

CASE 2172: Application of RICE  
ENGR. for a salt water disposal  
well. (Gulf Houston Well No. 1)

71-6-661  
1972 9-14

Case No.

2172

Application, Transcript,  
Small Exhibits, Etc.

DRAFT

RSM/esr  
February 9, 1961

BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO

*2/13*  
*[Signature]*  
IN THE MATTER OF THE HEARING  
CALLED BY THE OIL CONSERVATION  
COMMISSION OF NEW MEXICO FOR  
THE PURPOSE OF CONSIDERING:

CASE No. 2172  
Order No. R-1873

*8/13*  
*[Signature]*  
APPLICATION OF RICE ENGINEERING  
& OPERATING, INC. FOR AN ORDER  
AUTHORIZING A SALT WATER DISPOSAL  
WELL, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on February 8, 1961, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this \_\_\_\_\_ day of February, 1961, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Rice Engineering & Operating, Inc., seeks an order authorizing the disposal of produced salt water through its Gulf Houston Well No. 1, located 1980 feet from the South line and 1980 feet from the East line of Section 19, Township 12 South, Range 38 East, NMPM, Lea County, New Mexico, with injection to be in the Devonian formation in the interval from 12,200 feet to 12,500 feet.

(3) That internally plastic-coated tubing should be installed within ~~6 5/8 inch~~ <sup>the</sup> casing, <sup>which is to be</sup> set at 12,000 feet, <sup>and that sand</sup> and the casing-tubing annulus <sup>should be</sup> filled with sweet oil or its equivalent.

*at least 8 1/2 inch interior casing.*  
*to circulate pup into the shoe of the*

CASE No. 2172

(4) That inasmuch as the injection interval is below the oil-water contact in the Devonian formation, the applicant's proposed salt water disposal program will not jeopardize the production of oil, gas, or fresh water in the area.

IT IS THEREFORE ORDERED:

(1) That the applicant, Rice Engineering & Operating, Inc., is hereby authorized to dispose of produced salt water into the Devonian formation through its Gulf Houston Well No. 1, located 1980 feet from the South line and 1980 feet from the East line of Section 19, Township 12 South, Range 38 East, NMPM, Lea County, New Mexico, with the injection interval from 12,200 feet to 12,500 feet.

PROVIDED HOWEVER, That internally plastic-coated tubing shall be installed within ~~6 5/8 inch~~ <sup>the</sup> casing, <sup>which shall be</sup> set at 12,200 feet, and <sup>that</sup> the casing-tubing annulus <sup>shall be</sup> filled with sweet oil or its equivalent.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1119 of the Commission Rules and Regulations.

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

*to  
sufficient cement  
with sufficient  
to  
the  
intermediate  
casing  
circulate at least up into the shoe of the well*

DOCKET: EXAMINER HEARING - WEDNESDAY, FEBRUARY 8, 1961

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

The following cases will be heard before Daniel S. Nutter, Examiner, or Oliver E. Payne, Attorney, as alternate examiner:

CASE 2171: Application of Amerada Petroleum Corporation for permission to commingle the production from several separate pools and for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to commingle the production from the Justis-Blinebry, Justis-Drinkard, Justis-Fusselman, and an undesignated 5000 foot pay zone from all wells presently completed or hereafter drilled on the Ida Wimberley Lease comprising portions of Sections 24, 25 and 26, Township 25 South, Range 37 East, Lea County, New Mexico. Applicant further seeks permission to install an automatic custody transfer system to handle said commingled production.

CASE 2172: Application of Rice Engineering & Operating, Inc. for a salt water disposal well. Applicant, in the above-styled cause, seeks an order authorizing the disposal of produced salt water through its Gulf Houston Well No. 1, located 1980 feet from the South and East lines of Section 19, Township 12 South, Range 38 East, Lea County, New Mexico, with injection to be in the Devonian formation in the interval from 12,200 feet to 12,500 feet.

CASE 2173: Application of Yates Petroleum Corporation for an order force-pooling a 322.4-acre gas proration unit in the Atoka-Pennsylvanian Gas Pool. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Atoka-Pennsylvanian Gas Pool in the S/2 of Section 21, Township 18 South, Range 26 East, Eddy County, New Mexico. Interested parties include J. N. Hawkins, J. W. Potter, William H. Swearingen, Smith B. Crane, Frank F. Coon, A. F. Escobar, Olive E. Harrison, Pan American Petroleum Corporation, Mayme Ressinger, J. R. Raymond, Isabell Gallegos, Alice Heck Martin, Maze Heck Pinnell, Wave Heck Hill.

- CASE 2174: Application of Yates Petroleum Corporation for an order force-pooling a 322.2-acre gas proration unit in the Atoka-Pennsylvanian Gas Pool. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Atoka-Pennsylvanian Gas Pool in the N/2 of Section 28, Township 18 South, Range 26 East, Eddy County, New Mexico. Interested parties include William H. Swearingen, Alice Heck Martin, Maze Heck Pinnell, Wave Heck Hill, J. W. Potter, James W. Hall and Mrs. Lucille Ruddell South.
- CASE 2175: Application of Sunray Mid-Continent Oil Company for an oil-oil dual completion utilizing two strings of casing. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its State "Y" Well No. 1, located in Unit G, Section 32, Township 18 South, Range 31 East, Eddy County, New Mexico, in such a manner as to permit the production of oil from the Culwin-Yates Pool and the production of oil from the North Shugart Queen-Grayburg Pool through parallel strings of 2 7/8-inch casing cemented in a common well bore.
- CASE 2176: Application of Honolulu Oil Corporation for a pressure maintenance project. Applicant, in the above-styled cause, seeks an order authorizing it to install a pressure maintenance project in the Horseshoe-Gallup Oil Pool by the injection of water into the Gallup formation through its Navajo Well No. 4, located in the SE/4 SE/4 of Section 5, Township 31 North, Range 17 West, San Juan County, New Mexico. Applicant further seeks the adoption of special rules governing the operation of said project.
- CASE 2177: Application of Phillips Petroleum Company for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to install an automatic custody transfer system to handle the Corbin-Abo Pool production from all wells presently drilled or hereafter completed on the Eilliams Federal Lease comprising portions of Sections 33 and 34, Township 17 South, Range 33 East, Lea County, New Mexico.
- CASE 2178: Application of Humble Oil & Refining Company for permission to commingle the production from several separate leases and for an automatic custody transfer system. Applicant, in the above-styled cause, seeks permission to commingle the

CASE 2178: (Cont.)

Horseshoe-Gallup Oil Pool production from all wells presently completed or hereafter drilled on the Navajo "F" lease, comprising all of Sections 3, 4, 9, and 10, the Navajo "G" lease, comprising all of Sections 1, 2, 11 and 12; and the Navajo "M" lease, comprising the NE/4 of Section 5, all in Township 31 North, Range 17 West, San Juan County, New Mexico. Applicant further seeks permission to install an automatic custody transfer system to handle said commingled production.

CASE 2179:

Application of Drilling and Exploration Company, Inc. for approval of the Mescalero Ridge Unit Agreement. Applicant, in the above-styled cause, seeks approval of the Mescalero Ridge Unit Agreement, which unit embraces 7521 acres of Federal and State lands in Township 19 South, Range 34 East, Lea County, New Mexico.

CASE 2180:

Application of Great Western Drilling Company for an order force-pooling a 40-acre proration unit in the Eumont Gas Pool. Applicant, in the above-styled cause, seeks an order force-pooling all mineral interests in the Eumont Gas Pool in the SE/4 NE/4 of Section 32, Township 19 South, Range 37 East, Lea County, New Mexico. Interested parties include Dr. Hans May, B. A. Bowers, Estate of George F. Henneberry, William R. Kershaw, C. B. Neal, Fred Manley, Mae Williams, and W. L. Crutchfield.

CASE 2181:

Application of Gulf Oil Corporation for approval of the Hackberry Hills Unit Agreement. Applicant, in the above-styled cause, seeks approval of the Hackberry Hills Unit Agreement, which unit embraces 13,920 acres in Townships 21 and 22 South, Ranges 25 and 26 East, Eddy County, New Mexico.

*Case 2172*

RICE Engineering & Operating, Inc.

Post Office Box 1142

Telephone EXpress 3-9174

HOBBS, NEW MEXICO

January 5, 1961

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

Re: Rule 701 - Permit for Injection  
of Water (Salt Water Disposal).

Gentlemen:

Rice Engineering & Operating, Inc., of Hobbs, New Mexico, hereby applies for a hearing to be held before the New Mexico Oil Conservation Commission for the purpose of securing a permit under Rule 701 to recompleate the abandoned Gulf Houston No. 1 well as a salt water disposal well. The subject plugged and abandoned well is located in the NW/4 SE/4 of Section 19, Township 12 South, Range 38 East, Gladiola Pool, Lea County, New Mexico. The proposed disposal well will be known as the Rice Engineering & Operating, Inc., Gladiola SWD Well J-19.

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

- A. That said well is located 1980 feet from the South and East lines of Section 19, Township 12 South, Range 38 East, N.M.P.M. (See Exhibit A).
- B. That said well was drilled, plugged and abandoned as a dry hole on March 6, 1956, by Gulf Oil Corporation, being non-productive in any zone.
- C. That said well has 13-3/8" O.D. casing set at 376 feet, 8-5/8" O.D. casing set at 4499 feet, and 7-7/8" open hole to total depth of 12,065 feet. (See Exhibit "B").

*Docket  
Mailed  
1-30-61*



N.M.O.C.C.  
Santa Fe, New Mexico  
January 5, 1961  
Page 2

- D. That said well will be completed as a disposal well in the lower Devonian by (1) drilling to a new total depth of 12,500 feet; (2) setting a tapered string of 4500 feet of 7" O.D. casing and 7700 feet of 6-5/8" O.D. casing; (3) disposing of produced brine in the open hole interval from 12,200 to 12,500 feet.
- E. That the salt water to be injected is produced from the Gladiola Devonian and Wolfcamp Pools.
- F. That the volume of salt water to be disposed shall be approximately 15,000 barrels per day.

Therefore, Rice Engineering & Operating, Inc., requests that the Secretary of the New Mexico Oil Conservation Commission set a date for this application to be heard, and after said hearing to grant this permit to dispose of salt water in the Gulf Houston No. 1 well.

Respectfully submitted,

RICE ENGINEERING & OPERATING, INC.

By: \_\_\_\_\_

*W.G. Abbott*

W.G. Abbott  
Division Manager

DGS/ai

Attachments: Exhibit "A"  
Exhibit "B"

EXHIBIT "D"

WELLS WITHIN 1/2 MILE OF SWD J-19

GLADIOLA SWD SYSTEM

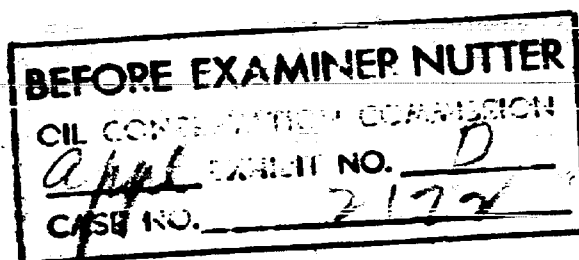
| <u>Operator</u>                    | <u>Lease</u> | <u>Well No.</u> | <u>Completion Interval Elevation</u>       | <u>Completion Zone</u> | <u>Remarks</u>               |
|------------------------------------|--------------|-----------------|--|------------------------|------------------------------|
| Pan American Petroleum Corporation | St. A-19     | 1               | -8032' to<br>-8072'<br>-8032' to<br>-8042' | Devonian               | Squeeze Cmt.<br>Re-Perforate |
|                                    | St. 19       | 1               | -8067' to<br>-8081'                        | Devonian               |                              |
|                                    | St. AM       | 1               | -8122' to<br>-8132'                        | Devonian               | Temp. Abd.                   |
|                                    | St. B-19     | 1               | -8074' to<br>-8084'                        | Devonian               |                              |
| Gulf Oil Corporation               | Lee St. AV   | 4               | -8075' to<br>-8112'                        | Devonian               |                              |
|                                    | Lee St. AV   | 5               | -8018' to<br>-8068'                        | Devonian               |                              |

EXHIBIT "D"

WELLS WITHIN 1/2 MILE OF SWD J-19

GLADIOLA SWD SYSTEM

| <u>Operator</u>                    | <u>Lease</u> | <u>Well No.</u> | <u>Completion Interval Elevation</u>       | <u>Completion Zone</u> | <u>Remarks</u>               |
|------------------------------------|--------------|-----------------|--|------------------------|------------------------------|
| Pan American Petroleum Corporation | St. A-19     | 1               | -8032' to<br>-8072'<br>-8032' to<br>-8042' | Devonian               | Squeeze Cmt.<br>Re-Perforate |
|                                    | St. 19       | 1               | -8067' to<br>-8081'                        | Devonian               |                              |
|                                    | St. AN       | 1               | -8122' to<br>-8132'                        | Devonian               | Temp. Abd.                   |
|                                    | St. B-19     | 1               | -8074' to<br>-8084'                        | Devonian               |                              |
| Gulf Oil Corporation               | Lea St. AV   | 4               | -8075' to<br>-8112'                        | Devonian               |                              |
|                                    | Lea St. AV   | 5               | -8018' to<br>-8068'                        | Devonian               |                              |



OIL CONSERVATION COMMISSION  
SANTA FE, NEW MEXICO

Date 2/13/61

CASE NO. 2172

HEARING DATE 2/5/61 9am DSN@SF

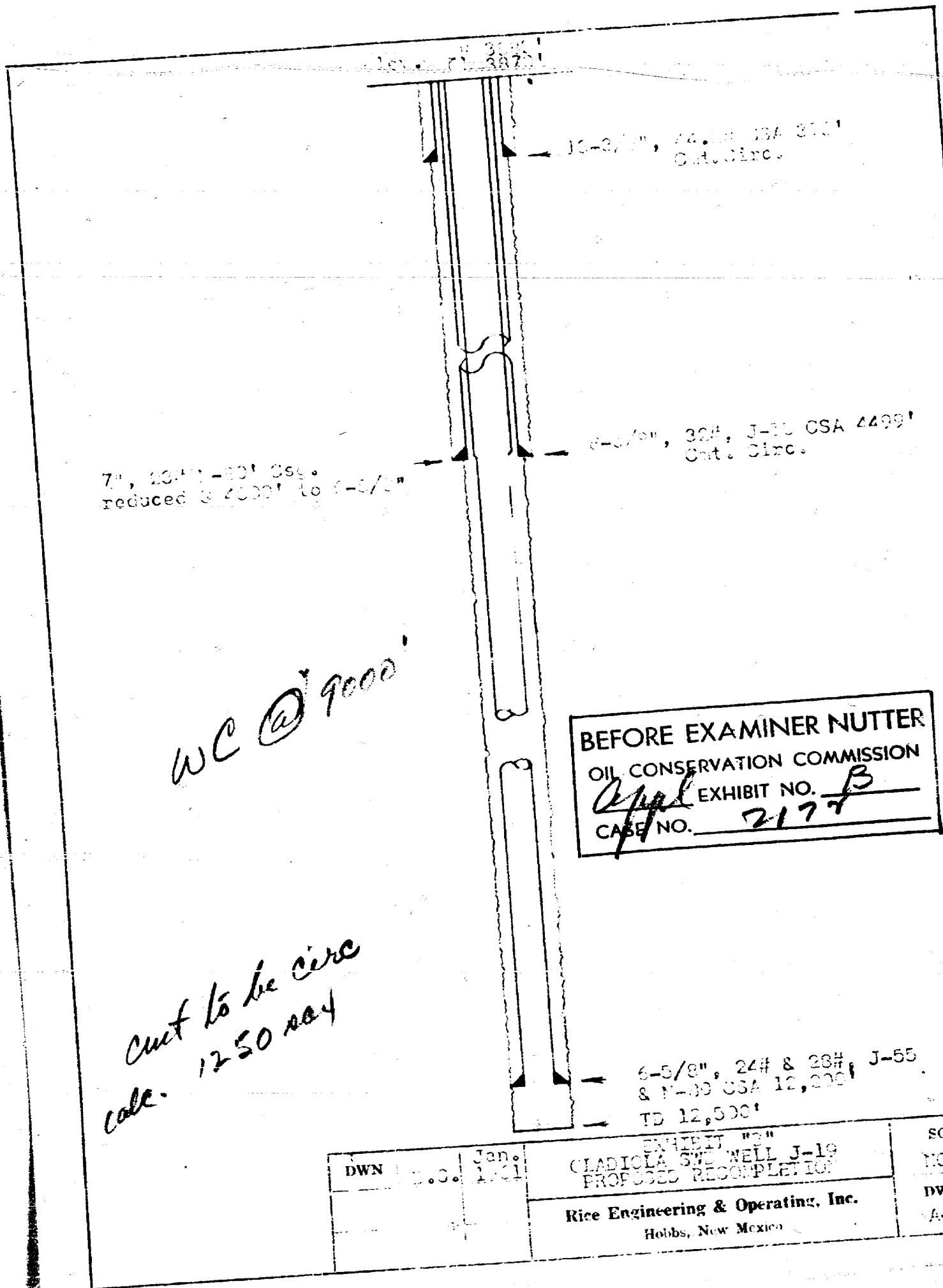
My recommendations for an order in the above numbered case(s) are as follows:

Enter an order authorizing Rice Engineering to re-enter the gulf Houston Well No. 1, located in the NW $\frac{1}{4}$  SE $\frac{1}{4}$  of Sec 19, T 12 S, R 38 E, Gladiola Field Lea County New Mexico and to re-complete said well as a ~~salt water~~ disposal well in the <sup>lower</sup> Devonian formation.

Disposal shall be thru tubing installed within ~~a string of 6 5/8"~~ the casing, the annulus between said string & casing to be filled w/ naphtha, sweet oil or other non-corrosive medium.

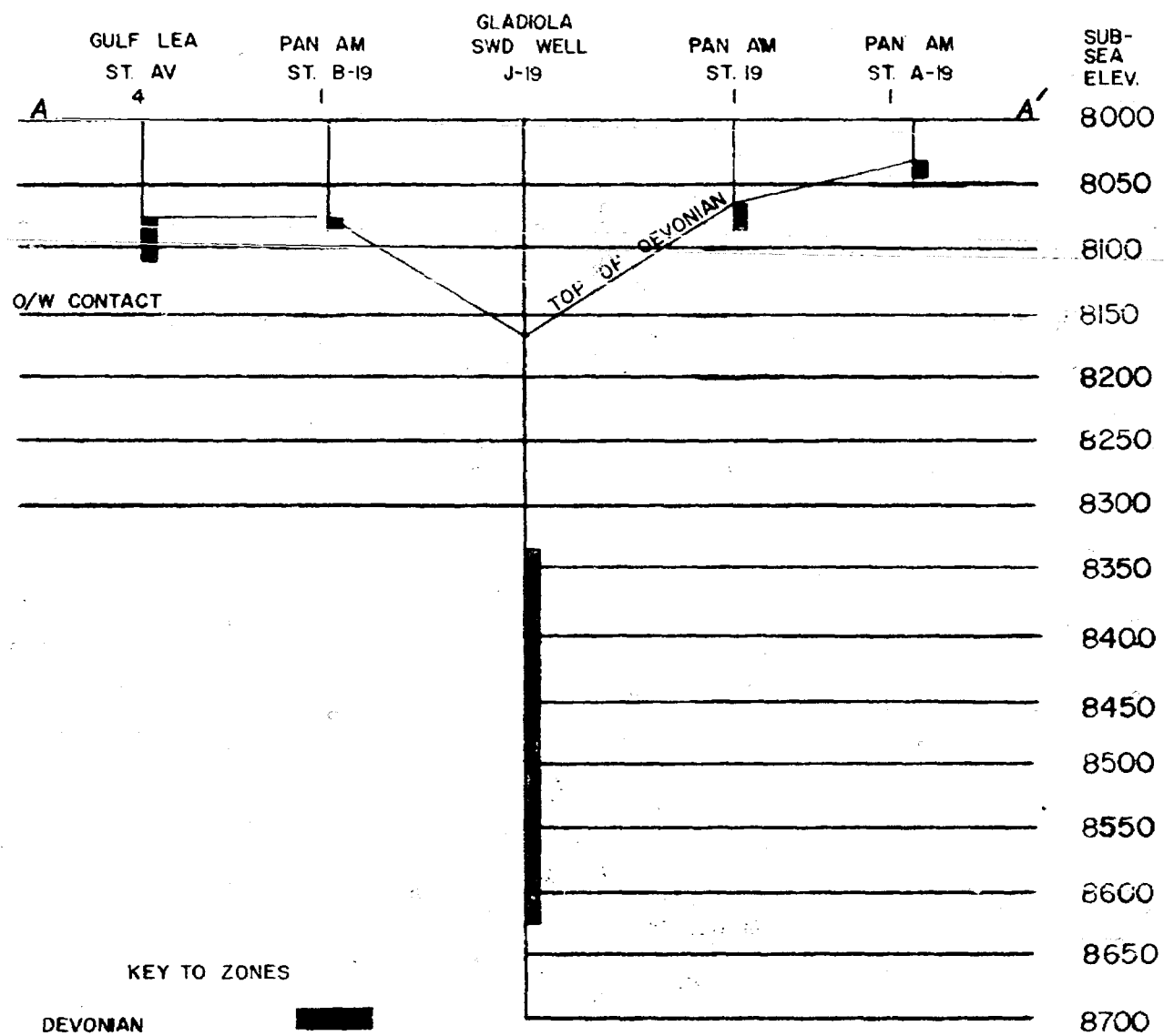
Injection to be thru open hole from approx 12,200' to approx 12,500'.

Sam Rutter  
Staff Engineer  
Examiner



BEFORE EXAMINER NUTTER  
 OIL CONSERVATION COMMISSION  
*Appl* EXHIBIT NO. B  
 CASE NO. 2177

|     |      |           |   |                  |
|-----|------|-----------|---|------------------|
| DWN | E.C. | Jan. 1961 | EXHIBIT "B"<br>GLADIOLA SW WELL J-19<br>PROPOSED RECOMPLETION | SCALE            |
|     |      |           |   | NONE             |
|     |      |           | Rice Engineering & Operating, Inc.<br>Hobbs, New Mexico       | DWG NO.<br>A-112 |



KEY TO ZONES

DEVONIAN

LOWER DEVONIAN

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

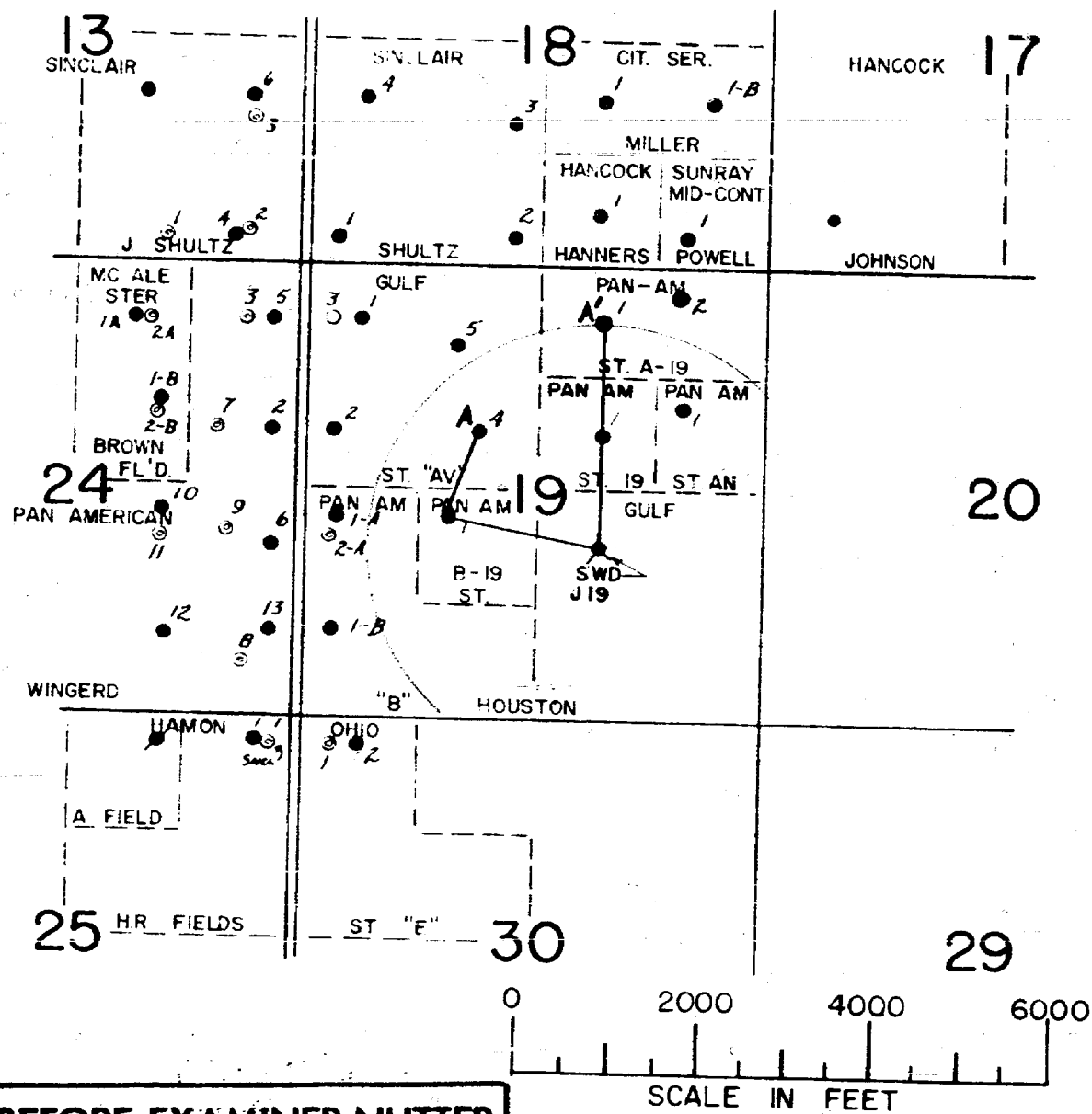
EXHIBIT NO. C

CASE NO. 2172

|     |     |          |                                    |             |         |
|-----|-----|----------|------------------------------------|-------------|---------|
| DWN | D B | 12-14-60 | SECTION A-A'                       | EXHIBIT "C" | SCALE   |
|     |     |          | GLADIOLA SWD SYSTEM WELL J-19      |             | NONE    |
|     |     |          | Rice Engineering & Operating, Inc. |             | DWG NO. |
|     |     |          | Hobbs, New Mexico                  |             | A-114   |

T-12-S R-37-E

T-12-S R-38-E



BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

EXHIBIT NO. A

CASE 2172

EXHIBIT "A"

DWN DB 12-14-60

LOCATION PLAT  
PROPOSED SWD WELL J-19  
GLADIOLA SWD SYSTEM

Rice Engineering & Operating, Inc.  
Hobbs, New Mexico

SCALE  
IND.

DWG NO.  
A-113

GOVERNOR  
JOHN BURROUGHS  
CHAIRMAN

State of New Mexico  
Oil Conservation Commission

LAND COMMISSIONER  
MURRAY E. MORGAN  
MEMBER



P. O. BOX 871  
SANTA FE

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

Mr. Jason Kellahin  
Kellahin & Fox  
Box 1718  
Santa Fe, New Mexico

Re: Case No. 2172  
Order No. B-1872  
Applicant:

Rice Engineering & Operating, Inc.

Dear Sir:

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

Very truly yours,

A. L. PORTER, Jr.,  
Secretary-Director

ir/

Carbon copy of order also sent to:

Hobbs OCC X  
Artesia OCC         
Aztec OCC       

Other



**BEFORE THE OIL CONSERVATION COMMISSION  
OF THE STATE OF NEW MEXICO**

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

**CASE No. 2172  
Order No. R-1873**

**APPLICATION OF RICE ENGINEERING  
& OPERATING, INC. FOR AN ORDER  
AUTHORIZING A SALT WATER DISPOSAL  
WELL, LEA COUNTY, NEW MEXICO.**

**ORDER OF THE COMMISSION**

**BY THE COMMISSION:**

This cause came on for hearing at 9 o'clock a.m. on February 8, 1961, at Santa Fe, New Mexico, before Daniel S. Nutter, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 15th day of February, 1961, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Daniel S. Nutter, and being fully advised in the premises,

**FINDS:**

- (1) That due public notice having been given as required by law, the Commission has jurisdiction of this cause and the subject matter thereof.
- (2) That the applicant, Rice Engineering & Operating, Inc., seeks an order authorizing the disposal of produced salt water through its Gulf Houston Well No. 1, located 1900 feet from the South line and 1500 feet from the East line of Section 19, Township 12 South, Range 38 East, NMPM, Lea County, New Mexico, with injection to be in the Devonian formation in the interval from 12,200 feet to 12,500 feet.
- (3) That internally plastic-coated tubing should be installed within the casing which is to be set at 12,000 feet, and that said casing should be cemented with sufficient cement to circulate at least up into the shoe of the 8 5/8-inch intermediate casing string, and that the casing-tubing annulus should be filled with sweet oil or its equivalent.
- (4) That inasmuch as the injection interval is below the oil-water contact in the Devonian formation, the applicant's proposed salt water disposal program will not jeopardize the production of oil, gas, or fresh water in the area.

-2-

CASE No. 2172  
Order No. R-1873

IT IS THEREFORE ORDERED:

(1) That the applicant, Rice Engineering & Operating, Inc., is hereby authorized to dispose of produced salt water into the Devonian formation through its Gulf Houston Well No. 1, located 1980 feet from the South line and 1980 feet from the East line of Section 19, Township 12 South, Range 38 East, NEPM, Lea County, New Mexico, with the injection interval from 12,200 feet to 12,500 feet.

PROVIDED HOWEVER, That internally plastic-coated tubing shall be installed within the casing which shall be set at 12,200 feet, and that said casing shall be cemented with sufficient cement to circulate at least up into the shoe of the 8 3/8-inch intermediate casing string, and that the casing-tubing annulus shall be filled with sweet oil or its equivalent.

(2) That the applicant shall submit monthly reports of its disposal operations in accordance with Rules 704 and 1119 of the Commission Rules and Regulations.

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

STATE OF NEW MEXICO  
OIL CONSERVATION COMMISSION



*E. L. Mechem*

EDWIN L. MECHEM, Chairman

*E. S. Walker*  
E. S. WALKER, Member

*A. H. Porter, Jr.*  
A. H. PORTER, JR., Member & Secretary

esx/

BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
February 8, 1961

EXAMINER HEARING

IN THE MATTER OF:

Application of Rice Engineering & Operating, Inc.,  
for a salt water disposal well. Applicant, in the  
above-styled cause, seeks an order authorizing the  
disposal of produced salt water through its Gulf  
Houston Well No. 1, located 1980 feet from the South  
and East lines of Section 19, Township 12 South,  
Range 38 East, Lea County, New Mexico, with injection  
to be in the Devonian formation in the interval from  
12,200 feet to 12,500 feet.

Case 2172

BEFORE:

Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: Case 2172.

MR. MORRIS: Application of Rice Engineering & Operating,  
Inc. for a salt water disposal well.

MR. KELLAHIN: Jason Kellahin, Kellahin & Fox, Santa Fe,  
representing the applicant. We have one witness, Mr. Abbott.  
(Witness sworn.)

W. G. ABBOTT

called as a witness, having been previously duly sworn, testified  
as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

Q Would you state your name, please?

A My name is W. G. Abbott.

Q By whom are you employed and in what position?

A Division Manager for Rice Engineering in Hobbs, New Mexico.

Q Have you testified before this Commission as a Petroleum Engineer?

A Yes, sir.

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

MR. NUTTER: Yes, sir, they are.

Q Mr. Abbott, are you familiar with the application of Rice Engineering in Case 2172?

A Yes, sir, I am.

Q Would you state briefly what is proposed in this application?

A We propose to go back and plug and abandon the well in the Gladiola Pool, NW/4 of the SE/4 of Section 19, Township 12 South, Range 38 East. We plan to run a tapered string, long string of casing in the well, drill the well deeper and make a salt water disposal well out of it.

Q Mr. Abbott, would you refer to what has been marked as Exhibit A and discuss the information shown on that exhibit?

A Exhibit A shows a plat of this immediate area. The well in question we have marked SWD J-19. It was originally drilled by Gulf and was a dry hole. Also on this exhibit A is a trace of a cross section AA Prime which I will describe later, and also there



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6651

ALBUQUERQUE, NEW MEXICO

is a half-mile arc around the well, and that will be brought out later.

Q What is the present status of the well?

A It is plugged and abandoned.

Q Referring to what has been marked as Exhibit B, would you discuss that exhibit?

A Exhibit B shows our proposed recompletion and a sketch of the well. You notice that the 13-3/8, set at 376 feet, and cement is circulated; the 8-5/8 inch, set 4499, also that cement is circulated. As the well stands right now it is open hole. Of course, it has some cement plugs in it, but it is open hole to 12,065 feet, and we propose to run a tapered string of 7 inch to 4500 feet, and then 6-5/8 inch down to 12,200 feet, and complete the well, open hole, from 12,200 feet to 12,500 feet in the lower Devonian pay.

Q Will the tapered string which you propose to set be cemented?

A Yes, sir. We plan to circulate the cement on it.

Q How much cement do you calculate it will take to adequately protect that string?

A We figure we will use around 1250 sacks of cement.

Q In your opinion, Mr. Abbott, does the cementing program protect all surface or subsurface water zones?

A Yes, sir.

Q Does it adequately protect any producing horizons that might be encountered in this area?



DEARNLEY-MEIER REPORTING SERVICE, Inc.  
ALBUQUERQUE, NEW MEXICO  
PHONE CH 3-6691

A Yes.

Q Are there any producing zones through which this well bore will pass?

A Yes. This well is a dry hole, but there may be some productive zones in the Wolfcamp.

Q Approximately what depth would that be?

A Around 9,000 feet.

Q But that area would be cemented off, would it?

A Yes, sir.

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

A Exhibit C is this cross section, AA Prime, which is shown on Exhibit A, and shows the wells on that AA Prime, Gulf State AV No. 4, Pan American State B-19 No. 1, and our proposed SWD J-19, Pan American's State A-19 No. 1, and Pan American State A-19 No. 1. It shows the oil completions in red and our proposed disposal completion in green.

Q The producing wells shown on the exhibit are completed in the Devonian, are they?

A Yes, sir.

Q Is the lower zone in which you propose to inject water water-productive at the present time?

A Yes.

Q Would the injection of fluids into that zone have any adverse effect, in your opinion, on the producing wells in the area?



DEARNLEY-MEIER REPORTING SERVICE, Inc.

PHONE CH 3-6691

ALBUQUERQUE, NEW MEXICO

A No, sir, it would not.

Q What volumes of water would you be injecting?

A We will be injecting approximately 15,000 barrels a day.

Q What is the source of that water?

A That is water produced in the Gladiola Pool. Most of it is Devonian water.

Q Is it a corrosive water?

A Yes, sir.

Q Referring to what has been marked as Exhibit D, would you discuss the information shown on that exhibit?

A Exhibit D shows the well completions and pertinent information on the wells within a half-mile radius of the subject salt water disposal well. It shows the completion interval in the zone and any rework that has been done to the wells.

Q Does that include all of the wells within a half-mile radius of the disposal well?

A Yes, sir.

Q Were Exhibits A, B, C and D prepared by you or under your supervision?

A Yes, sir.

MR. KELLAHIN: At this time I would like to offer in evidence Exhibits A, B, C and D.

MR. NUTTER: Rice's Exhibits A, B, C and D will be entered in evidence.

Q Will the water to be disposed of be on vacuum?



A Yes, gravity in the formation.

MR. KELLAHIN: That is all the questions I have.

MR. NUTTER: Any questions of Mr. Abbott?

BY MR. NUTTER:

Q Was this well ever produced from the Devonian?

A No, sir.

Q So then, I take it that no long string had ever been run in the well?

A No, it hadn't.

Q And the 8-5/8 is set at 4499, with the cement circulated?

A Yes, sir.

Q You will run a string of 7-inch down to the shoe on the 8-5/8, and then reduce to 6-5/8 pipe down to 12,200 and circulate the cement. How far do you calculate the cement will come, to the shoe of the 8-5/8 or circulate to the surface?

A We will try to circulate it to the surface. We don't know exactly how much cement the formation will take, but we figure about 40 percent fill, and it should circulate to the surface.

Q Do you expect to be able to do this with a single stage, or will you have to multistage?

A We will do it with a single stage. The reason for using this pipe program, we need all the capacity we can get for a salt water disposal well.

Q Will you run a temperature survey on that cement job to find out where the top comes to?

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A Yes, sir.

Q Do you plan to install tubing and dispose of water through tubing?

A If the Commission requires it we plan to run tubing, yes.

Q You mention that the fluid is corrosive. There has been adequate proof of corrosiveness in salt water disposal wells in north Lea County?

A Yes, sir.

Q In some instances?

A Yes, sir. We will probably use a tapered string of 5-1/2 and 5-inch casing as tubing in this well.

Q Can you dispose of 15,000 barrels by gravity through that size tubing?

A Yes, sir.

Q What would you do with the annulus, fill it with a non-corrosive fluid?

A Sweet oil, yes, sir.

Q Mr. Abbott, did you look at any of the wells that are beyond the half-mile limit and determine that they were completed at a depth that would be comparable to the green interval shown on your Exhibit C?

A No, none of them are completed in that lower Devonian. That is all water.

Q In the Gladiola Pool all wells are completed in the upper portion of the Devonian?



A Yes.

Q You feel you are definitely disposing of the salt water below the oil-water contact in the formation?

A Yes, sir.

MR. NUTTER: Any further questions of Mr. Abbott? He may be excused. Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: That is all I have.

MR. NUTTER: Does anyone have anything they wish to offer in this case? Case will be taken under advisement.

STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss

I, JUNE PAIGE, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 13th day of February, 1961.

*June Paige*  
Notary Public - Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2172 heard by me on 2/8, 1961.

*[Signature]*  
Examiner  
New Mexico Oil Conservation Commission

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| <u>NUMBER</u> | <u>EXHIBIT</u>   | <u>IDENTIFIED</u> | <u>OFFERED</u> | <u>ADMITTED</u> |
|---------------|------------------|-------------------|----------------|-----------------|
| Ex.#A         | Plat             | 2                 | 5              | 5               |
| Ex.#B         | Well Sketch      | 3                 | 5              | 5               |
| Ex.#C         | Cross Section    | 4                 | 5              | 5               |
| Ex.#D         | Well Completions | 5                 | 5              | 5               |

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