

Case Number.

4153

Application

Transcripts

Small Exhibits

ETC.

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

1120 SIMMONS BLDG. • P. O. BOX 1092 • PHONE 243-4691 • ALBUQUERQUE, NEW MEXICO



BEFORE THE

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

June 25, 1969

EXAMINER HEARING

IN THE MATTER OF:

Application of Amerada Petroleum
Corporation for salt water disposal
Lea County, New Mexico.

Case 4153

BEFORE: ELVIS A. UTZ, Examiner

TRANSCRIPT OF HEARING

AUG 6 PM 1 42

MR. HATCH: Case 4153, application of Amerada Petroleum Corporation for salt water disposal, Lea County, New Mexico.

MR. KELLAHIN: If the Examiner please, Jason Kellahin, appearing for the Applicant. And that would be as of June 20th, Amerada Hess corporation, Amerada Petroleum Division, is that correct?

MR. STEPHENSON: Amerada Division.

MR. HATCH: Amerada hyphen Hess?

MR. STEPHENSON: Just Amerada Hess, no hyphen.

MR. HATCH: What was the rest of it?

MR. KELLAHIN: Amerada Division.

(Thereupon, Applicant's Exhibits 1 through 4 were marked for identification.)

CHARLES STEPHENSON

called as a witness by the Applicant, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q State your name, please?

A I am Charles Stephenson.

Q By whom are you employed, and in what position?

A I am employed by Amerada Hess Corporation as Division Engineer for Amerada Division.

Q Have you testified before the Oil Conservation Commission, and made your qualifications a matter of record?

A Yes, I have.

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

MR. UTZ: Yes, they are.

Q Mr. Stephenson, are you familiar with the application of Amerada Hess in Case 4153?

A Yes, I am.

Q What is proposed by the Applicant in this Case?

A We are seeking authority to dispose of produced salt water into the Wolfcamp and Pennsylvanian formations in the interval from approximately 9,508 to 10,000 feet, in the L. W. Ward No. 5, and that is located in Unit J of Section 11, Township 13 South, Range 38 East, the Bronco-Wolfcamp Pool, Lea County, New Mexico.

Q Referring to what has been marked as Applicant's Exhibit No. 1, would you identify that exhibit?

A Exhibit No. 1 is an area map showing the general vicinity of the Bronco field. As you can see, there are three fields in this general area, the North Bronco, and the Bronco-Devonian, and the South Bronco field.

Marked on this map are wells which are currently completed as Wolfcamp producers. Also shown is a triangle colored blue, which is the current salt water disposal well located in Section 414 in Yoakum County, Texas, and our proposed salt water disposal well as stated previously.

The other wells shown on this map are primarily Devonian completion. The production from this area is primarily from the Devonian formation, which is a water drive reservoir.

Very early in the life of the field, this reservoir began to produce considerable amount of water, and because of this, a cooperative waterflood salt water disposal system was formed, and Amerada was elected as operator.

Injection commenced during 1960 into the salt water disposal well in Section 114 --

Q Do you mean 414?

A Yes, pardon me, 414. And water production has increased at the present time to a point where we need an additional salt water disposal well to handle the produced water.

Q Have you been injecting in the present disposal well for some period of time?

A Yes, sir, since 1960.

Q Have you injected large volumes of water into that well?

A Yes, sir, we are currently averaging about 8,400 barrels a day, and the cumulative injection is 20,360,000 barrels.

Q Has there been any effect of this injection on

the Wolfcamp formation, as far as you can determine?

A No, sir, we have detected none. We recently completed a well in Section 14 in Lea County, and pressure indications were such that we had a normal pressure in the well, and nothing that showed any influence of salt water disposal.

Q Now, referring to what has been marked as Exhibit No. 2, would you identify that exhibit?

A Exhibit No. 2 is a schematic showing the proposed completion for salt water disposal purposes. We plan on deepening the well from its present TD location of 9,660 down to 10,000 feet. We will install a packer and run 3 1/2 inch J-55 plastic coated tubing. We plan on loading the annulus with treated fluids to protect for corrosion, and will also have a pressure gauge on the casing annulus to detect any mechanical problems.

Q Is this the same type of completion you have in the injection well?

A It is very similar to the other completion.

Q And the exhibit reflects the cementing and casing program on this well, is that correct?

A That's correct.

Q What is the present status of the well?

A The present status of the well is temporarily abandoned. It was a Wolfcamp producer, and it was abandoned,

I believe, in 1960.

Q Now, the exhibit shows perforations from 9,425 to 9,554. Will you leave those perforations open?

A Those perforations are open at the present time, and we do not have any plans to squeeze those off. In other words, they will be opened.

Q Then they would be a part of your injection zone?

A That is correct.

Q Now, referring to what has been marked as Exhibit No. 3, would you identify that exhibit?

A Exhibit No. 3 is a water analysis of the produced salt water that is handled by the Bronco salt water disposal system. It depicts the various components of the produced water and their relative composition. It also indicates that the produced water is not corrosive.

Q What volumes of water do you anticipate you will be injecting in this well?

A We are currently injecting 8,400 barrels a day, and we need to divert part of that to this other well, and also our forecast of ultimate water production is around 15,000 barrels a day. So they would be somewhere in the range of between 3,000 to 7,000 barrels per day we will eventually dispose of into this well.

Q Now, as I understand, your source of water is the Devonian wells in the area, is that correct?

A That's correct.

Q Those are not all Amerada's wells, are they?

A No, they are not. This system is composed, the salt water disposal system is composed of Amerada, Sohio Petroleum, Atlantic Richfield, and Cities Service.

Q Do you anticipate that you will have to inject water under pressure?

A No, that was the reason for requesting this additional well. Our experience to date indicates that we should be able to dispose of our anticipated water volume under vacuum conditions.

Q Referring to Exhibit 4, is that a log of the well?

A Yes, that is a log of the well in its current completion. It indicates the various tops of the formations, and the fact that there are various shale zones in the vicinity above the Wolfcamp, which would preclude any fluid migration.

Q Were Exhibits 1 through 4 prepared by you or under your supervision?

A Yes, they were.

MR. KELLAHIN: At this time, I would like to offer in evidence Exhibits 1 through 4, inclusive.

MR. UTZ: Exhibits 1 through 4 will be entered into the record of this Case.

(Thereupon, Applicant's Exhibits 1 through 4 were admitted in evidence.)

MR. KELLAHIN: That is all I have on direct examination. Did you have anything to add, Mr. Stephenson.

THE WITNESS: No, I don't.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Stephenson, did you say what you are going to do about the tubing lining in the annulus?

A The tubing, 3 1/2 inch tubing will be plastic coated, but will be probably some sort of PVC material. The annulus will be treated with a treated fluid, and we do anticipate an installation of a pressure gauge to monitor for any mechanical problems.

Q You say this water isn't corrosive, since it only has 2,800 parts per million?

A If you will observe the PH, it is 7.5, which is non-corrosive.

Q I know it has quite a bit of iron in it.

A Yes, it does. This varies at times. And, of course, we treat for this. And we just happened to catch a sample that had quite a bit of iron in it at this time.

Q Does that make it heavy water?

A Heavier.

MR. UTZ: Any further questions?

MR. HATCH: How will the name appear on the bond and the different forms filed with the Commission?

MR. KELLAHIN: I would anticipate they will supply you with a stamp, as other companies have. You can change the name to Amerada Hess Division.

MR. HATCH: Do you think that will probably be carried as Amerada Hess Corporation?

MR. KELLAHIN: Yes, I am sure it will.

MR. UTZ: Any other questions? The witness may be excused. Any statements?

The Case will be taken under advisement.

I N D E XWITNESSPAGE

CHARLES STEPHENSON

Direct Examination by Mr. Kellahin

2

Cross Examination by Mr. Utz

8

EXHIBITSMARKEDADMITTED IN
EVIDENCEApplicant's Exhibits 1
through 4

2

7

STATE OF NEW MEXICO)
) SS
 COUNTY OF BERNALILLO)

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

Samuel R. Mortelette

I do hereby certify that the foregoing is
 a complete record of the proceedings in
 the ~~foregoing~~ hearing of case No. 4153,
 heard by us on June 25, 1969
Samuel R. Mortelette
 New Mexico Oil Conservation Commission

My Commission Expires:

December 6, 1972



OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO

P. O. BOX 2088 - SANTA FE

87501

July 10, 1969

GOVERNOR
DAVID F. CARGO
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

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

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

Re: Case No. 4153
Order No. R-3789
Applicant:
Amerada Petroleum Corporation

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.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x

Artesia OCC

Aztec OCC

Other State Engineer Office

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. 4153
Order No. R-3789

APPLICATION OF AMERADA PETROLEUM
CORPORATION FOR SALT WATER DISPOSAL,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 25, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 10th day of July, 1969, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, Amerada Petroleum Corporation, is
the owner and operator of the L. W. Ward Well No. 5, located in
Unit J of Section 11, Township 13 South, Range 38 East, NMPM,
Bronco-Wolfcamp Pool, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the Wolfcamp and Pennsyl-
vanian formations, with injection into the perforated and
open-hole interval from approximately 9506 feet to 10,000 feet.

(4) That the injection should be accomplished through
3 1/2-inch plastic-lined tubing installed in a packer set at
approximately 9270 feet; that the casing-tubing annulus should
be filled with an inert fluid; and that a pressure gauge should

-2-

CASE No. 4153
Order No. R-3789

be attached to the annulus at the surface in order to determine leakage in the casing, tubing, or packer.

(5) 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:

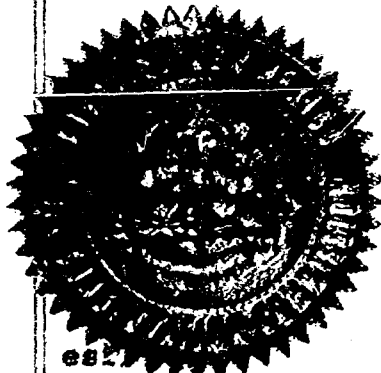
(1) That the applicant, Amerada Petroleum Corporation, is hereby authorized to utilize its L. W. Ward Well No. 5, located in Unit J of Section 11, Township 13 South, Range 38 East, NMPM, Bronco-Wolfcamp Pool, Lea County, New Mexico, to dispose of produced salt water into the Wolfcamp and Pennsylvanian formations, injection to be accomplished through 3 1/2-inch tubing installed in a packer set at approximately 9270 feet, with injection into the perforated and open-hole interval from approximately 9508 feet to 10,000 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 at the surface in order to determine leakage in the casing, tubing, or packer.

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

(3) 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

ALEX J. ARMISTEAD, Member

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

Case 4153

Heard 6-25-69

Rec. 6-27-69.

Grant Amerada permission
to convert its L.W. Ward
#5, Bronco W.C., of 11-13-38 to
a SWD well.

Injection shall be down joint.
plastic coated 3 1/2 tubing,
under a packer set at
approx. 9270' & into the W.C.
from thru pipe. 9425-9554
& open hole 9660-10,000.

Annulus to be filled w/
Inert fluid & gauge placed
at surface.

Thos. H. [Signature]

Shirley B. W.C. (O.C.C.)
& Amerada Perm.

John R. [Signature]

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 25, 1969

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

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

CASE 4151: Application of Northern Natural Gas Company for the suspension of certain provisions of Rules 14 (A) and 15 (A) of Order No. R-1670, as amended, of the General Rules and Regulations for the prorated gas pools of Southeastern New Mexico. Applicant, in the above-styled cause, seeks suspension, for a period of one year from July 1, 1969, of those provisions of Rules 14 (A) and 15 (A) of the General Rules and Regulations for the prorated gas pools of Southeastern New Mexico promulgated by Order No. R-1670, as amended, that provide, respectively, for the cancellation of unproduced allowable and the shutting-in of over-produced wells. Applicant seeks said suspension for the Blinebry, Eumont, Jalmat, Monument-McKee, and Tubb Gas Pools.

CASE 4152: Application of Anadarko Production Company for an amendment of Order No. R-3628, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-3628, which authorized the institution of a waterflood project in the Loco Hills Sand Unit Area, Loco Hills Pool, by the injection of water through certain wells located in Township 18 South, Range 29 East, Eddy County, New Mexico. Applicant seeks to delete 3 injection wells located or to be located in Section 4 of said Township and Range and to substitute in lieu thereof the following 3 wells in said Section 4:

A well to be drilled 2460 feet from the North line and 180 feet from the East line;

A well to be drilled 1980 feet from the South and West lines;

A well to be drilled 10 feet from the South line and 1650 feet from the West line.

Applicant further seeks a procedure whereby other injection wells may be substituted administratively for those previously authorized in order to have an efficient injection pattern.

CASE 4141: (Readvertised)
Application of McCasland Disposal System for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the

Seven Rivers formation in the intervals from approximately 3756 feet to 3851 feet and from approximately 3918 feet to 3939 feet, respectively, in the Getty Oil Company J. H. Day Wells Nos. 1 and 2, both located in the NW/4 of Section 6, Township 22 South, Range 36 East, Jalmat Field, Lea County, New Mexico.

CASE 4153:

Application of Amerada Petroleum 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 Wolfcamp and Pennsylvanian formations in the interval from approximately 9508 feet to 10,000 feet in its L. W. Ward Well No. 5 located in Unit J of Section 11, Township 13 South, Range 38 East, Bronco-Wolfcamp Pool, Lea County, New Mexico.

CASE 4107:

(Continued from the April 23, 1969 Examiner Hearing)
Application of Coastal States Gas Producing Company for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the West Sawyer-San Andres Pool, Lea County, New Mexico, including a provision for 80-acre spacing and proration units.

CASE 4144:

(Continued from the June 4, 1969, Examiner Hearing)
Application of Sam G. Dunn Oil Operations for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from approximately 1910 feet to 1950 feet in its E. Faircloth "C" Well No. 1 located in Unit N of Section 32, Township 7 South, Range 27 East, Acme-San Andres Pool, Chaves County, New Mexico.

CASE 4154:

Application of Pan American Petroleum Corporation for a pool creation and discovery allowable, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the creation of a new Blinbry oil pool for its State "C" Tract 11 Well No. 3 located in the NW/4 SE/4 of Section 2, Township 21 South, Range 36 East, Lea County, New Mexico, and for the assignment of an oil discovery allowable in the amount of approximately 28,510 barrels to said well.

CASE 4155:

Application of Pan American Petroleum Corporation for an exception to Order No. R-3221, as amended, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves and Roosevelt Counties, New Mexico, after January 1, 1969. Said

(Case 4155 continued)

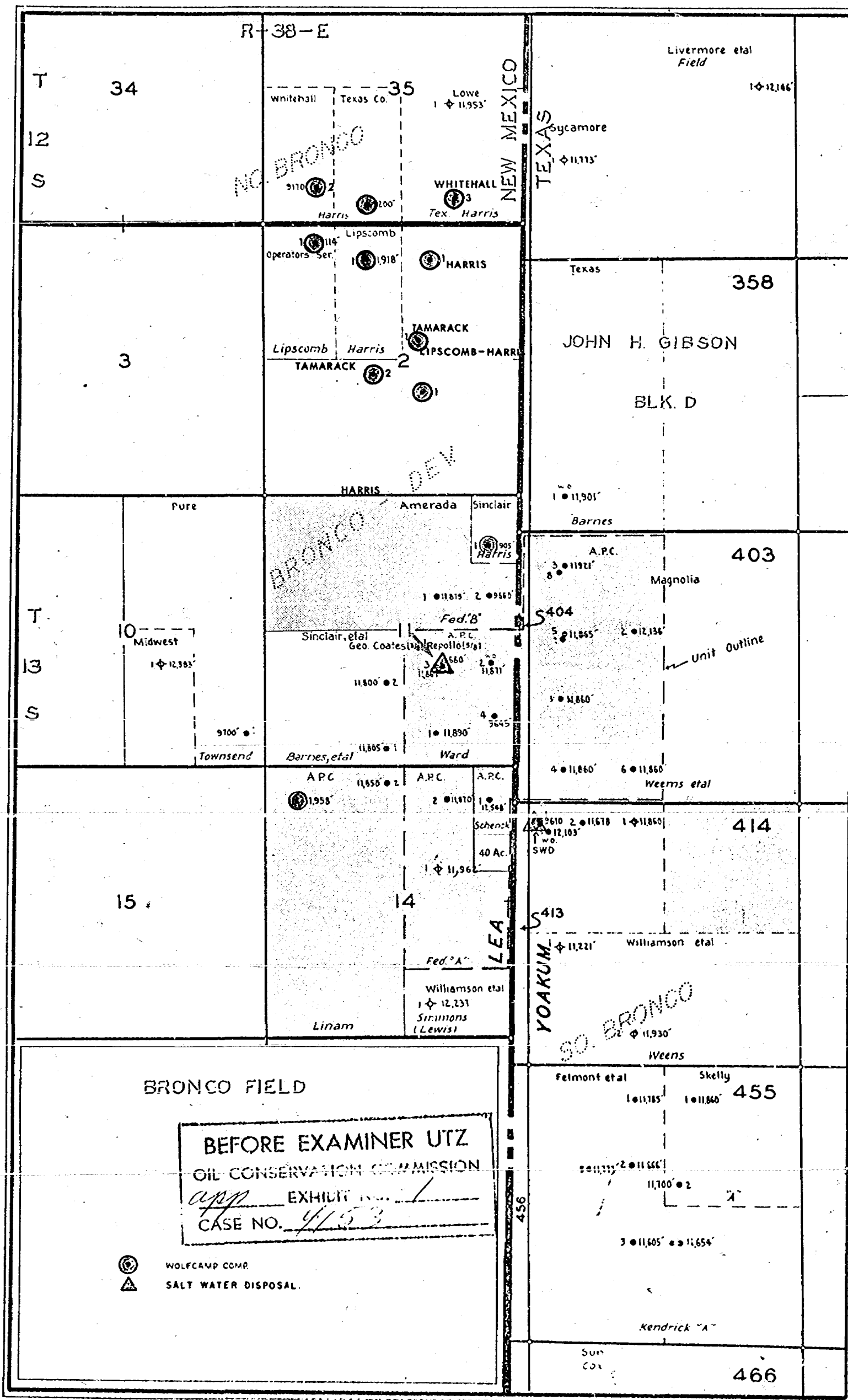
exception would be for the applicant's wells located in Sections 28 and 33, Township 19 South, Range 32 East, Lusk Field, Lea County, New Mexico. Applicant seeks authority to dispose of salt water produced by said wells in unlined surface pits in said sections.

CASE 4156: Application of Jack L. McClellan for an exception to Order No. R-3221, as amended, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil or gas or both, on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico, after January 1, 1965. Said exception would be for applicant's wells located in the SE/4 and NE/4, respectively, of Section 13 and 24, Township 15 South, Range 29 East, Sulimar-Queen Pool, Chaves County, New Mexico. Applicant, seeks authority to dispose of salt water produced by said wells in unlined surface pits located in said quarter sections.

CASE 4157: Application of Texaco Inc. for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Eunice-Monument Unit Area comprising 1516 acres, more or less, of State and fee lands in Township 20 South, Ranges 36 and 37 East, Lea County, New Mexico.

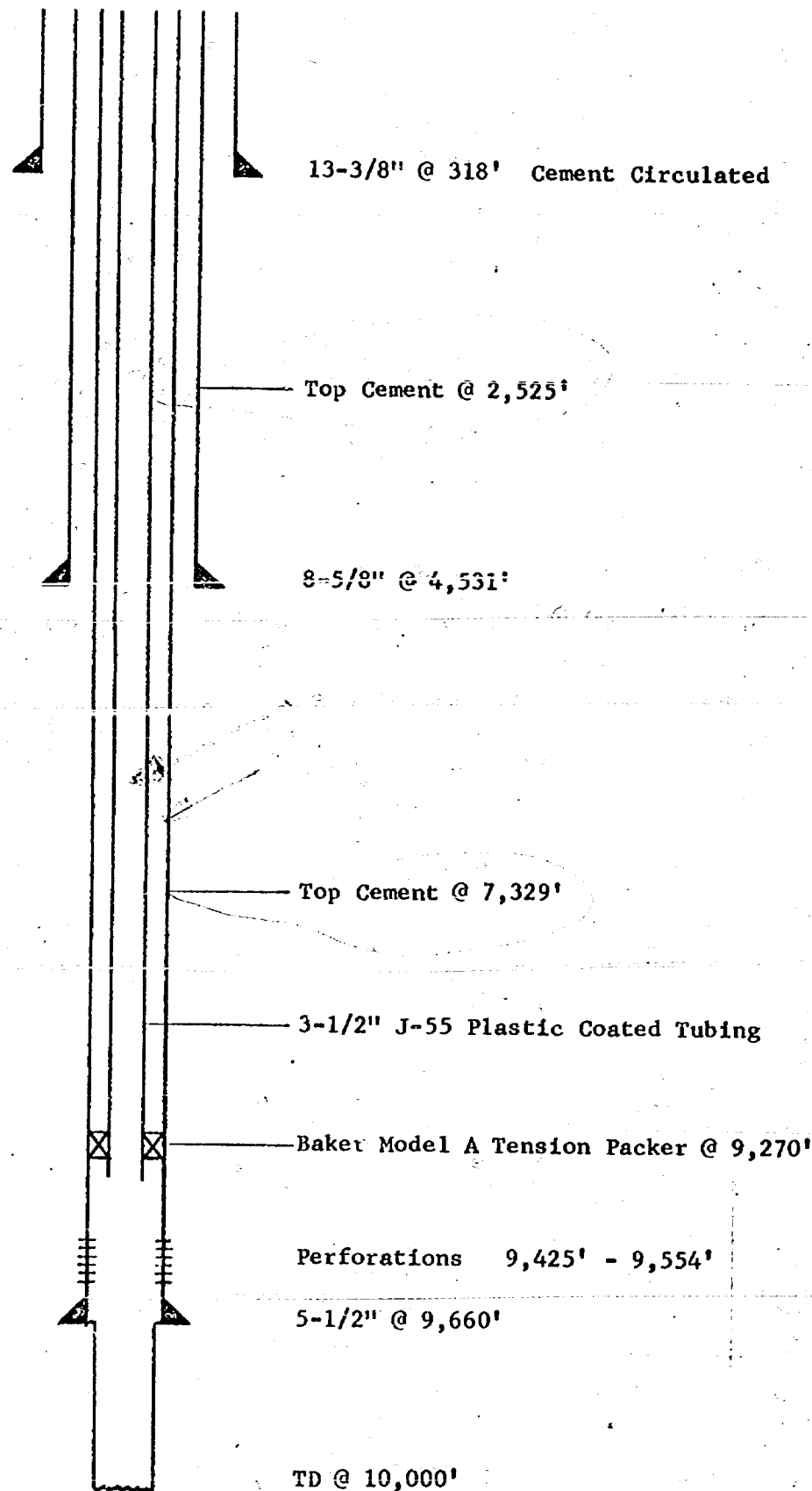
CASE 4158: Application of Texaco Inc. for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its Eunice-Monument Unit Area by the injection of water into the Grayburg and San Andres formations through 18 wells located in Section 24, Township 20 South, Range 36 East, and in Sections 19, 20, 21, 29 and 30, Township 20 South, Range 37 East, Eunice-Monument (Grayburg-San Andres) Pools, Lea County, New Mexico.

CASE 4159: Application of Southwestern Natural Gas Company, Inc. for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill at an unorthodox oil well location 2310 feet from the North line and 1980 feet from the West line of Section 27, Township 15 South, Range 32 East, North Anderson Ranch-Wolfcamp Pool, Lea County, New Mexico.



L. W. WARD NO. 5

COMPLETION SCHEMATIC FOR SALTWATER DISPOSAL



BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
APP. EXHIBIT NO. 2
CASE NO. 4153

Bronco Salt Water Disposal System
Water Analysis

	<u>mg/l</u>
Calcium	2,000
Sodium	381
Iron	21,363
Bicarbonate	573
Sulfate	2,800
Chloride	35,200
pH	7.5
Specific gravity	1.035

BEFORE EXAMINER UTZ.
OIL CONSERVATION COMMISSION
app. EXHIBIT NO. 3
CASE NO. 4153

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

OPERATOR Amerada Petroleum Corporation		ADDRESS Box 817, Seminole, Texas 79360	
LEASE NAME L.W. Ward	WELL NO. 5	FIELD Bronco Wolfcamp	COUNTY Lea
LOCATION UNIT LETTER <u>J</u> ; WELL IS LOCATED <u>1982.75</u> FEET FROM THE <u>South</u> LINE AND <u>1414.70</u> FEET FROM THE <u>East</u> LINE, SECTION <u>11 East</u> TOWNSHIP <u>13-S</u> RANGE <u>38-E</u> NMPM.			
CASING AND TUBING DATA			
NAME OF STRING	SIZE	SETTING DEPTH	SACKS CEMENT
SURFACE CASING	13-3/8"	300'	450
INTERMEDIATE	8-5/8"	4531'	1300
LONG STRING	5-1/2"	9660'	500
TUBING	None	NAME, MODEL AND DEPTH OF TUBING PACKER None	
NAME OF PROPOSED INJECTION FORMATION <u>time WC or PE</u>		TOP OF FORMATION 4505'	BOTTOM OF FORMATION 9660'
IS INJECTION THROUGH TUBING, CASING, OR ANNULUS? <u>Tubing</u>		PERFORATIONS OR OPEN HOLES? <u>open hole</u>	
IS THIS A NEW WELL DRILLED FOR DISPOSAL? <u>No</u>		PROPOSED INTERVAL(S) OF INJECTION <u>PE 9660' to approx. 10,000'</u>	
IF ANSWER IS NO, FOR WHAT PURPOSE WAS WELL ORIGINALLY DRILLED? <u>Wolfcamp producer</u>		WAS WELL EVER BEEN PERFORATED IN ANY ZONE OTHER THAN THE PROPOSED INJECTION ZONE? <u>No</u>	
LIST ALL SUCH PERFORATED INTERVALS AND SACKS OF CEMENT USED TO SEAL OFF OR SQUEEZE EACH			
DEPTH OF BOTTOM OF DEEPEST FRESH WATER ZONE IN THIS AREA 250'		DEPTH OF BOTTOM OF NEXT HIGHER OIL OR GAS ZONE IN THIS AREA None	
ANTICIPATED DAILY INJECTION VOLUME (BBL'S.) MINIMUM 5,000 bbls MAXIMUM 8000 bbls		OPEN OR CLOSED TYPE SYSTEM <u>closed</u>	
ANSWER YES OR NO WHETHER THE FOLLOWING WATERS ARE MINERALIZED TO SUCH A DEGREE AS TO BE UNFIT FOR DOMESTIC, STOCK, IRRIGATION, OR OTHER GENERAL USE -		IS INJECTION TO BE BY GRAVITY OR PRESSURE? <u>gravity</u>	
NAME AND ADDRESS OF SURFACE OWNER (OR LESSEE, IF STATE OR FEDERAL LAND) Mr. B.A. Young, Tahoka, Texas (Surface Owner)		APPROX. PRESSURE (PSI) -	
LIST NAMES AND ADDRESSES OF ALL OPERATORS WITHIN ONE-HALF (1/2) MILE OF THIS INJECTION WELL None			
HAVE COPIES OF THIS APPLICATION BEEN SENT TO EACH OF THE FOLLOWING? SURFACE OWNER <u>Yes</u> EACH OPERATOR WITHIN ONE-HALF MILE OF THIS WELL <u>None</u>			
ARE THE FOLLOWING ITEMS ATTACHED TO THIS APPLICATION (SEE RULE 701-B) PLAT OF AREA <u>Yes</u> ELECTRICAL LOG <u>Yes</u> DISCREPANCY SHEET FOR WELL <u>Yes</u>			

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

Sh. Deenhurst
(Signature)

Assistant Dist. Superintendent
(Title)

Date 6/12/69
5-8-69
(Date)

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

Memo

From

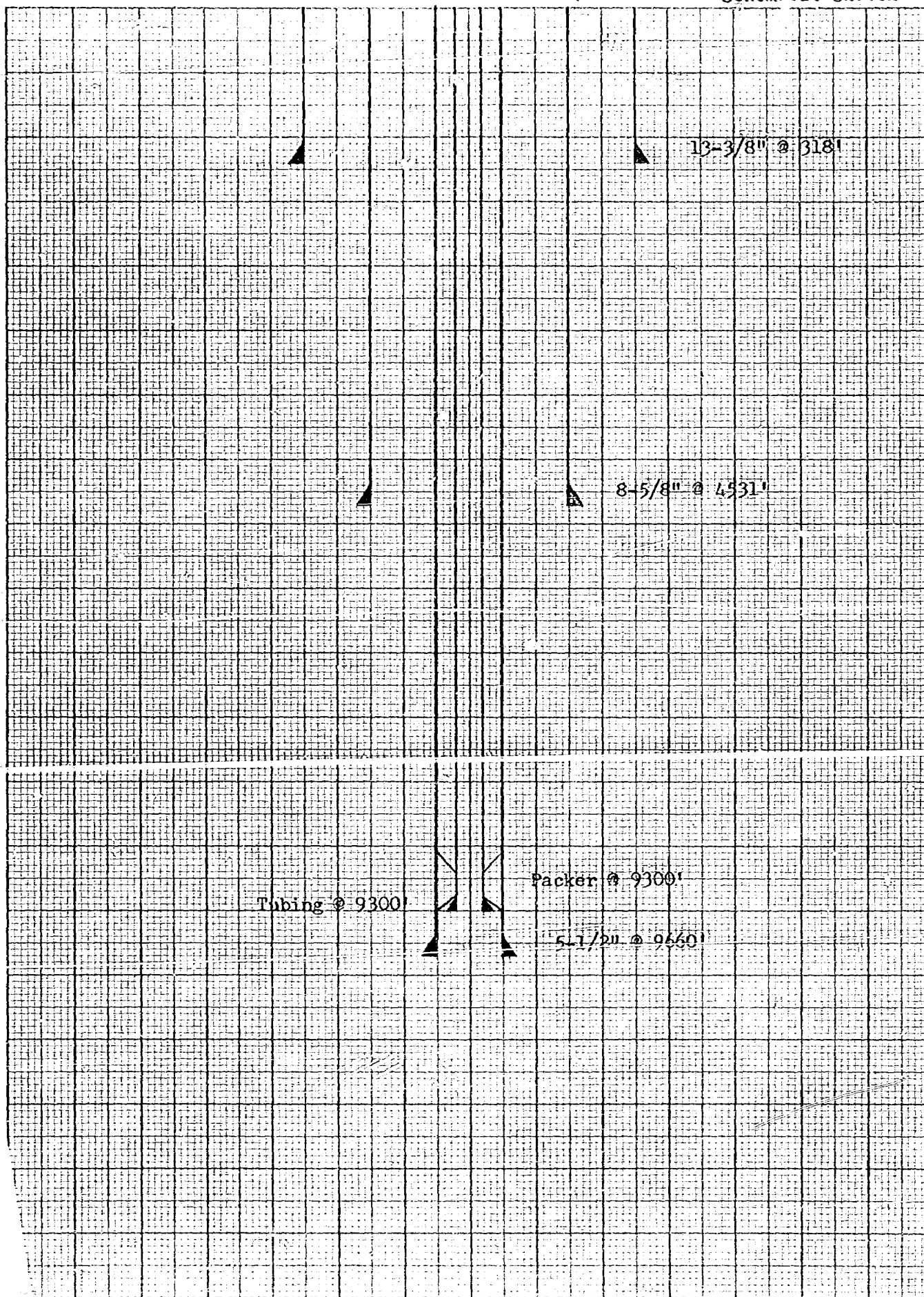
J. E. KAPTEINA
ENGINEER

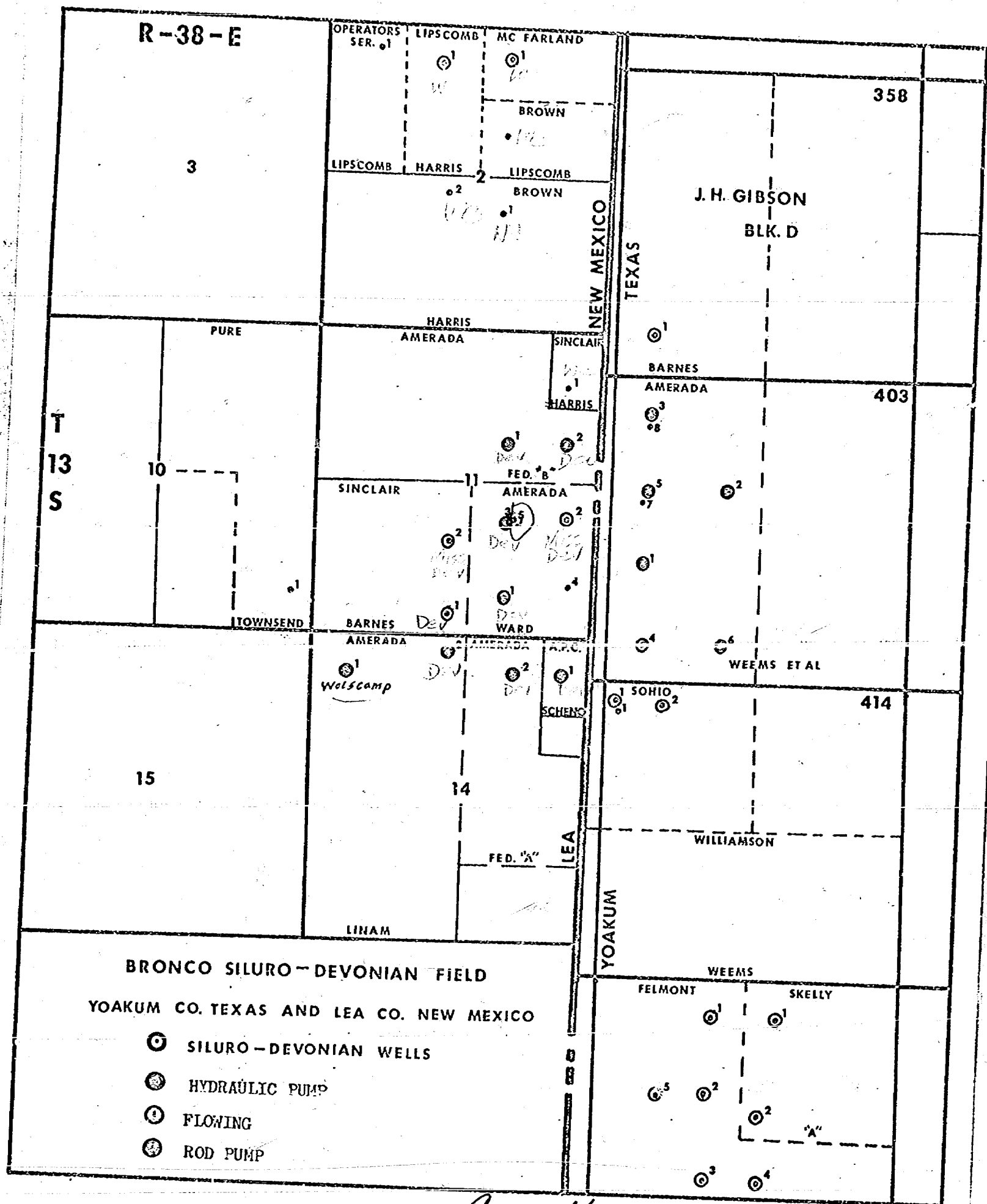
To

Packer to be made 9,000'
for injection of water into
the Wolfcamp formation.
If WC does not take
water, well to be drilled
deeper and packer will
then be set below 9650'

Case 4153

L. W. Ward # 5
Schematic Sketch





Top PE @ 9418'

By 11/10/1955 712 100

More to be added 906 10,000

DRAFT

GMH/esr

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. 4153

Order No. R-3789

APPLICATION OF AMERADA PETROLEUM CORPORATION
FOR SALT WATER DISPOSAL, LEA COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 25, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this July day of July, 1969, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, Amerada Petroleum Corporation,
is the owner and operator of the L. W. Ward Well No. 5,
located in Unit J of Section 11, Township 13, South, Range
38 East, NMPM, Bronco-Wolfcamp Pool, Lea
County, New Mexico.

(3) That the applicant proposes to utilize said well to
dispose of produced salt water into the Wolfcamp and Pennsylvanian
formations, with injection into the perforated and open-hole interval
from approximately 9508 feet to 10,000 feet.

(4) That the injection should be accomplished through
3 1/2-inch plastic-lined tubing installed in a packer set at

approximately 9270 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should be attached to the annulus ~~or the annulus left open~~ at the surface in order to determine leakage in the casing, tubing, or packer.

(5) 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, Amerada Petroleum Corporation, is hereby authorized to utilize its L. W. Ward Well No. 5 located in Unit J of Section 11, Township 13 South, Range 38 East, NMPM, Bronco-Wolfcamp Pool, Lea County, New Mexico, to dispose of produced salt water into the Wolfcamp and Pennsylvanian formations, injection to be accomplished through

3 1/2-inch tubing installed in a packer set at approximately 9270 feet, with injection into the perforated and open hole interval from approximately 9508 feet to 10,000 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 left open~~ at the surface in order to determine leakage in the casing, tubing, or packer.

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

(3) 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.

CASE 4154: Application of PAN AM.
FOR A POOL CREATION AND DISCOVERY
ALLOWABLE, LEA COUNTY, N. MEX.