

-asa / No.

2604

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plication, Transcript,  
and Exhibits, Etc.

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. 2604  
Order No. R-2299

APPLICATION OF SUNRAY DX OIL COMPANY  
FOR PERMISSION TO DISPOSE OF SALT WATER  
INTO THE SAN ANDRES FORMATION, ROOSEVELT  
COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on July 26, 1962, 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 2nd day of August, 1962, 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, Sunray DX Oil Company, is the owner and operator of the Nancy Watson Well No. 2, located 1980 feet from the South line and 660 feet from the West line of Section 31, Township 8 South, Range 34 East, NMPM, Roosevelt County, New Mexico.
- (3) That the applicant proposes to dispose of produced salt water into the San Andres horizon, utilizing the above-described Nancy Watson Well No. 2 as an injection well with an injection interval of 4592 to 4614 feet.
- (4) That the injection should be accomplished through 2 3/8-inch internally plastic-coated tubing set through a packer at approximately 4550 feet, and that the annulus should be filled with a non-corrosive fluid.
- (5) That 8 5/8-inch surface casing should be set at 356 feet and cemented to the surface and that 4 1/2-inch production casing should be set at 4658 feet and cemented to 3770 feet.

-2-

CASE No. 2604  
Order No. R-2299

(6) That the water being disposed of is not suitable for either domestic or agricultural usage, and that the disposal will not impair production of oil, gas or fresh water, nor will it impair correlative rights.

(7) That the injection of salt water into the San Andres horizon will not cause damage to the reservoir or the injection well and the injection may, in fact, aid in achieving maximum recovery.

IT IS THEREFORE ORDERED:

(1) That the applicant, Sunray DX Oil Company, is hereby authorized to dispose of produced salt water into the San Andres formation through its Nancy Watson Well No. 2, located 1980 feet from the South line and 660 feet from the West line of Section 31, Township 8 South, Range 34 East, NMPM, Roosevelt County, New Mexico, with the injection interval from 4582 to 4614 feet.

PROVIDED HOWEVER, That 8 5/8-inch surface casing shall be set at 356 feet and cemented to the surface; that 4 1/2-inch production casing shall be set at 4658 feet and cemented to 3770 feet; and that internally plastic-coated tubing shall be set in a packer within the casing and the annulus filled with a non-corrosive fluid.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1119 of the Commission Rules and Regulations.

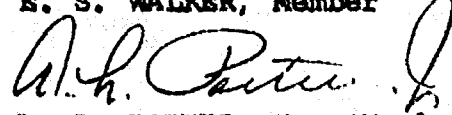
(3) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

  
EDWIN L. MECHEM, Chairman

  
E. S. WALKER, Member

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

esr/

GOVERNOR  
EDWIN L. MECHEM  
CHAIRMAN

State of New Mexico  
Oil Conservation Commission

LAND COMMISSIONER  
E. S. JOHNNY WALKER  
MEMBER



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

P. O. BOX 871  
SANTA FE

August 2, 1962

Mr. Charlie White  
Gilbert, White & Gilbert  
P. O. Box 787  
Santa Fe, New Mexico

Re: CASE NO. 2604

ORDER NO. R-2299

APPLICANT:

Sunray Oil Company

Dear Sir:

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

Very truly yours,

*A. L. Porter, Jr.*

A. L. PORTER, Jr.  
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC     

Aztec OCC     

OTHER

Case 2604

Heard 7-26-62

Res. 7-30-62

1. Grant Sun Ray's request for an SWD well known as ~~the~~ Harry Watson #2 H-31-85-34E.
2. 8" surface casing shall be set @ 3564 cement circulated. 4" production casing shall be set @ 4658, + cemented to ~~circulated~~ 3770. Water shall be injected thru 2 3/8" plastic coated tubing, ~~and the~~ set in a packer at bottom of tubing. The annulus above to packer shall be filled with a corrosion resistant fluid. Water to be injected into the San Andres from 4582 to 4614.

Thurston

Sunray DX Oil Company

District Office



July 27, 1962

*Case*

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

ATTENTION: Mr. Elvis A. Utz

SUBJECT: Case 260A Application  
of Sunray DX Oil Company  
for permission to dispose  
of salt water, Roosevelt  
County, New Mexico

Gentlemen:

This is to clarify the status of Sunray DX leases as shown in  
orange on the plat, Exhibit 1, of subject hearing.

The Nancy Watson lease with fee royalty is composed of the S/2  
NE/4, N/2 SE/4, and Lots 2, 3, and 4 of Section 31 T85, R34E.  
The New Mexico Federal "T" lease with federal royalty is Lot 1  
of the same section.

The lease shown in section 36, T85, R33E is State royalty and is  
a separate lease from either of the other two leases described  
above.

Sincerely,

*D. E. Berry Jr.*

D. E. Berry, Jr.

DEB/kg

cc L. C. White

PR-4



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

July 23, 1962

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

Re: Case 2604 (Sunray DX Oil Co.)

New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

Attn: Mr. A. L. Porter, Jr., Secretary-Director

Dear Mr. Porter:

On July 19, 1962, Mr. Frank E. Irby advised your office that the State Engineer objected to the granting of the Sunray DX Oil Company application as they had failed to comply with Section C of Rule 70'.

This office has since received a copy of the application which states that injection will be made through 2 3/8" internally plastic coated tubing with packer set at approximately 4550 feet.

I herewith rescind our objection on the condition that plastic tubing and packer are used as described in the application.

Very truly yours,

S. E. Reynolds  
State Engineer

By: *D. E. Gray*  
D. E. Gray, Engineer  
Water Rights Division

DEG:hmv

cc: Sunray DX Oil Company



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

July 19, 1962

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

Re: Case 2604 (Sunray DX Oil Co.)

New Mexico Oil Conservation Commission  
Santa Fe, New Mexico

Attn. Mr. A. L. Porter, Jr., Secretary-Director

Dear Mr. Porter:

I have noted that on your July 26, 1962 docket, Case No. 2604 is the application of Sunray DX Oil Company which seeks permission to dispose of salt water into the San Andres formation. Sunray has not filed a copy of their application with this office, nor have they filed any information pertaining to the construction program employed in the drilling of the subject well, such as casing program, cementing program, depth of formation in which injection is to be made, whether injection is down tubing or casing, etc., in compliance with Section C of Rule 701. For the above reasons, the State Engineer objects to the granting of the subject application.

Very truly yours,

S. E. Reynolds  
State Engineer

FEI/ma  
cc-Sunray DX Oil Co.

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



Is the water to be disposed of mineralized to such a degree as to be unfit for domestic, stock, irrigation, and/or other general use? Yes

Is any water occurring naturally within the proposed disposal formation mineralized to such a degree as to be unfit for domestic, stock, irrigation, and/or other general use? Yes

List all offset operators to the lease on which this well is located and their mailing address

Mc Alester Fuel Company, Box 608, Lovington, New Mexico

Atlantic Refining Company, Box 1978, Roswell, New Mexico

Shell Oil Company, Box 1656, Roswell, New Mexico

Ohio Oil Company, Box 2107, Hobbs, New Mexico

Name and address of surface owner Paul Davis and Thomas E. Davis, Jr., Milnesand, New Mexico

Have copies of this application been sent by registered mail or given to all offset operators, surface owners, and to the New Mexico State Engineer? Yes

Is a complete electrical log of this well attached? Yes

Operator: Sunray D<sup>X</sup> Oil Company

By: *R. E. Statton*  
R. E. Statton

Title: District Engineer

STATE OF New Mexico )

) ss.

County of Lea )

BEFORE ME, The undersigned authority, on this day personally appeared R. E. Statton known to me to be the person whose name is subscribed to the above instrument, who being by me duly sworn on oath states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein and that said report is true and correct.

SUBSCRIBED AND SWORN TO before me this the 3rd day of July, 19 62.

*Stanley B. Brock*  
Notary Public in and for the County of Lea

MY COMMISSION EXPIRES MAY 27, 1964

My Commission Expires

NOTE:

Should waivers from all offset operators, the surface owner, and the State Engineer not accompany an application, the New Mexico Oil Conservation Commission will hold the application for a period of fifteen (15) days from date of receipt by the Commission's Santa Fe office. If at the end of said fifteen-day period, no protest nor request for hearing is received by the Santa Fe office, the application will then be processed.

Revised 9 16 58

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

APPLICATION  
TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION  
~~NOT~~ PRODUCTIVE OF OIL OR GAS  
and

Operator Sunray DX Oil Company Address P. O. Box 128, Hobbs, New Mexico

Lease Nancy Watson Well No. 2 County Lea

Unit K Section 31 Township 8 S Range 34 E

This is an application to dispose of salt water produced from the following pool (s):

CLR

Name of Injection Formation(s): San Andres

Top of injection zone: Top San Andres 3847' SA not drilled thru  
Top Perf. 4582' Bottom of injection zone: Bottom perf. 4614'

Give operator, lease, well no., and location of any other well in this area using this same

zone for disposal purposes: None

CASING PROGRAM

	Diameter	Setting Depth	Sacks Cement	Top of Cement
Surface	8-5/8"	356'	200	Circulated
Intermediate	None			
Long String	4-1/2"	4658'	250	3770'

Will injection be through tubing, casing, or annulus? Tubing

Size tubing: 2-3/8" Setting depth: 4555' Packer set at: 4550'

Name and Model No. of packer: Baker Model A Tension Packer

Will injection be through perforations or open hole? Perforations

Proposed interval(s) of injection: 4582'-89', 4592'-95', 4599'-4601', 4610'-14'

Well was originally drilled for what purpose? San Andres Oil Produce\*\*

Has well ever been perforated in any zone other than the proposed injection zone? Yes

List all such perforated intervals and sacks of cement used to seal off or squeeze each:

4635'-42' squeezed with 115 sx. cement - water

Give depth of bottom of next higher zone which produces oil or gas: None \*\*

Give depth of top of next lower zone which produces oil or gas: None \*\*

Give depth of bottom of deepest fresh water zone in area: Above red bed @ about 350'

Expected volume of salt water to be injected daily (barrels): 240

Will injection be by gravity or pump pressure? gravity Estimated pressure: vacuum

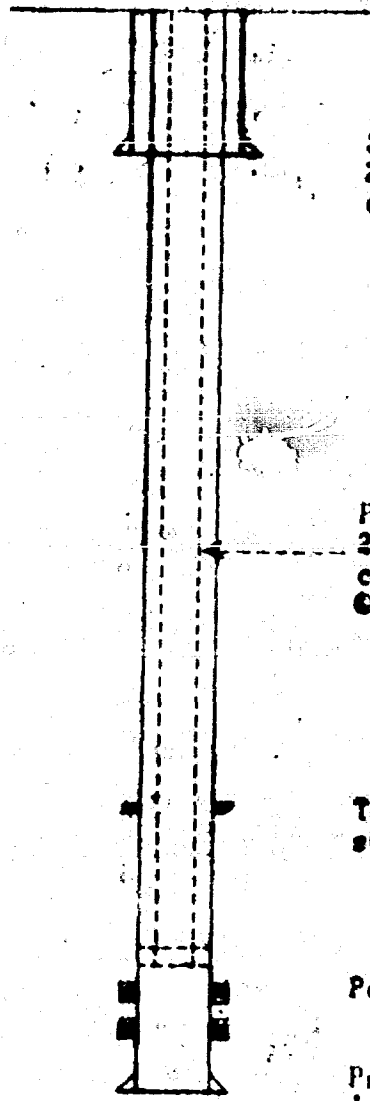
Is system open or close type? closed Is filtration or chemical treatment necessary? no

\* This well was originally drilled for a San Andres oil producer but ~~is~~ after extensive treatment and testing only produces 1 1/2 bbls. of oil per day with 11 bbls. of salt water per day.

\*\* Nancy Watson No. 1, offset well is only other producer in this area and it produces 40 BOPD and 240 BWPD from the section proposed for injection in this well.

Case 2604

Diagrammatic Sketch of Sunray D X Oil Company's  
Nancy Watson no. 2 located in unit K, sec. 31  
T8S, R34E, Roosevelt County, New Mexico



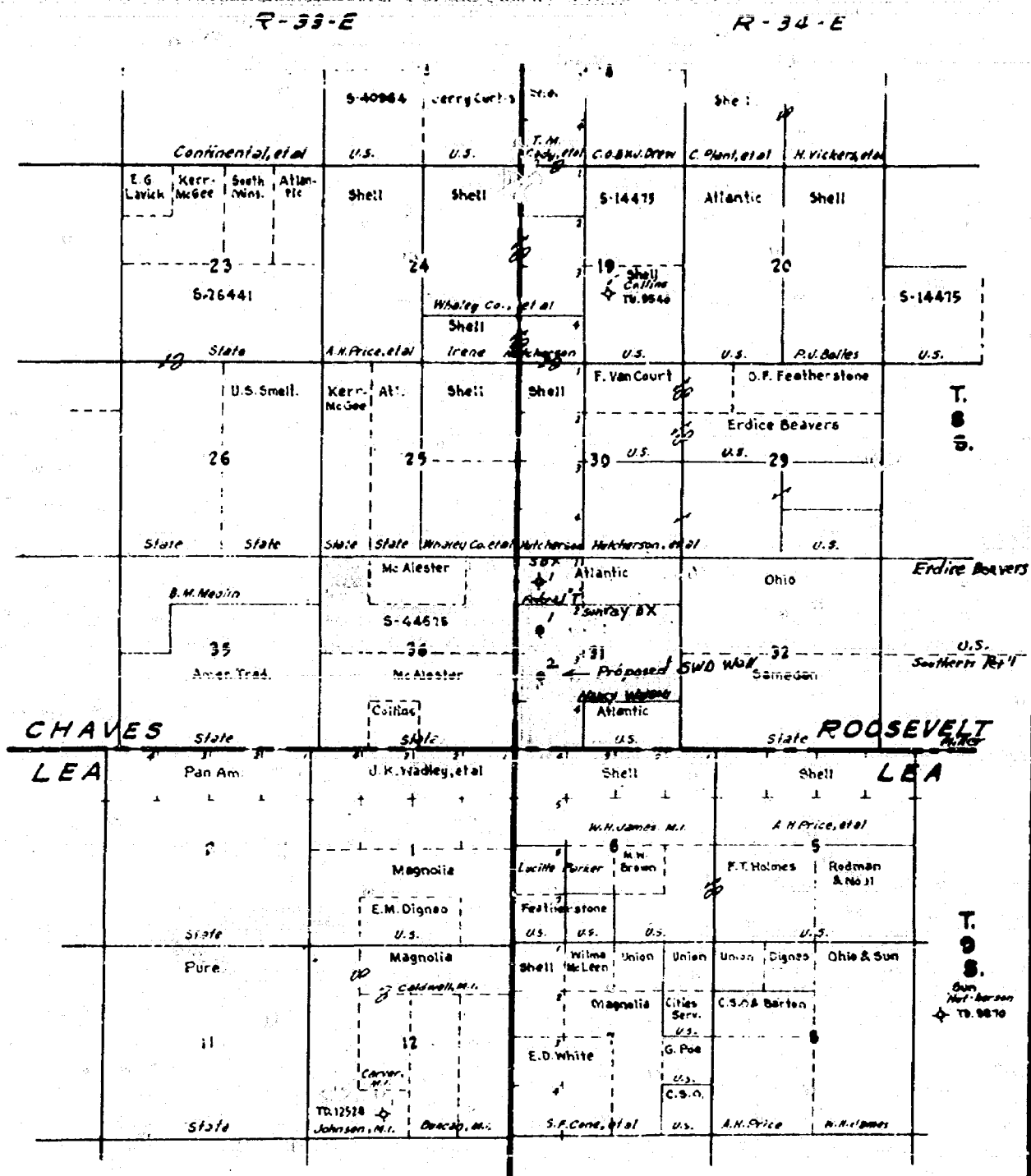
Surface Casing -  $\phi$  5/8"  
240', J-55 set @ 356' with  
cement circulated

Pronosed  
2 3/8" internally plastic  
coated tubing set in packer  
@ approx. 4550'

Top of cement by temperature  
survey @ 3770'

Perfo. 4582'-89', 4592'-95'  
4599'-4601', 4610'-14'

Production casing - 4 1/2"  
J-55, 9.5#, set @ 4658'



Note: The wells in sec. 31 T8S R34E are completed in the San Andres.

PRODUCING FORMATION		SUNRAY MID-CONTINENT OIL CO. PRODUCING LEASES	
NAME	AVERAGE DEPTH	FIELD:	
		DISTRICT:	GROUP:
		COUNTY: ROOSEVELT	STATE: N. MEX.
		SCALE	
		4000 2000 0 2000 4000 8000	
		FEET	

- CASE 2607: Application of Newmont Oil Company for special rules for its Square Lake Pool Waterflood Project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an amendment of Orders Nos. R-1110, R-1110-A, R-1110-B and R-1110-C defining the horizontal limits of its Square Lake Pool Waterflood Project in Eddy County, New Mexico, establishing rules for the expansion of said waterflood project, and providing for capacity allowables in said project area.
- CASE 2608: Application of Southwest Production Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in a gas proration unit comprising the S/2 of Section 5, Township 30 North, Range 11 West, Basin-Dakota Gas Pool, San Juan County, New Mexico.
- CASE 2609: Application of Southwest Production Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in a gas proration unit comprising the E/2 of Section 8, Township 30 North, Range 11 West, Basin-Dakota Gas Pool, San Juan County, New Mexico.
- CASE 2610: Application of Southwest Production Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in a gas proration unit comprising the E/2 of Section 9, Township 30 North, Range 11 West, Basin-Dakota Gas Pool, San Juan County, New Mexico.
- CASE 2611: Application of Southwest Production Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in a gas proration unit comprising the W/2 of Section 9, Township 30 North, Range 11 West, Basin-Dakota Gas Pool, San Juan County, New Mexico.

DOCKET: EXAMINER HEARING - THURSDAY, JULY 26, 1962

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 2603: Application of Pan American Petroleum Corporation for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in a gas proration unit comprising the S/2 of Section 30, Township 29 North, Range 10 West, Basin-Dakota Gas Pool, San Juan County, New Mexico.
- CASE 2604: Application of Sunray DX Oil Company for permission to dispose of salt water, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks permission to dispose of salt water into the San Andres formation through its Nancy Watson Well No. 2, located 1980 feet from the South line and 660 feet from the West line of Section 31, Township 8 South, Range 34 East, Roosevelt County, New Mexico.
- CASE 2605: Application of Amerada Petroleum Corporation for approval of a quadruple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its L. G. Warlick "A" Well No. 2 located in Unit J of Section 19, Township 21 South, Range 37 East, Lea County, New Mexico, as a quadruple completion (tubingless) in the Penrose-Skelly, Paddock, Blinbry, and Drinkard Pools, with the production of oil from all zones to be through parallel strings of 2 7/8-inch casing cemented in a common well bore.
- CASE 2606: Application of Texas Crude Oil Company for permission to directionally drill, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to directionally drill its Ohio State Well No. 1-22. Said well has a surface location 1980 feet from the North line and 1980 feet from the West line of Section 22, Township 10 South, Range 36 East, Lea County; the proposed bottom-hole location of said well will be in the South Crossroads-Devonian Pool at a point 1650 feet from the North line and 1980 feet from the West line of said Section 22.

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

*Class 2604*

July 10, 1962

C  
O  
P  
Y

Mr. R. E. Statton  
Sunray DX Oil Company  
P. O. Box 128  
Hobbs, New Mexico

Dear Sir:

Reference is made to your application for administrative approval of conversion of salt water disposal for your Nancy Watson No. 2, Roosevelt County, New Mexico.

Inasmuch as this well is within two miles of another well producing from the proposed injection zone, administrative approval cannot be given. The application is, therefore, being set for hearing July 26, 1962.

Very truly yours,

DANIEL S. NUTTER  
Chief Engineer

*Robert  
mailed  
7/13/62  
JL*

DAN/ir

Case 2604

Sunray DX Oil Company

P. O. Box 128  
Hobbs, New Mexico



1962 JUL 15 AM 8:22

District Office

Unit K?  
or L?

July 3, 1962

Re: Application To Dispose Of  
Salt Water Into The San  
Andres Formation (4582'-  
4614') Of Sunray DX Oil  
Company, Nancy Watson No. 2  
Located In Unit "K", Section  
31, T-8-S, R-34-E, Roosevelt  
County, New Mexico

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

Gentlemen:

Please find attached an application to dispose of salt water in subject well along with a schematic diagram and log of subject well.

If possible we would like to receive administrative approval of this application. There is only one producing well within several miles of subject well, that being our Nancy Watson No. 1 which produces 40 barrels of oil per day and 240 barrels of water per day. The No. 1 producing zone is equivalent to the proposed injection zone in No. 2.

If administrative approval cannot be given please advise what date a hearing will be scheduled.

no can do  
Jee

Sincerely yours

Sunray DX Oil Company

By:   
R. E. Statton

cc: NMOCC Hobbs, N.M.  
V. L. Smith  
Dave Probst, Tulsa  
File



BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico

July 26, 1962

EXAMINER HEARING

FARMINGTON, N. M.  
PHONE 325-1182

DEARNLEY-MEIER REPORTING SERVICE, Inc.

ALBUQUERQUE, N. M.  
PHONE 243-6691

IN THE MATTER OF:

Application of Sunray DX Oil Company for permission to dispose of salt water, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks permission to dispose of salt water into the San Andres formation through its Nancy Watson Well No. 2, located 1980 feet from the South line and 660 feet from the West line of Section 31, Township 8 South, Range 34 East, Roosevelt County, New Mexico.

CASE NO.  
2604

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case No. 2604.

MR. DURRETT: Application of Sunray DX Oil Company for permission to dispose of salt water, Roosevelt County, New Mexico.

MR. WHITE: If the Examiner please, Charles White of Gilbert, White & Gilbert, appearing on behalf of Sunray DX Company. We have one witness to be sworn, Mr. Berry.

(Witness sworn.)

MR. UTZ: Any other appearances in this case?



You may proceed.

D. E. BERRY, JR.

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

DIRECT EXAMINATION

BY MR. WHITE:

Q Mr. Berry, will you state your full name for the record, please?

A D. E. Berry, Jr.

Q By whom employed and in what capacity?

A I'm employed by Sunray DX Oil Company as a staff engineer.

Q Have you previously qualified before the Commission as a staff engineer in petroleum engineering?

A Yes, sir.

Q And have your qualifications been accepted?

A Yes, sir.

Q Are you familiar with the subject application?

A Yes, sir.

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

Q Will you refer to what's been marked Exhibit 1 and explain that exhibit, please?

A Exhibit No. 1 is a plat showing the location of the Sunray DX Nancy Watson No. 2 Well, located 660 feet from the West

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FARMINGTON, N. M.  
PHONE 325-1182

ALBUQUERQUE, N. M.  
PHONE 242-6691

line and 1980 feet from the South line of Section 31, Township 8 South, Range 34 East, Roosevelt County, New Mexico. Also shown on this plat is the Nancy Watson No. 1 Well north offset which is presently producing from the San Andres formation. This No. 1 well is the only well producing from the San Andres within a two-mile radius of the Nancy Watson No. 2 well. In the Northwest corner of Section 31 is the Sunray DX New Mexico Federal No. 1, a dry hole which no production casing was run due to lack of commercial shows on logs and cores.

Q Was it plugged and abandoned?

A Yes, sir.

(Whereupon Applicant's  
Exhibits 2 and 3 marked  
for identification.)

Q Will you refer to your logs, Exhibits 2 and 3?

A We are submitting the electric log of Nancy No. 2, which is marked to show production perforations, casing points, and we are also submitting as Exhibit No. 3 the electric log of Nancy Watson No. 1 similarly marked.

Q And those exhibits are self-explanatory, are they not?

A Yes, sir. By our correlation, the perforated intervals in the two wells are essentially the same.

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

Q Will you explain your diagrammatic sketch marked Exhibit 4 please?

A The diagram shows the 8 5/8ths surface point on which



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FARMINGTON, N. M.  
PHONE 325-1182ALBUQUERQUE, N. M.  
PHONE 243-6691

the cement was circulated to the surface, also shows the  $4\frac{1}{2}$ -inch casing point with the top of the cement on that particular string of casing. The diagram also shows the perforated intervals in the San Andres and shows a string of  $2\frac{3}{8}$  internally plastic coated tubing set on a packer immediately above the perforations.

Q Mr. Berry, will you describe the source and nature of the water to be disposed of?

A The disposal water will originate from the Nancy Watson No. 1 well and is San Andres formation water.

Q What is the present rate of the salt water production?

A Approximately 250 barrels per day.

Q And what is the present rate of oil produced from the Nancy Watson Well No. 1?

A 23 barrels of oil per day.

Q Since the proposed salt water disposal will be into an oil reservoir, do you anticipate any damage to the well, that is the Nancy Watson No. 1 or No. 2?

A No, sir, I don't anticipate any damage to the Nancy Watson No. 2. This well was perforated extensively in the same zone as the north offset well and produced only a non-commercial amount of oil, about  $1\frac{1}{2}$  barrels of oil per day with a low GOR. The only reason we haven't abandoned this well is that we wanted to use it for a disposal well. Since the well is non-commercial, we do not feel that the proposed disposal will harm the well.



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FARMINGTON, N. M.  
PHONE 325-1182

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PHONE 243-6691

Q What is your opinion as to any harm being done as to the reservoir?

A The San Andres formation in this area requires a frac job to get any significant amount of fluids into the well bore. For this reason we do not anticipate any extensive movement of salt water through the formation except perhaps towards the producing well. If this type of movement occurs towards the producing well, we do not feel that it will harm the producing well and correlate any recovery of additional oil.

Q But you are not requesting this disposal program to increase the production of oil, but merely to dispose of the salt water, is that correct?

A Yes, sir, we are not anticipating any secondary recovery but we do anticipate that this program, if approved, will increase the amount of primary oil which we can recover.

Q How are you disposing of the water at the present time, and what is it costing the company?

A The salt water is trucked off the lease and is costing about \$40 a day.

Q That represents how much net income from the reservoir?

A It would be the equivalent of about 20 barrels of oil per day production.

Q What do you estimate the cost of the proposed disposal to run?

A It will be about \$4 a day or the equivalent of two



barrels of oil per day of production.

Q Would it be economically feasible to continue trucking of the salt water?

A No, sir, if we have to continue trucking the water, we will have to abandon the well at a producing rate of about 18 BOPD greater than we would if the proposal is approved. This resulting earlier plugging and abandonment of the well we feel will result in leaving a considerable amount of otherwise recoverable oil in the reservoir. With our present production at about 23 BOPD, we are practically at the economic limit for the trucking operation now.

Q In your opinion, will the proposed salt water disposal result in greater recovery of hydrocarbons and protect correlative rights?

A Yes.

Q Did you anticipate using other wells and other zones for this disposal?

A Yes, sir, we could dispose down the 8 5/8ths by 4 1/2 casing annulus, but an injection test showed such disposal would require pressures at greater than the formation fracturing pressures, or we could use porous zones above the San Andres or porous zones of the San Andres below the present perforations, but either of these methods would require an extensive workover, and we would not have any prior occasion that such injection could be done.

Q Then you believe this proposal you are submitting today is the most practical one?

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. H.  
PHONE 325.1182

ALBUQUERQUE, N. M.  
PHONE 243.6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 323-1182

ALBUQUERQUE, N. M.  
PHONE 243-6691

A Yes, sir.

Q Will you now describe the proposed system?

A The produced salt water will leave the lease heater treater and go into a sump tank on which we will keep an oil blanket to prevent air from entering the system. The water will then go down the plastic coated tubing and into the San Andres perforations. The tubing will be set on a packer.

Q Does that complete your testimony?

A Yes, sir.

MR. WHITE: At this time we formally offer the exhibits and that concludes our presentation.

MR. UTZ: Let's see what -- did you have two exhibits?

MR. WHITE: No, sir, I believe we had four, one, two, three and four.

MR. UTZ: Without objection, the Exhibits 1 through 4 will be entered in the record in this case.

(Whereupon Applicant's  
Exhibits 1 through 4  
admitted in evidence.)

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Berry, are you asking here for this salt water disposal from the No. 1 well or from the entire lease?

A Well, the No. 1 well is the only producing well we have at the present.

Q You don't anticipate any more wells?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.  
PHONE 325-1182

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PHONE 243-6691

A No, sir. Or course, that's always a possibility and might prevent further application if we can get approval for the lease.

Q Your plat showing certain acreage in yellow was Exhibit No. 1, was it not?

A Yes, sir.

Q Does that yellow colored acreage on Exhibit No. 1 include all one lease?

A No, sir, the Federal, "T" lease is a different lease in Section 31 and the Nancy Watson lease immediately south of it is a separate lease. This other yellow colored lease over in 36, I'm not familiar whether that is the same basic lease as either of the other two or not. It's a Sunray lease.

MR. WHITE: Can you supply that information to the Examiner?

A Yes, sir.

Q (by Mr. Utz) Now, referring to your Exhibit No. 2 which is your sketch, your diagram for your disposal well --

A Yes, sir.

Q I notice the cement casing, cement proposal, your 8 5/8ths circulated at 356?

A Yes, sir.

Q Now, what size is the production casing, 4 1/2 is it not?

A Yes, sir.

Q And that cement is run to 3770?





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A Yes, sir, top, yes, sir.

Q The TD is 4658?

A That is correct.

Q Now, between 3770 and the bottom of the 8 5/8ths, what formations do you have in this area?

A This top of the cement is, I would have to refer to my log for the top there.

Q Your what, No. 1?

A No. 2 well. The top of the San Andres there is 3847, so the top of this cement is above the top of the San Andres, so above that --

Q It's 38 what?

A MR. WHITE:.. Forty-seven.

Q Forty-seven?

A Yes, sir.

Q Roughly a little less than a hundred feet then over the top of the San Andres?

A Yes, sir.

Q Any other oil producing zones above 3770?

A No, sir.

Q Any fresh water zones?

A The fresh water zones are behind the surface pipe.

Q What size tubing are you going to use, 2 3/8ths?

A Yes.

Q Internally plastic coated?



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A Yes, sir.

Q Are you going to set a packer at the bottom of the tubing?

A Yes, sir.

Q What type packer?

A Baker retrievable packer.

Q How about the annulus, are you going to load it?

A Yes, sir, we'll load that with a non-corrosive fluid.

Q And I gather that you can use this fluid as a medium to determine whether or not you have any leaks in the tubing?

A Yes, sir.

Q The loss of water --

A It will show up at the wellhead if there were a leak.

Q I believe it was your testimony that this injection would not harm the production from your No. 1 well, which is the north offset?

A Yes, sir.

Q But rather, if anything, it would probably help that production?

A Yes, sir.

Q By some, well, by increasing the -- maintaining the pressure in the reservoir.

A Yes, sir, and possibly some sweep effect.

MR. UTZ: Any other questions of the witness?

If not, the witness may be excused.



(Witness excused.)

MR. UTZ: Any statements in this case?

We have two letters from the State Engineer, one which objects to this case, of July 19th, and another of July 23 which removes that objection.

The case will be taken under advisement.

\* \* \* \*

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STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss.

I, MARIANNA MEIER, NOTARY PUBLIC in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached transcript of proceedings was reported by me in stenotype and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

*Marianna Meier*  
NOTARY PUBLIC

My Commission Expires:

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2604, heard by me on July 26 1962.  
*[Signature]*, Examiner  
New Mexico Oil Conservation Commission

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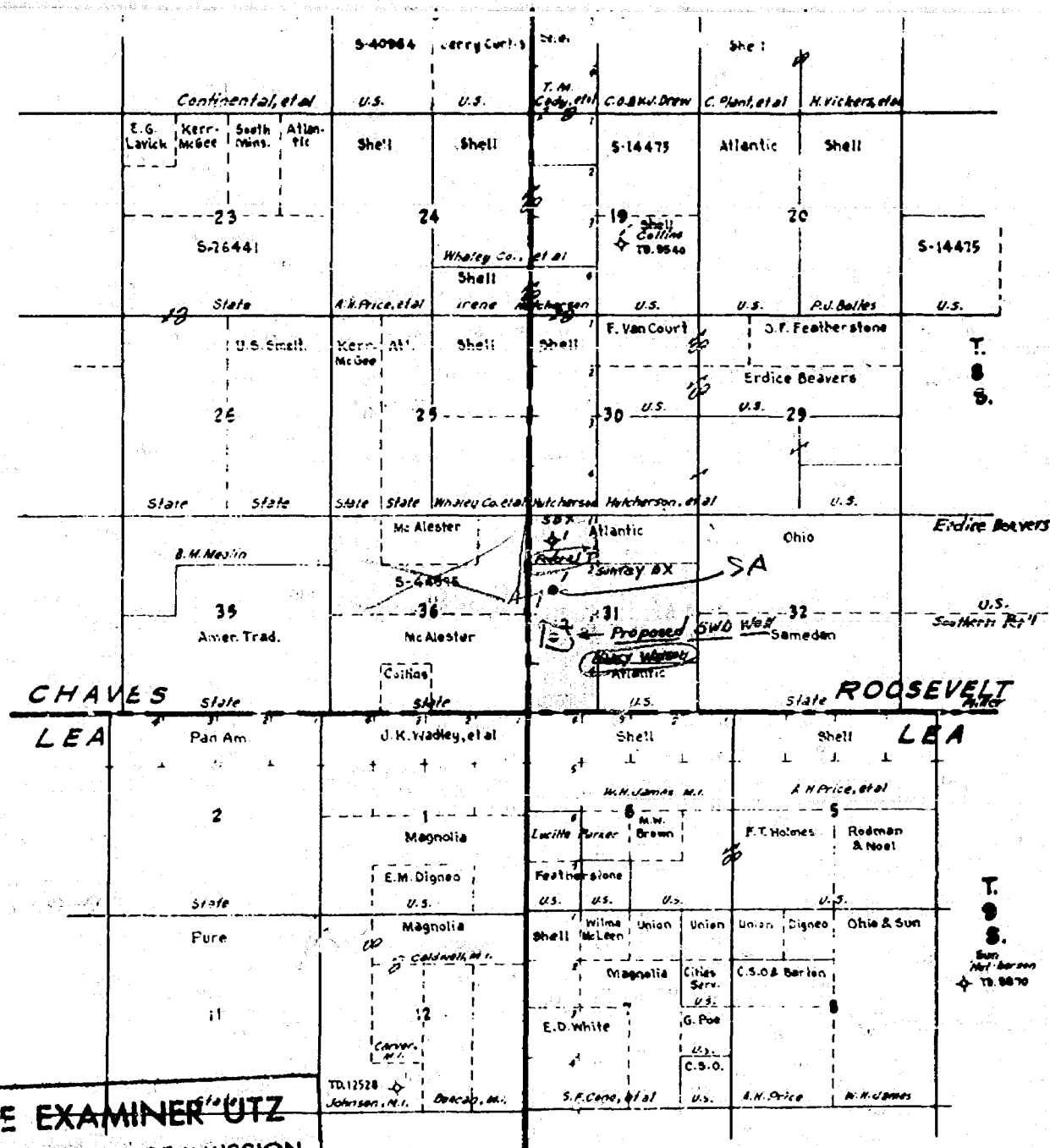
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R-33-E

R-34-E



BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 1  
CASE NO. 12528

Note: The wells in sec. 31 T8S-R34E are completed in the San Andres.

PRODUCING FORMATION		SUNRAY MID-CONTINENT OIL CO. PRODUCING LEASES	
NAME	AVERAGE DEPTH	FIELD: RCL	GROUP:
		DISTRICT:	STATE: N. MEX.
		COUNTY: ROOSEVELT	SCALE
		4000 2000 0 2000 4000 6000	
		FEET	

Diagrammatic Sketch of Sunray L. & Oil Company's  
Nancy Watson no. 2 located in unit K, sec. 31  
T8S, R34E, Roosevelt County, New Mexico

