-asa No. 2369

Application, Transcript, small Exhibits, Etc.

CASE 2369: Application of SUNRAY MID-CONTINENT for a dual completion on its State "O" Well No. 3.

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

February 20, 1969

Sun Oil Company
DX Division
Post Office Box 1416
Roswell, New Mexico 88201

Attention: Mr. C. T. McClanahan

Gentlemen:

Reference is made to Commission Order No. R-2057, dated September 7, 1961, which authorized the dual completion of Sunray Mid-Continent Oil Company's State "O" Well No. 3, located in the SW/4 SE/4 of Section 12, Township 19 South, Range 28 East, East Millman Pool, Eddy County, New Mexico, in such a manner as to permit the production of oil through two-inch tubing from perforations in the interval from 1763 feet to 2178 feet and to dispose of produced salt water through the 8 5/8 x 5 1/2-inch annulus into the Rustler anhydrite and Yates formations in the open-hole interval from 386 feet to 884 feet.

The above-approved use of the subject well was predicated principally upon Finding No. 3 of the order, which states, "That inasmuch as the quantities of salt water to be disposed of through the proposed installation are small, the subject application should be approved."

Testimony by Sunray's witness at the hearing was that the water production from the State "O" Lease at that time was approximately five barrels per day, but that Sunray expected to produce perhaps as much as 10 to 20 barrels per day, and that with additional development the total might go as high as 40 barrels per day, which would be the maximum.

It is noted that water disposal into the subject well has averaged 142 barrels per day during the last five months reported, and that monthly averages have gone as high as 157 barrels per day.

OIL CONSERVATION COMMISSION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Sun Oil Company
DX Division
Roswell, New Mexico
February 20, 1969

In view of current volumes being disposed of into this well, and also in view of the Commission's current policy of discouraging salt water disposal into any well in which the salt section is open, it is requested that you commence a study to find an alternative source of water disposal for this lease. We feel that you should be able to make such arrangements within 60 days.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/DSN/ir

cc: Mr. W. A. Gressett
Oil Conservation Commission
Drawer DD
Artesia, New Mexico 88210

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. 2369
Order No. R-2057

APPLICATION OF SUNRAY MID-CONTINENT
OIL COMPANY FOR A DUALLY COMPLETED
OIL PRODUCING AND SALT WATER DISPOSAL
WELL, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on August 30, 1961, 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 7th day of September, 1961, 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 Mid-Continent Oil Company, seeks permission to dually complete its State "O" Well No. 3, located in the SW/4 SE/4 of Section 12, Township 19 South, Range 28 East, NMPM, Eddy County, New Mexico, in such a manner as to permit the production of oil through 2-inch tubing from perforations in the interval from 1763 feet to 2178 feet and to dispose of produced salt water through the 8 5/8 x 5 1/2-inch annulus into the Rustler Anhydrite and Yates formations in the open-hole interval from 386 feet to 894 feet.

(3) That inasmuch as the quantities of salt water to be disposed of through the proposed installation are small, the subject application should be approved.

(4) That the salt water to be injected should be inhibited to prevent undue corrosion to the 8 5/8-inch and 5 1/2-inch casing strings.

IT IS THEREFORE ORDERED:

(1) That the applicant, Sunray Mid-Continent Oil Company, is hereby authorized to dually complete its State "O" Well No. 3, located in the SW/4 SE/4 of Section 12, Township 19 South, Range 28 East, NMPM, Eddy County, New Mexico, in such a manner as to permit the production of oil through 2-inch tubing from perforations in the interval from 1763 feet to 2178 feet and to dispose of produced salt water through the 8 5/8 x 5 1/2-inch annulus into the Rustler Anhydrite and Yates formations in the open-hole interval from 386 feet to 884 feet.

(2) That the salt water to be injected into the subject well shall be inhibited to prevent undue corrosion to the 8 5/8-inch and 5 1/2-inch casing strings.

(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

ir/

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 30, 1961

IN THE MATTER OF:

CASE NO. 2369

TRANSCRIPT OF HEARING

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
August 30, 1961

EXAMINER HEARING

IN THE MATTER OF:

Application of Sunray Mid-Continent Oil Company for a dually completed oil-producing salt water disposal well, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks permission to dually complete its State "O" Well No. 3, located in Unit O, Section 12, Township 19 South, Range 28 East, Eddy County, New Mexico, in such a manner as to permit the production of oil through tubing from perforations at 1763 feet to 2178 feet and to dispose of produced salt water through the casing-tubing annulus into the Rustler Anhydrite and Yates formation through perforations at 386 feet to 884 feet.

Case 2369

BEFORE:
Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 2369.

MR. MORRIS: Application of Sunray Mid-Continent Oil Company for a dually completed oil-producing salt water disposal well.

MR. WHITE: Charles White, appearing on behalf of the applicant as Resident Counsel, and have associated with me Mr. William Loar of Tulsa, Oklahoma, and he will be the active Counsel in this case.

MR. LOAR: We will have one witness, Mr. Examiner.

MR. UTZ: Are there other appearances in this case?

You may swear the witness.

R. E. STATTON,

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

DIRECT EXAMINATION

BY MR. LOAR:

Q Will you please state your name and occupation?

A My name is R. E. Statton. I am a Petroleum Engineer working for the Sunray Mid-Continent Oil Company.

Q You are the District Engineer for Sunray Mid-Continent at Hobbs; is that correct?

A Yes.

Q Have you testified before the Commission previously as a Petroleum Engineer?

A Yes.

Q And were your qualifications accepted at that time?

A Yes.

MR. UTZ: He is qualified.

Q (By Mr. Loar) Mr. Statton, are you familiar with the Millman East Queen Grayburg Pool in Eddy County, New Mexico, and the Sunray Mid-Continent State "O" Lease located in there?

A Yes.

Q Will you please refer to what has been marked as Exhibit No. 1, and briefly discuss that Exhibit?

A Exhibit No. 1 is a well and lease plat showing the wells

and leases in the vicinity of our State "O" Lease. Our leases are colored in yellow. The proposed salt water disposal well is marked with a red arrow. Most of these wells produce from the Millman East Queen Grayburg Pool, with the exception of one well in the northwest of the northwest of Section 18, 19 South, 29 East, which produces from the Seven Rivers Formation. There are also some wells that either do or are now producing from San Andres in the southwest of Section 14.

Q What is the State "O" Lease now producing?

A This lease produces 102 barrels of oil per day, and approximately 5 barrels of water per day.

Q And what are you presently doing with this water?

A We are disposing of this water in open pits.

Q And is that the practice in the field?

A Yes.

Q Now then, is this water corrosive?

A We recently pulled tubing on our No. 3 well and found no evidence of corrosion on the tubing or the pump. However, our offset operators have experienced some corrosion.

Q In your opinion, is this water the type that can be treated easily --

A Yes.

Q -- and commercially?

A Yes, to the point the corrosion would be negligible in this amount of water.

Q Now, will you refer to what has been marked as Exhibit No. 2, and discuss what Sunray proposes to do with the water from the State "O" Lease.

A Exhibit No. 2 is a schematic diagram of the No. 3 State "O", which shows a 8 5/8-inch casing set at 586 feet with cement brought to the surface, with 5 1/2-inch casing set at 2,231, with cement brought up to 884 feet as determined by a temperature survey. And, it shows that our producing interval is within 1,763 feet and 2,178 feet, and that the water to be injected will be injected down the annulus between the 8 5/8-inch casing and the 5 1/2-inch production casing into an injection interval between 386 feet and 884 feet.

Q And what type of formation is that, Mr. Statton?

A That is salt anhydrite with some shale stringers in it and the upper Yates.

Q Now then, what pressures do you anticipate, what volume of water are you presently producing?

A Approximately 5 barrels per day.

Q What volume of water do you anticipate will be the ultimate daily production from this lease?

A We will expect to produce perhaps as much as 10 to 20 barrels per day. In the event the drilling well shown on Exhibit No. 1 in the southwest quarter of Section 7, is completed as a commercial well, we would then drill a No. 5 well, which could increase our water production up to maybe a total of 40 barrels

per day.

Q Now, you are basing these water figures on a survey of other wells in the field; is that right?

A Yes.

Q And in your opinion, based on the present development of the field, will the well drilling in the southwest southwest southwest of Section 7 be a commercial well?

A I do not believe that it will be.

Q All right, sir. What pressures do you anticipate will be required to get the volume of water that you can anticipate into the formation?

A A small amount of water will go in on vacuum. However, we do not know in what amount, and we may have to inject a pressure somewhere between zero and 200 pounds.

Q Now, you say, "a small amount". Do you mean that approximately 10 barrels a day will probably go into the formation at zero pressure top hole?

A We are hoping that it will.

Q You have run injectivity tests on this well?

A Yes.

Q And based on the information you have obtained from that, what volume do you think you will be able to put in at atmospheric pressure top hole?

A Well, we think we will be able to put this 4 to 5 barrels a day in, possibly more than that.

Q Now, you said "a small amount". I was trying to get a number from you.

A Yes.

Q So at the present time you are disposing of this water into a pit located approximately where?

A The pit is located in the extreme northeast corner of the north half of the northwest quarter of Section 13.

Q Slightly north and east of Well No. 1; is that correct?

A That is correct.

Q That is also where the tank battery is; is that right?

A Yes.

Q Now then, you are faced with this problem: of either enlarging the pit to take care of your present water production, or finding a suitable underground disposal source or spot for your water; is that right?

A Yes, sir.

Q Now then, in your opinion is this the best, or is injecting into this well in the method outlined, the best way to dispose of this water?

A Yes, sir.

Q And are you doing this in an attempt to try to get along with your surface lessee?

A Yes, sir.

Q This is State land; is that right?

A Yes, sir.

DEARNLEY-MEIER REPORTING SERVICE, Inc.
ALBUQUERQUE, NEW MEXICO
PHONE CH 3-6691

Q And he is a lessee of the grazing rights from the State?

A Yes, sir.

Q Will you please refer to Exhibit No. 3, and point out what that reflects.

A Exhibit No. 3 is a Gamma ray neutron log of the New Mexico State "O" No. 3. In addition, it shows the top of the salt at 370 feet, and that we tested 1/2 barrel salt water per hour in the top of the salt while drilling the hole. It shows 8 5/8 casing at 386 feet. It shows the top of the cement on the outside of our production casing at 484 feet; and it shows that our injection will be into salt. The injection interval, excuse me, the injection interval will be in salt, anhydrite, shale strings, and sand dolomite, and shale, with the injection interval being between 386 feet and 884 feet.

Q Then, Mr. Statton, working in connection with the geologist in charge of this area, do you believe that there is an impervious formation at or near the base of your 8 5/8-inch casing?

A Yes, sir.

Q And do you believe that there is an impervious formation at or near the top of your cement, or 884 feet?

A Yes, sir.

Q Now, does that impervious formation extend over a wide area?

A Yes, sir.

Q Now then, based on this log and the other information

available in the drilling of the well and the samples and consultations with the geologist working on the well, have you made some calculations as to the likely footage which will take this water?

A Yes. I have calculated 44 feet with 9.8 percent porousity that will most likely take this water.

Q And based on 10 barrels a day injection, what would be your fillup in approximately 20 years?

A 2.9 acres.

Q So, selecting the 44 feet most likely to take this water, the most you can anticipate is that approximately 3 acres around the well would be filled up.

A Yes, sir.

Q And there is a larger interval which might take the water, or might not?

A Yes, sir.

Q Now then, if you are permitted to inject water in this fashion into this interval, will you be able to detect leaks in the production casing?

A Yes, sir.

Q And the surface pipe is cemented to surface --

A That is, leaks in this portion that is not cemented.

Q And the surface pipe is cemented to surface?

A Yes.

Q The oil string is cemented from this point to the TD?

A Yes, from 884 feet to TD.

Q And if there are any leaks that occur in the oil string, in general, it will be between --

A From 884 feet to the surface.

Q 884 feet to the surface. You will be able to detect that immediately by an increase in water production?

A Yes.

Q Based on an examination of the field, all available wells, and various methods of handling this water, do you recommend to the Oil Conservation Commission that this is the best way to dispose and handle this salt water production?

A Yes, sir.

Q Were Exhibits 1 through 3 prepared by you or under your supervision?

A Yes.

MR. LOAR: At this time, we would like to offer Exhibits 1 through 3.

MR. UTZ: Without objection, Exhibits 1 through 3 will be entered into the record.

(Whereupon, Applicant's Exhibits Nos. 1 through 3 received in evidence.)

MR. LOAR: That is all we have on this witness, Mr. Utz.

Q (By Mr. Utz) Mr. Statton, is there any possible value to the salt in this area?

A This well is 15 or 20 miles from the nearest potash mines, and I am not aware of any value of the salt.

Q Is it actually salt, or is it potash?

A I don't know. It's just described as salt on our geological description.

Q What is the depth of the point of the water near this area?

A The fresh water?

Q Yes, sir.

A The fresh water in our well would be located at, well, in this area, would be at a depth of between 95 and 200 feet.

Q You stated, I believe, that your calculation was for 20 years, the rate you intended to inject.

A Yes.

Q Is it possible that the water, instead of concentrating around your well bore, might run off on the stringer quite some distance?

A There is that possibility.

Q Do you have any zones in this salt section that are highly permeable?

A In my opinion, no.

Q It is all pretty tight?

A Yes, sir. We have no cores or anything to go on but --

Q Just the log?

A Just the log. This log, and sample logs.

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

MR. MORRIS: Yes, sir.

MR. UTZ: Mr. Morris.

Q (By Mr. Morris) Mr. Statton, this well in the extreme southwest of Section 7, the Yates Lease, where is that well projected?

A It is projected to the Queen Grayburg Formation. They were drilling 1400 feet the other day, which is already through --

Q Do you foresee that the disposal of salt water, as you propose, would in any way adversely affect production in that well?

A In the drilling well?

Q Yes.

A I would say that it is highly improbable that injection of water in our well would adversely affect production in that well or this Seven Rivers Well to the south of it.

Q And what was the anticipated rate of of injection that would only give you a 3-acre fillup in 10 years?

A That was an average of 10 barrels per day over a 10-year period.

Q You don't foresee using this well for injection of additional quantities of water?

A Not outside what I mentioned, that if we do drill this No. 5 Well, it may be more than that.

MR. PORTER: Do you think the maximum would be 40 barrels?

A That is the maximum.

MR. UTZ: Mr. Morris.

Q (By Mr. Morris) Mr. Statton, this well in the extreme southwest of Section 7, the Yates Lease, where is that well projected?

A It is projected to the Queen Grayburg Formation. They were drilling 1400 feet the other day, which is already through --

Q Do you foresee that the disposal of salt water, as you propose, would in any way adversely affect production in that well?

A In the drilling well?

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A That was an average of 10 barrels per day over a 10-year period.

Q You don't foresee using this well for injection of additional quantities of water?

A Not outside what I mentioned, that if we do drill this No. 5 Well, it may be more than that.

MR. PORTER: Do you think the maximum would be 40 barrels?

A That is the maximum.

Q (By Mr. Morris) Mr. Statton, how far is the nearest well to this?

A It is 990 feet over a 35-acre circle.

Q And your 10-barrel-day calculation is based on twice your present producing rate?

A Yes.

MR. PORTER: I have one question.

Q (By Mr. Porter) Mr. Statton, did you testify that this injection interval included part of the Yates Formation?

A Yes, sir.

Q Is the Yates known to be productive in this area?

A Not in this immediate area. I think that the Seven Rivers Zone has been called Yates before this. On down some 1,285 feet is their perforation in the Seven Rivers.

Q Do you think that is an error in nomenclature, then?

A Yes, sir.

Q It has been called the Yates, but it is Seven Rivers?

A In any event, there are impermeable stringers between the top of our cement and the producing zone.

MR. PORTER: I see. That is all I have.

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

(Whereupon, the hearing of Case No. 2369 was concluded.)

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, Michael P. Hall, Court Reporter, in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in machine shorthand and reduced to typewritten transcript under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

Michael P. Hall
NOTARY PUBLIC

My Commission Expires:

June 20, 1965

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2369, heard by me on Aug 30, 1961.

....., Examiner
New Mexico Oil Conservation Commission

Case 2369
Heard 8-30-61
Rec. 8-31-61

1. Grant Sun-Ray permission to dispose of Salt water down the 8 5/8 X 5 1/2 casing-casing annulus into the Salt section interval at 386'-884'.
2. The well is their N. Mex St. "O" # 3, 330/S, 2310/E lines of section 12- 19S-26E
3. The Salt water shall be inhibited in a manner that will prevent corrosion to either string of casing
4. This is a rather unorthodox ~~method~~ of mechanical means of SWD therefore this should be granted only because of the very small amounts of SW involved so as to not set any precedence.

[signature]

Received 7-27-61 Order 2369

Revised 9 16 58

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

PR-3

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

Operator Sunray Mid-Continent Oil Company Address P. O. Box 128 Hobbs, New Mexico

Lease N. M. State "O" Well No. 3 County Eddy

Unit O Section 12 Township 19S Range 28E

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

East Millman Queen-Grayburg

Name of Injection Formation(s): Rustler Anhydrite and Top of Yates

Top of injection zone: 386 Bottom of injection zone: 884'

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"	386'	300	Surface
Intermediate	None			
Long String	5 1/2"	2231'	275	884'

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

Size tubing: - Setting depth: - Packer set at: -

Name and Model No. of packer: -

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

Proposed interval(s) of injection: 386' - 884'

Well was originally drilled for what purpose? Oil well

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:

This well is presently producing from perforations 1763' to 2178'

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: 1763 *

Give depth of bottom of deepest fresh water zone in area: No fresh water in this well **

Expected volume of salt water to be injected daily (barrels): 6 B WPD

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

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

** This well was drilled with cable tools and no fresh water entered the hole while drilling. Did obtain 1 1/2 bbls/hr salt water at top of salt @ 365'. There is a fresh water windmill 1000' south which produces from above salt section.

* 1258' is the top of the next lower producing zone in the John A. Yates Campbell Gwalthey #1 approx 2700' ESE of the subject well. There was no show in our well above 1763' (drld w/cable tool)

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? No

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

Ralph Lowe P. O. Box 832 Midland, Texas

John A. Yates Carper Bldg., Artesia, New Mexico

Continent Oil Company Rowley Bldg., Artesia, New Mexico

Nix and Curtis 302 Booker Bldg. Artesia, New Mexico

Gulf Oil Corporation P. O. Box 2167 Hobbs, New Mexico

Name and address of surface owner State of 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 MID-CONTINENT OIL COMPANY

By: 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 26th day of July, 19 61.

Dorothy 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.

ir/

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

September 7, 1961

Re: Case No. 2364, 2365, 2366 & 2369
Order No. R-2054, R-2055, R-2056 & R-2057
Applicant:
TEXACO AND SUNRAY

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

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/

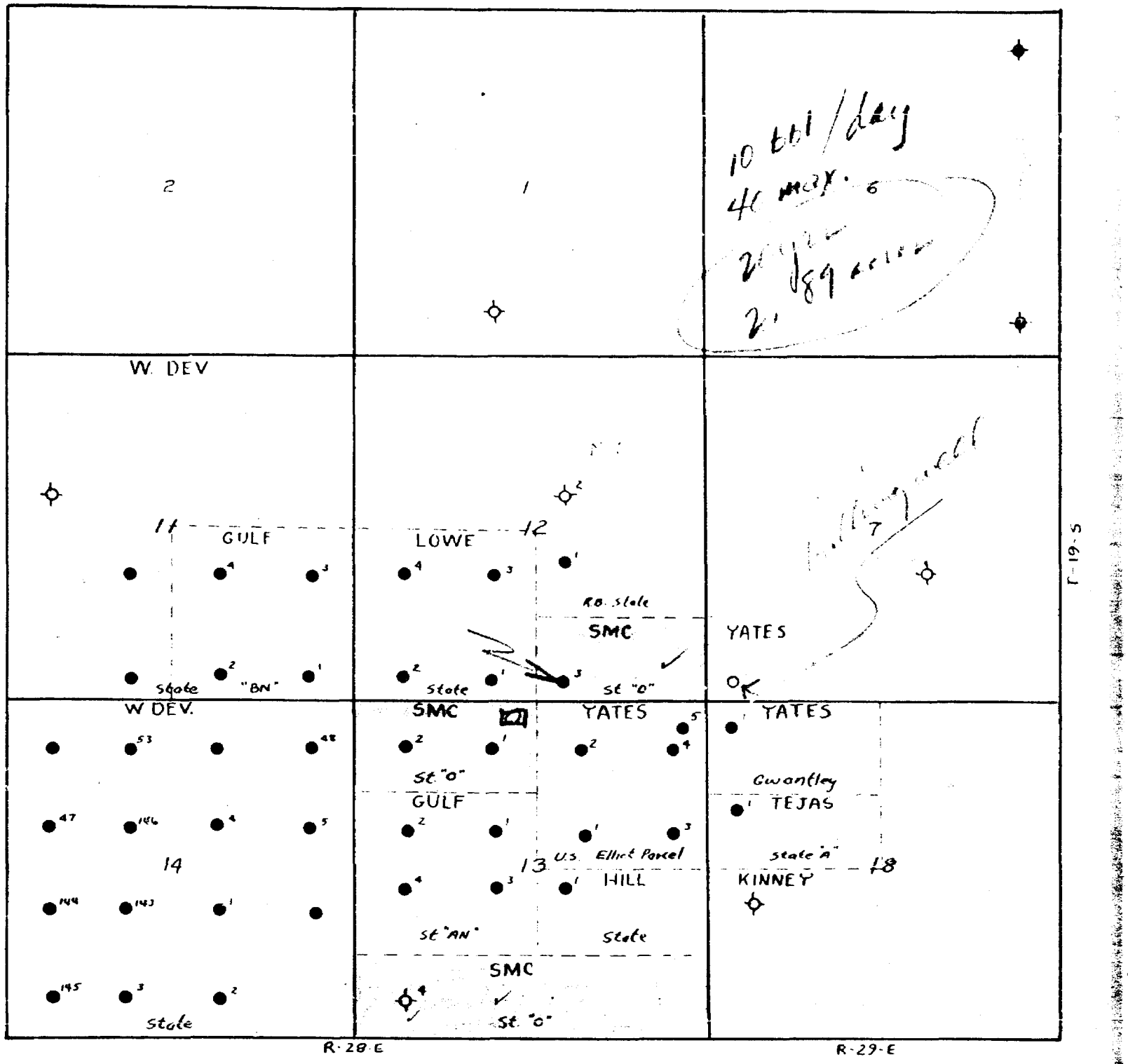
Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC x (R-2057)

Aztec OCC _____

OTHER _____

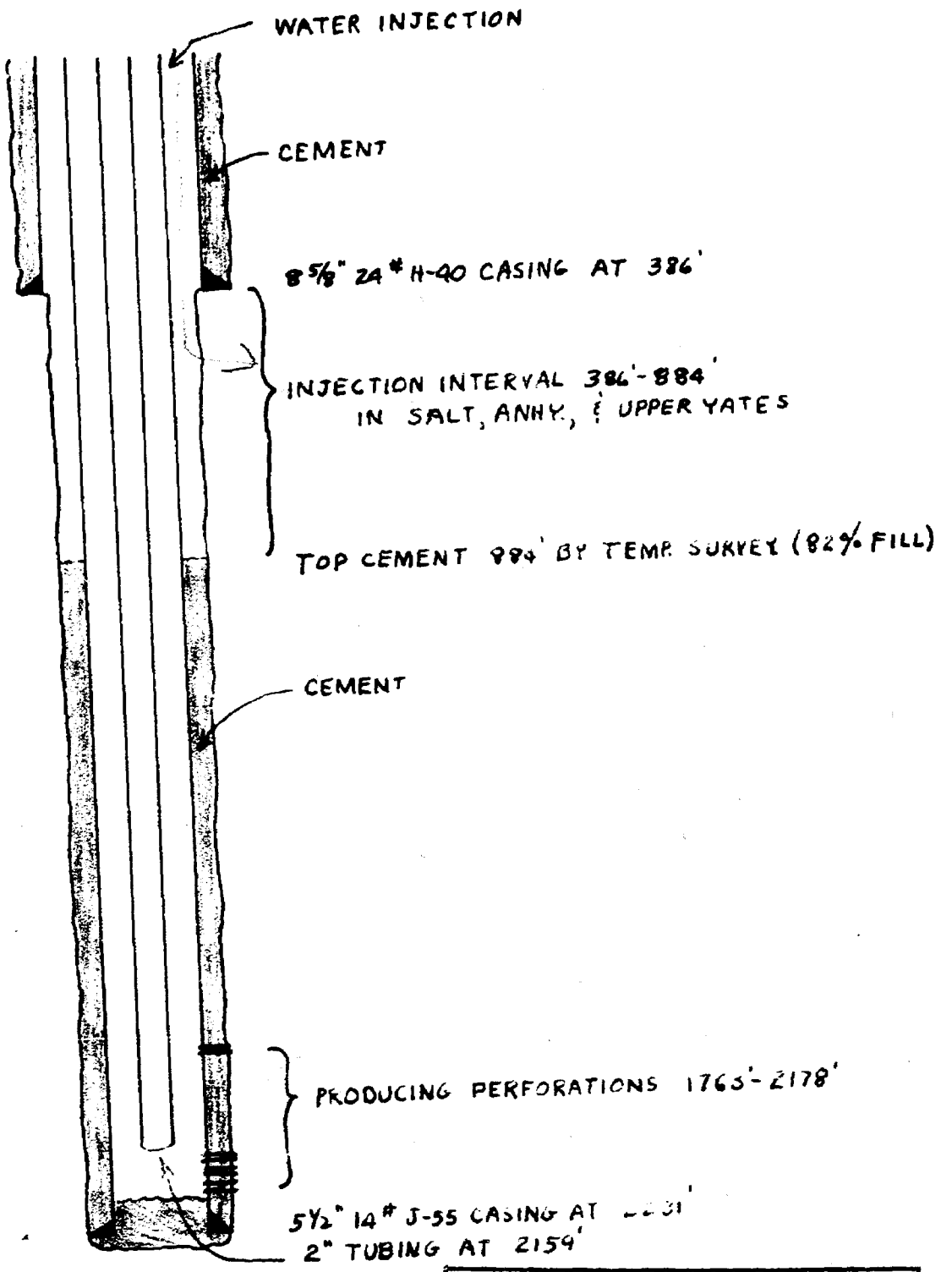


WELL AND LEASE PLAT
MILLMAN EAST QUEEN GRAYBURG POOL
EDDY COUNTY, NEW MEXICO

Scale: 1" = 2000'

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 1
CASE NO. 2369

SCHEMATIC DRAWING - SMC N.M. STATE "O" NO. 3
SALT WATER DISPOSAL WELL
MILLMAN EAST QUEEN GRAYBURG POOL
EDDY COUNTY, NEW MEXICO



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 2
CASE NO. 2369