CASE 6434: AMERADA HESS CORPORATION FOR APPROVAL OF INFILL DRILLING, LEA COUNTY, NEW MEXICO

Continued to February 28

CASE NO.

6434

APPLICATION,

TRANSCRIPTS,

SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 6434
Order No. R-5955

APPLICATION OF AMERADA HESS CORPORATION FOR APPROVAL OF INFILL DRILLING, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on February 28, 1979, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 16th day of March, 1979, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Amerada Hess Corporation, seeks a finding that the drilling of its State "O" Well No. 5 to be located in Unit H of Section 30, Township 19 South, Range 37 East, NMPM, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by the existing well.

(3) That the applicant further seeks approval of a waiver of existing well-spacing requirements.

(4) That the standard spacing unit in the Eumont Gas Pool is 640 acres.

(5) That Amerada Hess Corporation is the operator of a 160-acre non-standard proration unit consisting of the NE/4 of said Section 30 in said Eumont Gas Pool.

(6) That said 160-acre non-standard proration unit is dedicated to the applicant's State "O" Well No. 1 located in Unit B of said Section 30.

(7) That the evidence presented demonstrated that said State "O" Well No. 1 cannot as effectively and efficiently drain said dedicated 160-acre non-standard proration unit as would a new well to be drilled thereon (said State "O" Well No. 5) which may be completed and stimulated using modern techniques and processes.

(8) That the evidence presented further demonstrated that the drilling and completion of applicant's said State "O" Well No. 5 should result in the production of an additional 480,000 MCF of gas from said non-standard proration unit which would not otherwise be recovered.

(9) That such additional recovery will result in such unit being more efficiently and economically drained.

(10) That said State "O" Well No. 5 is to be drilled as an "infill" well on the existing 160-acre non-standard proration unit.

(11) That in order to permit the drainage of a portion of the reservoir covered by said 160-acre non-standard proration unit which cannot be effectively and efficiently drained by the existing well thereon, the subject application for infill drilling should be approved as an exception to the standard well spacing requirements for said Eumont Gas Pool.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amerada Hess Corporation, is hereby authorized to drill its State "O" Well No. 5 to be located in Unit H of Section 30, Township 19 South, Range 37 East, NMPM, as an infill well on an existing 160-acre non-standard proration unit being the NE/4 of said Section 30, Eumont Gas Pool, Lea County, New Mexico. The authorization for infill drilling granted by this order is an exception to applicable well spacing requirements and is necessary to permit the drainage of a portion of the reservoir covered by the existing 160-acre non-standard proration unit which cannot efficiently and economically be drained by any existing well thereon.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

fd/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
28 February 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico.

CASE 6434

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Lynn Teschendorf, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

For the Applicant: W. THOMAS KELLAHIN, ESQ.
KELLAHIN & KELLAHIN
500 Don Gaspar
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

E X H I B I T S CONT'D

MR. STAMETS: Call next Case Number 6434.

MS. TESCHENDORF: Case 6434. Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico.

MR. KELLAHIN: I'm Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of Amerada Hess, and I have one witness to be sworn. I'm sorry, two witnesses.

MR. STAMETS: I'd like to have both witnesses stand and be sworn at this time, please.

(Witnesses sworn.)

WAYNE WISE

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Would you please state your name, by whom you're employed, and in what capacity?

A. Wayne Wise, Amerada Hess, and I'm a Production Engineer.

Q. Mr. Wise, did you previously testify in this case when it was first heard on January 31st, 1979?

A. Yes, sir, I did.

Q. Have you made a study of and are you familiar

with all the facts surrounding this particular application?

A. Yes, sir.

MR. KELLAHIN: We tender Mr. Wise as an expert witness.

MR. STAMETS: He's considered qualified.

MR. KELLAHIN: If the Examiner will recall, that we introduced a number of exhibits with regard to this first case. We would like to go through all of the exhibits again briefly to refresh your recollection of what has occurred, and then to go through in detail some additional exhibits that we've prepared.

MR. STAMETS: Very good.

Q. (Mr. Kellahin continuing.) Mr. Wise, would you go to what we've marked as Exhibit Number One, identify it, and tell the Examiner what you seek to accomplish?

A. Okay, this is a plat of the 160-acre proration unit currently assigned to State "O" No. 1. This is a plat showing the 160-acre proration unit that is currently dedicated to the State "O" No. 1. We are requesting approval in order to drill State "O" No. 5, shown here in the red triangle.

Q. The 160-acre proration unit is the northeast quarter of Section 30?

A. Yes, sir.

Q. All right. What's the location of the first

well, the State No. 1 Well? That's the well out of the northwest corner of the proration unit, is it not?

A. It would be at 1920 from the north line, 1920 from the west line of the northeast quarter.

Q. All right. Now where is the infill well, the State "O" Well NO. 5?

A. Okay, it will be --

Q. It's in Unit H of the unit?

A. Yes, sir.

Q. All right. Okay, that's all that exhibit shows, right?

A. Yes, sir.

Q. All right, let's look at Exhibit Number Two and have you identify that, please.

A. Okay, this is the C-101 that we filed last year requesting -- our application to drill this well, the State "O" No. 5, 990 from the east and 1980 from the north line.

Q. Okay. What's Exhibit Number Three?

MR. STAMETS: Number Two wasn't what he said it was, or I don't have one here.

MR. KELLAHIN: They're still in the case file.

MR. STAMETS: Okay, this would be Number Two? OKay, let's hold this a second because --

(There followed a discussion off the record.)

MR. STAMETS: Okay.

Q. (Mr. Kellahin continuing.) Mr. Wise, you've discussed Exhibit Number One as simply nothing more than the plat showing the particular wells involved.

Would you refer now to Exhibit Number Two and identify that again?

A. It is the C-101 that Amerada Hess filed application to drill the State "O" No. 5.

Q. This is the infill well?

A. Yes, sir.

Q. All right, when was that well commenced? When was your application to drill it approved? Is there a date?

A. December the 12th.

Q. 1978?

A. Yes, sir.

Q. All right. What is Exhibit Number Three?

A. That is C-132, the Commission form, Application for Price Ceiling Category Determination, for the State "O" No. 5.

Q. You've not otherwise filed a C-132 with any other member of the Oil Conservation Division?

A. No, sir.

Q. Would you describe for us what Exhibit Number Four is now?

A. That is the current downhole completion of the State "O" No. 1, showing casing,perfs, whatever.

Q. How was the State "O" No. 1 originally completed?

A. It was drilled and completed initially in 1936 as a Grayburg-San Andres Well.

Q. Since then has it continued to produce as a Grayburg-San Andres well?

A. Not exclusively. In 1954 we completed it also in the Eumont Gas Zone.

Q. Okay. What is the current state of its completion?

A. Both of these zones are still producing.

Q. The well is currently producing the Grayburg Oil Zone --

A. Yes, sir.

Q. -- and the Eumont Gas Zone?

A. Yes, sir.

Q. How does it produce the Eumont Gas Zone?

A. Up the annulus between the 6-5/8ths inch casing and the 3-1/2 tubing.

Q. How does it currently produce the Grayburg Oil Zone?

A. We are pumping through a spaghetti string, a macaroni string, 1/2 inch tubing, inside the 3-inch tubing.

Q. All right. Why have you sought the second well on the unit?

A. We are unable to produce either side of this, either one of these zones at their optimum rate. We are restricted in both areas. We can increase one zone but we sacrifice production in the other zone.

Q. What do you propose to do?

A. We propose to drill a new Eumont gas well and plug off the current perfs in State "O" No. 1 and single complete the No. 1 in the Monument Grayburg Oil.

Q. Okay. The infill well will only be a single completion for the Eumont Gas Zone, is that correct?

A. Yes, sir, that's correct.

Q. In your opinion is the second well necessary to effectively and efficiently drain that portion of the proration unit that could not otherwise be drained from the Eumont Gas Zone in the first well?

A. Yes, sir.

Q. Let's look at Exhibit Number Five and have you identify that.

A. This is the Order 514 that was issued back in 1953 to authorize dually completing this well.

Q. What's Exhibit Number Six?

A. Exhibit Number Six is offset gas production. Okay, the top figure is the latest published figure, which is November. Okay, the bottom number is the cum in November. Mcf per day over cum Mcf.

Q. All right, let's look at Exhibit Number Seven and have you tell me what that is, now.

A. Exhibit Number Seven is the offset production in the Monument Grayburg Oil Zone.

The top figure is daily production for 1978. The bottom figure is cum through 1978.

Q. All right. What's Exhibit Number Eight?

A. Exhibit Number Eight is a decline curve for the oil zone, showing the plot in green or excuse me, the plot in blue is your casinghead gas; the plot in red is the oil.

Q. All right, look at Exhibit Number Nine and have you tell me what that is.

A. This is the decline curve on the Eumont gas Zone.

Q. Would you summarize what that decline curve shows?

A. It shows beginning of 1978 producing approximately 10,000 Mcf a month. The end of 1978 producing approximately 4000 Mcf a month.

Q. Go to Exhibit Number Ten and have you identify

that.

A. Exhibit Number Ten is a structure map of the Eumont Field. The top of the structure is the Penrose, which is the primarily producing gas zone here.

Q. You have prepared this same exhibit for all three of your cases today, have you not?

A. Yes, sir.

Q. Would you identify the proration unit that's involved for this particular one?

A. Okay, it is in Section 26 in the northeast quarter.

Q. It's the far lefthand square, is that right?

A. Yes, sir.

No, excuse me, it's Section 30.

Q. All right.

A. In the middle of the page.

Q. This is Section 30.

A. Yes, sir.

Q. All right. It's the center square of the three?

A. Yes.

Q. All right. Is there any structural significance for this particular section?

A. No. Let me clarify that a little bit.

My last testimony here last time, I did

state we were gaining structural advantage.

Okay, based on the -- we use, sometimes we use the base of the Eumont, which is the same thing as top of the Grayburg, and we, according to our figures, according to the way we plotted, we were gaining structure. However, when we did go back and did draw up a cross section, okay, there is discrepancy as to where exactly the top of the Grayburg is.

We did call the Hobbs and talked to John Runyon, the geologist over there, and he had some cross sections there and he give us a point to refer to. So based on his point, which the next exhibit is based on, we do not gain any structure.

Q. Let's look at Exhibit Number Eleven, which is your cross section.

A. The cross section covers from our State "O" No. 1 to the No. 2 to the proposed well No. 5, the No. 3, and Gulf Luthy No. 1.

As you can see, we lose structure in the Penrose compared to the No. 1.

Q. Your proposed location falls where on the cross section? Between which two wells?

A. Oh, between the State "O" No. 2 and State "O" No. 3.

Q. Okay. In your opinion, then, there is no

structural significance to this particular location?

A. No, sir.

Q. All right. Let's go to Exhibit Number Twelve and have you identify that exhibit.

A. Exhibit Number Twelve is an oil production plot of the State "P" No. 2. The No. 2 was a well exactly like the State "O". It was dual completed in the Monument Grayburg oil and the Eumont gas zone.

Q. All right, let's locate that State "P" No. 2 Well for me. Where is it?

A. Okay, it would be in the southwest quarter of Section 29 and proration letter M.

Q. Okay. What's the importance of the exhibit?

A. Okay. We attempted a workover. What we're trying to show is we attempted a workover and it was not successful. We got permission to drill a second well. What we're showing here is an increase in oil production by 40 barrels a day.

Q. How was the State"P" No. 2 Well completed?

A. It was pumping oil.

Q. Did it have Eumont gas?

A. Yes, sir.

Q. It was a dual Eumont gas and Grayburg oil?

A. Yes, sir.

Q. What's Exhibit Number Thirteen?

A. Exhibit Number Thirteen is the Eumont side of the State "P" No. 2, showing the workover and then increased production by drilling the No. 3.

Q. What conclusion do you reach from Exhibits 12 and 13?

A. That by single completing both wells we will increase both oil and gas ultimate recovery.

MR. STAMETS: While we're on here, let's look at this thing, because this is the formation that you're concerned with insofar as NGPA, the Eumont.

You've got a production decline curve from 1972 through the middle part of 1975 on the Eumont.

A. Yes, sir.

MR. STAMETS: And that -- that looks like the highest rate of production on this page. It looks like after your workover you made less gas and then when you drilled the replacement well, you made less gas in both cases

Projecting it --

A. Okay, with respect to the --

MR. STAMETS: Projecting your decline curve here from the lefthand side of the page into 1978 --

A. Oh, yes, sir.

MR. STAMETS: -- if you'd left everything alone, you would have been making more gas than you are under the current conditions, is that correct?

A. Okay, if we had not worked this over, this well over, yes, sir, that is correct.

MR. STAMETS: All right. Go ahead.

Q. (Mr. Kellahin continuing.) I don't understand that at all. Tell me again.

A. Okay, what he was saying is if you had not touched the well, not even drilled a new one, we'd be making more gas based on this decline curve. That's correct.

You can see what you were making before you worked it over and afterwards and what you made from a new well.

Q. Is your second well, the infill well for the Eumont gas, is it going to recover additional reserves that would not be otherwise recovered from the first well?

A. It will now, yes.

Q. How do you explain that statement in light of this exhibit?

A. Well, after you worked it over your production decreased considerably and you're going to reach the economic limits sooner than you will on the new completion.

Q. This is for the first well on the unit?

A. Yes, sir. Yes, sir.

Q. Okay. Let's look at Exhibit Fourteen and have you identify that.

A. Okay. Exhibit Fourteen is a pressure versus

cum plot.

Okay, on the righthand corner we have the 72-hour shut-in pressures, the dates, the cum at that date, annual production, date, and cum production, okay, ever since the well was completed.

Okay, as you can see, there's a plot -- all right. We anticipate by drilling the No. 5 we will increase-- there's an increase in reservoir pressure a minimum of 85 pounds.

Okay, going up on the plot from where your current cum is, and drawing a line parallel to that, we are showing what we anticipate -- anticipated increases by drilling this new well.

This amounts to .5-billion Mcf.

Q. Say it again.

A. We're going to increase ultimate recovery by .5-billion.

Q. Okay.

A. Based on this decline, the No. 5 should recover 1.4-billion.

Q. Say that again. 1.4-billion will be recovered by the infill well?

A. Yes, sir.

Q. And of that production .5-billion Mcf is additional gas that would not have been recovered from the

first well?

A. That is correct. Okay, we thought that by doing this we would increase gas reserves and oil reserves both.

We figure that currently there is 71,000 barrels of oil still to be recovered from the No. 1.

Q. Mr. Wise, give me that figure again. What is it?

A. 71,000 barrels of recoverable oil.

Q. Okay. That's 71,000 barrels of oil left to be recovered?

A. Yes.

Q. All right.

A. Okay, if you continue to produce it like it is now, you would get only 28,500 of these.

Q. Okay.

A. Leaving -- excuse me, 28,600 -- leaving behind 14,400 barrels of oil.

Q. Okay. What happens if you recomplete the first well only as an oil producer and you have the second well as the gas producer?

A. Okay, then we expect to recover the 71,000 barrels of oil and this additional .5-billion cubic feet of gas.

Q. Okay. Does that conclude your comments on

Exhibit Fourteen?

A. Yes, sir.

Q. Okay, let's go to Fifteen.

A. Okay. One of the ways that we expect to increase the production from this No. 5 Well, one, by a single completion; second, by better drainage; third, by better completion techniques.

Okay. Exhibit Fifteen shows our Hare 8 Well that was drilled in 1978, offset by two Mobil wells completed in '76 and '77.

Okay, these two Mobil wells were fraced with geled water in both cases. Our well was fraced with CO_2. Okay, the second exhibit shows the production of these wells.

Q. You mean Exhibit Number Sixteen?

A. Okay, Exhibit Number Sixteen shows the production of these two wells.

Q. Okay, and Exhibit Number Seventeen, what's that?

A. Exhibit Seventeen shows the production of these wells but starting at the same time, the same time interval. What we're attempting to say here is that our well since completion has produced 106,000 Mcf. One of Mobil's wells produced 153,000.6 Mcf and the third well, second well, rather, has produced 74.2 Mcf.

We're saying that the increase in production

is due mainly to the stimulation.

Q. Using the CO_2 treatment?

A. Yes, sir.

Q. Is it possible to enter the first well on the unit and treat it with the CO_2 treatment?

A. Yes and no.

Q. Do we have a second witness that can talk on the CO_2 treatment?

A. Yes, we do.

Q. Do you have anything else to add to your testimony?

A. Yes. To drill a Grayburg San Andres well costs you $195,000. Okay, a Eumont well costs $145,000. This additional expense is due to extra 500 feet you have to drill, 7-inch casing and 5-1/2 inch liner instead of just straight 5-1/2 inch pipe.

Okay, Amerada Hess fills that the drilling of this Grayburg well is a waste of energy, capital, and irreplaceable natural resources.

Q. Were Exhibits One through Seventeen prepared by you directly or compiled under your direction and supervision?

A. Yes, sir.

Q. In your opinion, Mr. Wise, will approval of this application be in the best interests of conservation,

the prevention of waste, and the protection of correlative rights?

A. Yes, sir.

Q. In your opinion is the second well, the State "O" No. 5 Well, necessary to effectively and efficiently drain this proration unit?

A. Yes, sir.

MR. KELLAHIN: That concludes our examination of Mr. Wise. We move the introduction of Exhibits One through Seventeen.

MR. STAMETS: These exhibits will be admitted

CROSS EXAMINATION

BY MR. STAMETS:

Q. MR. Wise, referring to Exhibit Number Four-teen, which is the pressure decline curve --

A. Yes, sir.

Q. -- if you completed Well No. 1 as a single Eumont gas producer --

A. Yes, sir.

Q. -- the lefthand pressure decline curve, the point at which that ends --

A. Yes, sir.

Q. -- that indicates what you would expect to produce from that well and from the proration unit?

A. As long as you do not consider economics, yes, sir.

Q. Okay. Now, what you're saying then, with the second line on there, the No. 5 Well --

A. Yes, sir.

Q. -- if you complete that well, and starting from an 85-pound higher pressure base --

A. Yes, sir.

Q. -- and projecting the pressure decline curve you'll recover another half a billion cubic feet of gas?

A. Yes, sir.

Q. All right. Now, where did that 85 pounds come from?

A. From two offset wells that we have drilled, one of them being the State "P" Well, and the other one being the Weir B Well.

Q. Are those shown on any of your plats?

A. The State "P" is. The Weir B is on the -- you do not see the Weir B, no.

Q. What's the location of that State "P" Well?

A. It's in the southwest quarter of Section 29. State "P" No. 3.

Q. Okay, I see it now.

A. Proration Unit K.

Q. All right.

A. Letter K.

Q. And what pressure did that come in with?

A. I believe that was 385 pounds. The old well, State "P" No. 2 had a pressure of something like305, I guess, was the last shut-in on it.

Q. Which well was that, now?

A. State "P" No. 2.

Q. When was Well No. 3 completed?

A. 1977.

Q. Okay, and what was the production pressure decline experienced on that well? Did you indeed have this nice straight line that you're showing -- projecting here for No. 5, or did you have a rapid draw-down to the same pressure line as No. 2?

A. It has not followed that line but it has not dropped where the No. 2 has.

Q. Based on what you've seen, then, are you saying probably we're not going to get this full .5-billion cubic feet?

A. No, sir, no, I'm not. We do not know -- the well is damaged, we feel like, the State "P" No. 3.

Q. You mentioned one other well.

A. The Weir B.

Q. Yes. What was the experience there as far as pressures are concerned?

A. The Weir B has just been completed, sir.

Q. Have you taken a pressure on that well?

A. That is shut-in currently, yes, sir.

Q. And what was the pressure?

A. It's on the exhibit here, sir, let me look here, on the Weir B exhibit.

390, sir.

Q. Which -- which is the Weir B exhibit, what number?

A. Okay, that is in the next case.

MR. KELLAHIN: It's in the third case.

Q. Well, all right, why don't you tell us about that, then? What did you say it was?

A. Approximately 390.

Q. 390, okay, and is there another well completed in the Eumont Pool close to that well?

A. Yes, sir, the Weir B No. 1.

Q. And what was the pressure on that well?

A. Based on the decline it's approximately 300, 285 to 300.

Q. So you've seen a similar range of pressures increase?

A. Well, that's what we're saying, sir. This could -- the well could be higher on this State "O" and it might be lower.

If it's the same, well, it's obvious what the answer is.

Q. It's an interesting question. Suppose you drill and complete the State "O" No. 5 and you wind up with a poor completion, what are you going to do in that case?

A. Live with it.

Q. Are you going to produce both wells?

A. No, sir. No, sir. The Eumont zone in the State "O" No. 1 will be plugged off.

What do you classify as a poor completion, poor production?

Q. Well, what I'm thinking about is this Exhibit Number Twelve.

A. Yes, sir.

Q. Twelve, no, Number Thirteen.

A. Yes, sir.

Q. Which shows the workover and poor production and a replacement well and poor production. That certainly doesn't look like either of those operations were needed.

A. Well, now, assuming the "P" 2 Eumont side is reaching its economic limit, if you don't get a new well those reserves you're going to lose. Correct?

And if you want to optimize or increase your oil production, there's only one way to do it.

Q. Well, I --

A. We did increase the oil production.

Q. It's a little hard to imagine that replacing a well reaching its economic limit with a well that produces even less is a very economical situation.

A. Well, we don't always bat 100 percent.

Q. The thing I'm concerned about here is, you know, we're not dealing with our own rules and regulations any more, we're talking about FERC rules and regulations, and their intent is to get more gas out of the ground, and what you've presented me with here is evidence that that might happen, but also that you might produce less.

A. That's quite right, sir.

Q. And I think that might be kind of hard to sell to FERC, that this is a needed well really, if there's a good chance that -- if you're going to wind up producing less off a proration unit.

A. Only one way to find out is to drill it.

Q. Well, would Amerada Hess be willing to keep both wells on production if you don't find this 85-pound increase and aren't able to project this increase in production from the proration unit, the ultimate production?

A. I don't know. Our ultimate goal here is the oil. That, I don't know. You could, you know, you could increase your oil production but what production you would get out of your gas zone would be restricted even more than

it is now.

Q. Has the subject well been spudded yet, No. 5?

A. No, sir.

Q. Okay.

MR. STAMETS: Any other questions of this witness? He may be excused.

MR. KELLAHIN: I have a second witness.

ROBERT LANSFORD

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Please state your name, by whom you're employed, and in what capacity.

A. I'm Robert Lansford. I work for Halliburton as a Service Sales Engineer.

Q. As an engineer for Halliburton, Mr. Lansford, what is your particular area of expertise with regards to this subject application?

A. I work mainly in the New Mexico area in the stimulation part of it.

Q. What types of stimulation work have you done?

A. Well, all types, but recently in the last couple of years, we came out with a stimulation program for the low bottom hole pressure gas wells that's been giving us a very significant results.

Q. Would that include the Eumont gas zone?

A. Yes, sir.

Q. That would include the proration involved in Section 30?

A. Yes, sir, the application.

Q. Would you describe briefly for the Examiner what that general treatment involves?

A. Yeah. May I read this report?

Q. I think we could mark that as an exhibit, perhaps, and you could simply introduce it.

Is this a report prepared by you or through you or under your direction with regards to CO_2 stimulation of gas wells?

A. Yes, sir, that report was prepared by me.

Q. Mr. Lansford, have you previously testified before the Oil Conservation Division?

A. No, sir.

Q. When and where did you obtain your degree in engineering?

A. I don't have a degree in engineering. I have a BS degree in chemistry at Cameron University.

Q. How long have you been employed by Halliburton?

A. I'm in my fourteenth year.

Q. How long have you been working in the area of CO stimulation of gas wells?

A. I've been using the CO_2 technique for the last two and a half years.

Q. Could you estimate the number of wells involved in the CO_2 treatment?

A. In the New Mexico area we've got approximately 100.

MR. KELLAHIN: I tender Mr. Lansford as an expert witness with regards to the CO_2 stimulation of gas wells.

MR. STAMETS: The witness is considered so qualified.

Q (Mr. Kellahin continuing.) Mr. Lansford, would you describe briefly the content of Exhibit Number Eighteen and tell us the methods for stimulating a gas well, such as the Eumont gas zone in this particular well by CO_2 stimulation?

A. Okay, in this particular area that we're referring to, we have been using three basic types of stimulation.

We have been using the gel water, the nitrogen

foam frac, and the CO_2 frac.

We have had far superior results with the CO_2 frac, and I feel like the CO_2 frac is more beneficial in this type of area due to when you're running a high concentration of CO_2 you're putting your whole system into a low Ph environment, which is beneficial to the clays.

Now, on a typical job, we've run these jobs anywhere from 10,000 gallons to 60,000 gallons, half of which has been CO_2, so we're only putting in half the volume of water. And at this stage of the game we're looking at fairly low bottom hole pressure wells, and with the CO_2 you have a fast clean-up, because we're able to pump CO_2 in a liquid state, whereby after the frac the formation heals back. It goes back to a gas state pushing your liquid back out of the well. We leave the well shut in for one hour and then start the well flowing back. And it's very important to get that water out of the formation as soon as possible to create lowest formation damage to that.

Q. Let me ask you this, Mr. Lansford. Can you re-enter the existing well in the proration unit and give it a CO_2 treatment?

A. I would not recommend it, due to the shape of the casing, the way it was cemented, the number of perforations that exist in each of the wells that they were referring to, and the 200 -- approximately 200 feet above

the Grayburg.

Q. All right, let's address ourselves to each of those three reasons.

What's wrong with the cement in the first well?

A. Okay. The first well, they used a minimum amount of cement, and on this particular type of frac, due to the high friction properties of CO_2, we've been fracing the wells down tubing and casing at the same time. It will frac at a lower pressure. And as old as that casing is, and which they have had to go back and squeeze that casing where the casing has, you know, obtained a leak in the casing, and using a CO_2 frac, if you split the casing, you lose the whole frac.

Q. All right. With regards to the number of perforations existing in the first well?

A. Okay, you're looking at a substantially high number of perforations, anywhere from -- there's four shots per foot, and you're looking at anywhere around 500 perforations up, at trying to frac this well by limited entry, is going to be hard to do. You'd have to do this in stages, dropping a blocking material, and this blocking material is a diverter, and the chances are with that quality of cement that the well has, that it stands -- does stand a chance to communicate downward; it could, and if that happened, each

one of these particular frac jobs we set up for that particular formation.

The Grayburg is an oil producing zone. We're treating the Eumont as a gas zone. If the CO_2 frac diverts down to the Grayburg, and it has not been chemically treated for oil, you're going to leave that CO_2 down in the Grayburg, and for an extended period of time, cooling off that formation, and withou the proper surfactants and chemicals in that fluid cooling that formation down would naturally drop the asphaltines and paraffin out, due to the drop in temperature.

Q. In conclusion, then, Mr. Lansford, in your opinion would you recommend the CO_2 treatment for the existing well in this proration unit?

A. Not in the existing well.

Q. All right. Now, with regards to the infill well, would you recommend the CO_2 treatment?

A. Yes, sir, I definitely would.

Q. What has been your experience with regards to increased recovery from CO_2 stimulation of the Eumont gas zone?

A. I would say the chances of an increase in production is 95 percent.

Q. Do you have any general numbers that you can give us with regards to the percentage of increase in production from a zone after it's been stimulated with CO_2?

A. We've had anywhere from 10 to 800 percent increase.

If you'll refer to the last page of my exhibit, I have the production before and the production after. That is the typical results that we've been having, in each of the zones.

You'll notice that we've been treating the Yates, Queens, Penrose, Cisco, and the Seven Rivers.

MR. KELLAHIN: That concludes my examination of Mr. Lansford, and we move the introduction of Exhibit Number Eighteen.

MR. STAMETS: Exhibit Eighteen will be admitted.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Lansford, you indicated there would be a 95 percent chance of increased production with this fracture treatment. Are you saying that that's a 95 percent chance in that wellbore, or as opposed to the existing well in the proration unit?

A. Okay. In the existing well, the old well. --

Q. No, no, you --

A. Okay, in the new well.

Q. Let me rephrase the question.

There is an existing well on there, which is producing at a certain rate.

A. Yes.

Q. The second well is to be drilled. When you are talking about 95 percent chance of increased production, were you speaking of what you would expect to achieve in the well that you frac, or were you thinking of the chance that the second well would produce more than the original well?

A. With this type of frac I would feel certain that it would be an increase in production, with this type of frac.

Q. As opposed to the original well which was not fraced?

A. Yes, sir.

Q. Okay.

MR. STAMETS: Any other questions of this witness? He may be excused.

Anything further in this case?

The case will be taken under advisement.

(Hearing concluded.)

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd

Sally W. Boyd, C.S.R.

I do he[illegible] in
a co[illegible]
the [illegible] 6434
heard by me on 2-28 1979.
Richard L. Stamets, Examiner
Oil Conservation Division

SALLY WALTON BOYD
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Santa Fe, New Mexico 87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
28 February 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico.

CASE 6434

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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I N D E X

E X H I B I T S

E X H I B I T S CONT'D

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MR. STAMETS: Call next Case Number 6434.

MS. TESCHENDORF: Case 6434. Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico.

MR. KELLAHIN: I'm Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of Amerada Hess, and I have one witness to be sworn. I'm sorry, two witnesses.

MR. STAMETS: I'd like to have both witnesses stand and be sworn at this time, please.

(Witnesses sworn.)

WAYNE WISE

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Would you please state your name, by whom you're employed, and in what capacity?

A Wayne Wise, Amerada Hess, and I'm a Production Engineer.

Q Mr. Wise, did you previously testify in this case when it was first heard on January 31st, 1979?

A Yes, sir, I did.

Q Have you made a study of and are you familiar

with all the facts surrounding this particular application?

A. Yes, sir.

MR. KELLAHIN: We tender Mr. Wise as an expert witness.

MR. STAMETS: He's considered qualified.

MR. KELLAHIN: If the Examiner will recall, that we introduced a number of exhibits with regard to this first case. We would like to go through all of the exhibits again briefly to refresh your recollection of what has occurred, and then to go through in detail some additional exhibits that we've prepared.

MR. STAMETS: Very good.

Q. (Mr. Kellahin continuing.) Mr. Wise, would you go to what we've marked as Exhibit Number One, identify it, and tell the Examiner what you seek to accomplish?

A. Okay, this is a plat of the 160-acre proration unit currently assigned to State "O" No. 1. This is a plat showing the 160-acre proration unit that is currently dedicated to the State "O" No. 1. We are requesting approval in order to drill State "O" No. 5, shown here in the red triangle.

Q. The 160-acre proration unit is the northeast quarter of Section 30?

A. Yes, sir.

Q. All right. What's the location of the first

well, the State No. 1 Well? That's the well out of the northwest corner of the proration unit, is it not?

A. It would be at 1920 from the north line, 1920 from the west line of the northeast quarter.

Q. All right. Now where is the infill well, the State "O" Well NO. 5?

A. Okay, it will be --

Q. It's in Unit H of the unit?

A. Yes, sir.

Q. All right. Okay, that's all that exhibit shows, right?

A. Yes, sir.

Q. All right, let's look at Exhibit Number Two and have you identify that, please.

A. Okay, this is the C-101 that we filed last year requesting -- our application to drill this well, the State "O" No. 5, 990 from the east and 1980 from the north line.

Q. Okay. What's Exhibit Number Three?

MR. STAMETS: Number Two wasn't what he said it was, or I don't have one here.

MR. KELLAHIN: They're still in the case file.

MR. STAMETS: Okay, this would be Number Two? OKay, let's hold this a second because --

(There followed a discussion off the record.)

MR. STAMETS: Okay.

Q (Mr. Kellahin continuing.) Mr. Wise, you've discussed Exhibit Number One as simply nothing more than the plat showing the particular wells involved.

Would you refer now to Exhibit Number Two and identify that again?

A It is the C-101 that Amerada Hess filed application to drill the State "O" No. 5.

Q This is the infill well?

A Yes, sir.

Q All right, when was that well commenced? When was your application to drill it approved? Is there a date?

A December the 12th.

Q 1978?

A Yes, sir.

Q All right. What is Exhibit Number Three?

A That is C-132, the Commission form, Application for Price Ceiling Category Determination, for the State "O" No. 5.

Q You've not otherwise filed a C-132 with any other member of the Oil Conservation Division?

A No, sir.

Q. Would you describe for us what Exhibit Number Four is now?

A. That is the current downhole completion of the State "O" No. 1, showing casing,perfs, whatever.

Q. How was the State "O" No. 1 originally completed?

A. It was drilled and completed initially in 1936 as a Grayburg-San Andres Well.

Q. Since then has it continued to produce as a Grayburg-San Andres well?

A. Not exclusively. In 1954 we completed it also in the Eumont Gas Zone.

Q. Okay. What is the current state of its completion?

A. Both of these zones are still producing.

Q. The well is currently producing the Grayburg Oil Zone --

A. Yes, sir.

Q. -- and the Eumont Gas Zone?

A. Yes, sir.

Q. How does it produce the Eumont Gas Zone?

A. Up the annulus between the 6-5/8ths inch casing and the 3-1/2 tubing.

Q. How does it currently produce the Grayburg Oil Zone?

A. We are pumping through a spaghetti string, a macaroni string, 1/2 inch tubing, inside the 3-inch tubing.

Q. All right. Why have you sought the second well on the unit?

A. We are unable to produce either side of this, either one of these zones at their optimum rate. We are restricted in both areas. We can increase one zone but we sacrifice production in the other zone.

Q. What do you propose to do?

A. We propose to drill a new Eumont gas well and plug off the current perfs in State "O" No. 1 and single complete the No. 1 in the Monument Grayburg Oil.

Q. Okay. The infill well will only be a single completion for the Eumont Gas Zone, is that correct?

A. Yes, sir, that's correct.

Q. In your opinion is the second well necessary to effectively and efficiently drain that portion of the proration unit that could not otherwise be drained from the Eumont Gas Zone in the first well?

A. Yes, sir.

Q. Let's look at Exhibit Number Five and have you identify that.

A. This is the Order 514 that was issued back in 1953 to authorize dually completing this well.

Q. What's Exhibit Number Six?

A. Exhibit Number Six is offset gas production. Okay, the top figure is the latest published figure, which is November. Okay, the bottom number is the cum in November. Mcf per day over cum Mcf.

Q. All right, let's look at Exhibit Number Seven and have you tell me what that is, now.

A. Exhibit Number Seven is the offset production in the Monument Grayburg Oil Zone.

The top figure is daily production for 1978. The bottom figure is cum through 1978.

Q. All right. What's Exhibit Number Eight?

A. Exhibit Number Eight is a decline curve for the oil zone, showing the plot in green or excuse me, the plot in blue is your casinghead gas; the plot in red is the oil.

Q. All right, look at Exhibit Number Nine and have you tell me what that is.

A. This is the decline curve on the Eumont gas Zone.

Q. Would you summarize what that decline curve shows?

A. It shows beginning of 1978 producing approximately 10,000 Mcf a month. The end of 1978 producing approximately 4000 Mcf a month.

Q. Go to Exhibit Number Ten and have you identify

that.

A. Exhibit Number Ten is a structure map of the Eumont Field. The top of the structure is the Penrose, which is the primarily producing gas zone here.

Q. You have prepared this same exhibit for all three of your cases today, have you not?

A. Yes, sir.

Q. Would you identify the proration unit that's involved for this particular one?

A. Okay, it is in Section 26 in the northeast quarter.

Q. It's the far lefthand square, is that right?

A. Yes, sir.

No, excuse me, it's Section 30.

Q. All right.

A. In the middle of the page.

Q. This is Section 30.

A. Yes, sir.

Q. All right. It's the center square of the three?

A. Yes.

Q. All right. Is there any structural significance for this particular section?

A. No. Let me clarify that a little bit.

My last testimony here last time, I did

state we were gaining structural advantage.

Okay, based on the -- we use, sometimes we use the base of the Eumont, which is the same thing as top of the Grayburg, and we, according to our figures, according to the way we plotted, we were gaining structure. However, when we did go back and did draw up a cross section, okay, there is discrepancy as to where exactly the top of the Grayburg is.

We did call the Hobbs and talked to John Runyon, the geologist over there, and he had some cross sections there and he give us a point to refer to. So based on his point, which the next exhibit is based on, we do not gain any structure.

Q Let's look at Exhibit Number Eleven, which is your cross section.

A The cross section covers from our State "O" No. 1 to the No. 2 to the proposed well No. 5, the No. 3, and Gulf Luthy No. 1.

As you can see, we lose structure in the Penrose compared to the No. 1.

Q Your proposed location falls where on the cross section? Between which two wells?

A Oh, between the State "O" No. 2 and State "O" No. 3.

Q Okay. In your opinion, then, there is no

structural significance to this particular location?

A. No, sir.

Q. All right. Let's go to Exhibit Number Twelve and have you identify that exhibit.

A. Exhibit Number Twelve is an oil production plot of the State "P" No. 2. The No. 2 was a well exactly like the State "O". It was dual completed in the Monument Grayburg oil and the Eumont gas zone.

Q. All right, let's locate that State "P" No. 2 Well for me. Where is it?

A. Okay, it would be in the southwest quarter of Section 29 and proration letter M.

Q. Okay. What's the importance of the exhibit?

A. Okay. We attempted a workover. What we're trying to show is we attempted a workover and it was not successful. We got permission to drill a second well. What we're showing here is an increase in oil production by 40 barrels a day.

Q. How was the State"P" No. 2 Well completed?

A. It was pumping oil.

Q. Did it have Eumont gas?

A. Yes, sir.

Q. It was a dual Eumont gas and Grayburg oil?

A. Yes, sir.

Q. What's Exhibit Number Thirteen?

A. Exhibit Number Thirteen is the Eumont side of the State "P" No. 2, showing the workover and then increased production by drilling the No. 3.

Q. What conclusion do you reach from Exhibits 12 and 13?

A. That by single completing both wells we will increase both oil and gas ultimate recovery.

MR. STAMETS: While we're on here, let's look at this thing, because this is the formation that you're concerned with insofar as NGPA, the Eumont.

You've got a production decline curve from 1972 through the middle part of 1975 on the Eumont.

A. Yes, sir.

MR. STAMETS: And that -- that looks like the highest rate of production on this page. It looks like after your workover you made less gas and then when you drilled the replacement well, you made less gas in both cases.

Projecting it --

A. Okay, with respect to the --

MR. STAMETS: Projecting your decline curve here from the lefthand side of the page into 1978 --

A. Oh, yes, sir.

MR. STAMETS: -- if you'd left everything alone, you would have been making more gas than you are under the current conditions, is that correct?

A. Okay, if we had not worked this over, this well over, yes, sir, that is correct.

MR. STAMETS: All right. Go ahead.

Q. (Mr. Kellahin continuing.) I don't understand that at all. Tell me again.

A. Okay, what he was saying is if you had not touched the well, not even drilled a new one, we'd be making more gas based on this decline curve. That's correct.

You can see what you were making before you worked it over and afterwards and what you made from a new well.

Q. Is your second well, the infill well for the Eumont gas, is it going to recover additional reserves that would not be otherwise recovered from the first well?

A. It will now, yes.

Q. How do you explain that statement in light of this exhibit?

A. Well, after you worked it over your production decreased considerably and you're going to reach the economic limits sooner than you will on the new completion.

Q. This is for the first well on the unit?

A. Yes, sir. Yes, sir.

Q. Okay. Let's look at Exhibit Fourteen and have you identify that.

A. Okay. Exhibit Fourteen is a pressure versus

cum plot.

Okay, on the righthand corner we have the 72-hour shut-in pressures, the dates, the cum at that date, annual production, date, and cum production, okay, ever since the well was completed.

Okay, as you can see, there's a plot -- all right. We anticipate by drilling the No. 5 we will increase-- there's an increase in reservoir pressure a minimum of 85 pounds.

Okay, going up on the plot from where your current cum is, and drawing a line parallel to that, we are showing what we anticipate -- anticipated increases by drilling this new well.

This amounts to .5-billion Mcf.

Q Say it again.

A We're going to increase ultimate recovery by .5-billion.

Q Okay.

A Based on this decline, the No. 5 should recover 1.4-billion.

Q Say that again. 1.4-billion will be recovered by the infill well?

A Yes, sir.

Q And of that production .5-billion Mcf is additional gas that would not have been recovered from the

first well?

A. That is correct. Okay, we thought that by doing this we would increase gas reserves and oil reserves both.

We figure that currently there is 71,000 barrels of oil still to be recovered from the No. 1.

Q. Mr. Wise, give me that figure again. What is it?

A. 71,000 barrels of recoverable oil.

Q. Okay. That's 71,000 barrels of oil left to be recovered?

A. Yes.

Q. All right.

A. Okay, if you continue to produce it like it is now, you would get only 28,500 of these.

Q. Okay.

A. Leaving -- excuse me, 28,600 -- leaving behind 14,400 barrels of oil.

Q. Okay. What happens if you recomplete the first well only as an oil producer and you have the second well as the gas producer?

A. Okay, then we expect to recover the 71,000 barrels of oil and this additional .5-billion cubic feet of gas.

Q. Okay. Does that conclude your comments on

Exhibit Fourteen?

A. Yes, sir.

Q. Okay, let's go to Fifteen.

A. Okay. One of the ways that we expect to increase the production from this No. 5 Well, one, by a single completion; second, by better drainage; third, by better completion techniques.

Okay. Exhibit Fifteen shows our Hare 8 Well that was drilled in 1978, offset by two Mobil wells completed in '76 and '77.

Okay, these two Mobil wells were fraced with geled water in both cases. Our well was fraced with CO_2. Okay, the second exhibit shows the production of these wells.

Q. You mean Exhibit Number Sixteen?

A. Okay, Exhibit Number Sixteen shows the production of these two wells.

Q. Okay, and Exhibit Number Seventeen, what's that?

A. Exhibit Seventeen shows the production of these wells but starting at the same time, the same time interval. What we're attempting to say here is that our well since completion has produced 106,000 Mcf. One of Mobil's wells produced 153,000.6 Mcf and the third well, second well, rather, has produced 74.2 Mcf.

We're saying that the increase in production

is due mainly to the stimulation.

Q. Using the CO_2 treatment?

A. Yes, sir.

Q. Is it possible to enter the first well on the unit and treat it with the CO_2 treatment?

A. Yes and no.

Q. Do we have a second witness that can talk on the CO_2 treatment?

A. Yes, we do.

Q. Do you have anything else to add to your testimony?

A. Yes. To drill a Grayburg San Andres well costs you $195,000. Okay, a Eumont well costs $145,000. This additional expense is due to extra 500 feet you have to drill, 7-inch casing and 5-1/2 inch liner instead of just straight 5-1/2 inch pipe.

Okay, Amerada Hess fills that the drilling of this Grayburg well is a waste of energy, capital, and irreplaceable natural resources.

Q. Were Exhibits One through Seventeen prepared by you directly or compiled under your direction and supervision?

A. Yes, sir.

Q. In your opinion, Mr. Wise, will approval of this application be in the best interests of conservation,

the prevention of waste, and the protection of correlative rights?

A. Yes, sir.

Q. In your opinion is the second well, the State "O" No. 5 Well, necessary to effectively and efficiently drain this proration unit?

A. Yes, sir.

MR. KELLAHIN: That concludes our examination of Mr. Wise. We move the introduction of Exhibits One through Seventeen.

MR. STAMETS: These exhibits will be admitted.

CROSS EXAMINATION

BY MR. STAMETS:

Q. MR. Wise, referring to Exhibit Number Fourteen, which is the pressure decline curve --

A. Yes, sir.

Q. -- if you completed Well No. 1 as a single Eumont gas producer --

A. Yes, sir.

Q. -- the lefthand pressure decline curve, the point at which that ends --

A. Yes, sir.

Q. -- that indicates what you would expect to produce from that well and from the proration unit?

A. As long as you do not consider economics, yes, sir.

Q. Okay. Now, what you're saying then, with the second line on there, the No. 5 Well --

A. Yes, sir.

Q. -- if you complete that well, and starting from an 85-pound higher pressure base --

A. Yes, sir.

Q. -- and projecting the pressure decline curve you'll recover another half a billion cubic feet of gas?

A. Yes, sir.

Q. All right. Now, where did that 85 pounds come from?

A. From two offset wells that we have drilled, one of them being the State "P" Well, and the other one being the Weir B Well.

Q. Are those shown on any of your plats?

A. The State "P" is. The Weir B is on the -- you do not see the Weir B, no.

Q. What's the location of that State "P" Well?

A. It's in the southwest quarter of Section 29. State "P" No. 3.

Q. Okay, I see it now.

A. Proration Unit K.

Q. All right.

A. Letter K.

Q. And what pressure did that come in with?

A. I believe that was 385 pounds. The old well, State "P" No. 2 had a pressure of something like305, I guess, was the last shut-in on it.

Q. Which well was that, now?

A. State "P" No. 2.

Q. When was Well No. 3 completed?

A. 1977.

Q. Okay, and what was the production pressure decline experienced on that well? Did you indeed have this nice straight line that you're showing -- projecting here for No. 5, or did you have a rapid draw-down to the same pressure line as No. 2?

A. It has not followed that line but it has not dropped where the No. 2 has.

Q. Based on what you've seen, then, are you saying probably we're not going to get this full .5-billion cubic feet?

A. No, sir, no, I'm not. We do not know -- the well is damaged, we feel like, the State "P" No. 3.

Q. You mentioned one other well.

A. The Weir B.

Q. Yes. What was the experience there as far as pressures are concerned?

A. The Weir B has just been completed, sir.

Q. Have you taken a pressure on that well?

A. That is shut-in currently, yes, sir.

Q. And what was the pressure?

A. It's on the exhibit here, sir, let me look here, on the Weir B exhibit.

390, sir.

Q. Which -- which is the Weir B exhibit, what number?

A. Okay, that is in the next case.

MR. KELLAHIN: It's in the third case.

Q. Well, all right, why don't you tell us about that, then? What did you say it was?

A. Approximately 390.

Q. 390, okay, and is there another well completed in the Eumont Pool close to that well?

A. Yes, sir, the Weir B No. 1.

Q. And what was the pressure on that well?

A. Based on the decline it's approximately 300, 285 to 300.

Q. So you've seen a similar range of pressures increase?

A. Well, that's what we're saying, sir. This could -- the well could be higher on this State "O" and it might be lower.

If it's the same, well, it's obvious what the answer is.

Q. It's an interesting question. Suppose you drill and complete the State "O" No. 5 and you wind up with a poor completion, what are you going to do in that case?

A. Live with it.

Q. Are you going to produce both wells?

A. No, sir. No, sir. The Eumont zone in the State "O" No. 1 will be plugged off.

What do you classify as a poor completion, poor production?

Q. Well, what I'm thinking about is this Exhibit Number Twelve.

A. Yes, sir.

Q. Twelve, no, Number Thirteen.

A. Yes, sir.

Q. Which shows the workover and poor production and a replacement well and poor production. That certainly doesn't look like either of those operations were needed.

A. Well, now, assuming the "P" 2 Eumont side is reaching its economic limit, if you don't get a new well those reserves you're going to lose. Correct?

And if you want to optimize or increase your oil production, there's only one way to do it.

Q. Well, I --

A. We did increase the oil production.

Q. It's a little hard to imagine that replacing a well reaching its economic limit with a well that produces even less is a very economical situation.

A. Well, we don't always bat 100 percent.

Q. The thing I'm concerned about here is, you know, we're not dealing with our own rules and regulations any more, we're talking about FERC rules and regulations, and their intent is to get more gas out of the ground, and what you've presented me with here is evidence that that might happen, but also that you might produce less.

A. That's quite right, sir.

Q. And I think that might be kind of hard to sell to FERC, that this is a needed well really, if there's a good chance that -- if you're going to wind up producing less off a proration unit.

A. Only one way to find out is to drill it.

Q. Well, would Amerada Hess be willing to keep both wells on production if you don't find this 85-pound increase and aren't able to project this increase in production from the proration unit, the ultimate production?

A. I don't know. Our ultimate goal here is the oil. That, I don't know. You could, you know, you could increase your oil production but what production you would get out of your gas zone would be restricted even more than

it is now.

Q. Has the subject well been spudded yet, No. 5?

A. No, sir.

Q. Okay.

MR. STAMETS: Any other questions of this witness? He may be excused.

MR. KELLAHIN: I have a second witness.

ROBERT LANSFORD

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Please state your name, by whom you're employed, and in what capacity.

A. I'm Robert Lansford. I work for Halliburton as a Service Sales Engineer.

Q. As an engineer for Halliburton, Mr. Lansford, what is your particular area of expertise with regards to this subject application?

A. I work mainly in the New Mexico area in the stimulation part of it.

Q. What types of stimulation work have you done?

A. Well, all types, but recently in the last couple of years, we came out with a stimulation program for the low bottom hole pressure gas wells that's been giving us a very significant results.

Q. Would that include the Eumont gas zone?

A. Yes, sir.

Q. That would include the proration involved in Section 30?

A. Yes, sir, the application.

Q. Would you describe briefly for the Examiner what that general treatment involves?

A. Yeah. May I read this report?

Q. I think we could mark that as an exhibit, perhaps, and you could simply introduce it.

Is this a report prepared by you or through you or under your direction with regards to CO_2 stimulation of gas wells?

A. Yes, sir, that report was prepared by me.

Q. Mr. Lansford, have you previously testified before the Oil Conservation Division?

A. No, sir.

Q. When and where did you obtain your degree in engineering?

A. I don't have a degree in engineering. I have a BS degree in chemistry at Cameron University.

Q. How long have you been employed by Halliburton?

A. I'm in my fourteenth year.

Q. How long have you been working in the area of CO stimulation of gas wells?

A. I've been using the CO_2 technique for the last two and a half years.

Q. Could you estimate the number of wells involved in the CO_2 treatment?

A. In the New Mexico area we've got approximately 100.

MR. KELLAHIN: I tender Mr. Lansford as an expert witness with regards to the CO_2 stimulation of gas wells.

MR. STAMETS: The witness is considered so qualified.

Q. (Mr. Kellahin continuing.) Mr. Lansford, would you describe briefly the content of Exhibit Number Eighteen and tell us the methods for stimulating a gas well, such as the Eumont gas zone in this particular well by CO_2 stimulation?

A. Okay, in this particular area that we're referring to, we have been using three basic types of stimulation.

We have been using the gel water, the nitrogen

foam frac, and the CO_2 frac.

We have had far superior results with the CO_2 frac, and I feel like the CO_2 frac is more beneficial in this type of area due to when you're running a high concentration of CO_2 you're putting your whole system into a low Ph environment, which is beneficial to the clays.

Now, on a typical job, we've run these jobs anywhere from 10,000 gallons to 60,000 gallons, half of which has been CO_2, so we're only putting in half the volume of water. And at this stage of the game we're looking at fairly low bottom hole pressure wells, and with the CO_2 you have a fast clean-up, because we're able to pump CO_2 in a liquid state, whereby after the frac the formation heals back. It goes back to a gas state pushing your liquid back out of the well. We leave the well shut in for one hour and then start the well flowing back. And it's very important to get that water out of the formation as soon as possible to create lowest formation damage to that.

Q. Let me ask you this, Mr. Lansford. Can you re-enter the existing well in the proration unit and give it a CO_2 treatment?

A. I would not recommend it, due to the shape of the casing, the way it was cemented, the number of perforations that exist in each of the wells that they were referring to, and the 200 -- approximately 200 feet above

the Grayburg.

Q All right, let's address ourselves to each of those three reasons.

What's wrong with the cement in the first well?

A Okay. The first well, they used a minimum amount of cement, and on this particular type of frac, due to the high friction properties of CO_2, we've been fracing the wells down tubing and casing at the same time. It will frac at a lower pressure. And as old as that casing is, and which they have had to go back and squeeze that casing where the casing has, you know, obtained a leak in the casing, and using a CO_2 frac, if you split the casing, you lose the whole frac.

Q All right. With regards to the number of perforations existing in the first well?

A Okay, you're looking at a substantially high number of perforations, anywhere from -- there's four shots per foot, and you're looking at anywhere around 500 perforations up, at trying to frac this well by limited entry, is going to be hard to do. You'd have to do this in stages, dropping a blocking material, and this blocking material is a diverter, and the chances are with that quality of cement that the well has, that it stands -- does stand a chance to communicate downward; it could, and if that happened, each

one of these particular frac jobs we set up for that particular formation.

The Grayburg is an oil producing zone. We're treating the Eumont as a gas zone. If the CO_2 frac diverts down to the Grayburg, and it has not been chemically treated for oil, you're going to leave that CO_2 down in the Grayburg, and for an extended period of time, cooling off that formation, and withou the proper surfactants and chemicals in that fluid cooling that formation down would naturally drop the asphaltines and paraffin out, due to the drop in temperature.

Q In conclusion, then, Mr. Lansford, in your opinion would you recommend the CO_2 treatment for the existing well in this proration unit?

A Not in the existing well.

Q All right. Now, with regards to the infill well, would you recommend the CO_2 treatment?

A Yes, sir, I definitely would.

Q What has been your experience with regards to increased recovery from CO_2 stimulation of the Eumont gas zone?

A I would say the chances of an increase in production is 95 percent.

Q Do you have any general numbers that you can give us with regards to the percentage of increase in production from a zone after it's been stimulated with CO_2?

A. We've had anywhere from 10 to 800 percent increase.

If you'll refer to the last page of my exhibit, I have the production before and the production after. That is the typical results that we've been having, in each of the zones.

You'll notice that we've been treating the Yates, Queens, Penrose, Cisco, and the Seven Rivers.

MR. KELLAHIN: That concludes my examination of Mr. Lansford, and we move the introduction of Exhibit Number Eighteen.

MR. STAMETS: Exhibit Eighteen will be admitted.

CROSS EXAMINATION

BY MR. STAMETS:

Q. Mr. Lansford, you indicated there would be a 95 percent chance of increased production with this fracture treatment. Are you saying that that's a 95 percent chance in that wellbore, or as opposed to the existing well in the proration unit?

A. Okay. In the existing well, the old well, --

Q. No, no, you --

A. Okay, in the new well.

Q. Let me rephrase the question.

There is an existing well on there, which is producing at a certain rate.

A. Yes.

Q. The second well is to be drilled. When you are talking about 95 percent chance of increased production, were you speaking of what you would expect to achieve in the well that you frac, or were you thinking of the chance that the second well would produce more than the original well?

A. With this type of frac I would feel certain that it would be an increase in production, with this type of frac.

Q. As opposed to the original well which was not fraced?

A. Yes, sir.

Q. Okay.

MR. STAMETS: Any other questions of this witness? He may be excused.

Anything further in this case?

The case will be taken under advisement.

(Hearing concluded.)

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case no. 6434, heard by me on 2-28 1979.

Richard L. Stamets, Examiner
Oil Conservation Division

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

JERRY APODACA
GOVERNOR

NICK FRANKLIN
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

March 20, 1979

Federal Energy Regulatory
Commission
825 North Capitol Street, N.E.
Washington, D.C. 20426

Re: Finding pursuant to
Section 271.305, NGPA
regulations

Gentlemen:

Attached is a copy of an order entered by the New Mexico Oil Conservation Division containing a finding that the drilling of the subject well is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by any existing well.

Well Name and Location: State "O" Well No. 5 in Unit H of Section 30, Township 19 South, Range 37 East

Operator: Amerada Hess Corporation

List of Participants: Amerada Hess Corporation

The matter (~~was~~ XXX) (was not) opposed.

The information contained in this notice includes all of the information required by Sections 271.305 and 274.104.

EXAMINER

Attachments: application and exhibits

AMERADA HESS CORPORATION

P. O. BOX 2040
TULSA, OKLAHOMA 74102
918-584-5554

March 14, 1979

Xerox one copy for each case file RLS

Mr. R. L. Stamets
Technical Support Chief
New Mexico Oil Conservation Commission
Post Office Box 2088
State Land Office Building
Santa Fe, New Mexico 87501

Re: Eumont Gas Pool,
Case Nos. 6434 and 6436 -
Amerada Hess Corporation - Applicant

Dear Mr. Stamets:

The captioned cases were presented and heard on February 28, 1979, and, with consent of the Commission, this letter is submitted as part of the record of those hearings to correct testimony on a single point which later investigation proves to have been inadvertently in error.

In response to cross-examination regarding the attached performance curve exhibit of the Amerada Hess State "P" Gas Com No. 2-2 Replacement Well No. 3 indicating reduced production from said replacement well, Amerada Hess stated that the replacement well had been frac treated using CO_2 as the fracture median. This representation was based on a written recommendation and proposal from our contractor and contained in our well file.

A review of that operation which was made immediately after the hearing shows that the proposed CO_2 frac was performed on the State "J" No. 4 Well and not the State "P" No. 3 Well. The State "P" No. 3 Well, which was the subject of the hearing, was foam fractured in the Eumont Queen Zone on August 3, 1977 in open hole with 260 barrels 2% KCL water, 835,000 SCF Nitrogen and 36,500 pounds of 20/40 sand.

We therefore request that the record reflect that Nitrogen was the fracture fluid utilized in the well, and not CO_2. Unfortunately, subsequent treatments in similar wells have indicated that a better increase

in production would have been realized if CO_2 had in fact been used in frac treating the well.

We apologize for any inconvenience or misconception created by our mistake in presenting our evidence. It is our intention that this transmittal will serve to correct the record and to preserve our integrity as to matters coming before the Commission.

Thank you for your consideration and assistance in this matter.

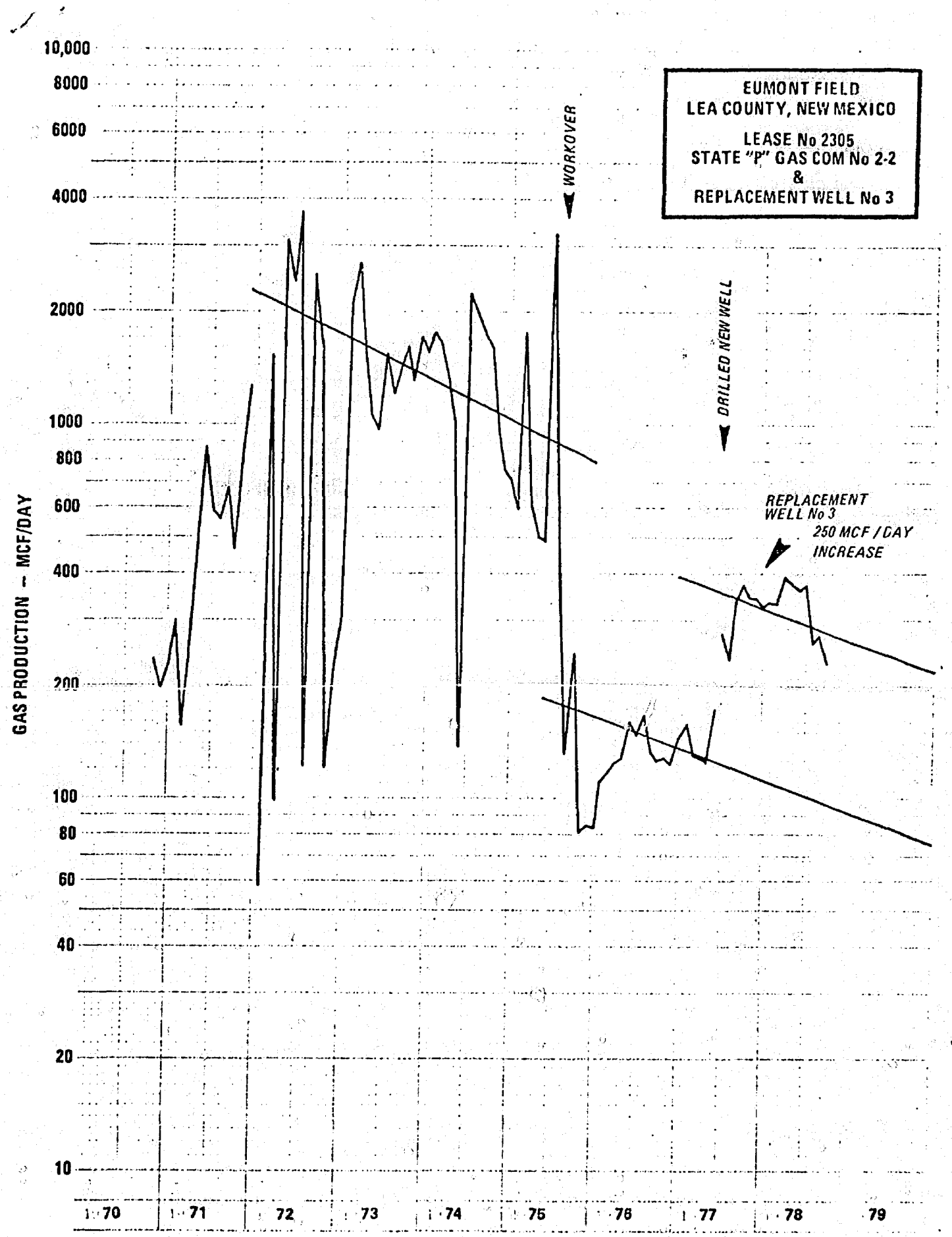
Very truly yours,

AMERADA HESS CORPORATION

Gilbert E. Miller
Supervisor, Production Conservation

GEM:bjt
Attachment

cc: W. Thomas Kellahin, Esq.
Kellahin & Kellahin
Post Office Box 1769
Santa Fe, New Mexico


EUMONT FIELD
LEA COUNTY, NEW MEXICO
LEASE No 2305
STATE "P" GAS COM No 2-2
&
REPLACEMENT WELL No 3
GAS PRODUCTION -- MCF/DAY
10,000
8000
6000
4000
2000
1000
800
600
400
200
100
80
60
40
20
10
WORKOVER
DRILLED NEW WELL
REPLACEMENT WELL No 3
250 MCF / DAY INCREASE
1970
1971
72
73
1974
75
76
77
78
79

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
State Land Office Building
Santa Fe, New Mexico
31 January 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Amerada Hess Corporation for approval of infill Drilling, Lea County, New Mexico.

CASES
6434
6435
6436

BEFORE: Richard L. Stamets

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: Lynn Teschendorf, Esq.
Legal Counsel for the Division
State Land Office Bldg.
Santa Fe, New Mexico 87503

For the Applicant: W. Thomas Kellahin, Esq.
KELLAHIN & KELLAHIN
500 Don Gaspar
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. STAMETS: We'll call next Case 6434.

MS. TESCHENDORF: Case 6434. Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico.

MR. KELLAHIN: Tom Kellahin of Kellahin and Kellahin, Santa Fe, New Mexico, appearing on behalf of Amerada Hess Corporation. I have one witness to be sworn.

(Witness sworn.)

WAYNE WISE

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q. Please state your name and occupation.

A. Wayne Wise. I'm currently employed with Amerada Hess as Staff Engineer.

Q. Mr. Wise, in what field do you hold a degree?

A. Mechanical engineering.

Q. Have you previously testified before the Oil Conservation Division?

A. Yes, sir.

Q. Have you made a study of and are you familiar with the facts surrounding this particular application?

A. Yes, sir.

MR. KELLAHIN: We tender Mr. Wise as an expert witness.

MR. STAMETS: He is considered qualified.

Q. (Mr. Kellahin continuing.) Would you refer to the land plat, which I've marked as Applicant Exhibit Number One, identify that for us, and explain what Amerada Hess is seeking to accomplish?

A. This is a plat of the State "O" Gas Zone and the final designation is the proposed new location to place the Well No. 1.

Q. What is the proration unit, Mr. Wise?

A. 160 acres.

Q. And it is what portion of Section 30?

A. It's the northeast quarter.

Q. I note that there are a number of wells indicated in the northeast quarter of Section 30. Commencing with Well No. 1, would you describe the information for each well?

A. Okay. The figures in red are average 1978 gas production over cum.

The figures in green are average oil production over cum.

Q. The only producing gas well in the proration unit is the No. 1 Well, is that correct?

A. Yes, sir.

Q. And it is producing from the Eumont Gas Pool?

A. Yes, sir.

Q. The second well on the proration unit, how is it going to be identified? What's its name? Do you have a name for that well yet?

A. Oh, it will be the State "O" No. 5, I believe, yes, sir.

Q. State "O" No. 5, located in Unit H, is that correct?

A. Yes, sir.

Q. All right. What are you seeking to accomplish Mr. Wise?

A. We are currently handicapped by the wellbore on No. 1. We are producing -- pumping the Eumont -- excuse me, the Monument-Grayburg zone, and showing the Eumont gas going up the annulus.

Q. The No. 1 Well is a dual completion?

A. Yes, sir.

Q. And tell me how the Eumont gas is being produced.

A. Between the annulus and the 2-1/2 inch tubing.

Q. And it is also producing Monument-Grayburg

oil?

A. Yes, sir.

Q. In your opinion can you efficiently and effectively continue to produce the Eumont gas zone through this dual completed well?

A. No.

Q. Why not?

A. Due to the producing limitations there, the Eumont in this case is continually loading up and we are having to swab it off regularly and there are increasing expenses involved in this.

Q. So it's your desire to replace that particular well with the State "O" Well No. 5.

A. Yes, sir.

Q. Will that well also be a dual completion?

A. No, sir, that will be a single only in the Eumont gas.

Q. What are your plans for the No. 1 Well?

A. Okay, well, in either case we are going to plug off -- we're going to have to drill a new gas well. And we will plug off, squeeze off the Eumont first. The oil produced from the Monument-Grayburg now through the 1/2 inch tubing by pump, 5/8'th rods, we are incurring increasing -- problems.

By going to a single completion in each well

we expect to increase production where can almost ensure increased production and increased recovery.

Q For the No. 1 Well, in your opinion, can you effectively and efficiently continue to produce the Grayburg Oil Zone with the Eumont gas zone open?

A No.

Q Let's go to Exhibit Number Two and have you identify that.

A This is the Commission Form C-101 to permit to drill deep and plug back. It was submitted last year.

Q This is for the replacement well, is that right, for the State "O" No. 5 Well?

A Yes, sir.

Q All right, sir. Would you refer to Exhibit Number Three and identify it?

A This is the Commission Form C-132, application for well-head category determination.

Q Would you refer to the schematic. I believe it should be properly labeled as Exhibit Number Four?

A Yes. This is the Current Completion or the schematic of the Current Completion, with production equipment. As you can see, you have 6-5/8 inch casing. The gas is flowing between the 6 and 5/8ths and the 3 and 1/2 inch tubing. Your 1 and 1/2 inch tubing for the Eumont - Grayburg is your producing tubing.

Q How would you propose to re-complete this for production of the Monument - Grayburg oil?

A We'd squeeze off the Monument first, pull the 3 and 1/2 inch tubing and packer and run in there either with 2 and 3/8 inch tubing, or 2 and 7/8 inch tubing. Doing this, we will get rid of our spaghetti string, so to speak, and go to a larger rod string and pump-sized also. We will also go deeper down to the Monument - Grayburg zone there.

Q In your opinion, will that be a more effective and efficient way in which to produce the Grayburg oil?

A Considerably. We anticipate an increase of approximately 40 barrels a day by doing this.

Q Would you refer to the Commission Order which we have marked as Exhibit Number Five?

A This is the Order R-303 for the dual completion of this well back in 1953.

Q Exhibit Number Six and Exhibit Number Seven, would you identify those Exhibits, please?

A Exhibit Number Six is the Decline Curve of Eumont Gas Zone. Number Seven is a Decline Curve of Oil and Gas Production from the Eumont - Grayburg Zone. I might add that we feel like a drilling of this new well, that we can increase gas production by a minimum of 500 Mcf a day over the current 100 in the State "O" Number 1.

Q Would you refer to what we have marked as Exhibit Number Eight and identify the significance of these particular graphs?

A This is a trial well we did last year that the Commission approved. The circumstances were the same. You had a Monument - Grayburg Oil Zone dualed with a Eumont Gas Zone. 6 and 5/8 inch casing, 3 and 1/2 inch tubing pumping the Monument - Grayburg Zone through 1 and 1/2 inch tubing. We drilled another gas well and we were able to increase oil production in the No. 2 well by approximately 40 barrels a day. We increased the gas productinn of the No. 3 Well by 250 Mcf per day.

Q In your opinion, Mr. Wise, will there be Eumont gas within the proration unit that the No. 1 Well will not be able to produce?

A Yes, sir.

Q In your opinion, Mr. Wise, will the State "O" No. 5 Well be necessary to effectively and efficiently drain that portion of the reservior covered by this particular proration unit?

A Yes, sir.

Q In your opinion, will the State "O" No. 5 Well be required to effectively and efficiently produce the Eumont gas reserves under this proration unit without regard to the gas price?

A Yes, sir.

Q In your opinion, will approval of this application be in the best interests of conservation and prevention of waste and the protection of correlative rights?

A Yes, sir.

Q Were Exhibits One through -- I believe it was Eight -- compiled or produced under your supervision and direction?

A Yes, sir.

MR. KELLAHIN: We move the introduction of Amerada Hess's Exhibits One through Eight.

MR. STAMETS: These Exhibits will be admitted.

MR. KELLAHIN: That concludes our direct examination.

EXAMINATION

BY MR. STAMETS:

Q Mr. Wise, why could you not go in and work over the No. 1 Well and complete it in the Eumont Pool?

A You mean the gas?

Q Yes.

A Nobody knows what it could be in the gas.

Q I asked the wrong question. Let's try this again. Why do you want an infill well in this unit? You are going to replace the No. 1 Well, is what you intend to do?

A Yes, sir.

Q Why do you want to do that?

A Okay. We are currently handicapped -- our production capacity is handicapped by the dual completion.

Q Okay. Now, why don't you seek to take the dual completion equipment out of the No. 1 Well and make it a Eumont gas single?

A Okay. You can either do that. In that case you are going to have to drill a Grayburg Well.

Q Right.

A Grayburg Well is more expensive. You've got to go approximately three to five hundred foot deeper.

Q Is there any reason, dealing with the Eumont Zone only, why you choose not to work over the No. 1 Well and make it a Eumont single?

A I'm not sure I understand the question, sir.

Q The FIRK Regulations require that the well that you drill is an infill well.

A Yes, sir.

Q Recover gas from the proration unit which would not be recovered by another well on the proration unit. What I'm trying to get at is, is there any reason that the No. 1 Well could not be put in a condition to recover this same gas in the proration unit?

A Well, by -- no, I guess there is no reason

why you couldn't. But by going to a new location, which is less drained, we will pick up additional reserves that the No. 1 Well will not.

Q Are you going to pick those reserves up ultimately, or only as a temporary increase in production from the unit?

A It will be ultimate.

Q How much is that?

A We have not calculated that, sir.

Q So you can't give us a figure that represents the difference between what would be produced from this unit from the existing well, and what would be produced by this unit from a new well?

A Not at this time, sir. No.

MR. STAMETS: Ms. Teschendorf?

EXAMINATION

BY MS. TESCHENDORF:

Q Is this a non-standard unit for the Eumont gas?

A Well, it is 160 acres. I think the standard proration unit is 640.

Q Do you happen to know or could you find out for us what authorized the non-standard unit?

A Yes.

Q If it was an administrative order, what

number? Okay.

MR. STAMETS: That may be one that's older than the 640 rules. Completed in 1936. I'm confident that this is one that was originally on 160.

MR. WISE: Well, now, the initial gas completion wasn't until 1953 -- '54.

EXAMINATION

BY MR. RAMEY:

Q Mr. Wise, what's the No. 1 making from the Eumont now?

A Right now approximately 100 Mcf per day.

Q How much liquids are you making?

A That, sir, I don't know.

Q But you are having a liquid problem. You say you have to go in and swab it off occasionally?

A Yes, sir. There are ways of enhancing the production from this well, but you are going to sacrifice it someplace else, mainly in the Monument - Grayburg Zone.

Q Your ultimate recovery from this well in the Eumont has been in excess of 3 million Mcf?

A Yes, sir.

Q This seems to be a good well. I only see a couple in the whole area that made more gas than it.

A Yes, sir.

Q What makes you think you are going to increase

the ultimate recovery from the unit?

A Well, first off, you are picking up some structure by going to the east. We're going in an area which has not been as drained severely as the No. 1. Also, you call it new completion practices, I guess you would say.

In other words, we have gone to open hole, setting pipe above the bay, open hole it with gas. Then only if necessary fracing it with CO_2. So we just anticipate a better well.

Q If this well were not a dual completion, just a Eumont single completion, is there any re-work that you could do this well to increase the present and ultimate recovery?

A Yes, sir. We could probably go in there and frac it. Put some tubing in it. Of course, if it's a single completion, you already have tubing in there. There are ways, if it is a single completion only, to increase your ultimate recovery from this well.

Q But because of mechanical problems you have evolved with the dual completion?

A Yes, sir.

Q The fact that you have to run a macaroni string inside the 3 inch, that's why are you limited on what you can do to the well?

A Yes, sir.

Q And to increase the ultimate recovery from both --

A Both zones, yes, sir.

Q It would be necessary that you squeeze off this well and drill a new one?

A Yes, sir.

MR. STAMETS: Let's go off the record.

(Whereupon a discussion was held off the record.)

MR. KELLAHIN: If the Examiner please, there appears to be some additional information that is available to us which we could supply the Commission or the Division in order to make an appropriate decision in this matter. We would request that this case and the two subsequent cases for Amerada Gas be continued to the next scheduled Examiner hearing, scheduled for February 14th.

MR. STAMETS: Okay. I don't have any problem with that. We will continue Case 6434 to the Examiner hearing on the 28th of February. Ms. Teschendorf, will you call Case 6435 and Case 6436, which we will also continue to that date?

MR. KELLAHIN: 14th or the --

MS. TESCHENDORF: 28th, 'cause it will be the same Examiner.

MR. KELLAHIN: We have to re-advertise that

again anyway?

MR. STAMETS: Yes.

MS. TESCHENDORF: Case 6435, application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico, and Case 6436 is also application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico.

MR. STAMETS: Those cases will be continued.

(Hearing Concluded.)

SALLY WALTON BOYD
CERTIFIED SHORTHAND REPORTER
2010 Plaza Blanca (505) 471-2462
Santa Fe, New Mexico 87501

REPORTER'S CERTIFICATE

I, STEFANIE XANTHULL, a court reporter, DO HEREBY CERTIFY that the foregoing and attached Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability, knowledge, and skill, from my notes taken at the time of the hearing.

Stefanie Xanthull
STEFANIE XANTHULL, C.S.R.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 6434 6435, 6436
heard by me on 1-31 1979.
Richard L. Stamets, Examiner
Oil Conservation Division

Nye Reporting Service, Inc.
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621 Old Santa Fe Trail – Suite 7
Santa Fe, New Mexico 87501

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

JERRY APODACA
GOVERNOR

NICK FRANKLIN
SECRETARY

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

March 20, 1979

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

Re: CASE NO. 6434
ORDER NO. ~~R-5955~~

Applicant:

Amerada Hess Corporation

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

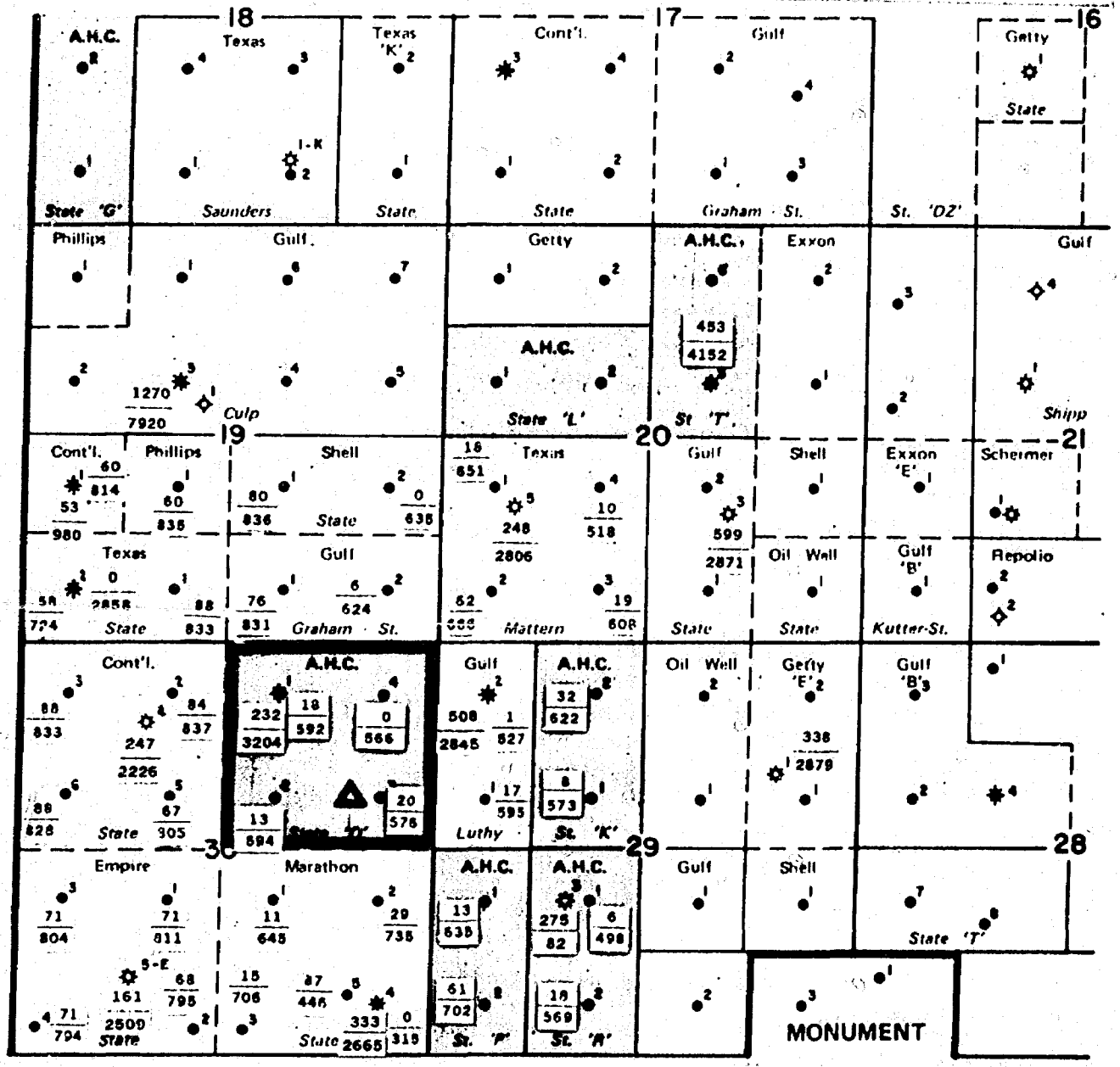
Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

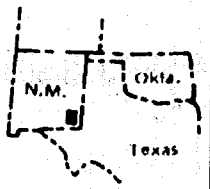
Other

Amerada Hess 1
6434

R 37 E



Location Map



LEGEND

- Oil
- Gas
- Dry & Abn
- Injection
- Proposed Location
- 000/0000 MCFPD / Cum MMCF
- 00/000 BOPD / Cum. MBBLS

SOUTHWEST PRODUCTION REGION
EUMONT FIELD
Lea County, New Mexico

AMERADA HESS

STATE 'O' LEASE

0 2000' 4000'

Date:

Page No.

Originator:

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NEW MEXICO OIL CONSERVATION COMMISSION
OIL CONSERVATION DIVISION
CASE NO. 6434
Submitted by
Hearing Date

Form C-101
Revised 14-65

5A. Indicate Type of Lease: STATE [XX] FEE [ ]

5. State Oil & Gas Lease No.: B-15533-122

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work: DRILL [XX] DEEPEN [ ] PLUG BACK [ ]

b. Type of Well: OIL WELL [ ] GAS WELL [XX] OTHER [ ] SINGLE ZONE [XX] MULTIPLE ZONE [ ]

7. Unit Agreement Name:

8. Farm or Lease Name: State "O"

2. Name of Operator: Amerada Hess Corporation

9. Well No.: 5

3. Address of Operator: Box 2040 - Tulsa, Oklahoma 74102

10. Field and Pool, or Wildcat: Eumont

4. Location of Well: UNIT LETTER I LOCATED 1980 FEET FROM THE North LINE AND 990 FEET FROM THE East LINE OF SEC. 30 TWP. 19S RGE. 37E NMPM

12. County: Lea

19. Proposed Depth	19A. Formation	20. Rotary or C.T.
3650'	Queen	Rotary

21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug. Bond	21B. Drilling Contractor	22. Approx. Date Work will start
3617.9' GL	Blanket	Cactus Drlg. Company	1/1/79

23.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12-1/4"	8-5/8"	32#	300'	200	Surf.
7-7/8"	5-1/2"	14 & 15.5	3450'	750	Surf.

Plan to drill 12¼" hole from surface to 300', set and cement 8-5/8" csg. at 300' with 200 sx., WOC, and drill 7-7/8" hole out from under 8-5/8" csg to 3450', set and cement 5-1/2" csg. at 3450' and cmt. with 750 sx.., Woc, Drill out from under 5-1/2" csg. with tbg to 3650', or sufficient depth to test Eumont Queen Zone and log. If indicates productive, will complete as a Eumont Queen Gas Well. (No cores or DST are anticipated at this time.)

Blowout Equipment, consists of 10" Cameron Type "F" Series 900 Dbl.Hyd. w/Payne closing Unit, Gas separator and de-gasser complete w/Auto.Choke. All BOP equipment will be checked periodically by a Cactus Drilling Company driller and Amerada Hess well site drilling supervisor.

Gas dedicated to purchaser.

APPROVAL VALID
FOR 90 DAYS UNLESS
DRILLING COMMENCED.
EXPIRES March 12, 1979

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed T H Porter H.O.Porter Title Supv.Drlg.Admin.Svcs. Date 12/8/78

(This space for State Use)

APPROVED BY John W. Runyan TITLE Geologist DATE DEC 12 1978

CONDITIONS OF APPROVAL, IF ANY:

MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Amerada Hess Corp.	State O	5

Unit Letter	Section	Township	Range	County
H	30	19 South	37 East	Lea

Actual Footage Location of Well: 1980 feet from the North line and 990 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3617.9	Queen	Eumont	160 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

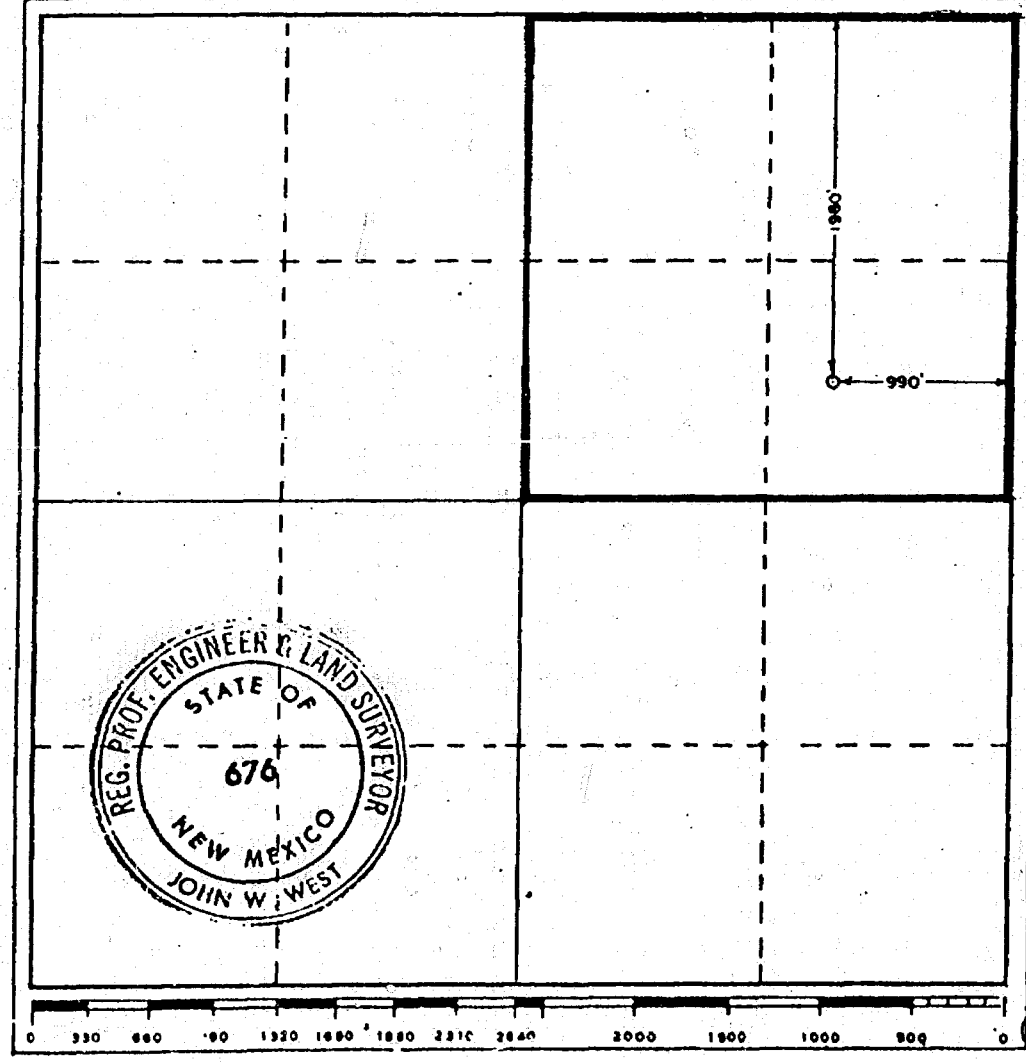
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation N/A

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

H.O.Porter

Name: Supv. Drlg. Admin. Svcs.

Position: Amerada Hess Corporation

Company: December 8, 1978

Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: November 30, 1978

Registered Professional Engineer and/or Land Surveyor

John W. West

Certificate No. John W. West 676
Ronald J. Eidson 3239

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

FORM C-132

APPLICATION FOR WELLHEAD
PRICE CEILING CATEGORY DETERMINATION

1. FOR DIVISION USE ONLY

DATE OF: APPLICATION _____

DETERMINATION _____

CONTESTED _____

PARTICIPANTS _____

Kind of Lease
State, Federal or Fee STATE

5. State Oil & Gas Lease No.
B-15533-122

7. Unit Agreement Name

8. Farm or Lease Name
State "O"

9. Well No.
5

10. Field and Pool, or Wildcat
Eumont

12. County
Lea

Name of Operator
Amerada Hess Corporation

Address of Operator
P. O. Box 2040, Tulsa, Oklahoma 74102

Location of Well
UNIT LETTER H, _____ FEET FROM THE 1980 LINE AND 990 FEET FROM THE East LINE, SECTION 30 TOWNSHIP 19S RANGE 37E NMPM.

11. Name and Address of Transporter(s) Northern Natural Gas Co.
2223 Dodge St., Omaha, Neb. 68102

WELL CATEGORY INFORMATION

Check appropriate box for category sought and information submitted.

1. Category(ies) Sought (By NGPA Section No.) _____
2. All Applications must contain:

[X] a. C-101 APPLICATION FOR PERMIT TO DRILL, DEEPEN OR PLUG BACK

[ ] b. C-105 WELL COMPLETION OR RECOMPLETION REPORT

[ ] c. DIRECTIONAL DRILLING SURVEY, IF REQUIRED UNDER RULE 111

[ ] d. AFFIDAVITS OF MAILING OR DELIVERY

3. NEW NATURAL GAS UNDER SEC. 102(c)(1)(B) (using 2.5 Mile or 1000 Feet Deeper Test)

[ ] a. Location Plat

4. NEW NATURAL GAS UNDER SEC. 102(c)(1)(C) (new onshore reservoir)

[ ] a. C-122 Multipoint and one point back pressure test

5. NEW ONSHORE PRODUCTION WELL

[X] a. C-102 WELL LOCATION AND ACREAGE DEDICATION PLAT

[ ] b. No. of order authorizing infill program _____

6. STRIPPER GAS

[ ] a. C-116 GAS-OIL RATIO TEST

[ ] b. PRODUCTION CURVE FOR 12-MONTH PERIOD

[ ] c. PRODUCTION CURVE FOR THE 90-DAY PERIOD ON WHICH THE APPLICATION IS BASED

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 3
CASE NO. 6434
Submitted by
Hearing Date

I HEREBY CERTIFY THAT THE INFORMATION CONTAINED HEREIN IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Gilbert E. Miller
NAME OF APPLICANT (Type or Print)

Title Conservation Supervisor

Date January 31, 1979

Signed Gilbert E Miller

DIVISION USE ONLY

[ ] Approved

[ ] Disapproved

The information contained herein includes all of the information required to be filed by the applicant under Subpart B of Part 274.

_____
EXAMINER

FERC-121

1.0 API well number: (If not available, leave blank. 14 digits.)	30-025-26170
2.0 Type of determination being sought: (Use the codes found on the front of this form.)	103 (Section of NGPA) ____ (Category Code)
3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.)	3650 feet
4.0 Name, address and code number of applicant: (35 letters per line maximum. If code number not available, leave blank.)	Amerada Hess Corporation (Name) 000459 (Seller Code) P. O. Box 2040 (Street) Tulsa, (City) Okla. (State) 74102 (Zip Code)
5.0 Location of this well: (Complete (a) or (b).) (a) For onshore wells (35 letters maximum for field name.)	Eumont (Field Name) Lea (County) New Mexico (State)
(b) For OCS wells:	____ (Area Name) ____ (Block Number) Date of Lease: ____ (Mo. Day Yr.) ____ (OCS Lease Number)
(c) Name and identification number of this well: (35 letters and digits maximum.)	State "O" No. 5
(d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters maximum.)	Queen
6.0 (a) Name and code number of the purchaser: (35 letters and digits maximum. If code number not available, leave blank.)	Northern Natural Gas Company (Name) 031767 (Buyer Code)
(b) Date of the contract:	06 21 74 (Mo. Day Yr.)
(c) Estimated annual production:	219 MMcf.

	(a) Base Price (S/MMBTU)	(b) Tax	(c) All Other Prices (Indicate (+) or (-).)	(d) Total of (a), (b) and (c)
7.0 Contract price: (As of filing date. Complete to 3 decimal places.)	1.980	.134	----	2.114
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	1.980	----	----	----

9.0 Person responsible for this application:

Gilbert E. Miller (Name) Conservation Supvr. (Title)

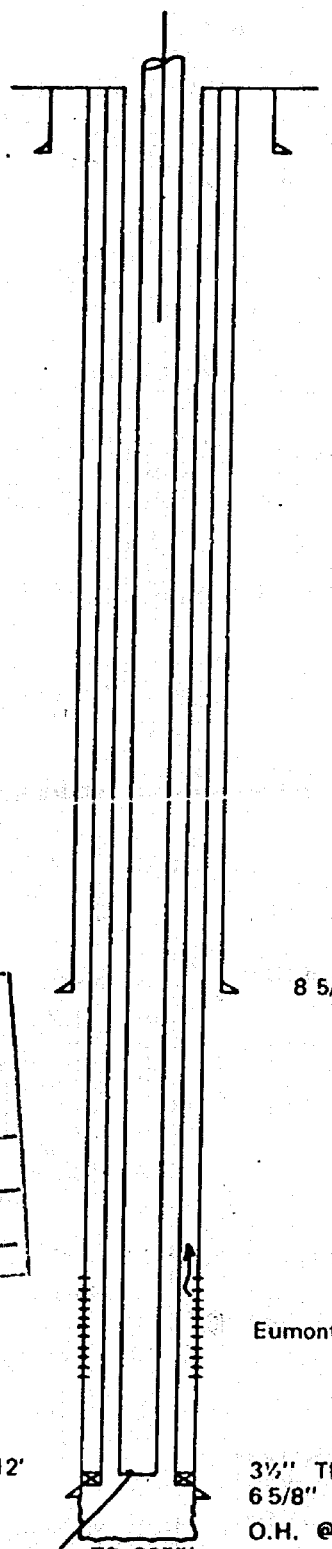
Gilbert E. Miller (Signature)

January 31, 1979 (Date Application is Completed) 918-584-5554 (Phone Number)

Agency Use Only
Date Received by Juris. Agency
Date Received by FERC

FT7900806/2-2

State 'O' No. 1
Sec. 30 - Twp 19S - R37E
Lea County, New Mexico



12½" Csg. @ 180'

8 5/8" Csg. @ 2491'

Eumont Perfs. @ 3260'-3560'

Production Equipment @ 3812'

3½" Tbg. w/Baker Pkr. @ 3818'
6 5/8" Csg. @ 3860'
O.H. @ 3860'-3975'

TD 3975'

Dual Completion Eumont Gas & Monument G-SA Oil

GB oil

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. 514
Order No. R-303

THE APPLICATION OF AMERADA PETROLEUM CORPORATION FOR AN ORDER GRANTING PERMISSION TO DUALLY COMPLETE AND PRODUCE ITS STATE 'O', WELL NO. 1 LOCATED IN THE NW/4 NE/4 OF SECTION 30, TOWNSHIP 19 SOUTH, RANGE 37 EAST, NMPM, LEA COUNTY, NEW MEXICO.

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 5
CASE NO. 6434
Submitted by
Hearing Date

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on March 17, 1953, at Santa Fe, New Mexico, before the Oil Conservation Commission, hereinafter referred to as the "Commission".

NOW, on this 31st day of March, 1953, the Commission, a quorum being present, having considered the records and the testimony adduced, and being fully advised in the premises,

FINDS:

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

(2) That the applicant's State 'O', Well No. 1, NW/4 NE/4 Section 30, Township 19 South, Range 37 East, NMPM, Lea County, New Mexico, was completed in April 1936 as an oil well producing from the Grayburg formation of the Eunice-Monument Pool in the open-hole interval 3860-3975, having drilled through the Seven Rivers-Queen formation of the Eumont Gas Pool at an approximate depth of 3100-3560.

(3) That although recent experiments tend to show that mechanical packers and other devices are ordinarily available for successful dual/multiple completions of oil - gas wells, the Commission is unconvinced of the soundness as a waste-prevention practice, of such dual/multiple completions as a general practice in New Mexico without specific controls over each such project.

IT IS THEREFORE ORDERED:

That the applicant herein, Amerada Petroleum Corporation, be, and it hereby is authorized to dually complete and produce its State 'O', Well No. 1, NW/4 NE/4 Section 30, Township 19 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner that gas from the Seven Rivers-Queen formation of the Eumont Gas Pool may be produced through the annular space between the casing and the tubing, and oil from the Grayburg formation of the Eunice-Monument Pool through the tubing by proper perforations and the installation of a proper packers;

PROVIDED, HOWEVER, That upon the actual dual completion of such subject well applicant shall submit to the District Office of the Commission in which the subject well is located Form C-103, Form C-104, Form C-110 and Form C-122 outlining the information required on these forms by existing Rules and Regulations.

PROVIDED, HOWEVER, That subject well shall be completed, and thereafter produced, in such a manner that there will be no commingling within the well bore, either within or outside the casing of gas, oil and gas, or oil produced from either or both of the separate strata, and,

PROVIDED FURTHER, That said subject well for dual completion and production shall be equipped in such a way that reservoir pressures may be determined separately for each of the two specified strata, and further, be equipped with all necessary connections required to permit recording meters to be installed and used, at any time, as may be required by the Commission or its representatives, in order that natural gas, oil, or oil and gas from each separate stratum may be accurately measured and the gas-oil ratio thereof determined, and,

PROVIDED FURTHER, That the operator applicant shall make any and all tests, including segregation tests, but not excluding other tests and/or determinations at any convenient time and in such manner as deemed necessary by the Commission; the original and all subsequent tests shall be witnessed by representatives of the Commission and by representatives of offset operators, if any there be, at their election, and the results of each test properly attested to by the applicant herein and all witnesses, and shall be filed with the Commission within ten (10) days after the completion of such test, and,

PROVIDED FURTHER, That upon the actual dual completion of such subject well, applicant shall submit to the Commission a diagrammatic sketch of the mechanical installation which was actually used to complete and produce the seal between the strata, and a special report of production, gas/oil ratio and reservoir pressure determination of each producing zone or stratum immediately following completion.

IT IS FURTHER ORDERED, That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order after proper notice and hearing, the Commission may terminate the authority hereby granted and require applicant or its successors and assigns to limit its activities to regular single-zone production in the interests of conservation.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EDWIN L. MECHEM, Chairman

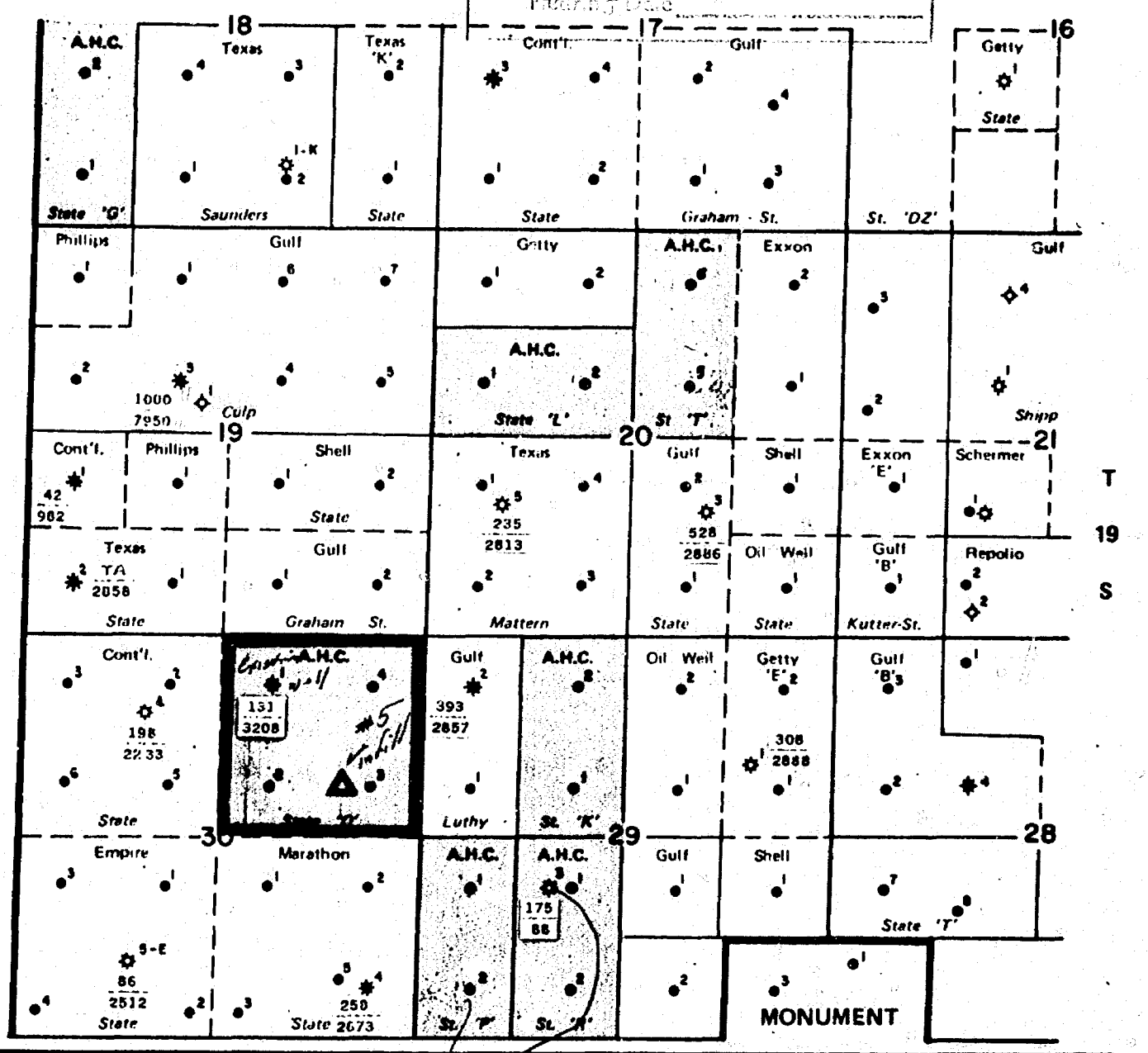
E. S. WALKER, Member

R. R. SPURRIER, Secretary

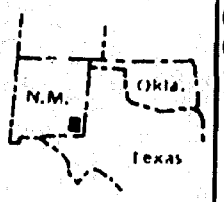
SEAL

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
6
6434

R 37 E



Location Map



LEGEND

- Oil
- Gas
- Dry & Abn
- Injection
- Proposed Location
- 000/0000 MCFPD/Cum MMCF

385 psi
Comp Pressure
1 gas
SI 302

SOUTHWEST PRODUCTION REGION
EUMONT FIELD
Lea County, New Mexico

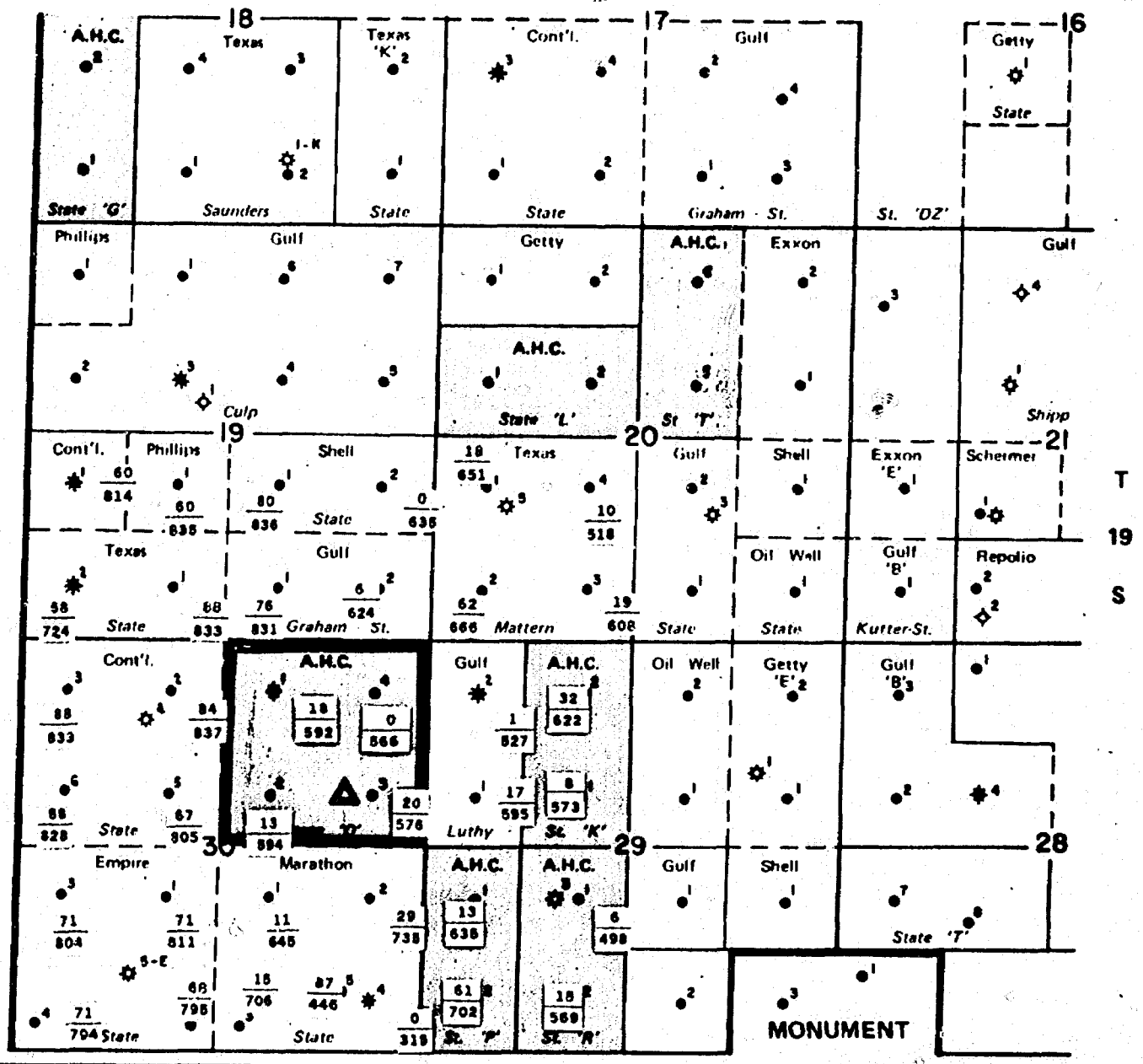
AMERADA HESS

STATE 'O' LEASE

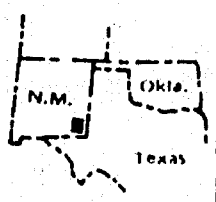
0 2000' 4000'

Date:
Page No.
Originator:
Ref. No.

R 37 E



Location Map



LEGEND

- Oil
- Gas
- Dry & Abn
- Injection
- Proposed Location
- MCFPD / Cum MMCF
- 00 / 000 BOPD / Cum. MBBLS

SOUTHWEST PRODUCTION REGION
EUMONT FIELD
Lea County, New Mexico

AMERADA HESS

STATE 'O' LEASE

0 2000' 4000'

Date:

Page No.

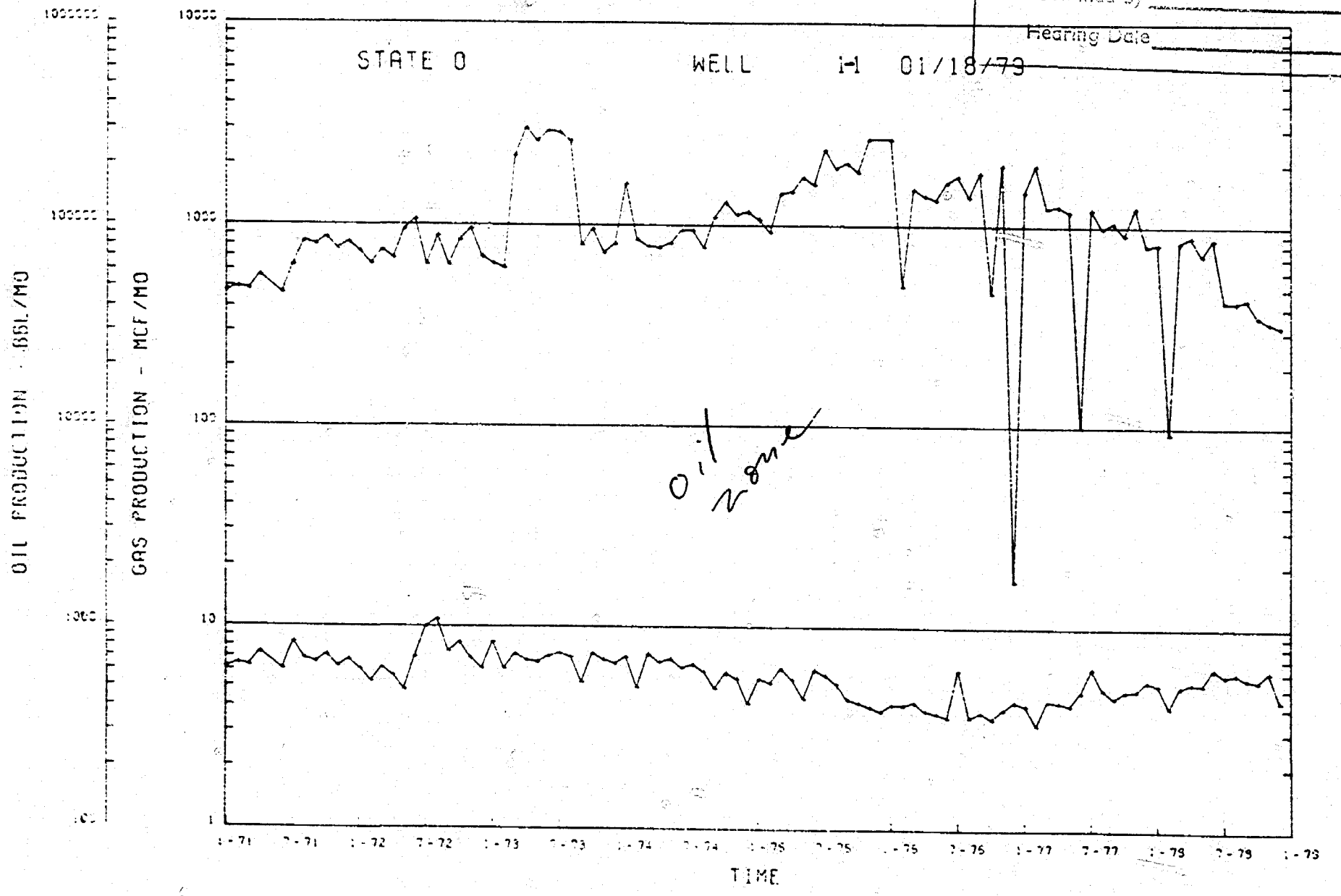
Originator:

Ref. No.

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 8
CASE NO. 6439
Submitted by
Hearing Date

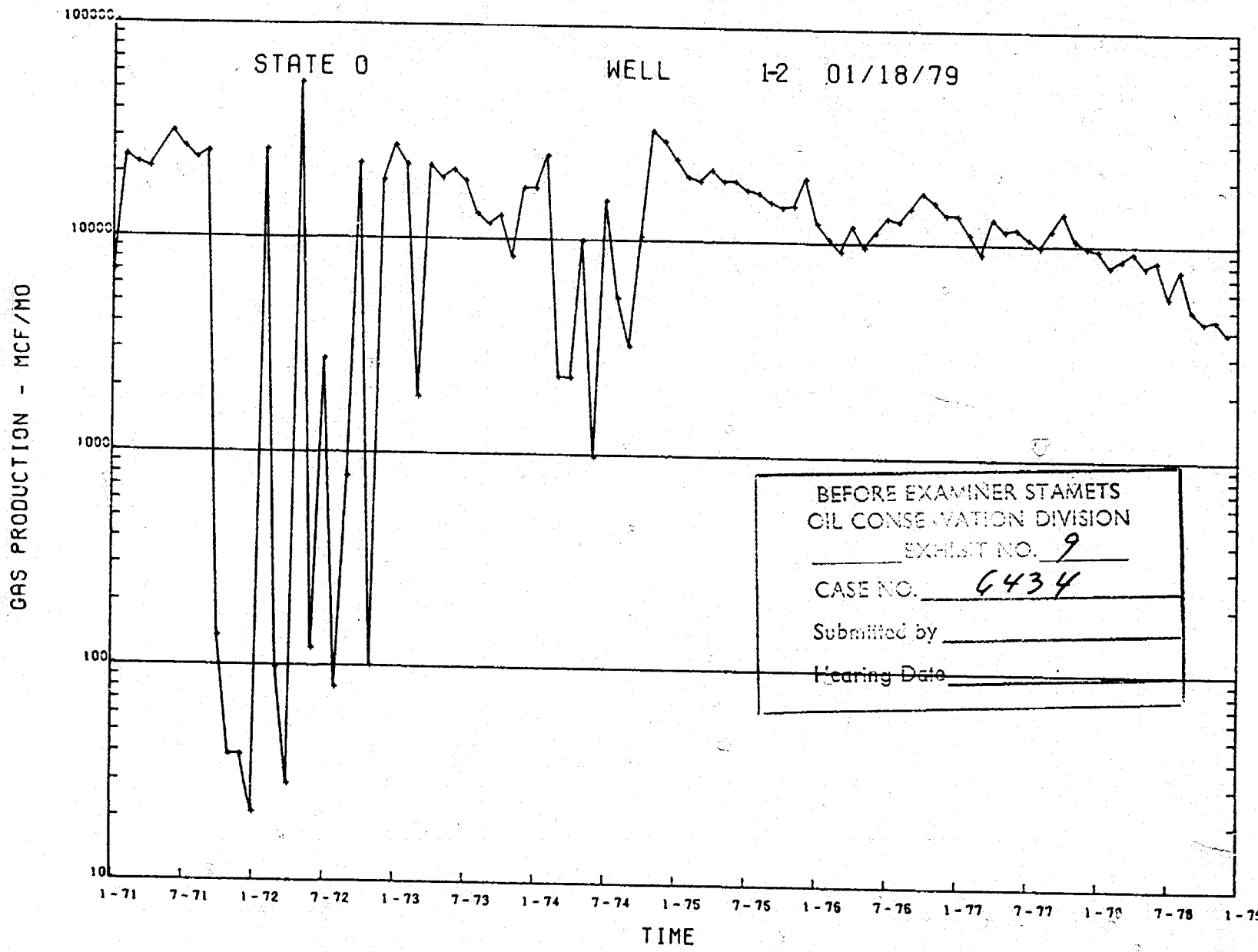
EUNICE–MONUMENT (G–SA) FIELD

LEA COUNTY, NEW MEXICO



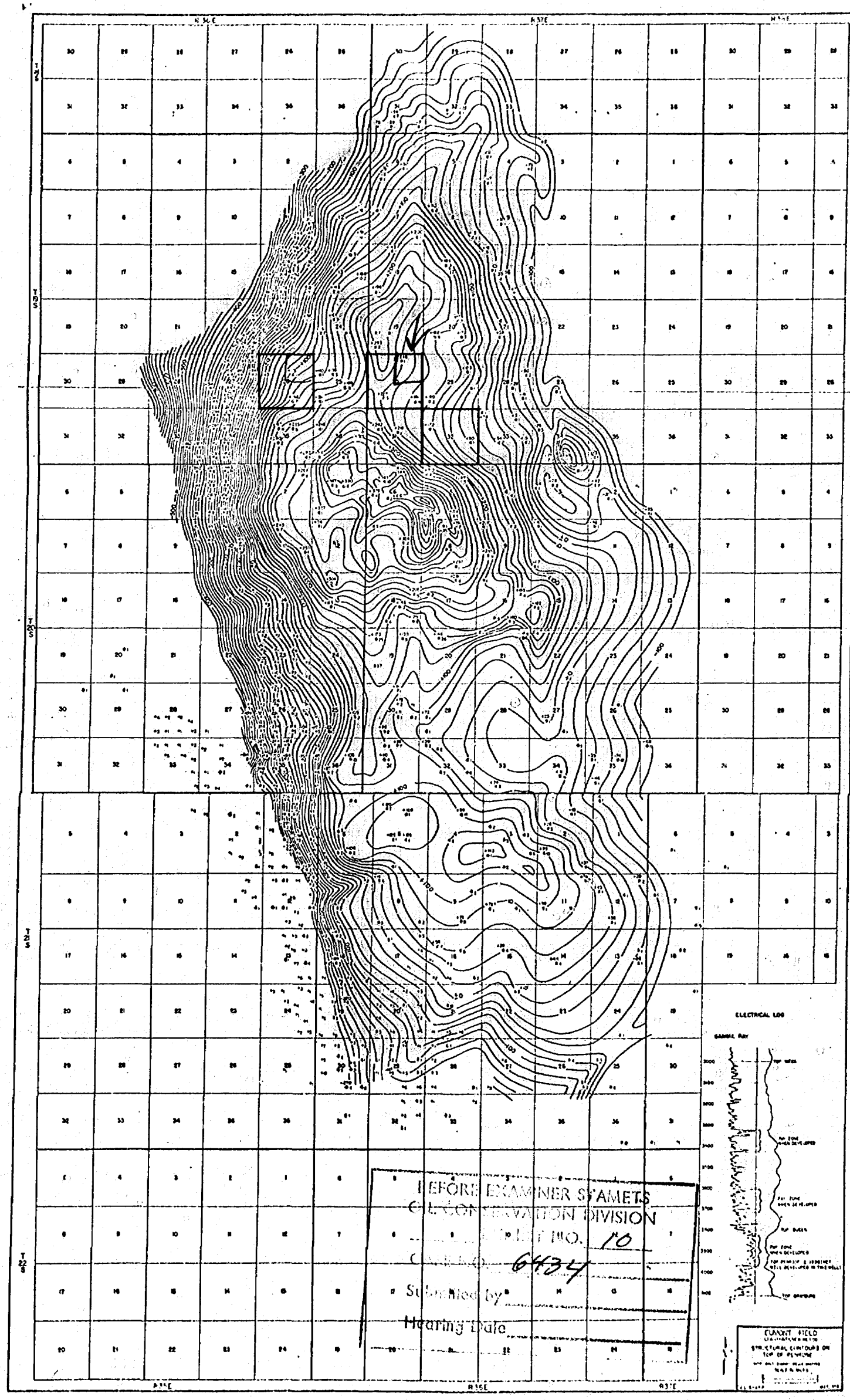
EUMONT FIELD

LEA COUNTY, NEW MEXICO



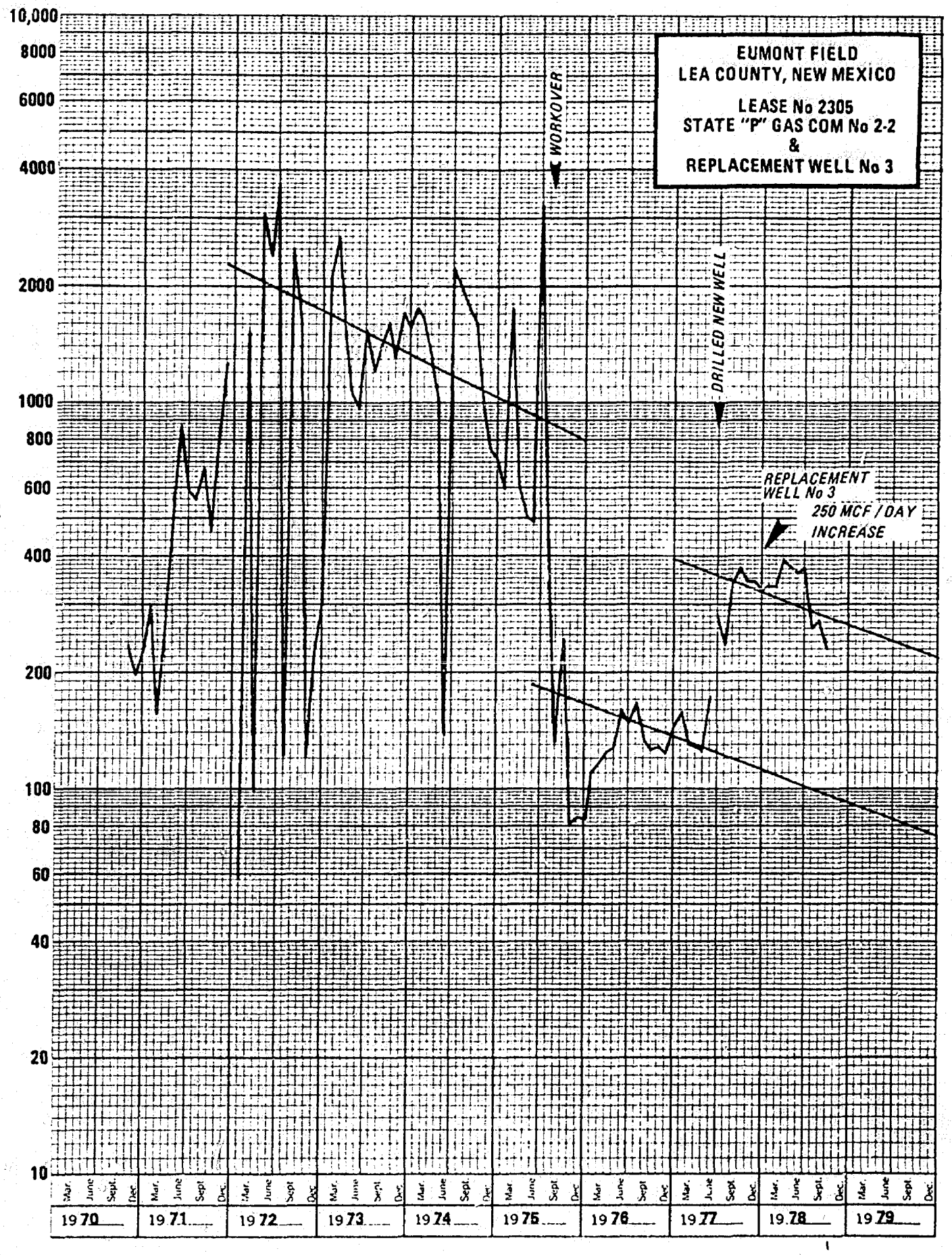
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 9
CASE NO. 6434
Submitted by
Hearing Date

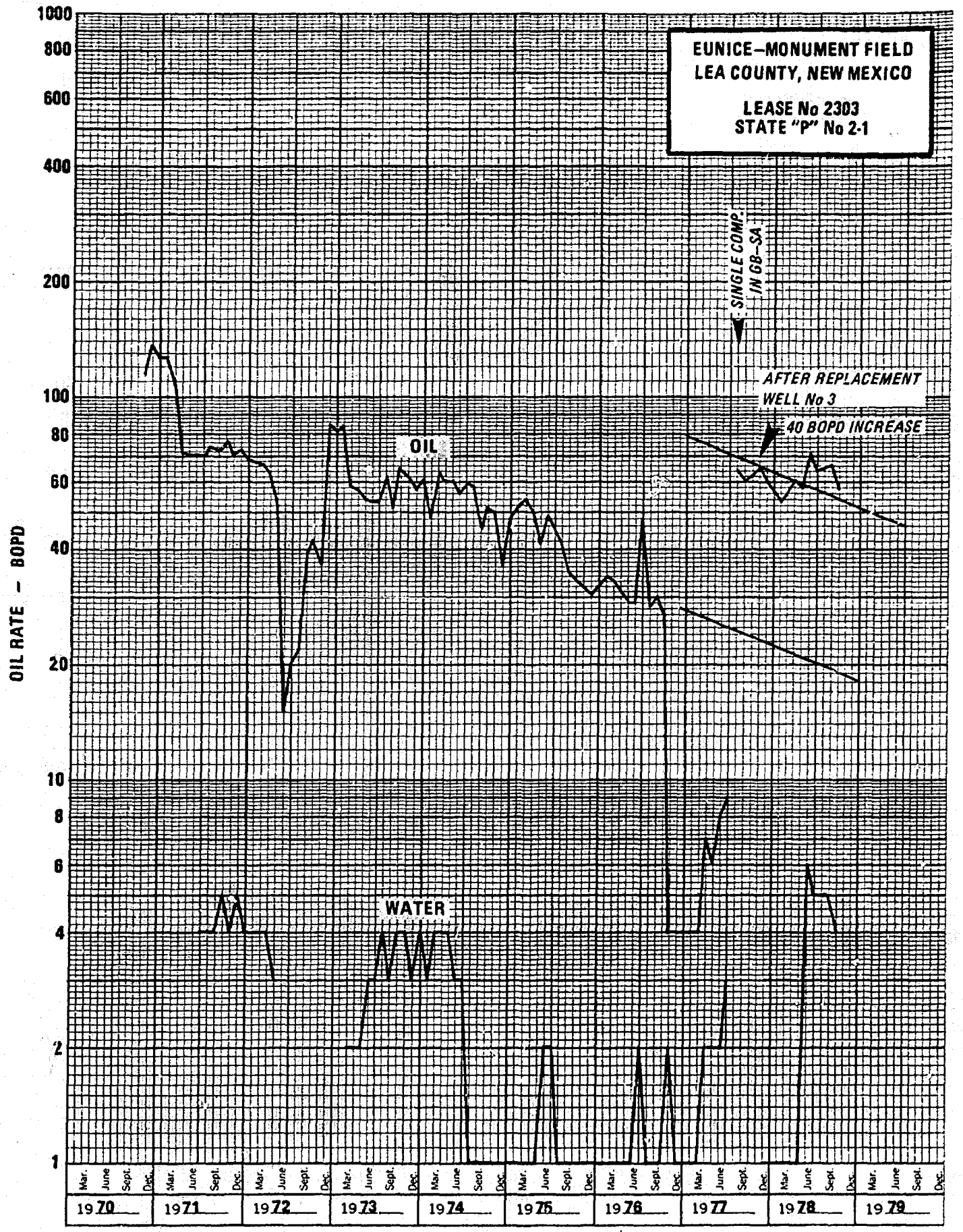
PLOT NO. 3



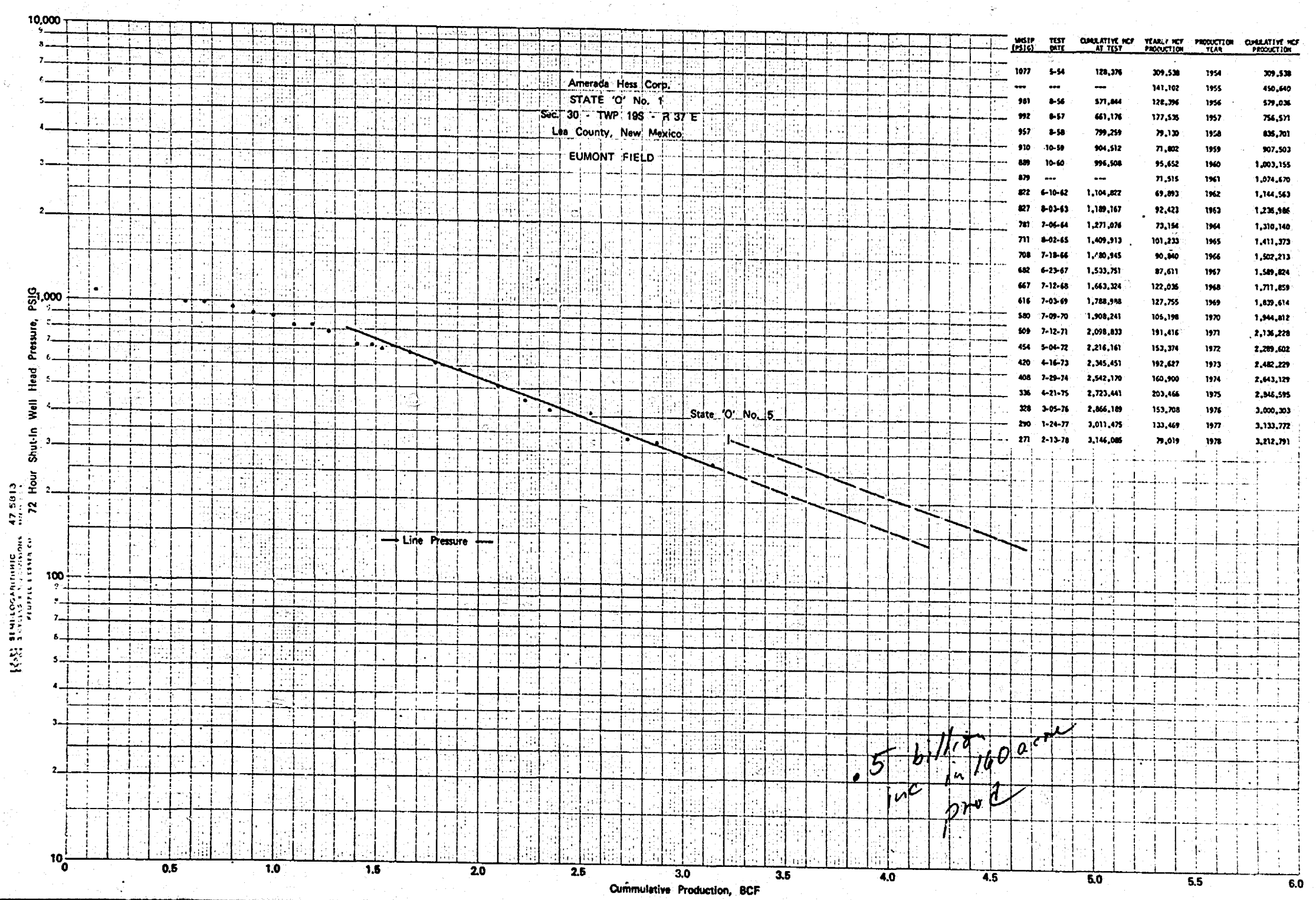
BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
CASE NO. 6434
Submitted by
Hearing Date

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 13
CASE NO. 6434
Submitted by
Hearing Date


EUMONT FIELD
LEA COUNTY, NEW MEXICO
LEASE No 2305
STATE "P" GAS COM No 2-2
&
REPLACEMENT WELL No 3
WORKOVER
DRILLED NEW WELL
REPLACEMENT WELL No 3
250 MCF / DAY INCREASE
GAS PRODUCTION – MCF/DAY
10,000
8000
6000
4000
2000
1000
800
600
400
200
100
80
60
40
20
10
Mar. June Sept. Dec.
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979

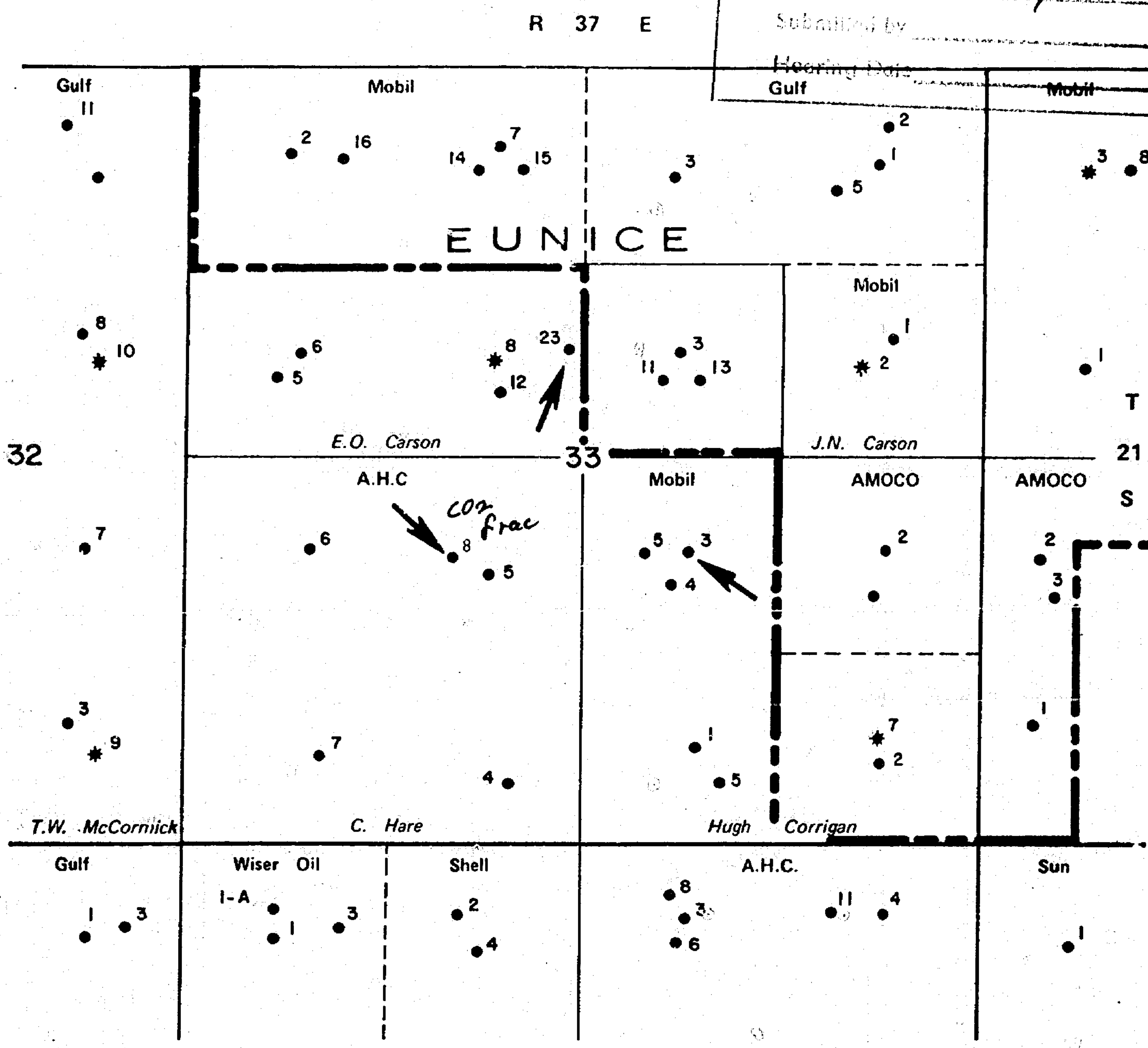

EUNICE–MONUMENT FIELD
LEA COUNTY, NEW MEXICO
LEASE No 2303
STATE "P" No 2-1
SINGLE COMP. IN GB–SA
AFTER REPLACEMENT WELL No 3
40 BOPD INCREASE
OIL
WATER
OIL RATE – BOPD
1000
800
600
400
200
100
80
60
40
20
10
8
6
4
2
1
Mar. June Sept. Dec.
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 12
CASE NO. 6434
Submitted by
Hearing Date

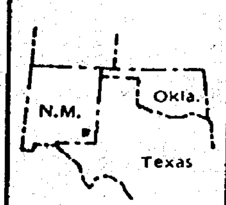


WHSIP (PSIG)	TEST DATE	CUMULATIVE MCF AT TEST	YEARLY MCF PRODUCTION	PRODUCTION YEAR	CUMULATIVE MCF PRODUCTION
1077	5-54	128,376	309,538	1954	309,538
---	---	---	141,102	1955	450,640
981	8-56	571,844	128,396	1956	579,036
992	8-57	661,176	177,535	1957	756,571
957	8-58	799,259	79,130	1958	836,701
910	10-59	904,512	71,802	1959	907,503
889	10-60	996,508	95,652	1960	1,003,155
879	---	---	71,515	1961	1,074,670
822	6-10-62	1,104,822	69,893	1962	1,144,563
827	8-03-63	1,189,167	92,423	1963	1,236,986
781	7-06-64	1,271,076	73,154	1964	1,310,140
711	8-02-65	1,409,913	101,233	1965	1,411,373
708	7-18-66	1,480,945	90,840	1966	1,502,213
682	6-23-67	1,533,751	87,611	1967	1,589,824
667	7-12-68	1,663,324	122,035	1968	1,711,859
616	7-03-69	1,788,998	127,755	1969	1,839,614
580	7-09-70	1,908,241	105,198	1970	1,944,812
509	7-12-71	2,098,833	191,416	1971	2,136,228
454	5-04-72	2,216,161	153,374	1972	2,289,602
420	4-16-73	2,345,451	192,627	1973	2,482,229
408	7-29-74	2,542,170	160,900	1974	2,643,129
336	4-21-75	2,723,441	203,466	1975	2,846,595
328	3-05-76	2,866,189	153,708	1976	3,000,303
290	1-24-77	3,011,475	133,469	1977	3,133,772
271	2-13-78	3,146,085	79,019	1978	3,212,791

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 15
CASE NO. 6434
Submitted by
Hearing Date



Location Map



LEGEND

- Oil
- Gas
- Dry & Abn
- Injection

SOUTHWEST PRODUCTION REGION
EUMONT FIELD
Lea County, New Mexico

AMERADA HESS

J.G. HARE LEASE

0 1000' 2000'

Date: Feb., 1979
Page No.:
Originator:
Ref. No.

A.H.C. Hare #8, Mobil Carson #23, & Mobil Corrigan #3

Sec. 33 – TWP 21S – R 37 E

Lea County, New Mexico

EUMONT FIELD

A.H.C. Hare #8 Initial 8 months Prod. 156.1 MCF

Mobil Carson #23 Initial 8 months Prod. 153.6 MCF

Mobil Corrigan #3 Initial 8 months Prod. 74.2 MCF

46 6690

Monthly Production, MCF

100,000 9 8 7 6 5 4 3 2

10,000 9 8 7 6 5 4 3 2

1,000

Jan. Feb. Mar. Apr. May June July Aug. Sept. Oct. Nov. Dec.

19 76 | 19 77 | 19 78 | 19 79 | 19 80

K·E 5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

A.H.C. Hare #8, Mobil Carson #23, & Mobil Corrigan #3
Sec. 33 – TWP 21S – R 37 E
Lea County, New Mexico
EUMONT FIELD

A.H.C. Hare #8 Initial 8 months Prod. 156.1 MCF
Mobil Carson #23 Initial 8 months Prod. 153.6 MCF
Mobil Corrigan #3 Initial 8 months Prod. 74.2 MCF

46 5493

Monthly Production, MCF

100,000
10,000
1,000

10 20 30 40 50 60 70
Months

SEMI-LOGARITHMIC • 3 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO MADE IN U.S.A.

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 17
CASE NO. 6434
Submitted by
Hearing Date

HALLIBURTON SERVICES

P. O. BOX 1889, MIDLAND, TEXAS 79702

J. R. (BUDDY) REDDEN, JR.
Sales Manager
Midland Division

December 8, 1978

GENERALIZED STIMULATION PROCEDURE TECHNIQUE FOR STIMULATING LOW BOTTOM HOLE PRESSURE OIL AND GAS WELLS IN THE PERMIAN BASIN

The purpose of this report is to give a generalized procedure of a stimulation technique used in the Permian Basin for stimulating low bottom hole pressure oil and gas wells (113 lbs. up). This technique has been utilized in the Seven Rivers, Yates, Queens, Grayburg, Penrose, Tubbs, and Cisco formations with very impressive results.

The following procedure and outline of a typical stimulation job incorporating this technique is shown, but it should also be pointed out that the volumes have varied from 10,000 gallons to 60,000 gallons of the 50-50 gelled water and CO_2 mixture depending upon the desired frac length to be obtained.

We have been recommending the selected zone of interest used with this procedure be acidized with 100 gallons per net foot of pay with 15% MCA acid with sufficient amount of ball sealers to open and treat all existing perforations. The spent acid should then be swabbed back and the well can then be evaluated. At this point, the proper chemicals and surfactants should be determined for the fracturing fluid on the particular litholigy of the formation to be treated. This is extremely important with the compatability of the system to assure minimal damage during and after stimulating the zone of interest.

An important consideration is to determine the proper depth to place the tubing. The main factor of course is the bottom hole pressure, the lower the pressure the lower the tubing should set. This should allow the well to clean up and produce at this point saving the damage a well might receive from loading the hole with water to move the tubing.

A typical 40,000 gallon 50/50 water and CO_2 frac for example would consist of 20,000 gallons gelled water and 20,000 gallons CO_2 carrying 40,000 pounds 20-40 sand and 62,000 pounds 10-20 sand. The treatment is usually done down tubing and tubing-casing annulus at 20 BPM at 2,300 psi surface treating pressure. A 2,000 gallon pre-pad containing selected surfactants should be pumped ahead of the frac treatment for scale or paraffin control. All fluid should contain 2 to 3% KCl.

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
EXHIBIT NO. 18
CASE NO. 6434
Submitted by
Hearing Date

(18)

The fluid used is designed to be as compatible as possible with the lithology found in each well. A majority of the sand formations have been found to contain a high percentage of clays. To keep the clays from swelling, 3% KCl water is used in conjunction with a high concentration of CO_2 which makes a weak acid solution that provides a low pH environmentthat is advantageous to the compabilities of the clays.

GENERAL PROCEDURE:

1. After perforating, circulate hole with 2% KCl water containing 1 gallon Morflo II per 1,000 gallons and spot acid over the perforated interval in the same operation.
2. Raise the tubing approximately 50 feet above the top perforations.
3. Acidize with the remaining acid injecting sufficient amount of ball sealers to ball-off perforations.
4. Lower tubing to desired depth.
5. Swab and evaluate zone.
6. Rig up Halliburton to frac down tubing and both sides of the casing as follows:

	Fluid Vol./Gal.	CO2 Vol./Gal.	Total Vol./Gal.	-----Sand Concentration----- @ Blender Lbs./Gal.	Sand Mesh	@ Perfs. Lbs./Gal.
a.	2,000	- 0 -	2,000	----------P R E- P A D----------		
b.	2,000	2,000	4,000	----------P A D----------		
c.	2,000	2,000	4,000	2.0	20-40	1.0
d.	3,000	3,000	6,000	4.0	20-40	2.0
e.	4,000	4,000	8.000	6.0	20-40	3.0
f.	4,000	4,000	8,000	5.0	10-20	2.5
g.	7,000	7,000	14,000	6.0	10-20	3.0

h. Flush to bottom perforation with treated KCl water and CO_2 which varies depending on well conditions.

i. Shut well in for a total of one (1) hour and flow back on a controlled choke setting.

FLUID COMPOSITION: Additives Per 1,000 Gallons

Acid	15% MCA 1 gallon corrosion inhibitor
Pre-Pad	No CO_2 3% KCl Surfactant (for individual well)
CO_2	50% frac fluid
Gelled Water	50% CO_2 3% KCl 50 pounds gel 50 pounds Adomite Aqua 10 pounds buffer 2 gallons surfactant "A" (individual well) 1 gallon surfactant "B" (individual well) Special breaker
Flush	% CO_2 (ratio varies on individual well) 3% KCl 15 pounds gel 4 gallons surfactant "A"

Note: Clean tanks plus clean fresh water is essential to the success of this fracturing technique.

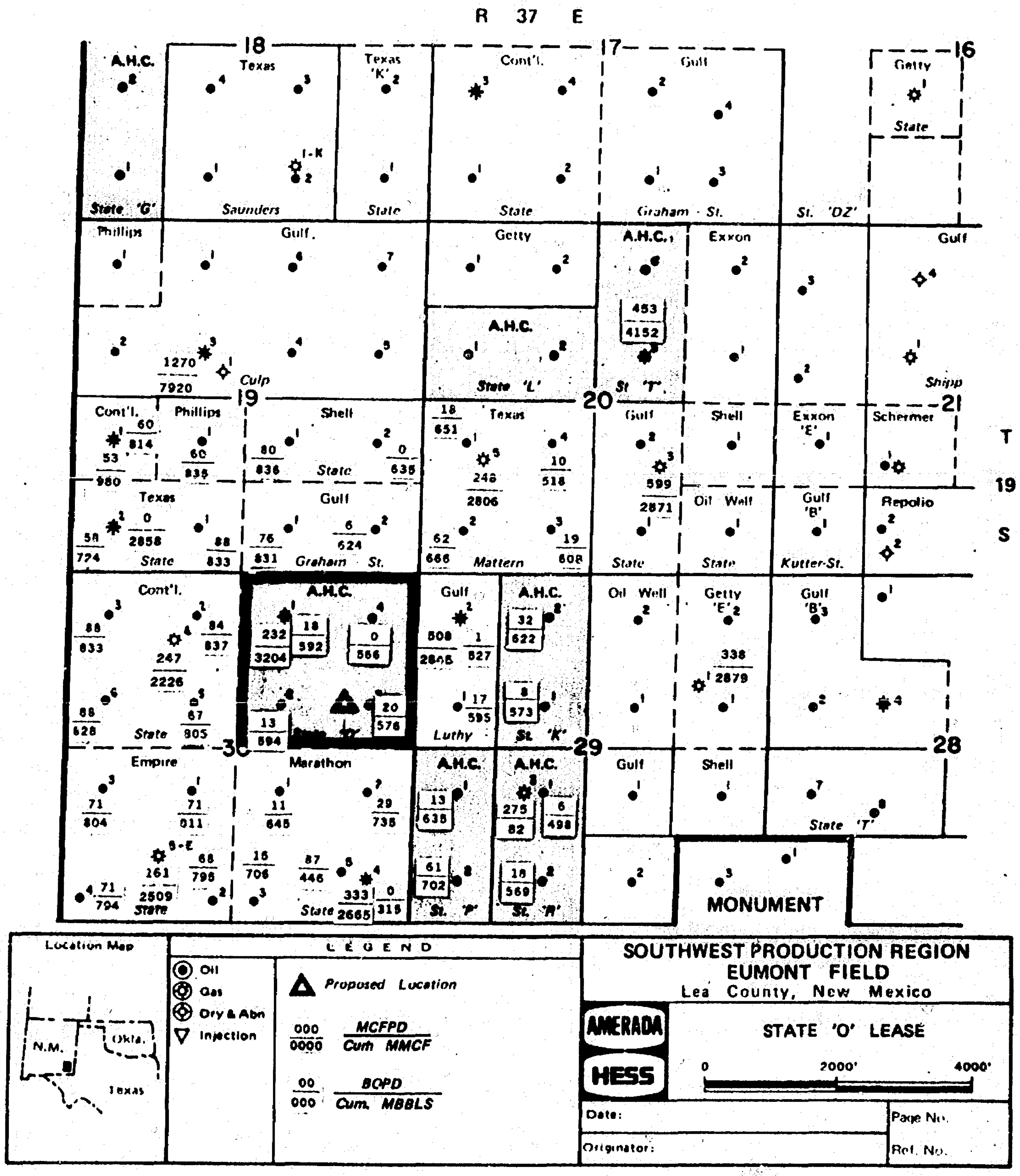
TYPICAL WELLS FRACED:

No.	County	Formation	Prod. Before CFPD or BPD	Potential After CFPD or BPD
a.	Lea	Yates	25 M	4.1 MM
b.	Lea	Queens	75 M	2.8 MM 12 oil
c.	Lea	Penrose	12M	800 M
d.	Lea	Queens	20M	7.2 MM
e.	Nolan*	Cisco	-0-	150 M 144 oil
	* Surrounding wells producing 1 to 8 BOPD.			
f.	Lea	Grayburg	20 M 1 oil	5.0 MM 30 oil
g.	Lea	Tubbs	400 M	1.4 MM
h.	Lea	7 Rivers	8 M (trace oil)	600 MM 28 oil
i.	Lea	Yates	-0-	4.7 MM
j.	Lea	Yates	18 M	4.3 MM
k.	Lea	Queens	10 M	800 M

The example wells shown are a small percentage of the wells treated with the typical results. The impressive point is the surrounding wells that have not used this technique are producing noticeably less or not at all.

Prepared by: R. W. Lansford

R. W. Lansford, Service Sales Engineer


R 37 E
T 19 S
18
17
16
19
20
21
30
29
28
A.H.C.
Texas
Texas 'K'
Cont'l.
Gulf
Getty
State 'G'
Saunders
State
Graham - St.
St. 'DZ'
Phillips
Exxon
Culp
State 'L'
St. 'T'
Shipp
Shell
Schermer
Exxon 'E'
Oil Well
Gulf 'B'
Repolio
Mattern
Kutter-St.
Getty 'E'
Gulf 'B'
Luthy
St. 'K'
Empire
Marathon
St. 'P'
St. 'R'
State 'T'
MONUMENT
Location Map
N.M.
Okla.
Texas
LEGEND
Oil
Gas
Dry & Abn
Injection
Proposed Location
000 / 0000 MCFPD / Cum MMCF
00 / 000 BOPD / Cum. MBBLS
SOUTHWEST PRODUCTION REGION
EUMONT FIELD
Lea County, New Mexico
AMERADA HESS
STATE 'O' LEASE
0 2000' 4000'
Date:
Originator:
Page No.
Ref. No.

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

FORM C-132

APPLICATION FOR WELLHEAD
PRICE CEILING CATEGORY DETERMINATION

1. FOR DIVISION USE ONLY

DATE OF: APPLICATION _____

DETERMINATION _____

CONTESTED _____

PARTICIPANTS _____

Kind of Lease
State, Federal or Fee STATE

5. State Oil & Gas Lease No.
B-15533-122

7. Unit Agreement Name

2. Name of Operator
Amerada Hess Corporation

8. Farm or Lease Name
State "O"

3. Address of Operator
P. O. Box 2040, Tulsa, Oklahoma 74102

9. Well No.
5

4. Location of Well
UNIT LETTER H , _____ FEET FROM THE 1980 LINE AND 990 FEET FROM THE East LINE, SECTION 30 TOWNSHIP 19S RANGE 37E NMPM.

10. Field and Pool, or Wildcat
Eumont

11. Name and Address of Transporter(s) Northern Natural Gas Co.
2223 Dodge St., Omaha, Neb. 68102

12. County
Lea

WELL CATEGORY INFORMATION

Check appropriate box for category sought and information submitted.

1. Category(ies) Sought (By NGPA Section No.) _____
2. All Applications must contain:

[X] a. C-101 APPLICATION FOR PERMIT TO DRILL, DEEPEN OR PLUG BACK

[ ] b. C-105 WELL COMPLETION OR RECOMPLETION REPORT

[ ] c. DIRECTIONAL DRILLING SURVEY, IF REQUIRED UNDER RULE 111

[ ] d. AFFIDAVITS OF MAILING OR DELIVERY

3. NEW NATURAL GAS UNDER SEC. 102(c)(1)(B) (using 2.5 Mile or 1000 Feet Deeper Test)

[ ] a. Location Plat

4. NEW NATURAL GAS UNDER SEC. 102(c)(1)(C) (new onshore reservoir)

[ ] a. C-122 Multipoint and one point back pressure test

5. NEW ONSHORE PRODUCTION WELL

[X] a. C-102 WELL LOCATION AND ACREAGE DEDICATION PLAT

[ ] b. No. of order authorizing infill program _____

6. STRIPPER GAS

[ ] a. C-116 GAS-OIL RATIO TEST

[ ] b. PRODUCTION CURVE FOR 12-MONTH PERIOD

[ ] c. PRODUCTION CURVE FOR THE 90-DAY PERIOD ON WHICH THE APPLICATION IS BASED

I HEREBY CERTIFY THAT THE INFORMATION CONTAINED HEREIN IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Gilbert E. Miller
NAME OF APPLICANT (Type or Print)

Title Conservation Supervisor

Date January 31, 1979

Signed Gilbert E Miller

DIVISION USE ONLY

[ ] Approved

[ ] Disapproved

The information contained herein includes all of the information required to be filed by the applicant under Subpart B of Part 274.

_____
EXAMINER

FERC-121

1.0 API well number: (If not available, leave blank. 14 digits.)	30-025-26170
2.0 Type of determination being sought: (Use the codes found on the front of this form.)	103 (Section of NGPA) ____ (Category Code)
3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.)	3650 feet
4.0 Name, address and code number of applicant: (35 letters per line maximum. If code number not available, leave blank.)	Amerada Hess Corporation (Name) 000459 (Seller Code) P. O. Box 2040 (Street) Tulsa, (City) Okla. (State) 74102 (Zip Code)
5.0 Location of this well: (Complete (a) or (b).) (a) For onshore wells (35 letters maximum for field name.)	Eumont (Field Name) Lea (County) New Mexico (State)
(b) For OCS wells:	____ (Area Name) ____ (Block Number) Date of Lease: ____ (Mo. Day Yr.) ____ (OCS Lease Number)
(c) Name and identification number of this well: (35 letters and digits maximum.)	State "0" No. 5
(d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters maximum.)	Queen
6.0 (a) Name and code number of the purchaser: (35 letters and digits maximum. If code number not available, leave blank.)	Northern Natural Gas Company (Name) 031767 (Buyer Code)
(b) Date of the contract:	06 21 74 (Mo. Day Yr.)
(c) Estimated annual production:	219 MMcf.

	(a) Base Price ($/MMBTU)	(b) Tax	(c) All Other Prices (Indicate (+) or (-).)	(d) Total of (a), (b) and (c)
7.0 Contract price: (As of filing date. Complete to 3 decimal places.)	1.980	.134	—.—	2.114
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	1.980	—.—	—.—	—.—

9.0 Person responsible for this application:

Gilbert E. Miller (Name) Conservation Supvr. (Title)

Gilbert E. Miller (Signature)

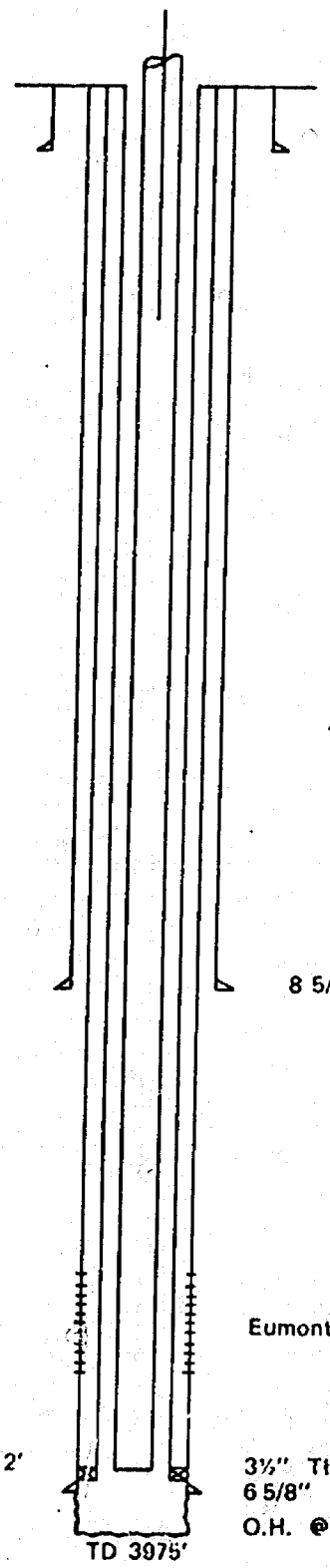
January 31, 1979 (Date Application is Completed) 918-584-5554 (Phone Number)

Agency Use Only
Date Received by Juris. Agency
Date Received by FERC

FT7900806/2-2

BEFORE EXAMINER STANLEY
OIL CONSERVATION DIVISION
Amerada Hess EXHIBIT NO. 3
CASE NO. 6434
Submitted by
Hearing Date

State 'O' No. 1
Sec. 30 - Twp 19S - R37E
Lea County, New Mexico



12½" Csg. @ 180'

8 5/8" Csg. @ 2491'

Eumont Perfs. @ 3260'–3560'

Production Equipment @ 3812'

3½" Tbg. w/Baker Pkr. @ 3818'
6 5/8" Csg. @ 3860'
O.H. @ 3860'-3975'

TD 3975'

Dual Completion Eumont Gas & Monument G--SA Oil

BEFORE EXAMINER STAMETS
OIL CONSERVATION DIVISION
Amerada Hess EXHIBIT NO. 54
CASE NO. 6434
Submitted by
Hearing Date

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. 514
Order No. R-303

THE APPLICATION OF AMERADA PETROLEUM CORPORATION FOR AN ORDER GRANTING PERMISSION TO DUALLY COMPLETE AND PRODUCE ITS STATE 'O', WELL NO. 1 LOCATED IN THE NW/4 NE/4 OF SECTION 30, TOWNSHIP 19 SOUTH, RANGE 37 EAST, NMPM, LEA COUNTY, NEW MEXICO.

BEFORE EXAMINER STAMETS
OIL CONSERVATION COMMISSION
Amerada Hess #5
Case No. 6434
Submitted by
Hearing Date

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on March 17, 1953, at Santa Fe, New Mexico, before the Oil Conservation Commission, hereinafter referred to as the "Commission".

NOW, on this 31st day of March, 1953, the Commission, a quorum being present, having considered the records and the testimony adduced, and being fully advised in the premises,

FINDS:

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

(2) That the applicant's State 'O', Well No. 1, NW/4 NE/4 Section 30, Township 19 South, Range 37 East, NMPM, Lea County, New Mexico, was completed in April 1936 as an oil well producing from the Grayburg formation of the Eunice-Monument Pool in the open-hole interval 3860-3975, having drilled through the Seven Rivers-Queen formation of the Eumont Gas Pool at an approximate depth of 3100-3560.

(3) That although recent experiments tend to show that mechanical packers and other devices are ordinarily available for successful dual/multiple completions of oil - gas wells, the Commission is unconvinced of the soundness as a waste-prevention practice, of such dual/multiple completions as a general practice in New Mexico without specific controls over each such project.

IT IS THEREFORE ORDERED:

That the applicant herein, Amerada Petroleum Corporation, be, and it hereby is authorized to dually complete and produce its State 'O', Well No. 1, NW/4 NE/4 Section 30, Township 19 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner that gas from the Seven Rivers-Queen formation of the Eumont Gas Pool may be produced through the annular space between the casing and the tubing, and oil from the Grayburg formation of the Eunice-Monument Pool through the tubing by proper perforations and the installation of a proper packer;

PROVIDED, HOWEVER, That upon the actual dual completion of such subject well applicant shall submit to the District Office of the Commission in which the subject well is located Form C-103, Form C-104, Form C-110 and Form C-122 outlining the information required on these forms by existing Rules and Regulations.

PROVIDED, HOWEVER, That subject well shall be completed, and thereafter produced, in such a manner that there will be no commingling within the well bore, either within or outside the casing of gas, oil and gas, or oil produced from either or both of the separate strata, and,

PROVIDED FURTHER, That said subject well for dual completion and production shall be equipped in such a way that reservoir pressures may be determined separately for each of the two specified strata, and further, be equipped with all necessary connections required to permit recording meters to be installed and used, at any time, as may be required by the Commission or its representatives, in order that natural gas, oil, or oil and gas from each separate stratum may be accurately measured and the gas-oil ratio thereof determined, and,

PROVIDED FURTHER, That the operator applicant shall make any and all tests, including segregation tests, but not excluding other tests and/or determinations at any convenient time and in such manner as deemed necessary by the Commission; the original and all subsequent tests shall be witnessed by representatives of the Commission and by representatives of offset operators, if any there be, at their election, and the results of each test properly attested to by the applicant herein and all witnesses, and shall be filed with the Commission within ten (10) days after the completion of such test, and,

PROVIDED FURTHER, That upon the actual dual completion of such subject well, applicant shall submit to the Commission a diagrammatic sketch of the mechanical installation which was actually used to complete and produce the seal between the strata, and a special report of production, gas/oil ratio and reservoir pressure determination of each producing zone or stratum immediately following completion.

IT IS FURTHER ORDERED, That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order after proper notice and hearing, the Commission may terminate the authority hereby granted and require applicant or its successors and assigns to limit its activities to regular single-zone production in the interests of conservation.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

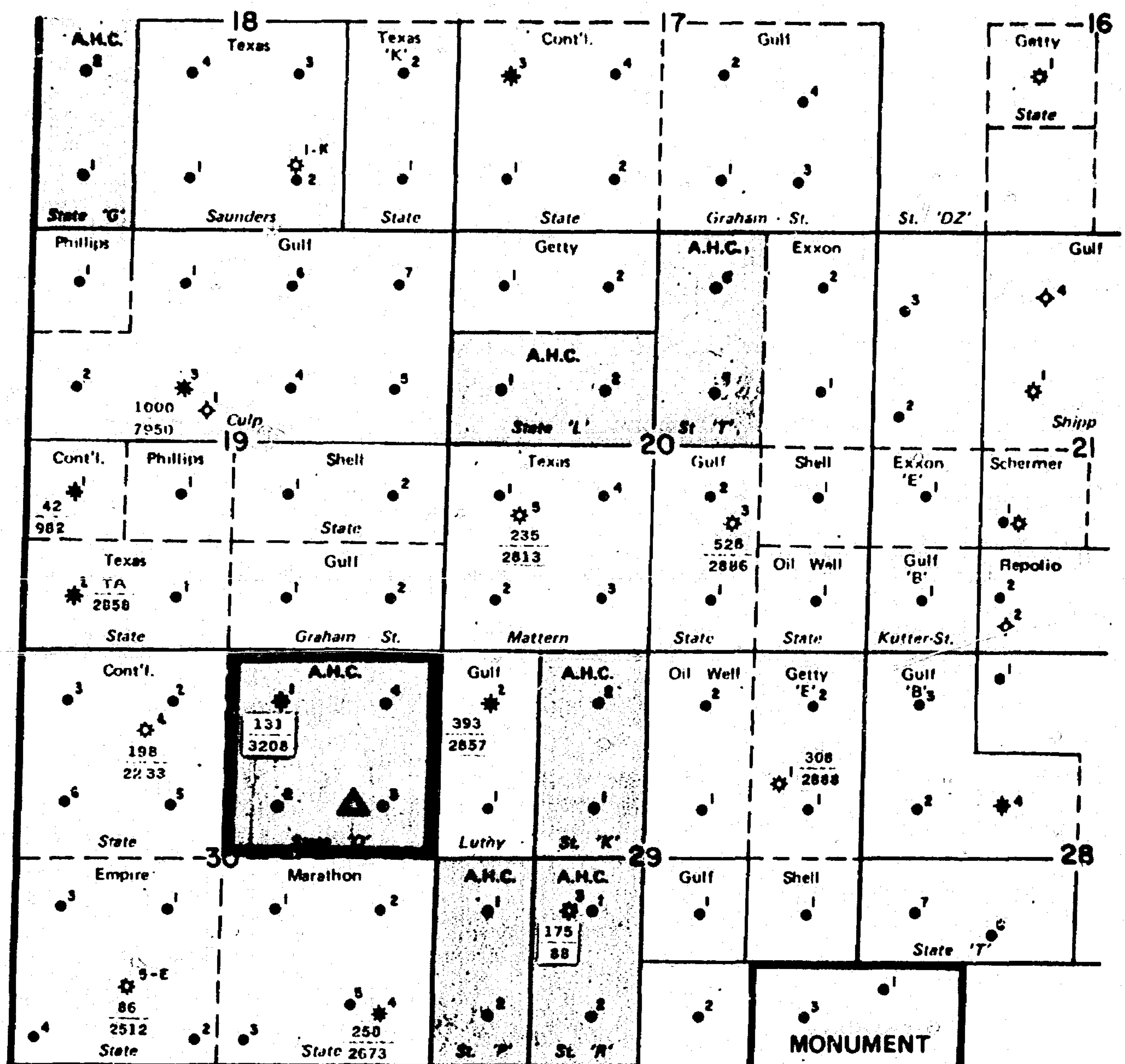
EDWIN L. MECHEM, Chairman

E. S. WALKER, Member

R. R. SPURRIER, Secretary

SEAL

Ex 6
0434



Location Map	LEGEND	
N.M. / Okla. / Texas	Oil / Gas / Dry & Abn / Injection	Proposed Location; 000/0000 MCFPD/Cum MMCF

SOUTHWEST PRODUCTION REGION
EUMONT FIELD
Lea County, New Mexico

AMERADA HESS

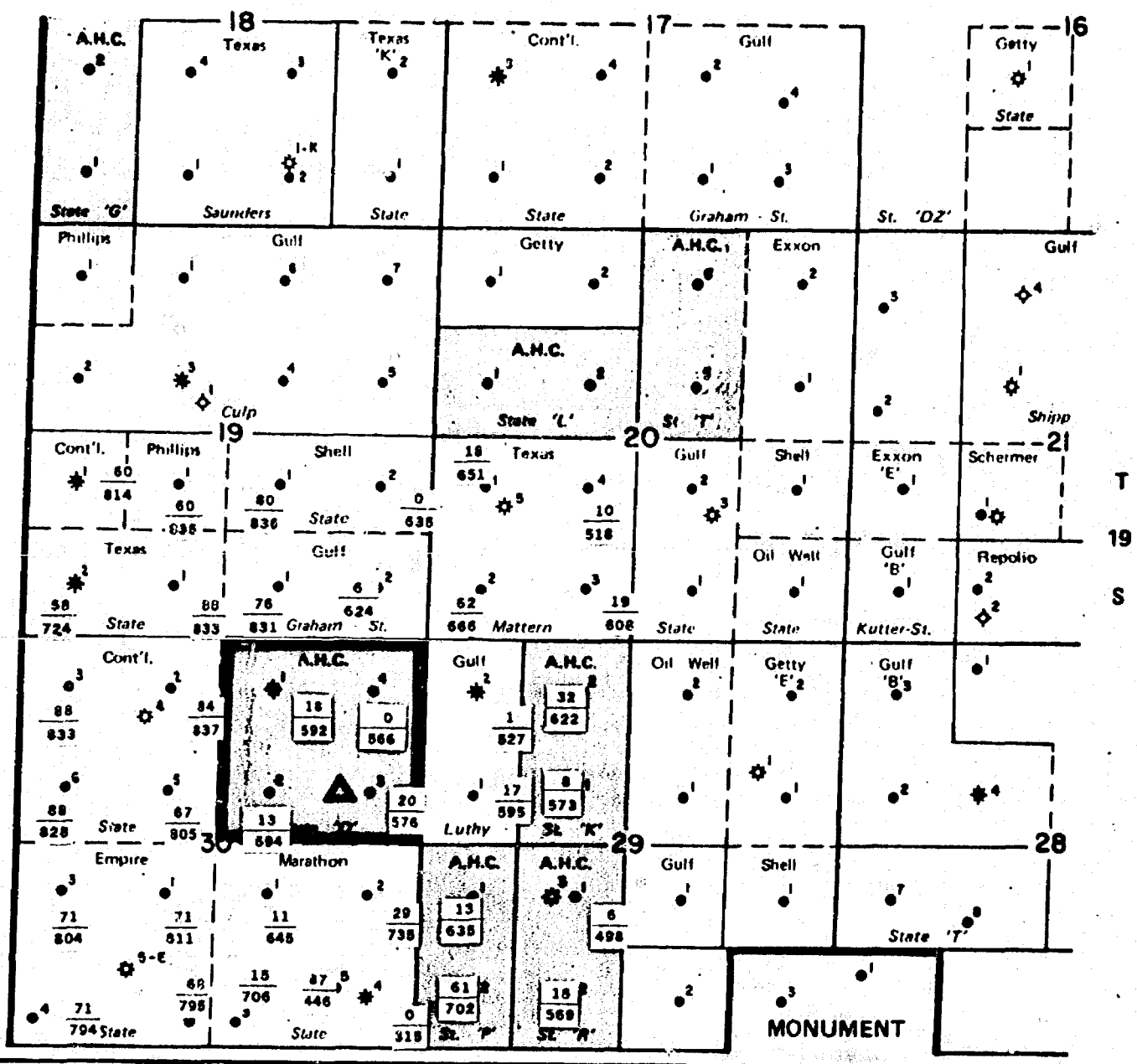
STATE 'O' LEASE

0 2000' 4000'

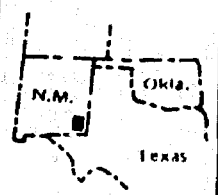
Date: | Page No.
Originator: | Ref. No.

Ex 1

R 37 E



Location Map



LEGEND

- Oil
- Gas
- Dry & Abn
- Injection
- Proposed Location
- MCFPD / Cum MMCF
- 00 / 000 BOPD / Cum. MBBLS

SOUTHWEST PRODUCTION REGION
EUMONT FIELD
Lea County, New Mexico

AMERADA HESS

STATE 'O' LEASE

0 2000' 4000'

Date:

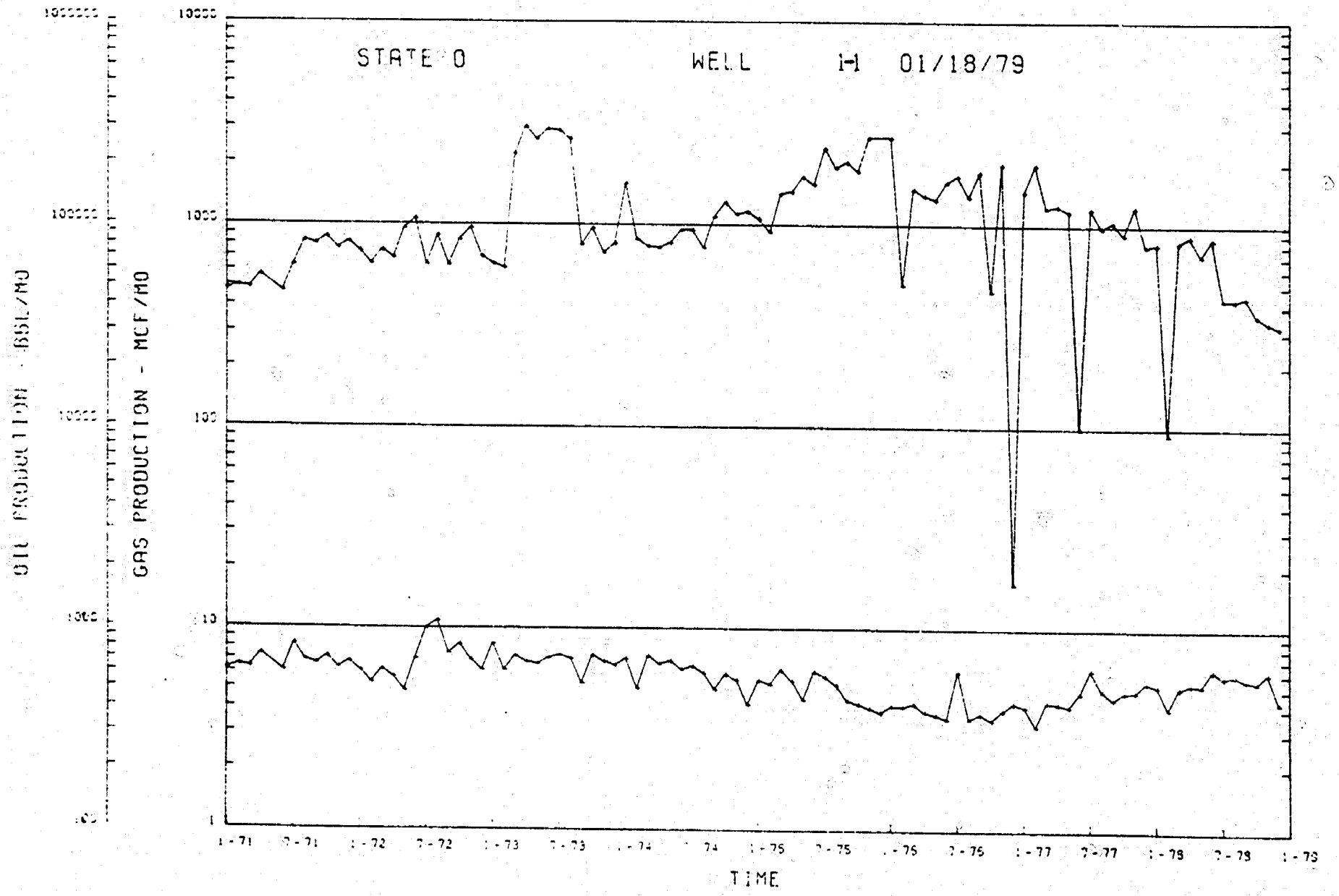
Originator:

Page No.

Rel. No.

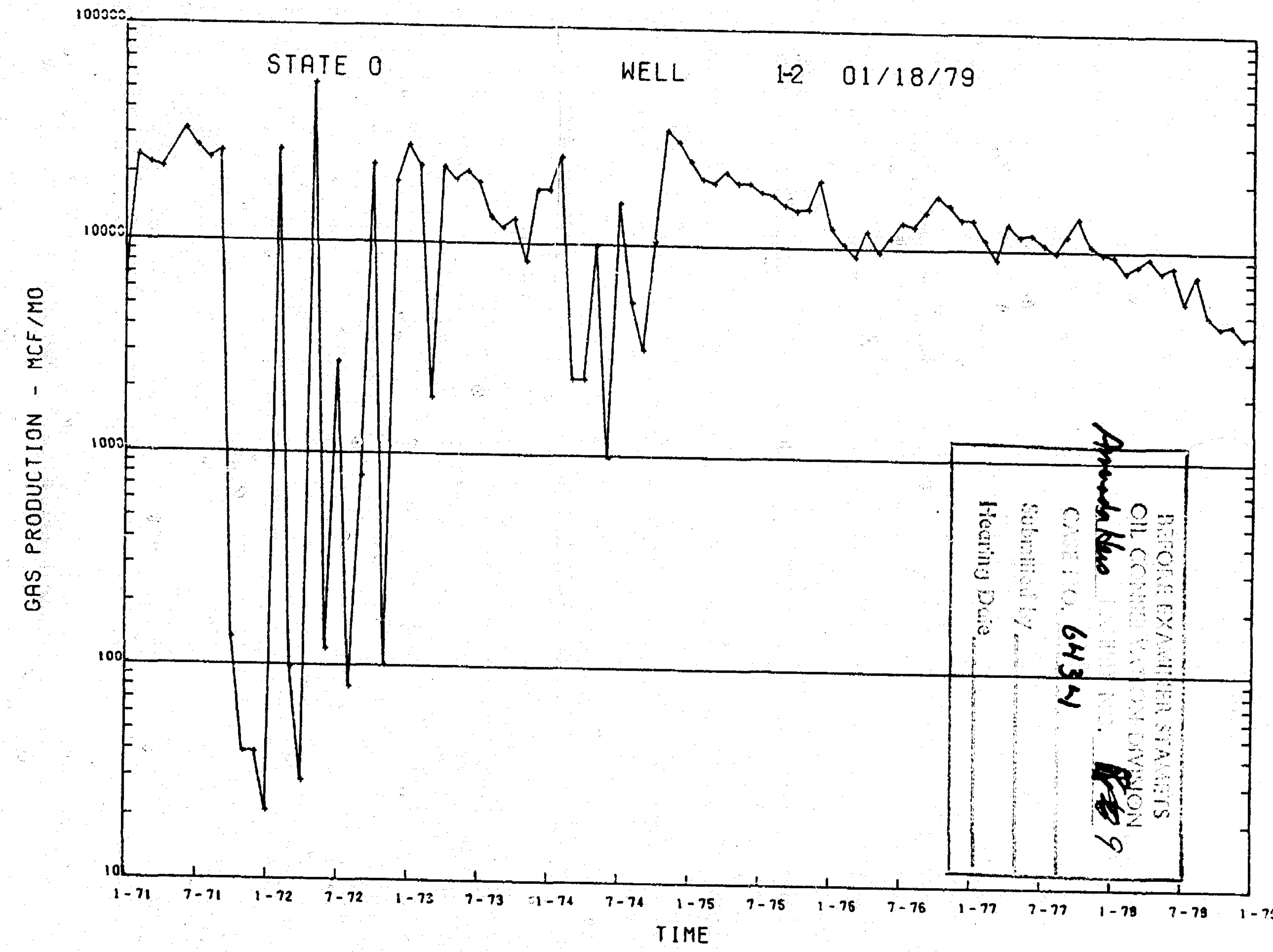
EUNICE–MONUMENT (G–SA) FIELD

LEA COUNTY, NEW MEXICO



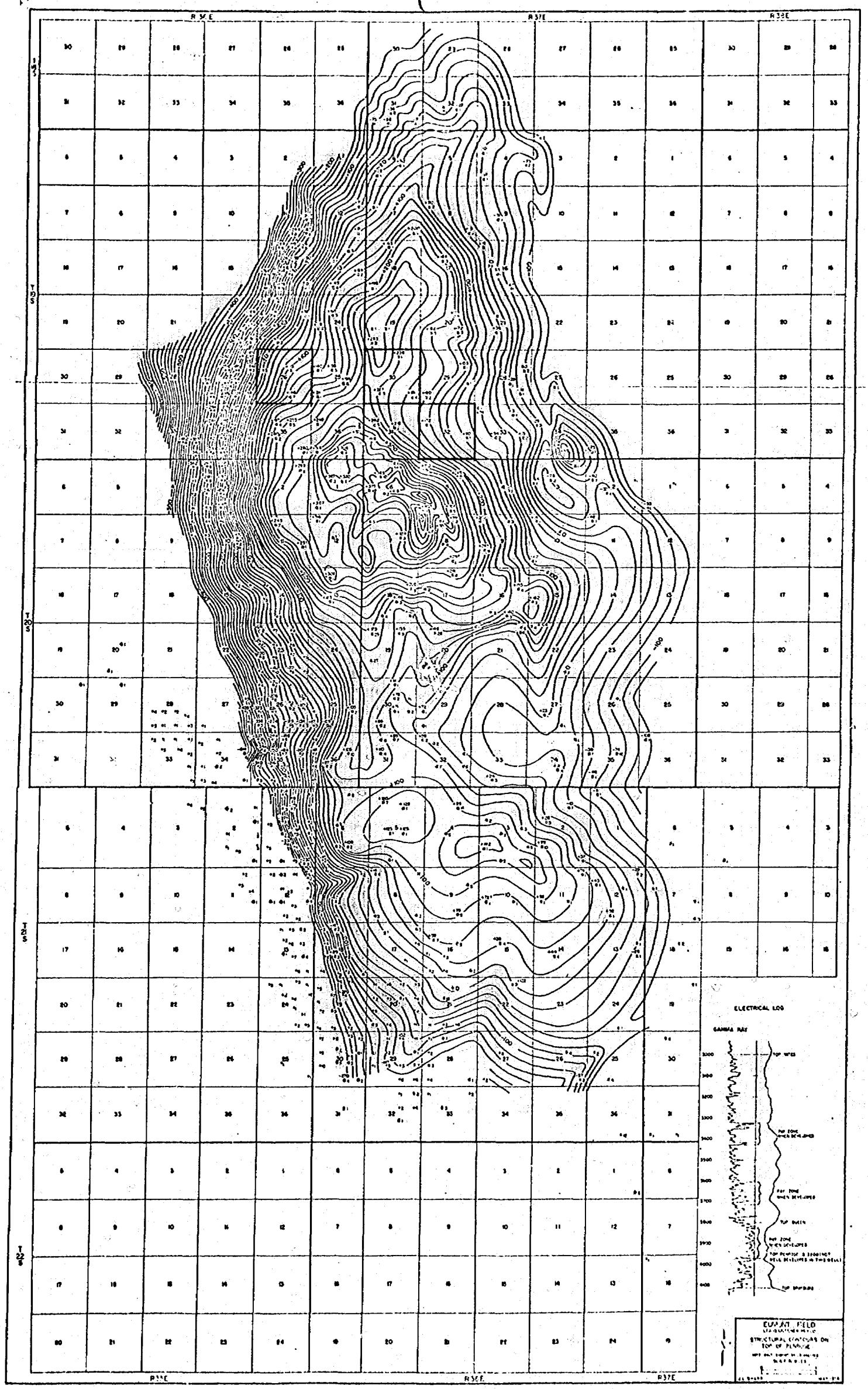
EUMONT FIELD

LEA COUNTY, NEW MEXICO

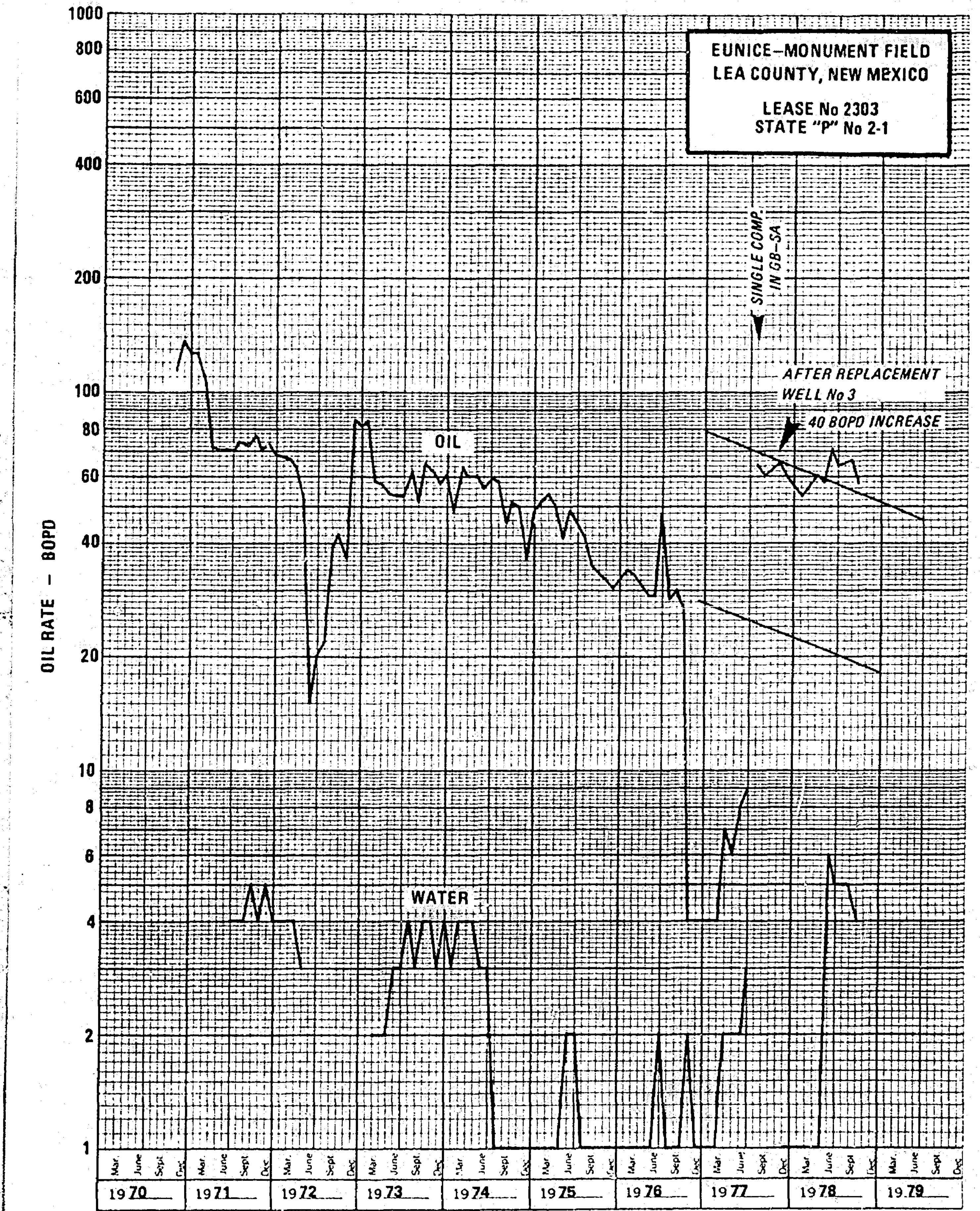


PLOT NO. 3

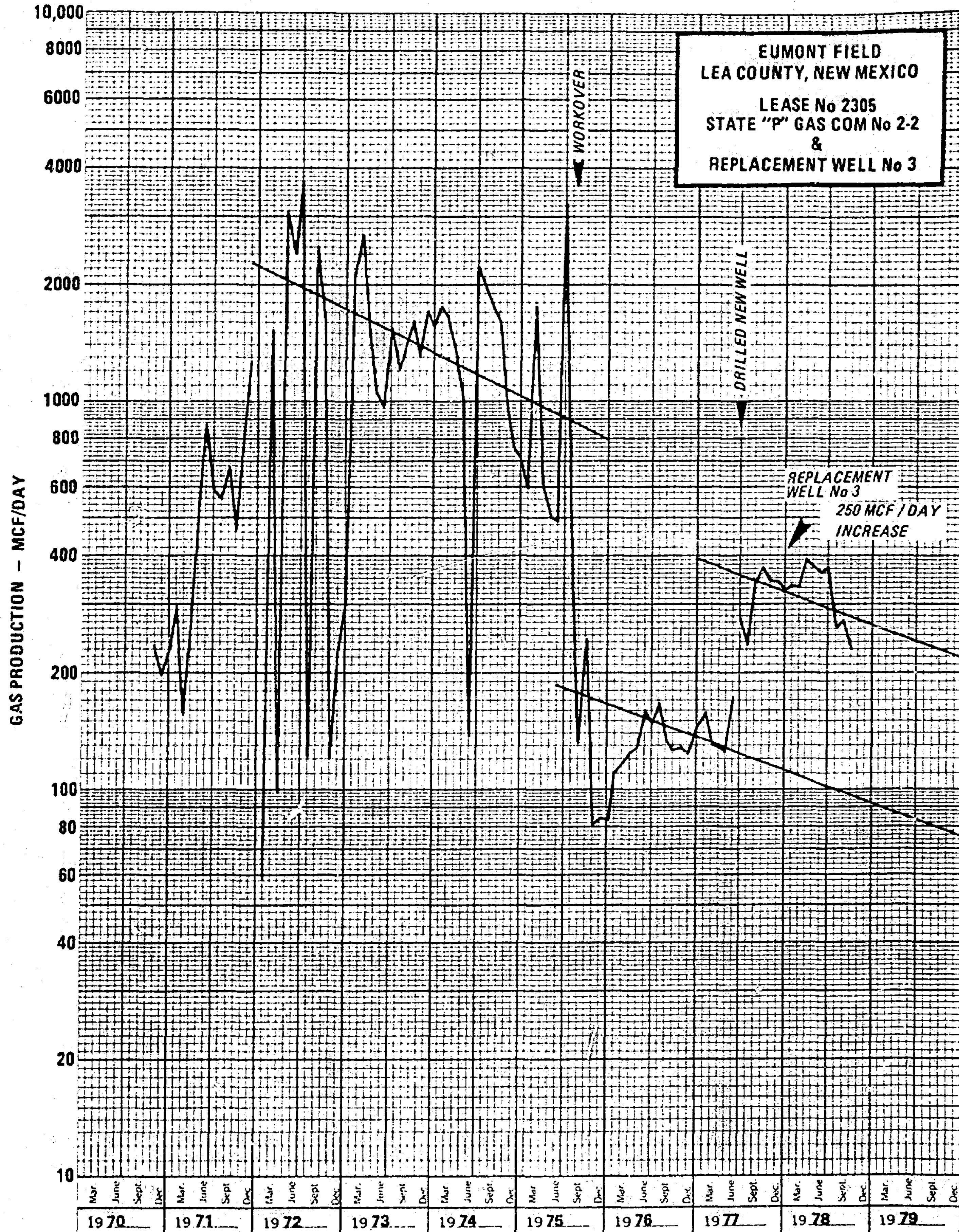
41 10

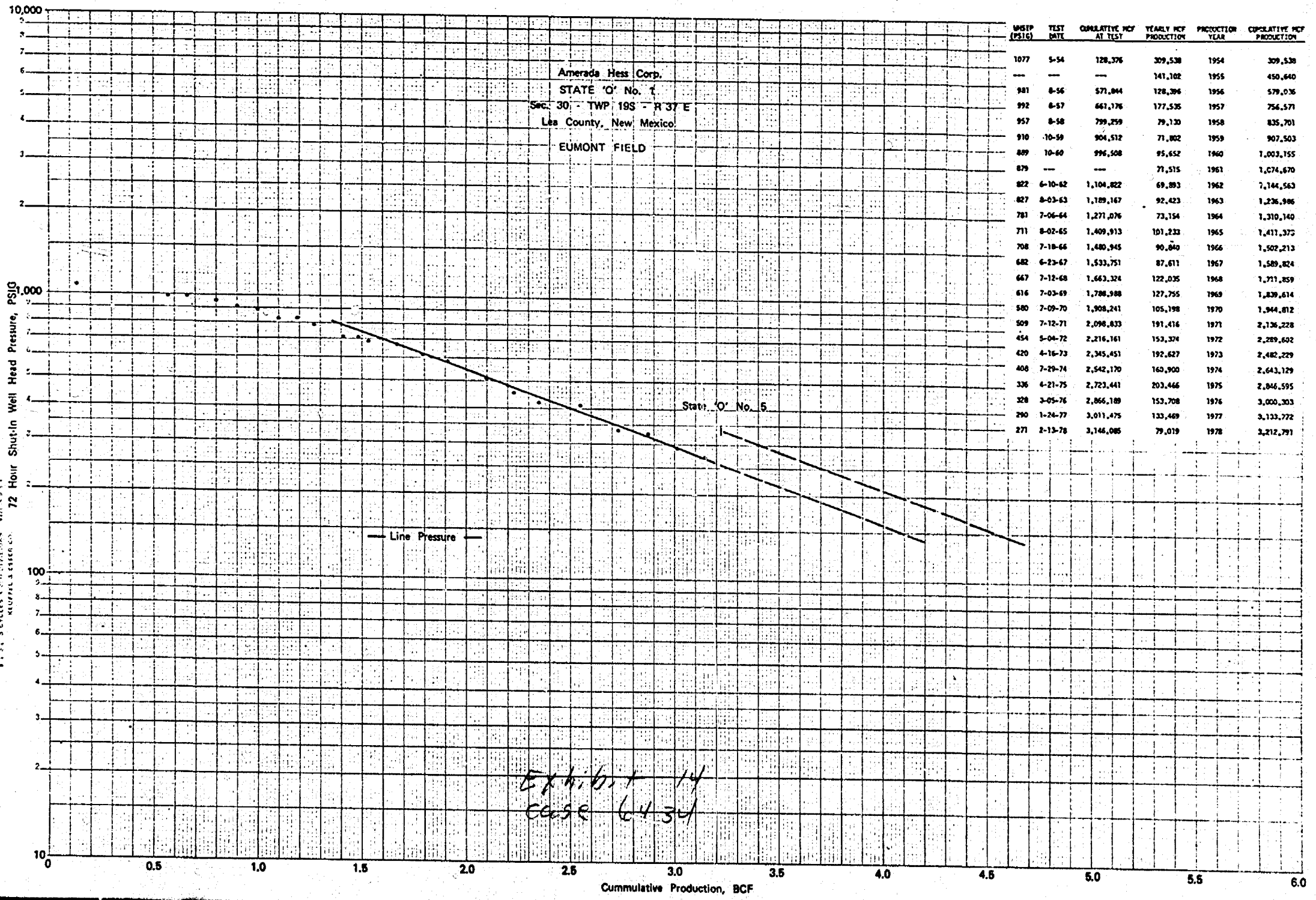

R 36 E
R 37 E
R 38 E
T 19 S
T 20 S
T 21 S
T 22 S
R 35 E
R 36 E
R 37 E
ELECTRICAL LOG
GAMMA RAY
TOP MYES
TOP ZONE WHEN DEVELOPED
TOP ZONE WHEN DEVELOPED
TOP BASIN
TOP ZONE WHEN DEVELOPED
TOP PENNSYLVANIAN WHERE DEVELOPED IN THIS AREA
TOP MISSISSIPPIAN
EUNICE FIELD
LEA COUNTY, NEW MEXICO
STRUCTURAL CONTOURS ON TOP OF PENNSYLVANIAN

8212


EUNICE–MONUMENT FIELD
LEA COUNTY, NEW MEXICO
LEASE No 2303
STATE "P" No 2-1
OIL RATE – BOPD
1000
800
600
400
200
100
80
60
40
20
10
8
6
4
2
1
OIL
WATER
SINGLE COMP. IN GB–SA
AFTER REPLACEMENT WELL No 3
40 BOPD INCREASE
Mar. June Sept Dec
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979

9/13

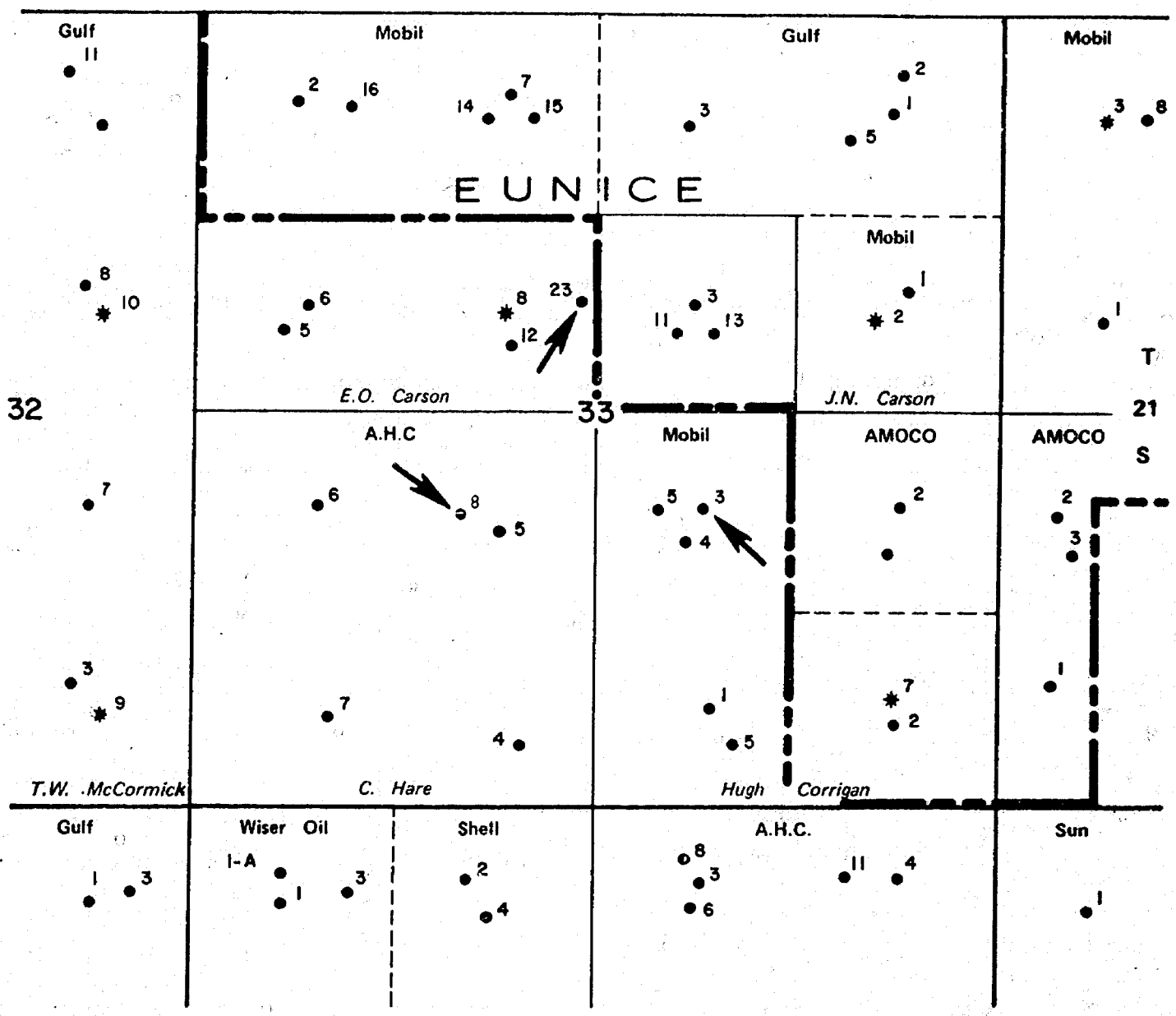

EUMONT FIELD
LEA COUNTY, NEW MEXICO
LEASE No 2305
STATE "P" GAS COM No 2-2
&
REPLACEMENT WELL No 3
GAS PRODUCTION – MCF/DAY
WORKOVER
DRILLED NEW WELL
REPLACEMENT WELL No 3
250 MCF/DAY INCREASE
10,000
8000
6000
4000
2000
1000
800
600
400
200
100
80
60
40
20
10
Mar. June Sept. Dec.
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979



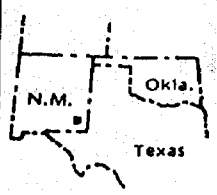
WHSIP (PSIG)	TEST DATE	CUMULATIVE MCF AT TEST	YEARLY MCF PRODUCTION	PRODUCTION YEAR	CUMULATIVE MCF PRODUCTION
1077	5-54	128,376	309,538	1954	309,538
---	---	---	141,102	1955	450,640
981	8-56	571,844	128,396	1956	579,036
992	8-57	661,176	177,535	1957	756,571
957	8-58	799,259	79,130	1958	835,701
910	10-59	904,512	71,802	1959	907,503
889	10-60	996,508	95,652	1960	1,003,155
879	---	---	71,515	1961	1,074,670
822	6-10-62	1,104,822	69,893	1962	1,144,563
827	8-03-63	1,189,167	92,423	1963	1,236,986
781	7-06-64	1,271,076	73,154	1964	1,310,140
711	8-02-65	1,409,913	101,233	1965	1,411,373
708	7-18-66	1,480,945	90,840	1966	1,502,213
682	6-23-67	1,533,751	87,611	1967	1,589,824
667	7-12-68	1,663,324	122,035	1968	1,711,859
616	7-03-69	1,788,988	127,755	1969	1,839,614
580	7-09-70	1,908,241	105,198	1970	1,944,812
509	7-12-71	2,098,833	191,416	1971	2,136,228
454	5-04-72	2,216,161	153,374	1972	2,289,602
420	4-16-73	2,345,451	192,627	1973	2,482,229
408	7-29-74	2,542,170	160,900	1974	2,643,129
336	6-21-75	2,723,441	203,466	1975	2,846,595
328	3-05-76	2,866,189	153,708	1976	3,000,303
290	1-24-77	3,011,475	133,469	1977	3,133,772
271	2-13-78	3,146,085	79,019	1978	3,212,791

Exhibit 14
Case 6434

R 37 E



Location Map



LEGEND

- Oil
- Gas
- Dry & Abn
- Injection

Exhibit 15
case 6434

SOUTHWEST PRODUCTION REGION
EUMONT FIELD
Lea County, New Mexico

AMERADA HESS

J.G. HARE LEASE

0 1000' 2000'

Date: Feb., 1979 | Page No.

Originator: | Ref. No.

A.H.C. Hare #8, Mobil Carson #23, & Mobil Corrigan #3

Sec. 33 – TWP 21S – R 37 E

Lea County, New Mexico

EUMONT FIELD

A.H.C. Hare #8 Initial 8 months Prod. 156.1 MCF

Mobil Carson #23 Initial 8 months Prod. 153.6 MCF

Mobil Corrigan #3 Initial 8 months Prod. 74.2 MCF

46 6690

Monthly Production, MCF

100,000 / 10,000 / 1,000

K-E 5 YEARS BY MONTHS x 3 LOGS CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

Jan. Feb. Mar. Apr. May June July Aug. Sept Oct. Nov. Dec.

19 76 | 19 77 | 19 78 | 19 79 | 19 80

Exhibit 16
Case 6434

A.H.C. Hare #8, Mobil Carson #23, & Mobil Corrigan #3
Sec. 33 – TWP 21S – R 37 E
Lea County, New Mexico
EUMONT FIELD

A.H.C. Hare #8 Initial 8 months Prod. 156.1 MCF
Mobil Carson #23 Initial 8 months Prod. 153.6 MCF
Mobil Corrigan #3 Initial 8 months Prod. 74.2 MCF

46 5493

Monthly Production, MCF

100,000
10,000
1,000

10 20 30 40 50 60 70

Months

SEMI-LOGARITHMIC • 3 CYCLES X 70 DIVISIONS
KEUFFEL & ESSER CO. MADE IN U.S.A.

Exhibit 17
case 6434

Dockets Nos. 9-79 and 10-79 are tentatively set for hearing on March 14 and 28, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

Docket No. 7-79

DOCKET: COMMISSION HEARING - FRIDAY - FEBRUARY 23, 1979

OIL CONSERVATION COMMISSION - 9 A.M. - ROOM 205
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

CASE 6461: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Mayor Eddie Armenta, the Village of Jemez Springs, and all other interested parties to appear and show cause why the Jemez Well No. 1 located in Unit A of Section 26, Township 18 North, Range 2 East, Sandoval County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

****

Docket No. 8-79

DOCKET: EXAMINER HEARING - WEDNESDAY - FEBRUARY 28, 1979

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

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

CASE 6422: (Continued from January 31, 1979, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Helton Engineering & Geological Services, Inc., Travelers Indemnity Company, and all other interested parties to appear and show cause why the Brent Well No. 1 located in Unit M of Section 29 and the Brent Well No. 3 located in Unit G of Section 19, both in Township 13 North, Range 6 East, Sandoval County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6434: (Continued from January 31, 1979, Examiner Hearing)

Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its State "O" Well No. 5 to be located in Unit H of Section 30, Township 19 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well, and further seeks approval of a waiver of existing well-spacing requirements.

CASE 6435: (Continued from February 14, 1979, Examiner Hearing)

Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its W. A. Weir "B" Well No. 3 located in Unit B of Section 26, Township 19 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well, and further seeks approval of a waiver of existing well-spacing requirements.

CASE 6436: (Continued from January 31, 1979, Examiner Hearing)

Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its State "U" Gas Com Well No. 2 to be located in Unit C of Section 32, Township 19 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well, and further seeks approval of a waiver of existing well-spacing requirements.

CASE 6462: Application of McClellan Oil Corporation for an unorthodox well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Marlisue State Well No. 3 to be located 1155 feet from the North line and 1485 feet from the West line of Section 24, Township 14 South, Range 29 East, Double "L" Queen Associated Pool, Chaves County, New Mexico, the NE/4 NW/4 of said Section 24 to be dedicated to the well.

CASE 6463: Application of Orville Slaughter for pool and lease commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to commingle Oswell-Farmington Pool production from his Sangre de Cristo Well No. 1 with undesignated Fruitland production from his Sangre de Cristo Well No. 2, both located in Unit D of Section 34, Township 30 North, Range 11 West, San Juan County, New Mexico.

CASE 6464: Application of Dallas McCasland for clarification of Orders Nos. R-2789 and R-2794, Lea County, New Mexico. Applicant, in the above-styled cause, seeks clarification of Orders Nos. R-2789 and R-2794 to determine what formations have been unitized and what formations are subject to a waterflood project under the South Penrose-Skelly Unit, Sections 6 and 7, Township 22 South, Range 37 East, Lea County, New Mexico, and of the vertical limits of the Eumont and Penrose-Skelly Pools in said sections.

CASE 6465: Application of Getty Oil Company for an unorthodox well location and a non-standard proration unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 160-acre non-standard gas proration unit comprising the SE/4 of Section 31, Township 24 South, Range 37 East, Jalmat Gas Pool, Lea County, New Mexico, to be dedicated to its J. W. Sherrell Well No. 9 located 2250 feet from the South line and 1650 feet from the East line of said Section 31.

CASE 6466: Application of Getty Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its State 35 Well No. 1 located in Unit K of Section 35, Township 21 South, Range 34 East, Lea County, New Mexico, to produce oil from an undesignated Wolfcamp pool and gas from the Grama Ridge-Morrow Gas Pool through parallel strings of tubing.

CASE 6467: Application of Getty Oil Company for pool creation and special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order creating a new oil pool in the Wolfcamp formation for its State 35 Well No. 1 located in Unit K of Section 35, Township 21 South, Range 34 East, Lea County, New Mexico, and for promulgation of special pool rules, including provision for 160-acre spacing.

CASE 6468: Application of Dome Petroleum Corporation for an exception to Order No. R-1069, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 2 of Order No. R-1069, as amended, for the Bisti-Lower Gallup Oil Pool to approve the following 13 non-standard proration units: the W/2 NW/4, W/2 NE/4, E/2 SW/4, and the E/2 SE/4 of Sections 3, 4, and 9, and the W/2 NW/4 of Section 10, all in Township 26 North, Range 14 West, San Juan County, New Mexico.

CASE 6469: Application of Continental Oil Company for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Fed. 34 Well No. 1 located in Unit N of Section 34, Township 20 South, Range 26 East, Eddy County, New Mexico, to produce gas from the Springs-Upper Pennsylvanian Pool and an undesignated Morrow pool through parallel strings of tubing.

CASE 6470: Application of Phillips Petroleum Company for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well spacing requirements to permit an infill drilling program in its East Vacuum Unit Area, Vacuum Grayburg-San Andres Pool, Lea County, New Mexico, and a finding that such infill wells are necessary to effectively and efficiently drain that portion of their proration units which is not presently being drained by any existing well. Applicant specifically seeks such waivers and findings now for ten wells, all in Township 17 South, Range 35 East, and located as follows: Unit K of Section 27; Units M and O, Section 28; Units B, I, and M of Section 32; Units C, H, and M of Section 33; and Unit C of Section 34.

CASE 6471: Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Freeman Well No. 1-A to be located in Unit C of Section 11, Township 31 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6472: Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Jenny Well No. 1-A to be located in Unit P of Section 13, Township 26 North, Range 4 West, Basin-Dakota Pool, Rio Arriba County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6473: Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its McIntyre Well No. 1-A to be located in Unit K of Section 11, Township 26 North, Range 4 West, Basin-Dakota Pool, Rio Arriba County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6474: Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Williams Well No. 1-A to be located in Unit C of Section 24, Township 31 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6475: Application of Consolidated Oil & Gas, Inc. for approval of infill drilling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Montoya Well No. 1-A to be located in Unit I of Section 35, Township 32 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6476: Application of Pennzoil Company for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be located 660 feet from the South line and 990 feet from the West line of Section 24, Township 17 South, Range 28 East, Aid-Morrow Gas Pool, Eddy County, New Mexico, the S/2 of said Section 24 to be dedicated to the well.

CASE 6477: Application of Sun Oil Company for a waterflood project, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project on its East Millman Pool Unit Area by the injection of water into the Queen and Grayburg formations through eleven wells located in Sections 12 and 13 of Township 19 South, Range 28 East, East Millman Pool, Eddy County, New Mexico.

CASE 6437: (Continued and Readvertised)

Application of Curtis Little for compulsory pooling, approval of infill drilling, and a non-standard proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the rescission of Order No. R-4556 and approval of an order pooling all mineral interests in the Dakota formation underlying all of Section 11 and Lot 4 and the SW/4 SW/4 of Section 12, Township 28 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, to form a 344.36-acre non-standard gas proration unit to be dedicated to a well to be located 1085 feet from the South line and 285 feet from the West line of said Section 12. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

Applicant further seeks a finding that the drilling of said well is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.

CASE 6478: Application of Coronado Exploration Corp. for compulsory pooling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying the NW/4 SE/4 of Section 26, Township 10 South, Range 28 East, Chaves County, New Mexico, to be dedicated to a well to be located at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6479: Application of Coronado Exploration Corp. for compulsory pooling, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the San Andres formation underlying the SE/4 SE/4 of Section 5, Township 10 South, Range 28 East, Chaves County, New Mexico, to be dedicated to a well to be located at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6480: Application of Harvey E. Yates Company for an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir or in the alternative a new onshore production well determination for its State 22 Well No. 1 located in Unit P of Section 22, Township 18 South, Range 35 East, Queen formation, Lea County, New Mexico.

CASE 6481: Application of Harvey E. Yates Company for an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir or in the alternative a new onshore production well determination for its Hanlad State Well No. 1 located in Unit K of Section 2, Township 18 South, Range 35 East, Queen formation, Lea County, New Mexico.

CASE 6482: Application of Harvey E. Yates Company for an NGPA determination, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a new onshore reservoir or in the alternative a new onshore production well determination for its Mobil 27 State Well No. 1 located in Unit A of Section 27, Township 18 South, Range 35 East, Queen formation, Lea County, New Mexico.

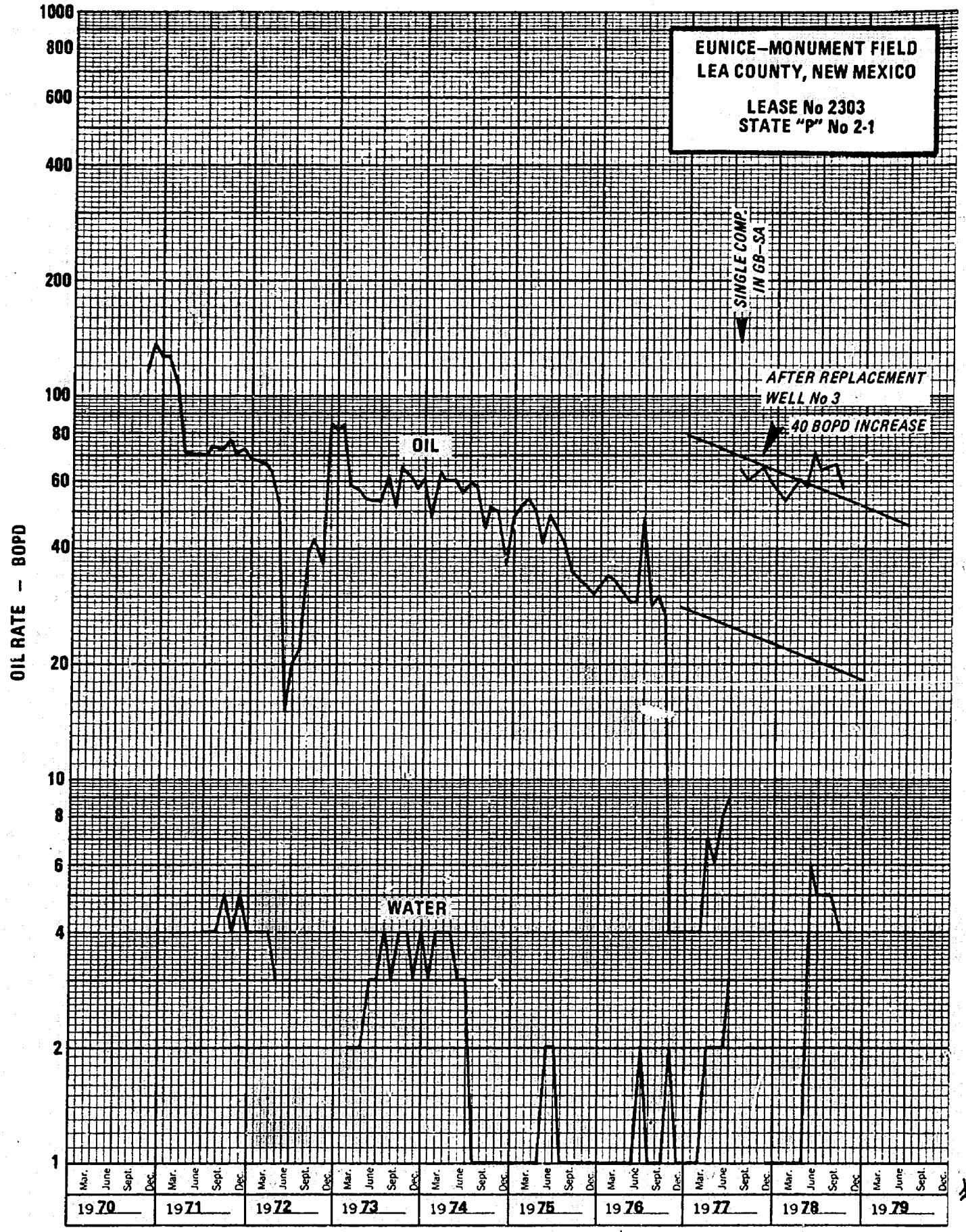
CASE 6483: Application of Harvey E. Yates Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp, Pennsylvanian, and Mississippian formations underlying the S/2 of Section 8, Township 14 South, Range 36 East, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6484: Application of Harvey E. Yates Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp, Pennsylvanian, and Mississippian formations underlying the E/2 of Section 28, Township 16 South, Range 37 East, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6485: Application of Harvey E. Yates Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp, Pennsylvanian, and Mississippian formations underlying the S/2 of Section 13, Township 18 South, Range 28 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6486: Application of Depco Inc. for an unorthodox well location, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be located 660 feet from the North and East lines of Section 21, Township 13 South, Range 30 East, undesignated Morrow pool, Chaves County, New Mexico, the E/2 of said Section 21 to be dedicated to the well.

CASE 6487: Application of El Paso Natural Gas Company for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a waiver of existing well-spacing requirements and a finding that the drilling of its Shell E State Com Well No. 2 located in Unit N of Section 6, Township 21 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well.


EUNICE–MONUMENT FIELD
LEA COUNTY, NEW MEXICO
LEASE No 2303
STATE "P" No 2-1
SINGLE COMP. IN GB–SA
AFTER REPLACEMENT WELL No 3
40 BOPD INCREASE
OIL
WATER
OIL RATE – BOPD
1000
800
600
400
200
100
80
60
40
20
10
8
6
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2
1
Mar. June Sept. Dec.
1970
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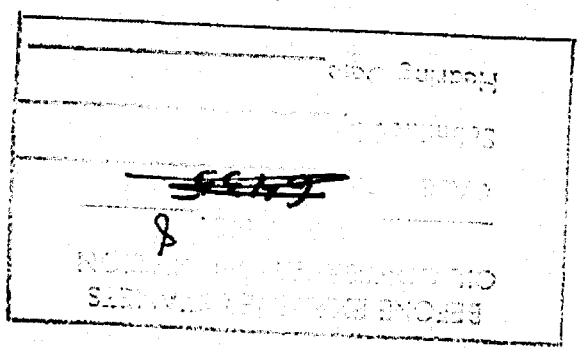
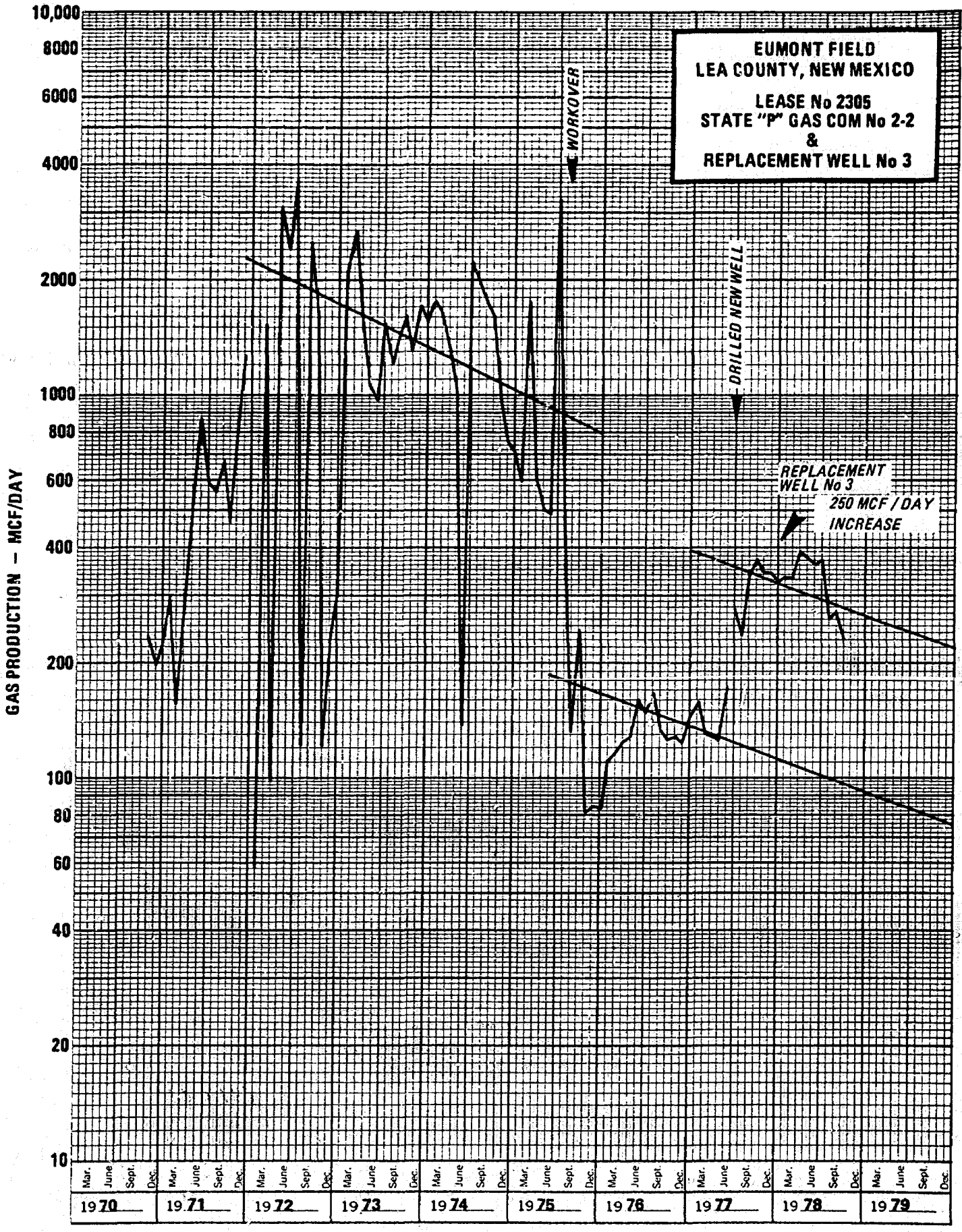
1976
1977
1978
1979

#8




EUMONT FIELD
LEA COUNTY, NEW MEXICO
LEASE No 2305
STATE "P" GAS COM No 2-2
&
REPLACEMENT WELL No 3
WORKOVER
DRILLED NEW WELL
REPLACEMENT WELL No 3
250 MCF / DAY INCREASE
GAS PRODUCTION – MCF/DAY
10,000
8000
6000
4000
2000
1000
800
600
400
200
100
80
60
40
20
10
Mar. June Sept. Dec.
1970
1971
1972
1973
1974
1975
1976
1977
1978
1979

[illegible]

6434

Hearing Date

AMERADA HESS CORPORATION

P. O. DRAWER "D"
MONUMENT, NEW MEXICO 88265

January 22, 1979

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

Re: Application of Amerada Hess Corporation
for Administrative Approval of a 160 acre
Non-Standard Gas Proration Unit.

Gentlemen:

Amerada Hess Corporation requests that a 160 acre non-standard gas proration unit, consisting of the W/2 of NE/4 and E/2 of NW/4, Sec. 26, T19S, R36E, Lea County, New Mexico be assigned to the W. A. Weir "B" #3, Unit B, Sec. 26, T19S, R36E. The requested non-standard proration unit is currently assigned to W. A. Weir "B" #1, Unit G, Sec. 26, T19S, R36E. The number one completion is an oil-gas completion in Grayburg San Andres and Eumont Queen zones. The Eumont Queen zone is to be plugged off.

Form C-102 and plat of wells in the area is attached.

The following offset operators have been furnished a copy of this application by registered mail.

Marathon Oil Company, P. O. Box 552, Midland, Texas 79701
Gulf Oil Company, P. O. Box 1150, Midland, Texas 79701
Texaco, Inc., P. O. Box 728, Hobbs, New Mexico 88240
Sun Production Company, P. O. Box 1205, Hobbs, New Mexico 88240

AMERADA HESS CORPORATION

By E B Dukes
Supv. Adm. Ser.

XC - R. E. Thomas
Gib Miller
N.M.O.C.D. Hobbs

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section.

Operator	Lease	Well No.
Amerada Hess Corporation	W. A. Weir "B"	3

Unit Letter	Section	Township	Range	County
B	26	19-S	36-E	Lea

Actual Footage Location of Well: 660 feet from the North line and 1980 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3660' GL	Eumont Queen	Eumont	160 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

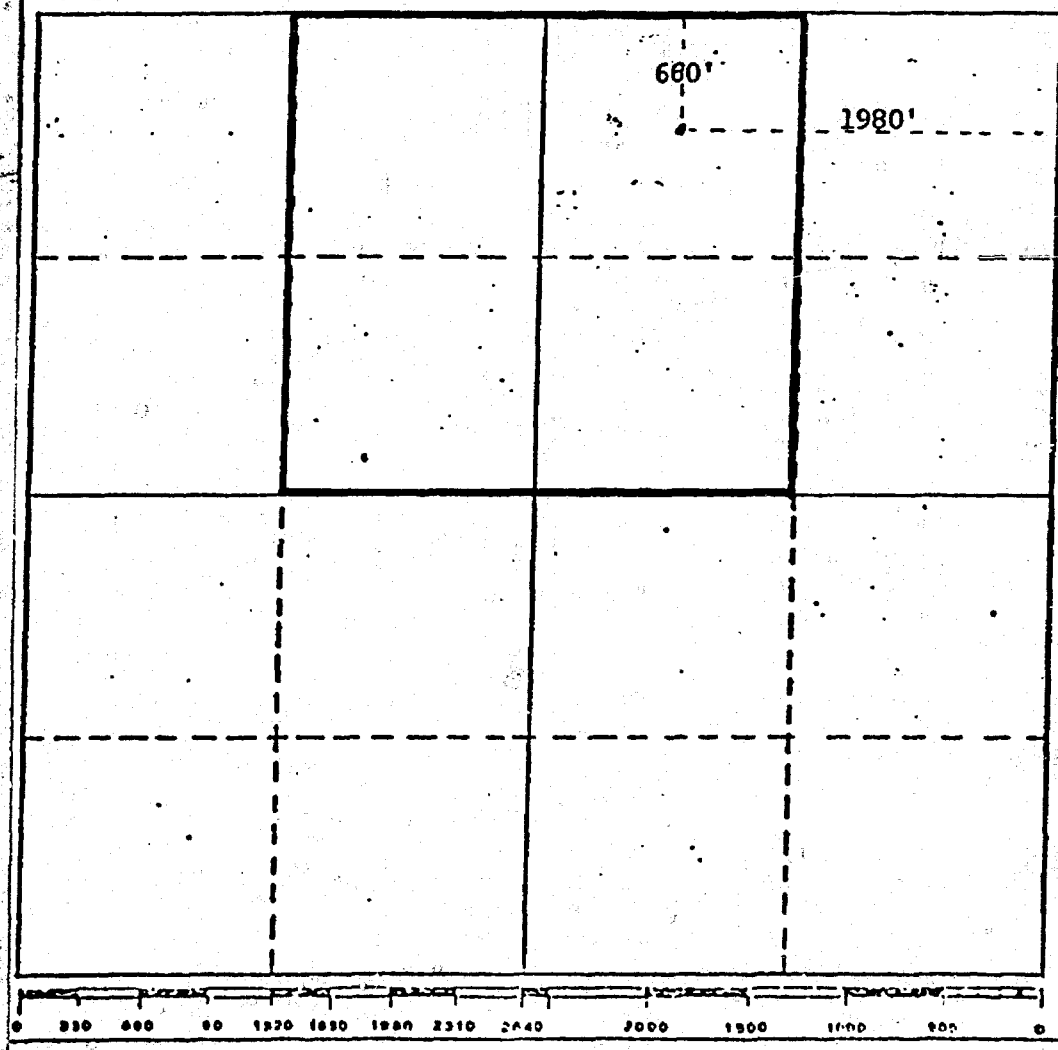
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☒ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

E K Fischer

Name: Supv. Adm. Ser.

Position: Amerada Hess Corporation

Company: 1-22-79

Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed

Registered Professional Engineer and/or Land Surveyor

Certificate No.

R-36-E

T 19 S

Texas 3 2 4 1
Gulf 1-DK-A DK 'A' | Texas 1 NCT-2 | Gulf
Southern Union 1 2 1*
22 Amerada 2 1 6
Shell 'R' 2 1 5 State
Gulf 2 3 1
23
Bell 'H' 2
Texas 2
1 DK 'B'
Weir
Sun 2* 1 Barr
Texas 'J' 3*
Gulf 'C' 2 3 4
24
Shell 'C' 1 2
Texas 'F' 1 2
State 'Gra'
Amerada Skelly 'B' 1 4 3 St. WM-B
Ohio 6 5 4 4 3
27 State-McGrail | Charm 3 2 1
Hunt 5 2 1 Persons
Cit. Serv. 1
Cont'l. 3 2 1 State
Amerada 'B' 3 MONUMENT 2 1
Weir
Texas 4
Weir
26
Ohio 2
Gulf 'B' 1
Weir, W. A. Gas Com
Amerada 7
Weir
Gulf 1
Bates
Texas 3 1 Weir
Amerada 'T' 4 3*
Gulf 'C' 5 7
25
Sun 1 2 State
Amerada 'X' 1 2
Weir
Skelly 1
Christmas
Gulf 1 6
State 'Gra'
Martin 2
Gulf 4 3 5 2 1
Resler-S. 1 2
Amerada 2 6 1 3 1*
34 Smith | Gaither
2 4 3 2-A 2 1
Foster
Amerada 8 6 3 4
Weir
Sun 6 5 3
Gulf 1 Weir
35
Sinclair 2 4 1
(Amerada) (Am. Rep.) 1-A 1 2
Maveety
Shell 1
State
Shell 'B' 2 3 1 4
Amerada 'V' 1 2 3
Amerada 'F' 2 3 1
State 'F' Gas Com 3 4
36
Gulf 'F' 2 3 4 5* 7 5725 6 1
State

EUMONT FIELD

Lea Co., New Mexico

Scale: 1" = 2000'

Map 7 of 9 Maps

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

NEW MEXICO OIL CONSERVATION COMMISSION

TULSA

1978 DEC 14 PM 4:04

DRILLING SERVICES

Form C-101
Revised 1-1-65

5A. Indicate Type of Lease STATE ☐ FEE ☒

5. State Oil & Gas Lease No.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK

1a. Type of Work

b. Type of Well: DRILL ☒ DEEPEN ☐ PLUG BACK ☐ OIL WELL ☐ GAS WELL ☒ OTHER SINGLE ZONE ☒ MULTIPLE ZONE ☐

7. Unit Agreement Name

8. Farm or Lease Name: W.A.Weir "B"

2. Name of Operator: Amerada Hess Corporation

9. Well No.: 3

3. Address of Operator: Box 2040 - Tulsa, Oklahoma 74102

10. Field and Pool, or Wildcat: Eumont

4. Location of Well: UNIT LETTER B LOCATED 660 FEET FROM THE North LINE AND 1980 FEET FROM THE East LINE OF SEC. 26 TWP 19S RGE 36E NMPM

12. County: Lea

19. Proposed Depth	19A. Formation	20. Rotary or C.T.
3750'	Queen	Rotary

21. Elevations (Show whether DF, RT, etc.)	21A. Kind & Status Plug. Bond	21B. Drilling Contractor	22. Approx. Date Work will start
3660.1' GL	Blanket	Cactus Drlg. Company	1/20/79

23.

PROPOSED CASING AND CEMENT PROGRAM

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF CEMENT	EST. TOP
12-1/4"	8-5/8"	32#	300'	200	Surf.
7-7/8"	5-1/2"	14 & 15.5#	3550'	750	Surf.

Plan to drill 12¼" hole from surface to 300', set and cement 8-5/8" csg. at 300' with 200 sx., WOC, and drill 7-7/8" hole out from under 8-5/8" csg. to 3550', set and cement 5-1/2" csg. at 3550' and cmt. with 750 sx., WOC, drill out from under 5-1/2" csg. with tbg. to 3750', or sufficient depth to test Eumont Queen Zone and log. If indicates productive, will complete as a Eumont Queen Gas Well. (No cores or DST are anticipated at this time.)

Blowout Equipment, consists of 10" Cameron Type "F" series 900 Dbl. Hyd. w/Payne closing un Gas separator and de-gasser complete w/auto. choke. All BOP equipment will be checked periodically by a Cactus Drlg. Company driller and Amerada Hess well site drilling supervis

Gas dedicated to purchaser.

3/11/79

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN OR PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PRODUCTIVE ZONE. GIVE BLOWOUT PREVENTER PROGRAM, IF ANY.

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

Signed H.O.Porter H.O.Porter Title Supv.Drlg.Admin.Svcs. Date 12/7/78

(This space for State Use)

APPROVED BY John W. Runyan TITLE Geologist DATE

CONDITIONS OF APPROVAL, IF ANY: No production from this well will be authorized until approval for the non-standard proration unit is obtained.

NEW MEXICO OIL CONSERVATION COMMISSION
WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Amerada Hess Corp.	Weir "B"	3

Unit Letter	Section	Township	Range	County
B	26	19 South	36 East	Lea

Actual Footage Location of Well:
660 feet from the North line and 1980 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3660.1	Queen	Eumont	160 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

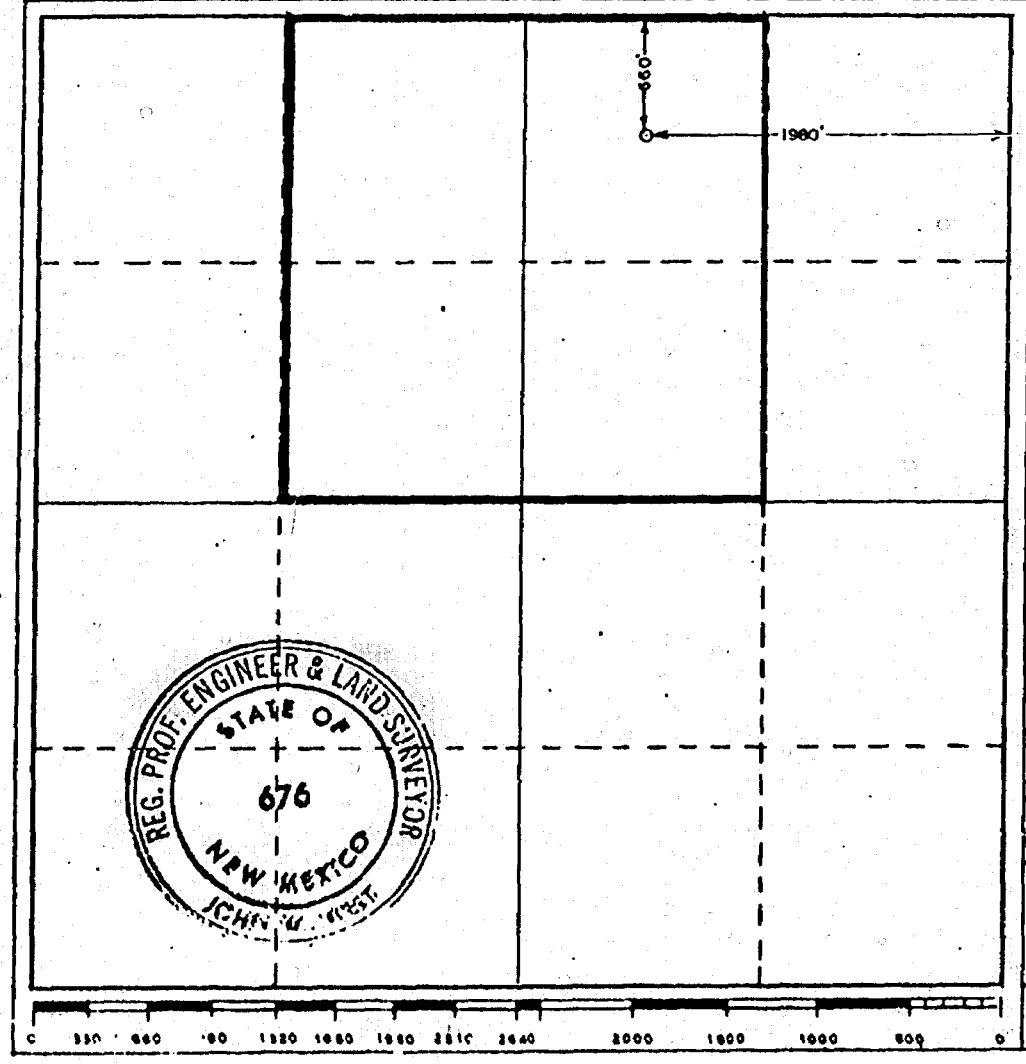
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc?

☐ Yes ☐ No If answer is "yes," type of consolidation N/A

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

H.O. Porter H.O. Porter
Name
Supv.Drlg.Admin.Svcs.
Position
Amerada Hess Corporation
Company
December 7, 1978
Date

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed
November 30, 1978
Registered Professional Engineer and/or Land Surveyor
John W. West
Certificate No. John W. West 676
Ronald J. Eidson 3239

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

FORM C-132

APPLICATION FOR WELLHEAD
PRICE CEILING CATEGORY DETERMINATION

1. FOR DIVISION USE ONLY

DATE OF: APPLICATION _____
DETERMINATION _____
CONTESTED _____
PARTICIPANTS _____

Kind of Lease
State, Federal or Fee: Fee

5. State Oil & Gas Lease No.

7. Unit Agreement Name

2. Name of Operator: Amerada Hess Corporation

8. Farm or Lease Name: W. A. Weir "B"

3. Address of Operator: P. O. Box 2040, Tulsa, Oklahoma 74102

9. Well No.: 3

4. Location of Well:
UNIT LETTER B 660 FEET FROM THE North LINE AND 1980 FEET FROM THE East LINE, SECTION 26 TOWNSHIP 19S RANGE 37E NMPM.

10. Field and Pool, or Wildcat: Eumont

12. County: Lea

11. Name and Address of Transporter(s): Northern Natural Gas Co.
2223 Dodge St., Omaha, Neb. 68102

WELL CATEGORY INFORMATION

Check appropriate box for category sought and information submitted.

1. Category(ies) Sought (By NGPA Section No.) 103
2. All Applications must contain:

[X] a. C-101 APPLICATION FOR PERMIT TO DRILL, DEEPEN OR PLUG BACK

[ ] b. C-105 WELL COMPLETION OR RECOMPLETION REPORT

[ ] c. DIRECTIONAL DRILLING SURVEY, IF REQUIRED UNDER RULE 111

[ ] d. AFFIDAVITS OF MAILING OR DELIVERY

3. NEW NATURAL GAS UNDER SEC. 102(c)(1)(B) (using 2.5 Mile or 1000 Feet Deeper Test)

[ ] a. Location Plat

4. NEW NATURAL GAS UNDER SEC. 102(c)(1)(C) (new onshore reservoir)

[ ] a. C-122 Multipoint and one point back pressure test

5. NEW ONSHORE PRODUCTION WELL

[X] a. C-102 WELL LOCATION AND ACREAGE DEDICATION PLAT

[ ] b. No. of order authorizing infill program _____

6. STRIPPER GAS

[ ] a. C-116 GAS-OIL RATIO TEST

[ ] b. PRODUCTION CURVE FOR 12-MONTH PERIOD

[ ] c. PRODUCTION CURVE FOR THE 90-DAY PERIOD ON WHICH THE APPLICATION IS BASED

I HEREBY CERTIFY THAT THE INFORMATION CONTAINED HEREIN IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

Gilbert E. Miller
NAME OF APPLICANT (Type or Print)

Title Conservation Supervisor

Date January 31, 1979

Signed Gilbert E. Miller

DIVISION USE ONLY

[ ] Approved

[ ] Disapproved

The information contained herein includes all of the information required to be filed by the applicant under Subpart B of Part 274.

_____
EXAMINER

FERC-121

1.0 API well number: (If not available, leave blank. 14 digits.)	30-025-26168
2.0 Type of determination being sought: (Use the codes fourd on the front of this form.)	103 (Section of NGPA) ____ (Category Code)
3.0 Depth of the deepest completion location: (Only needed if sections 103 or 107 in 2.0 above.)	3750 feet
4.0 Name, address and code number of applicant: (35 letters per line maximum. If code number not available, leave blank.)	Amerada Hess Corporation (Name) 000459 (Seller Code) P. O. Box 2040 (Street) Tulsa, (City) Okla. (State) 74102 (Zip Code)
5.0 Location of this well: (Complete (a) or (b).) (a) For onshore wells (35 letters maximum for field name.)	Eumont (Field Name) Lea (County) New Mexico (State)
(b) For OCS wells:	(Area Name) (Block Number) Date of Lease: Mo. Day Yr. (OCS Lease Number)
(c) Name and identification number of this well: (35 letters and digits maximum.)	W. A. Weir "B" No. 3
(d) If code 4 or 5 in 2.0 above, name of the reservoir: (35 letters maximum.)	Queen
6.0 (a) Name and code number of the purchaser: (35 letters and digits maximum. If code number not available, leave blank.)	Northern Natural Gas Company (Name) 013767 (Buyer Code)
(b) Date of the contract:	06 21 74 (Mo. Day Yr.)
(c) Estimated annual production:	292 MMcf.

	(a) Base Price ($/MMBTU)	(b) Tax	(c) All Other Prices (Indicate (+) or (-).)	(d) Total of (a), (b) and (c)
7.0 Contract price: (As of filing date. Complete to 3 decimal places.)	1.980	.134	----	2.114
8.0 Maximum lawful rate: (As of filing date. Complete to 3 decimal places.)	1.980	----	----	----

9.0 Person responsible for this application:

Gilbert E. Miller (Name) Conservation Supvr. (Title)

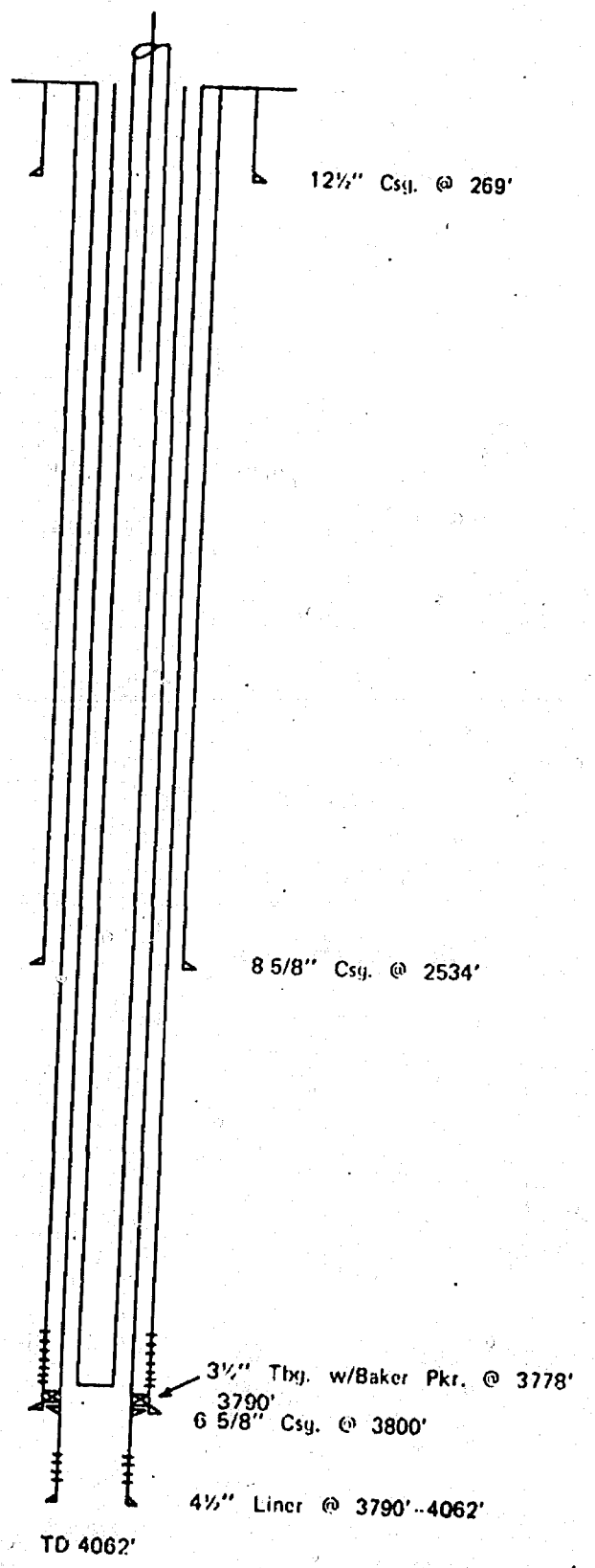
Gilbert E. Miller (Signature)

January 31, 1979 (Date Application is Completed) 918-584-5554 (Phone Number)

Agency Use Only
Date Received by Juris. Agency
Date Received by FERC

FT7900806/2-2

Weir 'B' No. 1
Sec. 26 – Twp 19S – R37E
Lea County, New Mexico



Dual Completion Eumont Gas & Monument G--SA Oil

SUBJECT: DUAL COMPLETION (GAS - OIL) NOVEMBER 13, 1953

THE APPLICATION OF AMERADA PETROLEUM CORPORATION FOR PERMISSION TO EFFECT DUAL COMPLETION OF ITS W. A. WEIR 'B' WELL NO. 1, SW/4 NE/4 SECTION 26, TOWNSHIP 19 SOUTH, RANGE 36 EAST, NMPM, LEA COUNTY, NEW MEXICO.

ORDER NO. DC-27

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION COMMISSION

Under the provisions of Order No. R-316, Rule 112-A, Amerada Petroleum Corporation made application to the New Mexico Oil Conservation Commission on November 2, 1953, for permission to dually complete its W. A. Weir 'B' Well No. 1, SW/4 NE/4 Section 26, Township 19 South, Range 36 East, NMPM, Lea County, New Mexico, and

The Secretary - Director Finds:

(1) That application has been duly filed under the provisions of Subsection 'c' of Rule 112-A of the Commission's Rules and Regulations;

(2) That satisfactory information has been provided that all operators of offset acreage have been duly notified; and

(3) That no objections have been received within the waiting period as prescribed by said rule.

IT IS THEREFORE ORDERED:

That the applicant herein, Amerada Petroleum Corporation, be and it hereby is authorized to dually complete its W. A. Weir 'B' Well No. 1, SW/4 NE/4 Section 26, Township 19 South, Range 36 East, NMPM, Lea County, New Mexico, in such a manner that gas from the Seven Rivers-Queen formation of the Eumont Gas Pool may be produced through the annular space between the casing and the tubing, and oil from the Grayburg-San Andres formation of the Eunice-Monument Oil Pool through the tubing, by proper perforations and the installation of a proper packer;

PROVIDED, HOWEVER, That subject well shall be completed and thereafter produced in such a manner that there will be no commingling within the well-bore, either within or outside the casing, of gas, oil and gas, or oil produced from either or both of the separate strata;

PROVIDED FURTHER, That upon the actual dual completion of such subject well applicant shall submit to the District Office of the Commission at Hobbs, New Mexico, copies of Oil Conservation Commission Form C-103, Form C-104, Form C-110 and Form C-122 outlining the information required on those forms by existing Rules and Regulations, and two copies of the electric log of the well, if available.

PROVIDED FURTHER, That said subject well for dual completion and production shall be equipped in such a way that reservoir pressures may be determined separately for each of the two specified strata, and further, be equipped with all necessary connections required to permit recording meters to be installed and used, at any time, as may be required by the Commission or its representatives, in order that natural gas, oil, or oil and gas from each separate stratum may be accurately measured and the gas-oil ratio thereof determined, and

PROVIDED FURTHER, That the operator-applicant shall make any and all tests, including segregation tests, but not excluding other tests and/or determinations at any convenient time and in such manner as deemed necessary by the Commission; the original and all subsequent tests shall be witnessed by representatives of the Commission and by representatives of offset operators, if any there be, at their election, and the results of each test properly attested to by the applicant herein and all witnesses, and shall be filed with the Commission within ten days after the completion of such test, and

PROVIDED FURTHER, That upon the actual dual completion of such subject well, applicant shall submit to the Commission a diagrammatic sketch of the mechanical installation which was actually used to complete and produce the seal between the strata, and a special report of production, gas-oil ratio and reservoir pressure determination of each producing zone or stratum immediately following completion.

IT IS FURTHER ORDERED, That jurisdiction of this cause is hereby retained by the Commission for such further order or orders as may seem necessary or convenient for the prevention of waste and/or protection of correlative rights; upon failure of applicant to comply with any requirement of this order after proper notice and hearing, the Commission may terminate the authority hereby granted and require applicant or its successors and assigns to limit its activities to regular single-zone production in the interests of conservation.

APPROVED at Santa Fe, New Mexico, on this 13th day of November 1953.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

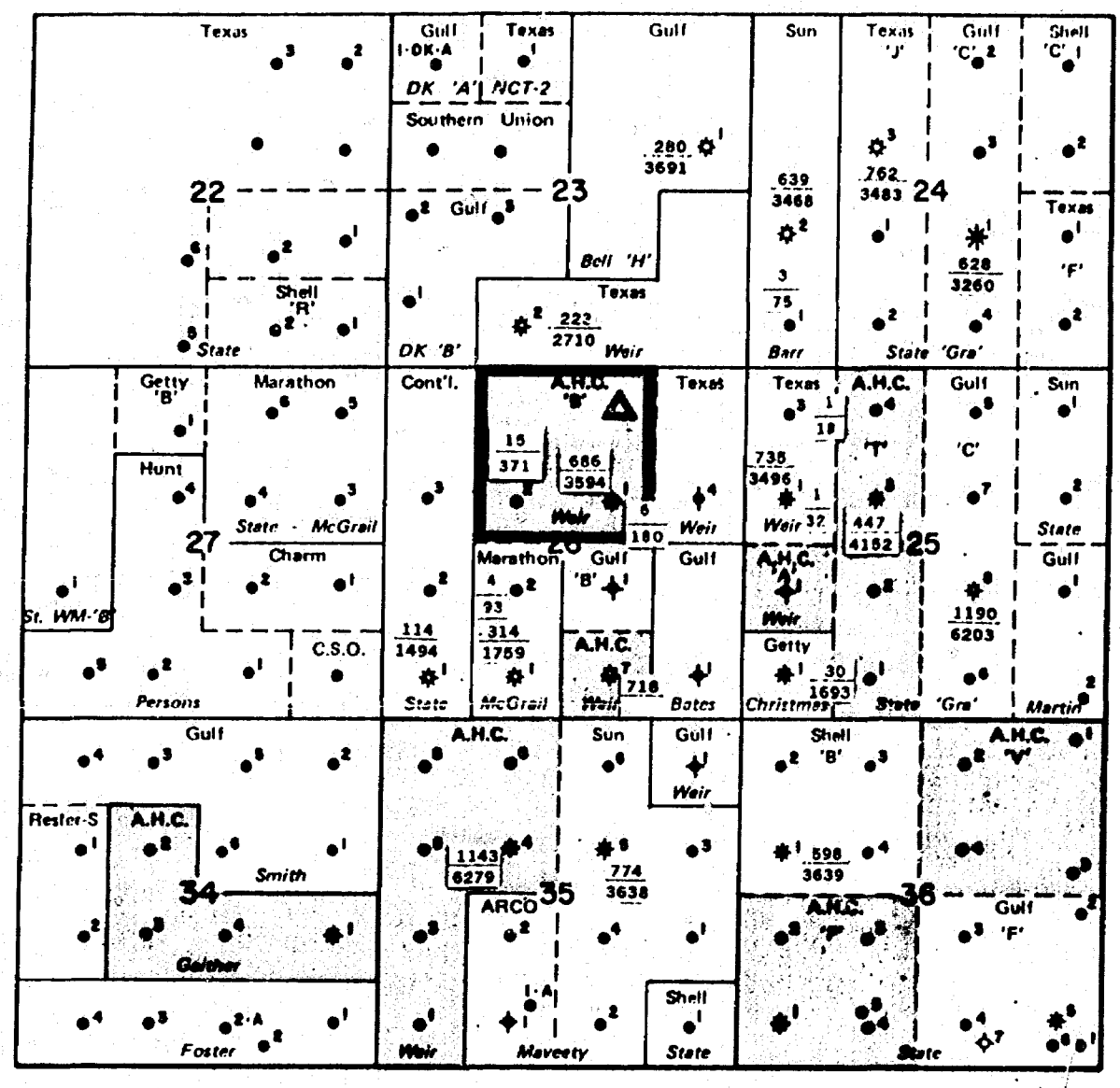
R. R. Spurrier

R. R. SPURRIER, Secretary-Director

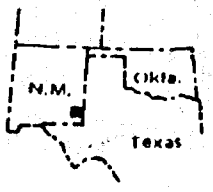
SEAL

R - 36 - E

T 19 S



Location Map



LEGEND

- Oil
- Gas
- Dry & Abn
- Injection
- Proposed Location
- 000 / 0000 MCFPD / Cum MMCF
- 00 / 000 BOPD / Cum. MBBLS

SOUTHWEST PRODUCTION REGION
EUMONT FIELD
Lea County, New Mexico

AMERADA HESS

WEIR 'B' LEASE

0 ½ 1 mi.

Date:

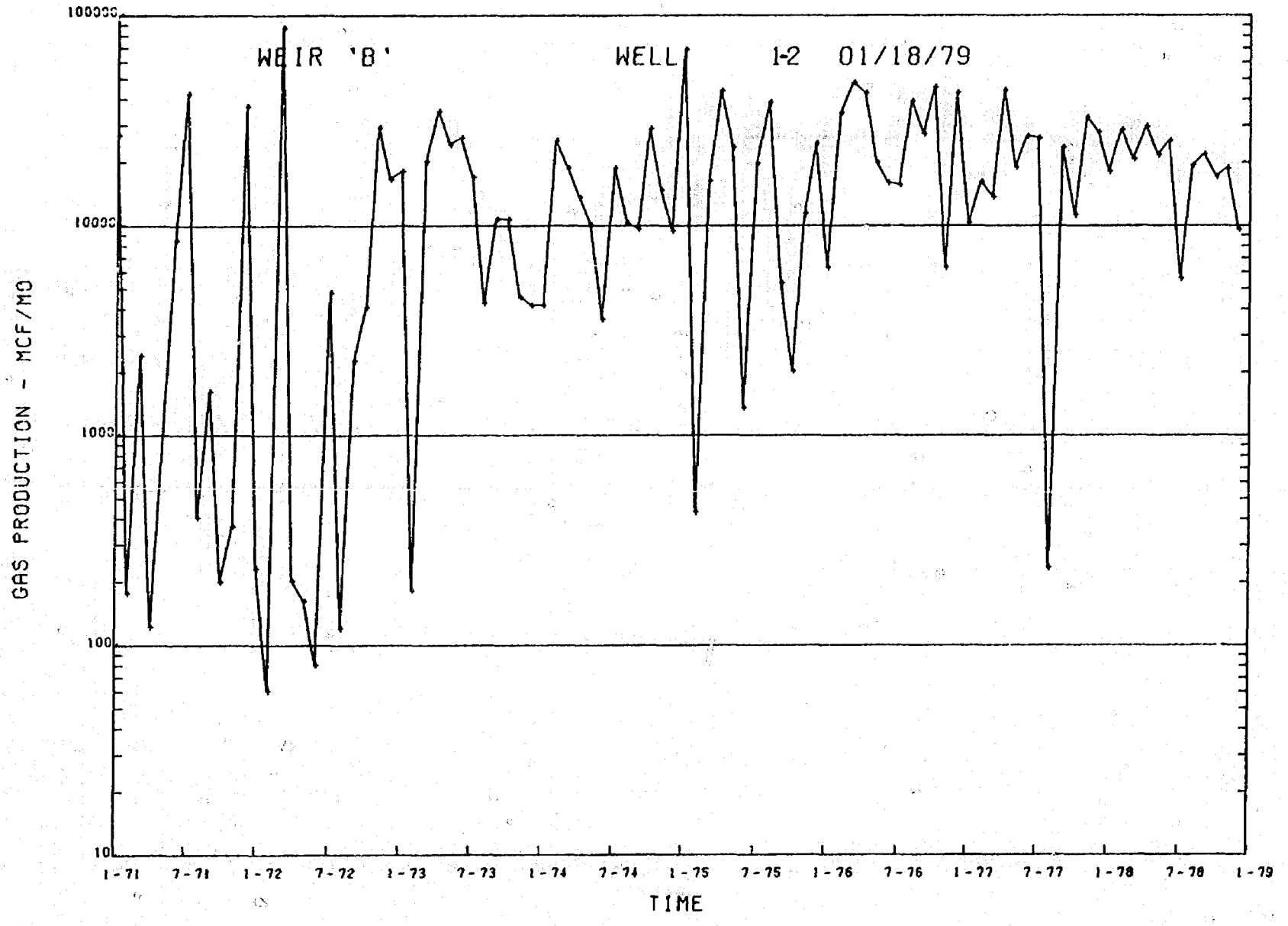
Page No.

Originator:

Ref. No.

EUMONT FIELD

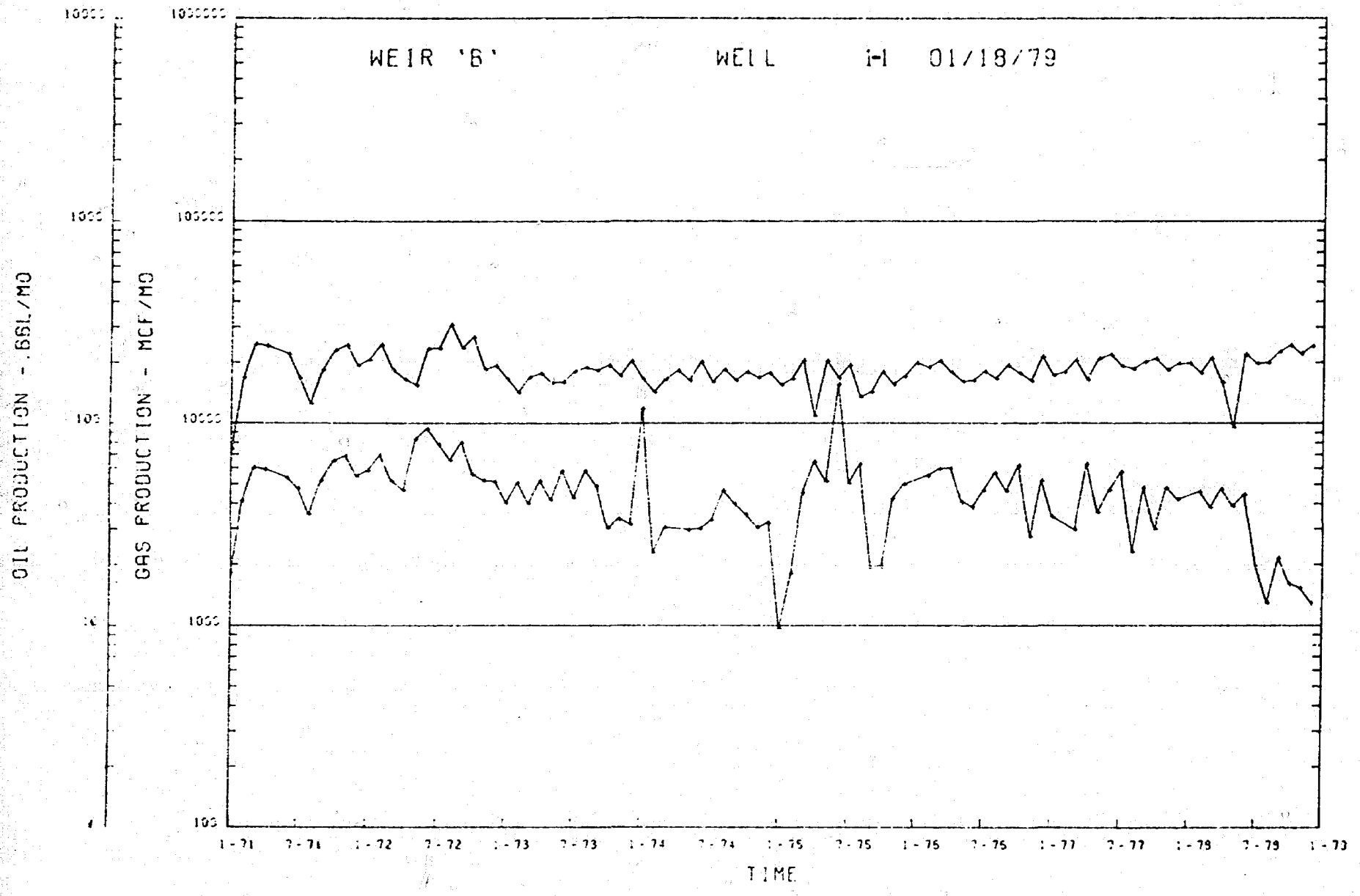
LEA COUNTY, NEW MEXICO



PLOT NO. 2

EUNICE--MONUMENT (G--SA) FIELD

LEA COUNTY, NEW MEXICO



Dockets Nos. 5-79 and 6-79 are tentatively set for hearing on February 14 and 28, 1979. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - JANUARY 31, 1979

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

The following cases will be heard before Richard L. Stamets, Examiner, or Daniel S. Nutter, Alternate Examiner:

CASE 6422: In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Helton Engineering & Geological Services, Inc., Travelers Indemnity Company, and all other interested parties to appear and show cause why the Brent Well No. 1 located in Unit M of Section 29 and the Brent Well No. 3 located in Unit G of Section 19, both in Township 13 North, Range 6 East, Sandoval County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6415: (Continued from January 17, 1979, Examiner Hearing)

Application of Yates Petroleum Corporation for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp thru Devonian formations underlying the W/2 of Section 20, Township 14 South, Range 36 East, Lea County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6419: (Continued from January 17, 1979, Examiner Hearing)

Application of Yates Petroleum Corporation for a dual completion, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Lanning JC Well No. 1 located in Unit B of Section 7, Township 18 South, Range 26 East, Eagle Creek Field, Eddy County, New Mexico, to produce gas from the Strawn formation through the casing-tubing annulus and from the Morrow formation through tubing.

CASE 6423: Application of Yates Petroleum Corporation for an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Jackson AT Well No. 9 located 660 feet from the South and West lines of Section 13, Township 17 South, Range 25 East, Eddy County, New Mexico, to test the Wolfcamp, Pennsylvanian, and Mississippian formations, the S/2 of said Section 13 to be dedicated to the well.

CASE 6424: Application of Yates Petroleum Corporation for an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Superior Fed. KJ Well No. 1 located 990 feet from the North and West lines of Section 7, Township 20 South, Range 29 East, Eddy County, New Mexico, to test the Wolfcamp and Pennsylvanian formations, the N/2 of said Section 7 to be dedicated to the well.

CASE 6425: Application of T. B. Knox Estate for exception to Order No. R-111-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the casing/cementing rules for the Oil-Potash Area as promulgated by Order No. R-111-A to permit its Lucia Brookes Well No. 2 located in Unit K of Section 14, Township 18 South, Range 30 East, Eddy County, New Mexico, to be completed in the following manner: set surface casing and circulate cement; eliminate salt protection string; and do not circulate cement on production casing.

CASE 6426: Application of C. W. Trainer for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a well to be located 660 feet from the North and West lines of Section 24, Township 20 South, Range 32 East, South Salt Lake-Morrow Pool, Lea County, New Mexico, the N/2 of said Section 24 to be dedicated to the well.

CASE 6427: Application of Caribou Four Corners, Inc., for an unorthodox well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Caribou/Kirtland Well No. 1 to be located 1214 feet from the North line and 650 feet from the East line of Section 13, Township 29 North, Range 15 West, Cha Cha-Gallup Pool, San Juan County, New Mexico, the E/2 NE/4 to be dedicated to the well.

CASE 6428: Application of Mobil Oil Corporation for the amendment of Order No. R-5801, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-5801 to delete the requirements for lined tubing in injection wells in the North Vacuum Abo East Pressure Maintenance Project, Lea County, New Mexico.

CASE 6429: Application of Zia Energy, Inc., for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its Elliott State Well No. 2 to be located in Unit B of Section 34, Township 20 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well, and further seeks approval of a waiver of existing well-spacing requirements.

CASE 6430: Application of Phoenix Resources Company for a unit agreement, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks approval for its Buckhorn Canyon Unit Area comprising 23,009 acres, more or less, of Federal and state lands in Township 19 South, Ranges 19 and 20 East, Chaves County, New Mexico.

CASE 6431: Application of HNG Oil Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the N/2 of Section 35, Township 23 South, Range 28 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6432: Application of John Yuronka for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Langlie Mattix Pool underlying the NE/4 NW/4 and the SE/4 NW/4 of Section 29, Township 24 South, Range 37 East, Lea County, New Mexico, to form two 40-acre units, each to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the wells and a charge for risk involved in drilling said wells.

CASE 6433: Application of Cities Service Company for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formations underlying the S/2 of Section 8, Township 23 South, Range 28 East, Eddy County, New Mexico, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 6434: Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its State "O" Well No. 5 to be located in Unit H of Section 30, Township 19 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well, and further seeks approval of a waiver of existing well-spacing requirements.

CASE 6435: Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its W. A. Weir "B" Well No. 3 located in Unit B of Section 26, Township 19 South, Range 36 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well, and further seeks approval of a waiver of existing well-spacing requirements.

CASE 6436: Application of Amerada Hess Corporation for approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of its State "U" Gas Com Well No. 2 to be located in Unit C of Section 32, Township 19 South, Range 37 East, Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well, and further seeks approval of a waiver of existing well-spacing requirements.

CASE 6437: Application of Curtis Little for approval of infill drilling and a non-standard proration unit, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks a finding that the drilling of a well to be located 1085 feet from the South line and 285 feet from the West line of Section 12, Township 28 North, Range 13 West, Basin-Dakota Pool, San Juan County, New Mexico, is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing well. Applicant further seeks rescission of Order No. R-4556 and approval of a 344.36-acre non-standard gas proration unit comprising all of Section 11, and Lot 4 and the SW/4 SW/4 of Section 12 for said well.

CASE 6438: Application of Caulkins Oil Company for dual completions and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Breech Well No. 812 located in Unit N of Section 18, Township 26 North, Range 6 West, and its Breech Well No. 224-A located in Unit B of Section 13, Township 26 North, Range 7 West, Rio Arriba County, New Mexico, to produce gas from the Dakota formation through a separate string of tubing and to commingle Chacra and Mesaverde production in the wellbores of said wells.

CASE 6439: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Mesaverde and Dakota production in the wellbore of its Breech A Well No. 229 located in Unit D of Section 17, Township 26 North, Range 6 West, Rio Arriba County, New Mexico.

CASE 6440: Application of Caulkins Oil Company for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its Breech F Well No. 8 located in Unit A of Section 34, Township 27 North, Range 6 West, Rio Arriba County, New Mexico, to produce gas from the Pictured Cliffs formation through a separate string of tubing and to commingle Mesaverde and Dakota production in the wellbore of said well.

CASE 6441: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs and Mesaverde production in the wellbore of its Breech F Well No. 12 located in Unit A of Section 35, Township 27 North, Range 6 West, Rio Arriba County, New Mexico.

CASE 6442: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs, Chacra and Mesaverde production in the wellbore of its Breech E Well No. 109 located in Unit M of Section 3, Township 26 North, Range 6 West, Rio Arriba County, New Mexico.

CASE 6443: Application of Caulkins Oil Company for a dual completion and downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its Breech B Well No. 220-R located in Unit B of Section 14, Township 26 North, Range 7 West, to produce gas from the Dakota formation through a separate string of tubing and to commingle Pictured Cliffs, Chacra and Mesaverde production in the wellbore of said well.

CASE 6444: Application of Caulkins Oil Company for downhole commingling, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the downhole commingling of Pictured Cliffs, Mesaverde, Chacra and Greenhorn production in the wellbore of its Breech Well No. 224 located in Unit A of Section 13, Township 26 North, Range 7 West, Rio Arriba County, New Mexico.

BEFORE THE

NEW MEXICO ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

Case 6434

Comes now Amerada Hess Corporation and applies to the New Mexico Energy and Minerals Department, Oil Conservation Division, and applies to the Division for an order for well-head price ceiling category determination pursuant to the Special Rules of the Division, and Part 271.305 (b) Federal Energy Regulatory Commission's Regulations Implementing the Natural Gas Policy Act of 1978, and in support thereof would show the Division:

1. Applicant proposes to drill its State "O" Well No. 5, to be located in Unit H, Section 30, Township 19 South, Range 37 East, N.M.P.M., Lea County, New Mexico, spudding said well after a well classification determination has been made. The subject well will be located 1980 feet from the North line, and 990 feet from the East line of Section 30.

2. The well will be projected to the Queen formation, at an approximate depth of 3.650 feet, Eumont Gas Pool.

3. Applicant seeks a determination pursuant to the F.E.R.C. rules, Part 271.305 that the subject well is necessary to effectively and efficiently drain a portion of the Eumont-Queen reservoir covered by the proposed proration unit which cannot be effectively and efficiently drained by any existing well within the proration unit and will offer evidence in support of that determination.

4. In the alternative applicant seeks determination of wellhead price ceiling category determination pursuant to the provisions of Part 271.305 (c) of the F.E.R.C. Regulations

Implementing the Natural Gas Policy Act of 1978, based upon a review of the records of the Division affecting the area and producing formation involved, as provided by the above section of the Regulations.

WHEREFORE Applicant respectfully requests that this matter be set for hearing at the January 17, 1979 Examiner hearing, and that after notice and hearing as required by law, the Division enter its order making the wellhead price ceiling category determination as requested.

Respectfully submitted,

AMERADA HESS CORPORATION

By Jason Kellahin

Kellahin & Kellahin
P. O. Box 1769
Santa Fe, New Mexico 87501

ATTORNEYS FOR APPLICANT

BEFORE THE

NEW MEXICO ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

DEC 29 1978

Case 6434

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2. The well will be projected to the Queen formation, at an approximate depth of 3.650 feet, Eumont Gas Pool.

3. Applicant seeks a determination pursuant to the F.E.R.C. rules, Part 271.305 that the subject well is necessary to effectively and efficiently drain a portion of the Eumont-Queen reservoir covered by the proposed proration unit which cannot be effectively and efficiently drained by any existing well within the proration unit and will offer evidence in support of that determination.

4. In the alternative applicant seeks determination of wellhead price ceiling category determination pursuant to the provisions of Part 271.305 (c) of the F.E.R.C. Regulations

Implementing the Natural Gas Policy Act of 1978, based upon a review of the records of the Division affecting the area and producing formation involved, as provided by the above section of the Regulations.

WHEREFORE Applicant respectfully requests that this matter be set for hearing at the January 17, 1979 Examiner hearing, and that after notice and hearing as required by law, the Division enter its order making the wellhead price ceiling category determination as requested.

Respectfully submitted,

AMERADA HESS CORPORATION

By Jason Kellahin

Kellahin & Kellahin
P. O. Box 1769
Santa Fe, New Mexico 87501

ATTORNEYS FOR APPLICANT

DEC 20 1978

BEFORE THE

NEW MEXICO ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

Case 6434

Comes now Amerada Hess Corporation and applies to the New Mexico Energy and Minerals Department, Oil Conservation Division, and applies to the Division for an order for well-head price ceiling category determination pursuant to the Special Rules of the Division, and Part 271.305 (b) Federal Energy Regulatory Commission's Regulations Implementing the Natural Gas Policy Act of 1978, and in support thereof would show the Division:

1. Applicant proposes to drill its State "O" Well No. 5, to be located in Unit H, Section 30, Township 19 South, Range 37 East, N.M.P.M., Lea County, New Mexico, spudding said well after a well classification determination has been made. The subject well will be located 1980 feet from the North line, and 990 feet from the East line of Section 30.

2. The well will be projected to the Queen formation, at an approximate depth of 3.650 feet, Eumont Gas Pool.

3. Applicant seeks a determination pursuant to the F.E.R.C. rules, Part 271.305 that the subject well is necessary to effectively and efficiently drain a portion of the Eumont-Queen reservoir covered by the proposed proration unit which cannot be effectively and efficiently drained by any existing well within the proration unit and will offer evidence in support of that determination.

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Respectfully submitted,

AMERADA HESS CORPORATION

By Jason Kellahin

Kellahin & Kellahin
P. O. Box 1769
Santa Fe, New Mexico 87501

ATTORNEYS FOR APPLICANT

ROUGH

dr/

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:

CASE NO. 6434

Order No. R-5955

APPLICATION OF AMERADA HESS CORPORATION FOR APPROVAL OF INFILL DRILLING, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on February 28, 1979, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this _____ day of March, 1979, the Division Director, 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 Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Amerada Hess Corporation, seeks a finding that the drilling of its State "O" Well No. 5 to be located in Unit H of Section 30, Township 19 South, Range 37 East, NMPM,

Eumont Gas Pool, Lea County, New Mexico, is necessary to effectively and efficiently drain ~~that~~ a portion ~~of~~ of the reservoir covered by the proration unit which cannot be so drained by the existing well.

(3) That the applicant further seeks approval of a waiver of existing well-spacing requirements.

(4) That the standard spacing unit in the Eumont Gas Pool is 640 acres.

(5) That Amerada Hess Corporation is the operator of a 160 -acre ~~tract~~ nonstandard proration unit consisting of the NE/4 of said Section 30 in said Eumont Gas Pool.

~~(6) That applicant's ______ tract is communitized with the ______ of said Section ____ forming an approved 160-acre non-standard proration unit for said pool.~~

(6) That said 160-acre non-standard proration unit is dedicated to the applicant's State "O" Well No. 1 located in Unit B of said Section 30.

~~(8) That production from said ______ ______ declined from an average monthly rate of ______ MCF in ______ to ______ MCF in ______~~

~~(9) That during ______ said ______ ______ was extensively worked over, being cleaned out, having additional zones perforated, and being acid fraced.~~

~~(10) That said workover was unsuccessful and in fact production declined to an average rate of ______ MCF per month or a figure equal to about ______ percent of its preworkover rate.~~

(7) ~~(11)~~ That the evidence presented demonstrated that said State "O" Well No. 1 cannot as ~~is no longer~~ effectively and efficiently drain said dedicated 160-acre non-standard proration unit. as would a new well ~~new well~~ to be drilled thereon (said State "O" Well No 5) which may be completed and stimulated using modern techniques and processes.

(8) ~~(12)~~ That the evidence presented further demonstrated that the drilling and completion of applicant's said State "O" Well No. 5 should result in the production of an additional 480,000 MCF of gas from ~~applicant's acreage~~ said non-standard proration unit which would not otherwise be recovered ~~from the proration unit~~.

(9) ~~(13)~~ That such additional recovery ~~from the non-standard proration unit~~ will result in such unit being more efficiently and economically drained.

(10) ~~(14)~~ That said State "O" Well No. 5 is to be drilled as an "infill" well on the existing 160-acre non-standard proration unit.

(11) ~~(15)~~ That in order to permit the drainage of a portion of the reservoir covered by said 160-acre non-standard proration unit which cannot be effectively and efficiently drained by the existing well thereon, the subject application for infill drilling should be approved as an exception to the standard well spacing requirements for said Eumont Gas Pool.

IT IS THEREFORE ORDERED:

(1) That the applicant, Amerada Hess Corporation, is hereby authorized to drill its State "O" Well No. 5 to be located in Unit H of Section 30, Township 19 South, Range 37 East, NMPM, as an infill well on an existing 160-acre non-standard proration unit being the NE/4 of said Section 30, Eumont Gas Pool, Lea County, New Mexico. The authorization for infill drilling granted by this order is an exception to applicable well spacing requirements and is necessary to permit the drainage of a portion of the reservoir covered by the existing 160-acre non-standard proration unit which cannot efficiently and economically be drained by any existing well thereon.

(2) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.