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

27 February 1985

EXAMINER HEARING

IN THE MATTER OF:

Application of BTA Oil Producers for compulsory pooling, Lea County, New Mexico.	CASE 8478
Application of Chama Petroleum Company for compulsory pooling and unorthodox gas well location, Lea County, New Mexico.	CASE 8505

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division:	Jeff Taylor Attorney at Law Legal Counsel to the Division State Land Office Bldg. Santa Fe, New Mexico 87501
For BTA Oil Producers:	W. Thomas Kellahin Attorney at Law KELLAHIN & KELLAHIN P. O. Box 2265 Santa Fe, New Mexico 87501

A P P E A R A N C E S

For Chama Petroleum: William F. Carr
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I N D E X

I N D E X CONT'D

E X H I B I T S

MR. STOGNER: This hearing will come to order.

We will call now Case Number 8478.

MR. TAYLOR: The application of BTA Oil Producers for compulsory pooling, Lea County, New Mexico.

MR. STOGNER: We'll now call for appearances.

MR. KELLAHIN: If the Examiner please, I'm Tom Kellahin of Santa Fe, New Mexico, appearing on behalf of the applicant.

MR. CARR: May it please the Examiner, my name is William F. Carr, with the law firm Campbell and Black, appearing on behalf of Chama Petroleum Company.

The next case on the docket is Case 8505. That case involves pooling of the same acreage. We would ask that it be consolidated for purposes of hearing and separate orders to be entered.

MR. STOGNER: Are there any objections?

MR. KELLAHIN: No objection.

MR. CARR: I'd also like to note that when the case was originally advertised, it's a very lengthy and complicated advertisement due to the fact

at the time it was advertised there was an application pending filed by Chama seeking the limitation of the pool rules for the Lea Pennsylvanian Gas Pool.

The application was denied; therefore it is unnecessary to consider any 320-acre pooling in this case, and so any portion of that or which relates to that and anything in our application which relates to 320-acre pooling may be dismissed.

MR. STOGNER: Mr. Carr, you are in fact pooling from the surface --

MR. CARR: To the base of the Morrow under the northeast quarter of Section 25, which I believe is the same acreage involved in the BTA application.

MR. STOGNER: Okay, the BTA application is pooling interest in the Pennsylvanian formation only, so the Wolfcamp in this particular area is still developed on 320 acres.

MR. KELLAHIN: I'm not sure.

MR. CARR: I'm not either.

MR. STOGNER: The Wolfcamp only because the Pennsylvanian is in the Lea Pennsylvanian Pool that has 160 acres.

Our rules say that 320 acres persists on all formations older than the Wolfcamp formation age, so therefore, the 320 acres still exists in the Wolfcamp.

MR. KELLAHIN: And if we get a

Wolfcamp well I guess we'll have to come back and redo this or work out some agreement because we're only seeking to pool 160 acres because of special pool rules in the Lea Penn, is all it will allow.

MR. STOGNER: Well, let me see. The BTA application is pooling all interest in the Pennsylvanian formation only, is that correct?

MR. ZOLLER: Right.

MR. STOGNER: Whereas Chama has everything else plus the stuff in the Pennsylvanian, is that correct?

MR. CARR: Well, the purpose of my statement was to simply concede that we no longer have the problem that would spring from the application filed by Chama, and that to the extent that we are only looking at 160-acre spacing, anything else that was involved in that prior case is now mooted by that decision and we want it clear that we are now not considering 320 acres, that we're accepting the fact that the pool rules for the Lea Penn Pool have not been limited as the earlier --

MR. STOGNER: We do have that straight.

MR. KELLAHIN: Yes, sir.

MR. STOGNER: Okay. We will now at this time call Case 8505.

MR. TAYLOR: The application of Chama Petroleum Company for compulsory pooling and an unor-

thodox gas well location, Lea County, New Mexico.

MR. STOGNER: These two cases will be consolidated for purposes of testimony. Let the record show that these two parties also enter an appearance in this case number.

Is there any other appearances in this matter, these matters?

Will you please continue.

MR. KELLAHIN: I have three witnesses to be sworn, Mr. Stogner.

MR. CARR: And I have two.

MR. STOGNER: All witnesses please stand and be sworn.

(Witnesses sworn.)

MR. KELLAHIN: If the Examiner please, we'll call as our first witness Robin Hughes.

ROBIN HUGHES,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Miss Hughes, for the record would you please state your name and occupation?

A Robin Hughes, Landman, BTA Oil Producers.

Q Miss Hughes, have you previously testified before the Oil Conservation Division as a petroleum landman?

A Yes.

Q And are you familiar with the land title arrangement with regards to BTA's application and the various efforts on behalf of the BTA to attempt to form a voluntary unit with Chama?

A Yes.

MR. KELLAHIN: We tender Miss Hughes as an expert petroleum landman.

MR. STOGNER: Are there any objections?

MR. CARR: No objection.

MR. STOGNER: She is so qualified.

Q Miss Hughes, let me direct your attention to the land plat that we have tendered as BTA Exhibit Number One and so that we all have a clear understanding of the issues involved in this hearing, have you identify for us the 160-acre spacing and proration unit that is the subject of the forced pooling application.

A Yes, I have. That would be the northeast quarter of Section 25, Township 20 South, Range 34 East, Lea County, New Mexico.

Q Within that 160-acre spacing and prora-

tion unit would you identify for us who are the working interest owners?

A Okay. BTA owns 50 percent of the working interest in the 160 acres.

Q All right.

A Chama, or Charles Nearburg, owns the other 50 percent of the working interest, being the west half of the northeast quarter.

Q Your exhibit shows the east half of the northeast quarter with Exxon's name on that.

A Yes. BTA''s working interest in the northeast quarter comes by virtue of a farmount agreement with Exxon.

Q So for the spacing and proration unit the east half working interest is controlled by BTA and the west half is controlled by Chama, or Mr. Nearburg.

A That's right.

Q From your understanding and recollection of the events transpiring between BTA and Mr. Nearburg, and/or Chama, would you describe for us in chronological order the efforts that have transpired between your company and Mr. Nearburg with regards to drilling a well in the northeast quarter of this section?

A Okay. Our first correspondence with Mr. Nearburg came on May the 9th of 1984.

Q I have marked that letter as Exhibit Number Two.

A Okay.

Q All right. Is this the first attempt by BTA to propose the formation of a Morrow test in the Lea Pennsylvanian Pool for the northeast quarter of this section?

A Yes, it was. At that time BTA approached several working interest owners in the area and attempted to negotiate farmout agreements. The first test well had not been drilled. A proposed test well was to be located in the southeast quarter of Section 24, where we subsequently drilled the Lynch No. 1 Well.

As I said, on May the 9th we first approached Mr. Nearburg for a farmout agreement of his acreage in the west half of the northeast quarter of Section 25 and proposed to drill the first well in the southeast quarter of 24 and operate the area under 180-day continuous development provision.

Q The first well in the Lea Penn --

A Right.

Q -- drilled by BTA was located in the southeast quarter of Section 24?

A That's right.

Q The section to the north of 25.

A That's right.

Q When was the second well drilled, approximately?

A The second well was commenced December

the 21st, 1984.

Q And that is located where?

A That's located in the southwest quarter of Section 24.

Q In discussing a well for the northeast quarter of Section 25, were there any efforts, to your knowledge, by either Chama or Mr. Nearburg prior to May 9th, 1984, by which Chama had approached BTA to either farm out its acreage or to participate in a well operated by Chama or Mr. Nearburg?

A No.

Q Would you describe for us generally wht were the proposed terms of the offer by BTA to Mr. Nearburg concerning his acreage in this spacing unit?

A Okay. We asked Mr. Nearburg to farmout his interest in the west half of the northeast quarter of Section 25 to BTA, retaining an overriding royalty interest, being the difference between 25 percent and present leasehold burden, with a 25 percent back-in at pay out.

Q Did you propose to Mr. Nearburg at this point the opportunity to participate in the well?

A Not at this point, no.

Q All right. Would you describe for us what then is the next event that took place after the May 9th letter?

A Okay. After the May 9th letter, as I said, we drilled the Lynch No. 1 in the southeast quarter.

We drilled the Lynch No. 2 in the southwest quarter, and then we again approached Chama on January the 4th and asked for support for a well in the northeast quarter of Section 25.

At that time we asked that Chama either elect to participate in the well with their 50 percent working interest or to farm out to BTA, retaining the difference between 30 percent and present leasehold burden.

Q Attached to Exhibit Number Three, which is BTA's letter of January 4th, '85, is an AFE.

A Right.

Q Is this the AFE that was submitted to Mr. Nearburg?

A Yes, it is.

Q All right, what then is the next event that occurred?

A Mr. Nearburg, or Chama, responded to BTA on January the 14th, stating that they were also interested in developing the acreage but that they had different ideas about how it should be developed.

They stated in their letter that they had on January the 4th staked a location 660 feet from the north line and 1980 from the east line of Section 25.

In that letter they stated that BTA's farmout terms would not be acceptable to them and that in terms of particpating they felt that BTA's AFE was excessive.

Q All right, what then is the next event that occurs after the January 14th letter?

A There was a meeting between Chama and BTA on -- well, I'm sorry.

The next thing that happened was that BTA applied for compulsory pooling on January the 16th.

Q All right, what then is the next thing that happened?

A On February the 4th we received correspondence from Chama indicating that they also had filed for compulsory pooling.

Q All right, so by Exhibit Number Five, which is Chama's letter of February 4th, both companies have traded applications to force pool the other.

A That's right.

Q All right. After the February 4th letter, what then is the next event?

A There was a meeting between Chama and BTA on February the 15th and more terms were discussed and no --

Q Was an agreement reached?

A No.

Q Following the February 15th meeting, what then is the next event?

A Chama wrote BTA on February the 21st and proposed farmout terms whereby Chama would farmout to BTA retaining an overriding royalty interest being the difference between 25 percent and leasehold burdens, and also re-

taining a 40 percent back-in at payout.

Q All right, let's look at Exhibit Number Six, which is the February 21st letter, Miss Hughes.

What, if any, response has Chama given you with regards to a proposed location for the subject well in the northeast quarter of this section?

A Well, I think their proposed location was 1980 from the east line, and as far as BTA operating the well, in the February 21st letter they said that the well could be operated at a location of BTA's choice if we accepted their farmout terms.

Q With regards to the AFE that BTA submitted to Chama, was there any resolution of the differences between the operators with regards to AFE costs for the well?

A Well, I don't really think so. They -- they said that they would like to discuss certain items, but basically that it would probably be acceptable.

Q As of today's hearing, Miss Hughes, has Chama and BTA come to any agreement with regards to forming a voluntary unit for the drilling of this well or come to terms with regards to a farmout of Chama's interest to BTA?

A No.

Q Do you have, Miss Hughes, a proposed rate to be included in any forced pooling order with regards to the overhead charges to be assessed while drilling and then while producing?

A Yes. We would propose drilling overhead rates of $5150 and producing rates of $560.

Q Would you describe for me upon what basis you make that recommendation?

A Well, the number -- our Lynch No. 2 Well was also -- was operated under a joint operating agreement and these are the terms that -- these are the overhead rates that we used for that well and it's been agreeable to the non-operators and --

Q The No. 2 Well is in the southwest quarter of Section 24?

A Yes.

Q Would you identify for us who the non-operating working interest owners, some of them who have committed to that rate?

A It's Union Oil Company of California.

Q And that well was drilled in 1984?

A Yes. That well has not been completed yet.

Q Do you know how the estimated well cost on the AFE that was submitted to Chama by letter dated January 4th, 1985, upon what basis that was prepared?

A Well, the No. 1 Well has total drilling and completing costs of about $1.8-million and the No. 2 Well, which has not yet been completed, I think is now around $888,000.

Q How then was the estimated well costs on

this Exhibit Number Five -- I'm sorry, Exhibit Number Three, been compiled and prepared?

Was it based just upon the costs for those two wells as projected or based upon some other costs?

A Well, I can't really say --

Q All right.

A -- for certain. I assume that the costs on the 1 and 2 wells were certainly taken into consideration.

Q Except for the AFE, Miss Hughes, were the other Exhibits One through Seven either prepared by you or represent correspondence received by BTA from Chama in files that are subject to your control and supervision?

A Yes.

MR. KELLAHIN: That concludes my examination of Miss Hughes.

We move the introduction of Exhibits One through Seven.

MR. STOGNER: Is there any objection?

MR. CARR: No objection.

MR. STOGNER: Exhibits One through Seven will be admitted into evidence.

Mr. Carr, your witness.

CROSS EXAMINATION

BY MR. CARR:

Q Miss Hughes, my name is Bill Carr. I represent Chama. I have several questions for you.

If you would look at your Exhibit Number One, the three spacing units are indicated. As to the spacing unit which is comprised of the southwest quarter of 24, did that case require that BTA come in and seek a compulsory pooling order?

A We did at one time seek a compulsory pooling order but it was later dismissed.

Q Okay. Was there ever a hearing, to your knowledge on that well?

A Yes, there was a hearing.

Q Did you testify in that hearing?

A Yes, I did.

Q And what was the subject of that hearing?

A Well, the subject of that hearing was the forced pooling of the west half of the southwest quarter.

Q Now no hearing, I assume, was required on the southeast quarter.

A That's right.

Q Does BTA own all the working interest in that, in that quarter section?

A Yes, it does.

Q And so we're now on the second pooling hearing in three units.

The first letter in your -- which I believe is Exhibit Number Two, is dated May the 9th. I be-

lieve you stated this was BTA's first attempt to contact Charles Nearburg of Chama Petroleum --

A Yes.

Q -- Company. Was there any follow-up, that you're aware of, on the part of BTA after this letter was sent in May?

A No.

Q Are you aware of any telephone calls or anything mailed to Chama?

A No, I'm not.

Q Was this -- it doesn't seem to indicate it was mailed by certified mail. Do you know if it was or not?

A I don't believe it was.

Q Are you aware that the address on this letter is incorrect?

A No, I'm not aware of that.

Q That the true address of Chama Petroleum Company is Box 31405 and that the zip code is 75231?

A I was not aware of that.

Q Did -- I assume you didn't receive any response from Chama to this letter.

A No, sir.

Q Are you aware of the hearing that was held before the Division on January the 3rd concerning the change in spacing, or the limitation of the pool rules for the Lea Penn Gas Pool?

A I was aware of that, yes.

Q That took place the day before your letter was sent to Chama proposing the -- the second letter to Chama proposing development of the northeast quarter of 25, is that correct?

A You said it took place on January the 3rd?

Q Yes.

A Then that would be the day before our letter.

Q And you received a response to your January 4th letter ten days later, that being the next exhibit in the packet of material --

A Right.

Q -- dated January 14th.

Now that letter requested a personal meeting between the parties, did it not?

A Yes.

Q But prior to a personal meeting there was an exchange of applications for compulsory pooling, is that right?

A Well --

Q Or was there a meeting before the application for compulsory pooling was filed by BTA, do you know?

A I don't think there was a meeting before we filed our compulsory pooling application now.

Q But we are in a position where we don't

have agreement between the parties for the development of the tract. That's fair to say.

The overhead charges that you have recommended, those are the figures that were actually used on the Lynch No. 2 or was it the Lynch No. 1?

A The Lynch No. 2.

Q Okay, and are those figures in line, the figures for the Lynch No. 2 and these, are they figures that were used for other wells in the area prior to the drilling of the Lynch No. 2?

A Well, I don't know.

MR. CARR: I have no further questions.

MR. STOGNER: Mr. Kellahin, no redirect?

CROSS EXAMINATION

BY MR. STOGNER:

Q Miss Robin, on Exhibit Number Six there is a P.S. in the letter from Chama Petroleum concerning changes in number two and number five.

Does that correspond with BTA's letter of -- what number two and number five are they actually talking about?

A I believe they're talking about number two and number five of their own letter of --

Q Their own letter.

A -- February 21st.

Q Okay. Did BTA respond to these two changes in any way?

A We responded by letter dated February 22nd. Do you have a copy of that?

Q That's Exhibit Number Seven, right?

A Yes, sir.

Q Do you know if there was any phone conversations between them?

A Well, I think that the February 21st letter was written and then the postscript was made as a result of a telephone conversation between Mr. Nearburg and Bob Crawford of BTA's office.

Q Do you know if these are the only two disagreements between BTA and Chama?

A As far as I know.

Q Okay.

MR. STOGNER: I have no further questions of Miss Robin.

Are there any other questions of this witness?

If not, she may be excused at this time.

Mr. Kellahin?

MR. KELLAHIN: Mr. Examiner, at this time we'll call Mr. T. B. O'Brien.

T. B. O'BRIEN,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. O'Brien, would you please state your name and occupation, sir?

A I'm T. B. O'Brien. I'm a drilling engineer. I'm President of O'Brien-Goins-Simpson, Incorporated, which is a drilling engineering firm.

Q What is your relationship to BTA, the applicant in this case?

A I was asked by Mr. Johnson of BTA to review their drilling records on the No. 1 and 2 Lynch Wells, to review their AFE and give them an opinion as to the accuracy, or probably accuracy, of their AFE.

Q Would you describe for the Examiner what background you have that allows you to provide that service to someone like BTA?

A I've been in the business of drilling oil wells for something over thirty-eight years.

I have been a drilling engineer for that period of time.

I've made estimates, cost estimates on I can't tell you how many wells.

I have managed the operations for an oil company.

One of my primary occupations within the business of being a drilling engineer is to design wells, to estimate costs, to manage drilling operations, to trouble-shoot wells that are in -- having problems.

I appear as a technical witness or expert witness, if you please, quite frequently. I on occasion arbitrate disputes regarding the cost and techniques, problems incurred in drilling wells.

Q Have you previously testified as a drilling expert before the New Mexico Oil Conservation Commission?

A Yes, sir.

MR. KELLAHIN: We tender Mr. O'Brien as an expert drilling engineer.

MR. CARR: We'll stipulate that Mr. O'Brien is an expert witness.

MR. STOGNER: He is so qualified.

Q Mr. O'Brien, in reference to the work you've performed for BTA in reviewing their drilling program and the information from their first two wells, have you compared that program and those costs to the estimated well costs for the subject Lynch No. 3 Well?

A Yes, sir.

Q I show you what has been introduced as an

attachment to BTA Exhibit Number Three, which purports to be a well cost estimate, an Authority for Expenditure, and ask you if you can identify that document?

A This was the -- is a copy of the AFE that was furnished me by BTA to consider in this investigation that I did.

Q And have you completed that investigation for BTA?

A Yes, sir.

Q In terms of a drilling program that you would prepare or pass on as being adequate for a well to this particular depth in this particular area, have you reached an opinion?

A Yes, sir.

Q And what is that opinion?

A I think this is an accurate or reasonably accurate, appropriate AFE and drilling program.

Q Are there any unusual circumstances or conditions about drilling a well in this area to this depth that we ought to know about?

A Probably the most unusual thing in this well program is the fact that there are three strings of casing required to the depth of 5500 feet in addition to conductor pipe.

There's a 700-foot string of 20-inch set to cover water, possible fresh water zones.

There's 3500 feet of 13-3/8ths set to go

through the salt and this being in the potash area, to cover the potash.

Then a string of 9-5/8ths is set at 5500 feet.

The regulatory bodies, the BLM, primarily, require that both the 20-inch and the 13-3/8ths be cemented from shoe to surface.

The reason for the, what be thought to be an extra string of casing here, is that between 3500 and 5500 feet lost circulation occurs even when using fresh water. It is impractical, another point that is important here is there are no water wells in this immediate vicinity that are adequate to provide drilling water. Water has to be hauled.

Then between 3500 and 5500 feet lost circulation occurs with fresh water. If an attempt were made to drill that interval with saturated brine, which would be in use when 3500 feet is reached, then lost circulation would be complete and the cost would be excessive.

That same problem applies to the portion of the hole below 5500 feet. The mud density required to drill the remainder of the hole reaches in excess of 10.2 or 3 to the order as much as 10.5 or so pounds per gallon, and the 3500 to 5500 foot zone simply will not stand that mud density.

Therefore, the unusual number of casing strings is required in this particular locality. This is

not a particularly common thing in the area but it is a problem that occurs in this particular locality.

Q You made reference to the potash/oil area. Is this an area that is designated as a potash/oil area under the Commission's R-111-A rules or this an area designated by the Secretary of Interior as being contained within the Federal Potash Enclave?

A It is my understanding that is it within the area designated by the Secretary of Interior.

Q And not within the area designated by the Oil Conservation Commission?

A That's my understanding.

Q In your opinion is the casing and cementing and drilling program outlined for this well one that will adequately protect potential fresh water sources and minimize the potential risk to any potash operations that may take place in this area?

A It will do that.

Q In terms of drilling this type of well, Mr. O'Brien, in your opinion are the estimate costs fair and reasonable?

A Yes, they are.

Q Can you characterize for us the type of risk involved in drilling this type of well in this area as opposed to drilling the ordinary garden-variety Morrow well outside of a potash area?

A There are, of course, limitations imposed

by BLM on wells that are drilled within the potash area; requirements for running and cementing casing and this kind of thing, and with those restrictions, well, those are the restrictions that are imposed because of the presence or possible presence of potash.

Q Has BTA as the proposed operator for this well properly budgeted for and planned for those contingencies or those potential risks?

A Yes, they have.

MR. KELLAHIN: That concludes my examination of Mr. O'Brien.

MR. STOGNER: Mr. Carr, your witness.

CROSS EXAMINATION

BY MR. CARR:

Q Mr. O'Brien, could you tell me what AFE stands for?

A Authority for Expenditure, I think it says.

Q So this document is a tool used at the beginning to sort of set out what the estimated costs for drilling a well in this area would be.

A That is correct.

Q And then payments that would be made ultimately would be adjusted to reflect the actual costs.

A That is correct.

Q So if there is a surprise, the costs would go up and if there's a surprise, savings likewise, of course, might come down.

A That's correct.

Q Now you talked about the three strings of casing that are being required. I want to be sure I understand your testimony.

Are they required by BLM or a government agency or are they actually required by the physical situation encountered out there?

A I think to a degree both. There is a requirement for a water string. There is a requirement for a salt string, and then the physical conditions require the third string.

Q And so there is a government regulation in place to -- that requires this casing because of the physical characteristics. Is that a fair statement?

A To a degree.

Q How is that not fair?

A Because the government regulations do not require the 9-5/8ths. They do --

Q Okay.

A -- require the 20-inch and 13-3/8ths or casing in those places but they do not require the 9-5/8ths.

Q Do you actually go out when they're drilling the well or is that your responsibility in your job?

A Not near as much as I used to. That's

one of the things about getting old.

Q Things are getting better in some respects.

A I'm glad you added the last part of that.

Q When you look at an AFE like this and you testified that it's fair and reasonable, it's possible, is it not, that some figures might in another APE for a similar well be some columns slightly higher, others slightly lower, and that you still could have, although some variation, still a reasonable AFE?

A If you -- depends on how much variation you want to accept as reasonable, I suppose.

Q But these are not the only possible figures.

A Absolutely not.

Q Okay. That's all I have.

MR. STOGNER: Mr. Kellahin, any redirect?

MR. KELLAHIN: No, sir.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. O'Brien, are you a drilling contractor or a drilling consultant?

A I'm not a contractor. I am a consultant, yes, sir.

Q Did you consult for BTA on the Lynch No.

1 and No. 2 Wells?

A No, sir.

Q Are you familiar with those two wells?

A I am, having reviewed their drilling reports.

Q Was their casing program similar to these?

A Yes, sir, almost identical.

Q Almost identical. And if I remember right, the 13-3/8ths and 9-5/8ths were both circulated with cement?

A No, sir, the 20-inch and 13-3/8ths were circulated. The 9-5/8ths, if I recall, the cement came up to some point within the 13-3/8ths. I seem to remember 3100 feet, but I may be off on that.

Q Anyway, back up to the shoe of the 13-3/8ths.

A It was within the 13-3/8ths.

MR. STOGNER: I have no further questions of Mr. O'Brien at this time.

Are there any other questions of this witness?

MR. KELLAHIN: No, sir.

MR. STOGNER: The witness may be excused.

Mr. Kellahin?

MR. KELLAHIN: Mr. Zoller.

MARVIN L. ZOLLER,

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. Zoller, for the record, would you please state your name?

A Marvin Zoller.

Q Mr. Zoller, would you describe for us what it is that you do for BTA Oil Producers?

A I'm the Chief Operations Geologist for BTA, which is primarily the drilling, for instance last year I believe 93 wells.

Q Mr. Zoller, have you previously testified as a petroleum geologist on behalf of your company before this Division?

A Yes, sir.

Q And were you involved as the geologist for your company in the drilling of the other two Lynch wells that we have discussed in the hearing this afternoon?

A Yes, sir.

Q And have you prepared a geologic study and certain exhibits with regards to BTA's forced pooling application this afternoon?

A Yes, sir.

MR. KELLAHIN: We tender Mr. Zoller as an expert petroleum geologist.

MR. STOGNER: Are there any objections?

Mr. Zoller is so qualified.

Q Mr. Zoller, let me direct your attention to what we've marked as BTA Exhibit Number Eight, which is a contour map on top of the Morrow Clastics.

A Yes, sir.

Q I would like you first of all to identify the exhibit before we get into describing what it means and how you interpret it and what conclusions you reach.

If you'll simply describe the exhibit for us.

A It's merely a structural map made on a point about midway down in the Morrow section, which is a point where the Morrow becomes a clastic or sand-shale section instead of primarily a limestone section, which is the case in the top 3-or-400 feet of the Morrow.

Q When we look at a possible well location for the well to be drilled in the northeast quarter of Section 25, do you have an opinion as to where that well ought to be located?

A Well, I have proposed it 660 out of the north and east corner of Section 25. I don't see anything wrong with that location. It's certainly it's not planted in cement, however.

Q What advantage does it give to the ability to produce the potential gas in this northeast quarter to have a well located similar to a position as you have indicated for us?

A Well, what I was attempting to do, of course, one, I wanted to get on BTA acreage. Two, I wanted to get just as high on the structure as I could get because some of the sands appear to have a gas/water contact; some of them apparently do not have.

Q Have you had an opportunity to consider the proposed location that Chama has suggested in their application which would be a location, as I see from the advertisement, of 660 from the north line and 1980 from the east line?

A Yes, I'm familiar with that.

Q All right, sir. Do you have an opinion with regards to which of the two proposed locations for which you have a preference?

A Well, naturally I prefer my own but with the control you've got, you know, it's hard to stand here and beat a drum and fight for 1320 feet when you're talking about a hole that's 13,600 feet deep. So there's certainly room for disagreement.

Q Have you had an opportunity to discuss the geologic considerations in this prospect with anyone representing Chama?

A No, sir.

Q All right. Let us turn now to the cross section, which is the C-C' cross section. I believe it's marked as Exhibit Number Nine.

A Okay.

Q And have you identify the cross section for us.

A Do you want to put this on the wall?

Q I think it might be helpful. It seems to be a little longer --

A It's seven feet long.

Q Using the line of cross section shown on Exhibit Number Eight, would you identify for us what you've done in preparing Exhibit Number Nine?

A Yes. If I can recap a little bit here, Mr. Examiner, out of all the hearings we have I'm running out of exhibits.

There is a cross section A-A' down towards the south end of the section which is already in your files twice.

There's a B-B', which goes from the northwest to southeast, which is already in your files and which Chama has; in fact, Chama has both of those.

That cross section, those two cross sections covered twelve wells, so in an attempt to cover one more aspect of risk, I decided to make one more cross section and cover the only two dry holes in the immediate area of the field, since dry holes is anotner form of risk.

Up on the left end of your cross section, which would be Wells Nos. 1 and 3, are the two dry holes.

Well No. 1 has a number of sands, most of which were extremely tight. We ran two drill stem tests and we got mud on both of them. They ran a couple of wireline formation tests and got very small quantities of water out of what's colored as the gray sand.

Well No. 3, which is on the east flank of the structure ran three drill stem tests, two within the Morrow, one within the -- probably the Barnet. One got 10 feet of mud, the other one got 63 feet of mud; obviously, neither one had porosity and permeability, or either.

The only significance that I really place on these two wells is that both of them are higher structurally than producing wells on the west flank of the field.

They either had sand or didn't have sand and if they had sand, they didn't have any permeability. It was to show that additional element of risk, but now we have a cross section that goes through every well in the field except two out on the very western flank and both of those didn't make enough gas to worry about drawing a cross section through them.

Q Do you have an opinion, Mr. Zoller, with regards to the risk factor penalty that ought to be assessed against any nonconsenting working interest owner by the Division should it enter a forced pooling order in this case?

A Well, it's my believe that every Morrow

well in New Mexico deserves the 200 percent penalty, whichever side I'm on.

Q Have you discovered anything in examining this area that would cause you to change that general opinion?

A Maybe I've discovered some things that would cause me to believe it stronger. These sands are, if anything, a little more erratic than normal.

I will say that this cross section does just exactly what the other two does, if you just go down it well by well and shows the erratic nature of the sands probably better than the other two.

Q Can you express an opinion on behalf of your company with regards to a selection of the operator for this well between BTA and Chama?

A Of course it's my opinion that BTA is the one that stepped out and took all the risk to make the extension to this field, or this reservoir. We spent a Million and a Half Dollars, or so, on that well. We have since spent a Million and a Half Dollars on the second well, and I'm a little perplexed to see why in the world we can't go ahead and finish the job and drill the third location, which is the last location we've got.

Q Have you participated in any wells in which Chama is the operator?

A Not that I'm familiar with.

Q Were Exhibits Eight and Nine prepared by

you or compiled under your direction and supervision?

A They were prepared by me.

MR. KELLAHIN: We move the introduction of Exhibits Eight and Nine.

MR. STOGNER: If there is no objection, these exhibits will be admitted into evidence.

MR. KELLAHIN: That concludes my examination by Mr. Zoller.

MR. STOGNER: Mr. Carr, your witness.

CROSS EXAMINATION

BY MR. CARR:

Q Mr. Zoller, when we look at your structure map I believe that I've seen this structure map before, is that correct?

A Very similar.

Q Very similar? Have there been changes?

A There's been one change on the map, Mr. Carr. In the process of making the cross section I got up to the north end, the farthest well away from the whole problem and to save my life, I don't know where I got that point on the other map, but this one's right.

Q All right, you have not adjusted the contours?

A No.

Q All right.

A In fact, let me volunteer something for you. We logged our well yesterday and the top of the Clastics on the second well is -9263, if you'd like to put it on your map.

Q All right, and what was that? It was --

A -9263.

Q And what did that figure show?

A Huh?

Q That figure shows what?

A That is the top of the Morrow Clastics, which is the point we're contoured on here, and it's 17 feet low to the No. 1.

Q Now on this structure map, does this show the gas/water contact?

A No.

Q In your Lynch No. 1 did you encounter any water?

A In the Lynch No. 1, if you remember, I submitted an exhibit showing a foot-to-foot correlation or calculation in which it indicated that we had 44 feet of -- possible 44 feet of gas column before we were definitely into what we calculated to be wet.

We drilled 1320 feet west and came in 17 feet low.

The first sand, the main sand, has no water calculation whatsoever on the second well that we can see.

Q Now, as I understood your testimony, you stated that one of the considerations in recommending the well location in Section 25 in the northeast of 25, was that you wanted to be as high structurally as possible.

Isn't one of the reasons for that to try and stay as far above the water that might be in any of these zones as possible?

A That's not really a major consideration here because the sand colored yellow on all the cross sections is the main sand in the No. 1 Lynch. It will be the main sand in the No. 2 Lynch.

The No. 1 Lynch is the one that attempted, or seemed to have a water down in the bottom of that sand. We're going to be too low for that sand unless that sand goes completely out, comes back in at a separate reservoir, it's not an objective in the No. 3 well.

Q So that same sand, if I understand your testimony, you do not believe that the sand that's producing in the Lynch No. 1 is going to be a main objective in the No. 3.

A If a sand of that age produces in the No. 3, it has to be separated from the No. 2 -- yeah, No. 1.

Q And tell me then why is it that you'd like to be structurally high, as high structurally as possible.

A Well, there's just something about anybody tnat's been in this business very long that if you've

got a choice of being high or low, you want to be high.

There are -- there is at least one other sand, and I can't tell you offhand which one it is, that had a little water. I think it's one of the brown up higher on one of the cross sections. There is a sand up there that had a little water in one well.

So again, it just makes sense to try to drill wells as structurally high as you can, even if you know it's almost all a stratigraphic trap.

Q And is the reason for trying to be high to avoid any water that might be there?

A Well, it in this case it certainly is. There's some slight amount of evidence that some of the better wells are up near the crest of the structure, but that's not a cardinal rule, and some indication that some of the thickest sands are fairly high on structure, but that's not -- that doesn't fit every well, either.

Q Are you aware that the Chama Well in Section 25 is producing from a sand that's below the main sand in the Lynch Well?

A Oh, yes.

Q And you're aware that that's producing no water.

A Oh, yes, but that has nothing to do with this. That's a different reservoir.

Q That's a different reservoir and that's -- would it be your opinion that that's more stratigraphic

trap than, perhaps, a structural trap you're looking at down there, or do you know?

A I think they're all stratigraphic traps. There's just some of them that aren't completely full of gas.

Q But structure is an important aspect as you go in and start working in this area, is it not?

A Well, it is if you're in one of those sands that does have some water in the bottom.

Q Like in the Lynch No. 1?

A Like in the Lynch No. 1.

Q And I believe you've previously testified that in that sand that it's a -- it's very sensitive to structure in the Lynch No. 1.

A Very sensitive? I don't know what that term means, but I testified that we, I think we perforated 14 feet at the top of it. We have calculations of about 30 feet of gas above water. We have a tight section that we don't know about, which might give us a total section of 44 feet above water.

Q Mr. Zoller, you testified at the hearing on the 28th of November concerning the Lynch No. 2 Well, did you not?

A I've testified at all of them, so I must have.

Q And at that time you were placed under oath and were asked certain questions by Mr. Kellahin, and

at that time Mr. Kellahin -- and this is, Tom, on Page 19, Line 7 -- Mr. Kellahin asked you:

"The structural relationship to production insofar as it affects the southwest quarter of 24 is one that's very sensitive to structure, is it not?"

Does that sound like a familiar question?

A (Not clearly understood.)

Q Your answer at that time was: "Was very."

A That's very in the sense that we did have water in the phase of this same sand in the No. 1 Well.

Q Okay, and the only point I was after with my question was that there are -- it's a mixed bag here. You may have some -- some stringers or some reservoirs in the Morrow that structure is an important factor.

A We very definitely do have.

Q Now if we look at the Lynch No. 1 Well, that's an extremely good well, is it not, for this area?

A Well, it had an extremely high potential.

Q Is it -- does it have the highest potential of any well in the Lea Penn Pool?

A No, sir. There's a well just north of it, the Marathon No. 11, that potentialed for 17,000,000 cubic feet a day and out of that completion didn't make but 240,000,000 cubic feet of gas.

Q Is it -- would you characterize it as a good well?

A It was after they plugged it back to similar sands, but it wasn't out of that zone.

Q As for the Lynch No. 1, is it a good well in that yellow sand body that we're -- we're talking about?

A The Lynch No. 1 has an extremely high potential and next year I'll try my best to answer the rest of your question.

Q But it has an unusually high potential and that's what you can --

A Well --

Q -- what do you judge a well on at this stage in its life, its potential.

A At this stage in its life?

Q Yes.

A Oh, you base it on its potential, its porosity; there's all kinds of engineering things that we might get to later.

I'm tremendously impressed by high potentials but when I've got a well a half, three-quarters of a mile away that potentialed for 17,000,000 cubic feet and day and didn't make but 240,000,000 cubic feet of gas, I'm not going to sit here and tell you that the Lynch No. 1 is an extremely good well.

It has an extremely nice potential.

Q And a year from now you might be able to tell me that it was and you might tell me wasn't.

A That's right.

Q Now the zone that we're talking about, the yellow zone on your Exhibit Number Nine, I believe, that is present in the Lynch No. 1 Well, you've been able to correlate that over a fair portion of the Lea Penn Gas Pool, have you not?

A I've been able to correlate every one of those zones all the way -- over every cross section I've got. Some of them come in and go out but the thickness is still there whether there's a sand there developed or not. There's shale to replace it or shaley silt.

Q And you testified that even though that sand body may be present in the north of Section 25, you don't consider that a primarly objective in the well that's being proposed. Is that -- is that a correct statement?

A I don't consider it to be one but something happened in the No. 2 Well that gives me faith.

Q Faith that it is or that it isn't?

A The bottom part of the sand that we found in the No. 1 Well, they calculated wet?

Q Yes.

A Was extremely dirty 1320 feet to the west.

What sand we had that was clean was extremely tight.

If that can happen 1320 feet to the west, there is no telling what's going to happen 2000 feet to the southeast. We may hit a sand of that age that's a complete-

ly separate reservoir, even if it is low.

Q And you may hit the same sand body, also. It's just a --

A Right.

Q You have to drill to see.

A It can be the same age and not be connected.

Q But it may be, and you won't really know that till you drill. Isn't that a fair statement?

A Well, if we drill it and it produces gas, I'm going to separate the two wells, because one of them calculates wet, and if we're down dip to a wet well producing gas, I'm going to build another reservoir down here.

Q Now, when we look at any of these wells, they're -- I believe you testified earlier that some wells in this pool may be able to drain in excess of 160 acres.

A Don't see any reason in the world why it wouldn't.

Q And that depends on the quality of the well. A better well would drain more -- I hope I'm right on this -- than a poor well would.

A The quality of the permeability and porosity is what it is.

Q Now, if we -- if we look at the subject proration unit in Section 25, doesn't it make sense that the closer we would get to the Lynch Well the higher structurally we would be?

A I don't know how you can do any better than you're doing unless you move 330 or 467, or something, from the north line, but we moved it 660 and I believe that's what the rule says is as close as we can get.

Q But it would be desireable to get as close to the Lynch as possible. That would mean that we're hopefully up structure, isn't that correct?

A I'm all for proximity. I just don't know how to get there from here.

Q Now I've asked this before but I'd like to get it in the record.

Have you attempted to map the Morrow in this area?

A You talking about Isopach?

Q Yes.

A I don't think I own enough paper to Isopach all the different zones that are out there and I don't think I'm qualified or capable or doing it if I did.

Q Do you know if anyone in BTA has done that or would you be the person?

A I can guarantee you no one in BTA did it.

Q Now if I look at the structure map, I see a fault.

A Right.

Q Can you tell me just what that fault is based upon?

A It's based on two things. It's based on

some geology that was brought to us off the street when we first looked at this deal, plus when I mapped it and found out that the Kell Oil State 30 Com in Section 30 was, oh, what is it, 800 feet lower now than we know the BTA well is, for instance, it was also 500 feet lower than the geology that we looked at when we bought this deal, so I proceeded to put that fault in there myself because there's just no doubt in my mind, there wasn't then and there sure isn't now, with 800 feet of dip between BTA's No. 1 and the Kell Oil well, that there's a fault out there.

All that fault says is, in my opinion, up in Section 7 you'll see a Sinclair State, I don't think there's any doubt that fault is east of the Sinclair State. It's somewhere west of the Kell Oil Well.

I don't propose to use it as exactly where I've got it.

Q That's an -- that's an interpretation based really on those -- on limited points, and there's a fault somewhere in there.

A That's right, sir.

Q On this structure map again, if we look at your proposed location in Section 25, it is -- would be below the 9300-foot contour, is that correct?

A 9305, I guess would be a fair figure if you one.

MR. KELLAHIN: I'd be willing to accept that.

Q If you look at the Chama location plotted 660 out of the northwest corner of that proposed spacing unit, it would actually be above the 9300-foot contour, would it not?

A Probably all the way up to 9290, if you like it.

Q So actually the Chama location would be structurally higher, would it not, than yours?

A If my map was 100 percent right.

Q This is your best estimate, is it not?

A It's the best I could do.

Q This is your best interpretation --

A Best I know how to do.

MR. CARR: I have no further questions.

MR. STOGNER: Mr. Kellahin, any redirect?

MR. KELLAHIN: Yes, sir.

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q Yes, sir. How far about physically on the surface are the two proposed well locations?

A 1320 feet.

Q And if we use the numbers that Mr. Carr has developed in terms of structural position, there's about 15 feet of difference in structure between the wells?

A That's my interpretation of my own map. It's the best I can do.

Q Is this map to such a degree of reliability that we can map down to a difference of 15 feet in structure?

A Well, let me put it this way. I lucked out on the No. 2 Lynch but I don't expect to do that very often.

Q Will 15 feet of structure make a material difference in the quality of this well?

A It won't make any difference in the interpretation of the sand colored yellow and everything else out there, every other sand at that location is a wildcat, anyway.

Q In your opinion is there any material difference between the two locations?

A No, none.

MR. KELLAHIN: Nothing further.

MR. STOGNER: Is this Exhibit Nine?

MR. KELLAHIN: Yes, sir.

A Yes, sir.

MR. STOGNER: I don't have any questions of the witness, Mr. Zoller, at this time.

Are three any other questions of this witness?

MR. KELLAHIN: No, sir.

MR. STOGNER: If not, he may be excused.

Mr. Kellahin, you alluded several times to several different cases previous to this. Do you know the case numbers on them, Mr. Carr or Mr. Kellahin?

MR. KELLAHIN: I would suggest for your reference, Mr. Examiner, that you take administrative notice of the case in January 3rd, which was a consolidated case. Those are Cases 8446 and 8447.

There is another hearing transcript and the number is -- Mr. Carr may have it.

MR. CARR: The number of that case is 8420. That matter was heard November 11 -- I mean, I'm sorry, November 28th, 1984.

We have no objection to your taking administrative note of both of those cross sections referred to as exhibits.

MR. STOGNER: The hearing examiner will take administrative notice of all three of the cases that you just talked about.

MR. KELLAHIN: That concludes my presentation on behalf of BTA.

MR. STOGNER: Thank you, Mr. Kellahin.

Mr. Carr?

MR. CARR: At this time I would call Mr. Mark Nearburg.

MARK NEARBURG,

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

DIRECT EXAMINATION

BY MR. CARR:

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

A I'm Mark Nearburg. Dallas, Texas.

Q By whom are you employed?

A Chama Petroleum Company.

Q In what capacity?

A Landman.

Q Have you previously testified before this Commission or one of its examiners and had your credentials as a landman accepted and made a matter of record?

A Yes.

Q Are you familiar with the application filed in each of these cases by BTA and by Chama?

A Yes.

Q Are you familiar with the subject acreage and the proposed wells?

A Yes.

MR. CARR: Are the witness' qualifications acceptable?

MR. STOGNER: Are there any ob-

jections?

MR. KELLAHIN: No, sir.

MR. STOGNER: Mr. Nearburg is so qualified.

Q Mr. Nearburg, will you briefly state what Chama is seeking with this application?

A Chama Petroleum Company seeks an order pooling all mineral interests from the surface to the base of the Morrow formation underlying the northeast quarter of Section 25, Township 20 South, Range 34 East, Lea County, New Mexico, to form a standard gas spacing and proration unit for any and all formations and/or pools dedicated on 160-acre spacing to be dedicated to a well to be drilled at a standard gas well location, 660 feet from the north line and 1980 feet from the east line of said Section 25.

Chama would also ask the Commission to establish the cost of drilling and completing said well and the allocation of the cost thereof, as well as actual operating costs and charges for supervision, designation of Chama Petroleum Company as operator of the well, and a charge for risk involved in drilling said well.

Q Mr. Nearburg, does Chama also seek a denial of the application of BTA?

A Yes.

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

A Yes.

Q Would you please refer to what's been marked for identification as Chama Exhibit Number One and review this for the Examiner?

A Chama Exhibit Number One is a land map with the subject acreage, the northeast quarter of Section 25, outlined in orange.

Chama acreage is shown in yellow. BTA acreage is the east half northeast in white. Chama's proposed well location is the red dot.

Q And what is that location on a footage basis?

A 660 feet from the north line and 1980 feet from the east line.

Q And in the northeast quarter of Section 25 Chama, or Charles Nearburg, own 50 percent of the acreage. BTA owns the remaining 50 percent working interest. Is that correct?

A That's correct. I assume BTA has the whole working interest under their agreement with Exxon.

Q And what is the primary objective in the Chama well?

A The Morrow formation.

Q The same as BTA?

A Yes.

Q Would you now refer to what has been marked as Chama Exhibit Number Two and review this for the Examiner?

A This is Chama's AFE for the proposed well.

Q And --

A A dry hole cost is $815,000 and completed cost is $1,221,230.

Q And there's a difference in this AFE and the one supplied by BTA, is there not?

A Yes, that's correct.

Q Is it by and large a result of casing cost?

A By and large it's -- it is a difference in the casing program.

Q And if Chama is successful in this case and drills the well, they will comply with all requirements of any government agency concerning the casing of the well, will they not?

A Yes, they will.

Q And if savings can be affected, that would be reflected in the actual cost, and if additional expenses are required, that would also be reflected in the actual cost.

A That's correct.

Q Are these costs, in your opinion, in line with what's being charged by other operators in the area for similar wells?

A Yes.

Q Would you please briefly so we don't repeat the testimony of Miss Hughes, would you briefly just

summarize the efforts you have made to obtain voluntary joinder in the well?

A We received our first communication from BTA on January 4th, 1985.

Miss Hughes summarized all the correspondence accurately and there's not much need to go back through it.

We were -- I would like to point out we were force pooled before there was any communication about a meeting which we requested, and that's why we responded with a forced pooling.

Q Have you continued to negotiate with BTA?

A We have continued to talk to BTA right up to yesterday morning and my conversation with Mr. Crawford. As yet we have not resolved any differences.

Q Do you remain willing to continue those negotiations if there is any reason to think they might produce voluntary agreement?

A Yes.

Q Would you just identify Exhibit Number Three for the Examiner, please?

A Exhibit Number Three is a series of letters, being the correspondence between BTA, Chama, and the OCD.

I would like to point out that we have include the May -- a copy of the May 9th, 1984, letter, which was given to me by Mr. Bob Crawford and Mr. C. R.

Pearson on the 15th of February at our meeting in Midland.

We'd never received a copy of this letter.

Q In your opinion has Chama made a good faith effort to reach voluntary agreement concerning the development of this spacing unit?

A Very much so.

Q Have you drilled other Morrow wells in the area?

A Yes.

Q And are you prepared to -- have you made an estimate of the overhead and administrative costs while drilling this well and also while producing it, if in fact it's a successful well?

A Yes. We had slightly higher figures than BTA did. We have $5300 drilling and $585 overhead.

Q $5300 drilling?

A Yes.

Q Do you believe these costs to be in line with what's being charged with other operators in the area?

A Yes.

Q And do you recommend that these figures be incorporated into any order which results from this hearing?

A Yes.

Q Mr. Nearburg, does Chama Petroleum Company seek to be designated the operator of the proposed

well?

A Yes, we do.

Q And why do you seek to be designated operator?

A We seek to be designated operator because the basic difference with BTA through all of this has been the well location and we believe, as testimony indicates, everyone wants to get as close to the producing wells as possible. We also have geologic testimony to support our position.

That naming Chama as operator and giving them the right to drill the well at the location they would like will definitely prevent waste and protect correlative rights which would otherwise not be protected.

Q Were Exhibits One through Three prepared by you or compiled from the Chama files?

A Yes.

MR. CARR: At this time, Mr. Stogner, we would offer into evidence Chama Exhibits One through Three.

MR. STOGNER: Are there any objections?

MR. KELLAHIN: No, sir.

MR. STOGNER: Exhibits One through Three will be admitted into evidence.

MR. CARR: And that concludes my direct examination of Mr. Nearburg.

MR. STOGNER: Mr. Kellahin, your witness.

CROSS EXAMINATION

BY MR. KELLAHIN:

Q Mr. Nearburg, I have forgotten what the producing rate overhead charge was that you proposed.

A $585.

Q I direct your attention to Exhibit -- your Exhibit Number Two, sir.

A The map?

Q No, sir, the AFE.

A Okay.

Q In these various discussions and negotiations that have gone on with BTA, has Chama ever submitted to BTA a proposed AFE by Chama for this well?

A We have never gotten to the point of having that be a concern in our meetings.

Q So the AFE that says prepared on February 24th, '85, is the only AFE that has been prepared for this well by Chama?

A That's correct. No AFE was previously requested, as I recall.

Q Were you involved in the negotiations yourself, Mr. Nearburg, with BTA about Chama's interest in the well and the various details in drilling this well?

A Personally?

Q Yes, sir.

A Yes.

Q Isn't the reason that Chama did not prepare until February 24th, 1985, a proposed AFE just the reason, the one, the fact that Chama's negotiating position with regards to this well has been one where Chama proposes to farmout acreage to BTA?

A No, the AFE was not prepared because the person who does that was in Hawaii.

So it was prepared immediately their return.

Q If you'll look at Exhibit Number Three, you've just told us that the principal reason that Chama wants to drill this well and be operator is because of the location, yet I see in Exhibit Number Three in paragraph three, it says the well will be at a location of BTA's choice.

Will you explain that to me?

A Simply in a cooperative effort to get a good well drilled. We feel that the farmout terms are a trade-off in not having the well where we want it. As we have not reached farm-out terms, we are here to take operations and try to drill the well where we want it.

Q In terms of a farm-out, Chama proposed to farm-out its acreage to BTA and I think the negotiations stagnated or broke down over the percentage of back-in after payout that Chama would receive.

A That's -- no, that's not correct. The negotiations have always broken down over geologic interpretation of where the well should be located.

And in my conversation yesterday morning with Mr. Crawfords, I reiterated this P. S. terms and he said, well, we will not consider them now. We'll go ahead with the hearing and see what happens.

So I don't know that those terms were actually -- how don't know how seriously they were considered by BTA, but these are certainly not the only terms we've discussed through the course of these negotiations.

Q All right. I need you to summarize for me what Chama's position was in terms of farming out its acreage and what response BTA has given on those essential terms.

A Would you be a little more specific. I don't really -- that's an awfully vague question, given the amount of negotiations we've had.

Q In terms of this February 21st letter --

A Uh-huh.

Q -- from Chama to BTA --

A Right.

Q The proposal from Chama was that BTA would earn before payout 100 percent working interest and a 75 percent net revenue interest.

A That's correct.

Q And that before payout Chama would retain

a royalty interest of 25 percent?

A No, the difference between 25 percent and presently existing lease burdens.

Q All right. So that there is a net burden as acquired by BTA of 25 percent?

A They would earn a 75 percent net revenue interest under our proposal, yes.

Q And that after payout, then, the over-riding royalty would be converted to a 40 percent working interest.

A That's correct.

Q With regards to that portion of the negotiations, what was the best offer that BTA made to you?

A The only offers I have from BTA are the ones in writing that you see in their letters.

Now, in the February 15th meeting I asked both Mr. Pearson and Mr. Crawford if they would go back and accept the original offer made, made in 1984, and they said, no, they did not think the economics would justify it.

At that point I said, well, I don't see much point in continuing the conversation.

Q What is the largest back-in after payout peprcentage that BTA offered to Chama for its interest?

A Back-in, working interest back-in?

Q Yes, sir.

A 25 percent working interest in the May 9, 1984, letter.

Q 25 percent back-in working interest after payout was what BTA said? I think the last --

A Which they have now stated they will not agree to.

Q All right. From looking at the correspondence, I guess the lowest working interest back-in percentage that Chama was willing to accept was a third.

A The lowest working interest back-in that Chama was willing to accept for ourselves on a farmout to BTA --

Q Yes.

A -- we've got to keep it clear.

Q I'm sorry.

A Is 33-1/3 as the P. S., yes.

Q All right.

Has BTA ever proposed to Chama that BTA would farmout its acreage to Chama?

A Only under the terms you see in these letters. No, they haven't, I'm sorry.

They, the whole point of this 33-1/3 percent was when Bob Crawford called me back and said will you take a 33-1/3 percent farmout, and I said, well, let me look into it.

When I ran the economics on it I did not have any figures for the Exxon trade, which, of course, we would be subject to if we take a farmout from BTA. If you look at fhe net revenue interest, which I won't get into

unless you really want me to, but if you look at the net revenue interest after payout when the option is -- for the working interest back-in is exchanged, you'll find that under the agreement with Exxon, the BTA net revenue interest decreases whereas the Chama net revenue interest increases.

So it's actually of benefit to BTA to take our farmout rather than us to take theirs. Theirs just doesn't work on the economics.

Q Thank you.

MR. STOGNER: Mr. Carr, any redirect.

REDIRECT EXAMINATION

BY MR. CARR:

Q Mr. Nearburg, if Chama is successful in this case, is Chama prepared to drill the well?

A Yes.

MR. CARR: No further questions.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Nearburg, would you please just recap what Chama's position is, other than BTA's? What does Chama disagree with?

A Chama --

Q In a nutshell.

A In a nutshell?

Q Yes, sir.

A The location of the well.

Q In your meetings with BTA have you -- how much have the two parties discussed this?

A Oh, we had a lengthy discussion, Mr. Pearson and Crawford and I. It was, as you know, it was an amiable discussion. It was very -- it was a very intense business discussion. It was not very emotional and we just came down to the fact that we couldn't agree on where the well should be located and therefore, here we are.

MR. STOGNER: Mr. Carr, do you plan ot provide a geological witness?

MR. CARR: Yes, I do.

MR. STOGNER: I have no further questions of this witness.

Are there any other questions of Mr. Nearburg at this time?

MR. KELLAHIN: No, sir.

MR. STOGNER: He may be excused.

Mr. Carr, I want to take a little break, about four minutes or five.

(Thereupon a brief recess was taken.)

MR. STOGNER: Okay, the hearing

will resume to order.

Mr. Carr?

MR. CARR: At this time I'd call Louis Mazzullo.

LOUIS MAZZULLO,

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

DIRECT EXAMINATION

BY MR. CARR:

Q Will you state your full name and place of residence?

A My name is Louis Mazzullo and I reside in Midland, Texas.

Q By whom are you employed and in what capacity?

A I'm a petroleum geological consultant and I represent Chama Petroleum Company's geological work.

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

A I have a Master's degree in geology and I've been working as an exploration geologist for nine, almost nine years now, most of which was involved in the interpretation and mapping, subsurface mapping of sedimentary -- sedimentary reservoirs, both for uranium and oil and gas.

I have been involved more recently in ex-

tensive study of the Morrow formation, which I had undertaken under contract to the GeoMap Company of Midland.

During the course of this study I had the privilege of looking at well cuttings, cores, and samples, from over 750 wells, and I've looked at over 1200 well logs from the entire Morrow depositional basin in Eddy, Lea, and Chavez Counties.

I have, among the various other formations that I've worked, I've done a lot of work mapping the Morrow for Chama Petroleum, as well as for the various publications that I have written on the subject.

These publications are with the West Texas Geological Society, the Southwest Section of the American Association of Petroleum Geologists, and more recently the Society of Professional -- of Petroleum Engineers.

Q And these articles that were published, were they on mapping the Morrow?

A They were specifically addressed on mapping reservoir trends in the Morrow, as well as potential clay problems encountered in the Morrow.

Q In your nine years of work as a geologist, have you been employed by any particular companies or have you worked as a consultant during that time?

A I have been employed by -- my first employer when I first got out of school was Energy Resources Corporation of Dallas, Texas. After that I worked with Phillips Petroleum Company in their Northwestern New Mexico

Uranium Project.

Following that I worked with The Superior Oil Company in Midland, and then I went on my own and have been in independent geological consultant for three years.

Q Are you familiar with the area that is the subject of today's hearing?

A Yes, I am.

Q Are you familiar with the applications filed by BTA and Chama?

A I am.

Q When did you first study the area which is the subject of today's hearing?

A I first studied the area on a regional scale as part of an extensive geological study for GeoMap Company, and that was over two years -- in fact, that was almost three years ago.

I have been working on the particular area for -- for Chama, the specific Lea South Area, as we call it, for over a year now.

Excuse me, for almost two years.

MR. CARR: Are the witness' qualifications as a geologist acceptable?

MR. STOGNER: Any objections?

MR. KELLAHIN: No, sir.

MR. STOGNER: He is so qualified.

Q Have you prepared certain exhibits for

introduction in this case?

A I have.

Q Would you refer to what's been marked for identification as Chama Exhibit Number Four, identify this and review it for the Examiner?

A Chama Exhibit Number Four is a structure contour map which was drawn on top of what I consider the Morrow Clastic section.

This marker horizon is basically similar to the one which BTA has submitted in this and previous hearings before this Commission.

There are some subtle differences in correlation and interpretation, but by and large, the two maps generally show the same thing.

On the map, as well as the -- is the fault which BTA has shown us in a slightly different position on their map. I base the location of this fault on some seismic mapping which was done as Marathon's original submittal for the Lea -- for the Lea Pennsylvanian Pool Unit, which -- which -- the interpretation of which has been modified by subsequent drilling in the area, and so the fault is drawn to the best of my knowledge based on old seismic work and subsurface control.

Now you'll note that the subsurface control is not that good, particularly towards Section 25, the area of the subject of this hearing.

I have arrows on the fault zone which in-

dicate that that fault could actually be a lot closer to both proposed locations than I've had it mapped, but in the interest of optimism, I left it where it was.

Q Now, when -- when did you originally prepare this map?

A This map was originally prepared in March of -- in November of 1983.

Q And it was subsequently revised?

A It was subsequently revised, as my date indicates, this month.

Q And when you revised the map, what information did you include that you hadn't previously had available to you?

A I included information from BTA No. 1 JVP Lynch in Section 24, the information which was acquired from the material submitted by BTA before this Commission on the last -- on the aforementioned hearings.

Q Would you look now at Section 24 and compare the locations, the proposed locations of Chama and BTA?

A Excuse me, you mean Section 25?

Q Yes, I do.

A Okay. We are basically in agreement as to the structural, the relative structural merits of the two proposed locations; that is, I'm basically in agreement with BTA that the Chama location is slightly up dip relative to the BTA location.

Our mapping, or my mapping, has indicated

that the degree of -- of difference in the depth to the top of this marker horizon can be as much as 50 feet, these are 50-foot contours as I've drawn them, not 100, as presented by BTA. Nevertheless, the structural difference between the two locations can be as much as 50 feet. I believe BTA says there could be as much as 15 feet or so. It's a matter of interpretation.

Q Would you explain to Mr. Stogner what the color coding indicates?

A Yes. The color coding indicates wells which are producing from two primary reservoir zones, and they are by far not the only reservoir zones that produce in the area, but there are two major reservoir zones.

The wells that are color coded in red produce from the zone which corresponds to Mr. Zoller's yellow, captioned yellow zone, on his cross sections, both from this hearing and previous hearings.

Q And what does the green indicate?

A The green, the wells which are indicated in green, came from a stratigraphic horizon which is lower than the yellow zone on Mr. Zoller's cross sections.

Q Is this the zone which is producing in the Chama well currently producing in Section 25?

A That's correct.

Q What general conclusions can you draw from this structure map?

A Okay. From this structure map the main

conclusion that can be drawn is that the proposed location that Chama submits in this application for their No. 2-L Federal is in a structurally more favorable position to the BTA proposed location. Structure may be an important factor in terms of getting above the water table or in any particular zone, but as Mr. Zoller, has so state, so would I, that any time you can get higher, that's what you want to do.

Q Would you now refer to what's been marked as Chama Exhibit Number Five, identify that, and review it, please?

A Chama Exhibit Number Five is an Isopach map. That is a map showing the thickness of a genetic sandstone unit which I have defined in this immediate area, the Lea Pool area and surrounding wells. It's a structure map -- I'm sorry, it's a thickness map of a specific sandstone unit; that is, the unit which correlates to the pay formation in BTA's No. 1 JVP Lynch, and that is the yellow captioned unit on Mr. Zoller's cross sections.

Q Now have you mapped the part -- is it the same producing zone, is that what you've just said, that's in the Lynch No. 1?

A This -- this map shows that there is 53 feet of sand within their No. 1 JVP Lynch, which I assign to this specific zone I call Number 11.

Q Would you just briefly describe how this map was prepared?

A This map was prepared on the basis of de

tailed sample evaluation on a number of wells in this immediate area, looking at the well cuttings in great detail; looking at the lithologic associations on the various sand zones, or what I term to be genetic units, or packages, of sand; as well as on a knowledge of the local geology, the local reservoir trends, as I established from my mega-study of a couple of years ago.

So it's a combination of detailed sedimentology combined with a knowledge of the regional setting of the Morrow in this part of Lea County.

This mapping technique has been described in the literature, it has by far -- it hasn't been invented by me; it's a standard sedimenticological practice, and it's accepted by Chama as valid and it's utilized in their exploration strategy.

Q Now, can you generally summarize the conclusions that you reached from this map; what it actually shows?

A Okay. The map indicates, at least it suggests when we look at this in line with the structure map previously presented, indicates the combination nature of the Morrow reservoirs in this area. In other words, these reservoirs are stratigraphic in nature and -- but they're also structurally enhanced.

The map shows that stratigraphy seems to be a major factor in the No. 1 -- the BTA No. 1 JVP Lynch, inasmuch as it's producing from one of the thickest sections

of this unit that I've been able to map in the area.

Structure controls the localization of the reservoir, particularly reservoir marginal wells. For example, the wells, the three wells on the north part of the section -- of the map in Sections 11 and 14, are getting towards the flattening of the thickest portions of the sands and they're probably productive there, or helped in production there, because they're getting up on the structure as we've defined it in this area.

Q So in essence you can trace the sand units in this area?

A I have shown both here and with other projects that I've done, and in the literature, that you can -- that these sands are traceable. I don't think -- I think Mr. Zoller has said the same thing, basically, in submitting his cross sections.

They are traceable as long as you don't try to take them over miles and miles. You can do it in a local area like this fairly effectively.

Q And, Mr. Mazzullo, would you now focus on Section 25 and compare the proposed locations of BTA and Chama?

A In terms of this particular zone, I show that the zone is thickest in the JVP Lynch No. 1 and that's the major portion of the sand trends in the southwesterly direction towards the Chama No. 1-L Federal and even further than that towards the Pennzoil 1-C Federal in Section 35.

The BTA -- the Chama proposed location in Section 25 is placed in a more stratigraphically favorable position with respect ot this zone than is the BTA proposed location.

Q Do you believe it's fair to say that from the Chama location there's greater potential for production from the Morrow?

A Yes, especially considering that we're getting structurally higher, which always helps matters.

Q Mr. Mazzullo, when was this Isopachous map constructed?

A This map was constructed, originally constructed, at the same time the original structure map was done, back in November of 1983, and subsequently revised with the addition of the data gleaned from the No. 1 JVP.

Q Were Exhibits Four and Five prepared by you?

A Yes.

MR. CARR: At this time, Mr. Stogner, we would offer into evidence Chama's Exhibits Four and Five.

MR. STOGNER: Exhibits Four and Five will be admitted into evidence.

Q Do you have anything further to add to your testimony?

A The only thing I could say is just to qualify my statement about the favorability of the Chama

proposed location, is that it too is a risky location in respect -- in regard to relative risks; it's more risky than drilling the No. 1 JVP, but a lot less riskier by my correlations and my geology, than drilling the BTA proposed No. 3 Lynch.

Q Do you concur that any well drilled in the Morrow in this area should receive the 200 percent penalty, risk penalty to be imposed against those who do not voluntarily participate?

A I do.

Q And Chama is desirous of being named the operator of the spacing unit?

A They do.

MR. CARR: And I have nothing further of Mr. Mazzullo on direct.

MR. STOGNER: Mr. Kellahin, your witness.

MR. KELLAHIN: No questions.

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. Mazzullo, did you participate in any of the meetings between BTA and Chama?

A No, I did not.

Q Was your geologic data that you said was put together in 1983 that you'd redone and come up with Exhibit Four and Five today, were those, do you know if those

were used in any of the meetings between BTA and Chama?

A I wasn't there; I wouldn't know.

Q Well, did you make them available to Chama before today?

A They're their documents, prepared by me on their behalf.

Q Have you supervised drilling a well out here?

A Have I supervised? I'm not qualified to supervise drilling a well.

Q Has Chama drilled a well out here?

A Yes, they have.

Q Which one?

A The No. 1-L Federal in Section -- in the northwest quarter of Section 25.

Q What's the present status on that well?

A It's shut in awaiting pipeline connection, I understand.

Q What interval will this well be producing from?

A This well will be producing from an interval stratigraphically lower than the one being produced at the present time in the BTA JVP No. 1, and presumably the No. 2.

Q It's in the Morrow though?

A Oh, yes.

Q Did this well, particular well, go deep

enough to encounter the "yellow zone"?

A You mean the 1-L?

Q Yes, sir.

A Yes, because it's producing from below the yellow zone.

Q Okay. Have you tested the yellow zone in that 1-L Well?

A Not yet.

Q Do you have any opinion what the yellow zone might produce in that 1-L Well?

A No, I have no opinion.

Q Did you look at the log?

A Yes, of course.

Q No opinion even after looking at the log?

A Oh, it is -- it shows characteristics that indicate that it's capable of production, and this was done by an independent -- calculations were done by an independent log analyst, not myself.

Geologically I could say that it has attributes which make that particular zone potentially productive.

However, I might add, we can be as much as 37 feet high even to that well in our proposed, new proposed location on that zone, so chances are getting better in our proposed location for that zone, regardless of what we see in the No. 1-L.

MR. STOGNER: I have no ques-

tions, further questions of this witness.

Are there any -- is there anything else of Mr. Mazzullo?

If not, he may be excused.

Mr. Kellahin, Mr. Carr, do you wish to recall any witnesses at this time?

MR. KELLAHIN: No, sir.

MR. STOGNER: Well, I would. I'd like to call Mr. O'Brien back one more time.

T. B. O'BRIEN,

being recalled as a witness and being still sworn upon his oath, testified as follows, to-wit:

CROSS EXAMINATION

BY MR. STOGNER:

Q Mr. O'Brien, I just have one question.

A Yes, sir.

Q The wells to this depth in this particular area, do they have a tendency to wander?

A Not greatly. They -- there are a few places in the hole that the hole will get in the order of two degrees or so, but the majority of the hole is in the order of one degree or less.

MR. STOGNER: I have no further questions.

MR. KELLAHIN: As long as we

have Mr. O'Brien sitting there, let me ask a question.

MR. STOGNER: Sure, Mr. Kellahin, go ahed.

REDIRECT EXAMINATION

BY MR. KELLAHIN:

Q Mr. O'Brien, since Mr. Nearburg testified and presented us with an AFE, have you had an opportunity to review Chama's AFE dated October -- February 25th of '85?

A I've made what you might term a cursory examination of it.

Q Based upon your cursory examination of that AFE, Mr. O'Brien, do you have any comments concerning Chama's proposed method of drilling and completing this well?

A The Chama proposal includes casing at 800 feet and at 5500 feet and I went into the need for the other string of pipe at 3500 feet.

Because to run only two strings they propose to set 8-5/8ths at 5500 feet and 13-38ths at the surface.

The difference in cost of the casing by the two programs is about $120,000. The remaining difference between the two wells, or the two AFE's is basically, although they -- different people make AFE's differently, so it's just hard to compare them, but the remaining difference between the -- about the -- the total difference in the

casing point cost is about $230,000 and there's $120,000 in casing cost.

The remaining difference is in drilling cost related to the drilling rig. Chama has used a footage contract where BTA uses a day work contract, and when you -- the costs there make up the majority of the difference. That's just based on Chama's estimate of what the footage contract can be obtained for; however, if they drilled the well by their program and lost circulation, then they would drill a substantial part of that hole, or they would spend a considerable amount of time on day work, anyhow, so again, because of the difference in the program, and the need for that other string of casing, then Chama's AFE is going ot have to be revised substantially.

MR. KELLAHIN: I have nothing further. Thank you.

MR. STOGNER: Mr. Carr?

RECROSS EXAMINATION

BY MR. CARR:

Q Mr. O'Brien, are you familiar with how the Marathon Wells were cased in the Lea Penn Unit?

A No, sir.

Q Then you wouldn't know if -- then you would not be able to testify whether Chama's proposal was in line with those.

A No, sir.

Q Now the difference that we have basically in the two AFE's from, admittedly, cursory review, comes from casing cost and the type of contract involved, is that correct? Was that your testimony?

A And the -- yes, and the -- the contract being on a footage lumps the costs that are in -- that BTA details into one lump, so the difference is the result of a different estimated cost for drilling rig operation.

Q So this makes it diffcult to make a very quick review.

A Yeah, almost impossible.

Q Okay. That's all I have.

MR. STOGNER: Any other questions of Mr. O'Brien?

If not, he may be excused.

Mr. Zoller?

MR. ZOLLER: Yes.

MR. STOGNER: I'd like to recall you for one question.

MR. ZOLLER: Okay.

MARVIN L. ZOLLER,

being recalled as a witness and being still sworn upon his oath, testified as follows, to-wit:

RECROSS EXAMINATION

BY MR. STOGNER:

Q Upon hearing everything today, do you think BTA and Chama can get together one more time?

A You mean get together to talk?

Q Yep.

A Oh, certainly. Now, you want to follow that up?

MR CARR: And so you don't have to recall Mr. Nearburg, Mr. Nearburg would be willing, I'm certain, to talk, also.

MR. STOGNER: Okay.

A I will even go so far as to say that I think we could find, certainly, surely, an adjustable location but I don't see any sense in talking any more about who wants to be the operator.

MR. STOGNER: I would like to take about a five minute recess and see Mr. Kellahin and Mr. Carr in my office.

(Thereupon a recess was taken.)

MR. STOGNER: The hearing will resume to order.

MR. KELLAHIN: Mr. Examiner, I would request that within a ten-day period you allow Mr. Carr and I to each submit to you our written closing com-

ments with regards to this case, and a proposed order.

That will allow, in my opinion, an opportunity for the parties to discuss among their principals whether or not they can resolve this case, and that at the end of that ten-day period, if there is no communication from Mr. Carr and I to you saying it's resolved, then we would request that you decide the case, that you will take into consideration our written comments and our respective proposed orders for --

MR. CARR: And I concur with the request of Mr. Kellahin.

MR. STOGNER: Okay, Mr. Kellahin. Thank you, Mr. Carr.

I'd like to make one little statement before we leave.

Mr. Nearburg, I think it might be advantageous as a suggestion and request that Mr. Charles Nearburg make some attempt either to go to Midland or meet halfway in between, go to Possum Kingdom, and discuss -- and discuss with BTA a little bit.

MR. NEARBURG: We have done that and we will do that again.

MR. STOGNER: That's just a suggestion.

MR. NEARBURG: We certainly will.

MR. STOGNER: If there is not

anything further in either of these cases, these cases 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.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 8478 & 8505 heard by me on 27 February 1985.

Michael E. Stogner, Examiner
Oil Conservation Division