

CASE 3715: Application of GULF
for an amendment to ORDER NO.
R-3345 - Lea County, N. Mex.

Case No.

3715

Application, Transcript,
Small Exhibits, Etc.

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. 3715
Order No. R-3345-B

APPLICATION OF GULF OIL CORPORATION
FOR AN AMENDMENT TO ORDER NO. R-3345,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 24, 1968, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 31st day of January, 1968, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That Orders No. R-3345 as corrected by R-3345-A authorized the applicant, Gulf Oil Corporation, to institute the Gulf Stuart Langlie Mattix Waterflood Project in the Stuart Langlie Mattix Unit Area, Langlie-Mattix Pool, by the injection of water into the Seven Rivers and Queen formations, Lea County, New Mexico.

(3) That the applicant, Gulf Oil Corporation, now seeks amendment of Orders No. R-3345 as corrected by R-3345-A to substitute the Sinclair Stuart "B" Well No. 2 located in Unit I and the Sinclair Stuart "C" Well No. 3 located in Unit K as water injection wells in said project in lieu of the Sinclair Stuart "A" Well No. 1 located in Unit J and the Sinclair Stuart "D" Well No. 4 located in Unit L, all in Section 10, Township 25

-2-

CASE No. 3715
Order No. R-3345-B

South, Range 37 East, NMPM, Langlie-Mattix Pool, Lea County,
New Mexico.

(4) That approval of the subject application will not violate correlative rights and should increase the efficiency of the Gulf Stuart Langlie Mattix Waterflood Project and result in greater ultimate recovery of oil, thereby preventing waste.

IT IS THEREFORE ORDERED:

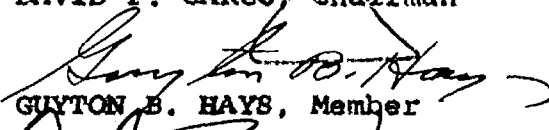
(1) That Order No. R-3345 as corrected by R-3345-A is hereby amended by deleting from the water injection wells authorized for the Gulf Stuart Langlie Mattix Waterflood Project in the Stuart Langlie Mattix Unit Area the Sinclair Stuart "A" Well No. 1 located in Unit J and the Sinclair Stuart "D" Well No. 4 located in Unit L, and substituting in lieu thereof as water injection wells the Sinclair Stuart "B" Well No. 2 located in Unit I and the Sinclair Stuart "C" Well No. 3 located in Unit K, all in Section 10, Township 25 South, Range 37 East, NMPM, Langlie-Mattix Pool, Lea County, New Mexico.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman


GUYTON B. HAYS, Member


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


esr/

CASE 3715: Application of Gulf Oil Corporation for an amendment to Order No. R-3345, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3345, which order authorized the Gulf Stuart Langlie Mattix Unit Waterflood Project. Applicant proposes to substitute the Stuart "B" Well No. 2 located in Unit I and the Stuart "C" Well No. 3 located in Unit K as water injection wells in said project in lieu of the Stuart "A" Well No. 1 located in Unit J and the Stuart "D" Well No. 4 located in Unit L, all in Section 10, Township 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico.

CASE 3716: Application of Carter Foundation Production Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Ellenburger formation through the perforated interval from 9580 to 9680 feet in its E. C. Hill "E" Federal Well No. 5 located in Unit E of Section 35, Township 23 South, Range 37 East, Teague-Ellenburger Pool, Lea County, New Mexico.

CASE 3651 (Reopened):

Application of Tenneco Oil Company for an amendment to Order No. R-3315, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the re-opening of Case No. 3651 and the amendment of Order No. R-3315 entered therein which order promulgated temporary pool rules for the North Morton-Pennsylvanian Pool, Lea County, New Mexico, including the establishment of 80-acre proration units for a period of one year. Applicant now seeks the amendment of said order to provide for 160-acre spacing and proration units on a temporary basis.

CASE 3717: Application of Aztec Oil & Gas Company for a dual completion and salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the authority to dually complete its State "AJ" Well No. 2 located in Unit N of Section 1, Township 18 South, Range 36 East, Arkansas Junction-San Andres Pool, Lea County, New Mexico, in such a manner as to permit the production of oil from the Upper San Andres formation in the interval from 5047 to 5079 feet and to permit the disposal of produced salt water in the Lower San Andres formation in the interval from 5430 to 5462 feet through parallel strings of 2-inch tubing.

CASE 3718: Application of Cabot Corporation for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water in the Wolfcamp, Pennsylvanian, Mississippian, and Devonian formations in the overall interval from 9406 to 12,689 feet in its H. L. Lowe "C" Well No. 1 located in Unit N of Section 26, Township 13 South, Range 37 East, King-Devonian Pool, Lea County, New Mexico.

Docket No. 3-68

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 24, 1968

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

The following cases will be heard before Daniel S. Nutter, Examiner, or
Elvis A. Utz, Alternate Examiner:

CASE 3704 (Continued from the December 20, 1967, Examiner Hearing)

Application of New Mexico Salt Water Disposal Company, 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 Bough "D" zone of the Pennsylvanian formation in the perforated interval from 9844 to 9875 feet in its Ainsworth Well No. 1 located in Unit H of Section 19, Township 9 South, Range 34 East, Vada-Pennsylvanian Pool, Lea County, New Mexico.

CASE 3711: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the amendment of Rule 509 of the Commission Rules and Regulations and Commission Form C-109 to permit the production of the bonus discovery oil allowable assigned to multiple discovery wells to be produced from any discovery zone in any proportion; and to further amend said rule to permit applications for the bonus discovery allowable to be heard on dockets other than the regular pool nomenclature docket in instances where the applicant will present the evidence.

CASE 3712: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the amendment of Rule 701 of the Commission Rules and Regulations and secondary recovery Orders Nos. R-1244, R-1311, R-1456, R-1470, R-1505, R-2064, R-2178-B, R-2268-A, R-2269, R-2403, R-2541, R-2622, R-2664, R-2700, and R-2795, to delete therefrom all references to the State Engineer or the State Engineer Office.

CASE 3713: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to consider the amendment to Rule 103 of the Commission Rules and Regulations to require that well identification signs for wells drilled hereafter shall designate the location of said wells by quarter-quarter section rather than quarter section as now required.

CASE 3714: Application of Continental Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dually complete its State "O" Well No. 1 located in Unit F of Section 16, Township 17 South, Range 32 East, Lea County, New Mexico, in such a manner as to permit the production of gas from the perforated interval 3140 to 3160 feet, Maljamar-Queen Gas Pool and the injection of water for secondary recovery purposes into the Grayburg-San Andres formations in the interval from 3700 to 4050 feet through parallel strings of 2-inch tubing.

Gulf Oil Corporation

EXPLORATION AND PRODUCTION DEPARTMENT--U. S. OPERATIONS
ROSWELL DISTRICT

T. W. Kidd
DISTRICT MANAGER
M. I. Taylor
DISTRICT PRODUCTION
MANAGER
F. O. Mortlock
DISTRICT EXPLORATION
MANAGER
H. A. Rankin
DISTRICT SERVICES MANAGER

P. O. Drawer 1938
Roswell, New Mexico 88201

January 3, 1968

Case 3715

Secretary Director
Oil Conservation Commission
State of New Mexico
Post Office Box 2088
Santa Fe, New Mexico 87501

Re: Application of Gulf Oil Corporation to Reopen
Case No. 3684 to Amend Order No. R-3345, to
Delete Two Injection Wells and Substitute Two
Different Injection Wells in the Stuart
Langlie Mattix Unit Waterflood Project

Dear Sir:

Gulf Oil Corporation, Operator of the Stuart Langlie Mattix Unit in Township 25 South, Range 37 East, Lea County, New Mexico, desires to change the location of two of the twelve injection wells as approved in Order No. R-3345. Gulf, therefore, requests that Case No. 3684 be reopened for this purpose and in support of this application states the following:

- (1) Two of the twelve injection wells originally included in the waterflood project in T-25-S, R-37-E will be used as producing wells. These wells are:

<u>Operator - Lease</u>	<u>Well No.</u>	<u>Location</u>
Sinclair Francis Stuart "A"	1	Unit J, Sec. 10
Sinclair Francis Stuart "D"	4	Unit L, Sec. 10

- (2) Two other producing wells will be substituted as injection wells in the project. These two wells are:

<u>Operator - Lease</u>	<u>Well No.</u>	<u>Location</u>
Sinclair Francis Stuart "B"	2	Unit I, Sec. 10
Sinclair Francis Stuart "C"	3	Unit K, Sec. 10

- (3) Applicant plans to inject up to 500 BWPD into the Seven Rivers (Lower 100') and Queen formations in the approximate interval 3,100' to 3,500'.



DOCKET MAILED

Date *1-11-68*

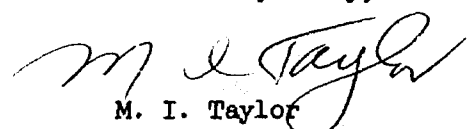
Secretary Director
Oil Conservation Commission

-2-

January 3, 1968

- (4) Injection water will be saline water from the San Andres formation found in the Unit Area at approximately 4,500'.
- (5) Gulf anticipates no other changes in the planned operation of this waterflood project.
- (6) The following items are enclosed with this application:
 - (a) A revised plat of Stuart Langlie Mattix Unit showing the waterflood injection pattern including substituted injection wells (a larger plat, Figure No. I was submitted with the original application).
 - (b) Diagrammatic sketches of the two new injection wells showing completion intervals and casing programs (Figures V and VI).
- (7) The Francis Stuart "A" No. 1 well is the only Unit injection well that has been logged. A copy of this log was submitted with the original application for this waterflood project (Log No. 2).
- (8) A copy of this application, complete with all enclosures, has been sent to the State Engineer Office, Santa Fe, New Mexico.

Yours very truly,


M. I. Taylor

Enclosures
LCS:sz

cc: New Mexico Oil Conservation Commission
Post Office Box 1980
Hobbs, New Mexico 88240

State Engineer Office
Post Office Box 1079
Santa Fe, New Mexico 87501

Commissioner of Public Lands
State of New Mexico
Post Office Box 1148
Santa Fe, New Mexico 87501

U. S. Department of the Interior
Geological Survey
Post Office Box 1857
Roswell, New Mexico 88201

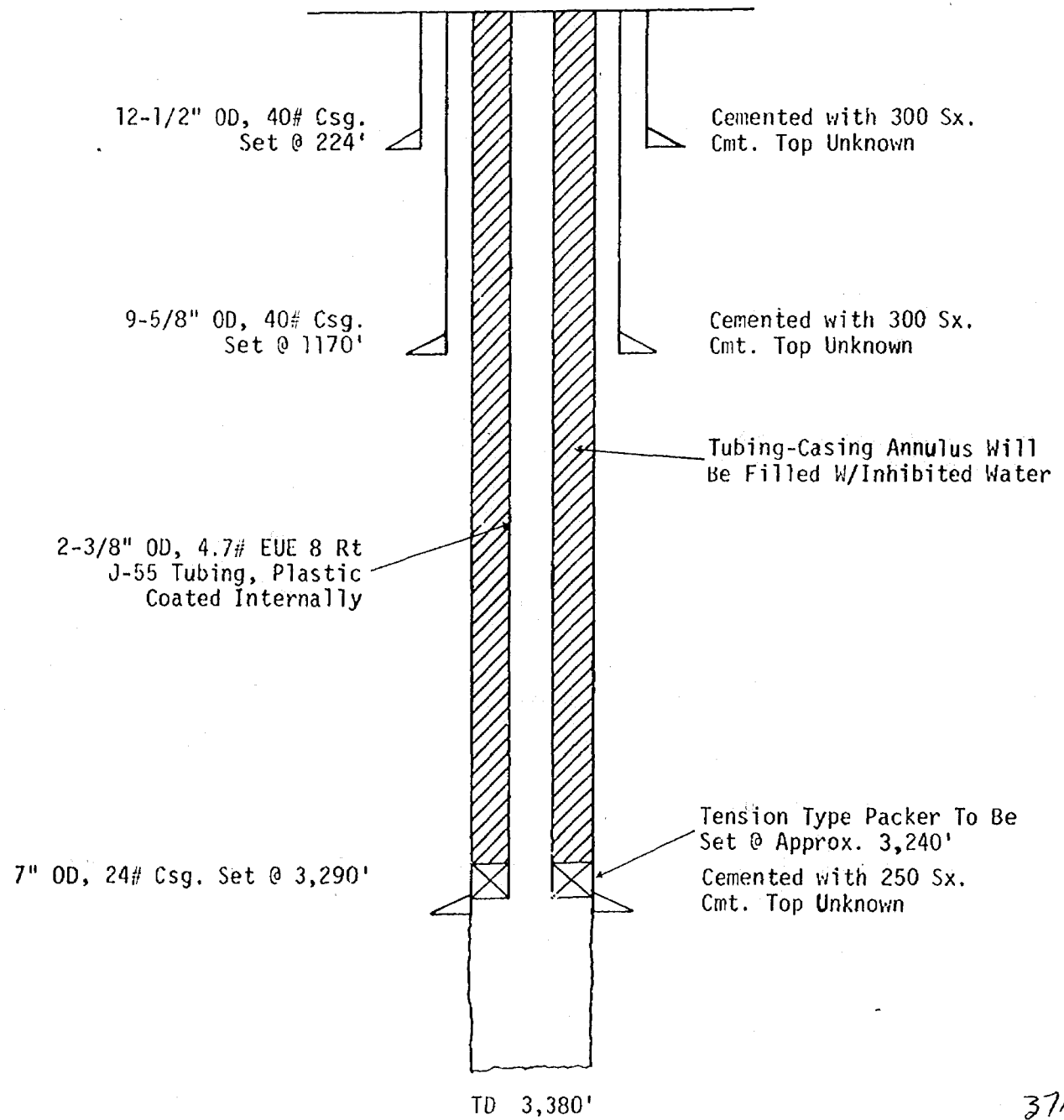
REOPENED CASE NO. 3684
REVISED EXHIBIT NO. 1-D

FIGURE V
DIAGRAMMATIC SKETCH
PROPOSED INJECTION WELL

STUART LANGLIE MATTIX UNIT
LEA COUNTY, NEW MEXICO

SINCLAIR OIL AND GAS COMPANY
FRANCIS STUART "B" WELL NO. 2

LOCATED UNIT 1, SEC. 10-25S-37E



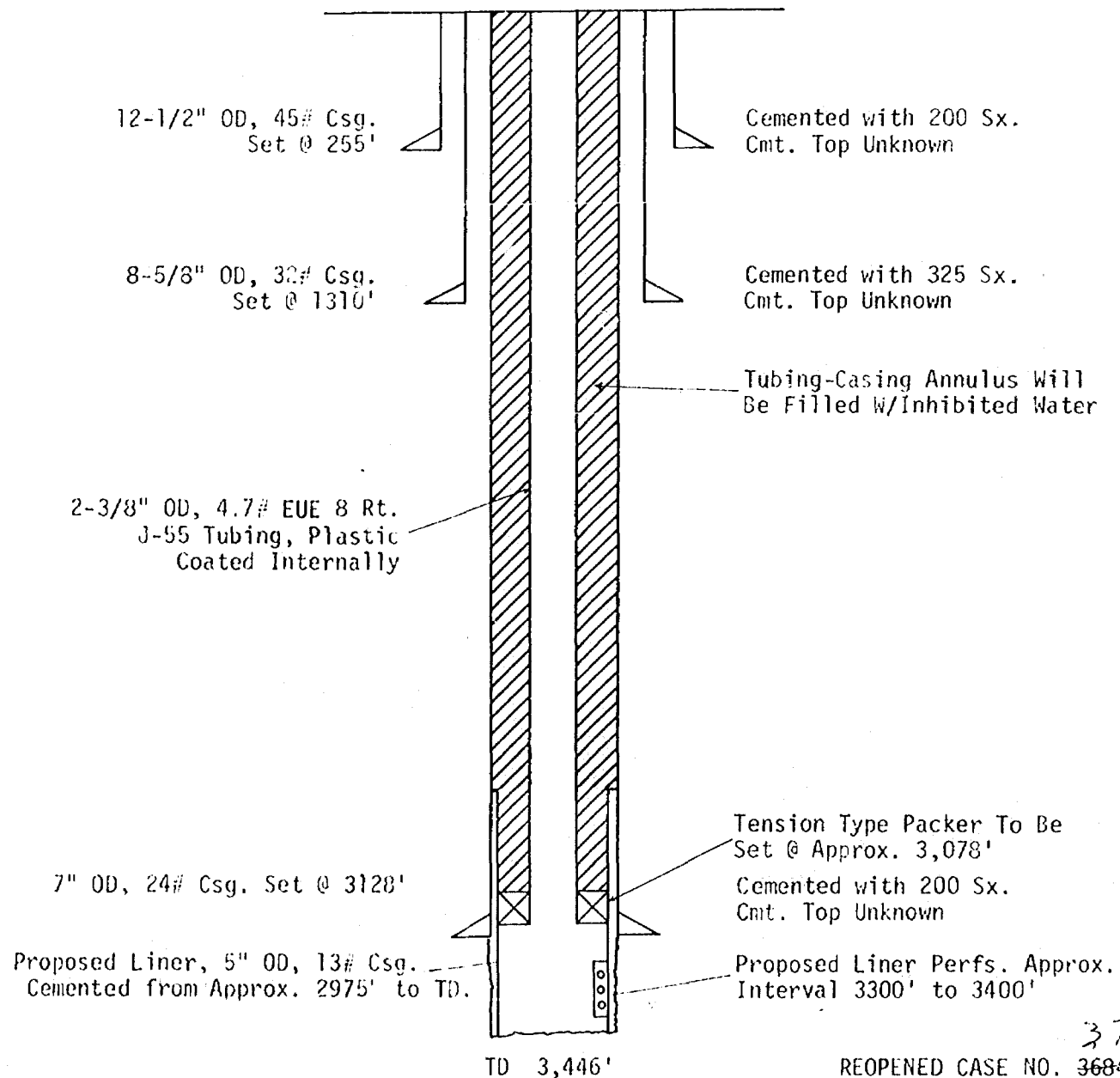
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REOPENED CASE NO. 3684
EXHIBIT NO. 1-H

FIGURE VI
 DIAGRAMMATIC SKETCH
 PROPOSED INJECTION WELL

STUART LANGLIE MATTIX UNIT
 LEA COUNTY, NEW MEXICO

SINCLAIR OIL AND GAS COMPANY
 FRANCIS STUART "C" WELL NO. 3

LOCATED UNIT K, SEC. 10-25S-37E



REOPENED CASE NO. 3684
 EXHIBIT NO. 1-1

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO

January 31, 1968

C
O
P
Y

Mr. Bill Kastler
Gulf Oil Corporation
Post Office Box 1938
Roswell, New Mexico 88201

Dear Mr. Kastler:

Enclosed herewith is Order No. R-3345-B recently entered in Case No. 3715, amending Order No. R-3345 to substitute the Stuart "B" Well No. 2 and Stuart "C" Well No. 3 in Units I and K, respectively, of Section 10, Township 25 South, Range 37 East, for two wells previously authorized in the Gulf Stuart Langlie Mattix Waterflood Project.

The two newly authorized water injection wells shall be equipped with plastic-coated tubing and packers, said packers being set as near to the casing shoe or upper-most perforation as is practicable.

The maximum allowable for the project will be the same as set forth in our letter of November 15, 1967.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

ALP/DSM/ir
Enclosure

cc: Mr. D. E. Gray - State Engineer Office, Santa Fe, New Mexico
Oil Conservation Commission - Hobbs, New Mexico

dearnley-meier reporting service, inc.

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

1120 SIMAS BLDG. • P. O. BOX 1092 • PHONE 243-4491 • ALBUQUERQUE, NEW MEXICO

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
January 24, 1968

IN THE MATTER OF:

Application of Gulf Oil
Corporation for an amendment to
Order No. R-3345, Lea County,
New Mexico

Case No. 3715

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: The hearing will come to order, please.
The next case will be Case 3715.

MR. HATCH: Application of Gulf Oil Corporation
for an amendment to Order No. R-3345, Lea County, New Mexico.

MR. KASTLER: If the Examiner please, I am Bill
Kastler, from Roswell, representing Gulf and my witness will
be Lonnie C. Smith.

(Witness sworn.)

(Whereupon, Applicant's Exhibits
1-D, 1-H, 1-I,
marked for identification.)

MR. KASTLER: I would like to move that the record
in consolidated Case 3683 and 3684 be considered a part of
the record in this case.

MR. NUTTER: 3683 and 84?

MR. KASTLER: Yes, sir.

MR. NUTTER: The record in Cases 3683 and 84 will
be consolidated in the record of Case 3715.

* * * * *

L O N N I E C. S M I T H, called as a witness,
having been first duly sworn, was examined and testified as
follows:

DIRECT EXAMINATION

BY MR. KASTLER:

Q Please state your name, your address and for

whom you work.

A I am Lonnie C. Smith, live at Roswell, work as a petroleum engineer for Gulf Oil Corporation.

Q Have you previously appeared before the New Mexico Oil Conservation Commission and qualified as an expert witness?

A Yes, most recently in the case of 3684 on this waterflood project in November of 1967.

Q What is the purpose of this hearing?

A Gulf has requested the reopening of Case 3684 for the purpose of amending that portion of Order No. R-3345 designating which of the unit wells would be injection wells, and their respective locations.

Q Has the unitization been effective as yet?

A Yes, the Stuart Langlie Mattix Unit became effective January 1st of 1968.

Q Does Gulf plan to change the location of some of the injection wells as originally proposed?

A Yes, referring to revised Exhibit 1-D, which is the plat Gulf proposes, and referring to the southernmost row with wells in the unit area, Gulf proposes to change two wells previously approved as injection wells, Sinclair's Francis Stuart "A" Well No. 1 in Unit J and Francis Stuart "D" Well No. 4 in Unit L, to producing wells and substitute two previously

approved producing wells to be used as injection wells. Sinclair Francis Stuart "B" Well No. 2 Unit I and Frances Stuart "C" Well No. 3 Unit K. All wells are located in Section 10, Township 25 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico.

Q Are the two newly proposed injection wells circled in green on this Exhibit 1-D?

A Yes.

Q Why is it necessary to change these two injection wells?

A The location of these two injection wells should be changed so that the injection pattern will be consistent throughout the unit. The injection well locations as submitted in our original application in October, incorrectly located the two southernmost injection wells. Due to the offcenter drilling on the forty-acre tracts, the error went unnoticed until after the hearing in November.

Q I would like you to refer to the Exhibit marked 1-H and Exhibit 1-I. Will you please explain what these two exhibits are?

A Yes, these exhibits are diagrammatic sketches showing the casing programs and completion information on the two new injection wells. Exhibit 1-H, figure 5, is a

diagram of Sinclair's Francis Stuart "B" No. 2 in Unit I of Section 10, Township 25 South, Range 37 East. Water will be injected through plastic-coated tubing beneath a packer, into the open hole, Langlie-Mattix hole. In referring to Exhibit 1-I, figure 6, it is a diagram of Sinclair's Francis Stuart 3, in Unit K, Section 10, Township 35 South, Range 37 East, Langlie-Mattix Pool, Lea County, New Mexico. Due to the high setting point of the 7-inch casing in this well, Gulf plans to run and cement a five-inch liner covering the entire open hole. The water will be set about at the five-inch liner and perforated injection through a perforated interval through this liner into the Langlie-Mattix zone. The tubing casing annulus will be filled with inhibited water in both these wells.

Q Would the substitution of these two injection wells affect the maximum unit allowable already approved for this project?

A No, calculations under the provisions of 701-E-3 were based on a total of 25 qualified unit wells. This total will not be affected by changing the two injection wells, hence the calculated allowables as previously approved will not be affected.

Q Were Exhibits I-D, 1-H and 1-I prepared by you or

under your direction and supervision?

A Yes.

MR. KASTLER: This concludes my questions on direct examination. I would like at this time, Mr. Examiner, to have Exhibits 1-D, 1-H and 1-I admitted into evidence.

MR. NUTTER: Gulf's Exhibits 1-D, 1-H, and 1-I will be admitted in evidence.

(Whereupon Applicant's Exhibits 1-D, 1-H and 1-I admitted into evidence.)

MR. NUTTER: Any questions of Mr. Smith?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Smith, I note that the acreage immediately offsetting the southern boundary of this unit is operated apparently by Buckles and Hart?

A Yes.

Q Does Gulf, the operator, have a line agreement with Buckles and Hart for conversion of these wells?

A Not completed as yet. We are still negotiating with them along this line and the north part of the unit, too.

Q They are aware of this arrangement of injection wells that you have got proposed here?

A Yes, they are. I have shown the wells on

their property as injection wells. This is our understanding at this time, that this, the location of the particular injection wells on their property.

Q They have already got injection wells on there?

A They do not yet, but we have had some negotiations with them and we feel that they will put on these wells that I have shown.

Q This would be the ideal pattern, a staggered pattern injection wells on their property as well as yours?

A Yes, sir.

MR. NUTTER: Are there any further questions of Mr. Smith? He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Kastler?

MR. KASTLER: Nothing further.

MR. NUTTER: Does anyone have anything they wish to offer in Case 3715? We will take the case under advisement.

I N D E X

<u>WITNESS</u>	<u>PAGE</u>
<u>LONNIE C. SMITH</u>	
Direct Examination by Mr. Kastler	2
Cross Examination by Mr. Nutter	6

<u>EXHIBITS</u>	<u>MARKED</u>	<u>OFFERED AND ENTERED</u>
Applicant's Exhibits 1-D, 1-H, 1-I	2	6

STATE OF NEW MEXICO)
) SS
 COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my hand and seal this 2nd day of February, 1968.

Ada Dearnley

 Court Reporter

I do hereby certify that the foregoing is
 a complete record of the proceedings in
 the Bernalillo hearing of Case No. 3715
 held by me on 1/24, 1968

James Examiner
 New Mexico Oil Conservation Commission

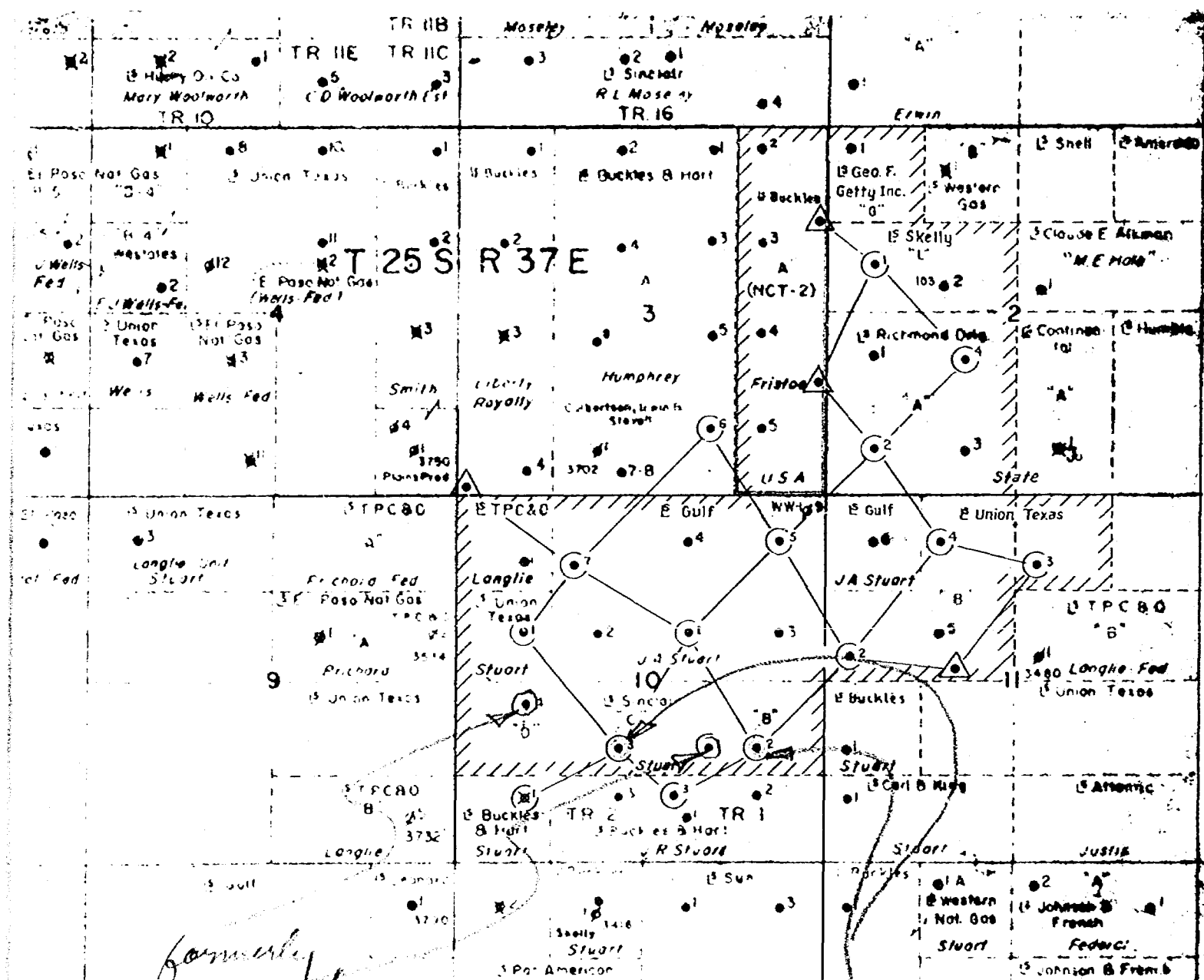


FIGURE NO. III

RECOMMENDED WATERFLOOD PATTERN
PROPOSED STUART LANGLIE MATTIX UNIT
LEA COUNTY, NEW MEXICO

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMMISSION

Approved EXHIBIT NO. *1 d, h, i*
CASE NO. *3715*

- LEGEND -

- Proposed Unit Boundary
- Unqualifying Tract
- Langlie Mattix Pool Well
- ⊗ Jalmat Pool Gas Well
- ⊗ Langlie Mattix - Jalmat Gas Dual
- ⊗ Justis Pool Gas Well
- ⊙ Injection Well
- ▲ Well to be drilled for Injection

GULF OIL CORPORATION ROSWELL DISTRICT
(REVISED JANUARY, 1968)

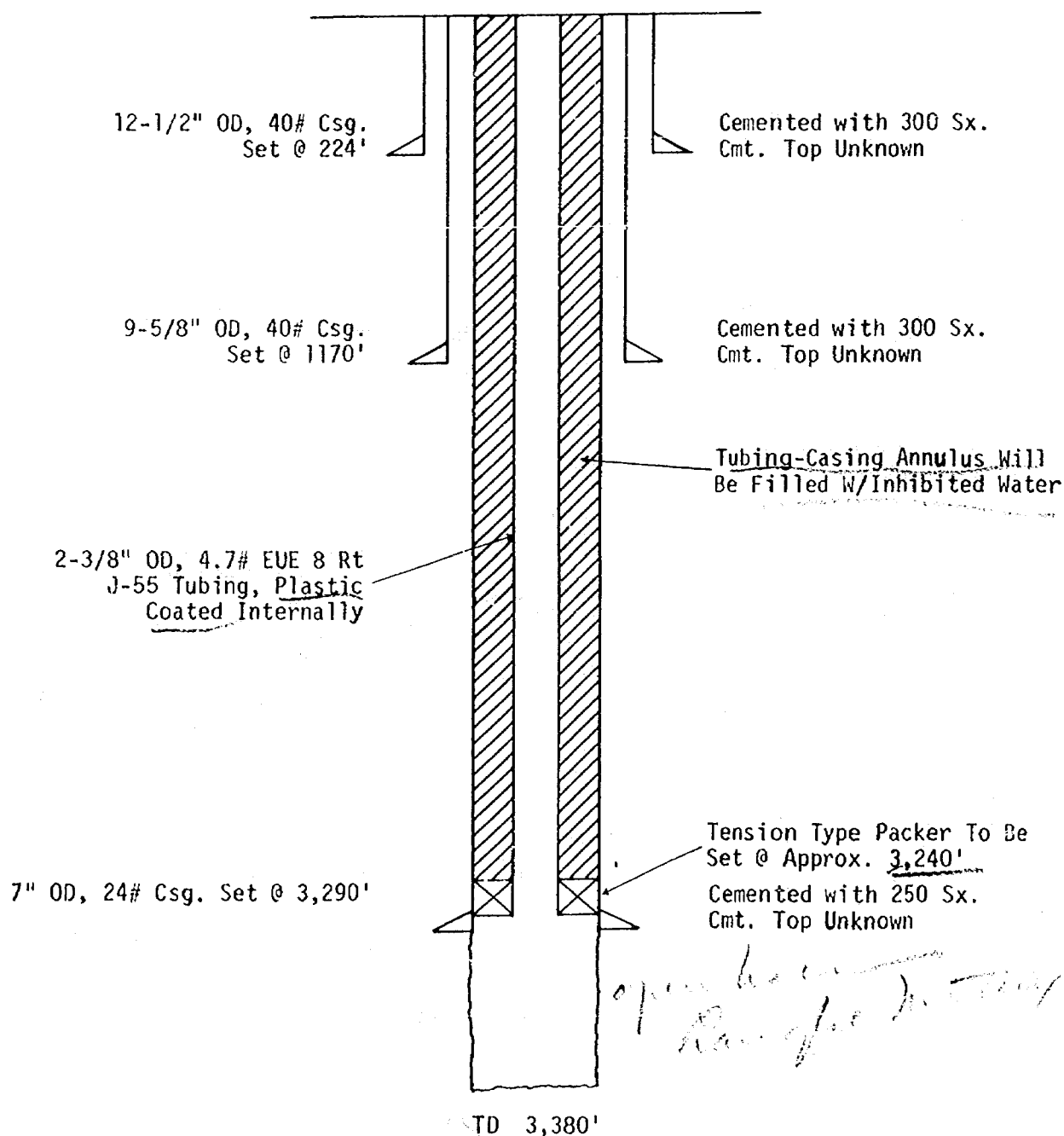
CASE NO. 3715
REVISED EXHIBIT NO. 1-D

FIGURE V
 DIAGRAMMATIC SKETCH
 PROPOSED INJECTION WELL

STUART LANGLIE MATTIX UNIT
 LEA COUNTY, NEW MEXICO

SINCLAIR OIL AND GAS COMPANY
 FRANCIS STUART "B" WELL NO. 2

LOCATED UNIT I, SEC. 10-25S-37E



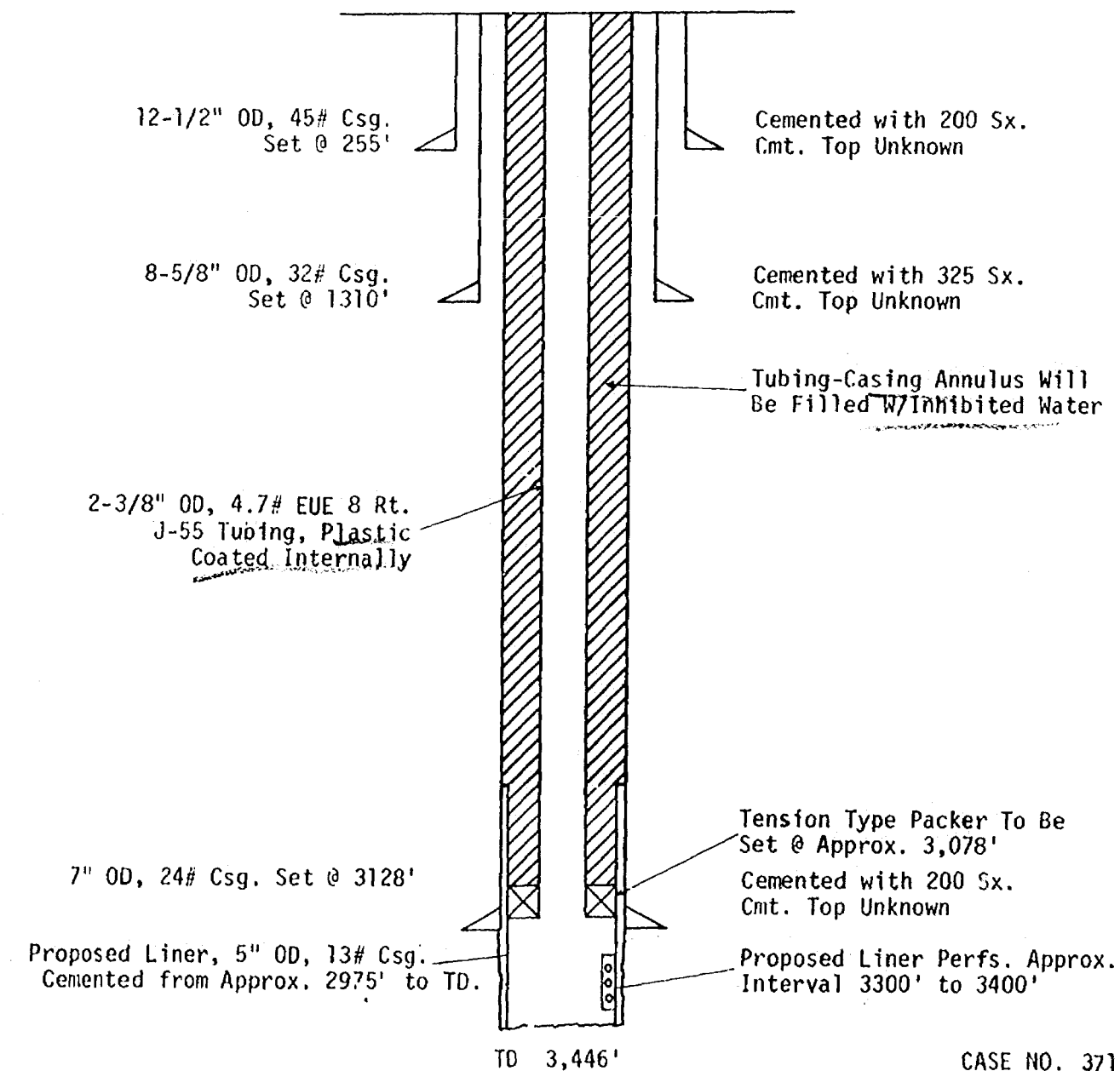
CASE NO. 3715
 EXHIBIT NO. 1-H

FIGURE VI
 DIAGRAMMATIC SKETCH
 PROPOSED INJECTION WELL

STUART LANGLIE MATTIX UNIT
 LEA COUNTY, NEW MEXICO

SINCLAIR OIL AND GAS COMPANY
 FRANCIS STUART "C" WELL NO. 3

LOCATED UNIT K, SEC. 10-25S-37E



CASE NO. 3715
 EXHIBIT NO. 1-1