CASE 7424: RICE ENGINEERING AND OPERATING, INC. FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO

DOCKET MAILED

Date 11/6/81

CASE NO.

7424

APPLICATION,

TRANSCRIPTS,

SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
19 November 1981

EXAMINER HEARING

IN THE MATTER OF:

Application of Rice Engineering and Operating, Inc., for salt water disposal, Lea County, New Mexico. CASE 7424

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
500 Don Gaspar
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. STAMETS: We will call next Case 7424.

MR. PEARCE: Application of Rice Engineering and Operating, Incorporated, for salt water disposal, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, I'm Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of the applicant, and I have one witness.

(Witness sworn.)

LOY GOODHEART

being called as a witness and being duly sworn upon his oath, testified as follows, to-wit:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Mr. Goodheart, for purposes of the record would you please state your name and occupation?

A. My name is Loy Goodheart. I'm employed as Division Manager, located in Hobbs, New Mexico, for Rice Engineering and Operating, Incorporated.

Q. Mr. Goodheart, have you previously testified before the Oil Conservation Division?

A. I have.

Q. In what capacity was that, sir?

A. The same capacity as I am.

Q. Do you hold a professional degree as a petroleum engineer or as a geologist?

A. Yes, sir.

Q. And what field is that?

A. Geological engineering.

Q. Pursuant to your employment have you made a study of the facts surrounding this particular application by Rice Engineering?

A. Yes, sir.

MR. KELLAHIN: We tender Mr. Goodheart as an expert witness.

MR. STAMETS: He is considered qualified

MR. KELLAHIN: If the Examiner please, what we have done is we have, pursuant to the rule 701, submitted at the time of the application the exhibits required by Form C-108, and we have at this time marked the entire package of exhibits as Exhibit Number One for the purposes of hearing.

In order to go through the testimony today we'd like to use that same package of exhibits with your permission.

MR. STAMETS: That's fine.

Q. Mr. Goodheart, let me direct your attention first of all to the cover letter that transmitted your application and have you summarize first of all the location of the subject well and what you're seeking to accomplish by this order.

A. Okay, this is a plugged and abandoned well, which is located 1980 from the north line and 2310 from the east line of Section 8, Township 20 South, Range 37 East, Lea County, New Mexico.

Q. What is to be the disposal formation?

A. It will be the Lower San Andres formation.

Q. Is the disposal of fluids in this well to be under pressure or will it take the fluids under gravity?

A. Thiswas proposed to be a gravity disposal well.

Q. Would you summarize for the Examiner the source of the fluids to be disposed of in this well?

A. The water to be disposed of will be from producing wells in the area located around the well in the Eunice-Monument Pool.

Q. Are there waters produced from these wells that are produced from formations other than the San

Andres formation?

A. Yes, the Paddock and Blinebry production in the area.

Q. All right, sir, to supplement your application do you have water analysis of samples of those produced waters from the other formations?

A. Yes, sir, we do.

Q. We'll come to those in just a minute. Would you tell the examiner what you anticipate to be the average and maximum volumes of water to be disposed of on a daily basis in this well?

A. We propose to dispose of approximately 8000 barrels a day from the Eunice-Monument Salt Water Disposal system.

Q. All right, sir. All right, let's turn past the Form C-108, Mr. Goodheart, and come to the first attachment, which is your tabulation of the injection well data. In addition to that tabulation, the next exhibit is the schematic of the well.

Would you take those two exhibits and summarize generally how you propose to complete or recomplete this well for disposal?

A. Yes. As set out on the well data sheet, this particular well has 13-3/8ths casing cemented, cement

circulated, set at 475 foot. Pardon me. Set at 463 feet.

9-5/8ths cemented to surface set at 2900 feet, and it has 7-inch casing set at 5709. This casing is supposedly cemented to surface. The temperature survey did not pick up the top of the cement and by calculations they said it was supposed to be circulated; however it didn't say anything about circulation being observed.

We propose, as shown, on the schematic, to clean out this 7-inch, the surface plug, and the 20-sack plug, which is located at 1072 to 1176, to the plugback TD depth of 4958, and we shall test the 7-inch casing. If the casing checks satisfactorily we will then perforate intervals as shown from 4300 to 4852, and this will be the disposal interval.

Q. The schematic shows a cement plug at about 4958 feet and then old perforations below that depth.

A. Yes, sir.

Q. In your opinion, Mr. Goodheart, is that cement plug adequate to isolate the disposal formation from the old producing perforations?

A. We believe that it is, yes.

Q. All right, sir.

Where in this area would one locate any fresh water bands?

A. The fresh water?

Q. Yes, sir.

A. Sands are -- I'm not sure of the depth, but they would be shallower than 300 feet.

Q. All right, sir, for purposes of the way you intend to recomplete this well for disposal, in your opinion is the method of completion adequate to insure that the disposal fluids would remain confined to the disposal formation?

A. Well, due to the fact that we have the 13-inch and 9-inch casing cemented to surface, I don't believe that there's any possibility that fresh water will be endangered.

Q. All right, sir, let's turn to the next exhibit, which is an ownership plat of the surface with some circles drawn. Would you identify that for us?

A. This shows the location of windmills where we have taken fresh water samples.

Q. The exhibit is a little difficult to read, Mr. Goodheart. Could you -- do you have a subsequent exhibit that locates the windmills?

A. Yes, sir.

Q. All right, sir, let's come back to that, then. The circle includes the wells that you have examined

in terms of a half mile radius and the subsequent page shows a tabulation of the information from all those wells in the area of review?

A. That's right.

Q. Have you studied all the information contained on that part of the exhibit?

A. I have.

Q. In your opinion are each of those wells completed or cemented and plugged in such a way that they will not serve as a zone for -- or a method for contamination of fresh water sources?

A. We don't feel that there's any danger of the offset wells.

Q. All right, sir. Subsequent to the tabulation of the information on offset wells is a couple of sample logs from the disposal well, are they?

A. Yes, that's the one.

Q. All right, sir. And then subsequent to that is a water analysis from a Windmill A in Section 7?

A. Yes. This shows the approximate location of the windmill.

Q. And the subsequent exhibit is another water source, fresh water source?

A. We listed them as Windmill A, B, and C,

and these are shown on the plat, the previous plat that you mentioned.

Q. All right. All right, sir, at this point would you give me copies of the water analysis of the produced waters from the various formations that would serve as sources for waters for this well?

MR. KELLAHIN: If the Examiner please, the exhibit stamp is not in the hearing room. If we may subsequent to the hearing mark these as additional exhibits for this case, I'd appreciate it.

MR. STAMETS: That will be fine.

Q. And then finally, Mr. Goodheart, attached to your packet of exhibits are return receipt notices for what purpose?

A. These were evidence of receipt of certified mail from the offset operators as required in the rule.

Q. Do you anticipate that you'll have to stimulate or otherwise treat the disposal well before it will be suitable as a disposal well?

A. We project that we'll have to acidize in preparation, yes. This would be the only ype of stimulation we'd use.

Q. All right. Mr. Goodheart, were the Exhibits One through Four prepared by you or compiled under

your direction and supervision?

A. Yes, they were.

Q. And in your opinion will approval of this application be in the best interest of conservation, the prevention of waste, and the protection of correlative rights?

A. It's our feeling, yes, sir.

MR. KELLAHIN: We move the introduction of Exhibits One, Two, Three, and Four.

MR. STAMETS: These exhibits will be admitted.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Goodheart, looking at the attachments to Form C-108, which will be the wells within a half mile, I've not looked at each one of those, but most of those seem to be cemented well above the injection level, is that your analysis?

A. That's correct, yes.

Q. And there seem to be no plugged and abandoned wells within this half mile radius.

A. That's correct.

Q. Okay. Now the injection well will be disposing of water into the San Andres formation?

A. Yes, sir.

Q. And the produced water that is to be injected is San Andres --

A. Grayburg, San Andres, and a small amount of Paddock and Blinebry.

Q. Okay.

A. The Paddock and Blinebry waters would probably represent less than 10 percent of the total.

Q. And have you commingled these waters in other places --

A. Yes.

Q. -- and found them to be compatible?

A. We have, yes.

Q. And to be compatible with waters in the San Andres?

A. Yes, sir.

For your information this is the eighth well in this project in the Eunice-Monument Pool and the other seven wells are completed in the same interval as we propose to complete this one, and have not experienced any problem.

Q. Okay. Will the well be injecting at pressure?

A. It will be gravity injection.

Q. And you anticipate nothing more than hydrostatic pressure.

A. That's all.

Q. And you have an oil blanket in the annulus.

A. Yes, sir.

Q. To provide a seal for the seal.

A. This is what we propose.

MR. STAMETS: Are there any other questions of this witness?

He may be excused.

Anything further in this case?

The case will be taken under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 7424, heard by me on 11-19, 1981.

Richard L. Stamets, Examiner
Oil Conservation Division

SALLY W. BOYD, C.S.R.
Rt. 1 Box 193-B
Santa Fe, New Mexico 87501
Phone (505) 455-7409

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

December 18, 1981

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

Re: CASE NO. 7424
ORDER NO. R-6855

Applicant:

Rice Engineering and Operating, Inc.

Dear Sir:

Enclosed herewith are two copies of the above-referenced Division order recently entered in the subject case.

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD

Other

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 7424
Order No. R-6855

APPLICATION OF RICE ENGINEERING AND OPERATING, INC., FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on November 19, 1981, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 18th day of December, 1981, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Rice Engineering and Operating, Inc., is the owner and operator of the Eunice-Monument Eumont SWD "G" Well No. 8, located in Unit G of Section 8, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Lower San Andres formation, with injection into the perforated interval from approximately 4300 feet to 4852 feet.

(4) That the injection should be accomplished through 5 1/2-inch plastic lined tubing under an oil blanket; 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 annulus in order to determine leakage in the casing or tubing.

(5) That if injection is at pressure greater than hydrostatic pressure, 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 860 psi.

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

(7) That the operator should report to the superviosr of the Hobbs district office of the Division at the start of disposal operations the gravity and level of the inert fluid in the annulus.

(8) 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.

(9) 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 and Operating, Inc., is hereby authorized to utilize its Eunice-Monument Eumont SWD "G" Well No. 8, located in Unit G of Section 8, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico, to dispose of produced salt water into the Lower San Andres formation, injection to be accomplished through 5 1/2-inch tubing with injection under an oil blanket into the perforated interval from approximately 4300 feet to 4852 feet;

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

(2) That, if injection is at greater than hydrostatic pressure, 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 860 psi.

(3) That the operator shall notify the supervisor of the Hobbs district office of the Division of the date and time of

the installation of disposal equipment so that the same may be inspected.

(4) That the operator shall report to the supervisor of the Hobbs district office of the Division at the start of disposal operations the gravity and level of the inert fluid in the annulus.

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

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

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

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

S E A L

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY,
Director

RICE *Engineering & Operating, Inc.*

122 WEST TAYLOR TELEPHONE (505) 393-9174

HOBBS, NEW MEXICO 88240

October 19, 1981

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Rice EXHIBIT NO. 1
CASE NO. 7424 7424
Case submitted by
Hearing Date

Director
Oil Conservation Division
Energy and Minerals Department
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Form C-108, Application for Authorization to Inject
(Salt Water Disposal)

Gentlemen:

Rice Engineering & Operating, Inc., as operator of the Eunice-Monument-Eumont Salt Water Disposal System, Lea County, New Mexico, hereby respectfully applies for a hearing to be held before the Oil Conservation Division for the purpose of securing a permit under Rule 701 to recomplete the abandoned E-M-E SWD "G" Well No. 8 (old Gulf Oil Corporation-Bertie Whitmire Well No. 7), located in the SW/4 NE/4 of Section 8, Township 20 South, Range 37 East, Lea County, New Mexico, as a salt water disposal well in the lower San Andres formation.

RECEIVED
OCT 21 1981
OIL CONSERVATION DIVISION
SANTA FE

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

A. That said well is located 1980 feet from the North line and 2310 feet from the East line of Section 8, Township 20 South, Range 37 East, N.M.P.M., Lea County, New Mexico (see Dwg. No. A-517).

B. That said well was drilled and completed as a producing oil well in the Monument Paddock Pool on February 6, 1954 and plugged and abandoned on May 6, 1975.

C. That said well has 13-3/8" OD casing set at 463 feet, 9-5/8" OD casing set at 2900 feet and 7" OD casing set at 5709 feet (see Dwg. No. A-516).

D. That said well will be completed as a disposal well in the lower San Andres formation by (1) cleaning out to present PBTD of 4958 feet and perforating in several intervals from 4300 feet to 4852 feet, (2) installing 5½" OD fiberglass lined tubing to approximately 4290 feet and (3) disposing of produced water in perforated intervals from 4360 feet to 4852 feet.

E. That the volume of salt water to be disposed shall be approximately 8000 barrels per day from the Eunice-Monument-Eumont Field, Lea County, New Mexico.

Therefore, Rice Engineering & Operating, Inc. requests that the Director of the Oil Conservation Division set a date for this application to be heard and, after said hearing, to grant this permit to dispose of salt water in the Eunice-Monument-Eumong SWD "G" Well No. 8.

Respectfully submitted,

RICE ENGINEERING & OPERATING, INC.

L. B. Goodheart
Division Manager

JEL/jp

Attachments: Form C-108 w/attachments

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

Case 7424

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no

II. Operator: Rice Engineering & Operating, Inc.

Address: 122 West Taylor, Hobbs, New Mexico 88240

Contact party: L. B. Goodheart Phone: 393-9174

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☒ yes ☐ no
If yes, give the Division order number authorizing the project None (SWD System).

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any. Perforations from 4300' to 4352' and 10,000 gals. of 15% HCL acid.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: L. B. Goodheart Title Division Manager

Signature: L. B. Goodheart Date: October 12, 1981

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. Sec. X. Find well logs attached, Drill stem tests were filed w/OCC when well was initially drilled on 3-1-54.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

(1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.

(2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.

(3) A description of the tubing to be used including its size, lining material, and setting depth.

(4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

(1) The name of the injection formation and, if applicable, the field or pool name.

(2) The injection interval and whether it is perforated or open-hole.

(3) State if the well was drilled for injection or, if not, the original purpose of the well.

(4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.

(5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

(1) The name, address, phone number, and contact party for the applicant;

(2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;

(3) the formation name and depth with expected maximum injection rates and pressures; and

(4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

INJECTION WELL DATA SHEET

Rice Engineering & Operating, Inc. Eunice-Monument-Eumont SWD "G"
OPERATOR LEASE

8	1980' FNL, 2310' FEL	8	20S	37E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Lea County, New Mexico

Schematic

See attached Dwg. No. A-516 Schematic of existing well bore with proposed disposal interval

Tabular Data

Surface Casing

Size 13-3/8" Cemented with 475 sx.

TOC @ surface ~~feet~~ determined by circulation

Hole size 17½"

Intermediate Casing

Size 9-5/8" Cemented with 1600 sx.

TOC @ surface ~~feet~~ determined by circulation

Hole size 12¼"

Long string

Size 7" Cemented with 735 sx.

TOC @ surface ~~feet~~ determined by *calculation

Hole size 8-3/4"

Total depth 5710'

Injection interval

4300 feet to 4852 feet

(perforated ~~or open hole~~, indicate which)

*T.S. did not pick up T.O.C.

Tubing size 5½" lined with fiberglass epoxy lining (material) set ~~in a~~

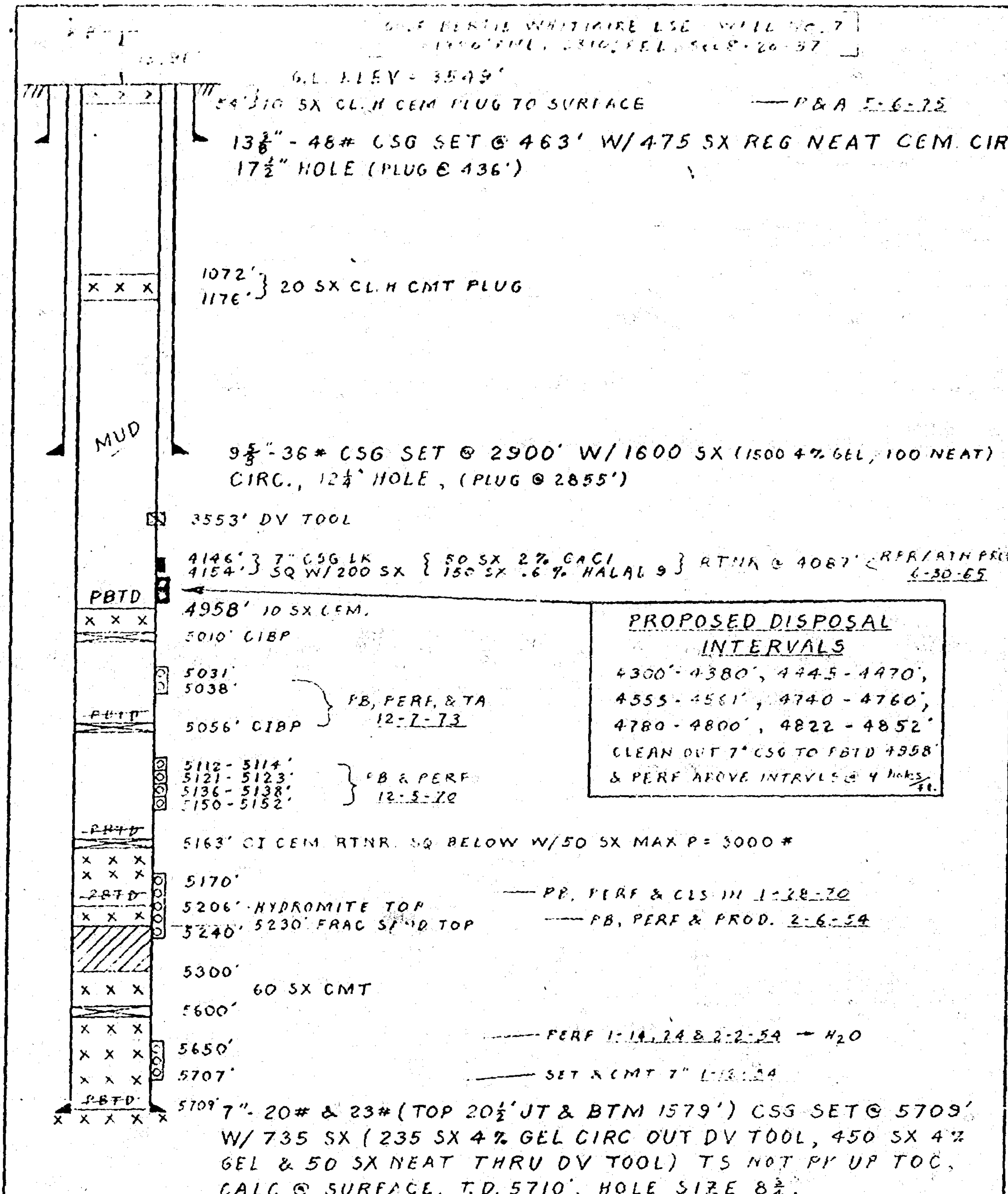
with an oil blanket in annulus (brand and model) ~~packer~~ at 4290 feet

(or describe any other casing-tubing seal).

Other Data

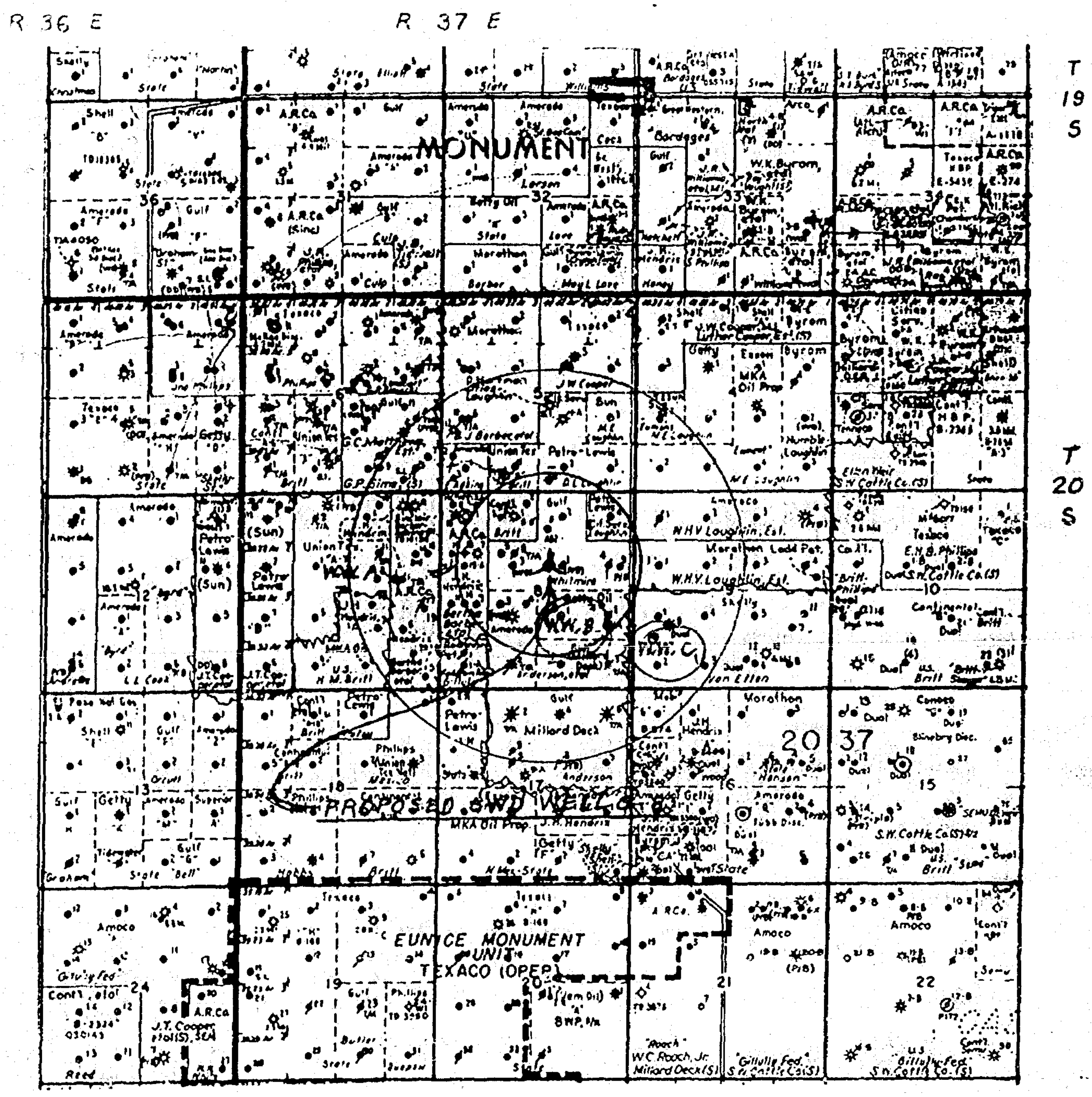
1. Name of the injection formation Lower San Andres
2. Name of Field or Pool (if applicable) Eunice-Monument Pool
3. Is this a new well drilled for injection? [ ] Yes [X] No

   If no, for what purpose was the well originally drilled? Drilled for oil and gas production- P & A on 5-6-75.
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Yes, 5031'-5038', 5112'-5152', 5170'-5240', 5650'-5707', see attached Dwg. No. A-516 for plugging detail, etc.
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Overlying oil zone: Eunice-Monument Pool in the upper San Andres Formation @ approximately 3885'. Underlying oil zone: Monument Paddock Pool in the Glorieta Formation @ approximately 5104'.



DWN	JEL	8-20-81	APPROVED		PROP. EME SWD "G" - WELL No. 8 EXIST WELL BORE W/PROP DISP. INT.	SCALE NONE
					Rice Engineering & Operating, Inc. Great Bend, Kansas	DWG. NO. A - 516

K & E Co. — Wichita — Herculene 191543 — A-5803 — 7-77 — 500



LEA COUNTY, NEW MEXICO

DWN	JEL	9·14·81	APPROVED		LOCATION PLAT EME SWD "G" WELL No. 8	SCALE 1" = 4000'
					Rice Engineering & Operating, Inc. Great Bend, Kansas	DWG. NO. A-517

Attachment to Form C-108 - Application for Authorization to Inject
Eunice-Monument-Eumont SWD "G" 8
Rice Engineering & Operating, Inc. - Page 1

Part VI - Other wells within area of review that penetrate the proposed injection zone

1. Getty Oil Company-T. Anderson Lease, Well #3, located 2173 FEL & SL, Section 8, T20S, R37E, drilled 3-18-54 to a TD @ 5254'; 13-3/8" @ 613' w/800 sx circ., 9-5/8" @ 2899' w/1275 sx circ., 7" @ 5252' w/500 sx to a TOC @ 3160' per T.S., completed for oil in Monument Paddock 5210'-5235'.

2. Getty Oil Company-T. Anderson Lease, Well #4, located 853' FEL & 2223' FSL, Section 8, T20S, R37E, drilled 12-13-76 to T.D. @ 6963'; 13-3/8" @ 317' w/320 sx circ., 9-5/8" @ 2748' w/1750 sx circ., 7" @ 4924' w/668 sx to TOC @ 3640' per T.S., 5" liner from 4693' to 6963' w/858 sx, completion record: Drinkard 6660'-6893' no oil, PBTD @ 6615', perf Tubb @ 6517-72', perf additional Tubb 6465'-6554' & 6313-6448', PBTD @ 6245', perf Blinebry @ 5610'-6170', PBTD 5485', perf Paddock @ 5205'-10' for oil.

3. Amerada Hess Corporation-T. Andreson Lease, Well #3, located 2310' FSL & 1650' FWL of Section 8, T20S, R37E, drilling complete on 3-3-54 to a T.D. of 5730'; 13-3/8" @ 295' w/300 sx circ., 8-5/8" @ 2900' w/1500 sx to TOC @ 1032' per T.S., 5½" @ 5730' w/500 sx to TOC @ 3229' per T.S., completed for oil and gas in Monument-Blinebry ~~5676'-5716'~~ on 3-8-54, PB & perf for oil & gas in Monument-Paddock 5168'-5198' & 5205'-5220' on 7-15-54, drill through & re-complete for oil in Monument-Blinebry 5676'-5766' on 12-10-70.

4. Amerada Hess Corporation-T. Anderson Lease, Well #4, located 2310' FSL & 2310' FWL, Section 8, T20S, R37E, to a TD of 5710'; 13-3/8" @ 316' w/300 sx circ., 9-5/8" @ 2530' w/1750 sx circ., 7" @ 3710' w/100 sx to 3419' per T.S., 5" liner from 3643'-5710' w/275 sx btm & top, completed for oil & gas in Monument-Blinebry 5670'-5700', Bradenhead completion for gas in Eumont Gas Field from 2530'-3419', on 3-15-65 perf & sand frac 5605' to 5700' changing well to flowing status, 4-8-74 recomplete from dual in Eumont-Queen gas & Blinebry oil to single in Monument-Blinebry zone.

5. Sinclair Oil & Gas Company-Bertha J. Barber Lease, Well #13-Y, located 1980' FNL & 660' FWL, Section 8, T20S, R37E, drilled 9-1-54 to TD of 5250'; 13-3/8" @ 990' w/1000 sx circ., 9-5/8" @ 2900' w/1150 sx to 1210' TOC per T.S., 7" @ 5250' w/2396 sx to 2975' TOC per T.S., completed in Monument Paddock 5104' to 5194' for oil & csg head gas.

6. Sinclair Oil & Gas Company-Bertha J. Barber Lease, Well #16, located 660 FWL & 2310 FSL, Section 8, T20S, R37E, drilled on 11-7-54 to a TD of 5240'; 13-3/8" @ 965' w/1150 sx circ., 9-5/8" @ 2909' w/1600 sx circ., 7" @ 5240' w/350 sx to 4600' TOC per T.S., completed in Monument Paddock 5148'-5206' for oil & csg head gas.

7. Conoco Inc.-Britt B-8, Well #2-B, located 330 FNL & 2310 FWL, Section 8, T20S, R37E, drilled on 9-20-53 to TD 5710'; 10-3/4" @ 600' w/400 sx circ., 7-5/8" @ 3349' w/1412 sx circ., 5½" @ 5705' w/206 sx to 5200' TOC per T.S., completed in Monument Blinebry 5670'-5680' for oil, 3-15-56, recomplete Monument Blinebry 5646'-5670' for oil & csg head gas, shut in 9-1-69.

8. Conoco Inc.- Britt B-8, Well #3-P, located 660 FNL & 1650 FWL, Section 8, T20S, R37E, drilled on 12-28-54 to TD of 5250'; 10-3/4" @ 632' w/500 sx circ., 7-5/8" @ 3298' w/1465 sx to TOC @ 650' per T.S., 5½" @ 5249' w/155 sx to TOC @ 4750' by T.S., completed on 12-28-54 in Monument-Paddock 5150'-5220' for oil. 3-20-61 found csg holes, cut, pulled, milled & reamed csg to 4676', replaced & cmt to 670', shut in 10-30-74.

9. Cities Service Oil Company-Laughlin Lease, Well #5, located 330 FSL & 2310 FEL, Section 5, T20S, R37E, drilled on 9-13-53 to TD 5715'; 13-3/8" @ 335' w/330 sx circ., 8-5/8" @ 2398' w/925 sx circ., 5½" @ 5713' w/1300 sx circ., dual completion on 9-23-53 in the Paddock 5190' to 5215' for oil and in the Queen 3207'-3355' for gas (perf & sqz off in Blinebry 5675'-5743', 1-19-54 PB to 3359' & continue as single completion in Queen zone.

10. Gulf Oil Corporation-Bertie Whitmire Lease, Well No. 5, located 1650 FNL & 1650 FWL, Section 8, T20S, R37E, drilled on 9-26-53 to TD of 5700'; 13-3/8" @ 471' w/475 sx circ., 9-5/8" @ 2901' w/1600 sx circ., 7" @ 5699' w/385 sx to near top, 9-26-53 perf 5660'-5695' to oil, 6-22-62 additional perfs 5580'-5618'.

11. Gulf Oil Corporation-Bertie Whitmire Lease, Well No. 6, located 990 FNL & 2310 FEL, Section 8, T20S, R37E, drilled on 11-10-53 to TD @ 5735'; 13-3/8" @ 469' w/469 sx circ., 9-5/8" @ 2900' w/1600 sx circ., 7" @ 5712' w/428 sx to TOC @ 2550' per T.S., completed for oil in the Paddock 5175'-5220' 11-26-53.

12. Gulf Oil Corporation-Bertie Whitmire Lease, Well No. 8, located 1650 FNL & 1980 FWL, Section 8, T20S, R37E, drilled 4-22-54 to a TD @ 5250'; 13-3/8" @ 455' w/475 sx circ., 9-5/8" @ 2829' w/1700 sx circ., 7" @ 5249' w/400 sx to TOC @ 2786' per T.S., completed 4-22-54 the Paddock 5140'-5245' to oil.

Attachment to Form C-108 - Application for Authorization to Inject
Eunice-Monument-Eumont SWD "G" 8
Rice Engineering & Operating, Inc. - Page 3

Part VII

1. An average injection rate of 8,000 bwpd and a maximum of 15,000 bwpd is projected.
2. The Eunice-Monument-Eumont SWD System is semi-closed.
3. Proposed SWD well to operate by gravity injection.
4. Injected fluid is produced water.
5. Not applicable.

Part VIII

The proposed injection zone, the San Andres Formation, is a thick carbonate reef growth characterized by coarsely crystalline to cavernous porosity. The San Andres varies from 1000'-1200' in thickness and the bottom of this formation is at a depth of 5080' per the original well log. The only source of potable ground water in the area is in the Ogallala Aguifer and the lowest water sands per the well log are at 216'.

Part XI

See attached chemical analysis on water wells.

Part XII

Available geologic and engineering data has been examined and we have found no evidence of open faults or any other hydrologic connection between this disposal zone and any source of drinking water.

JEL/jp
10-12-81

Reproduced By
West Texas Electrical Log Service
1305 Commerce Street
Dallas 1, Texas

REFERENCE Nº A 2533 -D

SCHLUMBERGER WELL SURVEYING CORPORATION

GAMMA RAY - NEUTRON

COMPANY GULF OIL CORP.
WELL WHITMEYER # 7
FIELD MONUMENT
LOCATION SEC.8-20S-37E
COUNTY LEA
STATE NEW MEXICO

Location of Well
1980' f NL
2310' f EL
Sec.8-20S-37E

GRN
(ES-HL-SG)

Elevations: D.F. 3560
K.B.
or G.L.

FILING No.

County Lea
Field or Location Monument
Well Whitmeyer # 7
Company Gulf Oil Corp.

RUN No.	1							
Date	1-11-54							
First Reading	5713							
Last Reading	0							
Feet Measured	5713							
Csg. Schlum.	2900							
Csg. Driller	2900							
Depth Reached	5714							
Bottom Driller	5710							
Depth Datum	1' Abv. RT.							
Mud Nor.	Gel-Chemicals							
Density	9.0							
Viscosity	51							
Resist.	2.56 @ 56° F	@	F	@	F	@	F	@ F
Res. BHT	.59 @ 119° F	@	F	@	F	@	F	@ F
pH	10	@	F	@	F	@	F	@ F
Wtr. Loss	10.2cc 30 min	CC 30 min		CC 30 min		CC 30 min		CC 30 min
Max. Temp. F	119							
Bit Size	8 3/4"							
Spcgs.—AM	10'							
A	32" LS							
AO	19'							
Opr. Rig Time	2 HRS.							
Truck No.	1754-Hobbs							
Recorded By	Dayless							
Witness By	Self							

REMARKS

COMBINATION

Reproduced By
West Texas Electrical Log Service
1305 Commerce Street
Dallas 1, Texas

REFERENCE Nº W 4319 -B

SCHLUMBERGER WELL SURVEYING CORPORATION

COMPANY GULF OIL CORP.
WELL WHITMEYER # 7
FIELD MONUMENT
LOCATION SEC.8-20S-37E
COUNTY LEA
STATE NEW MEXICO

Location of Well
1980' f NL
2310' f EL
Sec.8-20S-37E

ES-GRN
(HL-SG)

Elevations: D.F. 3560
K.B.
or G.L.

FILING No.

County Lea
Field or Location Monument
Well Whitmeyer # 7
Company Gulf Oil Corp.

RUN No.	1							
Date	1-11-54							
First Reading	5711							
Last Reading	2900							
Feet Measured	2811							
Csg. Schlum.	2900							
Csg. Driller	2900							
Depth Reached	5714							
Bottom Driller	5710							
Depth Datum	1' Abv. RT.							
Mud Nor.	Gel-Chemicals							
Density	9.0							
Viscosity	51							
Resist.	2.56 @ 56° F	@	F	@	F	@	F	@ F
Res. BHT	.59 @ 119° F	@	F	@	F	@	F	@ F
pH	11	@	F	@	F	@	F	@ F
Wtr. Loss	10.2cc 30 min	CC 30 min		CC 30 min		CC 30 min		CC 30 min
Max. Temp. F	119							
Bit Size	8 3/4"							
Spcgs.—AM	10'							
A	32" LS							
AO	19'							
Opr. Rig Time	2 HRS.							
Truck No.	1754-Hobbs							
Recorded By	Dayless							
Witness By	Self							

REMARKS

THIS IS NOT A COMPLETE REPRODUCTION OF THE ORIGINAL THREE-TRACK SCHLUMBERGER LOG.

SPONTANEOUS-POTENTIAL millivolts	SP-HOLE	RESISTIVITY -ohms. m²/m
-20	1/2	0 10" Normal 175
		0 1750

TRETOLITE DIVISION
359 Marshall Avenue / Saint Louis, Missouri 63119
(314) 961-3500 / TWX 910-760-1660 / Telex 44-2417

WATER ANALYSIS REPORT

Company

Rice Engineering & Operating Co.

Submitted by: Gaskin
Sampled by: Gaskin

Source

Sample Point: Windmill "A" Approx. 1200'FEL & 2350' FNL Sec. 7, T20S, R37E
Sample Date: 9/25/81
Analysis Date: 10/5/81

SAMPLE ANALYSIS

Appearance: Clear
Color: Colorless
Sp. Conductivity: 5960 micromhos/cm
H2S: Neg.
pH: 7

Constituent	PPM
Sodium	379
Potassium	8.48
Lithium	.1
Calcium	560
Magnesium	174
Barium	.3
Strontium	7.78
Aluminum	<.03
Silver	<.003
Arsenic	<.1
Chromium	<.01
Copper	<.002
Iron	.222
Mercury	<.03
Lead	<.05
Antimony	<.04
Tin	<.1
Titanium	<.002
Zinc	.456
Boron	.25
Phosphate	<.1
Chloride	1860
Sulfate	114
Bicarbonate	228
Carbonate	<1.
Silica	79.5

Sum of cations: 59.2
Sum of anions: 58.7
Ion Balance

Measured: 3100 ppm
Calculated 3420 ppm
TDS Balance

PETROLITE

TRETOLITE DIVISION

369 Marshall Avenue / Saint Louis, Missouri 63119
(314) 961-3500 / TWX 910-760-1660 / Telex 44-2417

WATER ANALYSIS REPORT

Company

Rice Engineering & Operating Co.

Submitted by: Gaskin
Sampled by: Gaskin

Source

Sample Point: Water well (elec) "B"
Approx. 700' FEL & 1700
FSL Sec. 8, T20S, R37E
Sample Date: 9/25/81
Analysis Date: 10/5/18

SAMPLE ANALYSIS

Appearance: Clear
Sp. Conductivity: 2990
pH: 7

Color: Colorless
H2S: Neg.

Constituent	PPM
Sodium	281
Potassium	3.69
Lithium	.1
Calcium	190
Magnesium	74.8
Barium	1.11
Strontium	4.62
Aluminum	<.03
Silver	<.003
Arsenic	<.1
Chromium	<.01
Copper	<.002
Iron	.003
Mercury	<.03
Lead	<.05
Antimony	<.4
Tin	<.1
Titanium	<.002
Zinc	.294
Boron	.549
Phosphate	<.1
Chloride	632
Sulfate	251
Bicarbonate	322
Carbonate	<.1
Silica	81.2

Sum of cations: 28.1 meq/l
Sum of anions: 28.5 meq/l

Ion Balance

Measured: 1500 ppm
Calculated: 1840 ppm

TDS Balance

RECEIVED
OCT 8 1981
RICE ENGINEERING & OPERATING, INC.
HOBBS, N. M.

TO	
FILE	

TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) 961-3500 / TWX 910-760-1660 / Telex 44-2417

WATER ANALYSIS REPORT

Company

Rice Engineering & Operating Co.

Submitted by: Gaskin
Sampled by: Gaskin

Source

Sample Point: Windmill "C" Approx. 600' FWL & 1400' FSL Sec. 9, T20S, R37E
Sample Date: 9/25/81
Analysis Date: 10/5/81

SAMPLE ANALYSIS

Appearance: Clear
Sp. Conductivity: 3310 micromhos/cm
pH: 7.6

Color: Colorless
H2S: Neg.

Constituent	PPM
Sodium	361
Potassium	5.68
Lithium	1.09
Calcium	2x19.-(219.)
Magnesium	69.3
Barium	1.4
Strontium	4.15
Aluminum	<.03
Silver	<.003
Arsenic	<.1
Chromium	<.01
Copper	.08
Iron	.682
Mercury	<.03
Lead	<.05
Antimony	<.4
Tin	<.1
Titanium	<.002
Zinc	.481
Boron	.668
Phosphate	<.1
Chloride	843
Sulfate	175
Bicarbonate	322
Carbonate	<1.
Silica	76.3

Sum of cations: 32.6 meq/l
Sum of anions: 32.9 meq/l
Ion Balance

Measured: 1800 ppm
Calculated: 2080 ppm
TDS Balance

RECEIVED
OCT 8 1981
RICE ENGINEERING & OPERATING, INC.
HOBBS, N. M.

TO	
FILE	

P 335 767 740

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
Petro-Lewis Corp.
STREET AND NO.
P. O. Box 506
P.O., STATE AND ZIP CODE
Levelland, TX 79336

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.70
POSTMARK OR DATE	OCT 13 1981 USPO

CONSULT POSTMASTER FOR FEES
OPTIONAL SERVICES
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P 335 767 733

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
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(See Reverse)

SENT TO
Marathon Oil Company
STREET AND NO.
P. O. Box 2409
P.O., STATE AND ZIP CODE
Hobbs, N. M. 88240

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.70
POSTMARK OR DATE	OCT 13 1981 USPO

CONSULT POSTMASTER FOR FEES
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P 335 767 734

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
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SENT TO
Gulf Oil Corporation
STREET AND NO.
P. O. Box 670
P.O., STATE AND ZIP CODE
Hobbs, N. M. 88240

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.70
POSTMARK OR DATE	OCT 13 1981 USPO

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RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
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SENT TO
Union Texas Petroleum Corp.
STREET AND NO.
1300 Wilco Building
P.O., STATE AND ZIP CODE
Midland, Texas 79701

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.70
POSTMARK OR DATE	OCT 13 1981 USPO

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P 335 767 742

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
John H. Hendrix Corp.
STREET AND NO.
525 Midland Tower
P.O., STATE AND ZIP CODE
Midland, Texas 79701

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	1.70
POSTMARK OR DATE	OCT 13 1981 USPO

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P 335 767 735

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
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(See Reverse)

SENT TO
Getty Oil Company
STREET AND NO.
P. O. Box 730
P.O., STATE AND ZIP CODE
Hobbs, N. M. 88240

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.70
POSTMARK OR DATE	OCT 13 1981 USPO

CONSULT POSTMASTER FOR FEES
OPTIONAL SERVICES
RETURN RECEIPT SERVICE

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P 335 767 736

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO: Conoco Inc.
STREET AND NO.: P. O. Box 460
P.O. STATE AND ZIP CODE: Hobbs, N. M. 88240

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	
POSTMARK OR DATE	OCT 13 1981

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

P 335 767 737

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO: ARCO Oil and Gas Company
STREET AND NO.: P. O. Box 1710
P.O. STATE AND ZIP CODE: Hobbs, N. M. 88240

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	
POSTMARK OR DATE	OCT 13 1981

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

P 335 767 739

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO: Cooper Brothers
% Jimmy Cooper
STREET AND NO.: P. O. Box 55
P.O. STATE AND ZIP CODE: Monument, N.M. 88265

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$1.70
POSTMARK OR DATE	OCT 13 1981

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

P 335 767 738

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO: Amerada Hess Corp.
STREET AND NO.: P. O. Drawer "D"
P.O. STATE AND ZIP CODE: Monument, N.M. 88265

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$1.70
POSTMARK OR DATE	OCT 13 1981

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) WO 1-3500/TWX 910-760-1660/Telex 44-2417

WATER ANALYSIS REPORT

(1)

COMPANY Rice Eng. & Oper.-EME SWD System ADDRESS Hobbs, NM DATE: 11/11/81

SOURCE Gulf Oil Bertie Whitmire #6 DATE SAMPLED 11 11/81 ANALYSIS NO.

Analysis	Mg/l			*Meq/l
1. pH 6.3				
2. H_2S (Qualitative)				
3. Specific Gravity 1.005				
4. Dissolved Solids	20072			
5. Suspended Solids	-0-			
6. Phenolphthalein Alkalinity ($CaCO_3$)	-0-			
7. Methyl Orange Alkalinity ($CaCO_3$)	1200			
8. Bicarbonate (HCO_3)	HCO_3 1464	÷61	24	HCO_3
9. Chlorides (Cl)	Cl 9566	÷35.5	269	Cl
10. Sulfates (SO_4)	SO_4 1875	÷48	39	SO_4
11. Calcium (Ca)	Ca 100	÷20	5	Ca
12. Magnesium (Mg)	Mg 486	÷12.2	39	Mg
13. Total Hardness ($CaCO_3$)	4500			
14. Total Iron (Fe)				
15. Barium (Qualitative)	275			
16. Strontium				

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

5	Ca ← →	HCO_3 24
39	Mg → →	SO_4 39
288	Na → →	Cl 269

Compound	Equiv. Wt.	X Meq/l	= Mg/l
$Ca(HCO_3)_2$	81.04	5	405
$CaSO_4$	68.07	-0-	-0-
$CaCl_2$	55.50	0-	-0-
$Mg(HCO_3)_2$	73.17	19	1390
$MgSO_4$	60.19	20	1203
$MgCl_2$	47.62	-0-	-0-
$NaHCO_3$	84.00	-0-	-0-
Na_2SO_4	71.03	19	1349
NaCl	58.46	269	15725

Saturation Values Distilled Water 20°C

$CaCO_3$	13 Mg/l
$CaSO_4 \cdot 2H_2O$	2,090 Mg/l
$MgCO_3$	103 Mg/l

REMARKS cc: J. LeFlohic, L. Goodheart

G. Knorr, E. Speck

Respectfully submitted
TRETOLITE COMPANY
Mike A. Hill

TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) WO 1-3500/TWX 910-760-1660/Telex 44-2417

WATER ANALYSIS REPORT

(2)

COMPANY Rice Eng. & Oper. EME SWD System ADDRESS Hobbs, NM DATE: 11/11/81

SOURCE Gulf -Bertie Whitmire #3 Monument Blinebry DATE SAMPLED 11/11/81 ANALYSIS NO.

Analysis	Mg/l		*Meq/l	
1. pH	6.4			
2. H_2S (Qualitative)				
3. Specific Gravity	1.005			
4. Dissolved Solids	21370			
5. Suspended Solids	-0-			
6. Phenolphthalein Alkalinity ($CaCO_3$)	-0-			
7. Methyl Orange Alkalinity ($CaCO_3$)	1400			
8. Bicarbonate (HCO_3)	1708	HCO_3 ÷ 61	28	HCO_3
9. Chlorides (Cl)	10218	Cl ÷ 35.5	287	Cl
10. Sulfates (SO_4)	1700	SO_4 ÷ 48	35	SO_4
11. Calcium (Ca)	136	Ca ÷ 20	6	Ca
12. Magnesium (Mg)	267	Mg ÷ 12.2	21	Mg
13. Total Hardness ($CaCO_3$)	4500			
14. Total Iron (Fe)				
15. Barium (Qualitative)	150			
16. Strontium				

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

6	Ca ←	→ HCO_3
21	Mg →	→ SO_4
323	Na ←	→ Cl

28	
35	
287	

Compound	Equiv. Wt.	X Meq/l	= Mg/l
$Ca(HCO_3)_2$	81.04	6	486
$CaSO_4$	68.07	0	0
$CaCl_2$	55.50	0	0
$Mg(HCO_3)_2$	73.17	21	1536
$MgSO_4$	60.19	0	0
$MgCl_2$	47.62	0	0
$NaHCO_3$	84.00	1	84
Na_2SO_4	71.03	35	2486
NaCl	58.46	287	16778

Saturation Values Distilled Water 20°C

$CaCO_3$	13 Mg/l
$CaSO_4 \cdot 2H_2O$	2,090 Mg/l
$MgCO_3$	103 Mg/l

REMARKS cc: J. LeFlohic, L. Goodheart

G. Knorr, E. Speck

Respectfully submitted
TRETOLITE COMPANY

Mike A. Hill

TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) WO 1-3500/TWX 910-760-1660/Telex 44-2417

WATER ANALYSIS REPORT

(3)

COMPANY Rice Eng. & Oper.-EME SWD Systems ADDRESS Hobbs, NM DATE: 11/11/81

SOURCE Gulf Bertie Whitmire-Heater Treater Co-mingled DATE SAMPLED 11/11/81 ANALYSIS NO.

Analysis	Mg/l			*Meq/l
	Monument Blinebury / Monument Paddock			
1. pH	6.0			
2. H_2S (Qualitative)				
3. Specific Gravity	1.010			
4. Dissolved Solids	22667			
5. Suspended Solids				
6. Phenolphthalein Alkalinity ($CaCO_3$)				
7. Methyl Orange Alkalinity ($CaCO_3$)	1100			
8. Bicarbonate (HCO_3)	HCO_3 1342	÷61	22	HCO_3
9. Chlorides (Cl)	Cl 1130	÷35.5	318	Cl
10. Sulfates (SO_4)	SO_4 1800	÷48	37	SO_4
11. Calcium (Ca)	Ca 120	÷20	6	Ca
12. Magnesium (Mg)	Mg 437	÷12.2	35	Mg
13. Total Hardness ($CaCO_3$)	4800			
14. Total Iron (Fe)				
15. Barium (Qualitative)	325			
16. Strontium				

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

6	Ca ← → HCO_3	22
35	Mg → → SO_4	37
336	Na → → Cl	318

Saturation Values Distilled Water 20°C

Ca CO_3	13 Mg/l
Ca $SO_4 \cdot 2H_2O$	2,090 Mg/l
Mg CO_3	103 Mg/l

Compound	Equiv. Wt.	X Meq/l	= Mg/l
Ca $(HCO_3)_2$	81.04	6	486
Ca SO_4	68.07	0	0
Ca Cl_2	55.50	0	0
Mg $(HCO_3)_2$	73.17	16	1170
Mg SO_4	60.19	19	1143
Mg Cl_2	47.62	0	0
Na HCO_3	84.00	0	0
$Na_2 SO_4$	71.03	18	1278
Na Cl	58.46	318	18590

REMARKS cc: J. LeFlohic, L. Goodheart

G. Knorr, E. Speck

Respectfully submitted
TRETOLITE COMPANY
Mike A. Hill

TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) WO 1-3500/TWX 910-760-1660/Telex 44-2417

WATER ANALYSIS REPORT

(4)

COMPANY RICE ENGINEERING & OPERATING ADDRESS HOBBS, NM DATE: 11/14/81

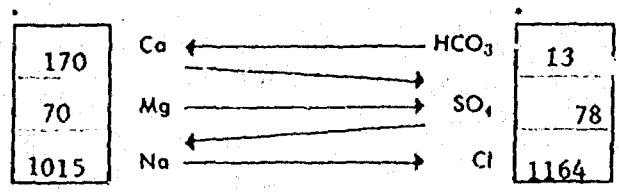
SOURCE EME - Getty T. Anderson #1 DATE SAMPLED 11/14/81 ANALYSIS NO.

Analysis GB/San Andres

		Mg/l		*Meq/l	
1.	pH	6.4			
2.	H_2S (Qualitative)				
3.	Specific Gravity	1.045			
4.	Dissolved Solids	73415			
5.	Suspended Solids	0			
6.	Phenolphthalein Alkalinity ($CaCO_3$)	0			
7.	Methyl Orange Alkalinity ($CaCO_3$)	650			
8.	Bicarbonate (HCO_3)	HCO_3 793	÷61	13	HCO_3
9.	Chlorides (Cl)	Cl 41,306	÷35.5	1164	Cl
10.	Sulfates (SO_4)	SO_4 3750	÷48	78	SO_4
11.	Calcium (Ca)	Ca 3400	÷20	170	Ca
12.	Magnesium (Mg)	Mg 850	÷12.2	70	Mg
13.	Total Hardness ($CaCO_3$)	12000			
14.	Total Iron (Fe)				
15.	Barium (Qualitative)	250			
16.	Strontium				

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Saturation Values Distilled Water 20°C

$CaCO_3$	13 Mg/l
$CaSO_4 \cdot 2H_2O$	2,090 Mg/l
$MgCO_3$	103 Mg/l

Compound	Equiv. Wt.	X Meq/l	== Mg/l
$Ca(HCO_3)_2$	81.04	13	1053
$CaSO_4$	68.07	78	5309
$CaCl_2$	55.50	79	4384
$Mg(HCO_3)_2$	73.17	0	0
$MgSO_4$	60.19	0	0
$MgCl_2$	47.62	70	3333
$NaHCO_3$	84.00	0	0
Na_2SO_4	71.03	0	0
NaCl	58.46	1015	59336

REMARKS cc: J. LeFlohic, L. Goodheart

G Knorr E Speck

Respectfully submitted
TRETOLITE COMPANY
Mike A Hill

TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) WO 1-3500/TWX 910-760-1660/Telex 44-2417

WATER ANALYSIS REPORT

(5)

COMPANY Rice Engineering & Operating, Inc ADDRESS Hobbs, NM DATE: 11/14/81

SOURCE EME SWD Well M-5 DATE SAMPLED 11/14/81 ANALYSIS NO.

Analysis		Mg/l		*Meq/l	
1.	pH	7.0			
2.	H_2S (Qualitative)				
3.	Specific Gravity	1,000			
4.	Dissolved Solids	14,920			
5.	Suspended Solids	0			
6.	Phenolphthalein Alkalinity ($CaCO_3$)	0			
7.	Methyl Orange Alkalinity ($CaCO_3$)	1050			
8.	Bicarbonate (HCO_3)	1281	÷ 61	21	HCO_3
9.	Chlorides (Cl)	7174	÷ 35.5	202	Cl
10.	Sulfates (SO_4)	1175	÷ 48	24	SO_4
11.	Calcium (Ca)	1040	÷ 20	54	Ca
12.	Magnesium (Mg)	219	÷ 12.2	18	Mg
13.	Total Hardness ($CaCO_3$)	3500			
14.	Total Iron (Fe)				
15.	Barium (Qualitative)	300			
16.	Strontium				

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

54	Ca ←	→ HCO_3
18	Mg →	→ SO_4
175	Na ←	→ Cl

21	HCO_3
24	SO_4
202	Cl

Compound	Equiv. Wt.	X Meq/l	= Mg/l
$Ca(HCO_3)_2$	81.04	21	1701
$CaSO_4$	68.07	24	1633
$CaCl_2$	55.50	9	499
$Mg(HCO_3)_2$	73.17	0	0
$MgSO_4$	60.19	0	0
$MgCl_2$	47.62	18	857
$NaHCO_3$	84.00	0	0
Na_2SO_4	71.03	0	0
NaCl	58.46	175	10230

Saturation Values Distilled Water 20°C

$CaCO_3$	13 Mg/l
$CaSO_4 \cdot 2H_2O$	2,090 Mg/l
$MgCO_3$	103 Mg/l

REMARKS cc: J LeFlohic, L Goodheart

G Knorr, E Speck

Respectfully submitted
TRETOLITE COMPANY
Mike A Hill

Dockets Nos. 38-81 and 39-81 are tentatively set for December 2, and December 15, 1981. Application for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - THURSDAY - NOVEMBER 19, 1981

9 A.M. - OIL CONSERVATION DIVISION 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 December, 1981, from fifteen prorated pools in Lea, Eddy and Chaves Counties, New Mexico.

(2) Consideration of the allowable production of gas for December, 1981, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.

CASE 7410: Application of B.O.A. Oil & Gas Company for two unorthodox oil well locations, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 2035 feet from the South line and 2455 feet from the East line and one to be drilled 2455 feet fron the North line and 1944 feet from the East line, both in Section 31, Township 31 North, Range 15 West, Verde-Gallup Oil Pool, the NW/4 SE/4 and SW/4 NE/4, respectively, of said Section 31 to be dedicated to said wells.

CASE 7356: (Continued from October 21, 1981, Examiner Hearing)

Application of S & I Oil Company for compulsory pooling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the W/2 SW/4 of Section 12, Township 29 North, Range 15 West, Cha Cha-Gallup Oil Pool, 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, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7411: Application of Viking Petroleum, Inc., for an unorthodox gas well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be drilled 330 feet from the North and East lines of Section 12, Township 11 South, Range 27 East, the NE/4 of said Section 12 to be dedicated to the well. (This case will be dismissed).

CASE 7412: Application of Gulf Oil Corporation for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Lower Yates, Queen, San Andres and Delaware formations in the open hole interval from 4375 feet to 7452 feet in its Lea "ZD" State Well No. 1 located in Unit M of Section 30, Township 13 South, Range 35 East, Air-Strip Field.

CASE 7413: Application of Gulf Oil Corporation for Directional Drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to directionally drill its Arnott Ramsey Well No. 12, the surface location of which is 500 feet from the South line and 1400 feet from the East line of Section 32, Township 25 South, Range 37 East, to a bottomhole location within 150 feet of a point 500 feet from the South line and 800 feet from the East line of Section 32, Township 25 South, Range 37 East, Langlie Mattix Pool, the SE/4 SE/4 of said Section 32 to be dedicated to the well.

CASE 7414: Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of the Drinkard and Wantz-Granite Wash production in the wellbore of its Hugh Well No. 10, located in Unit C of Section 14, Township 22 South, Range 37 East.

CASE 7415: Application of Gulf Oil Corporation for downhole commingling, Lea County, New Mexico, Applicant, in the above-styled cause, seeks approval for the downhole commingling of the Tubb and Drinkard production in the wellbore of its T. R. Andrews Well No. 3, located in Unit J of Section 32, Township 22 South, Range 38 East.

CASE 7379: (Continued from October 21, 1981, Examiner Hearing)

Application of JEM Resources, Inc., for vertical pool extension and special GOR limit, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the vertical extension of the Cave-Grayburg Pool to include the San Andres Formation, and the establishment of a special gas-oil ratio limit for said pool to 6000 to one or, in the alternative, the abolishment of the gas-oil ratio limit in said pool, all to be effective October 1, 1981.

CASE 7407: (Continued from November 4, 1981, Examiner Hearing)

Application of Mesa Petroleum Company for compulsory pooling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Abo formation underlying the NE/4 of Section 23, Township 5 South, Range 24 East, 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, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7416: Application of El Paso Natural Gas Company for pool creation and redelineation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks to contract the horizontal limits of the Jalmat Gas Pool by deleting therefrom all lands in Township 26 South, Range 37 East. Applicant also proposes to contract the horizontal limits of the Rhodes Yates - Seven Rivers Oil Pool by deleting therefrom all of the gas productive lands in the North end thereof and to create the Rhodes Yates-Seven Rivers Gas Pool comprising all such deleted lands. Applicant further proposes the deletion of certain oil productive lands from said Rhodes oil pool and the extension of the Scarborough Pool to include said lands. Applicant further proposes to contract the horizontal boundaries of the Rhodes Gas Storage Unit to delete certain lands and wells not participating in the Rhodes Gas Storage Project and to withdraw without restriction all gas remaining in the newly created Rhodes Gas Pool.

CASE 7417: (This case will be dismissed.)

Application of Northwest Pipeline Corporation for 13 non-standard gas proration units, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for 13 non-standard Pictured Cliffs gas proration units ranging in size from 142.39 acres to 176.77 acres and each comprised of various contiguous lots or tracts in Sections 4,5,6,7, and 18 of Township 31 North, Range 7 West. Said proration units result from corrections in the survey lines on the North and West sides of Township 31 North, Range 7 West and overlap seven non-standard Mesaverde proration units previously approved by Order No. R-1066.

CASE 7418: Application of Morris R. Antweil for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the West Nadine-Drinkard Pool including a special gas-oil ratio of 6,000 to one.

CASE 7419: Application of Morris R. Antweil for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the West Nadine-Blinebry pool including a special gas-oil ratio of 4,000 to one.

CASE 7420: Application of Southland Royalty Company for two unorthodox oil well locations, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of two previously drilled wells, the first being 760 feet from the South line and 660 feet from the East line of Section 5 the other being 660 feet from the North and West lines of Section 9, both in Township 19 South, Range 35 East, both to be plugged back to the Scharb-Bone Springs Pool, the S/2 SE/4 of Section 5 and the N/2 NW/4 of Section 9, respectively, to be dedicated to the wells.

CASE 7421: Application of Doyle Hartman for compulsory pooling, unorthodox well location and non-standard spacing unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Eumont Gas Pool underlying a 120-acre non-standard spacing unit consisting of the S/2 SW/4 and the NW/4 SW/4 of Section 3, Township 20 South, Range 37 East, to be dedicated to a well to be drilled at an unorthodox location 2,310 feet from the South line and 330 feet from the East line of Section 3. 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, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 7422: Application of Conoco, Inc. for dual completion and an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Southeast Monument Unit Well No. 121, to produce oil from the Skaggs Grayburg and an undesignated Paddock pool through parallel strings of tubing. Applicant further seeks approval of the unorthodox location of said well 1310 feet from the North line and 1330 feet from the West line of Section 19, Township 20 South, Range 38 East, the NE/4 NW/4 of said Section 19 to be dedicated to the well.

CASE 7423: Application of Conoco, Inc., for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority for three companies to institute a cooperative waterflood project in the Blinebry oil and gas pool by the injection of water into the Blinebry formation through 13 injection wells located on leases operated by Conoco, Shell Oil Company, and Southland Royalty Company, in Sections 33 and 34, Township 20 South, Range 38 East, and Sections 2 and 3, Township 21 South, Range 37 East.

CASE 7424: Application of Rice Engineering and 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 Lower San Andres formation in the perforated interval from 4300 feet to 4852 feet in its Eunice-Monument Eumont SWD "G" Well No. 8, located in Unit G of Section 8, Township 20 South, Range 37 East.

CASE 7425: Application of H. L. Brown, Jr. for compulsory pooling and an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the top of the San Andres formation to the base of the Pennsylvanian formation underlying the S/2 of Section 36, Township 16 South, Range 37 East, to be dedicated to a well to be drilled at an unorthodox location 554 feet from the South and West lines of said Section 26, provided that in the event the subject well encounters production in the Casey-Strawn Pool and/or the West Knowles-Drinkard Pool, the lands pooled would be the W/2 SW/4 of said Section 26. 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, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7426: Application of Phillips Petroleum Company for Amendment of Division Order No. R-5897 and certification of a tertiary recovery project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the Amendment of Division Order No. R-5897, to include the injection of carbon dioxide in the previously authorized pressure maintenance project in the East Vacuum Grayburg-San Andres Unit, for conversion of existing injectors to water/carbon dioxide injection, and for certification to the Secretary of the IRS that the East Vacuum Grayburg-San Andres Unit Project is a qualified tertiary oil recovery project.

CASE 7427: Application of Belco Petroleum Corporation for a special allowable, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an adjustment to the manner in which allowables are calculated for wells in the South Carlsbad-Morrow Gas Pool in order to grant relief to the over-produced status of its Douglas Com. Well No. 1 located in Unit H of Section 7, Township 22 South, Range 27 East, said well being subject to shut-in being more than six times its allowable over-produced. In the alternative, applicant seeks to make up the over-production at a rate less than complete shut-in by curtailing production from the well to 80 percent of its top allowable until it is back in balance.

CASE 7428: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating; and extending certain pools in Chaves, Eddy, Lea, and Roosevelt Counties, New Mexico.

(a) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Wolfcamp production and designated as the North Antelope Ridge-Wolfcamp Gas Pool. The discovery well is J. C. Williamson Triple A Federal Well No. 1 located in Unit F of Section 10, Township 23 South, Range 34 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 34 EAST, NMPM
Section 10: N/2 and N/2 SW/4

(b) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the Diamondtail-Wolfcamp Pool. The discovery well is the Superior Oil Company Triste Draw Federal Well No. 1 located in Unit J of Section 14, Township 23 South, Range 32 East, NMPM. Said pool would comprise:

TOWNSHIP 23 SOUTH, RANGE 32 EAST, NMPM
Section 14: SE/4

(c) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Bone Spring production and designated as the North Grama Ridge-Bone Spring Pool. The discovery well is the Hunt Oil Company State 4 Well No. 1 located in Unit T of Section 4, Township 21 South, Range 34 East, NMPM. Said pool would comprise:

TOWNSHIP 21 SOUTH, RANGE 34 EAST, NMPM
Section 4: SW/4

(d) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Wolfcamp production and designated as the Grassland-Wolfcamp Pool. The discovery well is C. F. Qualia State 23 Well No. 1 located in Unit K of Section 23, Township 15 South, Range 34 East, NMPM. Said pool would comprise:

TOWNSHIP 15 SOUTH, RANGE 34 EAST, NMPM
Section 23: SW/4

(e) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Bone Spring production and designated as the North Lusk-Bone Spring Pool. The discovery well is Petroleum Development Corporation Shelly Federal Com. Well No. 1 located in Unit H of Section 5, Township 19 South, Range 32 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM
Section 5: NE/4

(f) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the McMillan-Atoka Gas Pool. The discovery well is Southland Royalty Company Pecos River 21 Federal Com Well No. 1 located in Unit K of Section 21, Township 19 South, Range 27 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 27 EAST, NMPM
Section 21: S/2

(g) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Morrow production and designated as the Springs-Morrow Gas Pool. The discovery well is Jake L. Hamon State 33 Com Well No. 1 located in Unit I of Section 33, Township 20 South, Range 26 East, NMPM. Said pool would comprise:

TOWNSHIP 20 SOUTH, RANGE 26 EAST, NMPM
Section 32: E/2
Section 33: All

(h) EXTEND the Antelope Ridge-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 34 EAST, NMPM
Section 11: All
Section 15: N/2

(i) EXTEND the Baldridge Canyon-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 24 EAST, NMPM
Section 14: N/2

(j) EXTEND the Bear Draw-Queen-Grayburg-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 29 EAST, NMPM
Section 28: N/2 SE/4

(k) EXTEND the Bluitt-Wolfcamp Gas Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH RANGE 37 EAST, NMPM
Section 10: SE/4

(l) EXTEND the Buffalo Valley-Pennsylvanian Gas Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 15 SOUTH, RANGE 27 EAST, NMPM
Section 4: All

(m) EXTEND the Bunker Hill-Penrose Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 31 EAST, NMPM
Section 13: SE/4 SW/4

(n) EXTEND the Burton Flat-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM
Section 35: W/2

(o) EXTEND the Eagle Creek-Strawn Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 25 EAST, NMPM
Section 27: N/2

TOWNSHIP 18 SOUTH, RANGE 25 EAST, NMPM
Section 1: All

(p) EXTEND the Golden Lane-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 29 EAST, NMPM
Section 8: S/2

(q) EXTEND the Kennedy Farms-Upper Pennsylvanian Gas Pool in Eddy County, New Mexico to include therein:

TOWNSHIP 17 SOUTH, RANGE 26 EAST, NMPM
Section 34: N/2
Section 35: N/2

(r) EXTEND the North Mason-Delaware Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 26 SOUTH, RANGE 32 EAST, NMPM
Section 8: S/2 S/2

(s) EXTEND the West Osudo-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 35 EAST, NMPM
Section 35: N/2

(t) EXTEND the West Parkway-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 29 EAST, NMPM
Section 29: W/2

(u) EXTEND the Peterson-Mississippian Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 4 SOUTH, RANGE 33 EAST, NMPM
Section 29: NE/4

(v) EXTEND the POW-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 26 EAST, NMPM
Section 4: S/2

(w) EXTEND the Saunders-Permo Upper Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 33 EAST, NMPM
Section 32: NE/4

(x) EXTEND the Scharb-Bone Spring Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 35 EAST, NMPM
Section 8: NE/4

(y) EXTEND the East Siete-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 31 EAST, NMPM
Section 10: NE/4

(z) EXTEND the Teague-Abo Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 37 EAST, NMPM
Section 27: NW/4

(aa) EXTEND the Tom-Tom-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 31 EAST, NMPM
Section 28: SE/4

(bb) EXTEND the North Turkey Track-Morrow Gas Pool in Eddy County, New Mexico to include therein:

TOWNSHIP 18 SOUTH, RANGE 29 EAST, NMPM
Section 21: All

(cc) EXTEND the North Young-Bone Spring Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM
Section 9: NE/4

RICE *Engineering & Operating, Inc.*

122 WEST TAYLOR TELEPHONE (505) 393-9174

HOBBS, NEW MEXICO 88240

October 19, 1981

Case 7424

Director
Oil Conservation Division
Energy and Minerals Department
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Form C-108, Application for Authorization to Inject
(Salt Water Disposal)

Gentlemen:

Rice Engineering & Operating, Inc., as operator of the Eunice-Monument-Eumont Salt Water Disposal System, Lea County, New Mexico, hereby respectfully applies for a hearing to be held before the Oil Conservation Division for the purpose of securing a permit under Rule 701 to recomplete the abandoned E-M-E SWD "G" Well No. 8 (old Gulf Oil Corporation-Bertie Whitmire Well No. 7), located in the SW/4 NE/4 of Section 8, Township 20 South, Range 37 East, Lea County, New Mexico, as a salt water disposal well in the lower San Andres formation.

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

A. That said well is located 1980 feet from the North line and 2310 feet from the East line of Section 8, Township 20 South, Range 37 East, N.M.P.M., Lea County, New Mexico (see Dwg. No. A-517).

B. That said well was drilled and completed as a producing oil well in the Monument Paddock Pool on February 6, 1954 and plugged and abandoned on May 6, 1975.

C. That said well has 13-3/8" OD casing set at 465 feet, 9-5/8" OD casing set at 2900 feet and 7" OD casing set at 5709 feet (see Dwg. No. A-516).

D. That said well will be completed as a disposal well in the lower San Andres formation by (1) cleaning out to present PBTD of 4958 feet and perforating in several intervals from 4300 feet to 4852 feet, (2) installing 5½" OD fiberglass lined tubing to approximately 4290 feet and (3) disposing of produced water in perforated intervals from 4300 feet to 4852 feet.

E. That the volume of salt water to be disposed shall be approximately 8000 barrels per day from the Eunice-Monument-Eumont Field, Lea County, New Mexico.

Therefore, Rice Engineering & Operating, Inc. requests that the Director of the Oil Conservation Division set a date for this application to be heard and, after said hearing, to grant this permit to dispose of salt water in the Eunice-Monument-Eumong SWD "G" Well No. 8.

Respectfully submitted,

RICE ENGINEERING & OPERATING, INC.

L. B. Goodheart
Division Manager

JEL/jp

Attachments: Form C-108 w/attachments

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

FORM C-108
Revised 7-1-81

Case 7424

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☐ Secondary Recovery ☐ Pressure Maintenance ☒ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no

II. Operator: Rice Engineering & Operating, Inc.

Address: 122 West Taylor, Hobbs, New Mexico 88240

Contact party: L. B. Goodheart Phone: 393-9174

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☒ yes ☐ no
If yes, give the Division order number authorizing the project None (SWD System).

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any. Perforations from 4300' to 4852' and 10,000 gals. of 15% H_CL acid.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: L. B. Goodheart Title Division Manager

Signature: [signature] Date: October 12, 1981

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. Sec. X. Find well logs attached, Drill stem tests were filed w/OCC when well was initially drilled on 3-1-54.

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

INJECTION WELL DATA SHEET

Rice Engineering & Operating, Inc. Eunice-Monument-Eumont SWD "G"
OPERATOR LEASE

8	1980' FNL, 2310' FEL	8	20S	37E
WELL NO.	FOOTAGE LOCATION	SECTION	TOWNSHIP	RANGE

Lea County, New Mexico

Schematic

See attached Dwg. No. A-516 Schematic of existing well bore with proposed disposal interval

Tabular Data

Surface Casing

Size 13-3/8 " Cemented with 475 sx.

TOC @ surface ~~feet~~ determined by circulation

Hole size 17½"

Intermediate Casing

Size 9-5/8 " Cemented with 1600 sx.

TOC @ surface ~~feet~~ determined by circulation

Hole size 12¼"

Long string

Size 7 " Cemented with 735 sx.

TOC @ surface ~~feet~~ determined by *calculation

Hole size 8-3/4"

Total depth 5710'

Injection interval

4300 feet to 4852 feet

(perforated ~~or open hole~~, indicate which)

*T.S. did not pick up T.O.C.

Tubing size 5½" lined with fiberglass epoxy lining (material) set ~~in a~~

with an oil blanket in annulus (brand and model) ~~packer~~ at 4290 feet

(or describe any other casing-tubing seal).

Other Data

1. Name of the injection formation Lower San Andres
2. Name of Field or Pool (if applicable) Eunice-Monument Pool
3. Is this a new well drilled for injection? [ ] Yes [X] No

   If no, for what purpose was the well originally drilled? Drilled for oil and gas production- P & A on 5-6-75.
4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail (sacks of cement or bridge plug(s) used) Yes, 5031'-5038', 5112'-5152', 5170'-5240', 5650'-5707', see attached Dwg. No. A-516 for plugging detail, etc.
5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. Overlying oil zone: Eunice-Monument Pool in the upper San Andres Formation @ approximately 3885'. Underlying oil zone: Monument Paddock Pool in the Glorieta Formation @ approximately 5104'.

GULF BERTIE WHITMIRE LSE - WELL NO. 7
1980' FNL, 2310' FEL, Sec 8-20-37

K.B. 13.96'

G.L. ELEV = 3549'

54' } 10 SX CL. H CEM PLUG TO SURFACE — P & A 5-6-75

13⅜" - 48# CSG SET @ 463' W/ 475 SX REG NEAT CEM. CIR.
17½" HOLE (PLUG @ 436')

1072' } 20 SX CL. H CMT PLUG
1176' }

MUD

9⅝" 36# CSG SET @ 2900' W/ 1600 SX (1500 4% GEL, 100 NEAT)
CIRC., 12¼" HOLE, (PLUG @ 2855')

3553' DV TOOL

4146' } 7" CSG LK SQ W/ 200 SX { 50 SX 2% CACl, 150 SX .6% HALAD 9 } RTNR @ 4087' < RPR/RTN PROD 6-30-65
4154' }

PBTD

4958' 10 SX CEM.

5010' CIBP

5031'
5038' } PB, PERF, & TA 12-7-73

PBTD

5056' CIBP

5112 - 5114'
5121 - 5123'
5136 - 5138'
5150 - 5152' } PB & PERF 12-5-70

~~PBTD~~

5163' CI CEM. RTNR. SQ BELOW W/ 50 SX MAX P = 3000 #

5170'

~~PBTD~~

5206' HYDROMITE TOP — PB, PERF & CLS IN 1-28-70

5240' 5230' FRAC SAND TOP — PB, PERF & PROD. 2-6-24

5300'

60 SX CMT

5600'

PERF 1-14, 24 & 2-2-54 → H_2O

5650'

5707' SET & CMT 7" 1-12-54

PBTD

5709' 7" - 20# & 23# (TOP 20½' JT & BTM 1579') CSG SET @ 5709'
W/ 735 SX (235 SX 4% GEL CIRC OUT DV TOOL, 450 SX 4% GEL & 50 SX NEAT THRU DV TOOL) TS NOT PK UP TOC, CALC @ SURFACE, T.D. 5710', HOLE SIZE 8¾".

PROPOSED DISPOSAL INTERVALS

4300' - 4380', 4445 - 4470',
4555 - 4561', 4740 - 4760',
4780 - 4800', 4822 - 4852'
CLEAN OUT 7" CSG TO PBTD 4958'
& PERF ABOVE INTRVLS @ 4 holes/ft.

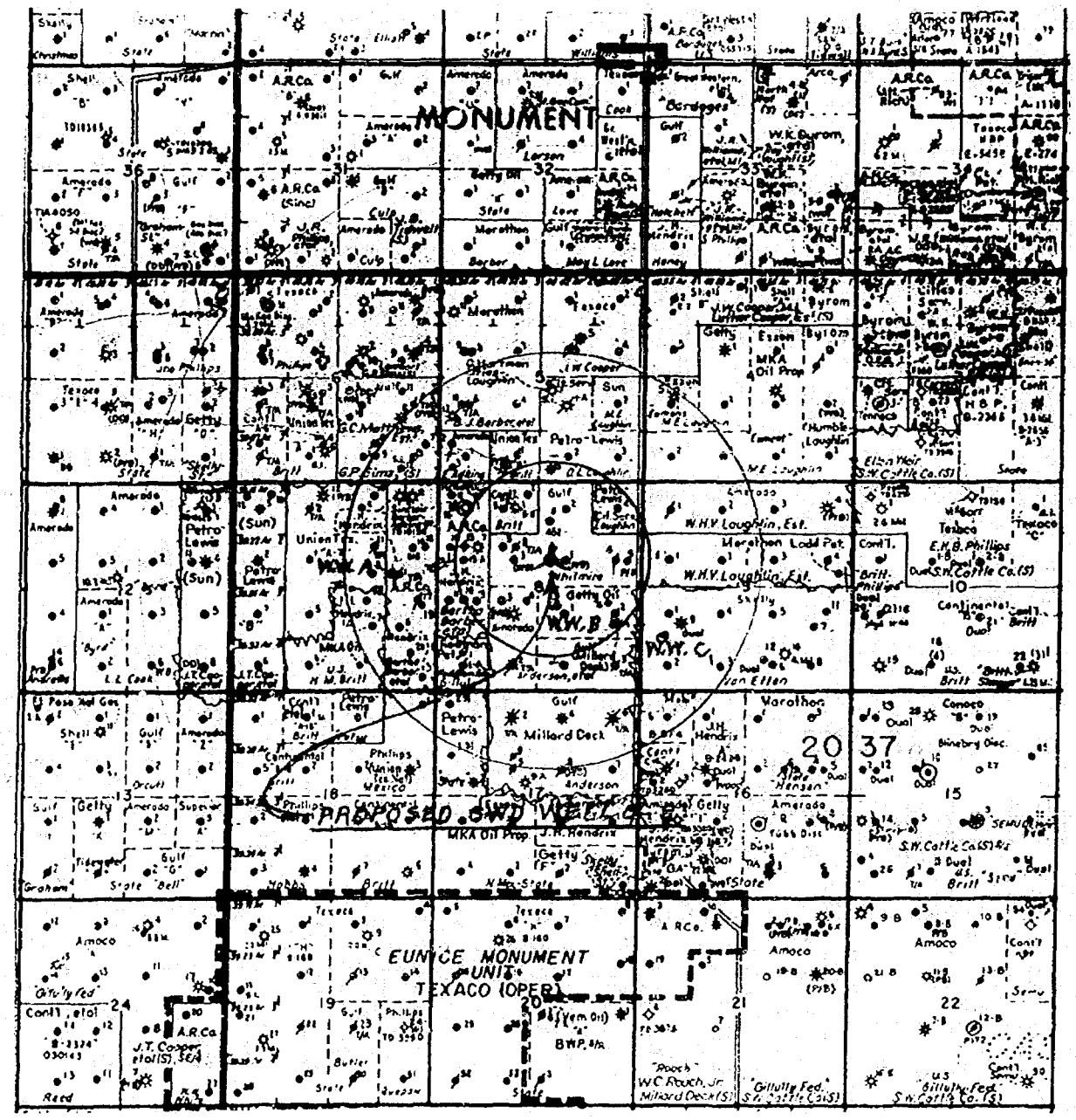
DWN	JEL	8-20-81	APPROVED		PROP. EMS SWD "G" - WELL No. 8 EXIST WELL BORE W/PROP DISP. INT.	SCALE NONE
					Rice Engineering & Operating, Inc. Great Bend, Kansas	DWG. NO. A-516

R 36 E

R 37 E

T 19 S

T 20 S



LEA COUNTY, NEW MEXICO

N

DWN	JEL	9-14-81	APPROVED		LOCATION PLAT EME SWD "6" WELL No. 8	SCALE 1" = 4000'
					Rice Engineering & Operating, Inc. Great Bend, Kansas	DWG. NO. A-517

Attachment to Form C-108 - Application for Authorization to Inject
Eunice-Monument-Eumont SWD "G" 8
Rice Engineering & Operating, Inc. - Page 1

Part VI - Other wells within area of review that penetrate the proposed injection zone

1. Getty Oil Company-T. Anderson Lease, Well #3, located 2173 FEL & SL, Section 8, T20S, R37E, drilled 3-18-54 to a TD @ 5254'; 13-3/8" @ 613' w/800 sx circ., 9-5/8" @ 2899' w/1275 sx circ., 7" @ 5252' w/500 sx to a TOC @ 3160' per T.S., completed for oil in Monument Paddock 5210'-5235'.

2. Getty Oil Company-T. Anderson Lease, Well #4, located 853' FEL & 2223' FSL, Section 8, T20S, R37E, drilled 12-13-76 to T.D. @ 6963'; 13-3/8" @ 317' w/320 sx circ., 9-5/8" @ 2748' w/1750 sx circ., 7" @ 4924' w/668 sx to TOC @ 3640' per T.S., 5" liner from 4693' to 6963' w/858 sx, completion record: Drinkard 6660'-6893' no oil, PBTD @ 6615', perf Tubb @ 6517-72', perf additional Tubb 6465'-6554' & 6313-6448', PBTD @ 6245', perf Blinebry @ 5610'-6170', PBTD 5485', perf Paddock @ 5205'-10' for oil.

3. Amerada Hess Corporation-T. Andreson Lease, Well [illegible], located 2310' FSL & 1650' FWL of Section 8, T20S, R37E, drilling complete on 3-3-54 to a T.D. of 5730'; 13-3/8" @ 295' w/300 sx circ., 8-5/8" @ 2900' w/1500 sx to TOC @ 1032' per T.S., 5½" @ 5730' w/500 sx to TOC @ 3229' per T.S., completed for oil and gas in Monument-Blinebry 5676'-5716' on 3-8-54, PB & perf for oil & gas in Monument-Paddock 5168'-5198' & 5205'-5220' on 7-15-54, drill through & re-complete for oil in Monument-Blinebry 5676'-5766' on 12-10-70.

4. Amerada Hess Corporation-T. Anderson Lease, Well #4, located 2310' FSL & 2310' FWL, Section 8, T20S, R37E, to a TD of 5710'; 13-3/8" @ 316' w/300 sx circ., 9-5/8" @ 2530' w/1750 sx circ., 7" @ 3710' w/100 sx to 3419' per T.S., 5" liner from 3643'-5710' w/275 sx btm & top, completed for oil & gas in Monument-Blinebry 5670'-5700', Bradenhead completion for gas in Eumont Gas Field from 2530'-3419', on 3-15-63 perf & sand frac 5605' to 5700' changing well to flowing status, 4-8-74 recomplete from dual in Eumont-Queen gas & Blinebry oil to single in Monument-Blinebry zone.

5. Sinclair Oil & Gas Company-Bertha J. Barber Lease, Well #13-Y, located 1980' FNL & 660' FWL, Section 8, T20S, R37E, drilled 9-1-54 to TD of 5250'; 13-3/8" @ 990' w/1000 sx circ., 9-5/8" @ 2900' w/1150 sx to 1210' TOC per T.S., 7" @ 5250' w/2396 sx to 2975' TOC per T.S., completed in Monument Paddock 5104' to 5194' for oil & csg head gas.

6. Sinclair Oil & Gas Company-Bertha J. Barber Lease, Well #16, located 660 FWL & 2310 FSL, Section 8, T20S, R37E, drilled on 11-7-54 to a TD of 5240'; 13-3/8" @ 965' w/1150 sx circ., 9-5/8" @ 2909' w/1600 sx circ., 7" @ 5240' w/350 sx to 4600' TOC per T.S., completed in Monument Paddock 5148'-5206' for oil & csg head gas.

7. Conoco Inc.-Britt B-8, Well #2-B, located 330 FNL & 2310 FWL, Section 8, T20S, R37E, drilled on 9-20-53 to TD 5710'; 10-3/4" @ 600' w/400 sx circ., 7-5/8" @ 3349' w/1412 sx circ., 5½" @ 5705' w/206 sx to 5200' TOC per T.S., completed in Monument Blinebry 5670'-5680' for oil, 3-15-56, recomplete Monument Blinebry 5646'-5670' for oil & csg head gas, shut in 9-1-69.

8. Conoco Inc.- Britt B-8, Well #3-P, located 660 FNL & 1650 FWL, Section 8, T20S, R37E, drilled on 12-28-54 to TD of 5250'; 10-3/4" @ 632' w/500 sx circ., 7-5/8" @ 3298' w/1465 sx to TOC @ 650' per T.S., 5½" @ 5249' w/155 sx to TOC @ 4750' by T.S., completed on 12-28-54 in Monument-Paddock 5150'-5220' for oil. 3-20-61 found csg holes, cut, pulled, milled & reamed csg to 4676', replaced & cmt to 670', shut in 10-30-74.

9. Cities Service Oil Company-Laughlin Lease, Well #5, located 330 FSL & 2310 FEL, Section 5, T20S, R37E, drilled on 9-13-53 to TD 5715'; 13-3/8" @ 335' w/330 sx circ., 8-5/8" @ 2398' w/925 sx circ., 5½" @ 5713' w/1300 sx circ., dual completion on 9-23-53 in the Paddock 5190' to 5215' for oil and in the Queen 3207'-3355' for gas (perf & sqz off in Blinebry 5675'-5743', 1-19-54 PB to 3359' & continue as single completion in Queen zone.

10. Gulf Oil Corporation-Bertie Whitmire Lease, Well No. 5, located 1650 FNL & 1650 FWL, Section 8, T20S, R37E, drilled on 9-26-53 to TD of 5700'; 13-3/8" @ 471' w/475 sx circ., 9-5/8" @ 2901' w/1600 sx circ., 7" @ 5699' w/385 sx to near top, 9-26-53 perf 5660'-5695' to oil, 6-22-62 additional perfs 5580'-5618'.

11. Gulf Oil Corporation-Bertie Whitmire Lease, Well No. 6, located 990 FNL & 2310 FEL, Section 8, T20S, R37E, drilled on 11-10-53 to TD @ 5735'; 13-3/8" @ 469' w/469 sx circ., 9-5/8" @ 2900' w/1600 sx circ., 7" @ 5712' w/428 sx to TOC @ 2550' per T.S., completed for oil in the Paddock 5175'-5220' 11-26-53.

12. Gulf Oil Corporation-Bertie Whitmire Lease, Well No. 8, located 1650 FNL & 1980 FWL, Section 8, T20S, R37E, drilled 4-22-54 to a TD @ 5250'; 13-3/8" @ 455' w/475 sx circ., 9-5/8" @ 2829' w/1700 sx circ., 7" @ 5249' w/400 sx to TOC @ 2786' per T.S., completed 4-22-54 the Paddock 5140'-5245' to oil.

Part VII

1. An average injection rate of 8,000 bwpd and a maximum of 15,000 bwpd is projected.
2. The Eunice-Monument-Eumont SWD System is semi-closed.
3. Proposed SWD well to operate by gravity injection.
4. Injected fluid is produced water.
5. Not applicable.

Part VIII

The proposed injection zone, the San Andres Formation, is a thick carbonate reef growth characterized by coarsely crystalline to cavernous porosity. The San Andres varies from 1000'-1200' in thickness and the bottom of this formation is at a depth of 5080' per the original well log. The only source of potable ground water in the area is in the Ogallala Aguifer and the lowest water sands per the well log are at 216'.

Part XI

See attached chemical analysis on water wells.

Part XII

Available geologic and engineering data has been examined and we have found no evidence of open faults or any other hydrologic connection between this disposal zone and any source of drinking water.

JEL/jp
10-12-81

PETROLITE CORPORATION

TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) 961-3500 / TWX 910-760-1660 / Telex 44-2417

WATER ANALYSIS REPORT

Company

Rice Engineering & Operating Co.

Submitted by: Gaskin
Sampled by: Gaskin

Source

Sample Point: Windmill "A"
Approx. 1200'FEL &
2350' FNL Sec. 7, T20S,
R37E
Sample Date: 9/25/81
Analysis Date: 10/5/81

SAMPLE ANALYSIS

Appearance: Clear
Sp. Conductivity: 5960 micromhos/cm
pH: 7

Color: Colorless
H2S: Neg.

Constituent	PPM
Sodium	379
Potassium	8.48
Lithium	.1
Calcium	560
Magnesium	174
Barium	.3
Strontium	7.78
Aluminum	<.03
Silver	<.003
Arsenic	<.1
Chromium	<.01
Copper	<.002
Iron	.222
Mercury	<.03
Lead	<.05
Antimony	<.04
Tin	<.1
Titanium	<.002
Zinc	.456
Boron	.25
Phosphate	<.1
Chloride	1860
Sulfate	114
Bicarbonate	228
Carbonate	<1.
Silica	79.5

Sum of cations: 59.2
Sum of anions: 58.7
Ion Balance

Measured: 3100 ppm
Calculated 3420 ppm
TDS Balance

RECEIVED
OCT 8 1981
RICE ENGINEERING & OPERATING, INC.
HOBBS, N. M.

10
FILE

TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) 961-3500 / TWX 910-760-1660 / Telex 44-2417

WATER ANALYSIS REPORT

Company

Rice Engineering & Operating Co.

Submitted by: Gaskin
Sampled by: Gaskin

Source

Sample Point: Water well (elec) "B"
Approx. 700' FEL & 1700'
FSL Sec. 8, T20S, R37E
Sample Date: 9/25/81
Analysis Dace: 10/5/18

SAMPLE ANALYSIS

Appearance: Clear
Sp. Conductivity: 2990
pH: 7

Color: Colorless
H2S: Neg.

Constituent	PPM
Sodium	281
Potassium	3.69
Lithium	.1
Calcium	190
Magnesium	74.8
Barium	1.11
Strontium	4.62
Aluminum	<.03
Silver	<.003
Arsenic	<.1
Chromium	<.01
Copper	<.002
Iron	.003
Mercury	<.03
Lead	<.05
Antimony	<.4
Tin	<.1
Titanium	<.002
Zinc	.294
Boron	.549
Phosphate	<.1
Chloride	632
Sulfate	251
Bicarbonate	322
Carbonate	<.1
Silica	81.2

Sum of cations: 28.1 meq/l
Sum of anions: 28.5 meq/l
Ion Balance

Measured: 1500 ppm
Calculated: 1840 ppm
TDS Balance

RECEIVED
OCT 8 1981
RICE ENGINEERING & OPERATING, INC.
HOBBS, N. M.

TO	
FILE	

PETROLITE CORPORATION

TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) 961-3500 / TWX 910-760-1660 / Telex 44-2417

WATER ANALYSIS REPORT

Company

Rice Engineering & Operating Co.

Submitted by: Gaskin
Sampled by: Gaskin

Source

Sample Point: Windmill "C" Approx. 600' FWL & 1400' FSL Sec. 9, T20S, R37E
Sample Date: 9/25/81
Analysis Date: 10/5/81

SAMPLE ANALYSIS

Appearance: Clear
Sp. Conductivity: 3310 micromhos/cm
pH: 7.6

Color: Colorless
H2S: Neg.

Constituent	PPM
Sodium	361
Potassium	5.68
Lithium	1.09
Calcium	2x19.-(219.)
Magnesium	69.3
Barium	1.4
Strontium	4.15
Aluminum	<.03
Silver	<.003
Arsenic	<.1
Chromium	<.01
Copper	.08
Iron	.682
Mercury	<.03
Lead	<.05
Antimony	<.4
Tin	<.1
Titanium	<.002
Zinc	.481
Boron	.668
Phosphate	<.1
Chloride	843
Sulfate	175
Bicarbonate	322
Carbonate	<1.
Silica	76.3

Sum of cations: 32.6 meq/l
Sum of anions: 32.9 meq/l
Ion Balance

Measured: 1800 ppm
Calculated: 2080 ppm
TDS Balance

RECEIVED
OCT 8 1981
RICE ENGINEERING & OPERATING, INC.
HOBBS, N. M.

TO	
FILE	

P 335 767 740

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
Petro-Lewis Corp.
STREET AND NO.
P. O. Box 506
P.O., STATE AND ZIP CODE
Levelland, TX 79336

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.70
POSTMARK OR DATE	OCT 13 1981 USPO

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

P 335 767 733

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
Marathon Oil Company
STREET AND NO.
P. O. Box 2409
P.O., STATE AND ZIP CODE
Hobbs, N. M. 88240

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.70
POSTMARK OR DATE	OCT 13 1981 USPO

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

P 335 767 734

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
Gulf Oil Corporation
STREET AND NO.
P. O. Box 670
P.O., STATE AND ZIP CODE
Hobbs, N. M. 88240

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.70
POSTMARK OR DATE	OCT 13 1981 USPO

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

P 335 767 741

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
Union Texas Petroleum Corp.
STREET AND NO.
1300 Wilco Building
P.O., STATE AND ZIP CODE
Midland, Texas 79701

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.70
POSTMARK OR DATE	OCT 13 1981 USPO

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

P 335 767 742

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
John H. Hendrix Corp.
STREET AND NO.
525 Midland Tower
P.O., STATE AND ZIP CODE
Midland, Texas 79701

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.70
POSTMARK OR DATE	OCT 13 1981 USPO

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

P 335 767 735

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO
Getty Oil Company
STREET AND NO.
P. O. Box 730
P.O., STATE AND ZIP CODE
Hobbs, N. M. 88240

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$ 1.70
POSTMARK OR DATE	OCT 13 1981 USPO

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

P 335 767 736

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO: Conoco Inc.
STREET AND NO.: P. O. Box 460
P.O., STATE AND ZIP CODE: Hobbs, N. M. 88240

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
RETURN RECEIPT SERVICE: SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	
POSTMARK OR DATE	OCT 13 1981

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

P 335 767 737

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO: ARCO Oil and Gas Company
STREET AND NO.: P. O. Box 1710
P.O., STATE AND ZIP CODE: Hobbs, N. M. 88240

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
RETURN RECEIPT SERVICE: SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	
POSTMARK OR DATE	OCT 13 1981

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

P 335 767 739

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO: Cooper Brothers
% Jimmy Cooper
STREET AND NO.: P. O. Box 55
P.O., STATE AND ZIP CODE: Monument, N.M. 88265

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
RETURN RECEIPT SERVICE: SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$1.70
POSTMARK OR DATE	OCT 13 1981

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

P 335 767 738

RECEIPT FOR CERTIFIED MAIL

NO INSURANCE COVERAGE PROVIDED—
NOT FOR INTERNATIONAL MAIL
(See Reverse)

SENT TO: Amerada Hess Corp.
STREET AND NO.: P. O. Drawer "D"
P.O., STATE AND ZIP CODE: Monument, N.M. 88265

POSTAGE	$ .35
CERTIFIED FEE	.75 ¢
SPECIAL DELIVERY	¢
RESTRICTED DELIVERY	¢
RETURN RECEIPT SERVICE: SHOW TO WHOM AND DATE DELIVERED	.60 ¢
SHOW TO WHOM, DATE, AND ADDRESS OF DELIVERY	¢
SHOW TO WHOM AND DATE DELIVERED WITH RESTRICTED DELIVERY	¢
SHOW TO WHOM, DATE AND ADDRESS OF DELIVERY WITH RESTRICTED DELIVERY	¢
TOTAL POSTAGE AND FEES	$1.70
POSTMARK OR DATE	OCT 13 1981

CONSULT POSTMASTER FOR FEES — OPTIONAL SERVICES — RETURN RECEIPT SERVICE

PS Form 3800, Apr. 1976

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 7424

Order No. R-6855

APPLICATION OF RICE ENGINEERING AND OPERATING, INC., FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on November 19, 1981, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this _____ day of November, 1981, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Rice Engineering and Operating, Inc., is the owner and operator of the Eunice-Monument Eumont ~~(formerly the Gulf Oil Corporation Bertie Whitmire Well No. 2)~~ SWD "G" Well No. 8, located in Unit G of Section 8, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to dispose of produced salt water into the Lower San Andres formation, with injection into the perforated interval from approximately 4300 feet to 4852 feet.

(4) That ~~injection is under pressure~~ the injection should be accomplished through 5½ inch plastic lined tubing ~~installed in a packer set at approximately _____ feet~~ under an oil blanket; 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 annulus in order to determine leakage in the casing or tubing ~~or packer~~.

(4300 x .2)

(5) That if injection is at pressure greater than hydrostatic pressure, 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 860 psi.

(6) That the Director of the Division should be authorized to administratively approve an increase in the injection pressure upon a proper showing by the operator that such higher pressure will not result in migration of the injected waters from the _____

formation.

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

(7) ~~(8)~~ That the operator should report to the supervisor of the Hobbs district office of the Division at the start of disposal operations the gravity and level of the inert fluid in the annulus.

(8) ~~(9)~~ 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.

(9) ~~(10)~~ 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 and Operating, Inc., is hereby authorized to utilize its Eunice-Monument ~~(formerly the Gulf Oil Corporation Berry Williamson Well No. 7)~~ Eumont SWD "G" Well No. 8, located in Unit G of Section 8, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico, to dispose of produced salt water into the Lower San Andres formation, injection to be accomplished through 5 1/2 inch tubing ~~installed in a packer set at approximately~~ under an oil blanket ~~feet~~ with injection into the perforated interval from approximately 4300 feet to 4852 feet;

PROVIDED HOWEVER, that the tubing shall be plastic-lined; that the casing-tubing annulus shall be filled with an inert fluid; and that a pressure gauge shall be attached to the annulus or the annulus shall be equipped with an approved leak

detection device in order to determine leakage in the casing, tubing, or packer.

(2) That if injection is at greater than hydrostatic pressure, 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 860 psi.

(3) That the Director of the Division may authorize an increase in ~~injection~~ pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the _____ formation.

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

(5) That the operator shall report to the supervisor of the Hobbs district office of the Division at the start of disposal operations the gravity and level of the inert fluid in the annulus.

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

~~(6)~~(7) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1120 of the Division Rules and Regulations.

(8) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem

necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY,
Director

S E A L