

RICE *Engineering & Operating, Inc.*

Post Office Box 1142

Telephone (505) 393-9174

HOBBS, NEW MEXICO 88240

November 5, 1969

NOV 6 1969

SWD - 109

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

See Now

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

Gentlemen:

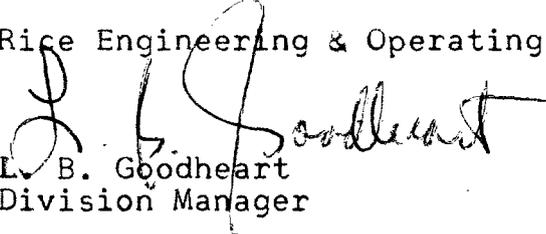
Attached is revised Form C-108 and Exhibit "B" showing a change in the Proposed Intervals of Injection for our Vacuum SWD Well No. H-35, located 2310' FNL & 990' FEL of Section 35, T17S, R35E, Lea County, New Mexico. The original application and related information was transmitted under our cover letter dated October 15, 1969.

Cities Service Oil Company protested the proposed perforations in the intervals 5030-40' and 5110-60'. Cities Service has been contacted regarding the deletion of the protested intervals and have advised Rice Engineering that a waiver would be forthcoming.

Rice Engineering & Operating, Inc., as operator of the Vacuum Salt Water Disposal System, respectfully requests administrative approval for the proposed salt water disposal well H-35 as per revised Form C-108.

Yours very truly,

Rice Engineering & Operating, Inc.

  
L. B. Goodheart  
Division Manager

JVR/nb

Attachments

REVISED

Form C-101  
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION

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

OPERATOR Rice Engineering & Operating, Inc.		ADDRESS P. O. Box 1142, Hobbs, New Mexico 88240	
LEASE NAME Vacuum SWD	WELL NO. H-35	FIELD Vac Edge	COUNTY Lea
LOCATION UNIT LETTER <u>H</u> ; WELL IS LOCATED <u>2310</u> FEET FROM THE <u>North</u> LINE AND <u>990</u> FEET FROM THE <u>East</u> LINE, SECTION <u>35</u> TOWNSHIP <u>17 South</u> RANGE <u>35 East</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"	321'	325	Surface	Circulated
INTERMEDIATE	8 5/8"	3502'	600	Surface	Circulated
LONG STRING	5 1/2"	9189'	775	3400'	Vol. calc. of caliper log & temp. survey
TUBING	3 1/2"	5230'	NAME, MODEL AND DEPTH OF TUBING PACKER Floating oil blanket will be used to protect annulus		

NAME OF PROPOSED INJECTION FORMATION San Andres	TOP OF FORMATION 4790'	BOTTOM OF FORMATION 6368'
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IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Plastic-lined tubing	PERFORATIONS OR OPEN HOLES? Perforations	PROPOSED INTERVAL(S) OF INJECTION 230-45', 260-85', 5325-3815, 345-68', 5660-74', 5720-25', 5750-85', (6955-95' into Paddock fm. app. by order No. R-3239)
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IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Oil Well	HAS WELL EVER BEEN PERFORMED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? Yes
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LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH  
by bridge plug set at 7600' w/2 sx. cmt. on top; 6663-64', 6673-74', 6757-59' sqz. w/425 sx  
cmt. (6955-95' injection into Paddock formation approved by order No. R-3239)

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA Base Triassic @ 1595'	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA Base Grayburg 4705'	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA Top Glorieta 6368'
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ANTICIPATED DAILY INJECTION VOLUME (BBL'S.) MINIMUM 2,500 MAXIMUM 5,000	OPEN OR CLOSED TYPE SYSTEM Semi-closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Gravity	APPROX. PRESSURE (PSI) Vacuum
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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 - Yes	WATER TO BE DISPOSED OF Yes	NATURAL WATER IN DISPOSAL ZONE Yes	ARE WATER ANALYSES ATTACHED? No
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NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)  
State Land - R. D. Lee, P. O. Box 363, Lovington, New Mexico 88260

LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL  
Phillips Petroleum Company, P. O. Box 477, Buckeye, New Mexico 88212

Pan American Petroleum Corporation, Box 68, Hobbs, New Mexico 88240

Amerada Hess Corporation, Box 668, Hobbs, New Mexico 88240

Cities Service Oil Company, Box 69, Hobbs, New Mexico 88240

Atlantic Richfield Company, Box 1920, Hobbs, New Mexico 88240

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? Yes	SURFACE OWNER Yes	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes	THE NEW MEXICO STATE ENGINEER No
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) Yes	PLAT OF AREA Yes	ELECTRICAL LOG No	DIAGRAMMATIC SKETCH OF WELL Yes

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

*L. B. Goodheart*

Division Manager

November 5, 1969

(Signature) L. B. Goodheart

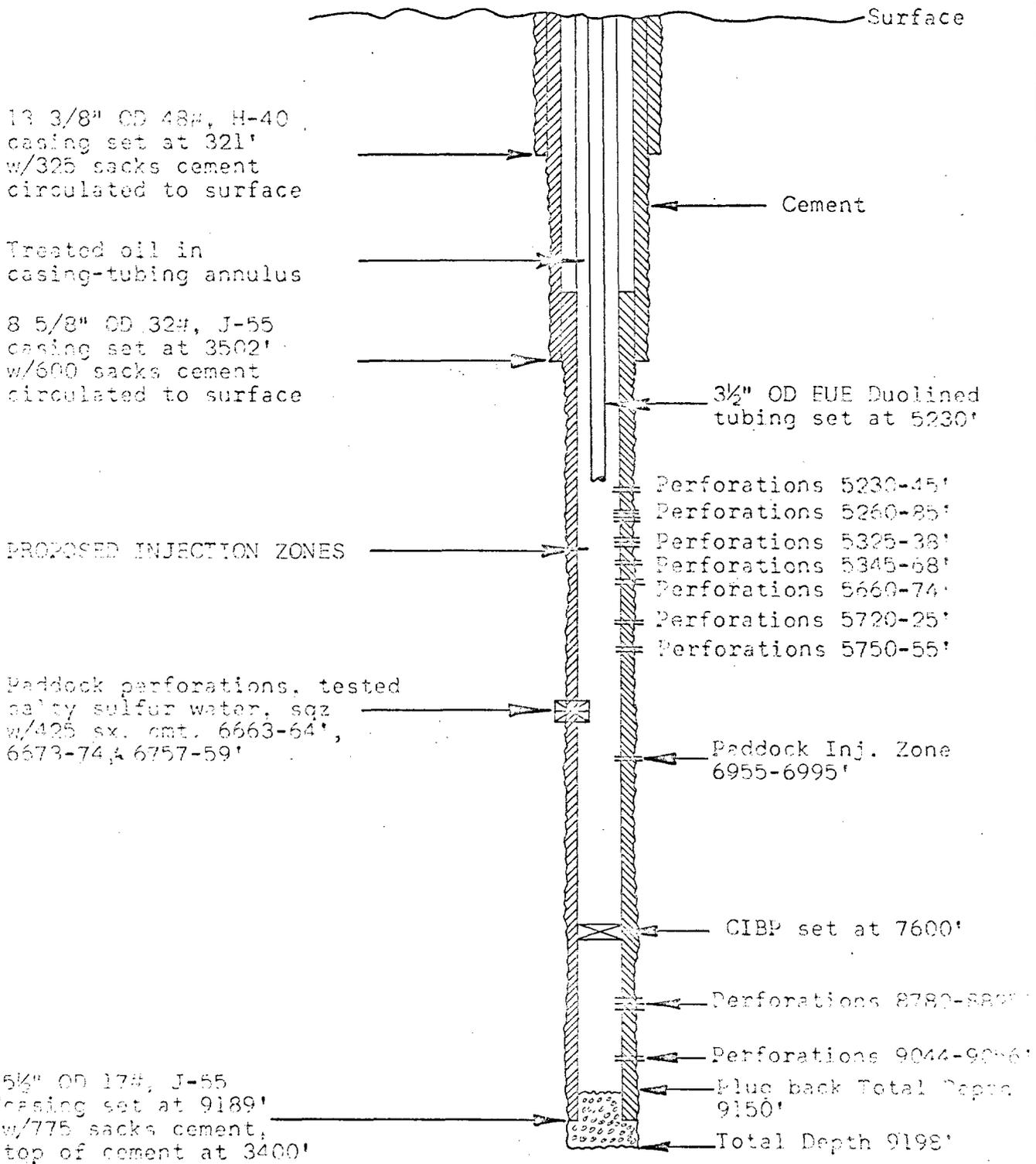
(Title)

(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.

REVISED

LXH "B"



DWN	17'	10'	PROPOSED COMPLETION WITH SWD WITH H-35	SCALE None
				DWG NO. 1-478
			Nice Engineering & Operating, Inc. Hobbs, New Mexico	

*Oct*  
~~16~~ *1969*

RICE Engineering & Operating, Inc.

Post Office Box 1142

Telephone (505) 393-9174

HOBBS, NEW MEXICO 88240

October 15, 1969

*Rel for hrg*  
*Nov 19 1969 25*

~~*W/D 108*~~

~~*New Oct 31*~~

*Case 4253*

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 Vacuum Salt Water Disposal System, respectfully requests administrative approval for proposed salt water disposal well H-35, located 2310' FNL & 990' FEL of Section 35, T17S, R35E, Lea County, New Mexico, as set out in Commission Order No. R-3079 dated June 15, 1966.

This application is filed in accordance with Rules 701-B and 701-C of the Commission Rules and Regulations. Attached is Form C-108 and related information.

Yours very truly,

RICE ENGINEERING & OPERATING, INC.

*L. B. Goodheart*

L. B. Goodheart  
Division Manager

JVR/nb

Attachments

DOCKET MAILED

Date 11-7-69

Form 2-101  
 Revised 1-1-65  
 SEP 16 1969

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

Case 4253

OPERATOR Rice Engineering & Operating, Inc.		ADDRESS P. O. Box 1142, Hobbs, New Mexico 88240	
LEASE NAME Vacuum SWD	WELL NO. H-35	FIELD Vac Edge	COUNTY Lea
LOCATION UNIT LETTER <u>H</u> ; WELL IS LOCATED <u>2310</u> FEET FROM THE <u>North</u> LINE AND <u>990</u> FEET FROM THE <u>East</u> LINE, SECTION <u>35</u> TOWNSHIP <u>17 South</u> RANGE <u>35 East</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"	321'	325	Surface	Circulated
INTERMEDIATE	8 5/8"	3502'	600	Surface	Circulated
LONG STRING	5 1/2"	9189'	775	3400'	Vol. calc. of caliper log & temp. survey
TUBING	3 1/2"	5030'	NAME, MODEL AND DEPTH OF TUBING PACKER Floating oil blanket will be used to protect annulus		

NAME OF PROPOSED INJECTION FORMATION San Andres	TOP OF FORMATION 4790'	BOTTOM OF FORMATION 6368'
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IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? Plastic-lined tubing	PERFORATIONS OR OPEN HOLE? Perforations	PROPOSED INTERVAL(S) OF INJECTION 0-80', 5320-30', 5360-70', 5690-5700', 6955-95' into Paddock fm. app. by ord. No. R-3239
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IS THIS A NEW WELL DRILLED FOR DISPOSAL? No	IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? Oil Well	HAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? Yes
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LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH  
 by bridge plug set at 7600' w/2 sx.cmt. on top; 6663-64', 6673-74', 6757-59' sqz.w/425 sx.cmt. (6955-95' injection into Paddock formation approved by order No. R-3239)

DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA Base Triassic @ 1595'	DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA Base Grayburg 4705'	DEPTH OF TOP OF NEXT LOWER OIL OR GAS ZONE IN THIS AREA Top Glorieta 6368'
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ANTICIPATED DAILY INJECTION VOLUME (BBLS.) MINIMUM 2,500 MAXIMUM 5,000	OPEN OR CLOSED TYPE SYSTEM Semi-closed	IS INJECTION TO BE BY GRAVITY OR PRESSURE? Gravity	APPROX. PRESSURE (PSI) Vacuum
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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 - Yes	WATER TO BE DISPOSED OF Yes	NATURAL WATER IN DISPOSAL ZONE Yes	ARE WATER ANALYSES ATTACHED? No
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NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND)  
 State Land - R. D. Lee, P. O. Box 363, Lovington, New Mexico 88260

- LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL
- Phillips Petroleum Company, Box 477, Buckeye, New Mexico 88212
  - Pan American Petroleum Corporation, Box 68, Hobbs, New Mexico 88240
  - Amerada Hess Corporation, Box 668, Hobbs, New Mexico 88240
  - Cities Service Oil Company, Box 69, Hobbs, New Mexico 88240
  - Atlantic Richfield Company, Box 1920, Hobbs, New Mexico 88240

HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? Yes	SURFACE OWNER Yes	EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL Yes	THE NEW MEXICO STATE ENGINEER No
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) Yes	PLAT OF AREA Yes	ELECTRICAL LOG No	DIAGRAMMATIC SKETCH OF WELL Yes

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

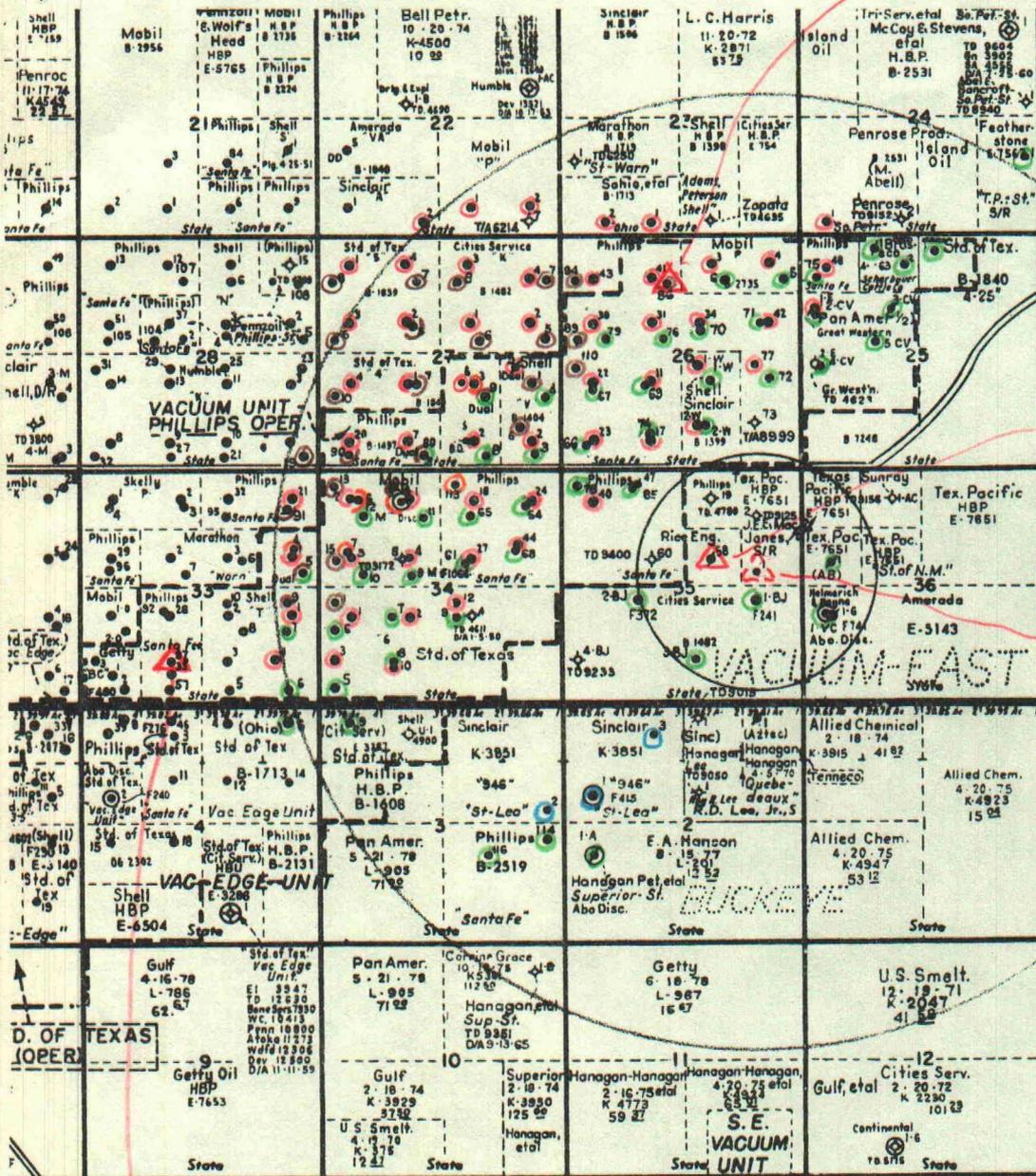
L. B. Goodhead Division Manager October 15, 1969  
 (Signature) (Title) (Date)

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 35 E

S.A. Disposal 5115-5760

Case 4253



S.A. Disposal 4970-5720

proposed disposal:

SA 5030-5700 and in Pad<sup>no</sup> already approved R-3239 6555-6995

△ Phillips disposal well auth by Order No R3079

S.A. disposal 5092-5500

LEA COUNTY, NEW MEXICO

Legend

- Yates
  - Grayburg-San Andres
  - Glorieta
  - Abo
  - Bone Springs
- EXHIBIT "A"

DWN.	DRL	10 - 69	LOCATION PLAT	SCALE
			VACUUM SWD WELL H-35	1" - 4000'
			RICE ENGINEERING & OPERATING, INC.	DWG. NO.
			HOBBS, NEW MEXICO	A - 446

Case 4253

**ILLEGIBLE**

12 3/8" OD 48-1, H-40 casing set at 321' w/325 sacks cement circulated to surface

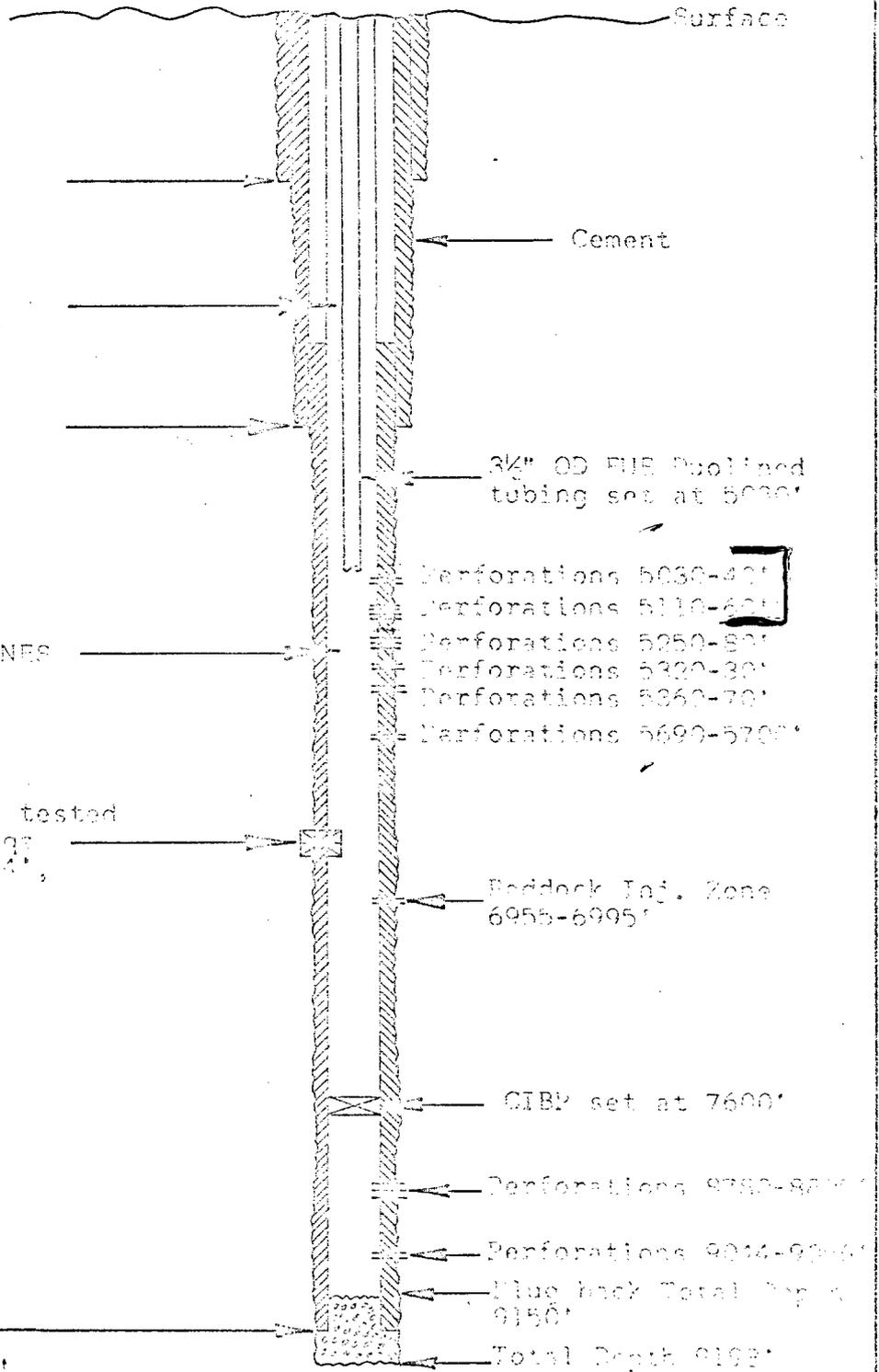
Treated oil in casing-tubing annulus

8 5/8" OD 324, J-55 casing set at 3502' w/600 sacks cement circulated to surface

PROPOSED INJECTION ZONES

Beddock perforations. tested salty sulfur water. see w/405 ex. cont. 6663-64', 6673-74, 6757-59'

6 1/2" OD 174, J-55 casing set at 9189' w/775 sacks cement, top of cement at 3400'



DWN	DATE	LOG NO.	WELL COMPLETION WELL NO. H-35	SCALE None
				Rice Engineering & Operating, Inc. Hobbs, New Mexico

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. 3414  
Order No. R-3079

APPLICATION OF PHILLIPS PETROLEUM  
COMPANY FOR SALT WATER DISPOSAL,  
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 8, 1966,  
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 15th day of June, 1966, 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, Phillips Petroleum Company, is the  
owner and operator of the following wells:

Phillips Santa Fe Well No. 97, located in Unit N  
of Section 33, Township 17 South, Range 35 East,  
NMPM, Lea County, New Mexico;

Phillips Santa Fe Well No. 86, located in Unit C  
of Section 26, Township 17 South, Range 35 East,  
NMPM, Lea County, New Mexico;

Phillips Santa Fe Well No. 58, located in Unit G  
of Section 35, Township 17 South, Range 35 East,  
NMPM, Lea County, New Mexico, and

Phillips M.E. Hale Well No. 11, located in Unit K  
of Section 35, Township 17 South, Range 34 East,  
NMPM, Lea County, New Mexico.

(3) That the applicant proposes to utilize the aforesaid Wells Nos. 97, 86, and 58 to dispose of produced salt water from the Vacuum Field area into the lower portion of the San Andres formation, with injection into the following intervals: Well No. 97: from 5092 feet to 5500 feet; Well No. 86: from 5115 feet to 5760 feet; and Well No. 58: from 4970 to 5720 feet.

(4) That the injection should be accomplished through 2 3/8-inch internally plastic-coated tubing installed in a packer set at approximately 5050 feet on the Phillips Santa Fe Well No. 97.

(5) That the injection should be accomplished through 2 3/8-inch internally plastic-coated tubing and under a blanket of oil in the annulus in the Phillips Santa Fe Well No. 58 and the Phillips Santa Fe Well No. 86.

(6) That the applicant, Phillips Petroleum Company, seeks authority to complete its Phillips M.E. Hale Well No. 11, located in Unit K of Section 35, Township 17 South, Range 34 East, NMPM, Lea County, New Mexico, as a dual completion to produce gas from the Vacuum-Yates Gas Pool through the casing-tubing annulus and to dispose of produced salt water into the lower portion of the San Andres formation, with injection into the perforated interval from 5014 feet to 5235 feet through 2 3/8-inch internally plastic-coated tubing installed in a packer set at approximately 4850 feet.

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

(8) That the applicant further seeks the establishment of an administrative procedure whereby additional wells could be placed on salt water disposal.

(9) That an administrative procedure should be established for approval of additional disposal wells, provided that the disposal will be into the lower portion of the San Andres formation, and provided further that the disposal interval is between 250 feet below the oil-water contact and 250 feet above the top of the Glorieta formation.

IT IS THEREFORE ORDERED:

(1) That the applicant, Phillips Petroleum Company, is hereby authorized to utilize the following three wells:

CASE No. 3414

Order No. R-3079

Phillips Santa Fe Well No. 97, located in Unit N of Section 33, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico;

Phillips Santa Fe Well No. 86, located in Unit C of Section 26, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico; and

Phillips Santa Fe Well No. 58, located in Unit G of Section 35, Township 17 South, Range 35 East, NMPM, Lea County, New Mexico;

to dispose of produced salt water from the Vacuum Field area into the lower portion of the San Andres formation, injection to be accomplished through 2 3/8-inch internally plastic-coated tubing installed in a packer set at approximately 5050 feet in the Phillips Santa Fe Well No. 97, and through 2 3/8-inch internally plastic-coated tubing and under a blanket of oil in the annulus in the Phillips Santa Fe Well No. 58 and Phillips Santa Fe Well No. 86, with injection into the following perforated intervals: Well No. 97: from 5092 feet to 5500 feet; Well No. 86: from 5115 feet to 5760 feet; and Well No. 58: from 4970 feet to 5720 feet.

(2) That the applicant, Phillips Petroleum Company, is hereby authorized to complete its Phillips M.E. Hale Well No. 11, located in Unit K of Section 35, Township 17 South, Range 34 East, NMPM, Lea County, New Mexico, as a dual completion to produce gas from the Vacuum-Yates Gas Pool through the casing-tubing annulus and to dispose of produced salt water into the lower portion of the San Andres formation in the perforated interval from 5014 feet to 5235 feet through 2 3/8-inch internally plastic-coated tubing installed in a packer set at approximately 4850 feet;

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

PROVIDED FURTHER, that the applicant shall take packer-leakage tests upon completion and annually thereafter during the Annual Shut-In Pressure Test Period for the Vacuum-Yates Gas Pool.

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

-4-

CASE No. 3414  
Order No. R-3079

(4) That as an exception to Rule 701 of the Commission Rules and Regulations, the Secretary-Director is hereby authorized to approve additional salt water disposal wells in the Vacuum Field when an application for such authority has been filed in accordance with the requirements of Rules 701-B and 701-C of the Commission Rules and Regulations and the Secretary-Director determines that approval of the application will prevent the drilling of unnecessary wells and otherwise prevent waste and protect correlative rights;

PROVIDED HOWEVER, that the disposal is into the lower portion of the San Andres formation between 250 feet below the oil-water contact and 250 feet above the top of the Glorieta formation.

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

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION

JACK M. CAMPBELL, Chairman

GUYTON B. HAYS, Member

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

S E A L

esr/