

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
STATE LAND OFFICE BLDG.  
SANTA FE, NEW MEXICO

23 May 1984

EXAMINER HEARING

IN THE MATTER OF:

Application of Elk Oil Company	CASE
for an unorthodox well location,	8197
Lea County, New Mexico.	

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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	State Land Office Bldg.
	Santa Fe, New Mexico 87501

For the Applicant:	Paul Cooter
	Attorney at Law
	RODEY LAW FIRM
	Santa Fe, New Mexico 87501

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A P P E A R A N C E S

For ARCO: William F. Carr  
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I N D E X

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3 MR. STOGNER: And we will now  
4 call Case Number 8197.

5 MR. PEARCE: That case is on  
6 the application of Elk Oil Company for an unorthodox well  
7 location, Lea County, New Mexico.

8 Ask for appearances at this  
9 time, please.

10 MR. COOTER: May it please the  
11 Commission, I'm Paul Cooter with the Rodey Law Firm here in  
12 Santa Fe.

13 We will have two witnesses, Joe  
14 Kelly and Bob Becker.

15 MR. CARR: May please the Exa-  
16 miner, my name is William F. Carr, with the law firm Camp-  
17 bell, Byrd and Black, P. A. I'm appearing on behalf of ARCO  
18 Oil and Gas Company.

19 I have one witness.

20 MR. PEARCE: Are there other  
21 apperances in this matter?

22 Could I ask all of the prospec-  
23 tive witnesses to rise at this time, please?

24  
25 (Witnesses sworn.)

JOSEPH J. KELLY,  
being called as a witness and being duly sworn upon his  
oath, testified as follows, to-wit:

## DIRECT EXAMINATION

BY MR. COOTER:

Q Would you state your name for the record,  
please, sir?

A My name is Joseph J. Kelly, President of  
Elk Oil Company, Roswell, New Mexico.

Q Elk Oil Company is the applicant in this  
case, which seeks approval for an unorthodox well location.

Would you please relate to the Examiner  
what is sought by this application?

A We propose to drill a well to the Atoka-  
Morrow formation, dedicating the north half of Section 26 in  
16, 34, Lea County, New Mexico.

Q In front of you is -- which I have marked  
as Exhibit Number One in this case, is a land map.

You seek a unit, first, you propose a  
unit comprising the north half of Section 26.

A Yes.

Q What is the closest production to this  
proposed unit, Mr. Kelly?

A Elk Oil has two wells located in Section  
27, the closest being our East Kemnitz No. 2, located in the

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southwest of the northeast with a north half proration unit.

Q Is that an Atoka well?

A It is an Atoka and a Morrow well, yes.

Q What about the south half of Section 27?

A The south half is our Elk East Kemnitz No. 1, which is in the northeast of the southwest, which is also Atoka-Morrow.

We also have a well in Section 23, which is the Elk Oil Northeast Kemnitz No. 1, which is a producer from the Morrow formation. It is in the northeast of the southwest.

Those are the closest producers.

Q The application on file sets forth the owners of the interests offsetting your proposed unit.

Would you please review that application, which commences with Amoco Production, and just relate where those owners' interests are?

A The various interest owners are Amoco Production, southwest quarter, Section 26; Shell Oil Company, north half southwest -- or southeast, excuse me, of 26; Atlantic Richfield, south half of the southeast of Section 26; Jane S. Parker, in care of Howard Parker, Midland, Texas, owns the west half of Section 25; Exxon Corporation, or Exxon Company USA, owns the south half of Section 22; and Shell Oil owns the west half southeast of Section 27.

ARCO, or Atlantic Richfield, owns or has an interest in the north half of Section 27. Elk earned

1  
2 that through a farmout agreement in which we drilled the two  
3 wells.

4 All of the surrounding acreage is owned  
5 by Elk Oil or Verde Vista, whichever, which are family-owned  
6 companies.

7 MR. COOTER: Mr. Examiner, I'll  
8 hand to you marked as Exhibit Two the photocopies of the re-  
9 turn receipts by which all of those offset operators were  
10 given notice of this hearing.

11 Q Mr. Kelly, why does the applicant seek  
12 this particular unorthodox location?

13 A We attempted to make an agreement with  
14 Amoco, who owns the southwest of 26, southwest quarter, to  
15 have a standard location, which would be a west dedication.

16 Amoco has subsequently turned down this  
17 request and refuses to participate in that west half prora-  
18 tion unit.

19 We feel that we would like to drill close  
20 to this old Humble "AV" No. 1, which we feel demonstrates as  
21 the pay --

22 Q Who is that? What's the location of that  
23 Humble well?

24 A It is in the southwest of the northwest  
25 of 26.

Q 660 feet from both the --

A It's 1980 out of the north, 660 out of  
the west.

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Q When was that well drilled?

3

A It was drilled in 1957.

4

Q And was plugged and abandoned?

5

A Plugged and abandoned.

6

Q As a dry hole?

7

A Yes, sir.

8

Q Might an effort be made to re-enter that well?

9

A We feel by re-entering this well the drilling practices of 1958 used a water-based mud, damaged the formation, and through subsequent drilling which we did in 27 we found that we need a very low water loss mud to go through this pay in order to protect it, so therefore we -- it would be a waste of money to re-enter this well and decided to skid the 100 feet to drill a new well.

15

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17

Q That old Humble location would be a standard location if a west half unit could have been formed?

18

A Yes, sir.

19

20

Q Who is the mineral owner underlying the -- your proposed north half Section 26 unit?

21

A State of New Mexico.

22

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Q Who is the owner of the minerals underlying the existing unit to the west, that north half of Section 27?

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A State of New Mexico.

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Q Mr. Kelly, assuming that the Commission



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granted the request which you seek by this application and first let me ask you that in your opinion would the -- if -- if the north half of Section 26 were productive, could that be drained or would that be drained by the existing well in Section 27, your Kemnitz No. 2 Well?

A No, sir.

Q If the -- further assuming that the north half of Section 26 would be productive, would the proposed well in this unorthodox location drain some part of the eastern portion of that north half of Section 27 unit?

A We don't believe so.

Q Without going into details, that will be covered by Mr. Becker, but why do you seek an unorthodox location in this spot in the western portion of your proposed north half Section 26 unit rather than a standard location which would be some 1980 feet from the west line?

A Well, Mr. Becker will get into this, but we feel that going easterly we'll be going off structure, going down into a water/gas contact, which we can demonstrate in our Northeast Kemnitz No. 5, and that's the reason why we would like to stay on the west side of 27.

Q In your opinion if the Commission granted the application but attached a substantial penalty to the drilling of the well in this location, in your opinion would it be economical to drill the well?

A No, sir.

Q Assuming that the north half of Section

1  
2 26 might be productive and the well not be drilled, would  
3 waste result?

4 A Yes, sir.

5 Q Would the granting of this application be  
6 in your opinion in the best interests of -- protect correla-  
7 tive rights, and be in the best interest of conservation?

8 A Yes, sir.

9 Q In the north half of Section 27, which is  
10 the unit adjacent to your proposed unit and well, what are  
11 the interests of Elk Oil and ARCO?

12 A ARCO has a 25 percent working interest.  
13 Elk Oil, et al, 75 percent working interest.

14 MR. COOTER: That's all I have  
15 from this witness.

16 MR. STOGNER: Mr. Carr, your  
17 witness.

#### 18 CROSS EXAMINATION

19 BY MR. CARR:

20 Q Mr. Kelly, in response to several ques-  
21 tions posed by Mr. Cooter, you have stated that assuming the  
22 north half of Section 26 is productive then certain things  
23 would happen.

24 Have you reached an opinion as to whether  
25 or not the north half of 26 is capable of contributing gas  
26 to a well at this location?

27 A Yes, it is. We feel that it is.

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Q Okay. And will Mr. Becker go into that?

A I believe so.

Q What is the primary objective in the well, the Morrow?

A The Atoka-Morrow.

Q When you say Atoka-Morrow I don't know what you mean.

A Well, there's the Atoka formation, which is located approximately, East Kemnitz No. 2 it was approximately 12,600 feet, and the Morrow comes in around 13,000 feet and the Commission, the OCD has designated this AToka-Morrow Field, so you could produce them together.

Q All right. The wells located in Section 27, they are actually producing from the Atoka --

A Atoka only.

Q And isn't that really the primary objective in this location?

A Yes, with the secondary Morrow.

Q Now, the spacing in this area is 320 acres --

A Yes, sir.

Q Isn't that correct?

A Yes, sir.

Q And so all of section 27 is dedicated to a standard spacing unit for each --

A Yes, the north half and south half.

Q Are you proposing any additional wells in

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Section 27 to offset any drainage that might be occurring from the proposed location?

A Not at this time.

Q Now I think you testified that the ownership in Section 27 was 75 percent Elk, 25 percent ARCO.

A North half.

Q In the north half.

A Right.

Q In the unit that you operate, the North Kemnitz Unit, does ARCO have any ownership interest in that unit?

A No, sir. Northeast Kennitz Unit.

Q Now you've testified that you didn't feel that you could move the well to the east or if you did you'd be moving toward a gas/water contact.

A Yes, sir.

Q Would it be possible to move the well to the north?

A Well, we felt moving it to the north that we might intercept the old wellbore which we are trying to stay out of.

Q If you move, say, to the northwest of the northwest of 26, would that give you a -- is that a possible location?

A No, we feel that's crowding towards the well in Section 23, which is a -- has a definite water horizon.

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Q Would you again be moving towards a possible water, gas/water contact by going northeast?

A That's what we feel, northeast is pushing it towards those contours.

Q Now, if I understood your testimony, you felt that the completion practices employed by Exxon in completing the No. 1 "AV" Well contribute to it not being productive.

A Yes, sir.

Q Would those affect the logging that was done on the well?

A No, it wouldn't.

Q You don't believe that a re-entry of that well is a feasible approach?

A Yeah, that's right, for reasons I stated. We believe they damaged -- this is a very water sensitive sand and it was damaged by the drilling techniques that they employed in '57. And we could demonstrate it in our well in -- the East Kemnitz No. 1, when we drilled through it we found that we were still a little bit high, and our low water loss and in fact had to frac that well to make it productive.

Q And you attempted to form a west half unit in Section 26?

A With Amoco.

Q And you were unable to do that.

A That's right.

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2 MR. CARR: That's all I have of  
3 this witness.

4 MR. STOGNER: I have no further  
5 questions of Mr. Kelly.

6 MR. COOTER: Before asking that  
7 he be dismissed, I do have just a couple of questions, if I  
8 may.

9 MR. STOGNER: Sure.

10 RECROSS EXAMINATION

11 BY MR. COOTER:

12 Q What is the estimated cost of drilling  
13 and completing your proposed well in Section 26?

14 A We estimated to Amoco in January of  
15 \$900,000. It could be up a little bit from that.

16 Q And those costs would be borne by -- if  
17 the application were granted, by Elk Oil and its partners.

18 A Yes, sir.

19 Q Thank you, that's all.

20 MR. STOGNER: Are there any  
21 other questions of Mr. Kelly? If not, he may be excused.

22 MR. COOTER: We'll offer Exhi-  
23 bits One and Two. Then we're going to have a third one here  
24 in a minute.

25 MR. STOGNER: Well, you wish to  
offer One and Two at this time?

MR. COOTER: Yes, sir, we'll

offer One and Two.

MR. STOGNER: If there are no objections, Exhibits One and Two will be admitted into evidence.

MR. COOTER: Mr. Becker.

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

DIRECT EXAMINATION

BY MR. COOTER:

Q Would you state your name for the record, please, sir?

A My name is Robert Becker.

Q And by whom are you employed, Mr. Becker?

A I'm a consulting geologist employed at this time by Elk Oil.

Q Are you acquainted with the area in southeastern New Mexico?

A Yes, sir.

Q Have you previously testified before this Commission?

A Yes, I have.

Q Just briefly relate, and don't go into any detail, your professional education and experience.

A I graduated from the University of Michi-

gan in 1948 with a Masters degree in geology; went to work with Texaco; worked for Texaco in this area for twenty years before I went out on my own.

Q And you now reside in Roswell?

A Yes.

Q At the request of Mr. Kelly of Elk Oil Company have you prepared an exhibit for this hearing?

A Yes, I have.

Q That is the exhibit which I have marked as Exhibit Number Three. You have a copy of that in front of you.

Please relate, if you would, what that exhibit depicts.

A It shows the area -- well, the proposed well in Section 26. It also shows a structural nose plunging southeast and these are the solid contour lines. The dashed lines indicate thickness of the Atoka sand. This map is contoured on the top of the Atoka pay. The dashed lines represent the thickness of these sands.

Q First, before going into why this particular location is sought, you sat here and heard the testimony of Mr. Kelly about the old Humble Well that was drilled back in the fifties and then plugged and abandoned as a dry hole.

A Yes.

Q Do you concur with Mr. Kelly's opinion of why a re-entry of that well would not be feasible?



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A Yes, I do.

Q Have you examined the log of that well?

A Yes, sir.

Q Do you believe that this area that is shown on your map may be productive from the Atoka formation?

A Yes, sir.

Q Do you believe that a north half Section 26 unit might be productive?

A Yes, I do.

Q Might be some gas or hydrocarbons underlying that particular unit.

A Yes, sir.

Q Why do you -- what's the basis of your conclusion in that regard, Mr. Becker?

A The dry hole in Section 26 has the same Atoka pay sand as the East Kenmitz No. 2. The map shows for the East Kenmitz No. 2 40 feet of sand and the Humble "AV" has 38 feet of this same sand. It looks porous on the log and I believe that it was probably damaged at the time that they drilled it by water.

Q Why -- do you recommend this particular location to Elk Oil, Mr. Kelly, that is sought by this application, being 560 feet from the west line and 1980 feet from the north line?

A Yes, sir.

Q Why?

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2           A           I would like to see us stay approximately  
3 flat with that Humble well. If we go east we go down dip.  
4 If we go north we go down dip. If we go east we would thin  
5 a little bit in our sands.

6                       The -- the No. 5 Northeast Kemnitz Well  
7 in Section 23 also had high water saturations in this Atoka  
8 sand.

9           Q           That's the well to the north?

10          A           That's the well in -- yes, sir, in 23.

11          Q           Okay. Would you prefer to see a west  
12 half unit rather than a north half unit?

13          A           Yes.

14          Q           In Section 26?

15          A           That would be the ideal, yes.

16          Q           All right, assuming that that's not so,  
17 or not capable of coming into fruition and so that you do  
18 have a north half unit, based upon your geological study of  
19 the area, would a well in a standard location on that north  
20 half be one which you would recommend?

21          A           No, sir. It would be down dip and would  
22 -- it would likely be wet, have high water saturation.

23                       It would be down dip.

24          Q           Assuming that you are right in your con-  
25 clusion that there is some production under the north half  
26 of Section 26, would that production be drained by the  
27 existing wells in Section 27?

28          A           No, sir.

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2 Q If the Commission granted the applica-  
3 tion, would the proposed well at this unorthodox location in  
4 your opinion drain from the adjacent Section 27?

5 A Very little, if any.

6 Q In your opinion if you are correct that  
7 there is production under the north half of Section 26, and  
8 the well were not drilled pursuant to Mr. Kelly's testimony,  
in your opinion would waste result?

9 A Yes, sir.

10 Q If the application were granted and the  
11 well were drilled, would, in your opinion, that be in the  
12 best interests of conservation?

13 A Yes, sir.

14 Q Would it protect correlative rights of  
15 the owners of the two -- of this north half of Section 26,  
which is State of New Mexico?

16 A Yes, sir.

17 MR. COOTER: We offer Exhibit  
18 Number Three.

19 MR. STOGNER: With no objec-  
20 tions Exhibit Number Three will be admitted into evidence.

21 MR. COOTER: That's all the  
22 questions I have of this witness.

23 MR. STOGNER: Mr. Carr, your  
24 witness.  
25

## CROSS EXAMINATION

BY MR. CARR:

Q Mr. Becker, I believe you testified you made a geological study of the area.

A Yes.

Q Now, what data did you have available to you in making that study?

A I had the -- all of the logs in the area, practically all, and all of the production information through our Permian Association Library in Roswell.

Q And then you took that data and you constructed Exhibit Number Three.

A Yes, sir.

Q Is this your interpretation of the area?

A Yes.

Q Now, if I look at Section 26, the dashed line is your interpretation of the thickness of the Atoka pay sands.

A Yes, sir.

Q I see nothing east of the dry hole in the north half of 26. I see nothing to the east of that, any data that you could use to determine the contours at that time and run them in an east/west direction across Section 26. Is that just your interpretation or do you have any data that would indicate that in fact the thickness of the Atoka took a turn off to the east at that point?

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A It's my interpretation.

Q Is that -- you had -- did you have any well log or anything that would show that there was that kind of a turn in the thickness of the pay sand?

A No, sir.

Q Now, as I understood your testimony, you thought -- it was your testimony that the north half might be productive across Section 26.

A Yes.

Q And yet you recommended this well location.

A Yes.

Q If this well, I believe you testified, was moved to the east, you would encounter water problems.

A We're heading down dip. We'd be low structurally, yes.

Q And if you get below the gas/water contact, would any of the acreage east of the gas/water contact contribute gas to a well at this location?

A I didn't understand your question.

Q If you have a gas/water contact coming across Section 26, would the acreage east and northeast of that gas/water contact contribute gas to the proposed well?

A Very little.

Q Now, when you say the thickness of the Atoka pay, were you -- were you talking about -- did you make -- reach any conclusion as to the porosity in that pay

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sand?

A No, sir, it has nothing to do with the porosity; gross thickness.

Q That simply shows the thickness of the body. It doesn't talk about water saturation or porosity or anything.

A No, sir.

Q Are you qualified to testify as to how many acres a well would drain in this area?

A That really would be more of an engineering problem.

Q Would you be -- are you qualified to testify as to whether there's any general trending or direction to the formation that would cause the drainage to have any general trend?

A Yes, I believe so.

Q Was your testimony that a well 530 feet from the lease line would not drain any substantial reserves from Section 27?

A I don't believe very substantially, no.

Q That is the better part of the Atoka pay, is it not, is under Section 27?

A Well, my interpretation is that it would also be under Section -- or under the north half of Section 26, also.

Q But you have no data that would show you that the contours should take the turn that they do in Sec-

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tion 26.

A No, sir.

Q I don't want to ask you questions outside of your area.

In drilling the well, are you familiar with how the bit might drift from the surface location when it -- as it approaches total depth?

A It generally drifts toward the up dip side.

Q And in that situation wouldn't you anticipate it to drift toward the -- toward the west?

A Or perhaps southwest. The strike right in the area of this well is actually about northwest/southeast.

Q And that would, if there is any drift, you would expect it in all probability to be toward Section 27.

A If there were any drift, yes.

MR. CARR: I have nothing further.

MR. STOGNER: Mr. Cooter, do you have any questions?

MR. COOTER: No other questions.

MR. STOGNER: I have no questions of Mr. --

MR. COOTER: Becker.

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2 MR. STOGNER: -- Becker at this  
3 time.

4 I also believe, Mr. Cooter,  
5 that we did not qualify this witness, and if there is no ob-  
6 jection I'll qualify him at this time.

7 Are there any other questions  
8 of this witness? If not, he may be excused.

9 MR. COOTER: That concludes our  
10 case, Mr. Examiner.

11 MR. STOGNER: Mr. Pearce? Mr.  
12 Carr?

13 MR. CARR: At this time I'd  
14 call Tony Fraga, F-R-A-G-A.

15 TONY FRAGA,  
16 being called as a witness and being duly sworn upon his  
17 oath, testified as follows, to-wit:

18 DIRECT EXAMINATION

19 BY MR. CARR:

20 Q Would you state your full name and place  
21 of residence?

22 A My name is Tony Fraga and I live in Mid-  
23 land, Texas.

24 Q By whom are you employed and in what ca-  
25 pacity?

A I'm employed by ARCO Oil & Gas and I'm a



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Senior Operations Analytical Engineer.

Q Have you previously testified before this Commission or one of its Examiners?

A No, I have not.

Q Would you summarize for Mr. Stogner your educational background and your work experience?

A Okay. I received a Bachelor of Science in natural gas engineering in 1975 from Texas A & I University.

I went to work for Atlantic Richfield in June 9th, 1975, in the Houston office, where I worked directly about a year, a little over a year, before being transferred to the North Permian Area out of the Midland office, and that covers the Andrews County.

I worked there for a period of four years before beng transferred to the West Permian, which would be the southeastern part of New Mexico.

I'm -- that spanned a period of about three and a half years, right now as an operations analytical engineer.

Q Does your area of responsibility include southeastern New Mexico?

A Yes, it does.

Q Are you familiar with the application filed in this case by Elk Oil Company?

A Yes, I am.

Q Are you familiar with the subject area?

1  
2 A Yes, sir.

3 MR. CARR: At this time, Mr.  
4 Stogner, we would offer Mr. Fraga as an expert witness in  
5 petroleum engineering.

6 MR. STOGNER: With no objection  
7 he is so qualified.

8 Q Mr. Fraga, briefly state what ARCO Oil &  
9 Gas Company seeks in this case.

10 A ARCO Oil & Gas seeks in the event that  
11 the nonstandard location is approved, we seek to impose a  
12 penalty on the production of the well.

13 Q Have you prepared certain exhibits for  
14 introduction in this case?

15 A Yes, I have.

16 Q Would you refer to what has been marked  
17 for identification as ARCO Exhibit Number One.

18 A Okay.

19 Q Identify this and review the information  
20 contained thereon.

21 A Okay. Exhibit Number One shows the  
22 boundaries of the East Kennitz Unit, which is operated by  
23 Elk.

24 It's got a color code on the Atoka and  
25 the Morrow. The Atoka is shown in a light green and the  
Morrow is shown on the purple. The red circle identifies  
the unorthodox location, which is directly 100 feet west of  
the dry hole.

1  
2 The more prolific sand in this area is  
3 the Atoka. All the wells that I've shown colored have pene-  
4 trated the Atoka down to the Morrow.

5 Directly northeast of us is the Northeast  
6 Kenmitz Unit, operated by Elk. As you can see by the cumu-  
7 lative numbers, as shown on the legend, the Morrow has been  
8 a very poor producer and has had poor producing sands in the  
9 area. The wells are averaging about 130 Mcf per day with  
10 cumulatives of production from the Morrow ranging from a  
point from 152 to .277.

11 The Atoka, on the other hand, in the East  
12 Kenmitz Com No. 1 is currently producing at 3.413 Mcf a day  
13 and has a cumulative production of .723, a billion two feet.  
14 This well was drilled in late 1982 and put on line early  
quarter of 1983.

15 The lines, the lines drawn across Section  
16 27 indicate the cross sections A-A', B-B', which I will  
17 later talk about in my testimony.

18 Q Mr. Fraga, has the No. 2 Well produced to  
19 date?

20 A At the time this exhibit was drawn it had  
21 not. It noted that a line had been laid out to the well but  
22 that the well had not produced.

23 Q Do you concur in the ownership represen-  
24 tations as to Section 27 made by Mr. Kelly?

25 A Yes, I do. We have a 25 percent working  
interest due to the contribution of the north half of Sec-

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tion 27.

Q And ARCO has -- do you also concur in his statements concerning your ownership interest under the north half of 26?

A Yes. We do not have a working interest at all in the north half of Section 26.

Q What would be a standard setback from the west line of Section 26 for the proposed well?

A Explain it again.

Q What would be a standard well location for a well --

A Okay.

Q -- in the north half?

A Well, the north half, I think a standard location would be 1980 from the end lines and 660 from the side lines. As it stands right now, this well is unorthodox.

Q Would you now refer to ARCO Exhibit Number Two and identify this, please?

A Okay. Exhibit Number Two is contoured on the top of the Morrow limestone. It's current trend is in the northwest and southeast direction with a nose type anticline.

As you can see, the eastern units are very near the top -- very top of the structure. There is a down dip to the north/northeast and eastern directions.

The Atoka sand, which I'm showing in a

different exhibit, is currently lying on the southeast flank of this structure.

Q And you would anticipate -- this is on the top of the Morrow. How would the Atoka compare to the Morrow?

A The Atoka, as I said earlier, is a more prolific and deeper sand in the area. The Morrow is very stratigraphic, discontinuous and poorly developed.

Q Would you anticipate that the structure would be similar in the Atoka as depicted on this map of the Morrow?

A On, yes, sir, on the northeast flank it would be.

Q Would you now refer to ARCO Exhibit Number Three and review this, please?

A Okay. Exhibit Number Three shows the overall trend of the Atoka sand.

Q I think first what you should do, Mr. Fraga, is explain how this Isopach was prepared.

A Sure. This Isopach map was constructed using the gamma ray logs and the gamma ray response assuming a 40 percent clean sands.

The numbers that are being identified under the colored wells there identify the amount of -- of sand, of clean sand developed at those locations, and you can see that the thicker part of the sand does overlies the north half of Section 27. There is a tapering to the north-

1  
2 east and southwest and then the sand was not developed to  
3 the north at the Northeast Kenmitz No. 2 Well location.

4 You can see there to the east that the  
5 sand does start tapering down, the clean sand, towards the  
6 dry hole location.

7 Q What porosity and permeability factors  
8 did you use in constructing this map?

9 A Okay. To construct this map no permeabil-  
10 ity and porosity factors were considered, other than just  
11 the -- determined the amount of clean sand developed by vir-  
12 tue of the gamma ray log response.

13 Q How would you evaluate the control data  
14 that you had available to you in constructing this map?

15 A I think it's got fairly good control data  
16 based on our interpretation; however, there's better control  
17 in the subject area in the direction of the dry hole.

18 Q Would you now refer to ARCO Exhibit Num-  
19 ber Four?

20 A Okay. Exhibit Number Four is a cross sec-  
21 tion A-A', which runs -- if you keep in mind the gross sand  
22 development, this runs northeast/southwest, and it runs with  
23 a center axis, or the length, the longer part of the sands,  
24 and you can see that the sand is thicker along the center  
25 axis and cleaner up in the East Kenmitz Com No. 2 Well's lo-  
cation.

The sand does tend to taper out to the  
southwest, as shown by the East Kenmitz Com No. 1, and as

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you can see, there is an evident gas/water contact at the Northeast Kennitz No. 5 location, which does cause the northeast boundary, due to the gas/water contact.

Q And that shows that there's acreage within the structure that is watered out or water saturated?

A It shows by basic log analysis that there is -- most of that sand is pretty much wet.

Now, also the completion intervals are indicated on the East Kemnitz Com No. 1 and the East Kemnitz Com No. 2 by the red bar.

Q Would you now review Exhibit Number Five?

A Exhibit Number Five is north and east cross section, called B-B'. This cross section will illustrate the productive limits of the Atoka sandstone to the north and to the east.

As we can see, to the north the sand, even though the well was drilled down to the Morrow, the Atoka sand was not present in that well.

To the east there's a well drilled by Exxon or Humble Oil Refining, the State "AV" No. 1. It also penetrated the Atoka, went down to the Morrow, but as you can see, the quality of pay encountered there is very poor. The section does become very dirty and shaley and there's very little at all apparent clean sand at that location.

So at least going to the unorthodox location would be -- tend to be thick and a thicker sand, thicker sand development to the west, as well as a structural ad-

1 vantage, as well.

2 Q Mr. Fraga, would you now go to Exhibit  
3 Number Six and identify this?

4 A Okay. Exhibit Number Six summarizes the  
5 DST results from both the Atoka and the Morrow when the well  
6 was drilled back in August of 1957.

7 Q Does this log show the information that  
8 you used in selecting or determining that there were only  
9 ten feet of clean sand in this well?

10 A Yes, sir.

11 Q Okay. Now would you refer to the DST da-  
12 ta?

13 A Okay, on the DST data there was two DST's  
14 run on this well.

15 The first DST had a (not understandable)  
16 so it was run a second time.

17 On the second DST the final shutin pres-  
18 sure after a thirty minute shutin was 2745 pounds, which  
19 does indicate relatively low permeability, and it's pretty  
20 well supported by the quality of pay developed at that loca-  
21 tion by the gamma ray log was (not understandable.)

22 Q What conclusions can you reach about the  
23 Atoka in this particular well?

24 A Okay, it's the -- just based on the pres-  
25 sure alone, this is actually one-third of the pressure that  
was encountered on the East Kenmitz No. 1 for the same  
equivalent period of shutin time, which indicates that --



1  
2 that Atoka at that location is relatively very tight and  
3 poorly developed.

4 Q And that you have reduced permeability in  
5 this area?

6 A Correct. The deterioration of permeabil-  
7 ity.

8 Q All right. Would you now go to Exhibit  
9 Number Seven and identify this for the Examiner?

10 A Exhibit Number Seven is a net pay map of  
11 the Atoka sand, showing the productive limits of the actual  
12 gas in place and as you can see by this net pay map, the  
13 bread and butter of the sand is located in Section 27, with  
14 the thicker part being in the north half of Section 27.

15 As I indicated earlier, there's really  
16 approximately close to five feet of possible or probable  
17 productive gas in Well No. 5, which also has the gas/water  
18 contact and which marks the limits of the -- of the Atoka  
19 sand to the north and east.

20 The Atoka sand was not present in the  
21 well -- in the well to the north, No. 2, and as you can see,  
22 we allocated zero productive pay in the dry hole location in  
23 virtue of the DST and the log -- the log quality.

24 The proposed well would be thick,  
25 slightly thicker net pay development to the west in the  
direction of our East Kenmitz Com No. 2.

Q What porosity cutoff did you use?

A Okay, for the construction of this map we

1  
2 used a porosity cutoff of five percent for -- for a well  
3 that had gas effect, and we also used the -- had gamma ray  
4 to show some clean sands, and also water saturation has been  
5 forty percent.

6 Q Are these cutoff figures or values con-  
7 sistent with sound engineering practices?

8 A Yes, sir, they're fairly standard for  
9 that area.

10 Q What conclusions can you reach about the  
11 ability of the north half of 26 to contribute gas to the  
12 proposed well?

13 A Based on our -- our interpretation and  
14 the available geology control we have, it appears that the  
15 amount of gas in place at the northwest quarter section of  
16 Section 26 would produce very little to an insignificant  
17 amount of gas.

18 Q And is it ARCO's position that Elk should  
19 not be permitted to produce gas at this location, or in the  
20 north half of Section 26?

21 A No, we're not trying to oppose or prevent  
22 Elk from producing gas at this position, as long as the gas  
23 comes his acreage only.

24 Q Would you identify ARCO Exhibit Number  
25 Eight and review this, please?

A Okay. The final exhibit, in the event  
that the State does allow Elk to drill the well at the pro-  
posed location, we would like to propose that the State set

a restriction on the -- on the production allowable.

We worked up an allowable reduction formula based on acre feet development.

As you can see by the one and two, Item One covers the north half of Section 27, which underlies acres, ARCO's acreage.

Item Two is the portion under Elk's north half of Section 26, which only had 295 acre feet.

The ratio of Items Two and One calculate to 5.2 percent. Therefore what we're trying -- we're seeking, we're seeking 95 -- 94.8 percent restriction allowable on deliverability.

As for an example, just to give you an example of the rate, we have used the East Kenmitz Com No. 1 Well, since that's the only well with sustained production history, and the rates that we used were from July 1, '83 to February 1 of '84, which averaged out 3,000,354 Mcf per day.

Therefore in summary we recommend that the allowable for the proposed unorthodox well be restricted to 174 Mcf per day, as an example.

Q Now, Mr. Fraga, that is just an example.

A It's just an example.

Q Now this is styled Allowable Reduction Formula. Is this Atoka-Morrow Pool prorated for gas production purposes?

A Explain that again.

Q Is the Atoka and Morrow in this area, are

1  
2 they prorated gas pools?

3 A No, they're not.

4 Q So when you say allowable reduction, what  
5 should any penalty be applied against?

6 A The penalty should be applied on the de-  
liverability.

7 Q And how often do you think deliverability  
8 tests should be run?

9 A I think they absolutely should be taken  
10 -- be measured every six months and witnessed.

11 Q And so what you're recommending is that a  
12 penalty be imposed allocating production based on the number  
13 of productive acre feet under their tract as opposed to un-  
14 der the north half of 27.

15 A Correct, uh-huh.

16 Q If the application of Elk is granted,  
17 what would the effect -- without a penalty, what effect  
18 would that have on correlative rights of ARCO Oil and Gas  
Company?

19 A Okay, if the well is granted it would al-  
20 so impair our correlative rights, as well.

21 Q And why is that?

22 A Well, by the present formula used, the  
23 Atoka sand, as you can see, is not developed on the east  
24 half of Section 26. Therefore if this type of restriction  
is not -- is not imposed, then it would adversely affect our  
25 correlative rights. As you can see, there's -- there's a

1  
2 very small amount, a really insignificant amount of net --  
3 of net pay developed on the north -- on the west quarter  
4 section of -- north quarter section of Section 26.

5 Q In the northwest quarter of Section 26?

6 A Northwest quarter of Section 26, right.

7 Q How could the interest owners in Section  
8 27 be protected from drainage from a well at the proposed  
9 location?

10 A Okay, there would be a -- the operator of  
11 the unit would be forced to drill a direct offset to this  
12 well, which we think would also be an economic waste.

13 Q You think that well would be unwise?

14 A I very -- I think so.

15 Q Do you believe that imposition of the  
16 proposed penalty on production from the proposed well would  
17 alleviate the problems that you've just outlined?

18 A Yes, it would be justifiable to.

19 Q Were Exhibits One through Six prepared by  
20 you or under your direction?

21 A Yes, sir, they were.

22 MR. CARR: At this time we  
23 would offer Atlantic -- or ARCO Oil and Gas Company Exhibits  
24 One through Eight.

25 MR. STOGNER: With no objec-  
tions Exhibits One through Eight will be admitted into evi-  
dence.

MR. CARR: That concludes my

1  
2 direct of Mr. Praga.

3 MR. STOGNER: Mr. Cooter, your  
4 witness.

5  
6 CROSS EXAMINATION

7 BY MR. COOTER:

8 Q Mr. Praga, your Exhibit Eight, let me ask  
9 you just a couple of questions about that.

10 A Uh-huh.

11 Q The acre feet under the north halves of  
12 both sections was calculated from the prior exhibits that  
13 you identified and talked about, was it not?

14 A Correct, uh-huh.

15 Q And the figure on the north half of Sec-  
16 tion 26 is your interpretation from, I believe, Exhibit Num-  
17 ber Seven?

18 A Correct.

19 Q Before going to Exhibit Number Seven, let  
20 me just ask you, may we assume from Exhibit Number Eight  
21 that Atlantic Richfield doesn't hold the north half of Sec-  
22 tion 26 in very high regard?

23 A Correct.

24 Q In your opinion would a well with this  
25 type of proposed penalty provision be economic?

A No, I don't think it would be. It would  
not (not audible).

Q Let me go next to Exhibit Six, which I

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noticed you have up on top of the -- your exhibits.

A Okay.

Q Which is the log, is it not, as you testified, from the Humble State Well, --

A That's correct.

Q -- which was plugged and abandoned as a dry hole back in -- in the fifties.

A Uh-huh, that's correct.

Q The Atoka pay which you've testified about is some ten feet.

A That's correct.

Q And you've been here and heard the testimony of Mr. Becker and Mr. Kelly that indicate that in their opinion it has a thickness of I think some 30 to 40 feet, or 38 feet, to be exact, is that correct?

A It probably will if you include the shelving and the shelf emplacement in there.

Q That is strictly a matter of interpretation; both of you are looking at the same log.

A Correct. The interpretation on the gamma ray is pretty well based on consulting with the service company that does the advisement on gamma ray response interpretation, so it's pretty well standard that would also be directed to any -- any producer.

Q This is what Mr. Becker and Mr. Kelly had in hand, not this particular exhibit, but this log when they made their interpretation of it.

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A I assume they probably did.

Q Now let me direct your attention to Exhibit Seven which is the contour map, the -- of the Atoka sand.

A Uh-huh.

Q I'm particularly interested in -- in your -- the outer line which shows zero thickness of that sand, and to the east part of the exhibit over in Sections 26, particularly, and in the southern part of 27.

Is this map again your interpretation of -- of the area?

A Yes, it is.

Q Your control marks are the two Elk wells in Section 27, which ARCO has an interest in?

A Right.

Q And then your interpretation of the log which has been marked as Exhibit Six.

A That's right.

Q You have seen the exhibit which they offered, which was Exhibit Three, I believe.

A No, I have not. Now I have.

Q Beg pardon?

A Now I have.

Q You have. The -- that -- we're interested in the thickness of the Atoka sand as it goes to the -- into Section 26 and your interpretation as shown on Exhibit Seven varies substantially from that as prepared by Mr.



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Becker?

A (Not understood.)

Q I'm not sure I can answer that. Basically.

MR. CARR: How does your interpretation differ?

Q Basically.

A Okay, basically by the virtue that if he does count that the (not understood) has 38 feet of pay, it could contour in that direction, but if you -- if you determine the amount of net pay based on the amount of clean sand present, actual clean sand, which would imply productive sand, not shale, just sand, then that interpretation to the east would not, to my opinion would not be totally correct.

Q So it's a question of whether in your interpretation of clean sand or Mr. Becker's interpretation of the depth of the thickness of the clean sand might really be determinative.

A Yes, sir, based on our experience and your knowledge of the original geology, all the production has been mostly from clean sands.

Q All right, assume, if you would for a minute, that Mr. Becker's interpretation may be correct on the thickness of the Atoka. If the Commission denied the application or it it granted it with a 95 percent penalty, which would make it economically impossible to drill --

A Uh-huh.

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2 Q -- might the production under that north  
3 half of Section 26, which would be forever lost or unrecoverable?  
4

5 A I think there's production in there at  
6 that location but the amount in place is very insignificant  
7 compared to the bulk volume on Section 27.

8 Q Well, I'm asking you to assume that Mr.  
9 Becker's interpretation is correct -- is accurate and yours  
10 is not, which goes cross grain to your testimony, I know,  
11 but just assuming that Mr. Becker's testimony is correct.

12 A Right. Then I would be making a false  
13 assumption.

14 Q Did you hear Mr. Becker's testimony about  
15 the completion factors as used by Humble in that -- did you  
16 hear the testimony of Mr. Becker with regard to the completion  
17 practices used by Humble in the drilling of that well?

18 A Yes, sir, I did.

19 Q Do you take offense to what he related,  
20 how it was completed and the possible effect that that completion  
21 practice might have had?

22 A I think the completion practice might  
23 have done some minor, if any, damage to the sand. I think  
24 it's pretty evident that the amount of -- that based on the  
25 DST pressure, the final shut-in pressure, and the quality of  
pay development based on the log, that the sand is actually  
deteriorated at that location.

So we can't develop it in the present

1 case if it's not there.

2 Q That's your interpretation solely from --  
3 from the one log?

4 A From the control, the pressure control to  
5 the west based on our -- our interpretation of the East Ken-  
6 mitz Com No. 2.

7 Q Okay, on the control to the west. What  
8 control do you have to the east, Mr. Fraga, where -- in Sec-  
9 tion 26 that we're talking about?

10 A To the east would be the log on the loca-  
11 tion.

12 Q Okay, that's the only control point that  
13 you have to form the basis of your exhibits, which are Exhi-  
14 bits Three and Seven.

15 A Yes, sir.

16 Q Insofar as the acreage to the east.

17 A Correct.

18 Q All right, now then we boil back down to  
19 strictly an interpretation of the log which is -- you've  
20 marked as Exhibit Number Six?

21 A Correct.

22 Q And I guess the point I'm trying to make  
23 is if there is a -- if there is a matter of debate as to the  
24 thickness of the Atoka sand, clean Atoka sand, and assuming,  
25 I'm asking you to assume that Mr. Becker's interpretation  
may be more accurate than yours of the thickness of that  
Atoka sand and there are in fact 38 feet in that Humble

1 well.

2  
3 A If we're talking about gross sand alone,  
4 I can't see how -- what we call, what I'm calling gross  
5 sand, I'm calling a gross sand, an actually developed sand  
6 and not including shale, is two different distinctions.

7 If I call this a gross sand, I'll be also  
8 counting the shale response in place and I would be dealing  
9 with and making a false statement.

10 But the sands, what I'm calling a gross  
11 sand, I'm calling actual gross clean sand development up to  
12 a certain API unit based on log response, and if we both use  
13 the same standards and based on service company procedures,  
14 then we both should come up fairly close to the, you know,  
15 the same answer.

16 Q Well, if Elk Oil came to ARCO to partici-  
17 pate in the drilling of this proposed well in the north half  
18 of Section 26, do you have any opinion as to whether ARCO  
19 would or would not participate?

20 A No, we would not participate at that lo-  
21 cation for the single fact that there are an insignificant  
22 amount of reserves and would not be justifiable.

23 Q And do you concur with -- with the --  
24 with the testimony that you've heard from Elk that if a well  
25 were to be drilled in the north half of Section 27, the  
reasons for the particular unorthodox location sought are  
reasonable?

A No, I don't -- reclarify your question

1  
2 now.

3 Q All right, if ARCO was going to drill a  
4 well, let me ask it this way, if ARCO was going to drill a  
5 well in the north half of Section 26, where would it seek to  
6 drill?

7 A We're talking about the north half of  
8 Section 26.

9 Q Yes, sir.

10 A Based on the information we've got on  
11 here and based on all the exhibits, we would drill a well at  
12 that location, because it would not be economically feas-  
13 ible, even though there might be some gas in place, but the  
14 gas in place would be insignificant. It would not meet our  
15 economic criteria; therefore, we'd try to find another loca-  
16 tion to invest our money in and prevent an economic waste.

17 Q So you just wouldn't drill under any cir-  
18 cumstances in the north half of Section 26.

19 A Only if -- only if there was gas in  
20 place. What's going to put money in our bank is the amount  
21 of gas in place. If there's none, I won't be able to.

22 Q Well, if Elk is relying on the interpre-  
23 tation of Mr. Becker that there is gas in place, that Mr.  
24 Becker's structure maps and Isopach map is more accurate  
25 than yours, in other words I'm asking you to assume that if  
Exhibit Number Three is correct, you would concur with me  
that -- that the location sought by Elk in its application  
is the most logical location under those circumstances?

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A Okay, on a hypothetical, just a --

Q Strictly hypothetical.

A -- hypothetical textbook type, if the thickness of the sands were present in that capacity and they were clean on the same conditions and standards as applied to the other wells, then it would -- there's a possibility that area could be productive.

Q Right. I'm just asking you strictly on textbook and to assume some facts which I know you don't agree with.

A Right.

Q But under those circumstances the proposed location is the most logical location for that well.

A Well, if Mr. Becker's interpretation is correct, then I don't see why he doesn't move it to a standard location. It would support his interpretation. There's plenty of room in there for a standard location.

Q Moving it some 1400 feet to the east?

A Say 1980 from the in lines and 660 from the side lines.

As it stands, there's a thick section in there if I'm interpreting his net pay correctly. He can move it up to the north side, 1980 from the middle lines and 660 from the side lines, and still encounter relatively thick pay section that should make him a productive well.

Q Well, for that aren't you disregarding the -- the water found in the well to the north in Section

1 23 that you heard Mr. Becker testify about?

2 A From the amount of dip or down dip on  
3 Number Five, we go back to that exhibit, --

4 Q Okay, go ahead.

5 A -- and based on my exhibit right here, if  
6 he were to move down to a standard location, we're talking  
7 about we're off about 100 foot drop from the (not under-  
8 stood) location down to where the Northeast Kennitz No. 5  
9 is, approximately 100 feet drop, and I don't think the  
10 structure will drop that significantly.

11 Q Okay.

12 MR. COOTER: That's all. Thank  
13 you.

14 MR. CARR: I have nothing on  
15 redirect.

16 MR. STOGNER: I have no ques-  
17 tions for this witness.

18 Does anybody else have any  
19 questions for Mr. Fraga?

20 If not, he may be excused.

21 At this time, Mr. Cooter, I'd  
22 like to recall Mr. Kelly for one quick question.

23 MR. COOTER: Sure.

24 JOSEPH J. KELLY,  
25 being recalled and being still under oath, testified as fol-  
lows, to-wit:

## DIRECT EXAMINATION

BY MR. STOGNER:

Q Mr. Kelly, --

A Yes, sir.

Q -- in your opinion what is the minimum production rate for an economical Atoka-Morrow well in this area?

A Well, based on gas contracts today, which if we drill this well we do not have a contract, and if that estimate is around \$2.50 to \$3.00, we would need two to three million a day.

Q Thank you, Mr. Kelly.

MR. STOGNER: If there are no other questions Mr. Kelly may be excused.

I believe we're ready for closing statements at this time.

Mr. Carr, you may go first.  
Mr. Cooter, you may go later.

MR. CARR: May it please the Examiner, I believe ARCO comes before you today raising basically one question and that is, how can a well be drilled in the north half of Section 26 and at the same time not impair their correlative rights under Section 27.

Elk has come before you and testified that under Section 27 they have 75 percent of the working interest and are operator of that section.



1  
2 They've also testified that  
3 ARCO has a 25 percent working interest under Section 27, and  
4 everyone agrees that ARCO has no interest under the north  
5 half of Section 26.

6 In one sense Elk is simply pro-  
7 posing to move toward itself in Section 27. The problem is  
8 that by so doing they are also moving toward ARCO with a 25  
9 percent interest in this tract toward which they are moving,  
10 none, no interest whatsoever under the tract on which the  
11 well will be located.

12 I think it's important to  
13 remember that correlative rights is defined as the opportu-  
14 nity afforded to each interest owner in a pool to produce his  
15 just and fair share of the reserves from that pool and do so  
16 without committing waste.

17 We submit to you that a penalty  
18 is necessary. The traditional formulas used by this Commis-  
19 sion for imposing a penalty simply won't work. They won't  
20 work because a large portion of the north half of Section 26  
21 will not contribute gas to that well.

22 The testimony, I think, leaves  
23 only that conclusion and the reason is that even if we take  
24 Mr. Becker's interpretation of the north half of 26, they  
25 admit they must be at this location to avoid the gas/water  
contact, and once you get beyond that, little gas will be  
contributed to a well.

So the traditional formula

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2 won't work because a lot of the acreage in the north half of  
3 26 simply is not going -- a large portion of that tract is  
4 not going to contribute.

5 We also believe we've shown  
6 there are porosity variations and permeability variations  
7 between the north half of 26 and 27, which also show that  
8 traditional straight acreage type formulas do not apply.

9 We therefore ask that you im-  
10 pose a penalty based on productive acre feet of pay. You've  
11 done this in the past in the Western Oil Producers case that  
12 was decided by this Commission in February.

13 You didn't use a straight ac-  
14 reage approach. You used productive acre feet. That case  
15 is Case 8049, Order R-7448.

16 I think it's important to look  
17 at what evidence has been presented in support of the appli-  
18 cation. Obviously, we have structure maps which differ sub-  
19 stantially. They're based on one is the interpretation of  
20 Mr. Becker, one the interpretation of Mr. Fraga. We ob-  
21 viously do not hold that north -- this north half of 26 in  
22 as high regard as Elk holds that tract.

23 But I think it's important to  
24 note that their exhibit, their structure map, Exhibit Three,  
25 shows the north half to have a thick sand running across it.  
There is no data, however, whatsoever, east of the dry hole  
in the north half of 26 upon which to base that interpreta-  
tion. You have to read that in conjunction with the fact

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that they're insisting in locating at this location to stay away from the gas/water contact.

They have higher regard for the north half of Section 26 but they seem to be reluctant to drill at a standard location thereon and if their interpretation is correct, they could avoid a penalty and develop the reserves under that tract from a standard location.

The only possible relief we seek is imposition of a penalty. No one here would propose drilling a well offsetting their proposed well and equidistant from their common lease line. That well won't be drilled.

So we are asking for an order that is based on the productive acre feet in the north half of 26 as they compare to the north half of 27 and in so doing we ask for a penalty of 94.8 percent.

Now you raise questions, Mr. Stogner, about a minimum productive rate to make this well in the north half of 26 an economic venture. In that regard I think it's important to remember that your duty here as an examiner is not to make ventures economic for anyone who comes before you. Your duty is to protect correlative rights and if you set a minimum production rate at a level so that they have an economic venture and in so doing authorize the drainage of reserves from an adjoining property, you will be denying us the opportunity to produce our just and fair share of the reserves from the adjoining tract

1  
2 and you will be impairing our correlative rights, and we be-  
3 lieve you will be acting in a fashion inconsistent with the  
4 Commission's statutory charge.

5 MR STOGNER: Mr. Cooter.

6 MR. COOTER: Mr. Examiner, some  
7 of what Mr. Carr has said I must agree with.

8 What was proposed here original-  
9 ly was to form a west half unit and if that had been done,  
10 to seek the same relief which is sought here. The re-entry  
11 of the Humble well is not a viable possibility in the opin-  
12 ion of the applicant, so that left the question of an unor-  
13 thodox location and if a west half unit had been formed,  
14 this application would have requested a variance of some 100  
15 feet rather than the 1400 and some odd feet that it is for a  
16 north half unit.

17 If the testimony of the experts  
18 is -- if there's any thread of common testimony, it is that  
19 the west half unit would be preferred.

20 That not being possible, then  
21 Mr. Kelly and Elk Oil sought the formation of the north half  
22 unit and really did not expect objection from its co-working  
23 interest owner to the west in Section 27.

24 Now that that has been voiced,  
25 the basic reasons for choosing this location remain un-  
changed. There may be a question as to the productivity of  
the north half and particularly the northeast quarter, but  
that won't be resolved really until more information is

1  
2 known.

3                   There's only one control point  
4 on the eastern flank of this development and that is the  
5 Humble well. How you look at the Humble well or what the  
6 interpretation may be from it, is again, may vary from wit-  
7 ness to witness or expert to expert.

8                   But we believe that there is  
9 production in the area that is proposed to be tested. Ad-  
10 mittedly Elk Oil has sought the most advantageous location,  
11 both from structure -- on a structure basis and for drilling  
12 purposes, but that the imposition of any penalty such as  
13 proposed by ARCO would, as know to one and all, would result  
14 in the well not being drilled and if the interpretation of  
15 Elk is correct, that's going to mean that this -- there'll  
16 be production left under the north half of Section 26. The  
17 State will be the loser for being royalty interest owner.

18                   MR. STOGNER: Thank you, Mr.  
19 Cooter.

20                   At this time I would like to  
21 suggest that both Mr. Carr and Mr. Cooter supply me with a  
22 rough draft of this -- of an order on this case today.

23                   Is there anything else further  
24 in Case Number 8197 this morning?

25                   If not, this case will be taken  
under advisement.

(Hearing concluded.)

## C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing 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.

Sally W. Boyd CSR

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 8197, heard by me on 5/23 1984.

Michael E. Singer Examiner  
Oil Conservation Division