CASE 4496: Application of BTA OIL PRODUCERS FOR A PRESSURE MAINTENANCE PROJECT.

Case Number

4496

Application

Transcripts.

SmaLL Exhibits

ETC.

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

February 3, 1971

EXAMINER HEARING

IN THE MATTER OF:

Application of BTA Oil Producers for a pressure maintenance project, Lea and Roosevelt Counties, New Mexico.

Case No. 4496

BEFORE: Daniel S. Nutter, Examiner

TRANSCRIPT OF HEARING

MR. NUTTER: We'll call the next case, 4496.

MR. HATCH: Case 4496, Application of BTA Oil Producers for a pressure maintenance project, Lea and Roosevelt Counties, New Mexico.

MR. KELLAHIN: Examiner, please, Jason Kellahin of Kellahin and Fox, Santa Fe, appearing for the Applicant. We have one witness we'd like to have sworn.

(Witness sworn.)

(Whereupon, Applicant's Exhibits 1 through 21 were duly marked for identification.)

JERRY I. MORITZ

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you state your name, please.

A Jerry Moritz.

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

A I'm employed by BTA Oil Producers as Secondary Recovery Engineer in Midland, Texas.

Q Have you ever testified before the Oil Conservation Commission and made your qualifications as an engineer a matter of record?

A Yes.

MR. KELLAHIN: Are the witness' qualifications acceptable?

MR. NUTTER: Yes, they are.

Q Mr. Moritz, briefly, what is proposed by BTA in the application in Case Number 4496?

A Our application is asking that we be allowed to inject water into BTA Oil Producers' 685 Ltd. Bond Well No. 5 which is located in the southwest quarter of Section 4, Township 9 South, Range 36 East.

The reason for this application is that, as exhibits will show later, BTA and many other operators in the Vada Trend, which this area is included in, have noticed that the Bough "C" production has the characteristic of declining at a very rapid rate. In several areas of the field, the production is now below thirty barrels of oil per day, and in this area, we feel, and we hope to show by exhibits, that the production is at the point where it is going to begin this very rapid decline.

BTA would like to conduct this pilot operation so that a secondary recovery method can be proven or disproven for this reservoir. If the pilot is successful, it is anticipated that upward of 300 wells in the Vada Trend will be unitized for secondary recovery operations. However, if this pilot is unsuccessful, it is anticipated that in a short time, the majority of the wells in the Vada Trend will have to

be abandoned.

Q Now, referring to what has been marked as Applicant's Exhibit Number 1, would you identify that exhibit.

A Exhibit Number 1 is a land plat of the so-called project area as we have asked for in this application.

We have shown it with a bordered area. Also, we have shown the initial injection well in a red triangle.

The yellow area is BTA Oil Producer leases. We have actually even shown the ones outside of the project area so that you can have a better idea where all of our properties are.

Q Now, where is this area located in relation to the Vada Pool?

A This is actually the easternmost edge of the Vada Trend or Vada Pool.

Q Now, referring to what has been marked as Exhibit Number 2 through 14, would you identify and discuss the information that is shown on those exhibits.

A Exhibit 2 through 14 are production plots, oil, gas and water of the thirteen leases included in this project area.

I think, thumbing through some of these, I will point out some specific ones, but you can see in general the oil production has been very good, reaching, in some cases, as high as 300 barrels of oil per day. As you can also see,

the water has been equally as good or greater than the oil production in the latter part of '70; in general, you can see that the production has begun to drop, the water production has dropped even more than that, and the gas has begun to increase.

In our mind, indicating that this is a straight depletion drive reservoir. Specifically, I'd like to have the Examiner look at Exhibit Number 4 as an example of the possible decline in this production.

This is BTA's 686 Harris lease which contains two wells. As you can see, the production dropped from approximately a maximum of twenty thousand barrels a month to its present rate of about six thousand barrels a month which represents about a sixty-seven percent decline in production, oil production.

The water production also declined seventy-nine percent during that period.

Now, I will refer you to Exhibit Number 6. Exhibit Number 6 again shows the same characteristic in that the production has dropped off in the last few months, dropping approximately seventy-seven percent.

The water production likewise has dropped ninety-two percent.

There's another characteristic I'd like to show here in June and July of 1970. The production actually picked

up, and this is due to the well being returned to a flowing status. There is, on some of these leases, the unique point whereby the water cut, the bottom hole pressure and the gas/oil ratio simultaneously agree that the wells will actually return to a flowing state. It does not happen on all the wells, but it does happen on some of them and this happens to be one of them.

Q Now, referring to what has been marked as Exhibit 15, would you identify that exhibit.

A Exhibit Number 15 is a plot of all thirteen leases in the project area. The total of all the leases, oil, gas and water.

Again, you can see that the oil production has dropped from a maximum of about a hundred and sixty thousand barrels a month to the present rate of about a hundred and ten thousand or about a thirty percent decline.

Likewise, the water production has dropped some seventy-eight percent and, as you can see, the gas/oil ratio and gas production has increased tremendously.

I might point out the December figures were not available at the time of preparation of these exhibits, but the oil production for December has dropped another thirteen percent.

MR. NUTTER: What would that level be, Mr. Moritz?

THE WITNESS: It would be about ninety thousand

barrels, and the water production dropped on down to about sixty thousand.

Q (Mr. Kellahin continuing) Now, would you discuss the information that is shown on Exhibit Number 16.

A Exhibit Number 16 is a time plot of the bottom hole pressures that BTA has measuredon the wells in the project area only. We do have the practice of drill stem testing most all of our wells on initial completion and, likewise, periodically, when the pumps need changing, the hydraulic pumps, we have run bottom hole pressures on all of the wells and you can see that rather significant decline in pressure here, again indicating that this is a straight forward depletion drive reservoir.

I might also point out that the project area of pressure is nearing a thousand pounds and it has been our experience from the operation of about eighty wells in this Bough "C" Trend that once the bottom hole pressure gets to about twelve hundred pounds, this is the point that the production does start to decline oil and water and the G.O.R. starts to skyrocket.

I have included here Exhibit Number 17 which is of BTA Oil Producers' 673 Limited Vada "C" Number 3. This well is approximately twelve miles west of the project area, in an area that was drilled about one year earlier than the project area, and this area or this curve, as you can see, has

declined tremendously.

The well went from essentially a top allowable, well down to almost an uneconomical state in something like ten months. Again, I might point out that this well has the characteristic of going back to a flowing status approximately in August of '69.

Q Has it continued to flow since then?

A Yes.

Q Now, referring to what has been marked as Exhibit Number 18, would you -- well, prior to that, based on the information that is shown on the preceding exhibits, what is your conclusion of the characteristics and feasibility of the pressure maintenance project in this area?

A My conclusions from these exhibits are that we can expect, or BTA can expect the production in the area to start this rapid decline and we estimate that within six to eight months, most of the wells in the project area will be at the state we have to consider abandoment of these wells.

It is likewise my conclusion that the pressure and the state of the production in this project is at the point where secondary recovery operations should be started. Since the time to form a communitized project would take about six to a year's time, at the minimum, BTA feels compelled to initiate a project of this type in an effort to obtain some data regarding the floodability of this reservoir.

Exhibit Number 17, we feel, is a good example of what can happen to the production and, likewise, this shows what can happen to a lease and how quickly it can be put into jeopardy as regards to losing the lease and, of course, if we lose the leases, we cannot conduct secondary recovery operations on these.

Q Is that one reason you feel it essential that a pilot project be started immediately?

A Yes.

Q Now, referring to Exhibit Number 18, would you discuss that exhibit.

A Exhibit Number 18 is a schematic of the initial well that we propose to inject into, the 685 Limited Bond No. 5. I have marked all the casing strings.

We did cement twelve and three-quarter inch casing at 361 feet and this cement was circulated.

We set eight and five-eighths casing at 4085 and cemented it with four hundred sacks with an estimated top of the cement at 1550 and we set five and a half casing at 9850 with three hundred sacks, with the cement top at 8290.

We perforated the Bough "C" interval from 9221 to -33, and if this application is approved, we will set a Baker Model R packer at 9780 and run two and seven-eighths tubing on it and we will inject below this packer.

We feel that we have adequately protected all of the various formations that we've penetrated in this well. We will load the annulus with an inhibited fluid and have pressure gauges on the annulus for periodic checks to see if pressure is built up on the annulus.

Q Will you use an internally coated tubing?

A We will not use an internally coated tubing in this case. We have looked at the water, and the water is not of the corrosive characteristic and we do not anticipate any problems from this standpoint.

Q Now, in the application, Mr. Mortiz, the Applicant asked for administrative procedure whereby additional injection wells may be included in the project and for injection of gas or air. Will, essentially, the same type of completion as shown on Exhibit 18 be utilized for those additional wells?

A Yes, essentially the same.

Q And is your casing of cementing program on the other wells in the project area essentially the same as shown on this exhibit?

A Yes, sir, it sure is.

Q Now, referring to what has been marked as Exhibit 19, would you identify that exhibit.

A Exhibit Number 19 is a reduced copy of the log on the 685 Limited Bond No. 5 which we propose to use as the initial injection well.

We have marked the normal tops of formations encountered in this well, plus the perforated interval and the packer setting point that we're proposing.

Q Now, would you please explain what is shown on Exhibit Number 20.

A Exhibit Number 20 is a summary of the calculations of the fluid volumes involved in the project area for the Bough "C" Formation.

As can be seen, we are estimating that the project area has approximately nineteen million eight hundred sixty thousand barrels of pore space contained in the Bough "C". Of this nineteen million barrels of pore space, we believe that approximately eleven million nine hundred thousand barrels was oil, and the remaining seven million nine hundred thousand barrels contained water.

Now, we have converted the next two figures, these stock barrels which is approximately six millions six hundred thousand barrels of stock tank oil and approximately seven million nine hundred thousand barrels of water.

The next group of figures are the recoveries to 12/1/70 showing that we recovered approximately three million barrels of oil or about a hundred and fifty-two thousand barrels per well and approximately five million five hundred thousand barrels of water or two hundred twenty-five thousand barrels of water per well.

We estimate that the oil recovery has been forty-six percent of the oil in place at 12/1/70, and approximately sixty-nine percent of it water. We also are estimating that a successful secondary recovery project will recover one million three hundred and eighty-nine thousand barrels of additional oil or approximately seventy thousand barrels per well in the project area.

Q Now, Mr. Moritz, you have discussed, in regard to converting the 685 Bond No. 5 Well to injection and your initial plans to inject water into this well, will you tell the Examiner what fluid you plan to use and where it will come from and the volumes and pressures expected to be used in connection with this project.

A BTA Oil Producers operates an extensive salt water disposal gathering system in this area, collecting Bough "C" water.

We plan to divert part of this water to injection in this Number 5 Well. We presently have about seventy-five hundred barrels of water a day available. Of course, this is rapidly declining.

We expect to initially begin with about fifteen hundred barrels of water a day in the Number 5 and, initially, we expect no pressure at all.

MR. NUTTER: How many barrels a day?

THE WITNESS: Fifteen hundred.

Q Now, in your application, you ask for considerable flexibility in the operation of this project; namely, the ability to change injection wells and to change injection fluids, possibly to gas or air. Would you explain the necessity for this?

A Yes. I have already talked about the time factor involved in this project in that the production from this reservoir is expected to decline very rapidly, expect it in the next few months, and we have already pointed out that we feel that there is sufficient oil left in the reservoir or will be left in the reservoir to justify secondary recovery operations.

Therefore, we are asking for this flexibility so that we can properly evaluate the secondary recovery technique or recover the maximum amount of oil. Flexibility asked in regard to changing wells is tied in with the request for flexibility of injecting different fluids.

BTA has some limited data that indicates possibly that the water is not the fluid to inject into this reservoir. Therefore, since BTA would like to evaluate this reservoir in the best manner, we are requesting that we be allowed to inject different fluids so that in case one fluid does not work, we have the ability to try and change to another.

Since we would probably not want to inject gas into the well that had previously injected water, we therefore need

the flexibility to change wells. BTA, of course, would advise the Commission and the offsets by administrative procedures of its intent to change operations.

Q Now, from your Exhibit Number 1 it would appear that the acreage involved in the project area is federally-owned.

A Yes. Most of the acreage is federal.

Q Have you received approval from the Department of the Interior Geological Survey?

A Yes, we have discussed this project with the federal government, and Exhibit 21 is their letter to us in this regard.

Q Mr. Moritz, do you know of any other efforts directed toward either pressure maintenance or secondary recovery in the Bough "C" reservoir?

A Yes, I know of one project called the Imbe Unit which is approximately sixteen miles south or west of here. This unit was actively engaged in attempt to form a unitized project. However, we have now received word that the operator has given up on attempts to form this unit. We know of no projects now that are attempting or are injecting fluids into the Bough "C" for secondary recovery purposes.

Q This would be a pilot project to determine if it is feasible, is that correct?

A Yes.

Q In your opinion, will the approval of this application result in the prevention of waste or correlative rights protected by the proposal you have made?

A Yes.

Q Were Exhibits 1 through 21, inclusive, prepared by you or under your supervision?

A Yes.

MR. KELLAHIN: I would like to offer Exhibits 1 through 21, inclusively.

MR. NUTTER: BTA's Exhibits 1 through 21 will be admitted.

(Whereupon, Applicant's Exhibits 1 through 21 were duly admitted into evidence.)

MR. KELLAHIN: That completes the direct examination of the witness, Mr. Nutter.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Moritz, which well other than the well shown on Exhibit 17 was the one that you mentioned that started flowing and increased its production after you removed the pump?

A On Exhibit 17? I believe it is --

Q Was it Exhibit 4?

MR. COOLEY: 6, I believe it was, Mr. Nutter.

THE WITNESS: Yes, 6.

Q Exhibit 6?

A Yes, 6.

Q Now, I notice the same characteristic there on your Vada "C" Number 3 and this Allen Lease here on Exhibit Number 6, that when you took the pump off and the well started flowing, that there was a drastic increase in the amount of gas produced at that time. Did the increase in the production of gas result from putting the well on a flowing status and taking the pump off, or did the well, going on flowing status, result from the increase in gas production?

A It may be a little of both. There is, of course when we have the pumps in there, a certain amount of restriction to this gas production because we actually are having to pump the gas and we feel that this probably is one of the reasons we get a little production increase when we put these back on flowing, in that we are not holding back the fluids back there, that they're freely coming out. We have a slight tendency with the pump to hold the fluid back.

Q Well, if you are holding it back, preventing this dissipation of the gas energy from the gas reservoir, you are actually helping the reservoir by pumping it, aren't you, if it is going to let the gas break up and overproduce gas by putting it on a flowing status?

A I guess we would be.

Q So all this pressure that you have lost, would

have to be pressure you'd have to make up before you can get any response with your water injection program?

A Yes. We think that one of the big questions that we have to answer with this project is: What is the time of breakthrough of this water? This is one of the big problems.

If the time of breakthrough is instantaneous, which we can foresee and some other people have discussed, then I would say the possibilities of secondary recovery with water are almost nil.

However, if this idea that the water breakthrough does not occur and we don't prove it out, then I think we have a much better chance of recovering this oil and, subsequently, if water does break through, I think there's a chance that gas or air injection may be the answer in that case, and this is just an alternate programming case; water breakthrough does like essentially what everybody says it will.

Q Well now, on this recovery, you estimate that you recovered forty-six percent of the stock tank oil in place, up to December of 1970, and that the average in the project area is two hundred and seventy-five thousand barrels a day. This is a rather high recovery factor for solution drive reservoirs, isn't it?

A Yes.

Q So you've had exceptional performance, really?

A Yes, and I personally believe or we believe that the

reason for this was the water contained in the reservoir, that you had a certain period in the reservoir production where you actually were operating by water expansion.

Q And this connate water, there was so much in there under so much pressure, the water expansion helped the flow?

A Right. The water expansion brought about the oil well for a short period of time.

Q But all that is connate water; no edge water or water drive, active water drive?

A We see no evidence of active water encroachment, especially when we covered it with our study of dry holes around this area, we found no place where there could be water encroachment because all the evidence shows it has not been encroaching.

Q Has the Bough "C" of the Pennsylvania been subjected to water injection or other forms of secondary recovery in Lea County or in any other area?

A No, not that I know of.

Q There was no project initiated in the Allison area?

A No. No. There's one slight difference I might point out in the Allison; the Allison prediction is somewhere in the neighborhood of eighty percent and this was their thoughts, that they would not have much left to recovery anyway, so it was not attempted.

Q That area was drilled on eighty-acre spacing?

A Right.

Q As compared to a hundred and sixty here?

A Right.

Q Now, in this estimate of seventy thousand barrels per well, secondary discovery, is that based on any scientific procedure or just a guess?

A No. It is based on an attempt to arrive at what we think the aerial sweep and the vertical displacements will be. It is very difficult to make these predictions in that the evidence of what water, gas or the other fluids are going to do is very contradictory. Some people have shown us evidence that water will not work at all, so you might say in that case, the recovery would be zero.

But we have tried to make some predictions on the basis of the data we can see.

Q What is your estimate of primary recovery without any secondary stimulation per well here?

A I'd say about a hundred and seventy thousand.

Q Well, you've recovered two hundred and seventy-five thousand.

A No. We've recovered, on the oil, a hundred and sixty-two.

Q I beg your pardon. I'm looking at water. Oil is a hundred and fifty-two.

A Right.

Q And you say a hundred and seventy thousand?

A Yes. This is based on this rapid decline point.

Q Now, the secondary recovery would be in addition to the hundred and fifty-two thousand that you recovered or in addition to the hundred and seventy thousand?

A In addition to the hundred and seventy.

Q So you'd get a total of two hundred seventy thousand per well, approximately?

A Right. I might point out one other thing: We are not wanting to enhance this project as an ultimate project. Our ultimate concern is the area in which BTA operates, which as I pointed out before, is about three hundred wells and our ultimate concern is the formation of a unitized project covering these three hundred wells.

I think conceivably if we could prove that this project is successful, whatever we inject, we probably in a short period of time would ask for the dismissal of this project and we would instigate negotiation on unitization, simultaneously, on three different units to unitize the three hundred wells.

Q Well, for the time being -- have you ever examined any of the Commission's rules for pressure maintenance projects that have been promulgated in the past?

A No.

Q Some are rather complex and provide for conversion

of water injection into m.c.f. of gas to apply against high G.O.R.'s and such as that. They are rather complicated. Do you think you need any rules such as have been promulgated by the Commission for other projects for this pilot, or would you just be able to --

A No, we are not asking for this. We do have some spare allowable there. We're going to lose a hundred barrels allowable on production in this well.

Q You will produce this from offsetting wells?

A We think there's a chance. Our production people say that the fluid migrates around enough to where we may make it up, but we are actually not worrying about it one way or another.

Q Would you like to see some of our rules that we put out for other projects to prove --

A No, not at this time.

Q -- offsetting wells? Not at this time; so your authority seeks to inject water into this well, and administrative procedure, converse to other wells, if not successful and if need be in the future, possibly convert to air or gas, is that right?

A Right. The reason we ask for the possibility of area is that we have been negotiating or talking with Warren in this area and the possibility of gas being available for injection is a little in question, it may be available; but at what price is the problem.

We would prefer not to inject air, but if it comes to it and our results are negative on water, we may have to go this way and we want this as an alternate to protect ourselves.

MR. NUTTER: Very good. Are there any further questions of Mr. Moritz?

MR. PORTER: I have one question.

CROSS EXAMINATION

BY MR. PORTER:

Q This well that you said had started flowing again, do you know how long that well flowed initially before it was put on pump, or was it put on pump immediately?

A The first one that I was referring to which is shown as Exhibit 6, I believe?

Q Yes.

A This one, as I remember, it flowed something like two or three weeks. It was a very short -- it was less than a month, and then the water cut, as usual, increased to the point where the well died and we had to put it on pump.

Q At the initial point of the time you put it on pump, about what was the total fluid production per day?

A I'd say, oh, something like eight hundred barrels of total fluid.

Q And now, what is the production? Apparently, I looked at the graph, but --

A Oh, we're looking at, probably there's about seventy barrels of oil and maybe twenty; so about less than a hundred barrels of total fluid now.

Q Your water has declined apparently faster than the oil has.

A Generally, this is the case. The water does decline faster.

MR. PORTER: That's all.

RECROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Moritz, I have one more question with regard to Exhibit 16 which is your bottom hole pressure history. Now, you mentioned that you normally take bottom hole pressures at the time you put pumps on the well. Was that your testimony?

A No. I said when we change pumps, I believe.

Q When you change pumps. So this would be a history of -- that defeats my question, because I thought it was at the time you put pumps on, and that this would be a history of decline of pressure as the need came up for installation of pumping equipment.

A No. No. I'd say the majority of the wells in this area did not flow. There's probably not one out of ten that flows initially.

Q So these wells that are represented here, these twenty wells, had pumps prior to the time of this bottom hole

pressure as well as after the bottom hole pressure, there was a pump change?

A Right.

MR. PORTER: Do you anticipate that some of these wells that didn't flow initially will flow now or will flow at a certain point of decline?

THE WITNESS: Some of them, yes, sir. I think there may be some. There's this three-phase point that has to be reached and, for some unknown reason, I say some of the wells may have the G.O.R., and what we predict to be the right bottom hole pressure, but they may have a cut, something like thirty-five percent, and it seems like if it is thirty-five percent, they won't flow. It takes about a twenty-five percent cut to make it.

MR. NUTTER: If there's no further questions of the witness, he may be excused. Do you have anything further, Mr. Kellahin?

MR. KELLAHIN: Yes. As an owner of royalty under acreage offsetting this project, I am in favor of it.

MR. HATCH: The Commission has received a letter from Blackrock Oil Company supporting the Applicant in this case.

MR. NUTTER: Does anyone else have any questions to ask?

THE WITNESS: You also, hopefully, received one

from Tenneco and I do have a copy of their letter that they sent me, a copy of that.

MR. NUTTER: You'd better give me that, because I had that Tenneco letter and it's plumb disappeared.

If there's nothing further in Case Number 4496, we will take the case under advisement.

I N D E X

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STATE OF NEW MEXICO)
) SS
COUNTY OF BERNALILLO)

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

Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4496, heard by me on 2/3, 71.

Examiner
New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION

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

GOVERNOR
BRUCE KING
CHAIRMAN

LAND COMMISSIONER
ALEX J. ARMIJO
MEMBER

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

February 8, 1971

Re: Case No. 4496
Order No. R-4098
Applicant:
BTA Oil Producers

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

Dear Sir:

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

Very truly yours,

A. L. Porter, Jr.

A. L. PORTER, Jr.
Secretary-Director

ALP/ir

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other

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. 4496
Order No. R-4098

APPLICATION OF BTA OIL PRODUCERS
FOR A PRESSURE MAINTENANCE PROJECT,
LEA AND ROOSEVELT COUNTIES, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 3, 1971, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 8th day of February, 1971, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, BTA Oil Producers, seeks authority to institute a pilot pressure maintenance project in the Vada-Pennsylvanian Pool by the injection of water into the Bough "C" zone of the Pennsylvanian formation through its 685 Ltd. Bond Well No. 5, located in the NW/4 SW/4 of Section 4, Township 9 South, Range 36 East, NMPM, Lea County, New Mexico.

(3) That the applicant further seeks a procedure whereby additional injection wells and the injection of air or gas may be approved administratively.

(4) That the proposed pilot pressure maintenance project is in the interest of conservation and may result in greater

ultimate recovery of oil from the subject pool, thereby preventing waste.

(5) That the proposed pressure maintenance project should be approved and an administrative procedure adopted for approval of additional injection wells and the injection of air or gas as well as water.

IT IS THEREFORE ORDERED:

(1) That the applicant, BTA Oil Producers, is hereby authorized to institute a pilot pressure maintenance project, designated the BTA Vada Bond Pressure Maintenance Project, in the Vada-Pennsylvanian Pool by the injection of water into the Bough "C" formation through its 685 Ltd. Bond Well No. 5, located in the NW/4 SW/4 of Section 4, Township 9 South, Range 36 East, NMPM, Lea County, New Mexico.

(2) That the Secretary-Director of the Commission is hereby authorized to approve additional injection wells in the area of the above-described 685 Ltd. Bond Well No. 5 and to authorize the injection of water, air, or gas into the Bough "C" zone of the Vada-Pennsylvanian Pool through such wells. To obtain such approval, the project operator shall file proper application with the Commission, which application shall include the following:

(a) A plat showing the location of the proposed injection well, all wells within a radius of one mile of the proposed injection well, and offset operators.

(b) A schematic drawing of the proposed injection well which fully describes the casing, tubing, perforated interval, and depth showing that the injection of water or air or gas will be confined to the Bough "C" zone of the Pennsylvanian formation.

(c) A letter stating that all offset operators to the proposed injection well have been furnished a complete copy of the application and the date of notification.

The Secretary-Director may approve the proposed injection well if, within 20 days after receiving the application, no

objection to the proposal has been received. The Secretary-Director may grant immediate approval, provided waivers of objection are received from all offset operators.

(3) That the subject pressure maintenance project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations insofar as said rules are not inconsistent with this order.

(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

BRUCE KING, Chairman

ALEX J. ARMIJO, Member

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

esr/

TENNECO OIL COMPANY · P. O. BOX 1031 · 1800 WILCO BUILDING · MIDLAND, TEXAS 79701

January 21, 1971

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

Gentlemen:

Tenneco Oil Company as an operator in the Vada and Bough Fields supports the application of BTA Oil Producers for approval to conduct a pilot pressure maintenance project in the Bough "C" formation of the Vada Trend in Lea and Roosevelt Counties, New Mexico.

We believe this project should contribute to increased recovery of oil reserves from the reservoir.

Yours very truly,

F. J. McDonald
District Production Superintendent

WVP:gs

cc: BTA Oil Producers
104 South Pecos
Midland, Texas 79701

Blackrock Oil Company

1000 V & J TOWER – MIDLAND, TEXAS 79701 – 915 683-5691

O. DOYLE BUTLER
President

PEGGY L. HOLDEN
Office Manager

January 25, 1971

NEW MEXICO OIL CONSERVATION COMMISSION
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Daniel S. Nutter

Re: Case No. 4496
Application of BTA Oil Producers
For Approval of Pressure Maintenance Project, Lea & Roosevelt Counties, New Mexico

Gentlemen:

This advises that Blackrock Oil Company does support BTA Oil Producers in their above mentioned applicaton for a Pressure Maintenance Project.

Should any further information be required, please advise.

Yours very truly,

BLACKROCK OIL COMPANY

O. Doyle Butler

ODB:jh

cc: Jerry I. Moritz
BTA Oil Producers
Midland, Texas 79701

TENNECO OIL COMPANY · P. O. BOX 1031 · 1800 WILCO BUILDING · MIDLAND, TEXAS 79701

January 21, 1971

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

Gentlemen:

Tenneco Oil Company as an operator in the Vada and Bough Fields supports the application of BTA Oil Producers for approval to conduct a pilot pressure maintenance project in the Bough "C" formation of the Vada Trend in Lea and Roosevelt Counties, New Mexico.

We believe this project should contribute to increased recovery of oil reserves from the reservoir.

Yours very truly,

F. J. McDonald
District Production Superintendent

WVP:gs

cc: BTA Oil Producers
104 South Pecos
Midland, Texas 79701

A/C 915 682-4364

ROGER C. HANKS
2100 WILCO BUILDING
P. O. BOX 384
MIDLAND, TEXAS 79701

February 5, 1971

Oil Conservation Commission
P. O. Box 1148
Santa Fe, New Mexico

GMF
file - Case 4496

Gentlemen:

We fully support BTA Oil Producers' application to conduct a pilot pressure maintenance project in the Bough "C" formation of the Vada Trend, Lea and Roosevelt Counties, New Mexico.

Very truly yours

Roger C. Hanks

Roger C. Hanks

RCH:bb

CASE 4496: Application of BTA Oil Producers for a pressure maintenance project, Lea and Roosevelt Counties, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a pilot pressure maintenance project in the Vada Pennsylvanian Pool by the injection of water into the Bough "C" formation in its 635 Ltd. Bond Well No. 5 located in the SW/4 of Section 4, Township 9 South, Range 36 East, Lea County, New Mexico. Applicant further seeks the designation of a project area and the promulgation of rules for the project including a procedure whereby additional injection wells and the injection of air or gas may be approved administratively.

CASE 4486 (Continued and Readvertised):

Application of Continental Oil Company for a waterflood expansion, a dual completion, and lease commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Langlie-Mattix Jack A-29 waterflood project, Langlie-Mattix Pool, Lea County, New Mexico, to include the NW/4 NE/4 of Section 29, Township 24 South, Range 37 East, prior to said tract being offset by an injection well. Applicant also proposes to drill and dually complete a well in the SW/4 NE/4 of said Section 29 in such a manner as to produce gas from the Jalmat Gas Pool and inject water into the Langlie-Mattix Pool as an additional injection well. Applicant further seeks authority to commingle the Langlie-Mattix production from its Jack A-29 and Jack B-29 leases (both in the proposed project area) allocating production by the subtraction method after separately metering production from the Jack A-29 Lease.

CASE 4497: Application of Twinlakes Oil Company for special pool rules and a non-standard proration unit, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special rules for the Twin Lakes-San Andres Pool, Chaves County, New Mexico, including provisions for the classification of oil and gas wells, spacing for oil and gas wells, and a limiting gas-oil ratio of 4000 to one. Applicant further seeks the establishment of a 160-acre non-standard Twin Lakes-San Andres gas proration unit comprising the W/2 W/2 of Section 36, Township 8 South, Range 28 East.

CASE 4491: (Continued from the January 13, 1971, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit W. C. Welch and all other interested persons to appear and show cause why his State Well No. 1 located 660 feet from the South and West lines of Section 28, Township 2 South, Range 26 East, De Baca County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 4492: (Continued from the January 13, 1971, Examiner Hearing)
In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Norman K. Jones and all other interested persons to appear and show cause why his State A Well No. 1 located in the NE/4 SE/4 of Section 16, Township 30 South, Range 14 West, Hidalgo County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

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. 4496
Order No. R-4098

APPLICATION OF BTA OIL PRODUCERS
FOR A PRESSURE MAINTENANCE PROJECT,
LEA AND ROOSEVELT COUNTIES, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 3, 1971, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 8th day of February, 1971, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, BTA Oil Producers, seeks authority to institute a pilot pressure maintenance project in the Vada-Pennsylvanian Pool by the injection of water into the Bough "C" zone of the Pennsylvanian formation through its 685 Ltd. Bond Well No. 5, located in the NW/4 SW/4 of Section 4, Township 9 South, Range 36 East, NMPM, Lea County, New Mexico.

(3) That the applicant further seeks a procedure whereby additional injection wells and the injection of air or gas may be approved administratively.

(4) That the proposed pilot pressure maintenance project is in the interest of conservation and may result in greater

ultimate recovery of oil from the subject pool, thereby preventing waste.

(5) That the proposed pressure maintenance project should be approved and an administrative procedure adopted for approval of additional injection wells and the injection of air or gas as well as water.

IT IS THEREFORE ORDERED:

(1) That the applicant, BTA Oil Producers, is hereby authorized to institute a pilot pressure maintenance project, designated the BTA Vada Bond Pressure Maintenance Project, in the Vada-Pennsylvanian Pool by the injection of water into the Bough "C" formation through its 685 Ltd. Bond Well No. 5, located in the NW/4 SW/4 of Section 4, Township 9 South, Range 36 East, NMPM, Lea County, New Mexico.

(2) That the Secretary-Director of the Commission is hereby authorized to approve additional injection wells in the area of the above-described 685 Ltd. Bond Well No. 5 and to authorize the injection of water, air, or gas into the Bough "C" zone of the Vada-Pennsylvanian Pool through such wells. To obtain such approval, the project operator shall file proper application with the Commission, which application shall include the following:

(a) A plat showing the location of the proposed injection well, all wells within a radius of one mile of the proposed injection well, and offset operators.

(b) A schematic drawing of the proposed injection well which fully describes the casing, tubing, perforated interval, and depth showing that the injection of water or air or gas will be confined to the Bough "C" zone of the Pennsylvanian formation.

(c) A letter stating that all offset operators to the proposed injection well have been furnished a complete copy of the application and the date of notification.

The Secretary-Director may approve the proposed injection well if, within 20 days after receiving the application, no

objection to the proposal has been received. The Secretary-Director may grant immediate approval, provided waivers of objection are received from all offset operators.

(3) That the subject pressure maintenance project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations insofar as said rules are not inconsistent with this order.

(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

BRUCE KING, Chairman

ALEX J. ARMIJO, Member

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

S E A L

esr/

BTA OIL PRODUCERS

CASE Nº [redacted]

VADA TREND (BOUGH "C")

LEA & ROOSEVELT COUNTIES, NEW MEXICO

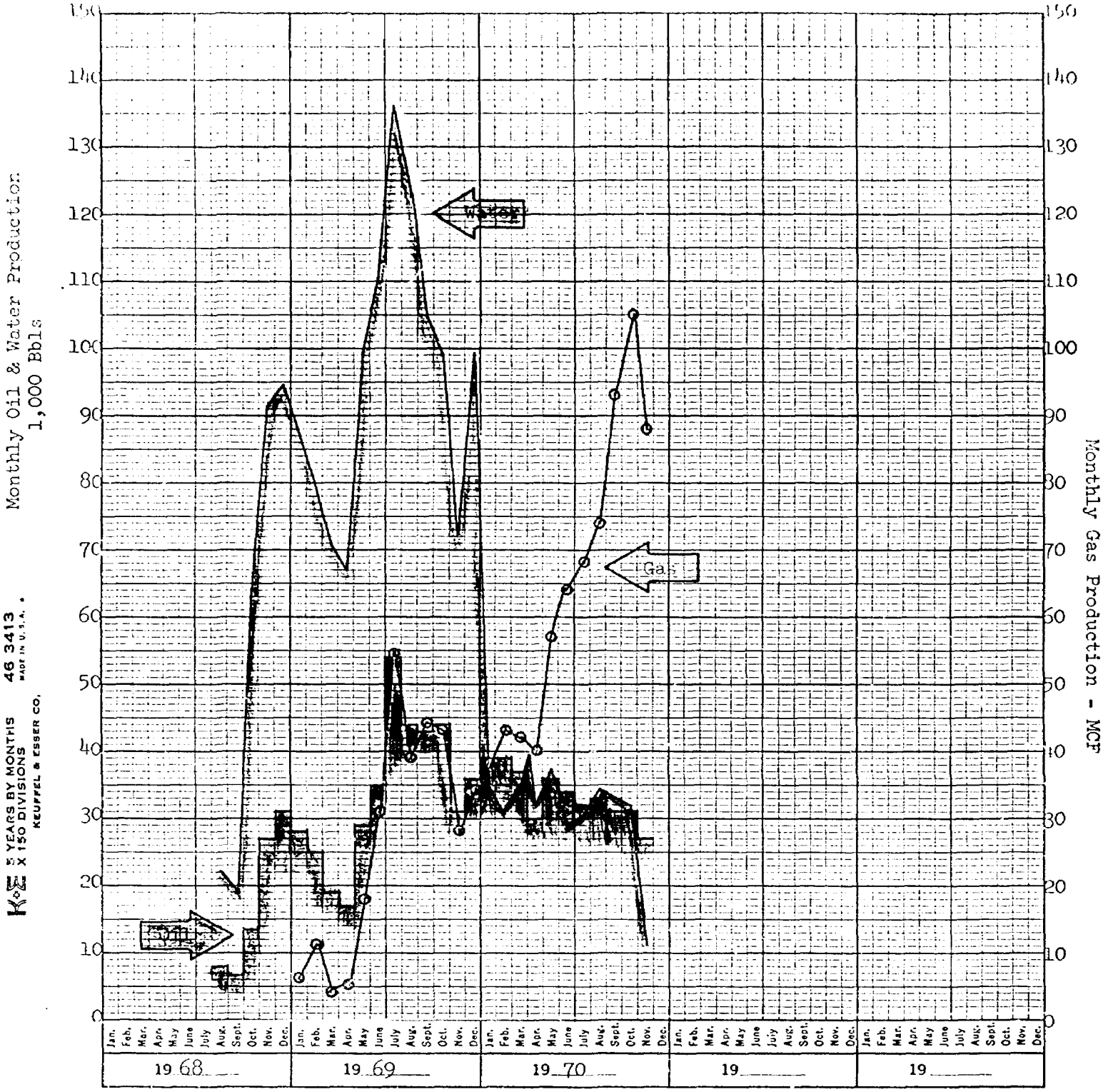
- PROJECT AREA
- INITIAL INJECTION WELL
- PRODUCER

SCALE: 1" = 4000'

DATE: 1-19-71

EXHIBIT 1

BTA Oil Producers
685 Bond Lease
Vada Pool
6 Wells



KEUFFEL & ESSER CO. MADE IN U.S.A. 46 3413
5 YEARS BY MONTHS
X 150 DIVISIONS

Cumulative to 12-1-70:

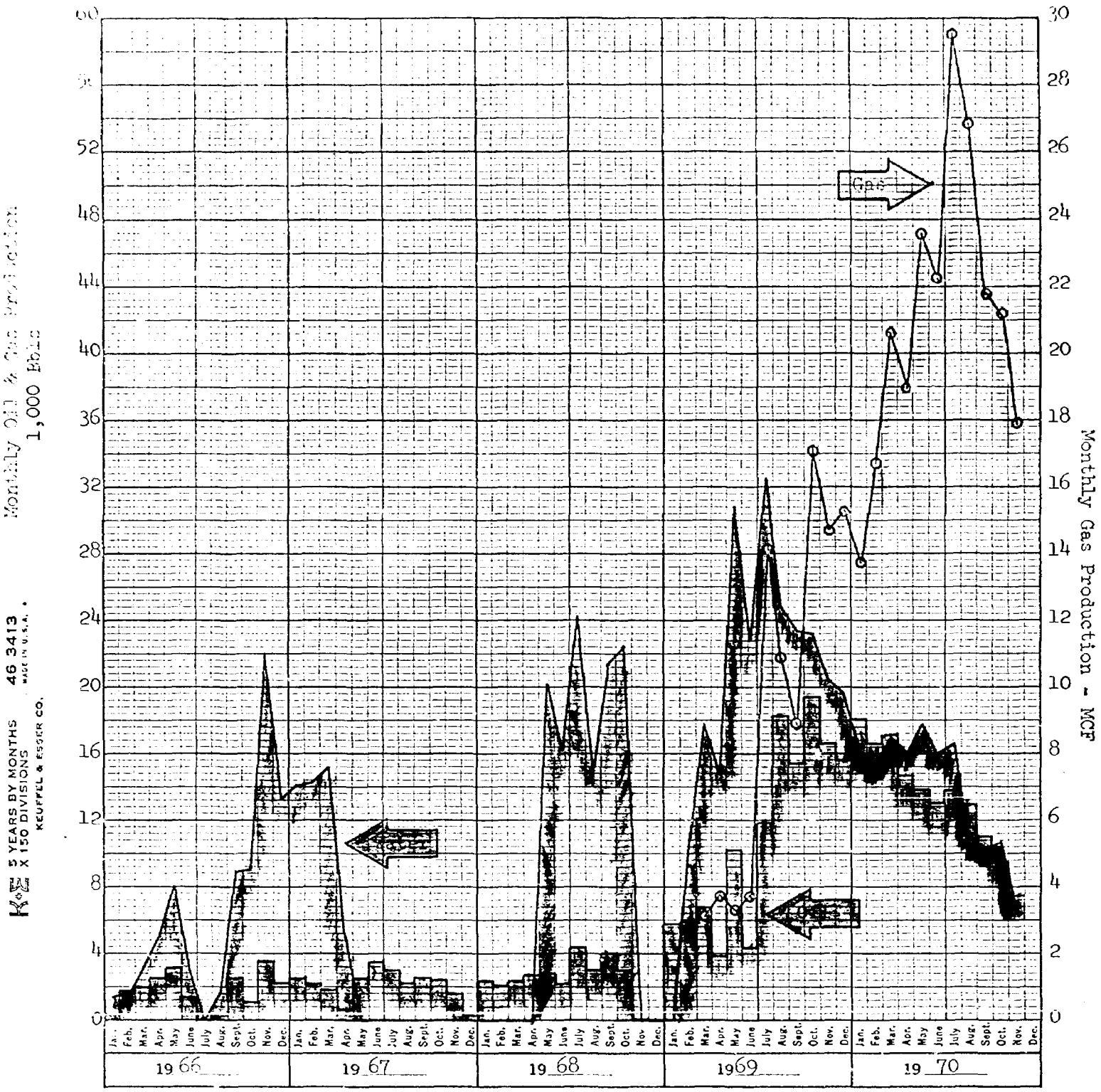
Oil	856,751 Bbls
Gas	1,029,707 MCF
Water	1,796,248 Bbls

EXAMINER

BTA EXHIBIT NO. 2
4496

EXHIBIT 2
CASE NO. 4496

BTA Oil Producers
6% Northcott Lease
Vada Pool
2 Wells



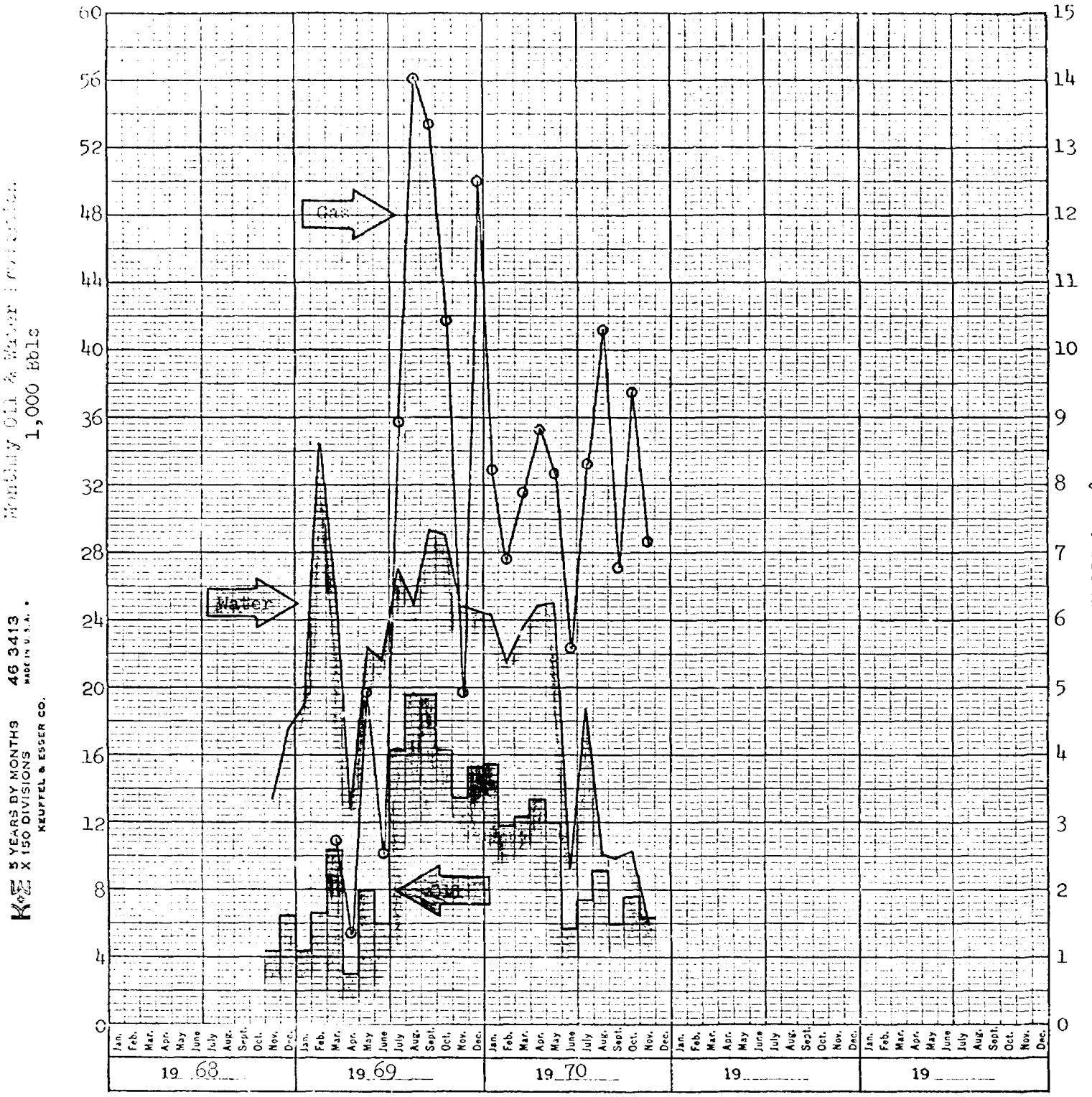
Cumulative to 12-1-70:

Oil	365,383 Bbls
Gas	367,601 MCF
Water	728,997 Bbls

BEFORE EXAMINER
BTA
4496

EXHIBIT 3
CASE NO. 4496

BTA Oil Producers
686 Harris Lease
Vada Pool
2 Wells



KE 5 YEARS BY MONTHS
X 150 DIVISIONS
KEUFFEL & ESSER CO.
46 3413
MADE IN U.S.A.

Cumulative to 12-1-70:

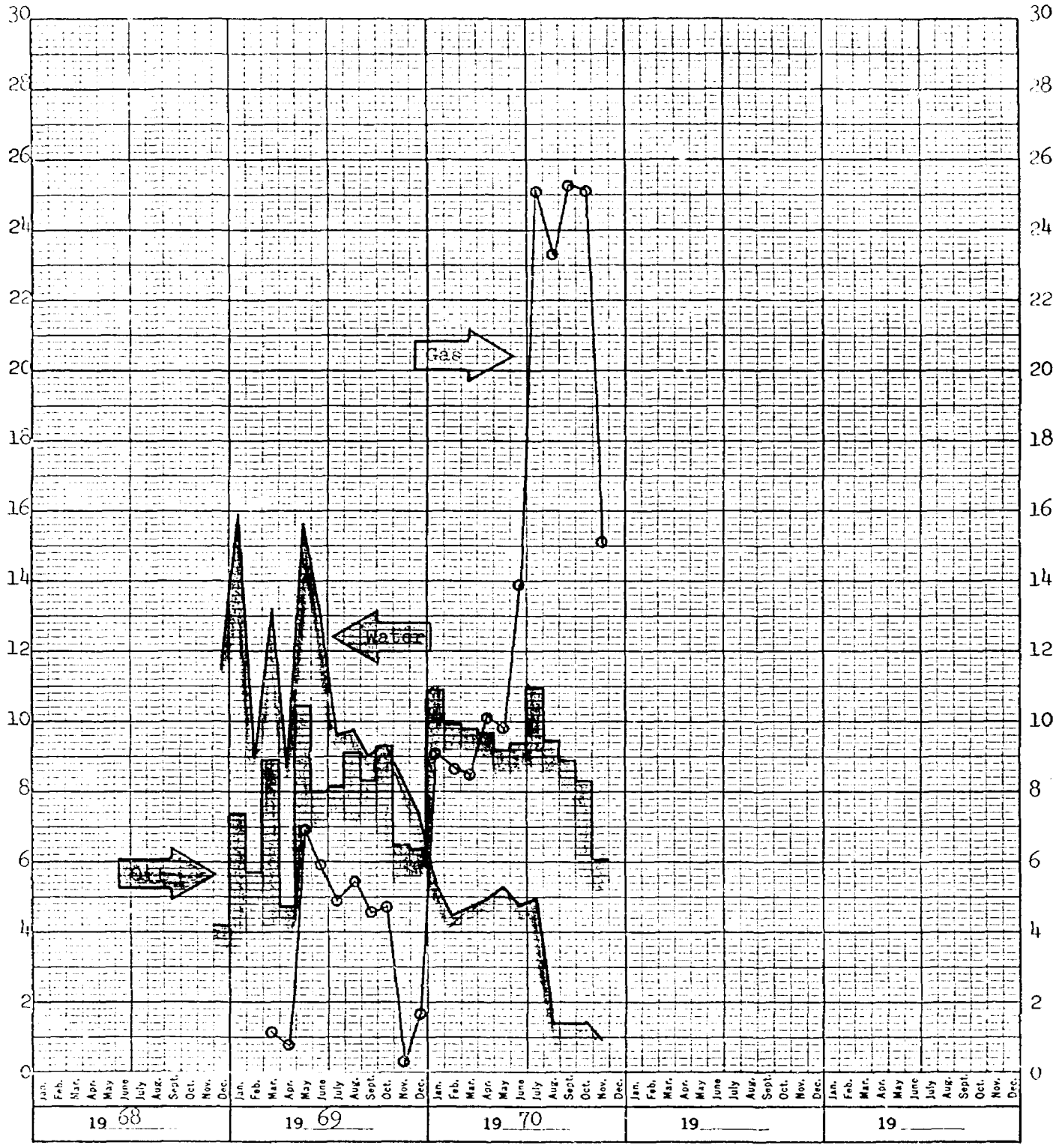
Oil	257,957 Bbls
Gas	163,295 MCF
Water	509,210 Bbls

EXAMINER
BTA
4496

EXHIBIT 4
CASE NO. 4496

BTA Oil Producers
687 Davis Lease
Vada Pool
1 Well

Monthly Oil & Water Production
1,000 Bbls



KEUFFEL & ESSER CO. 46 3413 MADE IN U.S.A.
5 YEARS BY MONTHS
X 150 DIVISIONS

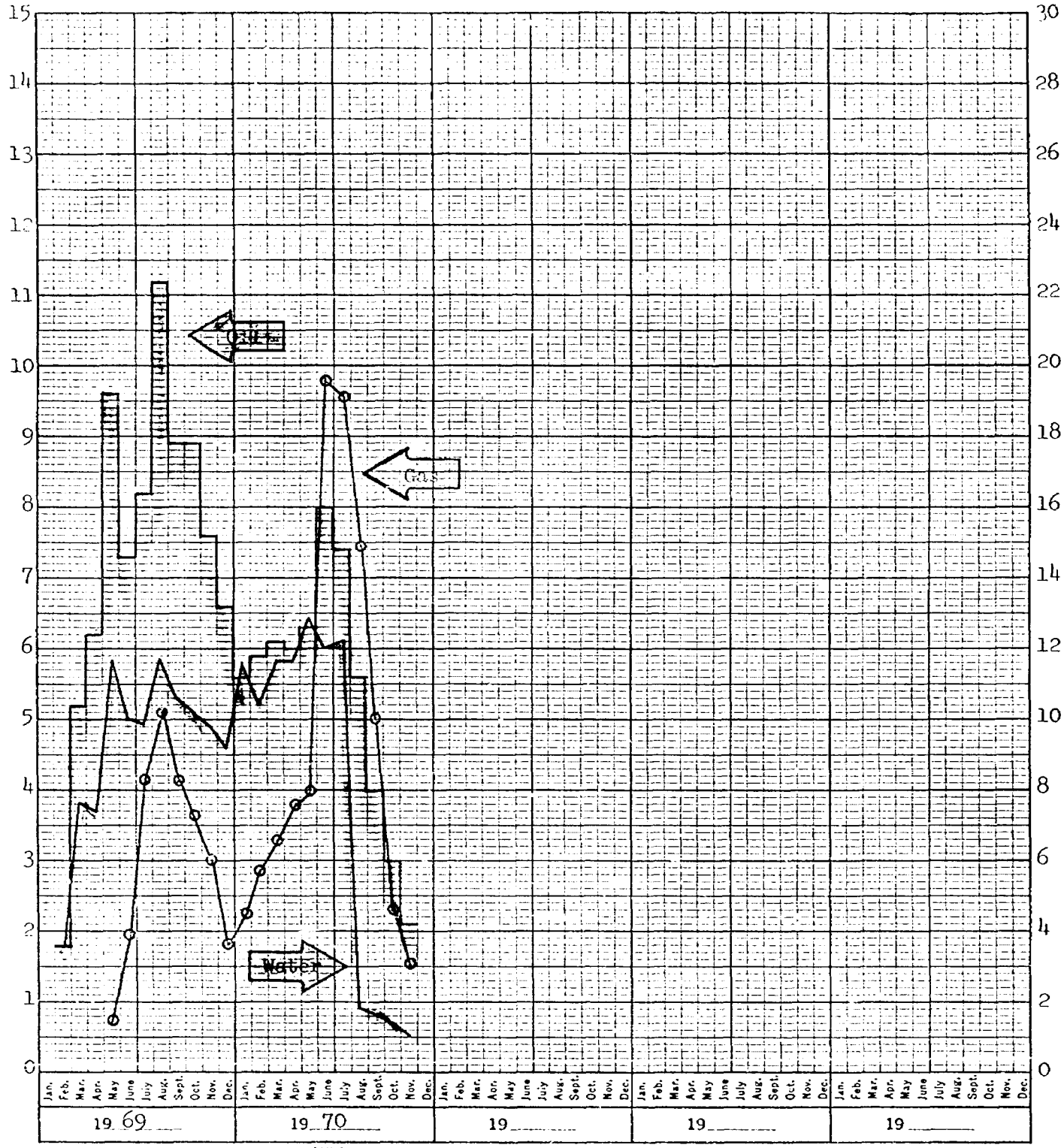
Cumulative to 12-1-70:

Oil	187,112 Bbls
Gas	210,539 MCF
Water	153,628 Bbls

BTA 5
4496

EXHIBIT 5
CASE NO. 4496

BTA Oil Producers
687 Allyn Lease
Vada Pool
1 Well



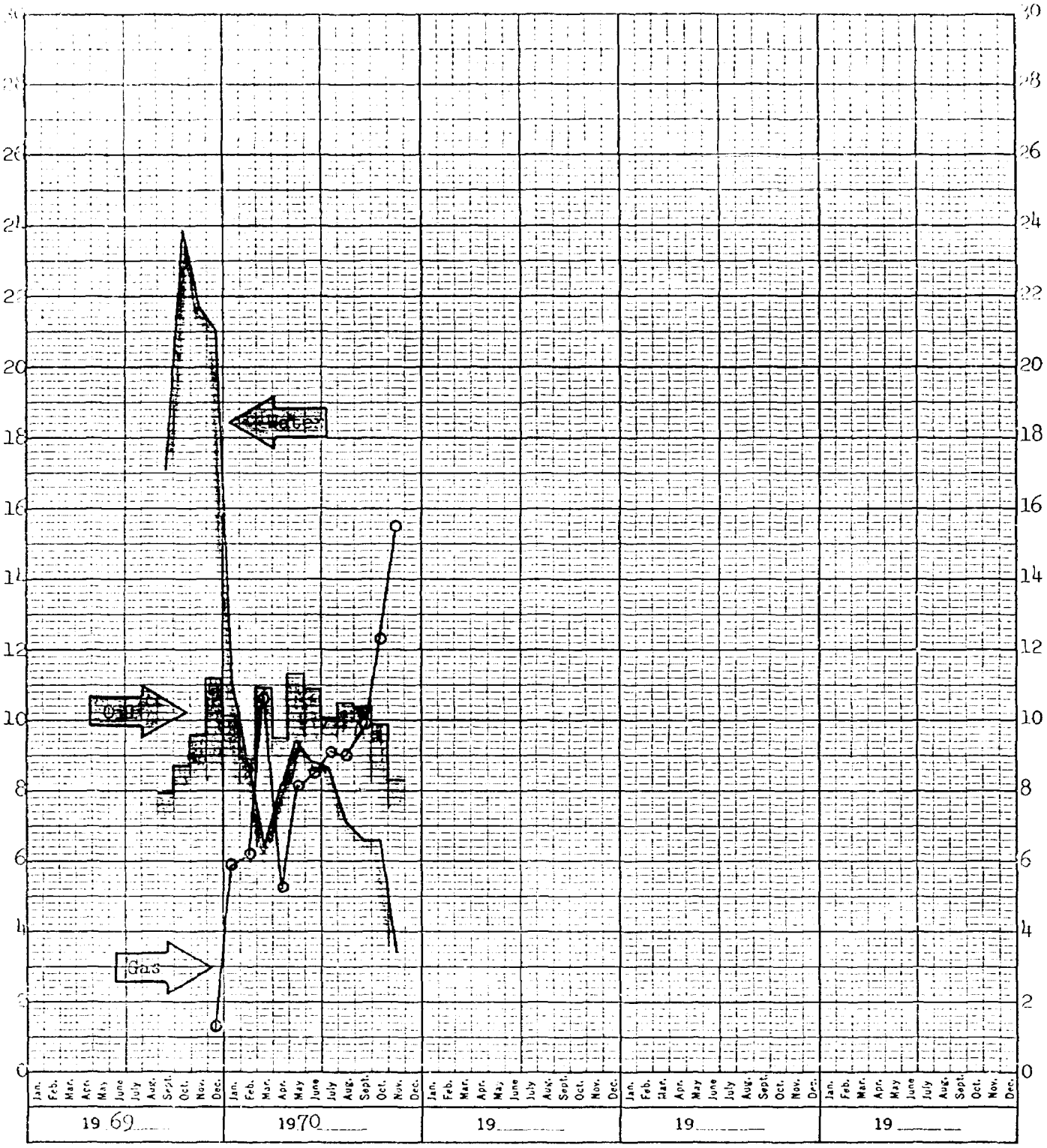
KE 5 YEARS BY MONTHS
X 150 DIVISIONS
KEUFFEL & ESSER CO.
46 3413
MADE IN U.S.A.

Cumulative to 12-1-70:
Oil 128,621 Bbls
Gas 152,629 MCF
Water 85,625 Bbls

BTA Exhibit No. 6
Case No. 4496

EXHIBIT 6
CASE NO. 4496

BTA Oil Producers
691 Cash Lease
Vada Pool
1 Well



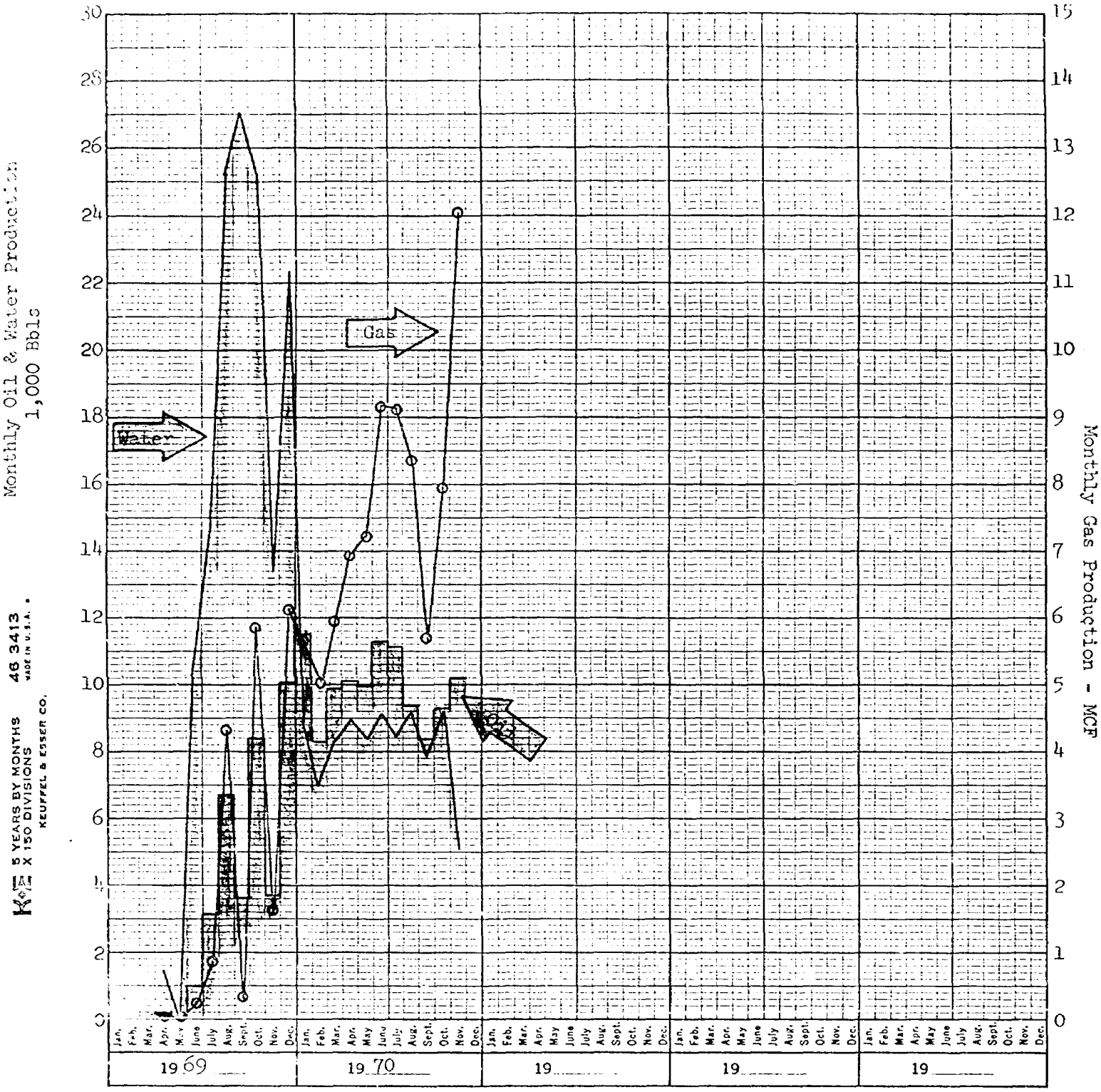
KE 5 YEARS BY MONTHS 46 3413
X 150 DIVISIONS MADE IN U.S.A.
KEUFFEL & ESSER CO.

Cumulative to 12-1-70:

Oil	148,181 Bbls
Gas	102,033 MCF
Water	168,785 Bbls

EXHIBIT 7
CASE NO. 4496

BTA Oil Producers
686 Olizer Lease
Vada Pool
1 Well



Cumulative to 12-1-70:

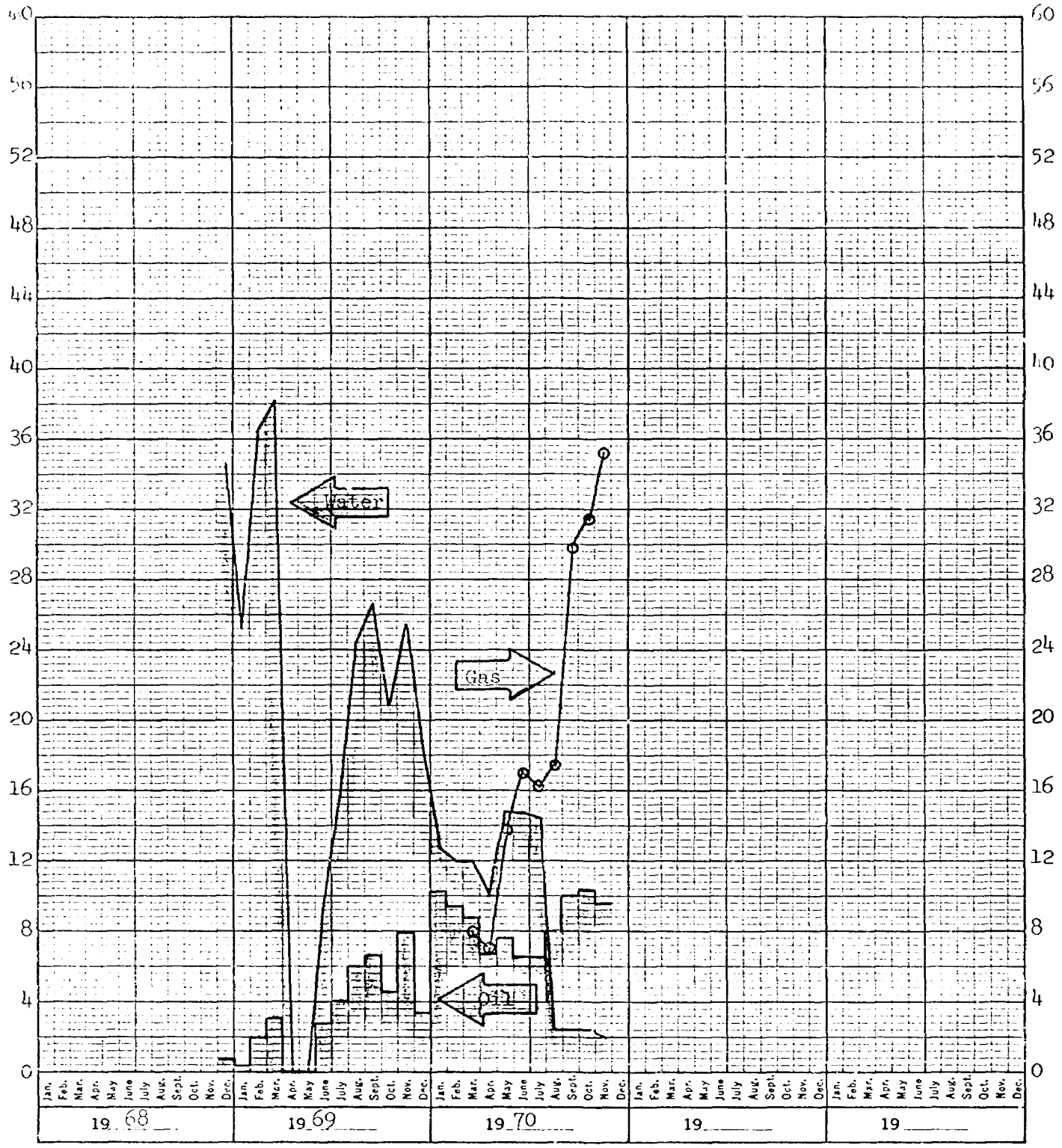
Oil	146,600 Bbls
Gas	102,587 MCF
Water	230,206 Bbls

EXHIBIT 8
CASE NO. 4496

BTA Oil Producers
646 NM Lease
Wade Pool
1 Well

Monthly Oil & Water Production
1,000 Bbls

Monthly Gas Production - MCF



Cumulative to 12-1-70:

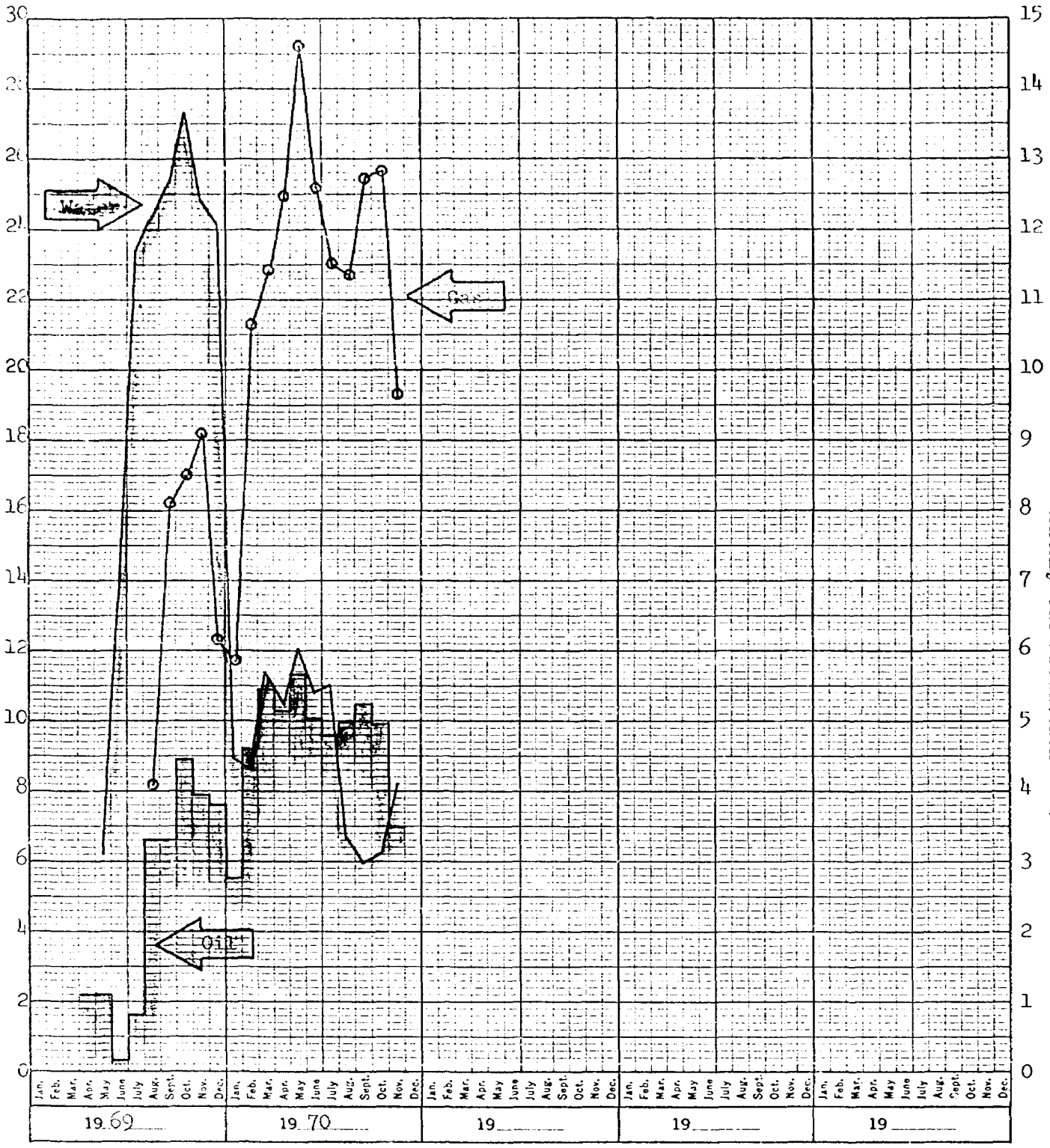
Oil	136,151 Bbls
Gas	175,412 MCF
Water	375,379 Bbls

EXHIBIT 9
BTA CASE NO. 4496

BTA Oil Producers
686 Hanagan Lease
Vada Pool
1 Well

Monthly Oil & Water Production
1,000 Bbls

Monthly Gas Production - MCF



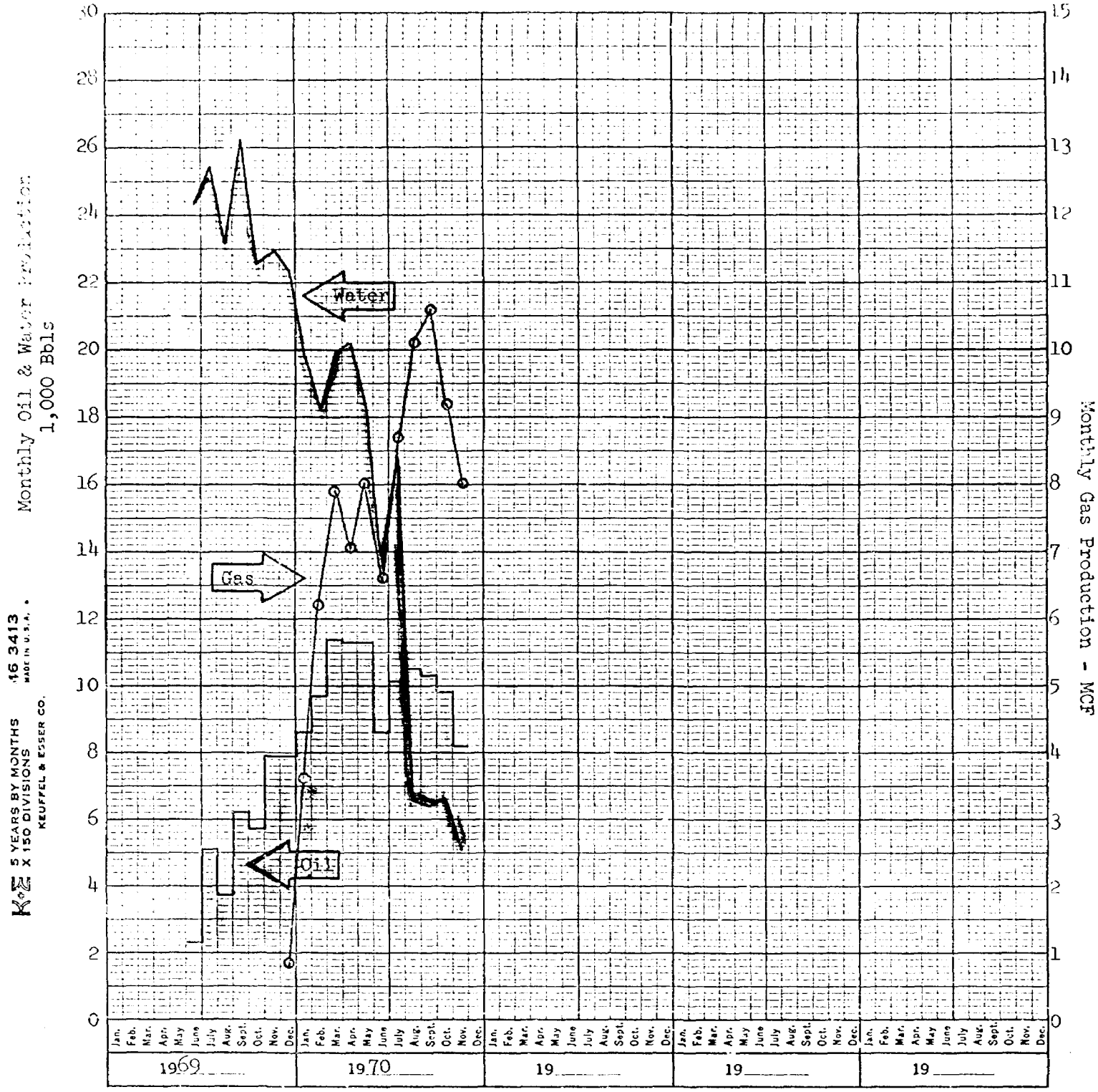
KEUFFEL & ESSER CO. 46 3413 MADE IN U.S.A.
5 YEARS BY MONTHS
X 150 DIVISIONS

Cumulative to 12-1-70:

Oil	148,798 Bbls
Gas	161,581 MCF
Water	275,873 Bbls

EXAMINER HEARING
BTA
EXHIBIT 10
CASE NO. 4496

BTA Oil Producers
687 Barnes Lease
Vada Pool
1 Well



KEUFFEL & ESSER CO. 5 YEARS BY MONTHS X 150 DIVISIONS MADE IN U.S.A. 46 3413

Cumulative to 12-1-70:

Oil	148,508 Bbls
Gas	86,719 MCF
Water	319,316 Bbls

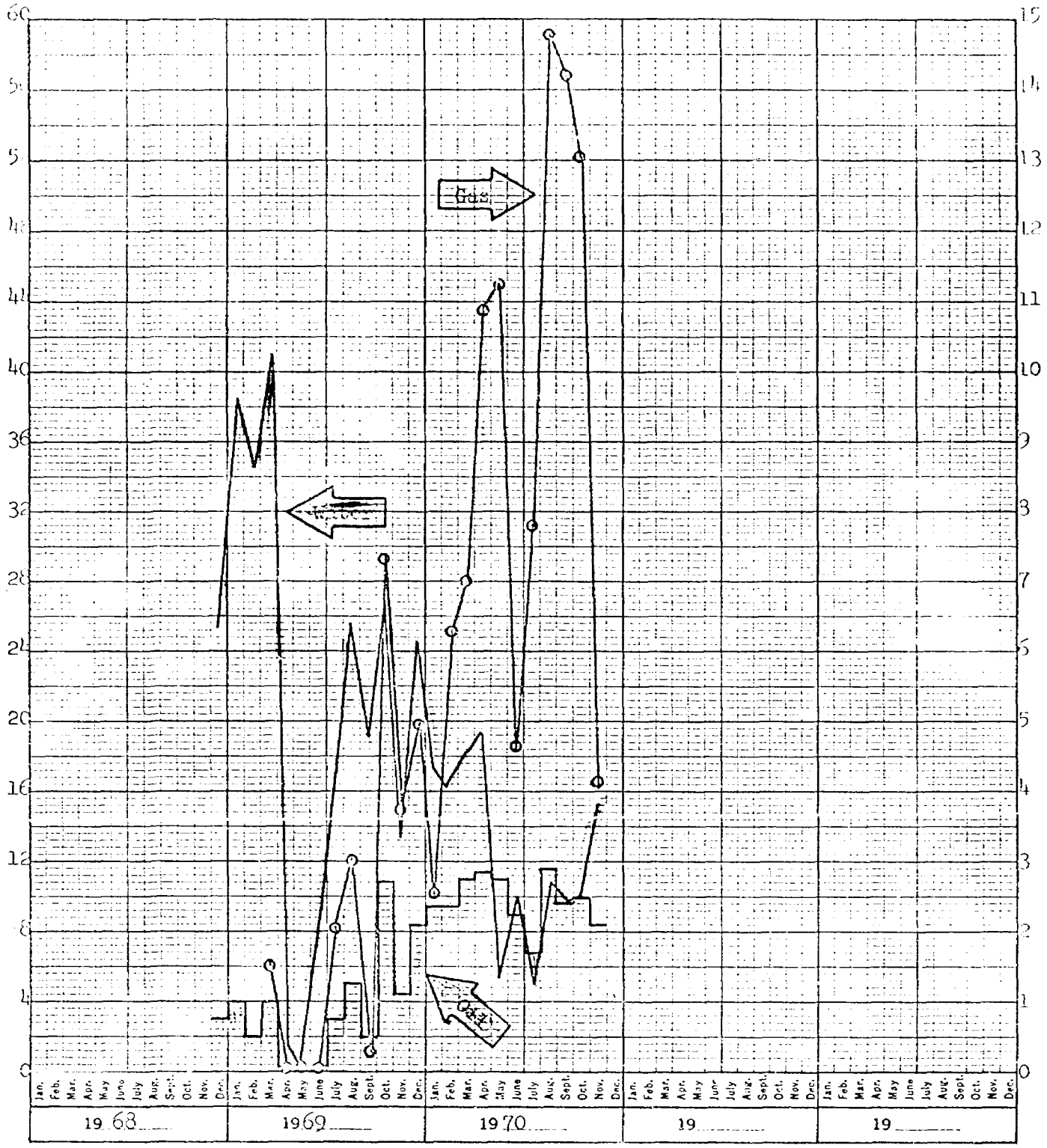
EXAMINER NMOCD

EXHIBIT 11
BTA
CASE NO. 4493
4493

BTA Oil Producers
(97 Building Lease
Vada Pool
1 W-11

Monthly Oil & Water Production
1,000 Bbls

Monthly Gas Production - MCF



KEUFFEL & ESSER CO. 46 3413 MADE IN U.S.A.
5 YEARS BY MONTHS
X 150 DIVISIONS

Cumulative to 12-1-70:

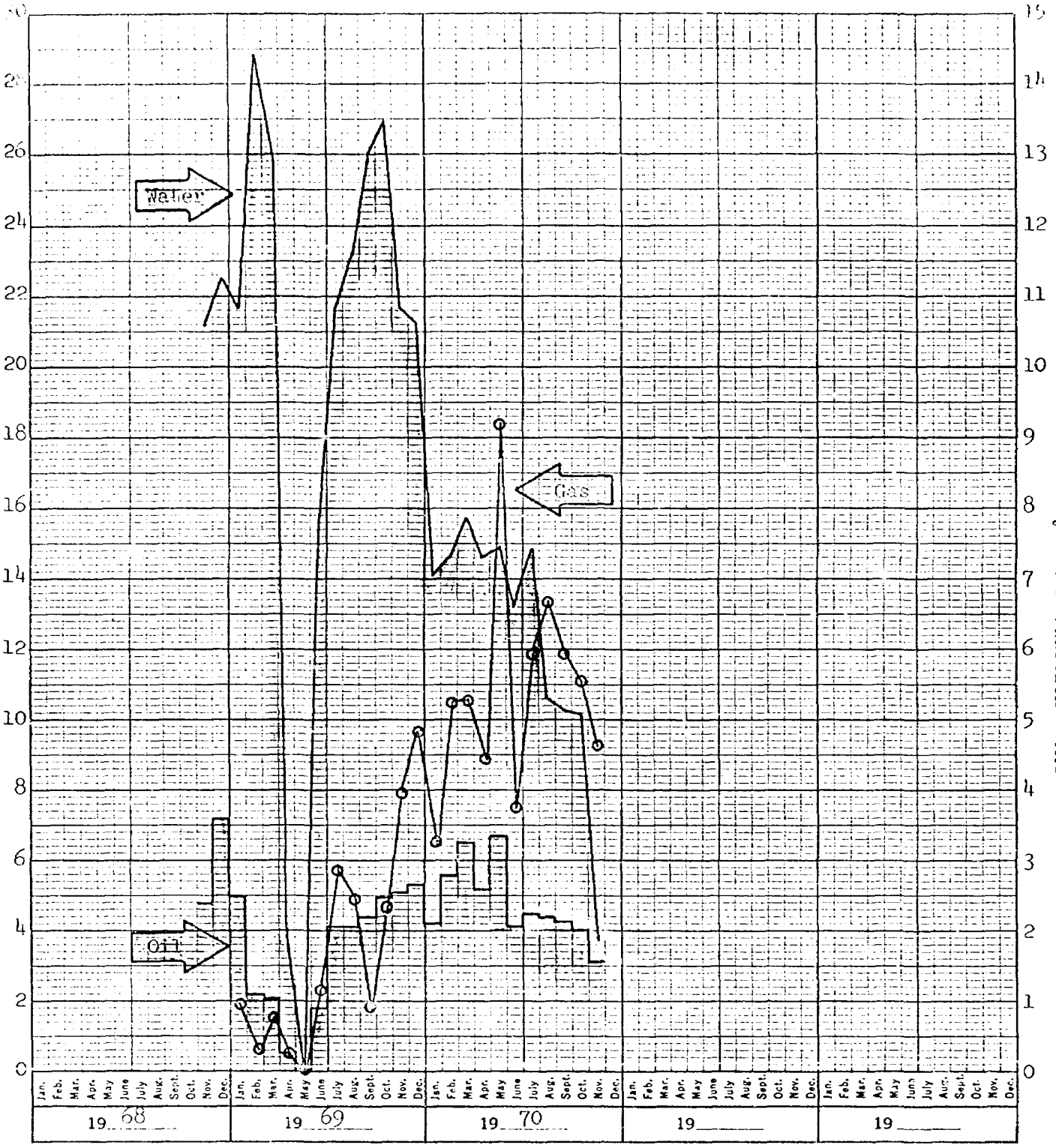
Oil	148,511 Bbls
Gas	119,376 MCF
Water	339,749 Bbls

BEFORE EXAMINER
OIL CONSERVATION COMMISSION
EXHIBIT 12
CASE NO. 4496

ETA Oil Producers
657 Trice Lease
Vada Pool
1 Well

Monthly Oil & Water Production
1,000 Bbls

Monthly Gas Production - MCF



Cumulative to 12-1-70:

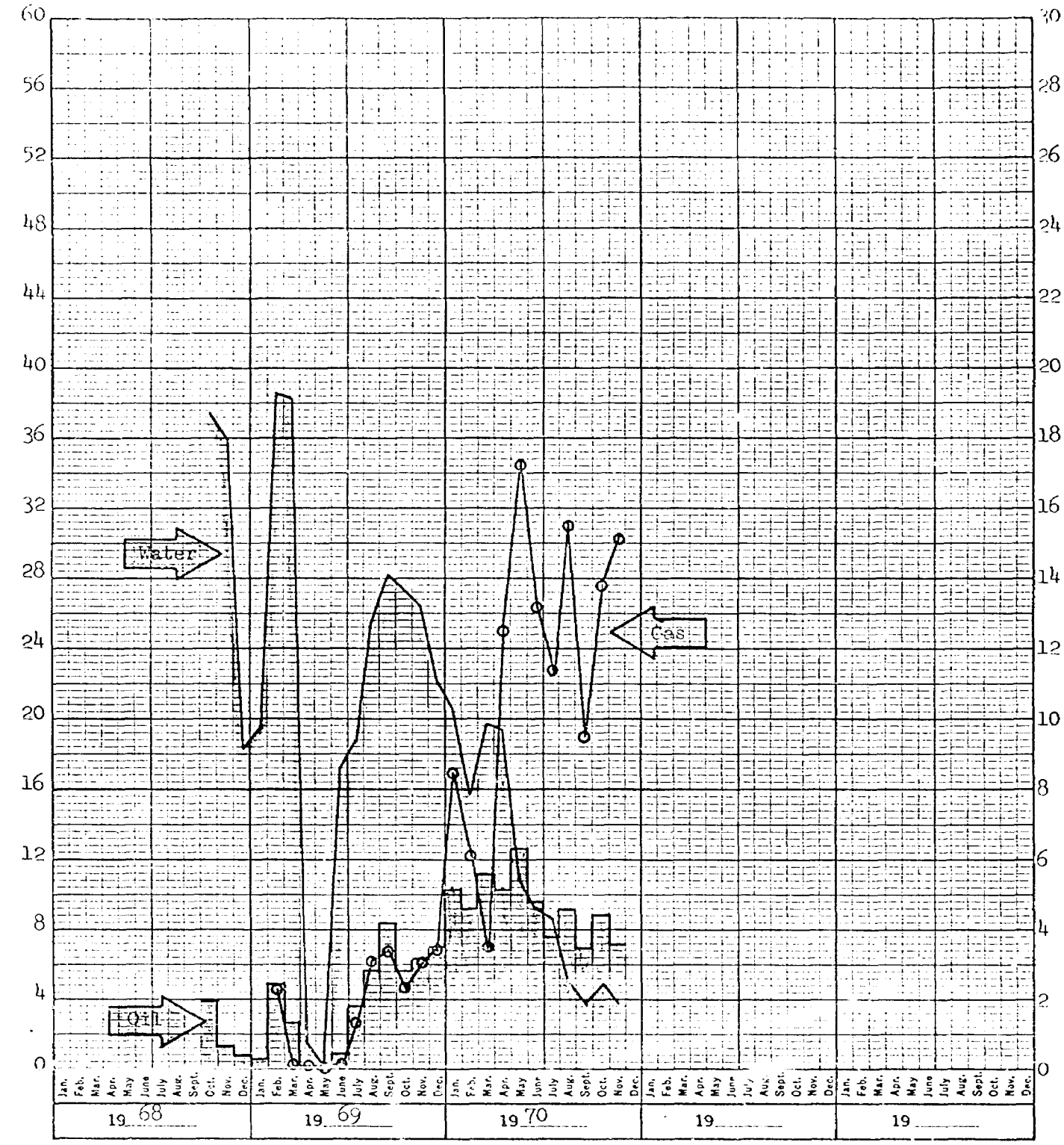
Oil	104,299 Bbls
Gas	80,895 MCF
Water	417,220 Bbls

EXHIBIT 13
CASE NO. 4496

BTA Oil Producers
686 Walker Lease
Vada Pool
1 Well

Monthly Oil & Water Production
1,000 Bbls

Monthly Gas Production - MCF

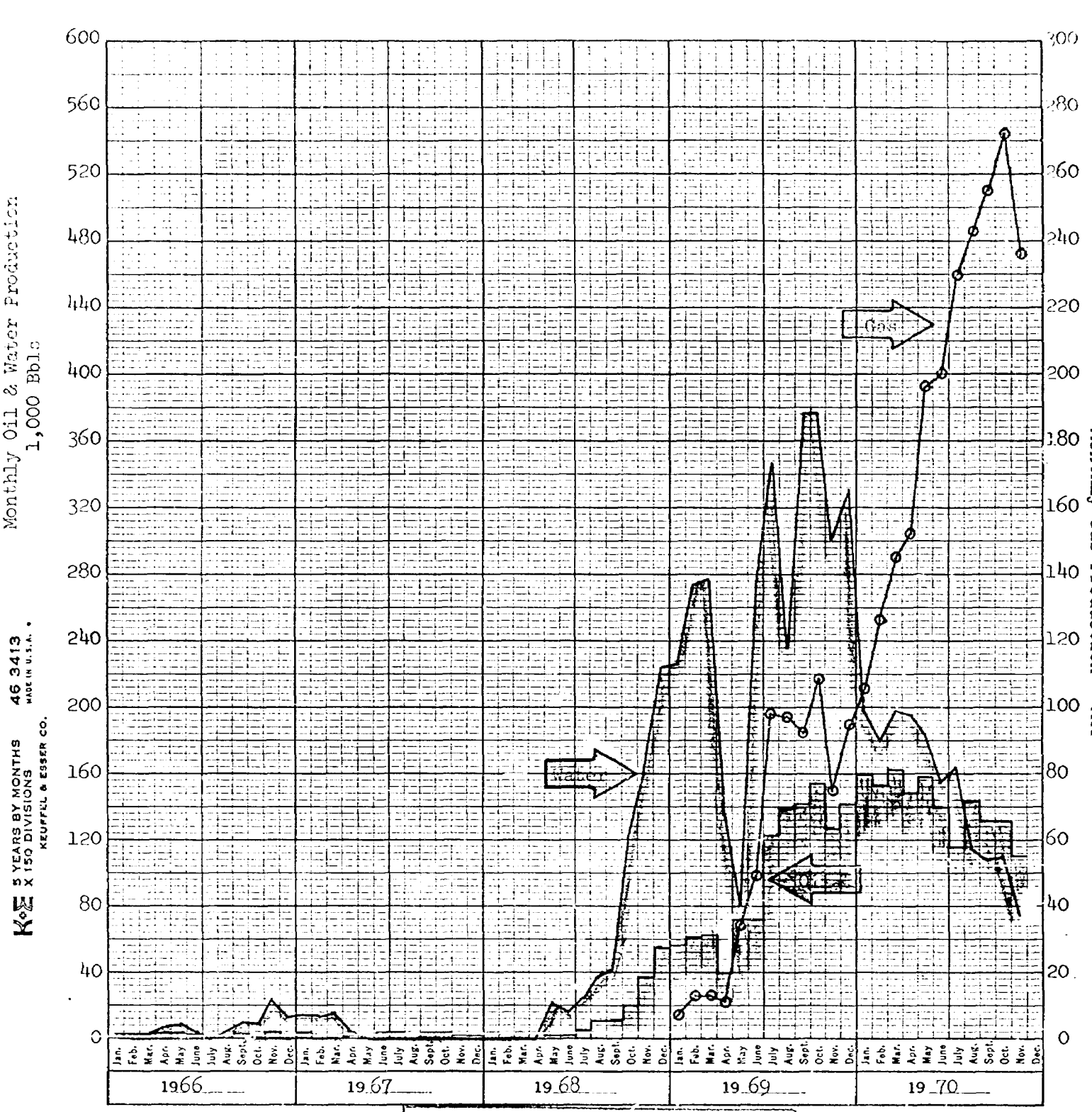


Cumulative to 12-1-70:

Oil	155,024 Bbls
Gas	145,181 MCF
Water	476,019 Bbls

EXAMINER EXHIBIT 14
BTA CASE NO. 4496
4496

BTA Oil Producers
Project Area Performance
Vada Pool
Total 20 Wells

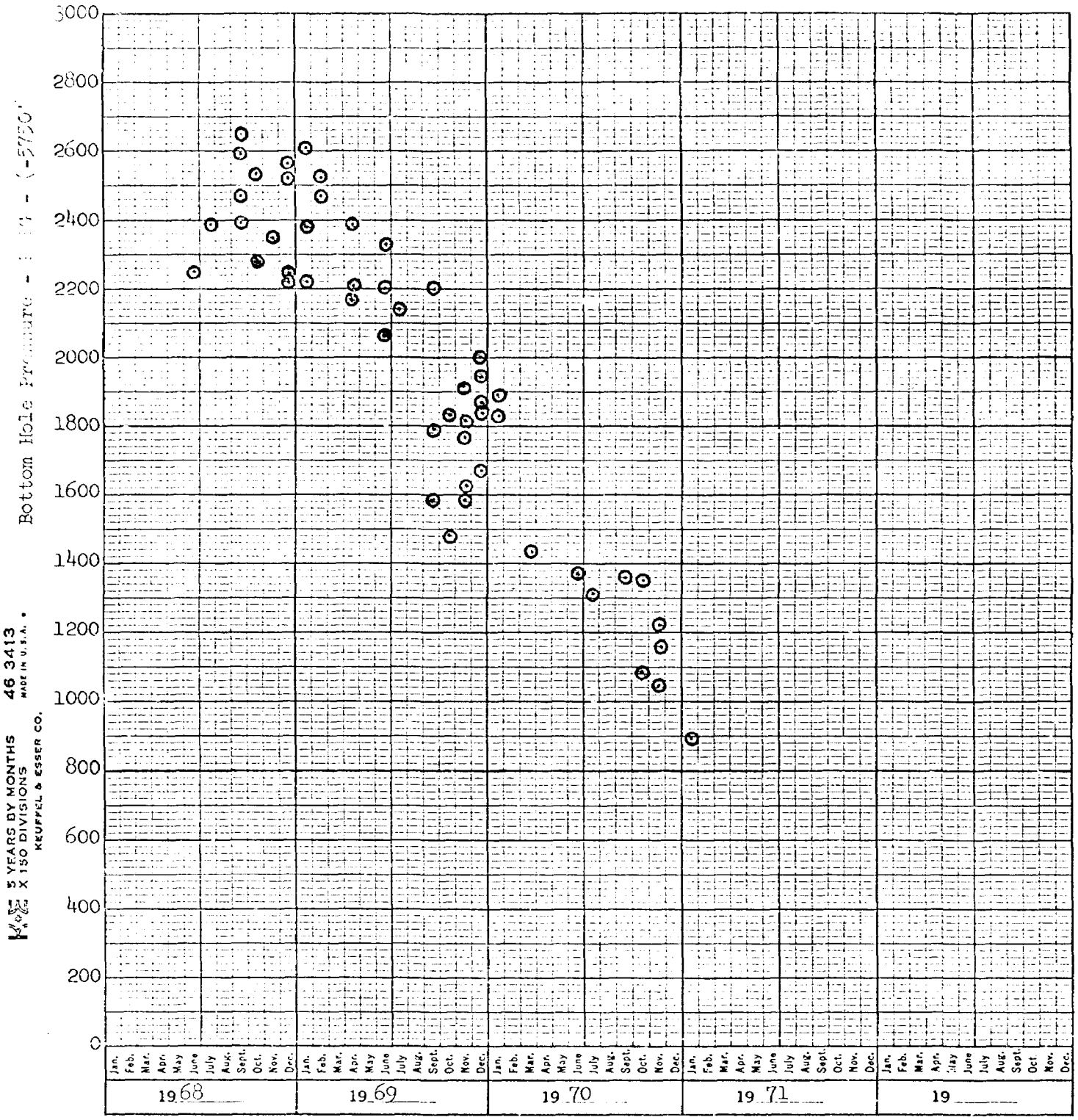


Cumulative to 12-1-70:

Oil	3,046,316 Bbls
Gas	2,875,311 MCF
Water	5,518,965 Bbls

EXHIBIT 15
CASE NO. 4496

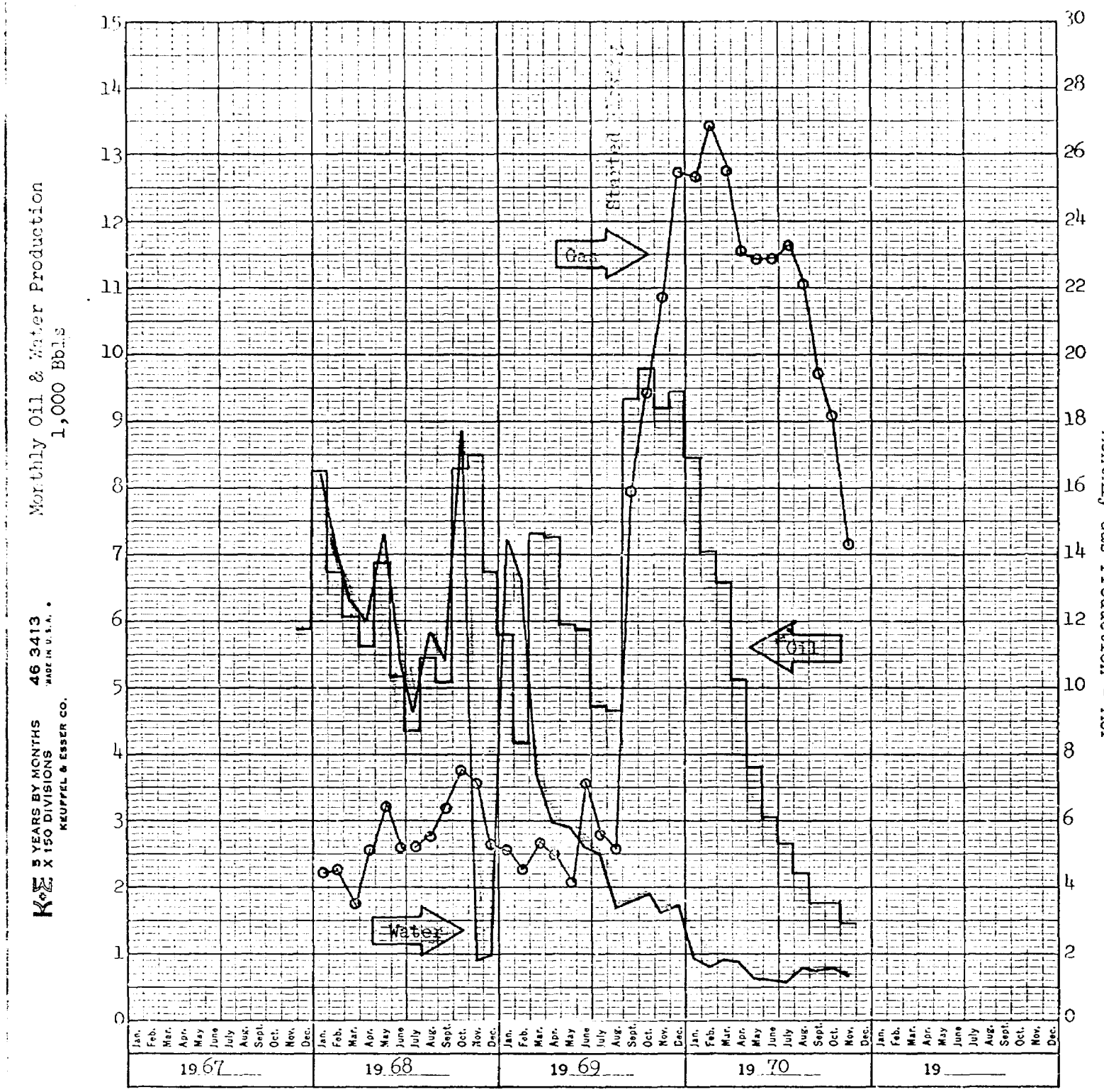
BIA Oil Producers
Project Area BHP History
Vada Pool
Total 20 Wells



BIA
4496

EXHIBIT 16
CASE NO. 4496

BTA Oil Producers
673 Ltd. Vada C #3
Vada Pool



KE 5 YEARS BY MONTHS
X 150 DIVISIONS
KEUFFEL & ESSER CO.
46 3413
MADE IN U.S.A.

Cumulative to 12-1-70:

Oil	210,734 Bbls
Gas	434,034 MCF
Water	112,521 Bbls

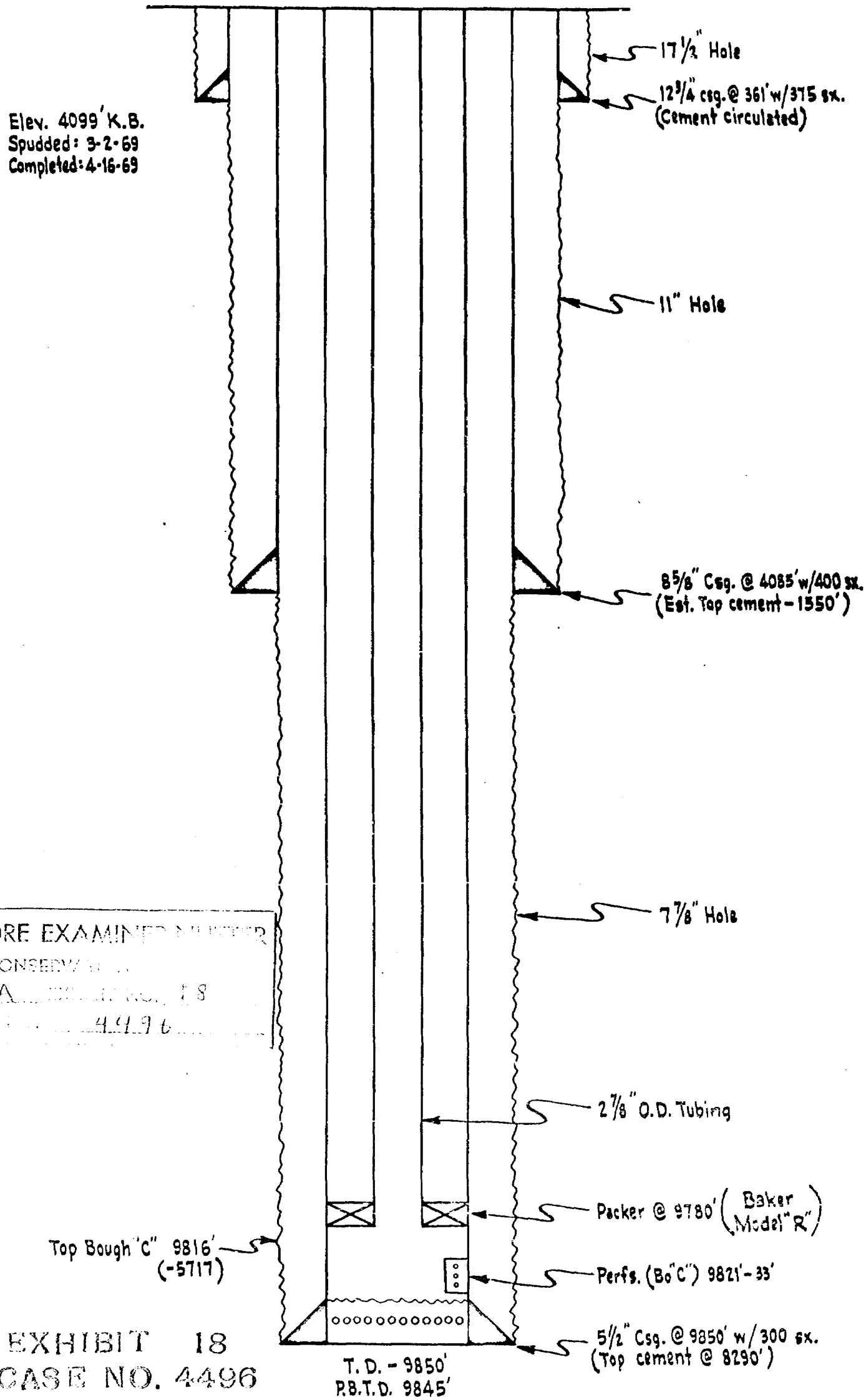
EXHIBIT 17
CASE NO. 4496

DIAGRAMMATIC SKETCH FOR PROPOSED INJECTION WELL

BTA OIL PRODUCERS

685 LTD. BOND, Nº 5

1980' FSL & 660' FWL OF SECTION 4, T-9-S, R-36-E
LEA COUNTY, NEW MEXICO



BEFORE EXAMINER
OIL CONSERVATION
B.T.A. EXHIBIT NO. 18
CASE NO. 4496

EXHIBIT 18
CASE NO. 4496

BTA OIL PRODUCERS
PILOT PRESSURE MAINTENANCE PROJECT
VADA PENN POOL

SUMMARY OF RESERVOIR RECOVERIES

Pore Volume in 3,680 Acre Pilot Area	19,860,500 Bbls
Reservoir Bbls Oil in Place - Res BO	11,916,300 Bbls
Reservoir Bbls Water in Place - Res BW	7,944,200 Bbls
Stock Tank Bbls Oil in Place - STBO	6,620,200 Bbls
Stock Tank Bbls Water in Place - STBW	7,919,600 Bbls
Stock Tank Recoveries to 12-1-70 - STBO	3,046,300 Bbls
Stock Tank Recoveries per Well to 12-1-70 - STBO	152,300 Bbls
Stock Tank Recoveries to 12-1-70 - STBW	5,518,960 Bbls
Stock Tank Recoveries per Well to 12-1-70 - STBW	275,900 Bbls
Percentage of Oil Recovered at 12-1-70	46%
Percentage of Water Recovered at 12-1-70	69%
Estimated Oil Recoverable by Sec Rec - STBO	1,389,850 Bbls
Estimated Oil Recoverable by Sec Rec - STBO	70,000 Bbls Per Well

United States Department of the Interior

GEOLOGICAL SURVEY

P. O. Box 1157
Hobbs, New Mexico 88240

January 25, 1971

BTA Oil Producers
104 South Pecos
Midland, Texas 79701

Attention: Mr. Jerry I. Moritz

Gentlemen:

Your letter of January 19 requests approval to institute a pilot pressure maintenance project in the Vada Pennsylvanian pool by the injection of water into the Bough "C" formation in well No. 5 Bond 685 Ltd. in the NW¼SW¼ sec. 4, T. 9 S., R. 36 E., Lea County, New Mexico, lease New Mexico 0449694-C.

The plan you propose for a pilot pressure maintenance project, by injection of water into the Bough "C" formation, lease New Mexico 0449694-C, is satisfactory to this office and is hereby approved.

Appropriate notices to convert the existing well to water injection should be submitted for approval prior to commencing the work. Duplicate copies of a monthly progress report should be submitted showing the volume of water injected and average pressures for each injection well and monthly oil and water production for the producing wells in the project area.

Approval of this project by the New Mexico Oil Conservation Commission pursuant to Rule 701 is also required.

Sincerely yours,

Arthur R. Brown
District Engineer

BEFORE EXAMINER NUTTER
OIL CONSERVATION COMMISSION
BTA EXHIBIT NO. 21
CASE NO. 4496

EXHIBIT 21
CASE NO. 4496

BEFORE THE OIL CONSERVATION COMMISSION

OF THE

STATE OF NEW MEXICO

Case 4496

IN THE MATTER OF THE APPLICATION
OF BTA OIL PRODUCERS FOR APPROVAL
OF A PILOT PRESSURE MAINTENANCE
PROJECT, LEA AND ROOSEVELT COUNTIES,
NEW MEXICO

A P P L I C A T I O N

Comes now BTA Oil Producers and applies to the Oil Conservation Commission of New Mexico for approval of a pilot pressure maintenance project in the Vada Pennsylvanian Pool under the provisions of Rule 701 D of the Commission's Rules and Regulations, with suitable provision for establishment of a project area, assignment of allowable, and operation of the project, and provision for approval of conduct of the project by an administrative proceeding, as hereinafter stated, and in support thereof would show the Commission:

1. Applicant proposes to establish a pressure maintenance project consisting of the following described lands:

Township 8 South, Range 36 East, N.M.P.M., Roosevelt County

Section 33 - S/2

Township 9 South, Range 36 East, N.M.P.M., Lea County

Section 4 - All
Section 5 - All
Section 6 - All
Section 8 - All
Section 7 - E/2
Section 9 - N/2, SW/4

2. Applicant is the operator of the properties in the above-described area, insofar as the proposal in this application is concerned.

DOCKET MAILED

Date 1-22-71

3. Applicant proposes to convert its 685 Ltd. Bond No. 5 well, located in the SW/4 of Section 4, Township 9 South, Range 36 East, N.M.P.M., to an injection well for the purpose of injecting water into the Bough C formation. Initial injection fluid will be produced Bough C water. Injection will be through tubing, under a packer.

4. Applicant further seeks designation of the area as a project area, with suitable provision for the assignment of allowables, as provided by Rule 701 D.

5. Applicant further seeks an administrative procedure whereby it may add additional injection wells, change injection wells to producing wells, or convert producing wells to injection, and for an administrative procedure whereby it may change or add injection fluids, to permit the injection of water, gas or air, into the Bough C formation.

6. Approval of this application will enable applicant to evaluate the feasibility of pressure maintenance in the Bough C formation, Vada Pennsylvanian Pool, will prevent possible waste, and correlative rights of operators, both within and adjacent to the project area will be protected.

WHEREFORE Applicant prays that this application be set for hearing before the Commission's duly appointed examiner on February 3, 1971, and that after notice and hearing as required by law, the Commission issue its order approving the pressure maintenance project as prayed for.

Respectfully submitted,

BTA OIL PRODUCERS

By Jason W. Kellahin

Kellahin & Fox
Attorneys for Applicant
P. O. Box 1769
Santa Fe, New Mexico 87501

DRAFT

GMH/esr
2-4-71

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. 4496

Order No. R-4098

APPLICATION OF BTA OIL PRODUCERS
FOR A PRESSURE MAINTENANCE PROJECT,
LEA AND ROOSEVELT COUNTIES, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on February 3, 1971, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of February, 1971, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, BTA Oil Producers, seeks authority to institute a pilot pressure maintenance project in the Vada-Pennsylvanian Pool by the injection of water into the Bough "C" zone of the Pennsylvanian formation through its 685 Ltd. Bond Well No. 5, located in the NW/4 SW/4 of Section 4, Township 9 South, Range 36 East, NMPM, Lea County, New Mexico.

(3) That the applicant further seeks a procedure whereby additional injection wells and the injection of air or gas may be approved administratively.

(4) That the proposed pilot pressure maintenance project is in the interest of conservation and may result in greater

ultimate recovery of oil from the subject pool, thereby preventing waste.

(5) That the proposed pressure maintenance project should be approved and an administrative procedure adopted for approval of additional injection wells and the injection of air or gas as well as water.

IT IS THEREFORE ORDERED:

(1) That the applicant, BTA Oil Producers, is hereby authorized to institute a pilot pressure maintenance project, designated the BTA Vada Bond Pressure Maintenance Project, in the Vada-Pennsylvanian Pool by the injection of water into the Bough "C" formation through its 685 Ltd. Bond Well No. 5 located in the NW/4 SW/4 of Section 4, Township 9 South, Range 36 East, NMPM, Lea County, New Mexico.

(2) That the Secretary-Director of the Commission is hereby authorized to approve additional injection wells in the area of the above-described 685 Ltd. Bond Well No. 5 and to authorize the injection of water, air, or gas into the Bough "C" zone of the Vada-Pennsylvanian Pool through such wells. To obtain such approval, the project operator shall file proper application with the Commission, which application shall include the following:

(a) A plat showing the location of proposed injection well, all wells within a radius of one mile of the proposed injection well, and offset operators.

(b) A schematic drawing of the proposed injection well which fully describes the casing, tubing, perforated interval, and depth showing that the injection of water or air or gas will be confined to the Bough "C" zone of the Pennsylvanian formation.

(c) A letter stating that all offset operators to the proposed injection well have been furnished a complete copy of the application and the date of notification.

The Secretary-Director may approve the proposed injection well if, within 20 days after receiving the application, no objection to the proposal has been received. The Secretary-Director may grant immediate approval, provided waivers of objection are received from all offset operators.

(3) That the subject pressure maintenance project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations insofar as said rules are not inconsistent with this order.

(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.