

CASE 3145: Application of SUNRAY  
DX OIL CO. for a dual completion \_\_\_\_\_  
and salt water disposal, Lea Co.

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CASE No.  
3745

Application,  
TRANSCRIPTS,  
SMALL Exhibits  
ETC.

Docket No. 30-64

DOCKET: EXAMINER HEARING - THURSDAY - NOVEMBER 12, 1964

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 3129: (Continued from the October 13, 1964 Examiner Hearing).  
Application of Shell Oil Company for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the West Wilson Deep Unit Area comprising 3360 acres, more or less, of State and Fee lands in Township 21 South, Range 34 East, Lea County, New Mexico.

CASE 3138: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider exempting certain oil pools in Lea, Chaves, Roosevelt and Eddy Counties, New Mexico, from the gas-oil ratio testing requirements of Rule 301 of the Commission Rules and Regulations. The following pools will be considered for exemption:

ARTESIA DISTRICT

Atoka-San Andres	Leo-Queen-Grayburg, South
Atoka-Grayburg	Leslie Spring-San Andres
Benson-Yates, East	Linda-San Andres
Bitter Lakes-San Andres, South	Loco Hills-San Andres, South
Bitter Lakes-San Andres, West	Logan Draw-San Andres
Brown, Q. Gbr.	Malaga-Delaware
Brushy Draw-Delaware	McMillan Seven Rivers-Queen, East
Canyon-Wolfcamp	Millman-Seven Rivers, East
Carlsbad-Delaware	Palmillo-Seven Rivers
Cass Draw-Delaware	Parallel-Delaware
Cave (Gbr.)	Pecos-Delaware
Case-San Andres, West	Pecos-San Andres
Cedar Lake-Cisco	Penasco-San Andres
Chisum-Devonian	Penasco-Wolfcamp
Corral Canyon-Delaware	Quahada Ridge-Delaware
Cotton Draw-Brushy Canyon	Red Hills- Yates
Coyote-Queen	Red Lake-Queen-Grayburg, East
Dark Canyon-Delaware	Red Lake-Seven Rivers, South
Dayton-Abo	Remuda-Wolfcamp
Dayton-Grayburg, East	Round Tank-San Andres
Dayton-San Andres, West	Saladar-Yates
Diablo-San Andres	Sand Tank-Queen
Dog Canyon-Grayburg	Shugart-Bone Springs
Dos Hermanos, Yates-Seven Rivers	Shugart-Wolfcamp
Eagle Creek-San Andres	Square Lake Grayburg-San Andres, North
Empire Paddock	Sulphate Draw-Delaware
Empire-Yates-Seven Rivers, E.	Twin Lakes-Devonian
Four Mile Draw-San Andres	U. S. Delaware
Fren Paddock	Welch-Delaware
Hackberry-Seven Rivers	White Ranch Siluro-Devonian
Hackberry-Yates, North	White Ranch-Devonian, West
L. E. Ranch-San Andres	Windmill-San Andres

HOBBS DISTRICT

Baish-Wolfcamp, North	Hume-Queen, West
Baum-Wolfcamp	Jenkins-Devonian
Bishop Canyon-Queen	Jenkins-San Andres
Bowers-Seven Rivers	King-Wolfcamp
Caprock-Wolfcamp, East	Lea-Yates
CLR-San Andres	Littman-San Andres
Corbin-Queen, South	Lone-Wolfcamp
Corbin-Yates	Lovington-San Andres
Crossroads-Mississippian	Lovington-San Andres, West
Crossroads-San Andres, West	Lynch-Yates, Middle
Dollarhide-Queen	Pearl-Pennsylvanian
Dublin-Devonian	Querecho Plains-Bone Springs
Echols-Devonian, East	Querecho Plains-Delaware
Echols-Devonian, North	Querecho Plains-Yates
Edson-Pennsylvanian	Teague-Devonian
Elliott-Abo	Teague-Ellebunger
Field Ranch-Wolfcamp	Teague Simpson
Gladiola-Wolfcamp, South	Warren-Abo
Hume-Queen	Williams-Pennsylvanian, North
	Young-San Andres

CASE 3139: Application of Shell Oil Company for a dual completion and a non-standard gas proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard gas proration unit comprising the S/2 SW/4, NE/4 SW/4, and SW/4 SE/4 of Section 3, Township 21 South, Range 37 East, Tubb Gas Pool, Lea County, New Mexico, to be dedicated to its Livingston Well No. 7 located in Unit V of said Section 3. Applicant further seeks approval of said well as a dual completion (conventional) to produce oil from the Drinkard Pool through 2-3/8 inch tubing and to produce gas from the Tubb Gas Pool through the casing-tubing annulus.

CASE 3140: Application of Caulkins Oil Company for a non-standard location and a dual completion, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location for its Breech B Well No. PD-123 to be located 700 feet from the North line and 1800 feet from the East line of Section 7, Township 26 North, Range 6 West, Rio Arriba County, New Mexico. Applicant further seeks authority to complete said well as a dual completion (conventional) to produce gas from the South Blanco-Pictured Cliffs Pool through 1-1/4 inch tubing and to produce gas from the Basin-Dakota Gas Pool through 2-3/8 inch tubing.

CASE 3141: Application of Caulkins Oil Company for a non-standard location and a dual completion, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location for its Breech C Well No. D-144 to be located 990 feet from the North line and 1,090 feet from the East line of Section 12, Township 26 North, Range 6 West, Rio Arriba County, New Mexico. Applicant further seeks authority to complete said well as a dual completion (conventional) to produce oil from the South Blanco-Tocito Pool through 2-3/8 inch tubing and to produce gas from the Basin-Dakota Gas Pool through 1-1/4 inch tubing.

November 12 Examiner Hearing

CASE 3142: Application of N. B. Hunt for a non-standard proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 280-acre non-standard gas proration unit comprising the SW/4, W/2 SE/4, and SE/4 SE/4 of Section 21, Township 21 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, to be dedicated to his Wantz Well No. 2 located in Unit L of said Section 21. In the event all of said acreage is not approved for said Well No. 2, applicant seeks approval of another non-standard unit comprising the remaining acreage to be dedicated to his Wantz Well No. 1 in Unit A of said Section 21.

CASE 3143: Application of Texaco Inc. for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its H. H. Harris Well No. 2 located in Unit O of Section 35, Township 12 South, Range 38 East, Lea County, New Mexico, as a dual completion (combination) to produce oil from the Bronco Wolfcamp Pool through 2-7/8 inch casing and to produce oil from the Bronco Siluro-Devonian Pool through tubing in a parallel string of 3-1/2 inch casing cemented in a common well bore.

CASE 3144: Application of Texaco Inc. for force-pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Drinkard Pool underlying the SE/4 of the SW/4 of Section 17, Township 22 South, Range 38 East, Lea County, New Mexico.

CASE 3145: Application of Sunray DX Oil Company for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to complete its State "AS" Well No. 1 located in Unit G of Section 29, Township 11 South, Range 33 East, Lea County, New Mexico, as a dual completion to produce oil from the Pennsylvanian formation through tubing and to dispose of produced salt water down the production-intermediate casing annulus into the San Andres, Glorieta, and Tubb formations from 3840 feet to 8600 feet.

CASE 2660: (Reopened and continued from the October 28th Examiner Hearing)  
In the matter of Case No. 2660 being reopened pursuant to the provisions of Order No. R-2348-A, which continued the original order establishing 80-acre proration units for the Middle Lane-Pennsylvanian Pool, Lea County, New Mexico, for an additional year. All interested parties may appear and show cause why said pool should not be developed on 40-acre proration units.

Case 3145

Record 11-12-64

Rec. 11-13-64

1. Grant Sunray permission to drill their N. Mer. St. '45', 12501 N+E-29-115-33E in such a manner that oil can be produced thru  $2\frac{3}{8}$ " tubing from ~~the~~ an undesignated Strawn pool and salt water from this zone can be injected down the  $5\frac{1}{2} \times 8\frac{3}{8}$  casing annulus into the San Andres, Blinney, and Jubb formations.
2. The injected water shall be treated to prevent corrosion of the casing.
3. The  $2\frac{3}{8} \times 5\frac{1}{2}$  annulus shall be filled with inert fluid and a pressure gauge installed at the surface to assist in detecting any leakage into the oil producing zone.

Thos. G. W.

Perk test on completion.



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS  
STATE ENGINEER

October 16, 1964

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

87501

*Case 3175*

Mr. A. L. Porter, Jr.  
Secretary-Director  
Oil Conservation Commission  
Santa Fe, N. M.

Dear Mr. Porter:

Reference is made to the application of Sunray DX Oil Company handed to me yesterday by their attorney, Mr. Kelly, which seeks approval to dispose of salt water into their State "AS" well No. 1 in Unit G, Section 29, Township 11 South, Range 33 East.

After reviewing the application and the schematic diagram of the well, it appears that no threat of contamination to fresh waters which may exist in the area will occur, provided the well is constructed and equipped as shown on the diagram. Therefore, this office offers no objection to the granting of the application.

Very truly yours,

S. E. Reynolds  
State Engineer

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

FEI/ma  
cc-Sunray DX Oil Co. (Mr. Wm. Kelly)  
F. H. Hennighausen

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

Revised 9 16 58

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

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

Lease New Mexico State "AS" Well No. 1 County Lea

Unit 0 Section 29 Township 11 Range 13

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

Strawn

Name of Injection Formation(s): San Andres, Glorieta, Tubb

Top of injection zone: 3840' Bottom of injection zone: 8600'

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	11 3/8"	380	400	Surface
Intermediate	8 5/8"	3,840	515	Surface
Long String	5 1/2"	10,702	650	8600

Will injection be through tubing, casing, or annulus? Casing Annulus 8 5/8" & 5 1/2"

Size tubing 2 3/8" EUE Setting depth: 10,026.30 Packer set at: 9868.93

Name and Model No. of packer: Baker Retrievalmatic

Will injection be through perforations or open hole? Annulus between intermediate and production casing.

Proposed interval(s) of injection: 3840'-8600'

Well was originally drilled for what purpose? Oil

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:

Perforated 10,613'-39', set Bridge Plug @ 10,615'. Presently producing from perforations  
Perforated 9977-82 and squeezed w/100 sx cmt. 9341-43, 9346-50, 9429-32, 10,007-16.

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: 8641'

Give depth of bottom of deepest fresh water zone in area: 790

Expected volume of salt water to be injected daily (barrels): 80

Will injection be by gravity or pump pressure? Pump Estimated pressure: 750 psig

Is system open or close type? close Is filtration or chemical treatment necessary? No\*\*

\*8641' is the top of the next lower producing zone in the Amerada, W.E. Mathers "B" No. 1  
located approx 6600' SE from the subject well.

\*\*Chemical injection pump will be set and the water treated to insure that no corrosion occurs.



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

Amerada Petroleum Corp., P.O. Box 668, Hobbs, New Mexico

Bell Petroleum Corp., P.O. Box 1538, Midland, Texas

Shell Oil Company., P.O. Box 1858, Roswell, New Mexico

Lone Star Producing Company, Hinkle Bldg., Roswell, New Mexico

Name and address of surface owner Walter W. Anderson, Caprock, 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 DX Oil Company

By: B. F. Brawley B.F. Brawley

Title: District Engineer

STATE OF New Mexico )  
 ) ss:  
County of Lea )

BEFORE ME, The undersigned authority, on this day personally appeared B. F. Brawley 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 9th day of October, 19 64.

Donald George Decker  
Notary Public in and for the County of Lea, New Mexico

MY COMMISSION EXPIRES DECEMBER 14, 1966

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.

ir/

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

GILBERT, WHITE AND GILBERT  
ATTORNEYS AND COUNSELORS AT LAW  
BISHOP BUILDING  
SANTA FE, NEW MEXICO

October 15, 1964

POST OFFICE BOX 787  
TELEPHONE 983-4324  
(AREA CODE 505)

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

Re: Sunray DX Oil Company's Application for salt  
water disposal.

Dear Mr. Porter:

By this letter Sunray DX Oil Company requests a public hearing by which it seeks approval of a proposed dual completion for its New Mexico State "AS" No. 1 Well located 1,980 feet from the North and East lines of Section 29, Township 11 South, Range 33 East, Lea County New Mexico. This well is presently completed and producing in the Pennsylvanian formation. The top of the formation is 9,341 feet and the bottom 10,016 feet.

Sunray seeks to inject salt water down the annulus between the intermediate and production casing into the San Andres, Glorietta and Tubb formations all non-productive of oil or gas. The top of the injection zone is 3,840 feet and the bottom 8,600 feet. Proper exhibits as required by Rule 701 are attached with this application.

Very truly yours,

GILBERT, WHITE AND GILBERT

By *W.B. Kelly*

WEK:cc

DOCKET MAILED

Date 10-30-64

GILBERT, WHITE AND GILBERT  
ATTORNEYS AND COUNSELORS AT LAW  
BISHOP BUILDING  
SANTA FE, NEW MEXICO

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

October 15, 1964

POST OFFICE BOX 787  
TELEPHONE 983-4324  
(AREA CODE 505)

Mr. Al Porter, Jr.  
Secretary- Director  
New Mexico Oil and Gas Commission  
Santa Fe, New Mexico

Re: Sunray DX Oil Company's Application for  
salt water disposal

My dear Mr. Porter:

Enclosed with this letter are three copies of Sunray DX  
Company's application to dispose of salt water by injection into  
a porous formation not productive of oil or gas, with appropriate  
exhibits attached.

All off-set operators and the surface owner have been sent  
copies of the application, and I have delivered to the State Engineer's  
office a copy of the application with all exhibits attached.

If objections are timely filed by any interested party, we  
would appreciate having this application set down for public hearing.

Very truly yours,

*W B Kelly*  
W. B. KELLY

WBK:cc

## LEASE STATUS

S-1532

DATE PREPARED

May 15, 1964

LEASE NAME

New Mexico State "AS"

WELL NO.

1

LEASE NO.

S-68631

LOCATION (PLAT ATTACHED)

1,980' FM&amp;EL of Section 29-11S-33E

DATE LEASE EXPIRES

February 18, 1969

LEASE DESCRIPTION

West Half of Northeast Quarter (W/2 NE/4), Southeast Quarter of Northeast Quarter (SE/4 NE/4), North Half of Northwest Quarter (N/2 NW/4), Southeast Quarter of Northwest Quarter (SE/4 NW/4), Southwest Quarter (SW/4), and West Half of Southeast Quarter (W/2 SE/4) of Section 29-11 South-33 East, LEA COUNTY, NEW MEXICO (K-3905).

COUNTY (PARISH) AND STATE

Lea County, New Mexico

EXPLORATION CODE

RM64-EX9

SURFACE OWNER State of New Mexico

SUNRAY MID-CONTINENT'S INTEREST All 7/8 W. I.

REMARKS: (Time Limitations, Special Contractual Provisions, Justification, Etc.)

The leased premises are subject to a Surface-Grazing Lease (GH-265) which expires September 30, 1965, in favor of Walter H. Anderson, Caprock, New Mexico.

ORIGINAL SIGNED BY

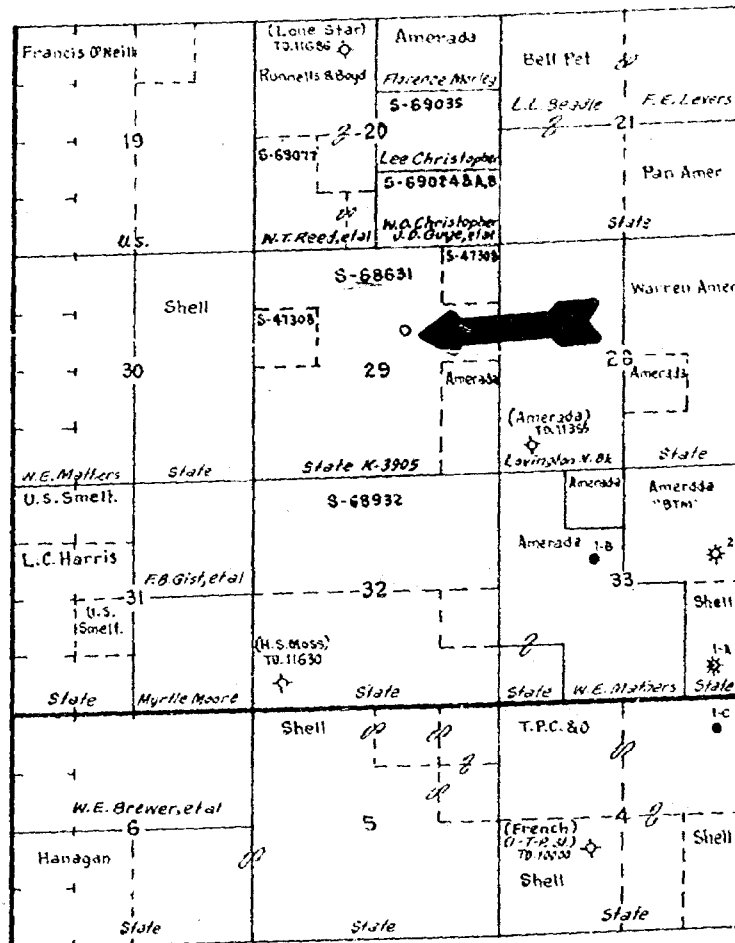
CLAIR A. FOSTER

Prepared by


DIVISION LEASE RECORDS MAN

Clair A. Foster

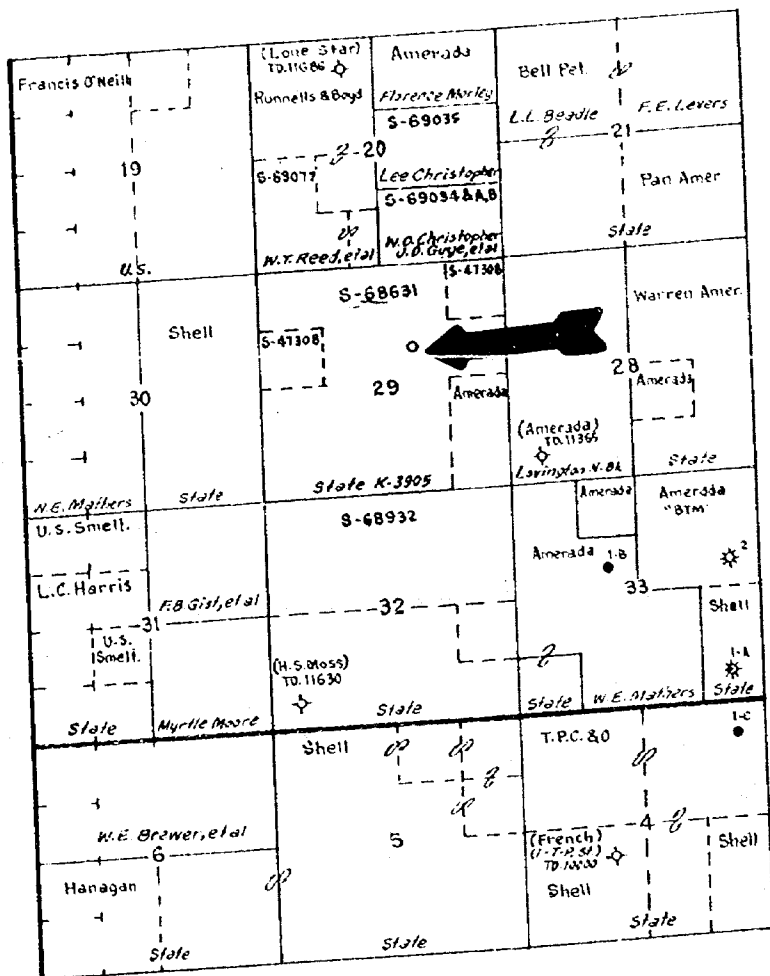
R-33-E



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PRODUCING FORMATION		SUNRAY DX OIL COMPANY		PRODUCING LEASES	
NAME	AVERAGE DEPTH	FIELD:			
		DISTRICT:	GROUP:		
		COUNTY: LEA	STATE: N. MEX.		
		SCALE			
		4000	0	4000	8000
					
		FEET			

R-33-E



T  
11  
S

PRODUCING FORMATION		SUNRAY DX OIL COMPANY		PRODUCING LEASES
NAME	AVERAGE DEPTH	FIELD:		
		DISTRICT:		
		COUNTY: LEA		
		GROUP: STATE: N. MEX.		
		SCALE		
		4000 0 4000 8000		
		FEET		

W.G.A. 4-30-64

GOVERNOR  
JACK M. CAMPBELL  
CHAIRMAN

State of New Mexico  
**Oil Conservation Commission**



LAND COMMISSIONER  
E. B. JOHNNY WALKER  
MEMBER

P. O. BOX 2088  
SANTA FE

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

November 24, 1964

Mr. Booker Kelly  
Gilbert, White & Gilbert  
Attorneys at Law  
Post Office Box 787  
Santa Fe, New Mexico

Re: CASE NO. 3145  
ORDER NO. R-2814  
APPLICANT SUNRAY DX

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

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. 3145  
Order No. R-2814

APPLICATION OF SUNRAY DX OIL COMPANY  
FOR A DUAL COMPLETION AND SALT WATER  
DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on November 12, 1964, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 24th day of November, 1964, 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, Sunray DX Oil Company, seeks authority to complete its State "AS" Well No. 1 located in Unit G of Section 29, Township 11 South, Range 33 East, NMPM, Lea County, New Mexico, as a dual completion to produce oil from the Pennsylvanian formation through 2 3/8-inch tubing installed in a packer set at approximately 9269 feet and to dispose of produced salt water through the production-intermediate casing annulus into the San Andres, Glorieta, and Tubb formations, with the injection interval from approximately 3840 feet to approximately 8600 feet.

(3) That the produced salt water should be treated prior to injection to prevent casing corrosion; that the casing-tubing annulus should be filled with inert fluid; and that a pressure gauge should be attached to the casing-tubing annulus to determine leakage of salt water from the production-intermediate casing annulus.



-2-

CASE No. 3145

Order No. R-2814

(4) That approval of the dual completion and salt water disposal as set out above will prevent the drilling of unnecessary wells and will otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

(1) That the applicant, Sunray DX Oil Company, is hereby authorized to complete its State "AS" Well No. 1 located in Unit G of Section 29, Township 11 South, Range 33 East, NMFM, Lea County, New Mexico, as a dual completion to produce oil from the Pennsylvanian formation through 2 3/8-inch tubing installed in a packer set at approximately 9269 feet and to dispose of produced salt water through the production-intermediate casing annulus into the San Andres, Glorieta, and Tubb formations, with the injection interval from approximately 3840 feet to approximately 8600 feet;

PROVIDED HOWEVER, that the produced salt water shall be treated prior to injection to prevent casing corrosion; that the casing-tubing annulus shall be filled with inert fluid; and that a pressure gauge shall be attached to the casing-tubing annulus to determine leakage of salt water from the production-intermediate casing annulus;

PROVIDED FURTHER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Commission Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take packer-leakage tests upon completion and annually thereafter during the Annual Gas-Oil Ratio Test Period for the Pennsylvanian formation.

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

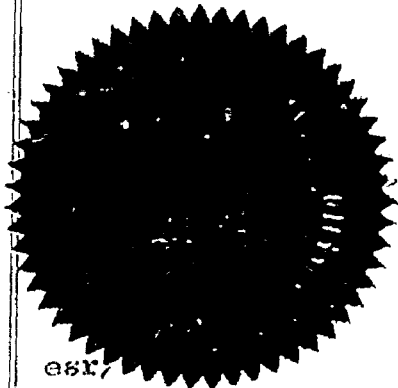
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

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



esr,

SUNRAY OX OIL COMPANY

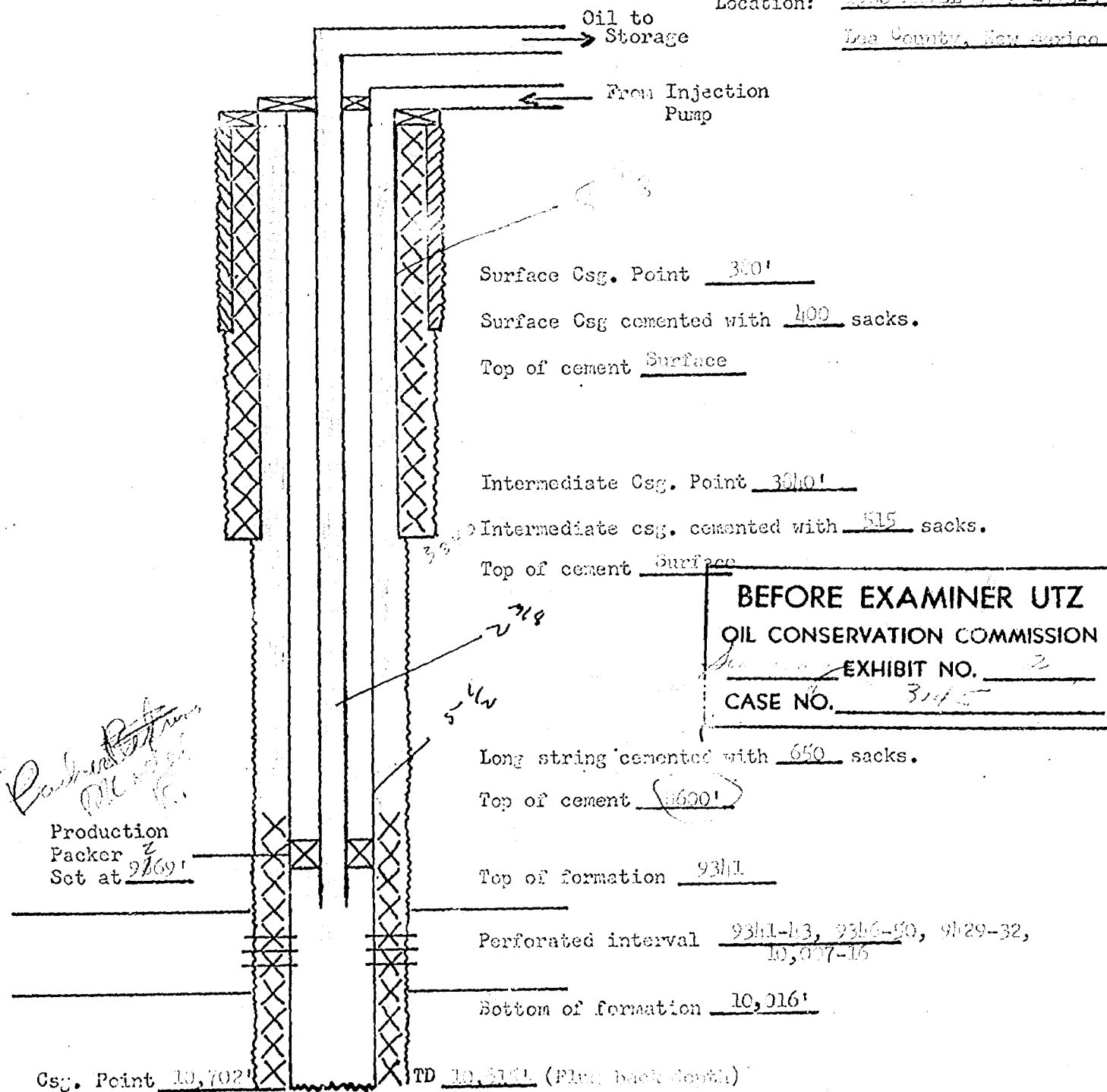
Lease Name: New Mexico State "A"

Well No: 1

Field: Wildcat

Location: 1980 FIDEL of 29-113-223

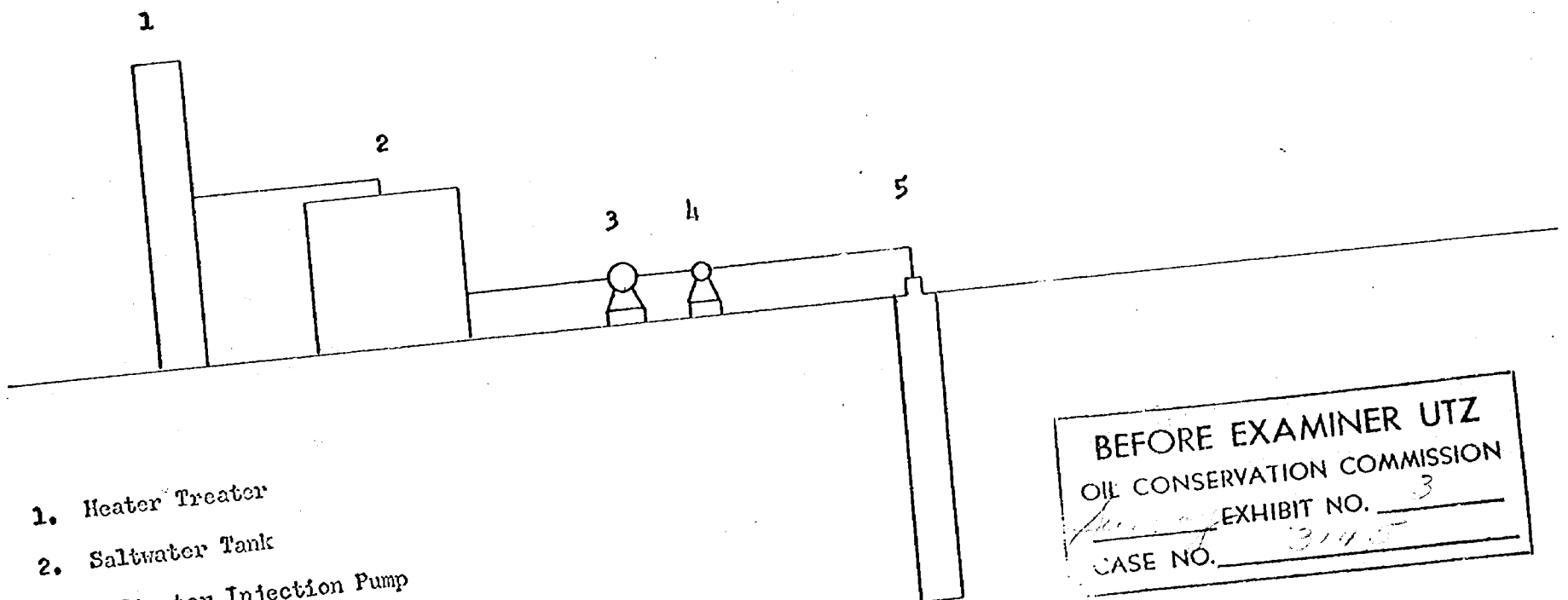
Lee County, New Mexico



SUNRAY DX OIL COMPANY

Lease Name: New Mexico State "A3"  
Well No: 1  
Field: Mildcat  
Location: 1920' SEEL of 29-11S-33E  
Lea County, New Mexico

Diagram of Installation



1. Heater Treater
2. Saltwater Tank
3. Saltwater Injection Pump
4. Chemical Injection Pump
5. Saltwater Disposal Well

BEFORE EXAMINER UTZ  
OIL CONSERVATION COMMISSION  
EXHIBIT NO. 3  
CASE NO. 3145

dearnley-meier reporting service, inc.

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

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

PAGE 1

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
November 12, 1964

EXAMINER      HEARING

-----  
IN THE MATTER OF: Application of Sunray DX Oil )  
Company for a dual completion and salt water )  
disposal, Lea County, New Mexico. Applicant )  
in the above-styled cause seeks authority to )  
complete its State "AS" Well No. 1 located in )  
Unit G of Section 29, Township 11 South, )  
Range 33 East, Lea County, New Mexico, as a )  
dual completion to produce oil from the )  
Pennsylvanian formation through tubing and to )  
dispose of produced salt water down the )  
production-intermediate casing annulus into )  
the San Andres, Glorieta and Tubb formations )  
from 3840 feet to 8600 feet. )  
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Case No. 3145

BEFORE:      Elyis A. Utz, Examiner

TRANSCRIPT OF HEARING



dearnley-meier

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

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



MR. UTZ: The next case will be Case 3145.

MR. DURRETT: Application of Sunray DX Oil Company for a dual completion and salt water disposal, Lea County, New Mexico.

MR. KELLY: Booker Kelly of Gilbert, White and Gilbert, Santa Fe, appearing on behalf of the applicant. I have one witness and ask that he be sworn.

(Witness sworn.)

(Whereupon, Applicant's Exhibits 1 through 5 marked for identification.)

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

DIRECT EXAMINATION

BY MR. KELLY:

Q Would you state your name, position and employer, please?

A John B. Hastings, Sunray DX Oil Company in Hobbs, New Mexico, Petroleum Engineer.

Q Have you testified before this Commission previously?

A No, I have not.

Q Would you give the Examiner a sketch of your professional and educational background?

A I am a graduate of Texas Technological College. I received a Bachelor of Science Degree in petroleum engineering

and I graduated in June, 1963 and have been employed by Sunray DX as a petroleum engineer since that time.

Q Are you personally familiar with the subject well?

A I am.

MR. KELLY: Are the witness's qualifications acceptable?

MR. UTZ: Yes, sir, they are.

Q Would you briefly state what Sunray seeks by this application?

A Sunray proposes to dispose of their produced salt water from their State "AS" Well No. 1 down the annulus between the intermediate and production string.

Q Referring to what has been marked Exhibit 1, the plat, would you point out the location of this well and explain the exhibit to the Examiner?

A This plat shows the location of Sunray DX State "AS" Number 1 Well in Section 29, 11 South, Range 33 East; and you will note that we have enclosed it by a red ring of two-mile radius, which shows other wells located in this area.

You might note that the Amerada W. E. Mathers "B" Number 1, which is located in Section 33, shows perforations 6841 to 57. This is near the bottom of the interval where we propose to inject salt water, but our geologist correlates this to be below our proposed injection interval.

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Q Do you have any information of whether there's any other production in any of the zones that you would be contemplating injection in this two-mile radius?

A No, there's not.

Q Could you show the Examiner the acreage that is owned or controlled by Sunray?

A Yes. Here's a plat prepared by our Land Department at the time that this well was initially drilled.

Q Would you read into the record the sections that are involved?

A Sections 29 -- Well, I don't believe they're broken down in exact acreage spacings. There's an area surrounding this Amerada in the southeast corner, that Sunray does not have, that is still under lease by Amerada.

In Section 32 we have the north half of the section; in Section 20, this is another one that's not real regular spacing.

Q You have roughly the south half of the section?

A Roughly the south half.

Q You have all of Section 29 except the southeast corner?

A Yes.

MR. KELLY: We only have one of these.

Q (By Mr. Kelly) Going on to what has been marked as

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Exhibit 2, the diagramatic sketch, would you explain that to the Examiner?

A Our Exhibit 2 shows that we ran 380 foot of 13 3/8-inch casing. It was cemented to the surface with 400 sacks. Our intermediate string of 8 5/8s was run to 3840 feet; it also is cemented to the surface; and our production string, which is 5 1/2-inch casing is run to a total depth of 10,702 feet. Actually our plug-back total depth is 10,615. This casing has been cemented to 8600 feet.

Q What is the present status of this well?

A This well is producing approximately 40 barrels of oil and 650 to 700 barrels of water per day.

Q How long has it been on production?

A It has been on steady production for about three to four weeks.

Q What would you estimate the life of the well to be?

A Well, we don't anticipate a long life. I would say three to four years would be a maximum.

Q So that would be the extent of the time that you would be injecting water?

A That is correct.

Q Along with Exhibit 2, Exhibit 3 shows the installation that you propose. Would you briefly explain this to the Examiner?



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A I think this would be a fairly standard salt water disposal installation. We propose to dump our produced water from the heater into the central tank and it will be inhibited and injected into this annular space.

Q This is a closed system?

A That is correct.

Q You have about 680 barrels of water a day now?

A That is correct.

Q Do you expect this would remain substantially the same throughout the life of the well?

A We do. We don't expect our total water production to increase from that figure.

Q Does Sunray have a similar type installation insofar as lack of success, or success of treating salt water so you don't have corrosion problems?

A We have. We have done this same type of installation in other areas and have treated our produced water and have had no indication that corrosion has occurred.

Q Do you feel that there would be any danger of communication as far as between stratas, or between zones, getting into your production zones?

A No, we do not.

Q Exhibit Number 4 is a temperature survey, you might just comment on that.

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A This temperature survey simply shows the top of the cement for our long string.

Q What is Sunray presently doing with the water?

A We're presently putting it in a pit while we're in this testing period, and economics simply do not warrant us hauling this water to dispose of it, and this seems to be the most economical approach to our problem.

Q Is the well a commercial success enough so that if you did have to haul it away or drill another injection well, could you continue to produce?

A No, we do not feel that we could. Our cost of disposing water will run 12 to 15 cents a barrel, and with this volume of oil and produced water we simply could not economically do that.

Q We have a log of the well, if you would like to see it, it is marked as Exhibit 5. In your expert opinion, what would be the result as far as waste of oil, if any, if this application were not granted?

A Well, if we are not able to economically produce this well, we will, of course, we will not be able to produce this oil.

Q Chances are it will be left in the ground?

A That is correct.

Q Does Sunray contemplate drilling any additional wells

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on their acreage in this area?

A No, at the present time we cannot see any further development.

Q That is because of the marginal qualities of this well, is that correct?

A That is correct.

Q In your opinion, the granting of this application would prevent economic waste?

A Yes.

Q And also prevent waste of oil by allowing it to remain in place?

A Correct.

Q Were Exhibits 1 through 5 prepared by you or under your supervision?

A They were.

MR. KELLY: I move the introduction of Exhibits 1 through 5.

MR. UTZ: Without objection Exhibits 1 through 5 will be entered into the record.

(Whereupon, Applicant's Exhibits 1 through 5 were admitted in evidence.)

MR. KELLY: I have no further questions on direct.

CROSS EXAMINATION

BY MR. UTZ:

Q 3840 to the surface you have what size casing is that?



A That is 8 5/8s.

Q Immediately below the 3840 is what formation?

A The San Andres.

Q And the top of the cement on your production string is 6800?

A Yes, sir, by temperature survey.

Q And that is the base of the Tubb?

A I have a marked log here that our geologist had prepared. We show the top of the Tubb at about 6490, which they break out a Hueco formation at approximately 8560, which would actually be at the top of our interval there.

Q Is that spelled H-u-e-c-o?

A Right.

Q What is the nearest producing well?

A We do not have any -- YOU mean the zones that we would be injecting into here?

Q Yes.

A There are not any zones that we can tell that are on this map which looks to be about a three-mile radius of our well.

Q Was there any drillstem test run on any of these three zones?

A No, sir, there were --

Q No shows?

A No.

Q Do you feel that these three formations will contain the salt water vertically?

A Yes, sir, we sure do...

Q This is just ordinary casing on your production string, is it not?

A Yes.

Q It isn't coated or lined with anything?

A No, sir, it is not.

Q It's your intention to treat the salt water?

A It is. Our Division Corrosion Engineer will work out a treating program to properly inhibit this water.

Q How about the annulus between your production string and your producing tubing?

A We have a packer there.

Q Do you intend to put a gauge on that, or any way to detect any corrosion or leakage into the production string?

A Yes, sir, we do. We would be able to detect any corrosion that might occur in that area.

Q By what manner?

A By gauge.

Q Are you going to fill that annulus with inert fluid or anything?

A Actually we really hadn't thought about that.

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Personally I don't see -- I see what you mean, in order to detect a leak there we would need that, although I don't actually see that it would really be necessary because as much salt water as we would be talking about disposing there, I believe we would detect an increase in pressure just from the compression of any gas that might be in that annulus.

Along this corrosion line, we feel like if this well were going to be a long term proposition, say, if we were going to produce ten or fifteen years we might have some problem there, but with this short production life that we are anticipating, and with proper treating of our water, we do not anticipate any corrosion problem.

Q How old is your production string?

A This was new pipe run in the well.

Q How long ago?

A I believe in August. Let me check. That is correct August of 1964.

Q Filling the annulus with inert fluid wouldn't be an excessively expensive job or too much trouble, would it?

A No, sir, if our application depended on that we would be happy to do that.

Q What type of packer is set at the top of the Pennsylvanian?

A This is a Baker Retrievmatic, I believe. Excuse me,

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it's a Baker Model R.

Q That's a retrievable packer, is it not?

A Yes, it is.

Q Have you run any tests on the packer to show that it's not leaking?

A No, sir, we haven't at this time.

Q Do you intend to do this?

A Yes, we do.

MR. UTZ: Any other questions of the witness?

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

MR. UTZ: Mr. Durrett.

BY MR. DURRETT:

Q I assume this well is not located within a declared underground water basin, declared by the State Engineer?

A To be perfectly truthful, I don't know. I talked with Mr. Ramey on the phone when I was preparing this application, about the depth of fresh water in this area, but I don't know.

MR. KELLY: The State Engineer has sent a letter to the Commission saying that he has no objection.

MR. DURRETT: Fine, that's what I wanted to know. Thank you.

MR. KELLY: At least I got a copy of such a letter.

MR. DURRETT: Let us check our files to see if we

have it in there.

MR. UTZ: Yes, sir, we have a copy of the letter.

MR. DURRETT: That's all I have.

MR. UTZ: Any other questions? The witness may be excused.

(Witness excused.)

MR. UTZ: Are there any statements in this case?

The case will be taken under advisement. The hearing is adjourned.



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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 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 24th day of November, 1964.

*Ada Dearnley*  
Notary Public - Court Reporter

My Commission Expires:

June 19, 1967



I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 3145 heard by me on Nov. 12, 1964.  
*[Signature]*  
Examiner  
New Mexico Oil Conservation Commission