CASE 5714: AGUA, INC. FOR SALT WATER DISPOSAL, LEA COUNTY, NEW MEXICO

CASE NO.

5714

APPLICATION,

TRANSCRIPTS,

SMALL EXHIBITS,

ETC.

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 1980 - HOBBS
88240

DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO

STATE GEOLOGIST
EMERY C. ARNOLD

December 17, 1976

File
Case 574

Mr. Joe D. Ramey, Director
New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Re: Commission Order No. R-4495-D

Dear Mr. Ramey:

Agua, Inc. salt water disposal well No. C-2 located in Section 2, T-22-S, R-37-E, was checked on December 1, 1976, to confirm that the packer set to isolate perforations from 4230' to 4320' was holding and the perforations were isolated.

The gauge pressure at this time on the tubing-casing annulus was 85 psi. This pressure did not change while the well was loaded and then shut in, confirming that the perforations are isolated.

Attached are Agua, Inc. figures on the pressures which were observed while the well was loaded.

Yours very truly,

OIL CONSERVATION COMMISSION

Jerry Sexton
Supervisor, District 1

JS/mc
Attach.

AGUA, INC.

BLINEBRY-DRINKARD SALT WATER DISPOSAL WELL No. C-2

Maximum injection rate after setting packer:

10/12/76 Start.

Time	Meter	Tbg.	Csg.	Rate EPH
1:00 P.M.	401033	27"	0	744
1:05 P.M.	401095	10"	0	648
1:10 P.M.	401149	9"		444
1:15 P.M.	401186	9"		216
1:20 P.M.	401204	10"		

End test because of low fluid level in redwood storage tanks.

10/21/76 Acidize. Petro-Thermo hauled 2,000 gallons 30% acid w/5 gallons S-95 inhibitor to well and put into tubing. Meter was out for repair, so rate was not taken. Well on hard vacuum.

10/26/76 Maximum Injection Test.

Time	Meter	Tbg.	Rate BPH	
3:00 P.M.	424626	27"	-	Tbg. was
3:05 P.M.	424700	23"	888	Loading
3:10 P.M.	424757	11"	684	
3:15 P.M.	424812	11"	660	
3:20 P.M.	424865	11"	636	

End test because of low fluid level in redwood tanks.

11/16/76 Loading Casing with Oil

A. A. Oilfield Service hauled 50 bbls. light straight run to location and dumped into casing. Gravity 54 at 28° corrected to 55 gravity @ 60°.

Time	Casing	
9:30 A.M.	0	
9:35 A.M.	150#	17 bbls. pumped when fluid was hit.
9:40 A.M.	500#	
9:45 A.M.	Stopped pumping to tighten leaking nipple on wellhead. Pressure dropped to 0.	
9:50 A.M.	Started pumping.	
10:00 A.M.	850#	
10:03 A.M.	1000# I.S.I.	Stopped end fluid
10:05 A.M.	300#	
10:10 A.M.	200#	
10:30 A.M.	135#	
11:05 A.M.	130#	
3:15 P.M.	100#	

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
July 14, 1976

COMMISSION HEARING

IN THE MATTER OF:

Application of Agua, Inc., for salt water disposal, Lea County, New Mexico. Applicant in the above styled case seeks permanent authority to dispose of produced salt water into the San Andres formation through the perforated interval from 4230 feet to 4320 feet below the surface and into the open hole interval from 4400 feet to 5000 feet in its SWD Well No. C-2 located in Unit C of Section 2, Township 22 South, Range 37 East, Lea County, New Mexico.

CASE 5714

BEFORE: Joe D. Ramey, Director
Phil Lucero, Member
Emory C. Arnold, Member

TRANSCRIPT OF HEARING

BE IT REMEMBERED that on to-wit, the fourteenth day of July, 1976, this matter came on for hearing before the New Mexico Oil Conservation Commission, Santa Fe, New Mexico at the hour of nine o'clock in the forenoon.

HOWARD W. HENRY & COMPANY
General Court Reporting Service
601 Tijeras, N.W.
ALBUQUERQUE, NEW MEXICO 87102
Phone 247-2224

A P P E A R A N C E S

FOR THE NEW MEXICO OIL CONSERVATION COMMISSION:

MR. WILLIAM F. CARR, ESQ.
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico 87501

FOR AGUA, INC.:

JENNINGS, CHRISTY & COPPLE
Attorneys at Law
1012 Security National Bank Building
Roswell, New Mexico
By: Mr. James T. Jennings

FOR EXXON CORPORATION:

MODRALL, SPERLING, ROEHL, HARRIS & SISK
Attorneys at Law
Public Service Building
Albuquerque, New Mexico
By: Mr. James E. Sperling

* * * * *

MR. RAMEY: Call case 5714.

MR. CARR: Case 5714, application of Agua, Inc., for salt water disposal, Lea County, New Mexico.

MR. RAMEY: I will ask for appearances in this case.

MR. JENNINGS: James T. Jennings, Jennings, Christy and Copple on behalf of the applicant, Agua, Inc.

MR. SPERLING: James E. Sperling, Modrall,

Sperling, Roehl, Harris and Sisk, Albuquerque, appearing on behalf of the Exxon Corporation, U.S.A.

MR. RAMEY: I will swear witnesses at this time. Do you have any witnesses?

MR. SPERLING: We have two witnesses.

MR. RAMEY: Will all witnesses please stand?

(THEREUPON, the witnesses were duly sworn.)

MR. JENNINGS: Before proceeding, we would like at this time to incorporate into the record the testimony heretofore adduced in this hearing on this same well, and I believe the hearings were on September 26th, January 20th, and April 28th. If there were others, why, we wish those incorporated, too, and maybe Mr. Sperling can correct me.

(THEREUPON, a discussion was held off the record.)

MR. CARR: Mr. Commissioner, I think it would be appropriate at this time since they involve overlapping subjects, if we could really incorporate the record from the previous case so we'd have everything together since we're going to have to work this whole thing out together. Do you have any objection?

MR. JENNINGS: I have no objection.

MR. RAMEY: Mr. Sperling, is that all right with you?

MR. SPERLING: Yes, sir.

MR. CARR: I'd move then that the records be incorporated.

MR. RAMEY: Okay. We will incorporate the records of the previous case.

MR. CARR: Which included everything before that.

MR. RAMEY: Case 5713, which includes six or seven cases previous to that.

MR. SPERLING: You mean from 4916 on up, is that right, to the --

MR. CARR: I think since --

MR. SPERLING: 5562.

MR. CARR: -- since 5377, which was the original case curtailing injection in this area in 1974.

MR. JENNINGS: December, '74.

MR. NUTTER: 4916 was incorporated this morning, too, so it is incorporated here then?

MR. SPERLING: Right.

MR. JENNINGS: Okay. With all this incorporation I hardly know where to start.

MR. RAMEY: I have a listing of those if you would like for me to read them.

MR. JENNINGS: No. I mean where to start with this testimony. I assume, then, there is no -- Mr. Abbott being sworn, I don't need to qualify him or anything since it is in the record in the previous hearing.

MR. RAMEY: Previous hearing. You may proceed with your direct questioning, please, Mr. Jennings.

MR. JENNINGS: All right.

(THEREUPON, Agua Exhibits One through Six were duly marked for identification.)

MR. ABBOTT

was called as a witness, and having been first duly sworn, testified upon his oath as follows, to-wit:

DIRECT EXAMINATION

BY MR. JENNINGS:

Q. Mr. Abbott, are you familiar with the application filed on behalf of Agua Corporation -- Agua, Inc., rather, in case number 5714?

A. Yes, sir.

Q. Basically what does that Agua seek by this application?

A. We seek a permanent order to allow us to utilize the perforated interval of 4230 to 4320 in our SWD C-2 Well,

besides the open hole section from 4400 to 4950.

Q. What is the current status of your injection into that well, Mr. Abbott?

A. At the present time we are injecting approximately four hundred barrels an hour by gravity into this well.

Q. Into what intervals?

A. Through the perforated interval from 4230 to 4320, and through the open hole section from 4400 to 4950.

Q. Does your authority to inject into the interval from 4230 to 4320 have a time limit on it?

A. I think the time runs out August 7th, 1976.

Q. Is it necessary, in your opinion, for you to continue to dispose of water into this interval after August 7th, 1976?

A. At the present time it looks like it is -- it will be necessary. I consider it an excellent place to put the disposal water in this well under gravity.

Q. If you are not allowed to continue, what are your alternates?

A. The -- I don't know what the alternates would be. We'd have to probably ask for an emergency order to inject water into the A-22 under pressure or something. I don't know.

Q. Do you feel that it is possible for you to --

between today and the seventh of August to properly equip and -- the A-22 well to inject water under pressure?

A. It may be possible, but it probably isn't probable, because we are having the usual right-of-way problems down in that area, and we are waiting on some right-of-way from one of the landowners.

Q. Well, don't you have the -- don't you have the pipeline hooked up?

A. We have the pipeline installed. We don't have the terminal facilities, the tanks installed.

Q. How many wells are currently hooked up to your Blinebry-Drinkard system?

A. There are four hundred and sixty-five wells connected to the system.

Q. What is the status of the -- is the water that is being disposed of by your system stable or is it increasing or decreasing, or what is --

A. I have -- I think I have an exhibit showing it is increasing.

Q. Just notwithstanding the exhibit, do you recall on what -- percentagewise, what is the increase?

A. I think it is increased, oh, twenty-five percent in the last three or four years.

Q. Roughly, how many wells are in this general area that are producing oil wells?

A. There's in excess of nine hundred producing oil wells.

Q. Now, getting back to the Agua C-2 Well, I hand you what has been marked as Exhibit One and ask you if you will identify that?

A. Yes. You can pass those on.

This Exhibit One is a diagrammatic sketch of the C-2 Well, showing the surface pipe, nine-and-five-eighths set at three hundred and twelve feet, and cement circulated to the surface. It shows the seven-inch casing set at forty-four hundred feet with a hundred and seventy-five sacks of cement, and the five-and-a-half-inch plastic line tubing swung in the well at four thousand and seventy-three feet.

Q. Are those three little lines casing there?

A. Yes. That's -- portrays the perforated interval from 4230 to 4320.

Q. Referring to Exhibits Two and Three, would you roughly identify these and state what they show?

A. Yeah. Exhibits Two and Three are the completion reports on the wells. The first one is an initial completion report submitted after the completion of the well, and it is

dated May 9th, 1973.

The next form, C-103, shows the work done on the well to perforate the casing in this interval from 4230 to 4320.

Q. That's the work that was done last September?

A. Yes.

Q. Now prior to this -- doing this work, was the well capable of taking the total output of your system?

A. No, sir.

Q. Since the work has been done is the well now capable of taking -- disposing of necessary water?

A. Yes, sir. It is taking approximately four hundred barrels an hour.

Q. And that's all on gravity?

A. Yes.

Q. Mr. Abbott, refer, please, to Exhibit Number Four.

A. Exhibit Four shows the water disposed monthly in barrels per month, and also the rate in barrels per day in the SWD, C-2, since January 1st of 1975, up through June of 1976.

Q. Has it increased any?

A. Yes. It has increased, especially -- you will notice the big jump in September of '75, when it was necessary to dispose of the water that was previously being disposed of

in the H-35 well, and there was a big jump in the water disposed.

Q. Have you encountered any problems in connection with disposing of the water in this well since the volume has increased?

A. Well, it was necessary for a period of four or five months to acidize the well monthly with two thousand gallons of thirty percent hydrochloric acid, but recently the well has -- seems to be acting a little better, and we haven't acidized the well since April 22nd of this year, so it's gone about two-and-a-half months.

Q. Would you briefly explain that?

A. The only explanation I have is that the bottom hole pressure in the San Andres aquifer in that area is decreasing. This could be due to a couple of things. One would be the oil production, and gas production, if any, out of the San Andres. And the other factor that may influence the bottom hole pressure is the withdrawal of water from the San Andres for this water being used for water flooding of the Drinkard formation by Gulf Oil Corporation.

Q. Where is the Gulf withdrawing the water?

A. They are withdrawing the water from the San Andres, and they are -- I don't have the exact location of their water source wells, but they are located about two to three miles

north and west of the SWD, C-2 Well.

Q. Do you have any knowledge as to the amount of water that Gulf has withdrawn from those wells?

A. Yes. Cumulative, a figure that we received from Gulf recently, they had withdrawn twenty-one million barrels out of these water source wells, which means that we are putting in at four hundred barrels an hour, we are putting in the -- into the C-2 Well approximately three-and-a-half million barrels a year, call it four million barrels a year, and if you divide the four into the twenty-one, well, it would be five years before we even caught up with the withdrawals from the -- by the Gulf on this -- on these water source wells, so I assume that since it is one big reservoir, that any withdrawals will reflect the bottom hole pressures in the San Andres Reservoir.

Q. Mr. Abbott, referring to what has been marked Exnibit Five, would you please identify that and tell us what it shows?

A. Exhibit Five is just a listing of the accumulative water through June 30th, 1976, in our three disposal wells in the -- this Blinebry-Drinkard disposal system. It shows that our SWD, A-22, we are hauling some water to the well, and we have disposed of approximately twenty-three thousand

barrels by gravity in the A-22 Well. The C-2 Well accumulated was about four million eight hundred thousand barrels, and the H-35 is thirteen million four hundred and forty-six thousand.

Q. Is that from the day you started?

A. Yes, sir.

Q. How far back does that go, Mr. Abbott?

A. I think it's 1969.

Q. Now, referring to what has been marked Exhibit Six, would you identify that and state what it reflects?

A. Exhibit Six just shows a graph of the water disposed in barrels a day, so we can get a graphic idea of water disposed and also the wells connected to the system, and you can see that it trends upward in the system. The big jump in about March of '76 is when we were flowing back the H-35 Well at a pretty good rate.

Q. Have you stopped that or are you still doing it?

A. No. It is still flowing back about fifty barrels an hour.

Q. Mr. Abbott, are there any wells producing from the formation into which you are injecting this water in the immediate vicinity of your injection well, the C-2?

A. No. There's some producing oil wells in the

San Andres formation down south of our disposal well, and an obstructure.

Q. Do you feel that the injection of the water into your well is in any way affecting these wells?

A. I don't think it's affecting them. I can't see where it could hurt them. It might help the bottom hole pressure.

Q. Do you feel that the injection, continued injection into the perforated zones -- the perforated zone between 4230 and 4320 will impair the correlative rights of any of the offset operators?

A. No, sir.

Q. Have any of the other offset operators other than Exxon voiced any complaint about your injection into this zone?

A. No, sir.

Q. Do you feel that the disposal of the water into this zone is in the interest of conservation and will prevent waste?

A. Yes, sir. I think it is a good place to put the water.

Q. Do you have any alternates, alternate places?

A. No, sir, not at the present time.

Q. Are there any other systems operating in the -- systems as such, operating in this vicinity?

A. There are probably some small systems, yes, operating in the -- by usually one company.

Q. Do you have anything further to offer to the Commission at this time?

A. No, other than to point out that this San Andres Aquifer is a very extended aquifer. It runs twenty or thirty miles that I know, north, and many miles west and a little east, and it is -- any fluids put into the San Andres are distributed throughout the San Andres formations.

Q. All right.

MR. JENNINGS: At this time we'd offer Exhibits One through Six.

MR. RAMEY: Without objection Agua Exhibits One through Six will be admitted.

(THEREUPON, Agua Exhibits One through Six were duly admitted into evidence.)

MR. RAMEY: Does that conclude your examination?

MR. JENNINGS: That concludes my examination.

MR. RAMEY: Mr. Abbott, you said there were some -- at least a Gulf water supply well some two miles north

of your C-2?

THE WITNESS: Yes. I don't know of the exact location, but there are -- I think they have probably more than one well that they are pulling water out of the San Andres.

MR. RAMEY: Are these wells updip or downdip from yours?

THE WITNESS: They are probably downdip. I don't know exactly how the formation runs that way.

MR. RAMEY: So if they are creating a pressure sink in an area that is down depth from your well, why, chances are the water would -- that you had disposed of, would tend to --

THE WITNESS: Move to that.

MR. RAMEY: -- go downdip towards this pressure center?

THE WITNESS: Yes, sir.

MR. RAMEY: Thank you, Mr. Abbott.

Any other questions of the witness?

MR. SPERLING: Yes, sir.

MR. RAMEY: Mr. Sperling.

MR. SPERLING: Yes, sir.

CROSS EXAMINATION

BY MR. SPERLING:

Q. You stated in your opinion that the withdrawal for supply purposes by Gulf to the north resulted in a reduction in bottom hole pressure in the vicinity of the C-2, is that right?

A. Yes, sir.

Q. Is that consistent with your previous answer to Mr. Ramey's question --

A. I think so.

Q. -- about the pressure sink?

A. Yes.

Q. You understand the principles of the water flood, I'm sure, Mr. Abbott, don't you?

A. Yes.

Q. And in the injection of water into a reservoir, an oil bearing reservoir, is to cause the oil to move in front of the water, stated very primitively, right?

A. Right.

Q. And the effect of that injection, then, is to cause the oil to move?

A. Yes, sir.

Q. Right?

A. Yes, sir.

Q. Uh-huh. So that if you inject enough water, volumetrically, you have to either witndraw the oil at some point or have it moved to a point where it can be withdrawn further away, right?

A. Right.

Q. Okay. But you see no possibility of damage to correlative rights in view of the injection of four hundred barrels of water per hour or cumulative, four million eight hundred thousand barrels in the C-2?

A. No. I think that is a good place to put the water.

Q. Yes. I'm aware that you have that feeling, but I don't think that answered my question.

A. I think by putting the water in where we are, we are downdip from any oil production, and assuming you have a -- that oil is on top of the water, which it usually is in these -- in this San Andres formation, that by putting the water in downdip, you are not injuring the oil producing wells.

Q. You testified that the rate of disposal of water in the C-2 at the present time is four hundred barrels per hour?

A. Approximately.

Q. Of which -- yes. Of which approximately fifty barrels represents water already injected into the H-35 Well, and being now produced and reinjected in the C-2?

A. Yes, sir.

Q. So you are not only disposing of produced water, you are disposing of previously disposed water?

A. Yes, sir.

Q. This may have been asked you at some point in one or the other of these hearings of which there are numerous references. How do you account for the presence of surface pressure in the H-35 well?

A. I think most of the pressure there is either gas or nitrogen, and it's been present in that area for twenty-five years that I know of.

Q. Well, where is the gas coming from? What --

A. I have no idea, unless it's just a low volume gas that may be coming out of the Yates formation.

Q. And what is the depth of the Yates at that point?

A. I don't know what the Yates is.

Q. Well, you are speculating then, really?

A. Yes, sir.

Q. All right.

MR. RAMEY: Mr. Sperling, are you referring to the pressure on the surface casing?

MR. SPERLING: Yes.

MR. RAMEY: And not the surface injection pressure?

MR. SPERLING: No.

MR. RAMEY: Okay.

MR. SPERLING: The recorded pressure. I'm getting over into the other case a little bit, but since we are there, so commingled now it doesn't make much difference, I guess.

MR. RAMEY: That's correct.

Q (Mr. Sperling continuing.) Well, do you think that that explains the phenomena insofar as surface pressure is concerned on what you testified as being the condition existing in eighty percent of the wells in the area?

A No. I think some of the wells that have pressure are -- on the surface pipe are being caused by some outside forces, but I think that a lot of the pressures recorded, and I think it's been proven since they were recorded that there was gas pressure that could be bled off, and the pressure had probably been accumulating in there for years.

Q At the rate of fifty barrels an hour, back flow

in the H-35, what is your estimate of the period of time required to stabilize?

A. I have no idea how long it will take. I would -- I would assume at that rate it will probably take another six months.

Q. I think that was your estimate, one of the prior hearings, wasn't it?

A. Must be the truth.

Q. Well, except for the elapsed time of six months since.

A. Well, we are -- the pressures are coming down slowly on the tubing, but it is very slow.

Q. Well, do you have any figures on what the net disposed of water in the H-35 is at this time?

A. No. We haven't made any calculation. We could make a calculation, but I haven't done it.

Q. Okay. So the thirteen million four hundred and forty-six is reduced by whatever has been back flowed, is that right?

A. Yes, sir.

Q. And you don't have any idea what that is?

A. No, sir.

Q. What you are really telling the Commission in the

prior hearing and this hearing is that if you are not allowed to inject into the C-2 well, then the only alternative is to shut in four hundred and sixty-five wells, or as of -- as a corollary to that, to allow you to inject into the A-22, is it?

A. Yes, sir.

Q. Well, under pressure of some substance?

A. Yes.

Q. Eleven hundred, twelve hundred or something?

A. We asked for twelve hundred, but we don't know exactly where -- how much pressure it will take.

Q. Well, did you inject under pressure for any interval of time into the A-22?

A. No, sir, not -- we -- the only injection has been testing the well at completion.

Q. And for -- and what volumes are you talking about there?

A. I think at twelve hundred pounds, we could put in nine barrels a minute, five hundred and forty barrels per hour.

Q. That's better than the C-2, right?

A. Yeah, better rates, yes.

Q. Yeah. So that makes it an optimum well, so far as your -- that is a good place to dispose of the water?

A. Well, it will take pressure to dispose, and it is best to dispose under gravity, and that you don't have to pay anything for electricity.

Q. Well -- and your testimony was that the pressure, the twelve-hundred-pound pressure, the injection pressure would dissipate -- I don't recall what your radius from the well bore was, but in a very short distance, is that right?

A. Yes. It will probably dissipate as an exponential function.

Q. What do you base that on?

A. Knowledge and literature and also experience.

Q. Where does the A-22 Well lie with reference to San Andres production or any other kind of production?

A. Well, the SWD, A-22, is also down structure in the San Andres, and it is among other producing wells in various horizons.

Q. Well, is the concentration of wells from various horizons in the area of the A-22 the same as, more than, or less than the concentration of wells in the vicinity of, say, the C-2?

A. I think it is approximately the same. There may be more wells in the A-22 area.

Q. How about the H-35 area? Is it comparable,

the same, or less?

A. No. There's less producing wells in the immediate area.

Q. Does the same general condition with reference to the concerns expressed by the Commission prevail in the area of the A-22, as prevailed in the area of the H-35? That is, possibility of salt water contamination or salt sections, all of the things that we are talking about in the previous hearing.

A. I don't know. I think they probably consider a better disposal well, but they haven't issued an order on a previous hearing where we asked to increase the allowable pressure, injection pressure.

Q. You testified on direct in response to Mr. Jennings' question that in your opinion there was no danger of injury to correlative rights by the injection of water at the present volume into the C-2 well, right?

A. No. I don't believe that -- I think that is the case, that it won't injure any -- anybody.

Q. Uh-huh. So I take it, then, you don't agree with the conclusion and finding of the Commission in the previous case, in order 4495-C, to the effect that the evidence presented to date is sufficient to indicate that correlative

rights will be violated if any order or series of orders would be issued by the Commission which would grant or would have the effect of granting permanent authority for injection of water into said perforated interval in said SWD Well Number C-2?

A. No, sir. I -- I don't think that is wrong.

Q Okay.

MR. SPERLING: That's all I have.

MR. RAMEY: Mr. Abbott --

THE WITNESS: Yes, sir.

MR. RAMEY: -- supposing also around the C-2 Well there are inadequately plugged or inadequately submitted wells. Would you conclude that putting water in at zero pressure would be less of a hazard than putting in water at eighteen hundred pounds pressure?

THE WITNESS: Yes, sir. I think it would be less of a hazard.

MR. RAMEY: Thank you.

Any other questions of the witness? He may be excused.

(THEREUPON, the witness was excused.)

MR. RAMEY: Let's take about a five minute break.

(THEREUPON, Exxon Exhibits One through Seven were duly marked for identification.)

(THEREUPON, the proceedings stood in a brief recess.)

MR. RAMEY: The hearing will come to order. Mr. Sperling.

MR. SPERLING: Yes, sir.

W. L. JORDAN, JR.

was called as a witness, and having been first duly sworn, testified upon his oath as follows, to-wit:

DIRECT EXAMINATION

BY MR. SPERLING:

Q. Mr. Jordan, for the record, will you state your name, place of residence, your employer, and the capacity in which you are employed?

A. I'm W. L. Jordan, Jr., production geologist for Exxon Company, U.S.A., Andrews, Texas.

Q. Are you familiar with the subject matter of this hearing?

A. Yes.

Q. Have you on any previous occasion testified before the Commission so that your qualifications are a matter of record?

A. Yes.

Q. Okay.

MR. SPERLING: Are the witness' qualifications acceptable, Mr. Examiner?

MR. RAMEY: Yes. I am familiar with Mr. Jordan.

MR. SPERLING: Thank you.

Q. Would you please refer to what's been marked for identification as Exxon Exhibit Number One in this case, and identify it and explain what it portrays?

A. Exhibit Number One is a structure map on the stratigraphic top of the San Andres formation in the general vicinity of Exxon's New Mexico "S" state lease, the contour interval is ten feet and the scale is one inch equals two thousand feet. The "S" state lease is in Township 22 South, 37 East, and hereafter all locations will be referred to this township and range and we will refer to them by section and number. The "S" state lease is bounded in the yellow color. The red triangles are the San Andres completions. There were nine San Andres completions. There are presently seven producers. The pool covers approximately a thousand acres, and cumulative production is as of 4/1/76, is four hundred and sixty thousand barrels. Agua, Incorporated's salt water

disposal well C-2 is circled in red. The structure in this area is -- well, there is a structural high in the west portion of Section Two, and in the east portion of Section Three, another small high in the northwest portion of Section Eleven, and the northeast portion of Section Ten. There is a re-entrant in the southeast portion of Section Two, and the dip is in the northeast of the hundred and twenty miles -- a hundred and twenty feet per mile. There are two lines of cross section shown on the map, AA prime in red, which is Exhibit Two, and BB prime in green, which is Exhibit Number Three.

MR. SPERLING: I might say by way of explanation to the Commission that necessarily some of the testimony that we will present will be cumulative or repetitious, hopefully not too much so, but it is difficult to divide this into segments, and still make some sense. We have attempted to update the information that was presented at the previous hearing, which was case number 5562, with the hearing having been held on September 26th, 1975. The information which we are presenting is as I have indicated, an update in most instances of the previous information, and is presented in an effort to orient the entire Commission as distinguished from the Examiner with the present problem, insofar as Exxon's viewpoint is concerned.

Q. With that explanation, Mr. Jordan, would you refer now to what's been marked as Exhibit Two by Exxon in this matter, and explain what it is and what it shows?

A. Exhibit Number Two is a structural and stratigraphic cross section showing continuity in the San Andres formation between Agua, Incorporated, State C-2, and other wells in the Eunice South Andres Pool, vertical scale is two-and-a-half inches equals one hundred feet, and horizontal scale is, none. Is there a problem?

MR. NUTTER: AA prime?

THE WITNESS: Yes. That's number two, Dan.

The following wells have been used in this cross section from left to right, Warren Petroleum Corporation, Eunice Plant number 161, salt water disposal well number one, Section Three, Unit H, represented by gamma ray neutron load. The Exxon Company, U.S.A., New Mexico "S" State Number 26, Section 2, Unit L, represented by gamma ray sidewall neutron.

Third well from the left is Exxon Company, U.S.A., State "S" number four water source well. Section Two, Unit M, also represented by gamma ray sidewall neutron.

The next well is Agua, Incorporated, State C-2, salt water disposal well, Section 2, Unit C, represented by gamma ray sidewall neutron.

The next well is Anadarko Production Company, Lou Wortham Number 5, in Section 11, Unit C, gamma ray sidewall neutron.

Next is Anadarko Production Company Lou Wortham Number 6, also in Section 11, Unit E, gamma ray sidewall neutron.

The next well is Anadarko Production Company, Lou Wortham C Number 2, Section 11, Unit G, represented by gamma ray density log.

Following that is Anadarko Production Company, Lou Wortham C Number 1, Section 11, Unit B, gamma ray density log.

Last well on the cross section is Exxon Company, U.S.A., New Mexico "S" State Number 104, in Section 2, Unit O. This well is represented by a stick as no log of a proper scale is available. On Exxon's "S" State 104, the data has been scaled to fit the scale of the cross section, and incorporated on this stick, so it is compatible with the rest of the wells, as far as sub sea depths are concerned and as far as stratigraphy is concerned. I refer you to the horizontal lines on the cross section, the top line is a stratigraphic top of the San Andres formation.

Q. This is the interval colored in green?

A. No. Starting at the top.

Q. All right.

A. On the cross section, using the horizontal lines, the first line is a stratigraphic top of the San Andres formation, commonly referred to as the White Lime in the old days.

The next horizontal line is minus five hundred foot sub sea, and that is the depth of which cross section was hung, or constructed.

The next straight horizontal line is a minus eight sixty-four at the left end, is a structural sub sea top of Agua, Incorporated, perforations, and their State C Number 2. There are two parallel lines that are not straight. They have an arrow between them. This is the stratigraphic equivalent interval of Agua, Incorporated, perforations. Perforations on this cross section are shown in the well bore by the large black bars. I forgot to mention that the stratigraphic -- the equivalent interval of Agua's perforation is colored green. From this cross section we can see that Agua's perforations have been correlated stratigraphically, and their equivalent --

MR. JENNINGS: Put it up on the wall. You can see better.

THE WITNESS: Well, I think everybody has one. I can make it all right if you all can make it.

Agua is perforated in the same zone that Exxon Company, U.S.A. State "S" Number 4 water source well was perforated. It also is perforated in the zone that Anadarko Production Company, Lou Wortham Number 5 is producing from, it is also perforated in Anadarko's Lou Wortham C Number 2. The stratigraphic equivalent interval also covers the lower portion of Humble's perforation, and their State "S" 104. So from this cross section, it is clear that Agua has perforated in a stratigraphically equivalent zone of these producing wells.

That's all on that one.

Q. Okay. Would you now refer to what's been marked for identification as Exxon's Exhibit Three and explain the purpose of that exhibit?

A. Exhibit Number Three is a structural and stratigraphic cross section showing continuity, direct comparison between Agua's State C-2 injection well, and Humble's New Mexico "S" State Number 104. This cross section has a vertical scale of two inches equal one hundred feet, and no horizontal scale. Starting at the top, the first horizontal line is stratigraphic top of the San Andres.

The next horizontal line is a minus five-hundred-foot line on which this section was hung.

The next straight horizontal line is the eight --

minus eight sixty-four line, which is the top of Agua's perforations. Once again, the parallel lines which are not horizontal represent the stratigraphic equivalent interval of Agua, Incorporated's, perforations. They have been correlated directly to Humble's State "S" 104, and are shown at that same stratigraphic interval, and it shows that Agua is perforated in the lower part of the same section we have perforated and from which we are producing oil. As a result of this study, Exxon is of the opinion that ejecting salt water into the perforated zones in Agua's C Number 2 is causing waste and is violating Exxon's correlative rights. Exxon would expect that Agua would be ordered to cease injection until the well is returned to its former status.

Q. Now, by former status, do you mean that which existed at the time the authorization was to inject or dispose into the open hole interval?

A. Exactly.

Q. All right. And the open hole interval is below what has been indicated on Exhibit Three as the bottom of the seven-inch casing, is that right?

A. Yes, sir. That's seven -- forty-four hundred feet.

Q. Okay. What is the total depth of -- indicated at the top of the exhibit, 4950? That is T.D.

A. Yes. That's correct. The production data and completion data is shown at the bottom of the logs on both cross sections.

Q. You have worked in this area and with this particular formation for some time, Mr. Jordan?

A. Yes, I have.

Q. All right. And this has been a continuing effort on your part?

A. Yes, it has.

Q. Okay. What is your conclusion insofar as possible volumes of oil in the San Andres within the section which comprises Exxon's lease, that being Section 2, I believe?

A. Sir, we don't really have any way of knowing what those volumes are. We know that we are producing oil from all up and down the entire San Andres section here. There are probably more than one oil water contact. As a matter of fact, I expect that there's several within the interval.

Q. I see.

A. So far, there's been no oil water contact established.

Q. Okay. Do you have anything further to add at this time, Mr. Jordan?

A. No, sir.

MR. SPERLING: That's all I have of this witness at this time.

MR. RAMEY: Any questions of the witness, Mr. Jennings?

MR. JENNINGS: Yes.

CROSS EXAMINATION

BY MR. JENNINGS:

Q. Mr. Jordan, what is -- you carried me a little fast here so I'm -- I will have to get a little further explanation. You referred to your various wells. Which -- would you identify your producing wells on this -- on one of your exhibits, say, on Exhibit Three?

A. Let's go to Exhibit Number One. This was the structure map on top of the San Andres. It has the wiggly lines on it, sir.

The wiggly lines. Okay.

MR. SPERLING: Contours.

A. In the southwest corner of the southwest corner of Section 2, is Exxon's State -- is Exxon's water source well Number 4, which is a discovery well for this pool. That produced eighty-seven thousand barrels of oil, and in the

southwest of the southeast is Exxon's New Mexico "S" State 104, which is a producer. In the southeast of the southeast is Exxon's Number 44, which also was completion in the San Andres, is presently shut in.

Q. How much did the four -- Number 4 well -- we'll call it the four in the southwest southwest produce last month?

A. In the southwest of the southwest. Sir, that well is plugged. It was plugged -- there is a plugging symbol.

Q. Well, maybe I missed you. What -- you have two producing wells or three producing wells in Section 2?

A. No, sir. We have one producing well in Section 2. That is New Mexico "S" State Number 104.

Q. And when was the well in the southwest southwest of Section 2 plugged?

A. That is -- hold on just a second. Let me find it. Sir, that well was plugged 5/14/76.

Q. How much was it making a month immediately before it was plugged? How much did it make last year? It would be easier.

MR. SPERLING: We will have the monthly and cumulative production from another witness, Mr. Jennings, if that will be of any help to you.

MR. JENNINGS: Okay. All right.

THE WITNESS: Sir, I will answer your question, but it will take me a minute to look it up. It's on these plats that you are going to get -- that you have been furnished and that the engineering witness will talk to you about.

MR. JENNINGS: Okay. I didn't have time to read them.

MR. RAMEY: Would you rather wait and question --

MR. JENNINGS: Yeah, I will wait. I will wait.

MR. RAMEY: -- the other witness on him, Mr. Jennings?

MR. JENNINGS: Yeah.

Q. And the other witness will testify as to the production from the 104 well, too?

A. Yes.

Q. And do you know about the 44 well?

A. That well was shut in in August of 1974, and it remains shut in.

Q. Do you know of your own knowledge if the -- if you have any information -- or do you have any information indicating that the injection of water into the C-2 Well has increased or diminished the production in your only producing

well, the 104?

A. We really don't have any way of telling that at this time.

Q. Did your 104 well produce anything other than oil?

A. Yes. It also produced water. We are going into that. Would you like for me to go ahead now? I'm not going --

Q. I thought you were through.

A. Yes, I was.

Q. Well, someone else is going into it.

A. Yes.

MR. JENNINGS: I don't think I have anything further.

MR. RAMEY: Any other questions of the witness? Mr. Sperling?

REDIRECT EXAMINATION

BY MR. SPERLING:

Q. Mr. Jordan, would you look at Exhibit Number Three, and with particular reference to the plat that is shown on three, there are a number of wells indicated other than those that are shown by the red triangle. What do those represent? What kind of wells are those?

A. Most of those are Paddock Unit wells, and those are -- the Paddock Unit wells are ones that we plan to

re-complete from the Paddock into the San Andres at a later date.

Q. Do you consider those or a number of those as potential San Andres producers at some point in time?

A. Yes, sir. At the present time we have to consider every one of those wells as a potential San Andres producer.

Q. Do you have information upon which to base that assumption?

A. Well, the New Mexico "S" State 104 was formerly a Paddock well. It is now an oil well.

Q. I see. Well, do I understand, then, that as the Paddock is depleted, that you have plans for San Andres completions in the same well bore?

A. That's correct.

Q. Okay. And will Mr. Reavis inform us further with reference to that?

A. There is an engineering exhibit showing the Paddock locations that are future completion in the San Andres.

Q. Okay.

MR. SPERLING: That's all.

RECROSS EXAMINATION

BY MR. JENNINGS:

Q. In your testimony that you have just given, Mr. Jordan, did you mean to refer also to Well Numbers 28, 28, 30 and 31?

A. Yes, sir. That's correct.

Q. When were those wells drilled?

A. Sir, I can't answer that. I don't recall when those wells were drilled.

Q. Are you the geologist in charge of that area?

A. No, sir.

Q. Do you know if the San Andres formation was tested in those wells?

A. I don't know whether it was or not, but when they were drilling those wells they generally spudded and headed for the target and completed and put them onstream. They didn't generally test the other zones.

Q. Well, when were those wells drilled?

A. Once again, sir, I don't recall when they were drilled.

Q. Are some of them recent wells?

A. They are old wells.

Q. Some of them been deepened?

A. Not that I know of. These wells are in the Paddock Unit, which is operated by --

Q. The wells that are not in the Paddock Unit.

A. Yes. There are several pays in this area. There's Penrose Skelly, there's Blinebry, there's Drinkard, there's Granite Wash. This is a multi-pay area.

Q. Well, is there any way to distinguish which wells are -- the Granite Wash wells or Drinkard wells and the Paddock wells?

A. Not on this map. We used -- we have used the Paddock wells and San Andres wells on here to show what we are trying to explain.

Q. That is, that you ultimately are going to use these for the San Andres?

A. Yes. Yes. And we have used other wells for control on top of the San Andres.

Q. I have information that looks to me like that Number 31 well was spudded in June -- on June 7th, '76. Am I haywire on that?

A. Of '36?

Q. Seventy-six.

A. Yes, sir. You are. This is a Paddock Unit 31 Well. You're talking about the Exxon Company, U.S.A.

State "S" Number 31.

Q. Well, there are other wells that you haven't shown on there. Maybe that's what's confusing me.

A. Yes. That's true. I just explained.

Q. These are just the Paddock wells?

A. Paddock wells, San Andres wells and the wells that I have used for control to draw my map.

Q. Well, then --

A. This map is not complete insofar as having every well in this area on the map, if that's what you're trying to --

Q. Well, I see a well 31 and I'm wondering what --

A. Yes, sir. Let me explain one more time. That 31 is a Paddock Unit Number 31 Well.

Q. I see.

A. It's in the Paddock Unit which we operate. The well you referred to as being spudded recently is the Exxon Company, U.S.A., New Mexico "S" State Number 104, which is a proposed Drinkard Granite Wash completion. Now all you have to do is differentiate the two, say, Paddock Unit 31, and you're looking at this well right here, New Mexico "S" State 31 is in the northeast of the northeast.

Q. Okay. Clarified it a little bit. Now, do you know if in the wells that have been recently drilled, if the

San Andres has been tested?

A. No, sir. We haven't been testing, not on the "S" State lease.

Q. Well, it's -- we're all talking about Section 2, are we not?

A. Yes. That's the "S" State lease.

Q. Okay.

MR. JENNINGS: That's all.

MR. SPERLING: That's all I have.

MR. RAMEY: Mr. Stamets.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Jordan, do you have any indication either from the logs on the Agua well or from records of Exxon wells in the area or any other records that there is oil in this green striped interval on your Exhibits Two and Three in the C-2 disposal well or in the immediate vicinity of the C-2 disposal well?

A. Well, let me refer you to Exhibit Number Two once again, and I'd like for you to look and see that they are disposing into the same stratigraphic interval once more. We are clear on that?

Q. Right. I'm clear that it is the same interval, but what I want to know is, is there any oil there at the C-2 well?

A. Okay. What I'm about to say is that we have not found an oil water contact. The oil water contact has not been defined, and we don't know how far downdip we can go and still produce oil.

Q. I don't believe that answers my question. What I'm asking -- I don't want -- I'm not interested right now where the oil water contact is. Do you see any oil at the C-2 location in the San Andres in this green interval?

A. No, sir, but we don't have any way of seeing whether there is any oil there or not. We haven't tried to produce it. We haven't run proper logs in that area to try to define it. It's very expensive to do this, and what you ordinarily do is work your way from the oil patch downdip until you find the oil water contact, and that's the way we have tackled the job, so in answer to your question, no, sir, we don't see any oil down there, because we haven't tested down that way.

Q. Any of the Exxon wells drilled in that area, was there a geologist on the well site or was there a geologist to examine the samples for shows of oil in the San Andres,

in that zone?

A. This was in what is sometimes referred to as the olden days, and they did run samples and there's oil stain throughout a large part of the San Andres section, so it's not at all uncommon to find oil stains, great porosity, everything you need except sometimes there's water.

Q. But you can't tell us whether in fact in the zone of interest here, whether there were samples and whether they showed oil?

A. In the immediate vicinity of this well?

Q. Of the C-2.

A. No, I can't.

Q. Now, looking at Exhibit Number One, again, it would appear to me that structurally the C-2 well is lower than any producing well in the pool, is that correct?

A. By two feet -- oh, producing well. Okay. All right. Yes, it is.

Q. Okay. And the next highest well is your Number 44 well, which is shut in?

A. Yes.

Q. Will the next witness testify as to why that well is shut in?

A. Well, I can testify --

MR. SPERLING: Yeah.

THE WITNESS: We can have him testify to that, yes.

MR. SPERLING: Or you can, if you can, whatever.

MR. JENNINGS: If he knows, he can testify.

MR. STAMETS: Yeah, I'd like to know why, from either witness.

THE WITNESS: All right. Because it made water on the original San Andres completion and we have shut it in waiting -- pending further information in this area. We didn't want to plug it because we might be plugging an oil well. The water level -- when we tried to complete this well, the water was at two hundred and sixty feet, and we had a mark 320 on there and it couldn't move the water fast enough to let the oil come into the well bore. It made too much -- maintained too much of a head.

Q. Was this well completed in the zone of interest here today?

A. Yes. Yes.

Q. So at least in that well there's quite a bit of water?

A. Now wait just a minute. When you say the zone of interest, are you talking about Agua's perforated interval?

Q. Right. Agua's perforated interval.

A. No.

Q. Or the green interval on your exhibit.

A. No. It's perforated above that interval.

Q. Perforated above that interval?

A. Yes.

Q. So in that well, you're not sure what's in the zone of interest?

A. That's correct.

Q. Referring to Exhibit Number One again, in the southeast quarter of the northeast quarter of Section 3, I see a well mark as SWD, and I believe it also shows on your cross section Exhibit A.

A. Would you give that location again, please?

Q. Southeast of the northeast of Section 3.

A. Yes.

Q. Now is that an active salt water disposal well?

A. As far as I know.

Q. And that is disposing -- well, let's see, is that into the San Andres, the zone of interest here?

A. That's the left-hand well on Exhibit Number Two.

Q. Now, is the green zone, zone of interest open in that salt water disposal well?

A. Yes, it is. You will see a casing, see, at 4131 and it is open hole below that.

Q. Okay. Now, going back to Exhibit Number One again, it appears to me that the San Andres there is about a minus 442, I guess?

A. That's close.

Q. All right. And that well then is structurally higher than a couple of your producing wells, or at least one of the producing wells, and is structurally higher than the C-2 Well?

A. Yes.

MR. STAMETS: I have no further questions.

MR. RAMEY: Any other questions of the witness?

MR. JENNINGS: One thing.

MR. RAMEY: Mr. Jennings.

RECROSS EXAMINATION

BY MR. JENNINGS:

Q. Back to the wells that you have recently drilled, would you just refer to what is marked Exhibit Number One and tell me where those wells are located?

A. You'll have to give me a minute. I have got to

dig. Okay. Sir, we don't have that information with us. I could tell you where the one is that we are drilling presently.

Q. All right. Where is it?

A. It's in the northeast of the northeast of Section 2.

Q. Northeast -- okay. And that is about, oh, three-quarters of a mile east or maybe not that much, half mile east of the C-2 Well?

A. That's correct.

Q. And did you have geologists on that well when it was going down?

A. Not through the San Andres, no.

Q. Were you not interested in the San Andres in that well that is right up by your C-2 Well?

A. Yes. We are interested in what is in the San Andres, but economics require that we drill a salt water and the cuttings are very, very fine, and by the time you get the cuttings you could see very little stain or porosity. All you could tell is that it is a white line tan, gray dolomite, and this doesn't help us very much.

Q. Have you drilled a well located in Unit F on that location, on that section?

A. Sir, I don't recall. Are you talking about a recent well?

Q. Yes, sir, your --

A. It seems like --

Q. Your State Well Number 28 shows to be in Unit F, which is twenty-one hundred and sixty feet from the north and eighteen hundred feet from the west of Section 2.

A. That's right. I think that's correct.

Q. And that is almost between the C-2 Well and your other production to the south?

A. That's correct.

Q. But you -- again, you have not made any effort to check these wells as they were drilled, as for the San Andres potential?

A. What do you mean by checking?

Q. Well, I mean run samples or test the well as you go down.

A. Well, I explained to you what happened to our samples. We take drill time so we can tell about porosity, the samples are no good. It doesn't do any good to run them. It is a matter of economics. We can't put mud into the top of the hole and drill a reasonably cheap well.

Q. And notwithstanding the fact that you contemplate later developing these Paddock wells or trying to complete them, the San Andres wells, you didn't check the particular location

at this time?

A. That's correct. The well we are presently drilling won't -- we couldn't have checked it, anyhow. We have got loose circulation in the San Andres.

Q. That is in a well in Unit 8?

A. Yes.

Q. At what depth?

A. At about forty-four to forty-five hundred, and down in the upper part of the San Andres.

MR. JENNINGS: That's all.

MR. RAMEY: Any other questions of the witness? He may be excused.

MR. SPERLING: Excuse me. I have one question with reference to the exhibits and their identification.

REDIRECT EXAMINATION

BY MR. SPERLING:

Q. Were Exhibits One through Three prepared by you or under your supervision?

A. Yes, they were.

MR. SPERLING: I'd like to offer those three exhibits at this time as identified and testified to by this witness.

MR. RAMEY: Without objection, Exxon Exhibits One, Two and Three will be admitted.

(THEREUPON, Exxon Exhibits One, Two and Three were duly admitted into evidence.)

(THEREUPON, the witness was excused.)

HARLEY REAVIS

was called as a witness, and having been first duly sworn, testified upon his oath as follows, to-wit:

DIRECT EXAMINATION

BY MR. SPERLING:

Q. Would you please state your name, your place of residence, your employer, and the capacity in which you are employed?

A. I'm -- my name is Harley Reavis. I'm a conservation engineer for Exxon Company, U.S.A., Division of Exxon Corporation. I live in Midland, Texas, work in the division office for Exxon.

Q. Mr. Reavis, have you on any previous occasion testified before the Commission so that your qualifications are a matter of record?

A. Yes, sir, I have.

Q. You have testified concerning your qualifications as an engineer?

A. Yes, sir.

Q. Okay.

MR. SPERLING: Are the witness' qualifications acceptable?

MR. RAMEY: Yes, they are, Mr. Sperling.

MR. SPERLING: All right. Thank you.

Q. You are familiar with the Exxon lease which covers Section 2 in 37 East, 22 South?

A. Yes, sir, I am.

Q. You have been present on the occasions of the other hearings with reference to the subject matter of this hearing?

A. I have been to all of the hearings except the one held in September, 1976, and I helped the gentleman who presented that particular case, prepare the case.

Q. I see. So you are familiar with the area and the subject matter?

A. Yes, sir, I am.

Q. Would you please --

MR. RAMEY: Was that September of '75 or --

THE WITNESS: Seventy-five. Excuse me.

Q. Would you please refer to what's been marked for identification as Exhibit Four in this matter on behalf of

Exxon and explain that exhibit and the information which is shown on it?

A. Exhibit Number Four is a plat of the area which is similar to the plat that was shown as Exhibit One, that was presented by Mr. Jordan. This well showed -- this map shows red triangles for the wells that have been completed in the San Andres formation, and it shows also the April, 1976, production in barrels of oil per day as the top number to the right of the well, and is the lower number, is the barrels of water per day. This particular map shows that Exxon's New Mexico State "S" 4WSW well has been plugged and abandoned. Exxon's 104 well on the same lease is making thirteen barrels of oil and one hundred and five barrels of water, and the well shown at well 44 on the Exxon State "S" lease is shut in.

Two additional wells on there are the Anadarko Number 5 Lou Wortham, which produced fifty-four barrels of oil in April, nineteen barrels of water. Their number 1 well produced thirty-nine barrels of oil, and a hundred and fifty-six barrels of water.

The other four wells produced sixteen barrels of oil or less. This also shows the location of the C-2 Well operated by Agua, which is approximately three-quarters of a mile north of the nearest production.

Q. Okay. That nearest production being your 104 well?

A. Yes, sir.

Q. Okay. There are a number of other wells indicated as being located in Section 2, as well as other sections. What is the significance of those wells indicated on the map?

A. These other wells on the map was the base map which was used to draw up the contours and put down the basic well data for this particular hearing. There has been additional wells drilled in this area. I believe Mr. Jordan explained to you.

Q. Okay. The basic purpose of Exhibit Four, then, is simply to show current production?

A. Yes, sir, it is.

Q. Okay. Refer to what's been marked as Exhibit Five, and explain that exhibit and the information shown on it.

A. Exhibit Five is the same plat as the previous exhibit, showing the cumulative production by each producing well up through to July, 1976. This shows the -- Exxon's New Mexico State water supply Well Number 4, as having produced some eighty-seven thousand barrels of oil, Exxon's 104 New Mexico State "S" Well, produced some twenty-six thousand barrels

of oil, the Paddock Unit Well Number 44, which was taken over by Exxon and tested produced -- shows zero barrels of oil. There was a minute amount of oil came out when they tested it.

The other two better wells in the field is the Anadarko Well Number Five in the northwest of Section 11, which has produced some hundred and sixteen thousand barrels of oil, the Anadarko Number 1 Well in the northeast of Section 11 that produced some hundred and forty-two thousand barrels of oil. The Number 2 Well has produced some forty-six thousand barrels of oil.

There are three other wells that have produced fifteen, five-and-a-half, and twenty-two thousand barrels of oil. You will note from this that there's about four of the eight wells that have produced enough to pay out the wells, so we can see that there is economic oil here. However, the risk of completing the well is quite high.

Q. Do you have anything else to add concerning five?

A. I believe that's all.

Q. All right. Then please refer to six.

A. Exhibit Six is a similar plat to the others, except we have shown potential San Andres completions on the Exxon lease in Section 2. We have also added one other Citco lease in Section 35, the southeast quarter, and the reason

we have shown these wells is to show that there are some twelve -- fourteen wells on that lease that are still potential candidates for re-completion. We have also shown arrows through six of these wells. These six wells were the injection wells for the double five spot for the Paddock Unit where we injected water into these six wells to determine the flood-ability of the Paddock Unit.

Q. Where does the Paddock lie with reference -- vertical reference to the San Andres in this area?

A. The Paddock Unit is producing from the San Angelo, which is below the San Andres formation.

Q. How far below?

A. I don't know what the exact depth is.

Q. Okay. Okay. Do you have anything else to add with reference to Exhibit Six?

A. No, sir.

Q. Refer to Exhibit Seven, and I think these are in combination, seven --

A. Yes, sir.

Q. -- eight through what?

A. This is a graph for each well showing the oil and water production and barrels per month and the gas-oil ratio averages taken at periods of time. Now, the water

production under the primary exhibit, we have colored it blue, underneath it, and the oil production in barrels per month, we have shown it as green underneath it. All the copies won't have that particular coloring on it.

MR. JENNINGS: I haven't seen any of it.

THE WITNESS: I had to color them, Mr. Jennings, so we got short.

Q. Well, the particular well to which the graphs refer is identified in the lower right-hand corner of each of the sheets?

A. Yes, sir, it is.

Q. And these are the wells that have produced from the San Andres in this field, is that right?

A. Yes, sir. This includes each well that has produced in the San Andres field.

Q. Okay. Other than that, the exhibits appear to be self-explanatory, right?

A. Yes, sir. It shows that they are -- all the wells produce oil, in varying degrees, and I would like to run through the first three or four of them.

Q. Very good.

A. The Exxon New Mexico State 104 is the first one, and it shows the oil production as about a thousand barrels

a month for the first year, and it is now down to about five hundred barrels per month. The Exxon New Mexico State Number 4, the water source well, showed that the water production is something way above ten thousand barrels per month, and until the end of '72, production ceased in that well, and '74, at that time it was producing about five hundred barrels per month, and the water production at that time was something like twenty thousand barrels a day -- I mean a month. Excuse me.

The Anadarko Lou Wortham C-1, which is a -- one of the better wells in the field, we can see that the oil production from that particular well has been over a thousand barrels per month for the last five or six years. The Anadarko Lou Wortham Number 5, has likewise been over one thousand barrels per month for several years. The Anadarko Lou Wortham C-2 is also producing over a thousand barrels per month for the last several years.

Q. Does that complete your testimony insofar as these graph exhibits are concerned?

A. Yes, sir, it does.

Q. Okay. Would you refer now to what's been marked as Exhibit Eight and explain that exhibit? Don't we have that one marked?

A. No. We don't have that one marked. We didn't include that.

Q. Okay. Scratch that.

A. That exhibit has been presented before --

Q. Okay. In a previous hearing.

A. -- its potentials and showing the initial oil production and water production.

Q. That same information or at least a portion of it is shown on the section, too, I believe?

A. Yes, sir.

Q. Cross sections? Mr. Reavis, would you state your opinion as to the effect of the injection of water in the volumes that have previously been testified to into the C-2 Well of Agua upon the potential San Andres production from Section 2, as previously identified?

A. Yes, sir. We have looked at how much water has been injected into the well, C-2, and since the well has been perforated, and I made a rough calculation. I won't say it was rough. It is a legitimate calculation, and it is assuming the worse situation could exist in the C-2, in that most of the water is going into C-2's perforations. The disposal rate into that well prior to July, 1975, was some twenty-seven hundred barrels per day. Since that time they have been

injecting roughly ninety-three hundred barrels per day into that well, which, if we assume that all of that water went into the C-2 perforations, which is according to the testimony that's been given here, I think we could assume that that situation could exist, that would be some sixty-five hundred and seventy-four barrels per day, that it's been going on some nine months, which would be some one million eight hundred thousand barrels of water. Assuming that ninety feet had twenty percent porosity, this would cover some twelve acres, nearly thirteen acres, actually. And the radial that that well -- the water that's been injected into the perforations would be up some four hundred and twenty-three feet out some, so we can't expect much water effect to reach the wells, three-fourths of a mile away with this amount of water that's been injected to date. However, the effect of every barrel going into that well is moving something off the lease, and we feel that it is moving, along with the water that is moving off, it is moving some oil off.

Q. Well, is that in a nutshell a summary of Exxon's position in opposition to the continued injection into the perforated interval in the C-2 Well?

A. Yes, sir. We do not want the oil to be moved off of this particular lease while we feel there is a potential

oil production that can be had from this particular lease. This is like a person coming on your lease, start injecting into your oil zone, and you would not allow it, and I don't think anyone would want that to happen to them.

Q. Okay. Well, then, the conclusion to be drawn from that, is that you feel, it is your opinion that Exxon's correlative rights are being violated?

A. Yes, sir, I do.

Q. Okay. Do you have anything further at this time?

A. No, sir. I believe not.

Q. All right.

MR. SPERLING: That's all I have at this time, Mr. Ramey.

MR. RAMEY: Any questions of the witness? Mr. Jennings.

MR. JENNINGS: I have a few.

CROSS EXAMINATION

BY MR. JENNINGS:

Q. Mr. Reavis, you said that oil was being moved off of the Exxon lease. In which direction?

A. We have to assume until we have something else to prove it, that the water being injected into a radial area,

there's withdrawals from this reservoir to the north, and I understand from Gulf and also to the south from the Exxon well, and the Anadarko wells, and the Gulf well. Therefore, I assume it's going both directions, if you take the withdrawals in those directions. Personally, I think it is probably going in all directions, in this particular lease, with the permeability and porosity that we have in this lease, that this particular injection would be in a radial manner.

Q. Did you have any indication of increased production in your two -- or your two wells that you shut in, and the other well that you are still producing in Section 2 from the injection of this --

A. No, sir, and I don't think any reservoir engineer can indicate that you would get a response in that distance of nearly three-quarters of a mile or roughly three-quarters of a mile, within several years, actually.

Q. And I believe that one of your assistants at the last time stated that -- at one hearing, that you had some plans to develop the San Andres production on this particular lease. Is that true?

A. Yes, sir. They still have those plans.

Q. What have you done since the last nine months concerning this?

A. We have been -- our district is working on this particular problem, and they have got to prepare their study and go to the other operators and request their permission to cease this plan, cease injection, and if this is what they come up with, if they come up that they want to try something else, we might do that, so we don't know exactly when we are going to be able to do anything at this particular point, because we have got a lot of other people involved besides Exxon Company.

Q. I see. Now what -- just what does the Paddock Unit embrace, just the Paddock formation?

A. Yes, sir. That's right.

Q. And then the only rights that the -- or, strike that.

What is the status of this Paddock Unit?

A. Well, the status -- the Paddock Unit is right now still injecting into the injection wells the water produced from the Paddock Unit.

Q. Roughly how much is that?

A. I -- it's a fifty or sixty barrels per injection well, as a rough number.

Q. Does the Paddock Unit embrace more than just Section 2?

A. Yes, sir, quite a bit more. It's about four or five more sections included in that Paddock Unit.

Q. Is the Paddock Unit a success?

A. Right now I'd say from what I understand, no, but I won't say that positive, because we have unsuccessful floods sometimes that we decide to do something else in, but I think basically that flood is a failure, from what I understand.

Q. Now, Mr. Jordan couldn't, possibly you could. Do you know generally where the other new wells are located in this section?

A. No, sir, I don't, Mr. Jennings. I was aware that they are drilling these new wells because I do get involved slightly with the permitting of them, and stuff like that, and as a result, I did discuss this with the people that are actually drilling the wells, and are also the district management, but the people drilling the wells have told me that there was no way for them to test, because of the lost return problem that they have in these new wells, because I thought the same thought that you had, why don't we look and see where we might have some oil? Why are we drilling through it? And that was the answer I got, that you can't test those when there are lost returns in there. In the first place,

you're going to get stuck and it's going to cost you a lot of money when you do.

Q. Well, if you have a section there that you think is quite capable of producing oil in great quantities -- or good quantities, and you mean in all the wells you drilled in there, that you don't look to see what is in that potential in producing formation?

A. I would say we would if we could, but we can't, within reason. Now we'd like to. Now like I --

Q. Well, you state that your people are making studies. What kind of studies are they making?

A. Well, they are studying action of wells, all the producing wells, what they have done, cross section -- draw cross section up and all that kind of stuff. I'm not involved in that particular study, Mr. Jennings.

Q. I can't understand what studies they are making in connection with the San Andres formation. That's what I thought you were talking about.

A. I was talking about the Paddock.

Q. Oh. Well, then, I understood that you were looking to -- trying to complete these wells in the San Andres formation, but you're not making any studies based upon this --

A. Not till we get the wells available to us, no, sir.

Now let me say one thing about developing the San Andres. I think you see from the cumulative production, from some of these wells and the current production, that this is not a real bonanza, that you're going to -- there's a fifty percent risk factor thrown in right now, of being uneconomical wells, just based on the wells that have been completed in it, and those are wells drilled and completed to it, some of them -- several of them are, so it's not one of the best places to drill for. However, we have fourteen wells on that lease, which we -- the only thing we could not test as we come up is the San Andres production. Now the San Andres has produced quite a bit of oil. If you add the cumulative for all of these wells that I have shown on my map, there's some four hundred and sixty thousand barrels been produced from that particular reservoir.

Q. Yes, but referring to those wells in particular, I think that C -- Anadarko's C-1 and the Number 5 wells, and aren't those wells substantially higher than the wells that -- the Humble wells and the other wells we're talking about, and higher on the structure than generally of Section 2?

A. Yes, sir, they are.

Q. And they are the only wells that seem to have paid out?

A. Well, that's right. We also got some that's higher than that. That's not very good, Mr. Jennings. You take the Gulf Eaves well is quite a bit higher, and it's not much of a well, but I don't think the height or the structural position of a well really determines where the best wells are going to be.

Q. Do you have any idea how much your -- how much oil that Exxon is producing from the zone in which the 4230 to 4320 zone that Agua is perforating?

A. I don't think anyone has an idea of that, Mr. Jennings. I think we know that it has come out of those particular perforations, as shown on Exhibit Two, and that is as much as I think anybody can legitimately say where that oil is coming from.

Q. Well, it was referring to your Exhibit Two. Tell me just how many different -- what interval you have perforated.

A. In Exhibit Two?

Q. Yeah.

A. I haven't got that exhibit here, but we'll look at it.

Q. Of your presently producing well.

A. Now you're talking about the Exxon's 104 Well?

Q. Well, that's the only one that's producing, isn't it?

A. Yes, sir.

Q. Okay. That's it.

A. I think it shows up very graphically on that. I don't have exact perforations here on hand. We maybe can dig them out here for you, Mr. Jennings.

Q. Just give us a rough figure.

A. Well, it's from about thirty-eight ninety-five feet down to below forty-two hundred feet.

Q. Well, that's almost five hundred feet.

A. About four hundred feet, five, something like that.

Q. And how much of the interval -- does that show how much of that interval is in the target zone or whatever Mr. Stamets called it, or zone of interest?

A. I believe it shows graphically very well on this particular graph.

Q. Well, if you would refer to it and answer my question, that will help me.

A. That's roughly eighteen feet, I believe.

Q. Eighteen feet out of five hundred.

Mr. Reavis, do you know when the last San Andres

well was drilled in this area?

A. No, sir, I don't.

Q. Maybe Mr. Jordan testified and maybe he didn't, but do you know when and why the Number 4 Well was plugged?

A. I understand that well was -- Number 4?

Q. Yes, sir. That's the well.

A. That had mechanical trouble -- that's the source well?

Q. Yes, sir.

A. That well was plugged because it had mechanical problems with the plumbing going down to the formation.

Q. Was that of your three -- well, your -- you only had two wells. Was that the better -- that's the well that produced most of the oil, is it not?

A. Yes, sir. It produced most of the oil in our lease. It produced some eighty-seven thousand barrels of oil.

Q. Do you have any present plans to try to reactive or re-complete the 44 Well -- that's the well in the southeast southeast of Section 2?

A. No, sir, not today. I don't know of any.

Q. Is that well completed to the Paddock or solely to the San Andres?

A. It's completed in the San Andres right now,

and it is shut in for later, look, see it to see what we're going to do with it.

Q. What zone is perforated in it, do you recall?

MR. NUTTER: It's not on the cross section. You're talking about the 44?

MR. JENNINGS: Yeah.

MR. NUTTER: It's not on the 44.

MR. SPERLING: It's not on that.

MR. JENNINGS: Well, that's all right. I don't think it's that material.

THE WITNESS: There was an exhibit prepared in that previous hearing, if I could find it, that has that, but I don't know if I have that here or not, Mr. Jennings.

MR. JENNINGS: Well, if it is, it is a part of the record.

MR. SPERLING: Which is now voluminous.

Q. Mr. Reavis, what are you doing with the water you are getting out of the 104?

A. I don't know what we're doing with it right now. As I see, it has nothing to do with this particular problem, as far as I was concerned, so I didn't check, Mr. Jennings.

Q. Sir?

A. I didn't check what we were doing with that

particular water.

Q. I see. How is the -- how is the ratio of oil to water compared -- how does it compare now as to what it did a year ago or two years ago?

A. I haven't compared it, Mr. Jennings. We could take these individual wells and look at the graphs and see what the water production is for individual wells, but I haven't compared it on a total basis versus oil.

MR. JENNINGS: I believe that's all we have. That's all I have.

MR. RAMEY: Mr. Stamets.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Reavis, you and the previous witness have discussed some of the problems that you would have in getting samples from the San Andres or testing the San Andres on the way down. What about logging this zone? Can you log it to determine what is in there?

A. I don't know, Mr. Stamets. New logs, I'm not familiar with what all we have got right today.

Q. I'm just curious if there's no way of determining what's in there, how in the world are you ever going to figure

out how to complete where in order to produce what might be in there, if it is?

A. I understand there are some logs. I have heard discussion that there are logs, but I don't know what kind they are, Mr. Stamets, or whatnot, but you can run through casing and tell where you may have an oil saturation or not. How good that is, I don't know. I'm not trying to be an expert on it or dodge your question, but that's all I know about that.

Q. But if I understand what the previous witness has said and what you have said, that Exxon has made no special effort since these cases have started to make such determination in any wells in the vicinity of the C-2?

A. I don't know what they have done on running logs to see what they have got on that particular point, no, sir. I don't know what the logs would even show.

MR. STAMETS: No questions.

MR. RAMEY: Any further questions of the witness?

MR. JENNINGS: I don't believe so.

MR. RAMEY: He may be excused -- or --

MR. JENNINGS: Excuse me.

MR. SPERLING: I just want to ask Mr. Reavis if Exhibits Four through Eight, I believe it was -- Seven,

and the various numbers attributable to Seven were prepared by you or under your direction?

A. Yes, sir. That's right.

MR. SPERLING: I'd like to offer those remaining exhibits as identified.

MR. RAMEY: Exxon Exhibits Four through Seven will be admitted without objection. Without objection, they will be admitted.

(THEREUPON, Exxon Exhibits Four through Seven were duly admitted into evidence.)

MR. RAMEY: Any further questions of the witness? He may be excused.

(THEREUPON, the witness was excused.)

MR. RAMEY: Mr. Jennings, do you have any more to add to this case?

MR. JENNINGS: I don't have any further rebuttal or further testimony.

MR. RAMEY: Do you have a statement you'd like to make?

MR. JENNINGS: I would just like to make a statement, since we have got the overall situation before the Commission, and point out that we are well aware of the problem, and we have done what we feel is our level best to

help solve the problem. We drilled another well and we have built six miles of pipeline. We have drilled another well, hopefully that we would be able to put the water in on gravity, and we have been back in this particular case on several occasions seeking more time, and I know this has taken a lot of the Commission's time, but we have shut in the H-35, and built the line up there, started putting the water in the C-2, and then we drilled the other well, and we have had a lot of delay, and if we could have some indication as to what we can expect, maybe we can do it, but we are faced with a -- quite a serious situation at this time, with looking at August 7th, and I hardly see how we can get all our work done on the C-2 -- or on the 22, assuming that we do get some favorable reaction -- action, and get it before August 7th, if we don't, it looks like we are between a rock and a hard place, unless we are allowed to continue to inject into this well, and as far as this particular well, I'm sure that Exxon is in good faith, but they have come here and they tell us, what -- how all the oil is going to be pushed off of the lease, but here they have drilled these wells, and they are going to do all these things and they haven't, as far as I can tell, done anything, and they are drilling these wells right down through the same formation, without making any effort to determine

what is there, and that doesn't seem like good sense to me. I'm not an oil man or a geologist or an engineer, but just good, old horse sense, it doesn't seem to me like that they are really sincere when they -- they are up here fighting us all the time, they are drilling wells there and not making any effort to see what's there. Maybe it's not feasible, but I don't think there is anything that is not feasible in the oil business. These people are knowledgeable and they can test these things and find out, and I don't know why they haven't, but I don't think we should be penalized when they haven't showed that they have done everything possible, and as far as they have showed us, one zone is eighteen foot out of five hundred, that they might be possibly being hurt in, and they -- nobody can testify that that's being hurt -- they're being hurt there, and that the wells are all -- not of the nature so that the water would go there, anyhow, and the only good wells in the pool are structurally much higher than these wells, so I think that they are certainly making a mountain out of a molehill, and we will be -- we are not going to seriously, or to any extent, impair their correlative rights by continuing to inject into that interval, and if at a later time it shows that there is some movement, why, then, I think we should then at that time look at plugging this

particular interval.

MR. RAMEY: Mr. Sperling, do you have a statement?

MR. SPERLING: Yes, sir. I have already called the Commission's attention to the fact that a finding has previously been made in order 4495-C, relating to the effect of the injection into the C-2 Well from the standpoint of violation or injury to correlative rights. The finding is that the evidence supports that conclusion. There's been nothing presented since the hearing that produced that order to show anything to the contrary.

Now, I guess what Mr. Jennings is saying is that you are supposed to make a judgment as to whose correlative rights, or the extent to which somebody's correlative rights are damaged. In other words, do you make a judgment if you are getting hurt a little bit, it's okay, if you are getting hurt a lot, it isn't okay? That's not the mandate of the statute to this Commission. It is to protect correlative rights, without regard to the extent to which the correlative right may be damaged. I don't believe it permits a judgment by way of degree.

Now with reference to good faith efforts, I can only reach the conclusion that Agua has felt rather

secure, in fact, that this Commission, and justifiably so is going to be pretty reluctant to cause that salt water disposal system to be shut down in view of the four hundred and sixty wells that are involved. That is a terrible thing to contemplate. There's no question about it, but at the same time, everybody, including this Commission, has a right to expect of Agua every effort in their power, as Mr. Jennings has said, you had a right to expect insofar as Exxon is concerned, to remedy the situation that they find themselves in.

Now they say that they have gone to another well, they drilled another well, and, really, they could do very well, except that the Commission is a stumbling block and won't let them inject into the well after they have drilled it under pressure. Feeling secure again in the fact that if you are not going to let them inject into the new well, you are going to let them continue to inject into the C-2 Well. It is a difficult position for the Commission to be in. There's no question about it. But there has got to be a solution insofar as Agua's continued coming back with the same old story every three months, and that is our basic complaint. We ask that the Commission reiterate its previous findings, and issue an order which prevents the permanent injection

into the C-2 Well.

MR. RAMEY: Mr. Nutter.

MR. NUTTER: Mr. Ramey, I would like to clarify one point in here, if one of these gentlemen could answer the question. I don't think it's ever been brought up, but what is Agua doing on this Humble State "S" lease in the first place? Is this by some agreement between Agua and Humble, or what? Can anybody answer that?

MR. JENNINGS: We were given permission, I know, by this Commission.

MR. NUTTER: Well, do you have an agreement with Exxon to be on the lease and be injecting? Is there any limitation under the contract of the formation that can be injected into --

MR. JENNINGS: I don't -- I'm sure we don't have a lease from Humble, but we have got an arrangement with the surface owner.

MR. NUTTER: I see. But there is no arrangement with Exxon, itself?

MR. JENNINGS: To my knowledge. Now this is before my time.

MR. ARNOLD: I'm glad you asked that question. It's been bothering me, too.

MR. ABBOTT: Well, I can answer it. One, it is a state lease, we went to the operators, and asked Exxon if it was all right to drill a well on the lease, and they said, yes. At that time we asked that we be given the right to dispose in the whole interval in the San Andres, and they said at that time, no, we'd have to dispose below that forty-four hundred feet, so then when we had to shut in H-35, we came back and got permission to inject in those perforations in that well, but they actually gave us -- Exxon gave us permission to drill the well at that place.

MR. NUTTER: But there was a limitation on the depth for this injection?

MR. ABBOTT: Yes.

MR. JENNINGS: I think it states -- don't they have a business lease on that or something?

MR. ABBOTT: Yes.

MR. SPERLING: It is my recollection that Exxon has never objected to the injection into the open hole interval, that the objection has come with the suggestion of the perforation at a lesser depth, an injection into that, and I think that's been consistently the position.

MR. RAMEY: Does anyone have anything further to add to this case?

If not, the Commission will take the case under advisement, and the hearing is adjourned.

(THEREUPON, the proceedings were adjourned.)

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REPORTER'S CERTIFICATE

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I further certify that I am not employed by any of the parties to this action or attorneys appearing herein, and that I have no financial interest in the outcome of this case.

WITNESS my hand this 28th day of July, 1976, at my offices in Albuquerque, New Mexico.

Linda Malone
Court Reporter

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I N D E X

		Page
1.	Appearances	2
2.	The Witness - MR. ABBOTT	
	Direct Examination by Mr. Jennings	5
	Cross Examination by Mr. Sperling	16
	Witness Excused	24
3.	The Witness - W. L. JORDAN, JR.	
	Direct Examination by Mr. Sperling	25
	Cross Examination by Mr. Jennings	34
	Redirect Examination by Mr. Sperling	37
	Recross Examination by Mr. Jennings	39
	Cross Examination by Mr. Stamets	42
	Recross Examination by Mr. Jennings	47
	Redirect Examination by Mr. Sperling	50
	Witness Excused	51
4.	The Witness - HARLEY REAVIS	
	Direct Examination by Mr. Sperling	51
	Cross Examination by Mr. Jennings	61
	Cross Examination by Mr. Stamets	71
	Witness Excused	73
5.	Reporter's Certificate	81

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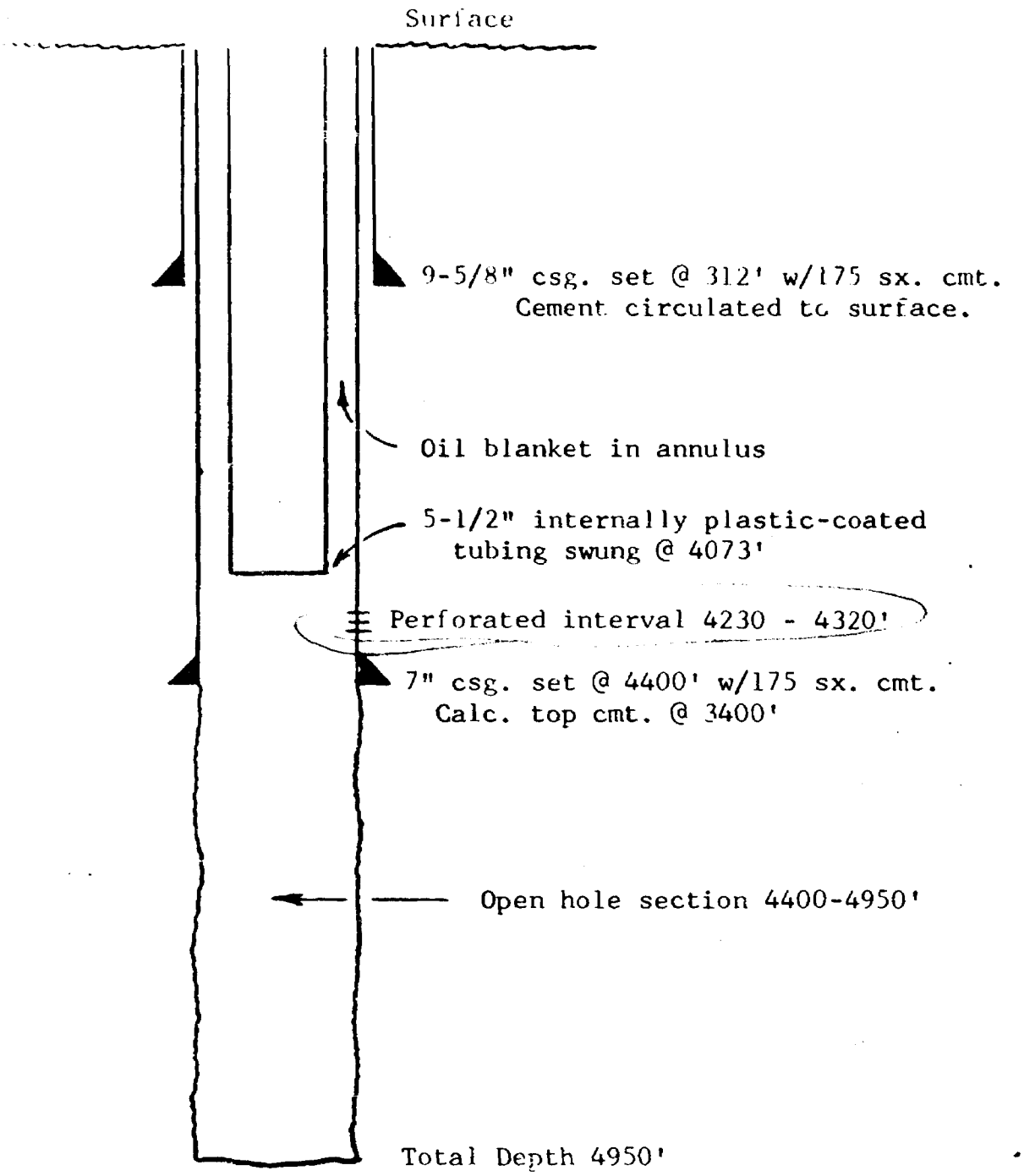
E X H I B I T S

Agua Exhibits:	Marked	Admitted
1. diagrammatic sketch of the C-2 well	5	14
2. initial well completion report	5	14
3. form C-103	5	14
4. water disposal record	5	14
5. listing of accumulation water through June 3, 1976, in Blinebry-Drinkard disposal system	5	14
6. graph of water disposal	5	14

Exxon Exhibits:	Marked	Admitted
1. San Andres structure map of Exxon's New Mexico "S" state lease	25	51
2. AA prime cross section	25	51
3. BB prime cross section	25	51
4. plat showing completed wells and current production	25	73
5. plat showing cumulative production plat with potential San Andres completions shown	25	73
6. plat with potential San Andres completions shown	25	73
7. graph showing oil and water production	25	73



DIAGRAMMATIC SKETCH

SALT WATER DISPOSAL WELL No. C-2

NE/4 NW/4 Section 2, T22S, R37E, Lea County, New Mexi.

BLINEBRY-DRINKARD SALT WATER DISPOSAL SYSTEM

DWN.	1/73	JVR	AGUA, INC.	SCALE None
	9/75	JVR	HOBBS, NEW MEXICO	DWG. NO. A-174

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
AGUA EXHIBIT No. 1
CASE 5714

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Form C-105
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease: State [X] Fee [ ]

5. State Oil & Gas Lease No.

1a. TYPE OF WELL: OIL WELL [ ] GAS WELL [ ] DRY [ ] OTHER Salt Water Disposal

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEPEN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] OTHER

7. Unit Agreement Name: Blinebry-Drinkard SWD System

8. Farm or Lease Name: Blinebry-Drinkard SW

2. Name of Operator: AGUA, INC.

9. Well No.: C-2

3. Address of Operator: P.O. Box 1978 Hobbs, New Mexico

10. Field and Pool, or Wildcat: Blinebry-Drinkard Ar

4. Location of Well: UNIT LETTER C LOCATED 660 FEET FROM THE North LINE AND 2305 FEET FROM THE West LINE OF SEC. 2 TWP. 22S RGE. 37E NMPM

12. County: Lea

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Cashinghead
4/6/73	4/22/73	4/28/73	3366 KB	

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools	Cable Tools
4950			→	0 - 4950'	

24. Producing Interval(s), of this completion — Top, Bottom, Name

Disposal interval: Open hole 4400 - 4950'

25. Was Directional Survey Made: Yes

26. Type Electric and Other Logs Run

Gamma ray - Neutron open hole 4950 - 3400'

27. Was Well Cored: No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8"	32	312'	12-1/4"	175 sx Class H w/2% CaCl	None
7"	20	4400'	8-3/4"	175 sx Class H w/2% CaCl	None

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN
None				

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
5-1/2"	4395'	None

31. Perforation Record (Interval, size and number)

None

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
AGUA EXHIBIT No. 2
CASE 5714

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
4400 - 4950'	5000 gals. 15% FE acid

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping — Size and type pump)	Well Status (Prod. or Shut-in)
N/A		

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Gas—Oil Ratio

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Oil Gravity — API (Corr.)

34. Disposition of Gas (Sold, used for fuel, vented, etc.)

Test Witnessed By

35. List of Attachments

Sidewall Neutron Porosity Log

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED W. B. Abbott TITLE Manager DATE 5/9/73

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico				Northwestern New Mexico			
T. Anhy		T. Canyon		T. Ojo Alamo		T. Penn. "B"	
T. Salt		T. Strawn		T. Kirtland-Fruitland		T. Penn. "C"	
B. Salt		T. Atoka		T. Pictured Cliffs		T. Penn. "D"	
T. Yates		T. Miss		T. Cliff House		T. Leadville	
T. 7 Rivers		T. Devonian		T. Menefee		T. Madison	
T. Queen		T. Silurian		T. Point Lookout		T. Elbert	
T. Grayburg		T. Montoya		T. Mancos		T. McCracken	
T. San Andres	3832	T. Simpson		T. Gallup		T. Ignacio Qtzte	
T. Glorieta		T. McKee		Base Greenhorn		T. Granite	
T. Paddock		T. Ellenburger		T. Dakota		T.	
T. Blinebry		T. Gr. Wash		T. Morrison		T.	
T. Tubb		T. Granite		T. Todilto		T.	
T. Drinkard		T. Delaware Sand		T. Entrada		T.	
T. Abo		T. Bone Springs		T. Wingate		T.	
T. Wolfcamp		T.		T. Chinle		T.	
T. Penn.		T.		T. Permian		T.	
T. Cisco (Bough C)		T.		T. Penn. "A"		T.	

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
3136	3440	304	Lime				
3440	3606	166	Anhydrite				
3606	3730	124	Sand and Anhydrite				
3730	3845	115	Lime				
3845	4950	1105	Dolomite and Lime				

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LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease: State ☐ Fee ☐

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" FOR SUCH PROPOSALS.)

1. OIL WELL ☐ GAS WELL ☐ OTHER- **Salt Water Disposal**

7. Unit Agreement Name: **Blinebry-Drinkard SWD System**

2. Name of Operator: **GUF, INC.**

8. Farm or Lease Name: **Blinebry-Drinkard SWD**

3. Address of Operator: **P. O. Box 1978 Hobbs, New Mexico 88240**

9. Well No.: **C-2**

4. Location of Well: UNIT LETTER **C**, **660** FEET FROM THE **North** LINE AND **2305** FEET FROM THE **West** LINE, SECTION **2** TOWNSHIP **22S** RANGE **37E** NMPM.

10. Field and Pool, or Wildcat

15. Elevation (*Show whether DF, RT, GR, etc.*): **3366 KB**

12. County: **Lea**

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:			SUBSEQUENT REPORT OF:		
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐		REMEDIAL WORK ☒	ALTERING CASING ☐	
TEMPORARILY ABANDON ☐			COMMENCE DRILLING OPNS. ☐	PLUG AND ABANDONMENT ☐	
PULL OR ALTER CASING ☐	CHANGE PLANS ☐		CASING TEST AND CEMENT JOB ☐		
OTHER ☐			OTHER ☐		

17. Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

1. Pull and lay down 322' 5-1/2" internally plastic-coated tubing.
2. Ran PDC log and perforate 7" casing w/2 jet SPF in the interval 4320 - 4230'.
3. Treat perforated interval 4320 - 4230' and OH section 4950 - 4400' with 5,000 gallons 15% HCl acid.
4. Returned well to gravity disposal.

Above work done Sept. 3 & 17, 1975.

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
NGA EXHIBIT NO. 3
CASE 5714

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

SIGNED **N. G. Abbott** TITLE **Manager** DATE **2/10/76**

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

BLINEBRY-DRINKARD SWD WELL NO. C-2

MONTH		WATER DISPOSED BBLS.	BWPD
1975	Jan.	81,009	2,613
	Feb.	70,946	2,534
	Mar.	83,429	2,691
	Apr.	78,867	2,629
	May	90,392	2,916
	June	83,313	2,777
	July	84,809	2,736
	Aug.	76,012	2,452
	Sept.	155,266	5,176
	Oct.	278,335	8,979
	Nov.	257,832	8,594
	Dec.	266,849	8,608
1976	Jan.	266,910	8,610
	Feb.	226,490	7,810
	Mar.	288,578	9,309
	Apr.	300,006	10,000
	May	303,061	9,776
	June	282,055	9,402

BLINEBRY-DRINKARD SALT WATER DISPOSAL SYSTEM

Disposal Well No.	Cumulative 6/30/76 Bbls. Water Disposed
A-22	22,750
C-2	4,808,253
H-35	13,446,411
SYSTEM TOTAL	18,277,414

BLINEBRY-DRINKARD SALT WATER DISPOSAL SYSTEM

WATER DISPOSED - B/D

10,000
9,000
8,000
7,000
6,000
5,000

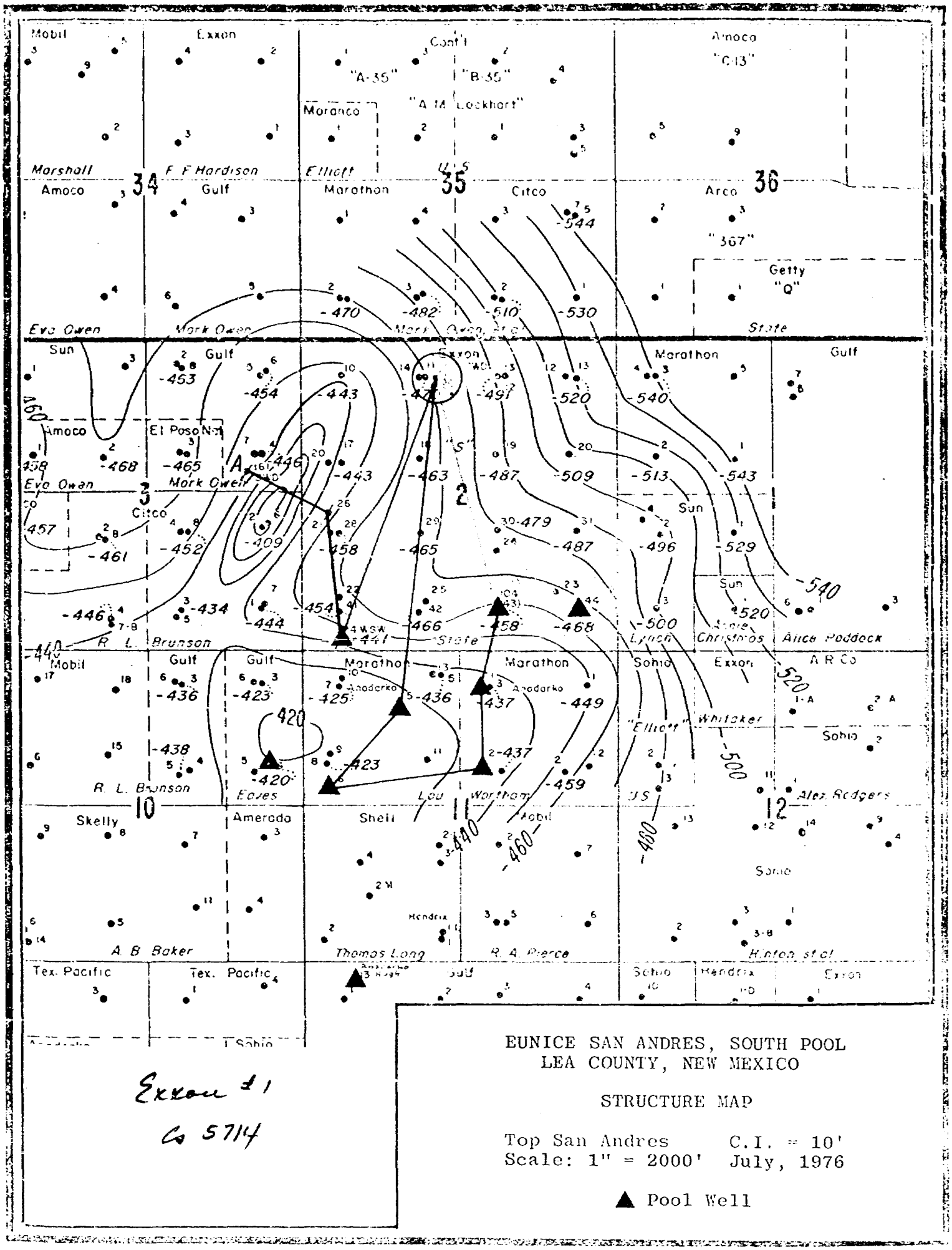
Water Disposed

Wells Connected

500
400
300

No. WELLS CONNECTED

1972 | 1973 | 1974 | 1975 | 1976



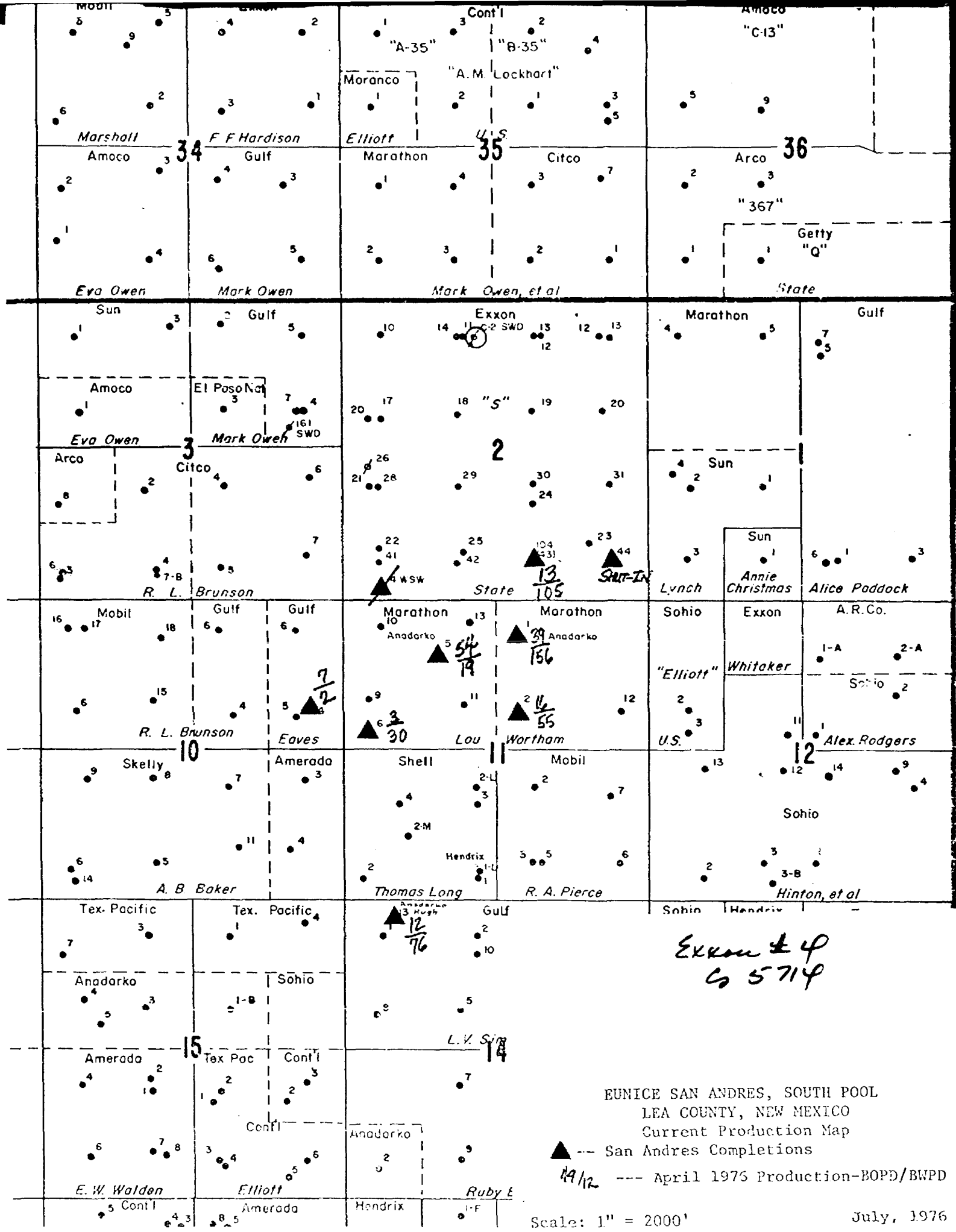
Exxon #1
Gs 5714

EUNICE SAN ANDRES, SOUTH POOL
LEA COUNTY, NEW MEXICO

STRUCTURE MAP

Top San Andres C.I. = 10'
Scale: 1" = 2000' July, 1976

▲ Pool Well



Exxon et al
G 5714

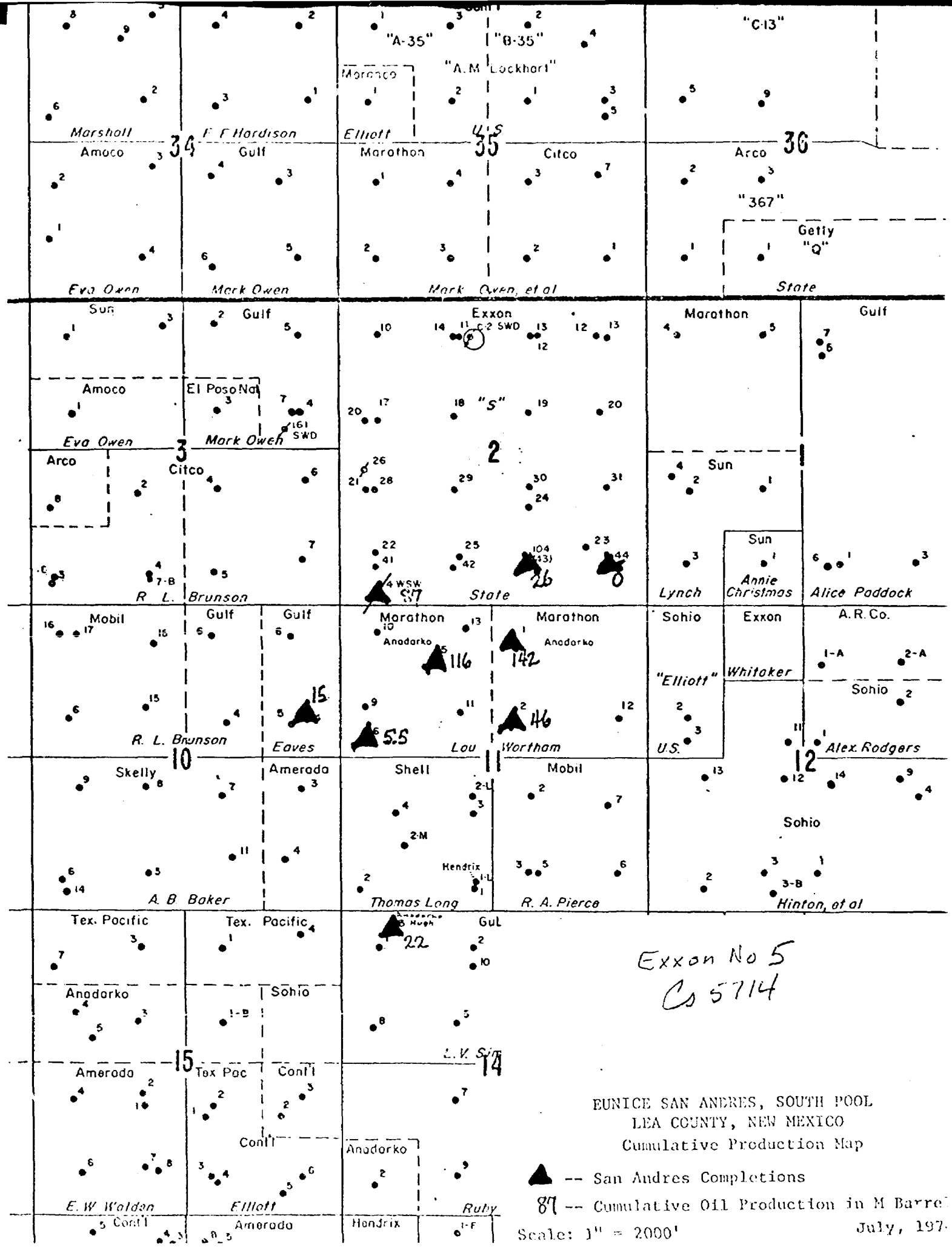
EUNICE SAN ANDRES, SOUTH POOL
LEA COUNTY, NEW MEXICO
Current Production Map

▲ -- San Andres Completions

49/12 --- April 1975 Production-BOPD/BWPD

Scale: 1" = 2000'

July, 1976

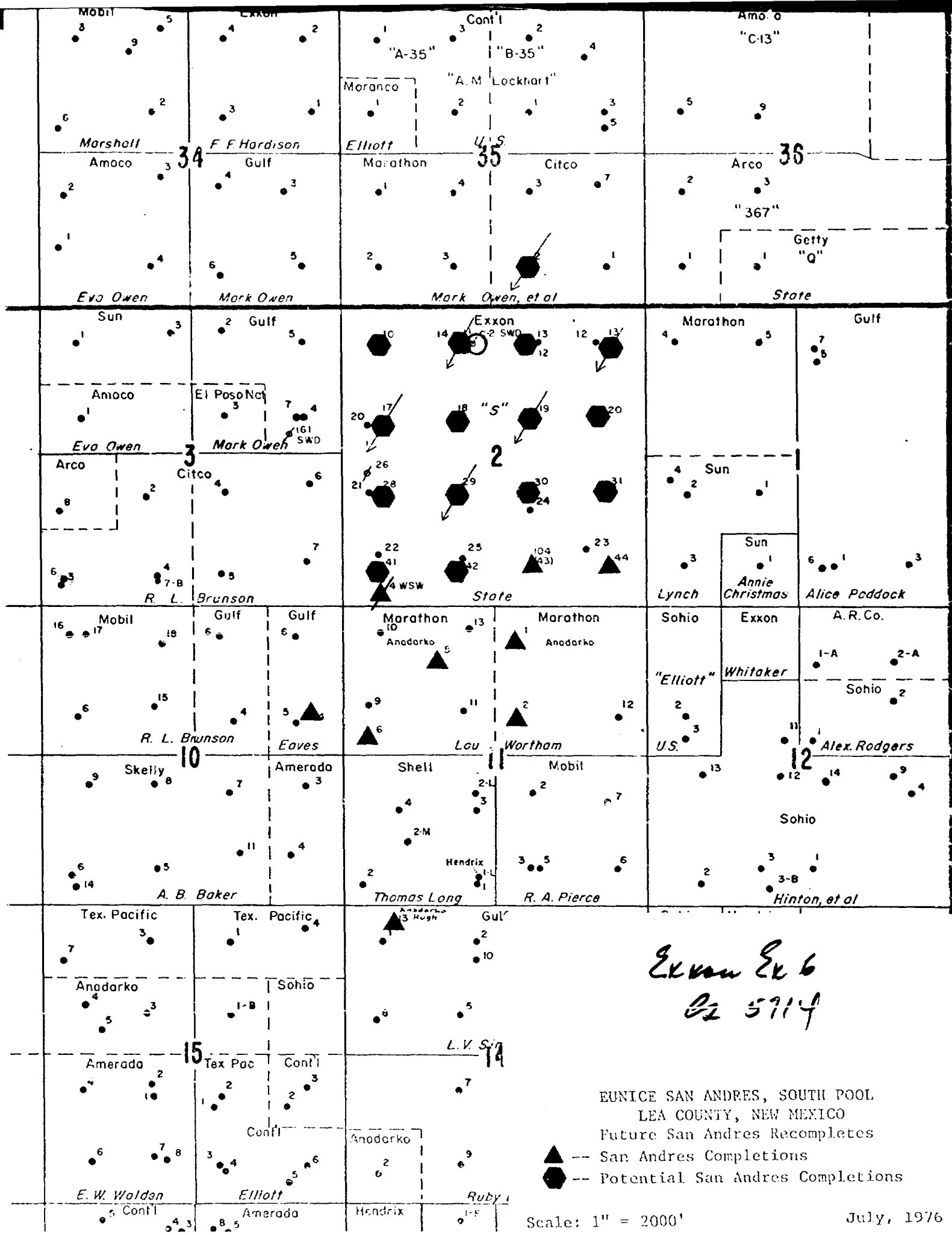


Exxon No 5
Cs 5714

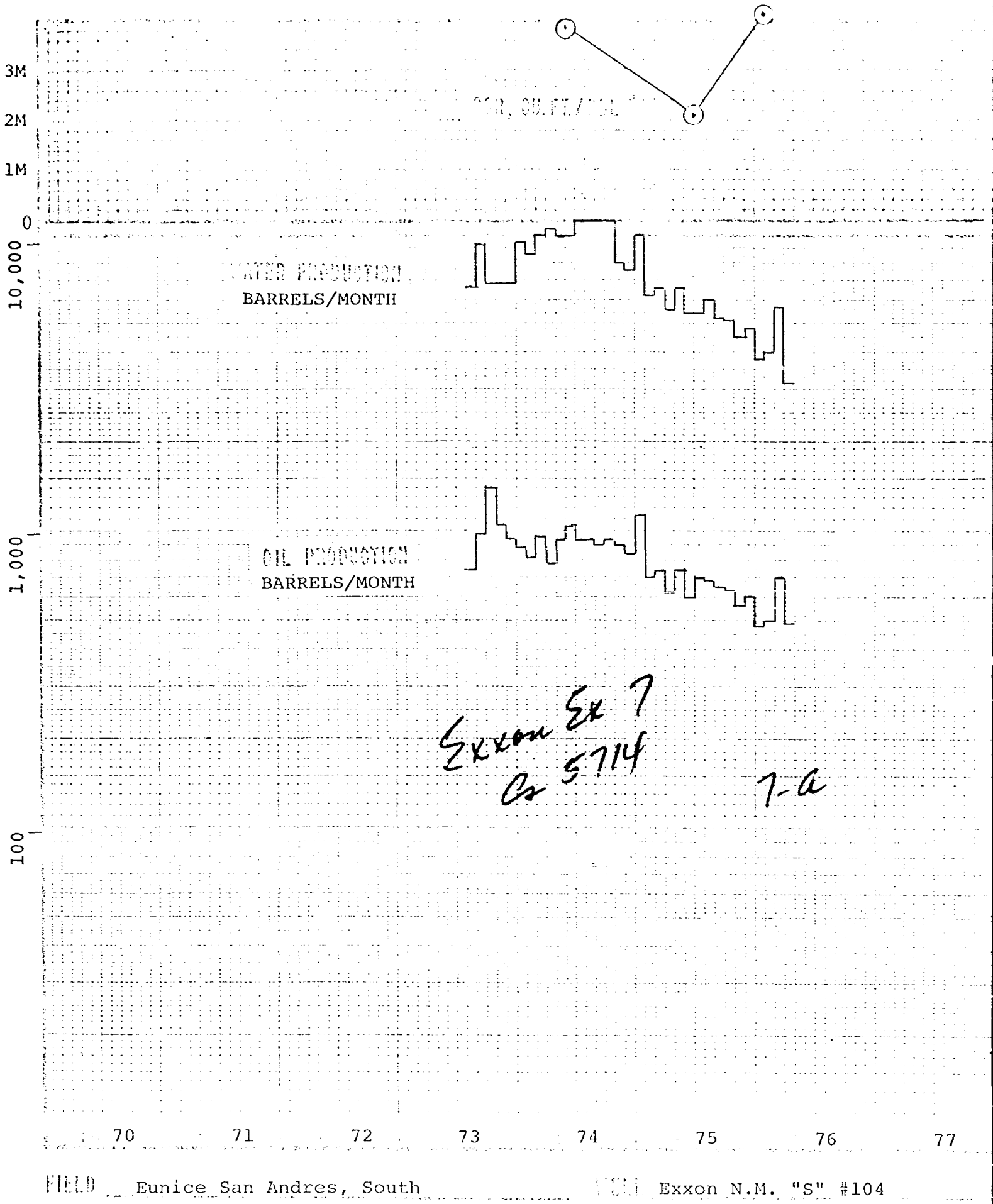
EUNICE SAN ANDRES, SOUTH POOL
LEA COUNTY, NEW MEXICO
Cumulative Production Map

▲ -- San Andres Completions

87 -- Cumulative Oil Production in M Barre

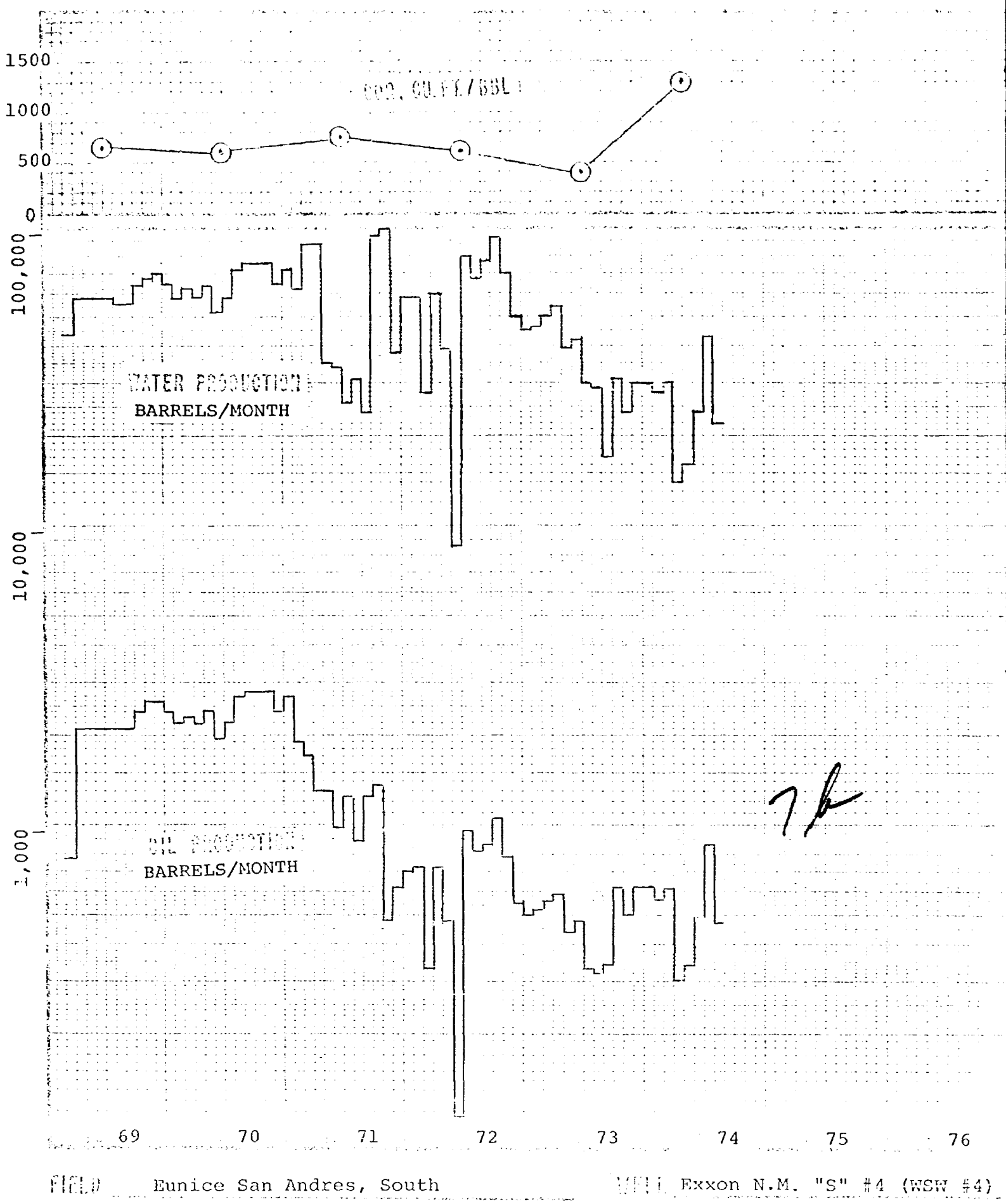


Exxon Ex 6
Case 5714



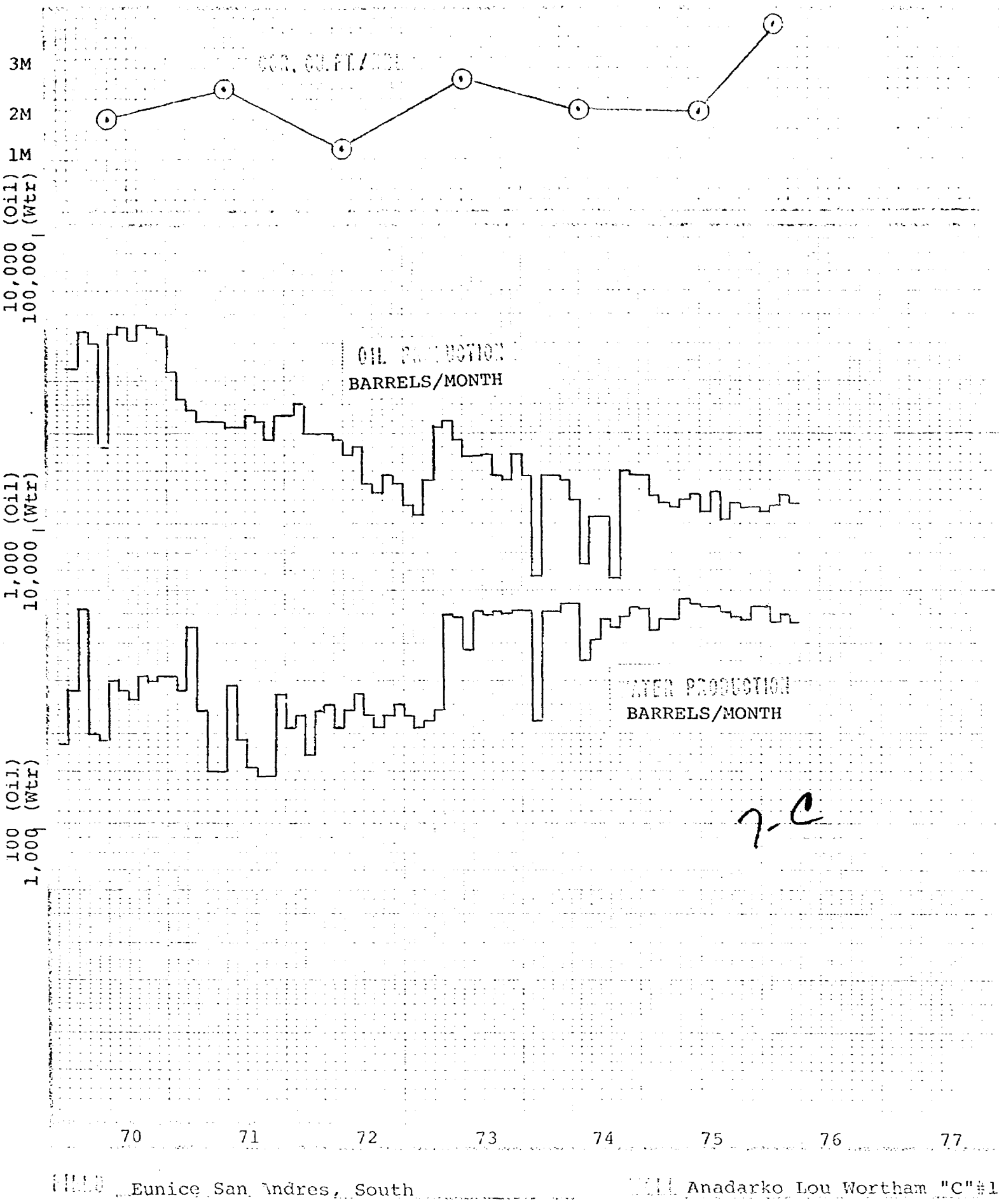
Exxon Ex 7
Cs 5714

1-a

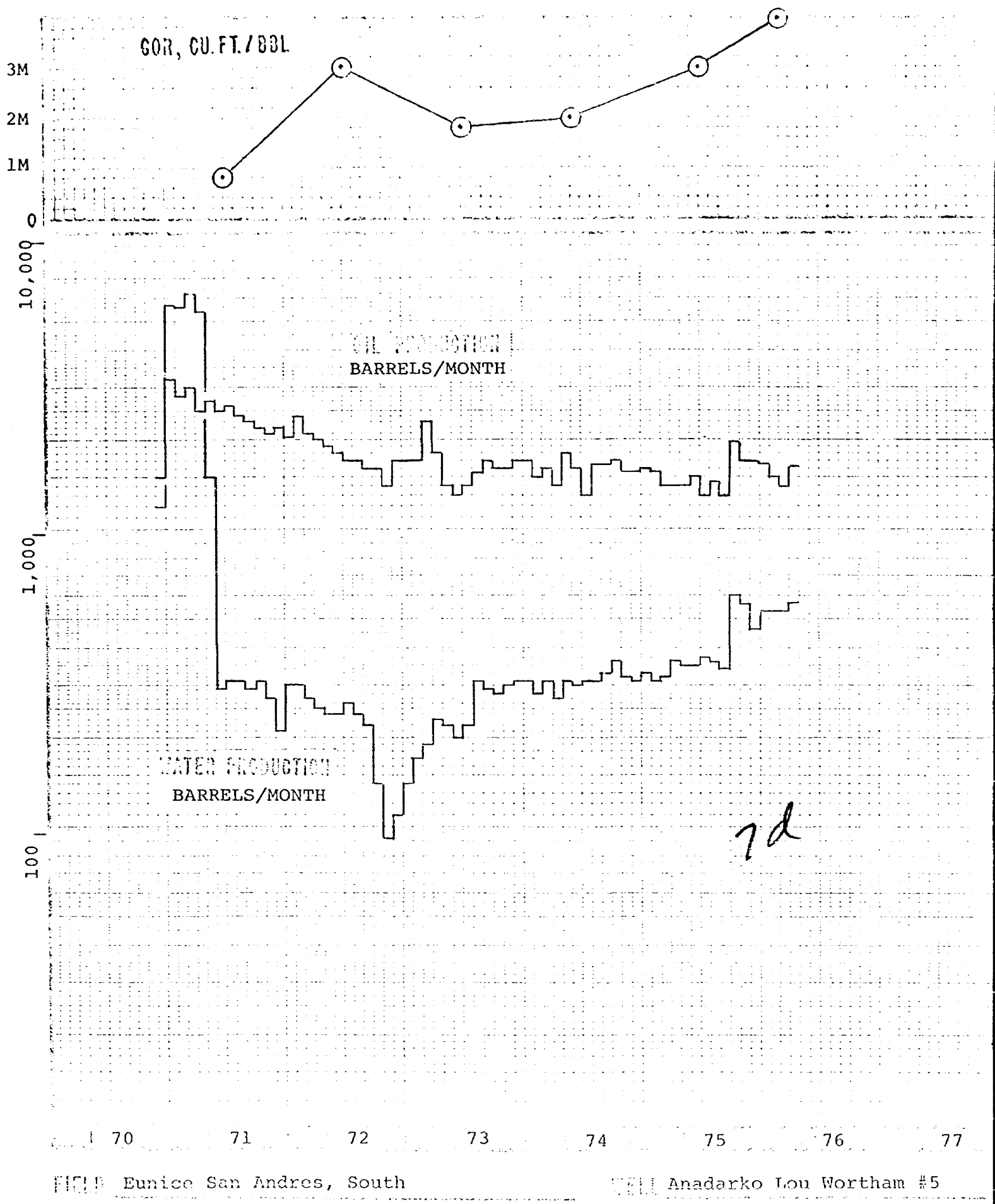


FIELD Eunice San Andres, South

WELL Exxon N.M. "S" #4 (WSW #4)


3M
2M
1M
10,000 (Oil)
100,000 (Wtr)
BARRELS/MONTH
1,000 (Oil)
10,000 (Wtr)
BARRELS/MONTH
100 (Oil)
1,000 (Wtr)
70
71
72
73
74
75
76
77
Eunice San Andres, South
Anadarko Lou Wortham "C"#1

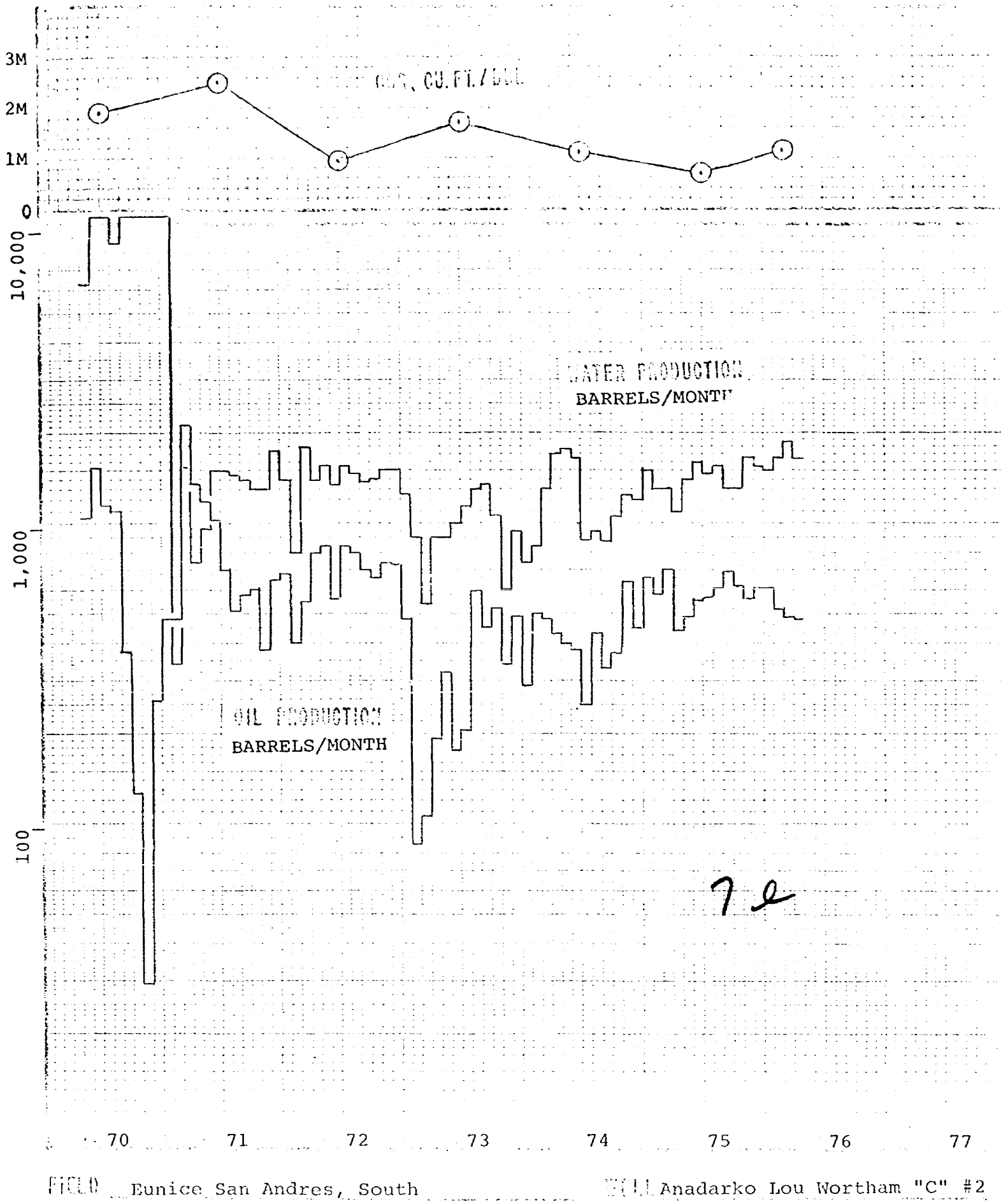
7-C



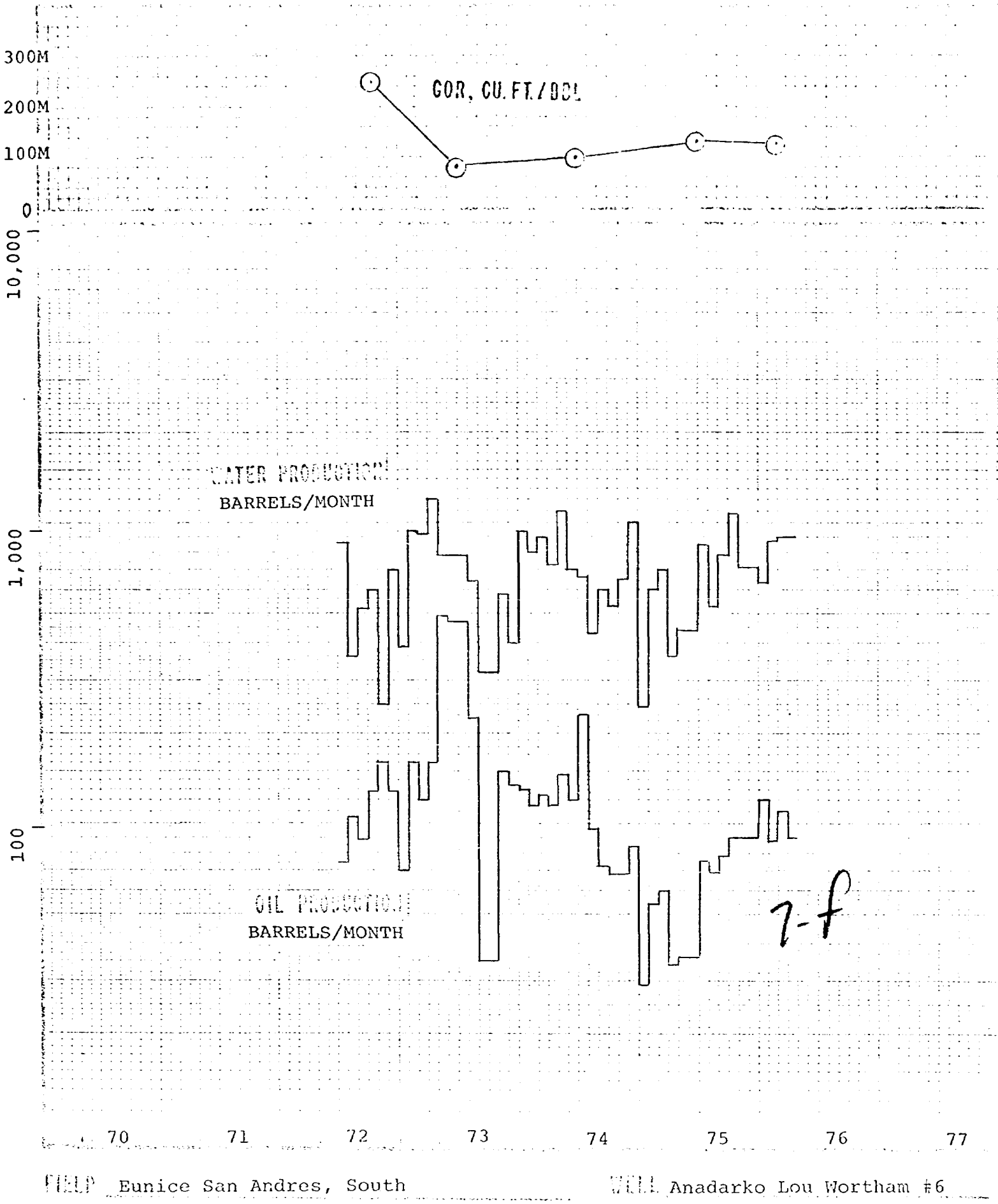
7d

FIELD Eunice San Andres, South

WELL Anadarko Lou Wortham #5



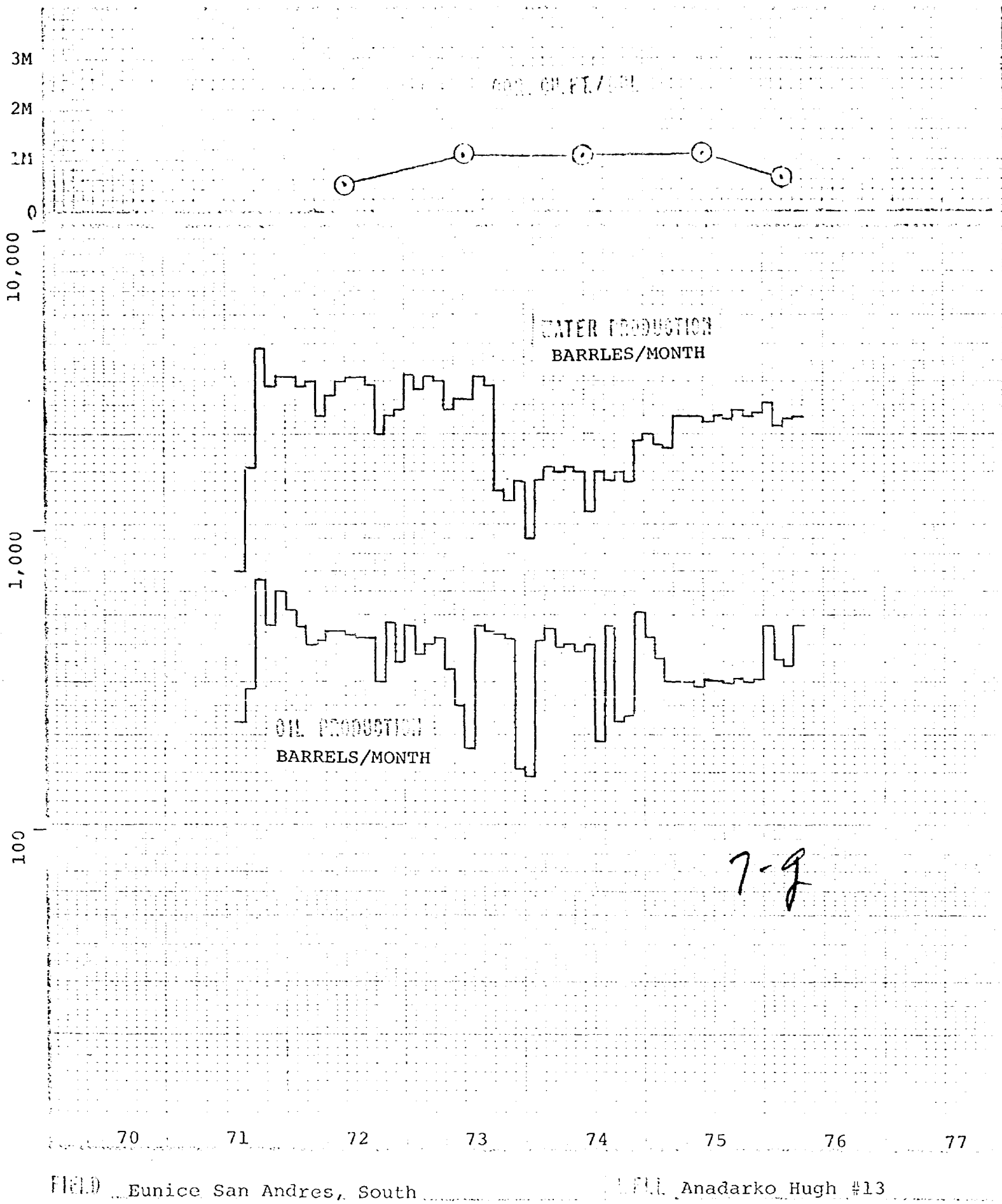
FIELD Eunice San Andres, South WELL Anadarko Lou Wortham "C" #2



7-f

FIELD Eunice San Andres, South

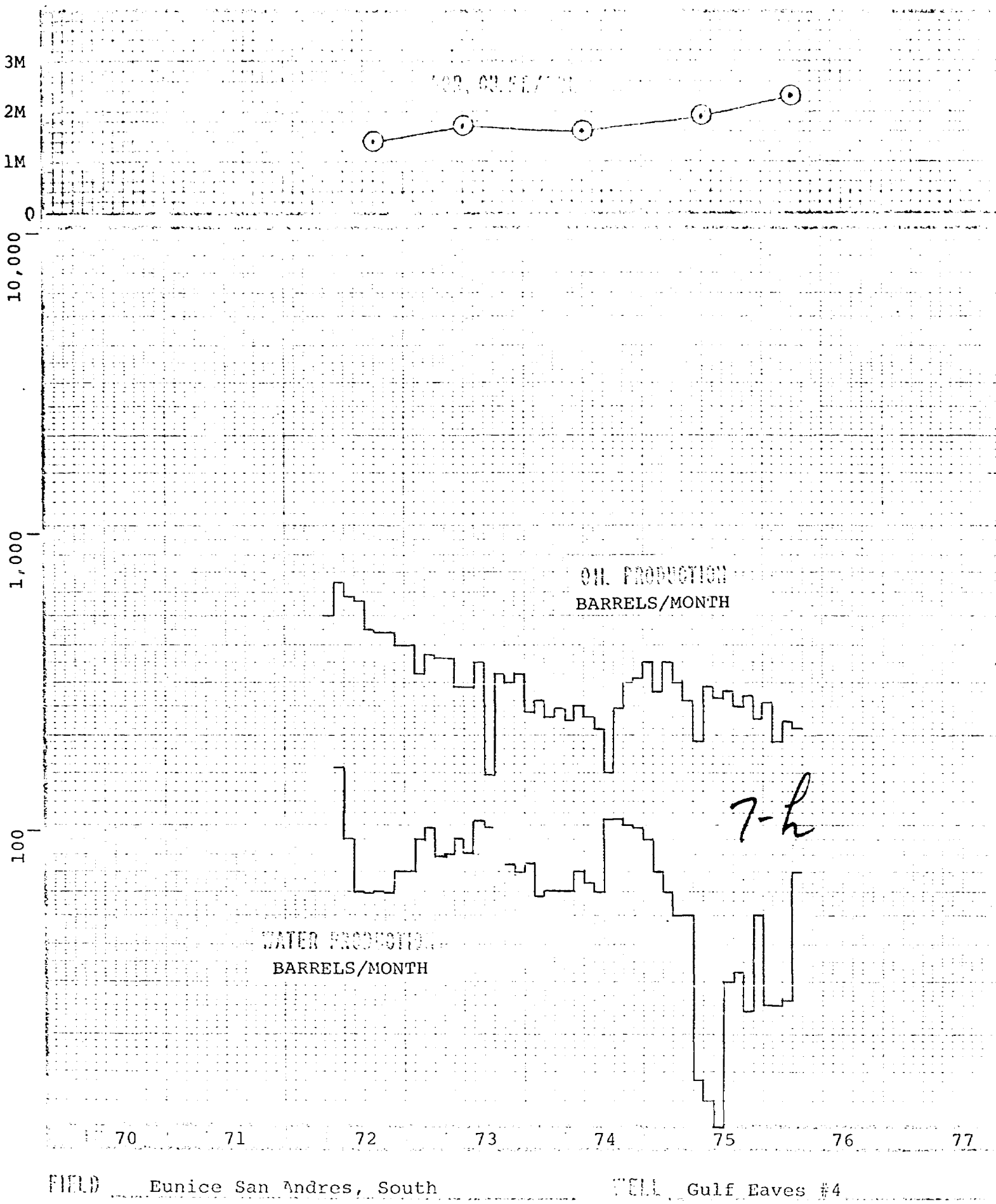
WELL Anadarko Lou Wortham #6



7-9

FIELD Eunice San Andres, South

WELL Anadarko Hugh #13



FIELD Eunice San Andres, South WELL Gulf Eaves #4

OIL CONSERVATION COMMISSION

STATE OF NEW MEXICO
P. O. BOX 2088 - SANTA FE
87501

DIRECTOR
JOE D. RAMEY

LAND COMMISSIONER
PHIL R. LUCERO

STATE GEOLOGIST
EMERY C. ARNOLD

August 3, 1976

Mr. James Jennings
Jennings, Christy & Copple
Attorneys at Law
Post Office Box 1180
Roswell, New Mexico 88201

Re: CASE NO. 5714
ORDER NO. R-4495-D

Applicant:

Agua, Inc.

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x
Artesia OCC
Aztec OCC

Other James Sperling

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. 5714
Order No. R-4495-D

APPLICATION OF AGUA INC. 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 July 14, 1976, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 3rd day of August, 1976, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, 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, Agua, Inc., is the operator of the SWD Well No. C-2, located in Unit C of Section 2, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That by Order No. R-4495, dated March 21, 1973, the Commission authorized the use of said well for salt water disposal purposes, provided that disposal would be into the San Andres formation through the open-hole interval from 4,400 feet to 5,000 feet.

(4) That by Order No. R-4495-A, dated October 7, 1975, said Order No. R-4495 was amended to also permit, until February 7, 1976, the disposal of produced salt water into perforations between 4,230 feet and 4,320 feet.

(5) That in Case No. 5619 held on January 20, 1976 before Commission Examiner Daniel S. Nutter, the applicant sought an additional 90-day period for disposal into the aforesaid perforated interval while applicant completed an additional disposal well for its salt water disposal system in the subject area.

(6) That at said January 20th hearing, the applicant assured the Commission that the additional disposal well and related facilities could be put into operation prior to the expiration of the requested 90-day extension of time and that upon placing such well and related facilities in operation, applicant would be able to reduce disposal volumes in said SWD Well No. C-2 to a level which the open-hole interval from 4,400 feet to 5,000 feet would accept, and would then be able to discontinue disposal into the perforated interval from 4,230 feet to 4,320 feet.

(7) That on February 3, 1976, the Commission entered Order No. R-4495-B amending Order No. R-4495-A to permit the continued disposal of produced salt water into perforations between 4,230 feet and 4,320 feet in said SWD Well No. C-2 until May 7, 1976.

(8) That the applicant completed such additional disposal well being its SWD Well No. A-22 located in Unit A of Section 22, Township 22 South, Range 37 East, Lea County, New Mexico.

(9) That said SWD Well No. A-22 would not accept sufficient water at pressure limitations imposed by Commission Order No. R-5137 (100 psi surface pressure) to permit the applicant to discontinue use of the perforated interval in said SWD Well No. C-2 for disposal purposes.

(10) That in Case No. 5644 heard by the Commission on March 10, 1976, applicant requested an amendment of said Order No. R-5137 to permit surface injection pressures of up to 1200 psi for said SWD Well No. A-22 to cause said well to accept volumes of water sufficient to offset those being disposed in said perforated interval in said SWD Well No. C-2.

(11) That in Case No. 5674 held on April 28, 1976, before Commission Examiner Richard L. Stamets, the applicant sought permission to continue disposal into said perforated interval in its SWD Well No. C-2 for an additional 90-day period after May 7, 1976, and thereafter until 30 days after the entry of an order favorable to the applicant in Case No. 5644.

(12) That if the Commission had denied applicant's request in Case No. 5644, approval of the application in Case 5674 would have resulted in permanent authorization to inject into said perforated interval in SWD Well No. C-2.

(13) That continued temporary extensions of applicant's authority to inject into said perforated interval in SWD Well No. C-2 would have had the same effect as permanent or unrestricted authority to inject.

(14) That on May 18, 1976, the Commission entered Order No. R-4495-C amending Orders Nos. R-4495-A and R-4495-B by granting the applicant's request to continue to dispose of produced salt water into the perforated interval between 4,230 feet and 4,320 feet in said SWD Well No. C-2 until August 7, 1976, and applicant's request for authority to inject into said perforated interval in said well until 30 days after the entry of an order favorable to the applicant in Case No. 5644 was not granted.

(15) That applicant seeks in this case permanent authority to dispose of produced salt water into the perforated interval from 4,230 feet to 4,320 feet and into the open-hole interval from 4,400 feet to 5,000 feet in its SWD Well No. C-2.

(16) That approval of continued injection of produced water through the open-hole interval from 4,400 feet to 5,000 feet will prevent waste and protect correlative rights.

(17) That evidence presented indicates that unrestricted disposal of salt water into said perforated interval in the subject well for an extended period of time could have an adverse effect on oil production and oil reserves in the vicinity of said well thereby causing waste.

(18) That to avoid said adverse effects no order should be issued which would authorize permanent unrestricted injection into said perforated interval in the SWD Well No. C-2.

(19) That an offset operator objected to continued disposal of salt water into said perforated interval in applicant's SWD Well No. C-2.

(20) That such objection is based upon assertions that there is oil under said objecting operator's lease which will be swept off such lease by the water being injected within said perforated interval in the SWD Well No. C-2.

(21) That if such assertions are correct, said operator's correlative rights would be violated by unlimited injection into said perforated interval in SWD Well No. C-2.

(22) That the evidence presented is sufficient to indicate that correlative rights will be violated if any order should be issued by the Commission granting permanent authority for injection of water into said perforated interval in said SWD Well No. C-2.

(23) That in order to prevent waste and protect correlative rights, the application for authority to dispose of produced salt water into said perforated interval in said SWD Well No. C-2 should be denied.

(24) That denial of the subject application might result in approximately 430 producing wells connected to applicant's disposal system being shut-in.

(25) That to avoid the immediate shut-in of said 430 producing wells following denial of the subject application, an extension of the temporary authority to inject into said perforated interval in applicant's SWD Well No. C-2 should be authorized.

IT IS THEREFORE ORDERED:

(1) That the application of Agua Inc. for permanent authority to dispose of produced salt water into the San Andres formation through the open-hole interval from 4,400 feet to 5,000 feet below the surface in its SWD Well No. C-2 located in Unit C of Section 2, Township 22 South, Range 37 East, Lea County, New Mexico, be and the same hereby is granted.

(2) That the application of Agua Inc. for permanent authority to dispose of produced salt water into the San Andres formation through the perforated interval from 4,230 feet to 4,320 feet below the surface in its SWD Well No. C-2 located in Unit C of Section 2, Township 22 South, Range 37 East, Lea County, New Mexico, be and the same hereby is denied.

(3) PROVIDED FURTHER, that the "PROVIDED FURTHER" Section of Order No. 1 of Commission Order No. R-4495-A is hereby amended to read in its entirety as follows:

> "PROVIDED FURTHER, that disposal into the aforesaid perforated interval from 4,230 feet to 4,320 feet shall not occur after October 1, 1976, and proper action shall be taken by the applicant to the satisfaction of the Supervisor of the Hobbs District Office of the Commission to prevent such disposal."

(4) 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.

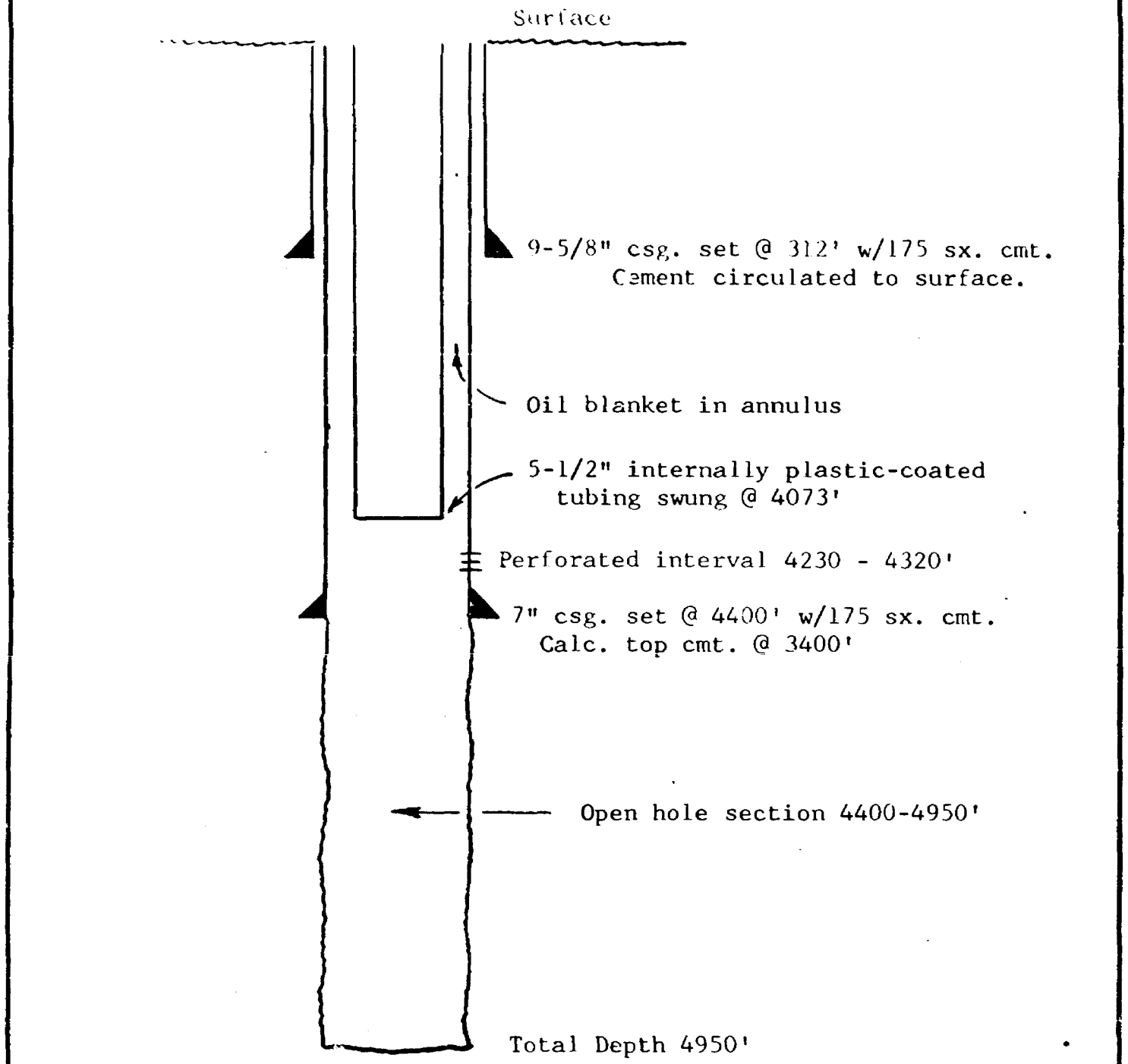
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

PHIL R. LUCERO, Chairman

EMERY C. ARNOLD, Member

JOE D. RAMEY, Member & Secretary

dr/



DIAGRAMMATIC SKETCH

SALT WATER DISPOSAL WELL No. C-2

NE/4 NW/4 Section 2, T22S, R37E, Lea County, New Mexi.

BLINEBRY-DRINKARD SALT WATER DISPOSAL SYSTEM

DWN.	1/73	JVR	AGUA, INC.	SCALE None
	9/75	JVR	HOBBS, NEW MEXICO	DWG. NO. A-174

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
AGUA EXHIBIT No. 1
CASE 5714

K•E HERCULENE® 79691

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LAND OFFICE	
OPERATOR	

Form C-105
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease: State [X] Fee [ ]
5. State Oil & Gas Lease No.

1a. TYPE OF WELL: OIL WELL [ ] GAS WELL [ ] DRY [ ] OTHER Salt Water Disposal

b. TYPE OF COMPLETION: NEW WELL [X] WORK OVER [ ] DEEPEN [ ] PLUG BACK [ ] DIFF. RESVR. [ ] OTHER

7. Unit Agreement Name: Blinebry-Drinkard SWD System
8. Farm or Lease Name: Blinebry-Drinkard SWD
9. Well No.: C-2
10. Field and Pool, or Wildcat: Blinebry-Drinkard Area

2. Name of Operator: AGUA, INC.
3. Address of Operator: P.O. Box 1978 Hobbs, New Mexico
4. Location of Well: UNIT LETTER C LOCATED 660 FEET FROM THE North LINE AND 2305 FEET FROM THE West LINE OF SEC. 2 TWP. 22S RGE. 37E NMPM
12. County: Lea

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Cashinghead
4/6/73	4/22/73	4/28/73	3366 KB	

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools	Cable Tools
4950			→	0 - 4950'	

24. Producing Interval(s), of this completion — Top, Bottom, Name
Disposal interval: Open hole 4400 - 4950'

25. Was Directional Survey Made: Yes

26. Type Electric and Other Logs Run
Gamma ray - Neutron open hole 4950 - 3400'

27. Was Well Cored: No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
9-5/8"	32	312'	12-1/4"	175 sx Class H w/2% CaCl	None
7"	20	4400'	8-3/4"	175 sx Class H w/2% CaCl	None

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN
None				

30. TUBING RECORD

SIZE	DEPTH SET	PACKER SET
5-1/2"	4395'	None

31. Perforation Record (Interval, size and number)
None

BEFORE ME
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
AGUA EXHIBIT No. 2
CASE 5714

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
4400 - 4950'	5000 gals. 15% FE acid

33. PRODUCTION

Date First Production	Production Method (Flowing, gas lift, pumping — Size and type pump)	Well Status (Prod. or Shut-in)
N/A		

Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Gas—Oil Ratio

Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate →	Oil — Bbl.	Gas — MCF	Water — Bbl.	Oil Gravity - API (Corr.)

34. Disposition of Gas (Sold, used for fuel, vented, etc.)
Test Witnessed By

35. List of Attachments
Sidewall Neutron Porosity Log

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED W. G. Abbott TITLE Manager DATE 5/9/73

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Commission not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, Items 30 through 34 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico				Northwestern New Mexico			
T. Anhy		T. Canyon		T. Ojo Alamo		T. Penn. "B"	
T. Salt		T. Strawn		T. Kirtland-Fruitland		T. Penn. "C"	
B. Salt		T. Atoka		T. Pictured Cliffs		T. Penn. "D"	
T. Yates		T. Miss		T. Cliff House		T. Leadville	
T. 7 Rivers		T. Devonian		T. Menefee		T. Madison	
T. Queen		T. Silurian		T. Point Lookout		T. Elbert	
T. Grayburg		T. Montoya		T. Mancos		T. McCracken	
T. San Andres	3832	T. Simpson		T. Gallup		T. Ignacio Qtzte	
T. Glorieta		T. McKee		Base Greenhorn		T. Granite	
T. Paddock		T. Ellenburger		T. Dakota		T.	
T. Blinebry		T. Gr. Wash		T. Morrison		T.	
T. Tubb		T. Granite		T. Todilto		T.	
T. Drinkard		T. Delaware Sand		T. Entrada		T.	
T. Abo		T. Bone Springs		T. Wingate		T.	
T. Wolfcamp		T.		T. Chinle		T.	
T. Penn.		T.		T. Permian		T.	
T. Cisco (Bough C)		T.		T. Penn. "A"		T.	

FORMATION RECORD (Attach additional sheets if necessary)

From	To	Thickness in Feet	Formation	From	To	Thickness in Feet	Formation
3136	3440	304	Lime				
3440	3606	166	Anhydrite				
3606	3730	124	Sand and Anhydrite				
3730	3845	115	Lime				
3845	4950	1105	Dolomite and Lime				

NO. OF COPIES RECEIVED		
DISTRIBUTION		
SANTA FE		
FILE		
U.S.G.S.		
LAND OFFICE		
OPERATOR		

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-103
Supersedes Old C-102 and C-103
Effective 1-1-65

5a. Indicate Type of Lease: State ☐ Fee ☐

5. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT —" (FORM C-101) FOR SUCH PROPOSALS.)

1. OIL WELL ☐ GAS WELL ☐ OTHER- **Salt Water Disposal**

7. Unit Agreement Name: **Blinebry-Drinkard SWD System**

2. Name of Operator: **AGUA, INC.**

8. Farm or Lease Name: **Blinebry-Drinkard SWD**

3. Address of Operator: **P. O. Box 1978 Hobbs, New Mexico 88240**

9. Well No. **C-2**

4. Location of Well: UNIT LETTER **C**, **660** FEET FROM THE **North** LINE AND **2305** FEET FROM THE **West** LINE, SECTION **2** TOWNSHIP **22S** RANGE **37E** NMPM.

10. Field and Pool, or Wildcat

15. Elevation (Show whether DF, RT, GR, etc.): **3366 KB**

12. County: **Lea**

16. Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☒	ALTERING CASING ☐
TEMPORARILY ABANDON ☐		COMMENCE DRILLING OPNS. ☐	PLUG AND ABANDONMENT ☐
PULL OR ALTER CASING ☐	CHANGE PLANS ☐	CASING TEST AND CEMENT JOB ☐	
OTHER ☐		OTHER ☐	

17. Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

1. Pull and lay down 322' 5-1/2" internally plastic-coated tubing.
2. Ran PDC log and perforate 7" casing w/2 jet SPF in the interval 4320 - 4230'.
3. Treat perforated interval 4320 - 4230' and OH section 4950 - 4400' with 5,000 gallons 15% HCl acid.
4. Returned well to gravity disposal.

Above work done Sept. 3 & 17, 1975.

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
AGUA EXHIBIT No. 3
CASE 5714

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

SIGNED W. G. Abbott TITLE Manager DATE 2/10/76

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

BLINEBRY-DRINKARD SWD WELL No. C-2

	MONTH	WATER DISPOSED BBLS.	BWPD
1975	Jan.	81,009	2,613
	Feb.	70,946	2,534
	Mar.	83,429	2,691
	Apr.	78,867	2,629
	May	90,392	2,916
	June	83,313	2,777
	July	84,809	2,736
	Aug.	76,012	2,452
	Sept.	155,266	5,176
	Oct.	278,335	8,979
	Nov.	257,832	8,594
	Dec.	266,849	8,608
1976	Jan.	266,910	8,610
	Feb.	226,490	7,810
	Mar.	288,578	9,309
	Apr.	300,006	10,000
	May	303,061	9,776
	June	282,055	9,402

BEFORE THE
OIL CONSERVATION COMM
SANTA FE, NEW MEXI
AGCA EXHIBIT NO. 5
CASE 5714

BLINEBRY-DRINKARD SALT WATER DISPOSAL SYSTEM

Disposal Well No.	Cumulative 6/30/76 Bbls. Water Disposed
A-22	22,750
C-2	4,808,253
H-35	13,446,411
SYSTEM TOTAL	18,277,414

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
AGA EXHIBIT No. 5
CASE 5714

NO. 31120. FIVE YEARS BY MONTHS X 100 DIVISIONS.
CODEX BOOK COMPANY, INC. NORWOOD, MASSACHUSETTS

BLINEBRY-DRINKARD SALT WATER DISPOSAL SYSTEM

WATER DISPOSED - B/D

10,000
9,000
8,000
7,000
6,000
5,000

Water Disposed

Wells Connected

500
400
300

NO. WELLS CONNECTED

1972 | 1973 | 1974 | 1975 | 1976

Case 5714

LAW OFFICES OF
JENNINGS, CHRISTY & COPPLE
1012 SECURITY NATIONAL BANK BUILDING
P. O. BOX 1180
ROSWELL, NEW MEXICO 88201

JAMES T. JENNINGS
SIM B. CHRISTY IV
BRIAN W. COPPLE
ROBERT G. ARMSTRONG

TELEPHONE 622-8432
AREA CODE 505

June 21, 1976

Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: W. F. Carr, General Counsel

RE: AGUA, INC. SWD WELL NO. C-2
LOCATED UNIT C IN SECTION 2,
TOWNSHIP 22 SOUTH, RANGE 37 EAST

Gentlemen:

Enclosed herewith you will find an Application in triplicate which we are filing on behalf of Agua, Inc. seeking permanent authority to inject into the perforated interval and open hole interval in its above described well. We will appreciate it if you will set this matter down for hearing before the Commission at an early date.

Yours very truly,

JAMES T. JENNINGS

JTJ/mb

Encl.

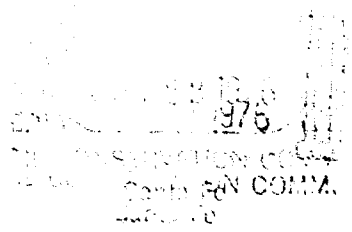
cc: Agua, Inc.

Case 5714

BEFORE THE OIL CONSERVATION COMMISSION

OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF AGUA, INC. FOR PERMANENT AUTHORITY TO INJECT PRODUCED SALT WATER INTO THE PERFORATED INTERVAL FROM 4230 FEET TO 4320 FEET BELOW THE SURFACE AND INTO THE OPEN HOLE INTERVAL FROM 4400 FEET TO 5000 FEET IN ITS C-2 SWD WELL LOCATED IN UNIT C, SECTION 2, TOWNSHIP 22 SOUTH, RANGE 37 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.



APPLICATION FOR PERMANENT AUTHORITY TO DISPOSE OF PRODUCED SALT WATER INTO C-2 SWD WELL SECTION 2, TOWNSHIP 22 SOUTH, RANGE 37 EAST

Comes now Agua, Inc. and hereby makes Application for permanent authority to dispose of produced salt water into the San Andres formation in the perforated interval from 4230 feet to 4320 feet below the surface and to continue to dispose of produced salt water into the oper hole interval from 4400 feet to 5000 feet below the surface into its SWD Well No. C-2, located in Unit C of Section 2, Township 22 South, Range 37 East; and in support thereof states:

1. That by Order No. 4495-A entered in Case No. 5562 on October 7, 1975, Applicant was authorized to dispose of produced salt water into its SWD Well No. C-2 located in Unit C of Section 2, Township 22 South, Range 37 East, N.M.P.M., into the San Andres formation through perforations from the interval from 4230 feet to 4320 feet and into the open hole interval from 4400 feet to 5000 feet below the surface, and pursuant to said Order and to Orders No. 4495-B and No. 4495-C, the Applicant has continued to and is now disposing of water into said zones in its SWD No. C-2 Well.

2. That Applicant is the operator of the Blinebry-Drinkard SWD System and that there are 466 producing wells hooked up to this system and the salt water produced from said wells is being disposed of in the Applicant's SWD No. C-2 Well. That there are approximately

900 producing wells located in the pools adjacent to the Blinebry-Drinkard Salt Water Disposal System and that the produced salt water is increasing at approximately 25% per annum.

3. That the Applicant's SWD No. C-2 Well is the only salt water disposal well in the Blinebry-Drinkard SWD System which will accept produced salt water on gravity and does not require injection pressure.

4. That the disposal of salt water into the perforated interval and the open hole interval into Applicant's SWD No. C-2 Well located in Unit C of Section 2, Township 22 South, Range 37 East, will not have an adverse effect on oil production and oil reserves in the vicinity of said well, and the injection of produced salt water into the San Andres formation in said zones in this well is feasible and will result in the increased ultimate recovery of oil and prevent waste.

WHEREFORE, Applicant requests the Commission to set this matter down for hearing before the Commission at an early date, publish the notice as required by law and after hearing issue an Order granting to Applicant permanent authority to dispose of produced salt water into the San Andres formation in the interval from 4230 feet to 4320 feet and into the open hole interval from 4400 feet to 5000 feet below the surface in its SWD Well No. C-2 located in Unit C of Section 2, Township 22 South, Range 37 East, N.M.P.M.

Respectfully submitted,

AGUA, INC.

By _____
For JENNINGS, CHRISTY & COPPLE
Attorneys for Applicant
P. O. Box 1180
Roswell, New Mexico 88201

Case 5714

BEFORE THE OIL CONSERVATION COMMISSION

OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF AGUA, INC. FOR PERMANENT AUTHORITY TO INJECT PRODUCED SALT WATER INTO THE PERFORATED INTERVAL FROM 4230 FEET TO 4320 FEET BELOW THE SURFACE AND INTO THE OPEN HOLE INTERVAL FROM 4400 FEET TO 5000 FEET IN ITS C-2 SWD WELL LOCATED IN UNIT C, SECTION 2, TOWNSHIP 22 SOUTH, RANGE 37 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

APPLICATION FOR PERMANENT AUTHORITY TO DISPOSE OF PRODUCED SALT WATER INTO C-2 SWD WELL SECTION 2, TOWNSHIP 22 SOUTH, RANGE 37 EAST

Comes now Agua, Inc. and hereby makes Application for permanent authority to dispose of produced salt water into the San Andres formation in the perforated interval from 4230 feet to 4320 feet below the surface and to continue to dispose of produced salt water into the open hole interval from 4400 feet to 5000 feet below the surface into its SWD Well No. C-2, located in Unit C of Section 2, Township 22 South, Range 37 East; and in support thereof states:

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3. That the Applicant's SWD No. C-2 Well is the only salt water disposal well in the Blinebry-Drinkard SWD System which will accept produced salt water on gravity and does not require injection pressure.

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Respectfully submitted,

AGUA, INC.

By _____
For JENNINGS, CHRISTY & COPPLE
Attorneys for Applicant
P. O. Box 1180
Roswell, New Mexico 88201

Case 5214

BEFORE THE OIL CONSERVATION COMMISSION

OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION OF AGUA, INC. FOR PERMANENT AUTHORITY TO INJECT PRODUCED SALT WATER INTO THE PERFORATED INTERVAL FROM 4230 FEET TO 4320 FEET BELOW THE SURFACE AND INTO THE OPEN HOLE INTERVAL FROM 4400 FEET TO 5000 FEET IN ITS C-2 SWD WELL LOCATED IN UNIT C, SECTION 2, TOWNSHIP 22 SOUTH, RANGE 37 EAST, N.M.P.M., LEA COUNTY, NEW MEXICO.

APPLICATION FOR PERMANENT AUTHORITY TO DISPOSE OF PRODUCED SALT WATER INTO C-2 SWD WELL SECTION 2, TOWNSHIP 22 SOUTH, RANGE 37 EAST

Comes now Agua, Inc. and hereby makes Application for permanent authority to dispose of produced salt water into the San Andres formation in the perforated interval from 4230 feet to 4320 feet below the surface and to continue to dispose of produced salt water into the open hole interval from 4400 feet to 5000 feet below the surface into its SWD Well No. C-2, located in Unit C of Section 2, Township 22 South, Range 37 East; and in support thereof states:

1. That by Order No. 4495-A entered in Case No. 5562 on October 7, 1975, Applicant was authorized to dispose of produced salt water into its SWD Well No. C-2 located in Unit C of Section 2, Township 22 South, Range 37 East, N.M.P.M., into the San Andres formation through perforations from the interval from 4230 feet to 4320 feet and into the open hole interval from 4400 feet to 5000 feet below the surface, and pursuant to said Order and to Orders No. 4495-B and No. 4495-C, the Applicant has continued to and is now disposing of water into said zones in its SWD No. C-2 Well.

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Case 5714

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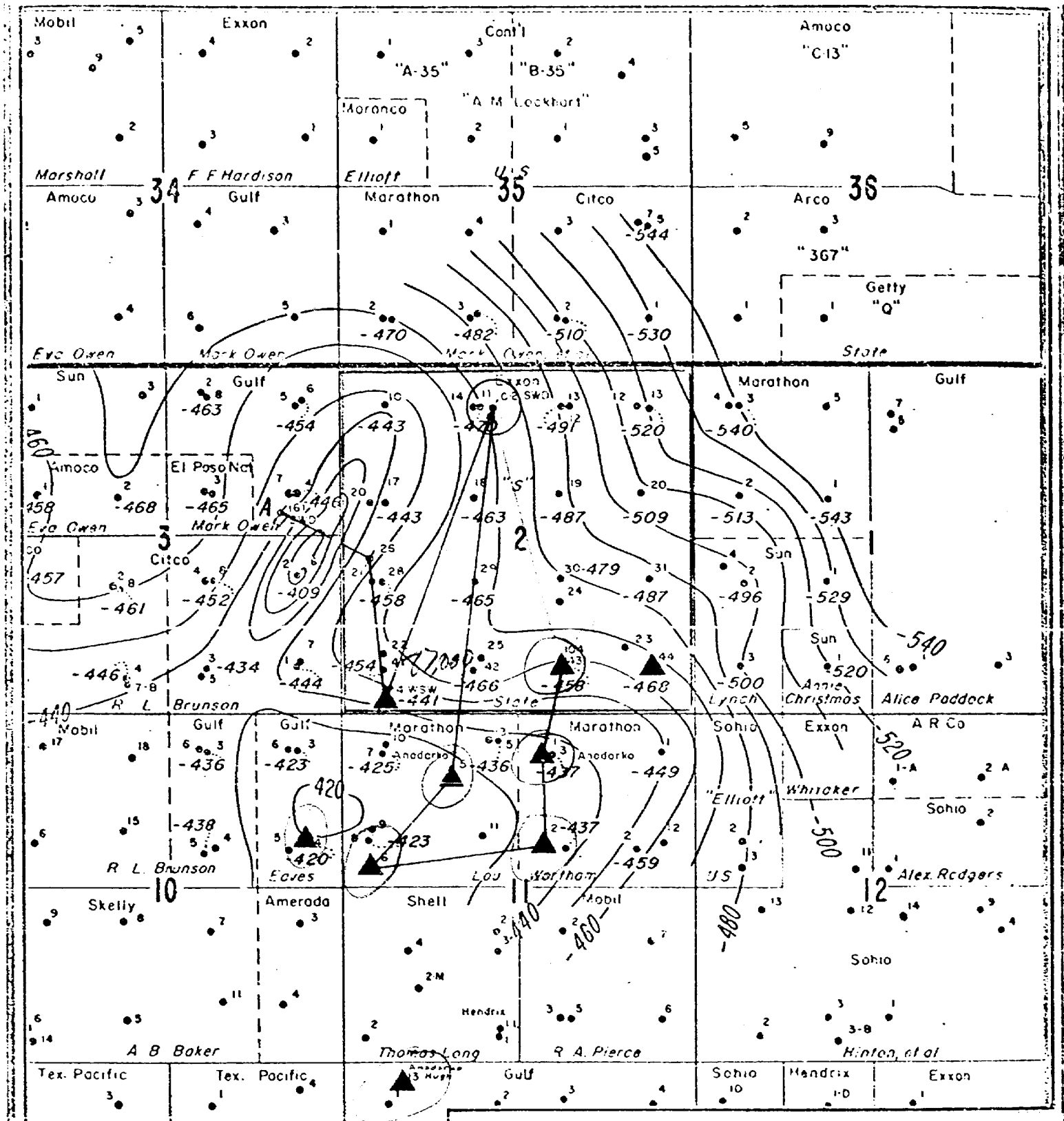
Respectfully submitted,

AGUA, INC.

By _____
For CANNINGS, CHRISTY & COPPLE
Attorneys for Applicant
P. O. Box 1180
Roswell, New Mexico 88201



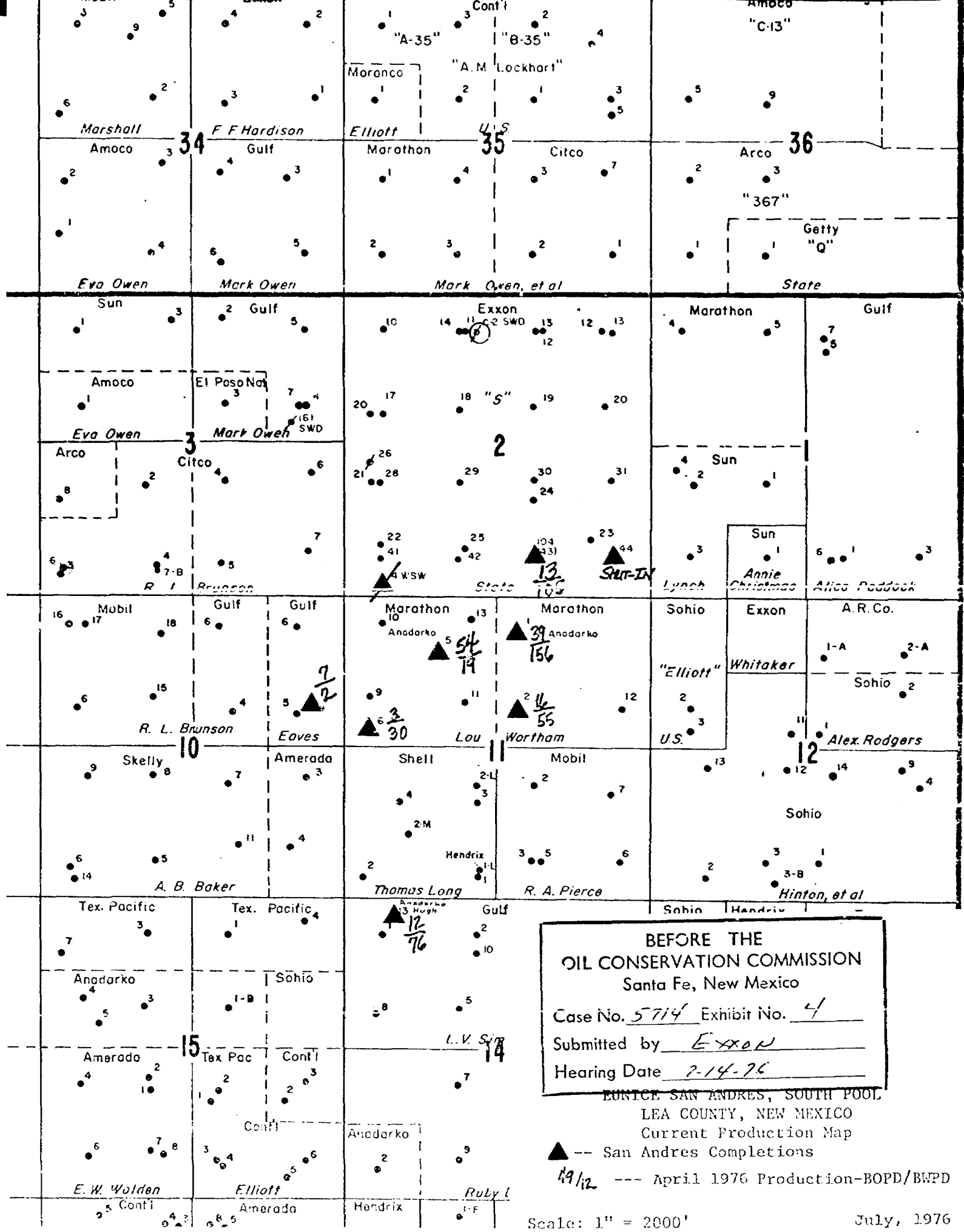
BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5714 Exhibit No. 1
Submitted by EXXON
Hearing Date 7-14-76

EUNICE SAN ANDRES, SOUTH POOL
LEA COUNTY, NEW MEXICO

STRUCTURE MAP

Top San Andres C.I. = 10'
Scale: 1" = 2000' July, 1976

▲ Pool Well



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5714 Exhibit No. 4
Submitted by Exxon
Hearing Date 2-14-76

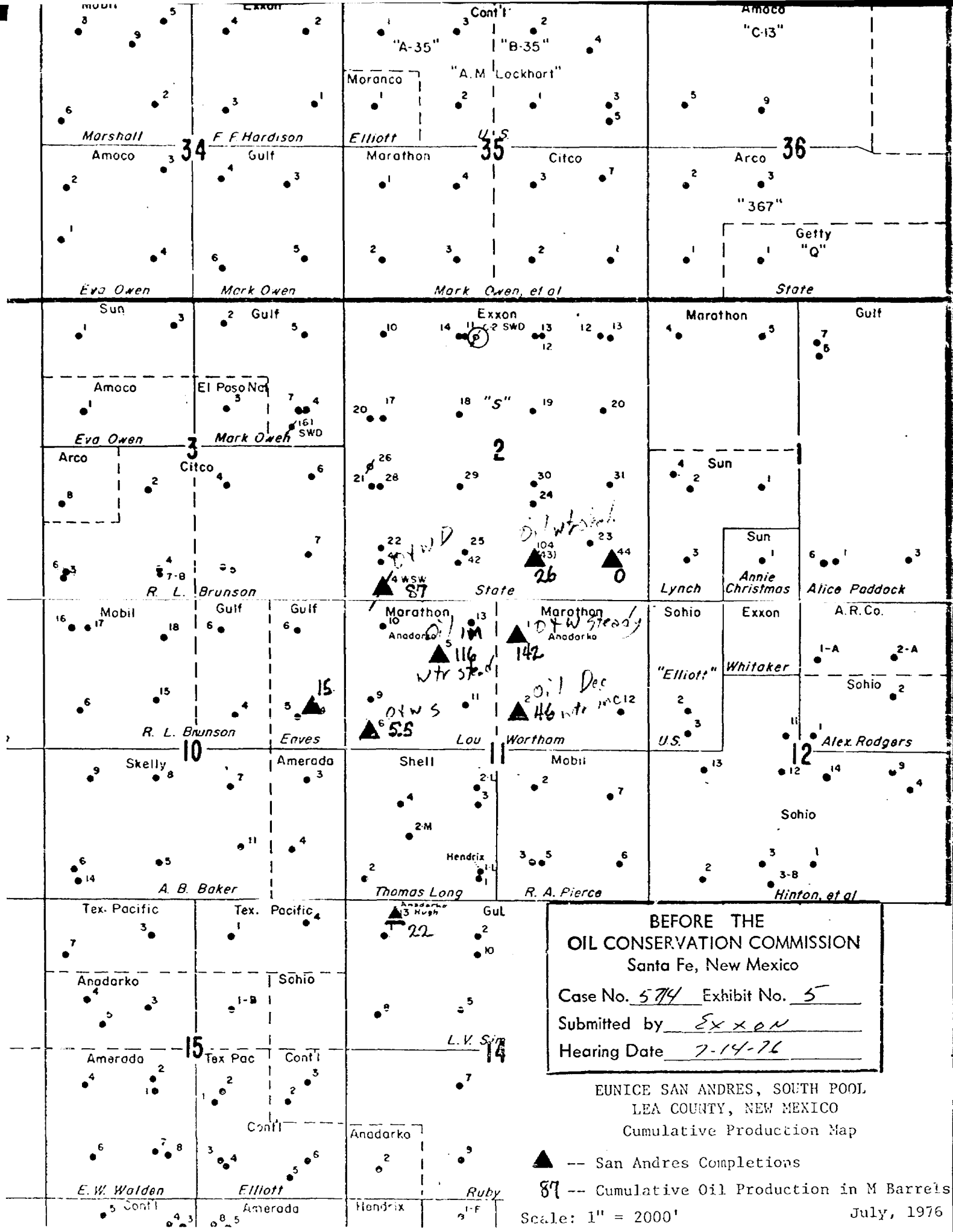
EUNICE SAN ANDRES, SOUTH POOL
LEA COUNTY, NEW MEXICO
Current Production Map

▲ -- San Andres Completions

49/12 --- April 1976 Production-BOPD/BWPD

Scale: 1" = 2000'

July, 1976



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

Case No. 574 Exhibit No. 5

Submitted by Exxon

Hearing Date 7-14-76

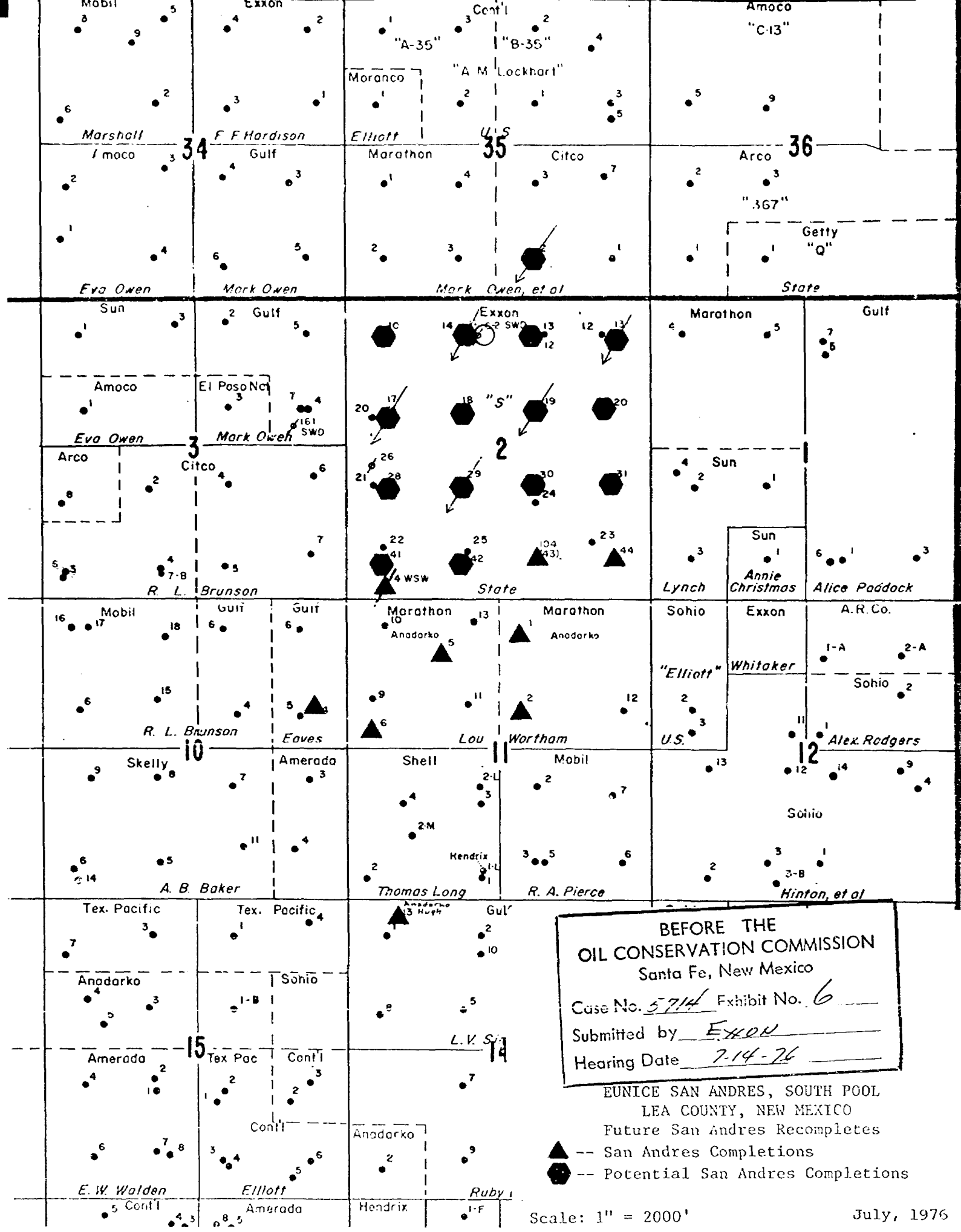
EUNICE SAN ANDRES, SOUTH POOL
LEA COUNTY, NEW MEXICO
Cumulative Production Map

▲ -- San Andres Completions

87 -- Cumulative Oil Production in M Barrels

Scale: 1" = 2000'

July, 1976



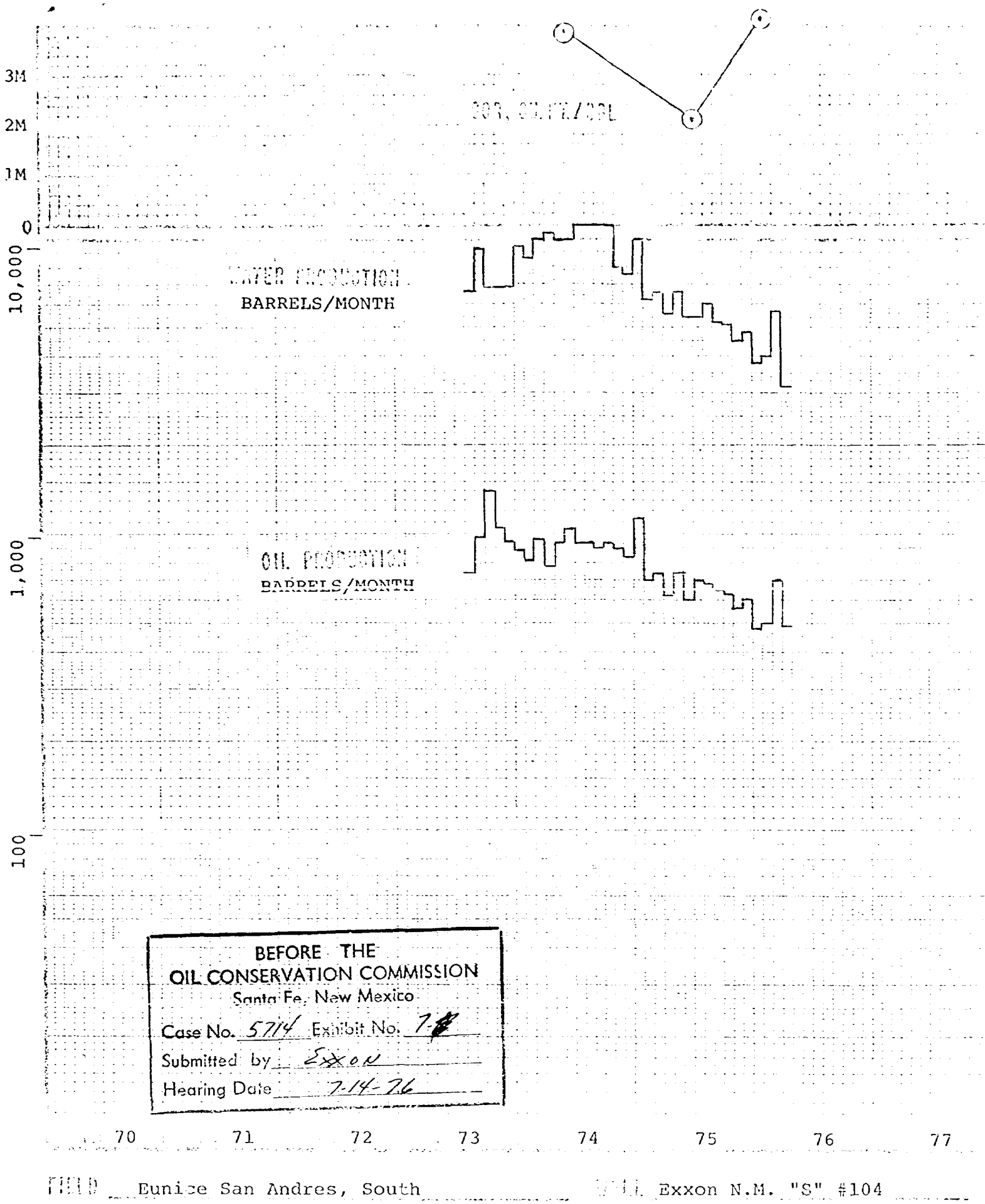
BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5714 Exhibit No. 6
Submitted by Exxon
Hearing Date 7-14-76

EUNICE SAN ANDRES, SOUTH POOL
LEA COUNTY, NEW MEXICO
Future San Andres Recompletes

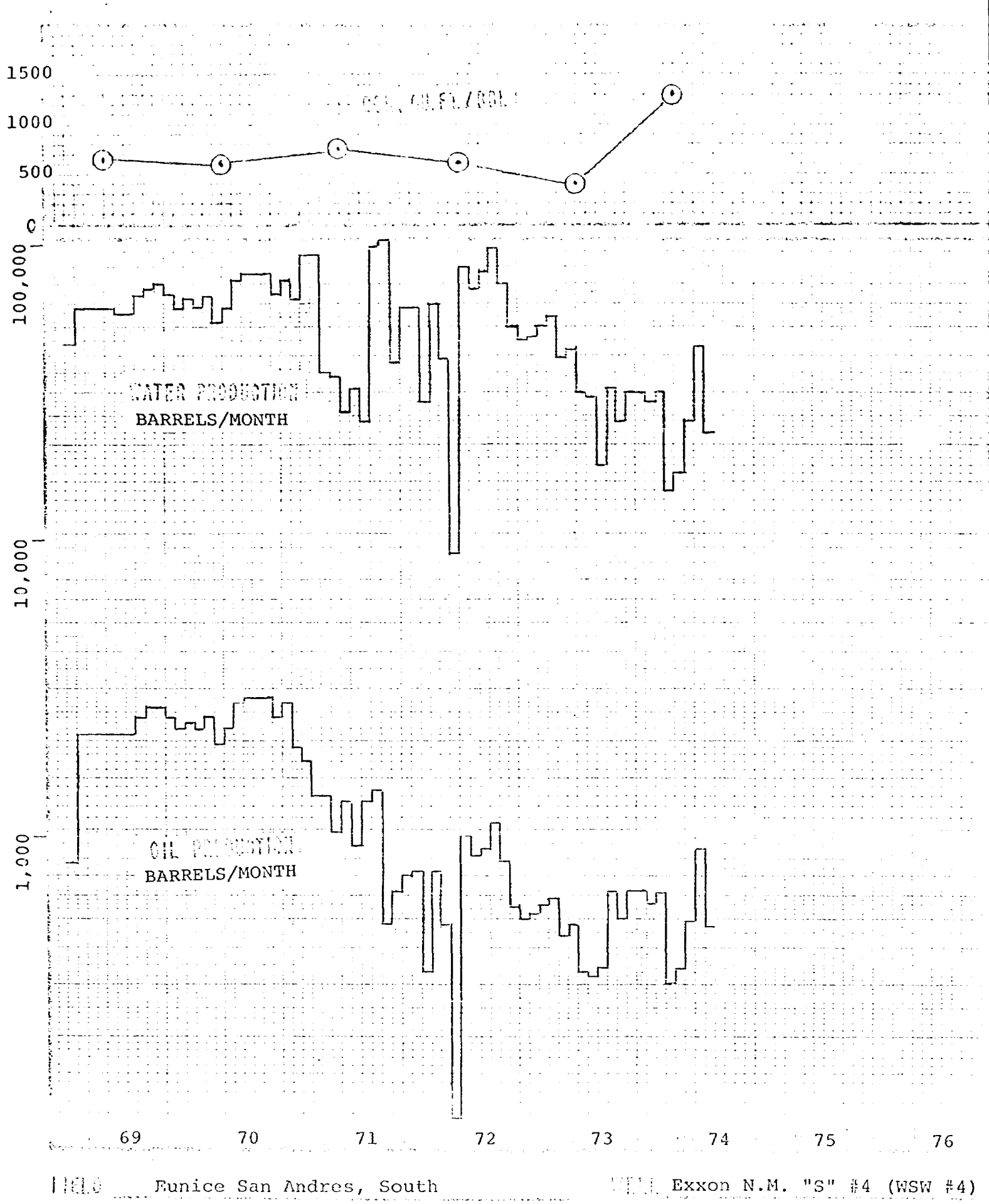
▲ -- San Andres Completions
⬢ -- Potential San Andres Completions

Scale: 1" = 2000'

July, 1976

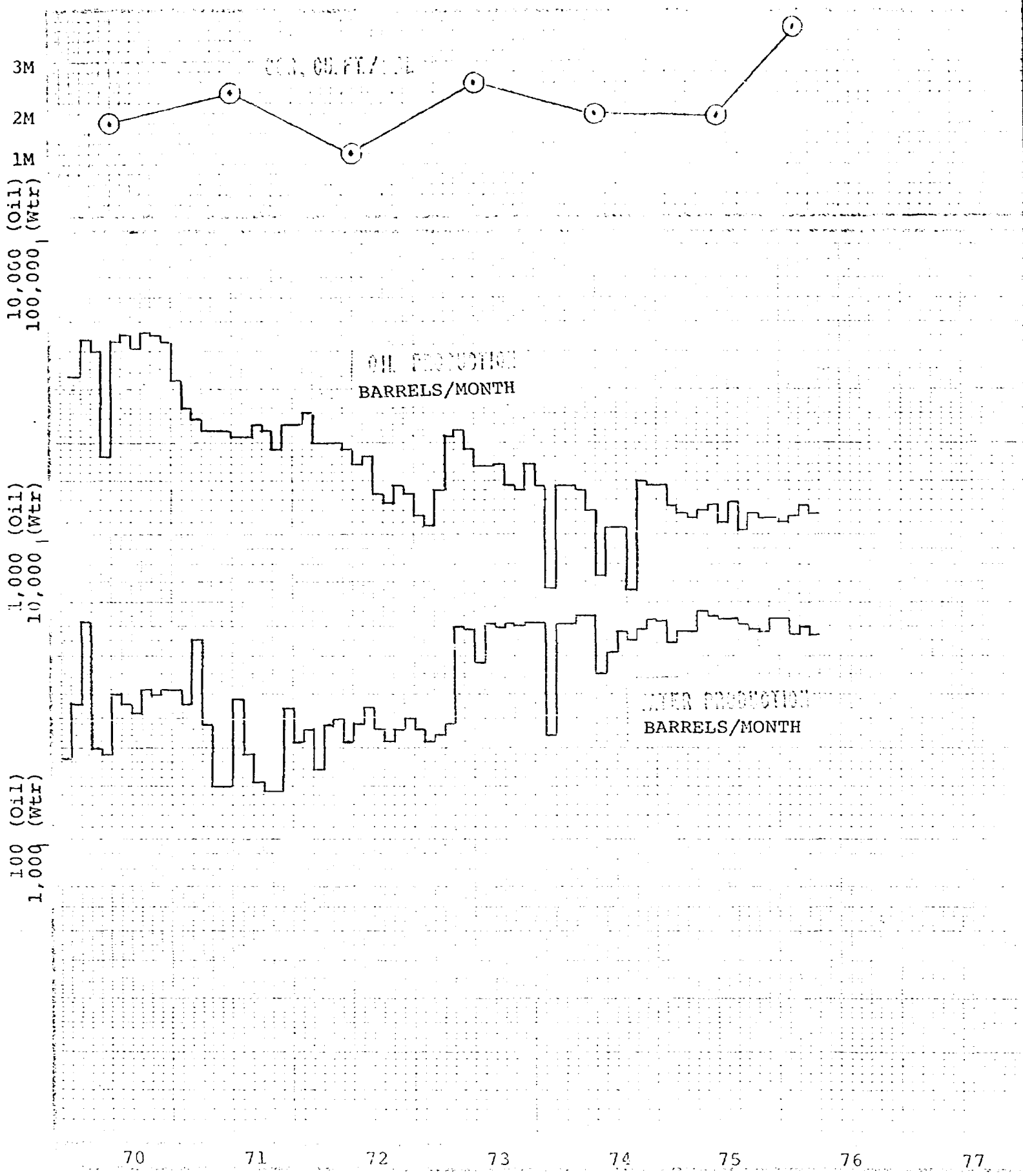


BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 5714 Exhibit No. 7-B
Submitted by Exxon
Hearing Date 7-14-76



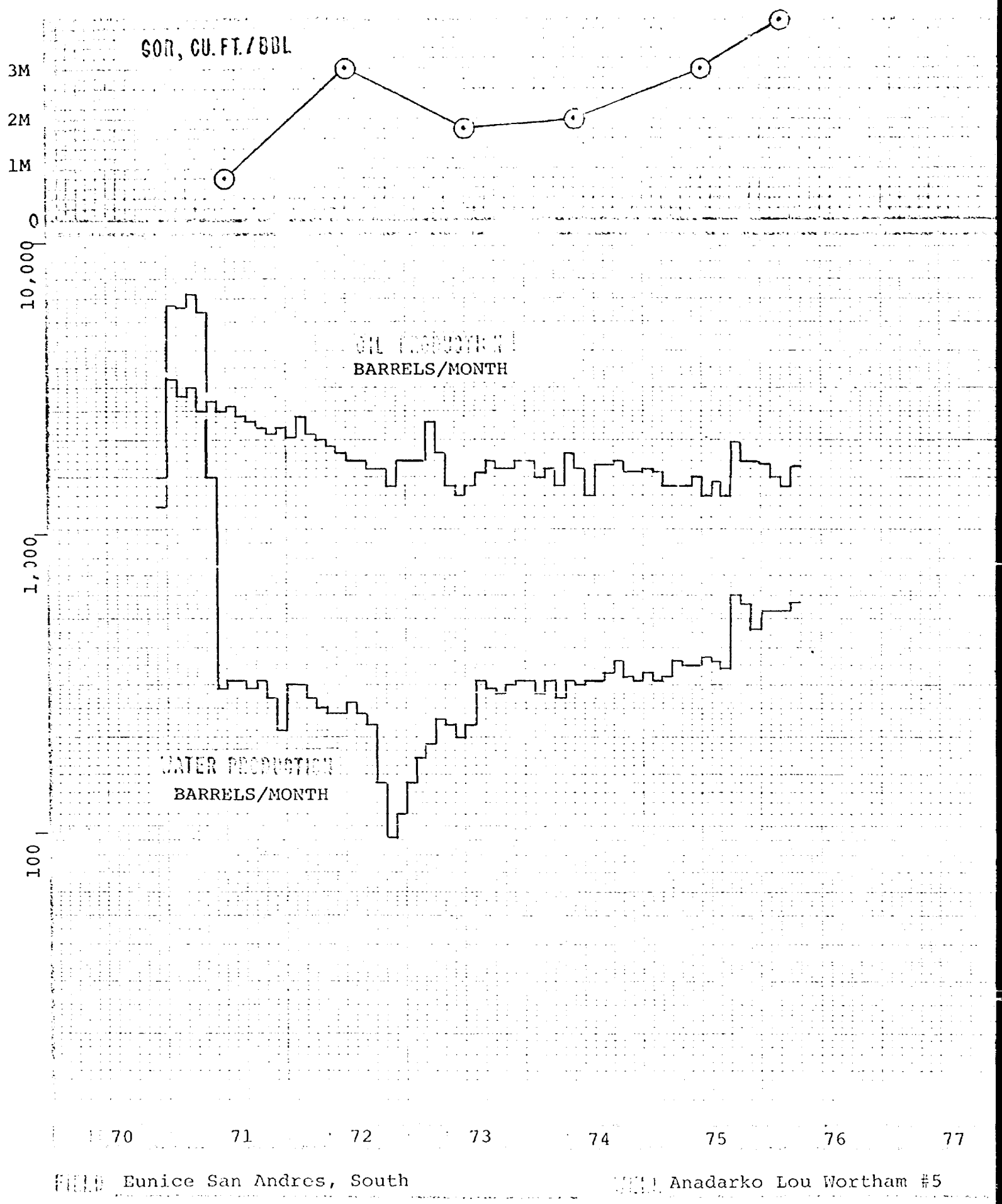
Eunice San Andres, South

Exxon N.M. "S" #4 (WSW #4)



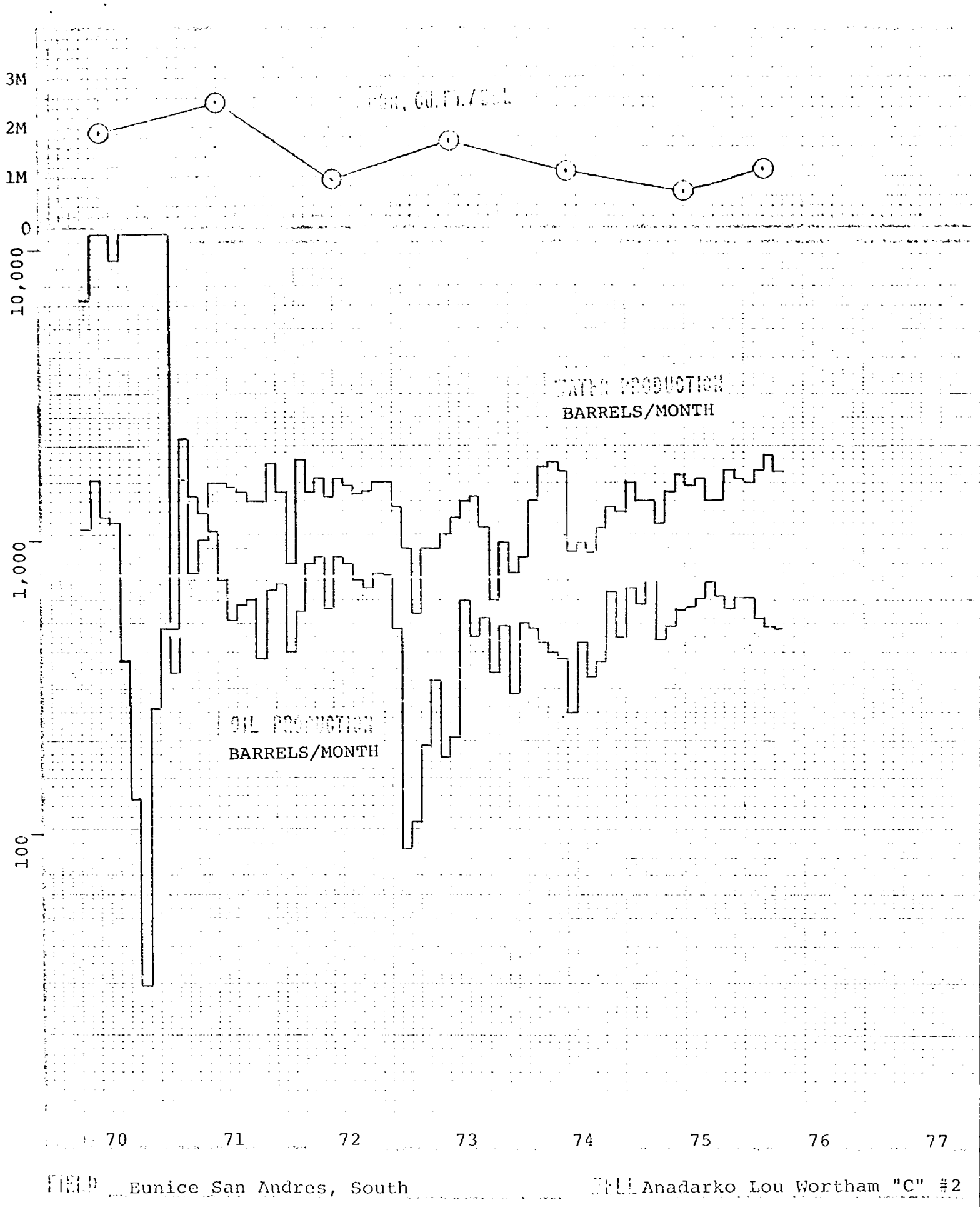
Eunice San Andres, South

Anadarko Lou Wortham "C"#1



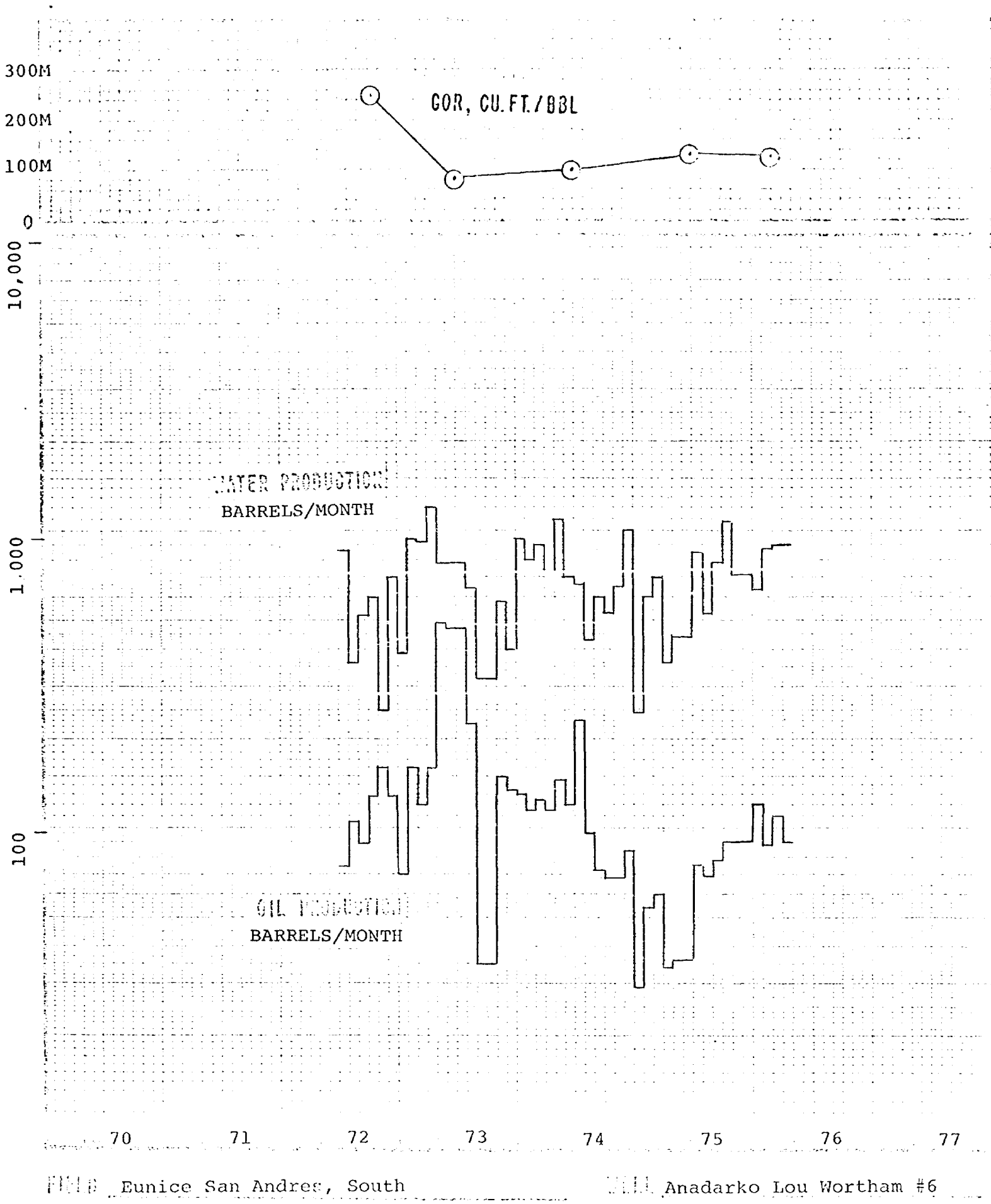
FIELD Eunice San Andres, South

WELL Anadarko Lou Wortham #5



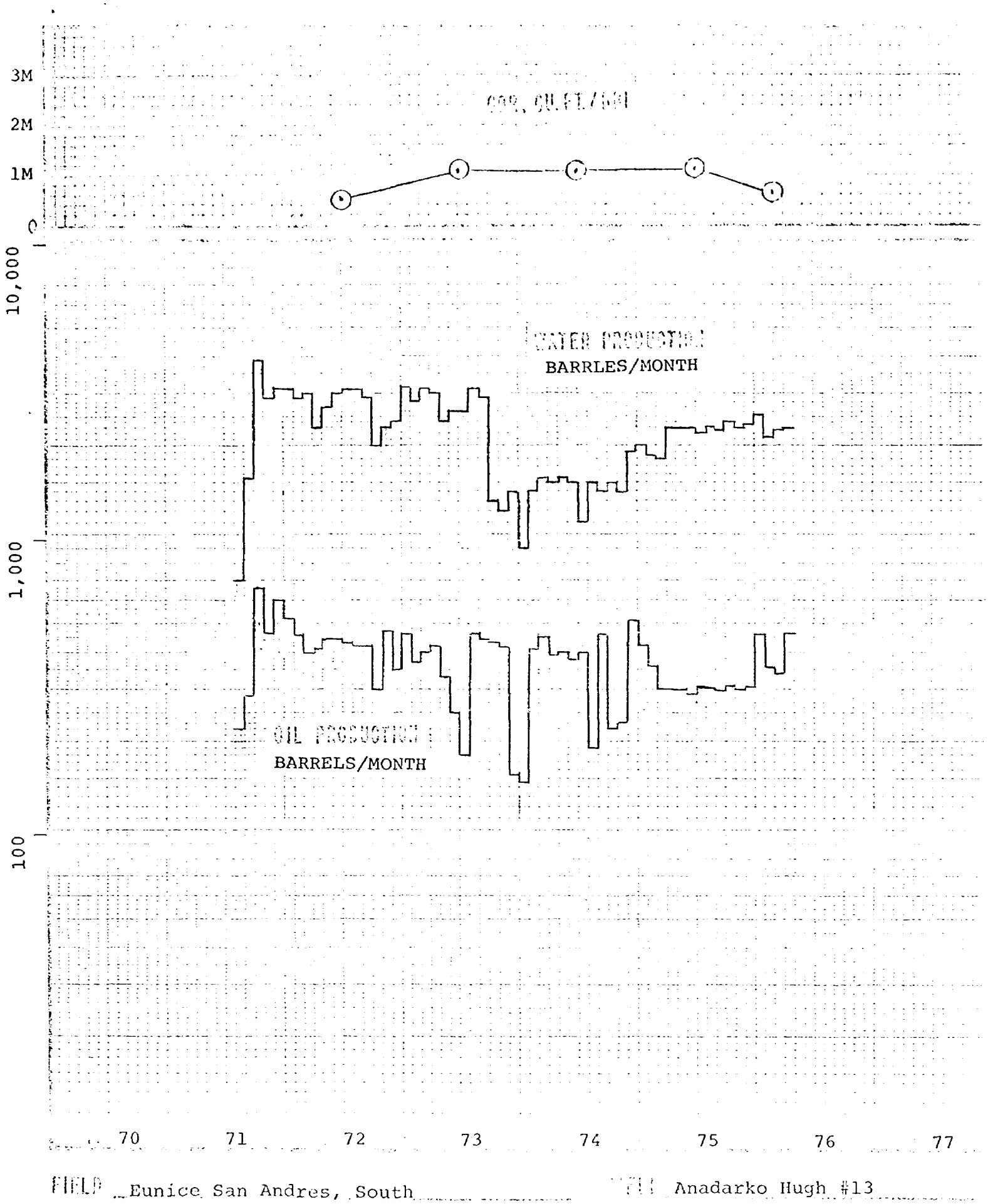
FIELD Eunice San Andres, South

WELL Anadarko Lou Wortham "C" #2



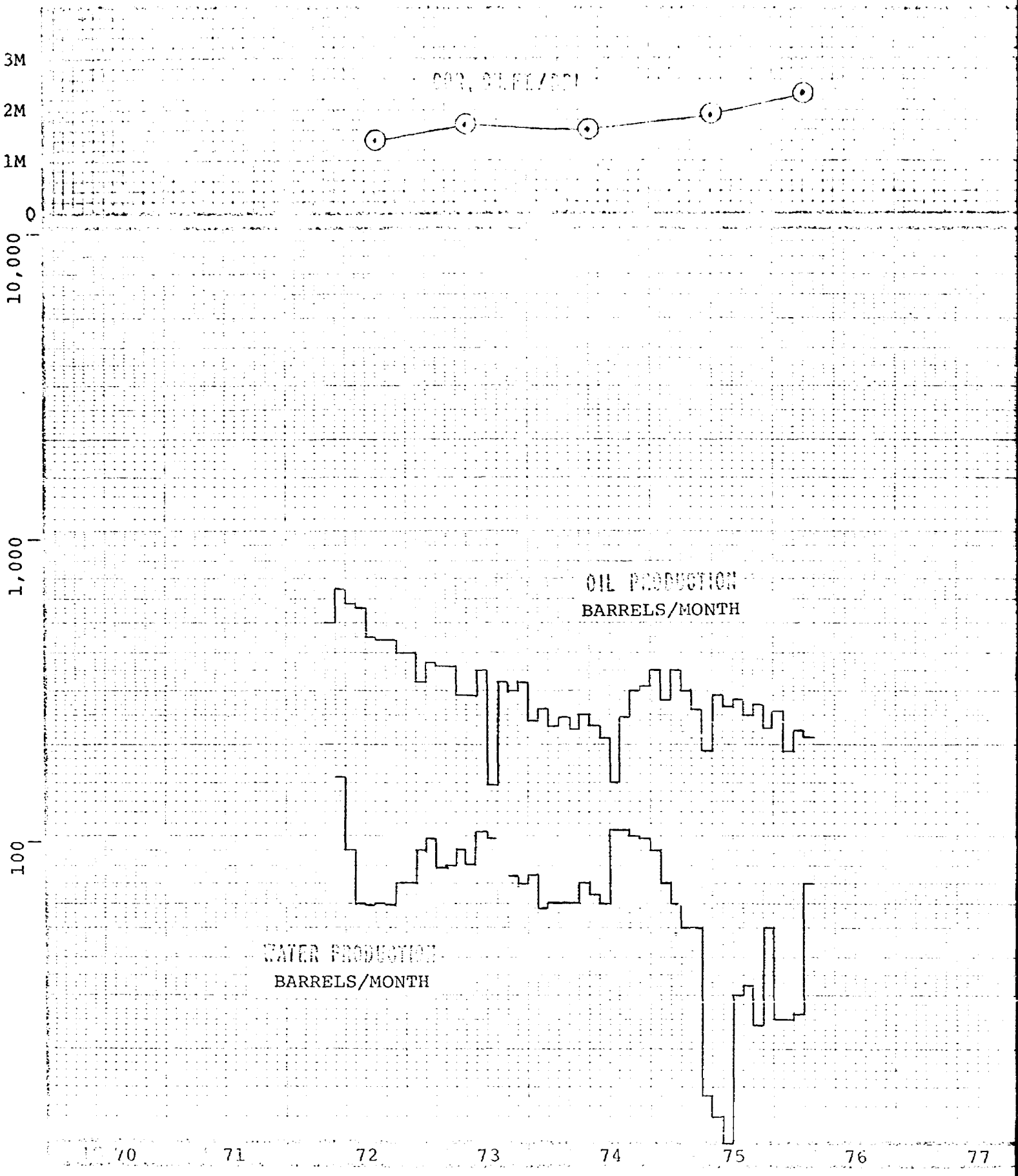
FIELD Eunice San Andres, South

WELL Anadarko Lou Wortham #6



FIELD Eunice San Andres, South

Anadarko Hugh #13



FIELD Eunice San Andres, South WELL Gulf Eaves #4

CASE 5701: Application of Cities Service Oil Company for downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Tubb Gas Pool and Drinkard Oil Pool production in the wellbore of its State "D" Well No. 2, located in Unit F of Section 15, Township 21 South, Range 37 East, Lea County, New Mexico.

CASE 5692: (Reopened & Readvertised)

Application of Cities Service Oil Company for a dual completion and downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Owen "A" Well No. 1 located in Unit P of Section 35, Township 21 South, Range 37 East, Lea County, New Mexico, completing said well in such a manner as to commingle Blinebry and Drinkard oil production and to dually complete said zones with the Wantz-Granite Wash Pool.

CASE 5711: Application of Hanson Oil Corporation for a dual completion and downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Max Gutman Well No. 7 located in Unit D of Section 19, Township 22 South, Range 38 East, Lea County, New Mexico, in such a manner as to commingle Blinebry and Tubb Pool oil and gas production and to dually complete said zones with the Drinkard Pool.

Docket No. 20-76

Dockets Nos. 21-76 and 22-76 are tentatively set for hearing on August 4 and August 18, 1976. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - WEDNESDAY - JULY 14, 1976

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

CASE 5712: In the matter of the hearing called by the Oil Conservation Commission upon its own motion to permit all interested parties to appear and show cause why the San Juan 30-4 Unit Area in Townships 30 and 31 North, Range 4 West, Rio Arriba County, New Mexico, should not be contracted by the deletion of all lands not presently within an approved participating area or which cannot be expected to be in such participating area within the reasonably foreseeable future as the result of commercial production being developed thereon.

CASE 5713: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Agua, Inc., and all other interested parties to appear and show cause why Agua, Inc. should be authorized to resume salt water disposal into the San Andres formation in its SWD Well No. H-35 located in Unit H of Section 35, Township 22 South, Range 37 East, Lea County, New Mexico.

CASE 5714: Application of Agua, Inc. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permanent authority to dispose of produced salt water into the San Andres formation through the perforated interval from 4230 feet to 4320 feet below the surface and into the open-hole interval from 4400 feet to 5000 feet in its SWD Well No. C-2 located in Unit C of Section 2, Township 22 South, Range 37 East, Lea County, New Mexico.

DRAFT

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. 5714
Order No. R-4495-D

APPLICATION OF AGUA INC. 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 July 14, 1976, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this _____ day of August, 1976, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, 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, Agua, Inc., is the operator of the SWD Well No. C-2, located in Unit C of Section 2, Township 22 South, Range 37 East, NMPM, Lea County, New Mexico.

(3) That by Order No. R-4495, dated March 21, 1973, the Commission authorized the use of said well for salt water disposal purposes, provided that disposal would be into the San Andres formation through the open-hole interval from 4,400 feet to 5,000 feet.

(4) That by Order No. R-4495-A, dated October 7, 1975, said Order No. R-4495 was amended to also permit, until February 7, 1976, the disposal of produced salt water into perforations between 4,230 feet and 4,320 feet.

(5) That in Case No. 5619 held on January 20, 1976 before Commission Examiner Daniel S. Nutter, the applicant sought an additional 90-day period for disposal into the aforesaid perforated interval while applicant completed an additional disposal well for its salt water disposal system in the subject area.

(6) That at said January 20th hearing, the applicant assured the Commission that the additional disposal well and related facilities could be put into operation prior to the expiration of the requested 90-day extension of time and that upon placing such well and related facilities in operation, applicant would be able to reduce disposal volumes in said SWD Well No. C-2 to a level which the open-hole interval from 4,400 feet to 5,000 feet would accept, and would then be able to discontinue disposal into the perforated interval from 4,230 feet to 4,320 feet.

(7) That on February 3, 1976, the Commission entered Order No. R-4495-B amending Order No. R-4495-A to permit the continued disposal of produced salt water into perforations between 4,230 feet and 4,320 feet in said SWD Well No. C-2 until May 7, 1976.

(8) That the applicant completed such additional disposal well being its SWD Well No. A-22 located in Unit A of Section 22, Township 22 South, Range 37 East, Lea County, New Mexico.

(9) That said SWD Well No. A-22 would not accept sufficient water at pressure limitations imposed by Commission Order No. R-5137 (100 psi surface pressure) to permit the applicant to discontinue use of the perforated interval in said SWD Well No. C-2 for disposal purposes.

(10) That in Case No. 5644 heard by the Commission on March 10, 1976, applicant requested an amendment of said Order No. R-5137 to permit surface injection pressures of up to 1200 psi for said SWD Well No. A-22 to cause said well to accept volumes of water sufficient to offset those being disposed in said perforated interval in said SWD Well No. C-2.

(11) That in Case No. 5674 held on April 28, 1976, before Commission Examiner Richard L. Stamets, the applicant sought permission to continue disposal into said perforated interval in its SWD Well No. C-2 for an additional 90-day period after May 7, 1976, and thereafter until 30 days after the entry of an order favorable to the applicant in Case No. 5644.

(12) That if the Commission had denied applicant's request in Case No. 5644, approval of the application in Case 5674 would have resulted in permanent authorization to inject into said perforated interval in SWD Well No. C-2.

(13) That continued temporary extensions of applicant's authority to inject into said perforated interval in SWD Well No. C-2 would have had the same effect as permanent or unrestricted authority to inject.

(14) That on May 18, 1976, the Commission entered Order No. R-4495-C amending Orders No. R-4495-A and R-4495-B by granting the applicant's request to continue to dispose of produced salt water into the perforated interval between 4,230 feet and 4,320 feet in said SWD Well No. C-2 until August 7, 1976, and ~~denying~~ applicant's request for authority to inject into said perforated interval in said well until 30 days after the entry of an order favorable to the applicant in Case No. 5644 was not granted.

(15) That applicant seeks in this case permanent authority to dispose of produced salt water into the perforated interval from 4230 feet to 4320 feet and into the open-hole interval from 4400 feet to 5000 feet in its SWD Well No. C-2.

(16) That approval of continued injection of produced water through the open-hole interval from 4400 feet to 5000 feet will prevent ~~the drilling of unnecessary wells~~ and otherwise ~~prevent~~ waste and protect correlative rights.

(17) That evidence presented indicates that unrestricted disposal of salt water into said perforated interval in the subject well for an extended period of time could have an adverse effect on oil production and oil reserves in the vicinity of said well thereby causing waste.

(18) That to avoid said adverse effects no order should be issued which would authorize permanent unrestricted injection into said perforated interval in the SWD Well No. C-2.

(19) That an offset operator objected to continued disposal of salt water into said perforated interval in applicant's SWD Well No. C-2.

(20) That such objection is based upon assertions that there is oil under said objecting operator's lease which will be swept off such lease by the water being injected within said perforated interval in the SWD Well No. C-2.

(21) That if such assertions are correct, said operator's correlative rights would be violated by unlimited injection into said perforated interval in SWD Well No. C-2.

(22) That the evidence presented is sufficient to indicate that correlative rights will be violated if any order should be issued by the Commission granting permanent authority for injection of water into said perforated interval in said SWD Well No. C-2.

(23) That in order to prevent waste and protect correlative rights, the application for authority to dispose of produced salt water into said perforated interval in said SWD Well No. C-2 should be denied.

(24) That denial of the subject application might result in approximately 430 producing wells connected to applicant's disposal system being shut-in.

(25) That to avoid the immediate shut-in of said 430 producing wells following denial of the subject application, an extension of the temporary authority to inject into said perforated interval in applicant's SWD Well No. C-2 should be ~~granted~~ authorized.

IT IS THEREFORE ORDERED:

(1) That the application of Agua Inc. for permanent authority to dispose of produced salt water into the San Andres formation through the open-hole interval from 4400 feet to 5000 feet below the surface in its SWD Well No. C-2 located in Unit C of Section 2, Township 22 South, Range 37 East, Lea County, New Mexico, be and the same hereby is granted.

(2) That the application of Agua Inc. for permanent authority

to dispose of produced salt water into the San Andres formation through the perforated interval from 4230 feet to 4320 feet below the surface in its SWD Well No. C-2 located in Unit C of Section 2, Township 22 South, Range 37 East, Lea County, New Mexico, be and the same hereby is denied.

(3) That the "PROVIDED FURTHER" Section of Order No. 1 of Commission Order No. R-4495-A is hereby amended to read in its entirety as follows:

> "PROVIDED FURTHER, that disposal into the aforesaid perforated interval from 4230 feet to 4320 feet shall not occur after September 1, 1976, and proper action shall be taken by the applicant to the satisfaction of the Supervisor of the Hobbs District Office of the Commission to prevent such disposal."

(4) 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.