

CASE 5197: Application of SKELLY  
OIL CO. FOR A WATERFLOOD PROJECT  
AND A DUAL COMPLETION, LEA COUNTY *JK*

CASE No.

5197

Application,  
Transcripts,  
Small Exhibits

ETC.

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
March 27, 1974

EXAMINER HEARING

IN THE MATTER OF:

Application of Skelly Oil Company  
for a waterflood project and a dual  
completion, Lea County, New Mexico.

Case No.  
5197

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil  
Conservation Commission:

William Carr, Esq.  
Legal Counsel for the  
Commission  
State Land Office Bldg.  
Santa Fe, New Mexico

For the Applicant:

C.E. Blodget, Esq.  
Tulsa, Oklahoma

I N D E X

PAGE

JOHN L. MOSELEY

Direct Examination by Mr. Blodget  
Cross Examination by Mr. Nutter

3  
7

E X H I B I T S

Marked

Admitted

Applicant's Exhibits 1  
through 4

--

7

MR. NUTTER: We call Case 5197.

MR. CARR: Case 5197. Application of Skelly Oil Company for a waterflood project and a dual completion, Lea County, New Mexico.

MR. BLODGET: Mr. Examiner, I'm Chester Blodget, Tulsa, Oklahoma, Attorney for the Applicant. I believe Charles White has heretofore entered appearance as local counsel in this Case.

MR. NUTTER: Yes, sir, we have that.

MR. BLODGET: We have one witness.

(Witness sworn.)

JOHN L. MOSELEY

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

DIRECT EXAMINATION

BY MR. BLODGET:

Q Would you state your name, your occupation and by whom you are employed?

A John L. Moseley, Senior Reservoir Engineer for Skelly Oil Company in Midland, Texas.

Q Have you previously testified before this Commission and your qualifications been accepted?

A Yes, I have.

Q Are you familiar with the Application that's now under consideration by this Commission?

A Yes, I am.

Q I call your attention to what has been marked as Skelly Exhibit No. 1. Would you identify and explain that, please?

A Yes, this is a plat of the area in question. On this plat we have shown Skelly's J.C. Johnson Lease outlined in yellow and also shown is the Johnson No. 4 in which we propose to dually complete, inject water into the Langlie-Mattix interval and produce gas from the Jalmat interval; it is shown by the red arrow.

Q I call your attention to what has been marked Skelly Exhibit No. 2. Would you identify that and explain it, please?

A Yes. This is a schematic of the Johnson No. 4 Well in which we are showing our proposed dual completion. We plan to inject water down a tubing shown on the schematic below a packer which will be set at approximately 3375 into the Langlie-Mattix interval, which is open hole 3425 to 3650. The Jalmat gas zone will be produced through the tubing casing annulus from perforations 2925 to 2990.

Q What amount of water do you plan to inject in

this particular well?

A We anticipate approximately 300 barrels per day at maximum pressure of 1800 pounds into the Langlie-Mattix interval.

Q Where is that water coming from?

A The water will come from a combination of produced water from several leases in the area.

Q I now call your attention to what has been marked Skelly Exhibit No. 3, and would you identify and explain that, please?

A Yes. This is simply a sample copy of a sample log that was run on the well drilled in 1954, and it shows the top of the Seven Rivers formation 2905, the top of the Queen we estimate to be 3370 and TD at 3650.

Q I call your attention to Skelly Exhibit No. 4. Would you identify that and state what it sets out?

A Yes. This is a water analysis, laboratory analysis, from the water in which we plan to inject into the Langlie-Mattix interval. This is a combination of produced water from our Steeler Lease, which is located to the north of our Johnson Lease, and some water produced from the Johnson Lease itself.

Q Now, are the wells in the area under consideration

in an advanced state of depletion at this time?

A Yes, they are. The Johnson No. 4 Langlie-Mattix zone at this time is presently shut-in, uneconomical to operate; the other wells on the lease are less than a barrel of oil per day at the present time.

Q In your opinion, would the proposed pilot waterflood project result in the recovery of otherwise unrecoverable oil and thereby prevent waste?

A Yes, it would. We anticipate something on the order of 17,000 barrels of additional oil that will be produced from the Johnson Lease as a result of conversion of our Johnson No. 4 to injection.

Q In your opinion, would the dual completion of this well in the Jalmat gas zone result in recovery of additional gas and thereby prevent waste?

A Yes, it would.

Q Is it also contained in the Application of Skelly Oil Company that they request, that based on information gained from the injection into the well before mentioned, that they also request permission to hereafter ask for administrative approval to expand this project and to convert additional wells to water injection without showing the waterflood response?

MOSELEY-DIRECT  
CROSS

CASE 5197

Page..... 7

A Yes, we would like that.

Q Were these Exhibits, Skelly 1, 2, 3 and 4, prepared by you or at your request and under your supervision?

A Yes, sir, they were.

MR. BLODGET: We submit for approval and introduction into evidence Skelly Exhibits Nos. 1, 2, 3 and 4.

MR. NUTTER: Skelly Exhibits Nos. 1 through 4 will be admitted into evidence.

(Whereupon, Skelly Exhibits Nos.

1 through 4 were admitted into evidence.)

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Moseley, referring to your Exhibit No. 1 of the plat?

A Yes.

Q I notice that you have the one well, No. 4, which is, of course, a Langlie-Mattix Well, then No. 1 to the south of it?

A Yes, sir.

Q With the "Q" on it? That would be a Langlie-Mattix Well?

A Yes, sir. The "Q" would indicate Langlie-Mattix.

THE NYE REPORTING SERVICE  
STATE-WIDE DEPOSITION NOTARIES  
225 JOHNSON STREET  
SANTA FE, NEW MEXICO 87501  
TEL. (505) 982-0386

Q Then No. 5 to the east would also be a Langlie-Mattix?

A Yes, sir, that is correct.

Q Now what are the two wells over in the east end of the Lease?

A The No. 2 is presently a Queen Well, or Langlie-Mattix Well; the No. 6 has recently been worked over and now completed in the Teague-Grayburg Field.

Q And then on the Lease to the north there is a waterflood in operation, correct?

A Yes, sir. We are at the present time expanding our E.L. Steeler Lease plug, as shown on the plat, with the proposed injection into the Steeler No. 7 and also the Steeler No. 1 and 3 to the north.

Q So, when you put the No. 7 on you'll be flooding Steeler No. 4 and this Johnson injection well will back it up?

A Yes, sir, that's correct.

Q So you'll not only be benefiting the No. 1 and the No. 5 on the Johnson Lease, but presumable the No. 4 on Steelers as well?

A Yes, sir.

MR. NUTTER: Are there any further questions of

Mr. Moseley? He may be excused. Do you have anything further, Mr. Blodget?

MR. BLODGET: Nothing further.

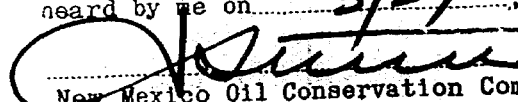
MR. NUTTER: Does anyone have anything they wish to offer in Case 5197? We will take the Case under advisement.

STATE OF NEW MEXICO )  
COUNTY OF SANTA FE )

I, RICHARD L. NYE, Court Reporter, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me, and the same is a true and correct record of the said proceedings, to the best of my knowledge, skill and ability.

  
RICHARD L. NYE, Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 5197 heard by me on 3/27, 1974.

  
Examiner  
New Mexico Oil Conservation Commission



## OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO  
P. O. BOX 2088 - SANTA FE  
87501

I. R. TRUJILLO  
CHAIRMAN

LAND COMMISSIONER  
ALEX J. ARMIJO  
MEMBER

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

May 21, 1974

Mr. Chester Blodget  
Skelly Oil Company  
Post Office Box 1650  
Tulsa, Oklahoma 74102

Re: CASE NO. 5197

ORDER NO. R-4785

Applicant:

Skelly Oil Company

Dear Sir:

Enclosed herewith are two copies of the above-referenced  
Commission order recently entered in the subject case.

Very truly yours,

*A. L. Porter, Jr.*

A. L. PORTER, Jr.  
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x  
Artesia OCC         
Aztec OCC       

Other State Engineer Office

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. 5197  
Order No. R-4785

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

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 27, 1974, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 21st day of May, 1974, 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 authority to institute a waterflood project by injection of water into the Seven Rivers-Queen formation in its J. C. Johnson Well No. 4, located in Unit D of Section 20, Township 23 South, Range 37 East, NMPM, Langlie-Mattix Pool, Lea County, New Mexico.

(3) That the applicant further seeks authority to recomplete said J. C. Johnson Well No. 4, located in Unit D of Section 20, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to also produce gas from the Jalmat gas pool through the casing-tubing annulus with separation of the zones by means of a packer set at approximately 3,375 feet.

(4) That the applicant further seeks the establishment of an administrative procedure whereby additional wells may be converted to injection and the project area expanded without notice and hearing.

(5) That the well in the proposed waterflood project area is in an advanced state of depletion and may properly be classified as a "stripper" well.

-2-

CASE NO. 5197

Order No. R-4785

(6) That approval of the subject waterflood will result in the recovery of gas which would otherwise not be recovered, thereby preventing waste and protecting correlative rights.

(7) That the mechanics of the proposed dual completion are feasible and in accordance with good conservation practices.

(8) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection zones and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

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

(10) That the subject dual completion should be approved and produced in accordance with the provision of Rule 112-A 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 Langlie Mattix Field by the injection of water into the Seven Rivers-Queen formation through its J. C. Johnson Well No. 4, located in Unit D of Section 20, Township 23 South, Range 37 East, NMPM, Langlie-Mattix Pool, Lea County, New Mexico.

(2) That injection of water shall be through 2 3/8-inch internally coated tubing set in a packer located at approximately 3375 feet.

(3) That the applicant is further authorized to recomplete its J. C. Johnson Well No. 4, located in Unit D of Section 20, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce gas from the Jalmat gas pool through the casing-tubing annulus with separation of the zones achieved by means of the packer set at approximately 3375 feet.

(4) That the operator shall immediately notify the supervisor of the Commission's Hobbs District Office of the failure of the tubing or packer in said injection well, the leakage of water or oil from around any producing well, or the leakage of water or oil from any plugged or abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(5) That the above authorized waterflood project is hereby designated the Skelly Johnson Langlie-Mattix Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

-3-

CASE NO. 5197  
Order No. R-4785

(6) 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.

(7) That the applicant shall complete and operate its J. C. Johnson Well No. 4, as hereinabove described, in accordance with Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order.

(8) That the applicant shall take packer-leakage tests on its J. C. Johnson Well No. 4, as hereinabove described, upon its completion and annually thereafter during the Annual Gas Well Shut-In Pressure Test Period.

(9) That a procedure is hereby established for the expansion of the project area and the inclusion of additional wells on the applicant's J. C. Johnson Lease in the waterflood project; that application for approval of additional water injection wells shall be made in accordance with the provisions of Rule 701 E-4 of the Commission Rules and Regulations.

(10) 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



*I. R. Trujillo*  
I. R. TRUJILLO, Chairman

ALEX J. ARMIJO, Member

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

S E A L

jr/

DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 27, 1974

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

The following cases will be heard before Daniel S. Nutter, Examiner, or Richard L. Stamets, Alternate Examiner:

CASE 5188: (Continued from the March 13, 1974, Examiner Hearing)

Application of Continental Oil Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Drinkard and Blinebry production in the wellbore of its Lockhart B-1 Well No. 8 located in Unit H of Section 1, Township 22 South, Range 36 East, Lea County, New Mexico.

CASE 5194: Application of Kersey & Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Queen-Grayburg formation through one well on its Creek Lease in Section 23, Township 18 South, Range 30 East, Leo Pool, Eddy County, New Mexico.

CASE 5195: Application of J. M. Huber Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests, including those of Harry V. Allen or his devisees, underlying the E/2 of the SE/4 of Section 21, Township 12 South, Range 37 East, Southwest Gladiola-Devonian Pool, Lea County, New Mexico. Also to be considered will be the cost of drilling and completing said well and the allocation of such costs, as well as actual operating costs and charges for supervision. Also to be considered is the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

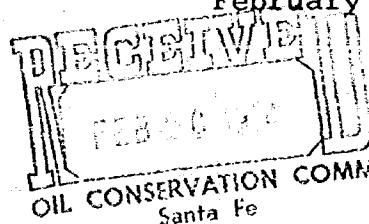
CASE 5196: Application of Kimbell Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling in the wellbore of Blanco-Mesa-verde and Basin-Dakota gas production in its Warren Federal Well No. 3 located in Unit P of Section 26 and in its Salazar Federal Well No. 3 located in Unit H of Section 27, and Otero-Gallup Oil and Basin-Dakota gas production in its Warren-Salazar Well No. 2 located in Unit M of Section 26, all in Township 25 North, Range 6 West, Rio Arriba County, New Mexico.

CASE 5197: Application of Skelly Oil Company for a waterflood project and a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Seven Rivers-Queen formation in its J. C. Johnson Well No. 4 located in Unit D of Section 20, Township 23 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico. Applicant further seeks authority to dually complete said well for water injection and for the production of gas from the Jalmat Gas Pool. Applicant also seeks an administrative procedure for said project for approval of additional injection wells without notice and hearing.

- CASE 5198: Application of Texaco Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Grayburg formation in the perforated interval from 3815 feet to 4068 feet in its V. M. Henderson Well No. 3 located in Unit H of Section 30, Township 21 South, Range 37 East, Penrose Skelly Pool, Lea County, New Mexico.
- CASE 5199: Application of Wm. G. Ross for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks, as an exception to the Atoka-Pennsylvanian Gas Pool Rules, authority to drill a gas well 1650 feet from the South line and 660 feet from the East line of Section 10, Township 18 South, Range 26 East, Atoka-Pennsylvanian Gas Pool, Eddy County, New Mexico, the E/2 of said Section 10 to be dedicated to the well.
- CASE 5200: Application of Monsanto Company for a triple completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the triple completion (conventional) of its Wilderspin Well No. 1 located in Unit F of Section 11, Township 21 South, Range 27 East, Burton Flats Field, Eddy County, New Mexico, in such a manner as to produce gas from the Wolfcamp, Strawn, and Morrow formations through three parallel strings of tubing.

WHITE,  
KOCH, KELLY  
&  
McCARTHY

February 25, 1974



*Case 5-197*

New Mexico Oil Conservation Commission  
State Land Office  
Santa Fe, New Mexico 87501

Re: Application for Waterflood Project and  
Dual Completion, J. C. Johnson Well No.  
4, Langlie Mattix Pool, Lea County, New  
Mexico

Gentlemen:

I have enclosed an original entry of appearance in  
the above captioned matter on behalf of Skelly Oil  
Company.

Sincerely,

A handwritten signature in cursive script, appearing to read "L. C. White".

L. C. WHITE

LCW:m  
enclosure as indicated

DOCKET MAILED

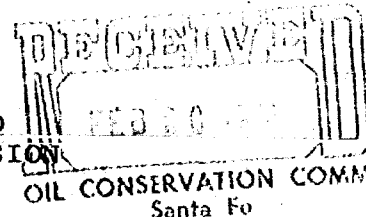
Date 3-14-74

L. C. White  
Sumner S. Koch  
William Booker Kelly  
John F. McCarthy, Jr.  
Kenneth Bateman  
Benjamin Phillips  
Ronald M. Friedman

Attorneys and Counselors at Law

220 Otero St., P.O. Box 787, (505)982-4374, Santa Fe, N.M. 87501 — P.O. Drawer E, (505)758-4338, Taos, N.M. 87571

BEFORE THE NEW MEXICO  
OIL CONSERVATION COMMISSION



IN THE MATTER OF THE APPLICATION  
OF SKELLY OIL COMPANY FOR AN ORDER  
AUTHORIZING A WATERFLOOD PROJECT  
IN THE LANGLIE MATTIX POOL BY IN-  
JECTION INTO ITS J. C. JOHNSON  
WELL NO. 4, AND TO DUALY COMPLETE  
THE SAID WELL IN THE JALMAT GAS  
ZONE, SAID WELL LOCATED IN SECTION  
20, TOWNSHIP 23 SOUTH, RANGE 37 EAST,  
LEA COUNTY, NEW MEXICO

*Case 5197*

FORMAL APPEARANCE OF LOCAL  
COUNSEL

Comes now L. C. White, of the firm of White, Koch, Kelly &  
McCarthy, P. O. Box 787, Santa Fe, New Mexico 87501 and herewith  
enters his formal appearance as local counsel for Skelly Oil  
Company in the above entitled matter.

WHITE, KOCH, KELLY & MCCARTHY

By *L. C. White*

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. 5174  
Order No. R-2909-B

APPLICATION OF GULF OIL  
CORPORATION FOR THREE DUAL  
COMPLETIONS, LEA COUNTY, NEW  
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 27, 1974, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 15th day of March, 1974, 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, Gulf Oil Corporation, seeks to complete certain of its wells in its Central Drinkard Unit, all in Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, as dual completions as follows: its H. T. Mattern (NCT-B) Well No. 8, located in Unit I of Section 30, to produce oil from the Blinebry formation and to inject water into the Drinkard formation through parallel strings of tubing; its W. T. McCormack Well No. 13, located in Unit A of Section 32, to produce gas from the Tubb formation and to inject water into the Drinkard formation through parallel strings of tubing; and its J. N. Carson (NCT-A) Well No. 4, located in Unit O of Section 28, to produce gas from the Blinebry formation through the casing-tubing annulus and to inject water into the Drinkard formation through tubing.

(3) That the applicant further seeks a procedure whereby the subject waterflood project may be expanded by the dual completion of additional wells within the project area without the necessity for notice and hearing.

-2-

Case No. 5174  
Order No. R-2909-B

(4) That the mechanics of the proposed dual completions are feasible and in accord with good conservation practices.

(5) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

(6) That approval of the subject application will prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Gulf Oil Corporation, is hereby authorized to complete the three wells described below, all located in Township 21 South, Range 37 East, NMPM, Central Drinkard Unit, as dual producing and injection wells in the following manner: its H. T. Mattern (NCT-B) Well No. 8, located in Unit I of Section 30, to produce oil from the Blinebry formation and to inject water into the Drinkard formation through parallel strings of tubing; its W. T. McCormack Well No. 13, located in Unit A of Section 32, to produce gas from the Tubb formation and to inject water into the Drinkard formation through parallel strings of tubing; and its J. N. Carson (NCT-A) Well No. 4, located in Unit O of Section 28, to produce gas from the Blinebry formation through the casing-tubing annulus and to inject water into the Drinkard formation through tubing.

(2) That the applicant shall complete, operate and produce said wells in accordance with the provisions of Rules 112-A, 701, 702, and 703 of the Commission Rules and Regulations insofar as said rules are not inconsistent with the provisions of this order.

(3) That injection into the subject wells shall be through internally plastic-lined tubing set in a packer which shall be located as near as practicable to the casing shoe.

(4) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the tubing or packer in any of said injection wells, the leakage of water or oil from around any producing well, or the leakage of water or oil from any plugged and abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(5) The applicant shall take such tests as may be practicable to detect leakage in the casing, tubing, or packer

-3-

Case No. 5174

Order No. R-2909-B

upon completion and annually thereafter during the annual Gas-Liquid Ratio Test for the Blinebry oil and gas pool or the Tubb gas pool, whichever is applicable.

(6) That Order (2) of Commission Order 2909, entered May 10, 1965, is hereby amended to read in its entirety as follows:

"That the subject 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 subject waterflood project to include such additional injection wells in the area of said project as may be necessary to complete an efficient injection pattern; that said wells may be approved as dual completions for injection into the Drinkard pool and production from the Blinebry Oil and gas pool or the Tubb gas pool."

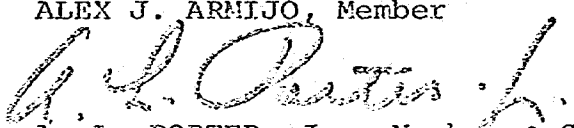
(7) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
I. R. TRUJILLO, Chairman

ALEX J. ARMIJO, Member

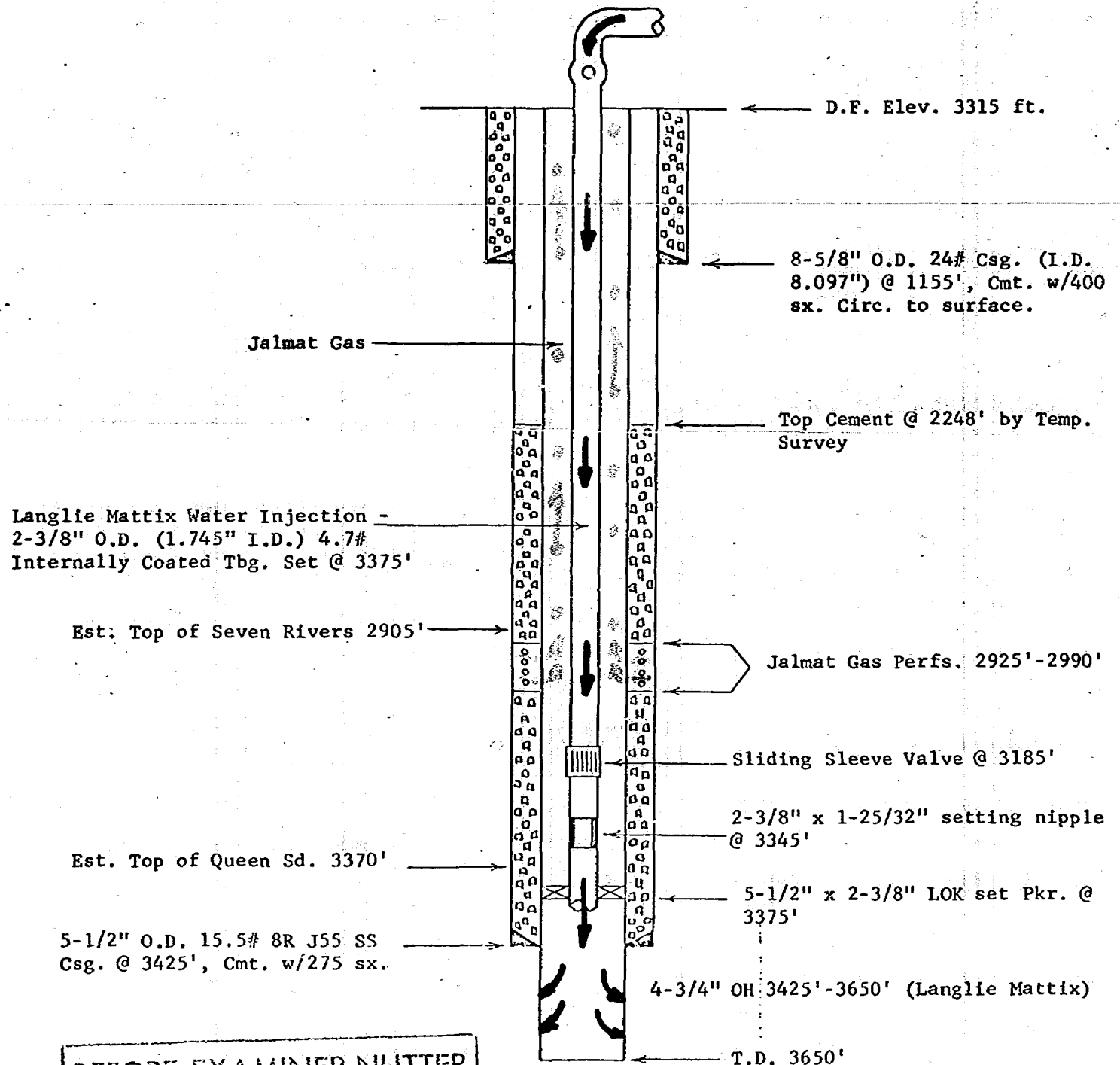
  
A. L. PORTER, Jr., Member & Secretary

S E A L

dr/

PROPOSED  
SKELLY J. C. JOHNSON LEASE  
WATERFLOOD PROJECT  
LANGLIE MATTIX FIELD  
LEA COUNTY, NEW MEXICO

J. C. Johnson Well No. 4  
Unit D, Sec. 20, T23S-R37E  
Proposed Dual Completion



BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

*Skelly* EXHIBIT NO. 2  
CASE NO. 5197

PROPOSED  
J. C. JOHNSON LEASE  
WATERFLOOD PROJECT  
LANGLIE MATTIX FIELD  
LEA COUNTY, NEW MEXICO

Sample Log  
J. C. Johnson No. 4

HOW LOG.	COMPANY	DATE
Lea	J. C. Johnson	4
BLK	NO.	
20	660' FNL & 660' FNL	
23S	37S	
CONTRACTOR Cactus Drig.		
COMMENCED 4-21-54		
COMPLETED 5-26-54		
REMARKS		
ALTITUDE 3315 OF		
PRODUCTION		
HIPP 802222 (Queen)		
HIPP 3200 MCF (TR) SING RECORD		

	10"	
	8"	
20"	6"	
15"	5"	
12"		
SHOT	QUARTS	BETWEEN

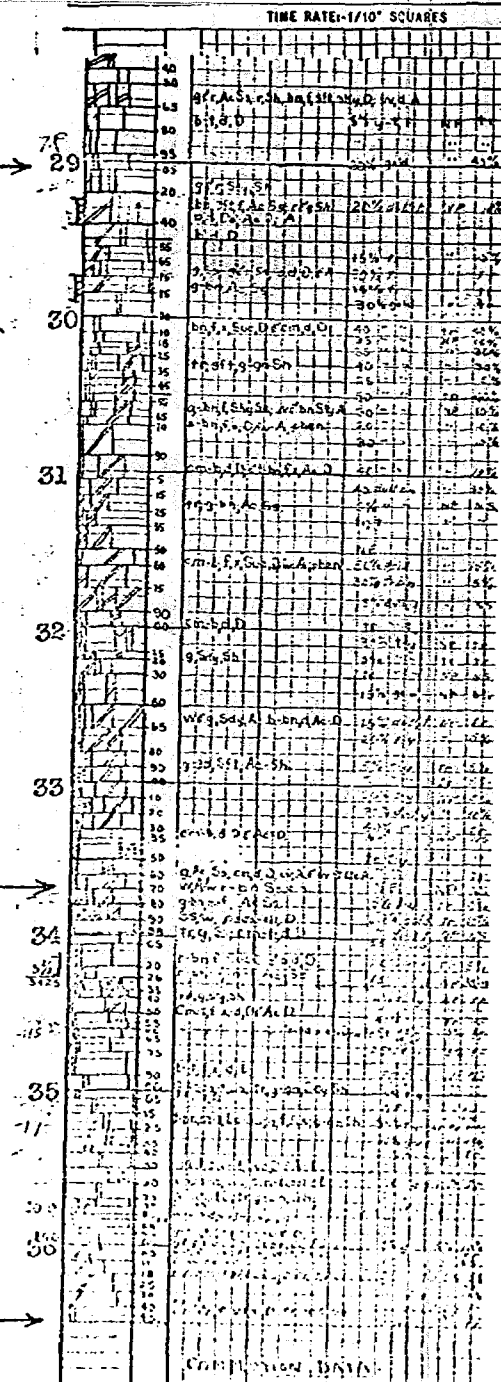
TIME RATE SCALE: 1/10" = 10 MINUTES

FORM 450 - In stock and for sale by Ross-Martin Co., Tulsa

Est. Top of Seven Rivers 2905'

Est. Top of Queen Sand 3370'

TD 3650'



BEFORE EXAMINER NUTTER  
OIL CONSERVATION COMMISSION  
Exhibit No. 3  
CASE NO. 5197

Exhibit No. \_\_\_\_\_

834-0015

## EXXON CHEMICAL COMPANY U.S.A.

SPECIALTIES LABORATORY  
December 28, 1973

8230 Stedman, Houston, Texas 77029

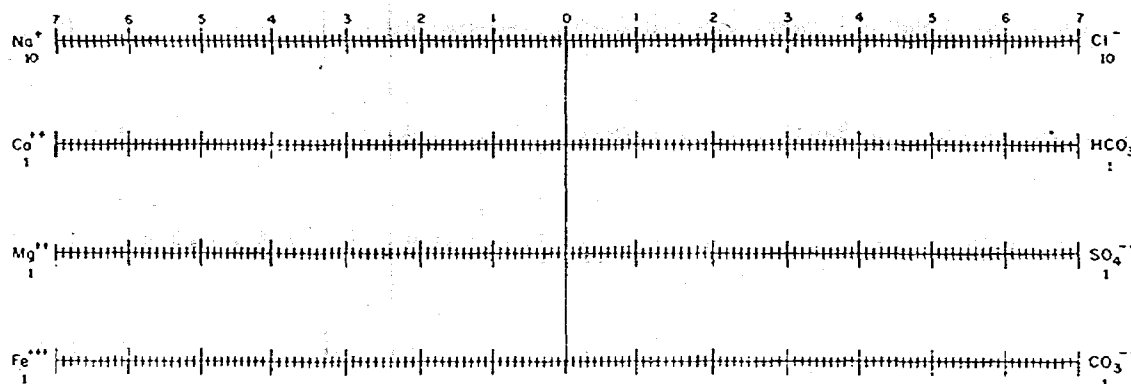
**EXXON**  
**CHEMICALS**WATER ANALYSIS

SAMPLE DESCRIPTION: Theoretical combination of 2/3 E. L. Steeler water and 1/3 J. C. Johnson water.

COMPANY: Skelly Oil Company  
STSR NUMBER: 1273148 (page 3)  
REQUESTED BY: Harold LangenDATE RECEIVED: 12-20-73  
ANALYZED BY: Gene Keil

	Mg/L	Meq/L		
Sodium	37,711	1,639.6	pH	7.2
Calcium	7,237	361.9	Specific Gravity at 60°F.	1.0710
Magnesium	788	64.9	Resistivity ohms/m @ 77°F	0.080
Chloride	72,321	2,039.5		
Sulfate	469	9.8	Oil Content	
Bicarbonate	1,045	17.1	Organic Matter	
Carbonate	0	0.0	Hydrogen Sulfide	193
Hydroxide	0	0.0		
TOTAL	119,571			
Dissolved Iron				
Total Iron	0.59			

## WATER PATTERN (Stiff Method)



Meq/LITER

Remarks:

BEFORE EXAMINER NUTTER  
OIL CONSERVATION  
EXHIBIT NO. 4  
CASE NO. 5197



## SKELLY OIL COMPANY

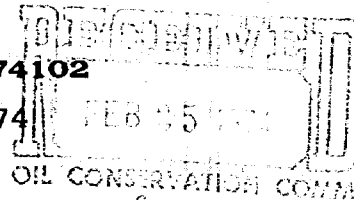
*Case 5197*

P. O. BOX 1850

TULSA, OKLAHOMA 74102

February 22, 1974

LAW DEPARTMENT  
CHESTER E. BLODGET  
SENIOR ATTORNEY



Re: Application for Waterflood Project  
and Dual Completion, J. C. Johnson  
Well No. 4, Langlie Mattix Pool,  
Lea County, New Mexico.

New Mexico Oil Conservation Commission  
P. O. Box 2088  
Santa Fe, New Mexico 87501

Gentlemen:

We are enclosing the original and two copies of the above-mentioned application.

We would appreciate your setting this matter down for hearing on the March 27, 1974 docket.

Yours very truly,

CEB:br  
Encl.

*Chester E. Blodget*  
Chester E. Blodget

DOCKET MAILED  
Date 3-14-74

BEFORE THE OIL CONSERVATION COMMISSION OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF SKELLY )  
OIL COMPANY FOR AN ORDER AUTHORIZING A )  
WATERFLOOD PROJECT IN THE LANGLIE MATTIX )  
POOL BY INJECTION INTO ITS J. C. JOHNSON )  
WELL NO. 4, AND TO DUALY COMPLETE THE )  
SAID WELL IN THE JALMAT GAS ZONE, SAID WELL )  
LOCATED IN SECTION 20, TOWNSHIP 23 SOUTH, )  
RANGE 37 EAST, LEA COUNTY, NEW MEXICO. )

CASE NO. 5797

A P P L I C A T I O N

Comes now Skelly Oil Company and alleges and states:

1. That it is a Delaware corporation authorized to do business in the state of New Mexico, and that it is operating wells on its J. C. Johnson Lease, located in Section 20, Township 23 South, Range 37 East, Lea County, New Mexico.

2. That Applicant seeks permission to institute a pilot waterflood project in the Langlie Mattix Pool by the injection of water into the Langlie Mattix Pool through the tubing and before a packer in its J. C. Johnson Well No. 4, located in Section 20, Township 23 South, Range 37 East, Lea County, New Mexico, through the open hole section from 3,425 feet to 3,650 feet. The water to be injected will be produced salt water from various Skelly operated leases in the immediate vicinity. The anticipated initial volume injected will be 300 barrels of water per day at a maximum pressure of 1800 psi. The wells in the project area are in an advanced state of depletion, and the said J. C. Johnson Well No. 4 is presently shut in. Unit D

3. Applicant further seeks permission to dualy complete the said J. C. Johnson Well No. 4 in the Jalmat gas zone through perforations between 2,925 feet and 2,990 feet. The production will be through the tubing casing annulus with a packer separating the Jalmat gas zone from the Langlie Mattix formation.

4. That the proposed pilot waterflood project will result in the recovery of otherwise unrecoverable oil, thereby preventing waste. The dual completion of said well in the Jalmat gas zone will also result in recovery of gas and prevent waste.

5. That based on performance and information gained from the injection into the aforementioned well the applicant may request administrative approval to expand the project and convert additional wells to water injection without showing waterflood response.

6. Operators offsetting the proposed injection well have heretofore been notified of this proposed pilot waterflood project.

WHEREFORE, PREMISES CONSIDERED, Applicant requests that this matter be set down for hearing, that notice hereof be given as required by law, that at the conclusion of said hearing based on the evidence adduced the Commission enter its order granting Skelly Oil Company permission to conduct a waterflood project in the Langlie Mattix Pool through injection in its J. C. Johnson Well No. 4, located in Section 20, Township 23 South, Range 37 East, Lea County, New Mexico, to further provide for administrative expansion of the project area and the conversion of additional wells by administrative means without the necessity of separate hearings, for permission to dualy complete the said J. C. Johnson Well No. 4 in the Jalmat gas zone, and for such other orders, rules and regulations as may be necessary in the premises.

Respectfully submitted,

SKELLY OIL COMPANY

By Chester E. Blodget  
Chester E. Blodget  
Its Attorney

Of Counsel:  
L. C. White, Attorney  
White, Koch, Kelly & McCarthy  
P. O. Box 787  
Santa Fe, New Mexico 87501

DRAFT

dr/

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. 5197

Order No. R- 4785

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

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on March 27, 1974, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this day of April, 1974, 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 authority to institute a waterflood project by injection of water into the Seven Rivers-Queen formation in its J. C. Johnson Well No. 4 located in Unit D of Section 20, Township 23 South, Range 37 East, NMPM, Langlie-Mattix Pool, Lea County, New Mexico.

*said* (3) That the applicant further seeks authority to recomplete its J. C. Johnson Well No. 4 located in Unit D of Section 20, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to <sup>also</sup> produce gas <sup>through from</sup> the ~~formation~~ <sup>gas pool</sup> ~~formation~~ through the ~~parallel strings of tubing~~ <sup>casing-tubing annulus</sup> with separation of the zones by means of a packer set at approximately 3375 feet.

(5) That the well in the proposed waterflood project area is in an advanced state of depletion and may properly be classified as a "stripper" well.

(6) That approval of the subject waterflood will result in the recovery of gas which would otherwise not be recovered, thereby preventing waste and protecting correlative rights.

(7) That the mechanics of the proposed dual completion <sup>are</sup> feasible and in <sup>accordance</sup> ~~accord~~ with good conservation practices.

(8) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection zones and is not permitted to escape to other formations or onto the surface from injection, production, or plugged and abandoned wells.

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

~~that~~ (10) ~~is~~ That the subject dual completion should be approved and produced in accordance with the provision of Rule 112-A of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(11) That the applicant further seeks the establishment of an administrative procedure whereby additional wells <sup>may</sup> ~~can~~ be converted to injection ~~in~~ <sup>in</sup> ~~status~~ <sup>status</sup> ~~in this pool~~ and the project area expanded without notice and hearing.

(1) That the applicant, Skelly Oil Company, is hereby authorized to institute a waterflood project in ~~its~~ the Langlie Mattix Field ~~Area~~ by the injection of water into the Seven Rivers-Queen formation through its J. C. Johnson Well No. 4 located in Unit D of Section 20, Township 23 South, Range 37 East, NMPM, Langlie-Mattix Pool, Lea County, New Mexico.

(2) That the applicant is further authorized to recompleat its J. C. Johnson Well No. 4, located in Unit D of Section 20, Township 23 South, Range 37 East, NMPM, Lea County, New Mexico, as a dual completion (conventional) to produce gas from the Langlie Mattix Galmat gas zone pool ~~formations~~ through ~~parallel strings of 2 3/8 inch tubing,~~ the tubing casing annulus with separation of the zones achieved by means of ~~the~~ packer set at approximately 3375 feet.

(3) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the tubing or packer in said injection well, the leakage of water or oil from around any producing well, or the leakage of water or oil from any plugged or abandoned well within the project area and shall take such timely steps as may be necessary or required to correct such failure or leakage.

(4) That the above authorized waterflood project is hereby designated the Skelly J. C. Johnson Langlie-Mattix Waterflood Project and shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(5) 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.

(2) That injection of water shall be through 2 3/8-inch internally coated tubing set in a packer located at approximately 3375 feet.

(7) That the applicant shall complete and operate its J. C. Johnson Well No. 4 as hereinabove described in accordance with Rule No. 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order.

(8) That the applicant shall take packer-leakage tests on its J. C. Johnson Well No. 4, as hereinabove described, upon its completion and annually thereafter during the Annual Gas Well Shut-In Pressure Test Period. ~~Test Period for~~  
~~\_\_\_\_\_ Pool.~~

(9) 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.

~~(8) That due to the scattered nature of the project area, no administrative procedure should be established whereby additional wells could be converted to injection on Skelly lease in the pool without notice and hearing~~

(9) That ~~the applicant is~~ a procedure is hereby established for the expansion of the project area and the inclusion of additional wells on the applicant's J. C. Johnson Lease in the waterflood project; That application for approval of ~~such~~ additional water injection wells shall be made in accordance with the provisions of Rule 701 E-4 of the Commission Rules and Regulations.