

CASE 3942: Application of CITIES
SERVICE OIL CO. FOR SALT WATER
DISPOSAL, LEA COUNTY, N. MEX.

Case Number

3942

Application

Transcripts.

Small 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. 3942
Order No. R-3570

APPLICATION OF CITIES SERVICE OIL
COMPANY FOR SALT WATER DISPOSAL,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 12, 1968, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 19th day of November, 1968, 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, Cities Service Oil Company, is the owner and operator of the Closson "B" Well No. 18, located in Unit M of Section 19, Township 22 South, Range 36 East, NMPM, Jalmat Pool, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Yates and Seven Rivers formations, with injection into the perforated interval from approximately 3790 feet to 3834 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set at approximately 3650 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should

-2-

CASE No. 3942

Order No. R-3570

be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

(5) That approval of the subject application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights.

IT IS THEREFORE ORDERED:

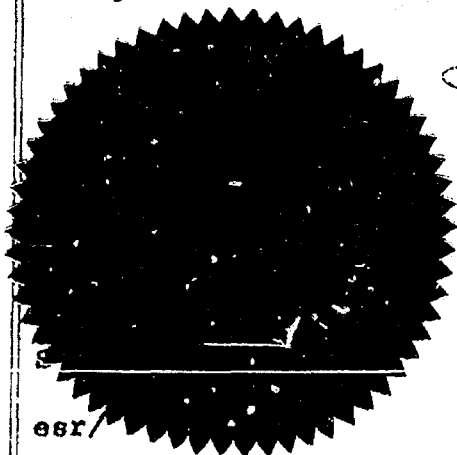
(1) That the applicant, Cities Service Oil Company, is hereby authorized to utilize its Closson "B" Well No. 18, located in Unit M of Section 19, Township 22 South, Range 36 East, NMPM, Jalmat Pool, Lea County, New Mexico, to dispose of produced salt water into the Yates and Seven Rivers formations, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 3650 feet, with injectic into the perforated interval from approximately 3790 feet to 3834 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 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

David E. Cargo
DAVID E. CARGO, Chairman

Guyton B. Hays
GUYTON B. HAYS, Member

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

esr/

dearnley-meier reporting service, inc.

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

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BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

November 12, 1968

EXAMINER HEARING

IN THE MATTER OF:)
)
)

Application of Cities Ser-)
vice Oil Company for salt)
water disposal, Lea)
County, New Mexico.)

Case No. 3942

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We'll call Case No. 3942.

MR. HATCH: Case 3942, application of Cities Service Oil Company for salt water disposal, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, Jason Kellahin of Kellahin and Fox, Santa Fe, appearing for the applicant. I have one witness I'd like to have sworn.

(Witness sworn.)

(Whereupon, Applicant's Exhibits Numbers 1, 2, 3, and 4 were marked for identification.)

E. F. MOTTER

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

DIPECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please?

A E. F. Motter, M-o-t-t-e-r.

Q By whom are you employed and in what position, Mr. Motter?

A Cities Service Oil Company, Region Engineer of the Western Region.

Q Have you ever testified before the Oil Conservation Commission and made your qualifications as a petroleum engineer a matter of record?

A Yes, numerous times.

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

MR. NUTTER: They are. Please proceed.

Q Mr. Motter, are you familiar with the application of Cities Service Oil Company in Case 3942?

A Yes, I am.

Q Briefly, what is proposed by Cities Service in this case?

A Cities Service proposes to convert a temporarily abandoned well completed in the lower portion of the Yates Formation to a salt water disposal on our Closson "B" Lease in the Jalmat Pool.

Q Now, referring to what has been marked as Exhibit Number 1, would you identify that exhibit, please?

A Yes. This is the location plat. It indicates that this Cities Service Closson "B" Lease is comprised of the west half of Section 18, all of 19, the west half of 20, all of 30, Range 36 East, 22 South, Lea County.

The No. 18 well is located in the southwest southwest of Section 19, is a proposed injection well.

I might comment while we're looking at this, that immediately to the west of this lease of Cities Service is the

Jalmat-Yates Pool Unit operated by Cone. Cities has an interest in this unit and we have petitioned Cone to take some of the produced water from the Closson "B" Lease into their unit. It comprises about 55 barrels per day at the present time. They have verbally agreed to do so, but as of Friday, we had not received contracts on this and in the interest of conservation and some of the pending rules will be in effect, salt water rules will be in effect January 1st, we have taken this method to insure ourselves of a salt water disposal system in the area and to handle the production from the Closson "B" Lease.

We will go ahead and install a gathering system and if we do not have a contract with the Cone Unit by January 1st, we will proceed to inject water into the Closson "B" 18.

Q What is the present status of the Closson "B" 18?

A This well was temporarily abandoned. It was drilled in 1960. An attempt was made to produce from the Yates. This gave up, primarily, water. We then perforated the zones which are currently open from 3790 to 3812, 3818 to -34 in this well. We fracked them, squeezed them, refracked them, and we were unsuccessful of making a commercial well and the well was abandoned in August of 1960 and it's been retained in this temporary abandoned status primarily in hopes that we could place all of these oil wells along the furthestmost west line of

this lease into this Cone-Jalmat Unit, but we have run into some difficulties. This is a federal lease, and the other unit is basically State and fee lands.

Q Now, referring to what has been marked as Exhibit Number 2, would you discuss that exhibit?

A Yes. This is a schematic of the proposed injection well showing that we have eight and five-eighths casing set at 1622 with cement circulated to surface. Although there is very little surface water in the area, we think this will sufficiently protect any surface water that may be found.

The five and a half casing was set at 3909 with the cement brought back up to 1955. I told you earlier where the perforations were at the present. We propose to run a string of two-inch plastic-coated tubing with a packer for injection purposes. The annulus will be filled with treated water.

Q Will you have a pressure gauge at the surface?

A Yes, we normally install one to see if there's any leaks.

Q Now, what zone will you be disposing of water into?

A Well, if we will look at Exhibit 3, this is a portion of the electric log showing down here the perforations which I previously identified and the interval of around 3800 and this

identifies the top of the Yates at 3583.

This is in the lower portion of the Yates, and I might point out that this interval of the Yates is not being flooded to the west, although the Yates Sand is. The Cone unit has identified some six porosity zones in the Yates in this area which they are now flooding and, primarily, they are flooding zones three and four. I might also tell the Examiner that this is in the area where we dip off quite rapidly in the Delaware Basin, so subsurface elevations are a little bit meaningless here as far as trying to show correlation across the two.

MR. NUTTER: This is over on the extreme west side of this plat, is that correct?

THE WITNESS: Yes, the very extreme west side. In fact, the last production in this Yates Formation is found on this unit. This interval which we are going to inject water is actually, or would be identified by the unit as the porosity Zone 5, which they say is nonproductive in their unit, and as I've indicated, we've found it to be so in our well.

Q You agree with them?

A Yes. We're some hundred fifty, two hundred feet below their injection interval in the well immediately to the west.

MR. NUTTER: What would that zone be on your log here, Mr. Motter?

THE WITNESS: Gosh. On our log, the interval that they are currently injecting into would be this big porosity interval from about 3628 down to about 3670. That is their number three interval. They call number four, the one you'd find there starting with about 3692 and three and down to about 3730.

MR. NUTTER: They're not flooding ~~that~~, though?

THE WITNESS: They're not injecting water into the well immediately west of us. I think they may be in some other portions of the unit. I do have a waiver from this group that is a part of our exhibit.

Basically, I think that's the story of this well. I might comment that the reason that we didn't try to make a well further up structure is that we would have gotten gas, and as you note on the Exhibit 1, Wells 8 and 9 already have all the acreage dedicated, so there was no need to spend any more money trying to develop this area.

MR. NUTTER: I presume the southwest quarter of 19 is dedicated to No. 8?

THE WITNESS: Yes, that's correct. I believe it's the whole west half of 19 that is dedicated, 320-acre unit there.

Q (By Mr. Kellahin) Actually, is this lower zone in which you propose to inject water productive, to your knowledge, within the vicinity of this well?

A No. As we get on up further north in the vicinity of our Wells 16 and 17 and up in 18, we're producing from this zone. This is a little bit of a twilight zone. We call it Seven Rivers, and I think some of them would rather say it's part of the lower part of the Yates, but we do have some oil coming out of it.

Q Now, referring to what has been marked as Exhibit Number 4, would you identify that exhibit?

A Yes. This is a waiver from Cone, operator of the Cone-Jalmat Unit to the lease indicating that they have no objection to this injection.

Q Were Exhibits 1, 2, and 3 prepared by you or under your supervision?

A Yes, they were.

Q And Exhibit 4 is a copy of a waiver received by you from the Cone-Jalmat operator?

A Yes, that's correct. I might add that we did not receive the original from Mr. Cone, and I thought he may have sent it to the Commission.

MR. HATCH: The Commission does have the original

waiver.

THE WITNESS: All right.

MR. KELLAHIN: At this time, I offer in evidence Exhibits 1 through 4, inclusive.

MR. NUTTER: Four is the letter?

MR. KELLAHIN: Yes, sir.

MR. NUTTER: Applicant's Exhibits 1 through 4 will be admitted in evidence.

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

MR. KELLAHIN: That's all I have on direct examination.

CROSS EXAMINATION

BY MR. NUTTER:

Q Where is the tank battery for this acreage, Mr. Motter?

A We have a tank battery located at approximately Well 15 which is in the southwest of the northwest of 19. We also have a battery in Section 20, which is the northwest of the northwest of Section 20, and we have a battery then down to the south here around Well 10 which would be the northwest to the southwest of 30, although those three wells to the south are not at present producing any water, so we don't plan to tie them

in right now.

Q So you'll have a gathering system from the battery near Well No. 15 and over here near Well No. 3?

A Yes, sir. Actually, what we're proposing to do at the present time is discontinue the battery in Section 20 and just lay flow lines over to the other battery and do away with one tank.

Q So you can fill this gathering system and run the water down here to 18, but in the event you get this contract for the waterflood to the west, you'll just run the water on out there?

A Right. They have a collection point, as you will note there, on the far west side in Section 25. It's in the northeast quarter there of Section 25, so we'd have to deliver the water.

Q I see.

A We would prefer to do this, rather than have to operate it on the system, but this is a precautionary measure.

MR. NUTTER: Are there any other questions of the witness? He may be excused. Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: That's all, Mr. Nutter.

MR. NUTTER: Does anyone have anything they wish to offer in Case No. 3942? We'll take the case under advisement.

I N D E X

<u>WITNESS</u>	<u>PAGE</u>
E. F. MOTTER	
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Cross Examination by Mr. Nutter	9

<u>EXHIBITS</u>	<u>MARKED</u>	<u>OFFERED AND ADMITTED</u>
Applicant's Exhibits Numbers 1, 2, 3, 4	2	9

STATE OF NEW MEXICO)
) ss
 COUNTY OF BERNALILLO)

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

Charlotte Macias
 COURT REPORTER

I do hereby certify that the foregoing is a correct record of the proceedings in Case No. 3942
 held by me on 4/12, 1968.
[Signature]
 New Mexico Oil Conservation Commission

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission



LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

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

P. O. BOX 2088
SANTA FE

November 19, 1968

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
Post Office Box 1769
Santa Fe, New Mexico

Re: Case No. 3942
Order No. 3944
Applicant: R-3570 & R-3571
Cities Service & Sun Oil Co.

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

ALP/ir

Carbon copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

Other State Engineer Office

(Case 3939 continued)

Township 31 North, Range 12 West

Richardson Well No. 7 - 1,584 feet from the East line
and 1,621 feet from the South line
of Section 15

East Well No. 10 1,770 feet from the North line
and 790 feet from the West line of
Section 26

East Well No. 8 790 feet from the South and East
lines of Section 26.

CASE 3940: Application of Shell Oil Company for an amendment to Order No. R-2808, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-2808 to permit the dedication of a non-standard proration unit authorized therein to its Livingston Wells Nos. 7 and 2 located in Units V and W, respectively, of Section 3, Township 21 South, Range 37 East, Tubb Gas Pool, Lea County, New Mexico. Applicant further seeks authority to produce the allowable assigned to said unit from either of the aforesaid wells in any proportion.

CASE 3941: Application of Agua, Inc., for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, proposes to dispose of produced salt water into the San Andres formation in the open-hole interval between the casing shoe set at 2050 feet and a cement plug at 5400 feet after cleaning out and acidizing the well between 2050 feet and 3600 feet in its Empire-Abo SWD Well No. 01, formerly the Humble Federal Empire-Abo Well No. 3, located in Unit Q of Section 1, Township 18 South, Range 27 East, Empire-Abo Field, Eddy County, New Mexico.

CASE 3942: Application of Cities Service Oil Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Yates and Seven Rivers formations in the perforated interval from approximately 3790 feet to 3834 feet in its Closson "B" Well No. 18 located in Unit M of Section 19, Township 22 South, Range 36 East, Jalmat Pool, Lea County, New Mexico.

R-35-E

R-36-E

JALMAT "YATES POOL" UNIT

LEGEND

- Oil Well
- * Gas Well
- ⊙ Injection Well
- SWD Salt Water Disposal

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

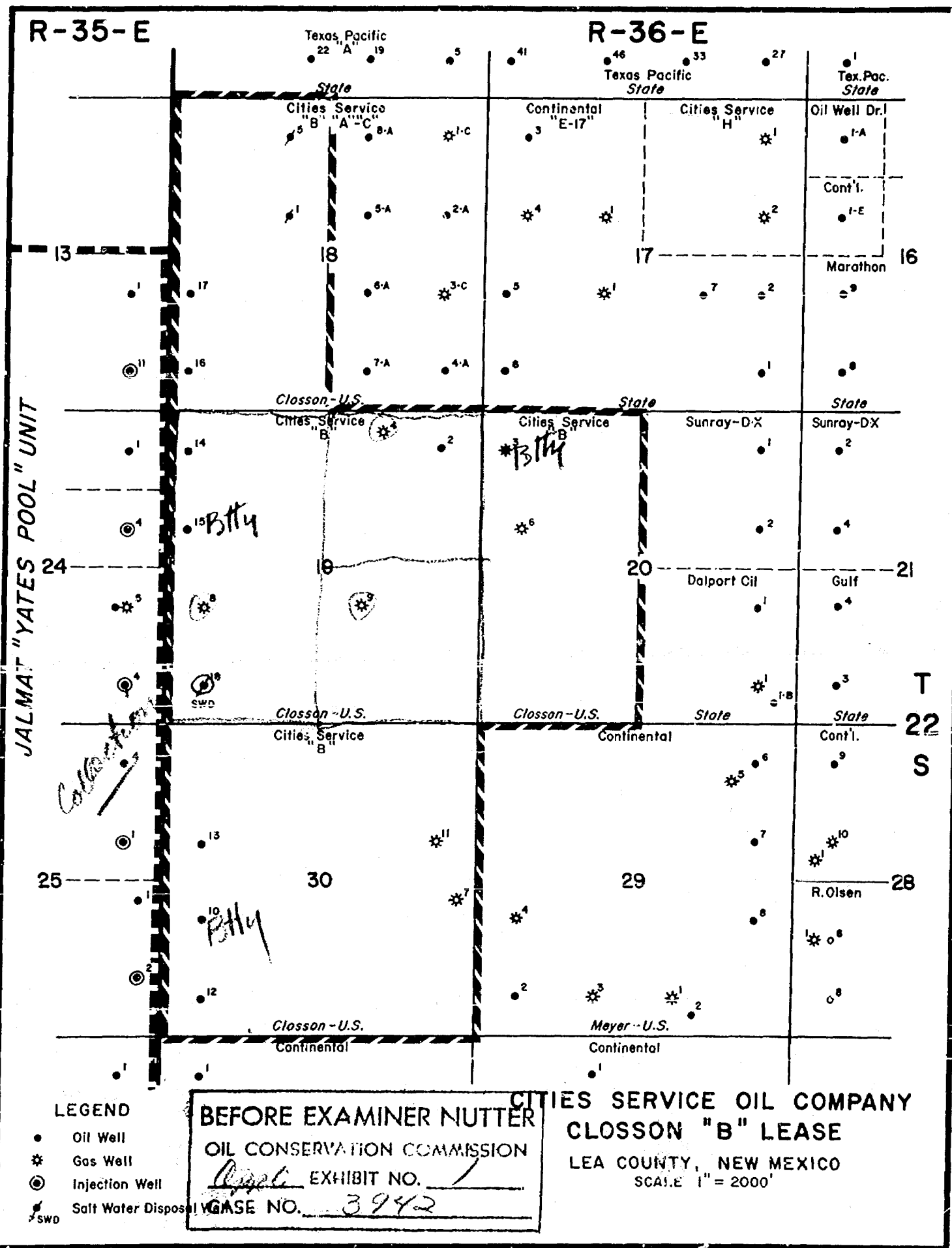
EXHIBIT NO. 1CASE NO. 3942

CITIES SERVICE OIL COMPANY

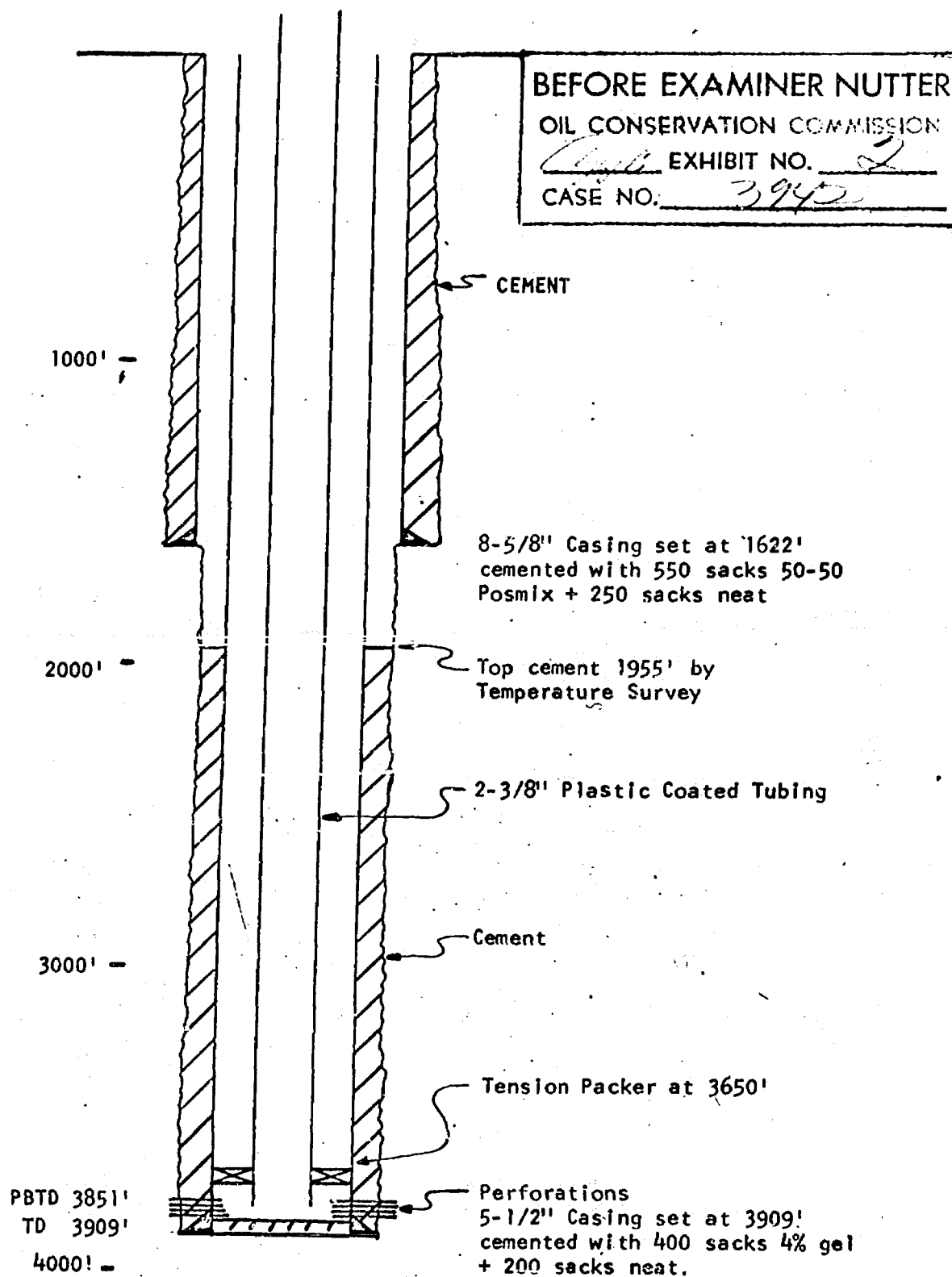
CLOSSON "B" LEASE

LEA COUNTY, NEW MEXICO

SCALE 1" = 2000'



CLOSSON "B" #18
CITIES SERVICE OIL COMPANY
LEA COUNTY, NEW MEXICO



EX 2
3942

W A I V E R

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

Gentlemen:

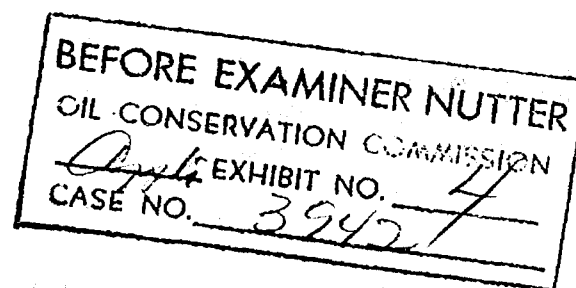
This is to advise that J. R. Cone, Operator of the Cone Jalmat Yates Unit, has no objection to Cities Service Oil Company's application to inject produced salt water into their Closson-B No. 18 well, located 660' from the South Line and 660' from the West Line of Section 19, T-22-S, Range 36-E, Lea County, New Mexico. We do hereby waive any protest in this matter.

Very truly yours,

Cone Jalmat Yates Sand Unit
J. R. Cone, Operator

By *J. R. Cone*

Date 11/5/68



W A I V E R

MAIN OFFICE

NOV 7 AM 8 10 '68

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

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Cone Jalmat Yates Sand Unit
J. R. Cone, Operator

By 

Date

11/5/68

BEFORE THE
OIL CONSERVATION COMMISSION OF NEW MEXICO

APPLICATION OF CITIES SERVICE OIL
COMPANY FOR APPROVAL OF A SALT
WATER DISPOSAL SYSTEM, LEA COUNTY,
NEW MEXICO

Case 3942

A P P L I C A T I O N

Comes now CITIES SERVICE OIL COMPANY and applies to the Oil Conservation Commission of New Mexico for approval of a salt water disposal system in the Jalmat Pool, Lea County, New Mexico, and in support thereof would show the Commission:

1. Applicant proposes to convert its Closson "B" Well No. 18 located 660 feet from the South line, and 660 feet from the West line of Section 19, Township 22 South, Range 36 East, N.M.P.M., Lea County, New Mexico, to utilize said well for the disposal of produced water.

2. The subject well is completed in the Jalmat Pool, with perforations from 3818 to 3834 feet, and from 3790 to 3812 feet, with $5\frac{1}{2}$ -inch casing set at 3909 feet.

3. Injection of water will be through tubing, and under a packer.

4. It is anticipated that approximately 60 barrels of water per day will be disposed of in the well, source of the water being from producing wells in the area.

5. The Jalmat zone into which it is proposed to inject water is productive in the vicinity of the proposed disposal well, necessitating a hearing by the Commission for approval of this application.

WHEREFORE, applicant prays that this application be set for hearing before the Commission or the Commission's duly appointed examiner, and that after notice and hearing as

DOCKET MAILED

Date 11-1-68

required by law, the Commission enter its order approving
the applicant's proposed salt water disposal system.

Respectfully submitted,

CITIES SERVICE OIL COMPANY

BY: Jason W. Kellahin
KELLAHIN & FOX
POST OFFICE BOX 1769
SANTA FE, NEW MEXICO

ATTORNEYS FOR APPLICANT

DRAFT

GMH/esr

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:

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Order No. R- 3570

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COMPANY FOR SALT WATER DISPOSAL,
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36 East, NMPM, Jalmat Pool, Lea
County, New Mexico.

(3) That the applicant proposes to utilize said well to
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formations, with injection into the perforated interval
from approximately 3790 feet to 3834 feet.

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2 3/8-inch plastic-lined tubing installed in a packer set at

approximately 3650 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus ~~or the annulus left open~~ at the surface in order to determine leakage in the casing, tubing, or packer.

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IT IS THEREFORE ORDERED:

(1) That the applicant, Cities Service Oil Company, is hereby authorized to utilize its Closson "B" Well No. 18, located in Unit M of Section 19, Township 22 South, Range 36 East, NMPM, Umat Pool, Lea County, New Mexico, to dispose of produced salt water into the Rivers Yates and Seven / formations injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 3650 feet, with injection into the perforated interval from approximately 3790 feet to 3834 feet;

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