

CASE 3681: Appli. of BURWINKLE &
SCANLON FOR A WATERFLOOD PROJECT,
McKINLEY COUNTY, NEW MEXICO.

Case No.

3687

Application, Transcript,
Small Exhibits, Etc.

CORE ANALYSIS FOR

BURSCAN OIL COMPANY

NO. 5 OH WELL

WILDCAT FIELD

McKINLEY COUNTY, NEW MEXICO

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Burscan EXHIBIT NO. 2

CASE NO. 3681

CORE

CA-20

CORE LABORATORIES, INC.
Petroleum Reservoir Engineering
DALLAS, TEXAS

Page No. 1

CORE ANALYSIS RESULTS

Company BURSCAN OIL COMPANY Formation MESA VERDE File RP-3-2244
Well OH #5 Core Type CONVENTIONAL Date Report 8/21/67
Field WILDCAT Drilling Fluid FRESH WATER Analysts GRAHAM
County McKINLEY State NEW MEX. Elev. Location SEC. 28-T20N-R9W

Lithological Abbreviations

SAMPLE NUMBER	DEPTH FEET	PERMEABILITY MILLIDARCS	POROSITY PER CENT	RESIDUAL SATURATION PER CENT PORE		SAMPLE DESCRIPTION AND REMARKS
				OIL	TOTAL WATER	
1	513-14	0.36	13.9	5.0	86.4	SS:GRY, FN, V ARGIL, V/SLTY
2	514-15	118.0	24.0	4.2	85.6	SS:LT GRY, FN, SLI/ARGIL
3	515-16	88.0	27.3	6.6	81.6	SS:LT GRY, FN, SLI/ARGIL
4	516-17	58.9	27.5	2.9	88.0	SS:LT GRY, FN, ARGIL, SLT STRNGRS, SLI/CALC
5	517-18	187.0	29.0	5.9	84.2	SS:LT GRY, FN, SLI/ARGIL
6	518-19	49.5	30.4	4.6	85.7	SS:LT GRY, V/FN-FN, ARGIL, SLT STRNGRS

SERVICE #1-A

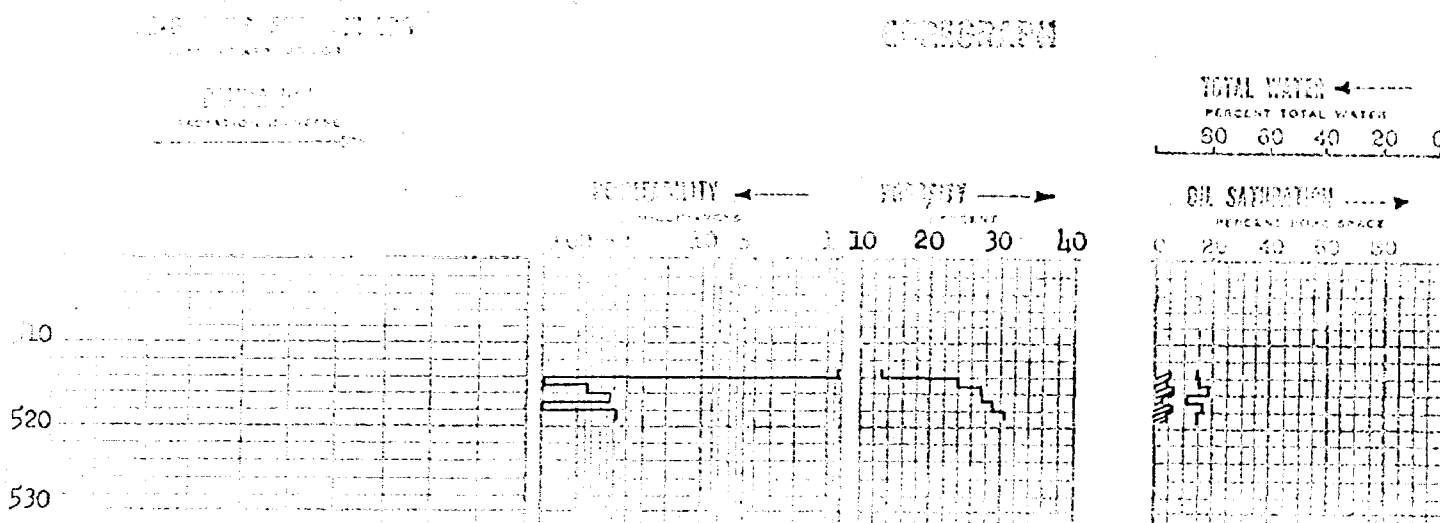
These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc. and its officers and employees, assume no responsibility and make no warranty or representations, as to the productivity, proper operations, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

BURSCAN OIL COMPANY WILDCAT
OH #5
SEC. 28-T20N-R9W NEW MEXICO
DATE 8/21/67
FILE RP-3-2244



Diagram showing the location of the well in the reservoir and the geological structure of the reservoir.

VERTICAL SCALE: 5" = 100'



CL-529 CORE SUMMARY AND CALCULATED RECOVERABLE OIL

FORMATION NAME AND DEPTH INTERVAL: 513.0 to 519.0 feet - Mesa Verde

FEET OF CORE RECOVERED FROM ABOVE INTERVAL	6	AVERAGE TOTAL WATER SATURATION: PER CENT OF PORE SPACE	85.3
FEET OF CORE INCLUDED IN AVERAGES	6	AVERAGE CONNATE WATER SATURATION: PER CENT OF PORE SPACE	
AVERAGE PERMEABILITY: MILLIDARCY	83.6	OIL GRAVITY: γ_{API}	
PRODUCTIVE CAPACITY: MILLICANDY-Feet	502	ORIGINAL SOLUTION GAS-OIL RATIO: CUBIC FEET PER BARREL	
AVERAGE POROSITY: PER CENT	25.7	ORIGINAL FORMATION VOLUME FACTOR: BARRELS SATURATED OIL PER BARREL STOCK-TANK OIL	
AVERAGE RESIDUAL OIL SATURATION: PER CENT OF PORE SPACE	4.9	CALCULATED ORIGINAL STOCK-TANK OIL IN PLACE: BARRELS PER ACRE-FOOT	

Calculated maximum solution gas drive recovery is barrels per acre-foot, assuming production could be continued until reservoir pressure declined to zero psig. Calculated maximum water drive recovery is barrels per acre-foot, assuming full maintenance of original reservoir pressure, 100% areal and vertical coverage, and continuation of production to 100% water cut. (Please refer to footnotes for further discussion of recovery estimates.)

INTERPRETATION OF DATA

513.0 - 519.0 feet - This interval will produce water and should be excluded from any completion attempts, due to higher than normal water saturations.

These recovery estimates represent theoretical maximum values for solution gas and water drive. They assume that production is started at original reservoir pressure; i.e., no account is taken of production to date or of prior drainage to other areas. The effects of factors tending to reduce actual ultimate recovery, such as economic limits on oil production rates, gas-oil ratios, or water-oil ratios, have not been taken into account. Neither have factors been considered which may result in actual recovery intermediate between solution gas and complete water drive recoveries, such as gas cap expansion, gravity drainage, or partial water drive. Detailed predictions of ultimate oil recovery to specific abandonment conditions may be made in an engineering study in which consideration is given to overall reservoir characteristics and economic factors.

These analyses, opinions or interpretations are based on observations and materials supplied by the client to whom, and for whose exclusive and confidential use, this report is made. The interpretations or opinions expressed represent the best judgment of Core Laboratories, Inc. (all errors and omissions excepted); but Core Laboratories, Inc., and its officers and employees assume no responsibility and make no warranty or representation as to the productivity, proper operation, or profitability of any oil, gas or other mineral well or sand in connection with which such report is used or relied upon.

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. 3681
Order No. R-3346

APPLICATION OF BURWINKLE AND SCANLON
FOR A WATERFLOOD PROJECT, MCKINLEY
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 8, 1967, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 15th day of November, 1967, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Burwinkle and Scanlon, seeks permission to institute a waterflood project adjacent to the Chaco Wash-Mesaverde Pool by the injection of water into the Mesaverde formation through a well to be drilled 330 feet from the North line and 330 feet from the East line of Unit C of Section 28, Township 20 North, Range 9 West, NMPM, McKinley County, New Mexico.

(3) That the applicant further seeks an administrative procedure whereby the Secretary-Director of the Commission is authorized to approve expansion of said project and the drilling of additional injection wells and producing wells at unorthodox locations; that said administrative procedure should provide for administrative approval for conversion to water injection in

-2-

CASE No. 3681

Order No. R-3346

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

(4) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(5) That the proposed waterflood project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

(6) That the subject application should be approved and the project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations; provided, however, that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

IT IS THEREFORE ORDERED:

(1) That the applicant, Burwinkle and Scanlon, is hereby authorized to institute a waterflood project adjacent to the Chaco Wash-Mesaverde Pool by the injection of water into the Mesaverde formation through a well to be drilled 330 feet from the North line and 330 feet from the East line of Unit C of Section 28, Township 20 North, Range 9 West, NMPM, McKinley County, New Mexico.

(2) That the subject waterflood project is hereby designated the Burwinkle and Scanlon Chaco Wash Waterflood Project and 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 aforesaid waterflood project and the drilling of such other additional injection wells and producing wells at unorthodox locations as may be necessary to complete an efficient water injection pattern in said expanded project, provided that the application therefor has been filed in accordance with Rule 701 B of the Commission Rules and Regulations, and provided further that a copy of the application has been sent to all offset operators and no such operator has objected within 15 days; that the showing of well response as

-3-

CASE No. 3681

Order No. R-3346

required by Rule 701 E-5 of the Commission Rules and Regulations shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman


GUXTON B. HAYS, Member


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


esr/

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

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

P. O. BOX 2088
SANTA FE

November 15, 1967

Mr. R. J. Scanlon
Scanlon & Shepard
Post Office Box 601
Farmington, New Mexico

Dear Sir:

Enclosed herewith is Commission Order No. R-3346, entered in Case No. 3681, approving the Burwinkle and Scanlon Chaco Wash Water-flood Project.

Injection is to be through the one authorized water injection well, which shall be equipped with 2 3/8 inch casing set at the top of the Mesaverde Red Mountain sand and cemented to the surface.

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 140 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

-2-

Mr. R. J. Scanlon
Farmington, New Mexico
November 15, 1967

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

Enclosure
ALP/DSN/ir

cc: Oil Conservation Commission
Hobbs and Aztec, New Mexico

Mr. Frank Irby, State Engineer Office
Santa Fe, New Mexico

Memo

From

OIL CONSERVATION COMMISSION
1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410

To *Gerry C. Hatch:*

*That letter of Oct 27,
really got results.*

al

Nov 1 PM 1 22

GOVERNOR
DAVID F. CARGO
CHAIRMAN

DA

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

1000 RIO BRAZOS ROAD
AZTEC

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

October 30, 1967

Burwinkle & Scanlon
120 Vassar Drive, S.E.
Albuquerque, New Mexico

Gentlemen:

This letter shall acknowledge receipt of forms C-101 and C-102 for your #6 and #7 wells on the Ohwell lease. It shall also confirm receipt of forms C-103 for wells #1, 2, 3, 5, 6, & 7 showing drilling and casing data.

Mr. R. J. Scanlon assured me that well signs will be set at each location in the immediate future as soon as the signs are completed.

Based upon the above information, this letter shall serve as your authority to proceed with your operations in the Chaco Wash - Mesaverde Oil Pool.

Yours very truly,

A. R. Kendrick
A. R. Kendrick
Engineer, District #3

ARK:ae

cc: NMOCC, Santa Fe
Mr. R. J. Scanlon

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DOCKET: EXAMINER HEARING - WEDNESDAY - NOVEMBER 8, 1967

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 Elvis A. Utz, Alternate Examiner:

- CASE 3681: Application of Burwinkle and Scanlon for a waterflood project, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Mesaverde formation through one well located 330 feet from the North and East lines of Unit C of Section 28, Township 20 North, Range 9 West, McKinley County, New Mexico. Applicant further seeks an administrative procedure for future expansion of said project.
- CASE 3674: Application of Robert N. Enfield for an interpretation of or the amendment of Order No. R-3189, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the interpretation of Order No. R-3189 which pooled all mineral interests in the Chaveroo-San Andres Pool underlying the NW/4 NW/4 of Section 11, Township 8 South, Range 33 East, Chaves County, New Mexico, that paragraph (9) of said order, in fixing \$125.00 per month as the reasonable cost of operating the well to be drilled on the acreage being pooled, should be construed to provide said \$125.00 per month as a reasonable charge for supervision and operational overhead; that applicant should be permitted to withhold from production the proportionate share of said \$125.00 attributable to each non-consenting working interest, and that in addition thereto, applicant should be permitted to withhold from production the proportionate share of actual operating costs of said well attributable to each non-consenting working interest. In the alternative to the aforesaid interpretation of Order No. R-3189, applicant seeks the amendment of paragraph (9) of said order in accordance with the above provisions.
- CASE 3682: Application of Gulf Oil Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its J. N. Carson (NCT-A) Well No. 7 located in Unit B of Section 33, Township 21 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce oil from the Drinkard and Brunson-Ellenburger Pools through parallel strings of tubing.
- CASE 3683: Application of Gulf Oil Corporation for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the approval of the Stuart Langlie Mattix Unit Area comprising 1,120 acres, more or less, of Federal, State and Fee lands in Sections 2, 3, 10, and 11, Township 25 South, Range 37 East, Lea County, New Mexico.
- CASE 3684: Application of Gulf Oil Corporation for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Stuart Langlie Mattix Unit by the injection of water in the Langlie Mattix Pool through 12 wells located in Sections 2, 3, 10, and 11, Township 25 South, Range 37 East, Lea County, New Mexico.

- CASE 3685: Application of Gulf Oil Corporation for an amendment of Order No. R-3290, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3290, which order authorized an unorthodox oil well location 1075 feet from the South line and 2395 feet from the West line of Section 16, Township 22 South, Range 37 East, Lea County, New Mexico, for its R. E. Cole (NCT-A) Well No. 9, said well being projected to undesignated Silurian and Montoya oil pools. Applicant now seeks the substitution of the Drinkard Pool for the previously authorized pools.
- CASE 3686: Application of Gulf Oil Corporation for down-hole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle production from the Allison-Abo and Allison-Pennsylvanian Pools in the wellbore of its Federal Mills Well No. 1 located in Unit C of Section 11, Township 9 South, Range 36 East, Lea County, New Mexico, with the provision that no more than one single allowable will be produced from said well.

Memo

From

A. R. KENDRICK
ENGINEER & DEPUTY
OIL & GAS INSPECTOR

To George Hatch:

You might ask these
people what they have
done about this when
they appear for Case 3681
on November 8th.

We spent all summer
last year getting some
Abandon wells plugged.

I want to keep them
straight then time.

ac

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission

*Put in core
3681 until
after hearing
George*

LAND COMMISSIONER
GUYTON B. HAYS
MEMBER



1000 RIO BRAZOS ROAD
AZTEC

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

October 27, 1967

Burwinkle & Scanlon
120 Vassar Drive S. E.
Albuquerque, New Mexico

Gentlemen:

Notices of intention to drill were approved August 1, 1967, for five wells in Section 28, Township 20 North, Range 9 West, Chaco Wash Mesaverde Oil Pool.

During a field inspection on October 26, 1967, we learned that four of the approved wells have been drilled. We have not received any subsequent report for this operation as required by Rule 1103.

We also learned that two wells have been drilled without approval as required by Rule 102.

We also learned that none of the wells was identified by a well sign as required by Rule 103.

We are hereby suspending your operations in District #3. Cease all drilling and production operations until you have complied with all rules and regulations and have received written approval from this office to proceed.

A copy of our Rules & Regulations is forwarded under separate cover. Please take note of section 65-3-27 of the statutes on pages 112 and 113.

If we can be of further service, please contact us.

Yours very truly;

A. R. Kendrick
Engineer, District #3

ARK:mc

cc: Oil Conservation Commission ✓
P. O. Box 2088
Santa Fe, New Mexico

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GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

1000 RIO BRAZOS ROAD
AZTEC

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

October 27, 1967

Mr. R. J. Scanlon
Scanlon & Shepard
P. O. Box 601
Farmington, New Mexico 87401

Dear Mr. Scanlon:

When you delivered the subsequent notices of abandonment of the Scanlon and Shepard wells in the Chaco Wash-Mesaverde Oil Pool, you told me that a location marker had been erected in each of the wells.

During a field inspection on October 26, 1967, I found that the markers have not been set.

Please cause the markers to be set immediately. Such markers must bear the information required by Rule 202 (a).

Statute Chapter 65, Article 3, Section 27 identifies the penalties for violating, evading, or aiding and abetting violations of the rules and regulations.

Enclosed is an information copy of a letter suspending current operations until compliance with all rules and regulations.

Yours very truly,

A. R. Kendrick
A. R. Kendrick
Engineer, District #3

ARK:mc
Encl.
cc: Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

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Burwinkle and Scanlon
120 Vassar Dr. SE
Albuquerque, N.M.

10-11-67

Mr. Daniel S. Nutter
New Mexico Oil Conservation Commission
P.O. Box 2088
Santa Fe, New Mexico 87501

Case 3581

Dear Mr. Nutter:

Pursuant to Rule 701 of the Commission, I hereby respectfully apply for a hearing to establish rules for a secondary (water Flood) program for the Chaco Wash-Mesa Verde Pool, McKinley County, New Mexico.

Initially, applicant desires to inject water into the Mesa Verde formation at an average depth of 517' in a pilot water flood in the NE 1/4 of the NW 1/4 Section 28, Township 20 North, Range 9 West, N.M.P.M., McKinley County, New Mexico

In the pilot program, a five spot pattern is planned employing wells to be drilled as follows:

1. 165' from the North line, 495 feet from the east line, production
2. 495' from the North line, 165 feet from the east line, production
3. 495' from the North line, 165 feet from the east line, production
4. 165' from the North line, 165 feet from the east line, production
5. 330' from the North line, 330 feet from the east line, injection

Handwritten notes:
Wash-Mesa Verde
Water supply
2600-2900
Hospah - Gallup
Section 28
(Chaco Oil Co.)

Water will be supplied from the Chaco Oil Company #20-1 Santa Fe well, located 660 feet from the South and East lines of Section 20, T 20 N, R 9 W, N.M.P.M. which produces brackish artesian water from the Hospah and Gallup zones, between 2600 and 2900 feet.

Request is also made for administrative procedure to provide for expansion and unorthodox locations as needed in applicants lease from The State of New Mexico which encompasses all of Section 28, T 20 N, R 9 W.

A copy of the application complete with all attachments, will be furnished to the State Engineers office prior to 15 October, 1967.

Handwritten notes:
will inject
100 BPD
increase to
300 BPD

Yours very truly,

John V. Burwinkle
Manager
Scanlon-Burwinkle

Copy: State Engineers Office
Enclosures: Exhibits

DOCKET MAILED

Date 10-25-67
R

Barwick - Sander, Operator
 N.M. State Lease - K 1883

McKinley

County, New Mexico

Township 20 N Range 9 W

Township Range

Township 19 N Range 9 W

Township Range

Form 104 - (Four on Township)

6	5	4	3	2	1	6	5	4	3	2	1
7	8	9	10	11	12	7	8	9	10	11	12
10	17	18	19	15	14	13	18	17	16	15	14
19	20	21	22	23	24	10	20	21	22	23	24
30	29	28	27	26	25	30	29	28	27	26	25
31	32	33	34	35	36	31	32	33	34	35	36
6	5	4	3	2	1	6	5	4	3	2	1
7	8	9	10	11	12	7	8	9	10	11	12
18	17	16	15	14	13	18	17	16	15	14	13
19	20	21	22	23	24	19	20	21	22	23	24
30	29	28	27	26	25	30	29	28	27	26	25
31	32	33	34	35	36	31	32	33	34	35	36

Lessees within 2 miles of Section 28

Key 1. Elko Den Co. 4. Walter Dungan.
 2. Sullivan, Inc. 5. H. O. Carr
 3. George H. Fredericks

Barnesdale - Stanton, Operator
 N.M. St. to 1100 - 1115
 Sec. 21, T20N, R9W McKinley Co
 Flooding to begin in NE 1/4 of NN 1/4

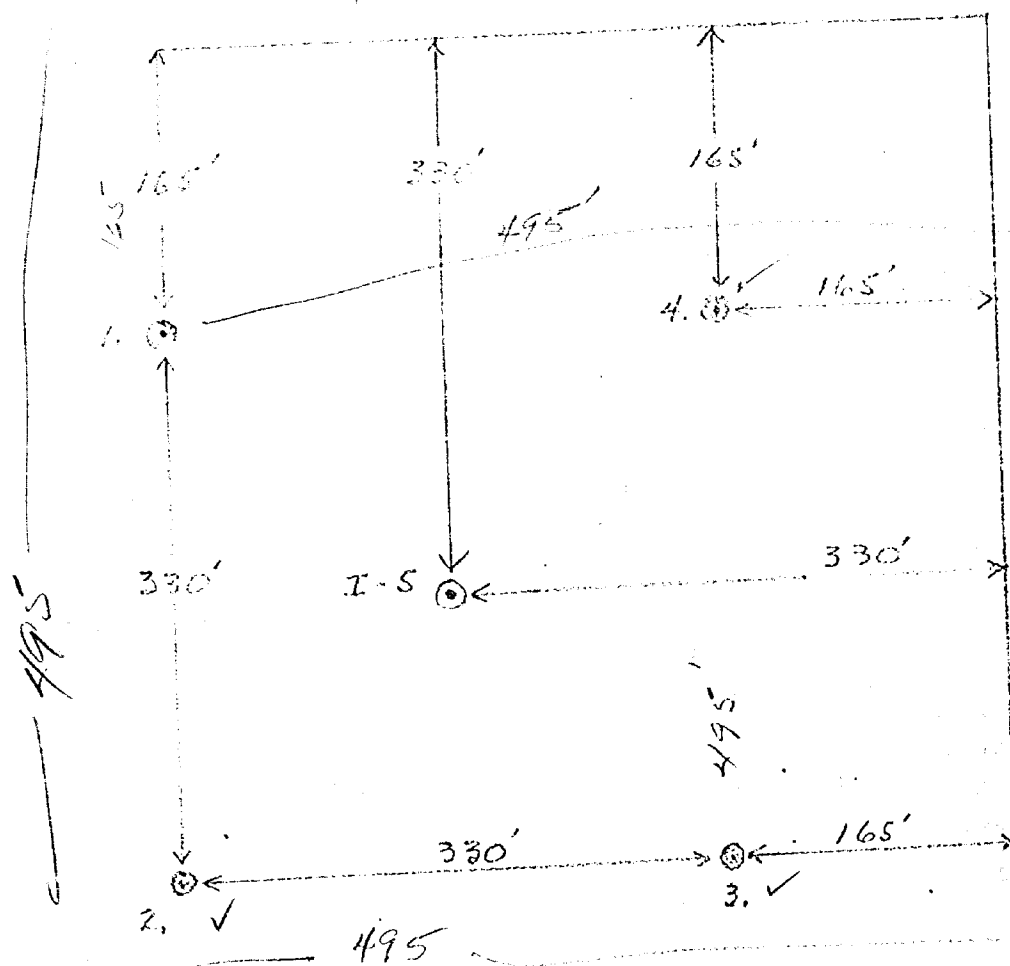
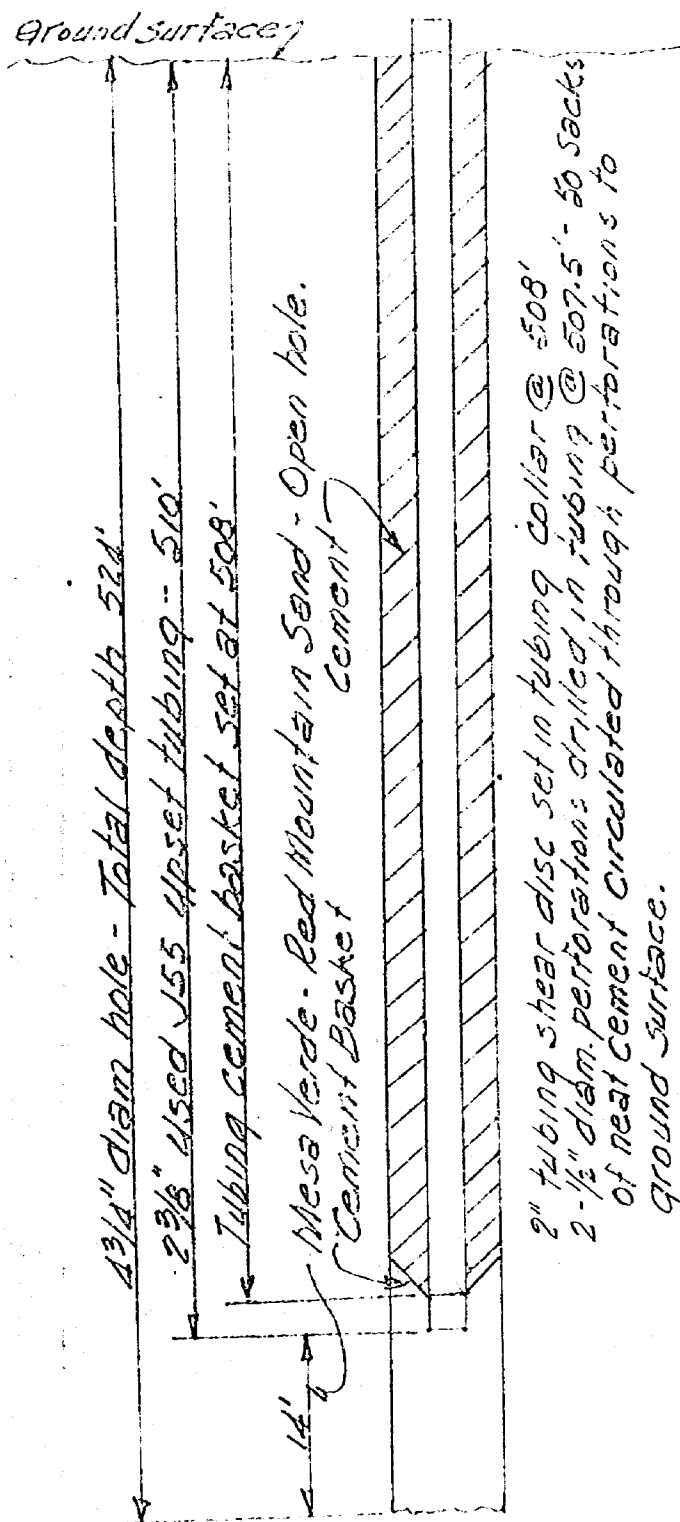


Diagram of spacing and pattern.
 Wells 1, 2, 3, & 4 are production
 wells, with 1-5 the injection
 well in the center of the
 pattern.

BURWINKLE-SCANLON, OPERATOR
 N.M. STATE LEASE - K 1883
 SEC. 28, T.20N, R.9W, MCKINLEY CO



DIAGRAMMATIC SKETCH
 OF
 PROPOSED WATER INJECTION WELLS
 FOR
 SECONDARY RECOVERY WATER FLOOD

BURWINKLE-SCANLON
 120 VASSER DR. S.E.
 ALBUQUERQUE, NEW MEXICO

Sept. 7, 1967

DRAWN BY R.J. SCANLON

Burwinkle-Scanlon,

Note:

The only known wells producing in the area are by Chaco Oil Company located in the N 1/2 of Section 29, and the S 1/2 of Section 20, T 20 N, R 9 W.

WATER ANALYSIS, HOSPAH-GALLUP ZONE, CHACO OIL CO.

No. 20-1 SANTA FE WELL, SE¹₄ SE¹₄ Sec. 20-20N-9W

SINCLAIR RESEARCH LABORATORIES

TULSA, OKLAHOMA

Sample # S-7104. Analyst: SiP:HE Formation: Gallup Depth: 2772'

Sample Taken 7-30-58; Rec'd: 8-11-58; Analyzed: 8-19-58

CONSTITUENTS, PARTS/MILLION		MEQ. PER LITER	REACTING VALUES, %
Potassium	None		
Sodium	338	14.71074	46.84 ✓
Lithium	None		
Calcium	10	0.49900	1.58 ✓
Magnesium	6	0.49344	1.58 ✓
Barium	None		
Strontium	None		
Manganese	None		
Carbonate	36	1.19880	3.81 ✓
Bicarbonate	381	6.24459	19.89 ✓
Hydroxide	None		
Sulphate	1,409	3.97339	12.65 ✓
Chloride	152	4.28640	13.65 ✓
TOTAL SOLIDS	2,332	Spec. Grav. 1.003	pH 8.26 @ 78°F

Primary salinity: 52.50; Primary alkalinity: 41.08; Chloride salinity: 51.90



dearnley-meier reporting service, inc.

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

1120 SIKAS BLDG. • P. O. BOX 1092 • PHONE 243-6691 • ALBUQUERQUE, NEW MEXICO

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 8, 1967

EXAMINER HEARING

IN THE MATTER OF:)

Application of Burwinkle and)
Scanlon for a waterflood project,)
McKinley County, New Mexico.)

Case 3681

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: The hearing will come to order, please. The first case on the docket will be Case 3681.

MR. HATCH: Case 3681, application of Burwinkle and Scanlon for a waterflood project, McKinley County, New Mexico.

MR. SCANLON: My name is R. J. Scanlon and I am here to represent Burwinkle and Scanlon in this application for a waterflood.

MR. NUTTER: Mr. Scanlon, would you stand and be sworn, please.

(Witness sworn)

R. J. SCANLON, a witness on his own behalf, having been first duly sworn, was examined and testified as follows:

THE WITNESS: What Burwinkle and Scanlon want to do is to have a five spot waterflood pilot plant program going in Section 28, Township 20, North, Range 9 West in McKinley County. The depth of the wells will be about 510 to 520 feet, and the original proposal is to have one water injection well in the center of four producing wells.

We will get the injection water from a well drilled by the Chaco Oil Company in Section 20 of Township 20 North, Range 9, and pipe it over to the water injection well, and this water is coming from the Hospah and Gallup zones, in this well, between, the depth between 26 and 2900 feet.

MR. NUTTER: That is the water supply?

THE WITNESS: Water supply, yes, sir. We are making a formal request for approval to put that pilot plant, waterflood project into operation. That is a copy of our application. You have seen it?

MR. NUTTER: Yes.

CROSS EXAMINATION

BY MR. NUTTER:

Q Now, Mr. Scanlon, as I understand it, it is your proposal to start this project off with just the one injection well, is that correct?

A That is correct.

Q And the location of that well would be three hundred thirty feet from the north line and three hundred thirty feet from the east line of the northeast quarter of the northwest quarter of Section 28?

A No, sir. The application is misleading. We propose to have that injection well three hundred and thirty feet from the north line, but this three hundred and thirty feet, then, would be from the center line. Actually it would be 2310 from the west line, in other words, our flood project is going to be in the northeast one-quarter of the northeast quarter of the northwest quarter.

Q Well, I think the description I gave would be the same as what you are talking about then. It is 330 from the north and 330 from the east of that forty acres.

A Correct.

Q And the forty acres is the northeast quarter of the northwest quarter --

A We are talking about the same thing, right, correct.

Q Then, you propose four producing wells around this injection well.

A Correct.

Q The first one would be 165 feet from the north line and 165 feet from the east line of that forty?

A Correct.

Q That is the Number 4?

A Right.

Q The Number 3 Well would be 165 feet from the east line --

A And 495 from the north.

Q -- and 495 from the north line?

A Right.

Q That is the Number 3 Well. The Number 2 Well would be 495 feet from the north line and 495 feet from the east line?

A That is correct.

Q -- of that forty? And, then, the Number 1 Well is 165 feet from the north line and 495 feet from the east line of the forty?

A That's correct.

Q Now, is Chaco Oil Corporation operating a water-flood in Sections 20 and 29 west of you?

A They are.

Q And they have a water supply well already drilled in Section 20?

A That is correct.

Q And what zones did you say that is, between 2600 and 2900?

A They call it the Hospah and Gallup zones.

Q Is that fresh water, Mr. Scanlon?

A No, sir, it is brackish, and we have an analysis attached to our application, of the water.

Q Apparently it has 2300 parts per million --

A That's correct.

Q -- of total dissolved solids in the water?

A Yes, sir.

Q Now, what rate do you plan to inject?

A Well, we plan to start the injection at 100 barrels

per day and increase it in increments of fifty barrels a day, up to a maximum of 300 barrels per day in that one well.

Q What rate are these people to the west of you injecting, do you know?

A They vary from 4 to 700 barrels per day.

Q Per well --

A No, --

Q -- or for their total production?

A -- per field, per total -- they have eleven injection wells.

Q I see. Now, what will the depth of the injection zone be?

A I have a little sketch in our application too, for that.

Q That would be your schematic diagram?

A Right. The injection zone would be from 508 to 22.

Q I see. And you propose to set two-inch, two and three-eighths-inch tubing at approximately 510 feet?

A That's right.

Q Then it would be cemented in the hole from top to bottom?

A Top to bottom.

Q Then, you would have an open hole interval from the casing shoe on down to about 522 or 24?

A That is correct.

Q This is the Mesaverde that you are flooding?

A We are flooding the Mesaverde.

Q Now, what about the water that is produced with the flood, Mr. Scanlon, what disposition will be made of that water?

A Well, it is not too far from a draw down there, and the water that is produced in that zone is fresh water, and we had planned as of right now to dispose of it by putting it into the Chaco Wash.

Q What does Chaco Oil Company do with the water that they produce?

A They do that now, the same thing, to my knowledge. I don't think they reinject it.

Q The Mesaverde water is fresh water, however?

A Yes, sir.

Q Now, I notice in your application, Mr. Scanlon, you make the statement that, "A copy of the application, complete with all the attachments, will be furnished to the State Engineer's Office prior to October 15th, 1967". Was a copy of this application furnished to the State Engineer's Office?

A It was.

MR. NUTTER: Are there any other questions of this witness?

MR. HATCH: I think perhaps we ought to -- do you intend for these to be entered as exhibits?

THE WITNESS: What I just gave you?

MR. HATCH: Yes. Should we mark any of these as exhibits?

MR. NUTTER: Well, they are actually a portion of the application.

THE WITNESS: It is just a copy of the application that I gave you there.

MR. NUTTER: They are a part of the record in the case, being a portion of the application.

MR. HATCH: And, I don't think Mr. Scanlon identified himself as an owner or anything in this particular case.

THE WITNESS: I am an owner.

MR. HATCH: You are representing yourself?

THE WITNESS: Myself and others, correct. I would like to submit a log of this well Number 3 in view of the fact that we do not have a log on the water injection well to supplement our application, and give everybody an idea

of what the formation is like down there.

MR. NUTTER: You can identify that as Exhibit Number 1 in this case.

(Whereupon, Applicant's Exhibit Number 1 was marked for identification.)

Q (By Mr. Nutter) This is a log of the producing well Number 3, which is shown on your plat?

A Correct.

THE WITNESS: Also this is a copy of the core analysis, as compiled by Core Laboratories of the injection well. I submit that as an exhibit.

(Whereupon, Applicant's Exhibit Number 2 was marked for identification.)

MR. NUTTER: Applicant's Exhibit 1 and 2 will be admitted in Case 3681.

(Whereupon, Applicant's Exhibits 1 and 2 were admitted in evidence.)

MR. NUTTER: Does anyone have any questions of Mr. Scanlon? He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further you wish to offer in this case?

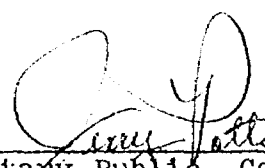
THE WITNESS: No, sir.

MR. NUTTER: Does anyone have anything they wish to offer in Case 3681? We will take the case under advisement.

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss.

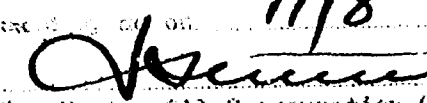
I, JERRY M. POTTS, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission Examiner at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 5th day of December, 1967.


Notary Public - Court Reporter

My Commission Expires:

July 10, 1970

I do hereby certify that the foregoing is a true and correct record of the proceedings in the hearing of the New Mexico Oil Conservation Commission held on 11/8 1967 3681

Notary Public - Court Reporter