CASE 4019: Application of SINCLAIR OIL CORPORATION FOR SALT WATER INJECTION, LEA COUNTY, NEW MEXICO.

-dse Number

4019

Application

Transcripts.

Small Exhibits

ETC.

BEFORE THE

NEW MEXICO OIL CONSERVATION COMMISSION

Santa Fe, New Mexico

January 8, 1969

EXAMINER HEARING

IN THE MATTER OF:

Application of Sinclair Oil Corporation for salt water injection, Lea County, New Mexico.

Case No. 4019

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. HATCH: Case 4019, Application of Sinclair Oil Corporation for salt water injection, Lea County, New Mexico.

MR. KELLY: Booker Kelly of White, Gilbert, Koch & Kelly, on behalf of the applicant. I have one witness and ask that he be sworn.

(Witness sworn.)

(Whereupon, Applicant's Exhibits Numbers 1, 2, 3, 4, 5, inclusive, were marked for identification.)

R. M. ANDERSON

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

DIRECT EXAMINATION

BY MR. KELLY:

Q State your name, position, and employer?

A R. M. Anderson, Sinclair Oil Corporation, Midland, Texas.

Q What is your position with Sinclair?

A I am Regional Regulatory Engineer.

Q Have you previously qualified as an expert witness before this Commission?

A I have.

Q Would you state what Sinclair seeks by this application?

A Sinclair seeks approval of a pressure maintenance

project to inject [illegible] from the Quail Ridge Bone Springs Field and the Quail Ridge Yates Field, into the Yates Formation of the Quail Ridge Yates Field.

Q Referring to what has been marked as Exhibit 1, a plat of the area, would you locate the proposed injection well and explain what is shown on that exhibit?

A Exhibit 1 is an area plat of the vicinity of the proposed injection well and the Quail Ridge Field. There are three wells in the Quail Ridge Bone Springs Field. They are colored, the Sinclair operated wells whose water will be disposed of are colored orange. The third Quail Ridge Bone Springs well is operated by Gulf, and lies immediately north of the two orange circles.

The two red circles indicate the only two Quail Ridge Yates Field producing wells, and they are both operated by Sinclair.

The well with the red arrow pointing to it is the proposed injection well.

Q Now, you also show some production way over here on Section 35 and Section 25. What is that?

A The wells to the southeast of the Quail Ridge Field are in the Bone Spring pool. They are several miles away.

Q So you have shown here all production within a two-mile radius of the injection well?

A Yes.

Q Now, what is the present status of the injection well?

A The present status of the injection well is a dry hole, and it was a deeper well that was plugged back to the Yates Formation, hoping to make a Yates producer, and it encountered water in the Yates Formation, and is presently a dry hole, shut in. It is not plugged and abandoned.

Q Let's jump for a moment to our Exhibit Number 5, which is the production history, and just go over that briefly while we are on these wells.

A Exhibit 5 is a tabulation of the production, it is the last exhibit in the group, the production from the two Yates wells, and this reflects that in June, 1968, Well No. 31, Mescalero Ridge Unit MA, Well No. 31, was completed in the Yates Formation. The oil, water, and gas production from that well through November, 1968, was reflected in the tabulation, and this reflects that the well is producing approximately 15 barrels of oil a day with no water.

Mescalero Ridge Unit MA, No. 32, was just completed in October of 1968, and I have the first full month of production for the month of November, 1968, on the tabulation, and that

reflects that the well is producing about ten barrels of oil a day and no water.

Now, I am advised that these wells together produce in the vicinity of maybe a barrel of water a day, a very small amount of water, which, through November had not been reported.

Q What is the water production from the Bone Springs well?

A The Bone Springs wells are Mescalero Ridge Unit No. 1 and No. 22. Well No. 1 makes approximately one barrel of water a day. Well No. 22 makes approximately 24 or 25 barrels of water a day.

Q So you have a total water production of about 26 barrels?

A Yes.

Q Now, I believe you testified that you have no real water production at all from your Quail Ridge, possibly up to one barrel a day?

A From the two wells, yes, it is very nominal.

Q So actually your water production which will be injected into the proposed injection well will just about match your oil production, is that right?

A Yes, in barrels it is about the same.

Q Now, going on to what has been marked as Exhibit

Number 2, your structure map, would you explain its significance to the Examiner?

A Exhibit 2 is a structure map drawn on the Queen marker which is immediately below the producing horizon, the Yates producing horizon, but reflects the Yates. This exhibit has an arrow, a red arrow pointing to the proposed disposal well, and we see that that well is lower structurally than the two Yates producing wells which are colored in red on the exhibit. And also, the green line indicates the line of the section which I have illustrated on Exhibit 3.

Q Let's turn to Exhibit Number 3, your cross-section.

A In Exhibit 3, the proposed disposal well is on the right, and I have indicated the perforations and colored them orange, that will be used as an injection interval. And I have indicated the exact footage for the perforations on the disposal well, and I have added the same information with regard to Well No. 31, which is the northwest offset to the disposal well. I have indicated the perforations from 3,952 to 3,958, and these perforations correlate with the lower set of perforations in the disposal well.

Q How about the other well, No. 32, I believe? Have you been able to correlate your perforations there, too?

A Well Number 32 is perforated in an interval that

correlates with the upper set of perforations in the disposal well.

Q So you will be injecting into the same correlative production zones in both wells?

A Yes.

Q Referring to Exhibit Number 4, would you explain the proposed installation of the injection well?

A Exhibit 4 is a diagrammatic sketch of the proposed injection well. It shows the size of the casing, and the number of sacks of cement used in setting, and it gives the cement tops, and illustrates the current condition of the well. And I have colored in yellow that part of the well bore that will be drilled out prior to converting the well to injection service.

The first thing to be drilled out will be the retainer, 3970. Then we will drill out the cement below the retainer down to a depth of 4,100 feet. Then we will reperforate the well at the same interval that it was perforated at originally, which is 4,020 to 4,050 feet, a 30-foot interval that will leave in the injection well the newly perforated interval, as well as the pre-existing interval, 3,860 to 3,880.

Q Are you going to have plastic-lined tubing?

A Yes, the exhibit reflects that we will run plastic-coated tubing, and set it in a retrieveable packer at 3,850 feet,

which is about ten feet above the uppermost perforations.

Q Will you have an inert fluid in the annulus?

A The annulus will be filled with corrosion inhibited fluid.

Q Some sort of a pressure device on the top?

A Yes, this will be either a pressure gauge or provision for measuring the pressure of the annulus at the surface. The usual Commission requirement on that.

Q Now, in your opinion, will this installation protect any fresh water zones, surface fresh water zones?

A Yes, the fresh water zone occurs between the surface and 878 feet, and we have set surface pipe to protect the interval, and have circulated cement back to the surface. In addition to that, nine and five-eighths-inch casing is set at 6,560 feet, and cement has been circulated behind that string of casing all the way back to the surface, so we have two strings of casing set that should adequately protect all fresh water sand in the area.

Q Can you say that that installation will prevent migration of the injected fluid to any other zones except the proposed injection zone?

A Yes, in my opinion, the injected fluid can go into no other zones but the zones that we have perforated opposite.

Q We are talking about injecting 30 or 31 barrels a day. Is there any reason to believe that will increase significantly?

A No, the water production has been very constant from the Bone Springs Wells which furnish the bulk of the water. I see no reason to anticipate that the volumes will be much increased. If they were increased to as much as 100 barrels a day, or something like that, it would still be a small amount of water.

Q Will you be injecting under pressure?

A Initially, we believe the well will take the water with no pressure.

Q In your opinion, will the injection of this volume of water tend to stabilize or maintain reservoir pressure in the injection zone?

A Well, I believe that it will have a very small effect, but the effect will be in that direction, in that the vast majority of the water we are putting in the well did not come out of that formation, but came out of another formation, so this is additional, this is voidage replacement, and I believe it will have some beneficial effect.

Q Can you envision any adverse effect to the reservoir by injection of this water?

A No, sir.

Q Were Exhibits 1 through 5 prepared by you or under your supervision?

A Yes, they were.

MR. KELLY: I move the introduction of Sinclair's Exhibits 1 through 5.

MR. NUTTER: Sinclair's Exhibits 1 through 5 will be admitted in evidence.

(Whereupon, Applicant's Exhibits Numbers 1 through 5, inclusive, were admitted in evidence.)

MR. KELLY: Nothing further.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Anderson, referring to your Exhibit Number 5, the production shown for each of these wells, take November for No. 31, that is 20,100 Mcf of gas produced during the month?

A Yes, sir.

Q And the other well made approximately 9,000 Mcf of gas?

A Yes, sir.

Q So they do have ratios in the neighborhood of 30,000 to 40,000 to 1?

A Yes, sir.

Q Has that been classified as a gas pool?

A No, sir.

Q Just extremely high ratio oil wells. Is this black oil produced, or condensate?

A It is 56 gravity oil.

Q 56 degree. So the gravity is in the neighborhood of condensate gravity, then. What color is it?

A I don't know, but I would suspect that there is condensate mixed with the black oil. For brand new wells, you can see they are not very good wells.

Q Has the Commission ever created a pool here for the Yates?

A Yes, they did. The Quail Ridge Yates Pool, it is my understanding the Commission has created an oil pool.

Q An oil pool?

A Yes. It is not on my schedule, but I believe it is in the process.

Q Were the two intervals in the No. 2 Well, which is the disposal well, were the two intervals there that are perforated or were perforated, tested individually?

A Yes.

Q And they both were water-bearing, is that right?

A Yes. The lower interval swabbed at the rate of about 400 barrels of water a day with no show. And the upper interval

after fracking, and after 15 days of swabbing, pumped nine barrels of water a day

Q With no oil?

A Reported one percent oil. That would be a trace.

MR. NUTTER: Anything further of this witness?

MR. KELLY: Nothing further.

MR. NUTTER: You may be excused. Do you have anything further, Mr. Kelly?

MR. KELLY: No

MR. NUTTER: Does anyone have anything that they wish to offer in Case 4019? We will take the case under advisement.

I N D E X

EXHIBITS	MARKED	OFFERED AND ADMITTED
Applicant's Exhibits Numbers 1 through 5	2	10

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 Mortelette
COURT REPORTER

I do hereby certify [illegible] as a [illegible] the [illegible] 4019, heard by me on 1-8 69.

[signature]
New Mexico Oil Conservation Commission

GOVERNOR
DAVID F. CARGO
CHAIRMAN

State of New Mexico
Oil Conservation Commission

LAND COMMISSIONER
GUYTON B. HAYS
MEMBER

P. O. BOX 2088
SANTA FE

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

January 13, 1969

Re: Case No. 4019
Order No. R-3660
Applicant:
Sinclair Oil Corporation

Mr. Booker Kelly
White, Gilbert, Koch & Kelly
Attorneys at Law
Post Office Box 787
Santa Fe, New Mexico

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

Carbon 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. 4019
Order No. R-3660

APPLICATION OF SINCLAIR OIL CORPORATION
FOR SALT WATER INJECTION, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 8, 1969, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 13th day of January, 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, Sinclair Oil Corporation, is the owner and operator of the Mescalero Ridge Unit Well No. 2, located in Unit B of Section 28, Township 19 South, Range 34 East, NMPM, Quail Ridge-Yates Pool, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to inject produced salt water into the Yates formation, with injection into the perforated interval from approximately 3860 feet to 4050 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set at approximately 3850 feet; that the casing-tubing annulus should be filled with an inert fluid; and that a pressure gauge should

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, Sinclair Oil Corporation, is hereby authorized to utilize its Mescalero Ridge Unit Well No. 2, located in Unit B of Section 28, Township 19 South, Range 34 East, NMPM, Quail Ridge-Yates Pool, Lea County, New Mexico, to inject produced salt water into the Yates formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 3850 feet, with injection into the perforated interval from approximately 3860 feet to 4050 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 injection 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. ARMIJO, Member

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

esr/

Docket No. 1-69

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 8, 1969

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 A. L. Porter, Jr., Alternate Examiner:

CASE 4016: Application of American Trading and Production Corporation for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Southeast Lea Unit Well No. 2 located in Unit L of Section 25, Township 20 South, Range 35 East, Lea County, New Mexico, in such a manner as to permit the production of gas from an undesignated Wolfcamp gas pool and gas from an undesignated Morrow gas pool through parallel strings of tubing.

CASE 3709: (Reopened)

In the matter of Case No. 3709 being reopened pursuant to the provisions of Order No. R-3366, which order established 80-acre spacing units for the Akah Nez-Devonian Oil Pool, San Juan County, New Mexico, for a period of one year. All interested parties may appear and show cause why said pool should not be developed on 40-acre spacing units.

CASE 4017: Application of Corinne Grace for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Morrow formation underlying Section 8, Township 21 South, Range 24 East, North Indian Hills-Morrow Gas Pool, Eddy County, New Mexico. Said acreage to be dedicated to a well to be drilled in the SE/4 of said Section 8. Also to be considered will be the costs of drilling said well, a charge for the risk involved, a provision for the allocation of actual operating costs, and the establishment of charges for supervision of said well.

CASE 4018: Application of Solar Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause seeks approval for the dual completion (conventional) of its Fanning "B" Well No. 1 located in Unit A of Section 33, Township 23 South, Range 37 East, Lea County, New Mexico, to produce oil from the Teague-Blinebry and undesignated Tubb-Drinkard Pools through parallel strings of tubing.

CASE 4019: Application of Sinclair Oil Corporation for salt water injection, Lea County, New Mexico. Applicant, in the above styled cause, seeks authority to inject produced salt water into the Yates formation in the perforated interval from approximately 3860 feet to 4050 feet in its Mescalero Ridge Unit Well No. 2 located in Unit B of Section 28, Township 19 South, Range 34 East, Quail Ridge-Yates Pool, Lea County, New Mexico.

CASE 4020: Application of Burk Royalty 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 Yates formation in the perforated interval from 3564 to 3585 feet in its Hanson "C" Well No. 4 located in Unit K of Section 23, Township 20 South, Range 34 East, Lynch Yates-Seven Rivers Pool, Lea County, New Mexico.

CASE 4015: (Continued from December 27, 1968, Examiner Hearing)

Application of Wilson Oil 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 Yates-Seven Rivers formations, Wilson Yates-Seven Rivers Pool, Lea County, New Mexico, through the following six wells:

TOWNSHIP 21 SOUTH, RANGE 34 EAST

Wilson State Well No. 9 located in Unit F of Section 13;

Shell State Well No. 13 located in Unit H of Section 13;

Wilson State Well No. 8 located in Unit O of Section 13;

Wilson State Well No. 20 located in Unit B of Section 23;

Wilson State Well No. 21 located in Unit J of Section 23;

TOWNSHIP 21 SOUTH, RANGE 35 EAST

Wilson State Well No. 1-A located in Unit G of Section 7;

Applicant further seeks an administrative procedure whereby other wells in said pool may be approved for disposal purposes without the requirement of notice and hearing.

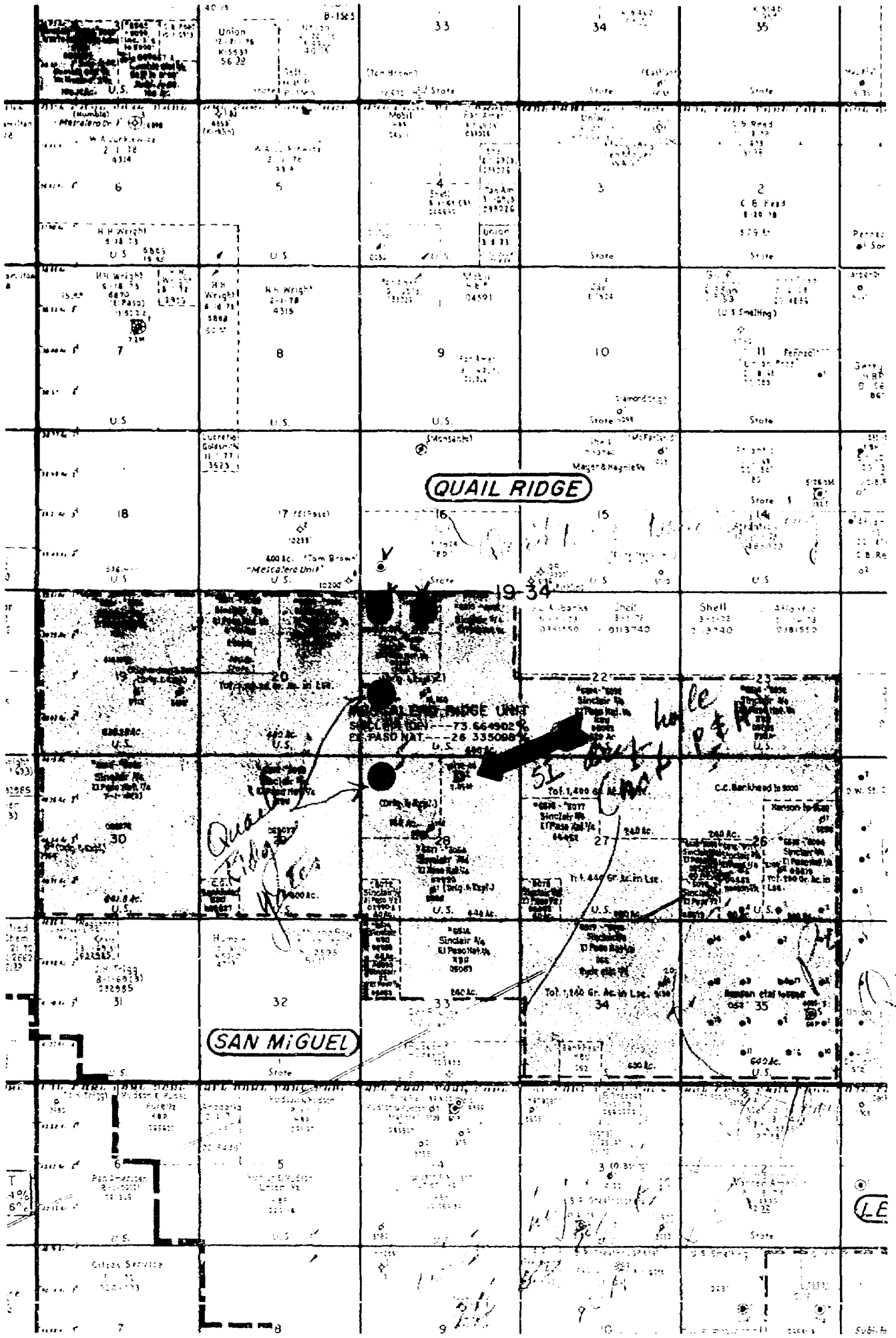
CASE 4010: (Continued from December 27, 1968, Examiner Hearing)

Application of John H. Trigg for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project by the injection of water into the Grayburg-San Andres formations through his Empire "J" Federal Well No. 1 located in Unit P of Section 1, Township 18 South, Range 26 East, Red Lake Grayburg-San Andres Pool, Eddy County, New Mexico.

CASE 4013: (Continued from December 27, 1968, Examiner Hearing)

Application of Redfern Development Corporation and Wil-Mc Oil Corporation for salt water disposal, Lea County, New Mexico. Applicants, in the above-styled cause, seek authority to dispose of produced salt water into the San Andres formation in the interval from approximately 4042 feet to 4179 feet in the Wil-Mc State "K" Well No. 1, located in Unit O of Section 11, Township 10 South, Range 32 East, Mescalero-San Andres Pool, Lea County, New Mexico. (The above perforated interval is in lieu of the originally advertised interval from 4200 feet to 4300 feet.)

R 34 E



R 34 E

BEFORE EXAMINER NUTTER

OIL CONSERVATION COMM.

EXHIBIT NO. 1

CASE NO. 4019

LEGEND:

- o QUAIL RIDGE BONE SPRINGS
- (o) QUAIL RIDGE YATES

SINCLAIR OIL CORPORATION

MIDLAND, TEXAS

PART OF

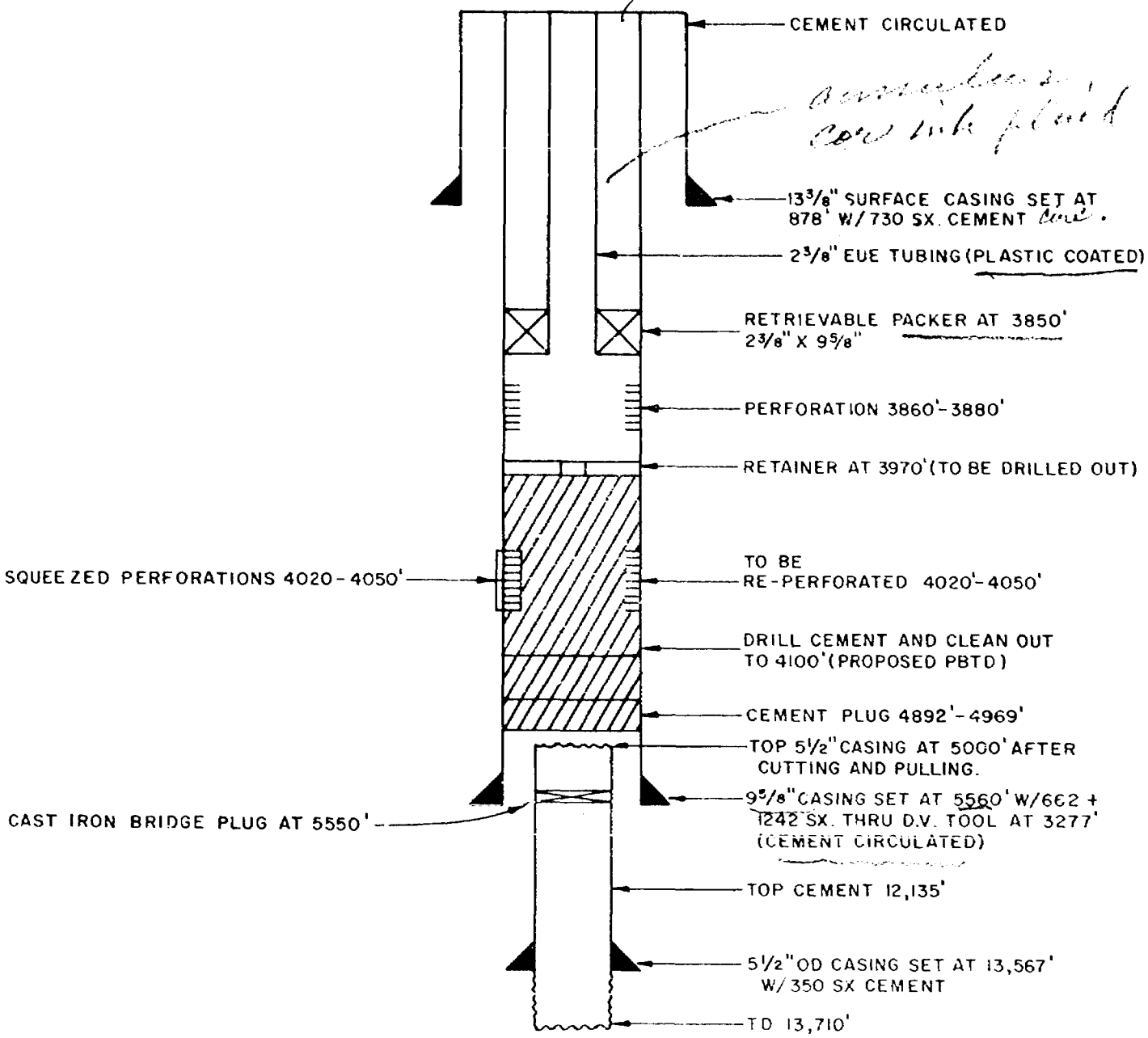
LEA COUNTY, NEW MEXICO

12-16-68 RMD

DRAWN BY J.W. CHECKED BY J.W.H. DATE 12-16-68

SCALE 1" = 4000' REVISED

DIAGRAMMETIC SKETCH OF
PROPOSED INSTALLATION



TO BE DRILLED OUT

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
EXHIBIT NO. 4
CASE NO. 4019

SINCLAIR OIL CORPORATION
MESCALERO RIDGE UNIT NO. 2
QUAIL RIDGE YATES POOL
660'FNL & 1980'FEL, SECTION 28, T-19-S R-34-E
LEA COUNTY, NEW MEXICO

LEASE	WELL NO.	SEC.-T-R	POOL	COMPLETED	MONTH	PRODUCTION OIL	WATER	GAS
Mescalero Ridge Unit MA	31	21-19-34	Quail Ridge-Yates	June 1968	June	5	0	2000
					July	Shut-In		
					Aug.	146	0	5768
					Sept.	490	0	25354
					Oct.	384	0	21000
					Nov.	441	0	20100
Mescalero Ridge Unit MA	32	28-19-34	Quail Ridge-Yates	Oct. 1968	Oct.	28	0	6523
					Nov.	305	0	8955

SINCLAIR OIL CORPORATION
P. O. BOX 1470
MIDLAND, TEXAS 79701

December 17, 1968

SOUTHERN REGION (WEST TEXAS)
DOMESTIC OIL & GAS DIVISION

Case 4019

New Mexico Oil Conservation Commission
Santa Fe, New Mexico 87501

Attention: Mr. A. L. Porter, Jr.
Secretary-Director

Gentlemen:

Sinclair Oil Corporation, hereby makes application for a hearing to authorize the initiation of a Pressure Maintenance Project by the injection of produced salt water into its Mescalero Ridge Unit Well No. 2 (originally drilled by El Paso Natural Gas Company), located in Section 28, T-19-S, R-34-E, Quail Ridge Yates Pool, Lea County, New Mexico. This lease as well as all other leases within two miles are shown on the attached area plat. Also enclosed please find:

1. A cross section which includes an electric log on the Mescalero Ridge Unit Well No. 2.

2. A diagramatic sketch of the proposed salt water Injection well showing all casing strings, diameters, setting depth, cement quantities, tops and producing intervals, tubing size, length, type packer and setting depth.

3. A plat of the area showing the oil and/or gas pool each well in the immediate vicinity is completed in.

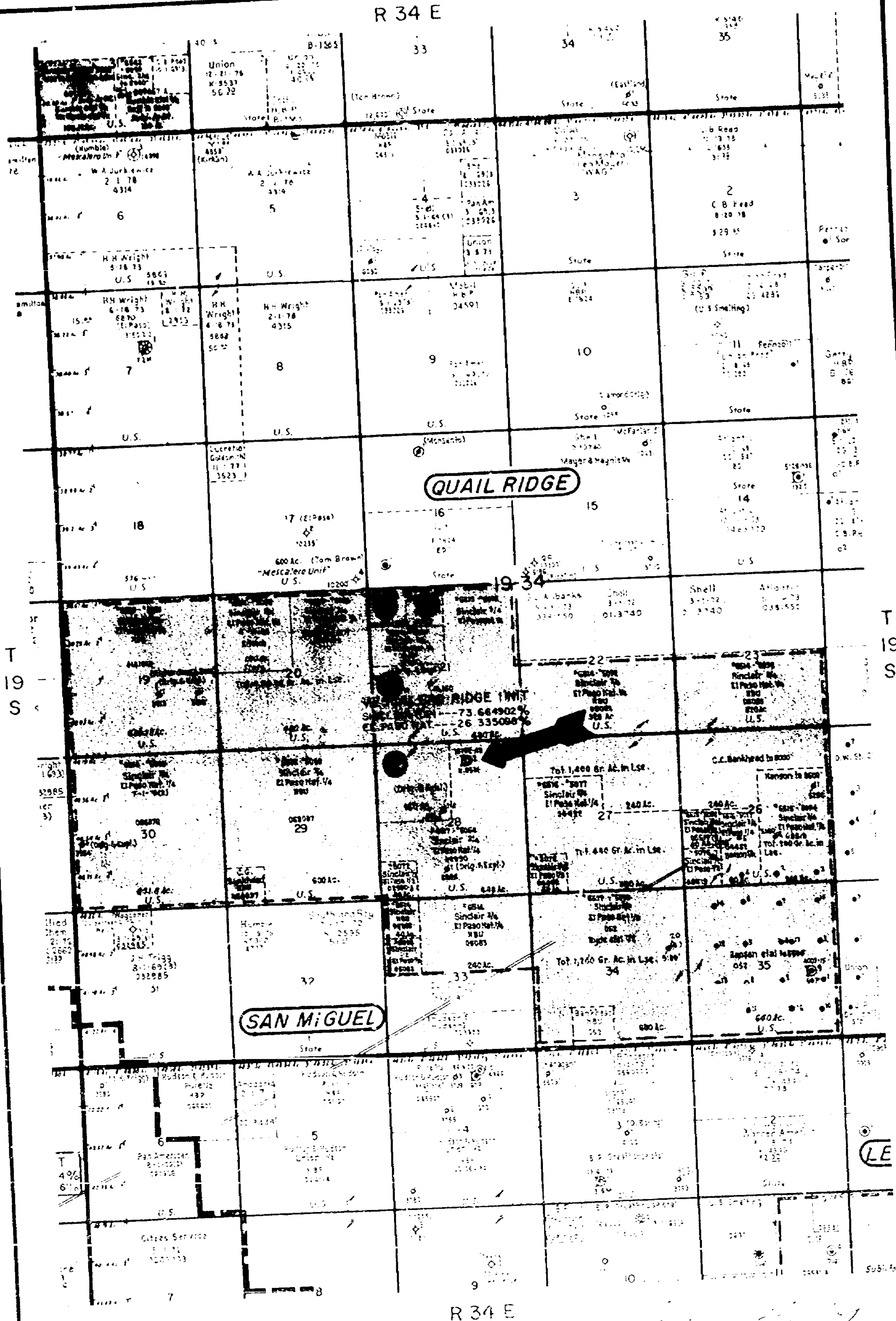
4. Injection will be into the Yates formation in the Quail Ridge Yates Pool. Produced salt water will be injected at approximately 30 barrels per day. Injection is to be by gravity.

Very truly yours,

R. M. Anderson

R. M. Anderson
Region Regulatory Engineer

RMA:rd
Attachments
CC: HNB
White, Guilbert, Koch & Kelly
P.O. Box 787, Santa Fe, New Mexico 87501



LEGEND

○ QUAIL RIDGE BONE SPRINGS

(○) QUAIL RIDGE YATES

SINCLAIR OIL CORPORATION

MIDLAND, TEXAS

PART OF

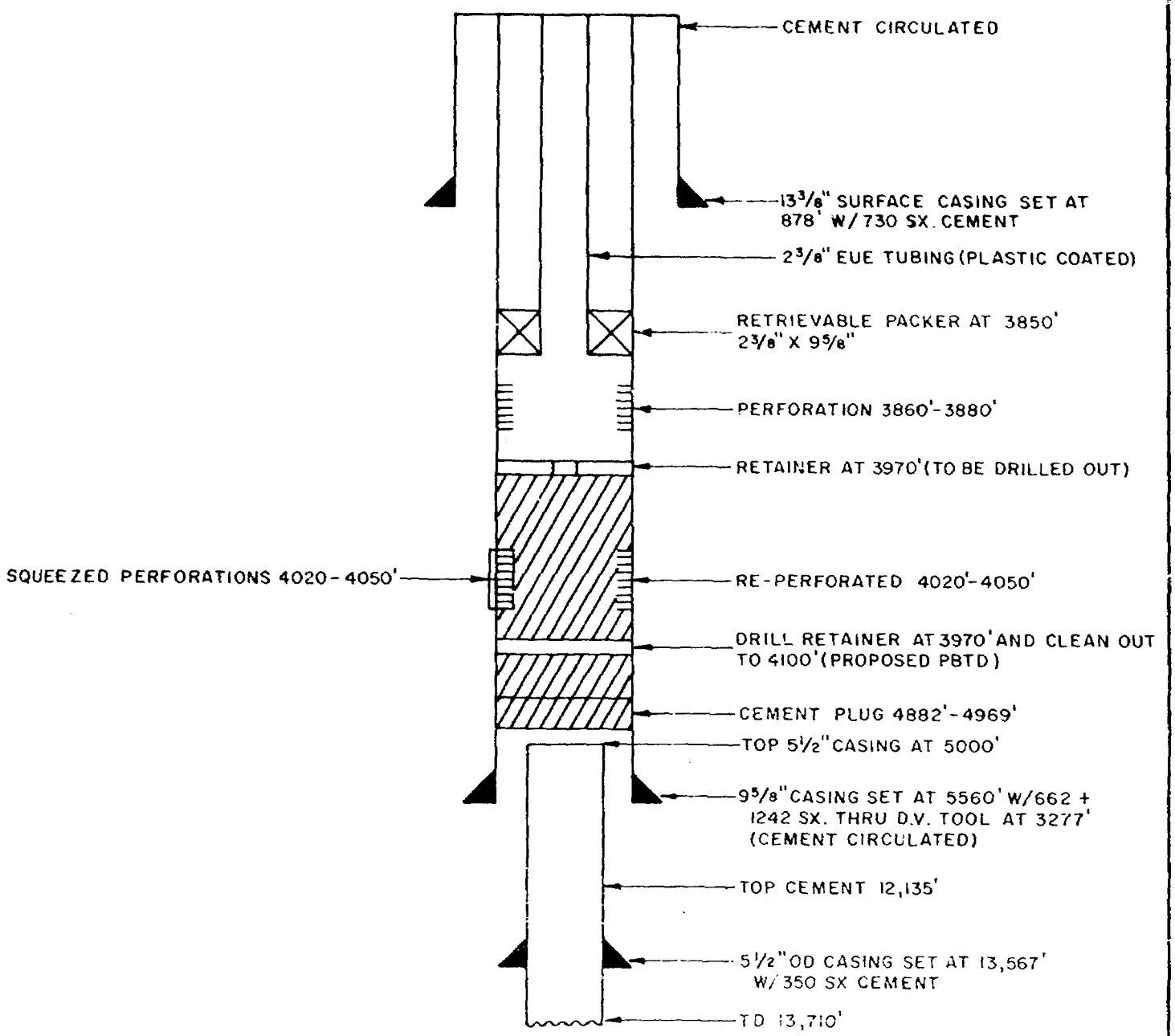
LEA COUNTY, NEW MEXICO

12-16-68 RMD

DRAWN BY J.W. CHECKED BY J.W.H. DATE 12-16-68

SCALE 1" = 4000 REVISED

DIAGRAMMETIC SKETCH OF
PROPOSED INSTALLATION



SINCLAIR OIL CORPORATION
MESCALERO RIDGE UNIT NO.2
QUAIL RIDGE YATES POOL
660' FNL & 1980' FEL, SECTION 28, T-19-S R-34-E
LEA COUNTY, NEW MEXICO

Case 11019

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. 4019

Order No. R- 3660

APPLICATION OF SINCLAIR OIL CORPORATION
FOR SALT WATER INJECTION, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on January 8, 1969, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of January, 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, Sinclair Oil Corporation, is the owner and operator of the Mescalero Ridge Unit Well No. 2, located in Unit B of Section 28, Township 19 South, Range 34 East, NMPM, Quail Ridge-Yates Pool, Lea County, New Mexico.

(3) That the applicant proposes to utilize said well to inject ~~dispose of~~ produced salt water into the Yates formation, with injection into the perforated interval from approximately 3860 feet to 4050 feet.

(4) That the injection should be accomplished through 2 3/8-inch plastic-lined tubing installed in a packer set at

approximately 3850 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, Sinclair Oil Corporation, is hereby authorized to utilize its Mescalero Ridge Unit Well No. 2, located in Unit B of Section 28, Township 19 South, Range 34 East, NMPM, Quail Ridge-Yates Pool, Lea County, New Mexico, to inject produced salt water into the Yates formation, injection to be accomplished through 2 3/8-inch tubing installed in a packer set at approximately 3850 feet, with injection into the perforated interval from approximately 3860 feet to 4050 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 injection 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.