COUNTY, NEW MEXICO

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CASE NO.

7521

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
31 March 1982

EXAMINER HEARING

IN THE MATTER OF:

Application of William B. Barnhill for an unorthodox gas well location, Eddy County, New Mexico. CASE 7521

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

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A P P E A R A N C E S

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I N D E X

E X H I B I T S

MR. NUTTER: We'll call now Case Number 7521.

MR. PEARCE: Application of William B. Barnhill for an unorthodox gas well location, Eddy County, New Mexico.

MR. NUTTER: Call for appearances in this case.

MR. PADILLA: Mr. Examiner, Ernest L. Padilla, Santa Fe, New Mexico, appearing on behalf of the applicant. I will have two witnesses to be sworn.

Also, Mr. Examiner, I'll probably only use one witness. It may be necessary to use the second witness on rebuttal, if necessary. Might as well swear them both in at this time.

MR. NUTTER: Any other appearances?

MR. CARR: Mr. Examiner, my name is William F. Carr with the law firm Campbell, Byrd, and Black, P. A., Santa Fe, New Mexico, appearing on behalf of Chama Petroleum Company. I have one witness who needs to be sworn, and I have no objection to your swearing him with these other witnesses.

(Witnesses sworn.)

WILLIAM B. BARNHILL

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

DIRECT EXAMINATION

BY MR. PADILLA:

Q. Mr. Barnhill, for the record would you please state your name and where you reside?

A. My name is William Barnhill. I live in Roswell, New Mexico.

Q. Mr. Barnhill, are you the applicant in this case?

A. Yes, I am.

Q. Mr. Barnhill, are you familiar with the Morrow formation and have your credentials been made a matter of record for testimony before the Oil Conservation Division or the Oil Conservation Commission at a prior time?

A. Yes, they have.

Q. How long have you worked with the Morrow formation in southeast New Mexico and in the area of interest today?

A. Well, I've lived in Roswell for 27 years and I primarily, almost exclusively, work the Morrow for the last 15, approximately 15, years.

Q. Mr. Barnhill, are you familiar with the purpose of the case today?

A. Yes, sir.

MR. PADILLA: Mr. Examiner, we tender Mr. Barnhill as an expert geologist.

MR. NUTTER: Mr. Barnhill is qualified.

Q. Mr. Barnhill, referring to what has been marked as Exhibit Number One, would you please explain what that is and what it contains?

A. This is an Isopach map, or a thickness map, of the Morrow formation in this particular area of the southern part of Township 19 South, Range 25 East, and 20 South, 25 East, Eddy County.

In Sections 34 and 35, of 19, 25, and 1, 2, 3, and 4, of 20, 25, we have various wells in there that we can -- we accumulated data, and the Morrow in this area is confined to erosional channels. Erosional channels are -- they've been incised into the Barnett Shale. Often times the erosion has even gone completely through the Barnett into the Mississippian, and the best sands are confined to this channel environment, and you have to first find you some sand, then keep in the channel, and then there's the problem of porosity and permeabilities which always occur.

Q. Mr. Barnhill, what is the area marked

in yellow, or colored yellow?

A Well, that's a farmout from Gulf Oil to me in which I propose, or hape to have approved, an unorthodox location,660 out of the south and west of Section 35, for a Morrow test.

Q Mr. Barnhill, what is the red line drawn through the area of Sections 4, 33, and 34 and 35?

A That is a cross section representing a channel sequence of this particular area.

Q Is that Exhibit Number Two, Mr. Barnhill?

A Yes.

Q Would you explain what Exhibit Number Two contains? And if necessary, and if it is necessary for you to relate back to Exhibit Number One, please do so.

A Well, yes, we can relate to Exhibit Number One which shows the cross section from east -- from east to west, from A-A'.

On the lefthand side of the cross section we start out in Section 4, of 20, 25. You notice the yellow is sand and the grays are shale. That is the Mark Holston Well in Section 4. It's on the bank of a channel. In fact, it's quite removed to the west.

We go to Section 34 of 19, 25, to the Coquina Pan Canadian. That has a well developed Morrow sand

and it also -- that's the -- these sometimes split and we call them A's and B's, and you can actually get a C in certain areas.

The next log to the right of the first one that we mentioned is the Coquina Pan Canadian, which is a very good well in the Morrow section.

The third well from the left is the Pan Am Lakewood. It was drilled back in 1953. It was a Devonian test, which at that time, in 1953, the gas situation was kind of a pain in the neck rather than anybody looking for it. You can see that the sands have thickened by going to the east half of 34.

Q. Mr. Barnhill, you're talking about the third well on the --

A. Third well on the cross section.

Q. On the cross section.

A. Yes.

Q. Okay.

A. Then this cross section is projected through the proposed unorthodox location, and then back to a Hilliard well in the north half of 35, which is out of the channel proper, showing the Morrow sands are present but they're broken and they're extremely shaley.

And you go further to the east, now, for

the last part of the cross section, the furthest one on the right, you end up in Section 1 of 20, 25, and that's completely zilch. In other words, there's nothing there.

From Section 1 of 20, 25, you're completely on the east bank, and in Section 4 of 20, 25, you're completely on the west bank. In between there's been some sand development and I think that that's what I'm trying to represent here, show you.

Q Mr. Barnhill, going to what has been marked as Exhibit Number Three, which is a microlog, would you explain what that is and where it is in relation to your cross section?

A Yes, this microlog is of the Stanoline Lakewood. It's in Section 34 of 19, 25.

This well was drilled back in 1953, as previously mentioned. You will notice that I've colored in on this log the A and the B Sands, which is the same as the A and the B Sands on this cross section but in the cross section this is a dual induction log and this log we have is a microlog of the same section, but you can see how -- the comparison, and they're here in this log -- this is a dry hole and there was an attempted recompletion at a later date, but never successful.

These sands are very, very well developed.

In fact, I would say that it's one of the better developed sands in this part of the county. And this is the same thing as we see on the cross section but we see it on the microlog.

Q. The well depicted on that microlog, what -- what did it test? Did it test the Morrow, or what did it test?

A. They -- this was a test upon -- but -- and they got gas in 35 minutes at 47,000. It's marked right to the left of the third log on the section.

And they took another DST at 9407 to 9540 and they got gas in 55 minutes, volume unknown.

Q. Was that primarily a Morrow test, Mr. Barnhill?

A. Yes, it was.

Q. And that was a dry hole, is that correct?

A. That's correct.

Q. Mr. Barnhill, can you tell us something about the -- how all this information depicted on Exhibit Number One, and Number Two, and Number Three, relates to the -- your proposed location?

A. Well, the best Morrow sands on the cross section as goes from west to east, or east to west, wherever you want to start, is in the -- is on the old Stanoline Lake-wood, located in the -- in Section 34, and I believe that the --

if the Commission will refer to the cross section, if I may point something out in relation to these channels that do develop, on the bottom part of the section I have a line called C Marker, and then I have a line called Top of Mississippian Lime.

Between the Coquina well in 34 and the Stanoline Lakewood in 34 the C marker, you see that although in that very short distance the amount of dip on the C marker? And certainly on the Mississippian Lime.

If you continue that erosional surface down to the proposed location it should be just very, very close to the apex of this channel, because when you have to go to the east of 35, back to the Hilliard well, you have to get back to your Mississippian and your C marker, and I think the sands, this is the maximum part of the channel, goes right through the east half of 34 and the west half of 35, and right on down through the west half of 2 and the east half of 3.

And what primarily, the main reason, we're asking for this unorthodox location is to get as far away as possible from that Hilliard well in 35, which is the north half proration unit, and which will never pay out, I have the production figures on it, and get as close as the old Stanoline Lakewood, which was drilled in 1953.

Q Mr. Barnhill, can you tell us now something about the production of some of these wells in the area, and in this regard please refer to what has been marked as Exhibit Number Four?

A Okay, I can point these out. Of course it's -- for instance, like the Hilliard Well in Section -- the north half of 35 of 19, 25. It was completed April 11th of 1974, and in seven years it has produced 189-million cubic feet of gas.

The last production figures I have is for November. It's running about the same. I have 80's right on through. It's a very, very poor well. Very likely will it ever pay out, even with gas to the tremendous increase in price.

Q Mr. Barnhill, how does this well relate to, say, a standard location on the southwest quarter of Section 35?

A Well, I think that if you went to 1980 out of the south and west of 35 you'd be in the same boat as the Hilliard-Gulf Well. In other words, it just wouldn't -- it would just be impossible situation; I mean a very unfavorable situation.

Q How about a standard location on the southeast quarter of 35?

A. Like 1980 from the west and 660 from the south? You'd still be right on strike with it, and this is a very complicated area. This is -- this is the way I would interpret it. There is a sand, a sand lens, and it would be right around the old Lakewood Well, and the further you can get away from that Hilliard Well and the closer you can get to the Stanoline Lakewood in 34, the better off you are for everybody concerned. I mean if you want my opinion.

Q. But the east, or the southeast quarter of 35, how -- what kind of --

A. Southeast quarter. The southeast quarter of 35 you'd be some place halfway between absolutely zero from the Gulf Shugart Well in 1 of 20, 25, and from zero to nothing into the north half of 35.

Q. What's the production on other wells, say, in Section 34? You've testified already that there was a dry hole in the southeast quarter of 34, but what wells --

A. There's two dry holes in the south half of 34, the Lakewood Well, although all maps show that thing as a gas well, but it's never -- it never has been a gas well.

There is another well in the south half of 34 called the Huber Irami. It was a dry hole.

In the north half of 34, the Coquina Pan Canadian has been a good well. It's produced 2-1/3 billion

cubic feet out of the Morrow. It depleted out of the Morrow and was recompleted out of the Atoka, and it is apparently producing out of the Atoka, not in any large -- November's production was 1,944,000, which is very light production, but it has been depleted in the Morrow for 2-1/3 billion and recompleted in the Atoka and we've got the cumulatives on that, too.

Q. Mr. Barnhill, do you have any well control in Sections 2 and 3 to the south of your -- to the south and southwest of your proposed location?

A. In the west half of 2 currently there's a well drilling, the Santa Fe No. 1 Exxon, 1980 from the south and 660 from the west. That's in the neighborhood of 7500 feet in depth, some place right in there.

In 3 there is a Chama Huber Federal No. 1. I have no information on that but it was reported by the operator to me that they had at least 50 foot of sand in that well. I was promised an electric log on that -- I would have to put a question mark on it -- but I didn't get one. Sample log I do have and these friable sands, they cave in a lot, you get a lot more sand in samples than you would on an electric log.

But I don't have any information on 3. And the one in 2 is drilling.

Q. Mr. Barnhill, would drilling the well as you propose prove up the acreage in Sections 34 and 35 and 2 and 3? In your opinion?

A. Yes, in my opinion, would help prove, would help it, sure.

Q. Mr. Barnhill, are -- what -- how do you assess the risk of your well as proposed?

A. These Morrow wells are terrible high risk, even drilling an offset. They're just a high risk venture.

Q. How much are you spending on your well?

A. These wells here AFE out around $800,000.

Q. Are you -- do you have any dry hole contributions from any of the offset operators?

A. No, I do not.

Q. When does your lease on the south half of 35 run out, Mr. Barnhill?

A. The southeast quarter runs out May 1, which gives me approximately 30 days, so to speak. It's a Federal lease;to drill it we have to have an archaeology permit, BLM, et cetera, et cetera, and et cetera. I am in quite a bind on if it's one way or the other, but it would be, the southeast quarter goes out May 1.

Q. Do you request from the Division an ex-

peditious decision on this case?

A. Yes, I would.

Q. Does the -- would the USGS issue a drilling permit prior to issuance of an order by the Division?

A. No, I don't believe they would.

Q. Mr. Barnhill, would approval of this application impair the correlative rights of offsetting operators?

A. I don't think so. The way I'm looking at it here, the acreage in 3 and down through 2 and I can only go to where the points are, like in 34 and 35, 1, 2, 3, and 4 of 20, 25. That's all the control there is. I can't make them up, and it could change. It could be quite thicker than that; it could be thinner than that; but I just have to take the data that I have, and I don't think it impairs anybody's rights.

Q. Would it allow you, if you do get a producing well, to recover your fair and equitable share of the hydrocarbons underlying the south half of 35?

A. I think so.

Q. Mr. Barnhill, in your opinion should a penalty or a production limitation be assessed against your well should it produce?

A. I don't think it -- a penalty would be

in order because of the -- I'm offsetting a dry hole and a terrible well to the north, and if I -- if there's gas to be found it's to everybody's benefit, and I don't know why I should be penalized.

Q. Mr. Barnhill, referring to what has been marked as Exhibit Number Five, would you explain what that is, what it contains?

A. The green is the south half proration unit withe the proposed unorthodox location located 660 from the south and west of 35, 19, 25.

The yellow acreage belongs to Chama Petroleum.

The -- in Section 2 of 20, 25, there is a west half proration unit, consisting of the west half of 2, in which a well is currently being drilled.

Q. Going back to your earlier testimony, a producing well at your proposed location would help determine what hydrocarbons, if any, in the Morrow formation would underlie the yellow acreage, wouldn't it?

A. Yes, with the control data we have on sand thicknesses there, it would, the south half of 34 and 3 and could even possibly go down to 10, but I don't have any control down there.

MR. PADILLA: Mr. Examiner, we have in-

cluded in this in this package some additional petroleum information and we haven't introduced that, but nonetheless, it's there for your edification should you read it.

MR. NUTTER: Those are scout tickets?

A. Scout tickets of all the wells in the immediate area.

MR. PADILLA: And I have no further questions of this witness, Mr. Examiner. We tender Exhibits One through Five.

MR. NUTTER: Exhibits One through Five will be admitted in evidence.

Any questions?

MR. CARR: Yes, sir.

CROSS EXAMINATION

BY MR. CARR:

Q. Mr. Barnhill, I'd like to first direct your attention to your Exhibit Number One, which is your Isopach map. How long have you been working in this area?

A. I've been working this area -- well, in the Morrow for a good number of years; a minimum of fifteen.

Q. Now, as I understand, an Isopach shows the sand thickness, is what it's designed to show. It does not show structure.

A Right. Right.

Q And is structure a significant factor in determining what you've got?

A None whatsoever.

Q So this shows the sand thickness, based on the data you've had available to you, your interpretation? Is that right?

A That's right.

Q Is this the first Isopach of this area you have prepared?

A No.

Q Did you not prepare an Isopach last fall in conjunction with Chama?

A Absolutely. In fact, the Chama well was based exclusively on my geology.

Q I'd like to hand you what's been marked for identification as Chama's Exhibit Number Seven, and ask if this is a copy of that Isopach?

A It's very similar in nature. It's an Isopach.

Q I believe it has on the bottom on the le gend, it has your -- your name. Does this look like you --

A Yes, uh-huh. Yes, that's my work.

Q Now, I'd like you to look at this and

focus on the south half of Section Number 35.

A. All right.

Q. The Isopach which you prepared for this hearing would show, I believe, that there are sands present throughout the south half of that section. Is that a correct interpretation?

A. In the south half of 35?

Q. Yes, sir.

A. I think the sands would go through part of it, you're right.

Q. But you said part of it. Do you think -- is the entire south half underlain with potentially productive Morrow sand or does it cut off as we move to the east?

A. Well, as you move to the east you get in a very much poorer environment because you're out of the channel proper. On the cross section from the Hilliard well in 35 to the Gulf Shugart Well in 1, it's a very, very poor section, shaley, tight sands, and your clean sands are deposited -- now, the Amoco Well, the Lakewood at 34 has a very well developed Morrow sand, you can see on this microlog.

Q. Right.

A. And the Hilliard Well in 35 is very poorly developed and the production in that is just -- is quite sad.

Q. Now, if we compare these two Isopachs, it appears to me that the Chama Exhibit Number Six, the first Isopach would tend to show that a substantial portion of the east part of the south half of Section 35 is -- does not contain commercial sand, is that correct?

A. Well, you see, we're not -- you have to, as a geologist, you have to use a little bit of optimism. When -- when I did this prospect and sold it to Chama on the geological merits, I wanted to see a well drilled in 3, preferably where they drilled it, 1980 from the south and the east.

The 60-foot Isopach was put in there and you'll notice that on the old Stanoline Lakewood I gave it a value of 44 feet, but here's the same thing and you can come up with 76.

Being optimistic, I wanted to see this channel, see if it would -- I knew that this was a dry hole. It's 76 feet. On Chama's Isopach I put 44, but if you want to count the feet off, count them off, they're right there, and 44 is not correct. It's 76.

Q. I believe you testified that you have received no data on that Chama Huber Well down in Section 3.

A. The only data that I have is a sample log on it and although I put the prospect together, my rela-

tionship with Chama is -- has gotten a little touchy. They went tight; they didn't give me an electric log. That's why I put 50 question mark, because they never delivered me an electric log, but I do have a sample log, as I mentioned. A lot of these friable sands cave in the hole and look like you're getting just a ton of sand, and looks like you may be getting a couple hundred feet, but it's really all cave-in.

Q. What --

A. So you need a log, like this.

Q. Uh-huh.

A. Well, you can actually, like on the SP on this old log here, see the maximum. See, that's it, right there.

MR. PADILLA: You're talking about a microlog, Mr. Barnhill?

A. Well, no, just one of these compensated neutron formation density logs now are what we run.

Q. What additional data have you received since you prepared your first Isopach that would cause you to alter your inte-pretation? What new data have you used?

A. The only data I have is from Charles Newburg (sic). He said they had 50 foot of sand in that well, but I haven't seen -- I don't have the electric log, although I was promised one. I have a sample log.

Q Wouldn't you say that your Exhibit Number One paints a more optimistic picture for the south half of Section 35 than the previously prepared Isopach?

A That's the way I wanted to present it previously.

Q And this is -- and the Exhibit Number One is the way you want to present it here today?

A No. I wanted to see a well drilled in the south half of 3. Getting back to the actual facts of it now, instead of a 44 Isopach value in the south half of 34, you'll have to take this log and count them out for yourself, and they're 76.

So you take your 76. You've got the Huber-Irami Well in the south half of 34 with 47. You go to 76. You've got Isopach values you've got to put in there. You go from the Coquina Pan Canadian of 40 feet to 76. You go from the Hilliard well in 35, 32 to 76. You've got to put those values in there, and I don't know any other way I can draw it.

Q If I compare these two Isopachs, which of the two portrays a more optimistic picture for the -- for making a successful well in the south half of 35?

A This one. This one that -- this exhibit.

Q Your Exhibit Number One, and that was

prepared specifically for this hearing?

A. Yes.

Q. Now, I'd like to go to the cross section. And I'll warn you at the beginning, I can't read a log barely at all, and so if some of the questions are not too logical, I want you to bear with me on it.

As I look at this cross section, yellow areas show the Morrow sand, which is the sand which may contain productive -- that may be productive of gas, is that correct?

A. That's correct.

Q. And as I look at where you've placed your proposed location for the Barnhill No. 1, the sands are thickening sort of to that, to the point of the proposed location.

A. Hopefully, right.

Q. What control do you have that would justify thickening of the sand to this point?

A. Well, the second log from the left is the Coquina well.

Q. Okay.

A. And you go to the third one, the old PanAm Lakewood again.

Q. Uh-huh.

A. Those sands, your A and your B sands, are thicker, and at the base -- base of the B Sand you will notice that that is an erosional surface, the Barnett shale. It's dipping, or dipping off to the east.

You go to your C marker and -- which shows that dip, and your top of your original Mississippian Lime shows that dip. It would indicate from that dip that you could go to a degree further east and may get into the deepest part of that channel, because you've got to reverse yourself to get back to this Hilliard Well in 35.

Q. Uh-huh. But as I look at this, is it not correct, that in the Hilliard Well and also in the Pan American Lakewood Well, that the C marker is virtually the same depth?

A. Well, you can certainly see, this C marker, how it correlates in the Hilliard Well going to the Coquina Well. You see the -- I'm not trying to give you a lesson on logs but --

Q. I probably could stand one.

Now, it is possible, however that the deepest portion of this channel might be in the Lakewood and that you could at that point turn the C marker up and just simply correlate it right over to the Hilliard Gulf Federal No. 1. Is that not possible to interpret it that way, also?

A. Well, if you went just -- yeah, if you went from the Coquina -- the Stanoline Lakewood back to the Hilliard Well, you've got well developed sands in the Lakewood and poorly developed sands in the Hilliard, and so therefor, the proposal is stay away from that Hilliard. You don't want to go in that direction. You want to get as close to the -- to the Lakewood Well as possible, because it had the best sands.

Q. Was it not also a dry hole?

A. Yes, it is.

Q. Was the Lakewood not originally a Devonian test?

A. It was a Devonian test.

Q. And wasn't there some indication of some water problems in completing that well?

A. Well, this was drilled back in 1953. When you drill Morrow wells, you're going to have all kind of problems. Primarily, if you don't have a low water loss and a good mud system, you might as well forget about the Morrow.

They drilled this -- they were drilling this with -- this Morrow Sand here, with water; went on down to the Devonian, tested, and got water in the Devonian.

To do that to the Morrow, you're absolutely

just killing yourself.

These sands are full of montmorillonites, bentonites, and once contact with water, they swell up and they're just like cement.

So you have to use a very low water washed drilling fluid in there, which inhibits the water from contaminating these montmorillonite, kaolinite parts.

And there was an attempted recompletion of that at a later date, completely unsuccessful, which is not surprising at all.

Q. Could it be that the completion practices in that Lakewood Well contributed to the fact that the Morrow did not produce?

A. I don't think you could complete it under any circumstances the way it was drilled.

Q. Do you think if a well was drilled at that location and this well had never been drilled, that you might be able to complete a producer there today?

A. Yes, I do.

Q. With better techniques existing now?

So actually, the objective is to get away from the Hilliard Well, which you consider to be a poor well, and towards this other well?

A. Yes.

Q Because the better portion of the sand is over there, is that correct?

A I think it would have a -- if not better, at least maybe equally as good as the old Lakewood Well drilled back in '53.

Q Were there any completion problems in the Hilliard-Gulf Federal Well that you're aware of?

A There's completion problems in all of these Morrow wells. There's formation damage in every one. I don't know of one -- unless you could drill it with air or gas, without fluid, I don't know how you could complete one without damage.

Q If we look at the Huber-Irami Well, that was also dry.

A Yes, uh-huh. The sands developed there but they lacked porosity and permeability. That's another thing you fight in these.

Q When was that completed? Do you recall?

A I don't recall but I have the card on it. The Huber-Irami was spudded 3-14-74, completed 4-23-74.

Q Do you think it's possible that techniques in terms of completing these wells, have improved enough that a commercial well might have been made there today if it were drilled today?

A At the Irami location?

Q Yes.

A No, there wasn't anything wrong at the Irami location. It had the sands but just lacked the porosity and permeability, and there's not a thing you can do about it.

Q Was that well fractured?

A No.

Q Would that have improved that or is that a --

A No, the electric logs, which I don't have one, but the electric logs just show that dude just to be tight; very, very tight.

And it just doesn't have any porosity and permeability. And they ran a good set of logs. They run the compensated neutron and just zilched out on them, that's all. The sands were there.

Q Now if we look at this Lakewood Well and if there were problems in completing it, and it thereby didn't -- doesn't necessarily condemn the acreage right there, isn't it possible that a well at your proposed location is going to be draining reserves from the southeast quarter of 34?

Q Well, it could. Sure, it would be in the same sand body. I mean if there was no additional drilling

and this was a successful test, it would -- it would drain a certain amount of area, hopefully.

Q Do you know what the standard spacing rules are for a well drilled in a laydown unit, like the south half of Section 35?

A Yeah, it would be 1980 from the south and west, which would be a direct offset to the Hilliard.

It could be a 1980 from the west and a 660 from the south, which would be a double offset from the Hilliard; speaking of forties.

Q And so the closest that you could drill to the west line of Section 34 and have a standard location would be 1980 feet, is that correct?

A Now how was that again?

Q The closest that you could drill a well to the west line of Section 35 would be 1980 feet, if you were having to stay with a standard location?

A Yes.

Q By moving 1320 feet to the west aren't you extending the drainage into Section 34 by, oh, a substantial amount, if not exactly 1320?

A Well, yeah, it would possibly drain 34. Probably a new well should be drilled where the old Amoco Well is. A well should be drilled in the north half of 3.

The proration unit in 2 down there is a west half proration unit. I think the -- if this proration unit is authorized, I think -- this unorthodox location -- I think it will show up a lot of things in there.

Q. But to protect themselves would Chama have to drill 660 feet from the east line of Section 34?

A. No.

Q. Do you think that a well drilled at another location would be able to offset any drainage that might come from your proposed well?

A. Yeah, I think so.

Q. I believe you indicated there was no dry hole contribution from any offsetting operator, is that correct?

A. I don't have any.

Q. Have you requested any?

A. No, I haven't.

Q. Now I think you also testified that a well drilled at the proposed location would -- and if it produced gas it would be to everyone's benefit. Is that what -- is that a correct statement?

A. I think it would -- as far as Section 2 is concerned, that being a west half proration unit, I wouldn't want to see an operator go to the east half of 2. It would

certainly help the leasehold interest in 3 and possibly on 10, if in the event this sandbar type thing would be extended.

Q And how would it help them?

A Well, using the data in there. There's a well in the south half of 3, the Chama Well, which is reported very -- a commercial producer. That certainly has a -- and if there was one in the southwest southwest of 35, if that was a commercial producer, what's wrong with the north half of 3?

And so everything has a bearing on everything else.

Q It would benefit them then because they would have additional data for projecting the area, is that correct?

A Well, that would be one way of looking at it.

Q Who would be paid for the reserves produced from that well?

A Who'd be paid for the reserves?

Q I mean who would receive compensation for the gas produced from that well? Only the owners of the south half of 35, is that not correct?

A Well, that's true. That would be the proration unit, that's right.

Q. You have a May 1 expiration date, is that right?

A. In the southeast quarter, yeah.

Q. Do you have to have a final Commission order before you can go ahead and start that well?

A. At this unorthodox location, and sure would for this proposal.

Q. And if this, whatever order is appealed, would that impair your ability to get USGS approval, or do you know?

A. I'm sure it would. This being a Federal lease, too, there's just roughly thirty days to go on it. They still have the archaeologist to go out there and make that report. The BLM has got to go out there and do their thing. And it takes time.

MR. CARR: I have no further questions.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Barnhill, you've interpreted on your Exhibit Number One that that Lakewood Well had 76 feet of pay but you think the reason it's not a producing well is because of its exposure to all that water during the drilling to the Devonian, is that it?

A. Yes, sir. I think they actually ruined that well when they were drilling to the Devonian. Had it been drilled, or I think you could drill a new well there under present day drilling techniques and have a very good chance of commercial gas.

Q. What unit is dedicated to the Coquina Pan Canadian?

A. That's a north half proration unit.

Q. North half.

A. Yes, sir.

Q. So, presumably, that -- another well in the south half would have the south half dedicated to it.

A. That's all you could dedicate in 34 would be the south half.

Q. Now, down here in Section 3, how does Chama have it's lands dedicated to that well that's drilling?

A. 3. The well is a south half proration unit and the south half of 3 is the proration unit.

Q. And the west half is dedicated to this Santa Fe-Exxon No. 1.

A. The west half of 2 is the proration unit for Santa Fe Exploration.

Q. Now, I presume that Hilliard is still producing this Gulf Federal even though it is just making a

very small amount of gas.

A. Yes, sir. I can give you November's --

Q. I noticed November's production on one of your exhibits there, 257 Mcf for the month.

A. That's right, something like that.

Q. 10 a day or less.

Now you also mentioned that the cumulative production from the Pan Canadian was 2.3 billion from the Morrow and I thought you said it was now recompleted to the Atoka.

A. That's correct.

Q. Isn't it the other way around, that it was originally an Atoka well and then was recompleted in the Morrow?

A. No, sir.

Q. Well, then this exhibit must be in error, where it shows the -- it's a revamp from the statistical report, but on page 534 it shows production for the North Cemetary Atoka Pool, but it doesn't show any production in the year 1980, and it says recompleted to Cemetary Morrow Gas.

A. That -- that is a -- that's an error. It was completed out of the Morrow and after that was -- went down, it was recomplted out of the Atoka, and on the cards

we have the --

Q. Well, when was it recompleted, do you know that?

A. I'd rather --

Q. Because it shows a full year's production for 1979 from the Morrow.

A. It was recompleted 5-5-77 according to this card. It was completed originally, potentialed from the Morrow perforations in January the 17th of '74.

It was recompleted with initial calculated open flow of 1,221,000 out of the Atoka in 5-5-77.

Q. And then was it recompleted back to the Morrow, then?

A. You know, I have a suspicion that they may have the -- even the Morrow perforations open still on this, but -- and I was just going off the data available.

Q. Well, you see your sheet here that's labeled 1979, so all that production during '79 has been from the Cemetary Morrow.

A. That is -- that is Cemetary Morrow production.

Q. Uh-huh.

A. Right, the one in '79.

Q. And then this sheet for November of 1981

attached to that same exhibit shows production in November of '81 from the Cemetary Morrow again.

So maybe it was completed in the Morrow, recompleted in the Atoka, and then put back in the Morrow.

A. Well, I'm sure it was completed in the Morrow and then recompleted in the Atoka, and that we've got something mixed up here and I can't exactly tell you what it is.

MR. PADILLA: Mr. Examiner, maybe we can verify that information through the records of the Division while we're here.

MR. NUTTER: There may be something in the well file to show what's been happening to that well.

Q. Now it's your opinion, Mr. Barnhill, I believe you stated that you don't feel any penalty should be imposed on your proposed well because of its unorthodox location because in effect you said you'd be benefitting the entire area by showing the existance of the channel and producing formations coming up through this particular area.

Do you believe that your entire south half of Section 35 would be productive from the Morrow if the well were productive?

A. I don't think you could drill a well in the southeast of 35 and get a well. I think you're on the

bank on that side.

Q It's coming up the slope there and some place or other you're getting up out of the channel.

A You're getting up out of the channel. You'll be on the east bank, and that's what's happened in this area. These channels were incised, eroded into the Barnett. Some of them have even gone down into the top of the Mississippian Lime, and they deposited with the sands due to the various situations; meander into the old arroyo or channel caused a dumping action of sand in which you get just kind of a sandbar build-up. I've noticed this on various areas I've worked.

Q Well now why do you think the Huber-Irami Well was a dry hole?

A Well, there are apparently plugs of impermeability existing in this. Now what causes it, I can't explain, and I've talked to a lot of intelligent people. You can -- the sands can be present but they can be just tight and they seem to be local spots of silica. Silica was deposited and choked off permeability and porosity. It's localized, kind of a localized induration.

The sands were very well developed in the Huber-Irami Well but just tight, and that is just something else you have to fight when you're --

Q Well, it's got an equal position with respect to the channel that the Pan Canadian has, even actually more sands.

A Yes, it did, but it was tight.

Q And didn't produce at all.

A So it's going to have localized areas of induration which you just hope you don't run into.

Q Okay.

MR. NUTTER: Are there any further questions of Mr. Barnhill?

MR. PADILLA: May I ask a couple of questions, Mr. Examiner?

REDIRECT EXAMINATION

BY MR. PADILLA:

Q Mr. Barnhill, would you consider drilling the well in any of the standard locations in Section -- in the south half of Section 35?

A No, I'm afraid I couldn't. It's just too risky. This stuff is a high risk at best.

Q Also, with respect to the change in the Isopach, did the well that Chama drilled have any influence in your decision to make a change?

A No, I'm glad to see that they got a well

down there, but -- and that's where I recommended they drill this well -- but I have the opportunity to possibly drill a well in the south half of 35, and I think that that didn't have any particular bearing on it.

Q. Did the limited information about 50 feet have anything to do with the changes that seems to --

A. No, because when you go across this cross section here and you take the factual data, actually the original Isopach and getting Chama to drill where they drilled in the south half of 3, that's where it needed to be drilled. But you -- but now I did not represent in that Isopach the true amount of sand in the -- in this old Stanoline Lakewood.

This channel certainly does come down through that and I'd like to drill a well in the south half of 35, but it would need to be an unorthodox location because these things are so restricted from the standpoint you can get on the bank so fast and get on the other bank. They're about a mile wide.

Q. Looking at the Hilliard Well, do you -- as far as the net amount of sand that's shown on the Isopach, does that -- does that consider the shale as depicted in the --

A. Well, what happens when you get out of the channel, when you get up on the banks, they -- your good, clean sands are deposited in -- just imagine a big arroyo,

big channel, and as you get up on the bank they get -- that's where a lot of shale, a lot of trash, a lot of stuff came in and just broke up, and you get fingers of sand.

Q. Do you show it on your Isopach, this total amount of feet as shown in the cross section, do you show the entire --

A. I show that as what I would consider net clean sand is 32 feet.

Q. And do you consider that the sand as shown at the Hilliard Well by drilling at a standard location you would encounter the same type of sand?

A. I think you have a good chance. I think you have an excellent chance.

MR. PADILLA: Mr. Examiner, I have no further questions.

RECROSS EXAMINATION

BY MR. NUTTER:

Q. What do you know about the status of the Chama Well in Section 3 at this present time, Mr. Barnhill?

A. The only thing I really know, that the operator reported they had 50 feet of sand and they've gone tight on me, but the operator is present here in the room. You might ask him.

Q. Well, I will. You don't know whether they've --

A. I don't know what they're doing. I do know they ran pipe, and I don't know what they've done.

Q. Okay.

REDIRECT EXAMINATION

BY MR. PADILLA:

Q. Mr. Barnhill, would wells drilled in the south half of 34, the north half of 3, and even in Section 2, would they have the opportunity of draining Section 35?

A. Sure they would.

MR. PADILLA: No further questions.

RECROSS EXAMINATION

BY MR. CARR:

Q. Mr. Barnhill, in preparing the two Isopachs did you, and looking at the Hilliard Well in both instances, use net clean sand? Is that what you used in both instances?

A. Yeah. It's best to try to use the overall interval, because you've got these shales through it and they vary.

MR. CARR: May it please the Examiner,

at this time I would like to offer into evidence the Isopach which has been marked as Chama Exhibit Number Six.

MR. NUTTER: Chama Exhibit Number Six will be admitted into evidence.

MR. CARR: I have no further questions.

MR. NUTTER: If there are no further questions, the witness may be excused.

Call your other witness, please.

MR. PADILLA: Mr. Examiner, we will only use Mr. MC Coy as a rebuttal witness, if necessary.

MR. CARR: At this time I'd call James Montgomery.

JAMES H. MONTGOMERY

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 James H. MOntgomery. I live in Dallas, Texas.

Q Mr. Montgomery, by whom are you employed

and in what capacity?

A. I'm a consulting geologist and engineer, representing Chama Petroleum, Mr. Charles Nearburg.

Q. And Mr. Nearburg is the President of Chama Petroleum?

A. That's correct.

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

A. I have. It's been over ten years ago.

Q. Would you summarize your educational background and your work experience for the Examiner?

A. All right. I have a Bachelor's degree in geology from Louisiana State University and have a Master's degree in geology, a Bachelor's degree in petroleum engineering from the University of Tulsa.

Spent 32 years in the oil business with major oil companies, large independents, and now am a consultant.

Q. And how long have you been a petroleum consultant?

A. Twelve years.

Q. Are you familiar with the application filed in this case on behalf of Mr. Barnhill?

A. Yes, sir.

Q And are you familiar with the subject area?

A Yes, I am.

MR. CARR: Are the witness' qualifications acceptable?

MR. NUTTER: He was qualified ten years ago. He's got ten more years experience, so we will qualify him.

Q Mr. Montgomery, will you summarize briefly Chama Petroleum Company's reasons for appearing in this case?

A Well, Chama is here to oppose an unorthodox location proposed by Mr. Barnhill without some kind of a penalty on it.

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

A Yes, I have.

Q Will you please refer to what has been marked for identification as Chama Exhibit Number One, identify this and explain what it shows?

A This is a land plat showing Chama's ownership. The acreage owned by Chama is cross hatched.

It also has the lines of the cross sections, which we'll introduce later in the testimony.

Q Is also shown the proposed well location?

A Yes, the proposed location and the standard location and the proposed proration unit in the south half of Section 35.

Q What are the spacing rules for the Morrow in this area?

A 320 acre spacing.

Q And what are the well locations on proration units?

A 1980 from - in this case 1980 from thewest line and 660 from the south or 1980 from the west and 1980 from the south.

Q How much of an advantage in terms of feet is Mr. Barnhill seeking to obtain by approval of the proposed location?

A 1320 feet.

Q Now I'd like to direct your attention to the south half of Section 34.

A Yes, sir.

Q A portion of the south half of that section is not shaded and the question is, who owns the remaining interest in the south half of 34?

A Exxon owns it and Chama Petroleum is in negotiations with them for a farmout now. Chama will control

the unit to be drilled and does expect to operate it.

Q So Chama does propose to drill a well --

A Yes.

Q -- in the south half? And I believe it's already been testified to, who owns the north half of that section?

A Yes, Coquina.

Q And a well is dedicated to it. The south half proration unit that is being put together by Chama, Chama would have the major interest ownership in that.

A That's correct.

Q I'd like to direct your attention to the northhalf of Section 3, which is the diagonal offset to the proposed location --

A Yes, sir.

Q -- and ask you to note just for the record what the ownership is.

A It's 100 percent Chama.

Q Will you now refer to what has been marked for identification as Chama Exhibit Number Two, and identify this, please.

A It's a topographic sheet of the area, showing that there is no topographical reason why it can't be drilled at a standard location.

Q. Will you now refer to Chama Exhibit Number Three and review this for Mr. Nutter?

A. This is a production cumulative map of the wells in the area. The Morrow wells are colored in yellow on the map and the others are colored by the appropriate color on the legend.

This shows 2.4 billion for the Coquina Well out of the Morrow. I'm uncertain, too, now what it's producing from. I don't know, either, whether it's Atoka or what. This shows production in the old Pan Am Lakewood, which I don't think was ever the case. I mean out of the Morrow.

Q. Would you, first of all, what is the date on this? It shows production through what date?

A. Production is to 1-1-81.

Q. Yes. Now, using this map would you look at the wells immediately to the north of the proposed location and just for the Examiner review the quality of these wells?

A. All right. The Coquina Well has made the 2.4 billion. The Hilliard Well is a very poor one, 187-million. The PanAm Lakewood, I think, will make an excellent well. The sand there is well developed, if a well were drilled next to it now it would produce.

I also think the Huber-Irami, although it's a dry hole, as we will show later on the cross section, the sand is terrifically thick, has gas effect all the way through it, and I think with a frac job it would produce.

Q. Now, Mr. Montgomery, I don't see on this map the Chama Well located in Section 3.

A. No, that's an oversight. It's there.

Q. What is the location of that well?

A. That's 1980 from the east and 1980 from the south.

Q. And when was it completed?

A. It was completed in late February.

Q. And have you reviewed data on that well?

A. Yes, I have.

Q. Would you summarize that data for the Examiner, referring to the number of feet of sand and the characteristics of the well?

A. Well, I have picked 55 feet of net sand in that well. It's on the same criteria that I think Mr. Barnhill was picking on his first Isopach.

Q. Does it appear to be a good Morrow producer?

A. Yes, it is an excellent well. Some of it's got 25 percent porosity.

MR. NUTTER: Do you have a potential on it, Mr. Montgomery?

A I don't have. It has been completed and I don't -- but I don't know. I haven't seen a calculated open flow.

MR. NUTTER: All right.

A It has not been hooked up, so I don't know.

MR. CARR: Mr. Nutter, Charles Nearburg is here and he can give you the potential on that well, if you would like that.

MR. NUTTER: I'd just like to have some idea what kind of potential it's got, Mr. Nearburg.

MR. NEARBURG: We, General Servicing of Hobbs tested the well for a calculated absolute open flow of 30-million cubic feet a day.

MR. NUTTER: Thank you.

Q Now, Mr. Montgomery, would you look at the Coquina Well in Section 34 and also the Hilliard Well in 35 and compare these two wells?

A The Coquina Well, of course, is by far the best. The Hilliard Well has a lot thinner sand, a lot shadier sand, and it has produced accordingly.

Q Now if you'll look at the Lakewood Well

MR. NUTTER: Do you have a potential on it, Mr. Montgomery?

A. I don't have. It has been completed and I don't -- but I don't know. I haven't seen a calculated open flow.

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MR. NUTTER: Thank you.

Q. Now, Mr. Montgomery, would you look at the Coquina Well in Section 34 and also the Hilliard Well in 35 and compare these two wells?

A. The Coquina Well, of course, is by far the best. The Hilliard Well has a lot thinner sand, a lot shadier sand, and it has produced accordingly.

Q. Now if you'll look at the Lakewood Well

in Section 34, the PanAm Lakewood Well, in your opinion if that well were drilled today do you think it could be made into a commercial producer?

A. Yes, sir, I do.

Q. From the Morrow?

A. Yes, from the Morrow.

Q. And what about the Huber-Irami Well?

A. I feel the same thing with it. It would probably take a frac job but I think you could do it.

Q. And you've reviewed the logs on that well?

A. Yes, I have.

Q. Are they contained on your cross section?

A. Yes.

Q. All right, at this time I would direct your attention to Chama Exhibit Number Four and ask that you review this for Mr. Nutter.

A. All right. This is an east-west cross section, E-E', which is shown on --

Q. On Exhibit Number One.

A. Number One, coming through the Max Well, through the Coquina Well, through the Stanoline Lakewood Unit, through the Hilliard Well, then on to the Gulf Well, which is out of the channel. I should point out that on

this cross section the Stanoline Lakewood Unit is half the scale of the other logs.

Q. So the yellow shaded area is a lot --

A. The yellow shaded area is a lot thicker than it appears here. You've seen the microlog on that because it is admitted in evidence.

Q. This shows the general characteristics of the sand through this area?

A. You can see the thickness in the Coquina Well, the thinness in the Hilliard Well, and the lack of sand in the Mark Production and the Gulf.

Q. Would you concur with Mr. Barnhill's statement that sructure is not important in this area in terms of making a Morrow -- successful Morrow completion?

A. I agree with him.

Q. And what you're looking for when you drill a well in this area is productive sand.

A. The thicker the better.

Q. So the -- is it fair to say that the thicker the sand body the, generally speaking, the greater reserves you would find under that -- in that location?

A. Yes, sir.

Q. Will you now refer to Chama Exhibit Number Five and review this?

A That is cross section, D-D', again starting with the Mark Production Well, through the Coquina Well, through the Huber-Irami Well, and then down to the southeast through the PanAmerican.

Q And this is the log of the Huber-Irami Well which you referred to before.

A Yes. If you will note on that log, on the Huber-Irami log, the porosity is low. A drill stem test recovered 60 feet of mud. The final shut-in pressure was 1879 pounds. An analysis of the build-up curve on that shows it to be still building, and it shows that there is some feed in from somewhere. At least that is the analysis that we have derived from testing.

I think that the gas effect shown on that log, with a not too large frac job would enable you to make a well out of it at present prices and this was drilled before these days prices.

MR. NUTTER: When was that Huber Well drilled?

A '74, 1974, March.

Q Now, Mr. Montgomery, have you reviewed the Isopach which has already been admitted into evidence which was prepared by Mr. Barnhill?

A Yes, sir. I reviewed that and these

two cross sections when Mr. Barnhill submitted this to Chama Petroleum. I reviewed it for Chama. Based on Mr. Barnhill's work, I thought he has the channel lined up pretty well. I differed with him a little bit on some of the sands, that this is not quite enough, actually, from his first cross section, or first Isopach, and I approved and recommended the deal to Chama and that's the reason they took it and drilled it.

Q. Have you taken the raw data and on your own prepared an Isopach?

A. Yes, sir, I have.

Q. And is that Isopach what has been marked for identification as Exhibit Number Seven?

A. Yes, sir.

Q. Would you please review this for Mr. Nutter?

A. This, to me, is what is productive, or gross productive sands across this area. I gave the Chama, the new Chama-Huber Well 53 feet, the Huber-Irami 47 feet, the Coquina PanAmerican 30 feet, the PanAm Lakewood 44 feet, the Hilliard Well 26 feet.

Q. Now I believe you're also trained as a geologist, not just as a --

A. Yes, I am.

Q. Do you believe there is sufficient control in this area, in the area now around the proposed location, to make a fairly accurate interpretation of the area?

A. Yes, sir, I do, across 34, 35, and 3, I think you can make a pretty accurate gauge as to where the thickest part of the channel is, or the largest reserves.

Q. That is without an additional well drilled at the proposed location?

A. Yes.

Q. Now as I look at this, the channel seems to generally trend north/south, is that correct?

A. Yes, sir.

Q. Would the general trending of this channel, in your opinion have any effect on the drainage pattern surrounding the proposed location?

A. No, sir, it's going to drain, with thick reserves it's going to be in the thick part and with thinner-- the thinner areas will drain from the thicker areas, invariably.

Q. Do you believe it would drain basically in a radial fashion?

A. Radial, if the reservoir was completely homogeneous then it would be completely radial.

Q. Where would the better portion of this reservoir be located?

A. In Section 34 and Section 3.

Q. So would a greater proportion of the drainage, do you believe, come from that acreage?

Q. Yes, sir.

A. And upon what do you base that statement that that portion of the reservoir is better?

Q. That's where the best well is; that's where the thickest sand is.

Q. And how --

A. To date, I mean.

Q. And how would you compare the quality of the sand in that area?

A. The sand is the best developed there. That's the only place where they have cleaned up sufficient is in the PanAm Lakewood and Chama Huber and the Coquina Well.

Q. Now, Mr. MOntgomery, I would direct your attention to Chama Exhibit Number Eight.

A. Yes, sir.

Q. And I would ask you to identify this for Mr. Nutter and then review what it shows.

A. This is a planimeter study that we made based on this Isopach, which is an ordinary engineering function in determining net acre feet.

Q. Which Isopach are you talking about?

A. The Isopach prepared by me, Exhibit Number Seven.

We have Isopached the acre feet present in the south half of Section 35 and the acre feet present in the south half of Section 34.

Q. And how do they compare?

A. 75 percent of the acreage is in the south half of Section 34 and 25 percent in the south half of Section 35.

Q. Now, a well in the proposed location, would it drain all of the reserves from the south half of Section 34?

A. No, sir, it probably wouldn't drain it all, no.

Q. Would not drain -- I'm sorry, I didn't hear you.

A. I said it would not drain the entire south half of 34.

Q. Have you tried to estimate what percentage of -- or what portion of the south half of Section 34 would contribute reserves to a well at the proposed unorthodox location?

A. It would probably drain the southeast

quarter of Section 34, 160 acres.

Q And would it also drain into Section 3, the diagonal offset?

A It would drain a portion, probably the northeast quarter of Section 3.

Q Have you attempted to compute a percentage of the reserves that would be drawn from the offsetting acreage and produced by a well at the proposed location?

A Yes, sir, using those figures, using the southeast of 34, the northeast of 3, the southwest of 35, and the northwest of 2, it would be 69 percent lying under 34 and 3, the southeast quarter of 34 and the northeast quarter of 3.

Q So your opinion is that 69 percent of the reserves would be drained from adjoining properties, is that correct?

A Yes, sir.

Q Are you prepared to make a recommendation to the Examiner as to the penalty which should be imposed on any well drilled at the proposed location?

A I would recommend a 69 percent penalty.

Q And what should this penalty be applied against?

A Oh, usually the semi-annual flow test or

on the calculated open flow.

Q Would the semi-annual deliverability test be satisfactory?

A Yes, uh-huh.

Q In your opinion could Chama Petroleum Company protect itself by drilling a well in the south half of Section 34?

A They could protect if we could drill at a normal location. If we had to drill in the southeast quarter of Section 34, I mean in the southeast southeast of 34, I don't think it would drain the reserves under the south half of 34.

Q To protect themselves from drainage from the proposed well, where would they have to locate?

A They'd have to drill 660 from the line, just like Mr. Barnhill.

Q And I believe it was your testimony -- would a well at that location drain the entire south half of 34?

A No, sir, it would not recover anything in the southwest quarter, I don't think.

Q To produce the reserves in the southwest quarter what would you have to do?

A Would have to drill an additional well.

Q. Is that an unnecessary well?

A. Yes, it would be a wasteful well.

Q. In your opinion would granting this application without imposing a 69 percent penalty afford Chama the opportunity to produce its just and fair share of the reserves under their tract without waste?

A. Yes, sir, if we put the penalty on, it would, yes.

Q. If they're penalized your correlative rights would not be impaired?

A. They would not be impaired, no.

Q. Were Exhibits One through Eight either prepared by you or have you reviewed them and can you testify from your own knowledge to their accuracy?

A. Yes, sir, I can.

MR. CARR: At this time, Mr. Nutter, we would offer Chama Exhibits One through Five, Seven and Eight.

MR. NUTTER: Chama Exhibits One through Five, Seven and Eight, will be admitted in evidence.

MR. CARR: I have no further questions.

MR. NUTTER: Any questions of the witness?

MR. PADILLA: Just a moment, Mr. Examiner.

CROSS EXAMINATION

BY MR. PADILLA:

Q. Mr. Montgomery, you have testified that you have studied this area and that you're familiar with the area, but you've also testified that, or acknowledged that you did not know what the calculated open flow for the well that Chama drilled, is that correct?

A. That's correct. I just hadn't been furnished with the data.

Q. Wouldn't that be important in calculating reserves for -- underlying -- at least the reserves in Section 3?

A. Yes, sir, it would be.

Q. Isn't it also true that offsetting operators could -- could drill wells in Section 34, Section 3, and possible even Section 2, and therefor would somehow equalize any type of drainage, is that correct?

A. No, sir, I don't think that's correct at all.

Q. Isn't your 69 percent --

A. I testified that I did not believe that a well drilled in the southeast quarter of -- the southeast southeast of 34 would drain the south half of 34. That's

where we'd have to drill to protect ourselves from this location.

Q. Isn't your 69 -- doesn't your 69 percent penalty assume that there would be no wells drilled offsetting the proposed well?

A. No, we're proposing to drill in 34, but I would certainly like to see you penalized 69 percent anyway to protect ourselves from the drainage we would suffer by that well.

Q. Are you saying then that even if you drilled a well 660 from the north -- from the corner of Section -- northeast corner of Section 3 that 69 penalty -- percent penalty should still apply?

A. We don't plan to drill in the northeast quarter of 3. We don't want to drill there unless we're forced to. We prefer to drill in the middle of the channel where the thickest reserves are.

Q. You have no quarrel with Mr. Barnhill's geology, do you?

A. No. I do object to some of his picks, but he revised one Iscpach to show different figures, but then that's my privilege and his privilege, too, when we see different interpretations.

Q. You've introduced Exhibits Four and Five,

haven't you, and those were prepared by Mr. Barnhill?

A. Yes, sir, they were.

Q. You've given the PanAmerican Well 44 percent -- or 44 feet of net pay. Do you differ with Mr. Barnhill on the -- or differ with the microlog that's introduced as Exhibit Number Three?

A. Mr. Barnhill didn't pick 76 feet of pay on the microlog. He picked it on the self potential curve, the SP curve. I think the old SP is not as good as the newer SP's and my pick as compared with the others, I think is more accurate.

I'm trying to compare with all the wells and he compared it this way at first and now he's -- he's changed it to read 76 feet.

Q. You don't agree with the information contained on the microlog, then?

A. I agree with information shown on the microlog. I don't agree that there is 76 feet of net effective sands.

Q. Mr. Montgomery, on Exhibit Three you've shown some information, some production information. NOw the wells you've indicated and colored red and purple to the north of the proposed location are in a separate area, aren't they?

A. Yes, uh-huh.

Q. And aren't the wells to the southwest in the channel shown in that exhibit, they're in a separate channel, too?

A. Yes, they are.

Q. So when we look at the area around the proposed well you really have very little well control, isn't that right?

A. Well, right now you've got one, two, three, four, four wells in a mile and a half. I'd say that's pretty close to it.

Q. How many of those are dry holes?

A. I don't think any of them are.

Q. They're not producing now, are they?

A. They're not producing, no.

Q. Mr. Barnhill, do you know whether Chama proposes to drill a well on the south half of Section 34?

A. Yes, sir, we do. It's been proposed.

Q. Where do you propose to drill that well?

A. Propose to drill it at a normal location in there, which will probably be 1980 from the east and 1980 from the south.

MR. PADILLA: Mr. Examiner, I think that's all we have now.

MR. NUTTER: Are there any further questions of Mr. Mongomery? Mr. Carr?

REDIRECT EXAMINATION

BY MR. CARR:

Q. Mr. Montgomery, I believe you indicated that you didn't have all the data on the Chama well either.

A. That's true.

Q. And you heard the calculated flow for the first time here today?

A. Here today. I have seen the logs.

Q. Based on that data, does that tend to confirm or dispute your calculations as to reserves under the tract?

A. Confirm, and from the looks of the log, it couldn't be anything but that good. It's the best looking MOrrow section I've seen out here in a long time.

MR. CARR: I have no further questions.

CROSS EXAMINATION

BY MR. NUTTER:

Q. Mr. Montgomery, your Exhibit Eight is a planimeter analysis of the thickness under these various tracts around here.

A. Yes, sir.

Q. Now what did you base your 69 percent on?

A. It was a combination of the northeast quarter of 3, which is half of these tracts, and the southeast quarter of 34, plus the southwest quarter of 35 and the northeast quarter of 2.

Q. Well now, was that on thickness of pay or was that on actual reserves, or what?

A. That was thickness of pay, right.

Q. Okay, from the same data for what you had from the planimeter analysis?

A. Yes. You have to change part of this because it's different tracts. In other words, part of this has to come off.

Q. You used quarter sections in each one of those then.

A. Yeah, that's right. You have to cut part of this off on these studies.

I don't have anything on 2. I did that last night and I didn't have time to prepare it.

Q. I see, okay, but it was just a straight mathematical analysis of pay thickness --

A. That's right.

Q. -- under each of the four 160-acre tracts.

A. Yes, sir, and you can see here for the half sections, and you can knock them off at your leisure. I mean if you want to compare it the way I did.

Q. And so then what you did, you assumed, then, that if a well were drilled right there at the intersection --

A. Right.

Q. -- of Sections 34, 35, 2, and 3 --

A. And it drained equally in all --

Q. -- that 69 percent of the drainage would come from 2, 3, and 34, and 100 percent minus 69, that would be 31 percent coming from Section 35.

A. Right.

MR. NUTTER: Are there any further questions of the witness? He may be excused.

MR. PADILLA: We have no further testimony, Mr. Examiner.

MR. NUTTER: If there is no further testimony in the case, I'll call for closing statements. Mr. Padilla, being applicant, you may go last.

MR. CARR: May it please the Examiner, Mr. Barnhill today is before you seeking approval of an unorthodox well location for a Morrow well. What he is doing is proposing to move 320 feet toward acreage that will be

operated by Chama Petroleum Company.

He's moving, as he admits, to gain structural advantage. He's not only moving close to the Chama property, but he's also moving into a better, cleaner section of the sand, and the testimony before you today shows the substantial portion of the drainage will come from offsetting tracts.

Now the rules under which oil and gas properties are operated in New Mexico in terms of spacing and well locations are designed to protect tracts from drainage from offsetting properties that cannot be compensated for without -- that cannot be compensated for without creating a situation in which waste will result.

I think it's important to remember that the jurisdiction of this Commission is based on waste prevention and protection of correlative rights, and with that in mind, if you'll look at the evidence presented, you will see that approving this application without imposing a substantial penalty will impair correlative rights of Chama, for they would have to come in and drill a well 660 out of the southeast corner of Section 34. This would be an unnecessary well because it would not be effective in terms of producing all the reserves underneath the south half of that section. And it would result in the drilling of an additional well and

that well would be an unnecessary well, which would result in waste.

Now, I think that if we take a look at the duties that are imposed on this Commission, you are empowered to take such action as will reasonably offset any advantage gained by, in this case, Mr. Barnhill, by reason of his unorthodox location.

We therefor, have come before you today and ask that you impose a fairly substantial penalty. Traditionally penalties are imposed on a straight acreage basis, but we submit to you that that does not stand when there is better evidence, when better evidence is presented as to the reserves under each tract, and under the very definition of correlative rights, we need to present testimony that shows that the bulk of the productive acre feet are under offsetting properties. You should look at that and consider that in assessing a penalty against the production.

We therefor request that in approving the application of Mr. Barnhill you impose a penalty which will be sufficient to protect Chama from the advantage which he is gaining by virtue of moving 1320 feet closer to our property and locating his well in a better portion of the channel.

MR. NUTTER: Thank you, Mr. Carr. Mr.

Padilla.

MR. PADILLA: Mr. Nutter, I believe that the opposition in this case assumes that Mr. Barnill's well is going to be a producing well and that's the only assumption that they have made.

I don't think the area and the evidence from both sides here demonstrates that the well is going to be a producing well.

Mr. Carr has cited the Continental case and of course the Continental case indicates that some type of reserves be calculated as far as is practicable to do so.

Mr. Montgomery had some type of evidence, at least on a calculated open flow, as to whether or not it will calculate reserves in the well drilled by Chama in Section 3. This has not been done.

We have shown, and I think are consistent with a precedent for the Morrow formation in southeast New Mexico, that the well is necessary at the proposed location in order to minimize the risk that Mr. Barnhill faces in drilling this well.

In addition to that, he will prove up acreage that currently is not available, and to penalize Mr. Barnhill at this time is certainly unfair.

MR. NUTTER: Thank you, Mr. Padilla.

Are there any other statements to be made in Case Number 7521?

If there is nothing further, we'll take the case under advisement.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

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Phone (505) 455-7409

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
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Mr. Ernest L. Padilla
Attorney at Law
P. O. Box 2523
Santa Fe, New Mexico

Re: CASE NO. 7521
ORDER NO. R-6948

Applicant:

~~William B. Bernhill~~

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCD x
Artesia OCD x
Aztec OCD

Other William F. Carr

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

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

CASE No. 7521
Order No. R-6948

APPLICATION OF WILLIAM B. BARNHILL
FOR AN UNORTHODOX GAS WELL LOCATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 31, 1982, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 16th day of April, 1982, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, William B. Barnhill, seeks approval of an unorthodox gas well location 660 feet from the South line and 660 feet from the West line of Section 35, Township 19 South, Range 25 East, NMPM, to test the Permo-Penn, Strawn, Atoka and Morrow formations, in the so-called "Boyd Channel" Area, Eddy County, New Mexico.

(3) That the S/2 of said Section 35 is to be dedicated to the well.

(4) That an offset operator, Chama Petroleum Company, appeared at the hearing and objected to approval of the aforesaid unorthodox location without penalty on the grounds that a well drilled at said location would drain gas from offsetting leases, thereby violating correlative rights.

(5) That approval of the unorthodox location will improve applicant's geological prospect for encountering the Morrow formation in a thickened section of the Boyd Channel and will better enable it to produce the gas underlying the S/2 of the aforesaid Section 35.

(6) That said unorthodox location will also place applicant in a more favorable position to drain gas from the offsetting leases which drainage would not be compensated for by counter drainage.

(7) That such drainage without counter drainage would result in the impairment of offsetting correlative rights.

(8) That approval of the proposed unorthodox location should be considered only if an adequate penalty is imposed on production from such location to minimize the aforesaid drainage and thus protect correlative rights.

(9) That a well drilled at the proposed unorthodox location and having the S/2 of the section dedicated thereto would be located at a standard distance relative to the South boundary of the spacing and proration unit.

(10) That a well drilled at the proposed unorthodox location and having the S/2 of the section dedicated thereto would be located 1320 feet or 67 percent closer to the west boundary of the spacing and proration unit than a well drilled at a standard location.

(11) That the drainage pattern of a well located at the proposed location would be encroaching primarily on two presently undeveloped spacing and proration units, namely the S/2 of Section 34, Township 19 South, Range 25 East, NMPM, and the N/2 of Section 3, Township 20 South, Range 25 East, NMPM.

(12) That according to the best geological evidence available at the hearing, the aforesaid two spacing and proration units have a total of some 13,638.5 and 13,443.6 acre feet of pay, respectively, or an average of 13,541.1 acre feet apiece, whereas the S/2 of Section 35, being the spacing and proration unit to which the well drilled at the proposed location would be dedicated, has some 3450.3 acre feet of pay.

(13) That on an acre-feet- of-pay basis, the S/2 of Section 26 has 25.5 percent of the acre feet of pay as the average of the two most directly affected spacing and proration units.

(14) That in accordance with Finding No. (8) above, the proposed unorthodox location should only be approved subject to a production limitation factor, and such factor should be computed by averaging the variation from a standard location and comparable acre feet of pay as follows: distance from south line of section, 100 percent of standard; distance from west line of section, 33 percent of standard; comparison of acre feet of pay with affected offsetting units' acre feet of pay, 25.5

percent, or, 100 percent plus 33 percent plus 25.5 percent divided by three equals 53 percent.

(15) That in the absence of any special rules and regulations for the prorationing of production from the subject well, the aforesaid production limitation factor should be applied against the well's ability to produce into the pipe line as determined by periodic tests.

(16) That in order to avoid premature abandonment and subsequent loss of recoverable reserves, provision should be made for a reasonable minimum allowable for the subject well, and 500,000 cubic feet of gas per day is a reasonable figure for a minimum allowable.

(17) That approval to drill the proposed well at the unorthodox location described in Finding No. (2) above, subject to the Production Limitation Factor described in Finding No. (14) above, will not impair but will protect correlative rights, will not cause waste, and should be given.

IT IS THEREFORE ORDERED:

(1) That the applicant, William B. Barnhill, is hereby authorized to drill a well to test the Permo-Penn, Strawn, Atoka and Morrow formations at a point 660 feet from the South line and 660 feet from the West line of Section 35, Township 19 South, Range 25 East, NMPM, Eddy County, New Mexico, subject to a Production Limitation Factor of 0.53 applicable as described below.

(2) That in the absence of any Special Rules and Regulations prorating production from the subject well, the following Special Rules and Regulations for a non-prorated gas well shall apply, if the well is drilled at the location described in Paragraph (1) above.

SPECIAL RULES AND REGULATIONS
FOR THE
APPLICATION OF A "PRODUCTION LIMITATION FACTOR"
TO A NON-PRORATED GAS WELL

APPLICATION OF RULES

RULE 1. These rules shall apply to the William B. Barnhill Morrow formation gas well located 660 feet from the South line and 660 feet from the West line of Section 35, Township 19 South, Range 25 East, NMPM, Eddy County, New Mexico, which well's Production Limitation Factor of 0.53 shall be applied to the well's deliverability (as determined by the hereinafter set

forth procedure) to determine its maximum allowable rate of production.

ALLOWABLE PERIOD

RULE 2. The allowable period for the subject well shall be six months.

RULE 3. The year shall be divided into two allowable periods commencing at 7:00 o'clock a.m. on January 1 and July 1.

DETERMINATION OF DELIVERY CAPACITY

RULE 4. Immediately upon connection of the well the operator shall determine the open flow capacity of the well in accordance with the Division "Manual for Back-Pressure Testing of Natural Gas Wells" then current, and the well's initial deliverability shall be calculated against average pipeline pressure in the manner described in the last paragraph on Page I-6 of said test manual.

RULE 5. The well's "subsequent deliverability" shall be determined twice a year, and shall be equal to its highest single day's production during the months of April and May or October and November, whichever is applicable. Said subsequent deliverability, certified by the pipeline, shall be submitted to the appropriate District Office of the Division not later than June 15 and December 15 of each year.

RULE 6. The Division Director may authorize special deliverability tests to be conducted upon a showing that the well has been worked over or that the subsequent deliverability determined under Rule 5 above is erroneous. Any such special test shall be conducted in accordance with Rule 4 above.

RULE 7. The operator shall notify the appropriate district office of the Division and all offset operators of the date and time of initial or special deliverability tests in order that the Division or any such operator may at their option witness such tests.

CALCULATION AND ASSIGNMENT OF ALLOWABLES

RULE 8. The well's allowable shall commence upon the date of connection to a pipeline and when the operator has complied with all appropriate filing requirements of the Rules and Regulations and any special rules and regulations.

RULE 9. The well's allowable during its first allowable period shall be determined by multiplying its initial deliverability by its production limitation factor.

RULE 10. The well's allowable during all ensuing allowable periods shall be determined by multiplying its latest subsequent deliverability, as determined under provisions of Rule 5, by its production limitation factor. If the well shall not have been producing for at least 60 days prior to the end of its first allowable period, the allowable for the second allowable period shall be determined in accordance with Rule 9.

RULE 11. Revision of allowable based upon special well tests shall become effective upon the date of such test provided the results of such test are filed with the Division's district office within 30 days after the date of the test; otherwise the date shall be the date the test report is received in said office.

RULE 12. Revised allowables based on special well tests shall remain effective until the beginning of the next allowable period.

RULE 13. In no event shall the well receive an allowable of less than 500,000 cubic feet of gas per day.

BALANCING OF PRODUCTION

RULE 14. January 1 and July 1 of each year shall be known as the balancing dates.

RULE 15. If the well has an underproduced status at the end of a six-month allowable period, it shall be allowed to carry such underproduction forward into the next period and may produce such underproduction in addition to its regularly assigned allowable. Any underproduction carried forward into any allowable period which remains unproduced at the end of the period shall be cancelled.

RULE 16. Production during any one month of an allowable period in excess of the monthly allowable assigned to the well shall be applied against the underproduction carried into the period in determining the amount of allowable, if any, to be cancelled.

RULE 17. If the well has an overproduced status at the end of a six-month allowable period, it shall be shut in until such overproduction is made up.

RULE 18. If, during any month, it is discovered that the well is overproduced in an amount exceeding three times its average monthly allowable, it shall be shut in during that month and during each succeeding month until it is overproduced in an amount three times or less its monthly allowable, as determined hereinabove.

RULE 19. The Director of the Division shall have authority to permit the well, if it is subject to shut-in pursuant to Rules 17 and 18 above, to produce up to 500 MCF of gas per month upon proper showing to the Director that complete shut-in would cause undue hardship, provided however, such permission shall be rescinded for the well if it has produced in excess of the monthly rate authorized by the Director.

RULE 20. The Division may allow overproduction to be made up at a lesser rate than permitted under Rules 17 or 18 above upon a showing that the same is necessary to avoid material damage to the well.

GENERAL

RULE 21. Failure to comply with the provisions of this order or the rules contained herein or the Rules and Regulations of the Division shall result in the cancellation of allowable assigned to the well. No further allowable shall be assigned to the well until all rules and regulations are complied with. The Division shall notify the operator of the well and the purchaser, in writing, of the date of allowable cancellation and the reason therefor.

IT IS FURTHER ORDERED:

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY,
Director

PRODUCTION 1980

CEMETARY MORROW (GAS) [illegible]

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	ACCUM
[illegible] / STATE COM															
13[illegible]29E	GAS		9											90	60601
[illegible], INC. / [illegible] STATE COM															
13[illegible]	GAS	49528	44581	44225	41031	41352	36190	30656	36270	32243	34131	33753	33390	462289	2705963
	OIL	78	65	66	27	58			93	35	25	36	31	582	3065
	WAT								93	35	29	36	31	224	
[illegible] OIL CORPORATION / [illegible]															
1F[illegible]29E	GAS	10982	10610	9997	7333	3036	3367	5721	7541	4770	3016	5444	5537	80571	2963270
	OIL	22												22	3529
[illegible] INCORPORATED / [illegible] FEDERAL															
1M [illegible]	GAS	2313 RECOMPLETED TO [illegible] STRAWN (GAS)												2313	74731
[illegible], INC. / [illegible] COM															
1J [illegible]	GAS	LAST PROD. PRIOR TO 6/73												5	196725
	OIL														650
DAVID FASKEN / [illegible] FEDERAL															
1J[illegible]25E	GAS	36425	30125	34630	26676	29790	24219	22495	19627	13468	25232	21832	17041	290950	3649856
	OIL	4	65	66	66	75	31	25	41	49	68	19	36	519	6199
CEMETARY FED COM															
1L21[illegible]25E	GAS	2004	1120	1521	1065	1702	1730	1991	1364	852	1765	1160	1640	16602	443627
	OIL														136
FEIL FEDERAL															
1O20[illegible]25E	GAS	4917	7630	7679	3679	6502	6819	8156	6068	3266	7481	7973	7316	77906	976080
	OIL	8					1					2	16	27	1786
GOSSETT 29															
1O29[illegible]25E	GAS	10536	7564	8162	7814	7426	9294	7005	5441	6925	7500	6082	7592	92126	1797993
	OIL						9	4					7	20	2122
HOWELL 29															
1G29[illegible]25E	GAS	16606	9696	15037	10093	14859	11124	12258	9012	5229	10606	12163	16366	149195	3230681
	OIL	19	5	1	2	12	1	5				10		67	1443
HOWELL 29 FEDERAL															
1H29[illegible]25E	GAS	2561	3194	3216	2319	2382	2355	1859	2600	1979	2495	2751	4071	31790	303509
	OIL														63
HOWELL 32 COM															
1L32[illegible]25E	GAS	12179	8875	11720	10276	9032	9779	9660	10029	6366	12096	10726	9012	121361	733830
	OIL	16	3	16	13	89	8				30	8	20	218	1105
[illegible] FEDERAL COM															
1S [illegible]24E	GAS	52300	57049	71536	66630	64309	61032	62937	59232	57777	57040	60093	49320	717123	10258239
	OIL	66	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
2M [illegible]24E	GAS		107378	240[illegible]	237[illegible]	233[illegible]	211[illegible]	200[illegible]	185[illegible]	183[illegible]	182[illegible]	165[illegible]	150[illegible]	220[illegible]	220[illegible]
	OIL		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3E [illegible]24E	GAS		77601	[illegible]	79736	77107	[illegible]	[illegible]	51[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	OIL		236	221	225	207	172	149	139	126	119	117	78	1791	1791
SHELL FEDERAL COM															
1S [illegible]24E	GAS	27721	33315	30922	37601	36632	34396	25817	21718	24677	17081	30236	12760	342656	7923267
	OIL	45	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	320	16600
5C [illegible]24E	GAS		7160	LEASE	[illegible]	9310	[illegible]	8733	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	OIL				9	14	11		7	12	18	26	5	104	104
STATE 32 COM															
1O32[illegible]25E	GAS	7606	7390	7610	7754	10221	7896	7646	7700	7343	10123	6036	6566	93673	1502530
	OIL	22				42	16	3			20	11	3	125	1415
COMPANY TOTAL	OIL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	GAS	172[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] OIL COMPANY / STATE [illegible]															
1[illegible]29E	GAS	4550	5572	4103	4115	3610	3035	3792	3664	3602	3335	4153	4039	47650	1349123
	OIL	6	1		5		5							17	2196
HILLIARD OIL AND GAS, INC. / GULF FEDERAL COM															
1F2319S25E	GAS	482	1310	1375	1052	1027	222	1615	850	396	552	267	565	9730	107673
	OIL														372
[illegible] OIL CO / FEDERAL [illegible] COM															
1H 7[illegible]25E	GAS	354	441	335	341	200	217	276	238	173	40			2701	334340
	OIL										3			3	723
FIRST NATIONAL BANK OF ALBUQUERQUE C															
1F [illegible]25E	GAS	7696	11203	10409	13325	7421	8677	10009	11171	3146	10745	10095	12172	136267	1595020
	OIL			12	18	10					14			54	1693
S P JOHNSON															
1G [illegible]25E	GAS	196	429	371	536		563	903	890	145	417	577	716	5761	445562
	OIL														291
NEW MEXICO [illegible] COM															
1O [illegible]25E	GAS	1492	1632	1461	2066	1036	1676	1062	1075	1117	1430	2026	2323	20214	380938
	OIL														133
COMPANY TOTAL	OIL			12	18	10					17			57	2060
	GAS	9734	13705	125[illegible]	162[illegible]	87[illegible]	11333	13040	14174	4581	126[illegible]	12696	15433	1449[illegible]	27640[illegible]
[illegible] OIL CORPORATION / [illegible] FEDERAL COM															
1[illegible]20S25E	GAS	PLUGGING APPROVED 1974													676321
	OIL														300
[illegible] COMPANY / ALBERT FEDERAL COM															
1O[illegible]25E	GAS	1242	468	3506	2976	914	451	309	299	119	204	96	236	12814	345959
	OIL														314
	WAT			25										25	
[illegible] DRAW															
2E [illegible]25E	GAS	ZONE ABANDONED													84726
	OIL														35
FOSTER FEDERAL COM															
1N[illegible]25E	GAS	20545	24002	23061	21676	20969	18057	10095	10926	7512	3300	7030	9544	194495	1955038
	OIL	20	6	9	9	11	2	2	5	1				65	1969
LEN MAYER GAS COM															
1C2[illegible]25E	GAS	1014	9493	3610	1639	2712	3402	6502	6150	5022	3068		7572	50904	232946
COMPANY TOTAL	OIL	20	6	9	9	11	2	2	5	1				65	2318
	GAS	308[illegible]	340[illegible]	329[illegible]	26[illegible]	26[illegible]	22710	24[illegible]	17375	12653	7452	7144	17352	2502[illegible]	2618[illegible]
	WAT			25										25	
PHILLIPS PETROLEUM COMPANY / ROYAL A															
1K[illegible]20S25E	GAS	PLUGGING APPROVED 1973													629993
READ AND STEVENS, INC. / MESA COM															
1P[illegible]20S25E	GAS	8			593	160	1340	1719	1706	1616	1686	1306	1695	11831	55000
SHELL OIL COMPANY / FEDERAL A															
1E [illegible]24E	GAS	54127	42705	39412	41445	43043	43231	45156	36503	17364	45079	43229	39519	492413	2900951
	OIL	95		72	72	78	57	60	58	23	72	82	62	741	5337
	WAT	27	21	20	21	22	22	27	29	10	36	26	24	285	
[illegible] OIL AND GAS CORPORATION / [illegible] STATE COM															
1C3[illegible]20S25E	GAS	39167	34[illegible]	3653[illegible]	33281	36271	325[illegible]	34447	32470	22518	34336	33426	32200	402025	1059063
	OIL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	63	[illegible]	[illegible]	2334
	WAT	[illegible]	270	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	3242	
2P3[illegible]20S24E	GAS	1236	1044	1151	[illegible]	1050	[illegible]	[illegible]	350	176	233	266	440	8156	34267
	OIL	3	4		3	4	7	2						23	79
	WAT	49	51	40	27	29	26							230	
COMPANY TOTAL	OIL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	GAS	40[illegible]	35[illegible]	37[illegible]	34[illegible]	373[illegible]	33[illegible]	34[illegible]	328[illegible]	22[illegible]	34[illegible]	33[illegible]	32[illegible]	41[illegible]	1093[illegible]
	WAT	360	329	355	309	326	288	301	287	180	304		435	3472	
YATES PETROLEUM CORPORATION / FEDERAL [illegible]															
1O[illegible]20S25E	GAS	79	22											101	60544
	WAT	6 ZONE ABANDONED												6	

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WELL		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	ACCUM.
C R [illegible]	GAS							[illegible]	[illegible]	[illegible]	1433	[illegible]	270	[illegible]	[illegible]
	OIL							[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]
	WAT							[illegible]	[illegible]	[illegible]	115	[illegible]	67	[illegible]	
COMPANY TOTAL	OIL							[illegible]	[illegible]	[illegible]		[illegible]		[illegible]	[illegible]
	GAS							[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	WAT							[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	
GULF OIL CORPORATION															
[illegible]	GAS								31	10				[illegible]	[illegible]
	OIL								[illegible]					[illegible]	[illegible]
	WAT								67		[illegible]	95	97	[illegible]	
EDDY UND DEVONIAN (GAS) DV															
CHARLES T. GASKINS															
[illegible]	GAS	PLUGGING APPROVED 1970													957
EDDY UND GRAYBURG (GAS) GB															
[illegible]															
[illegible]	GAS	PLUGGING APPROVED 1961													4410
GENERAL AMERICAN OIL COMPANY OF TEXAS															
[illegible]	GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	329347
[illegible]	GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
COMPANY TOTAL	GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
EDDY UND MCKEE (GAS) SM															
PAN AMERICAN CORP															
STATE [illegible]	GAS	PLUGGING APPROVED 1956													139505
	OIL														065
[illegible] PRODUCTION COMPANY															
[illegible] STATE	GAS	PLUGGING APPROVED 1953													34
EDDY UND MISSISSIPPIAN (GAS) MI															
YATES PETROLEUM CORPORATION															
[illegible] STATE COM	GAS	1153												1153	43064
	OIL	1												1	160
	WAT	9												9	
		RECOMPLETED TO	PENASCO DRAW PERMO PENN (GAS)												
[illegible] FEDERAL [illegible] COM	GAS	711	501	544	445	463	372	296	359		296	297	180	4952	35909
COMPANY TOTAL	OIL	1												1	160
	GAS	1864	501	544	445	463	372	296	359		296	297	180	5705	[illegible]
	WAT	9												9	
EDDY UND MORROW (GAS) PM															
AMOCO PRODUCTION CO															
[illegible]	GAS	38650	20714	29745	20048	20130	20520	19712	19095	8237	8733	13496	19540	252408	563872
	OIL	22	15	33	120							20		217	360
	WAT	1176	899	941	930	775	780	775	775	152	93	90	93	7421	
FEDERAL [illegible]	GAS		19529	39920	45737	41626	45047	42104	43436	35430	44456	39125	31398	420394	420394
	OIL			41	41	152	13		21	27	46	42	28	411	411
	WAT			31	30	31	30	84	60	56	93	90	93	598	
[illegible]	GAS				4983	20221	14470	22004	10921	9211	8124	6315	6061	93910	93910
	OIL										14	11		25	25
STATE [illegible] COM	GAS				22094	47602	54810	45300	50907	34017	10692	12530	37965	327492	327492
	OIL										2			2	2
	WAT				16	32		31		30				108	
STATE [illegible] COM	GAS										33207	30459	35263	107009	107009
STATE [illegible] COM	GAS									850	35010	30517	32052	99237	99237
[illegible]	GAS	RECOMPLETED TO	EDDY UND ATOKA (GAS)												74222
[illegible] COM	GAS	12620	10777	10322	8797	8083	7320	6711	6522	4353	5305	6581	6363	95770	233438
	OIL		17			2				3		6	22	50	119
	WAT	62	56	62	60	62	60	62	62	56	62	60	62	726	
COMPANY TOTAL	OIL	22	31	75	162	156	13		21	30	62	72	50	705	917
	GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	126799	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	WAT	1240	957	1034	1036	899	790	932	897	294	246	240	248	8893	
MORRIS R. ANTWEIL															
[illegible]	GAS	ZONE ABANDONED													7457
	OIL														3600
BELCO PETROLEUM CORPORATION															
FEDERAL [illegible]	GAS	ZONE ABANDONED													46599
	OIL														205
FEDERAL [illegible]	GAS	1600	5499	8710	9162	10110	9394	10000	9972	8405	6470	5196	4005	[illegible]	560168
	OIL	5	23	10	22	34	63	20	27	31	10	3	7	271	2173
	WAT		63	93	87	93	87	93	93	90	93	90	93	975	
COMPANY TOTAL	OIL	5	23	10	22	34	63	20	27	31	10	3	7	271	2378
	GAS	1600	5499	8710	9162	10110	9394	10000	9972	8405	6470	5196	4005	[illegible]	[illegible]
	WAT		63	93	87	93	87	93	93	90	93	90	93	975	
R. C. BENNETT AND J. C. RYAN															
[illegible] STATE	GAS	LAST PROD. DATE 02/78												5	106299
	OIL														[illegible]
CHAMPLIN PETROLEUM COMPANY															
[illegible]	GAS	ZONE ABANDONED													174480
	OIL														216
CORONA OIL CORPORATION															
[illegible]	GAS	PLUGGING APPROVED 1977													29794
	OIL														105
DELTA DRILLING CO.															
[illegible]	GAS	4740	5020	3099	5220	4851	1944	899	1012	677	1951	3036	4300	38453	101870
EAGLE OIL AND GAS CO.															
[illegible]	GAS											23601	37290	60971	60971
	OIL											329	390	719	719
GULF OIL CORPORATION															
[illegible] STATE COM	GAS	ZONE ABANDONED													40091
[illegible] UNIT	GAS	RECOMPLETED TO	EDDY UND DELAWARE (GAS)												73903
	OIL														117
COMPANY TOTAL	OIL														117
	GAS														[illegible]
[illegible] ENERGY CORP.															
[illegible]	GAS	9220	6424	3662	3004	143097	4719	2730	4233	3019	3725	225		180874	300063
	WAT	31	29	30	30		30	28	30	29	31	30		298	
		RECOMPLETED TO	CULEBRA BLUFF BONE SPRING, SOUTH												

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[illegible] (GAS) PAGE 570

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	ACCUM.
EL PASO [illegible] FEDERAL [illegible]	GAS / OIL	LAST PROD. DATE 10/79												5	91916 [illegible]
[illegible] 16 FEDERAL [illegible]	GAS / OIL / WAT	[illegible]	[illegible]	[illegible]	500	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	16335 232
COMPANY TOTAL	OIL / GAS / WAT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] CISCO (GAS) PC 7N TO 8N															
[illegible] 10 [illegible]	GAS / OIL	[illegible]	[illegible]	[illegible]	[illegible]	211	199	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	170	2011	[illegible]
[illegible] (GAS) [illegible] 9N TO 10N															
AMOCO PRODUCTION CO [illegible]	GAS / OIL											26435	[illegible]	[illegible]	[illegible]
CONOCO, INC. [illegible]	GAS		271	575	[illegible]	1030	55	730	730	[illegible]	1001	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] OIL CORPORATION [illegible]	GAS	10507	10026	[illegible]	9349	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	7066	7212	[illegible]	105796	552071
[illegible] PETROLEUM CORP [illegible]	GAS				[illegible]	4322	19	[illegible]	93	2501				13035	13035
[illegible]	GAS / OIL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	31503	[illegible]
[illegible] FEDERAL [illegible]	GAS / OIL	PLUGGING APPROVED 1976													[illegible]
[illegible]	GAS / OIL	332	[illegible]	1664	687	1199	831	6	1		79	1009	2041	10194	2622[illegible]
JOHNSTON [illegible] FEDERAL	GAS / OIL	[illegible]	[illegible]	[illegible]	7056	6514	[illegible]	3681	[illegible]	5553	4041	1970	4003	[illegible]	[illegible]
COMPANY TOTAL	OIL / GAS	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
YATES PETROLEUM CORPORATION ALLISON [illegible] FEDERAL COM	GAS / WAT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	42011	59071	58360	[illegible]	56679		61750	[illegible]	787741
[illegible]	GAS / WAT												[illegible]	[illegible]	[illegible]
[illegible] COM	GAS / OIL / WAT	329	1275	4390	2714	2776	3274	2006	487	2239	3304		2001	24955	412662 103
								2						2	
COTTON [illegible] FED. COM.	GAS / WAT												4065 55	4065 55	4065
[illegible] STATE COM	GAS / OIL / WAT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	54225	49532	44018	21800	44211	[illegible]	[illegible] 214
JOHNSTON [illegible]	GAS / OIL	707	817	1093	524	550	360	490	532	530	153	366	216	6422	[illegible]
RIO PENASCO "JR" COM	GAS / OIL / WAT	[illegible]	21055	21360	7761	1236	5565	[illegible]	6107	2157	[illegible]	742	672	101763	1124423 1015
RIO PENASCO [illegible] COM	GAS / OIL / WAT						16106	[illegible]	110332	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] 1297
2F [illegible]	GAS / OIL / WAT										[illegible]	[illegible]	[illegible]	[illegible]	[illegible] 231
RIO PENASCO MF FEDERAL COM	GAS / OIL / WAT			[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3337	[illegible]	[illegible]	470	[illegible]	[illegible]
COMPANY TOTAL	OIL / GAS / WAT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible] MORROW (GAS) PM 15N TO 16N															
AMERICAN QUASAR PETROLEUM CO. OF NEW MEXICO [illegible]	GAS / OIL / WAT	[illegible]	[illegible]	27338	17299	27764	[illegible]	35646	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	372264	[illegible]
[illegible]	GAS / OIL / WAT	[illegible]	4363	[illegible]	744	[illegible]	[illegible]	[illegible]	[illegible]	1370	[illegible]	[illegible]	[illegible]	[illegible]	[illegible] 1152
COMPANY TOTAL	OIL / GAS / WAT	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
CONOCO, INC. [illegible]	GAS / OIL	PLUGGING APPROVED 1980													430
[illegible] CANYON [illegible] (GAS) PS 6N TO 7N															
YATES PETROLEUM CORPORATION [illegible] FEDERAL	GAS / OIL / WAT	1140	2010	1751	1520	1507	1407	1106	369	2152	2460	1779	2456	19933	[illegible]
		5	5	10	20	11	8	16	62			18		163	
[illegible] SPRINGS MORROW, WEST (GAS)PM 9N TO 10N															
AMERICAN QUASAR PETROLEUM CO. OF NEW MEXICO [illegible]	GAS	PLUGGING APPROVED 1979													[illegible] 7
SOUTHERN UNION EXPLORATION COMPANY [illegible]	GAS / OIL	341	5709	156	13235	11019	9965	[illegible]	7861	21	7532	3027	[illegible]	72765	[illegible]
[illegible]	GAS / OIL	10510	140	12473	166	106	27		26	6376		82		29914	[illegible] 2
COMPANY TOTAL	OIL / GAS	10851	5857	12629	13401	11125	9992	[illegible]	7887	6397	7532	[illegible]	[illegible]	102679	[illegible]
BUFFALO PENN. (GAS) PN 13N TO 14N															
AMOCO PRODUCTION CO [illegible]	GAS / OIL	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
BUFFALO FEDERAL UNIT	GAS / OIL / WAT	5700	[illegible]	9650	[illegible]	[illegible]	12343	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	92307	[illegible]

1979

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	WP	ACCUM.
[illegible] OIL COMPANY																
[illegible] STATE																
[illegible]	GAS	LAST PROD. DATE 07/76													5	162101
	OIL															366
CATCLAW DRAW WOLFCAMP (GAS) WC 8M TO 9M																
TENNECO OIL COMPANY																
NORTH [illegible] COM																
36 22S25E	GAS			1763	1204									3067		10292
	OIL			3	9									1		415
	WAT			1	1									2		
CEDAR CANYON MORROW (GAS) PM 13M TO 14M																
GETTY OIL COMPANY																
CEDAR CANYON 16 COM																
16 23S29E	GAS															2073906
	OIL	305	80	263										648		2079
SKELLY OIL COMPANY																
CEDAR CANYON																
3P 23S29E	GAS	RECOMPLETED TO EDDY UNDESIGNATED GROUP 7														444003
CEDAR HILLS UPPER PENN. (GAS) UP 9M TO 10M																
HARVEY E. YATES CO.																
CEDAR HILLS COM																
11 21S27E	GAS	656	1135	1564	1324	1306	1213	965	603	2048	1027	767	658	14130		417993
	OIL	110	76	47	[illegible]	[illegible]	[illegible]	[illegible]			31	[illegible]	[illegible]	476		22558
	WAT			63	85	59	37	13	2	81	31	26	35	390		
CEDAR LAKE MORROW (GAS) PM																
[illegible] PRODUCTION COMPANY																
[illegible] FEDERAL COM																
Y 13 26S17E?	GAS				8298	20372	10932	14661	14092	10959	8518	2432	103396			103396
	OIL				360	629	327	348	259	196	165	86	2370			2370
ODESSA NATURAL GASOLINE COMPANY																
EL PASO STATE																
[illegible]	GAS	PLUGGING APPROVED 1565														103647
	OIL															2474
CEDAR LAKE MORROW, NORTH (GAS) PM 11M TO 12M																
ARCO OIL & GAS COMPANY																
FREN OIL CO COM																
[illegible]	GAS	4287	2601	2254	1816	300	2279	2796	875	441	2150	3030	1567	24370		520738
	OIL															2275
CEMETARY MORROW (GAS) PM 9M TO 10M																
[illegible] BUCHANAN																
[illegible] COM																
[illegible] 20S25E	GAS	479	220	436	227	14	2	1184	202	224	31	42		3143		80394
CORONADO? OIL CORPORATION																
PAN CANADIAN																
[illegible] 19S25E	GAS	5603	7163	10696	16145	16258	15655	15418	13554	10675	11229	11625	9103	142909		2302707
	OIL			3		1	3	12	6	2	9		4	45		3507
	WAT					1								1		
CERCO INCORPORATED																
[illegible] FEDERAL																
3N [illegible]	GAS	3568	2518	3758	3063	3118	3075	2554	1814	2705			2487	29002		72418
	WAT	31	28	31	33	31	30	31					31	243		
DAVID FASKEN																
CAMERON 31 FEDERAL																
1 31 20S25E	GAS	44694	38591	32326	32238	36299	35630	37265	35886	33608	37605	33032	33008	432281		3350097
	OIL	85	74	79	72	77	77	72	71	67	70	74	58	876		1600
CEMETARY FED COM																
3L 22 20S25E	GAS	2427	2233	2617	2281	1962	1992	2013	2018	2009	2216	1253	1814	25635		424965
	OIL					29								29		136
FEN FEDERAL																
1 20 20S25E	GAS	13299	8317	8322	11519	11305	12214	12620	9544	8608	6792	9217	10131	121878		899016
	OIL	19	19	3	14	8	19	11	14	6	2	9	11	135		1677
GOSSETT 20																
1 20 20S25E	GAS	12419	8738	11264	8458	9523	12143	11335	8300	10238	9480	11238	7081	121096		1705065
	OIL	5				23								28		2302
POWELL 29																
1G 29 20S25E	GAS	29347	27162	18031	15419	16702	17561	17202	13579	18400	13791	14629	19306	223129		3001486
	OIL	6	9	5			80				11			111		1308
POWELL 29 FEDERAL																
1M 29 20S25E	GAS	3907	3013	3120	2837	2570	2386	2318	2857	2953	2723	3139	3533	36244		271719
	OIL															65
POWELL 31 COM																
3L 31 20S25E	GAS	12365	12697	11489	10846	12324	11464	11647	11471	11221	11605	16699	11275	139103		612677
	OIL	26	19	11	25	22	14	16	18	6	47	14	14	236		905
ROSS FEDERAL COM																
15 4 21S24E	GAS	41646	65425	74911	71555	72906	71882	75012	74600	68061	72475	41206	68726	838413		9561116
	OIL	28	75	126	105	109	99	109	121	92	110	90	96	1160		19522
SHELL FEDERAL COM																
13 5 21S24E	GAS	35636	36150	44580	41800	41403	41467	42241	35089	36940	39952	32432	36023	465272		7580901
	OIL	36	41	75	62	59	57	62	57	50	69	47	52	638		16078
STATE 32 COM																
1 32 20S25E	GAS	5949	8923	9791	8687	10709	8504	8726	8983	15364	10050	7642	7745	115355		1408657
	OIL	5			16	17	8				20			66		1209
COMPANY TOTAL	OIL	192	237	299	294	344	354	270	281	223	320	234	231	3279		50912
	GAS	224259	212589	216857	205645	215983	215223	220379	202415	207404	206609	186507	202323	2518354		28876771
GETTY OIL COMPANY																
STATE K 6056 A																
1 28 19S25E	GAS	11693	7578		5290	5503	5493	5792	5066	4867	5092	5580	10111	72073		1301475
	OIL		3	3									27	33		2177
ROGER C. HANKS																
DEE STATE COM																
1 36 19S24E	GAS	60175	46203	45901	54047	64282	60310	57731	55044	51548	54400	48424	50481	650148		2322794
	OIL	66	40	117	84	85	27	70	60	52	64	63	74	834		3303
HILLIARD OIL AND GAS, INC.																
GULF FEDERAL COM																
1F 35 19S25E	GAS	2144	1459	2529	1905	1521	445	935	454	1021	1987	1134	1348	17682		177943
	OIL															372
[illegible] OIL CO																
FEDERAL C COM																
1H 3 20S25E	GAS		1833	2778					3756	159		347		8867		331839
	OIL	6		9		6			4					25		720
FIRST NATIONAL BANK OF ALBUQUERQUE C																
1F 6 20S25E	GAS	19662	16663	13279	12521	15607	13498	14676	14490	6880	18525	13955	11697	171513		1478761
	OIL		10		30	7		22	15	1	32	53	40	263		1639
S P JOHNSON																
1C 5 20S25E	GAS	2646	2962	2217	208	1560		3198	2117	45	153	304	1057	16567		439001
	OIL															201
NEW MEXICO OSAGE COM																
1D 5 20S25E	GAS	2960	2300	2151	1503	2373	2350	2649	2649	902	694	1870	1882	24471		2774
	OIL															
COMPANY TOTAL	OIL	6	10	9	30	13		22	23	1	32	53	49	288		2703
	GAS	25268	23738	20425	14312	19620	15056	20521	23012	7906	19372	16452	14636	221398		2619125
MOBIL OIL CORPORATION																
[illegible] FEDERAL COM																
1 [illegible] 20S25E	GAS	PLUGGING APPROVED 1974														876321
	OIL															300
MONSANTO COMPANY																
[illegible] FEDERAL COM																
1 [illegible] 19S25E	GAS	4564	3033	3001	3163	1573	2844	2478	1550	3238	1128	3092	486	29758		333145
	OIL	1	2	3	5			7						18		314

PRODUCTION 1980

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD NP	ACCUM.
FOSTER FF COM 1J 12052?E	GAS	62	16	179	72	113	122	91	90	93	41	130	55	1092	20216
	OIL														18
[illegible] FD 1F 19205?E	GAS	1011	1427	1154	993	1704	1696	4042	4006	7205	5750	5510	5406	42001	257062
	OIL		1	1	1		1			5				8	205
	WAT			2	1				1	3	1			8	
[illegible] COM	GAS	RECOMPLETED TO	CEMETERY ATOKA, NORTH (GAS)												232
COMPANY TOTAL	OIL		1	1	1		1			5				8	303
	GAS	1152	1443	1333	1065	1817	1818	4933	4184	7298	5601	5660	5541	44074	346354
	WAT	6		2	1				1	3	1			14	

CEMETARY WOLFCAMP (GAS) WC 7M TO 8M

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD NP	ACCUM.
READ AND STEVENS, INC. [illegible] 1P30205?E	GAS	3090	621	1912	2587	2116	1737	1579	2061	1762	1605	1722	1750	22466	92296
	OIL	36			50			7			16			109	1026

CEMETERY ATOKA, NORTH (GAS) PA 8M TO 9M

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD NP	ACCUM.
[illegible] OIL CORPORATION [illegible]	GAS	RECOMPLETED TO	CEMETARY MORROW (GAS)												20567
	OIL														50
[illegible] OIL CO STATE [illegible] COM 1G351?E	GAS	2929	2630	2630	2644	2427	2644	2462	1604	3169	2332	2135	2092	29306	364511
	OIL														411
YATES PETROLEUM CORPORATION [illegible] COM 1F201?E	GAS	2001	1900	1990	1006	2076	1700	2260	2340	1906	1950	1619	1937	23539	56485
	OIL	6	6	2	1	1	5		2	1				24	27
STATE CO COM [illegible]	GAS	4737	3791	3640	3379	3600	2629	2415	3213	3861	1920	2026	1873	37300	113078
	OIL	2	3	1	4	3	2						1	18	89
	WAT	5	3	5	12	2	3	1	1					30	
COMPANY TOTAL	OIL	8	9	3	5	4	7		2	1			1	42	116
	GAS	6018	5779	5638	5185	5754	4417	4675	5553	5767	3870	3645	3810	60919	169785
	WAT	5	3	5	12	2	3	1	1					30	

CEMETERY WOLFCAMP N (GAS) ABANDONEDWC 7M TO 8M

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD NP	ACCUM.
DAVID FASKEN SEVEN RIVERS FEDERAL 1C17205?E	GAS	PLUGGING APPROVED 1980													24688
	OIL														141

CHAVEROO CANYON, NORTH (GAS) CP 8M TO 9M

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD NP	ACCUM.
UNION OIL COMPANY OF CALIFORNIA [illegible] 10 ? 7S33E	GAS	LAST PROD. DATE 11/76												S	18172
	OIL														1068

CINTA ROJA MORROW (GAS) PM 14M TO 15M

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD NP	ACCUM.
AMOCO PRODUCTION CO CUSTER MOUNTAIN UNIT 1K ?S33E	GAS	39952	39048	39718	38200	39370	39395	41267	41128	31673	39742	38516	38977	467054	10460151
	OIL	173	181	171	89	190	82	115	110	75	27	30	30	1293	30796
	WAT	62	50	95	90	90	90	93	62	50	62	60	62	872	
GETTY OIL COMPANY CINTA ROJA [illegible] 1F1?S33E	GAS		10715	11778	10047	11189	10525	10441	10388	9088	10142	9655	10140	115908	115908
	OIL			55	21	24	25	25	25	25	22	16	25	261	261
	WAT		116	240	120	31	30		31	30		30	31	667	
WESTERN OIL PRODUCERS INCORPORATED [illegible] RANCH UNIT 1J 426S33E	GAS											2221	976	3197	3197
	OIL												46	46	46

CONOS DELAWARE (GAS) DL 0M TO 5M

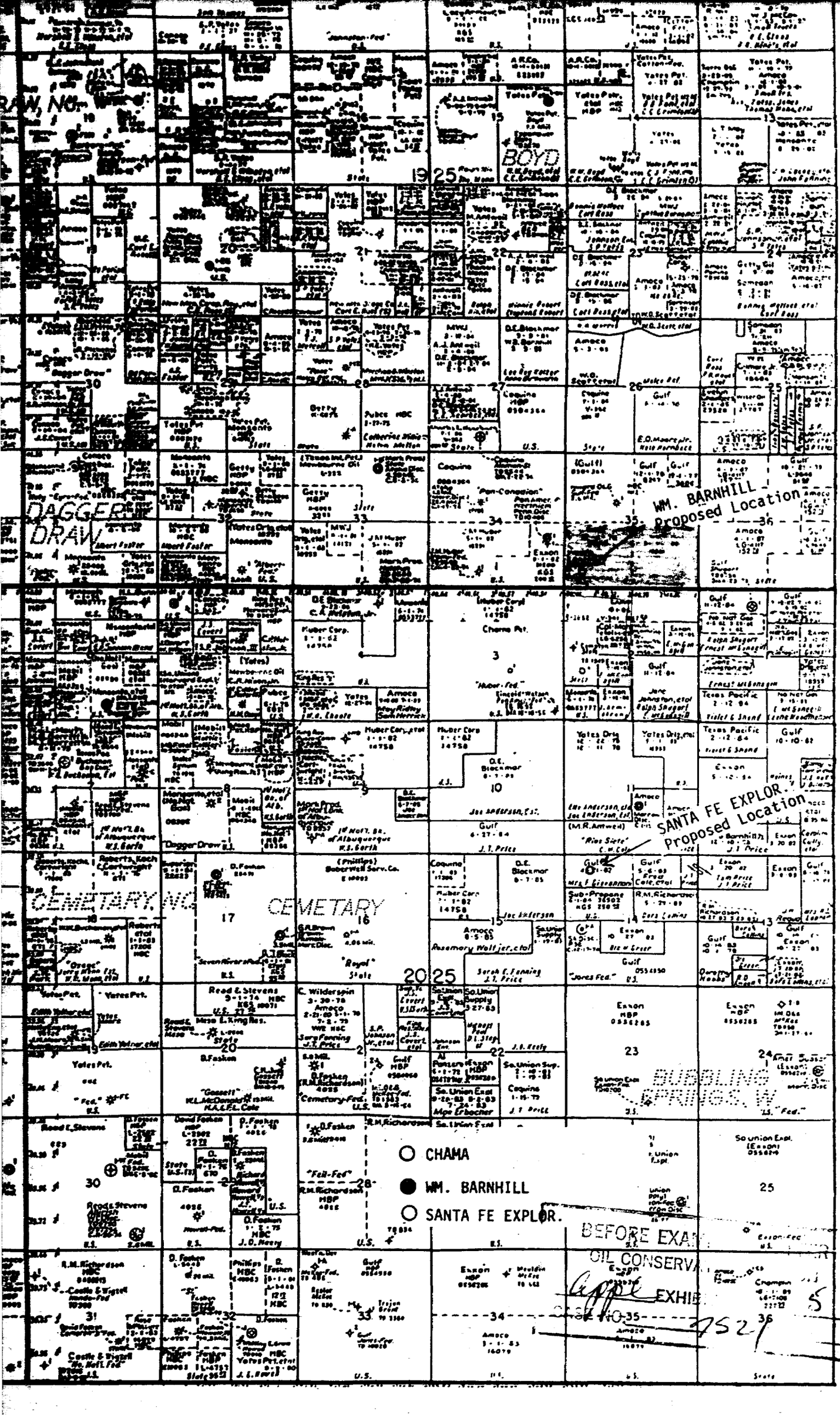
WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD NP	ACCUM.
DAVID FASKEN CONOS FEDERAL 1F1530S?E	GAS	PLUGGING APPROVED 1980													14262
	OIL														28

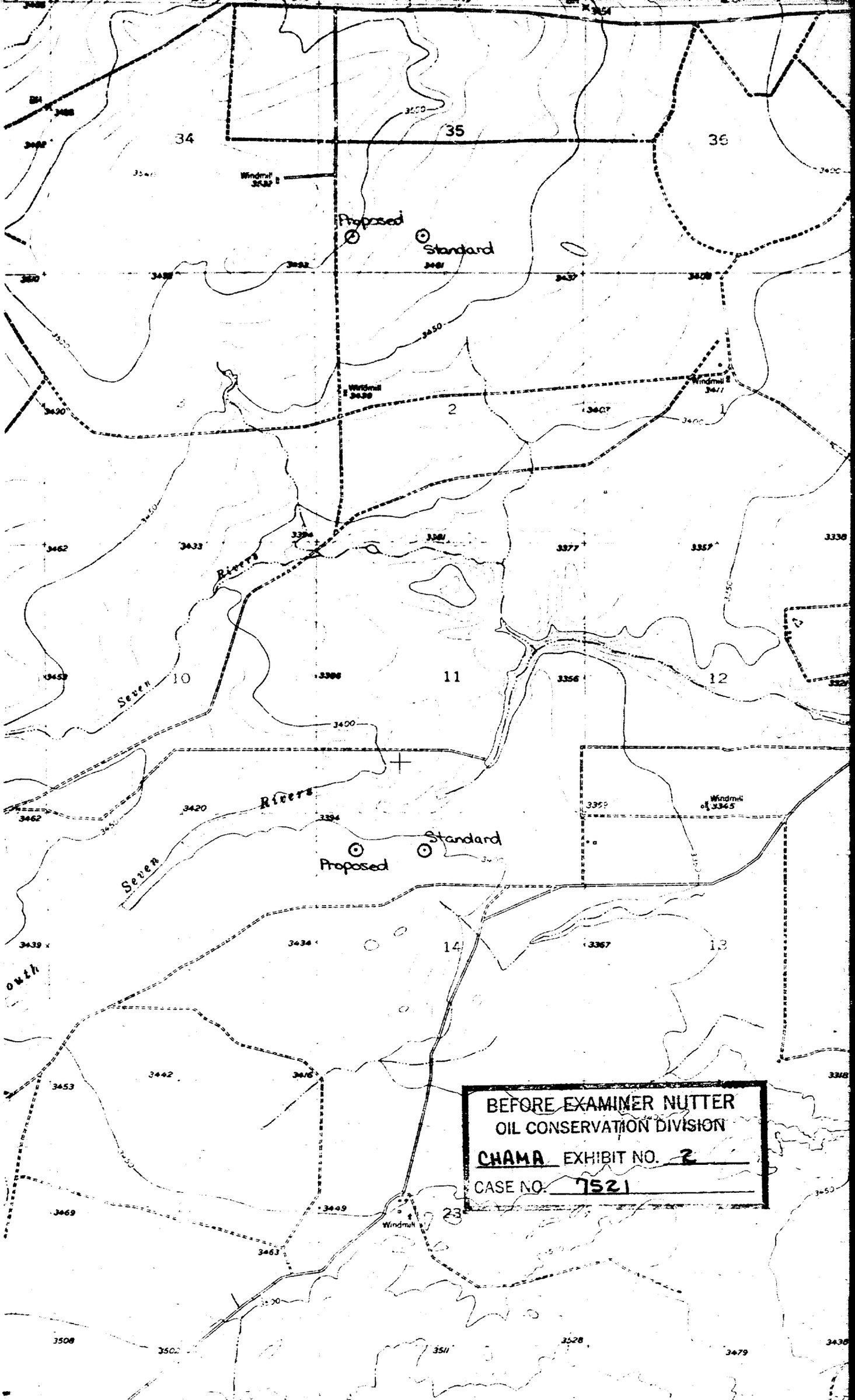
COOPER MORROW (GAS) PM 11M TO 12M

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD NP	ACCUM.
EL PASO NATURAL GAS COMPANY COOPER FEDERAL 1F2124S34E	GAS	164	134	227	381	10942	11659	11920	12006	9601	4396	2003	2960	67279	433240
	OIL				14	152	170	174	109	96	8		45	856	2014

CORBIN MORROW, SOUTH (GAS) PM 13M TO 14M

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD NP	ACCUM.
L. R. FRENCH, JR. UNCLE SAM 1J25?S33E	GAS	33579	27492	35540	25240	15564	11119	7744	8565	8878	2324	3703	644	180414	7080533
	OIL	582	438	571	459	391	242	102	124	134	6	59	19	3127	141909
MORAN EXPLORATION, INC ATLANTIC 32 STATE 1C32?S33E	GAS	1830	1717	2052	2540	2257	370	1962	2359	2251	2196	2062	2475	24099	472388
	OIL	21	25	32	44	25	4	13	6	36	44	30	51	333	7160
	WAT	1				2								3	
PENNZOIL COMPANY HUDSON 29 FEDERAL 3G29?S33E	GAS	12300	4623	1822										18825	3271536
	OIL	52	7	1										60	119206
	WAT	18	7	10										35	
3K30?S33E	GAS	32457	33605	36254	33108	33467	25388	29222	26173	26951	26458	23065	23108	349136	2913567
	OIL	622	434	439	395	403	331	286	349	334	316	224	321	4254	62707
	WAT	57	59	64	59	59	45	52	46	48	47	41	41	618	
COMPANY TOTAL	OIL	674	441	440	395	403	331	286	349	334	316	224	321	4314	181913
	GAS	44857	38028	38076	33108	33467	25388	29222	26173	26951	26458	23065	23108	367961	6185103
	WAT	75	66	74	59	59	45	52	46	48	47	41	41	653	
PENNZOIL UNITED INCORPORATED HUDSON 29 FEDERAL BATTERY 3 ?29?S33E	GAS	PLUGGING APPROVED 1972													607695
	OIL														6776
PETRO LEWIS CORP CORBIN 1N20?S33E	GAS	RECOMPLETED TO	CORBIN WOLFCAMP, SOUTH												7764
	OIL														1209
[illegible] AND ROYALTY COMPANY FEDERAL R 1L27?S33E	GAS	ZONE ABANDONED													532966
	OIL														20630
FEDERAL RA 1G27?S33E	GAS	LAST PROD. PRIOR TO 6/73												[illegible]	97844
	OIL														2340
FEDERAL RA COM 2?21?S33E	GAS	382	234	270	196	11760	236	282	248	13910	11530	13016	9254	61283	2716520
	OIL	186	180	193	160	200	173	183	132	196	170	135	94	1969	81581
	WAT	360	361	422	364			430	435	402	330	312	240	3649	
UNCLE COM 1C28?S33E	GAS	13990	11169	11592	12154	11500	11070	11356	11440	10907	9700	10024	8127	133653	5164775
	OIL	111	102	115	97	73	50	50	36	64	65	47	155	965	124094
	WAT	29	65	336	44	45		42	30	43	44	40	77	822	


DAGGER DRAW
BOYD
WM. BARNHILL
Proposed Location
SANTA FE EXPLOR.
Proposed Location
CEMETARY
CEMETARY
BUBBLING SPRINGS
CHAMA
WM. BARNHILL
SANTA FE EXPLOR.
BEFORE EXA
OIL CONSERVA
EXHIB
Case No. 35
9529


34
35
36
Proposed
Standard
Windmill
2
1
Rivers
Seven
10
11
12
Proposed
Standard
Windmill
14
13
23
Windmill
BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
CHAMA EXHIBIT NO. 2
CASE NO. 7521

Montgomery Map
Field Seven Rivers - So. Boyd Prospects County Eddy State New Mexico
Lease S/2 of 34 - 19S - 35E Job No. 1305
Operator Conversion Factor 2.22415

Interval	Trial 1	Trial 2	Trial 3	Trial 4	Area Used	Acres	Ave. H.	Acre Feet
10-20	3	3	3		3	6.7	17	113.9
20-30	20	19	19.5		19.5	43.4	25	1,085.0
30-40	22	21	20		21.0	46.7	35	1,634.5
40-50	19	20	19.5		19.5	43.4	45	1,953.0
50+	55	54	53		54	120.1	52	6,245.2
50-40	20	22	21		21	46.7	45	2,101.5
40-30	6	6	6		6	13.3	38	505.4
Totals:						320.3		13,638.5

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
EXHIBIT NO. 8
CASE NO. 7521

Planimetered By: [illegible] Date: 3-29-81
Computed By: [illegible] Date: 3-29-81

Montgomery Map

Field Seven Rivers - So. Boyd Prospects County Eddy State New Mexico

Lease S/2 of 35 - 19S - 25E Job No. 1306

Operator ______ Conversion Factor 2.22415

Interval	Trial 1	Trial 2	Trial 3	Trial 4	Area Used	Acres	Ave. H.	Acre Feet
0-10	21	21	22		21.3	47.4	5	237.0
10-20	24	24	23		23.6	52.5	15	787.5
20-30	22	21	22		21.6	48.0	25	1,200.0
30-40	15	15	15		15	33.4	34	1,135.6
40-50	1	1	1		1	2.2	41	90.2
					Totals:			3,450.3

Planimetered By: [signature] Date: 3-29-81

Computed By: [signature] Date: 3-29-81

Montgomery Map

Field Seven Rivers - So. Boyd Prospects County Eddy State New Mexico

Lease N/2 of 3 - 20S - 25E Job No. 1305

Operator ______ Conversion Factor 2.22415

Interval	Trial 1	Trial 2	Trial 3	Trial 4	Area Used	Acres	Ave. H.	Acre Feet
30-40	3	3	3		3	6.7	37	247.9
40-50	22	22	22		22	48.9	45	2,200.5
50+	65	63	65		64.3	143.0	52	7,436.0
40-50	23	22	22		22.3	49.6	45	2,232.0
30-40	16	16	16		16	35.6	35	1,246.0
20-30	1.3	1.3	1.3		1.3	2.9	28	81.2
Totals:								13,443.6

Planimetered By: *[signature]* Date: *3-29-81*

Computed By: *[signature]* Date: *3-29-81*

Dockets Nos. 10-82 and 11-82 are tentatively set for April 14 and April 28, 1982. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - MARCH 31, 1982
9 A.M. - OIL CONSERVATION DIVISION CONFERENCE ROOM
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

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

CASE 7469: (Continued from March 3, 1982, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit H. M. Bailey & Associates, Commercial Union Insurance Company, and all other interested parties to appear and show cause why the following wells on the H. M. Bailey Lease, Township 21 South, Range 1 West, Dona Ana County, should not be plugged and abandoned in accordance with a Division-approved plugging program: In Section 10: Nos. 9 in Unit A, 9, 11, 12, and 13 in Unit B, 10 and 14 in Unit C; and No. 15 in Unit C of Section 9.

CASE 7497: (Continued and Readvertised)

Application of Parabo, Inc. for an oil treatment plant permit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority for the construction and operation of an oil treating plant for the purpose of treating and reclaiming sediment oil at its salt water disposal site in the SW/4 of Section 29, Township 21 South, Range 38 East.

CASE 7516: Application of Benson-Montin-Greer for a unit agreement, Rio Arriba County, New Mexico. Applicant, in the above-styled cause, seeks approval for the North Canada Ojitos Unit Area, comprising 12,361 acres, more or less, of Jicarilla Apache Indian lands in Township 27 North, Range 1 West.

CASE 7517: Application of Anadarko Production Company for an unorthodox oil well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location 1450 feet from the South line and 1400 feet from the West line of Section 15, Township 22 South, Range 37 East, Penrose Skelly Pool, the NE/4 SW/4 of said Section 15 to be dedicated to the well.

CASE 7518: Application of Consolidated Oil & Gas Inc., for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Abo formation in the perforated interval from 8688 feet to 8856 feet in its Midway State Well No. 1, located in Section 8, Township 17 South, Range 37 East, Midway-Abo Pool.

CASE 7519: Application of S & J Oil Company for special pool rules, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Seven Lakes-Menafee Oil Pool to provide for wells to be located not nearer than 25 feet to the quarter-quarter section line nor nearer than 165 feet to lands owned by an offset operator.

CASE 7510: (Continued from March 16, 1982, Examiner Hearing)

Application of Union Oil Company of California for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp and Penn formations underlying the N/2 of Section 10, Township 22 South, Range 32 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7511: (Continued from March 16, 1982, Examiner Hearing)

Application of Buffton Oil & Gas Inc. for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp through Devonian formations underlying the W/2 of Section 35, Township 16 South, Range 35 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well, and a charge for risk involved in drilling said well.

CASE 7520: Application of Lewis B. Burleson Inc. for compulsory pooling and a non-standard proration and spacing unit, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Jalmat Pool underlying a 160-acre non-standard proration unit comprising the NW/4 of Section 15, Township 24 South, Range 36 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 7521: Application of William B. Barnhill for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location 660 feet from the South and West lines of Section 35, Township 19 South, Range 25 East, Permo-Penn, Strawn, Atoka and Morrow formations, the S/2 of said Section 35 to be dedicated to the well.

CASE 7522: Application of Santa Fe Exploration Co. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location 660 feet from the North and West lines of Section 14, Township 20 South, Range 25 East, Permo-Penn, Strawn, Atoka and Morrow formations, the W/2 of said Section 14 to be dedicated to the well.

CASE 7523: Application of Robert N. Enfield for compulsory pooling and an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Wolfcamp-Penn formations underlying the E/2 of Section 18, Township 19 South, Range 27 East, to be dedicated to a well to be drilled at an unorthodox location 660 feet from the North and East lines of said Section 18. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 7524 THRU 7535: Application of Jack J. Grynberg for compulsory pooling, Chaves County, New Mexico. Applicant, in each of the following 12 cases, seeks an order pooling all mineral interests down through the Abo formation underlying the lands specified in each case, each to form a standard 160-acre gas spacing and proration unit to be dedicated to a well to be drilled at a standard location thereon. Also to be considered in each case will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells and a charge for risk involved in drilling said wells:

CASE 7524: SE/4 Section 2, Township 5 South, Range 24 East

CASE 7525: SW/4 Section 3, Township 5 South, Range 24 East

CASE 7526: NW/4 Section 3, Township 5 South, Range 24 East

CASE 7527: SE/4 Section 3, Township 5 South, Range 24 East

CASE 7528: NW/4 Section 4, Township 5 South, Range 24 East

CASE 7529: NE/4 Section 4, Township 5 South, Range 24 East

CASE 7530: NW/4 Section 11, Township 6 South, Range 24 East

CASE 7531: SW/4 Section 11, Township 6 South, Range 24 East

CASE 7532: SE/4 Section 27, Township 6 South, Range 24 East

CASE 7533: SW/4 Section 27, Township 6 South, Range 24 East

CASE 7534: NW/4 Section 34, Township 6 South, Range 24 East

CASE 7535: SW/4 Section 17, Township 6 South, Range 25 East

CASE 7515: (Continued and Readvertised)

Application of Four Corners Gas Producers Association for designation of a tight formation, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks the designation of the Dakota formation underlying all or portions of Townships 26 and 27 North, Ranges 12 and 13 West, Township 28 North, Range 13 West, Township 29 North, Ranges 13 through 15 West, and Township 30 North, Ranges 14 and 15 West, containing 164,120 acres, more or less, as a tight formation pursuant to Section 107 of the Natural Gas Policy Act and 18 CFR Section 271. 701-705.

ERNEST L. PADILLA
ATTORNEY AND COUNSELOR AT LAW

P.O. Box 2523
Santa Fe, New Mexico 87501
(505) 988-7577

March 30, 1982

Mr. Joe D. Ramey
Director
Oil Conservation Division
Post Office Box 2088
Santa Fe, New Mexico 87504

Re: Case Nos. 7521 and 7522

Dear Mr. Ramey:

Enclosed for filing in the above-referenced cases is our SUBSTITUTION OF COUNSEL, the purpose of which is to enter the appearance of Roger L. Copple and myself as attorneys of record in both cases and the withdrawal of the law firm of Atwood, Malone, Mann & Cooter. Thank you for your assistance.

Very truly yours,

Ernest L. Padilla

ELP:pfm
Enclosures
cc: Roger L. Copple, Esq.
Paul Cooter, Esq.

STATE OF NEW MEXICO

DEPARTMENT OF NATURAL RESOURCES

OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION
OF WM. B. BARNHILL FOR AN UNORTHODOX
LOCATION, EDDY COUNTY, NEW MEXICO. CASE NO. 7521

SUBSTITUTION OF COUNSEL

COME NOW Atwood, Malone, Mann & Cooter and withdraw as counsel for the Applicant Wm. B. Barnhill, and

Roger L. Copple and Ernest L. Padilla enter their appearance for him herein.

ATWOOD, MALONE, MANN & COOTER, P.A.

By _____
P. O. Drawer 700
Roswell, New Mexico 88201

_____
Roger L. Copple
P. O. Box 40
Santa Fe, New Mexico 87501

_____
Ernest L. Padilla
P. O. Box 2088
Santa Fe, New Mexico 87501

NMOCC COPY

Form 9-331
(May 1963)

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN TRIPLICATE* (Other instructions on reverse side)

Form approved.
Budget Bureau No. 42-R1424.

5. LEASE DESIGNATION AND SERIAL NO: NM 0504364 B

6. IF INDIAN, ALLOTTEE OR TRIBE NAME:

SUNDRY NOTICES AND REPORTS ON WELLS

(Do not use this form for proposals to drill or to deepen or plug back to a different reservoir. Use "APPLICATION FOR PERMIT—" for such proposals.)

RECEIVED
NOV 22 1977
O. C. C.
ARTESIA, OFFICE

1. OIL WELL ☐ GAS WELL ☒ OTHER

7. UNIT AGREEMENT NAME:

2. NAME OF OPERATOR: Coquina Oil Corporation

8. FARM OR LEASE NAME: Pan Canadian

3. ADDRESS OF OPERATOR: P. O. Drawer 2960 Midland, Texas 79702

9. WELL NO.: 1

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements.* See also space 17 below.) At surface: Unit F, 1980' FNL & 1980' FWL of Sec. 34

10. FIELD AND POOL, OR WILDCAT: Cemetery Morrow

11. SEC., T., R., M., OR BLK. AND SURVEY OR AREA: Sec. 34, T19S, R25E

14. PERMIT NO.: does not apply

15. ELEVATIONS (Show whether DF, RT, GR, etc.): 3521 GR

12. COUNTY OR PARISH: Eddy

13. STATE: New Mexico

16. Check Appropriate Box To Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
TEST WATER SHUT-OFF	☐	PULL OR ALTER CASING	☐	WATER SHUT-OFF	☐	REPAIRING WELL	☐
FRACTURE TREAT	☐	MULTIPLE COMPLETE	☐	FRACTURE TREATMENT	☐	ALTERING CASING	☐
SHOOT OR ACIDIZE	☐	ABANDON*	☐	SHOOTING OR ACIDIZING	☐	ABANDONMENT*	☐
REPAIR WELL	☐	CHANGE PLANS	☐	(Other) Remedial Work			☒
(Other)	☐			(NOTE: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)			

17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)*

The Atoka Formation in above captioned well reached economic producing limit after rapid decline of a small limited reservior. The Morrow Formation perforations of original completion were returned to production which should be enhanced with immenent compressor installation. Work began on September 26, 1977 and is sommarized as follows:

MIRUPU. Killed Atoka Zone w/KCl water. Installed BOP. POOH with packers and tubing. Bailed sand from top of on-off tool and packer at 9177 +'. Ran on-off tool, sliding-sleeve in closed position and top packer and tubing. Latched onto on-off tool at 9177 +' with sliding sleeve at 9170' and top packer at 8741'. Tested tubing to 1500 psi. Pulled blanking plug from lower portion of on-off tool above lower packer and reopened Morrow Zone to production. Release PU. Return Morrow Zone to sales line on 10-8-77. Well completed 10-10-77.

Note: Working drawing attached for your information.

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U.S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

18. I hereby certify that the foregoing is true and correct

SIGNED C Alan Bump & Alan Bump TITLE Engineering Assistant DATE November 16, 197

(This space for Federal or State office use)

APPROVED BY Lee G. Lasa TITLE ACTING DISTRICT ENGINEER DATE NOV 22 1977

CONDITIONS OF APPROVAL, IF ANY:

*See Instructions on Reverse Side

Petroleum Information

COUNTY EDDY FIELD Undesignated STATE NM

OPR HUBER, J. M. CORP. API 30-015-21115

NO. 1 LEASE Irami Federal "Com." SERIAL

Sec 34, T-19-S, R-25-E MAP

660' FSL, 1980' FWL of Sec CO-ORD

	CLASS		ELEV	L & S
RPD 3-14-74 CMP 4-23-74	FORMATION	DATUM	FORMATION	DATUM
CSG				
13 3/8" at 485' w/325 sx				
	TD 9600'		PBD	

PLUGGED & ABANDONED

CONTR Delta OPR ELEV 3527' GL, 3545' KB TD 9500' TYPE RT

F.R. 2-25-74
(Morrow)

3-14-74 MIRT
3-20-74 Drlg 535'
3-27-74 Drlg 2958' lm
4-3-74 Drlg 4710' lm
4-10-74 Drlg 7060' lm & sh
4-17-74 Drlg 8865' lm & sh
4-24-74 TD 9600' P/P & A
— DST 9300-9410', open 1 hr,
Rec 60' DM (Spl 840 cc's DM + 1 CFG)
1 hr ISIP 608#, FP 87-62#
2 hr FSIP 1839#, HP 4808-4808#

EDDY | Undesignated | NM
HUBER, J. M. CORP. | 1 Irami Federal "Com." Page 2
Sec 34, T19S, R25E

4-29-74 TD 9600'; PLUGGED & ABANDONED
LOG TOPS: Wolfcamp 6552', Cisco 7702', Canyon 8237'
Strawn 8512', Atoka 8895', Morrow 9244', Chester 9572'

5-4-74 COMPLETION REPORTED

EDDY COUNTY | NEW MEXICO | ATOKA FIELD

Well: COQUINA OIL CORP. 1 Pan Canadian (OWWO) Result GAS DG

Locn: 7 mi W/Lakewood, 1980' FNL 1980' FWL Sec 34-19S-25E.

Re-Spud: 4-28-77; Re-Comp: 5-5-77; Elev: 3521' grd; TD: 9640' Miss; PB: 9177'
Casing: 13 3/8" 472'/550 sx, 8 5/8" 1320'/600 sx, 5 1/2" 9640'/325 sx
Prod Zone: (Atoka) T/Pay 8838', prod thru perfs 8838-8922'
AP CAOF: 1,251,000 CFGPD, GOR 270-1, Grav (gas) .645, (cond) NR, SIWHP 3163#
Comp Info: (Orig. #1 Pan Canadian, Comp 1-17-74 thru (Morrow) perfs 9236-9318'; OTD 9640'); PB to 9177'; Perf (Atoka) 8838-41', 8866-80', 8917-22' w/2 SPF; natural; (Atoka) Four Point Gauges: F/444 MCFGPD, 1" orifice, 120 min, TP 2811#; F/567 MCFGPD, 1" orifice, 120 min, TP 2610#; F/636 MCFGPD, 1" orifice, 120 min, TP 2444#; F/943 MCFGPD, 1" orifice, 120 min, TP 2031#; C/NR.
Tops: NR
API No.: 30-015-20997

Date: 6-22-77 Card No.: 3 rm

Petroleum Information.

COUNTY EDDY FIELD Wildcat STATE NM

OPR COQUINA OIL CORP. API 30-015-20997

NO 1 LEASE Pan Canadian SERIAL

Sec 34, T-19-S, R-25-E MAP

1980' FNL, 1980' FWL of Sec CO-ORD

CLASS GL ELEV [redacted]

SPD 10-25-73 CMP 1-17-74

CSG

	FORMATION	DATUM	FORMATION	DATUM
13 3/8" at 472' w/550 sx				
8 5/8" at 1320' w/600 sx				
5 1/2" at 9640' w/325 sx				
	TD 9640'		PBD	

IP (Morrow) Perfs 9236-9318' CAOF 28,463 MCFGPD. GOR Dry; Grav (Gas) .675; SIWHP 3070#; SIBHP 3771#

CONTR WEK OPRS ELEV 3521' GL PD 10,000' TYPE RT

F.R. 10-22-73
(Morrow)

10-29-73 Drlg 1050'
11-5-73 Drlg 3421' lm
11-12-73 Drlg 5733' lm
11-19-73 Drlg 7885'
DST 6420-6460', open 1 hr, rec 2400' GIDP, 1 hr ISIP 758#, FP 25-25#, 2 hr FSIP 343#, HP 2892-2875#, BHT 118 deg
11-26-73 TD 8856'; On DST (8805-56')
DST (NA), Miss Run
DST (NA), Miss Run

[redacted]

12-3-73 Drlg 9110'
DST 8805-56', open 2 hrs 15 mins, GTS in 13 mins @ 70 MCFGPD, incr to 282 MCFGPD, rec 15' M, 1 hr ISIP 4455#, IFP 313-521#, FFP 146-208#, 4 hr FSIP 4455#, HP 4824-4721#, BHT 140 deg

12-11-73 Drlg 9456'
DST 8870-8908', open 1 hr 10 mins, GTS in 5 min @ 195 MCFGPD, incr to 458 MCFGPD, rec 90' SGCM, 1 hr ISIP 4853#, FP 45-87#, 2 hr FSIP 4903#, HP 4934-4880#, BHT 133 deg
DST 9208-9289', open 1 hr 45 mins, GTS in 2 mins@ 15,000 MCFGPD (Max), Aver 5500

12-11-73 Continued
MCFGPD, rec 100' F (70' Cond + 30' SGCM), 1 hr ISIP 3840#, FP 1455-1396#, 4 hr FSIP 3840#, HP 5129-5069#

12-17-73 TD 9640'; WOC
DST 9289-9347', open 2 hrs 10 mins, GTS in 1 min @ 8500 MCFGPD (Max 14,000 MCFGPD), rec 10' Cond, 1 hr ISIP 3820#, FP 1697-1861#, 2 hr 30 min FSIP 3820#, HP 5069-5049#, BHT 152 deg

12-25-73 TD 9640'; WOCU

12-31-73 TD 9640'; Prep Run Tbg

1-7-74 TD 9640'; Rng Tbg

1-14-74 TD 9640'; Prep Perf

1-15-74 TD 9640'; SI WO Test Equip
Perf 9326-9318' w/104 shots (overall)
Flwd 7550 MCFGPD thru 24/64" chk, TP 2450#

3-16-74 COMPLETION REPORTED

EDDY	Wildcat	NM
COQUINA OIL CORP.	1 Pan Canadian	Page #3
	Sec 34, T19S, R25E	

1-22-74 TD 9640'; WO Pipeline Conn
CAOF 28,462 MCFGPD

3-11-74 TD 9640'; COMPLETE
<u>(Morrow) FOUR POINT GAUGES</u>:
Flwd 1197 MCFGPD, 1.75" orifice, 1 hr, TP 3000#
Flwd 1606 MCFGPD, 1.75" orifice, 1 hr, TP 2967#
Flwd 1946 MCFGPD, 1.75" orifice, 1 hr, TP 2939#
Flwd 2526 MCFGPD, 1.75" orifice, 1 hr, TP 2889#
LOG TOPS: Grayburg 520', San Andres 812', Glorieta 2365', Tubb 3170', Abo 3775', Third Bone Spring Sand 6175', Wolfcamp 6422, Canyon 7858', Strawn 8295', Atoka 8568', Morrow 8938', Barnett 9348', Chester 9573'

Co EDDY   WILDCAT   N.M.   2223-58

Western Drlg. Co. - #1 - Lakewood   3536DF

1830'FSL & 660'FEL
Sec. 34, T.19-S, R. 25-E
950'

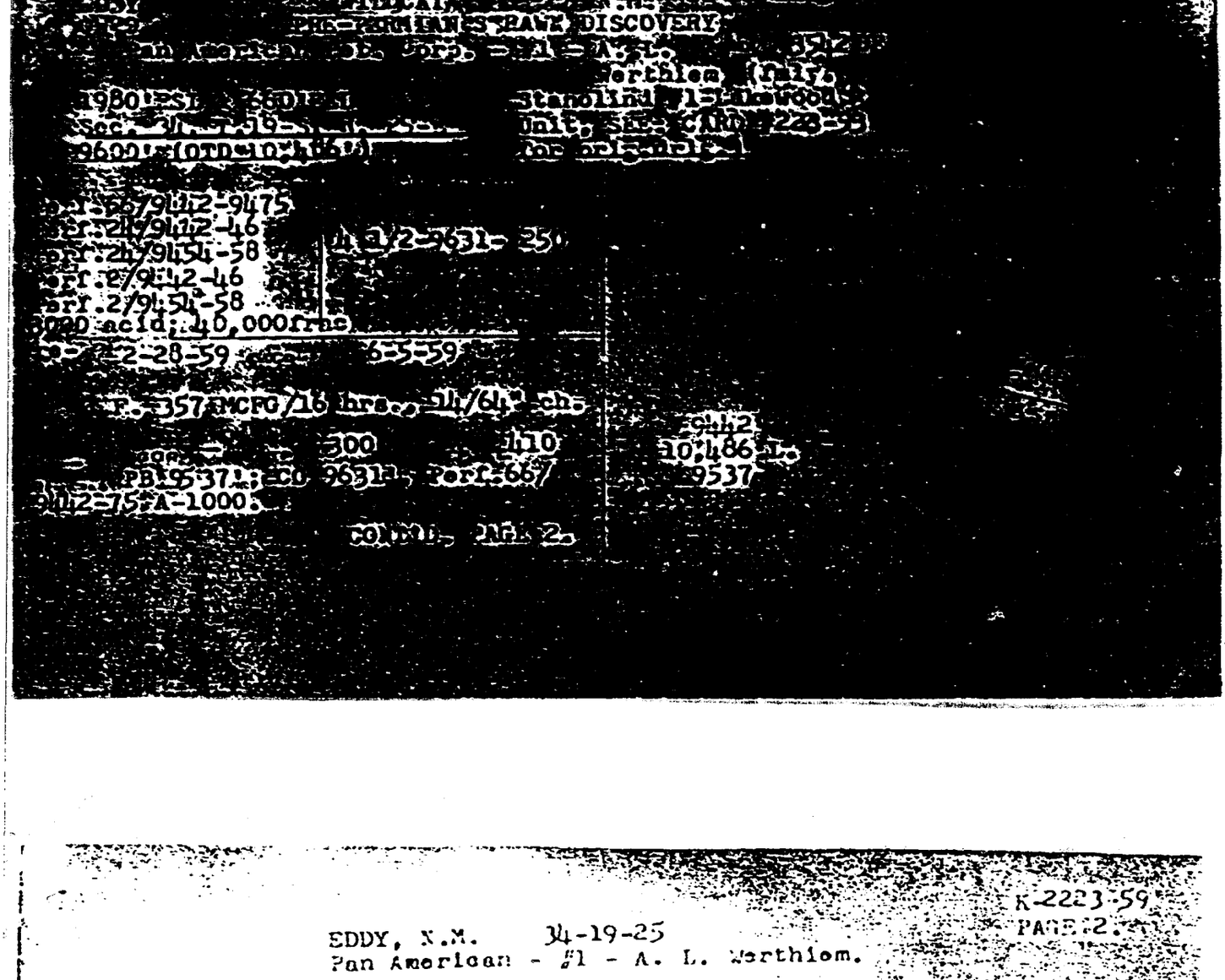
	10 - 45-	Gryb. 815
	5 - 817-500	

10-31-57   4-9-58

P & A

899 sd.

500 acid; 10,000 WF. TD 899' sd.
SI; P. 1 BO & 5 BXW/4 hrs.



K-2223-59
PAGE 2.

EDDY, N.M. 34-19-25
Pan American - #1 - A. L. Werthiem.

Swb. 144 bbls. LW & 24 BAW/24 hrs. w/SO; rec/2000 swb. 48 BAW & 134 BLW/53 hrs. & swb. dry w/sli. blow w/ gas, TSTM; blow down well; SITP 2950# to 1500#, 20/64" ch. 30" blew to 200# 45.64" ch. next 30" end of blow down had steady blow of gas.
30,000 SWF (16,500' sd) swb. 200 BLW/14 hrs. F. & rate 540 MCFGPD + 2 bbls. LW/1 hrs., 25/64" ch.; FTP 300 FCP 800#; F. 390 MCF + 4 BLW/1 hrs., 30/64" ch.; FTP 100#; FCP 600#; SI 12 hrs., TP 2000#; CP 2300#; F. 47 BLW/9 hrs. 25/64" ch., gas & 750 MCF to 384 MCFG; F. 23 BLW/12 hrs., 30/64" ch. no gas ggs., FTP 150#; CP 500#.
PB 9537'; ggs. 600 MCFG/12 hrs., 30/64" ch.; FTP 110-150# CP 500#; F. 18 bbls. LW/12 hrs., 30/64" ch.; TP 145#; CP 500#; SI 12 hrs.; CP 2200#; TP 2200#.
Perf. 24/9442-46
Perf. 24/9454-58; 40,000 SWF (10,000# sd.) swb. 148 bbls. LO & 1 bbl. LW/11 hrs.; Swb. 100 BLW/11 hrs., SI 12 hrs., CP 1200#; swb.& flow load; SI/16'; SITP 1250#; SICP 1400#.

K-2223-53
PAGE 3

EDDY, NEW MEXICO 34-19-25
Stanolind #1 - Lakewood Unit.

DST 10073-423 op 3 hrs. Rec. 225' mud.
FP 120 20 mins SIP 180#
DST 10433-486 op 4 hrs. Rec. 270' mud & 10030 black brackish wtr. FP 4275 SIP 4475

K-2223-53
PAGE 2

EDDY, NEW MEXICO 34-19-25
Stanolind - #1 - Lakewood Unit

DST 810-861 op 2 hrs. rec. 105' SOMGCM. FP 55 SIP-0-
DST 2610-42 op 2 hrs. rec. 135' SOMGCM,
DST 7770-2850 op 1 hr. 45 mins rec. 108' SOCM
DST 3310-3385 op 2 hrs. rec. 84' mud.
DST 6605-6700 op 4 hrs. 10 mins Gas 2 hrs. 15 mins Rec. 270' mud. 2615' SW. FP 1465 20 mins SIP 2605#
DST 7050-8123 op 4 hrs. Gas 35 mins rec. 60' SGCM, FP 130 20 mins SIP 175#
DST 7836-78 op 3 hrs. Rec. 39' mud, N.S.
DST 9397-9500 op 5 hrs. rec. gas 35 mins 47000 CFGPD, Rec. 284' HGCM, FP 115 20 mins SIP 2936#
DST 9407-9540 op 3 hrs. rec. gas 55 mins 315' HGCM, FP 2(20 mins SIP 1810#
DST 10,350-351 op 1 hr. 30 mins Rec. 20' mud.
DST 10,350-373 op 1 hr. 22 mins rec. 15' mud.
DST 10370-398 op 3 hrs. rec. 90' mud.

CONT'D ON PAGE 3

EDDY WILDCAT STATE N.M. 2223-53

Stanolind - #1 - Lakewood Unit ELEV. 3542'

(CHGD.TO: Pan American - #1 - A. S. Worthien, S.W.; CARD #2223-59 for OWWO)

660' FEL & 1980' FSL of sec.

Sec. 34, T-19-S; R-25-E

ACID OR SHOT

CASING RECORD

13-3/8 300 375

9-5/8 3578 200

TOPS

Gray	886
S.A.	900
Glor.	2450
C'F.	3260
Abo	4190
W.C.	6620
Penn	8150
Miss	9865 (-6323)
Dev.	10340

SPD. 9-25-52 COMP. 1-27-53

I. P. D&A

GOR TP CP

REMARKS CONT'D ON PAGE 2

TP

TD 10486' lime.

PBD

PERMIAN ASSN. CROSS INDEX LOG IN FILE CARD STAMPED

EL

RL

	F.R. 12-17-73
	(Morrow)
12-31-73	AMEND OPERATOR: Formerly reported as Barnhill-Richardson
2-5-74	Drlg 1095' lm & anhy
2-12-74	Drlg 3015' lm & dolo
2-15-74	Drlg 3865' lm & dolo DST 2801-3052', open 1 hr 15 mins, rec 600' GIDP + 20' OG&SWCDF, 1 hr 15 min ISIP 333#, FP 166-150#, 2 hr 30 min FSIP 416#, HP 1279-1279#, BHT 100 deg
2 19-74	Drlg 5280' lm
2-25-74	Drlg 7880' lm & sh
3-4-74	Drlg 9183'
3-11-74	TD 9633'; Prep to drill

COUNTY EDDY FIELD Wildcat STATE NM

OPR HILLIARD OIL & GAS CO. API 30-015-21066

WO 1 LEASE Gulf Federal

Sec 35, T-19-S, R-25-E

1980' FNL, 1980' FWL of Sec

CO-ORD

CLASS WOE ELEV [redacted]

SPD 1-30-74 COMP 4-11-74

CSG

13 3/8" at 305' w/250 sx
8 5/8" at 1300' w/700 sx
4 1/2" at 9810' w/500 sx

FORMATION	DATUM	FORMATION	DATUM
TD 9835' (CSTR)		PBD 9705'	

IP (Morrow) Perfs 9437-9563' CAOF 2639 MCFGPD. GOR (NR); Grav (gas) .596; SIWHP 3020#

CONTR Capitan OPRS ELEV 3503' GL TD 9900' TYPE RT

3-11-74 Cont'd
DST 9383-9467', open 1 hr 45 mins, GTS in 18 mins @ 95 MCFGPD, Flwd after 30 mins @ 160 MCFGPD thru 1/2" chk, rec 140' SGCM (Sampler rec 1.2 CFG), 1 hr 15 min ISIP 3811#, FP 150-213#, 3 hr FSIP 3879#, HP 4523-4523#
DST 9506-9573', open 4 hr 15 mins, GTS in 12 mins @ 250 MCFGPD thru 1/2" chk, FTP 24#, rec 270' GCM (Sampler rec 1.5 CFG @ 375#), 1 hr 30 min ISIP 3924#, FP 113-151#, 6 hr FSIP 3847#, HP 4551-4551#
DST 9561-9633#, open 1 hr 15 mins, rec 500' GIDP + 180' GCM (Sampler rec 3.56 CFG +

3-11-74	Cont'd 2000 cc's GCM @ 1650#), 1 hr 30 min ISIP 2746#, FP 57-75#, 3 hr FSIP 3391#, HP 4589-4570#
3-18-74	TD 9835'; MORT
3-26-74	TD 9835'; WOCU
4-15-74	TD 9835'; PBD 9705'; Tstg Perf 9437-9563' w/15 shots (overall) Acid (9437-9563') 6000 gals (7½% MSA)
4-29-74	TD 9835'; PBD 9705'; SI PBU
5-7-74	TD 9835'; PBD 9705'; Tstg
6-16-74	TD 9835'; PBD 9705'; WO Pot CAOF 2639 MCFGPD
6-17-74	TD 9835'; PBD 9705'; COMPLETE

6-17-74	Cont'd (Morrow) FOUR POINT GAUGES: Flwd 472 MCFGPD, .5" Orifice, 1 hr, TP 2901# Flwd 799 MCFGPD, .5" Orifice, 1 hr, TP 2740# Flwd 1295 MCFGPD, 1.0" Orifice, 1 hr, 2423# Flwd 2119 MCFGPD, 1.0" Orifice, 1 hr, 1481# LOG TOPS: Yeso 2455', Second Bone Spring Sand 3285', Third Bone Spring Sand 6364', Wolfcamp 6635', Cisco 7879', Canyon 8139', Strawn 8558', Atoka 9016', Morrow 9325', Chester 9795'
6-22-74	COMPLETION REPORTED

COUNTY EDDY FIELD Wildcat STATE NM

OPR GULF OIL CORP. API 30-015-20820

NO. 1 LEASE Shugart, Rena Com PERMIT

Sec 1, T-20-S, R-25-E MAP

660' FNL, 1980' FWL of Sec CO-ORD

CLASS ELEV. 3426 G.L.

SPD 3-11-73 CMP 4-23-73

CSG
13 3/8" at 299' w/320 sx
8 5/8" at 2090' w/1245 sx

FORMATION	DATUM	FORMATION	DATUM
TD 9756'		PBD	

PLUGGED & ABANDONED

CONTR McVay Drlg. OPR ELEV 3411' GL, 3429' KB PD 9650' TYPE RT

FM 3-19-73
(Morrow)

3-19-73	TD 2090' lm; WOC
3-26-73	Drlg 4310' lm & sd
4-2-73	Drlg 6643' lm
4-9-73	Drlg 8430' lm & sh DST (Cisco) 7878-7903', open 1 hr 30 mins, rec 130' DM, 1 hr ISIP 1570#, FP 43-85#, 1 hr 30 min FSIP 2139#, HP 3815-3772#, BHT 84 deg
4-16-73	Drlg 9595' sd & cht DST 8538-8644', open 1 hr, rec 272' mud + 1589' salt wtr, 1 hr ISIP 3309#, FP 415-739#, 1 hr FSIP 3264#, HP 4199-4154#, BHT 160 deg
4-23-73	TD 9756'; P&A 4-23-73 (Hold for Tops) DST (Morrow) 9565-9631', open 1 hr 30 mins, GTS in 63 mins @ TSTM, rec 210' DM, 1 hr 2 min ISIP 1122#, FP 94-140#, 3 hr FSIP 2963#, HP 4256-4256#, BHT 154 deg

4-23-73	Continued DST 9672-9756', open 1 hr, rec 480' mud, 1 hr ISIP 3489#, FP 237-237#, 1 hr FSIP 2546#, HP 4739-4762#, BHT 162 deg SP-DST 2830-2910', open 1 hr, rec 335' DM, 1 hr ISIP 836#, FP 198-209#, 2 hr FSIP 773#, HP 1349-1370#
4-30-73	TD 9756'; PLUGGED & ABANDONED LOG TOPS: San Andres 1002', Third Bone Spring Sand 6535', Wolfcamp 6887', Cisco 7858', Strawn 8525', Atoka 9080', Morrow 9440'
5-5-73	COMPLETION REPORTED

Petroleum Information.

County EDDY Field Undesignated State NM

Comp MARK PRODUCTION CO. API 30-015-21141

Well 1 Lease Holstun Com.

Sec 4, T-20-S, R-25-E

660' FNL, 1980' FEL of Sec

Class D Elev. Loc.

6-20-74 Comp. 7-20-74	Formation	Datum	Formation	Datum
12 3/4" at 305' w/200 sx				
8 5/8" at 1205' w/600 sx				
	TD 9550' (MSSP)		PBD	

PLUGGED & ABANDONED

Contr. Cactus Drlg. Elev. 3592' GL TD 10,000' Type RT

	F.R. 4-8-74
	(Pennsylvanian)
7-10-74	Drlg 8027'
7-17-74	Drlg 8970'
7-24-74	TD 9550'; Prep P&A
	DST 9245-9350', open 1 hr 15 mins, rec 160' Mud (Sampler rec 15 CFG + 400 cc's Mud), 1 hr ISIP 533#, FP 133-133#, 2 hr FSIP 1131#, HP 4374-4374#
7-31-74	TD 9550'; P&A (Hold)
8-5-74	TD 9550'; PLUGGED & ABANDONED
	LOG TOPS: Wolfcamp 6330', Pennsylvanian 7548', Morrow 9035', Mississippian 9515'
8-10-74	COMPLETION REPORTED

EDDY COUNTY NEW MEXICO UNDESIGNATED FIELD

Well: SOUTHERN UNION EXPL. CO. 2 Exxon Federal Result D&A D

Loc'n: 6 mi SW/Lakewood, 660' FSL 1980' FEL Sec 23-20S-25E.

Spud: 6-3-78; Comp: 9-6-78; Elev: 3491' grd; TD: 10,200' Barnett;
Casing: 13 3/8" 353'/375 sx, 8 5/8" 2223'/1450 sx, 4½" 3730'/450 sx
Comp Info: Perf (Bone Spgs) 3584-3626' w/1 SPF; A/6000 gals (15% MCA); S/sqlf wtr; sqzd w/75 sx; Perf (Bone Spng) 3562-76' w/1 SPF; A/1000 gals (7½%); S/ld w/NS; ran DILL, CNL & FDC logs; C/Big West.
Tops: (EL) San And 750', Bone Spng 3665', 3rd Bone Spng 6660', Wolfc 7050', Cisco 7874', Cany 8288', Strawn 8560', Atoka 9205', Morrow Lm 9500', Morrow Clastic 9645', Morrow Sh 9840', Barnett Sh 9970'
API No.: 30-015-22546

Date: 11-1-78 Card No.: 10 nm

EDDY COUNTY NEW MEXICO WILDCAT

Well: AMOCO PROD. CO. 1 Rios Siete Result: GAS WFD

Loca: 5 mi SW/Lakewood, 1980' FSL 2310' FEL Sec 11-20S-25E.

Spud: 11-13-78; Comp: 1-19-79; Elev: 3366' grd; TD: 9865' (Barnett); PB: 9825'
Casing: 13 3/8" 333'/325 sx, 8 5/8" 1500'/750 sx, 5½" 9865'/250 sx
Prod Zone: (Morrow) T/Pay 9448', prod thru perfs 9448-9660'
IPF: 750 MCFGPD, 14/64" ch, GOR NR, Grav NR, CP pkr, TP 525#
Comp Info: DST (Morrow) 9457-9530', op 3 hrs 45 min, GTS 30 min @ 70 MCFGPD, 3/8" ch, TP 12#, incr to 220 MCFGPD, 3/8" ch, TP 52#, rec 3106' slt GCDF, 1 hr 30 min, ISIP 3902#, HP 4565-4520#; wellsold to Amooc Prod Co.; Perf (Morrow) 9448-68', 9510-14', 9528-32', 9636-60' w/ISPF; S/I BW/9 hrs; A/5000 gals (7½%); F/750 MCFGPD/24 hrs, 14/64" ch, TP 525#; ran DILL, MICL & CNDL logs; C/Moranco #9.
Tops: (EL) Third Bone Spg 6423', Wolfc 7052', Cisco 7743', Cany 8256', Atoka 8992', Morrow 9408', Barnett 9661'
API No.: 30-015-22729

Petroleum Information
CORPORATION
A Subsidiary of A.C. Nielsen Company

Date: 3-7-79 Card No.: 16 rm

STATE OF NEW MEXICO

DEPARTMENT OF NATURAL RESOURCES

OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF WM. B. BARNHILL FOR AN UNORTHODOX LOCATION, EDDY COUNTY, NEW MEXICO.

CASE NO. 7521

APPLICATION

COMES NOW Wm. B. Barnhill and hereby makes application for an unorthodox location for the drilling of a well to test the Permo-Penn, Strawn, Atoka and Morrow formations at a location 660 feet from the south and west lines of Section 35, Township 19 South, Range 25 East, N.M.P.M., Eddy County, New Mexico, and as grounds therefor states:

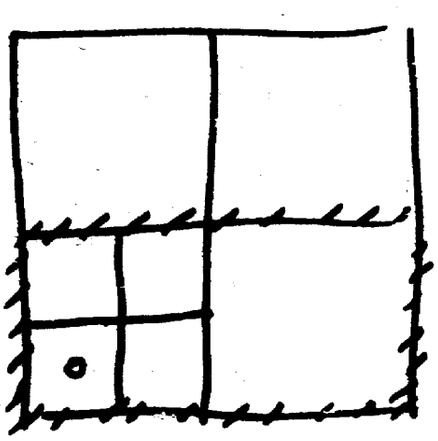
1. The S½ of said Section 35 would be dedicated to that well.

2. A well at that unorthodox location will better enable Applicant to produce the gas underlying the proration unit, and afford Applicant the opportunity to produce his just and equitable share of gas in the undesignated pool, prevent economic loss caused by the drilling of unnecessary wells, avoid the augmentation of risk arising from the drilling of an excessive number of wells and otherwise prevent waste and protect correlative rights.

Respectfully submitted,

WM. B. BARNEILL

By _____
for ATWOOD, MALONE, MANN & COOTER
P. O. Drawer 700
Roswell, New Mexico 88201



STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

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

CASE No. 7521

Order No. R-6948

APPLICATION OF WILLIAM B. BARNHILL
FOR AN UNORTHODOX GAS WELL LOCATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on March 31, 1982, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of April, 1982, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, William B. Barnhill, seeks approval of an unorthodox gas well location 660 feet from the South line and 660 feet from the West line of Section 35, Township 19 South, Range 25 East, NMPM, to test the Permo-Penn, Strawn, Atoka and Morrow formations, in the so-called "Boyd Channel" Area, Eddy County, New Mexico.

(3) That the S/2 of said Section 35 is to be dedicated to the well.

(4) That an offset operator, Chama Petroleum Company, appeared at the hearing and objected to approval of the aforesaid unorthodox location without penalty on the grounds that a well drilled at said location would drain gas from offsetting leases, thereby violating correlative rights.

(5) That approval of the unorthodox location will improve applicant's geological prospect for encountering the Morrow formation in a thickened section of the Boyd Channel and will better enable it to produce the gas underlying the S/2 of the aforesaid Section 35.

(6) That said unorthodox location will also place applicant in a more favorable position to drain gas from the offsetting leases which drainage would not be compensated for by counter drainage.

(7) That such drainage without counter drainage would result in the impairment of offsetting correlative rights.

(8) That approval of the proposed unorthodox location should be considered only if an adequate penalty is imposed on production from such location to minimize the aforesaid drainage and thus protect correlative rights.

(9) That a well drilled at the proposed unorthodox location and having the S/2 of the section dedicated thereto would be located at a standard distance relative to the South boundary of the spacing and proration unit.

(10) That a well drilled at the proposed unorthodox location and having the S/2 of the section dedicated thereto would be located 1320 feet or 67 percent closer to the west boundary of the spacing and proration unit than a well drilled at a standard location.

(11) That the drainage pattern of a well located at the proposed location would be encroaching primarily on two presently undeveloped spacing and proration units, namely the S/2 of Section 34, Township 19 South, Range 25 East, NMPM, and the N/2 of Section 3, Township 20 South, Range 25 East, NMPM.

(12) That according to the best geological evidence available at the hearing, the aforesaid two spacing and proration units have a total of some 13,638.5 and 13,443.6 acre feet of pay, respectively, or an average of 13,541.0 acre feet apiece, whereas the S/2 of Section 35, being the spacing and proration unit to which the well drilled at the proposed location would be dedicated, has some 3450.3 acre feet of pay.

(13) That on an acre-feet-of-pay basis, the S/2 of Section 26 has 25.5 percent of the acre feet of pay as the average of the two most directly affected spacing and proration units.

(14) That in accordance with Finding No. (8) above, the proposed unorthodox location should only be approved subject to a production limitation factor, and such factor should be computed by averaging the variation from a standard location and comparable acre feet of pay as follows: distance from south line of section, 100 percent of standard; distance from west line of section, 33 percent of standard; comparison of acre feet of pay with affected offsetting units' acre feet of pay, 25.5 percent, or, 100 percent plus 33 percent plus 25.5 percent divided by three equals 53 percent.

(15) That in the absence of any special rules and regulations for the prorationing of production from the subject well, the aforesaid production limitation factor should be applied against the well's ability to produce into the pipe line as determined by periodic tests.

(16) That in order to avoid premature abandonment and subsequent loss of recoverable reserves, provision should be made for a reasonable minimum allowable for the subject well, and ~~50,000~~ 500,000 cubic feet of gas per day is a reasonable figure for a minimum allowable.

(17) That approval to drill the proposed well at the unorthodox location described in Finding No. (2) above, subject to the Production Limitation Factor described in Finding No.

(14) above, will not impair but will protect correlative rights, will not cause waste, and should be given.

IT IS THEREFORE ORDERED:

(1) That the applicant, William B. Barnhill, is hereby authorized to drill a well to test the Permo-Penn, Strawn, Atoka and Morrow formations at a point 660 feet from the South line and 660 feet from the West line of Section 35, Township 19 South, Range 25 East, NMPM, Eddy County, New Mexico, subject to a Production Limitation Factor of 0.53 applicable as described below.

(2) That in the absence of any Special Rules and Regulations prorating production from the subject well, the following Special Rules and Regulations for a non-prorated gas well shall apply, if the well is drilled at the location described in Paragraph (1) above.

SPECIAL RULES AND REGULATIONS

FOR THE

APPLICATION OF A "PRODUCTION LIMITATION FACTOR"

TO A NON-PRORATED GAS WELL

APPLICATION OF RULES

RULE 1. These rules shall apply to the William B. Barnhill Morrow formation gas well located 660 feet from the South line and 660 feet from the West line of Section 35, Township 19 South, Range 25 East, NMPM, Eddy County, New Mexico, which well's Production Limitation Factor of 0.53 shall

be applied to the well's deliverability (as determined by the hereinafter set forth procedure) to determine its maximum allowable rate of production.

ALLOWABLE PERIOD

RULE 2. The allowable period for the subject well shall be six months.

RULE 3. The year shall be divided into two allowable periods commencing at 7:00 o'clock a.m. on January 1 and July 1.

DETERMINATION OF DELIVERY CAPACITY

RULE 4. Immediately upon connection of the well the operator shall determine the open flow capacity of the well in accordance with the Division "Manual for Back-Pressure Testing of Natural Gas Wells" then current, and the well's initial deliverability shall be calculated against average pipeline pressure in the manner described in the last paragraph on Page I-6 of said test manual.

RULE 5. The well's "subsequent deliverability" shall be determined twice a year, and shall be equal to its highest single day's production during the months of April and May or October and November, whichever is applicable. Said subsequent deliverability, certified by the pipeline, shall be submitted to the appropriate District Office of the Division not later than June 15 and December 15 of each year.

RULE 6. The Division Director may authorize special deliverability tests to be conducted upon a showing that the well has been worked over or that the subsequent deliverability determined under Rule 5 above is erroneous. Any such special test shall be conducted in accordance with Rule 4 above.

RULE 7. The operator shall notify the appropriate district office of the Division and all offset operators of the date and time of initial or special deliverability tests in order that the Division or any such operator may at their option witness such tests.

CALCULATION AND ASSIGNMENT OF ALLOWABLES

RULE 8. The well's allowable shall commence upon the date of connection to a pipeline and when the operator has complied with all appropriate filing requirements of the Rules and Regulations and any special rules and regulations.

RULE 9. The well's allowable during its first allowable period shall be determined by multiplying its initial deliverability by its production limitation factor.

RULE 10. The well's allowable during all ensuing allowable periods shall be determined by multiplying its latest subsequent deliverability, as determined under provisions of Rule 5, by its production limitation factor. If the well shall not have been producing for at least 60 days prior to the end of its first allowable period, the allowable for the second allowable period shall be determined in accordance with Rule 9.

RULE 11. Revision of allowable based upon special well tests shall become effective upon the date of such test provided the results of such test are filed with the Division's district office within 30 days after the date of the test; otherwise the date shall be the date the test report is received in said office.

RULE 12. Revised allowables based on special well tests shall remain effective until the beginning of the next allowable period.

RULE 13. In no event shall the well receive an allowable of less than 500,000 cubic feet of gas per day.

BALANCING OF PRODUCTION

RULE 14. January 1 and July 1 of each year shall be known as the balancing dates.

RULE 15. If the well has an underproduced status at the end of a six-month allowable period, it shall be allowed to carry such underproduction forward into the next period and may produce such underproduction in addition to its regularly assigned allowable. Any underproduction carried forward into any allowable period which remains unproduced at the end of the period shall be cancelled.

RULE 16. Production during any one month of an allowable period in excess of the monthly allowable assigned to the well shall be applied against the underproduction carried into the

period in determining the amount of allowable, if any, to be cancelled.

RULE 17. If the well has an overproduced status at the end of a six-month allowable period, it shall be shut in until such overproduction is made up.

RULE 18. If, during any month, it is discovered that the well is overproduced in an amount exceeding three times its average monthly allowable, it shall be shut in during that month and during each succeeding month until it is overproduced in an amount three times or less its monthly allowable, as determined hereinabove.

RULE 19. The Director of the Division shall have authority to permit the well, if it is subject to shut-in pursuant to Rules 17 and 18 above, to produce up to 500 MCF of gas per month upon proper showing to the Director that complete shut-in would cause undue hardship, provided however, such permission shall be rescinded for the well if it has produced in excess of the monthly rate authorized by the Director.

RULE 20. The Division may allow overproduction to be made up at a lesser rate than permitted under Rules 17 or 18 above upon a showing that the same is necessary to avoid material damage to the well.

GENERAL

RULE 21. Failure to comply with the provisions of this order or the rules contained herein or the Rules and

Regulations of the Division shall result in the cancellation of allowable assigned to the well. No further allowable shall be assigned to the well until all rules and regulations are complied with. The Division shall notify the operator of the well and the purchaser, in writing, of the date of allowable cancellation and the reason therefor.

IT IS FURTHER ORDERED:

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY,
Director

S E A L

CASE NO.

7521 DE NOVO

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

NEW MEXICO OIL CONSERVATION COMMISSION

COMMISSION HEARING

SANTA FE, NEW MEXICO

Hearing Date JUNE 25, 1982 **Time:** 9:00 A.M.

NAME	REPRESENTING	LOCATION
William F. Carr	Campbell, Byrd and Black	Santa Fe
Ernest L. Padilla	Santa Fe Exploration	Santa Fe
Wm Barnhill	Wm. Barnhill	Santa Fe
JAMES H. MONTGOMERY	Chama Petr.	Dallas, Tx
Charles E. Nearburg	Chama Petroleum	Dallas, Tx
Bob Huber	Bynum	Santa Fe
Thomas F. Bluebear	Campbell, Byrd & Black	Santa Fe

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
25 June 1982

COMMISSION HEARING

IN THE MATTER OF:

Application of William H. Barnhill for an unorthodox gas well location, Eddy County, New Mexico. CASE 7521

BEFORE: Commissioner Ramey
Commissioner Arnold

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation Division: W. Perry Pearce, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant: Ernest L. Padilla, Esq.
P. O. Box 2523
Santa Fe, New Mexico 87501

A P P E A R A N C E S

For Chama: William F. Carr, Esq.
CAMPBELL, BYRD, & BLACK P. A.
Jefferson Place
Santa Fe, New Mexico 87501

I N D E X

E X H I B I T S

MR. RAMEY: The hearing will come to order. We'll call first Case 7521.

MR. PEARCE: That is the application of William B. Barnhill for an unorthodox gas well location, Eddy County, New Mexico.

MR. PADILLA: Mr. Examiner, Ernest L. Padilla on behalf of the applicant in this case.

I have one witness who needs to be sworn.

MR. CARR: May it please the Commission, my name is William F. Carr, with the law firm Campbell, Byrd, and Black, P. A., of Santa Fe, appearing on behalf of Chama Petroleum Company in opposition to the application.

I have one witness.

(Witnesses sworn.)

WILLIAM B. BARNHILL

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

DIRECT EXAMINATION

BY MR. PADILLA:

Q. Mr. Barnhill, for the record would you please state your name and where you reside?

A. William B. Barnhill. I live in Roswell, New Mexico.

Q. Mr. Barnhill, what is your connection with the applicant, Santa Fe -- William Barnhill, in this case? Are you the same William B. Barnhill?

A. The same.

Q. And Mr. Barnhill, have your credentials as a geologist been accepted before the Oil Conservation Commission and accepted as a matter of record?

A. Yes, they have.

Q. Are you familiar with the Morrow formation in the area of concern in this case?

A. Yes, I believe so.

MR. PADILLA: Mr. Chairman, we request that Mr. Barnhill's credentials be accepted as an expert.

MR. RAMEY: He is so qualified, Mr. Padilla.

Q. Mr. Barnhill, referring to what has been marked as Exhibit Number One, would you please state what that is and what it contains?

A. Exhibit Number One is the acreage colored in green is the proration unit and the location in question, an unorthodox location location, located 660 feet from the south and the west of 35. The yellow acreage colored in is acreage controlled by Chama Petroleum.

Q. Chama Petroleum is the opposition in this case?

A. Yes.

Q. Mr. Barnhill, referring to what has been marked as Exhibit Number Two, would you tell us what that is and what it contains?

A. Exhibit Number Two is a revised Isopach map, or thickness map, of the Morrow sand in question in the area, delineating the sand body as I recognize it.

We have additional information since the hearing in March, which further substantiates some alterations as originally presented.

Q. Mr. Barnhill, how did you originally -- in general, how did you originally present this Isopach at the Division hearing?

A. In March?

Q. In March, yes.

A. At that time I thought the, a good part of the thickest part of the sand would -- would be a little further east than is shown on this recent plat. With additional drilling in there, it's delineated as shown on this exhibit here.

Q. What additional drilling has occurred since that time, Mr. Barnhill?

A. Well, down in the Section 2 of 20, 25, Santa Fe Exploration has drilled and run pipe on the Exxon State. It's located 1980 from the south, 660 from the east.

Q. What other information do you have on this Isopach that was not depicted in your earlier Isopach?

A. Well, on the other Isopach I had the sand thickness encroaching to the east considerably and I'd like to present electric logs and a cross section, which is marked A-A on the Isopach map.

If we start at the north half of 35 from the Hilliard Well, down to my proposed location, into the new Santa Fe Exxon State Well, which we didn't have at the original hearing.

Q. Mr. Barnhill, going on now to what has been marked Exhibits Three-A and Three-B, would you tell us and explain what they contain?

It would be -- would it facilitate to put this on the wall, Mr. Barnhill?

A. Well, it's so small I think everybody can just glance at it right on the table.

This -- this is a cross section. On the left is the Hilliard Gulf Federal. Colored in yellow is --

Q. Where is the Hilliard Gulf Federal located?

A. That's in -- 1980 out of the north and

west of Section 35, 19 South, Range 25 East.

Q And that's depicted in the Exhibit Number Two, is that correct?

A Yes..

Q In the north half of 35.

A Yes. And this cross section that I have now would be a straight line cross section between the Hilliard Gulf Well, located in 35, to the Santa Fe Exxon Well, located in the west half of 2, showing the similarity of the sand in question.

I have with this cross section a loose log, which is Three-B, which is the Chama Well located in Section 3 of Township 20 South, Range 25 East. This, this log here, if you put the Chama well against the Hilliard and line up the top of the Morrow, you can see what a poor sequence of sands the Hilliard Gulf Federal had.

If you lay that log along the recently drilled Santa Fe Exxon State, you can see what a poorly developed sand Santa Fe Exploration has.

Santa Fe Exploration and Hilliard Oil and Gas, in my opinion, are definitely on the well defined east bank of this channel section, and it's difficult to compare either of these, the Santa Fe or the Hilliard Well, with the recently completed Chama well, and that's the purpose of this

section here.

Q. How do the -- how does the cross section and the Isopach depict the sand thickness in the channel of the Morrow formation?

A. Well, there are some additional sands in the lower part of the log, but the sand in question, the Chama Huber Federal in Section 3, I depicted 4-foot of net sand.

In the Santa Fe Exxon State, to the east in Section 2, I can give it 28, very tight, high water saturations.

The Chama Well, the porosities in there were 20 - 25 percent, wateraturations were 10 - 12, in that neighborhood.

The Hilliard Gulf Well is comparable, most comparable to the Santa Fe Exxon, or the Santa Fe Exxon is most comparable to the Hilliard.

These are both, in the Hilliard Well and in the Santa Fe Well, are both advanced facies. They're shaley sands, are not in the main part of the channel, as I had thought at one time, in fact at the last hearing, but there's not any question in my mind that we're talking about the same sand, but both the Hilliard and the Santa Fe Well are on a shaley facies. They lack porosity and the permeability necessary for commercial, real, good commercial production.

Q. Does that affect the area of drainage or the potential deliverability of this, say, the Hilliard Gulf and the Santa Fe Exxon State Well?

A. Yes, I would definitely say so. For instance, taking the Hilliard well in Section 35 first, the cumulative production in eight years has been 189-million. The production figures are in the exhibits someplace.

Q. Is that Exhibit Four-A and Four-B, is that -- what is it?

A. Yes, that's right. It would be in the bottom part of Four-B, the Hilliard Well. The cumulative through 1981 is 189-million, just to round it off. This well in my opinion is possibly draining as much as 80 acres.

Q. Which well, Mr. Barnhill?

A. The Hilliard Well. There's no way, although this is the same sand, and if I may point out, that on the final shut-in pressures of the Hilliard Well in 35, the final shut-in pressure was 3879. The bottom hole pressure, as reported to me on the Chama Well, were 3896. It's only 17 pounds difference.

They do have the same bottom hole pressures and there's no question in my mind that they are the same sands. The Hilliard Well in 35 is on the east bank, tight and shaley, and has no deliverability, and will not drain

any of this Morrow sand the Chama has. It doesn't have the porosity or the permeability, and in my opinion, it may be draining as much as 80 acres.

The Chama Well would probably produce the total amount that the Hilliard Well produced in thirty days, and this has been going on for eight years.

Q. In terms of payout, Mr. Barnhill, how -- supposed you had the same type of production that Hilliard Gulf Well had, would you payout a well at the 660 location, as you are intending?

A. No, we couldn't, we couldn't pay it out, at that type of production, with that type of production.

The same relationship is going to be for Santa Fe Exploration, located in Section 2, to the south. They're going to have a very difficult time making payout. It's, there again, it's a tight, shaley sand. There's no way that, in my opinion, that they're going to be able to, with their porosities and permeabilities and water saturations, drain any of this thick Morrow sand the Chama has found to the west in Section 3.

They're going to have, they're going to be hard pressed to make a commercial well there.

Q. Mr. Barnhill, would wells located in the Chama acreage at standard or nonstandard locations, for that

matter, would they be able to drill their equitable share -- or drain their equitable share of gas underlying those lands?

A. Most definitely. The, the biggest part, 90 percent, or the best part of the channel, in fact it looks like all of the best part of the channel lies on the Chama acreage, going right through the center of Section 3 and continuing on south.

The, as I mentioned in the hearing we had in March, I did think that the sands would be considerably thicker to the east, but that's the nature of them, and it didn't prove out that way, and with the Santa Fe well, which we didn't have in evidence at the original hearing, and comparing it to the Hilliard well, they look almost identical, and in my opinion, I don't see how they're going to really tap into the Chama well.

Q. Mr. --

A. Or the sand that the Chama's got, because as you come out of these channels the porosity is, actually the permeability is good and the sands are clean, and you go up on the banks and they become shaley and even though you might get the same bottom hole pressures, and the correlations are good, and all that, they -- they have no deliverability, and --

Q. Going back to, and looking at the Santa Fe

Exxon State Well, what kind of thickness did you give it at the last hearing?

A. As I recall, I thought they'd have as much as 50 or 60 feet out there.

Q. So you've got basically half.

A. Half, and not only half, but it's very -- it's impermeable and it's tight, low porosity. It's just on the -- it's on the bank and it's not going to have any deliverability.

Q. What are the -- what are the porosity figures that you have for the -- for the wells in question here, the Santa Fe Exxon Well and, say, the Chama Well?

A. Well, the porosities on the Chama Well run 20 to 25 percent, water saturation about 10 or 12. I didn't put those on the log but the operator's here and I'm sure he can verify that statement.

And since this is the latest well, the Santa Fe Well is the latest well drilled in the area, I have the porosities in that sand, and if I may just call the attention again of that section, comparing the Chama Well to the Santa Fe and lining up the top of the Morrow sands, you can see a shale break just approximately halfway in between coming in, which is a typical type bank system, and as you go further up the bank, which would be to the east here, it would break

up completely and you just have slight stringers of sand, and if you go back to the Isopach map, we have two wells in almost a north/south alignment, which show to be the east bank of this so-called Boyd Channel.

To the west, in Section 3, we certainly can see what happens there. They are definitely in the channel, and the proposal here is to drill an unorthodox location which a considerable amount of money has already been spent and the well has been started, but if the economic considerations aren't there, a better climate is going to have to be found for the -- for the funds.

Q. Mr. Barnhill, what's the present status of the well that you have located on -- at a 660 location?

A. What's the what?

Q. 660 location?

A. What about it?

Q. What is the present status of it?

A. The present status is that conductor pipe has been set and cemented and before a large rotary, which would involve a much larger expenditure to put on there, in trying to get the results of this hearing, as to on the de novo, and we've had a ruling of -- on it in March or April, I guess it was when we got the ruling on the penalty, I'm asking the Commission to reconsider the whole thing and elimi-

nate the penalty in its entirety.

Q. Let's assume that -- that the Commission leaves the penalty as -- in accordance, or the same penalty that the Division gave, what would your decision in that case be?

A. For what --

Q. What are your thoughts in relation to what you might do?

A. Well, I might say this. If you got production like I'm anticipating for the Santa Fe Well in Section 2 or the Hilliard Well in Section 35, you'd have to have -- with a peanlty would just -- they're not going to pay out in the first place and with a penalty it just makes it that much worse, and I just have to make my own judgment at that time whether -- although money has been spent, the well has been started, I'm trying to explain to the Commission that I don't think, since funds have been committed to this, that a penalty is justified when I'm trying to present some evidence that is sound, in my judgment.

Q. Have you -- what's the status of that lease now covering Section -- the south half of Section 35?

A. The status of that lease, if you'd refer to the land plat, which is Exhibit One, the southeast -- the south half of 35 was communitized for a 320-acre proration

unit. The southeast quarter of 35 would have expired in May 1 of '82. It was communitized and a well was appropriately started to save that.

Due to the hearing we had and then a re-scheduling of the de novo and then it was cancelled several times for various reasons, the thing has sort of drug out and I went to the USGS and asked them if they would approve an extension for this proration unit so I could find out really what the economic climate was on the unit, and they have given me an extension which will terminate June the 30th.

Q In that regard, Mr. Barnhill, would you ask -- request an expeditious decision by the Commission?

A I'm afraid I would have to ask that.

Now the southeast quarter of that section was held because it's in the proration unit, but since a well was started in due time and in a prudent manner, they have extended this. Usually they don't like to extend them like that, but until I could have at least some interpretation of what we're talking about here in the way of penalty or something.

Q Mr. Barnhill, what are the contents of Exhibit Number Five?

A Number Five? Those are just completion records, cards, of the various wells that are of concern in

this immediate area.

Q. Mr. Barnhill, do you have anything else to add to your testimony today?

A. No, except, as I said, obtaining the new evidence by drilling of the Santa Fe Exxon State in Section 2, my original concept in there certainly wasn't correct. It's definitely on the -- on the east bank, and we're talking about an alignment of a north/south alignment of this unorthodox location, which pretty much throws it right in line with the others, and the Santa Fe Well just didn't have the sands and it's very comparable to a very, very poor well in the north half of 35, the Hilliard Gulf Federal, and they're going to be very hard pressed to make a commercial well out of that, and it was, of course, drilled 660 from a west line but it was a standard proration unit because it stood up 1980 out of the south, but it just goes to show you how close you can get and yet how far away you can be on one of these sand bodies.

MR. PADILLA: Mr. Chairman, we offer Exhibits One through Five, and I have nothing further of this witness at this time.

MR. RAMEY: Exhibits One through Five and Four-A and Four-B are admitted.

CROSS EXAMINATION

BY MR. RAMEY:

Q. Mr. Barnhill, you found the pressure, the initial pressure in the Coquina Well to be 3879 and the well, or the pressure in the newly drilled Chama Well to be 3896, or identical pressures?

A. The -- the shut-in pressure, yeah, the -- it was 3633 in the Santa Fe Exxon State, located in Section 2.

Q. 3633?

A. Yes, sir.

Q. That's the original shut-in pressure?

A. That's the final.

Q. Final shut-in pressure on drill stem test, I see.

A. Yes. And that would be about 129 pounds difference, I believe, from the Chama Well.

The Hilliard Well to the north is identical. There's six pounds difference, but it certainly shows low deliverability or capacity to produce. I don't think -- we're -- we're talking about the same reservoir, the same sands. It's just that the Hilliard and Santa Fe are on the east bank and just don't have any deliverability, due to porosity and permeability of the section.

Q. Okay, now let me get this straight. The

Hilliard Well in Section 35 --

A. Yes, sir.

Q. -- had a final shut-in pressure of 3879.

A. Yes, sir.

Q. Okay. The Santa Fe Exxon State in Section 2 --

A. Yes, sir.

Q. -- had a final shut-in pressure of 3633?

A. Yes.

Q. And then the Chama Well in Section 3 had a shut-in pressure of 3896?

A. Yes. Yes, 3896, that's what was reported to me by -- on the Chama Well, 3896.

Q. Do you have any pressure information on the two wells in Section 34?

A. 34. Well --

Q. Are those in the same reservoir?

A. Yeah, they'd be in the same reservoir. We can go back to the Exhibit Five, Exhibit Five, and go back to the completion cards. If you want to go up to Section 34 of 19, 25, we can take the Coquina PanCanadian, 1980 out of the north and west, and we can get the data there.

Let's see. It looks like the final shut-in there would be 3820.

Q. How about the other well in the south half of 34, do you have the pressure on it?

A. The Huber-Irami took a test. Well, now their final shut-in there on the Huber-Irami, 660 from the south and 1980 from the west of Section 34 shows on this completion card final shut-in as 1839.

Q. What about the, what is it, PanAmerican Wertheim? Do you have anything on it or --

A. They went on down to the Devonian. I think they came back and tried something in there. They have a -- they have a shut-in pressure 2936.

Q. Is that the dry hole? Is that well --

A. Yes, sir, that's a dry hole.

Q. Okay, what about the producing well just to the north of it but the same -- same location?

A. That's the Coquina PanCanadian, which, that pressure was -- we just had it here --

Q. Is that the PanCanadian?

A. Yes, sir.

Q. Okay, then I've got the -- I thought you said that was --

A. 38 -- 3820.

Q. I thought you said that was the pressure for the well that was 1980 from north and west.

A. That is the Coquina PanCanadian, yes, sir.

Q. Well, what about the well that's 19 -- looks like it's 1980 plus from the south and 660 from the east? That is right next to the Wertheim well.

A. That's the -- that's the Stanoline Lakewood or the Wertheim, as it was called, showing a shut-in there of -- of a test in there, recovery interval, 1810.

Q. I thought that was -- I thought you gave me that information for the dry hole, now. There's two wells there.

A. Right.

Q. What are those?

A. One's a shallow well. It only went down to 899 feet.

Q. And that's a dry hole.

A. Right, and the one that shows as a gas well is not a gas well. It's just -- all maps carry that. That is the PanAm Wertheim, or the Lakewood, it's also called, and it was a Devonian test and plugged as a Devonian test, but they did test the Morrow interval and have a shut-in pressure of 1810.

Q. So essentially all, all the shut-in pressures you have here of the producing wells, why, they're essentially the same except for the Santa Fe Exxon State, which

perhaps shows some pressure decline.

A. Right, and on their -- on their drill stem test they have gas in 40 minutes, 123,000, rather a poor test.

Q. But you feel that between the -- between the Hilliard Gulf and the Chama Huber there's essentially no depletion from the production from the Hilliard Gulf?

A. No, I -- I look like the Hilliard Gulf in the north half of 35, it's draining a -- it's draining something there in that little bit of sand, but it doesn't have the capability or the capacity to do much, possibly maybe 80 acres or something there, because it's tight and impermeable and the subject -- I think the Chama Well down in Section 3 of 20, 25, could kick out that much gas in a month, equal to eight years of production from the Hilliard Well, and the Santa Fe Well in 2 is going to be somewhat faced with a similar situation, if -- if you'll look at -- compare the logs, straight line correlation, north/south. They -- the sand just didn't get over there. It's on the -- on the east bank, and --

Q. And then a well that's drilled at your location is going to more -- be more similar to the Hilliard Well and Santa Fe Exxon State than it is to the Chama Huber Well.

A. Well, I certainly wouldn't think that I

certainly wouldn't think that I could -- can get the sand that the Chama Huber Well has in Section 3. I think that would be foolish to anticipate that. It's, hopefully, the porosity and permeability would be better at this unorthodox location, but I don't -- I'm not going to get the sand, I don't believe, that the Chama Huber has in the Section 3, and if it's too far up on the east bank, it's just going to be too far up, and that would be essentially the same as the Santa Fe Well in 2 and the Hilliard Well in 35. It's not exactly in a north/south straight line correlation but so relatively close that it's going to be either on the bank or maybe possibly a little bit -- but it's not going to have the sand section that the Chama Well found in Section 3.

Q. Are you, with your pressure information are you trying to show perhaps that there is no pressure relationship between the wells on the east bank and those that are in the channel?

A. Well, I think for the pressure relationship, I think we -- we have the bottom hole pressures that are essentially the same or very close to the Chama Well in 3, and there's not any question in my mind that we're talking about the same sand. It's just that -- that the best of the channel is to the west, as defined on this Isopach.

I originally thought it was a little fur-

ther to the east, but I don't believe that to be true now with the additional data that we have from the well drilled in Section 2, the Santa Fe Well, and if we're looking at an economic climate for the cost of these wells and production like the Hilliard, or what I'm assuming the Santa Fe is going to run into, with a penalty and one thing or another, just wouldn't warrant drilling, continuing the drilling of this test, irregardless of the expenditure that's already been done.

Q. Okay.

MR. RAMEY: Any other questions of Mr. Barnhill? Mr. CArr?

CROSS EXAMINATION

BY MR. CARR:

Q. Mr. Barnhill, I'd like to direct your attention first to the Isopach.

Could you tell me what is indicated by the yellow line?

A. That's just a color scheme. That would be, that's the 50-foot Isopach interval, and then the green is shaded in -- the 40-foot one is shaded in green just to -- that's all. It has no significance.

Q. Just indicates the --

A. Yeah.

Q -- different depths or the thickness of the channel.

A Thickness.

Q Thickness. I'd like to -- you to address your attention to the proposed well. I believe you testified that it's important that you have a final order from the Commission by the end of this month, is that correct?

A That's when my extension from the United States Geological Survey terminates.

Q And was it necessary to spud the well to keep the Gulf lease from -- farmout from terminating on the southeast quarter of that section?

A That's correct.

Q How deep is that well at the present time?

A That has 20-foot of conductor pipe and is cemented to the surface.

Q So you're at a present depth of 20 feet.

A Right, and the USGS granted me approval and they said that's enough to keep the proration unit in order until you find out what in the world is going on in these de novos.

Q Now when you actually spudded the well you were aware that an order had been entered imposing a penalty on the well's production, did you not?

A. That's right.

Q. Now, if I understand your -- your cross section, it shows that the Morrow formation in the Hilliard Gulf Well and in the Santa Fe Exxon State Well are fairly comparable. Is that a fair characterization?

A. I think so.

Q. And is it also your testimony that you're likely to encounter a similar sort of a Morrow sand at the proposed location?

A. It could well be because at our original hearing back in March I certainly had the idea that the better part of the channel, not the better part but a good part of the channel would be to the east -- to the easterly direction, and upon the drilling, which we didn't have the data at that time, the Santa Fe Well now has been drilled, certainly with a -- the comparison of the Santa Fe and the Hilliard Well, that is defining that east bank over there and the channel has to be to the west. I'm talking about the channel sand as Chama encountered.

Q. And so you're running a substantial risk of drilling a well that will not be a successful economic venture, is that not true?

A. No, I wouldn't put it that way. It's just that these porosities and permeabilities can change and they

are just absolutely unknown until you drill them.

Q. I believe you indicated that in your opinion the Hilliard Gulf Well drained approximately 80 acres, is that right?

A. Well, that's an estimate. I am not a reservoir engineer. I know one thing. It can't be draining much and it certainly isn't -- if it was tapped into the Chama sand, really tapped into it, it would have been an excellent producer, but in eight years it's made 189-million. This Chama well could probably produce that in a month, if they wanted to turn it loose.

Q. Was it your testimony that a well at the proposed location would probably drain only approximately 80 acres?

A. (Not understood.)

Q. No, I'm talking about the well that you're -- that's the subject of this hearing.

Was it your testimony that that well would drain only a limited area, like the Hilliard well?

A. If it hits a section where the porosities and permeabilities like the Santa Fe or the Hilliard well, I would say it would probably drain 80 acres, maybe.

Q. But it is possible that it could encounter a substantially -- that you could make a substantially better

well than either of those wells?

A. Hopefully.

Q. What would be --

A. The porosity and permeability is what determines these. Now I think you can delineate the east bank of this channel and the Hilliard well is discussed and the Santa Fe well is going to be just really not much, but you -- we've got that delineated there, and this unorthodox location is, I don't think it warrants, if you're looking at it in this light, a penalty of any kind because of the hazardous idea that you may be on that bank and end up with something like Hilliard.

Q. What was the porosity originally encountered in the Coquina PanAmerican well in Section 34?

A. I don't -- I don't have that. I do have it in the office but I didn't bring that.

Q. It's a very good well, is it not?

A. Yes. Well, it was. It's depleted in the Morrow and was subsequently plugged back to the Atoka.

Q. It was a successful well in the Morrow?

A. Yes.

Q. If you look at the Huber-Irami Well, it was -- it was the dry hole.

A. Yes, down in -- yes.

Q And it was dry not because of completion problems but because of the absence of permeability and porosity, is that correct?

A Lack of porosity and permeability, that's correct.

Q And if you compare those two, they are certainly in comparable parts of the -- this Boyd Channel, based on your Isopach, is that -- are they not?

A Yes.

Q And so based on that it's possible that at your proposed location you might have the reverse and get a very good well, even though there's a -- the Hilliard Well is not a good well.

A Well, I also want to remind you of the fact that there's a dry hole, the PanAm Wertheim, 1980 from the north and 660 from the east.

Q But it's possible --

A A Devonian test.

Q But isn't it also possible that there might be some reservoir characteristics in Section 35, is that not true?

A Yeah.

Q And so it is possible that you could get a very good well at the unorthodox location.

A. Well, I'm not going to get anything like Chama has in Section 3, I'll guarantee you that.

Q. But you could get a well substantially better than the Hilliard Gulf?

A. Well, hopefully.

Q. I believe you testified that the Coquina Pan Canadian Well and the Chama-Huber Well were located in the same reservoir, same channel, is that correct?

A. In my opinion, definitely.

Q. When did the Coquina PanCanadian first start producing, do you know that?

A. Yes. Not by memory. The PanCanadian was completed January 17th, 1974.

Q. Now you may have answered this and I just don't recall. Did you tell me you had any pressure data, initial pressure data on that well?

A. Let's see, didn't we just check that? Yes. We have pressure data on it, 3820.

Q. Do you happen to know what the initial pressure would have been in the Chama-Huber Well?

A. No, they didn't run a drill stem test but it was given to me that the -- the bottom hole pressures when they were 3896. Now the operator is here. If that is not a correct number, he can correct it.

Q. But they're fairly comparable, the initial pressures?

A. Yeah, uh-huh.

Q. Wouldn't you expect that if they were in the same reservoir that there would have been some pressure drop down in the Chama-Huber Well after the Coquina Well had produced, oh, some years?

A. Well, you're looking at a distance of over a mile away and this -- this Chama, the Huber Well in Section 3, this thick sand that Chama encountered goes to the south and goes to the north, and you're talking about a well that's been producing since whatever I told you, '74, it made a considerable amount of gas; it's not going to last forever, and it won't -- it wouldn't drain this whole channel system, if that's what you're inferring.

Q. But you wouldn't expect any pressure decline, then, in the Chama location from that other well?

A. Not necessarily.

Q. How many Morrow wells do you operate?

A. I don't operate any.

Q. How many do you have an interest in?

A. Well, it would be a good number.

Q. Based on your experience in the area, when a Morrow well is produced is it customary to produce the well

at its potential or do you produce it at a rate below that?

A. Well, a prudent operator, I think, could produce it at an optimum level so that he's not going to damage the reservoir, and I think most people would agree with that. Some people pull these wells too hard and they just ruin them pretty quick.

A good Morrow well, such as we have in Eddy County, I think that 3/4-million cubic feet a day is a good level to produce, provided when you run your various bottom hole pressure surveys, and one thing and another, but to run one of these things like some operators have in Eddy County, some of them as much as over 20-million a day, up to 30-million a day, they get their money back in a couple of weeks, but they sure aren't doing that well any good.

Q. So they're producing it at well deliverability. I don't know if that's the right term. Can you --

A. Yeah, though you won't find -- most prudent operators will pull the well back so that they're going to -- they're going to have a life span that is optimum.

Q. What happens if you just produce these at their deliverability? What kind of problems develop with a well?

A. Well, you take any well, if it -- if you produce it at full deliverability, it's not going to last as

long as if you use it, work in the prudent manner. Just like running a good race horse, you could kill it in the first day, if you wanted to.

Q. What kind of problems does it cause? I just -- if you produce a Morrow well, what risks are you running? What causes it to die the first day on you?

A. Well, if it's a water -- if it's a water drive, you're going to -- you're going to pull that water in very, very rapidly.

Q. And then that would create the situation we had in the Lakewood Well where the formation play in this well -- or something like that? Where you get water in it? If you put water into a well that damages the formation just like the Lakewood Well was drilled when it was completed, or drilled with water, is that what you're saying?

A. Well, when a water drive, when that water hits the wellbore it's usually that's -- that's the end of the story.

Q. You're actually -- actually won't know how good a well you'll get at your location until you go ahead and take the risk of drilling the test, obviously right, isn't it?

A. Right.

Q. And the penalty will be established before we have that information, if there is a penalty.

A. Right.

Q. In your opinion would it be possible to drill at a standard location in the south half of 35 and make a commercial well?

A. No way. You're just -- you're just compounding the situation, getting further east.

Q. Do you believe the entire south half of 35 will contribute gas to a well at the unorthodox location?

A. Well, it would contribute some, but not -- I mean as you go east what I've represented here is the way I truly believe it to be. You're getting up on this bank and it's -- unless that porosity and permeability change there at this unorthodox location, if it, as I said before, if you've got something like the Hilliard well or the Gulf well, you're probably going to drain 80 acres, and it would just be a miserable failure.

Q. Have you made any estimates of the reserves that might underlie the south half of 35?

A. No, I haven't.

Q. Have you made an estimate of the reserves under 34?

A. No.

Q. Now you said that you felt that by authorizing you to go forward with this well without a penalty at

the unorthodox location would not impair Chama's ability to produce its equitable share of the reserves in the channel, is that correct?

A. That's correct. Because I don't think the Hilliard well in Section 35 has any way of -- of getting the gas that Chama encountered which we have on this log. It doesn't have the porosity, the permeability. It's on the bank, shaled out. It's very tight.

Same way with the Santa Fe well. They're going to have a difficult time making some kind of a well, but it will not, under the porosities and permeabilities and the shaley nature of the sand, drilling 660 feet from the west line of Section 2, it will not get that Chama sand.

Q. When you said that you felt it would enable Chama to drain their equitable share, do you mean that they can -- will be able to drain all the reserves under their tract?

A. I would certainly think so. But Santa Fe is not going to get it in Section 2.

Q. You don't believe there's any chance that they are -- that the radius of drainage will extend into Section 3?

A. No, I don't. We have a drill stem test data on the Santa Fe well and the log calculations. The poro-

sities are low. The waters are high. There's no way that you could compare this Chama well located in Section 3. You'd think that this well was twenty miles away someplace, and it's -- the Santa Fe Well is 660 feet from the west line of Section 2. And at our hearing back in March, I thought that the sand would be encroached to the east. They definitely don't, and Santa Fe, unfortunately for Santa Fe, they're not going to be able to tap into this sand section here. It's just a -- it is the same sand. The bottom hole pressures are relatively the same. There's a difference, a little difference in the Santa Fe bottom hole pressure, but they're relatively the same. It's the tight, shaley, bank facies, which will not have much deliverability.

Q. Mr. Barnhill, you propose to dedicate the south of 35 to the well, is that correct?

A. That's true.

Q. What are the -- what would be a standard location in the south half of 35?

A. Well, 660 out of the south and 1980 out of the west.

Q. Is that your --

A. Or you could go 660 out of the south and 1980 out of the east.

Q. So you're moving 1320 feet toward the

Chama property.

A. Uh-huh, yes.

MR. CARR: I have nothing further.

MR. RAMEY: Any other questions of Mr. Barnhill? Mr. Padilla.

REDIRECT EXAMINATION

BY MR. PADILLA:

Q. Mr. Barnhill, what's your experience with the Morrow formation in southeast New Mexico?

A. I've almost exclusively devoted my time to the Morrow the last fifteen, sixteen years. I can't give you the exact date.

Q. Do you think the 47 percent penalty that was assessed on this location is fair under the circumstances?

A. On presentation of the new evidence of the well drilled in Section 2, I do not think it's fair. We have this new evidence, which we didn't have before. At the original hearing I could understand the penalty. I personally felt, as I mentioned, not to be repetitious, the sands would go further to the east. They do not. They are straight north/south alignment on the east bank; the channel is to the west.

Certain funds -- I didn't know that but certain funds have been committed to drilling that test; cer-

tain funds have been expended, but I do not think it warrants a penalty and if a better economic climate couldn't be found, I don't believe the well will be drilled.

MR. PADILLA: Nothing further, Mr. Chairman.

RECROSS EXAMINATION

BY MR. RAMEY:

Q. Okay, I think the gist of your testimony is, Mr. Barnhill, that if the well is up on the east bank, then it's not going to tap the porosity that is associated with the channel.

A. That's correct.

Q. If you got a well that would deliver 2-million to the pipeline and you were penalized to 1-million, would that still be an economical well, providing it produced the 1-million for a period of time? Even for a year?

A. That would be pretty light production, considering the cost. These wells AFE cut now at around $800,000. It would be very marginal.

Q. How much, how much production would you need overall to pay out a well, considering your operations, expenses, and any overrides you may have; just roughly? 400-million?

A. Yeah.

Q About 400-million?

MR. RAMEY: Any other questions of Mr. Barnhill? He may be excused.

MR. CARR: Mr. Ramey, may we have a few minutes?

MR. RAMEY: Yes, let's do.

(Thereupon a short recess was taken.)

MR. RAMEY: The hearing will come to order. Mr. Carr, you may proceed.

JAMES H. MONTGOMERY

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 James H. Montgomery. I live in Dallas, Texas.

Q Mr. Montgomery, by whom are you employed

and in what capacity?

A. Consulting geologist and engineer; I am employed by Chama Petroleum for this hearing.

Q. Would you briefly summarize your educational background and your work experience for the Commission?

A. I have a Bachelor's degree in geology from Louisiana State University. I have a Master's degree in geology from the University of Tulsa. I have a Bachelor's degree in petroleum engineering from the University of Tulsa.

Q. And will you review your work experience?

A. I worked for Magnolia Petroleum Company, Mobil, a number of independents. I spent thirty-two years in the oil business; the last twelve years as a consultant.

Q. Are you familiar with the application filed in this case by Mr. Barnhill?

A. Yes, sir, I am.

Q. Are you familiar with the area which is the subject of this application?

A. Yes, sir.

Q. Would you just very briefly summarize for the Commission your work in this immediate area?

A. About a year and a half ago Mr. Barnhill submitted a geological idea to the Chama Petroleum, to Mr. Charles Nerberg (sic). I was asked to review it; seemed like

a nice channel, MOrrow channel deal.

Mr. Nerberg acquired the acreage and went out and proceeded to drill the Chama-Huber Well.

So I've been involved in this specific spot for about the last year and a half.

Q. Are you the engineer that is responsible to Chama and for Chama's development in this area?

A. Yes, sir.

MR. CARR: At this time we would tender Mr. Montgomery as an expert witness in petroleum geology and engineering.

MR. RAMEY: He is so qualified, Mr. Carr.

Q. Will you briefly summarize Chama's reasons for appearing in this case?

A. Well, we're here to oppose the granting of an unorthodox gas well location without a severe penalty.

Q. Have you prepared certain exhibits for instroduction in this case?

A. Yes, sir, I have.

Q. Will you please refer to what has been marked for identification as Chama Exhibit Number One, identify this and explain what it shows.

A. This is a -- mainly a land map showing the Chama acreage in the area; the acreage owned by Chama Petroleum

is cross hatched.

It also shows the standard and proposed locations and outlines the proration unit.

Q. What is a standard proration unit in this area?

A. 320 acres.

Q. And what are standard well locations?

A. In this case 1980 from the west and 660 from the south.

Q. How much of an advantage in terms of feet is Mr. Barnhill seeking to gain on the Chama property by virtue of his proposal?

A. 1320 feet.

Q. Now I'd like to direct your attention to the south half of Section 34. A portion of that is not shaded. Who owns the remaining interest in the south half of Section 34?

A. That's owned by Exxon. Chama is negotiating for a farmout with them now. Chama will control the south half of 34.

Q. Does Chama propose to drill a well in the south half of 34?

A. Yes, sir.

Q. To the Morrow?

A. Yes, in the immediate future.

Q. Who owns the north half of that section?

A. It's held by Coquina, Section -- the north half of 34.

Q. Is the north half dedicated to a well?

A. Yes, sir, the Coquina PanAm -- Pan Canadian.

Q. So Chama would be required to develop the south half as a laydown unit, is that correct?

A. That's correct.

Q. To develop that acreage at a standard location how far from the east boundary of Section 34 would you have to locate the well?

A. We'd prefer to drill it 1980 from the east.

Q. And Chame would then, of course, have the major ownership interest in that south half unit?

A. Yes, sir.

Q. Now I'd like to direct your attention to the north half of Section 3, the southwest diagonal offset and ask you if Chama has any plans for the development of that acreage?

A. Yes, sir, planning to drill one there, the Chama Huber is in the south half of that section and we plan to drill one 1980 from the ast line and 660 from the north, standard location.

Q. Will you now refer to what's been marked for identification as Chama Exhibit Number Two and identify this and explain what it shows?

A. This is a topographic plat of the area. We're showing that there is no topographic reason for moving the location from a standard location to the unorthodox location.

Q. Now will you refer to Exhibit Number Three and review this for the Commission?

A. This is a production map of the area. The Morrow wells are colored in yellow.

Also on this map are the lines of two cross sections, which were previously prepared for the last hearing by Mr. Barnhill.

Q. And this map was originally prepared by Mr. Barnhill?

A. Yes, it was.

Q. What is the date on the production reflected on this map?

A. The production goes to 1-1-81, through 1980.

Q. Now using this map, will you please refer to the wells immediately to the north of the proposed location and review each of these wells in terms of quality for the

members of the Commission?

A. The Coquina PanCanadian Well has made about 2-1/2 billion out of the Morrow.

The Hilliard Well in Section 35 has made 190-million. It's a very poor well. The PanCanadian Well, the Coquina PanCanadian was an excellent well. I'm not sure at the present time, I've been able -- unable to determine whether it's producing out of the Morrow or the Atoka, at the present time. It has produced some from the Atoka. The last I saw, it was now producing out of the Morrow, so I'm not sure just what the status of it is.

The Stanolin Lakewood Unit in the east half of Section 34 is shown as a producing well. It has never produced. I think it was actually potentialed at one time from the Morrow. It was drilled to the Devonian in 1953. Five years later they plugged back, made a completion attempt in the Morrow. They potentialed to 197,000. The price of gas was low. They didn't attempt a frac job. They didn't attempt anything. It had set there with mud on it after having been drilled through with water. It would probably make a well if you drilled next to it today. It's got an excellent log on it. It has nice, thick sand.

Q. What about the Huber-Irami?

A. The Huber-Irami is another case. It is

tight. It has a thick Morrow sand section; is extremely tight. Their extrapolation on the bottom hole pressures made shows 3820. You can extrapolate them to go on up further than that. It shows gas effect all through the log but porosities are 8 percent or less average.

I think with a frac job it could -- it would make a well today, but it is tight.

Q. Now looking at this plat I don't see the Chama well in Section 3.

A. At the time this plat was made those wells were not drilled, the two wells. There have been two wells drilled since these maps were prepared by Mr. Barnhill, the Santa Fe Well in the west half of 2 and the Chama well in the south half of Section 3.

Q. And the well in the south half of Section 3 was drilled by who?

A. Chama.

Q. If you would, briefly, for the Commission summarize the data you have on the Chama well in Section 3.

A. The Chama well in Section Three averages about 20 percent porosity. It's got 53 feet of net sand. It's the best well in the area by far. It has the thickest sand. It has the best porosities. As Mr. Barnhill has said, it looks like it ought to be in another area, but it is by far

the best well in this area. It's in the middle of the channel and it is thick.

Q. When you say net effective sands, what do you mean?

A. I'm using a cutoff of about 7 percent and taking all clean sand above that point.

Q. You mean productive sand?

A. Net productive sand that will contribute to the reservoir, right.

Q. And the --

A. Which, I think, is what Mr. Barnhill was doing, because this is, when I reviewed his maps I was coming up with pretty much the same figures and I think we still have pretty much the same figures, so --

MR. RAMEY: How many net feet of pay did you say, net effective --

A. In which well?

MR. RAMEY: In the Chama well.

A. 53 feet. We'll have an Isopach so you can see it.

Q. Mr. Montgomery, at this time I'd direct your attention to Chama's Exhibit Number Four and ask if you would review this for the Commission?

A. This is the cross section A to A' running

east/west across the channel, starting with the production well in Section 4, which is on the west bank of the channel, very shaley, and has only about, oh, 8 feet of sand; coming through the Coquina PanCanadian Well, which has a nice, thick sand section, and did produce, you know, 2-1/2 billion; coming next to the Stanoline Lakewood Well, which has -- and I should point out that on this cross section that particular log is only half the scale of the others, so the sand is thicker than it appears there by comparison. I calculate it to have 48 feet of net sand and then on to the Hilliard Well, which I think I gave 25 feet of net sand, and it's on the east bank. Then you come on to the Gulf Well in Section 1, which has no sand at all.

Q. This cross section generally shows the characteristics of the sand across this area, is that --

A. Yes.

Q. -- what you're saying?

A. Yes, sir.

Q. In your opinion is structure of any importance in this area in terms of making a successful Morrow completion?

A. No, sir.

Q. What then are you looking for when you drill a well?

A. Thick productive sands.

Q. Such as was found in the Chama Well in Section 3.

Now, looking at this, you have the log on this cross section of the Stanline Well, is that correct?

A. Yes, sir.

Q. And I believe you testified that it appeared to have very good sand?

A. Yes, I did, 40 net feet of net effective sand based on the old log which was run.

Q. And --

MR. RAMEY: Which well is this again?

A. That Stanoline Lakewood, the PanAm Wertheim, or there's a confusion in the names there.

MR. RAMEY: The one in the middle?

A. Yeah, right. The Northwestern Development Company Lakewood is the little thing that went to 899 TD.

When Stanoline drilled it originally it was called the -- the deep test, it was called the Stanoline Lakewood; when they re-entered it later they called it the Pan Am Wertheim, so that's where all the mixup was.

Q. Just to be sure this is in the record, why did that well not produce?

A. Primarily, I think, because they drilled through the Morrow with an extremely high water loss, and I think that -- in fact they drill stem tested it and got gas to the surface and, you know, even after wrecking it, but then when they tried to complete it they -- by that time it had been sitting for ive years with mud on it, so I think if you drilled next to it now you'd make a well without a doubt.

Q. Is it fair to say that the more sand you get, the more net productive sand you get in a well, the better the well should be?

A. Yes, sir, it is, definitely.

Q. Is it also true that the more net productive sand you have under a tract the more reserves you should have.

A. That's correct.

Q. Will you now refer to Chama's Exhibit Number Five and review this?

A. That's cross section B-B', which runs from the Mark Olsen Well in Section 4 again, to the Coquina Well, to the Huber-Irami, and down to the Amoco Antweil Well, or Amoco Rio State.

Again we see that the Mark production well just has about 8 feet of sand. The Coquina Well has

a thick section. The Huber-Irami has a very thick section. You can see the gas effect on the log there, but it also very tight. I'd say it's an average of maybe 8 percent porosity at best; however, I think a frac job would do it.

Then down to the Antweil Well in Section 11, which again is lying on the east side of the channel, like the Gulf Hilliard Well, and it's shaley and has about 25 feet of sand.

Q. Will you now refer to Chama Exhibit Number Six and identify this for the Commission?

A. This is an Isopach that I prepared for the first hearing in March and then --

Q. Are you referring to Exhibit Number Six now or is it Seven?

A. No, I don't have six. Six is an Isopach that was prepared by Mr. Barnhill and it was submitted to me last year.

Q. Did you review this Isopach?

A. Yes, I did at the time. I found it reasonable at the time. I --

Q. Did you agree with Mr. Barnhill's interpretation?

A. Yes, at that time he got the wells on the east side of the channel that ought to be on the east side of

the channel; the thicknesses are very much the same that he had picked and I had picked. He's got thicker sand where Chama is than Chama had. That's all right. I'll settle for 53 feet. And actually, he has -- he's got, well, the well that was drilled by Santa Fe, he's got it a little thicker than it is; to me it only has 25 feet of sand; he's got it at about 35 feet, I think, it's not shown on the map, but there's not a lot of reasons for changing that Isopach. The two wells that have been drilled, one of them is thinner, both of them are thinner than they should be, but the Isopach is still generally correct, and I think he shows that on the Isopach he's introduced today.

Q. Now I'd like you to look at the Isopach that was originally prepared and I'd like you to specifically compare that Isopach with the Isopach prepared for the hearing today, as they relate to the south half of Section 35.

A. Okay.

Q. Mr. Montgomery, I'm asking you to look at Exhibit Six, being the original Barnhill Isopach --

A. Right.

Q. -- and also Mr. Barnhill's Isopach that was prepared for the hearing today.

A. Okay.

Q. And ask you to compare those two as they depict the sand that underlies the south half of Section 35.

A. I'd say they are essentially the same. He's cut down some of the pay. He had 32 feet in the Gulf Hilliard Well; today he's colored 24 feet. He has 40 feet in the PanCanadian and Coquina Well; he's got 40 feet today. Huber-Irami has 47 and he showed 47 today. 44 on the PanAm Lakewood; 46 today; 54 on the Chama Well.

I'd say they're essentially the same.

Q. Both of them indicate that productive sands underlie the south half of Section 35?

A. Underlie part of the south half of Section 35.

Q. Have you reviewed the data that was presented on Mr. Barnhill's original Isopach and from this constructed an Isopach map of your own?

A. Yes, sir, I have.

Q. Is that what has been marked for identification as Chama Exhibit Number Seven?

A. Yes.

Q. Does this Exhibit Number Seven take into consideration and use the data from the Santa Fe Well?

A. Yes, sir, it honors all the wells that have been drilled in the area to date. This Isopach was ac-

tually prepared back in March and I don't think we had to change anything. We had the information on the Huber well then. The Santa Fe Well was drilled since then and it shows 25 feet of sand; it shows to be on the east side of the channel, which is the way we figured it and Mr. Barnhill has figured it.

Essentially I think it shows that the majority of the thick sand lies in Section 34 and Section 3 and Section 10, and the east bank of the channel runs through 35, 2, and 11; the west bank of the channel runs through 33, 4, and 9.

Q. Now, Mr. Montgomery, I believe you also testified that you're trained as a -- had been trained as a geologist.

A. Yes, sir.

Q. You were qualified as an expert witness in geology.

A. Yes, sir.

Q. Do you believe there is sufficient control in this area for you to accurately interpret the Boyd Channel as it runs through Sections 34 and 35?

A. Well, in here you've got one, two, three, four, five, five wells in a mile and a half. That ought to be enough control for anybody.

Q. Now, as I look at the Isopach, the channel generally trends north to south, is that correct?

A. Yes, sir.

Q. Would this general trending of the channel, in your opinion, have any effect on the drainage pattern around the proposed well?

A. No, sir, I don't -- I don't think that it will drain in any north/south area just because the channel runs that way. Generally the greater reserves are going to lie in the thicker sands; the thinner areas will drain from the thicker areas, which has happened many times and it happens everyday.

Q. Are we looking at basically radial drainage?

A. If it were an entirely homogeneous reservoir you would have radial drainage. I doubt that you've got perfectly radial drainage here; in fact, a well drilled in Section 35 is probably going to tend to drain more of 34 and 3 than -- especially one drilled at this location, because we know that the Hilliard Well is not draining anything hardly, if you could -- even though it's probably connected, it seems to be the same sand, the Santa Fe Well doesn't look like it's going to drain much of anything, but if you can tie in and if you can get a well in here that has enough perme-

ability and porosity to plug into that -- the Hilliard Well is plugged in in some way because of the pressures. I think that essentially most of the drainage is going to come from the west part where the bigger sand is into any well drilled in 35.

Q. Mr. Montgomery, would you concur that the new Chama Well and the Coquina PanCanadian are in the same reservoir?

A. I don't know. I don't know what the bottom hole pressure is in the Coquina PanCanadian now. I know the Chama is what Mr. Barnhill testified to and those are essentially the same.

Originally that pressure would have seemed to fit, I mean the original bottom hole pressure in the Coquina Well would seem to have fit in the reservoir; however, I'm sure it's down now because it's not producing very much, so I would think that there is some sort of separation, but probably it hasn't drained that far south. I don't think it's going to drain a mile and a half away.

Q. Now let me direct your attention to what's been marked as Chama Exhibit Number Eight and ask you to first of all identify this and then explain what it shows.

A. This is just a blown up section of the previous Isopach. It was done with the tracts numbered to

facilitate an engineer -- a planimeter survey of the area, which is kind of a normal engineering practice for this type of thing.

Essentially, we've numbered the tracts, Tract A being the south half of 35; Tract B being the south half of 34; Tract C being the north half of 3; that Tract D being the west half of Section 2. Those are the proration units in the area.

It also shows the standard and the unortho-dox proposed location.

Q Now, Mr. Montgomery, will you --

A The planimeter surveys are attached to that.

Q -- refer to this and explain the purpose for this exhibit?

A The reason for this is to demonstrate -- first I took the two proration units that are opposed here, the south half of Section 35 and the south half of Section 34.

Of the total acre feet in those two tracts 21 percent is in the south half of Section 35; 79 percent is is in the south half of Section 34.

Looking at it a different way, taking the southwest quarter of Section 35, the northwest quarter of Section 2, the northeast quarter of Section 3, and the north -- the southeast quarter of Section 34, of the total acre feet

in those tracts, 72 -- 73 percent are under Section 34 and Section 3, and 27 percent is under Section 35 and Section 2.

Based on those type of analogies, we would recommend a 75 percent penalty.

Q. Now, Mr. Montgomery, wouldn't it have been better to use radial drainage circles?

A. It doesn't make any difference. You just knocked the corners off. I mean, we're square, but, you know, who knows? I don't think, but essentially it would have come out the same way.

Q. Do you think you would have received any better data by taking that approach?

A. No. This just seemed to be the most equitable method for doing it, and assuming that it would drain equally in all directions. I don't think it will. I think most of the drainage is going to come from the west to east, but --

Q. Now you recommended a 75 percent penalty.

A. Yes, sir.

Q. Against what should this penalty be applied?

A. Well I think it ought to be against the semi-annual deliverability test, but at the same time we do have a problem in that, in that, well, we were discussing earlier, my experience in the Morrow, if you get a good well,

an operator get a good well out here in the Morrow, with a high deliverability, they rarely will produce it at over 50 percent of that deliverability, so that a 50 percent penalty doesn't really bother you if you've got a good well. Mainly this is to produce water coning, keep from producing water coning, keep the clay fines from coming in, keep the Morrow from falling in, and those clay fines have been known to stop up the surface of the formation, allow it to get into the borehole and people have lost several holes out here because of that that were good producers, just pulling them too hard.

Q. In your opinion could Chama Drilling Company protect itself by drilling a well in the south half of Section 34?

A. If this unorthodox location were granted we would have to protect ourselves by trying to drill 660 out of the corner.

Q. Now is that a prudent place, in your opinion,to locate a Morrow well on that --

A. No, sir, it is not.

Q. -- proration unit?

A. I would prefer to drill at an orthodox location in the section in order to drain it in the thickest part of the sand.

Q. Now if you drill a well 660 out of the

southeast corner of 34, would it produce the -- in your opinion, produce the reserves that underlie the south half of Section 34?

A. Excuse me, would you ask it again?

Q. Yes. If Chama were to drill a Morrow well 660 out of the southeast corner of Section 34, in your opinion, would a well at that location effectively drain the reserves that underlie the south half of 34?

A. No, sir, it would not.

Q. To recover all the reserves under the south half of 34, what would Chama be required to do?

A. We would have to drill an additional well, in that case, which would be wasteful, but we would be leaving behind gas in the southwest quarter.

Q. Absent that well?

A. Yes.

Q. In your opinion, would granting this application without imposing an effective penalty, afford Chama an opportunity to produce its just and fair share of the reserves under this tract without waste?

A. No, sir, it wouldn't.

Q. If an effective penalty is not imposed, is it your -- would the correlative rights of Chama be impaired?

A. I feel that it would be -- they would be.

Q. Were Exhibits One through Eight prepared either by you or under your direction and supervision?

A. Yes, sir, they have been?

Q. And you have reviewed these exhibits and can testify as to their accuracy?

A. Yes, sir.

MR. CARR: At this time, Mr. Ramey, we would offer into evidence Applicant's Exhibits One through Eight.

MR. RAMEY: Applicant's Exhibits, Mr. Carr?

MR. CARR: Chama's Exhibits One through Eight.

MR. RAMEY: Chama Exhibits One through Eight will be admitted.

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

MR. RAMEY: Any questions of the witness? Mr. Padilla.

CROSS EXAMINATION

BY MR. PADILLA:

Q. Mr. Montgomery, on looking at your Exhibit

Number Eight, doesn't that assume a homogeneous reservoir?

A. Yes, sir, in preparing the acre/foot there?

A. Yes.

A. Yes, that's what you're doing. You're saying it is, and assuming the drainage would be, you know, even in both directions.

I do, I would like to add, you know, that I know and I think Mr. Barnhill knows, all of us realize that when you get below 30 feet of sand it seems to be shaley and tight on both sides of the channel. When you drop below that amount, you've got faults. I mean in drainage.

Q. You would agree that the porosity and permeability of the middle of the channel are better than in the bank of the channel, wouldn't you?

A. In -- well, there are a few cases that I don't know about. I know that the Huber-Irami Well is not good. It's in the middle of the channel and yet it is tight as a tick.

The PanAm, the Stanoline Lakewood unit, I don't think is that tight. I think it's good, I mean from the old log.

So you've got one instance where it definitely is tight in the channel, in the center of the channel.

Q. You would agree also that based upon the,

say, different porosities and different permeabilities, that deliverability of the well that's in the channel is much better than one on the channel.

A. Yes, sir.

Q. I mean on the bank.

A. Sure. As I say, the Chama Well is the -- by far the best looking well in there so far, in this area.

Q. With respect to drilling a well in the -- at the standard location on the south half of Section 34, and also with your agreement essentially -- essential agreement with Mr. Barnhill's geology, you wouldn't -- you wouldn't drill it further east at that point, would you?

A. I feel that if Mr. Barnhill went in without a penalty and drilled down in that corner, we would be forced to drill down there to protect ourselves, 660 out of that corner.

Now I'd prefer not to drill there because I think it's going to waste some gas in half the section, but --

Q. Well, assuming you did drill a well there and Mr. Barnhill's well was penalized, your well should then have an equal penalty, shouldn't it?

A. Probably. I'd prefer not to drill it there. And if there's enough of a penalty that's put on Mr. Barnhill's

well, then I won't have to drill it down there.

MR. PADILLA: We have no further questions, Mr. Chairman.

CROSS EXAMINATION

BY MR. RAMEY:

Q. Mr. Montgomery, do you think that the Chama Well in Section 3 is on the same reservoir as the Coquina Pan Canadian Well in Section 34?

A. I don't know. I think it is, but that's my opinion. At the present time I couldn't say. I don't think that -- I do know that drainage hasn't affected the Chama Well at all; there's been no pressure decline.

Q. You wouldn't apply for a category 102 for the Chama Well in respect of pressure?

A. Might like to.

Q. Well. Well, I look at this, and I, you know, I see all these pressures there essentially the same. I just wonder if we don't have every well in a different reservoir.

A. Well, that sometimes is a question because some of them drain, some of them don't. Of course, what I'd like to see, and what we don't have in a lot of them, on Chama's well we've got it, the bottom hole pressures,

rather than a drill stem test, which you can extrapolate and it's still not as good, and that's what I'd like to see and those don't have those.

They might tell us something.

Q. Have you looked at the pressure in the Santa Fe Well in Section 2?

A. No, sir, I have not. All I know about it, I have seen the log, otherwise all I know about it is from Mr. Barnhill, what he testified to today.

Q. That one doesn't seem to fit the pattern.

A. No, it doesn't.

Q. The pressures don't.

MR. RAMEY: Any other questions of Mr. Montgomery?

MR. CARR: No, thank you.

MR. RAMEY: He may be excused. Do you have anything further, Mr. Carr?

MR. CARR: I have a closing statement.

MR. RAMEY: You may proceed.

MR. CARR: Mr. Ramey, Mr. Barnhill is appearing before you today seeking approval of an unorthodox well location in the Morrow. What he would like to do is move 320 feet closer to the common lease line between this tract and property owned by Chama Petroleum Company.

He admits he's trying to gain an advantage by moving toward the better sand, and I think the testimony presented here today shows a substantial portion of the reserves in this channel underlie the property of Chama, and substantially a greater portion of the reserves underlie the south half of Section 34, operated by Chama, than underlie the south half of 35, on which Mr. Barnhill would like to drill.

Mr. Barnhill has commenced a well. He's at a total of 20 feet.

We submit that if the geology looks like it isn't good, he doesn't have to continue to drill to the Morrow. If it is good and if he does get a well, the chances are great that he will substantially impair the correlative rights of Chama Petroleum Company by virtue of the advantage that he has gained.

Now the Commission has rules covering the sapcing of wells. They're based in your authority to protect correlative rights of operators in the pool.

If this property is developed with a well set back 990 feet from the common lease line, as required by your rules, the drainage that would result from Mr. Barnhill's well would be offset by counter drainage. But that's not what is being proposed.

When this situation comes before you, you are authorized to take action to protect our correlative rights by penalizing the production from the well that is drilled in a location to gain -- in a position to gain advantage from the offsetting property.

Now we submit that this is the perfect case for the imposition of a substantial penalty. If no penalty, or no meaningful penalty is imposed, then we have a well drilled 660 from the common lease line, and it turns out to be a good well in the Morrow, then the only alternative Chama will have is to come in and offset that well 660 from the lease line and then to produce the reserves under the south half of 34, they'd have to then drill an unnecessary well, and that would be waste as defined by your rules and regulations.

We believe that the evidence submitted here today clearly shows that Mr. Barnhill is moving as close to our property as he can. We have a situation where without that penalty we will have -- it will be like two cylinders calipered one to the reserves under their tract, one to the reserves under our tract, connected at the bottom. You let the small cylinder production -- you permit production from the small cylinder and the large cylinder at the same rate, then the small one will empty and it will fill up the larger

one, and it will empty and fill up again from the larger, from the property, from taking the reserves from under Chama's tract. We feel that if you fail to impose an effective penalty, that you fail to carry out your jurisdictional responsibility to protect correlative rights, and we think it's important that you look at the penalty, you realize it needs to be an effective penalty. Both witnesses admit that a prudent way to develop the Morrow property is to produce the well far, far below its deliverability to prevent water coning and other problems of that nature. And a penalty, really much less than what has been proposed by Chama here today, would not be effective, for it would in fact be no penalty at all.

We therefor request that you approve drilling of a well, for certainly he has a right to drill and produce reserves from under his tract, but at the same time impose a penalty that will restrict the recovery to the reserves from under his tract.

MR. RAMEY: Your penalty, you said only 75 percent, Mr. Montgomery, is that right?

A. Yes, sir.

MR. RAMEY: So that would be in effect 25 percent of his producing capacity, is what you're saying.

A. Yes, sir.

MR. RAMEY: Mr. Padilla, do you have a

statement?

MR. PADILLA: Yes, sir.

Mr. Chairman, Mr. Arnold, I don't think it's as simple as Mr. Carr paints a picture about a cylinder filling up and a cylinder -- I think you have to take into consideration the porosity and the permeability of the reservoir, and it's not homogeneous and Mr. Montgomery agrees with that, and I think it's also a matter of economics. I think economics are important factor in the oil field. Whether or not -- there's no one that wants to drill a dry hole, and certainly the information and data we have presented today, we don't believe that we are taking advantage of the Chama area.

They have testified that they would not drill -- they would not want to drill a well at a 660 location in Section 34, southwest, from the southwest corner of that section. In fact, it seems apparent and prudent to drill the well at a standard location on the south half of 34, not only from a standpoint of deliverability but I think from the standpoint of drainage.

We just simply don't believe that we will be draining, based upon porosity and permeability, drilling a well on the bank of the channel. We would like to drill a commercial well.

For that reason we request that a penalty not be assessed against the well.

Thank you.

MR. RAMEY: Thank you, Mr. Padilla.

Does anyone have anything further to add in this case?

If not, the Commission will take the case under advisement, and we'll take a fifteen minute recess.

(Hearing concluded.)

C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO HEREBY CERTIFY that the foregoing Transcript of Hearing before the Oil Conservation Division was reported by me; that the said transcript is a full, true, and correct record of the hearing, prepared by me to the best of my ability.

Sally W. Boyd CSR

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
June 2, 1982

COMMISSION HEARING

IN THE MATTER OF: Application of William B. Barnhill for an unorthodox gas well location, Eddy County, New Mexico.	CASE 7521 (DE NOVO)

BEFORE: Joe D. Ramey, Director

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the New Mexico Oil Conservation Commission: W. Perry Pearce
Legal Counsel for the Commission
State Land Office Building
Santa Fe, New Mexico

MR. RAMEY: Call Case 7521.

MR. PEARCE: Case 7521, application of William B. Barnhill for an unorthodox gas well location, Eddy County, New Mexico. It is requested that this case be continued to June 22, 1982.

MR RAMEY: The case is hereby continued to June 22, 1982. The heering is adjourned.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

BRUCE KING
GOVERNOR

LARRY KEHOE
SECRETARY

POST OFFICE BOX 2088
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SANTA FE, NEW MEXICO 87501
(505) 827-5434

July 2, 1982

Mr. Ernest L. Padilla
Attorney at Law
P. O. Box 2523
Santa Fe, New Mexico 87502

Re: CASE NO. 7521
ORDER NO. R-6948-A

Applicant:

William B. Barnhill

Dear Sir:

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

Yours very truly,

JOE D. RAMEY
Director

JDR/fd

Copy of order also sent to:

Hobbs OCC x
Artesia OCC x
Aztec OCC

Other William F. Carr

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 7521 DE NOVO
Order No. R-6948-A

APPLICATION OF WILLIAM B. BARNHILL
FOR AN UNORTHODOX GAS WELL LOCATION,
EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 25, 1982, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this 30th day of June, 1982, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, William B. Barnhill, seeks approval of an unorthodox gas well location 660 feet from the South line and 660 feet from the West line of Section 35, Township 19 South, Range 25 East, NMPM, to test the Permo Penn, Strawn, Atoka and Morrow formations, in the so-called "Boyd Channel" Area, Eddy County, New Mexico.

(3) That the matter came on for hearing at 9 a.m. on March 31, 1982, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter and, pursuant to this hearing, Order No. R-6948 was issued on April 16, 1982, which granted Barnhill's application subject to certain restrictions.

(4) That on May 11 and May 12, 1982, application for Hearing De Novo was made by Chama Petroleum Company and William B. Barnhill, respectively, and the matter was set for hearing before the Commission.

(5) That the matter came on for hearing De Novo on June 25, 1982.

(6) That the evidence adduced at said hearing indicates that Findings (12), (13), and (14) of said Division Order No. R-6948 entered April 16, 1982, should be changed to read in their entirety as follows:

"(12) That according to the best geological evidence available at the hearing, the aforesaid two spacing and proration units have a total of some 13,224 and 15,254 acre feet of pay, respectively, or an average of 14,239 acre feet apiece, whereas the S/2 of Section 35, being the spacing and proration unit to which the well drilled at the proposed location would be dedicated, has some 3483 acre feet of pay.

(13) That on an acre-feet-of-pay basis, the S/2 of Section 26 has 24.5 percent of the acre feet of pay as the average of the two most directly affected spacing and proration units.

(14) That in accordance with Finding No. (8) above, the proposed unorthodox location should only be approved subject to a production limitation factor, and such factor should be computed by averaging the variation from a standard location and comparable acre feet of pay as follows: distance from south line of section, 100 percent of standard; distance from west line of section, 33 percent of standard; comparison of acre feet of pay with affected offsetting units' acre feet of pay, 24.5 percent, or, 100 percent plus 33 percent plus 24.5 percent divided by three equals 53 percent."

(7) That the remainder of Division Order No. R-6948 should be affirmed.

IT IS THEREFORE ORDERED:

(1) That Findings (12), (13), and (14) in Division Order No. R-6948 entered April 16, 1982, are changed to read in their entirety as follows:

"(12) That according to the best geological evidence available at the hearing, the aforesaid two spacing and proration units have a total of some 13,224 and 15,254 acre feet of pay, respectively, or an average of 14,239 acre feet apiece, whereas the S/2 of Section 35, being

the spacing and proration unit to which the well drilled at the proposed location would be dedicated, has some 3483 acre feet of pay.

(13) That on an acre-feet-of-pay basis, the S/2 of Section 26 has 24.5 percent of the acre feet of pay as the average of the two most directly affected spacing and proration units.

(14) That in accordance with Finding No. (8) above, the proposed unorthodox location should only be approved subject to a production limitation factor, and such factor should be computed by averaging the variation from a standard location and comparable acre feet of pay as follows: distance from south line of section, 100 percent of standard; distance from west line of section, 33 percent of standard; comparison of acre feet of pay with affected offsetting units' acre feet of pay, 24.5 percent, or, 100 percent plus 33 percent plus 24.5 percent divided by three equals 53 percent."

(2) That the remainder of Division Order No. R-6948 is hereby affirmed.

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

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

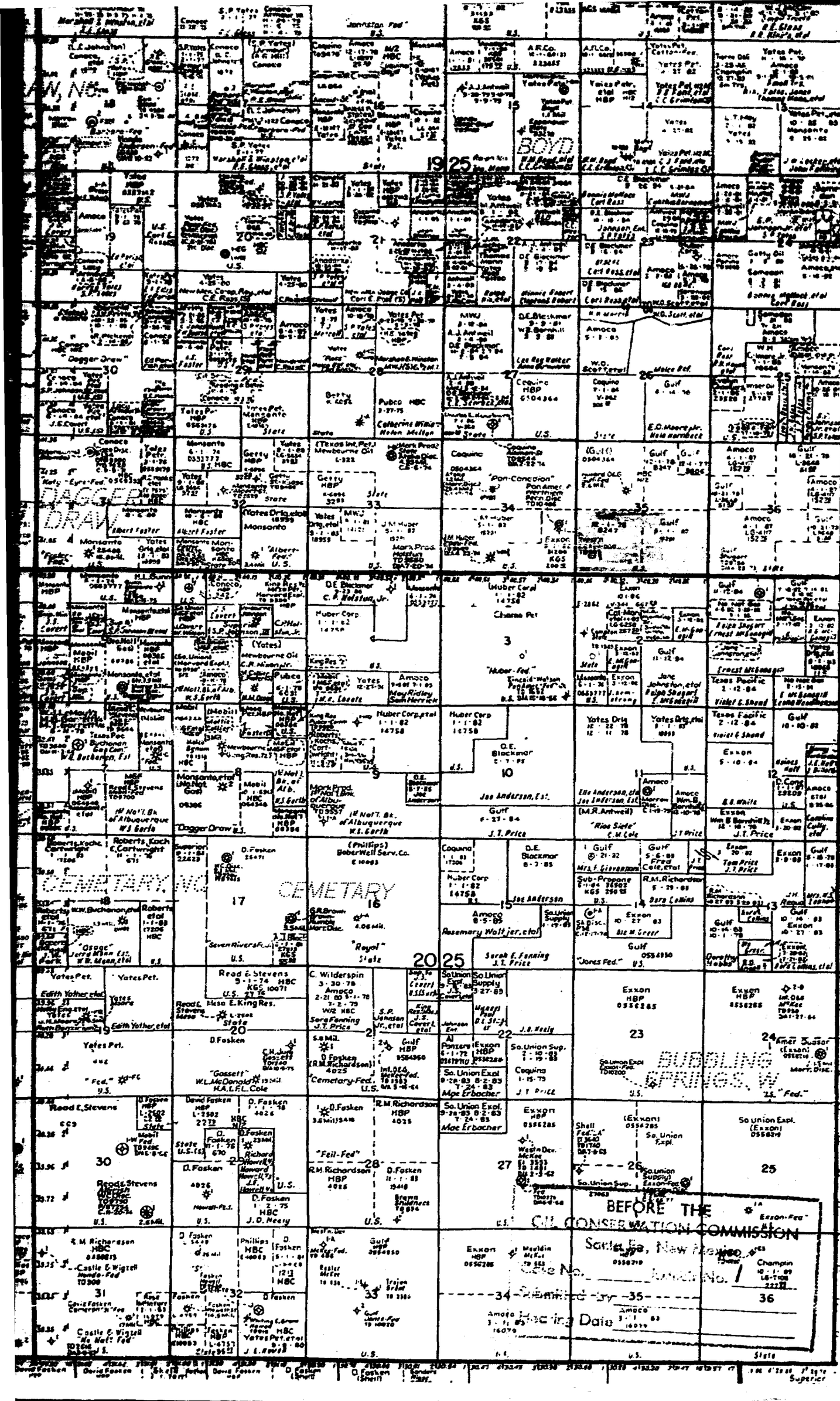
STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

EMERY C. ARNOLD, Chairman

ALEX J. ARMIJO, Member

JOE D. RAMEY, Member & Secretary

S E A L
fd/


DAGGER DRAW
CEMETARY
BOYD
BUBBLING SPRINGS W.
BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No.
Exhibit No. 1
Submitted by
Date

PRODUCTION THRU 1981

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD	ACCUM.
EDDY UND CISCO (GAS) PC															
CITIES SERVICE COMPANY / [illegible] UNIT															
30 [illegible]S26E	GAS	3062	4432	4727	3941	3042	4062	3070	4201	3606	4153	2904	3711	46302	223093
	OIL	5	36	14		1			8		22			80	642
	WAT	5	36	14		1			8		22			86	
EDDY UND DELAWARE (GAS) DL															
C [illegible] PETROLEUM INC / [illegible] FED [illegible] UNIT															
[illegible]	GAS	PLUGGING APPROVED 1976													30020
	OIL														481
C K FEDERAL															
1 24 [illegible]S26E	GAS	3278	1002	715	642	530	1147							7626	15363
	OIL	88	104	30	79	56	71							438	642
	WAT	4440	1569	954	1638	773	1068							10450	
COMPANY TOTAL	OIL	88	104	30	79	56	71							438	1123
	GAS	3278	1002	715	642	530	1147							7626	45413
	WAT	4440	1569	954	1638	773	1068							10450	
EDDY UND DEVONIAN (GAS) DV															
CHARLES F. GASKINS / [illegible]															
10[illegible]19S26E	GAS	PLUGGING APPROVED 1979													957
EDDY UND GRAYBURG (GAS) GB															
J. C. [illegible] / [illegible] FEDERAL															
1N[illegible]16S26E	GAS	PLUGGING APPROVED 1961													4618
GENERAL AMERICAN OIL COMPANY OF TEXAS															
[illegible]	GAS	242	218	242	234	242	234	242	242		242	234	242	2614	331961
[illegible]	GAS	242	219	242	234	242	234	242	242		242	234	242	2615	9302
COMPANY TOTAL	GAS	484	437	484	468	484	468	484	484		484	468	484	5229	341263
EDDY UND MCKEE (GAS) SK															
PAN AMERICAN CORP / STATE 20															
1A[illegible]19S28E	GAS	PLUGGING APPROVED 1954													139505
	OIL														863
SOUTHERN UNION PRODUCTION COMPANY / [illegible] STATE															
20 [illegible]S28E	GAS	PLUGGING APPROVED 1953													34
EDDY UND MISSISSIPPIAN (GAS) PI															
[illegible] OIL COMPANY / [illegible] STATE															
1J32[illegible]S25E	GAS			3345										3345	3345
	OIL			58										58	58
	WAT			21										21	
		ZONE ABANDONED													
YATES PETROLEUM CORPORATION															
CITIES [illegible] STATE COM															
1P[illegible]S24E	GAS	RECOMPLETED TO PENASCO DRAW PERMO PENN (GAS)													43045
	OIL														160
DAVIS [illegible] COM															
2L[illegible]S24E	GAS								9789	13495	1054	52		24390	24390
	WAT									2	20	4	25	59	
ROSS FEDERAL [illegible] COM															
1K[illegible]S25E	GAS	223	460	109	411	176	274	217	126	196				2272	39261
		RECOMPLETED TO EDDY UND STRAWN (GAS)													
COMPANY TOTAL	OIL														160
	GAS	223	460	109	411	176	274	217	9915	13691	1054	52		26662	107[illegible]
	WAT									2	20	4	25	59	
EDDY UND MORROW (GAS) PK															
AMOCO PRODUCTION CO / [illegible] GAS COM															
1K[illegible]S26E	GAS	15421	13006	15238	14918	14235	14203	14520	14077	12796	13169	14090	13920	170395	734267
	OIL	1	23	19	13	14	12	21	25		12	8	14	162	522
	WAT	93	84	31	30	93	90	93	93	90	310	300	310	1617	
FEDERAL AI COM															
1J34[illegible]S26E	GAS						29032	31191	13030	3481	10			77544	77544
	WAT										93			93	
RIO STATE															
1J[illegible]S25E	GAS	5662	4937	5461	4959	3993	3989	2888	1773	1972	1038		931	37603	131521
	OIL	43	2	4	6	1	18							84	189
STATE [illegible] COM															
1L [illegible]S25E	GAS	39288	39601	63178	66951	47679	66034	69009	61694	53769	40722		50463	618390	945882
	OIL				16									16	18
	WAT			31	30	31	30	31	31	30	31		3193	3438	
STATE [illegible] COM															
1B[illegible]S25E	GAS			12		17345	19772						12	37141	37141
STATE [illegible] COM															
1C [illegible]S25E	GAS	33639	37370	82005	839	86098	83433	89288	70274	70763	55282	56306	66106	731317	838326
	OIL							2						2	2
STATE IN															
[illegible]S24E	GAS			13260	17267	16016	12734	11856	10133	9066	8850	8744	8716	116582	116582
[illegible]															
1M[illegible]S25E	GAS	RECOMPLETED TO EDDY UND ATOKA (GAS)													74222
WILLIAMS GAS COM															
1C25[illegible]S26E	GAS	5735	4057	4067	3766	3816	3692	3459	2530	2966	2847	2559	2881	42175	295613
	OIL												3	3	122
	WAT	62	56	62	60	62	60	62	62	60	62	60	62	730	
COMPANY TOTAL	OIL	48	25	23	35	27	22	23	25		12	8	17	267	773
	GAS	99[illegible]	99[illegible]	183[illegible]	[illegible]	209[illegible]	233[illegible]	222[illegible]	173[illegible]	154813	121[illegible]	81[illegible]	143[illegible]	183[illegible]	3251[illegible]
	WAT	155	140	124	120	186	180	186	186	180	496	360	3563	5878	
MORRIS R. ANTWEIL / [illegible]															
1K[illegible]S25E	GAS	ZONE ABANDONED													7497
	OIL														3688
PERRY R. BASS / [illegible] UNIT															
49E1[illegible]S30E	GAS												22963	22963	22963
	OIL												5	5	5
	WAT												34	34	
BELCO PETROLEUM CORPORATION / FEDERAL [illegible]															
10 [illegible]S25E	GAS	ZONE ABANDONED													46599
	OIL														205
FEDERAL [illegible] 10															
1E10[illegible]S25E	GAS	5974	4674	4149	5864	[illegible]296	4795	5658	5113	3210	67[illegible]2	5561	6265	62281	622449
	OIL	16		9	6	2	2	6	3	17				61	2234
	WAT	93	84	111	94	93	123	155	150	94	155	150	145	1447	
COMPANY TOTAL	OIL	16		9	6	2	2	6	3	17				61	2439
	GAS	5974	4674	4149	5864	4296	4795	5658	5113	3210	6722	5561	6265	62281	66[illegible]
	WAT	93	84	111	94	93	123	155	150	94	155	150	145	1447	
R. C. BENNETT AND J. C. RYAN / [illegible] STATE															
2F2[illegible]S26E	GAS	LAST PROD. DATE 02/76												5	104299
	OIL														48860
CHAMPLIN PETROLEUM COMPANY / [illegible] FEDERAL COM															
1C [illegible]S2[illegible]	GAS	ZONE ABANDONED													176400
	OIL														214

Ex 4a

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

Case No. _____ Exhibit No. _____

Submitted by _____

Hearing Date _____

PRODUCTION THRU 1981

WELL S T R		JAN	FEB	MAR	APRIL	MAY	JUNE	JULY	AUG	SEPT	OCT	NOV	DEC	YR-PROD PP	ACCUM.
CATCLAW DRAW STRAWN (GAS) ABANDONED(PS) ... 9M TO 10M															
HANAGAN PETROLEUM CORPORATION															
CATCLAW DRAW UNIT															
1D34215S25E	GAS	PLUGGING APPROVED 1976													209826
	OIL														4211
INEXCO OIL COMPANY															
[illegible] STATE															
1K1821S26E	GAS	ZONE ABANDONED													142181
	OIL														344
CATCLAW DRAW WOLFCAMP (GAS) WC ... 8M TO 9M															
TENNECO OIL COMPANY															
NORTH FORK COM															
1C 2225S25E	GAS	PLUGGING APPROVED 1981													18262
	OIL														415
CEDAR CANYON MORROW (GAS) PM ... 13P TO 14M															
GETTY OIL COMPANY															
CEDAR CANYON 16 COM															
1F1024S29E	GAS	ZONE ABANDONED													1073506
	OIL														2675
SKELLY OIL COMPANY															
CEDAR CANYON															
1P 924S29E	GAS	RECOMPLETED TO EDDY UND GROUP 7													444085
CEDAR HILLS UPPER PENN (GAS) UP ... 9M TO 10M															
HARVEY E. YATES CO.															
CEDAR HILLS COM															
1I1521S27E	GAS	563	520			297		2081	1520	212	251	1727	984	8203	438117
	OIL								50			14	51	115	22463
CEDAR LAKE MORROW (GAS) PM															
ANADARKO PRODUCTION COMPANY															
POWER FEDERAL COM															
Y 1J2617S30E	GAS	964	1038	843	914	840	911	625	536	671	447			7791	137030
	OIL	3									728			761	3517
		RECOMPLETED TO EDDY UND GROUP 6													
ODESSA NATURAL GASOLINE COMPANY															
EL PASO STATE															
1A3617S30E	GAS	PLUGGING APPROVED 1965													103643
	OIL														2474
CEDAR LAKE MORROW, NORTH (GAS) PM ... 11P TO 12M															
ARCO OIL & GAS COMPANY															
FREN OIL CO COM															
2IN1917S31E	GAS	5291	1027	3627	1369	1321	634	625	575	657	932	793	879	17934	556563
	OIL														2275
CEMETARY MORROW (GAS) PM ... 9M TO 10M															
W.W. BUCHANAN															
OSAGE COM															
1J1820S25E	GAS	LAST PROD. DATE 02/80												U	80401
CIVOCC, INC.															
DEE STATE COM															
1J3619S25E	GAS	32010	22743	30610	30073	24344	24770	21882	9635	7411	4543	9853	11430	233524	3018407
	OIL	1	25	37	30	17	6	5	2			13	9	145	4010
	WAT	1	25	37	30	17	6	5	2					123	
COQUINA OIL CORPORATION															
PAN CANADIAN															
1F3419S25E	GAS	4333	5345	5639	6453	5073	4606	4578	4963	3341	4809	1969	1171	52280	2515558
	OIL														3125
DEPCO INCORPORATED															
DEPCO SHELL FEDERAL															
1K 621S24E	GAS	RECOMPLETED TO EDDY UND STRAWN (GAS)													74731
DURHAM, INC.															
INDIAN HILLS COM															
1J 821S24E	GAS	LAST PROD. PRIOR TO 6/73												U	154524
	OIL														658
DAVID FASKEN															
CAMERON 31 FEDERAL															
1J3120S25E	GAS	14857	15451	13302	12035	9570	12294	5643	12365	12816	11726	11633	13516	149208	3799064
	OIL	27	39	17	3	11		11	35	3		17		163	8342
CEMETARY FED COM															
1L2120S25E	GAS	1726	1185	1253	1241	1625	1513	1494	1342	1467	1497	1416	1311	17090	460517
	OIL														136
FEIL FEDERAL															
1D2820S25E	GAS	6771	6074	7744	5162	3356	3716	4926	10099	10013	10795	7178	8235	88149	1044225
	OIL	6					11							17	1723
GOSSETT 20															
1O2020S25E	GAS	7477	7609	8380	7674	7070	11273	8404	8796	8698	8062	4447	7572	97470	1895445
	OIL	5			13				10					28	2150
HOWELL 29															
1G2920S25E	GAS	11450	11463	11780	10999	11545	8200	17017	12578	11904	11867	8785	11336	139223	3365904
	OIL				5	1								6	1449
HOWELL 29 FEDERAL															
1M2920S25E	GAS	3360	2603	2689	2093	3275	3320	3083	9506	10419	5475	4933	4885	55701	359210
	OIL														63
HOWELL 32 COM															
1L3220S25E	GAS	8267	9264	9444	9355	8087	10857	8937	8087	7955	9831	8858	8801	107785	841623
	OIL					27								27	1222
ROSS FEDERAL COM															
1S 421S24E	GAS	56991	48475	39651	50293	51305	47201	53941	46767	49652	47401	48281	43096	583060	10841255
	OIL	70	69	27	77	62	73	69	67	62	80	73	69	798	21384
2M 421S24E	GAS	153768	121709	130071	109886	117828	120290	116172	100785	96962	51881	85662	82785	1331179	3537535
	OIL	284	215	243	215	232	258	231	216	194	181	140	116	2585	6538
3E 421S24E	GAS	27403	21455	17692	14715	14245	10955	15709	14779	12759	10765	11587	12772	198856	889443
	OIL	72	55	37	49	28	21	35	12	47	26	26	4	414	2205
SHELL FEDERAL COM															
1S 521S24E	GAS	21842	16385	1392	1893	1976	1182	1937	926	1792	1170	1419	2756	54670	7977917
	OIL	26	23	1	3	2	2	2	1	2	2	2	4	70	16676
5G 521S24E	GAS	1947	3023	2174	3482	5934	11678	11778	21432	24496	24065	21295	19414	150718	251374
	OIL		1			4	6		30	41	23	31	19	155	255
STATE 32 COM															
1O3220S25E	GAS	5983	6162	5974	6192	6185	5585	5277	6218	7941	6830	5661	5798	73814	1576344
	OIL	6			3									9	1423
COMPANY TOTAL	OIL	496	402	325	428	367	371	348	371	349	314	289	212	4272	65590
	GAS	321822	270860	251534	235080	242301	240664	256458	253660	256934	249313	233160	222211	3047525	36863522
GETTY OIL COMPANY															
STATE K 8096 A															
1N2819S25E	GAS	3626	3704	3876	2875	2697	2959	3031	2558	2799	2957	1903	4174	37199	1386326
	OIL														2194
HILLIARD OIL AND GAS, INC.															
GULF FEDERAL COM															
1F3519S25E	GAS	161	130		274	190		149	179	115		257	138	1593	189266
	OIL														372
MEWBOURNE OIL CO															
FEDERAL C COM															
1H 720S25E	GAS	845	1723	1785	1459	1674	1100	5634	1083	2350	857	378	2024	20912	357660
	OIL														723
FIRST NATIONAL BANK OF ALBUQUERQUE C															
1F 820S25E	GAS	8017	7889	7782	4648	963	2393	15407	12105	14342	6565	5162	12303	101976	1097004
	OIL		6	5	2				5				2	20	1713
S P JOHNSON															
1G 520S25E	GAS	199	238	380	76	219	397	1796	1653	658	475		435	6526	452088
	OIL														291

Ex 4b

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico

Case No. _____ Exhibit No. _____

Submitted by _____

Hearing Date _____

EDDY COUNTY NEW MEXICO WILDCAT

Well: AMOCO PROD. CO. 1 Rios Siete Result: GAS WFD

Loc'n: S mi SW/Lakewood, 1980' FSL 2310' FEL Sec 11-20S-25E.

Spudd 11-13-78; Comp: 1-19-79; Elev: 3366' grd; TD: 9865' (Barnett); PB: 9825'
Casing: 13 3/8" 333'/325 sx, 8 5/8" 1500'/750 sx, 5½" 9865'/250 sx
Prod Zone: (Morrow) T/Pay 9448', prod thru perfs 9448-9660'
IPF: 750 MCFGPD, 14/64" ch, GOR NR, Grav NR, CP pkr, TP 525#
Comp Info: DST (Morrow) 9457-9530', op 3 hrs 45 min, GTS 30 min @ 70 MCFGPD, 3/8" ch, TP 12#, incr to 220 MCFGPD, 3/8" ch, TP 52#, rec 3106' slt GCDF, 1 hr 30 min, ISIP 3902#, HP 4565-4520#; wellsold to Amoco Prod Co.; Perf (Morrow) 9448-68', 9510-14', 9528-32', 9636-60' w/1SPF; S/1 BW/9 hrs; A/5000 gals (7½%); F/750 MCF-GPD/24 hrs, 14/64" ch, TP 525#; ran DILL, MICL & CNDL logs; C/Moranco #9.
Tops: (EL) Third Bone Spng 6423', Wolfc 7052', Cisco 7743', Cany 8256', Atoka 8992', Morrow 9408', Barnett 9661'
API No.: 30-015-22729

Petroleum Information Corporation

Date: 3-7-79 Card No.: 16 rm

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. _____ Exhibit No. 5
Submitted by _____
Hearing Date _____

EDDY COUNTY NEW MEXICO ATOKA FIELD

Well: COQUINA OIL CORP. 1 Pan Canadian (OWWO) Result GAS DG

Locn: 7 mi W/Lakewood, 1980' FNL 1980' FWL Sec 34-19S-25E.

Re-Spud: 4-28-77; Re-Comp: 5-5-77; Elev: 3521' gnd; TD: 9640' Miss; PB: 9177'
Casing: 13 3/8" 472'/550 sx, 8 5/8" 1320'/600 sx, 5 1/2" 9640'/325 sx
Prod Zone: (Atoka) T/Pay 8838', prod thru perfs 8838-8922'
IP CAOF: 1,251,000 CFGPD, GOR 270-1, Grav (gas) .645, (cond) NR, SIWHP 3163#
Comp Info: (Orig. #1 Pan Canadian, Comp 1-17-74 thru (Morrow) perfs 9236-9318'; OTD 9640'); PB to 9177'; Perf (Atoka) 8838-41', 8866-80', 8917-22' w/2 SPF; natural; (Atoka) Four Point Gauges: F/444 MCFGPD, 1" orifice, 120 min, TP 2611#; F/567 MCFGPD, 1" orifice, 120 min, TP 2610#; F/636 MCFGPD, 1" orifice, 120 min, TP 2444#; F/943 MCFGPD, 1" orifice, 120 min, TP 2031#; C/NR.
Tops: NR
API No.: 30-015-20997

Petroleum Information

Date: 6-22-77 Card No.: 3 rm

Petroleum Information.

COUNTY EDDY FIELD Wildcat STATE NM
OPR COQUINA OIL CORP. API 30-015-20997
NO 1 LEASE Pan Canadian SERIAL
Sec 34, T-19-S, R-25-E MAP
1980' FNL, 1980' FWL of Sec CO-ORD
CLASS GL ELEV. [redacted]

SPD 10-25-73 COMP 1-17-74

13 3/8" at 472' w/550 sx
8 5/8" at 1320' w/600 sx
5 1/2" at 9640' w/325 sx

FORMATION	DATUM	FORMATION	DATUM
TD 9640'		PBD	

IP (Morrow) Perfs 9236-9318' CAOF 28,463 MCFGPD. GOR Dry; Grav (Gas) .675; SIWHP 3070#; SIBHP 3771#

CONTR WEK OPNS ELEV 3521' GL PD 10,000' TYPE RT

F.R. 10-22-73
(Morrow)
10-29-73 Drlg 1050'
11-5-73 Drlg 3421' lm
11-12-73 Drlg 5733' lm
11-19-73 Drlg 7885'
DST 6420-6460', open 1 hr, rec 2400' GIDP, 1 hr ISIP 758#, FP 25-25#, 2 hr FSIP 343#, HP 2892-2875#, BHT 118 deg
11-26-73 TD 8856'; On DST (8805-56')
DST (NA), Miss Run
DST (NA), Miss Run

EDDY Wildcat NM
COQUINA OIL CORP. 1 Pan Canadian Page #2
Sec 34, T19S, R25E

12-3-73 Drlg 9110'
DST 8805-56', open 2 hrs 15 mins, GTS in 13 mins @ 70 MCFGPD, incr to 282 MCFGPD, rec 15' M, 1 hr ISIP 4455#, IFP 313-521#, FFP 146-208#, 4 hr FSIP 4455#, HP 4824-4721#, BHT 140 deg
12-11-73 Drlg 9456'
DST 8870-8908', open 1 hr 10 mins, GTS in 5 min @ 195 MCFGPD, incr to 458 MCFGPD, rec 90' SGCM, 1 hr ISIP 4853#, FP 45-87#, 2 hr FSIP 4903#, HP 4934-4880#, BHT 133 deg
DST 9208-9289', open 1 hr 45 mins, GTS in 2 mins@ 15,000 MCFGPD (Max), Aver 5500

12-11-73 Continued
MCFGPD, rec 100' F (70' Cond + 30' SGCM), 1 hr ISIP 3840#, FP 1455-1396#, 4 hr FSIP 3840#, HP 5129-5069#

12-17-73 TD 9640'; WOC
DST 9289-9347', open 2 hrs 10 mins, GTS in 1 min @ 8500 MCFGPD (Max 14,000 MCFGPD), rec 10' Cond, 1 hr ISIP 3820#, FP 1697-1861#, 2 hr 30 min FSIP 3820#, HP 5069-5049#, BHT 152 deg

12-25-73 TD 9640'; WOCU

12-31-73 TD 9640'; Prep Run Tbg

1-7-74 TD 9640'; Rng Tbg

1-14-74 TD 9640'; Prep Perf

1-15-74 TD 9640'; SI WO Test Equip
Perf 9326-9318' w/104 shots (overall)
Flwd 7550 MCFGPD thru 24/64" chk, TP 2450#

EDDY Wildcat NM
COQUINA OIL CORP. 1 Pan Canadian Page #3
Sec 34, T19S, R25E

1-22-74 TD 9640'; WO Pipeline Conn
CAOF 28,462 MCFGPD

3-11-74 TD 9640'; COMPLETE
(Morrow) FOUR POINT GAUGES:
Flwd 1197 MCFGPD, 1.75" orifice, 1 hr, TP 3000#
Flwd 1606 MCFGPD, 1.75" orifice, 1 hr, TP 2967#
Flwd 1946 MCFGPD, 1.75" orifice, 1 hr, TP 2939#
Flwd 2526 MCFGPD, 1.75" orifice, 1 hr, TP 2889#
LOG TOPS: Grayburg 520', San Andres 812', Glorieta 2365', Tubb 3170', Abo 3775', Third Bone Spring Sand 6175', Wolfcamp 6422', Canyon 7868', Strawn 8295', Atoka 8568', Morrow 8938', Barnett 9348', Chester 9573'

3-16-74 COMPLETION REPORTED

EDDY WILDCAT N.M. 2223-58

Western Drlg. Co. - #1 - Lakewood 3536DF

1830'FSL & 660'FEL
Sec. 34, T.19-S, R. 25-E
950'

	10 - 45-	Gryb. 815
	5 - 817-500	

10-31-57 4-9-58

P & A

899 sd.

500 acid; 10,000 WF. TD 899' sd.,
SI; P. 1 BO & 5 BXW/4 hrs.

WILDCAT N.M. 2223-59
PRE-PERMIAN STRAWN DISCOVERY
Pan American Pet. Corp. - #1 - A. L. 3542DF
Worthiem (fmly.
Stanolind #1-Lakewood
Unit, SEE CARD #2223-58
for orig. drlg.)

1980'FSL & 660'FEL
Sec. 34, T.19-S, R. 25-E
9600' (OTD 10,486')

Perf. 66/9442-9475
Perf. 24/9442-46
Perf. 24/9454-58
Perf. 2/9442-46
Perf. 2/9454-58
3000 acid; 40,000 frac.

4 1/2-9631-250

2-28-59 6-5-59

F. 357 MCFG/16 hrs., 14/64" ch.

300 110

9442
10,486 T.
9537

PB 9537'; CO 9631'; Perf. 66/
9442-75; A-1000.

CONT'D. PAGE 2.

K-2223-59
PAGE 2.

EDDY, N.M. 34-19-25
Pan American - #1 - A. L. Worthiem.

Swb. 144 bbls. LW & 24 BAW/24 hrs. w/SG; reA/2000 swb. 48 BAW & 134 BLW/53 hrs. & swb. dry w/sli. blow gas, TSTM; blow down well; SITP 2950# to 1500#, 20/64" ch. 30" blew to 200# 45.64" ch. next 30" end of blow down had steady blow of gas.
30,000 SWF (16,500' sd) swb. 209 BLW/14 hrs. F. & rate 540 MCFGPD + 2 bbls. LW/1 hrs., 25/64" ch.; FTP 300 FCP 800#; F. 390 MCF + 4 BLW/1 hrs., 30/64" ch.; FTP 100#; FCP 600#; SI 12 hrs., TP 2000#; CP 2300#; F. 47 BLW/9 hrs. 25/64" ch., gas & 750 MCF to 384 MCFG; F. 23 BLW/12 hrs., 30/64" ch. no gas ggo., FTP 150#; CP 500#.
PB 9537'; ggo. 600 MCFG/12 hrs., 30/64" ch.; FTP 110-150# CP 500#; F. 18 bbls. LW/12 hrs., 30/64" ch.; TP 145#; CP 500#; SI 12 hrs.; CP 2200#; TP 2200#.
Perf. 24/9442-46
Perf. 24/9454-58; 10,000 SWF (10,000# sd.) swb. 148 bbls. LO & 1 bbl. LW/11 hrs.; Swb. 100 BLW/11 hrs., SI 12 hrs., CP 1200#; swb.& flow load; SI/16'; SITP 1250#; SICP 1400#.

K-2223-58
PAGE 3

EDDY, NEW MEXICO 34-19-25
Stanolind #1 - Lakewood Unit.

DST 10373-423 op 3 hrs. Rec. 225' mud.
PP 120 20 mins SIP 180#
DST 10433-486 op 4 hrs. Rec. 270' mud & 10030 black brackish wtr. PP 4275 SIP 4475

EDDY WILDCAT STATE N.M. 2223-53

Stanolind - #1 - Lakewood Unit ELEV. 3542'
(CHGD.TO: Pan American - #1 - A. E. Worthien, S.E. CARD #2223-59 for OWWO)
LOC 660' FEL & 1980' FSL of sec.
Sec. 34, T-19-S; R-25-E

ACID OR SHOT	CASING RECORD	TOPS	
	13-3/8 300 375	Gray	686
	9-5/8 3578 200	S.A.	900
		Glor.	2450
		C'F.	3260
		Abo	4190
		W.C.	6620
		Penn	8150
		Miss	9865
		Dev.	10340

SPD. 9-25-52 COMP. 1-27-53

I.P. D&A

GOR TP CP

REMARKS CONT'D ON PAGE 2

TD 10486' lime.

PERMIAN ASSN. CROSS INDEX LOG IN FILE CARD STAMPED

EL RL

K-2223-53

EDDY, NEW MEXICO 34-19-25 PAGE 2
Stanolind - #1 - Lakewood Unit

DST 810-861 op 2 hrs. rec. 105' SO&GCM. FP 55 SIP-0-
DST 2610-42 op 2 hrs. rec. 135' SO&GCM,
DST 2770-2850 op 1 hr. 45 mins rec. 108' SOCM
DST 3310-3385 op 2 hrs. rec. 84' mud.
DST 6605-6700 op 4 hrs. 10 mins Gas 2 hrs. 15 mins Rec. 270' mud. 2615' XW. FP 1465 20 mins SIP 2605#
DST 7030-7123 op 4 hrs. Gas 35 mins rec. 60' SGCM, FP 130 20 mins SIP 175#
DST 7036-78 op 3 hrs. Rec. 39' mud, N.S.
DST 9397-9500 op 5 hrs. rec. gas 35 mins 47000 CFGPD, Rec. 284' HGCM, FP 115 20 mins SIP 2936#
DST 9407-9540 op 3 hrs. rec. gas 55 mins 315' HGCM, FP 2(20 mins SIP 1810#
DST 10,330-351 op 1 hr. 30 mins Rec. 20' mud.
DST 10,350-373 op 1 hr. 22 mins rec. 15' mud.
DST 10370-398 op 3 hrs. rec. 90' mud.

CONT'D ON PAGE 3

COUNTY EDDY FIELD Undesignated STATE NM

OPR HUBER, J. M. CORP. API 30-015-21115

NO. 1 LEASE Irami Federal "Com."

Sec 34, T-19-S, R-25-E

660' FSL, 1980' FWL of Sec

SPUD 3-14-74 COMP 4-23-74

CSG

13 3/8" at 485' w/325 sx

FORMATION	DATUM	FORMATION	DATUM

TD 9600' PBD

PLUGGED & ABANDONED

CONTR Delta OPRS ELEV 3527' GL, 3545' KB PD 9500' TYPE RT

EDDY
HUBER, J. M. CORP.

Undesignated NM
1 Irami Federal "Com." Page 2
Sec 34, T19S, R25E

4-29-74	TD 9600'; PLUGGED & ABANDONED LOG TOPS: Wolfcamp 6552', Cisco 7702', Canyon 8237' Strawn 8512', Atoka 8895', Morrow 9244', Chester 9572'
5-4-74	COMPLETION REPORTED

F.R. 2-25-74
(Morrow)

3-14-74	MIRT
3-20-74	Drlg 535'
3-27-74	Drlg 2958' lm
4-3-74	Drlg 4710' lm
4-10-74	Drlg 7060' lm & sh
4-17-74	Drlg 8865' lm & sh
4-24-74	TD 9600' P/P & A DST 9300-9410', open 1 hr, Rec 60' DM (Spl 840 cc's DM + 1 CFG) 1 hr ISIP 608#, FP 87-62# 2 hr FSIP 1839#, HP 4808-4808#

EDDY Wildcat NM
HILLIARD OIL & GAS CO. 30-015-21066
1 Gulf Federal
Sec 35, T-19-S, R-25-E
1980' FNL, 1980' FWL of Sec
WOE [redacted]

1-30-74 4-11-74

13 3/8" at 305' w/250 sx
8 5/8" at 1300' w/700 sx
4 1/2" at 9810' w/500 sx

TD 9835' (CSTR) PBD 9705'

IP (Morrow) Perfs 9437-9563' CAOF 2639 MCFGPD. GOR (NR); Grav (gas) .596; SIWHP 3020#

Capitan GR elev 3503' GL TD 9900' Rot RT

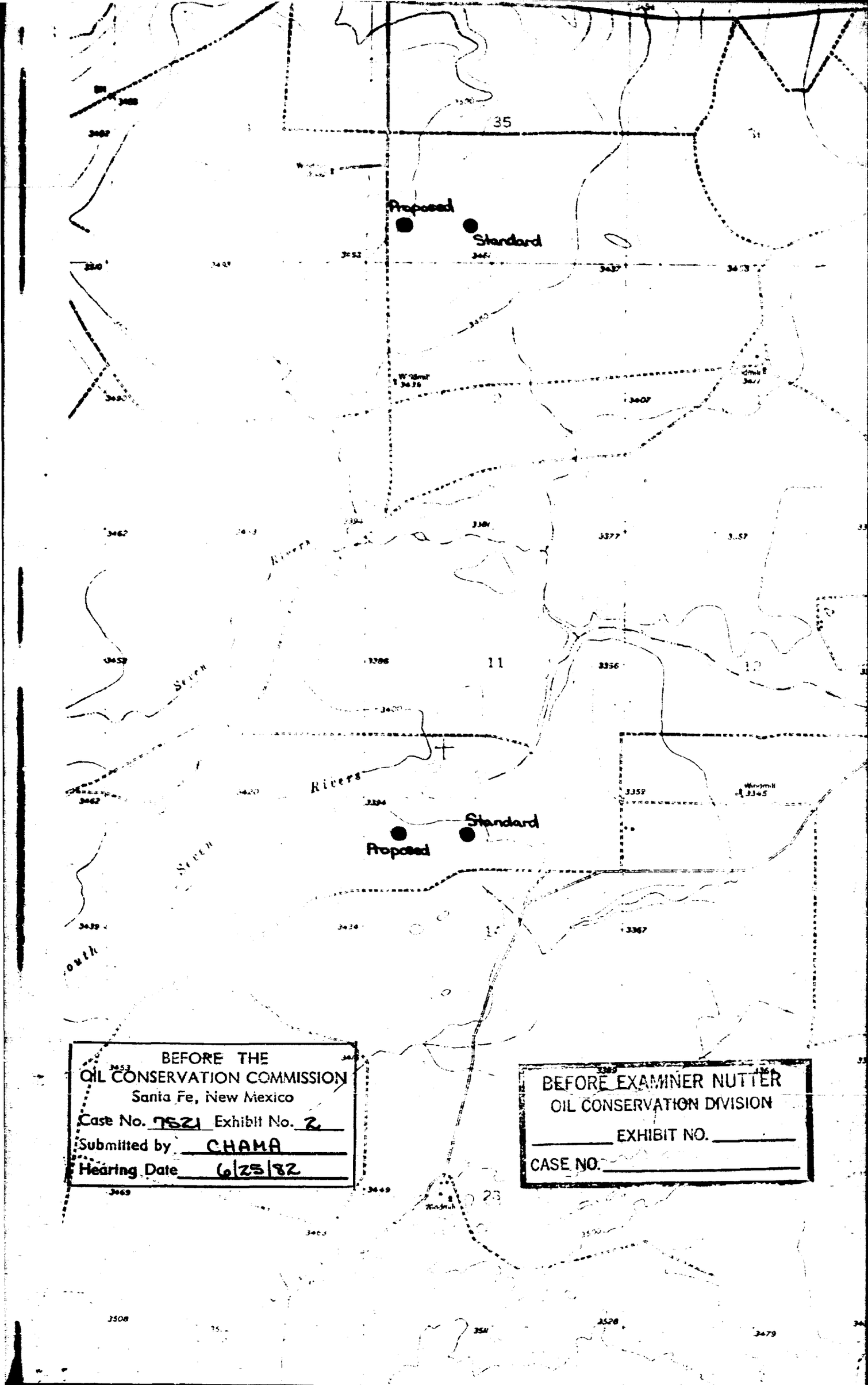
F.R. 12-17-73
(Morrow)

12-31-73 AMEND OPERATOR: Formerly reported as Barahill-Richardson
2-5-74 Drlg 1095' lm & anhy
2-12-74 Drlg 3015' lm & dolo
2-15-74 Drlg 3865' lm & dolo
DST 2801-3052', open 1 hr 15 mins, rec 600' GIDP + 20' OG&SWCDF, 1 hr 15 min ISIP 333#, FP 166-150#, 2 hr 30 min FSIP 416#, HP 1279-1279#, BHT 100 deg
2-19-74 Drlg 5280' lm
2-25-74 Drlg 7880' lm & sh
3-4-74 Drlg 9183'
3-11-74 TD 9633'; Prep to drill

3-11-74 Cont'd
DST 9383-9467', open 1 hr 45 mins, GTS in 18 mins @ 95 MCFGPD, Flwd after 30 mins @ 160 MCFGPD thru 1/2" chk, rec 140' SGCM (Sampler rec 1.2 CFG), 1 hr 15 min ISIP 3811#, FP 150-213#, 3 hr FSIP 3879#, HP 4523-4523#
DST 9506-9573', open 4 hr 15 mins, GTS in 12 mins @ 250 MCFGPD thru 1/2" chk, FTP 24#, rec 270' GCM (Sampler rec 1.5 CFG @ 375#), 1 hr 30 min ISIP 3924#, FP 113-151#, 6 hr FSIP 3847#, HP 4551-4551#
DST 9561-9633#, open 1 hr 15 mins, rec 500' GIDP + 180' GCM (Sampler rec 3.56 CFG + 2000 cc's GCM @ 1650#), 1 hr 30 min ISIP 2746#, FP 57-75#, 3 hr FSIP 3391#, HP 4589-4570#
3-18-74 TD 9835'; MORT
3-26-74 TD 9835'; WOCU
4-15-74 TD 9835'; PBD 9705'; Tstg
Perf 9437-9563' w/15 shots (overall)
Acid (9437-9563') 6000 gals (7½% MSA)
4-29-74 TD 9835'; PBD 9705'; SI PBU
5-7-74 TD 9835'; PBD 9705'; Tstg
6-16-74 TD 9835'; PBD 9705'; WO Pot
CAOF 2639 MCFGPD
6-17-74 TD 9835'; PBD 9705'; COMPLETE

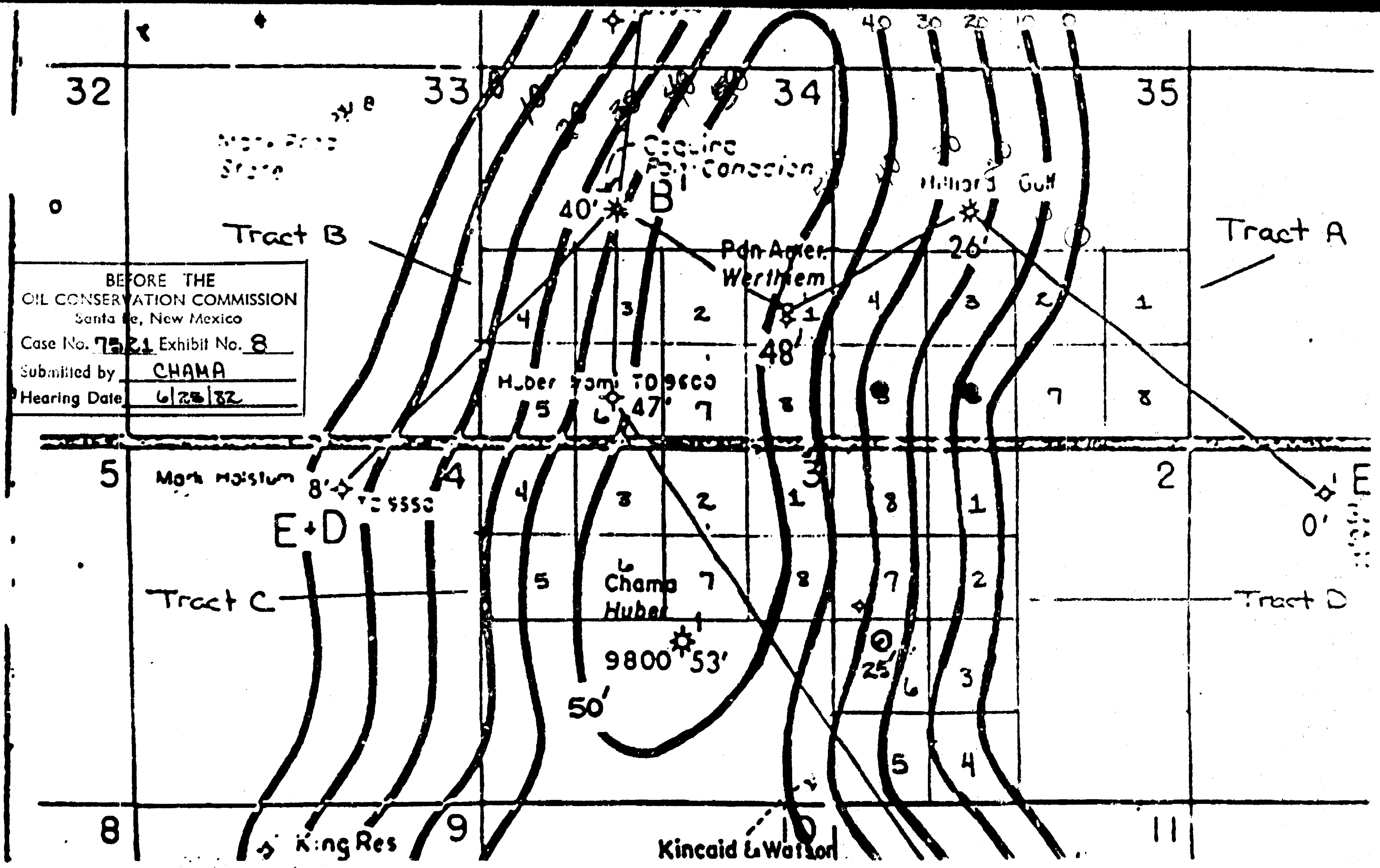
(Morrow) FOUR POINT GAUGES:
Flwd 472 MCFGPD, .5" Orifice, 1 hr, TP 2901#
Flwd 799 MCFGPD, .5" Orifice, 1 hr, TP 2740#
Flwd 1295 MCFGPD, 1.0" Orifice, 1 hr, 2423#
Flwd 2119 MCFGPD, 1.0" Orifice, 1 hr, 1481#
LOG TOPS: Yeso 2455', Second Bone Spring Sand 3285', Third Bone Spring Sand 6364', Wolfcamp 6635', Cisco 7879', Canyon 8139', Strawn 8558', Atoka 9016', Morrow 9325', Chester 9795'

6-22-74 COMPLETION REPORTED



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 7521 Exhibit No. 2
Submitted by CHAMA
Hearing Date 6/25/82

BEFORE EXAMINER NUTTER
OIL CONSERVATION DIVISION
_____ EXHIBIT NO. _____
CASE NO. _____



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
Case No. 7521 Exhibit No. 8
Submitted by CHAMA
Hearing Date 6/23/82
32
33
34
35
5
4
3
2
8
9
10
11
Tract A
Tract B
Tract C
Tract D
40'
B
48'
26'
47'
50'
9800
53'
25'
8'
0'
E
E+D
Pan Am
Wertheim
Huber
Chama
Huber
Mark Hoistum
King Res
Kincaid & Watson
Gulf
40
30
20
10
0

Chama Petroleum

Location	Ft	Acres	Ac Ft
Tract A-1		40	
Tract A-2	5	18	90
	11	2	22
			112
Tract A-3	7	4	28
	15	25	375
	23	11	253
			656
Tract A-4	27	13	351
	35	24	840
	43	3	129
			1320
Tract A-5	34	13	442
	25	21	525
	18	6	108
			1075
Tract A-6	13	15	195
	5	19	95
			320
Tract A-7	1	1	1
Tract A-8	—	40	0
			3483

Location	Ft	Acres	Ac Ft
Tract B-1	28	1	28
	45'	25	1125
	52'	14	728
			1881
Tract B-2	53	40	2120
Tract B-3	52'	8	416
	45'	22	990
	37'	10	370
			1776
Tract B-4	38'	11	363
	25'	20	500
	17'	9	153
			1016
Tract B-5	19'	53	10
	25'	19.96	499
	35'	19	665
	41'	51	21
			1195
Tract B-6	39'	1	39
	45'	23	1035
	52'	16	832
			1906
Tract B-7	53	40	2120
Tract B-8	52'	1.70	400
	45'	24.72	1112
	38'	7.58	288
			1800
			13224

Location	Ft	Acres	Ac Ft
Tract C-1	38'	3	114
	45'	23	1035
	52'	14	728
			1877
Tract C-2	53	40	2120
Tract C-3	52'	29	1508
	47	11	517
			2025
Tract C-4	43	16	688
	35'	17	595
	27'	7	189
			1472
Tract C-5	35'	17	595
	45'	23	1035
			1630
Tract C-6	43	1	43
	52'	39	2067
			2110
Tract C-7	53	40	2120
Tract C-8	52'	15.77	820
	45'	21.58	971
	39'	2.65	103
			1894
			15254

Location	Ft	Acres	Ac Ft
Tract D-1	5	18	90
	12	14	182
			272
Tract D-2	5	17	85
	12	16	208
			293
Tract D-3	5	21	105
	13	6	78
			183
Tract D-4	5	25	125
	13	5	65
			190
Tract D-5	16	18	288
	25	22	550
			838
Tract D-6	16	12	192
	25	20	500
	33	8	264
			956
Tract D-7	16	6	96
	25'	16	400
	35'	18	630
			1126
Tract D-8	16	6	96
	25'	18	450
	35'	16	560
			1106
			4964

Dockets Nos. 21-82 and 22-82 are tentatively set for July 7 and 21, 1982. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - TUESDAY - JUNE 22, 1982

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

The following cases were continued from the June 2, 1982, Commission hearing:

CASE 7522: (DE NOVO)

Application of Santa Fe Exploration Co. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location 660 feet from the North and West lines of Section 14, Township 20 South, Range 25 East, Permo-Penn, Strawn, Atoka and Morrow formations, the N/2 of said Section 14 to be dedicated to the well.

Upon application of Chama Petroleum Company, this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 7521: (DE NOVO)

Application of William B. Barnhill for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location 660 feet from the South and West lines of Section 35, Township 19 South, Range 25 East, Permo-Penn, Strawn, Atoka and Morrow formations, the S/2 of said Section 35 to be dedicated to the well.

Upon application of Chama Petroleum Company and William B. Barnhill, this case will be heard De Novo pursuant to the provisions of Rule 1220.

****

Docket No. 20-82

DOCKET: EXAMINER HEARING - WEDNESDAY - JUNE 23, 1982

9 A.M., MORGAN HALL, STATE LAND OFFICE BUILDING,
SANTA FE, NEW MEXICO

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

CASE 7610: Application of Stevens Oil Company for salt water disposal, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from 2724 feet to 2745 feet in its O'Brien "J" Well No. 9 located in Unit A, Section 31, Township 8 South, Range 29 East, Twinlakes-San Andres Pool.

CASE 7611: Application of Texaco Inc. for special pool rules, Lea County, New Mexico. Applicant, in the above-styled cause, seeks special pool rules for the Skaggs-Drinkard Pool, including provision for a limiting gas-oil ratio of 10,000 cubic feet of gas per barrel of oil.

CASE 7612: Application of B & E, Inc. for salt water disposal, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks authority to install and operate a commercial facility for the disposal of salt water into the Southeast end of Laguna Tres in Section 12, Township 23 South, Range 29 East and/or into the Northeast side of Laguna Cuatro in Section 6, Township 23 South, Range 30 East.

CASE 7613: Application of Tenneco Oil Company for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a Pennsylvanian test well to be located 660 feet from the South and West lines of Section 28, Township 16 South, Range 34 East, the W/2 of said Section 28 to be dedicated to the well.

CASE 7548: (Continued from June 9, 1982, Examiner Hearing)

Application of Tahoe Oil & Cattle Co. for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from 4932 feet to 4992 feet in its Schwalbe Well No. 1, located in Unit P of Section 21, Township 9 South, Range 37 East, West Sawyer-San Andres Pool.

CASES 7614 AND 7615: Application of Inexco Oil Company for compulsory pooling, Lea County, New Mexico. Applicant, in each of the following cases seeks an order pooling all mineral interests from the surface through the Strawn formation underlying the lands specified in each case, to form a standard 80-acre oil proration unit in the South Humble City-Strawn Pool to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells and a charge for risk involved in drilling said wells:

CASE 7614: W/2 NE/4 Section 23, Township 17 South, Range 37 East

CASE 7615: E/2 NE/4 Section 23, Township 17 South, Range 37 East

CASES 7616 AND 7617: Application of Southland Royalty Company for compulsory pooling, Eddy County, New Mexico. Applicant, in each of the following cases seeks an order pooling all mineral interests in the Pennsylvanian formation underlying the lands specified in each case, to form a standard 320-acre gas spacing and proration unit to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said wells and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the wells and a charge for risk involved in drilling said wells:

CASE 7616: N/2 Section 21, Township 18 South, Range 29 East

CASE 7617: S/2 Section 21, Township 18 South, Range 29 East

CASE 7618: Application of Doyle Hartman for an unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of a gas well to be drilled 1450 feet from the South line and 1980 feet from the East line of Section 20, Township 20 South, Range 37 East, Eumont Gas Pool, the SE/4 of said Section 20 to be dedicated to the well.

CASE 7605: (Continued from June 9, 1982, Examiner Hearing)

Application of Yates Petroleum Corporation for compulsory pooling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests from the top of the Wolfcamp formation through the uppermost 100 feet of the Mississippian Chester Limestone underlying the W/2 of Section 35, Township 19 South, Range 24 East, to be dedicated to a well to be drilled at a standard location thereon. Also to be considered will be the cost of drilling and completing said well and the allocation of the cost thereof as well as actual operating costs and charges for supervision, designation of applicant as operator of the well and a charge for risk involved in drilling said well.

CASE 7458: (Continued from April 28, 1982, Examiner Hearing)

Application of Marks & Garner Production Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of salt water into the Bough C formation in the perforated interval from 9596 feet to 9616 feet in its Betenbough Well No. 2, located in Unit M of Section 12, Township 9 South, Range 35 East.

CASE 7598: (This case was heard on May 26, 1982. However, due to an error in originally advertising the case in the Torrance County newspaper, it has been readvertised in Torrance County only and will be reopened June 23, 1982, with respect to Torrance County only.)

Application of AMR Production Company and Yates Petroleum Corporation for designation of a tight formation in San Miguel, Torrance, Guadalupe, De Baca, Lincoln and Chaves Counties, New Mexico. Pursuant to Section 107 of the Natural Gas Policy Act of 1978 and 18 CFR Section 271.701-705, applicants, in the above-styled cause, seeks the designation as a tight formation of the Abo formation underlying the following described lands in the above-named counties.

All of:

Townships 1 thru 4 North, Ranges 14 thru 27 East;
Townships 5 thru 11 North, Ranges 14 thru 26 East;
Township 1 South, Ranges 14 thru 27 East;
Townships 2 thru 5 South, Ranges 14 thru 21 East;
Townships 6 thru 11 South, Ranges 15 thru 21 East;
Township 12 South, Ranges 17 thru 21 1/2 East; and
Townships 13 and 14 South, Ranges 17 thru 21 East;

containing 5,168,563 acres, more or less, but excluding the not yet defined Capitan Wilderness Area.

Dockets Nos. 18-82 and 19-82 are tentatively set for June 23 and July 7, 1982. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: COMMISSION HEARING - WEDNESDAY - JUNE 2, 1982
OIL CONSERVATION COMMISSION - 9 A.M.
MORGAN HALL, STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO

CASE 7522: (DE NOVO - Continued from May 17, 1982, Commission Hearing)

Application of Santa Fe Exploration Co. for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location 660 feet from the North and West lines of Section 14, Township 20 South, Range 25 East, Permo-Penn, Strawn, Atoka and Morrow formations, the N/2 of said Section 14 to be dedicated to the well.

Upon application of Chama Petroleum Company, this case will be heard De Novo pursuant to the provisions of Rule 1220.

CASE 7521: (DE NOVO)

Application of William B. Barnhill for an unorthodox gas well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox location 660 feet from the South and West lines of Section 35, Township 19 South, Range 25 East, Permo-Penn, Strawn, Atoka and Morrow formations, the S/2 of said Section 35 to be dedicated to the well.

Upon application of Chama Petroleum Company and William B. Barnhill, this case will be heard De Novo pursuant to the provisions of Rule 1220.

ERNEST L. PADILLA
ATTORNEY AND COUNSELOR AT LAW

P.O. Box 2523
Santa Fe, New Mexico 87501
(505) 988-7577

May 13, 1982

OIL CONSERVATION DIVISION

MAY 13 1982

RECEIVED

Mr. Joe D. Ramey
Director
Oil Conservation Division
Post Office 2088
Santa Fe, New Mexico 87501

Oil Conservation Division Case No. 7521
Application for Unorthodox Location,
Eddy County, New Mexico

Dear Mr. Ramey:

Enclosed for filing in the above-referenced case are the original and copies of Application for Hearing De Novo of William Barnhill.

Very truly yours,

Ernest L. Padilla

ELP:PFM
Enclosures
cc: Mr. William Barnhill

BEFORE THE

OIL CONSERVATION DIVISION

NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS

OIL CONSERVATION DIVISION

IN THE MATTER OF THE APPLICATION OF WILLIAM B. BARNHILL FOR AN UNORTHODOX GAS WELL LOCATION, EDDY COUNTY, NEW MEXICO

MAY 12 1982

RECEIVED CASE NO. 7521

APPLICATION FOR HEARING DE NOVO

Comes now WILLIAM B. BARNHILL, by and through his undersigned attorney, and states that he is a party adversely affected by Order No. R-6948 which was entered in the above-referenced case on April 16, 1982 and pursuant to Section 70-2-13 NMSA, 1978 Compilation, hereby makes application for this case to be heard de novo before the Oil Conservation Commission.

Respectfully submitted,

Ernest L. Padilla
Post Office Box 2523
Santa Fe, New Mexico 87501
505-988-7577

Certificate of Service

I hereby certify that true and correct copies of the foregoing Application for Hearing De Novo were sent to all counsel of record this 13th day of May, 1982.

Ernest L. Padilla

CAMPBELL, BYRD & BLACK, P.A.
LAWYERS

JACK M. CAMPBELL
HARL D. BYRD
BRUCE D. BLACK
MICHAEL B. CAMPBELL
WILLIAM F. CARR
BRADFORD C. BERGE
WILLIAM G. WARDLE
KEMP W. GORTHEY

JEFFERSON PLACE
SUITE 1 - 110 NORTH GUADALUPE
POST OFFICE BOX 2208
SANTA FE, NEW MEXICO 87501
TELEPHONE: (505) 988-4421
TELECOPIER: (505) 983-6043

MAY 11 1982

MAY 11 1982

May 11, 1982

Mr. Joe D. Ramey
Director
Oil Conservation Division
New Mexico Department of Energy
& Minerals
Post Office Box 2088
Santa Fe, New Mexico 87501

HAND DELIVERED

Re: New Mexico Oil Conservation Division Case No. 7521:
Application of William B. Barnhill for an Unorthodox
Gas Well Location, Eddy County, New Mexico

Dear Mr. Ramey:

Enclosed in triplicate is the application of Chama Petroleum Company for hearing de novo in the above-referenced case.

Chama Petroleum requests that this matter be set for hearing before the full Oil Conservation Commission at the earliest possible date.

Your attention to this request is appreciated.

Very truly yours,

William F. Carr

WFC:jh
w/enc.
cc: Mr. Charles E. Nearburg (w/enc.)
Ernest L. Padilla, Esquire (w/enc.)

BEFORE THE

OIL CONSERVATION DIVISION

MAY 11 1982

NEW MEXICO DEPARTMENT OF ENERGY AND MINERALS

IN THE MATTER OF THE APPLICATION
OF WILLIAM B. BARNHILL FOR AN
UNORTHODOX GAS WELL LOCATION,
EDDY COUNTY, NEW MEXICO

CASE 7521

APPLICATION FOR HEARING DE NOVO

Comes now CHAMA PETROLEUM COMPANY, by and through its undersigned attorneys, and states that is is a party adversely affected by Order No. R-6948 which was entered in the above-referenced case on April 16, 1982 and pursuant to Oil Conservation Division Rule 1220, hereby makes application for this case to be heard de novo before the Commission.

Respectfully submitted,

CAMPBELL, BYRD & BLACK, P.A.

By William F. Carr

William F. Carr
Post OFfice Box 2208
Santa Fe, New Mexico 87501
(505) 988-4421

Certificate of Service

I hereby certify that true copies of the Application for Hearing De Novo were served on all opposing counsel of record on this 11th day of May, 1982.

William F. Carr

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF NEW MEXICO FOR
THE PURPOSE OF CONSIDERING:

CASE NO. 7521 DE NOVO
Order No. R-6948-A

APPLICATION OF WILLIAM B BARNHILL FOR AN UNORTHODOX GAS WELL LOCATION, EDDY COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on June 25, 1982, at Santa Fe, New Mexico, before the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission."

NOW, on this _____ day of June, 1982, the Commission, a quorum being present, having considered the testimony presented and the exhibits received at said hearing, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, William B. Barnhill, seeks approval of an unorthodox gas well location 660 feet from the South line and 1660 feet from the west line of Section 35, Township 19 South, Range 25 East NMPM, to test the Permo-Penn, Strawn, Atoka and Morrow formations, in the so-called "Boyd Channel" Area, Eddy County, New Mexico.

(3) That the matter came on for hearing at 9 a.m. on March 31, 1982, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter and, pursuant to this hearing, Order No. R-6948 was issued on April 16, 1982, which granted Barnhill's application subject to certain ~~xx~~ restrictions, ~~with restrictions,~~

(4) That on May 11 and May 12, 1982, ~~1982~~, application for Hearing De Novo was made by Chanis Petroleum Company and William B. Barnhill, respectively, and the matter was set for hearing before the Commission.

(5) That the matter came on for hearing de novo on June 25, 1982.

(6) That the evidence adduced at said hearing indicates that Division Order No. R-6948 entered April 16, 1982, ~~...~~, should be ~~affirmed~~ changed to read in its entirety as follows:

Findings ~~9~~, 12, 13, and 14 of said

"~~(11) That the drainage pattern of a well located at the proposed location would be encroaching primarily on two prorated, undeveloped spacing and proration units, namely the S/2 of Section 34, Township 19 South, Range 25 East, NMPM, and the N/2 of Section 3, Township 20 South, Range 25 East, NMPM.~~

(12) That according to the best geological evidence available at the hearing, the aforesaid two spacing and proration units have a total of some 13,~~220.6~~ 13,220 and ~~15,254.6~~ 15,254 acre feet of pay, respectively, or an average of ~~14,239.1~~ 14,239 acre feet apiece, whereas the S/2 of Section 35, being the spacing and proration unit to which the well drilled at the proposed location would be dedicated, has some ~~3450.3~~ 3483 acre feet of pay.

(13) That on an acre-feet- of-pay basis, the S/2 of Section 26 has ~~25.5~~ 24.3 percent of the acre feet of pay as the average of the two most directly affected spacing and proration units.

(14) That in accordance with Finding No. (8) above, the proposed unorthodox location should only be approved subject to a production limitation factor, and such factor should be computed by averaging the variation from a standard location and comparable acre feet of pay as follows: distance from south line of section, 100 percent of standard; distance from west line of section, 33 percent of standard; comparison of acre feet of pay with affected offsetting units' acre feet of pay, ~~25.5~~ 24.5 percent, or, 100 percent plus 33 percent plus ~~25.5~~ 24.5 percent divided by three equals ~~53~~ 53 percent."

(7) That the remainder of ~~said~~ Division Order R-6948 should be affirmed.

IT IS THEREFORE ORDERED:

(1) That Findings ~~9~~, 12, 13, and 14 in Division Order No. R-6948 entered April 16, 1982, are changed to read:

(2) That the remainder of Division Order No. R-6948 ~~is~~ is hereby affirmed.

(3) Jurisdiction