

CASE 5860: RICE ENGINEERING & OPERAT-  
ING, INC. FOR HAIT W. 1A. DEPOSED, LIA  
COUNTY, NEW MEXICO

5860

Application  
Transcripts.

Small Exhibits

ETC.

BEFORE THE  
NEW MEXICO OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
February 16, 1977

EXAMINER HEARING

IN THE MATTER OF:

Application of Rice Engineering &  
Operating, Inc. for salt water disposal,  
Lea County, New Mexico.

CASE  
5860

BEFORE: Richard L. Stamets, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission: Lynn Teschendorf, Esq.  
Legal Counsel for the Commission  
State Land Office Building  
Santa Fe, New Mexico

For the Applicant: Jason W. Kellahin, Esq.  
KELLAHIN & FOX  
Attorneys at Law  
500 Don Gaspar  
Santa Fe, New Mexico

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General Court Reporting Service  
825 Calle Mejia, No. 122, Santa Fe, New Mexico 87501  
Phone (505) 982-9212

I N D E XPageL. B. GOODHEART

Direct Examination by Mr. Kellahin

3

Cross Examination by Mr. Stamets

10

EXHIBIT INDEXOfferedAdmitted

Applicant's Exhibit One, Application

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Applicant's Exhibit Two, Plat

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Applicant's Exhibit Three, Sketch

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Applicant's Exhibit Four, Plat

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Applicant's Exhibit Five, Workover Program

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Applicant's Exhibit Six, Letter

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1 MR. STAMETS: Then we will now proceed to Case 5860.

2 MS. TESCHENDORF: Case 5860, application of Rice  
3 Engineering & Operating, Incorporated for salt water disposal,  
4 Lea County, New Mexico.

5 MR. KELLAHIN: If the Examiner please, Jason Kellahin,  
6 Kellahin and Fox, Santa Fe, appearing for the applicant and we  
7 have one witness to be sworn.

8 (THEREUPON, the witness was duly sworn.)

9  
10 L. B. GOODHEART

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

13  
14 DIRECT EXAMINATION

15 BY MR. KELLAHIN:

16 Q Would you state your name, please?

17 A L. B. Goodheart.

18 Q By whom are you employed and in what position,  
19 Mr. Goodheart?

20 A Rice Engineering & Operating, Inc., Hobbs,  
21 New Mexico.

22 Q What is your position?

23 A Division Manager.

24 Q Have you ever appeared before the Oil Conservation  
25 Commission and made your qualifications a matter of record?

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1 A Yes, I have.

2 MR. KELLAHIN: Are the witness' qualifications  
3 acceptable?

4 MR. STAMETS: They are.

5 Q (Mr. Kellahin continuing.) Mr. Goodheart, are you  
6 familiar with the application of Rice Engineering & Operating  
7 in Case Number 5860?

8 A Yes, sir.

9 Q What is proposed by the applicant in this case?

10 A Rice Engineering & Operating as operator of the  
11 Hobbs Salt Water Disposal System, Lea County, New Mexico in  
12 this case, applies for a permit for a salt water disposal well  
13 located in the southeast quarter of the southeast quarter of  
14 Section 16, Township 19 South, Range 38 East, Lea County,  
15 New Mexico.

16 This well will be used by the Hobbs Salt Water  
17 Disposal System to be designated Hobbs SWD Well, Hobbs Salt  
18 Water Disposal System Well No. P-16 with salt water to be  
19 disposed into the San Andres formation.

20 Q Referring to what has been marked as Applicant's  
21 Exhibit Number One, would you identify that exhibit, please?

22 A Exhibit Number One is the application to dispose of  
23 salt water by injection into a porous formation.

24 Q And that shows that it is going to be injected into  
25 the San Andres formation with a top of forty-two hundred and

1 ten feet, is that correct?

2 A The proposed interval for injection is from forty-one  
3 seventy-six to fifty-five hundred feet.

4 Q And this is a producing formation, is it not?

5 A Yes.

6 Q There is production in the area?

7 A There is not production adjoining, there is  
8 production in the Hobbs Pool from this interval.

9 Q It is some distance from this well?

10 A Yes.

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

13 A This is a plat showing the location of the well to  
14 be six sixty from the east line and six sixty from the south  
15 line of Section 16, T. 19 South, Range 38 East, Lea  
16 County, New Mexico.

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

19 A This is a wellbore sketch of our proposed completion  
20 of this well. It shows that the well was originally drilled  
21 to a TD of ten thousand, zero, zero, eight feet by Nurberg  
22 and Ingraham. We have proposed to clean out the cement plugs  
23 from the surface down to the top of the cement plug at fifty-  
24 five hundred feet. This injection will take place in the  
25 open hole interval from forty-one seventy-six to fifty-five

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1 hundred feet. We propose to run four and a half inch plastic  
2 lined tubing set at approximately forty-one hundred and  
3 sixty feet with an oil blanket in the tubing casing annulus.

4 Q You don't propose to use a packer, is that correct?

5 A That is correct.

6 Q Have you successfully used the system you are  
7 proposing with an oil blanket in the casing tubing annulus?

8 A Yes, we have.

9 Q How will that operate to inform you of any leak  
10 in either the casing or in the tubing in the event of trouble?

11 A You establish a static fluid level in the well,  
12 you calculate from that the gravity of oil that you will install  
13 in the annulus which will give you a positive pressure reading  
14 at the surface. A pressure gauge will be installed and  
15 monitored daily. Any marked drop in casing pressure such as  
16 a tubing or casing leak will be indicated on the gauge. Also  
17 we can monitor bottom-hole conditions from these pressure  
18 recordings that we observe at the surface.

19 Q Can you monitor the bottom-hole conditions better  
20 with this type of completion than with a packer in the hole?

21 A Yes.

22 Q Has the Commission approved this type of completion  
23 in other disposal wells?

24 A They have.

25 Q Now, what is the casing on this well and the cementing

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1 program?

2 A. It has thirteen and three-eighths casing set at  
 3 two hundred and ninety-two feet with three hundred sacks of  
 4 cement. The cement has been circulated to the surface. The  
 5 well already has eight and five-eighths OD casing set at  
 6 forty-one hundred and seventy-six feet with twenty-two hundred  
 7 sacks of cement. The cement was circulated to the surface.

8 Q Now, in your opinion will the completion you are  
 9 proposing for this well as a salt water disposal well fully  
 10 protect all fresh water zones in any producing horizons this  
 11 well may have penetrated?

12 A. It will.

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

15 A. Exhibit Number Four is a plat showing the wells  
 16 located within a radius of two miles of the proposed SWD  
 17 Well No. P-16.

18 Q Are those wells generally completed in the San Andres  
 19 formation?

20 A. Yes, Grayburg, Grayburg-San Andres intervals, yes.

21 Q Will the injection of water in the same formation  
 22 in the disposal well cause any damage to the producing wells?

23 A. No.

24 Q What volume of water will be injected in this  
 25 disposal well?

1 A We propose to inject up to fifty five -- let me  
2 check this and see -- anticipated daily volumes, minimum  
3 would be three thousand, maximum seven thousand barrels per  
4 day.

5 Q What is the source of this water?

6 A This is water produced in the Hobbs Pool at various  
7 tank battery locations which we gather by pipeline.

8 Q And your pipeline is already in place, is it?

9 A Yes.

10 Q Did you attach to your application in this case an  
11 exhibit showing the productive formations of all wells within  
12 a two-mile radius?

13 A Yes, we did.

14 MR. KELLAHIN: We would like the Examiner to take  
15 administrative notice of the tabulation of the wells in the  
16 producing formations in the intervals within a two-mile radius  
17 of the disposal well.

18 MR. STAMETS: Okay, this is just a tabulation of  
19 the wells?

20 A Yes, it shows the subsurface producing intervals of  
21 all the wells within a two-mile radius.

22 MR. STAMETS: We do have a copy of this in the file.

23 Q (Mr. Kellahin continuing.) Were Exhibits One through  
24 Four prepared by you or under your supervision?

25 A They were.

1 MR. KELLAHIN: At this time I offer into evidence  
2 Exhibits One through Four inclusive.

3 MR. STAMETS: These exhibits will be admitted.  
4 (THEREUPON, Applicant's Exhibits One through  
5 Four were admitted into evidence.)

6 MR. KELLAHIN: That's all we have on the direct  
7 examination, Mr. Stamets.

8 THE WITNESS: Are you going to use the letter?

9 MR. KELLAHIN: If the Examiner please, we have  
10 attached Exhibit Number Five, a letter from Amoco.

11 MR. STAMETS: That's Exhibit Number Six.

12 MR. KELLAHIN: Waiving their objection to the  
13 disposal well.

14 MR. STAMETS: And Exhibit Number Five is the workover  
15 procedure?

16 MR. KELLAHIN: Yes.

17 MR. STAMETS: And that's the one you intend to  
18 follow in this case?

19 MR. KELLAHIN: That is correct.

20 MR. STAMETS: And you wish to offer Five and Six?

21 MR. KELLAHIN: Five and Six also.

22 MR. STAMETS: We will accept Exhibits One through  
23 Six in this case.

24 (THEREUPON, Applicant's Exhibits One through  
25 Six were admitted into evidence.)

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1 THE WITNESS: I might point out that Amoco is the  
2 only operator within this two-mile radius and this Exhibit Six  
3 is offered in evidence from them indicating that they have no  
4 objection to our proposed completion of this well as set  
5 out in our application.  
6

7 CROSS EXAMINATION

8 BY MR. STAMETS:

9 Q Mr. Goodheart, I presume by this time you have  
10 heard of the Federal underground injection control program  
11 that may be coming up someday?

12 A I have heard of that, yes.

13 Q Are you aware that one of the provisions that has  
14 been in these regulations almost since the beginning and from  
15 which they have not deviated, a requirement that all injection  
16 would be through tubing under packer?

17 A I'm not personally aware of this, I have been  
18 informed of this by employees of the Oil Conservation Commission,  
19 but I'm not personally aware of the regulations.

20 Q I just call that to your attention at this time  
21 that perhaps it might be something you might wish to consider.  
22 It would certainly be cheaper to set a packer now than it  
23 would be in a couple of years.

24 Now, on these systems that you have used like this  
25 where you have tubing suspended in the hole, have you ever

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1 pulled any of that tubing?

2 A. Yes, sir.

3 Q And have you ever had any that has failed, any tubing  
4 that has had a hole in it?

5 A. Yes, we have.

6 Q In every instance did you know about it before you  
7 pulled the tubing?

8 A. We did.

9 Q Is that why you pulled the tubing?

10 A. That's why we pulled the tubing.

11 Q From the Exhibit Number One submitted in this case,  
12 that indicates that this is a gravity system?

13 A. Yes.

14 Q Do you anticipate the need to apply any pressure?

15 A. We do not, no.

16 Q Okay. Would an order which limited injection to  
17 gravity pressure be acceptable?

18 A. I think so but I would recommend that maybe you  
19 would set reasonable pressure limitations in case things don't  
20 turn out quite as we expect. We would leave that to your  
21 judgement.

22 Q The other alternative has been our two-tenths of a  
23 pound per foot of depth.

24 A. This would certainly be acceptable.

25 Q I note from Exhibit Number Four that there appear to

1 be three wells located within one half mile of the injection  
2 well. Two of these have been plugged and one of them appears  
3 to be temporarily abandoned?

4 A Yes.

5 Q Do you have any evidence at the hearing today to show  
6 the well construction or the plugging programs for these wells?

7 A I do not.

8 Q Would you submit that following this hearing to be a  
9 part of the record?

10 A We will, yes.

11 Q Okay, the reason for this, of course, is to assure  
12 the Commission that the water which is being injected in this  
13 well would not escape either through the two plugged holes  
14 because they were not properly plugged across this zone or  
15 through the well shown as a producing well because of improper  
16 casing or cementing.

17 A We would be glad to submit evidence as to the  
18 condition of these wells so far as we can determine from  
19 Commission and company records.

20 Q All right, and the Examiner, of course, will have  
21 to take that evidence into consideration when it is presented.

22 MR. STAMETS: Are there any other questions of the  
23 witness?

24 MR. KELLAHIN: No.

25 MR. STAMETS: He may be excused.

(THEREUPON, the witness was excused.)

MR. STAMETS: Is there anything further in this case? The case will be taken under advisement.

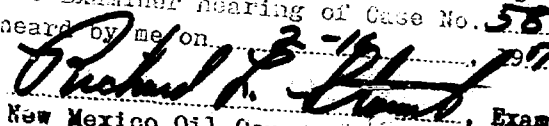
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REPORTER'S CERTIFICATE

I, SIDNEY F. MORRISH, a Certified Shorthand Reporter,  
do hereby certify that the foregoing and attached Transcript  
of Hearing before the New Mexico Oil Conservation Commission  
was reported by me, and the same is a true and correct record  
of the said proceedings to the best of my knowledge, skill and  
ability.

  
Sidney F. Morrish, C.S.R.

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I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 5860  
heard by me on 3-19-77  
, Examiner  
New Mexico Oil Conservation Commission



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. 5860  
Order No. R-5384

APPLICATION OF RICE ENGINEERING  
& OPERATING, INC. 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 February 16, 1977, at Santa Fe, New Mexico, before Examiner, Richard L. Stamets.

NOW, on this 15th day of March, 1977, 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, Rice Engineering & Operating, Inc., is the owner and operator of the Hobbs SWD Well No. P-16, located in Unit P of Section 16, Township 19 South, Range 38 East, NMPM, Hobbs Field, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the San Andres formation, with injection into the open-hole interval from approximately 4176 feet to 5500 feet.

(4) That the injection should be accomplished through 4 1/2-inch plastic lined tubing under a floating oil blanket, and that pressure gauges should be attached to the tubing and to the annulus in order to determine leakage in the casing or tubing.

(5) That the injection well or system should be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 835 psi.

(6) That the operator should notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

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Case No. 5860  
Order No. R-5384

(7) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(8) 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, Rice Engineering & Operating, Inc., is hereby authorized to utilize its Hobbs SWD Well No. P-16, located in Unit P of Section 16, Township 19 South, Range 38 East, NMPM, Hobbs Field, Lea County, New Mexico, to dispose of produced salt water into the San Andres formation, injection to be accomplished through 4 1/2-inch tubing with injection under an oil blanket into the open-hole interval from approximately 4176 feet to 5500 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined, and that pressure gauges shall be attached to the tubing and to the casing-tubing annulus in order to determine leakage in the casing or tubing.

(2) That the injection well or system shall be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than 835 psi.

(3) That the operator shall notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(4) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

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

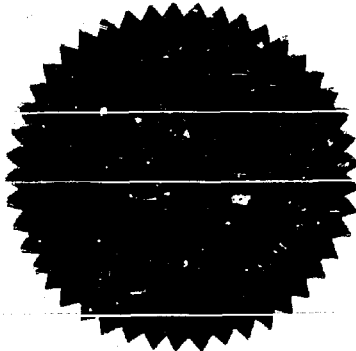
(6) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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Case No. 5860  
Order No. R-5384

DONE at Santa Fe, New Mexico, on the day and year herein-  
above designated.

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



PHIL R. LUCERO, Chairman

*Emery C. Arnold*  
EMERY C. ARNOLD, Member

*Joe D. Ramey*  
JOE D. RAMEY, Member & Secretary

S E A L

jr/



OK RLS  
2-22-77

RICE Engineering & Operating, Inc.

Post Office Box 1142

Telephone (505) 393-9174

HOBBS, NEW MEXICO 88240

February 17, 1977

New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico 87501  
Attn: Mr. Richard L. Stamets

Re: Case 5860  
(Hobbs SWD Well P-16)

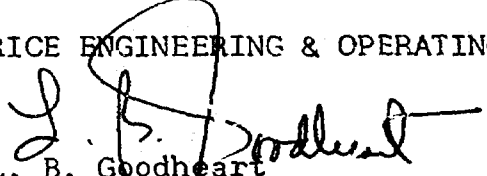
Gentlemen:

As requested at Examiner Hearing of Wednesday, February 16, 1977, for our application for salt water disposal in Hobbs SWD Well No. P-16, enclosed are copies of Forms C-103 and C-105 for three (3) wells located within one-half mile radius of our proposed SWD Well No. P-16. These records indicate that the wells were properly plugged and should not allow water to migrate above the San Andres injection interval.

We respectfully request approval of our application for salt water disposal into the San Andres formation through the open hole interval from 4176 feet to 5500 feet of our Hobbs SWD Well No. P-16.

Yours very truly,

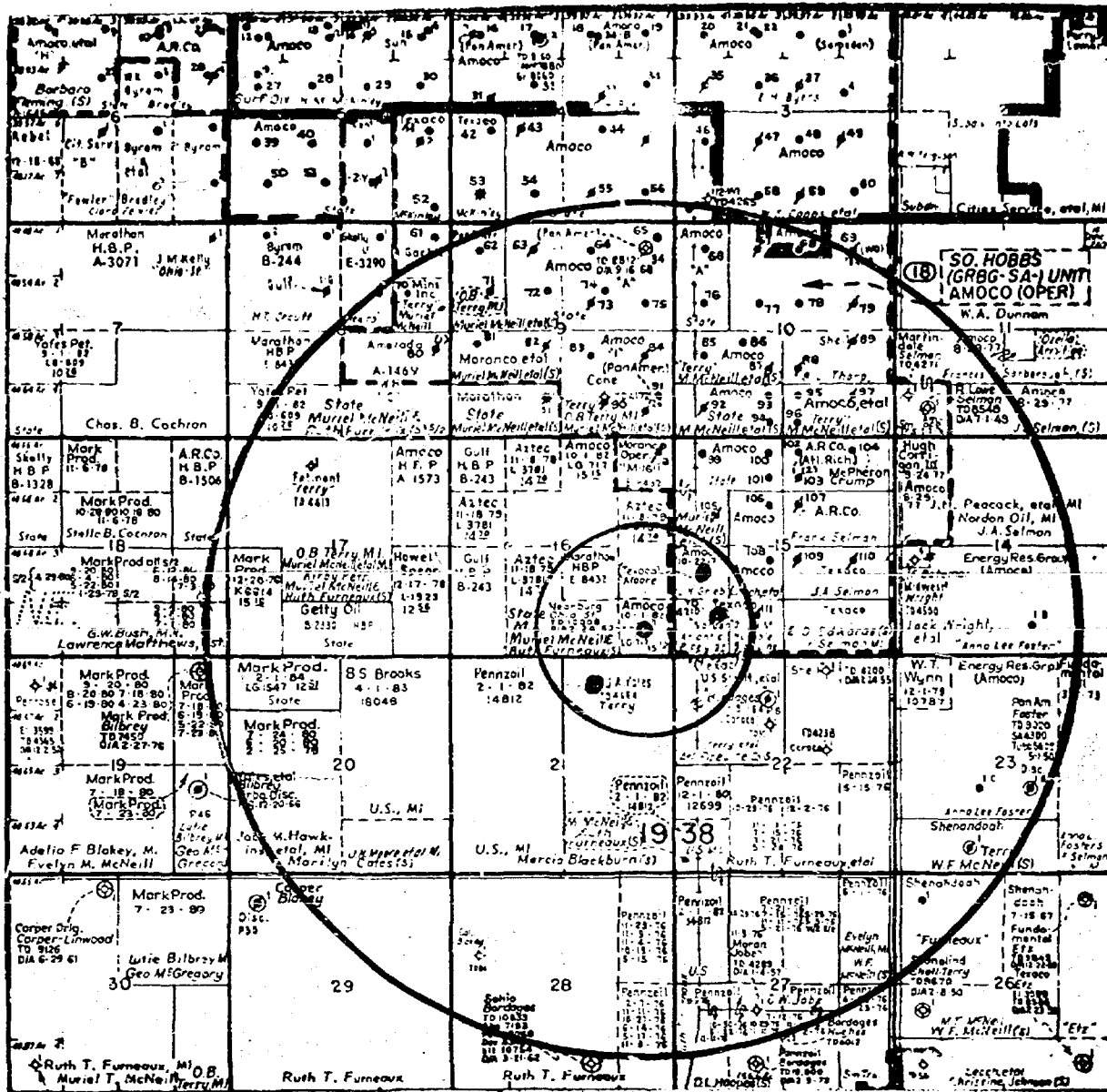
RICE ENGINEERING & OPERATING, INC.

  
L. B. Goodheart  
Division Manager

LBG/ac

Enclosures

R 38 E



LEA COUNTY, NEW MEXICO

EXHIBIT "C"

DWN				AREA PLAT HOBBS SWD WELL NO. P-16	SCALE 1" = 4000
				Rice Engineering & Operating, Inc. Hobbs, New Mexico	DWG NO.

NUMBER OF COPIES REQUIRED	1
COPIES	1
DATE	
TIME	
LOCATION	
OPERATOR	

# NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103  
(Rev 3-53)

## MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office or per Commission Rule 1106)

Name of Company **TEXACO Inc.** Address **P. O. Box 728 - Hobbs, New Mexico**

Lease **J. H. Moore** Well No. **1** Unit Letter **L** Section **15** Township **19-S** Range **38-E**

Date Work Performed **November 19, 1964** Pool **Hobbs** County **Lea**

THIS IS A REPORT OF: (Check appropriate block)

☐ Beginning Drilling Operations ☐ Casing Test and Cement Job ☐ Other (Explain):  
☒ Plugging ☐ Remedial Work

Detailed account of work done, nature and quantity of materials used, and results obtained.

The subject well has been plug and abandoned as follows:

1. Pull rods and tubing.
2. Plug No. 1 - 20 Sx. 4080' to 4128'. (Cement inside perforations)
3. Plug No. 2 - 10 Sx. 3760' to 4080'.
4. Plug No. 3 - 5 Sx. 0' to 180'. (Surface Plug)
5. Install 4" marker extending 4' above ground level, clean location for inspection by the New Mexico Oil Conservation Commission, Plug and abandon complete 7:00 P. M. November 19, 1964.

Witnessed by **C. F. Jackson** Position **Production Foreman** Company **TEXACO Inc.**

### FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

#### ORIGINAL WELL DATA

D F Elev. **T D** PBTD **Producing Interval** Completion Date

Tubing Diameter **Tubing Depth** Oil String Diameter **Oil String Depth**

Perforated Interval(s)

Open Hole Interval **Producing Formation(s)**

#### RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Dbl	Gas Well Potential MCFPD
Before Workover						
After Workover						

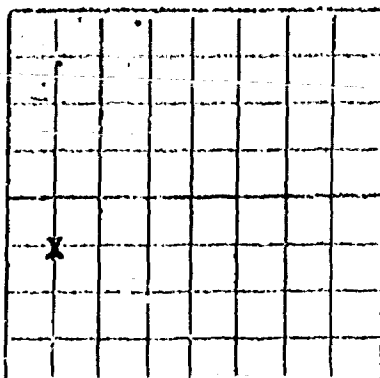
#### OIL CONSERVATION COMMISSION

I hereby certify that the information given above is true and complete to the best of my knowledge.

Approved by **Leslie W. Clements** Name **W. E. Morgan**  
Title **Assistant to the District Superintendent**  
Date **11/19/64** Company **TEXACO Inc.**

## NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

AREA 140 ACRES  
LOCATE WELL CORRECTLY

## WELL RECORD

Mail to District Office, Oil Conservation Commission, to which Form C-101 was sent not later than twenty days after completion of well. Follow instructions in Rules and Regulations of the Commission. Submit in QUINTUPPLICATE. If State Land submit 6 Copies

TEXACO Inc.

(Company or Operator)

J. H. Moore

(Lessee)

Well No. 1, in NE 1/4 of SW 1/4, of Sec. 15, T. 19-S, R. 38-E, NMPM.

Hobbs

Pool,

Lea

County.

Well is 660 feet from West line and 1980 feet from South line

of Section 15. If State Land the Oil and Gas Lease No. is Patented

Drilling Commenced October 5, 1961. Drilling was Completed October 14, 1961.

Name of Drilling Contractor Gackle Drilling Company

Address P. O. Box 2076 - Hobbs, New Mexico

Elevation above sea level at Top of Tubing Head 3600' (D.E.). The information given is to be kept confidential until

February, 1962.

## OIL SANDS OR ZONES

No. 1, from 4080' to 4098' No. 4, from to

No. 2, from 4102' to 4109' No. 5, from to

No. 3, from 4117' to 4128' No. 6, from to

Drilled with rotary tools and no water sands tested.

## IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from to feet.

No. 2, from to feet.

No. 3, from to feet.

No. 4, from to feet.

## CASING RECORD

SIZE	WEIGHT PER FOOT	NEW OR USED	AMOUNT	KIND OF SHOE	CUT AND PULLED FROM	PERFORATIONS	PURPOSE
7 5/8"	15.28	New	439'	Howco	None	None	Surface
2 7/8"	6.50	New	4228'	Howco	None	See above	Production

## MUDDING AND CEMENTING RECORD

SIZE OF HOLE	SIZE OF CASING	WHERE SET	NO. BAGS OF CEMENT	METHOD USED	MUD GRAVITY	AMOUNT OF MUD USED
9 7/8"	7 5/8"	419'	200	Howco		
6 3/4"	2 7/8"	4239'	550	Howco		

## RECORD OF PRODUCTION AND STIMULATION

(Record the Process used, No. of Qts. or Gals. used, interval treated or shot.)

Perforate 2 7/8" casing with 2 jet shots per ft. 4080' to 4098', 4102' to 4109', 4117' to 4128'. Acidize with 500 gals. IST NEA, re-acidize with 2000 gals. IST NEA, re-acidize with 5000 gals. IST NEA. Frac with 5000 gals. refined oil and 5000 lbs. sand at 3.3 P.M.

Result of Production Stimulation. On 24 hr. PT. well pumped 5 B.O. and no water ending 11:00 a.m.

November 17, 1961.

GOR - TEST

Gravity - 30.7

Depth Cleaned Out 4240'

Top of Pay - 4080'

Btm of Pay - 4128'

POTD 4135'

NMOCC Date - October 14, 1961 TEXACO Inc. Date - November 11, 1961

If drill-stem or other special tests or deviation surveys were made, submit report on separate sheet and attach hereto

TOOLS USED

Rotary tools were used from 0 feet to 4240 feet, and from feet to feet.  
Cable tools were used from feet to feet, and from feet to feet.

PRODUCTION

Put to Producing November 16, 1961

OIL WELL: The production during the first 24 hours was 5 barrels of liquid of which 100% was oil; % was emulsion; % water; and % was sediment, A.P.I.  
Gravity 30.7

GAS WELL: The production during the first 24 hours was None M.C.F. plus barrels of liquid Hydrocarbon. Shut in Pressure lbs.

Length of Time Shut in

PLEASE INDICATE BELOW FORMATION TOPS (IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE):

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	1654'	T. Devonian	T. Ojo Alamo
T. Salt	1750'	T. Silurian	T. Kirtland-Fruitland
B. Salt	2583'	T. Montoya	T. Farmington
T. Yates	2754'	T. Simpson	T. Pictured Cliffs
T. 7 Rivers		T. McKee	T. Menefee
T. Queen	3530'	T. Ellenburger	T. Point Lookout
T. Grayburg	3883'	T. Gr. Wash	T. Mancos
T. San Andres	4150'	T. Granite	T. Dakota
T. Glorieta		T.	T. Morrison
T. Drinkard		T.	T. Penn
T. Tubbs		T.	T.
T. Abo		T.	T.
T. Penn		T.	T.
T. Miss		T.	T.

FORMATION RECORD

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	456	456	Caliche				Deviation Record .
456	1585	1129	Redbed			Depth	Degrees Off
1585	1745	160	Redbed & Anhy			428	1/4
1745	2913	1168	Anhy & Salt			919	1/4
2913	3105	192	Anhy, Salt & Gyp			1415	1/2
3105	3902	797	Anhy & Gyp			1974	3/4
3902	4110	208	Lime & Anhy			2282	1/2
4110	4240	130	Lime			2743	1 1/4
Total Depth		4240				3085	1/2
PBTD		4135				3484	1 1/2
						3731	1 1/2
						4075	1 1/2
						4240	1 1/2

All measurements from rotary table  
or 10' above ground level.

Estimate No. 5683

5 - NMOCC  
1 - Pan American Pet.  
Box 3307 - Odessa, Texas  
1 - Division  
1 - Field  
1 - File

ATTACH SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED

I hereby swear or affirm that the information given herewith is a complete and correct record of the well and all work done on it so far as can be determined from available records.

W. B. Hubbard November 21, 1961  
 Company or Operator TEXACO Inc. Address P. O. Box 728 - Hobbs, New Mexico  
 Name [Signature] Position or Title District Superintendent

NEW MEXICO OIL CONSERVATION COMMISSION  
MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

COMPANY John Yates Artesia, New Mexico  
(Address)

LEASE McClafferty WELL NO. 1 UNIT B S 21 T -19-S R -38-E

DATE WORK PERFORMED February 13, 1958 POOL Undesignated

This is a Report of: (Check appropriate block) ☐ Results of Test of Casing Shut-off

☐ Beginning Drilling Operations

☐ Remedial Work

☒ Plugging

☐ Other \_\_\_\_\_

Detailed account of work done, nature and quantity of materials used and results obtained.

1. A 25 sx cement plug was placed at Total Depth 4679'.
2. The 5 1/2" casing was shot at 2725' and same amount pulled from the well.
3. A 25 sx cement plug was placed at 2725'.
4. A 15 sx cement plug was placed in bottom of the surface casing.
5. A 10 sx cement plug was placed in top of the hole.
6. A 4" marker complete with necessary information was placed in the top of hole 5' above the ground.

FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

Original Well Data:

DF Elev. \_\_\_\_\_ TD \_\_\_\_\_ PBD \_\_\_\_\_ Prod. Int. \_\_\_\_\_ Compl Date \_\_\_\_\_

Tbng. Dia \_\_\_\_\_ Tbng Depth \_\_\_\_\_ Oil String Dia \_\_\_\_\_ Oil String Depth \_\_\_\_\_

Perf Interval (s) \_\_\_\_\_

Open Hole Interval \_\_\_\_\_ Producing Formation (s) \_\_\_\_\_

RESULTS OF WORKOVER:

BEFORE

AFTER

Date of Test

Oil Production, bbls. per day

Gas Production, Mcf per day

Water Production, bbls. per day

Gas-Oil Ratio, cu. ft. per bbl.

Gas Well Potential, Mcf per day

Witnessed by \_\_\_\_\_

(Company)

OIL CONSERVATION COMMISSION

Name Stanley Saikin

Title Yard Superintendent

Date MAR 28 1958

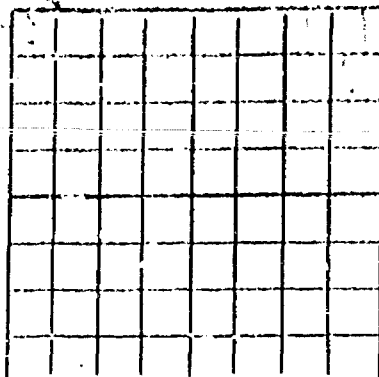
I hereby certify that the information given above is true and complete to the best of my knowledge.

Name Stanley Saikin

Position Yard Superintendent

Company Hobbs Pipe and Supply Company





AREA 640 ACRES  
LOCATE WELL CORRECTLY

# NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

HOBBS OFFICE OCC

## WELL RECORD

13 10:15

Mail to District Office, Oil Conservation Commission, to which Form C-101 was sent not later than twenty days after completion of well. Follow instructions in Rules and Regulations of the Commission. Submit in QUINTUPPLICATE. If State Land submit 6 Copies

John A. Yates

(Company or O. holder)

Forest-McClafferty

(Lease)

Well No. 1, in NW 1/4 of NE 1/4, of Sec. 21, T. 19S, R. 38E, NMPM.

Undesignated Pool, Lea County.

Well is 660 feet from North line and 1980 feet from East line of Section 21. If State Land the Oil and Gas Lease No. is

Drilling Commenced January 29, 1957. Drilling was Completed, 19

Name of Drilling Contractor S. P. Yates Drilling Co.

Address 309 Carper Bldg., Artesia, New Mexico.

Elevation above sea level at Top of Tubing Head 3606'. The information given is to be kept confidential until, 19

### OIL SANDS OR ZONES

No. 1, from 4478 to 4482 No. 4, from to  
No. 2, from to No. 5, from to  
No. 3, from to No. 6, from to

### IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from to feet.  
No. 2, from to feet.  
No. 3, from to feet.  
No. 4, from to feet.

### CASING RECORD

SIZE	WEIGHT PER FOOT	NEW OR USED	AMOUNT	KIND OF SHOT	CUT AND PULLED FROM	PERFORATIONS	PURPOSE
8 5/8			273'				Surface
5 1/2"		New	4680'			(4478-4482; 4318-4324; 4288-4292; 4217-4213; 3847-3851; 3690-3705; 3488-3492; 3413-3417; 2930-2934)	Production string

### MUDDING AND CEMENTING RECORD

SIZE OF HOLE	SIZE OF CASING	WHERE SET	NO. BAGS OF CEMENT	METHOD USED	MUD GRAVITY	AMOUNT OF MUD USED
	8 5/8"	273'	180	circulated.		
	5 1/2"	4680	360			

### RECORD OF PRODUCTION AND STIMULATION

(Record the Process used, No. of Qts. or Gals. used, interval treated or shot.)

2930-2934, treated with 5000 gallons heavy oil and 2500# sand. swabbed dry.  
3413-3417, treated with 5000 gal. heavy oil & 2500# sand. Swabbed dry.  
3488-3492, treated with 5000 gal. heavy oil & 2500# sand. Swabbed dry.  
3690-3705, treated with 5000 gal. heavy oil & 2500# sand. Swabbed dry.  
3847-3851, treated with 5000 gal. heavy oil & 2500# sand. Swabbed dry.  
4207-4213, treated with 5000 gal. heavy oil & 2500# sand. Swabbed dry.  
4288-4292, treated with 5000 gal. heavy oil & 2500# sand. Swabbed dry.  
4318-4324, treated with 1250 gals. acid. Swabbed dry.  
4478-4482, treated with 2500 gals acid. Made 70 Bbls oil and 124 Bbls. water in 18 hours swabbing.

Depth Cleaned Out.

If drill-stem or other special tests or elevation surveys were made, submit report on separate sheet and attach hereto

TOOLS USED

Rotary tools were used from 0 feet to 4680 feet, and from feet to feet.  
Cable tools were used from feet to feet, and from feet to feet.

PRODUCTION

Put to Producing March 12, 1957

OIL WELL: The production during the first 24 hours was 259 barrels of liquid of which 94 Bbls. was oil; % was emulsion; 165 Bbls. water; and % was sediment. A.P.I. Gravity.  
**Based on 124 Bbls. water & 70 Bbls Oil in 18 Hours swabbing.**

GAS WELL: The production during the first 24 hours was M.C.F. plus barrels of liquid Hydrocarbon. Shut in Pressure lbs.

Length of Time Shut in

PLEASE INDICATE BELOW FORMATION TOPS (IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE):

Southeastern New Mexico

Northwestern New Mexico

T. Anhy.....	T. Devonian.....	T. Ojo Alamo.....
T. Salt.....	T. Silurian.....	T. Kirtland-Fruitland.....
B. Salt.....	T. Montoya.....	T. Farmington.....
T. Yates.....	T. Simpson.....	T. Pictured Cliffs.....
T. 7 Rivers.....	T. McKee.....	T. Menefee.....
T. Queen..... 3685	T. Ellenburger.....	T. Point Lookout.....
T. Grayburg.....	T. Gr. Wash.....	T. Mancos.....
T. San Andres..... 4324	T. Granite.....	T. Dakota.....
T. Glorieta.....	T. ....	T. Morrison.....
T. Drinkard.....	T. ....	T. Penn.....
T. Tubbs.....	T. ....	T. ....
T. Abo.....	T. ....	T. ....
T. Penn.....	T. ....	T. ....
T. Miss.....	T. ....	T. ....

FORMATION RECORD

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	275	274	Surface.				
275	1327	1052	Red bed				
1327	1758	431	Red bed & Anhydrite				
1758	2816	1058	Salt & anhydrite				
2816	3397	581	Anhydrite & gyp				
3397	3472	75	Anhy., gyp & dolomite				
3472	4040	568	Anhydrite & gyp				
4040	4120	80	Lime				
4120	4168	48	Lime & dolomite				
4168	4219	51	Dolomite				
4219	4250	31	Lime & dolomite				
4250	4364	145	Dolomite				
4364	4377	13	Lime & dolomite				
4377	4400	23	Dolomite				
4400	4473	73	Sandy lime & dolomite				
4473	4524	51	Dolomite				
4524	4550	26	Lime & dolomite				
4550	4598	48	Dolomite				
4598	4649	51	Lime & Dolomite				
4649	4680	31	Dolomite				
4680	Total	depth					

ATTACH SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED

I hereby swear or affirm that the information given herewith is a complete and correct record of the well and all work done on it so far as can be determined from available records.

Company Operator John A. Yates Address 312 Carper Bldg., Artesia, N. Mex.  
Name Nela Bookkeeper Position or Title Bookkeeper  
Date 3-12-57



## NEW MEXICO OIL CONSERVATION COMMISSION

FORM C-103  
(Rev 3-55)

## MISCELLANEOUS REPORTS ON WELLS

(Submit to appropriate District Office as per Commission Rule 1106)

Name of Company TEXACO Inc.		Address P. O. Box 728 - Hobbs, New Mexico			
License Nordon Corporation Limited	Well No. 2	Unit Letter M	Section 15	Township 19-S	Range 38-E
Date Work Performed January 5, 1962	Pool Hobbs		County Lea		

THIS IS A REPORT OF: (Check appropriate block)

- ☐ Beginning Drilling Operations    ☐ Casing Test and Cement Job    ☐ Other: (Explain):  
☒ Plugging    ☐ Remedial Work

Detailed account of work done, nature and quantity of materials used, and results obtained.

We have plugged and abandoned subject well as follows:

1. Spot 20 sx cement plug, 3950' to 4210'
2. Cut 2-7/8" casing at 1265', recover same
3. Spot 25 sx cement plug, 1165' to 1265'
4. Spot 25 sx cement plug, 400' to 500'
5. Spot 12 sx surface plug, install 4" marker extending 4' above ground level, clean location for inspection as per NMOCC regulations. Plug and abandon. Complete 2:30 A. M., January 5, 1962.

NOTE: Verbal permission received to plug and abandon subject well from the New Mexico Oil Conservation Commission, 1:30 P. M. January 4, 1962.

Witnessed by C. F. Jackson	Position Production Foreman	Company TEXACO Inc.
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## FILL IN BELOW FOR REMEDIAL WORK REPORTS ONLY

## ORIGINAL WELL DATA

D F Elev.	T D	P B T D	Producing Interval	Completion Date
Tubing Diameter	Tubing Depth	Oil String Diameter	Oil String Depth	
Perforated Interval(s)				
Open Hole Interval		Producing Formation(s)		

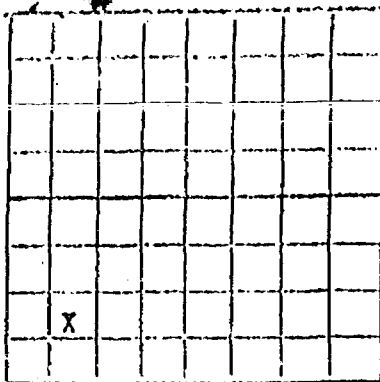
## RESULTS OF WORKOVER

Test	Date of Test	Oil Production BPD	Gas Production MCFPD	Water Production BPD	GOR Cubic feet/Bbl	Gas Well Potential MCFPD
Before Workover						
After Workover						

## OIL CONSERVATION COMMISSION

I hereby certify that the information given above is true and complete to the best of my knowledge.

Approved by <i>Lester A. Clements</i>	Name H. N. Wade
Title	Position Assistant District Superintendent
Date	Company TEXACO Inc.



## NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

## WELL RECORD

Mail to District Office, Oil Conservation Commission, to which Form C-101 was sent not later than twenty days after completion of well. Follow instructions in Rules and Regulations of the Commission. Submit in QUINTUPPLICATE. If State Land submit 6 Copies

AREA 40 ACRES  
LOCATE WELL CORRECTLY

TEXACO Inc.

Nordon Corporation Limited

(Company or Operator)

(Lease)

Well No. 2, in SE 1/4 of SE 1/4, of Sec. 15, T. 19-S, R. 38-E, NMPM.

Hobbs Pool, Lea County.

Well is 990 feet from West line and 990 feet from South line

of Section 15. If State Land the Oil and Gas Lease No. is Patented

Drilling Commenced November 1, 1961. Drilling was Completed November 10, 1961

Name of Drilling Contractor Gackle Drilling Company

Address P. O. Box 2076 - Hobbs, New Mexico

Elevation above sea level at Top of Tubing Head 3599' (D. F. A.) The information given is to be kept confidential until

April, 1962

## OIL SANDS OR ZONES

No. 1, from 4100' to 4108' No. 4, from 4149' to 4154'  
No. 2, from 4119' to 4127' No. 5, from 4170' to 4176'  
No. 3, from 4134' to 4145' No. 6, from 4180' to 4182'  
Drill with Rotary tools and no water sands tested.

## IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from to feet.  
No. 2, from to feet.  
No. 3, from to feet.  
No. 4, from to feet.

## CASING RECORD

SIZE	WEIGHT PER FOOT	NEW OR USED	AMOUNT	KIND OF SHOE	CUT AND PULLED FROM	PERFORATIONS	PURPOSE
7-5/8"	24.00	New	440'	Howco	None	None	Surface
2-7/8"	6.40	New	4194'	Howco	1265	See Above	Production

## MUDGING AND CEMENTING RECORD

SIZE OF HOLE	SIZE OF CASING	WHERE SET	NO. BAGS OF CEMENT	METHOD USED	MUD GRAVITY	AMOUNT OF MUD USED
9-7/8"	7-5/8"	451'	200	Howco		
6-3/4"	2-7/8"	4206'	550	Howco		

## RECORD OF PRODUCTION AND STIMULATION

(Record the Process used, No. of Qts. or Gals. used, interval treated or shot.)

Perforated 2-7/8" casing 4100' to 4108', 4119' to 4127', 4134' to 4145', 4149' to 4154', 4158' to 4165', 4170' to 4176' and 4180' to 4182' with 2 jet shots per ft. Acidize with 3000 gals 15% LSTNEA, 250 lbs. crushed Naphthalene, and 250 gals Gel Acid. Frac with 10,000 gals refined oil, 5000 lbs. sand, and 250 lbs Adomite.

Result of Production Stimulation Dry, verbal permission received to plug and abandon well from New Mexico Oil Conservation Commission, 1:30 P.M., January 4, 1962.

Depth Cleaned Out 4210'  
PBTD 4187'

If drill-stem or other special tests or deviation surveys were made, submit report on separate sheet and attach hereto.

TOOLS USED

Rotary tools were used from 0 feet to 4210 feet, and from feet to feet.  
Cable tools were used from feet to feet, and from feet to feet.

PRODUCTION

Put to Producing Dry - Plugged, 19 62

OIL WELL: The production during the first 24 hours was barrels of liquid of which % was  
was oil; % was emulsion; % water; and % was sediment. A.P.I.  
Gravity.

GAS WELL: The production during the first 24 hours was M.C.F. plus barrels of  
Liquid Hydrocarbon. Shut in Pressure lbs.

Length of Time Shut in Dry - Plugged

PLEASE INDICATE BELOW FORMATION TOPS (IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE):

Southeastern New Mexico		Northwestern New Mexico	
T. Anhy	1592'	T. Devonian	T. Ojo Alamo
T. Salt	1690'	T. Silurian	T. Kirtland-Fruitland
B. Salt	2624'	T. Montoya	T. Farmington
T. Yates	2756'	T. Simpson	T. Pictured Cliffs
T. 7 Rivers		T. McKee	T. Menefee
T. Queen	3540'	T. Ellenburger	T. Point Lookout
T. Grayburg	3892'	T. Gr. Wash	T. Mancos
T. San Andres	4166	T. Granite	T. Dakota
T. Glorieta		T.	T. Morrison
T. Drinkard		T.	T. Penn
T. Tubbs		T.	T.
T. Abo		T.	T.
T. Penn		T.	T.
T. Miss		T.	T.

FORMATION RECORD

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
0	455	455	Caliche	Deviation Record			
455	740	285	Redbed	Depth Degrees Off			
740	1592	852	Redbed & Sand	800'		1/4	
1592	1690	98	Redbed & Anhy	1511'		1/2	
1690	2624	934	Top of Salt	2304'	1		
2624	2756	132	Anhy & Salt	2676'	1	1/4	
2756	3540	784	Anhy & Gyp	3139'	1		
3540	3892	352	Anhy & Lime	3941'	1	1/4	
3892	4040	148	Lime	4210'	1	1/4	
4040	4210	170	Lime & Sand				
Total Depth	4210						
PBTD	4187						
All Measurements from Rotary Table or 10' above ground level.				Verbal Permission to Plug and Abandon, received from NMOCC 1:30 P.M., Jan. 4, 1962, 1. Spot 20 sx cement plug 3950' to 4210' 2. Cut 2-7/8" casing at 1265', recover same 3. Spot 25 sx cement plug, 1265' to 1265' 4. Spot 25 sx cement plug, 400' to 500' 5. Spot 12 sx surface plug, install 4" marker			
ESTIMATE NO. 5682				Extending 4' above ground level, clean location for inspection as per NMOCC regulations. Plug and abandon Complete 2:30 A.M., January 5, 1962.			
5-NMOCC 1-Division 1-Field 1-File							

ATTACH SEPARATE SHEET IF ADDITIONAL SPACE IS NEEDED

I hereby swear or affirm that the information given herewith is a complete and correct record of the well and all work done on it so far as can be determined from available records.

H. N. Wado January 5, 1962

Company or Operator TEXACO Inc.

Address P. O. Box 728, Hobbs, New M.

Name 7/7/72

Position or Title Assistant District

Agent

APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR <b>Rice Engineering &amp; Operating, Inc.</b>		ADDRESS <b>P. O. Box 1142, Hobbs, New Mexico</b>	
SYSTEM NAME <b>Hobbs Salt Water Disposal</b>	WELL NO. <b>P-16</b>	FIELD <b>Hobbs</b>	COUNTY <b>Lea</b>
LOCATION UNIT LETTER <b>P</b> WELL IS LOCATED <b>660</b> FEET FROM THE <b>South</b> LINE AND <b>660</b> FEET FROM THE <b>East</b> LINE, SECTION <b>16</b> TOWNSHIP <b>19N</b> RANGE <b>38E</b> NMPM.			

CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	<b>13-3/8</b>	<b>292</b>	<b>300</b>	<b>Surface</b>	<b>Visual</b>
INTERMEDIATE					
LONG STRING	<b>8-5/8</b>	<b>4176</b>	<b>2200</b>	<b>Surface</b>	<b>Visual</b>
TUBING	<b>4 1/2</b>	<b>4160</b>	NAME, MODEL AND DEPTH OF TUBING PACKER <b>None-floating oil blanket in tubing-casing annulus</b>		
NAME OF PROPOSED INJECTION FORMATION <b>San Andres</b>			TOP OF FORMATION <b>San Andres 4210</b>		BOTTOM OF FORMATION <b>San Andres 5525</b>
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? <b>Tubing</b>		PERFORATION OR OPEN HOLE? <b>open hole</b>		PROPOSED INTERVAL(S) OF INJECTION <b>4176 to 5500 (-572 to -1896)</b>	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? <b>No</b>		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? <b>Oil well</b>		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? <b>No</b>	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH <b>None</b>					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA <b>Unknown</b>		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA <b>4210 (Grayburg)</b>		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA <b>-2542 SS (Drinkard)</b>	
ANTICIPATED DAILY INJECTION VOLUME (BBLs.) <b>3000</b>	MINIMUM <b>3000</b>	MAXIMUM <b>7000</b>	OPEN OR CLOSED TYPE SYSTEM <b>Semi closed</b>	IS INJECTION TO BE BY GRAVITY OR PRESSURE? <b>Gravity</b>	APPROX. PRESSURE (PSI) <b>-</b>
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - <b>Yes</b>		WATER TO BE DISPOSED OF <b>Yes</b>		NATURAL WATER IN DISPOSAL ZONE <b>Yes</b>	ARE WATER ANALYSES ATTACHED? <b>No</b>
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) <b>Muriel T. McNeill, Box 686, Hobbs, New Mexico 88240</b>					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL <b>Amoco Production Company, Box 68, Hobbs, New Mexico 88240</b>					

BEFORE EXAMINER STAMETS  
OIL CONSERVATION COMMISSION  
*Rice* EXHIBIT NO. 1  
CASE NO. 5860  
Submitted by *Loy Goodheart*  
Hearing Date Feb. 16, 1977

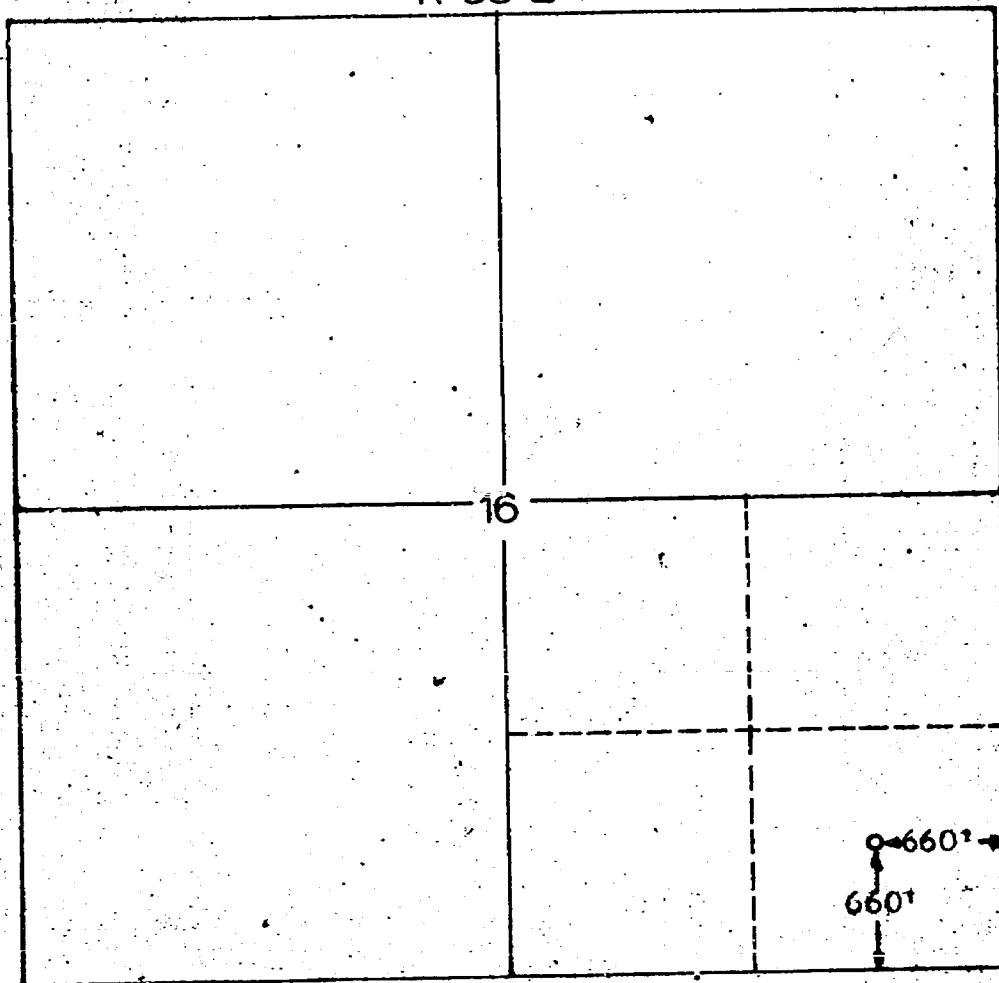
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? <b>Yes</b>	SURFACE OWNER <b>Yes</b>	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL <b>Yes</b>	THE NEW MEXICO STATE ENGINEER <b>Yes</b>
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) <b>Yes</b>	PLAT OF AREA <b>Yes</b>	ELECTRICAL LOG <b>Yes</b>	DIAGRAMMATIC SKETCH OF WELL <b>Yes</b>

I hereby certify that the information above is true and complete to the best of my knowledge and belief.  
*J. G. Goodheart* **Division Manager** **January 17, 1977**  
(Signature) (Title) (Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

R 38 E

N



T 19 S

LEA COUNTY, NEW MEXICO

BEFORE EXAMINER STAMETS  
OIL CONSERVATION COMMISSION

Rice EXHIBIT NO. 2

CASE NO. 5860

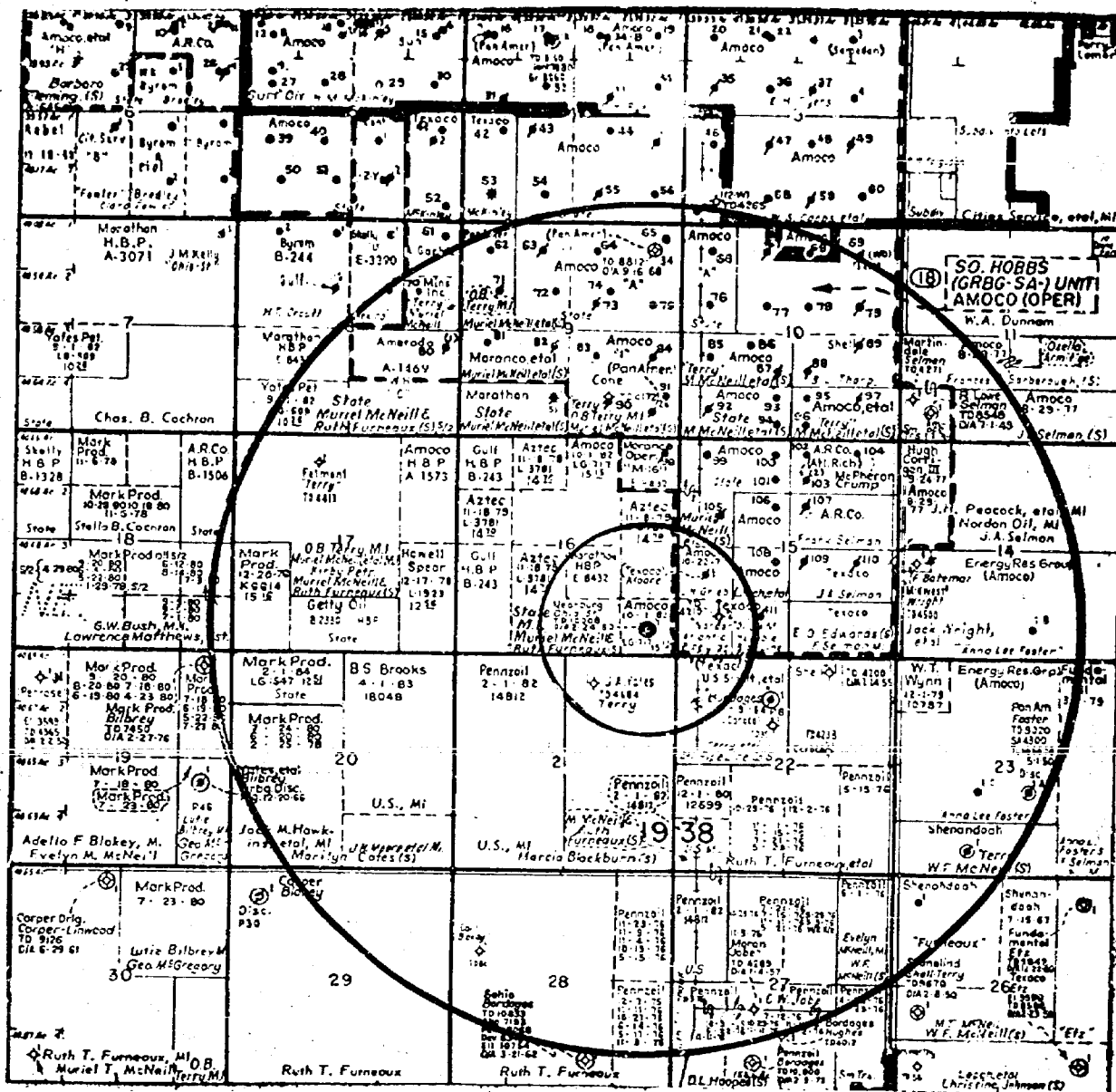
Submitted by Gradient

Hearing Date Feb 16, 1977

Exhibit "A"

DWN			WELL NO. P-16 HOBBS SWD SYSTEM	SCALE 1" = 1000'
			Rice Engineering & Operating, Inc. Hobbs, New Mexico	DWG NO.

R 33 E



LEA COUNTY, NEW MEXICO

BEFORE EXAMINER STAMETS  
OIL CONSERVATION COMMISSION

Rice EXHIBIT NO. 4

CASE NO. 5860

Submitted by Goodheart

Hearing Date Feb 16, 1977 EXHIBIT "C"

DWN

AREA PLAT  
HOBBS SWD WELL NO. P-16

SCALE  
1" = 4000'

Rice Engineering & Operating, Inc.  
Hobbs, New Mexico

DWG NO.

13 3/8" OD 48#-H Casing Set  
@ 292' w/300 sks. Cement  
Cement Circulated to Surface

4 1/2" Plastic Lined Tubing Set  
@ approx. 4160' w/Oil Blanket  
in Tubing-Casing Annulus

8 5/8" OD 24# & 32# J&H Casing  
Set @ 4176' w/2200 sks. Cement  
Cement Circulated to Surface

Proposed Disposal Zone  
4176-5500

Cement Plug 5500-5566

Cement Plug 6600-6666

Cement Plug 8100-8300

Cement Plug 9700-9800

BEFORE EXAMINER STAMETS  
OIL CONSERVATION COMMISSION  
Rice EXHIBIT NO. 3  
CASE NO. 5860  
Submitted by Goodheart  
Hearing Date Feb. 16, 1977

TD-10,008'

DIAGRAMMATIC SKETCH OF WELL  
660' FSL & 660' FEL Section 16, T19S, R38E  
Lea County, New Mexico

(EXHIBIT "B")

DWN			WELL NO. P-16 HOBBS SWD SYSTEM	SCALE NONE
			Rice Engineering & Operating, Inc. Hobbs, New Mexico	DWG NO.





**Amoco Production Company**

P.O. Drawer A  
Levelland, Texas 79336

V. E. Staley  
Area Superintendent

February 1, 1977

File: CDC-501.61-34

Re: Conversion of Abandoned  
Well to Salt Water Disposal  
Service, Hobbs Salt Water  
Disposal System,  
Lea County, New Mexico

Mr. L. B. Goodheart  
Division Manager  
Rice Engineering & Operating, Inc.  
P. O. Box 1142  
Hobbs, NM 88240

Dear Mr. Goodheart,

Amoco has no objection to the use of the abandoned well located in the SE/4 SE/4 of Section 16, Township 19 South, Range 38 East, Lea County, New Mexico, for salt water disposal service. Disposal will be into the San Andres formation over the openhole section from 4,176 feet to 5,500 feet. All available information confirms there is no productive pay over this interval.

HAK,Jr:kr

BEFORE EXAMINER STAMETS  
OIL CONSERVATION COMMISSION

Rice EXHIBIT NO. 6  
CASE NO. 5860

Submitted by Goodheart  
Hearing Date Feb 16, 1977

TO	✓
LIB	
FILE	

Hobbs SWD  
Well P-16

**RECEIVED**

FEB 2 1977

RICE ENGINEERING & OPERATING, INC.  
HOBBS, N. M.





Amoco Production Company

P.O. Drawer A  
Levelland, Texas 79336

V. E. Staley  
Area Superintendent

February 1, 1977

File: CDC-501.61-34

Re: Conversion of Abandoned  
Well to Salt Water Disposal  
Service, Hobbs Salt Water  
Disposal System,  
Lea County, New Mexico

Mr. L. B. Goodheart  
Division Manager  
Rice Engineering & Operating, Inc.  
P. O. Box 1142  
Hobbs, NM 88240

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HAK,Jr:kr

TO	✓
LBH	
FILE	

Hobbs SWD  
WELL 2-16

RECEIVED

FEB 2 1977

RICE ENGINEERING & OPERATING, INC.  
HOBBS, N. M.

WORKOVER PROCEDURE  
Hobbs SWD System Well P-16

Workover procedure to convert P/A Nearburg & Ingram-Ohio State Well No. 1, located 660' FSL and 660' FEL Section 16, T19S, R38E, Lea County, New Mexico to salt water disposal well for Hobbs SWD System:

1. MIRU pulling unit and reverse unit. Install BOP on 8-5/8" casing.
2. Run 7-7/8" steel tooth bit and 4-4-3/4" drill collars on 2-7/8" OD EUE drill string and drill cement plugs at: Surface, 4125' to 4225' (bottom of 8-5/8" casing) and 5000' to 5100'. Clean 7-7/8" open hole to top of cement plug at 5500' and displace drilling fluid out of well with clean salt water. Release reverse unit.
3. Run 6-5/8" Lynes open hole straddle packers spaced 350' apart on 2-7/8" drill string. Acidize zones of porosity from 4300-5450', (5450-5100', 5100-4750' and 4650-4300') with 3000 gals. 15% reg. Hcl acid each zone (total of 9000 gals.) Pull packer back in 8-5/8" casing and take maximum injection test. If rate is sufficient (400 BPH), pull 2-7/8" drill string & lay down.
4. Lower wellhead so that 4 1/2" tubing flow tee will be approx. 3' below ground level. Run 4 1/2" plastic lined tubing and nipple up for disposal operation. Release pulling unit after 4 1/2" tubing run in well.

WJC/jp  
1-31-77  
Rev'd.  
LBG/jp  
2-14-77

BEFORE EXAMINER STAMETS	
OIL CONSERVATION COMMISSION	
<u>Rice</u>	EXHIBIT NO. <u>5</u>
CASE NO. <u>5-860</u>	
Submitted by <u>Goodheart</u>	
Hearing Date <u>Feb 16, 1977</u>	

Dockets Nos. 8-77 and 9-77 are tentatively set for hearing on March 9 and March 23, 1977. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - FRIDAY - FEBRUARY 11, 1977

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following case will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

CASE 5872: In the matter of the hearing called by the Oil Conservation Commission on its own motion to consider the suspension of Rules 15(A) and 15(B) of the General Rules for Prorated Gas Pools as promulgated by Order No. R-1670, as amended, to permit overproduced wells to continue to produce gas during the present severe weather conditions without danger of being shut in for overproduction.

DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 16, 1977

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,  
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

- ALLOWABLE:
- (1) Consideration of the allowable production of gas for March, 1977, from seventeen prorated pools in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico.
  - (2) Consideration of the allowable production of gas for March, 1977, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.
  - (3) Consideration of purchaser's nominations for the one-year period beginning April 1, 1977, for both of the above areas.

CASE 5855: Application of Amoco Production Company for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Elliott Gas Com "F" 1-R Well No. 1A to be drilled 1244 feet from the South line and 820 feet from the East line of Section 33, Township 30 North, Range 9 West, Blanco Mesaverde Pool, San Juan County, New Mexico.

CASE 5857: Application of Union Oil Company of California for directional drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to re-enter its Pipeline Deep Unit Federal Well No. 3, the surface location of which is 1980 feet from the North and East lines of Section 7, Township 19 South, Range 34 East, Lea County, New Mexico, and to directionally drill said well in a southerly or easterly direction and complete it in the Morrow formation at a point no closer than 330 feet to the outer boundary of the proration unit, the E/2 of said Section 7.

CASE 5858: Application of Union Oil Company of California for 320-acre spacing, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the adoption of 320-acre spacing and proration units for the North Quail Ridge-Morrow Gas Pool, Lea County, New Mexico. In the absence of objection, the Commission will adopt such 320-acre spacing.

CASE 5859: (This case will be continued and readvertised.)

Application of Caulkins Oil Company for townhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Basin-Dakota and Blanco-Mesaverde production in the wellbore of its Breech D Well No. 307 located in Unit M of Section 13, Township 26 North, Range 7 West, Rio Arriba County, New Mexico.

CASE 5860: Application of Rice Engineering & Operating, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation through the open hole interval from 4176 feet to 5500 feet of its Hobbs SWD Well No. P-16, located in Unit P of Section 16, Township 19 South, Range 38 East, Hobbs Field, Lea County, New Mexico.

- CASE 5861:** Application of Hanson Oil Corporation for a salt water disposal well, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Delaware formation in the open hole interval from 1926 to 1978 feet in its Sulphate Sister Well No. 1, located in Unit E of Section 13, Township 25 South, Range 26 East, Eddy County, New Mexico.
- CASE 5862:** Application of Palmer Oil and Gas Company for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Federal 1 Well No. 1 located 1525 feet from the South line and 820 feet from the East line of Section 1, Township 31 North, Range 13 West, Blanco Mesaverde and Basin-Dakota Pools, San Juan County, New Mexico.
- CASE 5863:** Application of Amerada Hess Corporation for an unorthodox oil well location, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Jicarilla Apache "B" Well No. 10, completed as an oil well in the Dakota formation at a point 1850 feet from the South line and 1500 feet from the West line of Section 29, Township 25 North, Range 5 West, Rio Arriba County, New Mexico, said well having been projected as a Basin-Dakota gas well at a standard gas well location for said pool.
- CASE 5864:** Application of Agua, Inc. for the amendment of Order No. R-5137, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the further amendment of Order No. R-5137, which authorized the disposal of produced salt water into the San Andres formation through the open-hole interval from approximately 4000 feet to 5000 feet in applicant's Blinbry-Drinkard SWD System Well No. A-22, located in Unit A of Section 22, Township 22 South, Range 37 East, Blinbry-Drinkard-Langlie Mattix Area, Lea County, New Mexico. Said order, as amended, limited surface injection pressures to 800 psi, and applicant seeks its amendment to permit surface injection pressures up to 1500 psi.
- CASE 5865:** Application of Inexco Oil Co. for 320-acre spacing, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the adoption of 320-acre spacing and proration units for the West Tonto-Pennsylvanian Gas Pool, Lea County, New Mexico. In the absence of objection, the Commission will adopt such 320-acre spacing.
- CASE 5866:** Application of Union Texas Petroleum for an exception to casing and cementing requirements of Order No. R-111-A, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the casing and cementing requirements of Order No. R-111-A to eliminate the salt protection string in a well it proposes to drill in Unit D of Section 33, Township 20 South, Range 34 East, Lynch Yates-Seven Rivers Pool, Lea County, New Mexico.
- CASE 5867:** Application of Texas Oil & Gas Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the S/2 of Section 19, Township 21 South, Range 27 East, Burton Flat Field, Eddy County, New Mexico, to be dedicated to its Forrest Well No. 1 to be located in Unit N of said Section 19. Also to be considered will be the cost of completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in completion of said well.
- CASE 5820:** (Continued from the February 2, 1977, Examiner Hearing.)  
Application of Texas Oil & Gas Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Pennsylvanian formations underlying the W/2 of Section 4, Township 22 South, Range 26 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 5868:** Application of Harvey E. Yates Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Travis Deep Unit Well No. 1 to be drilled 1980 feet from the South line and 1684 feet from the West line of Section 13, Township 18 South, Range 29 East, Eddy County, New Mexico, the S/2 of said Section 18 to be dedicated to the well.
- CASE 5846:** (Continued and Readvertised)  
Application of Harvey E. Yates Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Empire South Deep Unit Well No. 13 to be drilled 660 feet from the South line and 1432 feet from the West line of Section 30, Township 17 South, Range 29 East, South Empire Field, Eddy County, New Mexico, the S/2 of said Section 30 to be dedicated to the well.

- CASE 5869: Application of Harvey E. Yates Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Big Boggy Well No. 1 to be drilled 990 feet from the South line and 2080 feet from the East line of Section 36, Township 17 South, Range 26 East, Atoka Pennsylvanian Gas Pool, Eddy County, New Mexico, the S/2 of said Section 36 to be dedicated to the well.
- CASE 5870: Application of Harvey E. Yates Company for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its South Maljamar Deep Unit Well No. 2 to be drilled 990 feet from the South line and 1980 feet from the West line of Section 30, Township 17 South, Range 32 East, Lea County, New Mexico, the S/2 of said Section 30 to be dedicated to the well.
- CASE 5871: Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Friendly Frenchman Well No. 1 to be drilled 1005 feet from the South line and 660 feet from the East line of Section 32, Township 16 South, Range 26 East, Eddy County, New Mexico, the S/2 of said Section 32 to be dedicated to the well.
- CASE 5810: (Continued from the February 2, 1977, Examiner Hearing)
- Application of Yates Petroleum Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Stonewall "EP" Com Well No. 1, located in Unit F of Section 30, Township 20 South, Range 28 East, Eddy County, New Mexico, to produce gas from the North Burton Flat-Wolfcamp Gas Pool and an undesignated Morrow gas pool.
- CASE 5847: (Continued from the February 2, 1977, Examiner Hearing)
- Application of Yates Petroleum Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Gossett "EU" Well No. 1, located in Unit K of Section 26, Township 17 South, Range 25 East, Eddy County, New Mexico, in such a manner as to produce gas from the Lower Wolfcamp or Upper Pennsylvanian and the Lower Pennsylvanian formations through the casing-tubing annulus and tubing, respectively.
- CASE 5848: (Continued from the February 2, 1977, Examiner Hearing)
- Application of Yates Petroleum Corporation for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Pipkin HE Well No. 1 to be drilled 660 feet from the South and West lines of Section 4, Township 18 South, Range 25 East, Eddy County, New Mexico, the S/2 of said Section 4 to be dedicated to the well.

## EXHIBIT "D"

PRODUCTIVE FORMATIONS OF WELLS WITHIN A  
TWO-MILE RADIUS OF PROPOSED HOBBS SWD WELL P-16

<u>COMPANY</u>	<u>LEASE</u>	<u>WELL</u>	<u>FORMATION</u>
Amoco	South Hobbs (GSA) Unit	NO.	
"	"	62	Grayburg-San Andres -466 to -582'
"	"	63	Grayburg-San Andres -496 to -655'
"	"	64	Grayburg-San Andres -492 to -585'
"	"	65	Grayburg-San Andres -426 to -614'
"	"	66	Grayburg-San Andres -414 to -624'
"	"	67	Grayburg-San Andres -384 to -596'
"	"	68	Grayburg-San Andres -459 to -590'
"	"	69	Grayburg-San Andres -509 to -672'
"	"	70	Grayburg-San Andres -454 to -534'
"	"	71	Grayburg-San Andres -391 to -465'
"	"	72	Grayburg-San Andres -387 to -457'
"	"	73	Grayburg-San Andres -512 to -667'
"	"	74	Grayburg-San Andres -384 to -586'
"	"	75	Grayburg-San Andres -439 to -618'
"	"	76	Grayburg-San Andres -401 to -558'
"	"	77	Grayburg-San Andres -394 to -595'
"	"	78	Grayburg-San Andres -467 to -660'
"	"	79	Grayburg-San Andres -507 to -585'
"	"	80	Grayburg-San Andres -530 to -568'
"	"	81	Grayburg-San Andres -496 to -543'
"	"	82	Grayburg-San Andres -417 to -505'
"	"	83	Grayburg-San Andres -421 to -600'
"	"	84	Grayburg-San Andres -409 to -618'
"	"	85	Grayburg-San Andres -550 to -570'
"	"	86	Grayburg-San Andres -501 to -609'
"	"	87	Grayburg-San Andres -475 to -632'
"	"	88	Grayburg-San Andres -386 to -580'
"	"	89	Grayburg-San Andres -500 to -615'
"	"	90	Grayburg-San Andres -464 to -524'
"	"	91	Grayburg-San Andres -450 to -597'
"	"	92	Grayburg-San Andres -439 to -600'
"	"	93	Grayburg-San Andres -480 to -588'
"	"	94	Grayburg-San Andres 4016 to 4177' Elev. not available
"	"	95	Grayburg-San Andres -477 to -585'
"	"	96	Grayburg-San Andres -465 to -593'
"	"	97	Grayburg-San Andres -575 to -612'
"	"	98	Grayburg-San Andres -467 to -512'
"	"	99	Grayburg-San Andres -452 to -506' T/A
"	"	100	Grayburg-San Andres -547 to -566'
"	"	101	Grayburg-San Andres -411 to -574'

<u>COMPANY</u>	<u>LEASE</u>	<u>WELL</u> <u>NO.</u>	<u>FORMATION</u>
Amoco Contd.	South Hobbs (GSA) Unit	102	Grayburg-San Andres -545 to -579'
"	"	103	Grayburg-San Andres -409 to -584'
"	"	104	Grayburg-San Andres -569 to -598'
"	"	105	Grayburg-San Andres -472 to -525'
"	"	106	Grayburg-San Andres -477 to -563'
"	"	107	Grayburg-San Andres -402 to -582'
"	"	108	Grayburg-San Andres -473 to -517'
"	"	109	Grayburg-San Andres -404 to -584'
"	"	110	Grayburg-San Andres -482 to -634'
"	"	111	Grayburg-San Andres -497 to -584'
"	"	34	Paddock -768 to -772' T/A
"	H. T. Orcutt	1	Grayburg-San Andres -398 to -498'
"	Terry et al	1	Grayburg-San Andres 4140 to 4194' Elev. not available
Christman	J. Hughes	1	4011' P/A
Cone-	Will Terry	1	Grayburg-San Andres -469 to -514' P/A
Energy	Foster B	1	Drinkard -3607 to -4004'
"	Foster C	1	Drinkard -3119 to 3264'
Felmont	Terry	1	-817' TD P/A
R. Lowe	F. Selman	1	-3886 to -4031' P/A
Marathon	State Sec. 9	1	South Bowers-Seven Rivers +407 to +267'
Martindale	Selman	1	Grayburg-San Andres 4202 to 4250' P/A
Moran	Etal	1	-670 to -702' Dry hole P/A
Pan American	A.L. Foster A	1	Blaineby, Drinkard -2542 to -3358 to -2652' -3462' P/A
Rice Eng.	Hobbs SWD	E-15	Lower San Andres -1063 to -1215'
Shenandoah	W. Terry	1	Drinkard -3135 to -3288' P/A
Shell	Terry	1	-640' TD Dry hole
Skelly	Mexico "U"	2	Grayburg-San Andres -469 to -554'
Sohio	Bordages etal	1	-6689' Dry hole
Stanolind	Terry Tract	1	4071 to 4185' Elev. not avail. P/A
"	Wright	6	4275' TD Dry hole P/A
Texaco	J. H. Moore	1	-480 to -528' P/A
"	N. Corp. Ltd.	2	-501 to -583' P/A
US Smelt.	Bordages	1	-569 to -618' dry, -3437 to -4279' dry P/A
Forest	Yates	1	San Andres -872 to 876' P/A

Application of Rice Engineering &  
Operating, Inc. for salt water  
disposal, Lea County, N.M.

Applicant in the above-styled cause  
seeks authority to dispose of produced  
salt water into the San Andres  
formation through the open hole  
interval from 4176 feet to 5500  
feet of its Nearburg & Ingram -  
Ohio State Well No. 1, located in  
Unit P of Section 16, Township 19  
South, Range 38 East, Hobbs Field,  
Lea County, New Mexico.



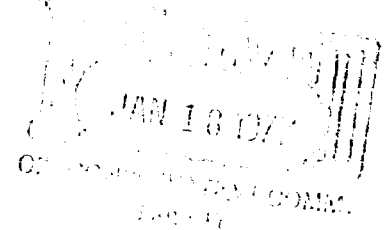
RICE Engineering & Operating, Inc.

Post Office Box 1142

Telephone (505) 393-9174

HOBBS, NEW MEXICO 88240

January 17, 1977



New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico 87501

Case 5860

Re: Rule 701, Injection of  
Fluids into Reservoirs  
(Salt Water Disposal)

Gentlemen:

Rice Engineering & Operating, Inc. as operator of the Hobbs Salt Water Disposal System, Lea County, New Mexico, hereby respectfully applies for a hearing to be held before the New Mexico Oil Conservation Commission for the purpose of securing a permit under Rule 701 to recomplete the abandoned Nearburg & Ingram-Ohio State Well No. 1, located in the SE/4 SE/4 Section 16, Township 19 South, Range 38 East, Lea County, New Mexico, as the Hobbs SWD System Well No. P-16, with salt water disposal into the San Andres formation.

Rice Engineering & Operating, Inc. further deposes and states the following:

- A. That said well is located 660' FSL and 660' FEL of Section 16, Township 19 South, Range 38 East, Lea County, New Mexico (see Exhibit "A").
- B. That said well was drilled as an unsuccessful deep test (TD 10,008') for possible productive formations with drilling complete on February 19, 1960 and plugging and abandonment completed on February 24, 1960.
- C. That said well has 13-3/8" OD casing set at 292 feet and 8-5/8" OD casing set at 4176 feet with cement circulated to the surface on both strings (see Exhibit "B").

D. That said well will be completed as a disposal well in the San Andres formation by (1) cleaning out to top of the cement plug at 5500 feet (base of San Andres formation), (2) installing 4½" OD P. L. tubing to 4176 feet and (3) disposing of produced water in the open hole section from 4176 feet to 5500 feet.

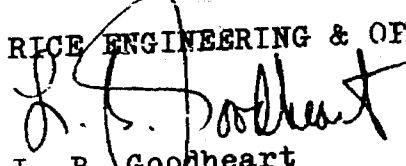
E. That the salt water to be injected is produced in the Hobbs Field.

F. That the volume of salt water to be disposed shall be approximately 5500 barrels per day.

Therefore, Rice Engineering & Operating, Inc. requests that the Secretary of the New Mexico Oil Conservation Commission set a date for this application to be heard, and after said hearing, to grant this permit to dispose of salt water in the Hobbs SWD Well No. P-16.

Yours very truly,

RICE ENGINEERING & OPERATING, INC.

  
L. B. Goodheart  
Division Manager

LBG/jp

Attachments: Form C-108  
Exhibit "A"  
Exhibit "B"  
Exhibit "C"  
Exhibit "D"  
Electrical Log

Case 5860

## NEW MEXICO OIL CONSERVATION COMMISSION

## APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR		ADDRESS			
Rice Engineering & Operating, Inc.		P. O. Box 1142, Hobbs, New Mexico			
LEASE NAME	WELL NO.	FIELD	COUNTY		
Hobbs Salt Water Disposal	P-16	Hobbs	Lea		
LOCATION					
UNIT LETTER <u>P</u> WELL IS LOCATED <u>660</u> FEET FROM THE <u>South</u> LINE AND <u>660</u> FEET FROM THE <u>East</u> LINE. SECTION <u>16</u> TOWNSHIP <u>19S</u> RANGE <u>38E</u> NMPM.					
CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8	292	300	Surface	Visual
INTERMEDIATE					
LONG STRING	8-5/8	4176	2200	Surface	Visual
TUBING	4 1/2	4160	NAME, MODEL AND DEPTH OF TUBING PACKER <u>None-floating oil blanket in tubing-casing annulus</u>		
NAME OF PROPOSED INJECTION FORMATION		TOP OF FORMATION		BOTTOM OF FORMATION	
San Andres		San Andres 4210		San Andres 5525	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS?		PERFORATIONS OR OPEN HOLES		PROPOSED INTERVAL(S) OF INJECTION	
Tubing		open hole		4176 to 5500 (-572 to -1896)	
IS THIS A NEW WELL DRILLED FOR DISPOSAL?		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED?		HAS WELL EVER BEEN PERFORATED IN AN ZONE OTHER THAN THE PROPOSED INJECTION ZONE?	
No		Oil well		No	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH					
None					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA	
Unknown		4210 (Grayburg)		-2542 SS (Drinkard)	
ANTICIPATED DAILY INJECTION VOLUME (BBLs.)	MINIMUM	MAXIMUM	OPEN OR CLOSED TYPE SYSTEM	IS INJECTION TO BE BY GRAVITY OR PRESSURE?	APPROX. PRESSURE (PSI)
	3000	7000	Semi closed	Gravity	
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -			WATER TO BE DISPOSED OF	NATURAL WATER IN DISPOSAL ZONE	ARE WATER ANALYSES ATTACHED?
			Yes	Yes	No
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)					
Muriel T. McNeill, Box 686, Hobbs, New Mexico 88240					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL					
Amoco Production Company, Box 68, Hobbs, New Mexico 88240					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING?		SURFACE OWNER		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL	
Yes		Yes		Yes	
SEE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)		PLAT OF AREA		ELECTRICAL LOG	
		Yes		Yes	
				DIAGRAMMATIC SKETCH OF WELL	
				Yes	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

(Signature) B. Goodheart

Division Manager

(Title)

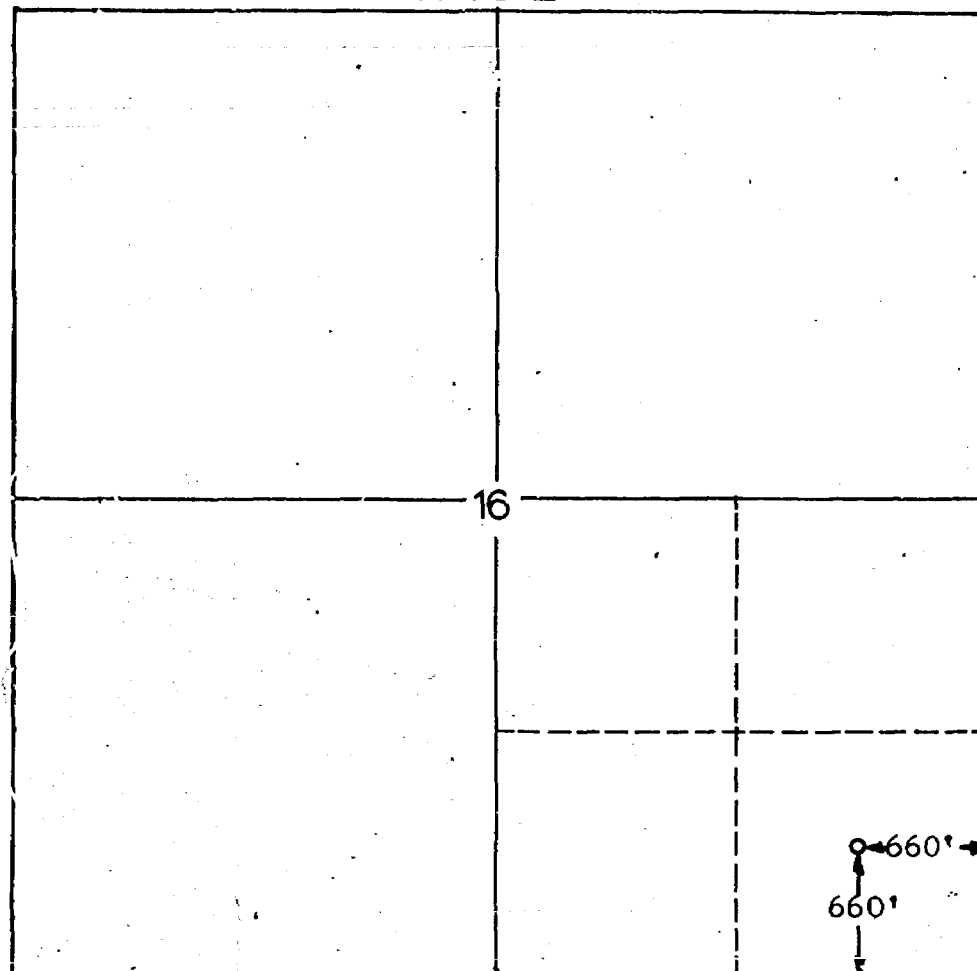
January 17, 1977

(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

R 38 E

N



T 19 S

LEA COUNTY, NEW MEXICO

Exhibit "A"

DWN			WELL NO. P-16 HOBBS SWD SYSTEM	SCALE 1"=1000'
			Rice Engineering & Operating, Inc. Hobbs, New Mexico	DWG NO.

Proposed Disposal Zone  
4176-5500

13 3/8" OD 48#-H Casing Set  
@ 292' w/300 sks. Cement  
Cement Circulated to Surface

4 1/2" Plastic Lined Tubing Set  
@ approx. 4160' w/Oil Blanket  
in Tubing-Casing Annulus

8 5/8" OD 24# & 32# J&H Casing  
Set @ 4176' w/2200 sks. Cement  
Cement Circulated to Surface

Cement Plug 5500-5566

Cement Plug 6600-6666

Cement Plug 8100-8300

Cement Plug 9700-9800

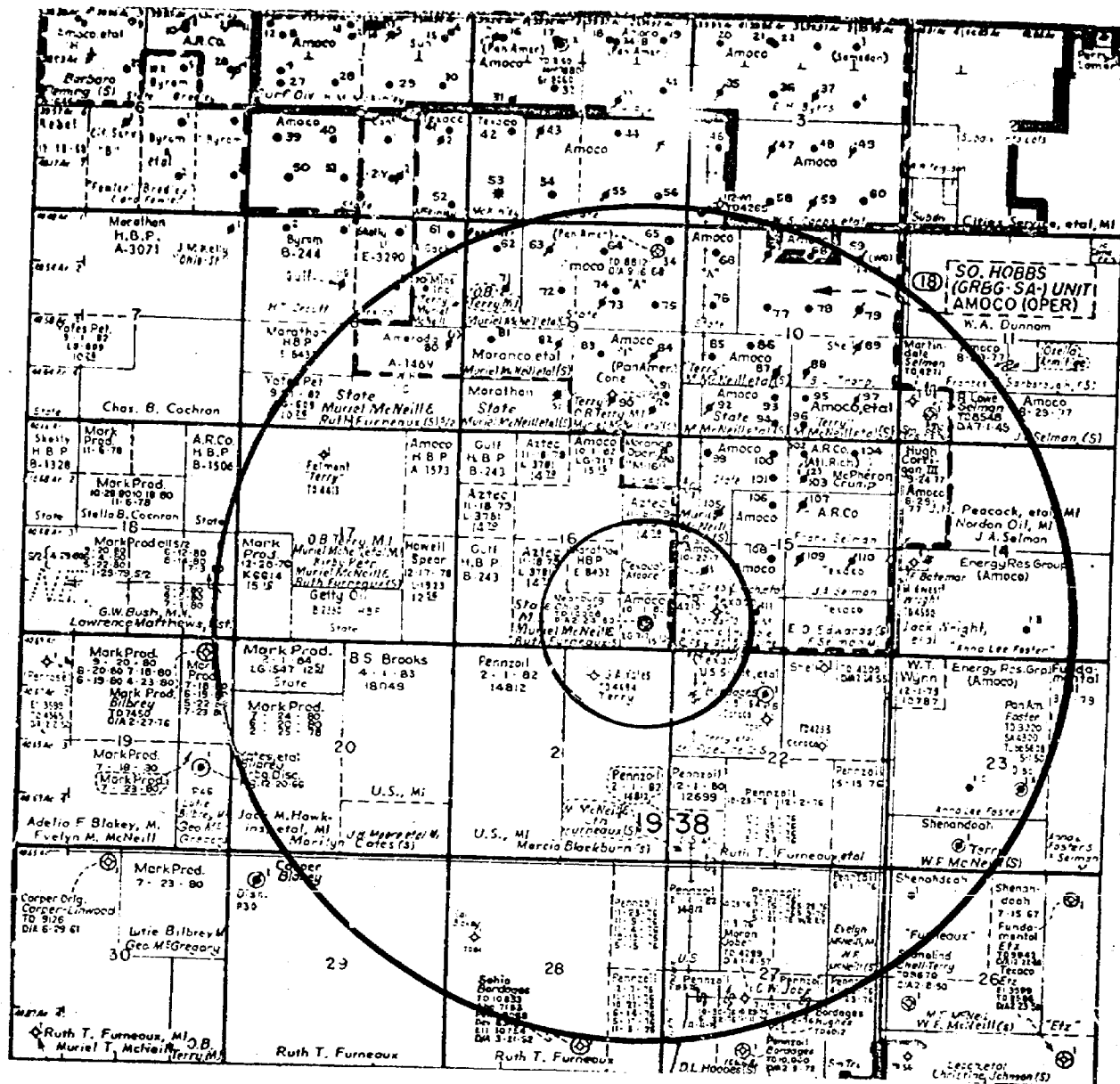
TD-10,008'

DIAGRAMMATIC SKETCH OF WELL  
660' FSL & 660' FEL Section 16, T19S, R38E  
Lea County, New Mexico

(EXHIBIT "B")

DWN			WELL NO. P-16 HOBBS SWD SYSTEM	SCALE NONE
			Rice Engineering & Operating, Inc. Hobbs, New Mexico	DWG NO.

R 38 E



LEA COUNTY, NEW MEXICO

EXHIBIT "C"

DWN			AREA PLAT HOBBS SWD WELL NO. P-16	SCALE 1" = 4000
			Rice Engineering & Operating, Inc. Hobbs, New Mexico	DWG NO.

## EXHIBIT "D"

PRODUCTIVE FORMATIONS OF WELLS WITHIN A  
TWO-MILE RADIUS OF PROPOSED HOBBS SWD WELL P-16

<u>COMPANY</u>	<u>LEASE</u>	<u>WELL</u>	<u>FORMATION</u>
Amoco	South Hobbs (GSA) Unit	NO.	
"	"	62	Grayburg-San Andres -466 to -582'
"	"	63	Grayburg-San Andres -496 to -655'
"	"	64	Grayburg-San Andres -492 to -585'
"	"	65	Grayburg-San Andres -426 to -614'
"	"	66	Grayburg-San Andres -414 to -624'
"	"	67	Grayburg-San Andres -384 to -596'
"	"	68	Grayburg-San Andres -459 to -590'
"	"	69	Grayburg-San Andres -509 to -672'
"	"	70	Grayburg-San Andres -454 to -534'
"	"	71	Grayburg-San Andres -391 to -465'
"	"	72	Grayburg-San Andres -387 to -457'
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"	"	92	Grayburg-San Andres -439 to -600'
"	"	93	Grayburg-San Andres -480 to -588'
"	"	94	Grayburg-San Andres 4016 to 4177' Elev. not available
"	"	95	Grayburg-San Andres -477 to -585'
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<u>COMPANY</u>	<u>LEASE</u>	<u>WELL NO.</u>	<u>FORMATION</u>
Amoco Contd.	South Hobbs (GSA) Unit	102	Grayburg-San Andres -546 to -579'
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Energy	Foster B	1	Drinkard -3607 to -4004'
"	Foster C	1	Drinkard -3999 to 3264'
Felmont	Terry	1	-817' TD P/A
R. Lowe	F. Selman	1	-3886 to -4032' P/A
Marathon	State Sec. 9	1	South Bowers-Seven Rivers +407 to +267'
Martindale	Selman	1	Grayburg-San Andres 4202 to 4250' P/A
Moran	Etal	1	-670 to -702' Dry hole P/A
Pan American	A.L.Foster A	1	Blaine, Drinkard -2542 to -3358 to -2652' -3462' P/A
Rice Eng.	Hobbs SWD	E-15	Lower San Andres -1063 to -1215'
Shenandoah	W. Terry	1	Drinkard -3135 to -3288' P/A
Shell	Terry	1	-640' TD Dry hole
Skelly	Mexico "U"	2	Grayburg-San Andres -469 to -554'
Sohio	Bordages et al	1	-6689' Dry hole
Stanolind	Terry Tract	1	4071 to 4185' Elev. not avail. P/A
"	Wright	6	4275' TD Dry hole P/A
Texaco	J. H. Moore	1	-480 to -528' P/A
"	N. Corp. Ltd.	2	-501 to -583' P/A
US Smelt.	Bordages	1	-569 to -618' dry, -3437 to -4279' dry P/A
Forest	Yates	1	San Andres -872 to 876' P/A



**RICE Engineering & Operating, Inc.**

Post Office Box 1142

Telephone (505) 393-9174

HOBBS, NEW MEXICO 88240

January 17, 1977

New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico 87501

Case 5860

Re: Rule 701, Injection of  
Fluids into Reservoirs  
(Salt Water Disposal)

Gentlemen:

Rice Engineering & Operating, Inc. as operator of the Hobbs Salt Water Disposal System, Lea County, New Mexico, hereby respectfully applies for a hearing to be held before the New Mexico Oil Conservation Commission for the purpose of securing a permit under Rule 701 to recomplete the abandoned Hearburg & Ingram-Ohio State Well No. 1, located in the SE/4 SE/4 Section 16, Township 19 South, Range 38 East, Lea County, New Mexico, as the Hobbs SWD System Well No. P-16, with salt water disposal into the San Andres formation.

Rice Engineering & Operating, Inc. further deposes and states the following:

- A. That said well is located 660' FSL and 660' FSL of Section 16, Township 19 South, Range 38 East, Lea County, New Mexico (see Exhibit "A").
- B. That said well was drilled as an unsuccessful deep test (TD 10,008') for possible productive formations with drilling complete on February 19, 1960 and plugging and abandonment completed on February 24, 1960.
- C. That said well has 13-3/8" OD casing set at 292 feet and 8-5/8" OD casing set at 4176 feet with cement circulated to the surface on both strings (see Exhibit "B").

D. That said well will be completed as a disposal well in the San Andres formation by (1) cleaning out to top of the cement plug at 5500 feet (base of San Andres formation), (2) installing 4½" OD P. L. tubing to 4176 feet and (3) disposing of produced water in the open hole section from 4176 feet to 5500 feet.


E. That the salt water to be injected is produced in the Hobbs Field.

F. That the volume of salt water to be disposed shall be approximately 5500 barrels per day.

Therefore, Rice Engineering & Operating, Inc. requests that the Secretary of the New Mexico Oil Conservation Commission set a date for this application to be heard, and after said hearing, to grant this permit to dispose of salt water in the Hobbs SWD Well No. P-16.

Yours very truly,

RICE ENGINEERING & OPERATING, INC.



L. B. Goodheart  
Division Manager

LBG/jp

Attachments: Form C-108  
Exhibit "A"  
Exhibit "B"  
Exhibit "C"  
Exhibit "D"  
Electrical Log

Case 5860

NEW MEXICO OIL CONSERVATION COMMISSION  
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR <b>Rice Engineering &amp; Operating, Inc.</b>		ADDRESS <b>P. O. Box 1142, Hobbs, New Mexico</b>	
LEASE NAME <b>System</b>	WELL NO. <b>P-16</b>	FIELD <b>Hobbs</b>	COUNTY <b>Lea</b>
LOCATION <b>Hobbs Salt Water Disposal</b>			
UNIT LETTER <b>P</b> WELL IS LOCATED <b>660</b> FEET FROM THE <b>South</b> LINE AND <b>660</b> FEET FROM THE <b>East</b> LINE, SECTION <b>16</b> TOWNSHIP <b>19S</b> RANGE <b>38E</b> NMPM.			

CASING AND TUBING DATA					
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	13-3/8	292	300	Surface	Visual
INTERMEDIATE					
LONG STRING	8-5/8	4176	2200	Surface	Visual
TUBING	4 1/2	4160	NAME, MODEL AND DEPTH OF TUBING PACKER <b>None-floating oil blanket in tubing-casing annulus</b>		
NAME OF PROPOSED INJECTION FORMATION <b>San Andres</b>			TOP OF FORMATION <b>San Andres 4210</b>		BOTTOM OF FORMATION <b>San Andres 5525</b>
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? <b>Tubing</b>			PERFORATIONS OR OPEN HOLES <b>open hole</b>		
PROPOSED INTERVAL(S) OF INJECTION <b>4176 to 5500 (-572 to -1896)</b>					
IS THIS A NEW WELL DRILLED FOR DISPOSAL? <b>No</b>		IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? <b>Oil well</b>		HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? <b>No</b>	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH <b>None</b>					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA <b>Unknown</b>		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA <b>4210 (Grayburg)</b>		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA <b>-2542 SS (Drinkard)</b>	
ANTICIPATED DAILY INJECTION VOLUME (BBL/DAY) <b>3000</b>	MINIMUM <b>7000</b>	MAXIMUM <b>7000</b>	OPEN OR CLOSED TYPE SYSTEM <b>Semi closed</b>	IS INJECTION TO BE BY GRAVITY OR PRESSURE? <b>Gravity</b>	APPROX. PRESSURE (PSI) <b>-</b>
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE <b>Yes</b>			NATURAL WATER IN DISPOSAL ZONE <b>Yes</b>		
ARE WATER ANALYSES ATTACHED? <b>No</b>					
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) <b>Muriel T. McNeill, Box 686, Hobbs, New Mexico 88240</b>					
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL <b>Amoco Production Company, Box 68, Hobbs, New Mexico 88240</b>					
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? <b>Yes</b>		SURFACE OWNER <b>Yes</b>		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL <b>Yes</b>	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)? <b>Yes</b>		PLAY OF AREA <b>Yes</b>		ELECTRICAL LOG <b>Yes</b>	
				DIAGRAMMATIC SKETCH OF WELL <b>Yes</b>	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

(Signature) **B. Goodheart**

**Division Manager**  
(Title)

**January 17, 1977**  
(Date)

NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.

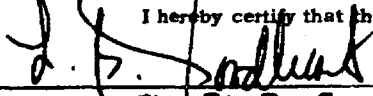
NEW MEXICO OIL CONSERVATION COMMISSION  
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

Case 5860

OPERATOR <b>Rice Engineering &amp; Operating, Inc.</b>		ADDRESS <b>P. O. Box 1142, Hobbs, New Mexico</b>	
LEASE NAME <b>System</b>	WELL NO. <b>P-16</b>	COUNTY <b>Hobbs</b>	COUNTY <b>Lea</b>
LOCATION UNIT LETTER <b>P</b> WELL IS LOCATED <b>660</b> FEET FROM THE <b>South</b> LINE AND <b>660</b> FEET FROM THE <b>East</b> LINE, SECTION <b>16</b> TOWNSHIP <b>19S</b> RANGE <b>38E</b> NMPM.			

NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT	TOP OF CEMENT	TOP DETERMINED BY
SURFACE CASING	<b>13-3/8</b>	<b>292</b>	<b>300</b>	<b>Surface</b>	<b>Visual</b>
INTERMEDIATE					
LONG STRING	<b>8-5/8</b>	<b>4176</b>	<b>2200</b>	<b>Surface</b>	<b>Visual</b>
TUBING	<b>4 1/2</b>	<b>4160</b>	NAME, MODEL AND DEPTH OF TUBING PACKER <b>None-floating oil blanket in tubing-casing annulus</b>		
NAME OF PROPOSED INJECTION FORMATION <b>San Andres</b>		TOP OF FORMATION <b>San Andres 4210</b>		BOTTOM OF FORMATION <b>San Andres 5525</b>	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? <b>Tubing</b>		PERFORATIONS OR OPEN HOLES? <b>open hole</b>		PROPOSED INTERVAL(S) OF INJECTION <b>4176 to 5500 (-572 to -1096)</b>	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? <b>No</b>	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? <b>Oil well</b>			HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? <b>No</b>	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH <b>None</b>					
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA <b>Unknown</b>		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA <b>4210 (Grayburg)</b>		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA <b>-2542 SS (Drinkard)</b>	
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ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - <b>Yes</b>			WATER TO BE DISPOSED OF <b>Yes</b>		
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) <b>Muriel T. McNeill, Box 686, Hobbs, New Mexico 88240</b>			NATURAL WATER IN DISPOSAL ZONE <b>Yes</b>		
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL <b>Amoco Production Company, Box 68, Hobbs, New Mexico 88240</b>			ARE WATER ANALYSES ATTACHED? <b>No</b>		
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? <b>Yes</b>					
SURFACE OWNER <b>Yes</b>		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL <b>Yes</b>		THE NEW MEXICO STATE ENGINEER <b>Yes</b>	
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)? <b>Yes</b>		ELECTRICAL LOG <b>Yes</b>		DIAGRAMMATIC SKETCH OF WELL <b>Yes</b>	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

  
(Signature) **B. Goodheart**Division Manager  
(Title)January 17, 1977  
(Date)

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R 38 E

T 19 S

16

660'  
660'

LEA COUNTY, NEW MEXICO

Exhibit "A"

Exhibit "A"				
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TD-10,008'

DIAGRAMMATIC SKETCH OF WELL  
660' FSL & 660' FEL Section 16, T19S, R38E  
Lea County, New Mexico

(EXHIBIT "B")

DWN			WELL NO. P-16 HOBBS SWD SYSTEM	SCALE NONE
			Rice Engineering & Operating, Inc. Hobbs, New Mexico	DWG NO.

[illegible]

EXHIBIT "C"

DWN			AREA PLAT HOBBS SWD WELL NO. P-16	SCALE 1" = 4000
			Rice Engineering & Operating, Inc. Hobbs, New Mexico	DWG NO.

## EXHIBIT "D"

PRODUCTIVE FORMATIONS OF WELLS WITHIN A  
TWO-MILE RADIUS OF PROPOSED HOBBS SWD WELL P-16

<u>COMPANY</u>	<u>LEASE</u>	<u>WELL</u>	<u>FORMATION</u>
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Marathon	State Sec. 9	1	South Bowers-Seven Rivers +407 to +267'
Martindale	Selman	1	Grayburg-San Andres 4202 to 4250' P/A
Moran	Egal	1	-670 to -702' Dry hole P/A
Pan American	A.L. Foster A	1	Blinebry, Drinkard -2542 to -3358 to -2652' -3462' P/A
Rice Eng.	Hobbs SWD	E-15	Lower San Andres -1063 to -1215'
Shenandoah	W. Terry	1	Drinkard -3135 to -3288' P/A
Shell	Terry	1	-640' TD Dry hole
Skelly	Mexico "U"	2	Grayburg-San Andres -469 to -554'
Sohio	Bordages et al	1	-6689' Dry hole
Stanolind	Terry Tract	1	4071 to 4185' Elev. not avail. P/A
"	Wright	6	4275' TD Dry hole P/A
Texaco	J. H. Moore	1	-480 to -528' P/A
"	N. Corp. Ltd.	2	-501 to -583' P/A
US Smelt.	Bordages	1	-569 to -618' dry, -3437 to -4279' dry P/A
Forest	Yates	1	San Andres -872 to 876' P/A

**RICE Engineering & Operating, Inc.**

Post Office Box 1142

Telephone (505) 393-9174

HOBBS, NEW MEXICO 88240

January 17, 1977

New Mexico Oil Conservation Commission  
P. O. Box 871  
Santa Fe, New Mexico 87501

Re: Rule 701, Injection of  
Fluids into Reservoirs  
(Salt Water Disposal)

Gentlemen:

Rice Engineering & Operating, Inc. as operator of the Hobbs Salt Water Disposal System, Lea County, New Mexico, hereby respectfully applies for a hearing to be held before the New Mexico Oil Conservation Commission for the purpose of securing a permit under Rule 701 to recomplete the abandoned Hearburg & Ingram-Ohio State Well No. 1, located in the SE/4 SE/4 Section 16, Township 19 South, Range 38 East, Lea County, New Mexico, as the Hobbs SWD System Well No. P-16, with salt water disposal into the San Andres formation.

Rice Engineering & Operating, Inc. further deposes and states the following:

- A. That said well is located 660' FSL and 660' FHL of Section 16, Township 19 South, Range 38 East, Lea County, New Mexico (see Exhibit "A").
- B. That said well was drilled as an unsuccessful deep test (TD 10,008') for possible productive formations with drilling complete on February 19, 1960 and plugging and abandonment completed on February 24, 1960.
- C. That said well has 13-3/8" OD casing set at 292 feet and 8-5/8" OD casing set at 4176 feet with cement circulated to the surface on both strings (see Exhibit "B").

D. That said well will be completed as a disposal well in the San Andres formation by (1) cleaning out to top of the cement plug at 5500 feet (base of San Andres formation), (2) installing 4½" OD P. L. tubing to 4176 feet and (3) disposing of produced water in the open hole section from 4176 feet to 5500 feet.

E. That the salt water to be injected is produced in the Hobbs Field.

F. That the volume of salt water to be disposed shall be approximately 5500 barrels per day.

Therefore, Rice Engineering & Operating, Inc. requests that the Secretary of the New Mexico Oil Conservation Commission set a date for this application to be heard, and after said hearing, to grant this permit to dispose of salt water in the Hobbs SWD Well No. P-16.

Yours very truly,

RICE ENGINEERING & OPERATING, INC.

*L. B. Goodheart*  
L. B. Goodheart  
Division Manager

LBG/jp

Attachments: Form C-108  
Exhibit "A"  
Exhibit "B"  
Exhibit "C"  
Exhibit "D"  
Electrical Log

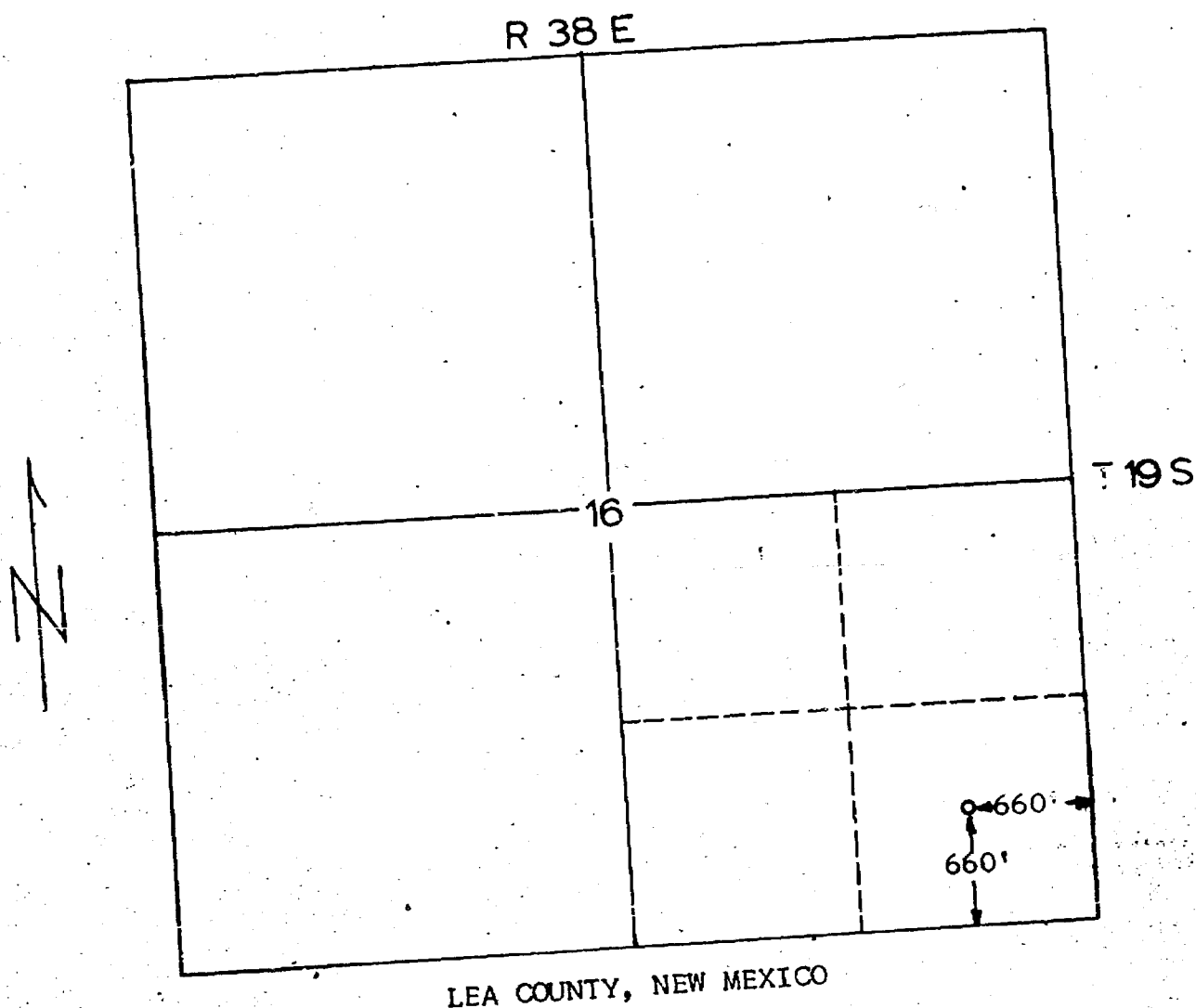
NEW MEXICO OIL CONSERVATION COMMISSION  
APPLICATION TO DISPOSE OF SALT WATER BY INJECTION INTO A POROUS FORMATION

OPERATOR <b>Rice Engineering &amp; Operating, Inc.</b>		ADDRESS <b>P. O. Box 1142, Hobbs, New Mexico</b>	
LEASE NAME <b>Hobbs Salt Water Disposal System</b>	WELL NO. <b>P-16</b>	FIELD <b>Hobbs</b>	COUNTY <b>Lea</b>
LOCATION UNIT LETTER <b>P</b> ; WELL IS LOCATED <b>660</b> FEET FROM THE <b>South</b> LINE AND <b>660</b> FEET FROM THE <b>East</b> LINE, SECTION <b>16</b> TOWNSHIP <b>19S</b> RANGE <b>38E</b> NMPM.			
CASING AND TUBING DATA			
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT
SURFACE CASING	<b>13-3/8</b>	<b>292</b>	<b>300</b>
INTERMEDIATE			
LONG STRING	<b>8-5/8</b>	<b>4176</b>	<b>2200</b>
TUBING	<b>4</b>	<b>4160</b>	<b>blanket in tubing-casing annulus</b>
NAME OF PROPOSED INJECTION FORMATION <b>San Andres</b>		TOP OF CEMENT <b>Surface</b>	
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? <b>Tubing</b>		TOP OF FORMATION <b>San Andres 4210</b>	
PERFORATIONS OR OPEN HOLES <b>open hole</b>		PROPOSED INTERVAL(S) OF INJECTION <b>4176 to 5500 (-572 to -1896)</b>	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? <b>No</b>		HAB WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? <b>No</b>	
IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? <b>Oil well</b>			
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH <b>None</b>			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA <b>Unknown</b>		DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA <b>-2542 SS (Drinkard)</b>	
ANTICIPATED DAILY INJECTION VOLUME (BBL.) MINIMUM <b>3000</b> MAXIMUM <b>7000</b>		OPEN OR CLOSED TYPE SYSTEM <b>Semi closed</b>	
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE - <b>Yes</b>		IS INJECTION TO BE BY GRAVITY OR PRESSURE? <b>Gravity</b>	
WATER TO BE DISPOSED OF <b>Yes</b>		NATURAL WATER IN DISPOSAL ZONE <b>Yes</b>	
ARE WATER ANALYSES ATTACHED? <b>No</b>		APPROX. PRESSURE (PSI) <b>-</b>	
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) <b>Muriel T. McNeill, Box 686, Hobbs, New Mexico 88240</b>			
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL <b>Anaco Production Company, Box 68, Hobbs, New Mexico 88240</b>			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? <b>Yes</b>		EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL <b>Yes</b>	
ARE THE FOLLOWING EXAMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B)? <b>Yes</b>		ELECTRICAL LOG <b>Yes</b>	
SURFACE OWNER <b>Yes</b>		THE NEW MEXICO STATE ENGINEER <b>Yes</b>	
PLAT OF AREA <b>Yes</b>		DIAGRAMMATIC SKETCH OF WELL <b>Yes</b>	

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

*(Signature)* **B. Goodheart** **Division Manager** **January 17, 1977**  
(Title) (Date)

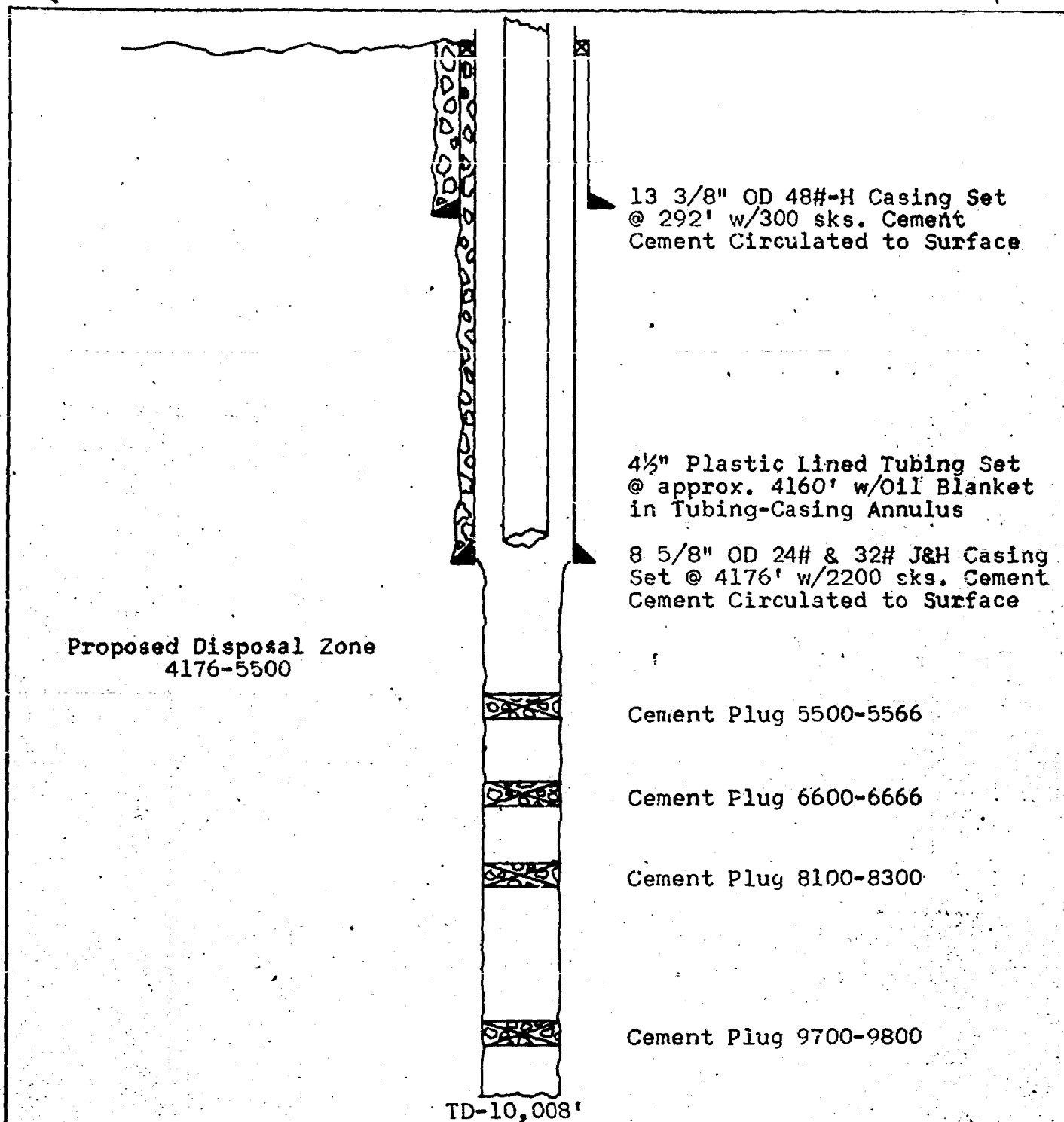
NOTE: Should waivers from the State Engineer, the surface owner, and all operators within one-half mile of the proposed injection well, not accompany this application, the New Mexico Oil Conservation Commission will hold the application for a period of 15 days from the date of receipt by the Commission's Santa Fe office. If at the end of the 15-day waiting period no protest has been received by the Santa Fe office, the application will be processed. If a protest is received, the application will be set for hearing, if the applicant so requests. SEE RULE 701.



LEA COUNTY, NEW MEXICO

Exhibit "A"

DWN			WELL NO. P-16 HOBBS SWD SYSTEM	SCALE 1"=1000'
			Rice Engineering & Operating, Inc. Hobbs, New Mexico	DWG NO.

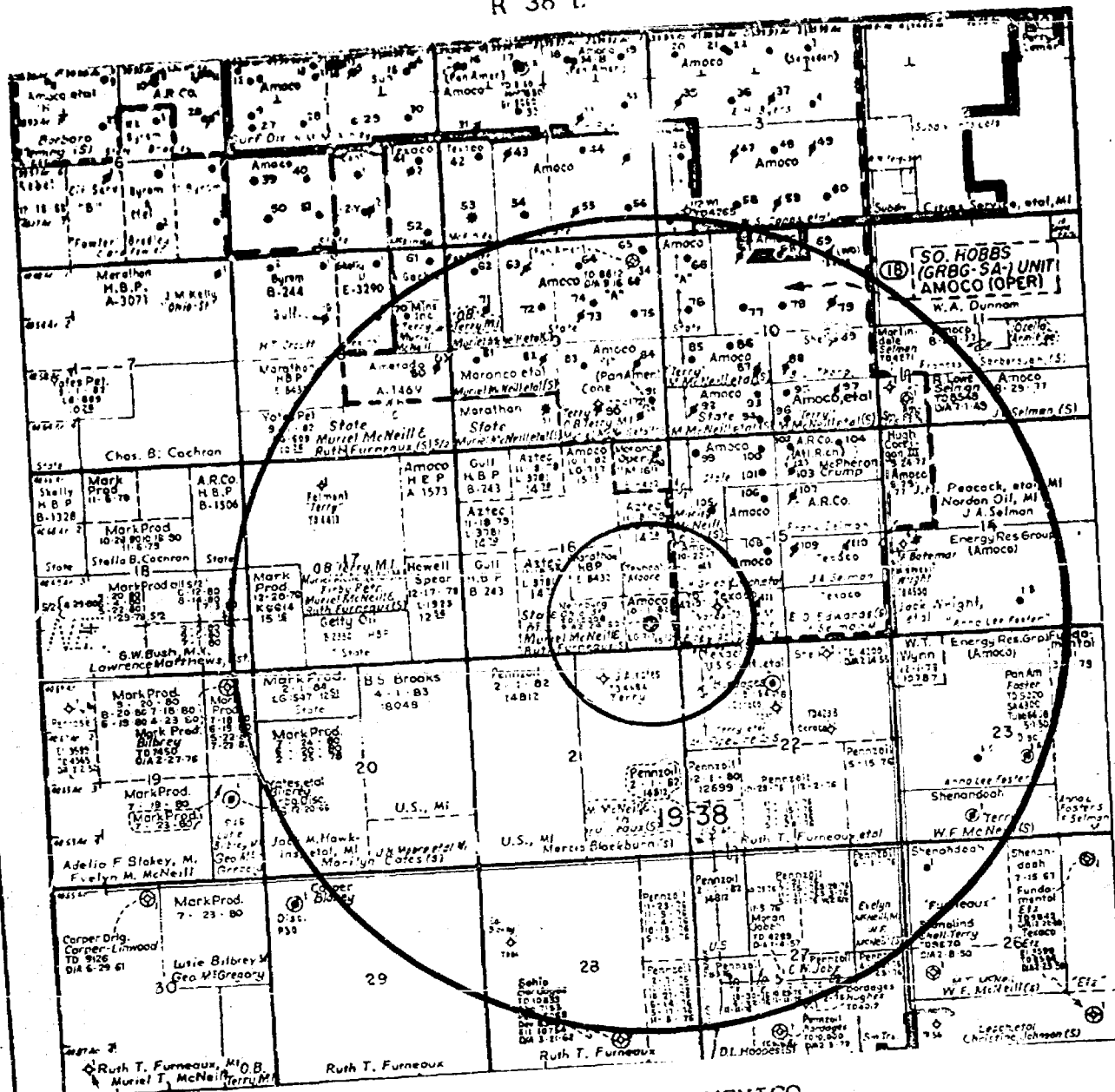


DIAGRAMMATIC SKETCH OF WELL  
660' FSL & 660' FEL Section 16, T19S, R38E  
Lea County, New Mexico

(EXHIBIT "B")

DWN			WELL NO. P-16 HOBBS SWD SYSTEM	SCALE NONE
			Rice Engineering & Operating, Inc. Hobbs, New Mexico	DWG NO.

R 38 E



LEA COUNTY, NEW MEXICO

EXHIBIT "C"

DWN	AREA PLAT HOBBS SWD WELL NO. P-16		SCALE 1" = 4000
	Rice Engineering & Operating, Inc. Hobbs, New Mexico		DWG NO.

## EXHIBIT "D"

PRODUCTIVE FORMATIONS OF WELLS WITHIN A  
TWO-MILE RADIUS OF PROPOSED HOBBS SWD WELL P-16

<u>COMPANY</u>	<u>LEASE</u>	<u>WELL</u>	<u>FORMATION</u>
<u>Amoco</u>	<u>South Hobbs</u> <u>(GSA) Unit</u>	<u>NO.</u>	
"	"	62	Grayburg-San Andres -466 to -582'
"	"	63	Grayburg-San Andres -496 to -655'
"	"	64	Grayburg-San Andres -492 to -585'
"	"	65	Grayburg-San Andres -426 to -614'
"	"	66	Grayburg-San Andres -414 to -624'
"	"	67	Grayburg-San Andres -384 to -596'
"	"	68	Grayburg-San Andres -459 to -590'
"	"	69	Grayburg-San Andres -509 to -672'
"	"	70	Grayburg-San Andres -454 to -534'
"	"	71	Grayburg-San Andres -391 to -465'
"	"	72	Grayburg-San Andres -387 to -457'
"	"	73	Grayburg-San Andres -512 to -667'
"	"	74	Grayburg-San Andres -384 to -586'
"	"	75	Grayburg-San Andres -439 to -618'
"	"	76	Grayburg-San Andres -401 to -558'
"	"	77	Grayburg-San Andres -394 to -595'
"	"	78	Grayburg-San Andres -467 to -660'
"	"	79	Grayburg-San Andres -507 to -585'
"	"	80	Grayburg-San Andres -530 to -568'
"	"	81	Grayburg-San Andres -496 to -543'
"	"	82	Grayburg-San Andres -417 to -505'
"	"	83	Grayburg-San Andres -421 to -600'
"	"	84	Grayburg-San Andres -409 to -618'
"	"	85	Grayburg-San Andres -550 to -570'
"	"	86	Grayburg-San Andres -501 to -609'
"	"	87	Grayburg-San Andres -475 to -632'
"	"	88	Grayburg-San Andres -386 to -580'
"	"	89	Grayburg-San Andres -500 to -615'
"	"	90	Grayburg-San Andres -464 to -524'
"	"	91	Grayburg-San Andres -450 to -597'
"	"	92	Grayburg-San Andres -439 to -600'
"	"	93	Grayburg-San Andres -480 to -588'
"	"	94	Grayburg-San Andres 4016 to 4177' Elev. not available
"	"	95	Grayburg-San Andres -477 to -585'
"	"	96	Grayburg-San Andres -465 to -593'
"	"	97	Grayburg-San Andres -575 to -612'
"	"	98	Grayburg-San Andres -467 to -512'
"	"	99	Grayburg-San Andres -452 to -506' T/A
"	"	100	Grayburg-San Andres -547 to -566'
"	"	101	Grayburg-San Andres -411 to -574'



<u>COMPANY</u>	<u>LEASE</u>	<u>WELL NO.</u>	<u>FORMATION</u>
Amoco Contd.	South Hobbs (GSA) Unit	102	Grayburg-San Andres -546 to -579'
"	"	103	Grayburg-San Andres -409 to -584'
"	"	104	Grayburg-San Andres -569 to -598'
"	"	105	Grayburg-San Andres -472 to -525'
"	"	106	Grayburg-San Andres -477 to -563'
"	"	107	Grayburg-San Andres -402 to -582'
"	"	108	Grayburg-San Andres -473 to -517'
"	"	109	Grayburg-San Andres -404 to -584'
"	"	110	Grayburg-San Andres -482 to -634'
"	"	111	Grayburg-San Andres -497 to -584'
"	"	34	Paddock -768 to -772' T/A
"	H. T. Orcutt	1	Grayburg-San Andres -398 to -498'
"	Terry et al	1	Grayburg-San Andres 4140 to 4194' Elev. not available
Christman	J. Hughes	1	4011' P/A
Gone	Will Terry	1	Grayburg-San Andres -469 to -514' P/A
Energy	Poster B	1	Drinkard -3607 to -4004'
"	Poster C	1	Drinkard -3999 to 3264'
Felmont	Terry	1	-817' TD P/A
R. Lowe	F. Selman	1	-3886 to -4031' P/A
Marathon	State Sec. 9	1	South Bowers-Seven Rivers +407 to +267'
Martindale	Selman	1	Grayburg-San Andres 4202 to 4250' P/A
Moran	Egal	1	-670 to -702' Dry hole P/A
Pan American	A.L. Foster A	1	Blinedry, Drinkard -2542 to -3358 to -2652' -3462' P/A
Rice Eng.	Hobbs SWD	E-15	Lower San Andres -1063 to -1215'
Shenandoah	W. Terry	1	Drinkard -3135 to -3288' P/A
Shell	Terry	1	-640' TD Dry hole
Skelly	Mexico "U"	2	Grayburg-San Andres -469 to -554'
Sohio	Bordages et al	1	-6689' Dry hole
Stanolind	Terry Tract	1	4071 to 4185' Elev. not avail. P/A
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Texaco	J. H. Moore	1	-480 to -528' P/A
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US Smelt.	Bordages	1	-569 to -618' dry, -3437 to -4279' dry P/A
Forest	Yates	1	San Andres -872 to 876' P/A

DRAFT

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

dr/

IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE NO. 5860

Order No. R- 5384

APPLICATION OF RICE ENGINEERING &  
OPERATING, INC. 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 February 16, 1977,  
at Santa Fe, New Mexico, before Examiner, Richard L. Stamets.

NOW, on this        day of February, 1977, 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, Rice Engineering & Operating, Inc.,  
is the owner and operator of the Hobbs SWD Well No. P-16,  
located in Unit P of Section 16, Township 19 South,  
Range 38 East, NMPM, Hobbs Field,  
Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to  
dispose of produced salt water into the San Andres  
formation, with injection into the open hole interval  
from approximately 4176 feet to 5500 feet.

(4) That the injection should be accomplished through 4 1/2  
under a floating  
oil blanketing -inch plastic lined tubing installed in a packer  
set at approximately feet; that the casing-tubing annulus  
should be filled with an inert fluid, and that a pressure gauge  
or approved leak detection device should be attached to the

CASE NO. \_\_\_\_\_

*the tubing and the*  
annulus in order to determine leakage in the casing <sup>or</sup> tubing,  
~~or packer.~~

(4) That the injection well or system should be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than <sup>835</sup> ~~700~~ psi.

(5) That the operator should notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(6) That the operator should take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

(7) 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, Rice Engineering & Operating, Inc., is hereby authorized to utilize its Hobbs SWD Well No. P-16, located in Unit P of Section 16, Township 19 South, Range 38 East, NMPM, Hobbs Field, Lea County, New Mexico, to dispose of produced salt water into the San Andres formation, injection to be accomplished through 4 1/2-inch tubing ~~installed in a packer set at approximately \_\_\_\_\_ feet,~~  
*under an oil blank*  
with injection into the open hole interval from approximately 4176 feet to 5500 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined, ~~that the casing tubing annulus shall be filled with an inert fluid;~~ <sup>*tubing and to the casing-tubing*</sup> and that a pressure gauge shall be attached to the annulus ~~or the annulus shall be equipped with an approved leak detection device~~ in order to determine leakage in the casing <sup>or</sup> tubing, ~~or packer.~~

(2) That the injection well or system shall be equipped with a pop-off valve or acceptable substitute which will limit the wellhead pressure on the injection well to no more than <sup>235</sup>~~700~~ psi.

(3) That the operator shall notify the supervisor of the Hobbs district office of the Commission of the date and time of the installation of disposal equipment so that the same may be inspected.

(4) That the operator shall immediately notify the supervisor of the Commission's Hobbs district office of the failure of the tubing, casing, or packer, in said well or the leakage of water from or around said well and shall take such steps as may be timely and necessary to correct such failure or leakage.

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

(6) 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.