

CASE 2729: Application of SCANLON-
SHEPARD for a waterflood project,
CHACO WASH OIL POOL, McKinley Co.

Port 10
Jan 23rd.

-asa / No.

2729

petition, Transcript,

and Exhibits, Etc.

SCANLON ENGINEERING CO.

P. O. BOX 601

PH. DA 5-3492

REGISTERED ENGINEERS & LAND SURVEYORS

FARMINGTON, NEW MEXICO

November 9, 1962

*Case 2773
2729*

Mr. A. L. Porter
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Sir:

The writer is one of a group who have Oil & Gas Leases in Sections 21, 22., 27 & 28, Township 20N, Range 9W, McKinley County, New Mexico. We have drilled 12 wells as shown on the enclosed map. Most of the wells will produce from three to five BOPD after 60 days of pumping but some had initial production rates as high as 30 BOPD. Because of the rapid decrease in production rates we feel that we must go to a repressure project and request that a hearing be arranged with the Commission in order that we may present our plans and obtain permission for a pilot water repressure project on this acreage.

Your early consideration of this request will certainly be appreciated.

Very truly yours,

R. J. Scanlon
R. J. Scanlon

DOCKET MAILED

Date 1-11-63

DOCKET MAILED

Date 12/21/62

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. 1805
Order No. R-1533

APPLICATION OF CHACO OIL COMPANY
FOR AN ORDER AUTHORIZING A WATER
FLOOD PROJECT IN THE RED MOUNTAIN
OIL POOL, MCKINLEY COUNTY, NEW
MEXICO, AND FOR ELEVEN UNORTHODOX
WATER INJECTION WELL LOCATIONS

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on November 10, 1959, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 23rd day of November, 1959, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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 proposes to institute a water flood project in the Red Mountain Oil Pool by the injection of water into the Menefee zone of the Mesaverde formation through the following-described 11 wells at unorthodox locations in Township 20 North, Range 9 West, NMPM, McKinley County, New Mexico:

Well No. I-1, located 980 feet from the South line
and 2025 feet from the East line of Section 20;

Well No. I-2, located 490 feet from the South line
and 2300 feet from the East line of Section 20;

Well No. I-3, located 80 feet from the South line
and 2280 feet from the East line of Section 20;

-2-

Case No. 1805
Order No. R-1533

Well No. I-4, located 310 feet from the North line
and 2290 feet from the East line of Section 29;

Well No. I-5, located 615 feet from the North line
and 1920 feet from the East line of Section 29;

Well No. I-6, located 600 feet from the North line
and 1500 feet from the East line of Section 29;

Well No. I-7, located 370 feet from the North line
and 1150 feet from the East line of Section 29;

Well No. I-8, located 5 feet from the North line
and 1130 feet from the East line of Section 29;

Well No. I-9, located 450 feet from the South line
and 1145 feet from the East line of Section 20;

Well No. I-10, located 900 feet from the South line
and 1280 feet from the East line of Section 20;

Well No. I-11, located 1330 feet from the South line
and 1490 feet from the East line of Section 20.

(3) That the applicant further proposes that an administrative procedure be established to permit the relocation of injection wells at other unorthodox locations in the event that the injection wells drilled as herein proposed should prove to be productive of oil.

(4) That the producing wells in the area to be water-flooded are substantially depleted.

(5) That the operation of the proposed pilot water flood project should be governed by Rule 701 of the Commission Rules and Regulations, including those provisions regarding allocation of allowables.

IT IS THEREFORE ORDERED:

(1) That the applicant be and the same is hereby authorized to institute a water flood project in the Red Mountain Oil Pool by the injection of water into the Menefee zone of the Mesaverde formation through the following-described wells at unorthodox locations in Township 20 North, Range 9 West, NMPM, McKinley County, New Mexico:

Well No. I-1, located 980 feet from the South line
and 2025 feet from the East line of Section 20;

-3-

Case No. 1805
Order No. R-1533

Well No. I-2, located 490 feet from the South line
and 2300 feet from the East line of Section 20;

Well No. I-3, located 80 feet from the South line
and 2280 feet from the East line of Section 20;

Well No. I-4, located 310 feet from the North line
and 2290 feet from the East line of Section 29;

Well No. I-5, located 615 feet from the North line
and 1920 feet from the East line of Section 29;

Well No. I-6, located 600 feet from the North line
and 1500 feet from the East line of Section 29;

Well No. I-7, located 370 feet from the North line
and 1150 feet from the East line of Section 29;

Well No. I-8, located 5 feet from the North line
and 1130 feet from the East line of Section 29;

Well No. I-9, located 450 feet from the South line
and 1145 feet from the East line of Section 20;

Well No. I-10, located 900 feet from the South line
and 1280 feet from the East line of Section 20;

Well No. I-11, located 1330 feet from the South line
and 1490 feet from the East line of Section 20.

(2) That an administrative procedure be and the same is hereby established to permit the relocation of injection wells at other unorthodox locations upon showing the following:

(a) That an injection well drilled at a location herein authorized has proven productive of oil.

(b) That the proposed relocation will place the injection well in a pattern which will result in a thorough and efficient sweep of the oil by the water flood.

(3) That the operation of the water flood herein authorized shall be governed by Rule 701 of the Commission Rules and Regulations, including those provisions regarding allocation of allowances.

(4) That monthly progress reports on the water flood project herein authorized shall be submitted to the Commission in accordance with Rule 704 and Rule 1119 of the Commission Rules and Regulations.

-4-

Case No. 1805
Order No. R-1533

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

JOHN BURROUGHS, Chairman

MURRAY E. MORGAN, Member

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

S E A L

vem/

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 23, 1963

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, as alternate examiner:

CASE 2729: (Continued)

Application of Scanlon-Shepard for a waterflood project, Chaco Wash Oil Pool, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to inject water into the Mesaverde formation through certain wells in Sections 21, 22, 27 and 28, Township 20 North, Range 9 West, McKinley County, New Mexico.

CASE 2731: Application of Texaco, Inc., for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its State of New Mexico "O" NCT-1 Well No. 12, located in Unit J of Section 36, Township 17 South, Range 34 East, as a dual completion (tubingless) to produce oil from the Glorieta and Blinberry formations, Lea County, New Mexico.

CASE 2732: Application of Sinclair Oil & Gas Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the dual completion (conventional) of its Mahaffey-Federal (ARC) Well No. 1 located in Unit C of Section 14, Township 20 South, Range 33 East, Lea County, New Mexico, to produce Bone Springs oil and Pennsylvanian gas through parallel strings of tubing.

CASE 2733: Application of Charles B. Read for a non-standard oil proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a 48.99-acre non-standard oil proration unit in an undesignated Delaware pool consisting of Lots 4 and 5 of Section 31, Township 26 South, Range 32 East, Lea County, New Mexico.

CASE 2734: Application of Aztec Oil & Gas Company for approval of a unit agreement, Lea and Eddy Counties, New Mexico. Applicant, in the above-styled cause, seeks approval of the Aztec-Robinson Waterflood Unit, comprising approximately 682 acres of State and Federal Lands in the E/2 SE/4 and SW/4 SE/4 of Section 36, Township 16 South, Range 31 East, the SW/4 SE/4 of Section 30, the W/2, W/2 E/2 and SE/4 SE/4 of Section 31, Township 16 South, Range 32 East Lea and Eddy Counties, New Mexico.

CASE 2735: Application of Amerada Petroleum Corporation for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its State BT "G" Well No. 2 located in Unit P, Section 27, Township 12 South, Range 33 East, Hightower Field, Lea County, New Mexico, in such a manner as to dispose of produced salt water into the Pennsylvanian formation.

- CASE 2736: Application of Gulf Oil Corporation for a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of a 120-acre non-standard gas proration unit in the Blinebry Gas Pool, comprising the N/2 SW/4 and SE/4 NW/4 of Section 31, Township 22 South, Range 38 East, Lea County, New Mexico, said unit to be dedicated to the Scarborough Estate Well No. 4 located in Unit F of Section 31.
- CASE 2737: Application of Gulf Oil Corporation for special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of special pool rules for the White City-Pennsylvanian Gas Pool, Eddy County, New Mexico, including provisions for 640-acre spacing therein.
- CASE 2738: Application of BCO, Inc. for a no-flare exception, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the no-flare provisions of Order No. R-2267 for its Campos Well No. 1-10 located in Unit J of Section 10, Township 23 North, Range 7 West, Lybrook-Gallup Pool, Rio Arriba County, New Mexico.
- CASE 2739: Application of Socony Mobil Oil Company, Inc., to create a new pool for Abo production, and for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new pool for Abo production in Section 26, Township 17 South, Range 34 East, Lea County, New Mexico, and the establishment of temporary special pool rules therefor, including a provision for 80-acre spacing units.
- CASE 2740: Application of Socony Mobil Oil Company, Inc., for temporary special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of temporary special pool rules for the Vacuum-Wolfcamp Pool in Section 26, Township 17 South, Range 34 East, Lea County, New Mexico, including a provision for 80-acre spacing units.
- CASE 2741: Application of Socony Mobil Oil Company, Inc., for temporary special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of temporary special pool rules for the Vacuum-Devonian Pool in Section 26, Township 17 South, Range 34 East, Lea County, New Mexico, including a provision for 80-acre spacing units.
- CASE 2742: Application of Pan American Petroleum Corporation for special temporary pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of temporary special pool rules for the Fowler-Blinebry Oil Pool, Lea County, New Mexico, including a provision for 80-acre proration units.
- CASE 2743: Application of Pan American Petroleum Corporation for the creation of a Tubb Gas Pool, for approval of a non-standard gas unit, and for special temporary pool rules. Applicant, in the above-styled cause, seeks the creation of a new Tubb gas pool, and the establishment of temporary special pool rules therefor, Lea County, New Mexico, including a provision for 320-acre spacing units. Applicant further seeks establishment of a non-standard unit in said pool, comprising the NE/4, E/2 NW/4, and the N/2 SE/4 of Section 22, Township 24 South, Range 37 East.

CASE 2744: Application of Pan American Petroleum Corporation for special pool rules and approval of a non-standard gas unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the establishment of temporary special pool rules for the Fowler-Paddock Gas Pool, Lea County, New Mexico, including a provision for 320-acre spacing units. Applicant further seeks establishment of a non-standard unit in said pool, comprising the NE/4, E/2 NW/4, and the N/2 SE/4 of Section 22, Township 24 South, Range 37 East.

2729,

Heard 1-23-63

Rec. 1-24-63.

1. Grant Scanlon & Shepard's request for the Chaco Wash waterflood project.

2. Approve the following wells for water injection:

S & S. - Santa Fe #5, unit P. sec. 21-20N-9W.

" " #7 " "

" " #8 " "

Use R1533, Red Mt. waterflood as a guide to this order. ~~In addition to this order set up a administrative procedure for approving injection wells. Last Para. of Rule 701 requires Admin. approval.~~

James A. [Signature]

DRAFT

JMD/esr
January 28, 1963

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. 2729

Order No. R- 2419

APPLICATION OF SCANLON & SHEPARD
FOR A WATERFLOOD PROJECT, CHACO
WASH OIL POOL, MCKINLEY COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on
January 23, 1963, at Santa Fe, New Mexico, before Elvis A. Utz
Examiner duly appointed by the Oil Conservation Commission of New
Mexico, hereinafter referred to as the "Commission," in accordance
with Rule 1214 of the Commission Rules and Regulations.

NOW, on this day of January, 1963, the Commission,
a quorum being present, having considered the application, the
evidence adduced, and the recommendations of the Examiner,
Elvis A. Utz, 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, Scanlon & Shepard, seeks permission
to institute a waterflood project to be known as the Chaco Wash
Waterflood Project in the Chaco Wash ^{Mesaverde} Oil Pool in Sections 21, 22,
27, and 28, Township 20 North, Range 9 West, NMPM, McKinley County,
New Mexico, with ^{the initial} ~~the~~ injection of water into the Mesaverde forma-
tion through three wells located in Unit P of Section 21, Township
20 North, Range 9 West, NMPM, McKinley 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 subject application should be approved and
should be governed by the provisions of Rule 701, including the
allowable provisions thereof, and including the provisions with
respect to expansion of the waterflood project.

*That the proposed waterflood project is in the
interest of conservation and should permit receding in
recovery of otherwise unrecoverable oil.*

IT IS THEREFORE ORDERED:

(1) That the applicant, Scanlon & Shepard, is hereby authorized to institute the Chaco Wash Waterflood Project in the Chaco Wash ^{Mesaverde} Oil Pool in Sections 21, 22, 27, and 28, Township 20 North, Range 9 West, NMPM, McKinley County, New Mexico, with ~~the~~ injection of water into the Mesaverde formation through the following wells:

Scanlon & Shepard-Santa Fe Well No. 5;
Scanlon & Shepard-Santa Fe Well No. 7;
Scanlon & Shepard-Santa Fe Well No. 8;

all in Unit P of Section 21, Township 20 North, Range 9 West, NMPM, McKinley County, New Mexico.

(2) That the subject waterflood project shall be governed by the provisions of Rule 701, including the allowable provisions thereof, and including the provisions with respect to expansion of the waterflood project.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1119 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

E. S. WALKER, Member

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

GOVERNOR
JACK M. CAMPBELL
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
H. S. JOHNNY WALKER
MEMBER

P. O. BOX 871
SANTA FE

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

February 1, 1963

Mr. William J. Cooley
Verity, Burr & Cooley
Attorneys at Law
152 Petroleum Center Building
Farmington, New Mexico

Re: Case No. 2729
Order No. R-2419
Applicant:
Scanlon-Shepard

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

ir/

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC

Astec OCC x

OTHER Mr. Frank Irby

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. 2729
Order No. R-2419

APPLICATION OF SCANLON & SHEPARD
FOR A WATERFLOOD PROJECT, CHACO
WASH-MESAVERDE OIL POOL, MCKINLEY
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on January 23, 1963, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 1st day of February, 1963, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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, Scanlon & Shepard, seeks permission to institute a waterflood project to be known as the Chaco Wash Waterflood Project in the Chaco Wash-Mesaverde Oil Pool in Sections 21, 22, 27, and 28, Township 20 North, Range 9 West, NMPM, McKinley County, New Mexico, with the initial injection of water into the Mesaverde formation through three wells located in Unit P of Section 21, Township 20 North, Range 9 West, NMPM, McKinley 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 is in the interest of conservation and should result in recovery of otherwise unrecoverable oil.

(5) That the subject application should be approved and should be governed by the provisions of Rule 701, including the

-2-

CASE No. 2729
Order No. R-2419

allowable provisions thereof, and including the provisions with respect to expansion of the waterflood project.

IT IS THEREFORE ORDERED:

(1) That the applicant, Scanlon & Shepard, is hereby authorized to institute the Chaco Wash Waterflood Project in the Chaco Wash-Mesaverde Oil Pool in Sections 21, 22, 27, and 28, Township 20 North, Range 9 West, NMPM, McKinley County, New Mexico, with injection of water into the Mesaverde formation through the following wells:

Scanlon & Shepard-Santa Fe Well No. 5;
Scanlon & Shepard-Santa Fe Well No. 7;
Scanlon & Shepard-Santa Fe Well No. 8;

all in Unit P of Section 21, Township 20 North, Range 9 West, NMPM, McKinley County, New Mexico.

(2) That the subject waterflood project shall be governed by the provisions of Rule 701, including the allowable provisions thereof, and including the provisions with respect to expansion of the waterflood project.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1119 of the Commission Rules and Regulations.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


Jack M. Campbell
JACK M. CAMPBELL, Chairman

E. S. Walker
E. S. WALKER, Member

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

csr/

SCANLON ENGINEERING CO.

P. O. BOX 601
FARMINGTON, NEW MEXICO

PH. DA 5-3492

REGISTERED ENGINEERS & LAND SURVEYORS

May 7, 1963

N.M. Oil Conservation Commission
P.O. Box 871
Santa Fe, New Mexico

Re. Case No. 2729
Order No. R-2419

Gentlemen:

We are hereby notifying you that the injection of water on our waterflood project was started on May 4, 1963, and that the first injection well was our Santa Fe #5.

We plan to inject into two more wells in the next day or two and our June 1, 1963 report will report this.

Very truly yours,

Richard J. Scanlon
Scanlon & Shepard

c.c. Santa Fe Pacific R.R. Co.
N.M. Oil Conservation Commission, Aztec, N.M.

August 7, 1963

Mr. A. L. Porter
State Geologist
Post Office Box 671
Santa Fe, New Mexico

Case No. 2729
Order No. R-2419

Dear Sir:

On February 1, 1963, the Oil Conservation Commission of New Mexico approved our application for a waterflood project on acreage located in Sections 21, 22, 27 and 28, T20N, R9W, N.M.P.M., McKinley County, New Mexico. In our original application we stated that our initial injection wells were to be our Santa Fe 5, 7 and 8 wells. We also stated that our water supply would be from the Chaco Oil Company water well located in the SE/4SE/4 of Section 20, T20N, R9W. We now wish to revise our plans regarding this project and make the changes as given below.

1. For our initial test we propose to use water from an old well located near the acreage to be flooded. This well was deepened by us from 320 feet to 350 feet and we can obtain approximately 200 barrels of water per day which will be ample for a test to determine whether a flood of the area is feasible. In the event we prove that the area can be flooded economically, then we propose to either obtain water from the Chaco Oil Company or to drill a water well on our acreage. See plat for location of well we propose to obtain water from for test flooding.

2. Our original request stated that we were going to use the Santa Fe 5, 7 and 8 wells as the initial injection wells. We now propose to change these injection wells and will inject water in the Santa Fe 5, 13, 14, 16 and Ray 2 wells as shown on the enclosed plat. Wells 14 and 16 were recently drilled and have 2" pipe cemented in and are ready for injection of water. The reason for the change in plans is that we think the field extends to the southwest and that wells No. 7 and 8 will be producing wells and we do not want to ruin them by the injection of water into them. We think that our new proposal is much better than our original plan and will result in a much greater oil year than if we adhere to the original plan.

Page 2
Mr. A. L. Porter
August 7, 1963

3. The cross-hatched area shown on Plat No. 2 is the area we have under lease from the Santa Fe Railroad and from the State of New Mexico. All offsetting acreage is leased by us and there are no offset operators to this project.

We request that your office review these changes in our plans and request your approval at your earliest convenience.

Very truly yours,

SCANLON and SHEPARD

R. J. Scanlon
By A. J. Scanlon

RJS:G

cc: State Engineer
State Capitol
Santa Fe, New Mexico

New Mexico Oil
Conservation Commission
1000 Rio Brazos Road
Aztec, New Mexico



STATE OF NEW MEXICO.

STATE ENGINEER OFFICE
SANTA FE

S. E. REYNOLDS
STATE ENGINEER

August 20, 1963

ADDRESS CORRESPONDENCE TO:
STATE CAPITOL
SANTA FE, N. M.

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the application of Scanlon & Shepard dated August 7, 1963 concerning their change in plans with regard to their application which was Case No. 2729 and on which Order No. R-2419 was issued.

This office offers no objection to the granting of this change provided the casing and cementing program and testing program are equal to those set forth in the transcript of the original hearing and further provided that the water to be used in the injection program is of a quality equal to that of the water they originally intended to use.

Yours very truly,

S. E. Reynolds
State Engineer

By: *Frank E. Irby*
Frank E. Irby
Chief
Water Rights Division

FEI/ma
cc-Scanlon & Shepard

OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

Copy 2729

August 29, 1963

Scanlon & Shepard
Box 601
Farmington, New Mexico

Attention: Mr. R. J. Scanlon

Gentlemen:

Reference is made to your letter of August 7, 1963, wherein you request approval to substitute your Santa Fe 5, 13, 14, and 18, and your Ray 2 wells for the previously authorized Santa Fe 5, 7, and 8 wells as the injection wells in your Chaco Wash Waterflood Project, McKinley County, New Mexico.

Inasmuch as you are the only operators in the Chaco Wash-Mesaverde Pool and you own all of the offsetting acreage to this project, your request is hereby granted in the interest of obtaining a more efficient flood, provided however, that such approval is subject to the conditions set forth in Mr. Frank Irby's letter of August 20, 1963, relating to the State Engineer's position in this matter.

Very truly yours,

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

ALP/DSN/og

cc: N. Mex. Oil Conservation Commission - Aztec
State Engineer - Santa Fe

C
O
P
Y

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. Apple
CASE NO. 2729

6615 P. 17.

Monahan

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 23, 1963

EXAMINER HEARING

IN THE MATTER OF:

Application of Scanlon-Shepard for a
waterflood project, Chaco Wash Oil Pool,
McKinley County, New Mexico. Applicant, in
the above-styled cause, seeks authority to
inject water into the Mesaverde formation
through certain wells in Section 21, 22, 27
and 28, Township 20 North, Range 9 West,
McKinley County, New Mexico.

Case 2729 -
(Continued)

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: The next case is Case 2729.

MR. DURRETT: Application of Scanlon-Shepard for a
waterflood project, Chaco Wash Oil Pool, McKinley County, New
Mexico.

MR. COOLEY: William J. Cooley, of Verity, Burr, Cooley
and Jones, Farmington, New Mexico, appearing on behalf of the
applicant. We have one witness, Mr. Scanlon.

(Witness sworn.)

MR. UTZ: Any other appearances in this case? You may
proceed.

R I C H A R D J. S C A N L O N

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

DIRECT EXAMINATION

BY MR. COOLEY:

Q State your full name, please.

A Richard J. Scanlon.

Q By whom are you employed?

A By the Scanlon Engineering Company.

Q Where do you reside?

A Farmington, New Mexico.

MR. COOLEY: I believe this witness's expert qualifications as a petroleum engineer with particular knowledge and experience in the Chaco Wash Oil Pool in McKinley County, New Mexico have previously been established before this Commission.

MR. UTZ: That was in the spacing case?

MR. COOLEY: The spacing case for this same area.

MR. UTZ: His qualifications will be accepted.

Q (By Mr. Cooley) Mr. Scanlon, were you responsible for the supervision of the development of the Chaco Wash-Mesaverde Oil Pool?

A I was.

Q Were you there, present, when the first well in this pool was drilled?

A I was.

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



Q Who had supervision of the drilling of that well?

A I did.

Q Is this true of all the remaining wells drilled in this pool?

A I had the supervision. Several of those wells were completed when I wasn't there.

Q Mr. Scanlon, would you, as briefly as possible, give the Examiner a history of the wells drilled in the Chaco Wash-Mesaverde Oil Field, to date?

A The discovery well, the Santa Fe Number 3 was drilled with cable tools. It was spudded on April 1, 1961, was completed on September 4th.

MR. UTZ: What is the location?

A Southeast-southeast of 21, right in the corner down there. You can see it better on Exhibit Number 2. It was completed on September 4, 1961. The well was drilled to 314 feet and four and a half inch casing set and cemented with ten sacks of cement. The well was drilled out under the casing to 319 and completed open hole. Water was encountered at 270 feet, but was shut off with ten sacks of cement. It produced 17 barrels of oil per day with traces of water. After 60 days the production dropped to seven barrels of oil per day and is currently producing about four barrels of oil per day.

Q Would you please supplement your information with regard to that well as to the level of the cement behind the casing?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

PAGE 5

A Yes. In all cases we put ten sacks of cement in there to be sure we shut off any water, and covered any water sand that we encountered above our producing zone. Going to the Halliburton tables we can determine how many feet of cement we have in that hole if we know the size of the hole drilled and the size of the casing put in there. And in every case, we figured that the ten sacks would cover that 270-foot zone.

Q Have you calculated the level of the cement?

A Not on that one, but I have on the wells that we will use as injection wells.

Q Proceed.

A Santa Fe Number 4 was spudded on October 1, 1961 and completed on November 2, 1961. Four inch casing was set at 323 feet and cemented with ten sacks of cement. The total depth is 330 feet with open hole completion. Water found at 280 to 95 was shut off with ten-sack cement job. Well was first produced on November 6, 1961 and produced 20 barrels of oil with traces of water. Currently the well is producing two barrels of oil per day. Santa Fe Number 5 was spudded on November 15, 1961, and completed on December 15, 1961. Five and a half inch casing was set at 325 feet and cemented with ten sacks; open hole completion; total depth, 360. The well has not been produced, but by a later test showed production to be about four barrels per day. On Number 5 well, which is going to be one of the water injection wells, I calculated the amount of cement behind that, and it goes



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-0691

PAGE 6

up 218 feet from the top. In other words, we got cement down to within 218 feet, which covers the water zone there. Santa Fe Number Six Well was not drilled. Santa Fe Number 7 was spudded on January 13, 1961, and completed on January 16, 1961. Four and a half inch casing was set at 318 feet and cemented with ten sacks of cement. The well was completed open hole at 333 feet; water encountered at 283 to 298 was effectively shut off with ten-sack cementing job. Initial production was 19 barrels of oil per day with 95 percent of fluid being oil. The well will produce one barrel of oil per day now. The cement on that well which we will use as an injection well, is up to within 161 feet of the top.

The Santa Fe Number 8 spudded on December 15, 1961 and completed on January 10, 1962, four and a half inch casing set at 315 feet; well was open hole completed at a total depth of 325 feet; water encountered at 265 to 275 was effectively shut off with ten sacks of cement. Initial production was 20 barrels of oil and first produced on January 11, 1962. We have cement in that hole up to within 158 feet of the top, which Number 8 will be used as an injection well.

Santa Fe Number 9 was spudded on July 9, 1962 and completed on July 13, 1962; five and a half inch casing set at 308, cemented with ten sacks of cement; well was completed open hole at a total depth of 343 feet. We were unable to determine location of water sands, but we feel that the ten-sack cementing job would



effectively seal off any water sand. First production was on July 20, 1962 when the well produced 72 barrels of fluid per day, 28 barrels was oil. Currently the well is producing 23 barrels of oil per day.

Santa Fe Number 10 was drilled to 342, is out of the boundaries of the producing area, and no completion was attempted. That is up in the south half of the northeast.

MR. UTZ: That's plugged and abandoned?

A Temporarily plugged and abandoned. The Santa Fe Number 11, spudded on June 10, 1962, and completed on August 8, 1962; four and a half inch casing set at 312, and well was completed open hole at 348. The well was first produced on September 4, 1962 and initial production was 20 barrels of oil with 20 barrels of water. Currently the well is capable of producing 2 barrels of oil per day.

Santa Fe Number 12 was spudded on July 25, 1962, and completed August 10, 1962.

MR. UTZ: Do you have a cement record on the Number 11?

A I don't have it here, but it was ten sacks on all the wells.

MR. UTZ: All right.

A Santa Fe Number 12 was spudded on July 25, 1962 and completed on August 10, 1962; four and a half inch casing set at 326 feet, and well completed open hole at a total depth of 360 feet. Initial test indicated that the well will produce 25 barrels



DEARNLEY-MEIER REPORTING SERVICE, Inc.

SANTA FE, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3571

ALBUQUERQUE, N. M.
PHONE 243-0691

PAGE 8

of oil per day, but the well has not been put on the pump. If our request for water repressure project is approved, we will pump the well.

Santa Fe Number 13 was spudded on August 19, 1962 and completed August 23, 1962; five inch casing was set 310 feet and cemented with ten sacks, and total depth was 370. A good show of oil was found, but the well was not completed because we feel that the well would not be commercial unless we have a water pressure project

In recapitulation from the above information, our group has drilled nine wells in the producing area and all nine wells have some show of oil from the Menefee sands, and most of the wells had initial production rates of from 10 to 30 barrels of oil per day. Wells quickly fall off from their initial production and at the end of 30 to 45 days only two to three barrels of oil per day from each well. The production in these wells is from the Menefee member of the Mesaverde. The sands vary in thickness as near as we can tell from six to fifteen feet, and the producing depth is between 319 and 340 feet depth. Five of the wells have been logged. In our initial test we plan to inject water into three of the wells we already have drilled. The numbers of these wells are the Santa Fe Number 5, Number 7 and Number 8. The Number 5 well has five and a half inch good used casing set at 325 feet. The Number 7 has four and a half inch good used casing set at 318 feet.



MR. UTZ: What size casing is on the Number 5?

A On Number 5 it's five and a half. The Number 8 has four and a half new casing set at 315 feet. All of these proposed injection wells have been cemented, using ten sacks of cement per well.

MR. UTZ: The Number 8, would you repeat it?

A The Number 8 well has four and a half inch new casing set at 315 feet.

MR. UTZ: Did I say the Number 8? I meant the Number 7.

A The Number 7 well has four and a half good used casing set at 315.

Q (By Mr. Cooley) Mr. Scanlon, what pressure tests were conducted on these casing jobs, if any?

A Well, all of the cementing work was done with a portable rotary rig and we had to encounter sometimes pressure up to a thousand pounds to circulate the mud out from behind it, and after we got done cementing, after it set 18 hours we tested it with 600 pounds pressure, for one hour.

Q What was the result of those tests?

A Well, the pressure did not decrease.

Q In your opinion, are the casing and cementing jobs adequate to withstand the injection pressures which you anticipate?

A Yes, because we don't think that we'll have injection pressures of over 300 pounds per square inch.



Q What is the highest pressure you have put on any of these casing jobs?

A Six hundred pounds.

Q Do you anticipate that your injection pressure would ever achieve that high pressure?

A No, sir.

Q What is your source of water for the proposed injection project?

A The Chaco Oil Company has drilled a Dakota test in the southeast-southeast of Section 20, and they have completed that well in the Gallup, with two-inch tubing, and currently it is a source of supply for the Chaco Oil Company waterflood, which adjoins the property that we have.

Q Have you prepared an exhibit which shows the general area of the proposed waterflood with the offset lease owners thereof, and also the source of water?

A I have.

(Applicant's Exhibit No. 1 was marked for identification.)

Q I hand you what has been marked as Applicant's Exhibit Number 1 and ask you if that is the exhibit to which you refer?

A It is.

Q Would you please explain the information shown on Exhibit Number 1, first pointing out the location of the water source?

A Water source is the Chaco Oil Company 20 Number 1 SF;



drilled by the Chaco Oil Company.

Q Where is it located?

A It's in the southeast-southeast of Section 20, Township 20 North, Range 9 West.

Q Approximately what amount of water is produced from this well and from what zone?

A The water production is from the Gallup zone and the well will flow from somewhere between 4,000 and 5,000 barrels of oil per day.

Q Oil?

A I mean barrels of water.

Q What is the nature of this water?

A It's good clean water.

Q Is it fresh, brackish, or salt?

A Fresh water.

Q Would you consider it potable, for table use?

A No, not entirely. I've tried it and it doesn't taste too good.

Q Approximately how far is it from this well to your proposed pilot area?

A Approximately one mile.

Q Have you made satisfactory arrangements with the Chaco Oil Company to obtain all the necessary water for this project?

A Yes, we have.

Q Referring to your Exhibit Number 1, is the hundred sixty



acre area outlined in red, your proposed pilot area?

A It is.

Q Are all the wells in the entire area shown on this plat?

A All the wells that I know of are shown on that plat.

Q Have you prepared a larger scale exhibit which shows in greater detail your proposed pilot area?

A I have.

(Applicant's Exhibit No. 2 was marked for identification.)

Q I hand you what has been marked as Exhibit Number 2 and ask you to explain the information shown thereon.

A Exhibit Number 2 is the larger scale map of the 160 acres that we plan to flood, and the wells colored in red are the wells we propose to produce the oil from; and the wells colored in green are the initial injection wells that we plan to put the water in; and the wells colored in yellow are the proposed injection wells if the initial test is successful.

Q As I understand it then, you are here seeking permission to inject water in the three wells shown in green?

A I am.

Q Mr. Scanlon, what is your proposal with respect to the allowable that should be allocated to this waterflood pilot project area?

A Well, I think that in view of the fact that once we start this flooding and it's successful, why we should be given an



allowable of 70, or the maximum for 40, which would be four maximum allowables for this flood project. At the present proration figure it would be 280 barrels.

Q Now, is it your proposal that the Commission authorize you to produce this from any wells, or wells shown in red?

A All the wells shown in red, plus any of the proposed injection wells which might be good oil wells, after we drill them and get going on them.

Q In plain words, any well presently drilled, or that might hereafter be drilled in the four 40 acres that are shown on this plat?

A Right.

Q Mr. Scanlon, have you prepared a diagrammatic sketch which purports to show the physical installation on your injection wells?

A I have.

(Applicant's Exhibit No. 3 was marked for identification.)

Q I hand you what has been marked as Exhibit Number 3 and ask you if this is the sketch to which you refer?

A It is.

Q Would you please explain the information shown thereon?

A Exhibit Number 3 is a sketch of a typical installation in the area, showing the casing, the cementing, and the proposed hook-up at the top of the well. We have a pressure gauge and



we'll have a positive displacement water meter and shutoff valve and an injection pump.

Q As I understand it then you will actually meter the amount of water injected into each well and at what pressure it is injected?

A Right.

Q Mr. Scanlon, do you have logs of all three of the initial proposed injection wells?

A We have logs on two of the three.

Q Which of those two?

A Number 7 and Number 8.

Q Which well is it that you have no log on?

A Number 5.

(Applicant's Exhibit No. 4 was marked for identification.)

Q I hand you what has been marked as Exhibit Number 4, and ask you if these are the logs to which you refer?

A They are.

Q Would you please explain the information shown thereon?

A These logs were taken after we had cemented the casing, so the logs themselves only show the formation below the casing to the bottom of the hole. On these logs we can get sand thickness, and the approximate depth at which the water should be injected into these wells.

Q From these logs, together with the other information that you have accumulated concerning the wells in this area, is it

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



your opinion that the producing formation will satisfactorily receive water injection?

A Yes, I'm positive that we'll get some increase in production because we have approximately the same porosity and permeability that the Chaco Oil Company has on their waterflood, which is about 30 percent porosity and the permeability we estimate will be between three and five hundred millidarcies, which is plenty good for transmission of fluid through the sands. The Chaco Oil Company when they first started, they had their production from four wells of about a total of eight barrels of oil per day, and now they are producing over 6,000 barrels per month, and I see no reason why our area couldn't be flooded as successfully as the Chaco Oil Company area.

Q The Chaco Oil Company waterflood to which you have referred in your testimony is located where?

A In Sections 21, Township 20 North, Range 9 West, 20 and 29.

Q Is this area shown on your Exhibit Number 1?

A It is.

Q Approximately how many producing wells do they have in their area at the present time?

A I think they have ten producing wells.

Q Approximately what number of injection wells?

A Somewhere between ten and twelve, about the same number of wells for water as they have oil.

DEARNLEY-MEIER REPORTING SERVICE, Inc.
FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

Q Do you plan to institute and operate your waterflood project in substantially the same manner as the Chaco Oil Company has?

A Yes.

Q Mr. Scanlon, do you feel that the primary production from the Chaco Wash Oil Pool has reached an economic limit?

A No, I don't. I think that the production will continue to increase.

Q The primary recovery?

A Oh --

Q Without waterflood?

A From the Chaco Wash Mesaverde?

Q Yes.

A Yes, I certainly do.

Q Do you feel that there is still a substantial amount of oil to be recovered from this area if the waterflood project is permitted?

A Yes.

Q In your opinion, will the granting of the application prevent waste and protect correlative rights?

A It will.

Q Will it result in the recovery of, in your opinion, of a substantial quantity of additional oil?

A It will.

Q If this application is denied will it be necessary to



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

plug and abandon this pool?

A Well, yes, I would say so, because the present, because at the present production level it's uneconomical to operate the thing, you can't even break even.

Q What is the primary factor which renders the primary recovery from this area very low?

A Lack of any pressure for drive.

Q No reservoir drive of any sort?

A Right.

Q Also as a portion of Exhibit Number 4 there are three additional logs, would you please testify with regard to these?

A These three logs are on the Santa Fe Number 12, the Santa Fe Number 13 and the New Mexico State Ray Number 2. Now the Number 2 is in Section 28, and the Number 12 is in Section 22, and Number 13 is in Section 27. These logs are similar to the ones that we got on 7 and 8 and there you see the same information.

Q Then as I understand it, you have, with the five logs that comprise your Exhibit Number 4, logs covering, practically speaking, the entire presently drilled area of the Pool?

A Yes, by these five logs we have circled the wells that have been drilled and gives us the information on a section through there.

Q Does it indicate that you have a continuous sand throughout the producing area?



A In my opinion it does.

MR. COOLEY: With that, Mr. Examiner, the Applicant offers their Exhibits 1, 2, 3 and 4 into evidence.

MR. UTZ: Without objection Exhibits 1, 2, 3 and 4 in this case will be entered into the record.

(Applicant's Exhibits 1, 2, 3 & 4 were admitted into evidence.)

MR. COOLEY: We have no further direct testimony.

MR. UTZ: Are there questions of the witness? Mr. Irby.

MR. IRBY: Frank Irby, State Engineer's Office.

CROSS EXAMINATION

BY MR. IRBY:

Q Mr. Scanlon, referring to your Exhibit Number 3, in the depth between that designated as the water sand and the oil sand, where your casing is landed and cemented, what is that formation there? I mean the nature of it rather than the name.

A It's a sand.

Q It's a sand, also?

A Yes.

Q What prevents that water from going on down into your oil sand?

A The cementing job.

Q In your annulus, of course, but what keeps it from going on down out away from your well? In other words, I take it from the exhibit that this portion designated as water sand is water



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1112

SANTA FE, N. M.
PHONE 983-3371

ALBUQUERQUE, N. M.
PHONE 243-6691

PAGE 19

bearing and the one designated as oil sand is oil bearing, and that the interval between has no fluid in it?

A Right. The interval between is shale.

Q Shale?

A Yes.

Q I beg your pardon, I thought you said sand?

A Oh, the interval between is shale, yes.

Q Is it impervious to water?

A Yes.

Q I notice in your computation referring to Halliburton's Tables that your ten sacks of cement computed to go to a certain height, did you allow any for migration out into the formation?

A No, not in my computation.

Q You just used the annular space alone?

A Right.

Q Does this cement, according to those computations, come well up above the top of the water in the water sand?

A Yes.

Q It indicates so on the Exhibit.

A On the Santa Fe Number 5 we drilled a seven-inch hole and put five and a half inch casing in there and their tables show that one sack of cement will cover the annulus to a depth of 10.7 feet. So, in that case we had 100 feet, 107 feet of cement behind the casing, which takes it well above that water zone.

Q And you anticipate your injection pressure will be a



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

maximum of 300 pounds, did I get that right?

A That's right. I'm basing that on the pressures of the Chaco Oil Company, and I understand that they are putting it in at 380 or 400 pound pressure at 470 foot depth.

Q The formation from which you are producing is not the same, but a similar formation to that from which the Chaco Oil Company is producing.

A It is not the same, and it is very similar.

Q With regard to porosity and permeability?

A Yes.

Q If it becomes necessary for you to increase your injection pressure up to a point near 600 PSI, would additional tests be run on the wells to be sure that the casing was capable of handling this?

A Yes, if it becomes necessary to go anywhere near 600 pounds, we'll shoe her down and test the casing before we exceed that.

Q Will water be recirculated that is produced with the oil?

A We do not plan to recirculate it, no.

Q What disposal will be made of that water?

A There's an arroya that runs very near our producing area and we'll probably just pipe it down through the arroya and let it go.

Q Will the injection be through the casing without tubing?

A On the initial test, yes. However, if the test is



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

successful and we drill additional injection wells, we'll probably just complete those with tubing and we'll pump water down the tubing then in the other injection wells.

Q Without casing?

A Without casing, it's a lot cheaper.

Q Is this system open or closed?

A I don't follow the question.

Q Well, if you are not circulating water, I don't know as it makes a lot of difference.

MR. IRBY: That's all the questions I have.

MR. UTZ: Are there any other questions?

MR. DURRETT: Yes, sir, I have a question.

BY MR. DURRETT:

Q Mr. Scanlon, I'm not clear at all on your request as far as the allowable goes for this water flood. Could you clarify that a little bit?

A The allowable, according to Rule 701 would be satisfactory.

Q You feel that the maximum allowable authorized under Rule 701 would be completely satisfactory to you?

A Yes.

MR. DURRETT: That clarifies it, thank you very much.

BY MR. UTZ:

Q You are aware of the fact, are you, Mr. Scanlon, that the Red Mountain unit is operating under Rule 701?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

A No, I wasn't aware of it, but I knew their allowable was pretty high.

Q You don't object to having more allowable than you requested then?

A No.

Q Do you have any idea how Red Mountain Unit is disposing of their produced water?

A They're just running it down to this same arroya.

Q Is it creating much of a hazard, is much oil going with it?

A No, they have a pit they run it out into, and then out of, and the water and oil, if there is any, separates out real good, and they burn the oil off and dispose of the water.

Q Are any of these wells that are shown on Exhibit Number 2 unorthodox locations, in regard to R 2112, are they all more than 165 feet?

A They are all more than 165 feet from any subdivision like that, and 330 feet between wells.

Q So they will comply with 2112?

A Right.

Q You will not have any unorthodox locations?

A Right.

MR. UTZ: Are there any other questions of the witness?

MR. COOLEY: I have redirect examination if no further



cross.

MR. UTZ: Mr. Arnold.

BY MR. ARNOLD:

Q Were you going to make some sort of an arrangement to keep the stock away from the pit where you are disposing of the water? There is stock in that area.

A There is, yes. We'll put a fence around it.

MR. UTZ: Cow tight fence?

A Cow tight fence.

MR. ARNOLD: It should be a sheep type fence probably.

MR. UTZ: Are there other questions? You may proceed, Mr. Cooley.

REDIRECT EXAMINATION

BY MR. COOLEY:

Q Mr. Scanlon, concerning the fresh water zone about which you have previously testified, do you have any information or knowledge as to whether any fresh water is actually being produced from that zone, or could be in any quantity?

A I don't think that there's enough water in that zone for any commercial production or for cattle or anything else?

Q As far as you know, are there any wells producing from this zone in the area?

A Not to my knowledge, no.

Q You say you have tasted the water that you will be injecting?



A Yes.

Q In your opinion would this water, even if it were to percolate into this fresh water zone about which you have testified, contaminate that zone?

A No, because the cattle are drinking water that would come from this well now.

Q The water which you propose to inject is fit for stock use?

A Right.

Q Mr. Irby questioned you as to whether, in your opinion there was a possibility that there were any thief zones or lost circulation zones into which some of the cement might have migrated in these wells. Would you further explain the situation with regard to this?

A All the wells that we've drilled in that area either went through a hard shale or a sand formation, and in between, where we found the water, between 260 and 280 feet, and the oil sand, we had a hard shale zone so that none of the zones between where we put the cement in and the water in could be a thief zone to take that cement.

Q If there is any migration of cement out into any zone, what zone would it be, in your opinion?

A It would be in the water sand.

Q What would the effect of this be?

A Just to seal it off better.



MR. COOLEY: No further questions.

RECROSS EXAMINATION

BY MR. UTZ:

Q What is the depth of your water source well in the Gallup Zone?

A Approximately 2,700 feet. We have one log available on that well if you would like to have it.

Q I don't think that would be necessary. This water that is in the zone above your pay zone is potable water?

A I will assume, yes. It's not being produced anywhere in the area.

Q And this pay zone in this area is Menefee?

A It's one of the Menefee sands.

Q It's a different zone of the Menefee than is in the Red Mountain area?

A We think so for this reason, because they are producing at 470 feet although the ground levels are different, they are getting a 42 to 43 gravity, and ours is 50 plus, so we assume that we have different zones.

MR. UTZ: Are there any other questions?

MR. IRBY: I have one.

BY MR. IRBY:

Q Mr. Scanlon, if this application is granted, would you, after production starts and you begin producing water with this



oil, furnish me a copy of the analysis of the water that is being wasted into this arroya?

A I will.

MR. IRBY: Thank you.

MR. UTZ: The witness may be excused. Are there other statements in this case? The case will be taken under advisement.

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 18th day of February, 1963.

Ada Dearnley
Notary Public - Court Reporter

My Commission Expires:
June 19, 1963

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2729, heard by me on Jan 23, 1963.

Thurston, Examiner
New Mexico Oil Conservation Commission

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243 6691



oil, furnish me a copy of the analysis of the water that is being wasted into this arroya?

A I will.

MR. IRBY: Thank you.

MR. UTZ: The witness may be excused. Are there other statements in this case? The case will be taken under advisement.

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 18th day of February, 1963.

Ada Dearnley
Notary Public - Court Reporter

My Commission Expires:
June 19, 1963

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2729, heard by me on Jan 23, 1963.

Shirley H. H.
Examiner
New Mexico Oil Conservation Commission

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

REGISTERHEARING DATE JANUARY 23, 1963 TIME: 9 A.M.

NAME:	REPRESENTING:	LOCATION:
Joe Gordon	Socony Mobil	Hobbs
C.R. Black	TEXACO Inc	Midland
B.L. Francis	" "	"
V.T. Lyon	CONTINENTAL OIL CO	ROSWELL, N.M.
Booster Kelly	Gulfstream white fillers	S.F.
S. Christy	Hersey, Dow & Hinkle	Roswell, NM
D.E. Ware	Consult. Reel.	Midland.
R. S. Morris	Seth, Mackgum, Federal	Santa Fe
Kenneth Swanson	Agtec. Oil & Gas Co.	Dallas, Texas
Charles B. Reed	Self	Roswell, N.M.
J.T. M. Grath	U.S.G.S.	Midland
D.W. Cunningham	Smith, Albright	Midland
R.J. Seaton	Seaton, Shepard	Farmington, N.M.

NEW MEXICO OIL CONSERVATION COMMISSION

EXAMINER HEARING

SANTA FE, NEW MEXICO

REGISTERHEARING DATE JANUARY 23, 1963 TIME: 9 A.M.

NAME:	REPRESENTING:	LOCATION:
A.E. Snyder	Amerada Petr. Corp.	Hobbs, N.M.
Jason Kellah	Kellah & Fox	Santa Fe
O. W. Schmidt	Amerada Petr. Corp.	Torrey, N. Mex.
Frank E. Libby	State Engin.	Santa Fe
J. H. Hoover	Gulf Oil Corp.	Roswell N.M.
W. V. Kester		
Jos. V. Ramirez	NMOC	Hobbs NM
Ernest Canale	NMOC	Albuquerque
Chris Jones	W.R. Rasmussen, Inc.	Albuquerque, N.M.
L. C. White	SWI	Santa Fe
A. L. Porter, Jr.	OCC	Santa Fe
J. F. Sperling	Mobil Oil Co.	Albuquerque

NEW MEXICO OIL CONSERVATION COMMISSION
EXAMINER HEARING

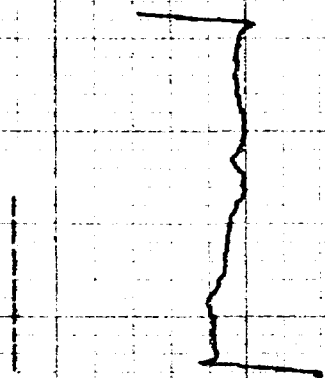
SANTA FE, NEW MEXICO

REGISTER

HEARING DATE JANUARY 23, 1963 TIME: 9 A.M.

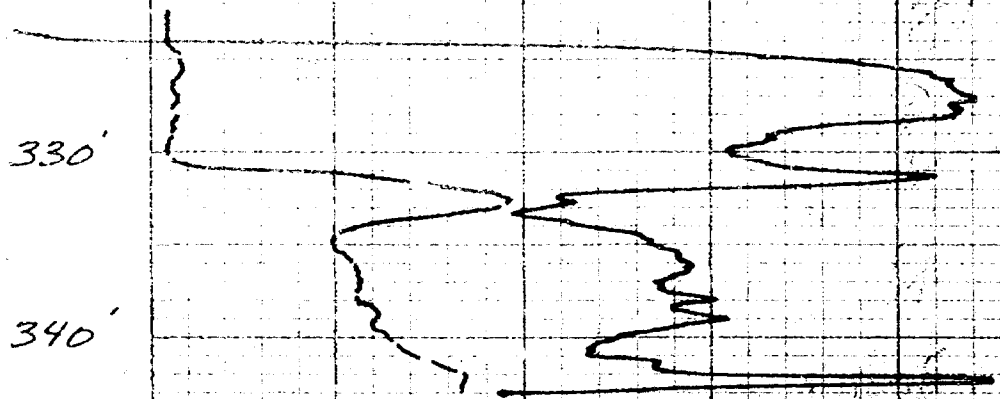
NAME:	REPRESENTING:	LOCATION:
E Sperling Booker Kelly	Mobil oil co Gilbert H. H. H. H.	albuquerque S.F.

Scanlon & Shepard
 Santa Fe # 8



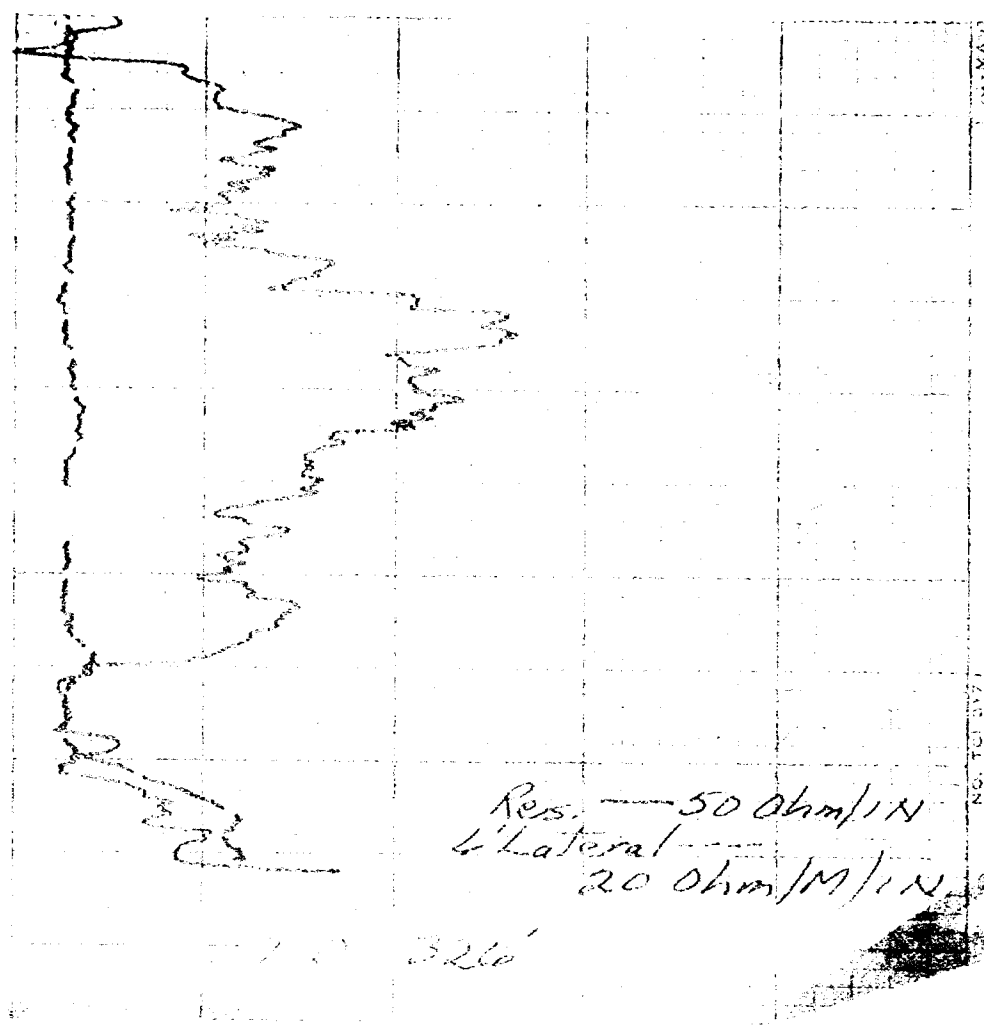
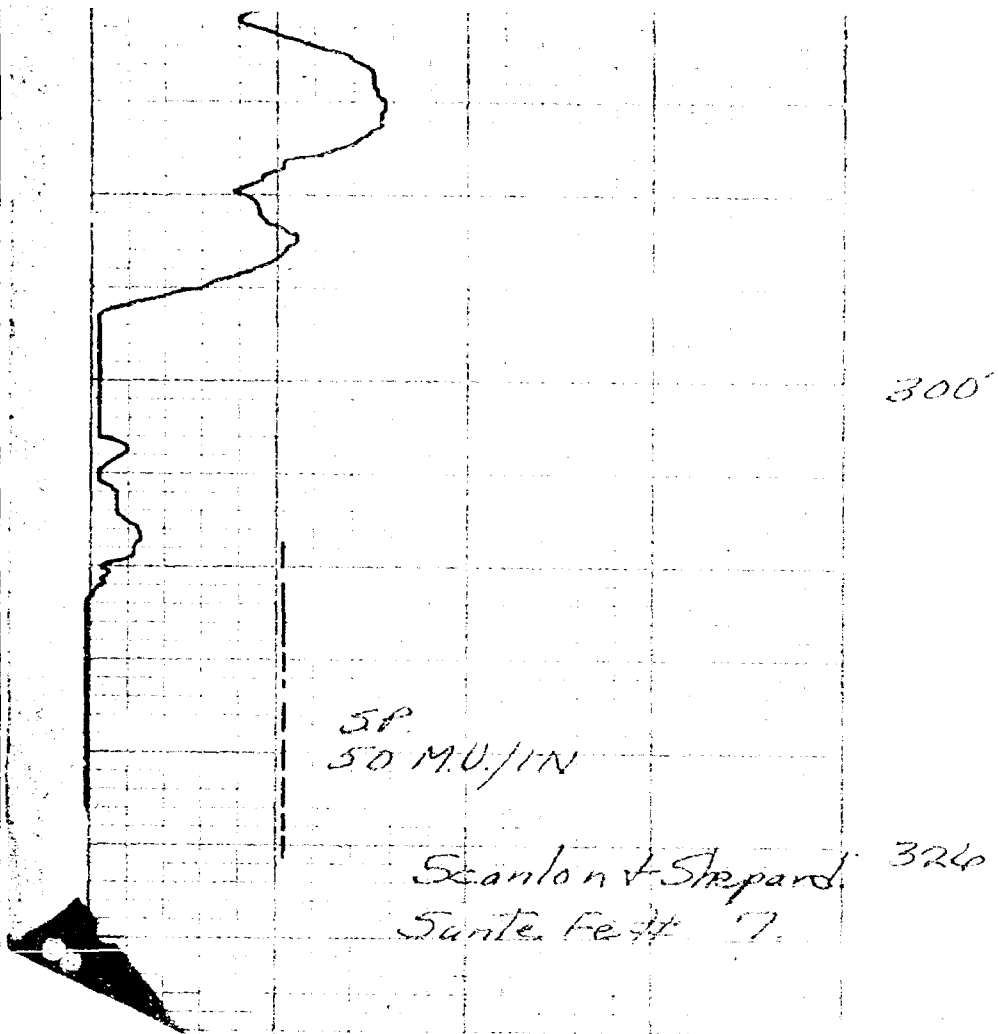
S.P.
 25 M.O./IN.

Res. ——— 25 Ohm/IN
 6' Lateral ———
 20 Ohm/M./IN.



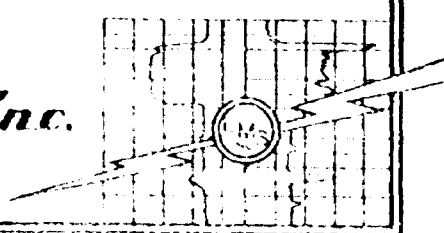
T.D. 343'

LOG-MASTER SERVICES, INC.



Log-Master Services, Inc.

ENID, OKLAHOMA



TYPE OF SURVEY

Electric Log

Well Ray # 2
Field Chaco Wash Mesa Verde
Company Scanlon & Shepard
Location Sec. 28 20-9
County McKinley
State N. Mex.

Well Ray # 2
Company
County McKinley
State N. Mex.
Location Sec. 28 20-9
Date August 16, 1962

Depth Datum G. L.

Bottom Depth: Log 355'

Size Hole

Mud: Kind

Viscosity

Casing Data Cased To 315'

Elev.

Driller

Weight

Resistivity

'F.

Remarks:

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. _____
CASE NO. _____

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4 a b c d e
CASE NO. 2729

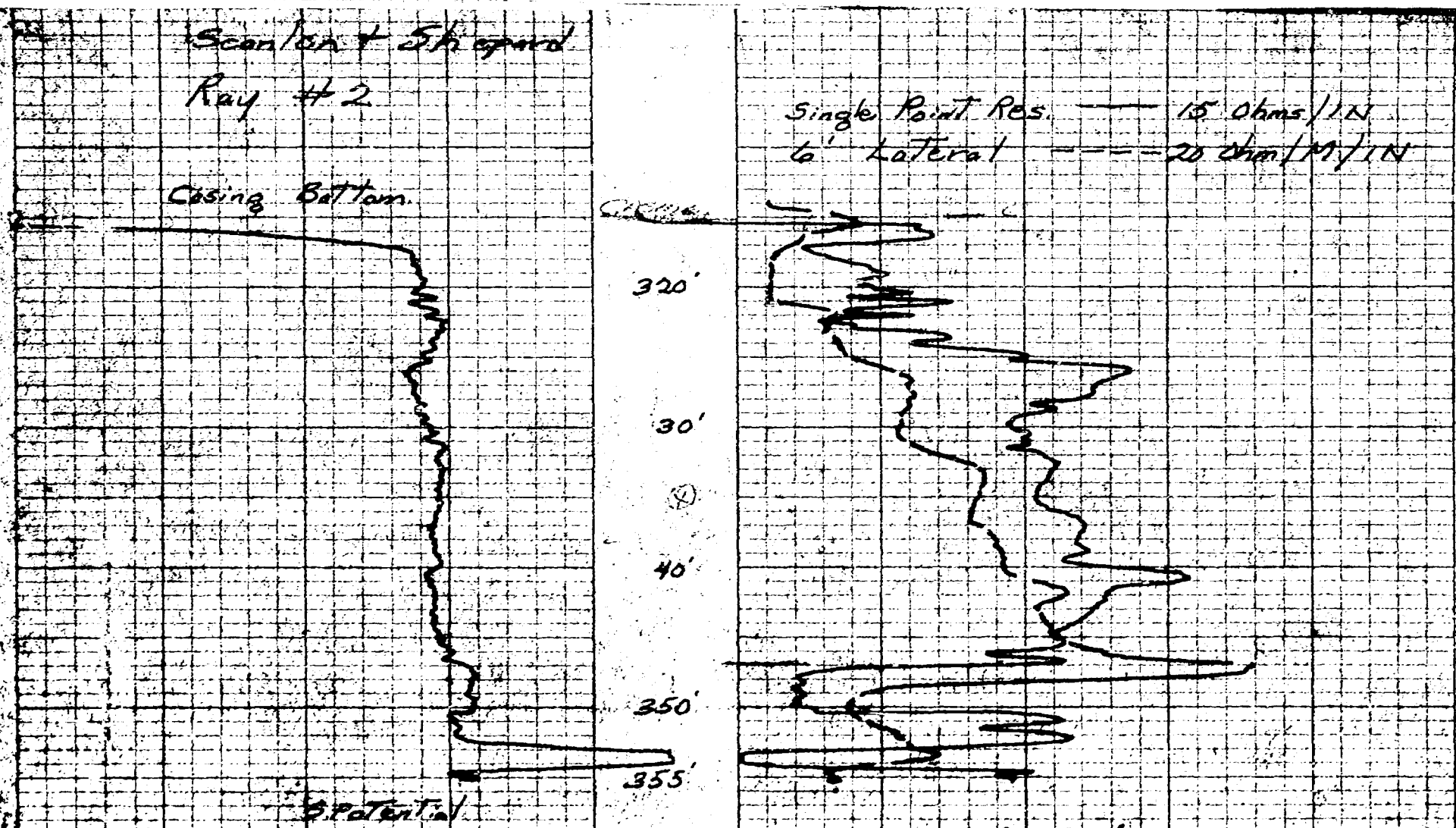
Date August 16, 1962

Observer E. Critchlow

Scanlon & Shepard
Ray # 2

Casing Bottom

Single Point Res. — 15 Ohms/IN
6' Lateral — 20 Ohms/IN



LOG-MASTER SERVICES, INC. ENID, OKLAHOMA

SP.
25 M.U./IN

20 Ohm/IN

320'

350'

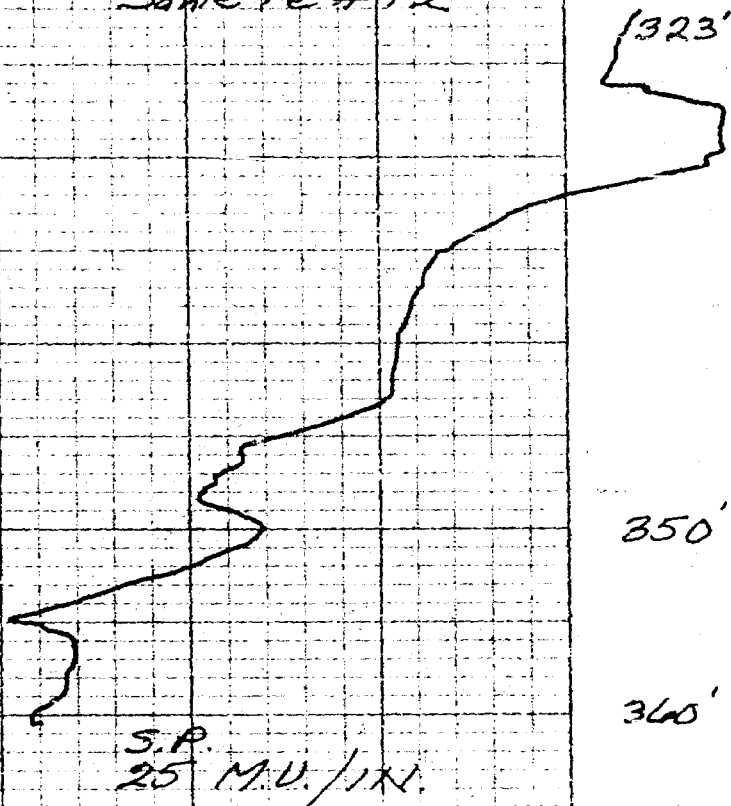
370'

Scanlon + Shepard
State Fe #13

NO. TGI 3173

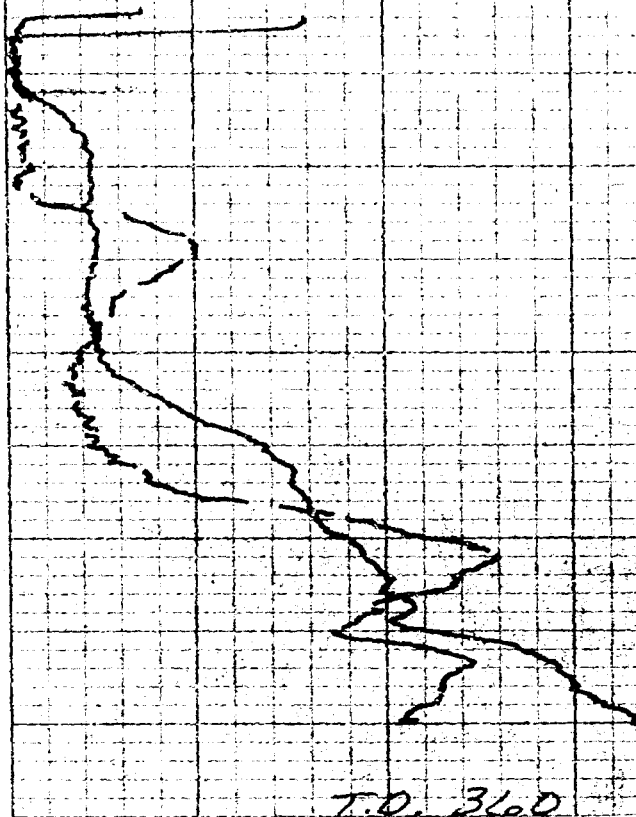
PRINTED IN U.S.A.

Soanlon &
Shepard.
Sante Fe #12



S.P.
25 M.V./IN.

Res. ——— 25 Ohms/IN.
6' Lateral ——— 20 Ohm/M/IN.



T.O. 360

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 3, 1963

EXAMINER HEARING

IN THE MATTER OF:

Application of Scanlon-Shepard for a waterflood
project, Chaco Wash Oil Pool, McKinley County,
New Mexico. Applicant, in the above-styled
cause, seeks authority to inject water into the
Mesaverde formation through certain wells in
Sections 21, 22, 27 and 28, Township 20 North,
Range 9 West, McKinley County, New Mexico.

CASE 2729

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. NUTTER: Call Case 2729.

MR. DURRETT: Application of Scanlon-Shepard for a
waterflood project, Chaco Wash Oil Pool, McKinley County, New
Mexico.

If the Examiner please, I believe the Applicant has
requested that the case be continued to the January 23rd hearing.
I would like to so move at this time.

MR. NUTTER: Case 2729 will be continued to January
23rd, same time and place.

* * * *

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss

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

WITNESS my Hand and Seal this 22nd day of January, 1963.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:
June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2727, heard by me on 1/3, 19 63.

Examiner
New Mexico Oil Conservation Commission

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1162

SANTA FE, N. M.
PHONE 983-3971

ALBUQUERQUE, N. M.
PHONE 243-6691



ALBUQUERQUE, N. M.
PHONE 243-6691

EXAMINER HEARING

Application of Scanlon-Shepard for a waterflood project, Chaco Wash Oil Pool, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to inject water into the Mesaverde formation through certain wells in Sections 21, 22, 27 and 28, Township 20 North, Range 9 West, McKinley County, New Mexico.

CASE 2729

TRANSCRIPT OF PROCEEDINGS

MR. DURRETT: Application of Scanlon-Shepard for a waterflood project, Chaco Wash Oil Pool, McKinley County, New Mexico.

If the Examiner please, I believe the Applicant has requested that the case be continued to the January 23rd hearing. I would like to so move at this time.

MR. NUTTER: Case 2729 will be continued to January 23rd, same time and place.

✱ ✱ ✱ ✱



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

SANTA FE, N. M.
PHONE 083-3971

ALBUQUERQUE, N. M.
PHONE 243-6691

PAGE 3

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss

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

WITNESS my Hand and Seal this 22nd day of January, 1963.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner's hearing of Case No. 2727 heard by me on 1/3, 1963.

Asenior Examiner
New Mexico Oil Conservation Commission

