STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING CALLED BY THE OIL CONSERVATION DIVISION FOR THE PURPOSE OF CONSIDERING:	)	CASE NO. 11,644
APPLICATION OF AMOCO PRODUCTION COMPANY FOR SURFACE COMMINGLING, SAN JUAN COUNTY, NEW MEXICO	)	ORIGINAL

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Hearing Examiner

November 7th, 1996

Santa Fe, New Mexico

This matter came on for hearing before the New Mexico Oil Conservation Division, MICHAEL E. STOGNER, Hearing Examiner, on Thursday, November 7th, 1996, at the New Mexico Energy, Minerals and Natural Resources Department, Porter Hall, 2040 South Pacheco, Santa Fe, New Mexico, Steven T. Brenner, Certified Court Reporter No. 7 for the State of New Mexico.

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I N D E X

November 7th, 1996
Examiner Hearing
CASE NO. 11,644

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E X H I B I T

Applicant's	Identified	Admitted
Exhibit 1	5	13

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A P P E A R A N C E S

FOR THE DIVISION:

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FOR THE APPLICANT:

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P.O. Box 2208
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By: WILLIAM F. CARR

* * *

WHEREUPON, the following proceedings were had at 11:51 a.m.:

EXAMINER STOGNER: At this time I'll call Case Number 11,644.

MR. CARROLL: Application of Amoco Production Company for surface commingling, San Juan County, New Mexico.

EXAMINER STOGNER: At this time, I'll call for appearances.

MR. CARR: May it please the Examiner, my name is William F. Carr with the Santa Fe law firm Campbell, Carr, Berge and Sheridan.

We represent Amoco Production Company in this matter, and I have one witness.

EXAMINER STOGNER: Are there any other appearances?

Will the witness please stand to be sworn?

(Thereupon, the witness was sworn.)

PAMELA W. STALEY,

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

DIRECT EXAMINATION

BY MR. CARR:

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

A. My name is Pamela Staley.

Q. Where do you reside?

A. I reside in Denver, Colorado.

Q. By whom are you employed?

A. Amoco Production Company.

Q. And what is your current position with Amoco?

A. I'm a regulatory affairs engineer.

Q. Ms. Staley, have you previously testified before the New Mexico Oil Conservation Division?

A. Yes, I have.

Q. At the time of that testimony, were your credentials as a petroleum engineer accepted and made a matter of record?

A. Yes, sir, they were.

Q. Are you familiar with the Application filed in this case?

A. Yes.

Q. Are you familiar with the subject area?

A. Yes, sir.

MR. CARR: Are the witness's qualifications acceptable?

EXAMINER STOGNER: They are.

Q. (By Mr. Carr) Ms. Staley, could you briefly summarize for Mr. Stogner what it is Amoco seeks with this Application?

A. Yes, we seek an exception to Rule 303 (A),

surface commingling, for the Atlantic A "LS" 9A well. It's located 1185 feet from the north line, 1575 feet from the west line of Unit C, Section 27, 31 North, 10 West. We seek to commingle the Blanco-Mesaverde with the Blanco-Pictured Cliffs Pool in this wellbore.

Q. Have you prepared exhibits for presentation here today?

A. Yes, I have.

Q. And they're contained in the exhibit booklet?

A. Yes, they are.

Q. All right, let's go to the first document in that booklet. Would you just identify that for Mr. Stogner?

A. Yes, Mr. Stogner, that is the Application that we made to the Division for this hearing.

Q. And in that Application, you state that the ownership is common to the pools that are -- for which you're proposing to surface commingle?

A. That is correct.

Q. Let's go to the next document, the letter dated September the 10th. What is the significance of this letter?

A. This was a letter that we received from the Oil Conservation Division denying our Application on the basis of their view as the Division of the commingling being a method of economically producing two or more zones which

may otherwise not be economically producible and asking for additional information.

Q. Have you reviewed the rules that relate to surface commingling of production?

A. Yes, sir, I have.

Q. Is there an economic test in those rules for surface commingling?

A. Not that I can find in the specific rules.

Q. Let's go to the next exhibit, please.

A. Yes.

Q. Identify that.

A. Yes, in satisfaction of the Application, this is a map showing all of the producing wells to date in the Mesaverde formation.

Q. And then behind that we have another map?

A. Yes, it's the same map, showing the Pictured Cliffs formation, all the offsetting wells in that.

Q. Behind that is a copy of the Form C-102?

A. Yes, for --

Q. And what is the purpose of including this?

A. It is also required for the Application. This one combines both on the same C-102, both formations.

Q. Have all parties having an interest in the subject leases been notified of this Application?

A. We did not notify other parties, because this was

of common ownership, but we did notify the Bureau of Land Management.

Q. And what is the result of your notification to the BLM?

A. They have approved this well for surface commingling.

Q. Now, Ms. Staley, let's -- and the return receipt from the BLM is included in the exhibit book; is that right?

A. That is correct.

Q. Let's go behind that now. Let's look at the production curves, and I would ask you to refer to these and review them for Mr. Stogner.

A. Yes, Mr. Stogner, we have the curve -- the first curve there is for the Mesaverde. This well is currently about 416 MCFD, and this shows a slight amount of oil production, about a half a barrel a day, as well.

Q. And then behind that, the next curve?

A. Yes, the same sort of information for the Pictured Cliffs side of this dualed well, and it's currently producing about 276 MCFD and no oil.

Q. And how are you going to meter -- or do you meter the production from each of these zones?

A. We have been metering the production from each of these zones. It is our intent to commingle these uphole,

meter them prior to that, and commingle them, do an allocation meter back, basically.

Q. Behind the production curves you have certain diagrams. Would you explain what those are?

A. Again, in support of the Application we're required to provide the surface site facility diagram. The first diagram there is the current location as it stands, and the following page is our proposed location. What we're removing there is, we would be able to take out some surface pipeline that we're using, a dehydrator, a production unit and a 21-barrel tank, which is used as a pit.

Q. Would you now go to the next page and review for the Examiner the savings that you anticipate you can achieve by surface commingling?

A. Yes, we have duplicate equipment on this well, as I just stated. The savings there, we're going to be able to move these -- this equipment to another lease in the Basin and save those costs. We will be moving, as I stated, a dehydrator at $7000, the 21-barrel pit at $3000, some pipeline, and then our Jupiter automation system that we're using on both -- We would be using this on both sides. We're removing all the piping and all of the meters required in the automation. In addition -- Well, that total savings would be about $19,000.

In addition, we, by combining this, will be able to save an annual gas analysis, as well as the calibration to metering and all on the well, which is one pumper day per year. So about another $230 a year.

Q. Ms. Staley, let's now go to the next page and, referring to that, could you explain to the Examiner how you propose to allocate production between zones?

A. Yes, this is the standard way that we propose to allocate on most of our surface commingled wells, which is by annual well test.

With the current average production, we would be looking at splitting the gas at about 60 percent to the Mesaverde and about 40 percent to the Pictured Cliffs. Our current condensate production is only from the Mesaverde, so we would look at producing -- or actually attributing that production only to the Mesaverde side.

And we've also provided here the liquid gravity of the Mesaverde, which is also required by the rule.

Q. Let's go next to your table on surface commingling. Will you review this?

A. Yes, when we were denied this Application, we kind of took a look at some of the wells that we had had permitted in the past couple of years. I've presented as the next exhibit those wells, the order numbers that we received, and kind of a view of what the production was on

each of those wells. As you can see, there are some wells that are very similar to the one that we are commingling -- asking for commingling today.

In addition, in the comments section, in trying to understand why we were denied this, we took a look at some of the comments that have been included in those orders, and those are listed by number in the comments section.

The first comment that's typically included in the PC orders is that it should -- that the production should be of a marginal nature. But the way the marginal nature is defined typically in this order is by its relationship to being capable of producing top unit allowable. And these wells are not capable of producing their top unit allowable.

Secondly, some of the language that's included refers to the manual for the installation and operation of commingling facilities. And so we had unearthed that book, which proved difficult to do, but we were able to find it and kind of take a look at the manual. And it also relates to marginality in respect to top unit allowable in that book.

Third, the language that's always included is that the approval will reduce operating expenses, which we're going to do in this well, extend the well life, which

we're looking to do in this well as well, and get additional gas reserves, again, which is applicable to this well.

Q. Let's go to the next page, entitled "Justification for Surface Commingling". What does this address?

A. Well, this is just a kind of a summary of what we had on the previous page, saying that we were going to, in this Application, produce at operating expenses which may result in recovery of additional gas, we'll be able to utilize a single train of production equipment to reduce our operating expenses, we'll be extending the well life, and, as I've stated before, the marginality of this well, it's incapable of producing its top unit allowable on either the Pictured Cliffs or the Mesaverde side.

Q. And the next page, what is that?

A. This is just a little bit of looking at the commingling -- the Division's commingling manual. And again, the manual states that the NMOCD recognizes commingling as being practical if the facilities are properly designed, operated, provide a reliable and economic means for receiving, measuring and storing.

The manual also states that either marginal zones or top allowable wells may be commingled and outlines the process for both of those types of wells.

Q. The final page in the document is a summary of the arguments that support commingling?

A. Right, basically we feel that if there is no surface commingling here waste will occur. We feel that well testing can be done at any time to justify what the production is on either side of this well, and also that the BLM is in support of this Application.

So that's -- Those are the reasons that we ask you to approve this Application.

Q. Now, Ms. Staley, you've testified that the ownership in the zones to be commingled is common --

A. That is correct.

Q. -- is that right?

Will production from each zone be accurately measured or determined prior to the actual commingling?

A. Yes.

Q. Will the actual commercial value of the commingled production be less than the sum of the values of the production from each of the sources of supply?

A. That's right.

Q. In your opinion, will approval of this Application be in the best interest of conservation --

A. Yes.

Q. -- the prevention of waste --

A. Yes.

Q. -- and the protection of correlative rights?

A. Yes, sir.

Q. Was Exhibit 1 prepared by you?

A. Yes, it was.

MR. CARR: At this time, Mr. Stogner, we would move the admission into evidence of Amoco Exhibit Number 1.

EXAMINER STOGNER: Exhibit Number 1 will be admitted into evidence at this time.

MR. CARR: And that concludes my direct examination of Ms. Staley.

EXAMINATION

BY EXAMINER STOGNER:

Q. Ms. Staley, you said that this was an accurate means of measurement. Could you be a little more specific how accurate is it and what percentage of accuracy?

A. I can't tell you down to the exact percentage. Since the interests are common here, we are able to measure that against also what the well has produced before in looking at the decline rates and all. So we will be able to determine if there's some problem with that.

Also, since we can well-test on any frequency that you prefer, we think we have a means for testing to see if this well is producing as it is needed.

Q. Would accuracy -- As a petroleum engineer, would you want to be more -- how would you say? -- interested in

the actual volumes being produced, as an engineer, so you could look at your balancing, material balancing equations and such as that? Would your accuracy -- Would you want to have more accuracy in that aspect, as opposed to the royalty or interest, in paying royalties and such?

A. I think as an engineer, you always want more data and more accurate data. I think in the Basin where we are now, and where we're at in the life of many of these wells, we have the ability to get the information without having to have an individual production string attached to each well.

And so from an engineering standpoint, I have enough data in most of those wells that we're commingling to draw the line out for the rest of their natural life and be able to pretty accurately indicate what they're producing.

So from an engineering standpoint, the reduction in perhaps the accuracy of data that you're speaking about, would not affect my ability to do a material balance on this well.

Q. Isn't one zone prorated?

A. Yes, sir.

Q. How about the accuracy for the prorationing aspect of it?

A. We've done this in several wells before and, you

know, we're looking right now at actually reducing the amount of information that we're going to have to be providing.

In other words, we're actually looking in the San Juan Basin right now at not doing deliverability testing or reducing the amount of testing we're going to be doing there as it is. So again, I think it falls in line with where we're going in the future in this Basin.

Q. Well, I'm not aware of any application for doing away with deliverability, so I'm not sure whether you can get that information.

You talk about the savings for surface commingling and show $19,000. Is that -- I thought you were just going to pull a gauge, as opposed to a whole system setup. Why can't you just run it through two different gauges and then bring it in and run it through the same lease equipment?

A. We can, that's effectively what we're going to do. We're going to save this -- In other words, this equipment will be basically attributed back to this lease. This lease has already paid for this equipment, and this lease will be credited for this equipment when it's moved off of it to another well, so the lease will actually receive an income from this movement.

Q. Well, how much does a meter cost a year, just a

meter?

A. A meter, depending on the, you know, quality of the meter --

Q. Okay, how about your meters?

A. Okay --

Q. Let's talk about meters that are out there; let's don't talk general.

A. Okay.

Q. I mean, this $19,000, that's not the cost of a meter. What's a meter cost out there a year?

A. No, the meter cost out there is very minimal.

Q. What is it?

A. I think --

Q. You're talking generalities. Let's don't talk generalities. What does it cost?

A. I don't specifically know the exact number on a meter.

Q. You don't know?

A. No.

Q. Okay. And that's essentially what we're talking about, is a meter, isn't it?

A. No.

Q. What do you mean, no?

A. No, we're talking about the use of this equipment otherwise. Had we been able to set this well up

initially --

A. Did you bring one string through one meter and another string through the other meter, and then after those two meter points bring it into the same operations where you get your $19,000 savings?

A. We said we were going to put an allocation meter on that, so I'm not sure --

Q. Well, what's the difference between two meters and an allocation meter? You're talking about the cost of one meter, aren't you?

A. Well, we're able to save the money toward this well of the other equipment as well, which is some of the benefit that we're looking toward doing this for.

Q. At what point or what volumes do we stop at? Of allowing this? At what point?

A. I don't see, I guess, any reason to not have -- to have individual metering on every well, from --

Q. Then why aren't you in here asking for the rule to be changed, as opposed to an exception?

A. Because I don't -- I did not feel that this was even an exception when I applied for administrative application. We have done this historically and we have had these approved, so I was quite surprised when this was denied. So I don't know that we have reached a level yet. We would like to do this on new wells as well.

Q. What was the production on many of your others that you get --

A. Pardon?

Q. -- approved? Others that you got approved, what has been the production --

A. If we go back to these --

Q. -- of the majority of them? No. No, no, no, no, no, no.

A. Okay.

Q. The majority of the many applications which Amoco applies for up in northwest New Mexico, what is the average production?

A. These are very standard to what we have had approved.

Q. Then why was this one denied?

A. I -- That's a good question. Like I said, we had one a year ago which had higher --

Q. Well, the letter in there states, doesn't it, because of the amount of production?

A. This is the first one that we have had denied, and we've had very similar ones approved, and so that's why it was a question. We've had ones approved with higher production than this, production where the -- You know, this is basically what I pulled out of the drawer for the past year of well -- or past two years of what we've been

allowed. So I did not see this as a different type of well, and that's why I was surprised by the denial.

Q. Well, obviously somebody did, or we wouldn't be here.

As far as the annual -- You're requesting an annual well test; is that correct?

A. Yes, sir, predominantly because these wells have been produced for some time. In some of the wells, Mr. Stogner, that we have had surface commingling done from the beginning, and where we don't have the specific data, we've well-tested them a little more frequently.

But this well has fairly long producing life on both sides of the dual completion.

Q. You wanted to refer to that page one of your surface commingling orders. What percentage does this reflect, as far as the number of surface commingling applications Amoco has received approval for?

A. I would say 75 percent. What I did was, I went through my drawer of applications, and when I saw surface commingling I pulled them out and organized them from that, and I probably missed a few.

Q. Now, you refer to marginal in nature, and you were referring back to -- What, marginal as far as gas prorationing goes?

A. That's the indication that I've had, both from

the statements that have been made in the orders -- I do have all the orders for these wells with me. Those have been the nature of the statements that have come across in the approvals that we've had on these wells, as well as when I went back, then, to the commingling manual written in 1969, the indications in there as well, relates to wells that are marginal, as well as wells that are top unit allowable, so I took that to mean that marginality was related to top unit allowable.

Q. Could marginal mean something else, like marginal stripper wells?

A. In this case it does relate to both gas and oil wells in the commingling manuals. But in other instances, yes, it could.

Q. Okay. And what is a marginal stripper well, whenever we usually talk? What's the rates?

A. On a marginal stripper well?

Q. Yeah.

A. I don't deal with any oil wells, Mr. Stogner, so...

Q. Well, I'll refresh your memory. Does 60 MCF a day --

A. Okay.

Q. -- does that count in anything for the stripper gas wells? Do you remember that figure?

A. For a stripper gas well?

Q. Yes. And aren't those known as marginal wells also?

A. I'm not familiar with that. Sorry.

Q. There's an annual report put out by the IOGCC referring to marginal production, and they use that 60 MCF. Should that be utilized in these instances, the 60 MCF a day?

A. Well, based on what has gone before us, as well as based on the references in both your rule and the references in your commingling manual, I would say no. And based on what we --

Q. Well, maybe we need to reference something at this point, because evidently this production has caused it to be here. Maybe this is what we're having the hearing today for.

A. Perhaps --

Q. So we could use the 60 MCF? That would be applicable in this matter, going back to the term "marginal"?

A. I don't think related to this type of an application, no. I guess I think the marginality as it's been defined before has related to top unit allowable.

Q. Well, one of the pools is unprorated.

A. Yes.

Q. So what's the top allowable for an unprorated gas pool? What is it?

A. Well, that's the only reference that we have, though, is to those --

Q. So there is no --

A. -- well, there is no specific --

Q. There's no such thing as a marginal in an unprorated gas pool, is there? So we've got to go back to something. Perhaps the 60 MCF would be something we could go back into that has the term "marginal"?

A. Well, building on the past history that we've had of wells, that doesn't seem to be the definition that the Commission has used.

Q. Perhaps that's what we're here for at this point.

Referring back to that page one of previous applications, how many of these were Mesaverde and Pictured Cliffs?

A. The formation is listed right after the order number. The formation is indicated by a DK for Dakota and an MV for Mesaverde, the standard --

Q. So how many of these listed on here are similar Mesaverde --

A. Give me a moment.

Q. -- and Pictured Cliffs?

A. Two of those are.

Q. I count three. The Gonzales --

A. Oh, I'm sorry --

Q. -- the Michener and the --

A. -- I forgot the -- I didn't look at the Hutchin at the bottom, I apologize.

Q. Okay. So what was the total production average for those three commingles? Just for the Pictured Cliffs and the Mesaverdes?

A. The total on the Hutchin is 517, the total on the Schwerdtfeger is 351, and the total on the Michener is 400. That's listed under the total production column.

Q. There's four of them then.

Okay, so in 1994 of April, we had one pass through at 300 MCF. Then in December of '44 [*sic*] we bumped it up to 400. And then in May of 1996 we had one go at 517. And now we're up to what? A total production of six hundred and --

A. 692.

Q. -- 692? Almost 700?

A. Yes, sir.

Q. So you're advocating that there should be no limit?

A. I don't believe there should be any limit where we're able to extend a well life and prevent waste and where there aren't correlative-rights issues, no.

Q. Okay, I -- What do you mean, "extend well life", then?

A. Well, in most of these cases where we're adding some reserves back to the well by saving some costs on it, we're able to extend well life.

Q. Okay, explain that a little bit more in detail, then.

A. Certainly. Whenever we're able to save money on either side of this well, we're able to produce the well longer. And when we are able to reduce operating costs, just the sheer amount of tweaking we have to do with an automation system or with a dehydrator or with a separator saves the operating costs the number of trips that pumper makes to that well.

Q. Okay, so that could mean any well savings would transfer, so you're talking about 100 percent?

A. 100 percent of well savings?

Q. Yes, on that, as far as 100 percent of the wells. So you're talking, there's no limit on extending well life, with your definition?

A. Right.

Q. Okay. So what was the other factor, then?

A. You mean on the correlative-rights issue?

A. Okay, now there is no correlative-rights issue in this particular one, because it's the same lease operation;

is that correct?

A. Yes, sir.

Q. And what was the third factor then?

A. Well, I think I kind of combined two of them, which was reducing the operating cost and extending the well life as a result --

Q. So you're saying in these instances there should be no limitation?

A. I don't see any reason for it, from our standpoint, as long as we can see what the production is going to be, attribute it to the right people, and make these wells last longer. I think that's what we're faced with in a declining basin.

Often when you're setting up a well and looking at whether or not you have to equip it on both sides and put -- you know, that can make the difference in your economics for drilling a well, as well.

Q. Would accuracy ever override cost savings?

A. Certainly in some areas, I think that's correct. In the areas where we're in the middle of the Basin, we have a lot of control around us, they're really not issues. I mean, I as an engineer would like to, as I said before, have as much data as possible, but --

Q. Yeah, but not everybody may be a prudent operator like Amoco. How about if you have a neighbor that -- would

you -- we can make a savings on this 3000-MCF-per-zone well? Would accuracy -- Would you be concerned about that as an offset?

A. Not if I don't see any effect on my well, and from a surface commingle I can't see how I would see the effect on my well.

Q. But you would want to know the accuracy of the production or the measurement --

A. I think --

Q. -- as an engineer?

A. I'd like to know it on my wells, yes.

Q. But not your neighbors' wells, as far as looking at the overall -- as a petroleum engineer looking at the overall field which you're part of? You wouldn't -- That wouldn't concern you in any way?

A. I guess I just don't think that the surface commingling affects accuracy --

Q. Well, we're talking about accuracy, that's what we're talking about.

A. -- dramatically. That's what I'm saying. I don't think it's dramatic enough to make a difference in mine --

Q. Well, that could -- Where do we end? Where do we stop? You're saying we don't.

A. Well, yeah, I guess you're saying that you would

stop with people that you think are probably not able to provide you --

Q. Well, no, that's what I'm asking you. I'm not saying it, I'm asking you. Where should we stop? At what level? At what point does accuracy take a dive?

A. I think on the edge of the -- perhaps on the edge of the field, where you don't have as much data surrounding you, I think you're going to have some issues there.

But where you're in the middle of the field, and certainly where you have years of production on a well -- these wells -- You know, you can point to many, many wells in this Basin where the production curves don't change dramatically over the life of the well. Everything -- Other than the subject to line pressure, there's not much change in any of these production curves. So we're able to pretty well model and anticipate what these wells are going to produce. And only when you get outside that envelope of wells where you have a lot of control would I see there being any issue.

Q. How would I determine which well is an edge well, as opposed to a middle well?

A. Well, I would think when you look at the information that comes in and you see perhaps in your nine-section plat that you require, where you see that there are no Mesaverde wells, say, to the east or to the west or

whatever it would be, that you would consider that to be edge data.

EXAMINER STOGNER: I have no other questions at this time, Mr. Carr.

MR. CARR: Mr. Stogner, that concludes our presentation in this case.

EXAMINER STOGNER: Anybody else have anything further in Case 11,614 [*sic*]?

Then this case will be taken under advisement.

Let's take about a ten-minute recess at this time.

(Thereupon, these proceedings were concluded at 12:29 p.m.)

* * *

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 11644, heard by me on November 7, 1996.

, Examiner
Oil Conservation Division

CERTIFICATE OF REPORTER

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

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

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

WITNESS MY HAND AND SEAL November 16th, 1996.

STEVEN T. BRENNER
CCR No. 7

My commission expires: October 14, 1998