South, Range 37 East, Lea County, New Mexico,
- (b) Lovington Paddock Well No. 25 in Unit G of Section 31, Township 16 South, Range 37 East, Lea County, New Mexico,
- (c) Lovington Paddock Well No. 34 in Unit I of Section 31, Township 16 South, Range 37 East, Lea County, New Mexico, to 2200 psi.

Very truly yours,

JOE D. RAMEY

JDR/MH/og

cc: Oil Conservation Division Box 1890 Hobbs, New Mexico



STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT OIL CONSERVATION DIVISION

BRUCE KING GOVERNOR LARRY KEHOE SECRETARY

December 11, 1979

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 97501 (505) 827-2434

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> Re: Case No. 3692 Order No. R-3124

Dear Mr. Wade:

By authority granted me in Order No. R-3124, you are hereby authorized to increase the surface injection pressure on:

- (a) Lovington Paddock Unit Well No. 53 in Unit A of Section 6, Township 17 South, Range 37 East, Lea County, New Mexico,
- (b) Lovington Paddock Well No. 25 in Unit G of Section 31, Township 16 South, Range 37 East, Lea County, New Mexico,
- (c) Lovington Paddock Well No. 34 in Unit I of Section 31, Township 16 South, Range 37 East, Lea County, New Mexico, to 2200 psi.

very truly yours

JOE D. RAMEY

Director

JDR/MH/og

cc: Oil Conservation Division Box 1890 Hobbs, New Mexico

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. 3692 Order No. R-3352

APPLICATION OF SKELLY OIL COMPANY FOR A WATERFLOOD EXPANSION, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 29, 1967 at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 4th day of December, 1967, 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, Skelly Oil Company, seeks permission to expand its Lovington Paddock Unit Waterflood Project in the Lovington-Paddock Pool by the conversion to water injection into the Lovington Glorieta (Paddock) formation of seven additional wells located in Sections 25 and 35, Township 16 South, Range 36 East; Section 30, Township 16 South, Range 37 East; Sections 1 and 12, Township 17 South, Range 36 East; and Section 6, Township 17 South, Range 37 East, NMPM, Lea County, New Mexico.
- (3) That the applicant further seeks an administrative procedure whereby said project could be expanded to include additional lands and injection wells in the area of the said project as may be necessary in order to complete an efficient injection pattern; that said administrative procedure should provide for administrative approval for conversion to water

-2-CASE No. 3692 Order No. R-3352

injection in exception to the well response requirements of Rule 701 E-5 of the Commission Rules and Regulations.

- (4) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.
- (5) That the proposed expansion of the Lovington Paddock Unit Waterflood Project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.
- (6) That the subject application should be approved and the expanded project should be governed by the provisions of Rules 701 702, and 703 of the Commission Rules and Regulations; provided, however, that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

IT IS THEREFORE ORDERED:

(1) That the applicant, Skelly Oil Company, is hereby authorized to expand its Lovington Paddock Unit Waterflood Project in the Lovington-Paddock Pool by the injection of water into the Lovington Glorieta (Paddock) formation through the following-described wells in Lea County, New Mexico:

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Lovington Paddock Unit Well No. 4, Unit M, Section 25 Lovington Paddock Unit Well No. 6, Unit O, Section 25 Lovington Paddock Unit Well No. 44, Unit O, Section 35

TOWNSHIP 16 SOUTH, RANGE 37 BAST, NMPM

Lovington Paddock Unit Well No. 8, Unit M, Section 30

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM

Lovington Paddock Unit Well No. 73, Unit M, Section 1 Lovington Paddock Unit Well No. 80, Unit G, Section 12

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM

Lovington Paddock Unit Well No. 70, Unit M, Section 6

-3-CASE No. 3692 Order No. R-3352

(2) That the expanded waterflood project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations;

PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve expansion of the Lovington Paddock Unit Water-flood Project to include such additional lands and injection wells in the area of said project as may be necessary to complete an efficient water injection pattern; that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

- (3) That monthly progress reports of the expanded 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

DAVID F. CARGO, Chairman

GUYTON B. HAYS, Member

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

esr/

OIL CONSERVATION COMMISSION P. O. BOX 2088 SANTA FE, NEW MEXICO 87501

Case file

December 6, 1967

Mr. J. B. Grant Skelly Oil Company Post Office Box 1650 Wulsa, Oklahoma 74102

Dear Sir:

Reference is made to Commission Order No. R-3352, recently entered in Case No. 3692, approving the expansion of Skelly's Lovington Paddock Unit Waterflood Project.

Additional injection is to be through the seven newly authorized water injection wells, each of which shall be equipped with internally-coated tubing and a packer. Packers shall be set within 100 feet of the uppermost perforation in the Paddock, or in the case of open hole completions, within 100 feet of the casing shoe. The casingtubing annulus shall be loaded with an inert fluid and fitted with a pressure gauge or left open to facilitate detection of tubing or packer leaks.

As to allowable, our calculations indicate that when all of the newly authorized injection wells have been placed on active injection, the maximum allowable which the expanded project will be eligible to receive under the provisions of Rule 701-E-3 is 5750 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less, subject to acreage factor adjustment for certain wells in the unit.

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

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE. NEW MEXICO 87501

Page -2-Mr. J. B. Grant Skelly Oil Company Tulsa, Oklahoma 74102

both of the aforementioned Commission offices by letter of any change in 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.

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

ALP/DSN/ir

GC: Oil Conservation Commission Hobbs, New Mexico

> State Engineer Office Santa Fe, New Mexico

OFFSET OPERATORS' MAILING LIST

LOVINGTON PADDOCK UNIT

October 11, 1967

Care 3692

Amerada Petroleum Corporation P.O. Box 2040 Tulsa, Oklahoma

Attn: Mr. J. C. Blackwood

McCullough Oil Corp. of Calif. Twelfth Floor McCullough Bldg. 6151 West Century Blvd. Los Angeles, California 90045

Socony Mobil Oil Company, Inc. P.O. Box 2406 Hobbs, New Mexico

Ashland Oil and Refining Co. P.O. Box 18695 Oklahoma City, Oklahoma 73118

Attn: Mr. Bill Hinkle

Northern Natural P.O. Box 1786 Midland, Texas

Southern Petroleum Exploration 200 West 1st Box 1434 Roswell, New Mexico

Tom Brown Drilling Company, Inc. Pan American Petroleum Corp. P.O. Box 5131 Midland, Texas 79701

P.O. Box 1410 Fort Worth, Texas 76101

'Attn: Mr. N. S. Whitmore

Sunray DX Oil Company 1001 Wilco Building Midland, Texas

Attn: Mr. V. M. Williams

Consolidated Oil and Gas Writer Building 4130 East Mexico Denver, Colorado

Phillips Petroleum Company Room B-2 Phillips Building Odessa, Texas

Attn: Mr. J. N. Perkins

Tenneco Oil Company P.O. Box 1031 Midland, Texas 79701

John L. Cox 305 V & J Tower Midland, Texas 79701

Shell Oil Company P.O. Box 1509 Midland, Texas 79704 Union Oil Company of California Union Oil Company Bldg. Midland, Texas 79701

Getty Oil Company P.O. Box 1231 _Midland, Texas 79701 Sinclair Oil & Gas Company P.O. Box 1920 Hobbs, New Mexico 88240

Attn: W. F. Burns

GOVERNOR DAVID F. CARGO CHAIRMAN

State of New Mexico Gil Conservation Commission

LAND COMMISSIONER GUYTON B. HAYS MEMBER



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

P. O. BOX 2088 SANTA FE

December 4, 1967

Re:	Case No	3692
	Order No	R-3352
	Applicant:	
	SKELLY OIL	COMPANY

Dear Sir:

Mr. J. B. Grant Skelly Oil Company Post Office Box 1650 Tulsa, Oklahoma 74102

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. Secretary-Director

ALP/ir

Carbon copy of order also sent to:

Hobbs	OCC_	×		
Artes	ia oc	C		
Aztec	OCC_			
State	Engi	neer	×	
Other				

Case 3697

Plead 11-29-67

Rec. 11-30-67

(, Grant Skelly permission to cinject wally ento the sportlowing action with forward to Paddock Waterflood.

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L #4501 G 12 L

L #501 G 12 L

L #501 M 30 16-37

L L #70-M 6 17-37

That Cedmin coppion for day further injection well- which many be needed in this project.

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. 3467 Order No. R-3124

APPLICATION OF SKELLY OIL COMPANY FOR A WATERFLOOD PROJECT, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 28, 1966, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 30th day of <u>September</u>, 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, Skelly Oil Company, seeks permission to institute a waterflood project in the Lovington Paddock Unit Area, Lovington-Paddock Pool, by the injection of water into the Lovington Glorieta (Paddock) formation through 22 injection wells in Sections 25, 35, and 36, Township 16 South, Range 36 East, Sections 31, Township 16 South, Range 37 East, Sections 1, 2, and 12, Township 17 South, Range 36 East, and Section 6, Township 17 South, Range 37 East, NMPM, Lea 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.

-2-CASE No. 3467 Order No. R-3124

(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, Skelly Oil Company, is hereby authorized to institute a waterflood project in the Lovington Paddock Unit Area, Lovington-Paddock Pool, Lea County, New Mexico, by the injection of water into the Lovington Glorieta (Paddock) formation through the following-described wells:

TOWNSHIP 16 SOUTH, RANGE 36 EAST, NMPM

Mobil-State "K" Well No. 4, Unit I, Section 25
Skelly-Mexico "Y" Well No. 1, Unit A, Section 35
Cities Service-State "AE" Well No. 3, Unit I,
Section 35
Skelly-State "R" Well No. 10, Unit C, Section 36
Skelly-State "R" Well No. 8, Unit K, Section 36
Skelly-State "N" Well No. 3, Unit A, Section 36
Tidewater-State "M" Well No. 4, Unit I, Section 36

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM

Texaco-Graham Well No. 3, Unit C, Section 31
Skelly-State "O" Well No. 24, Unit G, Section 31
Skelly-State "O" Well No. 20, Unit I, Section 31
Sinclair-State "182-A" Well No. 5, Unit K, Section 31

TOWNSHIP 17 SOUTH, RANGE 36 EAST, NMPM

Lee Drlg. Co.-State "E" Well No. 1, Unit C, Section 1

Amerada-State "LA" Well No. 16, Unit A, Section 1

Amerada-State "LA" Well No. 20, Unit K, Section 1

Mobil-State "R" Well No. 10, Unit I, Section 1

Lee Drlg. Co.-State "E" Well No. 5, Unit A, Section 2

Mobil State "R" Well No. 12, Unit I, Section 2

Cities Service-State "AJ" Well No. 1, Unit C, Section 12

McBee-State "A" Well No. 2, Unit A, Section 12

-3-CASE No. 3467 Order No. R-3124

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM

Ashland-C.S. Caylor Well No. 5, Unit C, Section 6
Skelly-C. S. Caylor Well No. 5, Unit A, Section 6
Skelly-C. S. Caylor Well No. 2, Unit K, Section 6

- (2) That the subject waterflood project is hereby designated the Lovington Paddock 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, Chairman

GUYTON B. HAYS, Member

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

SRAI

esr/



SKELLY OIL COMPANY

P.O. Box 730, Hobbs, New Mexico October 11, 1967

Char 3692

Re: Application for Injection Expansion Lovington Paddock Unit Lea County, New Mexico

New Mexico Oil Conservation Commission State Land Office Building P.O. Box 2088 Santa Fe, New Mexico

Dear Sirs:

This is an application for administrative approval to expand the Skelly Oil Company's Lovington Paddock Unit water injection system by converting seven producing wells to water injection. This unit was established by the Oil Conservation Commission Order No. (R-3124 issued on September 30th, 1966. In the original application, 22 injection wells were approved, but 19 were to be used initially with the remaining three to be added when suitable cross-line agreements could be arranged. It was anticipated that 9,000 barrels per day would be injected into the 19 wells initially converted.

Injection commenced in December, 1966 at an average rate of 9,000 barrels per day. The injection rate has declined to a daily average now of about 5,500 barrels per day. The maximum safe design pressure of the injection plant is being maintained. No response to injection has been experienced anywhere in the unit, as of this time.

Skelly desires to inject 9,000 barrels of water per day into the reservoir; therefore, we are requesting approval to convert the following wells to water injection:

Township 16 South, Range 36 East
Unit Well No. 4, Unit M, Section 25
Unit Well No. 6, Unit O, Section 25
Unit Well No. 44, Unit O, Section 35

Township 17 South, Range 36 East Unit Well No. 73, Unit M, Section 1 Unit Well No. 80, Unit G, Section 12

Township 16 South, Range 37 East Unit Well No. 8, Unit M, Section 30

Township 17 South, Range 37 East Unit Well No. 70, Unit M, Section 6

Oct 16 AM (1981)

DOCKET MAILED

oto M.

New Mexico Oil Conservation Commission Lovington Paddock Unit - 10-11-67

Page No. 2

Attached is a map showing all wells in a two mile radius, a unit plat showing injection wells and proposed injection wells, schematic diagrams of the proposed injection wells, partial copies of logs on the proposed injection wells, and forms C-116 on the wells in accordance with Rule 701-B and 701-E-5, as stated above no response has been experienced; therefore, only one C-116 is included, reflecting the current producing ability of the wells.

Very truly yours, SKELLY OIL COMPANY

V. E. Fletcher District Superintendent

BOB/bh

ATTACHMENTS

- P.S. Notices have been sent to the following:
 - 1. State Engineer's Office-Application and all exhibits.
 - Offset Operators (as per Attachment)-Application and plat of Unit. NOTE: No waiver of objection was requested from offset operators.

WHITE, GILBERT, KOCH & KELLY (GILBERT, WHITE AND GILBERT)

ATTORNEYS AND COUNSELORS AT LAW

SANTA PE, NEW MEXICO 87501

CARL H. GILBERT (1891-1963)
L.C.WHI FE
WILLIAM W. GILBERT
SUMNER S. KOCH
WILLIAM BOOKER KELLY
JOHN F. MCCARTHY, JR.

November 21, 1967

POST OFFICE BOX 787
TELEPHONE 982-4301
(AREA CODE 505)

New Mexico Oil Conservation Commission State of New Mexico Santa Fe, New Mexico

Re: Skelly Oil Company Injection System Expansion, Lovington Paddock Unit,

\$3 50

Lea County, New Mexico

Gentlemen:

Please enter our appearance as local counsel for Skelly Oil Company in the above captioned application which is scheduled for hearing on November 29, 1967.

Very truly yours,

L. C. WHITE

LCW:el

Docket No. 36-67

DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 29, 1967

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

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

CASE 3689:

Application of Sunray DX Oil Company for a dual completion and salt water disposal, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its Navajo Table Mesa Well No. 2, located in Unit O of Section 27, Township 28 North, Range 17 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from the Table Mesa-Pennsylvanian "C" Oil Pool and the disposal of produced salt water through the intermediate casing-production casing annulus into the Organ Rock formation through perforations in said intermediate casing from approximately 5505 feet to 5525 feet.

CASE 3690:

Application of Roger C. Hanks, Ltd., for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Bar-U Pennsylvanian Pool, Lea County, New Mexico, including a provision for 160-acre spacing units and the establishment of 80-acre allowables for said 160-acre units.

CASE 3691:

Application of Roger C. Hanks, Ltd., for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Bough "C" zone of the Pennyslvanian formation adjacent to the Bar-U Pennsylvanian Pool in its Tidewater State Well No. 1 located in Unit H of Section 31, Township 8 South, Range 33 East, Chaves County, New Mexico.

CASE 3692:

Application of Skelly Oil Company for a waterflood expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the expansion of its Lovington Paddock Unit Waterflood Project, Lovington Paddock Pool, by the conversion to water injection of seven additional wells located in Sections 25 and 35, Township 16 South, Range 36 East; Section 30, Township 16 South, Range 37 East; Sections 1 and 12, Township 17 South, Range 36 East; and Section 6, Township 17 South, Range 37 East, Lea County, New Mexico.

CASE 3693:

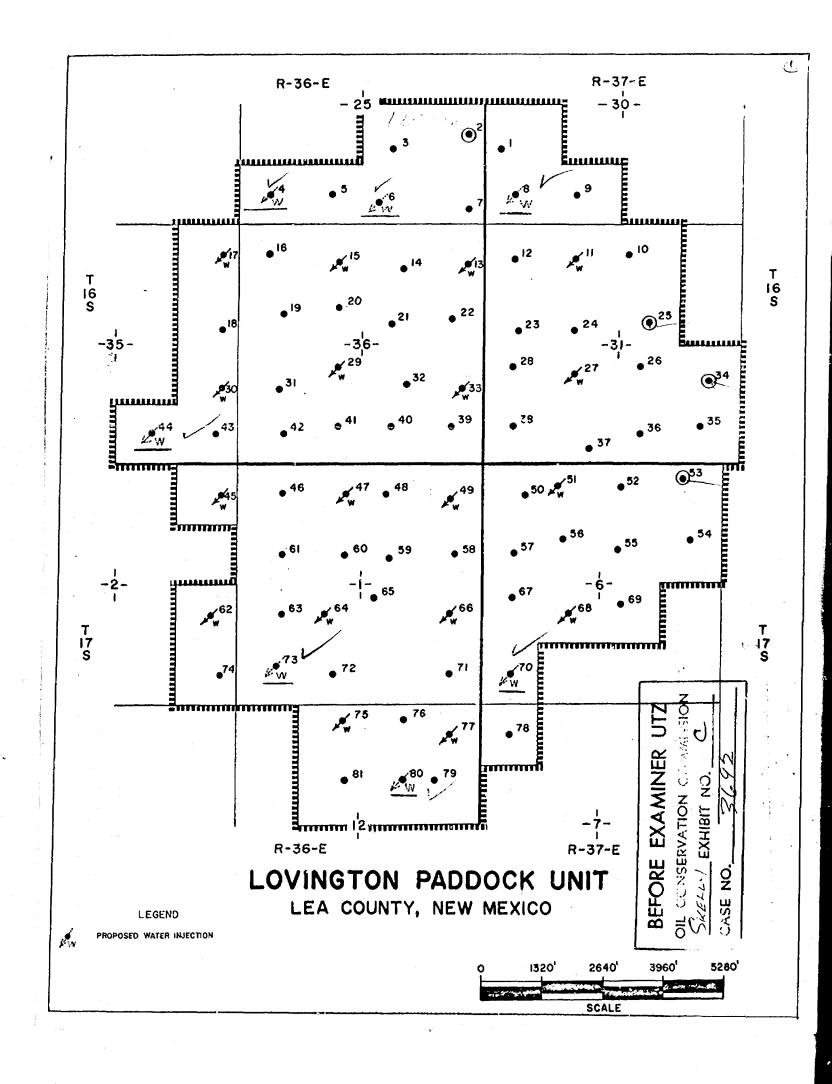
Application of Atlantic Richfield Company for an exception to Order No. R-3221, Lea County, New Mexico. Applicant, in the above-styled cause, on its own behalf and as operator of the Denton Salt Water Disposal System, seeks an exception to the provision of Paragraph (6) of Commission Order No. R-3221 which requires that certain unlined pits used for the disposal of produced salt water be filled, leveled, and compacted. Applicant proposes that said pits be left open in the Denton Field, Lea County, New Mexico, to permit their use for temporary emergency storage of produced water in connection with individual tank batteries connected to the Denton Salt Water Disposal System operated by Atlantic Richfield Company.

-2-Examiner Hearing - November 29, 1967

Docket No. 36-67

CASE 3694: Application of Mallard Petroleum Inc., for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox gas well location of its Alves Well No. 1, located 660 feet from the South line and 990 feet from the East line of Section 6, Township 20 South, Range 36 East, Lea County, New Mexico, said well being completed as an apparent extension of the North Osudo-Morrow Gas Pool.

CASE 3695: Application of Tenneco Oil Company for Special Pool Rules, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the South Hospah Upper Sand Oil Pool and the South Hospah Lower Sand Oil Pool, McKinley County, New Mexico, to provide that wells drilled in said pools could be located anywhere on the 40-acre unit except that no well could be located closer than 330 feet to the outer boundary of the lease nor closer than 200 feet to another well producing from the same pool. Applicant further proposes that any existing well not located in accordance with the above requirements be granted an exception to said requirements.



מפסורות א-ווופופו ובשחחונות אפואונה ווני

1120 SIMMS BLDG. . P. O. BOX 1092 . PHONE 243-6491 . ALBUQUERQUE, NEW MEXICO

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 29, 1967

EXAMINER HEARING

IN THE MATTER OF:

Application of Skelly Oil

Company for a waterflood
expansion, Lea County, New

Mexico.

)

CASE 3692

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 3692.

MR. HATCH: Case 3692. Application of Skelly Oil Company for a waterflood expansion, Lea County, New Mexico.

MR. GRANT: J. B. Grant, Tulsa, Oklahoma, for the Applicant. I have one witness.

MR. UTZ: Other appearances?

(Witness sworn)

MR. GRANT: Before we begin, Mr. Examiner, I might state that the only reason we are here with this application rather than administratively, is because there has not yet been response to this waterflood project. Had there been, of course, we could have received administrative approval on the wells.

LARRY R. HALL

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

DIRECT EXAMINATION

BY MR. GRANT:

- Q Please state your name and place of residence.
- A Larry R. Hall, Hobbs, New Mexico.
- Q By whom are you employed and in what capacity?
- A I am employed by Skelly Oil Company as an advance

production engineer.

- Q Have you offered testimony before this Commission as an Engineer on previous occasions, and have your qualifications been accepted?
- A I have testified and my qualifications have been accepted.
- Q Are you familiar with the Lovington Paddock Unit of the Lovington Paddock Waterflood Project?
 - A Yes, sir, I am.
 - Q That is the subject of this application, is it not?
 - A Yes, it is.
- Q Would you please give the Examiner a little background on the Lovington Paddock Unit in this waterflood project?
- A The Lovington Paddock unit is operated by Skelly
 Oil Company. It was established by the New Mexico Oil
 Conservation Commission Order R-3124, issued on September30,
 1966. The unit consists of 81 wells, 18 of which are currently
 water injection wells and 63 are producing oil wells. The
 original order established 22 water injection wells, offset
 producers have caused a delay in converting four of these wells
 and no property lease-line agreements can be made to protect
 correlative rights. These agreements are pending on the
 formation of a waterflood unit to the east of the Lovington Paddock

unit which is not expected to become effective in the immediate future.

Q When did injection of water begin in these 18 wells, Mr. Hall?

A We began the injection of water in December of 1966; our initial plan of operation and our economic projections were based on an injection rate of 9000 barrels of water per day. The waterflood plant and the water injection system were designed to handle this volume at a pressure of 1850 pounds. It became apparent, quite soon, that the reservoir would not accept water at the anticipated rate through only these 18 wells. We acidized four of these wells in an attempt to increase the injectivity. These acid jobs did not increase the injection rates and indicated that the problem was not well—bore damage, but reservoir characteristics. In order to inject water at our desired rate, more wells would have to be utilized. For this reason we are requesting additional wells be approved for conversion to water injection.

Q In other words, to receive response from this project, you would have to inject 9000 barrels into the formation at 1850 PSI and the formation is not now capable through the existing injection wells of accepting that volume, is that correct?

Q Referring to those four wells which were previously approved and which have not yet been converted, you mentioned in passing awhile ago, the reason why those have not yet been converted, would you go into -- point those wells out for the Examiner, and go into a little more detail as to the status of those wells and what the plans for them are?

A The four wells are -- the first one is Unit Well number 2, it is in Section 25 in the southeast quarter. Well number 25 which is in the northeast quarter of Section 31, Well number 34 which is in the southeast quarter of Section 31 and Well number 53 which is in the northeast quarter of Section 6. The three well numbers, 25, 34 and 53, have been delayed pending the formation of this waterflood unit to the east. It was pointed out in our original application in '66, that these wells would be delayed until proper lease-line agreements could be made between these two units.

- Q Are negotiations underway at the present time for that lease-line agreement?
- A No, there has been one operators meeting, I understand, on this unit and it has not progressed to the extent that we can start negotiations.
- Q But progress is being made and you do expect to convert those in the very near future, is that correct?

(Whereupon Skelly's Exhibit B marked for identification)

Q I now hand you what has been marked Skelly's Exhibit number B and ask you to state what that is and what it tends to show?

A Exhibit B is a map showing all the wells and leases within a two-mile radius of the Lovington Paddock Unit. It also shows a formation from which said wells are producing or have produced. The Paddock reservoir is the middle of the three oil producing horizons; these being the San Andres, Paddock and the Abo. Also shown on this exhibit is a boundary outline of the Lovington Paddock and the Lovington-San Andres units; both units operated by Skelly Oil Company.

(Whereupon Skelly's Exhibit C marked for identification)

Q I now refer you to what has been marked Skelly's Exhibit C and ask you to state what that is.

A Exhibit C is the plat of the Lovington Paddock unit showing only the Paddock well locations. The present and the proposed injections wells are designated on this exhibit.

The current 18 wells are indicated by the API standard symbol. The four wells approved as injection wells on the original order which have not yet been converted, are shown with a blue circle around the well location. The seven wells applied for in this application are underlined in red.

A That is correct.

(Whereupon, Skelly's Exhibit A marked for identification)

- Q I hand you what has been marked Skelly's Exhibit
 A and ask you to state what that is and what it tends to show?
- A Exhibit A is our tabulation of monthly water injection rates since the start of our injection. This tabulation shows a decline of water being injected. It also indicates that if the decline continues it won't be very long until only a small volume of water will be injected into the reservoir, greatly increasing the time required to complete the waterflood project.
- Q The approval which was previously received for the 22 wells, was based on an inverted nine-spot pattern, was it not?
 - A That is correct.
- Q And these additional wells which you are now seeking would change that to a five-spot pattern, would they not?
- A That's right, in the area of where these additional conversions will be made. The nine-spot will be converted to the regular five-spot pattern.
- Q And this would hold true for any additional wells that might possibly be converted at a later time?
 - A That's right.

A We could receive a response at a lesser injection rate, but it would be a delayed response and the time is in essence. Based on this performance to date of the reservoir's ability to take this fluid, we are requesting that this application be approved and that provisions be made to allow these additional wells to be converted for injection by administrative approval, to the Secretary-Director. In the event that these seven wells will not take the desired volumes, we are requesting that additional wells could be converted if the need again arises to have injection wells, to add injection wells to permit the injection of our desired 9000 barrels a day.

MR. GRANT: I might say, Mr. Examiner, that the application stated that we are requesting approval for eight additional injection wells; actually there are seven as the exhibits attached to the application indicate.

O So, what you are saying now, Mr. Hall, is that we not only wish approval of these seven wells, but we want the order the provide that administratively we may obtain approval for additional injection wells in either one of two events; in the event that they are needed to achieve response or in the event that response is obtained and the additional wells are needed to maintain the flood in the natural state of progression, is that correct?

- A Yes, this is right.
- Q Those two Tenneco wells on the north, they are outside of the unit area, are they not?
- A Yes, they are shown on the largemap, Exhibit B. Exhibit C does not show those outside wells. At the original application we had intended to inject into Well number 2 at the outset of the formation of this unit, however, Tenneco has completed the northeast diagonal well to this well number 2 and we cannot start injection in this well because of this offset production.
- Q So to protect correlative rights, you can't convert that one guite yet?
 - A This is true.

(Whereupon Skelly's Exhibits Dl through D8 marked for identification)

- Q I now refer you to what has been marked Exhibit D1; actually it is Exhibit D and it is in seven parts.
 - A Eight parts.
- Q Excuse me, eight parts. Exhibit Dl through D8 and I would ask you to explain what those are and what they tend to show?
- A Exhibits D1 through D7 are the schematic diagrams of these seven proposed injection wells with the log sections attached. Shown on these diagrams are all casing strings

including the diameters and the setting depths, perforated or open hole intervals. Tubing string including the diameter and the setting depth and a top and location of packer. Exhibit D8 is a table which has been prepared showing these casing programs on these seven proposed injection wells and showing the quantities of cement used and the tops of cement behind each casing string.

- Q Is Exhibit D7 the same exhibit which was furnished by mail to the Examiner with the application?
- A Exhibit D7 has been changed. It is different from the one sent through the mail.
 - Q In what way?
- A The seven-inch casing string was shown as a full string on the original application. It was a well that we took over from the former operator and we had conflict in that seven-inch is a liner rather than a full casing string and I believe the surface casing was left off of the original exhibit.
 - Q And Exhibit D8 was added?
 - A That's correct.
 - Q All right.

(Whereupon Skelly's Exhibit E marked for identification)

Q I now refer you to what has been marked Exhibit E and ask you to state what that is and its purpose?

Mexico Oil Conservation Commission on this Lovington Paddock Unit. It is dated May the 2nd, 1967. The production at the present time is comparable to that shown on this form. As no response to injection has been noted within the unit, the average daily well production is six barrels of oil per day per producing well.

- Q Since the average well daily production is only six barrels of oil, is it your opinion based on expert engineering evidence, that this unit is in an advanced state of depletion and the wells are classed as stripper wells and that the granting of this application is necessary in order to recover oil which might not otherwise be recovered?
 - A Yes, it is my opinion.
- Q Will Skelly continue to submit progress reports monthly in accordance with Rules 704 and 1120 in the event this application is granted?
 - A Yes, sir, we will.
- Q Has a copy of this application and exhibits been furnished to the State Engineer?
- A Yes, the State Engineer has been furnished all exhibits including D8, the supplement to Exhibit D and the revised D7.

Q Has he expressed any objection to the application?

A No, sir.

MR. GRANT: Exhibit A, which incidentally, Mr. Examiner, was also not mailed to the Examiner previously, but was furnished here today.

O Were Exhibits A through E prepared either by you or under your supervision and direction?

A They were.

MR. GRANT: We, offer Exhibits A through E.

MR. UTZ: Without objection Exhibits A through E will be entered into the record of this case.

(Whereupon Skelly's Exhibits
A through E were offered and
admitted in evidence)

MR. GRANT: I have no further questions.

MR. UTZ: Mr. Grant, these four wells which you say you had previous approval and have not converted yet because of these lease-line agreements, are they listed in Order 3124?

MR. GRANT: That's the original order, yes, sir, they were listed.

MR. UTZ: I was just glancing at them here and I'm having a little trouble.

A I think the original order --

MR. UTZ: Let's go off the record a minute.

(An off the record discussion was held)

MR. UTZ: You are not seeking approval for those four wells here?

MR. GRANT: No, sir, we were merely explaining their status at the present time.

MR. UTZ: And the seven wells listed are the seven wells on which you are requesting approval at this time, are the ones listed on page 1 of your application, are they not?

MR. GRANT: Yes, sir.

MR. UTZ: And those locations are correct?

MR. GRANT: Yes, sir.

MR. UTZ: Any other questions? Witness may be excused.

(Witness excused)

MR. UTZ: Case will be taken under advisement. Any other statements?

INDEX

WITNESS	- A	
LARRY R. HALL		PAGE
Direct Exami	nation by Mr. Grant	2

EXHIBITS

	- 1 5			
EXHIBIT	MARKED	00000		
Skelly's Exhibit		OFFERED	AND ADMITTED	
A	6			
Skelly's Exhibit				
	7			
Skelly's Exhibit	7			
Skelly's Exhibits Dl through D8	9			
Skelly's Exhibit E	10			
Skelly's Exhibits A through E				
			12	

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, KAY EMBREE, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

Witness my Hand and Seal this 5th day of Delember, 1967.

Ray Complete

My Commission Expires:

Nov. 13, 1957

to hereby sortify that the foregrains is to take record of the proceedings in the exampler hearths of case to. 2012, here dry no on the case to 196.

New Moxico Cil Conservation Complection

SKELLY OIL COMPANY

MONTHLY WATER INJECTION

LOVINGTON PADDOCK UNIT

Month & Year 1966		Water Injected (Barrels)	Daily Average Water Injected (Barrels)
December		120,373	9,612
1967			
January		259,608	8,374
February		205,964	7,355
March		205, 965	6,644
April		187,392	6,245
May		187, 381	6,046
June		170,766	5,692
July		182,323	5,881
August		175,538	5,662
September		163, 153	5,438
	TOTAL	1,858,463	

BOB/bh 11-17-67

BEFORE EXAMIN'ER	UTZ
IL CONCERVATION .	1.29
SKELLY EXHIBIT.	<u>A</u>
CASE NO. 3692	

SKELLY OIL COMPANY LOVINGTON PADDOCK UNIT WELL NO. 4 660' FS & WL'S, SECTION 25, T-16-S, R-36-E LEA COUNTY, NEW MEXICO

2 3/8" O D 4.7 Lb. EUE J-55 Internally Coated

Tubing

Elev. D.F. 3857 8 5/8" O.D. Casing Set @ 2110' Cement W/975 Sxs. Cement Circulated to Surface.

5 1/2" Tension Type Packer Set @ 6100'

 5 1/2" O.D. 14, 15.5, & 17# Casing Set @ 6130' Cemented W/450_Sxs._

BEFORE EXAMINER UTZ

OIL CONSERVATION COMMISSION SIKELLY EXHILIT NO. D-1 3693

T.D. 6277'

SKELLY O'TL COMPANY

LOVINGTON PADDOCK UNIT WELL NO. 6 480' FSL 2280' FEL, Section 25, T-16-S, R-36-E LEA COUNTY, NEW MEXICO

> Elevation D.F. 3853' Set @ 6080'.

9 5/8" O.D. 32.3 & 36 Lb. H&J Casing Set @ 3145' W/1800 Sacks.

5 1/2" Tension Type Packer

5 1/2" O.D. 15.5 Lb. J-55 Casing Set @ 6118' W/475 Sacks.

T.D. 6285'

BEFORE EXAMINER UTZ

OIL CONSERVATION COMMISSION
SKELLY EXHIBIT NO. D-2

3692 CASE NO.___

2 3/8" O.D. 4.7 Lb. J-55 Internally Coated Tubing SKELLY OIL COMPANY
LOVINGTON PADDOCK UNIT WELL NO. 8
660' FS & WL's, SECTION 30, T-16-S. R-37-E
LEA COUNTY, NEW MEXICO

Elevation D.F. 3837

13 3/8" O.D. 48 Lb. Casing Set @ 323' W/350 Sacks

9 5/8" O.D. 36 & 40 Lb. Casing Set @ 4705' W/2700 Sacks.

2 3/8" 0.D. 4.7 Lb J-55 Internally Coated Tubing

 $7^{\,\prime\prime}$ Tension Type Packer Set @ 6070'.

Perfs: 1 Shot Per Interval 6109'-10',15',16',23',24',25',38',39',40', 41',42',53',54',64',65',66',67',72',73', 74',75,'84',85',86',88',

> Perf's 4 Holes per Foot 6200'-6260' 7" O.D. 20 & 23 Lb. Casing Set @ 6270' W/450 Sacks

BEFORE EXAMINER UTZ

Skeazy EXHIBIT NO. D-3

CASE NO. 3692

T.D. 6270'

LOVINGTON PADDOCK UNIT WELL NO. 8

PROCEEDURE TO PERFORATE ADDITIONAL ZONES AND CONVERT TO INJECTION.

- 1. Pull rods and tubing.
- 2. Perforate 7" 0.D. casing one shot per interval 6109'-10',15',16',23',24', 25',38',39',40',41',42',53',54',64',65',66',67',72',73',74',75',84',85',86', 87', and 88'.
- 3. Run tubing with packer and retrievable Bridge Plug. Set BP @ 6196'. Set Tubing bottom approximately 6100'. Set Packer and treat casing perforations 6109' to 6184' with 1000 Gallons 15% Mud Acid and 40 Ball Sealers. Ball Out. Flow and swab acid water back.
- 4. Pull tubing Bridge Plug and packer.
- 5. Run plastic coated tubing and tension packer.
- 6. Put on injection.

BOB/bh

SKELLY OTL COMPANY LOVINGTON PADDOCK UNIT WELL NO. 44 660' FSL & 1880' FEL, JECTION 35, T-16-S, R-36-E LEA COUNTY, NEW MEXICO

Elevation D.F. 38561 13 3/4" OD 27.3 # Casing Set 286 W/325 Sacks 8 5/8" OD 24 & 32# Casing Set @ 4694' W/2150 Sacks 2 3/8" OD 4.7# J-55 Internally Coated Tubing Perfs.6/Ft 6194'-6224' Cement on Top. BEFORE EXAMINER UTZ SKELLY EXHIBIT NO. D-4 W/740 Sacks

5 1/2" Tension Type Packer @ 6150'.

Perfs.6/Ft 6292'-6328' CI Bridge Plug 6350' W/7'

5 1/2" OD 17# Set at 8875 Gement Plug Top 88791

T.D. 9069'

SKELLY OIL COMPANY
LOVINGTON PADDOCK UNIT WELL NO. 70
660' FSL, 614' PWL, SECTION 6, T-17-S, R-37-E
LEA COUNTY, NEW MEXICO

Elevation 3822' D.F.

8 5/8" O.D. 32 Lb. Casing Set @ 1921' W/900 Sacks.

2 3/8" O.D. 4.7 Lb. J-55 Internally Coated Tubing

> 5 1/2" Tension Type Packer Set @ 6100'.

5 1/2" 0.D. 15.5 Lb. & 17 Lb. Casing Set @ 6131' W/200 Sacks.

BEFORE EXAMINER UTZ

Shelfer 3692

T.D. 6250'

LOTTICTON PARTY 1 1841. 12.73

853' FS & WL's, SECTION 1, N-17-8 R-36-E
LEA COUNTY, NEW MEXTCO

Elevation D.F. 3837'

13 3/8" O.D. 36 Lb. Casing Set @ 296' W/300 Sacks.

8 5/8" O.D. 32 Lb. Casing Set @ 3747' W/1500 Sacks

2 3/8" O.D. 4.7 Lb. J-55 Internally Coated Tubing

5 1/2" O.D. Tension Type Packer Set @ 6075'

5 1/2" 0.D. 15.5 & 17 Lb. Casing Set @ 6105' W/500 Sacks.

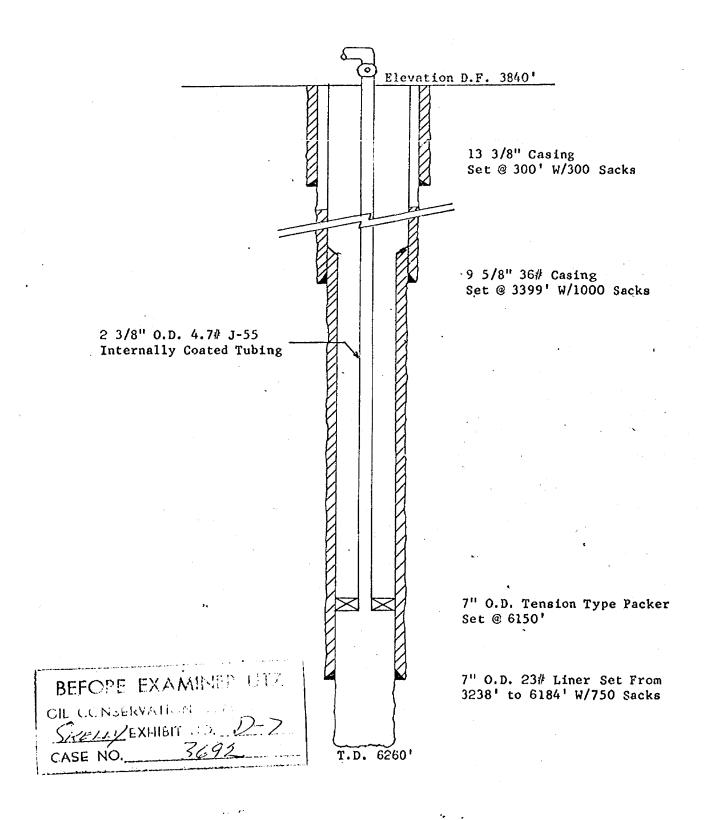
BEFORE EXAMINER UTZ

OIL CONSERVATION C. D.-C.

CASE NO._

T.D. 6248

SKELLY OIL COMPANY
LOVINGTON PADDOCK UNIT WELL NO. 80
1650' FN & EL's, SECTION 12, T-17-S, R-36-E
LEA COUNTY, NEW MEXICO



LOVINGTON PADDOCK UNIT WATER INJECTION EXPANSION

CASING PROGRAM

UNIT WELL NO	SIZE CASI	NG DEPTH		EMENT KS USED	TOP OF CEMENT	METHOD OF DETERMINING CEMENT TOPS
4	8 5/8"	2110		Sxs	Surface	Visual
	5 1/2"	6130'	465	Sxs	3891'	Temp. Survey
6	9 5/8"	3145'	1800	Sxs	Surface	Visual
	5 1/2"	6118'	475	Sxs	3974'	Temp.Survey
8	13 3/8"	323'	350	Sxs	Surface	Visual
·	9 5/8"	47051	2700		Surface	Calculated (1)
	7"	6270'		Sxs	3621	Calculated (1)
44	13 3/8"	286'	325	Sxs	Surface	Visual
	8 5/8"	4694'	2150	Sxs	Surface	Visual
	5 1/2"	8875 ¹ .	740	Sxs	3250 '	Survey
70	8 5/8"	1921'	900	Sxs	Surface	Visual
	5 1/2"	6131'	200	Sxs	4900'	Temp.Survey
73	13 3/8"	296'	300	Sxs	Surface	Calculated (1)
• -	8 5/8"	3747'	1500		1145'	Survey
,	5 1/2"	6105'	500	Sxs	34261	Survey
80	13 3/8"	3001	300	Sxs	Surface	Visual
	9 5/8"	33991	1000		5731	Calculated (1)
	7" Liner					
	3238¹ to	6184'	750	Sxs	3238	Visual

⁽¹⁾ Tops calculated using 1.18 cubic feet per sack of cement and 75% fill efficiency.

BOB/bh

DEFORE EXAMPLES 17 17 OIL CONSERVATION D-8 CASE NO. 3693

NEW MEXICO OIL CONSERVATION COMMISSION GAS - OIL RATIO TESTS

C-116 Revised 1-1-65

SKELLY OIL COMPANY	ľ		l'er	LOVINGION PADDOCK.C. County LEA.													
P.O. BOX 730, HOBB	(ICO	TYPE OF TEST - IX (3) Scheduled X Completion Spec											ecial 🗍				
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 	24	<u>/~</u> .	13/	1-16	37	3-15-67	151		·		24	0	30	7	<u> </u>	1571	

No well will be assigned an allowable greater than the amount of cil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 35 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be analyzed increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15,025 pale and a temperature of 60° F. Specific gravity base will be 0.60.

. Report cosing pressure in lieu of tubing pressure for any well producing through coaing

Nell original and one copy of this report to the district office of the New ABCHERNATION

OIL CONSERVATION

SAMLY EXHIBIT OF CASE NO. 3693

I hereby certify that the above information is true and complete to the best of my know-ledge and belief.

Charles Love Charles J. Love Highory	
Charles J. Love (Signoture)	
DISTRICT ENGINEER	
MAY 2, 1967	
(Due)	

NEW MEXICO OIL CONSERVATION COMMISSION GAS - OIL RATIO TESTS

C-116 Revised 1-1-65

Operator SKELLY OIL COMPAN	SKELLY OIL COMPANY							PADDO	OCK	Co.	inty C,	LEI	1			
P.O. BOX 730, HO			YPE OF Sheduled [X] [7] Completion [] Spec								cia)					
	WELL		Loc	ATION		DATEOF	15	CHOKE	TBG.	DAILY	LENSTH	P	ROD. C	URING	TEST	GAS - OIL
LEASE NAME	NO.	l)	s	т	R	TEST	37.47	1	PRESS.	ALLOW- ABLE	TEST HOURS	WATER BBLS.	GRAV. OIL	OIL EBLS.	GAS M.C.F.	RATIO CU.FT/BBL
LOVINGTON PADDECK UNIT COM	d. 56	F		17	37	4-3.67	P			5	1 2 6	· · · · · · · · · · · · · · · · · · ·	30	. 5	19	3800
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	58	11	7	17	36	4.6.67				10	24	1	30	7	22	3/43
	59	G	/	17	36	4-7-67	1		-	7	2"	2	30	7	25	3571
	60	F	/	17	36	3-20-67	P	-	-	17	2.4	0	31	//	13	1182
	61	4		17	36	3-21-67	2			6	2.5	2	3i 31	6	7	1137
	63	1		17	35	3-23.61	12	**	-	10			L	6	14	2373
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	78	P	7.	17	37	4 21 - 67	7			73	20	3	32	16	9	563
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No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-off ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15,025 pais and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in fleu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oll Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Charles J. Love (Signature)
DISTRICT ENGINEER

, MAY 2, 1967

(Date)

NEW MEXICO OIL CONSERVATION COMMISSION GAS - OIL RATIO TESTS

C-116
Revised 1-1-65

Operator SKELLY OIL COMPAN	Y		l'ex	»I	OVIN	IGTON,	ן כן	ADDOC	K 1:	Con	inty CE ()	L.E.A	1			
P.O. BOX 730, HOB		TYPE OF														
	WELL	į	LOC.	ATION		DATEOF	5	CHOKE	TBG.	DAILY	LENGTH	Р	ROD. C	URING	TEST	GAS - OIL
LEASE NAME	NO.	ľ	s	т	R	TEST	STAT		PRESS.	ALLOW-	TEST HOURS	WATER BBLS.	GRAV.	OIL Barr	GAS M.C.F.	RATIO CU.FT/BBL
LOVINGTON PLUDOCK UNIT Con'd	+	6	3/	16	37	3-16-67		<u> </u>		8	24		30	7	15	2/43
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No well will be assigned an allowable greater than the amount of ell produced on the official test.

During gas-oil ratio test, each well shall be preduced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15,025 pain and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing press se in Heu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

Charles J. Love (Magiure)
DISTRICT ENGINEER

MAY 2, 1967