

CASE 4082: Application of SAM D.
ARES FOR SALT WATER DISPOSAL,
LEA COUNTY, NEW MEXICO.

- case number

4082

Application
Transcripts.

Small Exhibits

ETC.

dearnley-meier

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

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



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

March 26, 1969

EXAMINER HEARING

IN THE MATTER OF:)

Application of Sam D.)
Ares for salt water)
disposal, Lea County,)
New Mexico.)

Case No. 4082

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case No. 4082.

MR. HATCH: Case 4082, application of Sam D. Ares
for salt water disposal, Lea County, New Mexico.

MR. McDERMOTT: W. H. McDermott, appearing for
Sam D. Ares in Case No. 4082, and I have one witness.

(Whereupon, Applicant's Exhibits
Numbers 1 through 4, inclusive,
were marked for identification.)

(Witness sworn.)

JAMES F. O'BRIANT

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

DIRECT EXAMINATION

BY MR. McDERMOTT:

Q Would you state your name, please?

A James F. O'Briant.

Q By whom are you employed?

A Sam D. Ares.

Q What is your present occupation?

A I am a petroleum engineering consultant from
Midland, Texas.

Q Have you appeared before the Commission before?

A Yes, sir.

Q Are you familiar with the application of Sam D. Ares

in Case No. 4082?

A Yes, sir.

Q Would you explain to the Commission its purpose?

A Mr. Ares is proposing to convert his Arnott-Ramsey No. 3 Well from producing status to water injection status.

Q And by Exhibit Number 1, does this outline the property within a two-mile radius of the proposed well?

A Yes, sir.

Q What is the present status of the well to be used?

A It is presently producing.

Q What is the amount of oil that it is producing?

A It is producing 99-plus per cent water at the present time, very little oil.

Q Is Mr. Ares planning to shut this well in at the present time?

A Yes.

Q In what zone do you plan to inject the disposal of water?

A Water will be injected into the Seven Rivers section.

Q Do you have a log of this well to be used as a disposal well?

A Yes, sir, it is Exhibit Number 2.

Q Would you explain this log to the Commission at

this time?

A It is a gamma ray neutron log, showing the casing point, and the open-hole portion of the well into which water will be injected.

Q How many wells are going to be injecting water into this well?

A At present, there will be three wells supplying water.

Q How much water is produced at the present time from these wells?

A At present, about 200 barrels a day.

Q Will this formation be sufficient to handle this amount of water, or a greater amount of water?

A Yes, it will be sufficient to handle 200 barrels a day, and should handle quite a bit in excess of that.

Q Do you have a diagrammatic sketch of the installation to be used on this well?

A Yes, sir, that is Exhibit Number 3.

Q Would you explain this to the Commission?

A This shows the proposed completion of the water injection well. It also shows the depth to which surface, intermediate, and the long string were set, and the amount of cement used, and the open-hole section from 3,358 to 3,495,

into which water will be injected.

Q Do you have any water analysis pertaining to the water from the wells to be injected into this disposal well?

A Yes, sir, pages one and two of Exhibit No. 4 are analyses of samples of water taken from the two places involved. The other four pages of Exhibit No. 4 show analyses from other wells in the area.

Q What do pages one and two in Exhibit 4, pages one and two, what do they show in regard to the water, as to whether or not it is potable or unpotable water?

A It is unpotable water, slightly saline, with a strong trace of hydrogen sulfide.

Q What size pipe is proposed to be used on this well?

A The tubing will be -- two and seven-eighths inch tubing will be set, two and a half inch ID.

Q And what kind of a method of injection is to be used on this?

A Gravity.

Q Will any fluid be used in the annulus at all?

A Yes, the annulus will be filled with a non-corrosive fluid.

Q Is the tubing to be plastic-lined?

A Yes, sir.

Q Were these exhibits prepared by you or under your direction?

A Yes.

Q Will the correlative rights of any of the adjoining property owners be affected by this water injection?

A No, sir.

MR. McDERMOTT: I have no further questions at this time. I will offer Exhibits 1 through 4 to be admitted.

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

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

CROSS EXAMINATION

BY MR. UTZ:

Q Do you know what is the top of the cement on the nine and five-eighths?

A No, I do not.

Q Do you have any opinion?

A They used sufficient cement to bring it back up to the thirteen-inch, but I do not know. Mr. Ares purchased these wells from Gulf, and these records are quite poor.

Q The same question on the seven-inch.

A No, sir, I do not know the top of the cement.

Q Do you have any opinion how much cement there is above your packer?

A Well, let's see, the seven-inch, the base of it is 3,358. The packer will be set at approximately 3,330, which is only 20 feet from the base, so we should have, I guess, 1,000 feet or better above it. It should be a good cement job around the shoe, and some distance above.

Q Now, your tubing was two and a half-inch, is that right?

A It is two and a half ID; two and seven-eighths OD.

Q Do you intend to put a gauge at the surface, or leave it open?

A Either way, sir, whatever the Commission would recommend on that.

MR. UTZ: Any other questions of the witness?

The entire section here that you will dispose of into is Seven Rivers?

THE WITNESS: Yes, sir.

MR. UTZ: The witness may be excused. Any statements in this case?

I N D E X

| <u>WITNESS</u> | | <u>PAGE</u> |
|---|---------------|-----------------------------|
| JAMES F. O'BRIANT | | |
| Direct Examination by Mr. McDermott | | 2 |
| Cross Examination by Mr. Utz | | 6 |
| | | |
| <u>EXHIBITS</u> | <u>MARKED</u> | <u>ADMITTED IN EVIDENCE</u> |
| Applicant's Exhibits Numbers 1 through 4 | 2 | 6 |

STATE OF NEW MEXICO)
)
 COUNTY OF BERNALILLO) ss.

I, SAMUEL MORTELETTE, Court Reporter 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.


 COURT REPORTER

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4082, heard by me on March 26, 1967.


 New Mexico Oil Conservation Commission



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87501

GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMijo
MEMBER

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

April 1, 1969

Mr. W. H. McDermott
Attorney at Law
Lincoln Building
Post Office Box 1143
Santa Fe, New Mexico

Re: Case No. 4082
Order No. R-3717
Applicant:
Sam D. Ares

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.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

Other State Engineer Office

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. 4082
Order No. R-3717

APPLICATION OF SAM D. ARES
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 March 26, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 1st day of April, 1969, 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, Sam D. Ares, is the owner and opera-
tor of the Arnott Ramsey "A" Well No. 3, located 660 feet from
the North line and 660 feet from the West line of Section 2, Town-
ship 25 South, Range 36 East, NMPM, Jalmat Yates-Seven Rivers
Pool, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the Seven Rivers formation,
with injection into the open-hole interval from approximately
3358 feet to 3495 feet.

(4) That the injection should be accomplished through
2 7/8-inch plastic-lined tubing installed in a packer set at
approximately 3330 feet; that the casing-tubing annulus should
be filled with an inert fluid; and that a pressure gauge should

-2-

CASE No. 4082

Order No. R-3717

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:

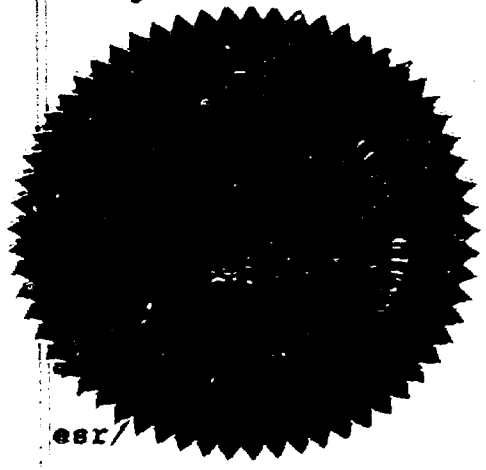
(1) That the applicant, Sam D. Ares, is hereby authorized to utilize his Arnott Ramsey "A" Well No. 3, located 660 feet from the North line and 660 feet from the West line of Section 2, Township 25 South, Range 36 East, NMPM, Jalmat Yates-Seven Rivers Pool, Lea County, New Mexico, to dispose of produced salt water into the Seven Rivers formation, injection to be accomplished through 2 7/8-inch tubing installed in a packer set at approximately 3330 feet, with injection into the open-hole interval from approximately 3358 feet to 3495 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 his 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 F. Cargo
DAVID F. CARGO, Chairman

Alex J. Armijo
ALEX J. ARMILLO, Member

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

esr/

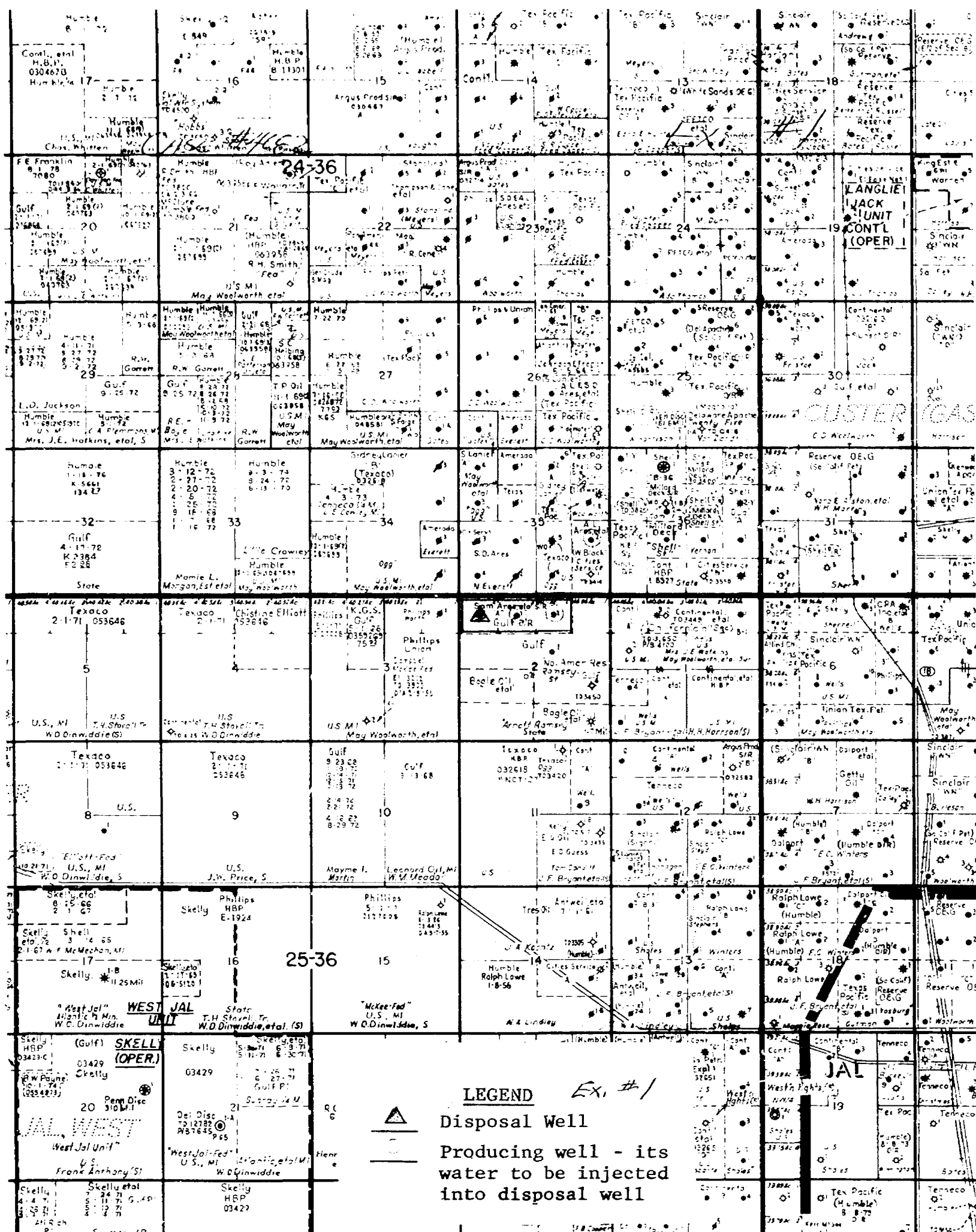
Case 4082

Logd 3-26-69

Rec. 3-26-69

Grant ~~Sam~~ D. Arer
permission to convert his
Ernst Ramsey 'A' #3. D-
2-255-365, to an SWD
well by injecting thru 2 1/2
plaster coated tubing under
packer set at approx 3330'
+ into open hole of the seven
Rivers from 3358 to 3495.

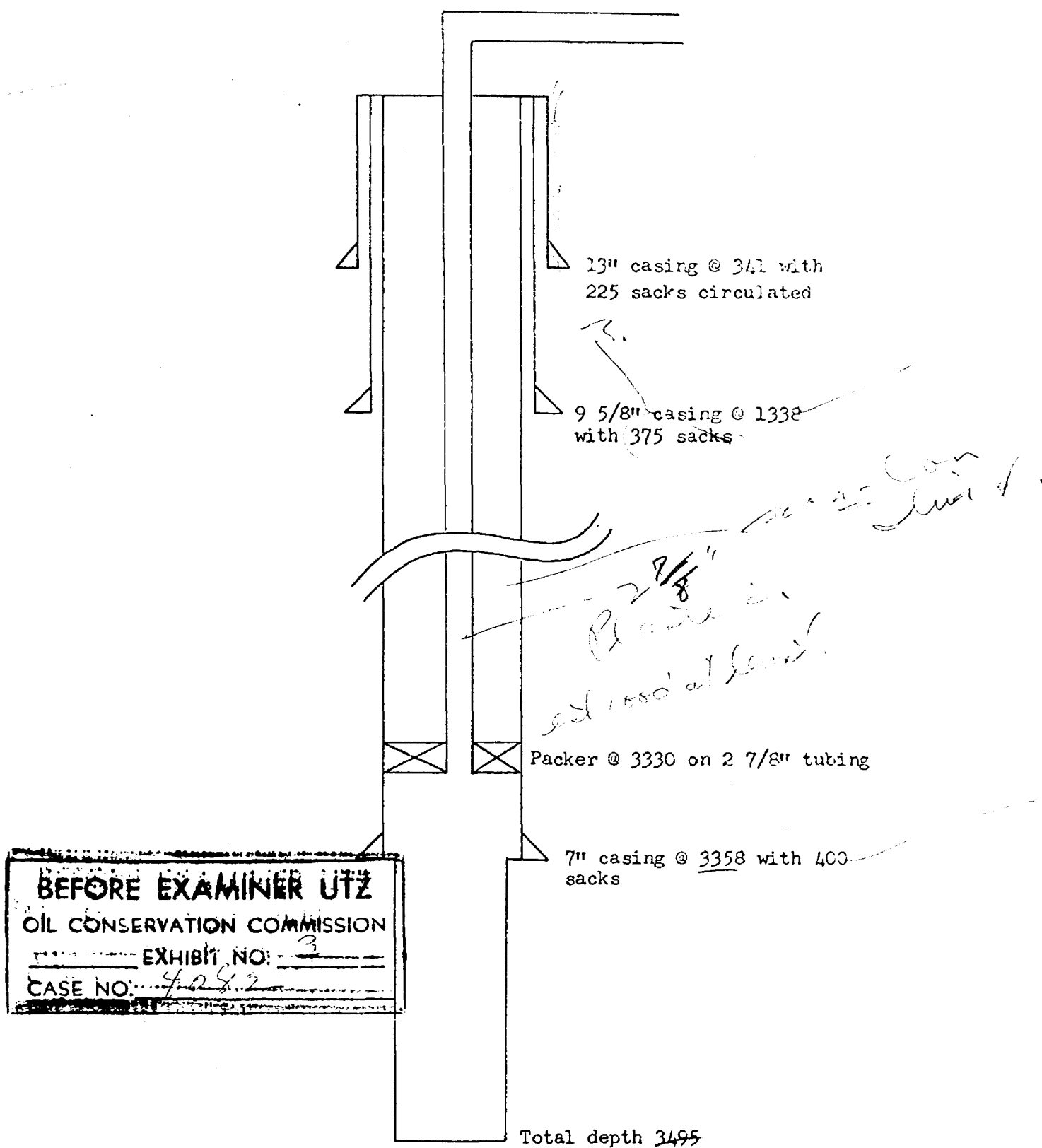
Ernst Ramsey
Annulus shall be filled with
inert fluid / a pressure gauge
at surface.
Ernst Ramsey



Ex. #3

DIAGRAMMATIC SKETCH
of Proposed Installation of
Water Injection Equipment

CASE #4082



Proposed for: Sam D. Ares
Arnott Ramsay "A" No. 3
660' FHL & 660' FWL
Sec. 2, T25S, R36E
Jalmat Pool
Lea County, New Mexico

SAMPLE NO. _____

THE WESTERN COMPANY
Service Laboratory

EX. #4
(6 PAGES)

WATER ANALYSIS

| | | | |
|-----------|----------------------|-------------------|----------------|
| Operator | Sam D. Ares | Date Sampled | 11-16-68 |
| Well | Arnott - Ramsay | Date Received | 11-17-68 |
| Field | Jalmat | Submitted by | Hobbs District |
| Formation | Yates - Seven Rivers | Worked by | George Koehl |
| Depth | | Other Description | |
| County | Lea, New Mexico | | |

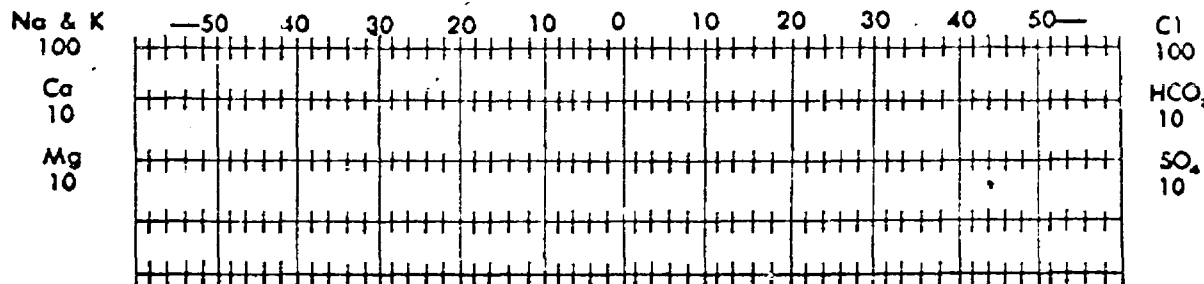
CHEMICAL DETERMINATIONS

| | | | |
|----------------------|---------------|--------------------|--------------|
| Density | 1.005 @ 71° F | pH | 7.0 |
| Iron | No Trace | Hydrogen Sulfide | Strong Trace |
| Sodium and Potassium | 1,268 ppm | Bicarbonate | 1,770 ppm |
| Calcium | 304 ppm | Sulfate | 380 ppm |
| Magnesium | 200 ppm | Phosphate | ppm |
| Chloride | 1,720 ppm | as Sodium Chloride | ppm |

Remarks:

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CAS. 4082

for Stiff type plot (in meq./l.)



Per _____

SAMPLE NO _____

EX. #4

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

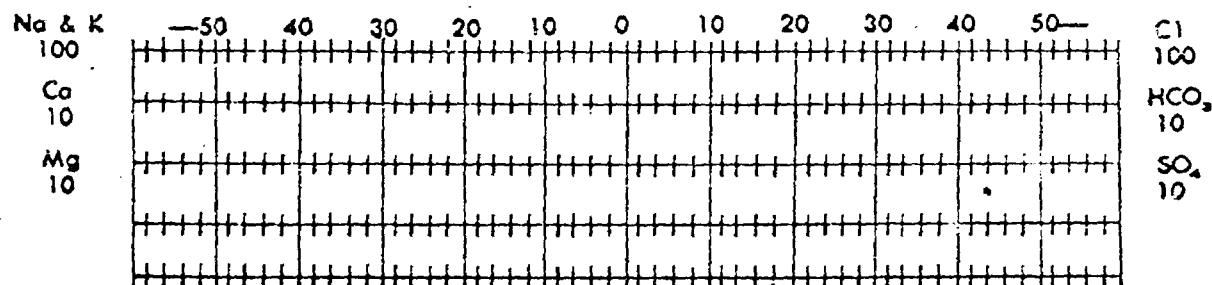
| | | | |
|-----------|------------------------|-------------------|----------------|
| Operator | A. L. Ares | Date Sampled | 11-16-68 |
| Well | Cities Service Federal | Date Received | 11-17-68 |
| Field | Jalmat | Submitted by | Hobbs District |
| Formation | Yates - Seven Rivers | Worked by | George Koehl |
| Depth | | Other Description | |
| County | Lea, New Mexico | | |

CHEMICAL DETERMINATIONS

| | | | |
|----------------------|--------------|--------------------|-------------------|
| Density | 1.005 @ 71°F | pH | 7.3 |
| Iron | No Trace | Hydrogen Sulfide | Very Strong Trace |
| Sodium and Potassium | 2,925 ppm | Bicarbonate | 1,516 ppm |
| Calcium | 520 ppm | Sulfate | 1,340 ppm |
| Magnesium | 268 ppm | Phosphate | ppm |
| Chloride | 4,330 ppm | as Sodium Chloride | ppm |

Remarks:

for Stiff type plot (in meq./l.)



Per _____

SAMPLE NO. _____

EX. #4

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

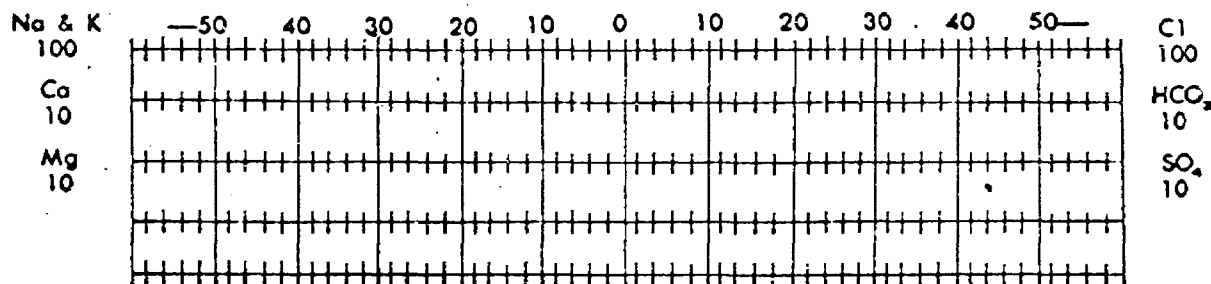
| | | | |
|-----------|----------------------|-------------------|----------------|
| Operator | Sam D. Ares | Date Sampled | 11-16-68 |
| Well | Everett | Date Received | 11-17-68 |
| Field | Jalmat | Submitted by | Hobbs District |
| Formation | Yates - Seven Rivers | Worked by | George Koehl |
| Depth | | Other Description | |
| County | Lea, New Mexico | | |

CHEMICAL DETERMINATIONS

| | | | |
|----------------------|--------------|--------------------|-------------------|
| Density | 1.005 @ 71°F | pH | 6.7 |
| Iron | No Trace | Hydrogen Sulfide | Very Strong Trace |
| Sodium and Potassium | 1,560 ppm | Bicarbonate | 1,640 ppm |
| Calcium | 400 ppm | Sulfate | 720 ppm |
| Magnesium | 238 ppm | Phosphate | ppm |
| Chloride | 2,320 ppm | as Sodium Chloride | ppm |

Remarks:

for Stiff type plot (in meq./l.)



Per _____

SAMPLE NO. _____

EX. #4
(6)

CASE # 4082

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

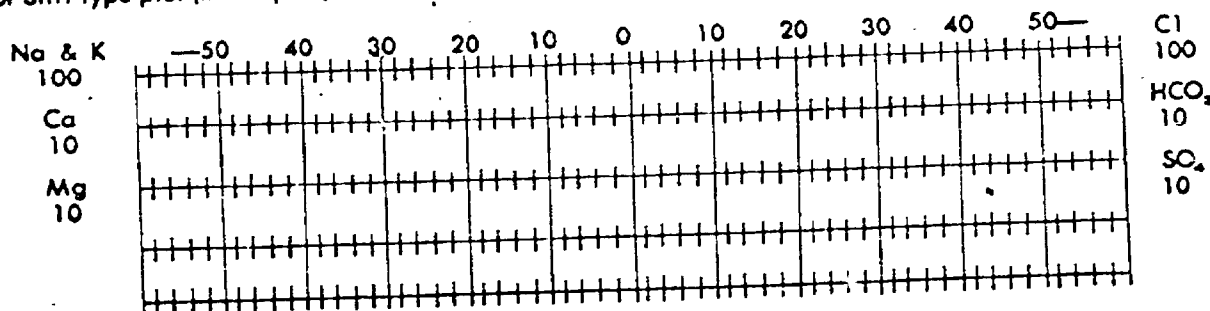
| | | | |
|-----------|----------------------|-------------------|----------------|
| Operator | Sidney Lanier | Date Sampled | 11-16-68 |
| Well | Ogg "A" | Date Received | 11-17-68 |
| Field | Jalmat | Submitted by | Hobbs District |
| Formation | Yates - Seven Rivers | Worked by | George Koehl |
| Depth | | Other Description | |
| County | Lea, New Mexico | | |

CHEMICAL DETERMINATIONS

| | | | |
|----------------------|---------------|--------------------|-------------------|
| Density | 1.010 @ 70° F | pH | 7.1 |
| Iron | No Trace | Hydrogen Sulfide | Very Strong Trace |
| Sodium and Potassium | 2,210 ppm | Bicarbonate | 1,588 ppm |
| Calcium | 585 ppm | Sulfate | 1,300 ppm |
| Magnesium | 277 ppm | Phosphate | ppm |
| Chloride | 3,370 ppm | as Sodium Chloride | ppm |

Remarks:

for Stiff type plot (in meq./l.)



Per _____

SAMPLE NO _____

EX. #4

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

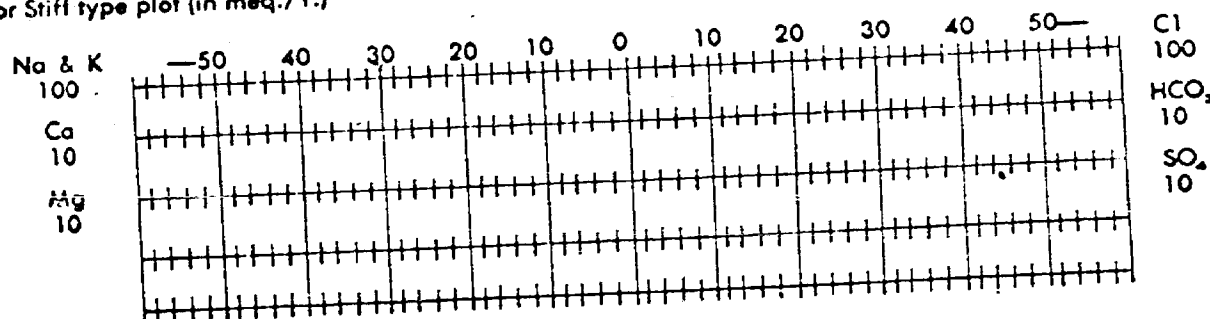
| | | | |
|-----------|----------------------|-------------------|----------------|
| Operator | Sidney Lanier | Date Sampled | 11-16-68 |
| Well | Ogg "B" | Date Received | 11-17-68 |
| Field | Jalmat | Submitted by | Hobbs District |
| Formation | Yates - Seven Rivers | Worked by | George Koehl |
| Depth | | Other Description | |
| County | Lea, New Mexico | | |

CHEMICAL DETERMINATIONS

| | | | |
|----------------------|---------------|--------------------|-------------------|
| Density | 1.011 @ 71° F | pH | 7.6 |
| Iron | No Trace | Hydrogen Sulfide | Very Strong Trace |
| Sodium and Potassium | 4,490 ppm | Bicarbonate | 1,780 ppm |
| Calcium | 640 ppm | Sulfate | 1,300 ppm |
| Magnesium | 121 ppm | Phosphate | ppm |
| Chloride | 6,330 ppm | as Sodium Chloride | ppm |

Remarks:

for Stiff type plot (in meq./l.)



Per _____

SAMPLE NO _____

EX. #4

THE WESTERN COMPANY
Service Laboratory

WATER ANALYSIS

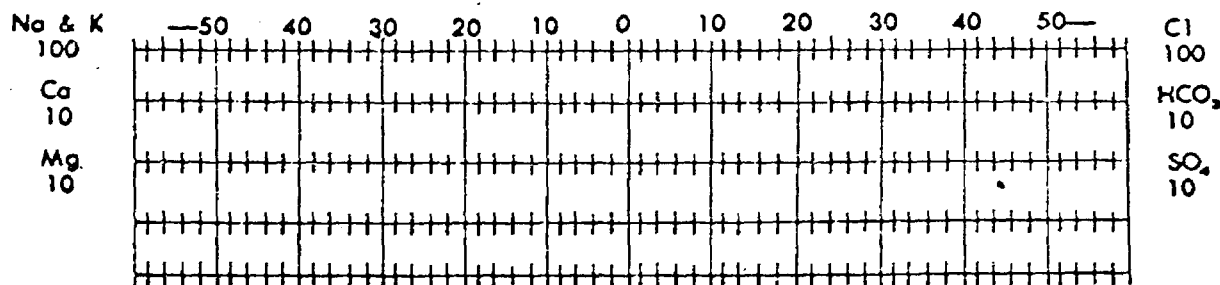
| | | | |
|-----------|----------------------|-------------------|----------------|
| Operator | Sidney Lanier | Date Sampled | 11-16-68 |
| Well | Woolworth | Date Received | 11-17-68 |
| Field | Jalmat | Submitted by | Hobbs District |
| Formation | Yates - Seven Rivers | Worked by | George Koehl |
| Depth | | Other Description | |
| County | Lea, New Mexico | | |

CHEMICAL DETERMINATIONS

| | | | |
|----------------------|---------------------------|--------------------|-------------------|
| Density | 1.010 @ 71 ^o F | pH | 7.5 |
| Iron | Very Faint Trace | Hydrogen Sulfide | Very Strong Trace |
| Sodium and Potassium | 1,700 ppm | Bicarbonate | 1,135 ppm |
| Calcium | 632 ppm | Sulfate | 1,980 ppm |
| Magnesium | 301 ppm | Phosphate | ppm |
| Chloride | 2,480 ppm | as Sodium Chloride | ppm |

Remarks:

for Stiff type plot (in meq./l.)



Per _____

Oil Reports and Gas Services

P. O. BOX 763
HOBBS, NEW MEXICO

March 5, 1969

W. L. SMITH, OWNER

EX 3-2727

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

Gentlemen:

In accordance with Rule 1203 application is hereby made on behalf of Sam D. Ares for an Examiner Hearing before the Oil Conservation Commission for the purpose of presenting evidence to obtain Commission approval to dispose of produced oil field brine by injection into the Yates-Seven Rivers formation.

Applicant proposes to inject into open hole formation 3358 to 3495 feet as is now open in the Sam D. Ares - Arnott Ramsay "A" No. 3, located 660 feet from the North line and 660 feet from the West line of Section 2, Township 25 South, Range 36 East, Lea County, New Mexico.

Control of said injection to be obtained by running 2-1/2 inch plastic lined tubing with a packer to be set at 3330 in 7 inch casing.

Interested parties who have this day been furnished a copy of this application:

A. L. Ares
P. O. Box 75
Santa Fe, New Mexico

Sidney Lanier
P. O. Box 3284
Midland, Texas

Continental Oil Company
P. O. Box 460
Hobbs, New Mexico

Texas Pacific Oil Company
P. O. Box 1069
Hobbs, New Mexico

Gulf Oil Corporation
P. O. Box 670
Hobbs, New Mexico

Yours very truly,

OIL REPORTS AND GAS SERVICES

Donna Holler
(Mrs.) Donna Holler

DH/kh

DO NOT REPLY

3-14-69

Palmer Yates 7 Rivers

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:

CASE No. 4082

Order No. R- 3717

APPLICATION OF SAM D. ARES
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 March 26, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this day of , 1969, 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, Sam D. Ares,
is the owner and operator of the Arnott Ramsey "A" Well No. 3,
660 feet from the North line and 660 feet from the West line
located AN/AAA/III of Section 2, Township 25 South, Range
36 East, NMPM, Jalpat Yates-Seven Rivers Pool, Lea
County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the Yates-Seven Rivers
formations, with injection into the open-hole interval
from approximately 3358 feet to 3495 feet.

(4) That the injection should be accomplished through
2 7/8-inch plastic-lined tubing installed in a packer set at

approximately 3330 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.

(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, Sam D. Ares,
is hereby authorized to utilize ^{his} ~~xxx~~ Arnott Ramsey "A" Well No. 3,
660 feet from the North line and 660 feet from the West line
located ~~xx/yyy/zzz~~ of Section 2, Township 25 South, Range
36 East, NMPM, Jalmat Yates-Seven Rivers Pool, Lea
County, New Mexico, to dispose of produced salt water into the
~~Yates-Seven Rivers~~ formations, injection to be accomplished through
2 7/8-inch tubing installed in a packer set at approximately
3330 feet, with injection into the open-hole interval
from approximately 3358 feet to 3495 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
~~or the annulus left open~~ at the surface in order to determine
leakage in the casing, tubing, or packer.

(2) That the applicant shall submit monthly reports of ~~xxx~~ his
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.