STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

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

CASE NO. 11,360

APPLICATION OF NEARBURG)

EXPLORATION COMPANY FOR COMPULSORY)

POOLING, EDDY COUNTY, NEW MEXICO)

ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing ExaminRECEIVED

October 5th, 1995

OCT 1 9 1995

Santa Fe, New Mexico Oll Conservation Division

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, October 5th, 1995, at the New Mexico Energy, Minerals and Natural Resources

Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

* * *

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* * *

EXHIBITS

Applicant's	Identified	Admitted
Exhibit 1 Exhibit 2 Exhibit 3	16 18 6	21 21 13
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* * *

APPEARANCES

FOR THE DIVISION:

RAND L. CARROLL Attorney at Law Legal Counsel to the Division 2040 South Pacheco Santa Fe, New Mexico 87505

FOR THE APPLICANT:

KELLAHIN & KELLAHIN
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P.O. Box 2265
Santa Fe, New Mexico 87504-2265
By: W. THOMAS KELLAHIN

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WHEREUPON, the following proceedings were had at
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     8:38 a.m.:
               EXAMINER STOGNER: At this time I'll call next
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 4
     case, Number 11,360.
               MR. CARROLL: Application of Nearburg Exploration
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 6
     Company for compulsory pooling, Eddy County, New Mexico.
7
               EXAMINER STOGNER: At this time I'll call for
 8
     appearances.
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               MR. KELLAHIN: Mr. Examiner, I'm Tom Kellahin of
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     the Santa Fe law firm of Kellahin and Kellahin, appearing
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     on behalf of the Applicant, and I have two witnesses to be
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     sworn.
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               EXAMINER STOGNER: Are there any other
     appearances in this matter?
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               Both witnesses, please stand to be sworn at this
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     time.
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               (Thereupon, the witnesses were sworn.)
               EXAMINER STOGNER: Mr. Kellahin?
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               MR. KELLAHIN: Thank you, Mr. Examiner. Exhibits
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     1 and 2 are the geologic displays that Mr. Elger will
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     sponsor. If you'll set those aside for just a moment,
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     we'll start with the land testimony, which commences with
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     Exhibit Number 3.
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               My first witness is Mike Gray. Mr. Gray is a
     consulting landman, employed by Nearburg Production
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1 Company. MICHAEL M. GRAY, 2 the witness herein, after having been first duly sworn upon 3 his oath, was examined and testified as follows: 4 5 DIRECT EXAMINATION 6 BY MR. KELLAHIN: 7 Mr. Gray, for the record would you please state Q. 8 your name and occupation? 9 Α. Michael M. Gray. I'm a consulting landman for 10 Nearburg Exploration Company and Producing Company. 11 Ο. And where do you reside, sir? Amarillo, Texas. 12 Α. 13 Ο. Has it been your responsibility as a landman to attempt to consolidate on a voluntary basis the working 14 15 interest owners for the drilling of the subject well within the spacing unit that we're about to discuss in this case? 16 17 Α. Yes. 18 On prior occasions have you testified and Q. 19 qualified as an expert before the Division in matters of 20 petroleum land management? 2.1 Α. Yes. In addition, have you made yourself familiar with 22 Q. the proposed operating agreement that is to be utilized in 23 24 this case? 25 Α. Yes.

And you are generally knowledgeable about the 1 Ο. 2 operating costs and the system by which your company 3 prepares and submits estimates of well cost to other interest owners? 5 Α. Yes. MR. KELLAHIN: We tender Mr. Gray as an expert 6 7 witness. EXAMINER STOGNER: Mr. Gray is so qualified. 8 9 Q. (By Mr. Kellahin) Mr. Gray, let me have you 10 turn, sir, to what is marked as Exhibit 1 and identify it 11 for us in drawing our attention to the half section that's outlined in red. 12 13 Α. Exhibit 1 or Exhibit 3? 1.4 0. I'm sorry, Exhibit 3. 15 Exhibit 3 is a locator map depicting the proposed unit for the MW "33" well, being the west half of Section 16 17 33, Township 17 South, Range 27 East. When this well was originally proposed, the 18 original proposal offered the well in the southwest quarter 19 20 of Section 33, did it not? 21 Α. That's correct. 22 Ο. And had it been located in the southwest quarter, 2.3 there is a division of interest as shown on Exhibit Number 24 3? Yes, there is. 25 Α.

Since then, the case has been amended, 1 0. readvertised, and new notices have been sent to the other 3 interest owners, moving the location up to the northwest quarter of 33, have you not? 5 Α. Yes. Within the northwest quarter of 33, do you 6 control on a voluntary basis all formations that might be productive on a 160-acre spacing configuration? 8 9 Α. Yes, we do. 10 0. And so all you're seeking to do, then, is to 11 compel those parties who have not voluntarily agreed in the 12 southwest quarter so that you can form a standard west-half spacing unit for any production below the top of the 13 Wolfcamp? 14 15 Α. Yes. 16 Q. And the primary target for this well is a Morrow 17 test, is it not? 18 Α. That's correct. 19 MR. KELLAHIN: All right. So that portion of our 20 case, Mr. Examiner, that asks for the pooling of the 21 shallow gas is no longer necessary, and we're seeking to 22 amend our request, asking for a pooling order for all 320 23 gas spacing below the top of the Wolfcamp.

Exhibit Number 4, Mr. Gray, and give us an illustration,

(By Mr. Kellahin) All right, let's turn now to

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Q.

then, of what party is the only party remaining as a nonconsenting party.

- A. Exhibit Number 4 represents an illustration of the west half of Section 33, Township 17 South, Range 27 East, and depicts the ownership within the west half of that section, being Nearburg Exploration Company, with 87.5 percent of the acreage under lease, and Amoco Production Company with an outstanding 12.5-percent interest.
- Q. And that percentage calculation is derived by the fact that Amoco has the 40-acre tract that is the southeast quarter of the southwest quarter of Section 33?
 - A. That's correct.

- Q. And when you do the calculation for the deep gas west half spacing, then their share is reduced to the 12.5 percent?
 - A. That's right.
- Q. Summarize for us before we talk about the exhibits themselves your efforts to consolidate the interest owners on a voluntary basis. When you first started, how many parties were you dealing with?
- A. Initially, we were dealing with four individual owners: Exxon, MW Petroleum, and Petco and Amoco.
- Q. As of this morning, the only party with whom you have not received or obtained voluntary approval is which party?

A. Amoco.

- Q. All right. Let's go through the package of documents, then, that address your attempts to get Amoco to participate with you on a voluntary basis. If you'll start with Exhibit Number 5, let's summarize the correspondence.
- A. Exhibit Number 5 is a package of correspondence mailed by certified mail in March of 1995 to the then outstanding interest owners in the west half of Section 33, which at the time were Amoco Production Company and MW Petroleum Corporation.

The letter proposes the drilling of a well, at that time, in the southwest quarter of Section 33, and submits an authority for expenditure for review and approval, and also a model form operating agreement for review.

- Q. Apart from the fact the well was proposed in the southwest quarter, was it always proposed as a Morrow test?
 - A. Yes, that's correct.
- Q. And have the AFE costs submitted to the other interest owners changed insofar as the location?
 - A. No, they haven't.
- Q. So by moving the location didn't change the AFE costs?
 - A. No, sir, it didn't.
- Q. Has Amocc objected to any of the proposed AFE

costs?

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- A. No, they haven't.
- Q. Have they objected to your proposed operating costs?
 - A. No, they haven't.
- Q. What is your recommendation to the Examiner as to operating cost charges to be included in the pooling order?
- A. We recommend the operating charges as set forth on the operating agreement which was submitted, of \$6000 for a drilling well and \$600 a month for a producing well.
- Q. Have you caused a search to be made of Nearburg's records to determine whether or not there are examples of those costs for wells of this depth by which we may have a comparable?
- A. Yes, sir, the most -- One of the most recent or the most recent well that we've drilled of comparable depth, which was done, I guess, probably begun -- spudded just prior to the end of last year, these were the operating numbers that were agreed upon by the working interest parties.
- Q. And they're what you propose to have the Division adopt in this pooling case?
 - A. Yes, sir.
- Q. Describe for us the method by which Nearburg goes through to prepare and issue an authority for expenditure.

- A. AFEs are prepared by our engineering and drilling departments with -- based on experience and quoted prices from suppliers and generally probably tend to be -- probably to err on the side of pessimism.
- Q. Was there any objection from Amoco as to this AFE?
 - A. No, sir.

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- Q. And based upon your knowledge, have you compared it to other AFEs for wells at this depth to determine if it, in your opinion, is fair and accurate?
- A. Yes, sir, again, relative to the most recent well that we drilled to this approximate depth, this AFE is actually slightly lower, I think, than AFEs issued in the recent past, for wells of equivalent depth.
- Q. In addition, you proposed to Amoco, had they joined you on a voluntary basis, a model form operating agreement that was utilizing, I believe, the 1992 AAPL form?
 - A. That's correct.
- Q. And that was completed, the appropriate attachments were appended to that, and it was submitted to Amoco, was it not?
- 23 A. Yes.
- Q. As a result of any of those submittals, have you had conversations with any employee or personnel at Amoco?

A. Yes, I have.

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- Q. And with what kind of response from Amoco?
- A. Generally a nonresponse, a "Well, we're looking at it" kind of response.
- Q. Did you specifically draw Amoco's attention to the fact that you're amending the location of this well to move it up into the northwest quarter of the section?
 - A. Yes, I did.
 - Q. And how did you do that, sir?
- A. By certified mail and telephone facsimile, I noticed Amoco that the well would be moved to the northwest quarter of the section, or the proposed well would be moved, and sent them a revised AFE describing the new location, and also a revised page 4 of the operating agreement, also changing the location.
- Q. So in addition to the notices of hearing showing that amendment, you initiated a separate letter identifying to Amoco the fact that the location was being adjusted?
 - A. That's correct.
- Q. And did you receive any response from Amoco as to that issue?
- A. I received the response that they received my correspondence, and no other response.
- Q. All right, sir. At this point, Mr. Gray, have you exhausted all reasonable efforts to obtain a voluntary

agreement from Amoco for the drilling of this well in this 1 2 spacing unit? Yes, sir. 3 Α. Do you now desire to have the Commission issue a Q. 4 5 pooling order in this case? Α. Yes. 6 7 MR. KELLAHIN: That concludes my examination of 8 Mr. Gray. 9 We move the introduction of Exhibits 3 through 6. 10 EXAMINER STOGNER: Exhibits 3 through 6 will be admitted into evidence. 11 12 EXAMINATION 13 BY EXAMINER STOGNER: Was the March letter of Exhibit Number 5 -- Was 14 15 that the first contact, written contact, made with Amoco? To my knowledge, sir. I didn't work for Nearburg 16 17 at the time, so that's -- As far as I know, that's the first contact. 18 Now, your AFE -- I'm sorry, your operating 19 agreement is dated March 15th, 1995. Has any of those 20 numbers been changed or amended? 21 No, not since submitted to Amoco. 22 Α. 23 Α. Okay, and those are still the figures that Nearburg will still be operating off of? 24 A. Yes, sir. 25

1 EXAMINER STOGNER: I have no other questions of this witness. He may be excused. 2 MR. KELLAHIN: I'd like to call Mr. Jerry Elger. 3 Mr. Elger is Nearburg's petroleum geologist. He's going to 4 discuss Exhibits 1 and 2. Exhibit 1 is a cross-section, 5 and Exhibit Number 2 is a composite display of a structure 6 7 map and an isopach. 8 JERRY B. ELGER, 9 the witness herein, after having been first duly sworn upon 10 his oath, was examined and testified as follows: 11 DIRECT EXAMINATION 12 BY MR. KELLAHIN: 13 Q. Mr. Elger, for the record would you please state 14 your name and occupation? 15 Α. Jerry Elger. I'm a petroleum geologist. 16 On prior occasions, Mr. Elger, have you testified Q. 17 as an expert geologist before the Division and had your qualifications accepted and made a matter of record? 18 19 Ã. Yes, I have. 20 Q. Pursuant to your employment in that capacity by 21 Nearburg Producing Company, have you made a geologic 22 investigation of this prospect? Yes, I have. 23 Α. 24 And in fact, this geologic work represents your 25 work product in terms of locating this well?

15 That's correct. Α. 1 MR. KELLAHIN: We tender Mr. Elger as an expert 2 witness. 3 EXAMINER STOGNER: Mr. Elger is so qualified. 4 5 Q. (By Mr. Kellahin) Before we talk about the 6 displays, give us a general overview of the geology with 7 regards to the components of risk that are relevant to the Examiner when he issues a pooling order. 8 Α. Well, the components of risk are primarily that 9 the Morrow sands can be very fickle, they can be -- you can 10 have -- encounter sand within units that are typically 11 mapped, and those sands will lack porosity and 12 permeability. You can encounter sands with porosity and 13 14 permeability, but the sands can lack hydrocarbons; they can be water-bearing. 15 Those are the primary risks. Or you can -- If 16 17 you've mismapped the sands you can not encounter any sand. Q. You've testified before the Division with regards 18 19 to recommendations on penalty factors in pooling cases on 20 prior occasions, have you not, sir? Α. Yes, I have. 21

Amoco in this case?

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have a conclusion and recommendation to the Examiner as to

an appropriate risk factor penalty to be applied against

Within the context, then, of that topic, do you

A. Yes, I do.

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- Q. And what is it, sir?
- A. It would be cost plus 200 percent.
- Q. Let's turn to Exhibit Number 1 and have you identify it, and then we'll talk about it.
- A. Exhibit Number 1 is a stratigraphic cross-section of the offset wells to this proposed west-half-of-33 test. It shows an old well that was drilled in the mid-1950s by Humble Oil. That well is the only penetration of the Morrow in Section 32 to the west. That well had some -- encountered some sands within the Morrow. A number of drill stem tests were run across those sand intervals, the results of which are displayed at the bottom of the log.

Casing was run on this well, and both of the sand intervals in the lower and upper part of the Morrow were production tested. Those results are displayed at the bottom of the log.

Basically, this well has some thin sands. They appear to lack porosity and permeability, indicating that this well may be on the edge of some sand systems within the Morrow, but this wellbore did not encounter any commercial hydrocarbon-bearing sands within the Morrow section.

Q. When you as an exploration geologist are looking for your best opportunity for hydrocarbon recovery in the

west half of Section 33, what formation or formations have come to mind?

- A. Well, the Morrow, primarily the Morrow.
- Q. Do you see any other secondary objectives, either in shallower zones, either gas or oil, that represent a real probability as a backup zone?
- A. The -- There's a silty, sandy section that's present within what's been designated the Cisco formation in this local area. Those -- There are several wells that have production histories from this silt/sand section.

 It's not really a commercial objective. I think the average from the four wells that have been designated within the Logan Draw Cisco field are probably about a third of a BCF per well, average.
 - Q. So your best prospect is looking at the Morrow?
 - A. That's correct.

- Q. When you look at the Morrow, do you subdivide it from an exploration concept to any subdivisions?
- A. Yes, there's a number of subdivisions. The first one that's apparent is the datum for the cross-section itself, being a shale marker that occurs regionally within the middle part of the Morrow and has been recognized and classified as the top -- the base of the shale being classified as the top of the lower Morrow.
 - Q. When you put this data together, I think it would

1 | help if you go down to the center portion, the bottom

center portion of Exhibit 1, and you have drawn some contour lines?

A. That's correct.

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- Q. Are those structural contour lines?
- A. Yes, they are.
- Q. Give us a quick summary of what structure means to you as you explore for Morrow production in this area.
- A. Well, what we typically try to do is find as many Morrow sand packages that could contain reservoir rock, where those intersect structural noses or structurally positive areas within the Morrow. You have a tendency, where you get simultaneously sands crossing noses and anticlines in structural positive areas, of getting enhancement of production within each of the individual Morrow packages.
- Q. Does that explain why you have a preference to be in the northwest quarter of 33 as opposed to the southwest quarter of 33?
 - A. Yes, it does.
- Q. Because there is a structural advantage to the northwest quarter?
 - A. A structural advantage, that's correct.
- Q. All right. Let's turn to Exhibit 2. Let's take a look at that. First of all, describe for us what we're

looking at.

- A. We're looking at a gross sand isopach of the early lower Morrow system which is productive off to the east of the proposed drill site and also productive in wellbores to the north of the proposed drill site.
- Q. Now, the isopach is shaded in yellow, ranges of yellow shading, but you've also superimposed the structure map on this display, have you not?
 - A. Yes, I have.
 - Q. Help us interpret that.
- A. Well, we have a system where commercial hydrocarbon-bearing sands do occur, again to the north and to the east of the proposed drill site. There's apparently some sort of a band in this -- what I've interpreted as a channel system, that occurs in the vicinity of the east half of Section 32, west half of 33.

There's kind of a lack of well control as to where this system makes this actual turn, although there is a well that's present down in the northwest quarter of Section 4 that did have this sand present and had -- The sand section by drill stem test contained both gas and water. The well was unable to complete, due to the percentage of water from this particular reservoir.

Q. Let's take Exhibit 2, then, and have you summarize for us the major components or reasons that have

caused you to conclude that the 200-percent risk factor is appropriate.

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- A. Well, this proven sand reservoir in the early lower part of the Morrow system apparently is present, or it's interpreted as being present, in the west half of Section 33. And the structural component of the nose that runs diagonally across the Section 29 and the north part of Section 33 seems like a logical place to drill to obtain potential reservoir-quality sand within this system, with the enhancement of the structure.
- Q. How have you shown the dryholes that have penetrated and not been successful in producing this portion of the Morrow?
- A. On this display, if the well has not encountered any sand whatsoever within the early lower Morrow system, it's been shaded gray.

If the well has encountered sand but has lacked porosity, I kind of have a twofold numbering system by each wellbore. The first number represents the net feet of porosity greater than 8 percent within that sand interval. The second number represents the overall gross thickness of the sand.

And you see there's a number of wells drilled in here that have encountered the sand but lack porosity.

Those wells have been shaded a yellow color.

Productive or gas-bearing sands have been shaded 1 orange on this display. 2 Do you see any geologic component in here that 3 Q. reduces the risk to less than what we typically see in Eddy 4 5 County to be the high-risk Morrow exploration? 6 Α. The area has a fair amount of well control, but 7 that's -- We don't have the advantage of any seismic in 8 this particular area. So the fact that you do have well control does 9 Ο. not diminish the risk to less --10 11 Α. No. 12 0. -- than 200 percent? 13 Α. No. All right. Were Exhibits 1 and 2 prepared by 14 Q. 15 you? 16 Α. Yes, they were. 17 MR. KELLAHIN: That concludes my examination of Mr. Elger. 18 19 We move the introduction of his Exhibits 1 and 2. 20 EXAMINER STOGNER: Exhibits 1 and 2 will be admitted into evidence at this time. 21 22 EXAMINATION 23 BY EXAMINER STOGNER: 24 I know in your testimony you primarily kept it to 25 the Morrow formation, but is there any attempt or is there

1 any -- does Nearburg attempt to -- or are they going to 2 test the Atoka and some of the higher formations? I have mapped the Atoka in this particular area, and I think the -- There is an Atoka well on this map, but it's up in Section 22. I believe that's the only Atoka 5 producer. And I don't see any Atoka sands, channels, that 6 7 project anywhere in or around this particular acreage. 8 Obviously, we'd like to -- You know, we would 9 certainly like to encounter some productive Atoka in this 10 area. But I think that's very high --11 Q. So this is essentially going to be a stand-alone 12 Morrow? 13 Α. That's correct. 14 EXAMINER STOGNER: Okay, I don't have any other questions of this witness. 15 MR. KELLAHIN: Mr. Examiner, the last exhibit is 16 my Exhibit 7, which is the certificate of mailing in 17 compliance with the notice requirements where we show that 18 we have sent this notice to the parties. We would request 19 20 that Exhibit 7 be introduced at this time. 21 EXAMINER STOGNER: Okay, now, you show that MW Petroleum Corporation was notified, but I --22 2.3 MR. KELLAHIN: They're --EXAMINER STOGNER: -- as I understand that, they 24 25 have joined at this time?

1	MR. KELLAHIN: Yes, sir.
2	EXAMINER STOGNER: Okay, Exhibit Number 7 will be
3	admitted into evidence also.
4	MR. KELLAHIN: That concludes our presentation.
5	EXAMINER STOGNER: Does anybody else have
6	anything further in Case Number 11,360?
7	If not, then this case will be taken under
8	advisement.
9	(Thereupon, these proceedings were concluded at
10	9:04 a.m.)
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STEVEN T. BRENNER, CCR (505) 989-9317

CERTIFICATE OF REPORTER

STATE OF NEW MEXICO SS.) COUNTY OF SANTA FE

I, Steven T. Brenner, Certified Court Reporter and Notary Public, HEREBY CERTIFY that the foregoing transcript of proceedings before the Oil Conservation Division was reported by me; that I transcribed my notes; and that the foregoing is a true and accurate record of the proceedings.

I FURTHER CERTIFY that I am not a relative or employee of any of the parties or attorneys involved in this matter and that I have no personal interest in the final disposition of this matter.

WITNESS MY HAND AND SEAL October 11th, 1995.

STEVEN T. BRENNER CCR No. 7

My commission expires: October 14, 1998

I do hereby certify that the foregoing is a complete record of the proceedings in The Examiner nearing of Case No. 1/360 heard by me on 5 Oxfoler 1995

, Examiner

Oil Conservation Division