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

June 2, 1971

EXAMINER HEARING

IN THE MATTER OF:

Application of Shiprock Corporation for a waterflood project, San Juan County, New Mexico.

Case 4545

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF PROCEEDINGS

MR. UTZ: Case 4545.

MR. HATCH: Application of Shiprock Corporation for a waterflood project, San Juan County, New Mexico.

MR. STEVENS: I am Don Stevens of McDermott, Kelly and Stevens, representing the applicant Shiprock Oil Corporation. One witness shall be sworn.

MR. UTZ: Any other appearances? You may proceed.

(Witness was sworn.)

* * * * *

WILLIAM SKEEN,

a witness, having been first duly sworn according to law, upon his oath testified as follows:

DIRECT EXAMINATION

BY MR. STEVENS:

Q Would you state your name, your position with the applicant, please?

A William Earl Skeen, President, Shiprock Oil Corporation.

Q Could you give us your qualifications, your experiences in the oil business and your educational background pertinent to the oil business?

A Two years of College and I spent about the last twelve -- Well, I spent my life in the oil industry or affiliated with it.

Q Could you particularize?

A I spent about twenty years with Chicago Pneumatic Tool

Tool Company. They are producers of rock drill bits so I spent a lot of time on drilling rigs and then later I owned a machine shop for a couple of years and, of course, I have come in contact with production through that. Then later I had a service company, used equipment.

For the last five years, I have had Shiprock Oil Corporation. We have been developing this Shiprock production up there in northwestern New Mexico.

MR. STEVENS: Are the witness's qualifications acceptable to the Commission?

MR. UTZ: Yes, they are.

Q (By Mr. Stevens) Briefly, could you explain what the applicant seeks in this application, 4545?

A Well, our production, we feel, is becoming marginal or stripper production up there and from a high of something like about 3600 barrels per month. A year and a half ago this month, we got something like 1500 barrels. Of course, it is very shallow production, 100 foot.

Q Basically, what is it you are asking the Commission?

A Permission to waterflood in order to create some energy where we might increase our production.

Q Could you explain to the Commission the significance of Exhibit No. 1?

A Well, this is a plat of our lease and the wells. Also the wells we intend to use as injection wells. They are

presently producing, but we are going to use them as injection wells and that is on the lower end.

This particular area is cut off by a fault on the south. It shales out on the east and north and the west -- it comes to surface about two to three miles west of this field.

Q What is the legal description of this?

A Section 17 and 16, 29 North, 18 West, San Juan County.

Q What is the significance of your circled 17 on the exhibit?

A Well, that is the center of Section 17. That represents 160 acres there. That is where most of it is concentrated.

Q Then every pie-shaped quarter section to the southwest, would be the southwest quarter of that section, to the northwest be the northwest quarter of the section, northeast would be the northeast quarter?

A That's correct.

Q The southeast, the southeast quarter of that section?

A That's correct.

Q Your circles represent wells, is that right?

A That's right. Producing wells.

Q What formation are they producing from?

A They are producing out of the Gallup.

Q What depth?

A Anywhere from 66 feet down to 118 feet.

Q Is that sand or a limestone?
A Sand, Gallup Sand.
Q What is the thickness of that sand?
A About six feet.
Q What is the significance of your little squares on the right-hand side of the plat?
A That is proposed injection wells. That is across the lower end of the formation to the deepest part of the formation. I intend to flood it back to the high end.
Q Would you describe the structure? You mentioned a fault on the south.
A Yes.
Q Which way is the dip and could you describe the sand body?
A It dips from west to east, approximately ten feet dip for every 330 feet of distance, and we intend to inject it on the lower end, as I say, and move the oil back updip.
Q At this time, do you plan any other injection wells?
A Not at this time. We are going to start out initially with those five with the rate of about forty to fifty barrels per day for each well, which means that there is not going to be any pressure, particularly, involved.

We'll just float it in there where it won't bypass any oil in place.

Q This is forty to fifty barrels of fresh water per day?
A Fresh water per day.
Q What is the source of your fresh water?
A From the Dakota formation. This "X" up here in the southwest of 17 represents the water well, injection well. I mean, the producing well.
Q Do you have a gauge on the capacity of that well?
A Not yet. We have drilled a well, but we are waiting for at outcome of this hearing in order to set pipe on it.
Q There will be no pressure injection, it will just be gravity injection?
A That's right. There is a fall about fifty feet from this water well down at the lower end here and then I will pump it out of there with my ordinary pumping unit. It will be a closed system. It will come directly out of this Dakota well and go directly into these other wells through a closed system. It won't be exposed to any oxygen or the atmosphere or anything.
Q Drill into the old producing wells as marked?
A That's right.
Q How much oil has the field made to date, approximately?
A Approximately 180,000 barrels.
Q Do you have any information as to how much might be remaining left in the trap?

A That could be a good question. Probably three quarters of a million barrels. It is a closed system.

Q Of course, you have no idea exactly how much this might yield to you, is that correct?

A That's right, that's correct.

Q What are these wells currently producing?

A Like I say, last month they produced fifteen hundred barrels.

Q Is that down from there original production?

A Yes. A year and a half ago they were at a high of about thirty-six hundred barrels per month.

Q How many wells are currently producing in the field?

A About thirty-two producing right now. There are some others that have pipe in them but we aren't producing them at the moment.

Q So, that is approximately fifty barrels per well, per month, is that correct?

A Yes, something like that.

Q Would you classify that as stripper production in the strict sense of the word, stripper?

A Definitely, now.

Q In your opinion, Mr. Skeen, will approval of this application result in increased production in the field, a consequent reduction in waste and will it protect correlative rights of the various overriding

royalty owners?

A If it is a successful flood, there isn't any doubt about what it will.

MR. STEVENS: We have no further questions, Mr. Examiner.

MR. UTZ: Any questions of the witness?

The injection will not be under pressure. It will be gravity?

THE WITNESS: That's right, sir. We are going to put it in there at such a slow rate, approximately two barrels per hour, sir, because the engineers I have talked to, I am not an engineer myself, but the engineers that I consulted, that was their suggestion; don't put it in under any pressure because if you do, that's shallow depth and very permeable. This formation, particularly, certain sections of it, and they said you would bypass a lot of our oil or we may channel it or something else, so let it take its own course and put it in there at a slow rate and let it start flooding, moving the oil upstructure.

MR. UTZ: You would consider this a line flood?

THE WITNESS: Well, it's actually a peripheral flood.

MR.UTZ: It is a downdip?

THE WITNESS: Later on I may go around the north side. You see these peripheral wells on the north. Actually, at the moment, it will be a line flood, but then,

later on we would probably extend it around, if it is successful down here.

MR. UTZ: Now, over in the west half of Section 17, why is that not productive? Is it permeability pinchout or --

THE WITNESS: Well, actually, that formation is coming to the surface. About two miles west of here you come to the surface. That is the extremety of the San Juan Basin over there and it comes to the surface. So, it actually just pinches out or is not non productive sand. You pick up a sand, but there isn't anything in it.

MR. UTZ: Tight sand?

THE WITNESS: No. Within the confines of this oil field it is highly permeable.

MR. UTZ: What is going to happen to the oil that might be pushed over into this sand? How are you going to keep it from going over to the west?

THE WITNESS: Well, we are going to pick it up, of course, we will keep a close check on it and if it starts moving on us, we will put put us a -- we will flood it back the other way, see. We will put us a water block in there.

MR. UTZ: Are there other questions?

MR. HATCH: Is that all one lease?

THE WITNESS: Yes, it's all Navajo Lease.

MR. HATCH: Is the name of the lease identified in this application?

THE WITNESS: Actually, for our purpose, we have broken down two leases, one of them is Navajo and the other is Shiprock-Gallup, but it is all Navajo Lease.

MR. HATCH: Is it just one lease though, is what I am getting at because there is some -- the Commission in their transfer of allowables, don't allow them between one lease to another unless it has been unitized or some agreement made by the owners?

THE WITNESS: Actually, it is all one lease. For our purpose we have it broken down into two sections because we acquired half of it at a later date from Shell Oil Company, but it all belongs to Shiprock Oil Company and it's all one lease.

MR. STEVENS: But different overriding royalty owners?

THE WITNESS: On the north side I think there's a two and a quarter interest held by a party in Houston and on the south side there is a sixteenth override held by Amerada-Hess.

MR. HATCH: I think the Examiner would like some exhibits, at least one or something, showing the injection well.

MR. STEVENS: The injection wells?

MR. HATCH: A schematic sketch, how you intend to complete the injection well?

MR. STEVENS: We will be happy to submit them later, but would you explain exactly how you propose -- now those are

currently producing oil wells, is that correct?

THE WITNESS: Yes. Well, they have four-and-a-half-inch casing in them and three of them have pipe set through the formation and perforated cemented from top to bottom. Two of them have pipe set on top of the sand and cemented and all five of them have been fracked and we intend to bring our water line into the top.

I am going to take the tubing and rods out and inject it directly into this four-and-a-half-inch casing into the formation at the rate of about two barrels per hour.

MR. STEVENS: Do you plan, though, plastic coated tubing or internally coated pipe or anything of that nature?

THE WITNESS: No, I will treat the water, if necessary. I will have it checked and see what the compatability is there and we will chemically treat it if necessary.

MR. STEVENS: There are no fresh water sands above your producing formation?

THE WITNESS: No, nothing above it at all except shale and lime.

MR. STEVENS: That is all.

MR. HATCH: Also need the name and location of each of those wells. You may be able to give it right now.

THE WITNESS: I could if I had a map up here but it is down in my car.

MR. UTZ: Will you supply us today, with the names

and location of these injection wells?

THE WITNESS: Yes. I have it in the car but I didn't bring it up. I have this plat.

MR. UTZ: Is this difference in overriding royalty of any consequence to us, George?

MR. HATCH: If it is all one lease, but I am not quite sure it is all one lease. I wish you would show the ownership involved here. I do not think it is going to cause any problem.

MR. STEVENS: It is one Navajo lease issued originally to Shell Oil Company on one big lease, but I will be happy to give you --

THE WITNESS: I think it was the originally, Humble which, at that time was the Carter because that old lease carries an eight royalty up there and that's an old, old lease because now I think it's a sixth in those Indian areas and the south side does carry a sixth.

MR. UTZ: Are there other questions? The witness may be excused. Statements in this case? The case will be taken under advisement.

STATE OF NEW MEXICO)
)
COUNTY OF BERNALILLO)

I, Glenda Burks, Court Reporter, 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.

Glenda Burks
Court Reporter

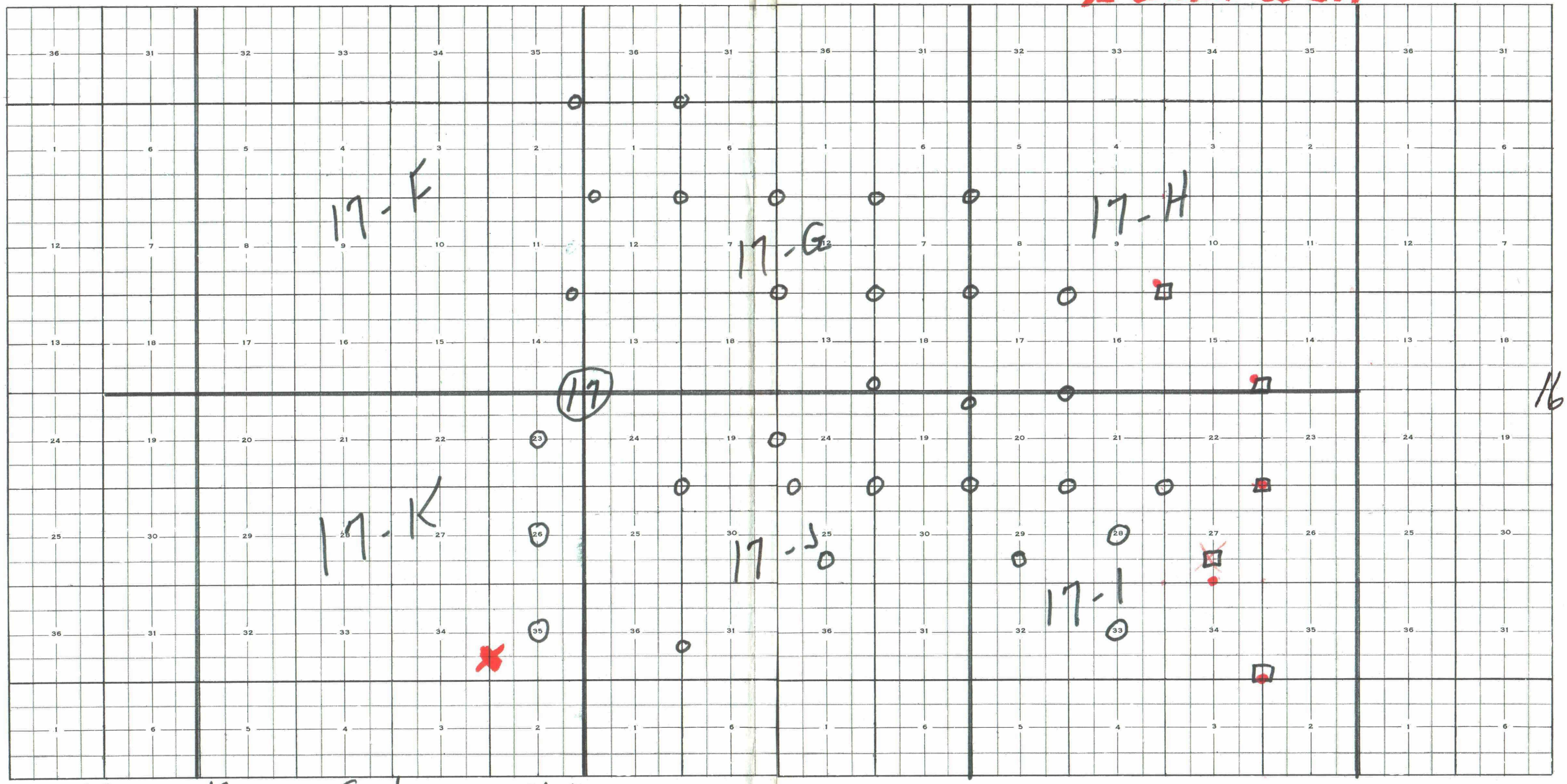
I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4545 heard by me on January 7, 1957.

Examiner
New Mexico Oil Conservation Commission

(SCALE 1 IN. = 1 MI.) ISLAND TOWNSHIP

2½ Acre Spacing
○ = 30 Producing Wells
□ = 5 Injection Wells

SAN JUAN REPRODUCTION CO
135 Airport Drive
Farmington, New Mexico 87401
Tel. 325-3111



TOWNSHIP 29N RANGE 18W COUNTY San Juan STATE N. Mexico

REMARKS: Shiprock Oil Corp.
Box 211
Farmington, N. Mexico
87401

COMPANY

(SCALE 1 IN. = 1 MI.) ISLAND TOWNSHIP

SAN JUAN REPRODUCTION CO
135 Airport Drive
Farmington, New Mexico 87401
Tel. 325-3111

X Water Well

TOWNSHIP RANGE COUNTY STATE

REMARKS:

COMPANY

Case No. 4545
Appl. Exh. No. 1

(SCALE 1 IN. = 1 MI.) ISLAND TOWNSHIP

SECTION 17 - T29N - R18W

SAN JUAN REPRODUCTION CO
135 Airport Drive
Farmington, New Mexico 87401
Tel. 325-3111

(SCALE 1 IN. = 1 MI.) ISLAND TOWNSHIP

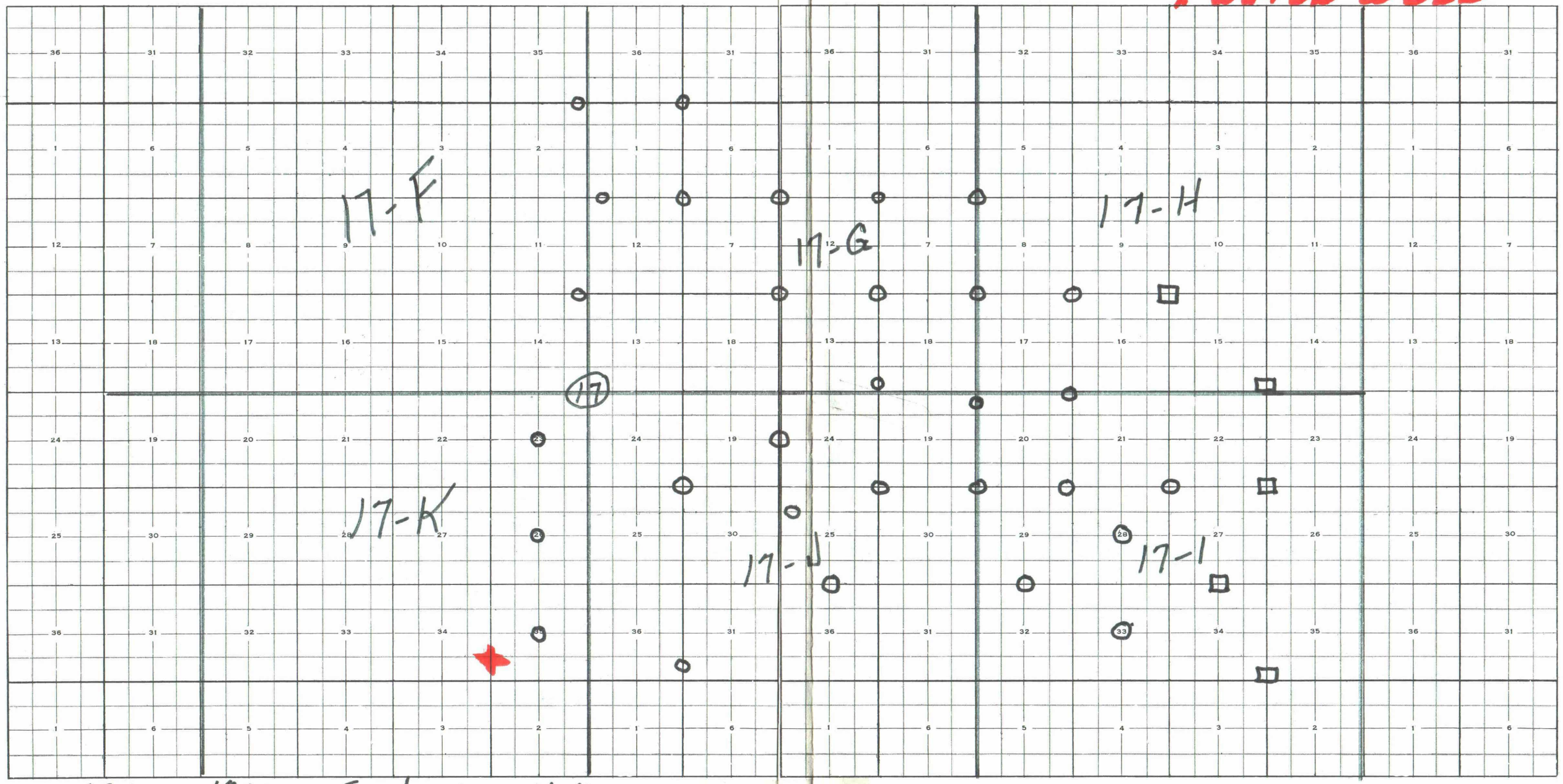
2½ Acre Spacing

O = 30 PRODUCING WELLS

□ = 5 INJECTION WELLS

X WATER WELL

SAN JUAN REPRODUCTION CO
135 Airport Drive
Farmington, New Mexico 87401
Tel. 325-3111



TOWNSHIP 29N RANGE 18W COUNTY SAN JUAN STATE N. MEXICO

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Box 211
Farmington, N. Mexico
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COMPANY

TOWNSHIP RANGE COUNTY STATE

REMARKS:

COMPANY