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. 10775

APPLICATION OF SANTA FE ENERGY
OPERATING PARTNERS, L.P.

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: David R. Catanach, Hearing Examiner

October 7, 1993

Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Division on October 7, 1993, at Morgan Hall, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Deborah O'Bine, RPR, Certified Court Reporter No. 63, for the State of New Mexico.

I N D E X

October 7, 1993
Examiner Hearing
CASE NO. 10775

E X H I B I T S

FOR SANTA FE ENERGY OPERATING PARTNERS:

FOR TEXACO:

A P P E A R A N C E S

FOR THE DIVISION:	ROBERT G. STOVALL, ESQ. General Counsel Oil Conservation Commission State Land Office Building 310 Old Santa Fe Trail Santa Fe, New Mexico 87501
FOR THE APPLICANT:	HINKLE, COX, EATON, COFFIELD & HENSLEY P.O. Box 2068 Santa Fe, New Mexico 87504 BY: JAMES G. BRUCE, ESQ.
FOR TEXACO, ENRON, and READ & STEVENS:	CAMPBELL, CARR, BERGE & SHERIDAN, P.A. P.O. Box 2208 Santa Fe, New Mexico 87504 BY: WILLIAM F. CARR, ESQ.

EXAMINER CATANACH: Let's call the hearing back to order, and at this time we'll call Case 10775.

MR. STOVALL: Application of Santa Fe Energy Operating Partners L.P. for an unorthodox infill gas well location and simultaneous dedication, Eddy County, New Mexico.

EXAMINER CATANACH: Are there appearances in this case?

MR. BRUCE: Mr. Examiner, my name is Jim Bruce from the Hinkle law firm in Santa Fe representing the Applicant. I have three witnesses.

EXAMINER CATANACH: Additional appearances?

MR. CARR: May it please the Examiner, my name is William F. Carr with the Santa Fe law firm, Campbell, Carr, Berge & Sheridan. I'm entering an appearance on behalf of Texaco Exploration & Production, Inc., for whom I have two witness; Enron Oil & Gas Company, for whom I have one; and I'm also entering an appearance for Read & Stevens, Inc.

MR. STOVALL: For whom you have none?

MR. CARR: For whom I have none.

EXAMINER CATANACH: Okay. Let's get the six witnesses to stand up and be sworn in.

(Witnesses sworn.)

CURTIS SMITH,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. BRUCE:

Q. Would you please state your name for the record?

A. My name is Curtis Smith.

MR. BRUCE: Mr. Examiner, if Mr. Carr has no objection, Mr. Smith was previously sworn in and qualified as an expert petroleum landman earlier today, and I'd move his admission as an expert landman.

EXAMINER CATANACH: Any objection, Mr. Carr?

MR. CARR: No objection.

EXAMINER CATANACH: The record shall so reflect.

Q. (BY MR. BRUCE) Briefly, Mr. Smith what is it Santa Fe Energy seeks today?

A. Santa Fe seeks permission to drill its Malaga "1" No. 2 well to test the Atoka formation at an unorthodox location 1980 feet from the south line and 660 feet from the east line of Section 1, Township 24 South, Range 28 East, Eddy County, New Mexico.

Santa Fe seeks to simultaneously dedicate the No. 2 well together with its existing Malaga Fed "1" No. 1 well located in the southwest quarter of Section 1 to the south half of Section 1.

The No. 1 well is currently producing from the Atoka formation.

Q. Would you identify Exhibit 1 for the examiner?

A. Exhibit 1 is a land plat marking the location of the existing No. 1 well and the proposed No. 2 well. The offset operator that's shown on the plat, and they are also listed on the second page of the exhibit. The primary offset operator is Texaco to the east and Enron to the north.

Q. To the north is the proposed well location encroaching on Enron's acreage?

A. No. We are standard 660 feet from the north half of the unit or 660 feet from our side boundary.

Q. Were the offset operators notified of this application?

A. Yes, they were. And Exhibit 2 is my affidavit of notice containing my notice letters and certified return receipts.

Q. Now, this application was originally set

for the July 29th hearing, was it not?

A. That's correct.

Q. And it was continued several times?

A. That's correct.

Q. One last question, Mr. Smith, what is the cost of Santa Fe's proposed well?

A. The anticipated cost of the well is $937 for a dry hole and $1,321,000 for a completed well. Santa Fe is willing to invest a substantial sum to recover the reserves our geologist and engineer believe are under the southeast quarter of Section 1.

Q. I believe I omitted one exhibit. What is Exhibit 2A?

A. Exhibit 2A is our letter to Kaiser Francis, requesting a waiver of the 20-day notification period, which I believe ultimately was unnecessary since we continued the hearing, and they were given a 20-day notification after all, but regardless of that date, they've given us the waiver.

Q. Were Exhibits 1, 2 and 2A prepared by you or under your direction or compiled from company records?

A. Yes, they were.

Q. In your opinion, is the granting of the application in the interest of conservation and the

prevention of waste?

A. Yes, it is.

MR. BRUCE: Mr. Examiner, I tender Santa Fe Exhibits 1, 2, and 2A.

EXAMINER CATANACH: Exhibits 1, 2, and 2A will be admitted as evidence.

EXAMINER CATANACH: Mr. Carr?

MR. CARR: No questions.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Smith, the only party being crowded by the unorthodox location is Texaco in Section 6?

A. That's correct.

Q. But you did notify everybody that surrounds the spacing unit?

A. That's correct.

Q. Due to the infill well?

A. That's correct.

EXAMINER CATANACH: I have nothing further.

MR. BRUCE: Call Mr. Goldstein to the stand.

LOUIS GOLDSTEIN,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. BRUCE:

Q. Would you please state your name for the record.

A. My name is Louis Goldstein.

Q. Who do you work for and in what capacity?

A. I'm a geologist employed by Santa Fe Energy Resources in Midland, Texas.

Q. Have you previously testified before the Division?

A. No, I have not testified before this board.

Q. Would you please outline for the Division your educational and employment background.

A. Yes. I got my bachelor's of science degree in geology in 1980 from the State University of New York College at Fredonia. I've spent the last 12-3/4 years employed as a geologist, from 1981 to 1985 with Samson Resources Company in Tulsa, Oklahoma; from February '85 through April '87 with Energy Acquisitions, Inc., in Tulsa, Oklahoma; August '87 through April '90 with Texas Oil & Gas Production Corporation in Oklahoma City; and April '90 to present with Santa Fe Energy Resources, first in Houston and now in Midland, Texas.

I've also testified and been a qualified witness before the Oklahoma Corporation Commission.

Q. Are you familiar with the geological matters involved in this case?

A. Yes, I am.

Q. Have you conducted geological study and prepared certain exhibits for presentation today?

A. Yes, I have.

MR. BRUCE: Mr. Examiner, I would tender Mr. Goldstein as an expert petroleum geologist.

EXAMINER CATANACH: Mr. Goldstein is so qualified.

Q. (BY MR. BRUCE) Mr. Goldstein, would you please refer to Santa Fe Exhibit 3 and identify it for the examiner.

A. Yes. Exhibit 3 was prepared by me. It's a structure map on the Top of the Lower Atoka formation. It was prepared and shows that the structure dips to the east at approximately 120 feet per mile.

It shows our location, our unorthodox location in the southeast of Section 1. It also shows production from all wells producing at or specifically the AD member of the Atoka formation.

In this particular area, the Malaga Pool and this area in general, there are a number of different Atoka sands and limes which produce, some of

which are the AB, AC, AD, Atoka bank limestone, and AE sands. Our primary objective is the Atoka AD sand.

And one other thing about this exhibit is the yellow-colored wells are all wells that have perforated the AD member. The AD may not be the main contributing member in the well, but if the well was perforated in the AD, it is reflected in yellow on this exhibit, and production is given for all the zones that are produced in that well.

It also shows the outline of cross-section A-A' and B-B', which are parallel cross-sections, which will be introduced as a later exhibit, Exhibit No. 5, I believe.

Q. Okay. Let's move on first to Exhibit 4. Would you identify that for the examiner and tell the examiner what it shows?

A. Yes. Exhibit No. 4 is an Atoka AD sand net isopach, density porosity greater than or equal to 10 percent. What it attempts to do is identify the reservoir-quality rock within the AD member of the Atoka formation.

This exhibit illustrates subparallel fluvial systems, which I interpret to be braided channels. As such, you have limited bars along each river system.

The dashed line indicates the river limit or depositional limit, if you will, of each of these systems. All the well control outside the dashed lines, you won't have any gross or any net Atoka AD sand of any kind. Within the dashed limits of the channel systems, you can have silty rock, tight rock, or reservoir-quality rock. Since that is net porosity isopach, what I've delineated here is what I've interpreted to be the reservoir quality rock within these channel systems.

Our main objective in drilling and attempting to locate our well at an unorthodox location in the southeast of Section 1 is so that we can drill a well which is more or less on depositional strike with the Enron Malaga well drilled in the southeast of Section 36.

On the eastern trend of production, if you will, the Enron well in the southeast of 36 is the only economic AD producer by itself of all the colored wells. And so we want to be basically on strike yet in a separate pod with that -- with the deposition in the section southeast of 36.

That's what we're attempting to do, and that's why we need to go ahead and crowd to the east in Section 1 in order to optimize our geologic location,

to find our own discrete reservoir within the system.

Q. And, once again, your primary zone is the AD Atoka itself?

A. That's correct, AD zone is our main objective.

Q. Would you identify Exhibit 4A for the examiner and tell us what it shows?

A. Exhibit 4A is a map of our secondary objective. It is a map of the net density porosity sand greater than or equal to --

MR. STOVALL: What's 4A look like, just so we're --

THE WITNESS: 4A looks not very pretty.

MR. STOVALL: Is that it?

MR. BRUCE: It's marked in the upper left-hand corner.

MR. STOVALL: So it is.

THE WITNESS: Kind of hard to tell with the way that beautiful drafting is done.

Q. (BY MR. BRUCE) First, before you begin, is this a secondary objective?

A. Yes. This is our secondary objective in drilling our test well. As you can see by looking at the location compared to the thick on the net isopach, we are not optimized to encounter the thickest

possible AC. We just think it will be a zone that we encounter on the way down, and we would like the right to produce that zone as well in our wellbore.

Q. Is your existing Malaga Fed "1" No. 1 well, the one in the southwest quarter of Section 1, perforated in this zone?

A. The existing well is perforated as shown by Exhibit 4 and Exhibit 4A in the AD and the AC member of the Atoka formation. It is also perforated in the Atoka bank that as engineering testimony will show, both the AD and AC member are not contributing to the production in the Malaga Fed 1-1.

Q. And this map also shows that the Texaco acreage to the east is not respective or the AC just isn't there?

A. That's correct, not in the Malaga Harroun Com 1-6 wellbore.

Q. And one final question on this, the Enron well in the northwest quarter of Section 1 is producing from the AC; is that correct?

A. Yes, that is producing out of the AC, and I believe the bank as well.

Q. Let's move on to the cross-section, Exhibit 5.

A. Okay. This cross-section is somewhat big

and awkward. There's a reason why I put this exhibit on one piece of paper instead of spreading it out. That's so that comparisons can be made from A-A' to B-B' which are basically running parallel to each other.

What I'm attempting to do by this exhibit is draw an analogy between what's going on up in the north in Section 36 and what's going on in Section 1 further south.

Specifically, this was put together for the AC sand. This cross-section also serves to show some of the multiple zone productive within the Atoka in this particular area in that these wells -- you can see the AC sand discrete from the AD sand discrete from the Atoka Bank. And you can see that Top Lower Atoka in purple. This is what I made my structure map on.

This interval is relatively uniform in this area and the correlations relatively straightforward. They all have discrete levels in which they sit.

With reference to the AD sand on the left side of A-A', that well has 4 feet of type that is no net, no net porosity greater than 10 percent in that well, the Phillips Malaga 1-C. As such in the density isopach, it's colored in yellow because it was

perforated, but there is no net pay in that well. So it remains within the depositional fairways of the trend yet outside of the productive pod, the productive lens, if you will.

The Phillips Malaga 3-C, which is the second well in on A-A', encountered 4 feet with greater than 10 percent density porosity. It is on the western edge of the productive member, productive sand lens, if you will. It does show very thin member. It is not yet completed. It is still in the process of being completed as of right now, as of the latest PR report out of perforations in the AC and AD. And that well is making 2.2 million a day, but it has not been finaled and reported to the state as of yet.

Obviously, the good well and the well we're trying to drill a mirror to would be the Enron 1 Malaga 36 State. That well has 12 feet of well-developed AC sand. It sits in the middle of that productive sandbar and shows nice solid base, nice fluvial deposit.

MR. STOVALL: What was that, what kind of deposit?

THE WITNESS: Fluvial.

MR. STOVALL: You need to make sure you're enunciating somewhat clearly for the court reporter to

get strange words.

THE WITNESS: Yes, sir.

The last well, the well furthest to the east on A-A', is the Santa Fe Energy 1 Harroun Trust 31 Fed Com. That well has no net porosity greater than 10 percent. It was perforated in the interval, and you can see some zonal development, thick but silty, in that well. So it would fall within the channel system, yet not within a productive member, not within a productive reservoir.

That all becomes more interesting when we look at B-B' further to the south. The first well in B-B', the Santa Fe Energy 1 Malaga 1 Fed Com, you can see it has four feet, thin, tight AD sand, very much like the Phillips Malaga 1-C on the left side of A-A'. Those two are basically on strike with each other. Very thin, tight sands.

The Phillips Malaga 3-C well has no comparable well on this cross-section. I don't want to drill a well that has just four feet of net sand. I want to go ahead and optimize my location by moving further east, similar to where Enron drilled their Malaga State, further north.

Then I have -- I believe my sand pinches out and then comes back into another thin bar in the

Getty Harroun Com 1-6. You can see there's porosity, five feet of porosity developed in the Getty well, but if you look at the character of that well and compare it to the Santa Fe Harroun Trust, it simply looks like it has cleaned up further south, if you will.

They're close to being on strike with each other. This one is a little better developed. This one is a little siltier. You can go ahead and look at gamma ray on those two logs.

As such, I believe the strike orients itself a little bit in this direction, a little bit south to southeast in this direction. And so with this on strike here, these two wells are on strike, in order for us to be on strike with our well in Section 36, we need to move east in Section 1 in order to optimize our geological opportunity.

This is a risky prospect. Each of these sand lenses are relatively limited and discrete. In order to optimize our geological possibility of finding the zone, we need to drill in the most optimal place we can in order to hopefully encounter maximum sand thickness. That's the intent in coming in here and getting the unorthodox location.

Let me make one other point while the cross-section is out. And that's the Santa Fe Energy

Operating Partners' 1 Malaga 1 Fed Com with the perforations as shown before in the AC and the AD and the Atoka Bank, all shown on the west side of B-B' cross-section.

The Atoka AD sand itself doesn't have any reservoir-quality rock at all, just four feet tight. The AC sand looks like it contributed seven feet of greater than 10 percent density porosity, but as engineering will testify, it did not contribute, and there are the perforations in the limestone Atoka Bank, which is the contributing horizon in the wellbore.

Q. So looking at Exhibit 5 together with your Exhibit 4, what you're saying is that the wells seem to line up on a south-southeast basis?

A. That's correct.

Q. And as a result --

A. Kind of a north-northeast, south-southeast strike.

Q. North-northwest to south-southeast?

A. Yes, that's correct.

Q. As a result, to place -- to emulate the Enron well in Section 36, you're locating your well south-southeast in Section 1?

A. That's correct.

Q. Looking at this, just from a geological perspective, is there any need for any type of penalty on production from the proposed well if the OCD grants this application?

A. No. It is our intent to drill a reservoir that hasn't been encountered by any other well. In our economic evaluation of the area, it's not economic for us to either try to get into the same sandbar with the Enron well 36 or the Texaco well in Section 6, as engineering will testify.

So we are trying to find our own sand body, and it's risky, and we don't feel that any penalty should be necessary.

Q. So as far as the AD zone goes, you're in a different pod, if you will, than either Texaco or Enron?

A. That's correct.

Q. And so there's no need for a penalty?

A. That's correct.

Q. And as far as the AC zone goes, your Exhibit 4A, there isn't any AC zone present in Texaco's acreage?

A. That's correct.

Q. And Enron to the north already has a well producing from that?

A. Yes. And our well in the south half of Section 1 is not getting any contribution, any production from that zone.

Q. So in order to produce that zone, you need a second well?

A. That's correct.

Q. One final thing, looking, oh, say at your Exhibit 4, are you aware that at one time Collins & Ware had proposed a well in the southeast quarter of Section 25?

A. Yes, I am. I spoke with a Collins & Ware geologist about that several months ago or a month ago or so. They had a similar application to ours whereby they wanted to drill an unorthodox location 710 feet from the south line and 710 feet from the east line of Section 25 north of the Enron well and have simultaneous dedication because their well is producing at a different Atoka horizon than the AD.

Upon receiving pressure data from Enron, which conclusively showed that the Enron well in Section 36 was in a relatively small sandbar or reservoir, they decided to dismiss their location in the southeast of 25. They didn't want to run the risk of drilling into the same reservoir with Enron in 36 because that one well would sufficiently drain that

reservoir, and they didn't want to take the geological risk to go out there and try to identify the new reservoir themselves.

Q. Were Exhibits 3 through 5 prepared by you?

A. Yes, they were.

Q. And, in your opinion, is the granting of the unorthodox location in the interest of conservation and the prevention of waste?

A. Yes, it is.

Q. In your opinion, will the unorthodox location and simultaneous dedication adversely affect the correlative rights of Enron or Texaco?

A. No, it will not.

MR. BRUCE: Mr. Examiner, at this time I'd move the admission of Santa Fe Exhibits 3 through 5.

EXAMINER CATANACH: Exhibits 3 through 5 will be admit as evidence. Mr. Carr?

EXAMINATION

BY MR. CARR:

Q. Mr. Goldstein, in preparing your geologic exhibits, have you relied on well control?

A. Yes, I have.

Q. Have you integrated seismic information into this interpretation?

A. No, I have not. There's no seismic in this

interpretation. It's purely a subsurface well control study.

Q. If we look at Exhibit No. 3, this exhibit basically shows that the proposed location will be in the Lower Atoka structurally high to the Texaco well in 6; is that right?

A. That's right.

Q. It will be low to the existing Santa Fe well in the south half of 1?

A. That's correct.

Q. You've indicated that your primary zones of interest are the AB member; is that right?

A. I'm sorry, AD is our main objective with the secondary objective in the AC.

Q. Secondary is the AC?

A. Yes.

Q. How many zones are there in the Atoka in this area that might be productive?

A. There are potentially multiple zones that might be productive.

Q. Are you intending to test all of the zones that are encountered in the proposed well?

A. We are not intending to test anything that we don't have the right to produce, such as the bank, which is producing in our existing well in 1;

therefore, I don't believe it's our intention to produce that well. We might test it to see if it had different pressure, but it's not our intention to go and drill for that objective.

Q. Are you telling us that if you have a producing capability in the zone which is producing in the existing No. 1 well, that Santa Fe will not produce that zone in this well?

A. Santa Fe will come to the board and/or make a decision to -- a well which we don't have the right to have a simultaneous dedication, we will have to either plug our well, plug the original well, or do something so that both wells aren't producing out of the same zone at the same time.

Q. So in terms of simultaneous dedication, you're asking for authority for simultaneous dedication, but at the same time you are committing that you would not have the same zone producing in two wells at once?

A. Not if it's contributing in that well, that's correct.

Q. And the nomenclature out here and the geology is clear enough that we would be able to clearly establish whether or not we are in correlative zones?

A. I believe so. That would be supported by pressure data as well.

Q. Now, in preparing your Exhibit No. 4, this is on your zone that's the primary zone of interest; correct?

A. Yes, sir.

Q. And, here again, we're working with well control?

A. Yes, sir.

Q. What control do you have to separate the pods between Section 1 and Section 6?

A. Well control, there is nothing to separate the pods in Section 1 and Section 6. What does limit the size of the pods is the drainage study done by our engineer who will come up and testify to show limited size of those pods.

Q. So we're going to have some volumetrics and pressure information that establishes these are pods?

A. Establish these are discrete sand members or pods or lenses, whatever you want to call them. That will be presented.

Q. And that will be based on pressure information strictly confined to these individual zones?

A. I cannot answer that question.

Q. In breaking this into these individual pods, what did you rely on to place them exactly as you did with this north-south orientation?

A. In looking at -- I made the judgment when I was looking at basically a braided stream depositional environment. As such, the trend to the east is not making any significant turns. And when looking in that environment, this would be a reasonable orientation for those sandbars to lie in.

Q. Is it possible if we look at the pod in which you're proposing to locate your proposed well, that in fact the limits of that pod might extend further to the east than you've mapped them; isn't that correct?

A. Further to the east. Yes, sir, it's possible. I do not have the well control to say that it definitely does not extend further to the east.

Q. What information do you have to tell us that we've got ten feet of thickness in this area?

A. In looking at -- and this trend is not just limited to the size of this map. It goes much further north. When looking at all the well control on these trends, there was only one well that had a gross of 16 feet, and the thickest well is the Enron well with 12 feet. I felt it presumptuous of me to draw anything

thicker than a 10 foot contour.

Q. Are there pods that in fact do not have a 10 foot thickness?

A. I believe the Texaco well in Section 6 is such a pod that we know of right now.

Q. And it's possible, is it not, that the pod that you're projecting in the southeast of 1 might not have that thickness?

A. It's possible, but I believe based on my geological interpretation, that if it was to thicken up, that would be the optimum place for it to occur.

Q. If we look at this pod, it's also -- it could be farther to the west of the boundary? It could extend farther west; could it not?

A. That's true; however, when looking at the Phillips 3-C Malaga well on cross-section A-A', and that well is very thin with only four feet of greater than 10 percent density porosity, in order to reduce my geological risk, I thought if we move as far east as possible, we can prevent hitting a five foot or thinner zone and get a thicker well that has the ability to capture the reserves within the reservoir.

Q. Actually, you could -- there are standard locations available in the south half in this particular AD sand where you could place a well and

intersect this zone, isn't that true, intersect this sand?

A. The closest standard location is going to be 1980 west of the east line. And I don't believe there will be anything thicker than five feet that you can encounter in that well. I don't feel that this well could be economically drilled to hit a five- foot zone. We need a thicker zone in order to be able to make a significant well. This has high geologic risk. We have to be able to capture the upside of the project in order to warrant drilling the well.

Q. Your entire geological interpretation of these two pods is actually based on the logs of the Texaco well in 6 and the log of your well in 1? That's the only control you actually have through all this structure?

A. To limit the control, to say that I've only looked at two wells or to try to imply that I've only looked at two wells suggests that I haven't looked at the regional geology in the area, and I don't want to give that impression.

Q. I'm not intending to suggest that. I'm just saying, the only two hard data points we have to construct two pods, one ten feet in thickness and one perhaps slightly over five are these two points?

A. Actually, the pod that I'm actually drilling for has no net foot well control to show it there other than just regional geological interpretation.

Q. If I look at your cross-section, Exhibit No. 5, you haven't connected as we go across this B-B' cross-section the zones that are shaded in blue titled Atoka Bank; that's correct, right?

A. I haven't connected them as in drawing a correlation line through them? That's correct. However, it will exist in our wellbore, if that was the question.

Q. And that zone would exist across the zone?

A. Yes, I believe so. My geological interpretation shows that the Atoka Bank will be present in our well that we drill in Section 1.

Q. But Santa Fe is not going to produce that zone in this well?

A. That is not our intent here at this hearing, to produce that zone. We feel that that is the one contributing zone within our existing well in the south half, and, as such, we don't have the right to produce that zone in our new well. We are not requesting a simultaneous dedication in the Atoka Bank.

Q. If that's the only zone that is productive in this new well, are you telling us that you wouldn't come back then and ask authority to produce it?

A. I cannot say that. I do not know. I certainly hope that is not the case. I hope we can count on more than that.

Q. Is there anything that you can point me to that shows that the AD sand actually breaks between your proposed location in the Getty Harroun Com No. 6 in just your interpretation on the --

A. On well control, you cannot show a thin well control. That break is supported by engineering evidence which we will put into testimony.

Q. If I look at this location, you could in fact move it farther to the west and also have a potential for picking up the Atoka AC sand; correct?

A. Actually, moving it further west would optimize it more with regard to the Atoka AC. However, our primary objective is the AD. To us, to optimize to the AD is what really -- that's what justifies the risk in drilling the well is being able to encounter the thick AD. I don't think moving further west and risking drilling a well like the Phillips well in the southwest of Section 1, I don't think that's what we're trying to do. We need to go

ahead and get the thickest zone. And that's why I moved that location 660 off the east line.

Q. It's possible, however, your AC sand might be present in this wellbore; correct?

A. Yes, sir.

Q. And at this time you're not asking for authority to produce the AC sand in this well?

A. Yes, I believe we are.

Q. You are asking for authority to do that?

A. Yes, sir. Our engineering evidence will show that in our Santa Fe Energy Malaga 1-1 Fed Com, both the AD and AC sands, neither one are contributing to production in that well. Simply, the Atoka Bank is the one producing member that's perforated in that well that's contributing to production, which is why we're not asking for the simultaneous dedication in the Atoka Bank, but we are asking for it in the AC and AD members.

Q. And yet this is all classified as Atoka; correct?

A. Yes. As far as I know this is considered one common pool.

MR. CARR: That's all I have.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Goldstein, just this one question on the -- do you have information on the productive potential of the Enron Malaga 36 State No. 1?

A. We have production information which will be brought into testimony and pressure data that was provided by Enron specifically about their well in Section 36.

Q. It will be presented later?

A. Yes, sir.

EXAMINER CATANACH: I have nothing further.

EXAMINER CATANACH: Call Mr. Offenberger to the stand.

RANDY M. OFFENBERGER,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. BRUCE:

Q. Will you please state your name for the record.

A. Randy Offenberger.

MR. BRUCE: Once again, Mr. Examiner, Mr. Offenberger was qualified as an expert petroleum engineer earlier today and sworn in as such. If there's no objection from Mr. Carr, I tender him as an

expert petroleum engineer.

MR. CARR: No objection.

EXAMINER CATANACH: Mr. Offenberger is so qualified.

Q. (BY MR. BRUCE) Mr. Offenberger, have you conducted a study to determine the effect on correlative rights if Santa Fe is allowed to drill its well?

A. Yes, I have.

Q. And could you briefly state up front your conclusions of your study?

A. The conclusions of my study are based on production data and pressure data. I will refer you to Exhibit 6A. It's a table that shows the calculations that I performed on the three wells, 6A, and on the second page is 6A also.

The three wells in this area, the first well that we're looking at on the volumetric study is the well in Section 6, the Texaco Malaga Harroun Trust No. 1 in the northeast quarter of Section 6.

The other well that we looked at, or I looked at, is the Enron Malaga 36 State No. 1 in Section 36 in the southwest quarter.

The third well in this area that I looked at is the Enron Malaga Well No. 1 in the northwest

quarter of Section 1. These three wells I looked at from the AC and AD intervals and performed this drainage study to further support the drilling of a well in the northeast quarter of the southeast quarter of Section 1.

Q. As to the AD zone, what is your conclusion, just briefly?

A. The AD zone, based on this study, is that we can demonstrate through the study that these reservoirs in the AD are limited in size. And what we expect anticipating in the east half of Section 1 is a different and separate reservoir from what produced in Section 6 and also what's producing up in Section 36.

Q. As a result, would there be any adverse effect on Texaco or Enron from drilling this well in the AD zone?

A. No, there will not.

Q. As to the AC zone, what is your conclusion?

A. From the AC zone, we've got production currently in the south half unit of Section 1 in our Santa Fe well currently, and what we're wanting to demonstrate is that the AC zone in that particular well, when we perforated it, made no contribution to the production from that well which originally was from the Atoka Bank.

Q. So in order to adequately produce the AC zone in your acreage, you need a new well?

A. That's correct.

Q. Let's look first at the Texaco well and the Texaco reservoir, your Exhibit 6A and also Exhibit 6B, and discuss your study a little bit more.

A. Okay. The Texaco Malaga Harroun Trust in the northwest quarter of Section 6 originally was perforated in the lower zones below the AD sand.

If you look at Exhibit 6B, I show a production curve from 1990 through the current, May 1993, which incorporates the early life production of the well in the first six months of 1990, which is production from an AE member and possibly an A or Atoka Bank.

What you see there is approximately eight years of production out of the Bank, out of the AE and possibly the Bank. Texaco went in and did a workover during July 1990, and production increased substantially up to approximately 54 million Mcf per month.

Since that time -- the curve is not real clear. There's some lines that did not xerox real well. As you can see from the production curve, that the production has dropped dramatically on that

particular well, which further indicates that we have a limited reservoir.

The cumulative production from the initial sales of the well through -- up to the workover is 1.3 Bcf. From 7-90 through 5 of 93, the well has produced 424 million cubic feet. We have an estimated ultimate recovery for that well of 844 million cubic feet.

With that estimated ultimate recovery, coming back and keeping in mind that the AD is open with the other intervals, and what I had done is made the assumption that 100 percent of the production is coming from the AD zone, which would give the largest drainage area underlying that well for the AD zone.

Going back to Exhibit 6A, the first page, and using an estimated ultimate recovery of 844 million cubic feet, we come up with an approximate drainage area for that particular well of 156 acres out of the Atoka AD sand.

Keep it in mind that some of the remaining production is likely to come from the Bank and also from the AE zone that was perforated earlier, which would even give a smaller drainage radius for the Atoka AD sand.

As shown earlier in the geological information that was presented, the production pod or

the isopach pod --

Q. Exhibit 4?

A. Right, referring to Exhibit 4, looking at the isopach, the Atoka AD sand density is greater than 10 percent isopach. Looking at the pod, the geological interpretation has shown there, that volume of reservoir indicated in the colored section there is approximately 225 acres, which is clearly larger than what my drainage study has uncovered, further indicating that that reservoir could be slightly smaller.

And the fact that we're over half a mile away supports also that our location will not, with the production data we have available, will not penetrate the same AD reservoir.

Q. In short, Texaco's well is in a very small pod of less than a quarter section in extent?

A. That's correct.

MR. BRUCE: Before you go on, Mr. Examiner, I noticed one typo on Exhibit 6A under the Texaco well. It says southeast quarter of Section 6. That should be northwest quarter of Section 6, for future reference.

THE WITNESS: There's one other typo on section 6B at the bottom of the production curve,

where we show the scale for the cumulative production from 7/90 to 5/93, that should be 424 Mmf.

Q. (BY MR. BRUCE) Let's then, looking at your Exhibit 6A again, could you discuss the size of the, if you will, the Enron pod in Section 36?

A. The Enron Malaga well in Section 36 produces also from the AD and produces from an additional Lower Atoka member.

What I had done is gone in, with data provided from Enron on this particular well, and did a P/Z versus cum on that well and come up with 166 acres of drainage underlying that well, which indicates that we have a similar type reservoir as what's experienced over in the Texaco well and forced Collins & Ware to withdraw their drilling proposal up in Section 25.

Q. There is a bottom hole pressure data. That is actual data from the Enron well?

A. We received actual data from Enron, pressure data from that well, showing an initial bottom hole pressure of 4781. And we got subsequent pressure points on that particular well also from Enron. With a P/Z showing a good linear relationship on a P/Z versus cum plot, that clearly indicates that that well will ultimately recover approximately 2.5 Bcf.

Q. And, once again, if you compare your drainage calculation of about 166 acres with the Exhibit 4 area, your calculations actually show a smaller reservoir than is shown on Exhibit 4?

A. That's correct. The reservoir size shown on the geological interpretation which is done prior to the pressure data available is more on the magnitude of 500 acres.

Q. Let's move on to your Exhibit 7 and discuss production from your existing Malaga 1 Federal No. 1 well. Could you discuss production from that well, please.

A. Yes, I'll discuss production from the Santa Fe Malaga 1 Federal Com No. 1 in the southwest quarter of Section 1. That well was drilled originally in late '90 and production initiated in the first part of '91.

Once production was initiated, we recognized that there may be some additional potential in the AC and AD intervals.

Q. So it was initially perforated only in the Atoka Bank?

A. Initially only in the Atoka Bank, the well was completed. At that time we had a test from that well out of the Bank only of 542 Mcf per day at about

1,700 pounds of pressure, which caused us to take a closer look at this well and see if there was any additional potential.

We subsequently opened up two months later the AC and AD intervals in that particular well. After we had opened up those intervals, the production rate from the well, which included the Atoka Bank, the AC and the AD of 500 Mcf per day at 1100 pounds flowing tubing pressure, which is a drop in production from the original Atoka Bank completion.

This further supports that the AC and the AD have essentially not contributed any production out of this well.

Q. As a result, is there any engineering basis, in your opinion, to deny simultaneous dedication in the AD zone in the south half of Section 1?

A. No.

Q. And that would also apply to the AC?

A. That's correct.

Q. Now, discussing the AC zone, what is Exhibit 8?

A. Exhibit 8 is a production curve from the Enron Malaga well, which is located in the northwest quarter of Section 1. That particular well tested in

10 of '90 from the Atoka Bank of 700 Mcf per day and 600 pounds flowing tubing pressure.

One week later, Enron went in and opened up the AC zone and commingled it with the Bank and had a production rate of 3300 Mcf per day at 1525 pounds flowing tubing pressure. The well was IP'd for that same rate and flowing tubing pressure on November 6 of 1990.

Turning back to Exhibit 6A --

Q. The second page of Exhibit 6A?

A. The second page of Exhibit 6A, and keeping in mind the Enron production curve, which demonstrates a big impact that the AC has had on the production from that well, we estimated approximately 80 percent based on IP's for initial test rates. That 80 percent of the production is coming from the AC zone.

On Exhibit 6A, this is a drainage study performed for only the AC interval. Keeping in mind that it is producing from both the Bank and the AC, the study suggests if you take 80 percent of the cumulative production to date and assign it to the AC zone and calculate what area that would drain, we come up with 325 acres of drainage, which approximates the north half proration unit.

Q. Considering that Santa Fe's existing well

isn't contributing, isn't having any production contributed to it from the AC zone, does Santa Fe need a second well in the south half in the AC to compete with Enron's existing well?

A. Yes, it does.

Q. Once again, this location, although you are moving to the east, you're not moving any closer to Enron's acreage; is that correct?

A. That's correct.

Q. If the OCD decides to grant Santa Fe's application, in your opinion, should a penalty be assessed against production from the No. 2 well, the proposed No. 2 well?

A. No, it should not, based primarily on the reservoir size expected in the AD interval and also the protection of correlative rights in the AC in the south half of the unit.

Q. Once again, if you could summarize, you believe that Santa Fe's location will be a separate reservoir from either the Enron or the Texaco wells in the AD?

A. Pressure data and production data and calculations indicate that we will be clearly separated from those two wells.

Q. In fact, if Santa Fe is right, it could --

there's a possibility it could help prove up Texaco's acreage to the east, couldn't it?

A. That's correct.

Q. As to the AC zone moving toward Texaco, there is no production from the Texaco well in the AC zone?

A. That's correct.

Q. Mr. Offenberger, were Exhibits 5 through 8 prepared by you or under your direction -- excuse me, 6 through 8?

A. Six through 8 were prepared by myself.

Q. In your opinion, is the granting of this application in the interest of conservation and the prevention of waste?

A. Yes.

Q. Will Santa Fe's correlative rights be harmed if it cannot drill this second well on the unit?

A. I believe they will in the AC interval, particularly.

Q. Do you believe it's necessary to help drain the AC reserves under your acreage?

A. Yes.

Q. Finally, in your opinion, will Enron's or Texaco's correlative rights be adversely affected by

the drilling of the second well?

A. No, they will not.

MR. BRUCE: Mr. Examiner, I'd move the admission of Santa Fe Exhibits 6 through 8.

EXAMINER CATANACH: Exhibits 6 through 8 will be admitted as evidence.

EXAMINATION

BY MR. CARR:

Q. Mr. Offenberger, let's go to Exhibit 6A.

A. The first page or the second page?

Q. The first page. I need help with all the pages, but we'll start with the first page. If I look at this exhibit, you've got a column for the Texaco Malaga Harroun Trust No. 1 in the southeast of 6. That's the first column; correct?

A. We corrected that. It's in the northwest quarter.

Q. I'm sorry, but it is the Texaco well in Section 6?

A. In the northwest quarter.

Q. Right. And below that, you have Atoka AD 7/90. What is that date?

A. The Atoka AD was added, perforations on a workover which I had indicated on Section 6B on that graph where Texaco had gone in and opened up

additional pay in the AD interval.

Q. So that's just -- this information is on the date when they recompleted in the AD section; is that correct, or when they opened that up; correct?

A. That's correct.

Q. When you go over to the next column, the Enron well, we've got Atoka AD. When in time is that? Is that a comparable time, or when would that be?

A. When that well came on production?

Q. Is that when the well was initially produced or when the AD was added to it?

A. What production we've got there is strictly the AD production.

Q. Was the AD always produced in this well?

A. No. It was added subsequently.

Q. Do you know approximately when?

A. I believe it was added in May of this year.

Q. Now, if I look at the pressure figures you have, I think that's what they are, it's the 4781 pounds?

A. That's the initial bottom hole pressure over Z.

Q. That was in the AD zone?

A. That is the pressure that was recorded with

the AD open.

Q. With the AD open. So we wouldn't know what the pressure was actually in the AD zone alone?

A. Separately, no, we do not.

Q. Could it be higher than that? I just don't know.

A. Based on 120-hour shut-in, I would suspect not.

Q. Do you know, was the original pressure in the AD zone higher than that?

A. The zone was not tested separately.

Q. If we go over to the next pressure, we get 4781, the same pressure again. Is that an actual -- that's the actual pressure in the well again with the AD zone open? I'm trying to see what we're trying to compare here. We have identical pressures on those two. One is, I think, estimated, and the other is actual. What are they? Are they the same things?

A. Yes, they are. The estimated pressure is the assumption that we encountered a similar reservoir, similar reservoir pressure.

Q. Are we talking just about the AD zone here?

A. Yes.

Q. If I take these two, and I compare them to the geological exhibit, Exhibit No. 4, it seems to me

that the Enron well is in 36, and it has the identical pressure with the Texaco well in 6, and I can't understand why you wouldn't draw the pods together if that's the case?

A. It's the same depositional environment, and very common you have similar reservoir. You may have plus or minus 100 pounds. In this case here, we made the assumption that we're encountering the same pressure because we did not have what we felt was accurate pressure data on the Texaco well. So we made the assumption that we encountered 4781 pounds.

Q. So from a geological point of view with these two data points, we're assuming pods, and we're confirming them with engineering where we're assuming the pressure; is that right?

A. We're making one assumption on the pressure.

Q. Let's talk about some other assumptions. If we look at the Texaco Malaga Harroun Trust No. 1, you've assumed at the bottom that 100 percent of the production shown is from the AD; is that right?

A. Like I had stated earlier in my testimony, that if we're making a drainage study, if you make 100 percent of the production since the workover attributed to that zone, you'll get a larger drainage

area. Keep in mind that a portion of that production is coming from other intervals. Subsequently, a calculation would yield a smaller drainage area. So at maximum, under that well, we would experience 156 acres drainage.

Q. So you're assuming 100 percent from the AD zone, but you do acknowledge that three zones open in the well?

A. That's correct.

Q. Now, on the Enron Malaga, again we have the same situation. Are you assuming that all this production is from the AD?

A. I am not.

Q. Do you think it is all from the AD?

A. I think a large portion of it is from the AD.

Q. But there are two zones open in that well also?

A. That's correct.

Q. And so this is the largest drainage area you can come up with; is that fair to say?

A. On these two pods, that's correct.

Q. And that the actual drainage area would be something smaller?

A. Providing the AD is not contributing 100

percent of the production of that well, then your drainage area would be smaller.

Q. Didn't I understand the comparison of these figures to the geology to be that in fact the geological pods are being drawn larger than the engineering figures?

A. What I had stated earlier in my testimony was that the geological pods were prepared prior to production and pressure data and in this drainage study performed, and it was interpretive only.

Q. So the geological pods are larger than your figures on 6A which you think, again, are larger than the actual size of the pod?

A. The data supports that.

Q. Now, the information you have on the Texaco well shifts down to an estimated ultimate recovery of 844 -- what is that, 844 --

A. That's million cubic feet, .8 Bcf.

Q. So you take this, and you apply it to the geology, and that's actually the volume that's being drained; isn't that right, that will be taken?

A. The volume that is being drained?

Q. Yes. It doesn't tell you anything about the shape of the pod. That just gives you a volume figure?

A. That gives you a volume, a drainage radius.

Q. And if subsequent information to the 1990 workover shows that the Texaco Malaga Harroun Trust No. 1 can produce at a substantially higher rate, then again that would affect this entire calculation, would it not?

A. We feel that three years of production data, as indicated on Exhibit 6B, is pretty good data to utilize in estimation of ultimate recovery.

Q. There's a well in Section 31. That's a Santa Fe well, is it not?

A. That's correct.

Q. What zones does that produce from?

A. I believe that produces from the AC.

Q. Have you examined the log on that well?

A. I have not looked at a log on that well.

Q. I have a copy of a log I'd like you to look at, which I believe is on that well. Correct me if I'm wrong. 31? Can you confirm to me exactly what zone that well is producing from?

A. Let me look at the cross-section. I prefer to look at our interpretation, if I might.

Q. Fine.

A. It's producing from what we classify as the AD and AC sands.

Q. And if I look at Exhibit No. 4, this is a plat of AD pods, is it not?

A. Pardon?

Q. If I look at your Exhibit No. 4, it says Atoka AD Sand, and that's where the pods are drawn. My question is, if it's producing from the AD, why don't you have a pod that includes that?

A. That's not a very substantial producer. And I also made a drainage analysis today on that well, a preliminary, indicating that if you take 100 percent of the production and apply it to an AC interval, you're only looking at approximately 100 acres also.

Q. So although it produces from the AD, you think it's too small to include in the pod?

A. Yes.

MR. CARR: That's all I have. Thank you.

EXAMINATION

BY EXAMINER CATANACH:

Q. Mr. Offenberger, earlier in your testimony you mentioned a few things about correlative rights and specifically about the AC interval being more important than the AD. Can you kind of briefly go over that again? I believe you said that the inability to produce the AC would be a real detriment

to Santa Fe Energy.

A. From our geological mapping of the area indicates that there is pay covering a substantial part, if not all, of the south half of the proration unit.

Q. The south half of Section 1?

A. Yeah, excuse me, south half of Section 1 in our proration unit. That well, as we have shown, has not contributed any production or significant production to the well in 1, and we feel that, due to the results of that, there's additional reserves in the south half that, in conjunction with the mapping, indicate that could be recovered with an additional well.

Q. In terms of the Enron well that was brought into that picture also, in terms of -- that Enron well is producing from the AC as well?

A. That's correct.

Q. Your Exhibit 6A is essentially saying that these pods, the Texaco pod is 156 acres large; is that correct?

A. My calculations indicate that that's the largest pod that you can possibly see in the AD interval. Keeping in mind the assumption of several zones are open and we made the most conservative

estimate and assigned all remaining production to that interval.

Q. And the Enron pod is actually 166 acres or so large?

A. Yes. Excuse me, did you say larger?

Q. No. Just that's how big it is, 166 acres.

A. Oh, okay.

Q. On your Exhibit No. 7 where you show the production from your No. 1 well, what do you attribute the drop in the production to after the --

A. The nature of the Atoka reservoirs.

Q. Is it possible that the Bank could have been affected by any kind of workover in here?

A. It's a possibility. I have not researched that thoroughly to make a statement one way or the other.

EXAMINER CATANACH: I don't think I have anything further, Mr. Bruce.

MR. BRUCE: Let me just clarify one thing, Mr. Examiner.

FURTHER EXAMINATION

BY MR. BRUCE:

Q. Mr. Offenberger, Mr. Carr asked you a question about the Santa Fe well in Section 31. That well is perforated in the AD; is that correct?

A. That's correct.

Q. But the geology presented, if you will recall, does that show any porosity in that zone?

A. There is no net pay in that well.

MR. BRUCE: Thank you.

EXAMINER CATANACH: Let's take a five-minute break here.

(Thereupon, a recess was taken.)

EXAMINER CATANACH: Call the hearing back to order and turn it over to Mr. Carr at this time.

MR. CARR: May it please the Examiner, at this time I would call Allen R. Spelman.

ALLEN R. SPELMAN,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. CARR:

Q. Will you state your name for the record, please.

A. My name is Allen R. Spelman.

Q. Where do you reside?

A. I live in Wheatridge, Colorado, which is a suburb of Denver, Colorado.

Q. By whom are you employed?

A. I'm employed by Texaco.

Q. And in what capacity?

A. I'm an exploration geologist.

Q. Mr. Spelman, have you previously testified before this Division?

A. I have not.

Q. Could you summarize for Mr. Catanach your educational background and then briefly review your work experience?

A. I received a degree of geological engineer from the Colorado School of Mines in 1957, an M.A. in geology from the University of Wyoming in 1959. I completed a Ph.D. in geology from the Pennsylvania State University in 1964. I was hired by Texaco in January of 1965, and I have worked continuously for Texaco since that time.

My first assignment was in New Orleans. I worked two and a half years as exploration geologist offshore Louisiana.

I was transferred at that time to our research laboratory in Bellaire, Texas, where I worked in carbonate studies and organic geochemistry. Following that, I was transferred to Denver, Colorado, as supervisor of the geology lab, responsible for petrographic studies and carbonate and clastic rocks; also, supporting palynological and ALGOL studies in

carbonate reservoirs.

For the last 12 years, I have been an exploration geologist for Texaco, working primarily in the Rocky Mountain area but also involved in several foreign assignments.

Q. Mr. Spelman, are you familiar with the application filed in this case by Santa Fe Energy Operating Partners?

A. Yes, I am.

Q. Have you made a geological study of the Atoka formation in the area of the Malaga-Atoka Gas Pool?

A. Yes, I have.

MR. CARR: At this time, Mr. Catanach, we tender Allen R. Spelman as an expert witness in petroleum geology.

EXAMINER CATANACH: Mr. Spelman is so qualified.

Q. (BY MR. CARR) Could you briefly state what Texaco seeks by appearing in this case?

A. Texaco seeks a penalty on the Malaga 1 Federal Com No. 2 to offset the advantage gained on Texaco as offsetting operator to an east half unit in Section 6.

Q. Does Texaco also object to the request for

simultaneous dedication in the Atoka formation?

A. Yes, Texaco does object to the request for a simultaneous dedication in the south half of Section 1 of the proposed No. 2 well.

Q. Mr. Spelman, by way of background, could you identify and briefly review the history of Texaco's Getty Harroun Com 6 No. 1 well in the northwest of Section 6?

A. The well in Section 6 was drilled by Getty Oil. It was spud by cable tool in June of 1981 and then spud by rotary rig in December of 1981. In March of 1982, it was TD'd at a depth of 13,300 feet in Morrow clastic section.

In April of 1982, it was completed in the Morrow in six separate zones over a gross interval of 12,557 feet to 13,226 feet. The calculated open flow was 1.46 MM cubic feet of gas per day.

In February of 1984, the well was plugged back to a depth of 12,195 feet, and it was recompleted from a Massive Atoka carbonate. The perforation interval was 12,144 to 12,150 feet. It had a calculated open flow of 14,630 Mcf of gas per day.

In August of 1984, the Ivanovia Bank or Atoka Bank interval was perforated. That interval was from 12,019 feet to 12,032 feet. In July of 1990, the

Lower Atoka sand was perforated. This is referred to informally as the Texaco C sand. Perforation interval for the C sand was 11,981 to 11,991 feet. That interval was potentialed with 10 barrels of oil, 3 barrels of water, and two, 2,078 Mcf gas per day.

In June of this year, responsibility for southeast New Mexico was transferred from Midland, Texas, to Denver, Colorado. Since that time, the Denver office has been reviewing producing properties and acreage holdings that we have in southeastern New Mexico. As a result of the review of the Getty Malaga well, the Denver office recommended to the Hobbs area that that well should be recompleted and acidized.

As a result of that recommendation, on or about the 1st of October, the well was reperforated and acidized. The reperforations and acidizing took place over all three zones that were open in the well. As a result of that work over, the well flowed at a rate of 1.3 million cubic feet of gas per day at a flowing tubing pressure of 700 psi.

The Texaco or Getty Malaga well is located at a standard location for a stand-up west half Atoka gas unit. It is located 1980 feet from the north line and 1880 feet from the west line.

Q. This is a standard unit in the Atoka?

A. This is a standard unit in the Atoka.

Q. Before we get into the geological testimony, could you identify for Mr. Catanach the property in the area which is actually operated by Texaco?

A. If you will refer to the map, Figure 2, the area that is shown in yellow identifies Texaco's acreage interest in the area.

Q. This exhibit also contains a trace for a cross-section A-A', does it not?

A. Yes.

Q. That's Exhibit 1?

A. Exhibit 1 is a stratigraphic cross-section that connects the Santa Fe well in the south half of Section 1 to the Getty well in the northwest quarter of Section 6. And it would pass through approximately the proposed location of Santa Fe's well in the southeast quarter of Section 1.

MR. STOVALL: Mr. Carr, I do want to interrupt one thing. I think I heard you say a minute ago that the Texaco Malaga well is located at a standard location?

THE WITNESS: Yes.

MR. STOVALL: Is that clear, which one is the Malaga well?

THE WITNESS: We are using the name Texaco and Getty.

MR. STOVALL: I understand that.

MR. CARR: That well is at a 1980 from the north line, 1980 from the west line location in Section 6.

MR. STOVALL: Oh. Is that the same as the Harroun Com State No. 1.

MR. CARR: That is the same well. If you put the whole name on it, it's the Texaco Getty Malaga No. 1 Federal Com No. 2 --

THE WITNESS: No, No. 1.

MR. CARR: We will refer to it from this point on as the Texaco well. It is the well in the northwest quarter of Section 6. All right?

MR. STOVALL: I was reading Texaco's notes here that were part of the exhibit and looking at the thing, and then he referred to a different name. So I wanted to make sure we're on the same well.

MR. CARR: It's the Harroun well, but it is the well in the northwest of 6.

MR. STOVALL: Okay.

Q. (BY MR. CARR) Mr. Spelman, let's go now to Exhibit No. 1. Would you review that, please, for Mr. Catanach.

A. Exhibit No. 1 is a stratigraphic cross-section connecting the Santa Fe well in Section 1 to the Texaco well in Section 6. These are portions of neutron density logs.

On the right-hand side, I've shown the informal terminology of Texaco where we have identified the Texaco B, the Texaco C, and the Texaco D. If I'm correct in looking at the exhibits presented earlier, the Texaco D is equivalent to Santa Fe Atoka Bank. The Texaco C would be equivalent to the Santa Fe AD. And the Texaco B would be equivalent to the Santa Fe AC members.

Looking at the Texaco well, in the depth column, I've shown perforation intervals in three zones, all within the Atoka formation. The lower zone is in the Massive Atoka, what we refer to as the Massive Atoka. The middle zone is in the Atoka Bank or the D, and the upper zone is in the Atoka C.

On the left-hand side, a portion of the neutron density log from the Santa Fe well in Section 1. Perforation intervals are shown in the depth column, and our information was that the Atoka D had been perforated, and it was the producing zone in that well.

I've also shown two intervals that were

drill stem tested. This information came from the bottom, the resistivity log that was available to us on microfiche from MJ Systems. That indicated that in the upper test, a test that would have gone through the AC and the AD zones, that that test did recover a small amount of gas in the sample chamber.

In looking at the AD zone or RC zone, the blue horizon, it looks as though that there is some crossover of the neutron density log, suggesting that there is the potential for gas in that unit.

Also shown on this cross-section would be the location of the proposed No. 2 well in Section 1. In dashed line adjacent to that would be the boundary line between Section 1 and Section 6.

What we would like to emphasize in this cross-section is the fact that we strongly believe that there is actually lateral continuity in these reservoirs. There would be continuity especially in the D that we will try to display to you in the maps that we will present, and we feel that there is also continuity in our Texaco C or the AD, as well as in the Texaco B units.

So the primary purpose of this cross-section is to emphasize the proximity of the proposed location to the boundary between our leases

and to show what we believe is continuity of the reservoirs between these wells.

Q. Mr. Spelman, how far from the proposed location are either the Santa Fe well in Section 1 or the Texaco well in Section 6?

A. The proposed Santa Fe well is approximately 2,500 feet northeast of the Santa Fe No. 1 well, and it would be about 2,800 feet to the southwest from the existing Texaco well.

Q. Let's go now to your Exhibit No. 2, the structure map on the top of the -- I guess it's the D sand?

A. The D Bank.

Q. The D Bank. And I would ask you to review that for Mr. Catanach.

A. Figure 2 is a structure map drawn on the top of the Ivanovia Atoka Bank or the Texaco D Unit. The mapping that is shown on this exhibit and all my other maps is based entirely on subsurface control. No geophysical data was used in drawing these maps.

This map shows that the regional dip in this area is to the east at approximately 100 to 150 feet per mile to the east. The importance of this cross-section is to emphasize the fact that the proposed Santa Fe well is located structurally higher

than the existing Texaco well, which would give advantage to the Santa Fe well in drainage of reserves in Section 6.

Q. Let's move on to Texaco Exhibit No. 3. Would you identify and review that?

A. Texaco Exhibit No. 3 is an isopach map of the Ivanovia Atoka Bank Unit. This isopach map shows that there is regional thickening of the Ivanovia Bank to the east.

Also, it shows what we have interpreted possible carbonate build-ups that trend in a more or less north-south direction. These carbonate build-ups could also be described as carbonate mounds. There are thicks in Section 31, and there is again the potential of a thick buildup in Section 6 and in Section 7 as well.

So what we hope to show in this figure is that we do have in fact continuity of this reservoir between Section 6 and Section 1.

Q. Let's move on now to Exhibit No. 4, the isopach map. Would you review that for Mr. Catanach?

A. Exhibit No. 4 is a isopach map of the feet of neutron density crossover within the Atoka Bank. Oftentimes, neutron density crossover in a reservoir could indicate the potential for gas production.

So on the basis of the contouring we're showing here is that we have a considerable amount of potential pay represented in the isopach, and in fact in the color code that we're using here, production from the Ivanovia Bank is shown by the blue coloration. So that, as you can see in Section 6, the Texaco well produces from the Ivanovia.

In Section 1, the Santa Fe well in the south half produces from that unit. In the north half of Section 1, the Enron well produces from that unit.

If you'll go down to Section 7, the two wells that have been drilled in Section 7, Range 29 East, also produce from that unit, and the well in the south half of Section 12 also produces from that unit. So we feel that there is excellent evidence for the continuity of that reservoir.

Q. Let's move on now to the Texaco exhibits on the Lower Atoka sand, the C sand, and I'd ask you to refer to Texaco Exhibit No. 5 and identify and review that, please.

A. Figure 5 is a structure map drawn on the top of the Lower Atoka sand. I believe this would correlate with the Santa Fe AD sand member.

The purpose of the structure map is to demonstrate again, the regional dip is to the east,

and that by drilling the proposed No. 2 well in Section 1, Santa Fe would be structurally high to the Texaco well and gain a significant advantage in draining the reserves in Section 6.

Q. Let's move now to Texaco Exhibit No. 6.

A. Figure No. 6 is an isopach map of the Lower Atoka sand. What I have tried to do is look at the sand unit as an entire unit and not isolate out only that portion which is porous. So that on the basis of the electric log character of the well and the thicknesses of the unit, I would interpret that the geology suggests that what we have is something on the order of a distributary channel.

The thickest interval that is recognized in that channel would be in the Enron well in Section 36. We would trend that channel more in a southeast-northwest direction.

The interpretation would be that that sand in Section 1 is part of that same sand system but is something of an overbank type of unit.

The boundaries I have shown as a channel is only there to sort of highlight the interpretation of the channel. Where the actual boundaries of the channel would be could fluctuate a little bit in either direction, but I think I would argue

geologically that this interpretation would be a valid interpretation based on the well control that is available to us in this area.

So, again, the point of this diagram would be to argue that the sand, the Texaco C sand or the AC sand, would be part of the same continuous reservoir system.

Q. If we could go now to the isopach map showing the neutron density crossover, Exhibit No. 7, would you explain to Mr. Catanach what that exhibit shows?

A. Exhibit No. 7 would be an isopach map of the feet of neutron density crossover within the Lower Atoka sand. What we are showing again is a configuration that suggests that the main reservoir quality would be along the trend of the channel, but that reservoir quality exists outside the limit of that channel into Section 1, and that the Santa Fe well, in fact, does have the potential to be productive in that well.

I would like to point out that based on the color code that we used, the green color indicates production from that Lower Atoka sand or the AD sand. So that the two wells in Section 36 are perforated and produce from that sand. The well in Section 31 is

perforated in that sand, and we assume produces from the sand. And the well in the north half of Section 12 is perforated and produces from that sand. And that well is located to the south of the proposed Santa Fe well.

So we feel on the basis of our geologic interpretation, on the basis of the geologic control available, that that is in fact a continuous sand body and that a well in the northeast -- in the southeast quarter of Section 1 would in fact drain Texaco's well in Section 6.

Q. How would you generally describe the Atoka formation in this area?

A. The Atoka formation is a series of sands that are isolated by impermeable shales. And at the base of that interval would be the massive Atoka carbonate, which also is isolated by a shale sequence.

Q. With the data available to you, Mr. Spelman, do you see anything that would support characterizing the formation as a number of disconnected pods within these particular sand channels?

A. I believe that on the basis of our interpretation, in this limited area, the sand members are continuous in this area.

Q. Could you generally summarize for Mr. Catanach the conclusions you've reached from your geologic study of the area?

A. We feel that the two primary zones of production in this area are from the Atoka Bank and from the Lower Atoka sand, the Texaco C sand.

We feel that the B sand and the C sand and the Atoka Bank are continuous bodies across in the area of Section 6 and extending into Section 1 and in this general area.

We feel that at the proposed unorthodox location, Santa Fe gains an advantage on Texaco's acreage in Section 6. We feel that they will encounter the same reservoir that is being produced in the Texaco well and is also being produced in their well. That well will be structurally high to Texaco; so it will have an opportunity to drain Texaco's acreage in that fashion.

We feel that the reservoirs that they will encounter will be as thick or possibly thicker than Texaco's wells, gaining an advantage on Texaco. And we feel that that well, because it is closer than Division rules allow, should not be permitted to be drilled, or if it is drilled, a significant penalty should be assessed to that well.

Q. Mr. Spelman, will Texaco call an engineering witness to present its penalty recommendation?

A. Yes, it will.

Q. Were Exhibits 1 through 7 prepared by you?

A. Yes, they were.

MR. CARR: At this time, Mr. Catanach, we move the admission of Texaco Exhibits 1 through 7.

EXAMINER CATANACH: Exhibits 1 through 7 will be admitted as evidence.

MR. CARR: That concludes my direct examination of Mr. Spelman.

EXAMINER CATANACH: Mr. Bruce?

MR. BRUCE: Just a few questions, Mr. Examiner.

EXAMINATION

BY MR. BRUCE:

Q. Just to clarify something, Mr. Spelman, and I believe we agreed, Texaco's B sand is equivalent to Santa Fe's AC sand?

A. That would be my understanding.

Q. And the C sand is equivalent to the AD?

A. That would be my understanding based on your displays.

Q. And Texaco's D sand is equivalent to Santa

Fe's Atoka Bank?

A. Yes. We call it the D. It's a carbonate bank.

Q. Now, your first exhibit, is there any production from the AC sand, Texaco's B sand in the Getty Malaga Harroun well?

A. To my knowledge, that interval has not been perforated.

Q. Looking over at the Santa Fe Malaga 1 No. 1 well, do you have any data which would counter Mr. Offenberger's assertion that the AC and the AD zones are not contributing to production in that well?

A. My only data would be the fact that that interval of those sands was drill stem tested, and that gas was recovered in the sample chamber during the course of that drill stem test.

Q. I think you said small amounts?

A. A small amount, right. I would also say that on the basis of the log character and the fact that there is neutron density crossover within that C interval, that that further indicates the potential for production. It does not ensure production.

Q. Looking at your, I think it's your last Exhibit, Exhibit 7, this is the Texaco C sand; is that correct?

A. Yes, it is.
Q. What is your porosity cutoff?
A. Porosity cutoff would be at approximately 8 percent.
Q. 8 percent?
A. It will be somewhere between 6 and 8 percent.
Q. 6 to 8 percent?
A. Right.
Q. And that's lower than what Santa Fe uses?
A. Yes.
Q. Santa Fe used a 10 percent figure?
A. Yes.
Q. If you use the Santa Fe, what would you show as far as net or Santa Fe's existing well?
A. On here, I'd probably -- I would show zero.
Q. Do you use that same porosity cut off in the bank, Texaco's D zone?
A. The Texaco D zone is a carbonate unit, as opposed to the C, which is a sandstone. So these are entirely lithologically different kinds of bodies.
The D zone is a carbonate bank, typically shows a very low porosity, generally in the range of 3 percent. 3 percent is sufficient for production in this area. So we're asking about two entirely

different kinds of bodies, lithologies.

Q. So you really can't equate the two?

A. No.

Q. One final question. On your Exhibit 7, you show just one huge, continuous reservoir here in the Santa Fe AD zone, the Texaco C zone?

A. This is the isopach of what I've interpreted as neutron density crossover. And I've shown footages of what I interpret in each of those wells. So on the basis of that interpretation, I'm showing that as one continuous sand body.

Q. Extending for -- looking at the Texaco well, it looks like it would continue for a couple miles to the northwest and a couple of miles to the southeast?

A. Yes. It would extend down to the next section, one mile to the next section.

MR. BRUCE: I don't have anything further, Mr. Examiner.

EXAMINATION

BY EXAMINER CATANACH:

Q. Just a couple. You said you've looked geologically just at this one small area. Have you looked at the depositional environment on a regional or more regional basis?

A. I've relied on work that has been done by Texaco geologists in Midland who have given us all of their files in the area. So as a part of the overall regional study we're doing on evaluating our properties, we are using the framework that has been established previously by Texaco for this area. And the interpretation I have shown does follow fairly closely to the interpretation that Texaco uses for this area.

Q. In this general area, do you show the existence of pods?

A. No, we do not. We're talking about the AD now?

Q. Right.

A. Right. No, we do not.

Q. Do you show them on a more regional basis?

A. I think part of the differences in some of our displays, what I have tried to focus on is the entire sandstone unit to understand its depositional environment.

If you take a sandstone unit, it will not be, have the same reservoir character over the entire unit. So that if you were to only map what you think is porosity, you may come up with a pod-like map, but if you look at the sand as a whole and try to

understand its depositional environment, you may not see the pod-like appearance. You may see a more blanket-like appearance.

So the difference, I think, in part of our displays is I've tried to look at the sand as a depositional unit so that I could indicate what we believe is continuity of reservoir.

If you only focus on what you think is porous versus nonporous, you are very limited to your well control. Once you get a few feet beyond your well control, you could go to zero porosity. So when you start drawing pods that are two miles long based on one well control point, you're getting out in the reaches of -- geologists like to conceptualize, and that's certainly conceptualization to the ultimate.

EXAMINER CATANACH: I have nothing further.

MR. CARR: At this time we call Mr. Jim Dore.

JIM DORE,

the witness herein, after having been first duly sworn upon his oath, was examined and testified as follows:

EXAMINATION

BY MR. CARR:

Q. Would you state your name for the record, please.

A. My name is Jim Dore.

Q. Where do you reside?

A. In Denver, Colorado.

Q. By whom are you employed and in what capacity?

A. By Texaco as a petroleum engineer.

Q. Have you previously testified before this Division?

A. I have not.

Q. Would you briefly summarize for Mr. Catanach your educational background and review your work experience?

A. I received a Bachelor of Science Degree in mechanical engineering from Oklahoma State University in 1968. I've been employed by Texaco since June of 1981 and have been working in the southeast New Mexico area for the last two and a half years.

Q. Are you familiar with the application filed in this case by Santa Fe?

A. Yes, I am.

Q. Have you made an engineering study of the area surrounding their proposed well?

A. Yes, I have.

MR. CARR: We tender Mr. Dore as an expert witness in petroleum engineering.

EXAMINER CATANACH: He is so qualified.

Q. (BY MR. CARR) Mr. Dore, could you tell us how much has the Texaco well produced to date?

A. The well has produced 1.73 Bcf so far.

Q. What was its most recent producing area?

A. The most recent producing rate prior to this test that Mr. Spelman mentioned was 287 Mcf per day.

Q. Mr. Spelman indicated you just recently received some new information on the well?

A. Yes, sir. The Hobbs area office worked over and reperforated the C, D zones in the Massive Atoka and acidized these zones. Their initial reports indicate an production rate of 1.3 million cubic foot a day and a flowing tubing pressure of 700 pounds.

Q. This is substantially better than the information you had on the well prior to this workover?

A. That is correct.

Q. Prior to receiving this information, had you attempted to calculate the estimated ultimate recovery from your Texaco well?

A. Yes, I have. The production history of this well is very erratic, and I used three different methods to estimate the ultimate recovery. Normally,

an ideal situation, you have nice smooth curves, and it makes it easy to estimate these reserves. My No. 1 -- correction, the No. 8 figure is a P/Z cum gas method for these calculations.

Figure 9 is the rate versus cum gas. Figure 10 is the rate versus time with a hyperbolic decline. And Figure 11 is the rate versus time with exponential decline rate.

These methods indicate that the remaining reserves prior to this latest workover was somewhere between a quarter and-a-half of a Bcf of gas. That's as certain as I can be because this well not only has an erratic production history, it also produces from more than one zone.

Q. Have you compared this to the estimated ultimate recovery for other Atoka wells in the Malaga field area?

A. Figure 12 shows the range of estimated ultimate recoveries for the other Atoka wells in the area. And the Swanson's mean is about 2.5 Bcf. And this well is certainly within that range.

Q. This was before you received the new information on the well?

A. That is correct.

Q. What does this new information do to these

calculations?

A. In my opinion, it makes these calculations invalid and also would indicate to me that the remaining reserves would be substantially higher. At this time I do not know what that figure would be.

Q. What had you originally estimated as the remaining reserves?

A. The remaining reserves would be somewhere in the range of about 2 Bcf, 2.25 Bcf.

Q. In your opinion, what would be the impact on Texaco if Santa Fe's well was drilled at the proposed unorthodox location and permitted to produce without penalty?

A. It would impair our ability to drain the remaining gas in the west half of Section 6.

Q. Do you recommend in fact that a penalty be imposed on this well if it is approved?

A. Yes, I do.

Q. What is your penalty recommendation?

A. Exhibit No. 13 shows the recommendation based upon the variance of the well location from the established footage marks.

Q. And you are recommending the 67 percent penalty?

A. Yes, I do.

Q. And that is because the well is 67 percent closer than the nearest standard location; is that correct?

A. Yes, that's correct.

Q. If the well location was approved and this penalty was imposed, in your opinion, would Texaco's correlative rights be protected?

A. Yes, it would.

Q. Against what would you recommend this penalty be imposed?

A. Against the new well's deliverability.

Q. How frequently do you believe the well should be tested?

A. Semi-annually. And I would hope that we get a notice to both Texaco and OCD so we could send a witness.

Q. Does Texaco also object to the simultaneous dedication of wells in the south half of Section 1?

A. Yes. The rules provide for only one Atoka well per 320-acre spacing unit. All the Atoka wells are classified as one pool. Therefore, we should recommend that Santa Fe is not permitted to produce more than one well in this spacing unit.

Q. Were Exhibits 8 through 13 prepared by you?

A. Yes, they were.

MR. CARR: At this time, Mr. Catanach, we move the admission of Texaco's Exhibits 8 through 13.

EXAMINER CATANACH: Exhibits 8 through 13 will be admitted.

MR. CARR: That concludes my direct examination of this witness.

EXAMINATION

BY MR. BRUCE:

Q. Mr. Dore, let me clarify something in response to a question by Mr. Carr. I didn't know if you said we were talking about remaining reserves or ultimate reserves in the Texaco well, but you used the figure 2 to 2-1/2 billion.

A. Those are the estimated ultimates.

Q. Estimated ultimates?

A. Yes.

Q. And it's already produced how much?

A. 1.73.

Q. So your figure is that there's remaining about .8 Bcf, roughly, or .3 to .8 Bcf?

A. .3 to .5 Bcf.

Q. Isn't that roughly equivalent with Mr. Offenberger's calculations?

A. That's correct. And these calculations were done prior to this workover that we just did.

Q. Have you done a study on how much acreage the Texaco well drains?

A. No, I have not because I cannot determine from which zone the gas is being produced.

Q. Have you reviewed the data from the Enron well?

A. Just their production history, yes.

Q. Have you done a study on that well to determine what it's drained?

A. No, I haven't. I've primarily worried about the Texaco well and the fact that it might be drained by an unusual location by your new well.

Q. So you haven't calculated Enron's -- the drainage area of Enron's well?

A. I have not. And I cannot do that either because I don't know which zones they are producing from either.

Q. I don't know if you have it in front of you, but it was Mr. Spelman's final exhibit, Exhibit 7. Based on that exhibit, would you anticipate Enron's well having a substantial drainage area?

A. That would be supposition. I would have to make that study. I can't answer that question.

MR. BRUCE: I don't have anything further, Mr. Examiner -- could I ask just one question, Mr.

Examiner?

Q. Your figure 10?

A. Yes.

Q. Right on the graph where you have economic limit, there is a production that goes down to -- it's right above the figure 100 or the level 100.

A. Right.

Q. What was occurring during that time period, as far as production from that well?

A. I have no idea.

MR. BRUCE: That's all I have, Mr. Examiner.

EXAMINER CATANACH: The witness may be excused.

MR. CARR: Mr. Catanach, at this time I think I will, in lieu of calling an Enron witness, request permission to read a brief statement from Enron and provide a very short closing and not call an additional witness.

EXAMINER CATANACH: That suits me.

MR. STOVALL: I recommend you accept that, Mr. Examiner.

MR. CARR: If I could do that now, then Mr. Bruce as the Applicant can close.

EXAMINER CATANACH: That would be fine. Go

ahead.

MR. CARR: Texaco and Enron are here today because they're concerned about their correlative rights. Texaco is concerned they're going to be drained from a well drilled too close to them immediately to the west of the spacing unit dedicated to their well in Section 6.

Enron and Read & Stevens are concerned that what is being requested here is a new approach to Atoka production where you have one pool but the Division is going to start determining which zone within the Atoka can be produced, and if you have different zones, you can drill additional wells in the pool, and we're concerned about that, and we oppose it.

Texaco has presented to you what we submit is a sound and appropriate geological presentation for a case of this kind. And on that we base our concern that we are going to be drained.

On the other hand, we have Santa Fe's interpretation where we have a number of pods based on extremely limited control. We have a geologic interpretation where the pods are larger, and the engineering exhibits and the engineering witness says yes, and the engineering interpretation is larger than

reality.

We confirmed the geology with engineering that assumes pressures, and then it assumes that all production is from one zone when in fact we know multiple zones are open.

We have engineering interpretations presented by Santa Fe that don't accurately reflect the current information on the Texaco well. They don't have the results of the recent workover. What, in fact, they're trying to do is come in here with unusual interpretation, leap through hoops, and ask you to find all sorts of compartmentalization in this reservoir so they can drain production from the east and tie into the Enron reservoir to the north.

We submit to you that all they're trying to do is take liberty with a technical case so that you will authorize drainage and depart from what is established procedure for developing the Atoka reservoir. And in so doing our correlative rights will be impaired.

We ask you to first consider denying the application, and if you do not, we ask you to impose a penalty equal to two thirds of the production, very simply because they are two thirds too close in continuous reservoirs.

I also have a statement from Enron that I have to read, and it is short. It is addressed to Mr. LeMay, and it is signed by Gary Thomas, Vice President and General Manager of Enron.

Please be advised that Enron Oil & Gas Company protests Santa Fe Energy's application for unorthodox location and simultaneous dedication on their Malaga 1 Federal No. 2.

Enron is the offset operator to the north and thereby is affected by the application. Enron supports Texaco, Inc., as offset operator to the east in their request for a penalty of 67 percent, 33 production limitation, if said well is completed from a formation requiring a 320-acre spacing unit.

Enron believes that the geologic and engineering data supports such penalty. Enron also believes that the lesser penalty will not protect Enron's or Texaco's correlative rights.

Thank you, Mr. Catanach.

EXAMINER CATANACH: Thank you Mr. Carr.

Mr. Bruce?

MR. BRUCE: Mr. Examiner, let's take these one at a time.

As to Enron, the undisputed evidence presented by Santa Fe is that the Enron well in

Section 36 is a very small reservoir, a very small pod. Furthermore, Santa Fe is not moving closer to that well. Therefore, we think Enron's disputes or protest should be dismissed out of hand.

Now, Enron does have a second well, the one in the northwest quarter of Section 36. Once again, -- I mean northwest quarter of Section 1 producing from the AC zone. Santa Fe does not have a well producing from the AC zone in that section. We think the only way Santa Fe can effectively compete against that well is to drill the second well, the No. 2 well in the southeast quarter of Section 1.

As to the AD zone and as to Texaco's claims, we believe Santa Fe has presented sufficient data to show that Texaco's well is in a small pod by itself. This is consistent with the regional geology.

Texaco has presented an exhibit that shows just a huge AD reservoir. That does not comport with the facts. It doesn't comport with the drainage radius calculated by Santa Fe's witness.

We believe, as a result, that Santa Fe's geologic interpretation is the correct one; that there are small, specific pods; and that Texaco is in a separate one from Santa Fe. Furthermore, Santa Fe's

well is a good half mile away from the Texaco well. We don't think that based on that alone, that using a straight footage penalty formula, as both Enron and Texaco propose, is reasonable. Yes, we're 660 feet away from the east line of the section, but we are not encroaching on Enron, and we are more than a half a mile away from the Texaco well.

Furthermore, looking at the AC zone, Texaco doesn't even have that in its well. So what is the effect on correlative rights? We think none.

As to the simultaneous dedication, Santa Fe recognizes that this is all under the OCD's rules. The Atoka is one pool. We recognize that. We've tried to state our case to limit any adverse effect. And we've said we would be happy to accept simultaneous dedication in the AC and AD zones alone. Santa Fe's current well, the No. 1 well in the southwest quarter of Section 1, is not producing from those zones, is not capable of producing from those zones, and therefore we think we need this well to effectively compete against the offset operators.

As to the Atoka Bank, we said we really don't want to produce that at the same time. The fact of the matter is, that well is producing about 175 Mcf a day. It's not exactly a prolific well. We will

leave that to the discretion of the Division.

In short, we believe we have shown that there will be no effect on the offsets. Santa Fe needs this well to effectively drain its acreage in the Atoka. And we do not believe any penalty is necessary. Thank you.

EXAMINER CATANACH: Thank you, Mr. Bruce.

Is there anything else in this case?

Gentlemen, rough draft orders, please.

And there being nothing further, this case will be taken under advisement.

CERTIFICATE OF REPORTER

STATE OF NEW MEXICO)
) ss.
COUNTY OF SANTA FE)

I, Deborah O'Bine, Certified Shorthand Reporter and Notary Public, HEREBY CERTIFY that I caused my notes to be transcribed under my personal supervision, and that the foregoing transcript is a true and accurate record of the proceedings of said hearing.

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 16, 1993.

Deborah O'Bine

DEBORAH O'BINE
CCR No. 63

OFFICIAL SEAL
Deborah O'Bine
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: Sept. 19, 1994

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10775, heard by me on October 7 1993.

David R. Catanach, Examiner
Oil Conservation Division