

CASE NO.

6756

APPLICATION,
TRANSCRIPTS,
SMALL EXHIBITS,

ETC.

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
12 December 1979

EXAMINER HEARING

IN THE MATTER OF:

Application of Amoco Production Company
for pool contraction and creation, Lea
County, New Mexico.

)
)
)
) CASE
) 6756
)

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division:

Ernest L. Padilla, Esq.
Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

Guy Buell, Esq.
AMOCO PRODUCTION COMPANY
Houston, Texas

I N D E X

J. C. ALLEN

Direct Examination by Mr. Fuehl 7

Cross Examination by Mr. Nutter 19

E X H I B I T S

Applicant Exhibit One, Plat 8

Applicant Exhibit Two, Cross Section 11

MR. NUTTER: We'll call now Case Number 6756.

MR. PADILLA: Application of Amoco Production Company for pool contraction and creation, Lea County, New Mexico.

MR. BUELL: Are you ready for appearances, Mr. Examiner?

MR. NUTTER: Yes, sir.

MR. BUELL: My name is Guy Buell, representing Amoco Production Company.

We have one exhibit, this cross section, Mr. Examiner, and I thought it would be a little more efficient to have a copy put on the wall. It will save you and Mr. Padilla from having to do a lot of exhibit shuffling.

Mr. Examiner, as to our application in this case, it is a four-pronged application. We're asking to -- the Division to create the Air Strip-Upper Bone Spring Oil Pool, the Air Strip-Middle Bone Spring Oil Pool, and the Air Strip-Lower Bone Spring Oil Pool. We're also asking for a discovery allowable on the well, our well that first tested the Lower and what well was that, Mr. Allen?

MR. ALLEN: FU No. 2.

MR. BUELL: And we'd like to, at this time, dismiss from this application that portion that relates to creation of the Air Strip-Upper Bone Spring, and the Air Strip-Middle Bone Spring.

We would like to leave within our application the creation of the Air Strip-Lower Bone Spring and the discovery allowable for the State FU Well No. 2.

Our evidence will show, Mr. Examiner, that while the Upper Bone Spring appears to be geologically separated from the Middle, and all of our available pressure data showed us at the time we filed this application that these two intervals of the Bone Spring formation were in truth and in fact separate, in production testing the Upper Bone Spring, after the production of between 5000 and 6000 barrels of oil, our pressure in that interval had declined from 3600 pounds to roughly 2400 pounds. That indicates to us that one, this Upper portion of the Bone Spring is an extremely low reserve accumulation of oil. Any time you lose one-third of your total pressure producing only 5000 to 6000 barrels of oil, and also that it's probably limited areal extent.

So that is the reason that we're dismissing from our application the creation of the Upper Bone Spring Pool and the Middle Bone Spring Pool. We

feel that conservation will best be served, based on data we now have, that by producing what we have called Middle in our application and Upper in our application, that we will recover more oil from these two areas.

As you'll see, when our witness discusses the cross section, our Exhibit Two that we have on the wall, the Upper is not well developed in all four of the wells that are currently drilled in and completed in the Bone Spring area. Probably none of the wells could economically stand a separate completion of the Upper, but by producing what we call the Middle and the Upper together in the same wellbore, we feel that these upper stringers can be perforated and oil be recovered that otherwise would not, but we're still asking that the Commission create the Air Strip-Lower Bone Spring and grant a discovery to our No. 2 State FU Well.

MR. NUTTER: And then what would the vertical limits of the Air Strip-Upper Bone Spring Pool be?

MR. BUELL: Well, our recommendation is --

MR. NUTTER: We have previously defined as being Upper and Middle?

MR. BUELL: My recommendation would be, Mr. Examiner, in fact Amoco's recommendation is, that you vertically define the Lower Bone Spring, as we show on our Exhibit Two, from 10,100 feet to 10,400 feet, and not pre-

cisely define the Middle and the Upper.

MR. NUTTER: Well, we wouldn't create a Middle and an Upper per se, would we? We'd just have an upper pool.

MR. BUELL: That's right, yes, sir.

MR. NUTTER: And so you would define the lower pool as being from 10,000 to 10,400, as we had previously advertised.

MR. BUELL: Yes, sir.

MR. NUTTER: And then the other pool would be the remainder of the Bone Spring, is that right?

MR. BUELL: Yes, sir. That's our recommendation.

MR. NUTTER: Okay. Now, the following case after this one is for a dual completion in the Upper and the Middle. I presume you're going to dismiss that one.

MR. BUELL: I'll dismiss that at any time the Examiner thinks appropriate, now, or when you call the next case.

MR. NUTTER: Well, we haven't called it yet, but that's what you're going to do.

MR. BUELL: Yes, sir.

We have one witness, Mr. Allen, who has not been sworn.

(Witness sworn.)

J. C. ALLEN

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

DIRECT EXAMINATION

BY MR. BUELL:

Q Mr. Allen, would you state your complete name, by whom you're employed, and in what capacity and in what location, please?

A Yes, sir. My name is J. C. Allen. I'm a petroleum engineering supervisor for Amoco Production Company in Houston, Texas.

Q Mr. Allen, you've testified before this body on many previous occasions and your qualifications as a petroleum engineer are a matter of public record, are they not?

A Yes, sir.

MR. BUELL: Any questions as to Mr. Allen's qualifications with particular reference to southeastern New Mexico, Mr. Examiner?

MR. NUTTER: Mr. Allen is qualified.

Q In connection with your testimony here

today, look first at what has been identified as our Exhibit Number One, and what is that exhibit, Mr. Allen?

A Exhibit Number One is a map of the area surrounding our working interest unit, and we have shown on this map all wells that have been drilled within a two-mile radius of our State FU Well No. 1, and No. 2.

Q All right, first, let's -- the Air Strip Bone Spring area is in approximately center of Exhibit One, is it not?

A Yes, sir, it is.

Q All right. Let's go first and talk about the other production reflected on Exhibit One away from the Bone Spring. Why don't you move up to the northwest, I notice some wells up there. What pool is that?

A Yes, sir, that is the East EK Unit operated by Conoco. It is producing from the Queen formation.

A In other words, that is the EK Queen Oil Pool.

A Yes, sir.

Q All right, sir, now down to the southeast on Exhibit One I see some symbols that indicate other production. What is that?

A Yes, sir, the wells to the southeast identified by a blue dot, are wells producing the Bone

Spring, and that is the Scarb Bone Spring.

Q Is that an oil pool or a gas pool?

A It's an oil pool.

Q All right, sir, I notice one orphan green dot, I believe it is, way over in the southwest corner of Exhibit One. What is that?

A Yes, sir, that's a Morrow gas well.

Q All right, sir. Now, move back up to our Air Strip area and to the east I notice a well colored with a red dot. What's the significance of that?

A That is a Wolfcamp producer operated by Gulf Oil Corporation.

Q All right. Now, let's move into the Air Strip-Bone Spring area. What production do we have in the Air Strip-Bone Spring area at this time?

A At the present time there are four wells producing from the Air Strip-Bone Spring Field. The Gulf Nos. 1 and 2 State YH Wells, and the Amoco FU Wells Nos. 1 and 2.

The FU No. 1 is also completed in the Wolfcamp but it is segregated at this time by a bridge plug from the Bone Spring.

Q What was the discovery well for the Air Strip-Bone Spring Oil Pool, as it is known on the Commission records today?

A It was the Gulf YH Well No. 1.

Q And was that well completed in a vertical interval that would have fallen within what is described in the docket of our application, what we would call the Middle Bone Spring?

A Yes, sir, it was. Or it is.

Q All right, sir. I notice what appear to be some well location symbols in and around the area of Bone Spring. Is Amoco planning any kind of a development program in this area?

A Yes, they are. The well to the west, the No. 1 HQ Well, has reached total depth and is now logging.

The Well No. 1 RH has also reached total depth and we're in the process of running a drill stem test to test both the Wolfcamp and the Bone Spring.

The No. 3 FU is drilling and at the current time I think we plan to drill one additional well, at this time.

Q All right, sir. I notice that there is a line connecting all four of the wells in the Air Strip-Bone Spring Pool area. Is that the surface trace of a cross section?

A Yes, sir, that's the surface trace of cross section A-A', which is on the wall, and has been

furnished to the Examiner.

Q All right, sir. Mr. Allen, would you rather go to the well now where we have Exhibit Two that is that cross section A-A'? And speak up real distinctly and loudly, Mr. Allen, does that cross section run, as the surface trace shows, from north to south and then off to the east?

A Yes, sir, it runs from the Amoco FU No. 1 to the Gulf YH Well No. 2 to the right of this cross section.

This is essentially the same cross section which was filed with our application, with the exception we have taken the vertical -- proposed vertical limits of the Upper and the Middle Bone Spring off this cross section.

Q But we do have what was on the cross section that we filed with this application with regard to the Lower Bone Spring.

A Yes, sir. I highlighted on this one with a red line, showing the top and bottom of the proposed Lower Bone Spring Field.

Q All right, sir. What is the significance of the two blue horizontal lines that I notice on Exhibit Number Two, that fall within our 10,100 and 10,400 foot depth that we're recommending for the vertical limits?

A In general, this is the interval we would

consider the productive interval within this proposed --

Q And the vertical limits that we are recommending cover a larger interval in case in some other well the Lower could be productive at a higher elevation than it is in our well on Exhibit Two.

A Yes, sir, that is correct.

Q All right, sir, now you heard my opening statement that initial pressure data, as well as geological data, indicated to us that the Upper Bone Spring, as defined in our application and the docket of this case, and the Middle Bone Spring, as so defined, were geologically separated and also pressure data indicated their separation.

A That's correct. It's been illustrated, I think, on our FU Well No. 1. The logs will show when the well was drilled in 1975 and completed as a Wolfcamp oil well, a drill stem test was taken across what we previously referred to as the Upper Bone Spring. At that time we reported a final shut-in pressure of 3712 pounds.

When we started testing the Middle and Upper Bone Spring this year, we recorded a bottom hole pressure from the Upper Bone Spring of 3600 pounds immediately after perforating, as compared to a bottom hole pressure in what we would call the middle of 1800 pounds.

Q Do you have any idea of the initial pressure or the approximate discovery pressure of the middle

zone as revealed by the Gulf wells?

A They, to my knowledge, have taken no bottom hole pressures in their -- their wells. They did run a drill stem test in their YH No. 2, indicating a bottom hole pressure in the order of 3280 to 3848 pounds.

We did attempt to calculate a bottom hole pressure from surface pressures, and using gradients, on their YH No. 1, which indicated a pressure in the order of 3400 pounds. This ties in pretty well with the drill stem test.

Q In your opinion would that be a normal, approximately normal pressure, initial pressure, for this depth in this area?

A At that depth, yes, sir.

Q Let me ask you this. Do we have an idea of what the current pressure is in what we have called the Middle Bone Spring?

A Well, on our well it's 1800 pounds; however, at the current time we cannot get this zone to produce. And we have a swab test indicating a productive capacity of about 100 barrels a day. I think during swab test we recovered 52 barrels of oil and 48 barrels of water in 10 hours, but we've been unsuccessful in getting the zone to produce after we put the dual equipment in the wellbore.

Q But when you compare the 1800 pound pressure that we found in the Middle Bone Spring in our well with the 3600 pound pressure in the Upper Bone Spring in our well, would that indicate that those two were probably geologically separated?

A Yes.

Q All right, sir. What type of production tests did we run with only the Upper Bone Spring open that revealed to us the probable low reserve, low areal extent of the Upper Bone Spring?

A Well, as I mentioned earlier, the initial bottom hole pressure on perforating was 3600 pounds. After producing approximately 5000 barrels we ran a subsequent bottom hole pressure and it was only 2405 pounds, which indicates that we had a 1200 pound drop while producing only 5000 barrels of oil.

Q Would that indicate to you in all probability that it would be economically unfeasible to separately complete in and produce the Upper Bone Spring?

A I think it would, yes, sir, in my opinion.

Q Is the Upper Bone Spring a well developed in the other three logs on our Exhibit Number Two, as is the case in our No. 1 Well?

A No, sir, it's not. It thins considerably in our State FU No. 2 and the Gulf YH No. 1, and almost dis-

appears completely in their State Well No. 2.

Q Do you feel that our current application, which is to create only the Air Strip-Lower Bone Spring Oil Pool, and all the remainder other than the vertically defined limits of that pool will just be considered the Air Strip-Bone Spring Pool?

A Yes, sir.

Q In that manner, in these other wells, our No. 2 Well and the Gulf Well, where it's not as well developed, would that give the opportunity in those wells to produce those stringers in the upper along with the middle and recover oil that would probably otherwise not be recovered?

A Yes, sir, it would.

Q All right, sir, let's go now to the lower zone. Do we have any pressure data on what we're calling the Lower Bone Spring to indicate that it is not only geologically separate from the other Bone Spring, but do we also have pressure data to show that it is separate?

A Yes, sir, we do. We took a bottom hole pressure build-up test in this well after producing about 1500 barrels of oil, and we had a pressure of 4476 psi. At this time this zone is also shut off with a bridge plug and we're testing the -- what is referred to as the Middle

Bone Spring.

Q About how much vertical separation is there between the uppermost productive interval in the Lower Bone Spring in our No. 2 Well and the lowest productive interval in what we've heretofore in this application called the Middle Bone Spring?

A Oh, approximately 800 feet.

Q Do you feel these data show conclusively that the Lower Bone Spring is not only geologically separate but is -- the pressure data conclusively shows that it is separate?

A In my opinion, yes sir.

Q It is your recommendation to the Commission here today that the Air Strip-Lower Bone Spring Pool be created?

A Yes, sir. I would not produce this zone with the others.

Q It is also your recommendation that the testing of the Lower Bone Spring in our No. 2 Well discovered a new accumulation of Bone Spring oil and that the No. 2 Well should be granted a discovery allowable?

A Yes, sir.

Q Do we contemplate an immediate completion in the Lower Bone Spring in our No. 2 Well, the discovery

well?

A Not at this time. We are considering a dual completion but we do have 5-1/2 inch casing, which does, of course, limit our ability to dually complete this well.

I think a lot of it would be based on what our testing the two intervals up here reveals. At this time we're talking about 118 barrels a day of oil here and we have yet to open the uppermost zone.

Q In your opinion, and based on your study of this area, is the Lower Bone Spring oil accumulation being produced in any other well in this area?

A No, sir, it's not.

Q It, then, is not a competitive zone?

A No, sir.

Q The other Bone Spring up the hole from our Lower Bone Spring is competitive, is it not?

A Yes, sir, it's being produced in both the Gulf wells.

Q So would it be your further recommendation to the Commission that in the granting of the discovery allowable to our State FU No. 2 Well, that it be made effective from the date that we are able to make a completion in that well in the Lower Bone Spring?

A Yes, sir.

Q Do you feel that the approval of our amended application in this case will protect the correlative rights of all the interest owners in the area, as well as serve conservation by preventing waste, Mr. Allen?

A In my opinion, yes, sir.

Q Do you have anything else that you'd care to add at this time to your testimony?

A Just might clear up the one area I've marked here as the Scharb. This is, to the best of our ability, the interval which is productive some mile and a half or two miles or more, I guess, to the southeast of us. It is extremely tight in all the wells here and does not appear to be productive at all.

Q But that is the vertical interval that you've correlated from the Scharb-Bone Spring Oil Pool over into our area?

A Yes, sir, and that correlation is very difficult.

MR. BUELL: May it please the Examiner -- do you have anything else, Mr. Allen?

A No, sir.

MR. BUELL: May it please the Examiner, that's all we have on direct. I would like to formally offer our Exhibits One and Two into evidence.

MR. NUTTER. Amoco Exhibits One and Two will be admitted in evidence.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Allen, now I see on the State FU No. 1 some perforations way down here in the lower section. Are those the Wolfcamp perforations?

A Yes, sir, they are, and we produced about 85,000 barrels of oil prior to the plugback to the Bone Spring.

Q Has the No. 2 been completed in the Wolfcamp, also?

A No, sir, we did not test the Wolfcamp here. It did not look as well as it did over here, and of course, we did have the competitive Bone Springs.

Q Did either of the Gulf wells go to the Wolfcamp?

A Yes, sir, they did. I've forgotten which well it was that did have a test across the Wolfcamp, I believe. I see the Wolfcamp down in here. I believe that they did. Let me check my notes.

Q No, that's all right.

MR. NUTTER: Are there any further questions of Mr. Allen? He may be excused.

Do you have anything further -- now, let's see, Mr. Buell, we want to dismiss the creation of the Upper and Middle, as defined in the advertisement, and create a Lower Bone Spring from 10,100 feet to 10,400 feet, and to create an Air Strip-Upper Bone Spring Pool encompassing the rest of the Bone Spring formation above the lower pool.

MR. BUELL: Yes, sir, Mr. Examiner, that is correct, or you could just call -- create the Air Strip-Lower Bone Spring and then the Air Strip-Bone Spring, which you already have a --

MR. NUTTER: No, I'd rather have an Upper and a Lower.

MR. BUELL: All right, then --

MR. NUTTER: We'll have an Upper and a Lower, so the Upper will comprise what you had called Upper and Middle.

MR. BUELL: Yes, sir.

MR. NUTTER: And then you also seek a discovery allowable for the No. 2 in the Lower Pool, and you requested that allowable be deferred for production until such time as the well was put on production in the Bone Spring.

MR. BUELL: Yes, sir.

MR. NUTTER: In the Lower Bone Spring.

MR. BUELL: Yes, sir.

MR. NUTTER: Now, normally a period of 730 days is allowed for the production of a discovery allowable, so you'd request that the 730 days commence on the date of completion in the Lower Bone Spring.

MR. BUELL: Yes, sir, that is our recommendation. In view of the fact that we have competitive Bone Spring up the hole, we feel that it's in the best interest of all the owners, including the State as royalty owner, to produce the No. 2 in the competitive zones at this time.

MR. NUTTER: If there are no further questions of Mr. Allen, he may be excused.

Do you have anything further, Mr. Buell?

MR. BUELL: No, Mr. Examiner, that's all we have.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 6756?

We'll take the case under advisement.

(Hearing concluded.)

REPORTER'S CERTIFICATE

I, SALLY W. BOYD, a Certified Shorthand Reporter,
DO HEREBY CERTIFY that the foregoing and attached 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 from my notes taken at the time of the hearing.

Sally W. Boyd C.S.R.
Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 6723
heard by me on 12/12 1979.

[Signature] Examiner
Oil Conservation Division



STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

January 16, 1980

Mr. Guy Duell, Attorney
Amoco Production Company
P. O. Box 3092
Houston, Texas 77001

Re: CASE NO. 6756
ORDER NO. R-6255

Applicant:

Amoco Production Company

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

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אח, ישי

Copy of order also sent to:

Hobbs OCD _____ X
Artesia OCD _____ X
Aztec OCD _____

Other

NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION FOR DISCOVERY ALLOWABLE AND CREATION OF A NEW POOL

Form O-102
 Adopted 9-1-66

NOTE: This form is to be filed and attachments made in accordance with the provisions of Rule 50a.
 If discovery is claimed for more than one zone, separate forms must be filed for each.

Operator Amoco Production Company		Address P. O. Box 68, Hobbs, New Mexico, 88240	
Lease Name State "FU"		Well No. 2	County Lea
Well Location Unit Letter N ; 1980 Feet from The west Line and 960 Feet From the south Line of Section 25 , Township 18-S , Range 34-E , NMPM			
Suggested Pool Names (List in order of preference) 1. Airstrip (Lower Bone Springs)			
Name of Producing Formation Bone Springs		Perforations 10,262' - 10,272'	Date of Filing Form C-104 -
Was "Affidavit of Discovery" Previously Filed For This Well in this Pool? No		If Yes, Give Date of Filing	Date Well was Spudded 7-28-79
			Date Compl. Ready to Prod. 9-13-79
Total Depth 10,814	Plugged Back Depth 10,754	Depth Casing Shoe 10,800	Tubing Depth 10,165
		Elevation (Gr. DF, RKB, RT, etc.) 3,966	
Oil Well Potential (Test to be taken only after all load oil has been recovered) 361 Bbls, Oil Per Day Based On 361 Bbls In 24 Hours; 0 Bbls Water Per Day Based On 0 Bbls In 24 Hours; Gas Production During Test: 235 MCF; Gas-Oil Ratio: 653 Method of Producing: flowing Chk. Size 10/64			

NEAREST PRODUCTION TO THIS DISCOVERY (Includes past and present oil or gas producing areas and zones whether this discovery is based on horizontal or vertical separation):

Pool Name Airstrip Bone Springs	Name of Producing Formation Bone Spring	Top of Pay 9,329	Bottom of Pay 9,392	Currently Producing? Yes
Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Pool 1,250' E		Vertical Distance from Subject Discovery Zone to Producing Interval this Pool 870'		

NEAREST COMPARABLE PRODUCTION (Includes past and present oil or gas production from this pay or formation only):

Pool Name Airstrip Bone Springs	Top of Pay 9329	Bottom of Pay 9392	Currently Producing? Yes
Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Comparable Pool 1250' SE			

Is "County Deep" Discovery Allowable Requested for Subject Discovery Well? No	If Yes, Give Name, Location, and Depth of Next Deepest Oil Production in this County
---	--

Is the Subject Well Multiple Completion? No	Is Discovery Allowable Requested for other Zone(s)? No	If Yes, Name all Such Formations
---	--	----------------------------------

LIST ALL OPERATORS OWNING LEASES WITHIN ONE MILE OF THIS WELL (Attach additional sheet if necessary)


NAME	ADDRESS
Mesa Petroleum Co.	P. O. Box 1756, Hobbs, NM 88240
Cities Service Co.	Box 1919, Midland, TX 79701
Southland Royalty Co.	1100 Wall Towers West, Midland, TX 79701
Bass & Richardson	P. O. Box 2760, Midland, TX 79702
P. R. Bass	P. O. Box 2760, Midland, TX 79702
Gulf	P. O. Box 1509, Midland, TX 79702

Attach evidence that all of the above operators have been furnished a copy of this application. Any of said operators who intends to object to the designation of the subject well as a discovery well, eligible to receive a discovery allowable, must notify the appropriate District Office and the Santa Fe Office of the Commission of such intent in writing within ten days after receiving a copy of this application.

Remarks:

CERTIFICATION

I hereby certify that all rules and regulations of the New Mexico Oil Conservation Commission have been complied with, with respect to the subject well, and that it is my opinion that a bona fide discovery of a hitherto unknown common source of oil supply has been made in said well. I further certify that the discovery allowable for the subject well, if authorized, will be produced from the subject zone in this well only. Further, that the information given herein and attached hereto is true and complete to the best of my knowledge and belief.


J.C. Allen Senior Petroleum Engineering Supervisor 11/19/79
 Signature Position Date

**NEW MEXICO OIL CONSERVATION COMMISSION
APPLICATION FOR DISCOVERY ALLOWABLE AND CREATION OF A NEW POOL**

Form C-109
Adopted 9-1-66

NOTE: This form is to be filed and attachments made in accordance with the provisions of Rule 509.
If discovery is claimed for more than one zone, separate forms must be filed for each.

Operator Amoco Production Company		Address P. O. Box 68, Hobbs, NM 88240	
Lease Name State "FU"		Well No. 1	County Lea
Well Location Unit Letter K ; 1980 Feet from The south Line and 1980 Feet From the west Line of Section 25 , Township 18-S , Range 34-E , NMPM			
Suggested Pool Names (List in order of preference) 1. Airstrip (Upper Bone Springs)			
Name of Producing Formation Bone Springs		Perforations 9182' - 9260'	Date of Filing Form C-104 10-30-79
Was "Affidavit of Discovery" Previously Filed For This Well in this Pool? No		If Yes, Give Date of Filing	Date Well was Spudded 9-13-79
			Date Compl. Ready to Prod. 10-5-79
Total Depth 13490'	Plugged Back Depth 12088'	Depth Casing Shoe 12140'	Tubing Depth 9160'
		Elevation (Gr., DF, RKB, RT, etc.) 3965.9 GR	
Oil Well Potential (Test to be taken only after all load oil has been recovered) 319 Bbls. Oil Per Day Based On 319 Bbls In 24 Hours; 0 Bbls Water Per Day Based On 0 Bbls in 24 Hours; Gas Production During Test: 272 MCF; Gas-Oil Ratio: 852 Method Of Producing: flowing Chk. Size 17/64			

NEAREST PRODUCTION TO THIS DISCOVERY (Includes past and present oil or gas producing areas and zones whether this discovery is based on horizontal or vertical separation):

Pool Name Airstrip Bone Springs	Name of Producing Formation Bone Springs	Top of Pay 9329'	Bottom of Pay 9392'	Currently Producing? Yes
Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Pool 1750' SE		Vertical Distance from Subject Discovery Zone to Producing Interval this Pool 70'		

NEAREST COMPARABLE PRODUCTION (Includes past and present oil or gas production from this pay or formation only):

Pool Name Airstrip Bone Springs	Top of Pay 9329'	Bottom of Pay 9392'	Currently Producing? Yes
Horizontal Distance and Direction from Subject Discovery Well to the Nearest Well in this Comparable Pool 1750' SE			

Is "County Deep" Discovery Allowable Requested for Subject Discovery Well? No	If Yes, Give Name, Location, and Depth of Next Deepest Oil Production in this County
---	--

Is the Subject Well Multiple Completion? Yes	Is Discovery Allowable Requested for other Zone(s)? No	If Yes, Name all Such Formations
--	--	----------------------------------

LIST ALL OPERATORS OWNING LEASES WITHIN ONE MILE OF THIS WELL (Attach additional sheet if necessary)


NAME	ADDRESS
Mesa Petroleum Co.	P. O. Box 1756, Hobbs, NM 88240
Cities Service Co.	Box 1919, Midland, TX 79701
Southland Royalty Co.	1100 Wall Towers West, Midland, TX 79701
Bass & Richardson	P. O. Box 2760, Midland, TX 79702
P. R. Bass	P. O. Box 2760, Midland, TX 79702
Gulf	P. O. Box 1509, Midland, TX 79702

Attach evidence that all of the above operators have been furnished a copy of this application. Any of said operators who intends to object to the designation of the subject well as a discovery well, eligible to receive a discovery allowable, must notify the appropriate District Office and the Santa Fe Office of the Commission of such intent in writing within ten days after receiving a copy of this application.

Remarks:

CERTIFICATION

I hereby certify that all rules and regulations of the New Mexico Oil Conservation Commission have been complied with, with respect to the subject well, and that it is my opinion that a bona fide discovery of a hitherto unknown common source of oil supply has been made in said well. I further certify that the discovery allowable for the subject well, if authorized, will be produced from the subject zone in this well only. Further, that the information given herein and attached hereto is true and complete to the best of my knowledge and belief.


J.C. Allen Senior Petroleum Engineering Supervisor **11/19/79**
 Signature Position Date



Amoco Production Company

Houston Region
500 Jefferson Building
Post Office Box 3092
Houston, Texas 77001

J. R. Barnett
Regional Engineering
Manager

November 14, 1979

File: JCA-986.51NM-4119

Case 6756

Re: HEARING REQUEST FOR DEFINING VERTICAL LIMITS
AIRSTRIIP (BONE SPRINGS) AND DUAL COMPLETION
AMOCO STATE "FU" NO. 1
SECTION 25, T-18-S, R-34-E
LEA COUNTY, NEW MEXICO

Oil Conservation Division (3)
Energy and Minerals Department
P. O. Box 2088
Santa Fe, NM 87501

ATTN: Mr. Joe D. Ramey

Dear Mr. Ramey:

Confirming telephone request of November 13, 1979, Amoco Production Company requests a hearing to consider contracting the vertical limits of the Airstrip (Bone Springs) Pool to 9300'-9460' and renaming it the Airstrip (Middle Bone Springs), creation of the Airstrip (Upper Bone Springs) with vertical limits of 9180'-9260' and creation of the Airstrip (Lower Bone Springs) with vertical limits of 10,100'-10,400'. All depth measurements refer to Amoco's State "FU" Well No. 2. Amoco will also request approval to dually complete its State "FU" No. 1 Well in the Airstrip (Upper Bone Springs) and Airstrip (Middle Bone Springs) oil pools.

In support of our request attached are the appropriate number of copies of Form C-109, Application for Discovery Allowable and Creation of a New Pool, with exhibits and Form C-107, Application for Multiple Completion, with exhibits.

Mr. Joe D. Ramey
Page Two
November 14, 1979

Also attached is an affidavit covering the testing of the proposed
Airstrip (Lower Bone Springs) in the Amoco State "FU" No. 2 well.

Please direct any questions to Mr. Jim Allen, phone: (713) 652-5497.

Yours very truly,



JCA/rw

Attachment

cc: Mr. V. E. Staley - Hobbs, New Mexico
Mr. Guy T. Buell - 1604

cc: Oil Conservation Division
New Mexico Dept. of Energy & Minerals
P.O. Box 1980
Hobbs, New Mexico

Attention: Mr. Jerry T. Sexton

11-13-79

urg
Dec 12, 79

Jim Allen
(713) 652-5497

Amoco Production Company

- 1 Contract the vertical limits Air Strip B.S. Pool to 9300 to 9460 and redesignate said pool Air Strip Middle BS Pool.
- 2 Create Air Strip Upper BS vert limits 9180 to 9260. This well is # FU # 1
- 3 Create Air Strip Lower BS Pool vert limits 10100 to 10400 This is FU # 2 perf. 10262' Design allowance 51300 bbls (51310) type log:
Amoco St FU # 2 N of Sec 25-18S-34E Rm
- 4 Dual compl
St FU well # 1 loc K 25-18S-34E Rm
in Air Strip Upper
Air Strip Middle
parallel strings of 469

Nov. 28
 Jim Bane
 523004
 Houston

Air Strip Bone Springs
 SE 1/4 Sec 25-18-34

one zone 10,260' C-104 under BS
 290

would PB to Gulf zone
 @ 9329-92

#1 was WC tested
 Gulf zone 9302.
 subd 50 BO & EBLW

BS:

upper

9180
 9260

middle

9300
 9460

lower

9460

10260
 10290

10,100
 10,400

1800
 paid

at BP and perf
 9182-9259

upper

319 BOPD

3712 psi

would dual

St Fll #1 K 25-18-34 Lea

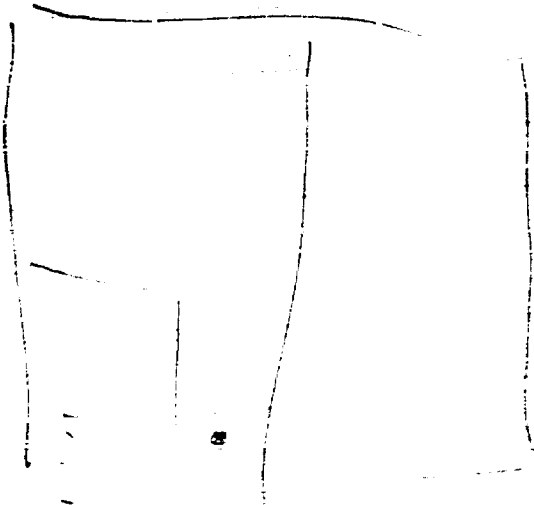
upper & middle

9182-9259

9302-9370

St FA #2 middle zone

~~middle~~



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. 6756
Order No. R-6255
NOMENCLATURE

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR POOL CONTRACTION AND
CREATION, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on December 12, 1979, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this 16th day of January, 1980, 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 in this case, Amoco Production Company, requested the contraction of the vertical limits of the Air Strip-Bone Spring Pool in Section 25, Township 18 South, Range 34 East, NMPN, Lea County, New Mexico, to comprise the Middle Bone Spring formation only, from 9300 feet to 9460 feet, and the creation of the Air Strip-Upper Bone Spring Pool to comprise the Upper Bone Spring formation only, from 9180 feet to 9260 feet, and the creation of the Air Strip-Lower Bone Spring Pool, to comprise the Lower Bone Spring formation only, from 10,100 feet to 10,400 feet, all depths being from the log of applicant's State PU Well No. 2, located in Unit N of the aforesaid Section 25.
- (3) That the applicant further seeks the assignment of 51,310 barrels of oil discovery allowable to its State PU Well No. 2 as the discovery well for the proposed Air Strip-Lower Bone Spring Pool.

-2-

Case No. 6756
Order No. R-6255

(4) That at the hearing, the applicant amended its application and now requests that the Air Strip-Bone Spring Pool be contracted to include the upper and middle sections of the Bone Spring formation only, with vertical limits from 9180 feet to 9460 feet and that only the new Lower Bone Spring pool described in Finding No. (2) above be created.

(5) That it appears that the upper section of the Bone Spring formation, taken by itself, is non-commercial and should be combined with the middle section of the Bone Spring formation to designate a pool, and that said pool should be known as the Air Strip-Upper Bone Spring Pool with vertical limits from 9180 feet to 9460 feet on the log of the Amoco State FU Well No. 2 located in Unit N of Section 25, Township 18 South, Range 34 East, NMPM, Lea County, New Mexico, and with horizontal limits comprising the following described lands:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 25: SE/4 and E/2 SW/4

(6) That to accomplish the above-described designation of an upper Bone Spring pool, it would be best to contract the vertical limits of the present Air Strip-Bone Spring Pool to the limits described above, extend the horizontal limits of said pool to the horizontal limits described above, and redesignate said pool the Air Strip-Upper Bone Spring Pool.

(7) That there is need for the creation of a lower Bone Spring pool, said pool to be designated the Air Strip-Lower Bone Spring Pool and have vertical limits from 10,100 feet to 10,400 feet on the log of the above-described Amoco State FU Well No. 2, and horizontal limits comprising the following described lands:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 25: SW/4

(8) That the discovery well for the aforementioned Air Strip-Lower Bone Spring Pool, the Amoco State FU Well No. 2, located in Unit N of Section 25, Township 18 South, Range 34 East, NMPM, should have reserved to it 51,310 barrels of oil discovery allowable, with actual assignment of the discovery allowable deferred until said well is recompleted in the afore-said Air Strip-Lower Bone Spring Pool.

(9) That an order embodying the above findings will not impair correlative rights nor cause waste and should be approved.

IT IS THEREFORE ORDERED:

(1) That the Air Strip-Bone Spring Pool in Lea County, New Mexico, is hereby redesignated the Air Strip-Upper Bone Spring Pool, and the vertical limits of said Air Strip-Upper Bone Spring Pool are established as being that interval in the Bone Spring formation from 9180 feet to 9460 feet on the log of the Amoco State PU Well No. 2 located in Unit N of Section 25, Township 18 South, Range 34 East, NMPM, Lea County, New Mexico, and the horizontal limits of said pool are established as comprising the following described area:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 25: SE/4 and E/2 SW/4

(2) That a new pool for Lower Bone Spring production, classified as an oil pool and designated the Air Strip-Lower Bone Spring Pool is hereby created, with vertical limits established as being that interval in the Bone Spring formation from 10,100 feet to 10,400 feet on the log of the aforementioned Amoco State PU Well No. 2, and the horizontal limits of said pool are established as comprising the following described lands in Lea County, New Mexico:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 25: SW/4

(3) That the discovery well for the aforesaid Air Strip-Lower Bone Spring Pool, the Amoco Production Company State PU Well No. 2, located in Unit N of Section 25, Township 18 South, Range 34 East, NMPM, shall have reserved to it 51,310 barrels of oil discovery allowable, with actual assignment of such discovery allowable to the well for production deferred until such time as the well has been recompleted in the Lower Bone Spring formation. Assignment and production of the discovery allowable shall in all other ways comply with the provisions of Rule 509 of the Division's Rules and Regulations.

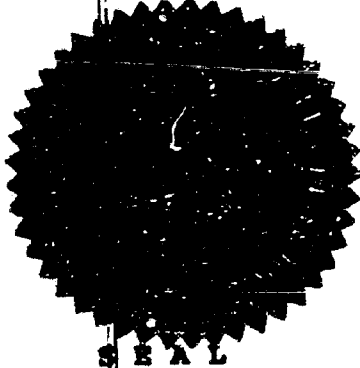
(4) That this order shall become effective January 1, 1980.

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

-4-

Case No. 6756
Order No. R-6255

DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.



STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

Joe D. Famey
JOE D. FAMEY
Director

22/

ROUGH

dr/

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. 6756

Order No. R-6255

NOMENCLATURE

APPLICATION OF AMOCO PRODUCTION
COMPANY FOR POOL CONTRACTION AND
CREATION, LEA COUNTY, NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 9 a.m. on December 12
1979, at Santa Fe, New Mexico, before Examiner Daniel S. Nutter.

NOW, on this _____ day of January, 19 80, 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 in this case, Amoco Production Company,
requested the contraction of the vertical limits of the Air Strip-
Bone Spring Pool in Section 25, Township 18 South, Range 34 East,
NMPM, Lea County, New Mexico, to comprise the Middle Bone Spring
formation only, from 9300 feet to 9460 feet, and the creation of

the Air Strip-Upper Bone Spring Pool to comprise the Upper Bone Spring formation only, from 9180 feet to 9260 feet, and the creation of the Air Strip Lower Bone Spring Pool, to comprise the Lower Bone Spring formation only, from 10,100 feet to 10,400 feet, all depths being from the log of applicant's State FU Well No. 2, located in Unit N of the aforesaid Section 25.

(3) That the applicant further seeks the assignment of 51,310 barrels of oil discovery allowable to its State FU Well No. 2 as the discovery well for the proposed Air Strip-Lower Bone Spring Pool, ~~with actual assignment of the discovery allowable to the well for production deferred until said well is recompleted in the Lower Bone Spring Pool.~~

(4) That at the hearing, the applicant amended its application and now requests that the Air Strip-Bone Spring Pool be contracted to include the upper and middle sections of the Bone Spring formation only, with vertical limits from 9180 feet to 9460 feet and ~~that a new Lower Bone Spring pool be created, designated the Air Strip-Lower Bone Spring Pool in the lower section of the Bone Spring formation only, with vertical limits from 10,100 feet to 10,400 feet.~~ *only the described in Finding No. 2 above*

(5) That it appears that the upper section of the Bone Spring formation, taken by itself, is non-commercial and should be combined with the middle section of the Bone Spring formation to designate a pool, and that said pool should be known as the Air Strip-Upper Bone Spring Pool with vertical limits from 9180 feet to 9460 feet on the log of the Amoco State FU Well No. 2 located in Unit N of Section 25, Township 18 South, Range 34 East, NMPM, Lea County, New Mexico, and with horizontal limits comprising the following described lands:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 25: SE/4 and E/2 SW/4

(6) That to accomplish the above-described designation of an upper Bone Spring pool, it would be best to contract the vertical limits of the present Air Strip-Bone Spring Pool to the limits described above, extend the horizontal limits of said pool to the horizontal limits described above, and redesignate said pool the Air Strip-Upper Bone Spring Pool.

(7) That there is need for the creation of a lower Bone Spring Pool, said pool to be designated the Air Strip-Lower Bone Spring Pool and have vertical limits from 10,100 feet to 10,400 feet on the log of the above-described Amoco State FU Well No. 2, and horizontal limits comprising the following described lands:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 25: SW/4

(8) That the discovery well for the aforementioned Air Strip-Lower Bone Spring Pool, the Amoco State FU Well No. 2, located in Unit N of Section 25, Township 18 South, Range 34 East, NMPM, should have reserved to it 51,310 barrels of oil discovery allowable, with actual assignment of the discovery allowable deferred until said well is recompleted in the aforesaid Air Strip-Lower Bone Spring Pool.

(9) That an order embodying the above findings will not impair correlative rights nor cause waste and should be approved.

IT IS THEREFORE ORDERED:

(1) That the Air Strip-Bone Spring Pool in Lea County, New Mexico, is hereby redesignated the Air Strip-Upper Bone Spring Pool, and the vertical limits of said Air Strip-Upper Bone Spring Pool are established as being that interval in the Bone Spring formation from 9180 feet to 9460 feet on the log of the Amoco State FU Well No. 2 located in Unit N of Section 25, Township 18 South, Range 34 East, NMPM, Lea County, New Mexico, and the horizontal limits of said pool are established as comprising the following described area:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 25: SE/4 and E/2 SW/4

(2) That a new pool for Lower Bone Spring production, classified as an oil pool and designated the Air Strip-Lower Bone

Spring Pool is hereby created, with vertical limits established as being that interval in the Bone Spring formation from 10,100 feet to 10,400 feet on the log of the aforementioned Amoco State FU Well No. 2, and the horizontal limits of said pool are established as comprising the following described lands in Lea County, New Mexico:

TOWNSHIP 18 SOUTH, RANGE 34 EAST, NMPM
Section 25: SW/4

(3) That the discovery well for the aforesaid Air Strip-Lower Bone Spring Pool, the Amoco Production Company State FU Well No. 2, located in Unit N of Section 25, Township 18 South, Range 34 East, NMPM, shall have reserved to it 51,310 barrels of oil discovery allowable, with actual assignment of such discovery allowable to the well for production deferred until such time as the well has been recompleted in the Lower Bone Spring formation. Assignment and production of the discovery allowable shall in all other ways comply with the provisions of Rule 509 of the Division's Rules and Regulations.

(4) That this order shall become effective February 1, 1980.

(5) That jurisdiction of this cause is hereby 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.

A-F-F-I-D-A-V-I-T

Amoco Production Company drilled the State "FU" Well No. 2 at a location of 1980' FWL and 960' FSL, Sec. 25, T-18-S, R-34-E, Lea County, New Mexico. The subject well was spudded on July 28, 1979 and reached total depth of 10,800' on August 24, 1979. The well was permitted as a development oil well in the Undesignated Airstrip Wolfcamp field at a standard location.

The Amoco State "FU" Well No. 2 encountered a new reservoir in the Lower Bone Springs horizon and tested the interval 10,262'-10,272'. Testing of this discovery zone in the Bone Springs commenced when a Service Unit was moved in on August 31, 1979. The Bone Springs was perforated 10,262'-10,272' with 2 JSPF and acidized with 2,000 gallons. After the well cleaned up, Amoco ran a potential test and completed the well on September 13, 1979. Potential test was 361 BOPD, 0 BWPD, GOR of 651, flowing with a TPF of 1200 psi on a 10/64" choke.

There is additional Bone Springs development up the hole in the well which Amoco plans to test. The Lower Bone Springs, 10,262'-10,272' will be isolated with a Bridge Plug and two Upper Bone Springs zones at 9212-9240 and 9360-9432 will be tested.

This affidavit is to support Amoco's discovery of the new reservoir in the Lower Bone Springs which is productive in the interval 10,262'-10,272', pursuant to New Mexico Oil Conservation Division Statewide Rule 509.



J. C. ALLEN
SENIOR PETROLEUM ENGINEERING SUPERVISOR

SWORN TO AND SUBSCRIBED BEFORE ME, BY J. C. Allen ON THIS
14TH DAY OF NOVEMBER, 1979, TO CERTIFY WHICH WITNESS MY HAND AND SEAL OF
OFFICE.



SANDY BROWN
NOTARY PUBLIC IN AND FOR HARRIS CO., TEXAS

SANDRA J. BROWN
Notary Public in Harris County, Texas
My Commission Expires 4-28-80

MY COMMISSION EXPIRES

4-28-80

Application of Amaco Production Co for
pool contraction and creation, Lea
County, New Mexico

Applicant, in the above styled cause seeks
the contraction of the vertical limits of the
Air Strip - Bone Spring Pool to comprise the
Middle Bone Spring formation only, from
9300 feet to 9460 feet, and the creation
of the Air Strip - Upper Bone Spring Pool to
comprise the formation from 9180 feet to 9260
feet and the Air Strip Lower Bone Spring Pool
to comprise the formation from 10100 feet to
10400 feet. All depths are from the log of the Amaco
State Well No. 2 in Unit No. 1 of Section
25, Township 18 South, Range 34 East, for which
wells applicant also seeks 51,310 barrels of discovery
allowance.

ATWOOD, MALONE, MANN & COOTER

A PROFESSIONAL ASSOCIATION
LAWYERS

JEFF D. ATWOOD [1883-1960]
ROSS L. MALONE [1910-1974]

P. O. DRAWER 700
SECURITY NATIONAL BANK BUILDING
ROSWELL, NEW MEXICO 88201
[505] 622-6221

CHARLES F. MALONE
RUSSELL D. MANN
PAUL A. COOTER
BOB F. TURNER
JOHN W. BASSETT
ROBERT E. SABIN
BRIAN W. COPPLE

RANDAL W. ROBERTS
STEVEN L. BELL
WILLIAM R. LYNCH

December 6, 1979

Mr. Joe Ramey
Secretary-Director
Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

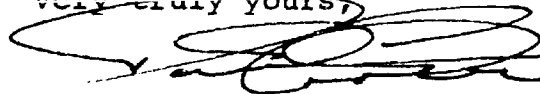
RE: Examiner Hearing - Wednesday, December 12, 1979
Cause No. 6756
Cause No. 6757
Cause No. 6758

Dear Mr. Ramey:

We would appreciate your filing the three enclosed
Entries of Appearance for Amoco Production Company in the
above captioned causes.

Your assistance in this matter is greatly appreciated.

Very truly yours,

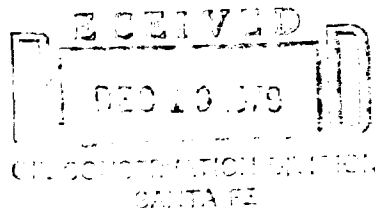


Paul Cooter

PC/le

Enc.

cc: Guy Buell, Esq. (w/enc.)



BEFORE THE OIL CONSERVATION COMMISSION
STATE OF NEW MEXICO

IN THE MATTER OF THE APPLICATION)
OF AMOCO PRODUCTION COMPANY FOR)
POOL CONTRACTION AND CREATION,)
LEA COUNTY, NEW MEXICO.)

NO. 6756

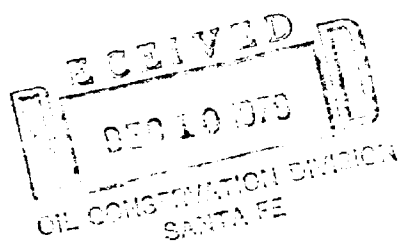
ENTRY OF APPEARANCE

The undersigned hereby enter their appearance on
behalf of Amoco Production Company with Guy Buell of Houston,
Texas.

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

By 

P. O. Drawer 700
Roswell, New Mexico 88201



Docket No. 45-79

Dockets Nos. 1-80 and 2-80 are tentatively set for January 3 and 16, 1980. Applications for hearing must be filed at least 22 days in advance of hearing date.

DOCKET: EXAMINER HEARING - WEDNESDAY - DECEMBER 12, 1979

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:

- ALLOWABLE: (1) Consideration of the allowable production of gas for January, 1980, from fifteen prorated pools in Lea, Eddy, and Chaves Counties, New Mexico.
- (2) Consideration of the allowable production of gas for January, 1980, from four prorated pools in San Juan, Rio Arriba, and Sandoval Counties, New Mexico.
- CASE 6752: Application of Bill Stapler for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the Quark Unit Area, comprising 11,200 acres, more or less, of State and Federal lands in Township 22 South, Range 34 East.
- CASE 6753: Application of Amax Chemical Corporation for the amendment of Order No. R-111-A, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-111-A to extend the boundaries of the Potash-Oil Area by the inclusion of certain lands in Sections 26 and 27, Township 19 South, Range 29 East.
- CASE 6754: Application of Petroleum Development Corporation for a non-standard gas proration unit and an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location for a well to be drilled 660 feet from the North and West lines of Section 15, Township 19 South, Range 32 East, Lusk-Morrow Gas Pool, the W/2 of said Section 15 to be dedicated to the well as a non-standard 320-acre proration unit.
- CASE 6755: Application of Dome Petroleum Corporation for water disposal, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to extend the previously authorized water disposal interval in its Santa Fe 20 Well No. 2 located in Unit F of Section 20, Township 21 North, Range 8 West, Snake Eyes-Entrada Oil Pool, to include the perforated interval from 5756 feet to 5790 feet in the Entrada formation.
- CASE 6756: Application of Amoco Production Company for pool contraction and creation, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the contraction of the vertical limits of the Air Strip-Bone Spring Pool to comprise the Middle Bone Spring formation only, from 9300 feet to 9460 feet, and the creation of the Air Strip-Upper Bone Spring Pool to comprise said formation from 9180 feet to 9260 feet and the Air Strip-Lower Bone Spring Pool to comprise said formation from 10,100 feet to 10,400 feet. All depths are from the log of the Amoco State FU Well No. 2 in Unit N of Section 25, Township 18 South, Range 34 East, for which well applicant also seeks 51,310 barrels of discovery allowable.
- CASE 6757: Application of Amoco Production Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion (conventional) of its State FU Well No. 1 located in Unit K of Section 25, Township 18 South, Range 34 East, to produce oil from the Air Strip Upper and Middle Bone Spring Pools thru parallel strings of tubing.
- CASE 6758: Application of Amoco Production Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the dual completion of its State "C" Tract 11 Well No. 11 located in Unit X of Section 2, Township 21 South, Range 36 East, to produce oil from the Hardy-Blinbry Pool and an undesignated Drinkard pool through parallel strings of tubing.
- CASE 6719: (Continued and Readvertised)
- Application of Sam H. Snoddy for an amendment to Order No. R-5521, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the amendment of Order No. R-5521, which authorizes the directional drilling of the Federal Well No. 2 in Section 25, Township 20 South, Range 32 East, to permit the well to be bottomed within 400 feet of a point 1320 feet from the South and West lines of Section 25.
- CASE 6759: Application of Sun Oil Company for an unorthodox location, non-standard gas proration unit, infill findings, simultaneous dedication, and downhole commingling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Reeves Well No. 6, 660 feet from the North line and 610 feet from the East line of Section 29, Township 20 South, Range 31 East, Eumont Gas Pool, to be simultaneously dedicated with its Reeves Well No. 2 in Unit D of Section 29 to a 160-acre non-standard gas proration unit comprising the N/2 N/2 of Section 29. Also sought are findings that the proposed well is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing unit well, and authority to commingle Eumont and Monument production in the wellbore of the proposed well.

- CASE 6760:** Application of Sun Oil Company for an unorthodox location, non-standard gas proration unit, infill findings, and simultaneous dedication, Roosevelt County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its State "AY" Well No. 5, located in Unit E of Section 36, Township 7 South, Range 35 East, Todd-Upper San Andres Gas Pool, to be simultaneously dedicated with its State "AY" Well No. 3 in Unit F of Section 36 to a 160-acre non-standard gas proration unit comprising the NW/4 of Section 36. Also sought are findings that the proposed well is necessary to effectively and efficiently drain that portion of the proration unit which cannot be so drained by the existing unit well.
- CASE 6761:** Application of Phillips Petroleum Company for an unorthodox gas well location and approval of infill drilling, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of an Atoka-Morrow test well to be drilled 660 feet from the North and West lines of Section 2, Township 24 South, Range 28 East; applicant further seeks a finding that the drilling of said well is necessary to effectively and efficiently drain that portion of the proration unit, being the W/2 of said Section 2, which cannot be so drained by the existing well.
- CASE 6762:** Application of Joe Don Cook for an exception to Order No. R-3221, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221 to permit disposal of produced brine into an unlined surface pit located in Section 1, Township 19 South, Range 31 East, Shugart Pool.
- CASE 6763:** Application of Adams Exploration Company for compulsory pooling and an unorthodox location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the North Osudo-Morrow Gas Pool underlying Section 16, Township 20 South, Range 36 East, to be dedicated to a well to be drilled at an unorthodox location 660 feet from the South and West lines of said Section 16. 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. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6729:** (Continued from November 14, 1979, Examiner Hearing)
- Application of Adams Exploration Company for compulsory pooling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order pooling all mineral interests in the Pennsylvanian formation underlying Section 16, Township 20 South, Range 36 East, North Osudo-Morrow Gas 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 well and the allocation of the cost thereof as well as actual operating costs and charges for supervision. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well.
- CASE 6725:** (Continued from November 28, 1979, Examiner Hearing)
- Application of Tenneco Oil Company for three non-standard gas proration units, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 291.23-acre non-standard gas proration unit comprising the W/2 of Section 6 and the NW/4 of Section 7, a 347.58-acre unit comprising the W/2 of Section 19 and the NW/4 of Section 30, and a 375.17-acre unit comprising the SW/4 of Section 30 and the W/2 of Section 31, all in Township 29 North, Range 8 West, Basin-Dakota Pool, each unit to be dedicated to a well to be drilled at a standard location thereon.
- CASE 6751:** (Continued from November 28, 1979, Examiner Hearing)
- Application of Tenneco Oil Company for the rescission of special pool rules, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks the rescission of the special pool rules for the Catclaw Draw-Morrow Gas Pool to provide for 320-acre spacing rather than 640 acres. In the absence of objection, the pool rules will be rescinded and the pool placed on standard 320-acre spacing for Pennsylvanian gas pools rather than the present 640-acre spacing.
- CASE 6764:** Application of Lee Crane for surface commingling, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the surface commingling of undesignated Ojo Alamo and Oswell-Farmington production from his Martin Wells Nos. 1 and 3 located in Section 34, Township 30 North, Range 11 West.
- CASE 6765:** Application of Mesa Petroleum Company for an exception to Order No. R-111-A and an unorthodox well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the casing-cementing rules of Order No. R-111-A to complete its Bass Federal Well No. 2 to be drilled at an unorthodox location 1450 feet from the North line and 1850 feet from the West line and its Bass Federal Well No. 3 to be drilled in Unit D, both in Section 6, Township 20 South, Range 31 East, by setting surface casing in the "Red Bed" section of the basal Rustler formation and production casing at total depth. Both casing strings would have cement circulated to the surface.

CASE 6766: Application of Supton Energy Corporation for two non-standard gas proration units, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval of two non-standard gas proration units, the first being 192.97 acres comprising the W/2 of Section 7, Township 28 North, Range 10 West, and the E/2 E/2 of Section 12, Township 28 North, Range 11 West, for the Fruitland, Pictured Cliffs and Chacra formations, and the second being 190.89 acres comprising the W/2 and W/2 E/2 of said Section 12 for the Fruitland formation only, both units to be dedicated to wells to be drilled at standard locations thereon.

CASE 6700: (Reopened and Readvertised)

Application of Doyle Hartman to reopen Case No. 6700, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the reopening of Case No. 6700, heard October 17, 1979, to amend the original unorthodox well location 2310 feet from the North line and 330 feet from the West line of Section 29, Township 25 South, Range 37 East, to a new unorthodox location 1870 feet from the North line and 280 feet from the West line of said Section 29. All other aspects of Case No. 6700 would remain the same.

CASE 6767: Application of Alpha Twenty-One Production Company for two non-standard gas proration units, unorthodox well location, and approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 40-acre non-standard proration unit comprising the NW/4 NW/4 of Section 27, Township 25 South, Range 37 East, Jalmat Gas Pool, to be dedicated to El Paso Natural Gas Company's Harrison Well No. 2, and also a 200-acre unit comprising the S/2 N/2 and NE/4 NW/4 of said Section 27 to be dedicated to a well to be drilled at an unorthodox location 1980 feet from the North line and 560 feet from the West line of Section 27. Applicant further seeks a finding that the drilling of the latter well is necessary to effectively and efficiently drain that portion of an existing proration unit which cannot be so drained by the existing well.

CASE 6768: Application of Alpha Twenty-One Production Company for two non-standard gas proration units, compulsory pooling, unorthodox well location, and approval of infill drilling, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of a 40-acre non-standard gas proration unit comprising the SW/4 SW/4 of Section 21, Township 24 South, Range 37 East, Jalmat Gas Pool, to be dedicated to the El Paso Natural Gas Company Shell Black Well No. 2. Applicant also seeks an order pooling all mineral interests in the Jalmat Gas Pool underlying the E/2 SW/4 and NW/4 SE/4 of said Section 21 to form a 120-acre non-standard gas proration unit to be dedicated to a well to be drilled at an unorthodox location 990 feet from the South line and 1650 feet from the West line of said Section 21. 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. Also to be considered will be the designation of applicant as operator of the well and a charge for risk involved in drilling said well. Applicant further seeks a finding that the drilling of said well is necessary to effectively and efficiently drain that portion of the existing proration unit which cannot be so drained by the existing well.

CASE 6656: (Continued from October 2, 1979, Examiner Hearing)

In the matter of the hearing called by the Oil Conservation Division on its own motion to permit Energy Oil & Gas Corp., The Travelers Indemnity Co., and all other interested parties to appear and show cause why the Sadler Well No. 1 located in Unit I of Section 3, Township 24 North, Range 29 East, Union County, New Mexico, should not be plugged and abandoned in accordance with a Division-approved plugging program.

CASE 6769: In the matter of the hearing called by the Oil Conservation Division on its own motion for an order creating, reclassifying, and extending certain pools in Chaves, Eddy, Lea, and Roosevelt Counties, New Mexico:

(a) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the West Double Y-Morrow Gas Pool. The discovery well is Union Oil Company of California Paduca Federal Well No. 1 located in Unit G of Section 30, Township 24 South, Range 32 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 32 EAST, NMPM
Section 30: E/2

(b) CREATE a new pool in Eddy County, New Mexico, classified as a gas pool for Atoka production and designated as the Dublin Ranch-Atoka Gas Pool. The discovery well is J. C. Barnes Little Squaw Com Well No. 2 located in Unit N of Section 27, Township 22 South, Range 28 East, NMPM. Said pool would comprise:

TOWNSHIP 22 SOUTH, RANGE 28 EAST, NMPM
Section 27: S/2

(c) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the Gem-Morrow Gas Pool. The discovery well is Union Oil Company of California Maduro Unit Federal Well No. 1 located in Unit J of Section 29, Township 19 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM
Section 29: S/2

(d) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Morrow production and designated as the East Gem-Morrow Gas Pool. The discovery well is Union Oil Company of California Laguna Deep Unit Federal Well No. 1 located in Unit G of Section 35, Township 19 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 19 SOUTH, RANGE 33 EAST, NMPM
Section 35: N/2

(e) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Atoka production and designated as the Halfway-Atoka Gas Pool. The discovery well is Amoco Production Company Federal Y Com Well No. 1 located in Unit G of Section 27, Township 20 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 20 SOUTH, RANGE 33 EAST, NMPM
Section 27: E/2

(f) CREATE a new pool in Lea County, New Mexico, classified as an oil pool for Devonian production and designated as the Midway-Devonian Pool. The discovery well is David Fasken Warren Well No. 1 located in Unit G of Section 8, Township 17 South, Range 37 East, NMPM. Said pool would comprise:

TOWNSHIP 17 SOUTH, RANGE 37 EAST, NMPM
Section 8: NE/4

(g) CREATE a new pool in Lea County, New Mexico, classified as a gas pool for Atoka production and designated as the East Triste Draw-Atoka Gas Pool. The discovery well is Getty Oil Company State 29 J Well No. 1 located in Unit J of Section 29, Township 24 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 24 SOUTH, RANGE 33 EAST, NMPM
Section 29: E/2

(h) CREATE a new pool in Roosevelt County, New Mexico, classified as an oil pool for Bough C production and designated as the Tucker Ranch-Bough C Pool. The discovery well is Pauley Petroleum, Inc. Tucker Well No. 1 located in Unit J of Section 9, Township 7 South, Range 33 East, NMPM. Said pool would comprise:

TOWNSHIP 7 SOUTH, RANGE 33 EAST, NMPM
Section 9: SE/4

(i) RECLASSIFY the Oil Center-Glorieta Pool in Lea County, New Mexico, as the Oil Center-Glorieta Gas Pool. The pool was created by Order R-5988 as an oil pool but was advertised as a gas pool.

(j) EXTEND the Angell Ranch-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM
Section 1: W/2
Section 2: N/2

(k) EXTEND the Atoka-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 26 EAST, NMPM
Section 28: S/2 SE/4

(l) EXTEND the Atoka-Yeso Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 13 SOUTH, RANGE 26 EAST, NMPM
Section 34: E/2 NW/4

(m) EXTEND the Austin-Mississippian Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 14 SOUTH, RANGE 36 EAST, NMPM
Section 16: N/2

- (n) EXTEND the Blinebry Oil and Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 38 EAST, NMPM
Section 20: SE/4

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM
Section 18: SW/4

TOWNSHIP 22 SOUTH, RANGE 36 EAST, NMPM
Section 1: NW/4

- (o) EXTEND the Bluitt-Wolfcamp Gas Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 37 EAST, NMPM
Section 3: NE/4

- (p) EXTEND the South Brunson-Granite Wash Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 38 EAST, NMPM
Section 31: NE/4

- (q) EXTEND the Cass Draw-Wolfcamp Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 27 EAST, NMPM
Section 11: W/2

- (r) EXTEND the Chaveroo-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 32 EAST, NMPM
Section 3: SE/4

- (s) EXTEND the Cinta Roja-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 24 SOUTH, RANGE 35 EAST, NMPM
Section 10: All

- (t) EXTEND the Comanche-San Andres Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 11 SOUTH, RANGE 26 EAST, NMPM
Section 14: NW/4 NW/4

- (u) EXTEND the Corbin-Queen Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 17 SOUTH, RANGE 33 EAST, NMPM
Section 34: NE/4

- (v) EXTEND the South Culebra Bluff-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 23 SOUTH, RANGE 28 EAST, NMPM
Section 35: S/2

- (w) EXTEND the Diablo-San Andres Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 27 EAST, NMPM
Section 15: SW/4 SW/4

- (x) EXTEND the Golden Lane-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 29 EAST, NMPM
Section 36: E/2

- (y) EXTEND the East Grama Ridge-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 34 EAST, NMPM
Section 34: E/2

- (z) EXTEND the Langley-Devonian Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 22 SOUTH, RANGE 36 EAST, NMPM
Section 20: E/2

- (aa) EXTEND the Lovington-San Andres Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 37 EAST, NMPM
Section 28: S/2
Section 29: S/2

- (bb) EXTEND the North Lusk-Morrow Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 32 EAST, NMPM
Section 33: E/2

TOWNSHIP 19 SOUTH, RANGE 32 EAST, NMPM
Section 4: E/2

- (cc) EXTEND the East McMillan Seven Rivers-Queen Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 27 EAST, NMPM
Section 3: S/2 NE/4 and SE/4 NW/4

- (dd) EXTEND the Mescalero Permo-Pennsylvanian Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 10 SOUTH, RANGE 32 EAST, NMPM
Section 34: W/2

- (ee) EXTEND the Monument-Tubb Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 37 EAST, NMPM
Section 12: NW/4

- (ff) EXTEND the Penasco Draw San Andres-Yeso Associated Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 24 EAST, NMPM
Section 1: E/2 E/2, NW/4 NE/4, E/2 NW/4 and NE/4 SW/4
Section 12: NE/4

TOWNSHIP 19 SOUTH, RANGE 25 EAST, NMPM
Section 6: N/2

- (gg) EXTEND the South Peterson-Fusselman Pool in Roosevelt County, New Mexico, to include therein:

TOWNSHIP 5 SOUTH, RANGE 33 EAST, NMPM
Section 30: SW/4

- (hh) EXTEND the East Red Lake Queen-Grayburg Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 16 SOUTH, RANGE 28 EAST, NMPM
Section 36: NE/4

- (ii) EXTEND the Runyan Ranch-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 19 SOUTH, RANGE 23 EAST, NMPM
Section 18: E/2

- (jj) EXTEND the Salt Lake-Bone Springs Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 20 SOUTH, RANGE 32 EAST, NMPM
Section 14: SE/4
Section 23: S/2 and NE/4

- (kk) EXTEND the North Shugart-Atoka Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 31 EAST, NMPM
Section 20: W/2

- (ll) EXTEND the Sioux-Yates Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 25 SOUTH, RANGE 36 EAST, NMPM
Section 8: SE/4

(mm) EXTEND the Tomahawk-San Andres Pool in Chaves and Roosevelt Counties, New Mexico, to include therein:

TOWNSHIP 7 SOUTH, RANGE 32 EAST, NMPM

Section 29: NW/4

Section 32: S/2

TOWNSHIP 8 SOUTH, RANGE 32 EAST, NMPM

Section 5: NE/4

(nn) EXTEND the Tubb Oil and Gas Pool in Lea County, New Mexico, to include therein:

TOWNSHIP 21 SOUTH, RANGE 36 EAST, NMPM

Section 36: N/2

TOWNSHIP 21 SOUTH, RANGE 37 EAST, NMPM

Section 31: NW/4

(oo) EXTEND the North Turkey Track-Morrow Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 18 SOUTH, RANGE 28 EAST, NMPM

Section 26: E/2

TOWNSHIP 19 SOUTH, RANGE 28 EAST, NMPM

Section 1: N/2

(pp) EXTEND the Twin Lakes-San Andres Associated Pool in Chaves County, New Mexico, to include therein:

TOWNSHIP 8 SOUTH, RANGE 28 EAST, NMPM

Section 25: SE/4

TOWNSHIP 8 SOUTH, RANGE 29 EAST, NMPM

Section 19: S/2 SW/4 and SW/4 SE/4

Section 30: W/2

Section 31: NW/4

(qq) EXTEND the White City-Pennsylvanian Gas Pool in Eddy County, New Mexico, to include therein:

TOWNSHIP 25 SOUTH, RANGE 26 EAST, NMPM

Section 12: All

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
STATE LAND OFFICE BLDG.
SANTA FE, NEW MEXICO
12 December 1979

EXAMINER HEARING

IN THE MATTER OF:)

Application of Amoco Production Company)
for pool contraction and creation, Lea)
County, New Mexico.)

CASE
6756

BEFORE: Daniel S. Nutter

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Oil Conservation
Division.

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Legal Counsel to the Division
State Land Office Bldg.
Santa Fe, New Mexico 87501

For the Applicant:

Guy Buell, Esq.
AMOCO PRODUCTION COMPANY
Houston, Texas

I N D E X

J. C. ALLEN

Direct Examination by Mr. Buell

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Cross Examination by Mr. Rutter

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E X H I B I T S

Applicant Exhibit One, Plat

8

Applicant Exhibit Two, Cross Section

11

MR. NUTTER: We'll call now Case Number 6756.

MR. PADILLA: Application of Amoco Production Company for pool contraction and creation, Lea County, New Mexico.

MR. BUELL: Are you ready for appearances, Mr. Examiner?

MR. NUTTER: Yes, sir.

MR. BUELL: My name is Guy Buell, representing Amoco Production Company.

We have one exhibit, this cross section, Mr. Examiner, and I thought it would be a little more efficient to have a copy put on the wall. It will save you and Mr. Padilla from having to do a lot of exhibit shuffling.

Mr. Examiner, as to our application in this case, it is a four-pronged application. We're asking to -- the Division to create the Air Strip-Upper Bone Spring Oil Pool, the Air Strip-Middle Bone Spring Oil Pool, and the Air Strip-Lower Bone Spring Oil Pool. We're also asking for a discovery allowable on the well, our well that first tested the Lower and what well was that, Mr. Allen?

MR. ALLEN: FU No. 2.

MR. BUELL: And we'd like to, at this time, dismiss from this application that portion that relates to creation of the Air Strip-Upper Bone Spring, and the Air Strip-Middle Bone Spring.

We would like to leave within our application the creation of the Air Strip-Lower Bone Spring and the discovery allowable for the State PU Well No. 2.

Our evidence will show, Mr. Examiner, that while the Upper Bone Spring appears to be geologically separated from the Middle, and all of our available pressure data showed us at the time we filed this application that these two intervals of the Bone Spring formation were in truth and in fact separate, in production testing the Upper Bone Spring, after the production of between 5000 and 6000 barrels of oil, our pressure in that interval had declined from 3600 pounds to roughly 2400 pounds. That indicates to us that one, this Upper portion of the Bone Spring is an extremely low reserve accumulation of oil. Any time you lose one-third of your total pressure producing only 5000 to 6000 barrels of oil, and also that it's probably limited areal extent.

So that is the reason that we're dismissing from our application the creation of the Upper Bone Spring Pool and the Middle Bone Spring Pool. We

feel that conservation will best be served, based on data we now have, that by producing what we have called Middle in our application and Upper in our application, that we will recover more oil from these two areas.

As you'll see, when our witness discusses the cross section, our Exhibit Two that we have on the wall, the Upper is not well developed in all four of the wells that are currently drilled in and completed in the Bone Spring area. Probably none of the wells could economically stand a separate completion of the Upper, but by producing what we call the Middle and the Upper together in the same wellbore, we feel that these upper stringers can be perforated and oil be recovered that otherwise would not, but we're still asking that the Commission create the Air Strip-Lower Bone Spring and grant a discovery to our No. 2 State PU Well.

MR. NUTTER: And then what would the vertical limits of the Air Strip-Upper Bone Spring Pool be?

MR. BUELL: Well, our recommendation is --

MR. NUTTER: We have previously defined as being Upper and Middle?

MR. BUELL: My recommendation would be, Mr. Examiner, in fact Amoco's recommendation is, that you vertically define the Lower Bone Spring, as we show on our Exhibit Two, from 10,100 feet to 10,400 feet, and not pre-

cisely define the Middle and the Upper.

MR. NUTTER: Well, we wouldn't create a Middle and an Upper per se, would we? We'd just have an upper pool.

MR. BUELL: That's right, yes, sir.

MR. NUTTER: And so you would define the lower pool as being from 10,000 to 10,400, as we had previously advertised.

MR. BUELL: Yes, sir.

MR. NUTTER: And then the other pool would be the remainder of the Bone Spring, is that right?

MR. BUELL: Yes, sir. That's our recommendation.

MR. NUTTER: Okay. Now, the following case after this one is for a dual completion in the Upper and the Middle. I presume you're going to dismiss that one.

MR. BUELL: I'll dismiss that at any time the Examiner thinks appropriate, now, or when you call the next case.

MR. NUTTER: Well, we haven't called it yet, but that's what you're going to do.

MR. BUELL: Yes, sir.

We have one witness, Mr. Allen, who has not been sworn.

(Witness sworn.)

J. C. ALLEN

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

DIRECT EXAMINATION

BY MR. BUELL:

Q Mr. Allen, would you state your complete name, by whom you're employed, and in what capacity and in what location, please?

A Yes, sir. My name is J. C. Allen. I'm a petroleum engineering supervisor for Amoco Production Company in Houston, Texas.

Q Mr. Allen, you've testified before this body on many previous occasions and your qualifications as a petroleum engineer are a matter of public record, are they not?

A Yes, sir.

MR. BUELL: Any questions as to Mr. Allen's qualifications with particular reference to southeastern New Mexico, Mr. Examiner?

MR. NUTTER: Mr. Allen is qualified.

Q In connection with your testimony here

today, look first at what has been identified as our Exhibit Number One, and what is that exhibit, Mr. Allen?

A Exhibit Number One is a map of the area surrounding our working interest unit, and we have shown on this map all wells that have been drilled within a two-mile radius of our State FU Well No. 1, and No. 2.

Q All right, first, let's -- the Air Strip Bone Spring area is in approximately center of Exhibit One, is it not?

A Yes, sir, it is.

Q All right. Let's go first and talk about the other production reflected on Exhibit One away from the Bone Spring. Why don't you move up to the northwest, I notice some wells up there. What pool is that?

A Yes, sir, that is the East EK Unit operated by Conoco. It is producing from the Queen formation.

A In other words, that is the EK Queen Oil Pool.

A Yes, sir.

Q All right, sir, now down to the southeast on Exhibit One I see some symbols that indicate other production. What is that?

A Yes, sir, the wells to the southeast, identified by a blue dot, are wells producing the Bone

Spring, and that is the Scarb Bone Spring.

Q Is that an oil pool or a gas pool?

A It's an oil pool.

Q All right, sir, I notice one orphan green dot, I believe it is, way over in the southwest corner of Exhibit One. What is that?

A Yes, sir, that's a Morrow gas well.

Q All right, sir. Now, move back up to our Air Strip area and to the east I notice a well colored with a red dot. What's the significance of that?

A That is a Wolfcamp producer operated by Gulf Oil Corporation.

Q All right. Now, let's move into the Air Strip-Bone Spring area. What production do we have in the Air Strip-Bone Spring area at this time?

A At the present time there are four wells producing from the Air Strip-Bone Spring Field. The Gulf Nos. 1 and 2 State YH Wells, and the Amoco FU Wells Nos. 1 and 2.

The FU No. 1 is also completed in the Wolfcamp but it is segregated at this time by a bridge plug from the Bone Spring.

Q What was the discovery well for the Air Strip-Bone Spring Oil Pool, as it is known on the Commission records today?

A It was the Gulf V8 Well No. 1.

Q And was that well completed in a vertical interval that would have fallen within what is described in the docket of our application, what we would call the Middle Bone Spring?

A Yes, sir, it was. Or it is.

Q All right, sir. I notice what appear to be some well location symbols in and around the area of Bone Spring. Is Amoco planning any kind of a development program in this area?

A Yes, they are. The well to the west, the No. 1 HQ Well, has reached total depth and is now logging.

The Well No. 1 RH has also reached total depth and we're in the process of running a drill stem test to test both the Wolfcamp and the Bone Spring.

The No. 3 FU is drilling and at the current time I think we plan to drill one additional well, at this time.

Q All right, sir. I notice that there is a line connecting all four of the wells in the Air Strip-Bone Spring Pool area. Is that the surface trace of a cross section?

A Yes, sir, that's the surface trace of cross section A-A', which is on the wall, and has been

furnished to the State

rather go to the well now where we have a well and that
is that cross section 1 and 2 and about 10 feet apart
and loudly. Mr. Allen, does that cross section run as the
surface trace shows, from north to south and then off to
the east?

A Yes, sir, it runs from the Union to the
to the Gulf Oil Well No. 2 to the right of this cross section

This is essentially the same cross section
which was filed with our application, with the exception we
have taken the vertical -- proposed vertical limits of the
Upper and the Middle Bone Spring off this cross section.

Q But we do have what was on the cross sec-
tion that we filed with this application with regard to the
Lower Bone Spring.

A Yes, sir. I highlighted on this one
with a red line, showing the top and bottom of the proposed
Lower Bone Spring field.

Q All right, sir. What is the significance
of the two lines highlighted there that I pointed out earlier
Number Two, that tell about the top and bottom of the
depth that we're recommending for the proposed field?

A That's the top and bottom of the proposed field.

consider the productive interval within this proposed --

Q And the vertical limits that we are recommending cover a larger interval in case in some other well the Lower could be productive at a higher elevation than it is in our well on Exhibit Two.

A Yes, sir, that is correct.

Q All right, sir, now you heard my opening statement that initial pressure data, as well as geological data, indicated to us that the Upper Bone Spring, as defined in our application and the docket of this case, and the Middle Bone Spring, as so defined, were geologically separated and also pressure data indicated their separation.

A That's correct. It's been illustrated, I think, on our FU Well No. 1. The logs will show when the well was drilled in 1975 and completed as a Wolfcamp oil well, a drill stem test was taken across what we previously referred to as the Upper Bone Spring. At that time we reported a final shut-in pressure of 3712 pounds.

When we started testing the Middle and Upper Bone Spring this year, we recorded a bottom hole pressure from the Upper Bone Spring of 3600 pounds immediately after perforating, as compared to a bottom hole pressure in what we would call the middle of 1800 pounds.

Q Do you have any idea of the initial pressure or the approximate discovery pressure of the middle

zone as revealed by the Gulf wells?

A They, to my knowledge, have taken no bottom hole pressures in their -- their wells. They did run a drill stem test in their YH No. 2, indicating a bottom hole pressure in the order of 3280 to 3340 pounds.

We did attempt to calculate a bottom hole pressure from surface pressures, and using gradients, on their YH No. 1, which indicated a pressure in the order of 3400 pounds. This ties in pretty well with the drill stem test.

Q In your opinion would that be a normal, approximately normal pressure, initial pressure, for this depth in this area?

A At that depth, yes, sir.

Q Let me ask you this. Do we have an idea of what the current pressure is in what we have called the Middle Bone Spring?

A Well, on our well it's 1800 pounds; however, at the current time we cannot get this zone to produce. And we have a swab test indicating a productive capacity of about 100 barrels a day. I think during swab test we recovered 52 barrels of oil and 42 barrels of water in 10 hours, but we've been unsuccessful in getting the zone to produce after we put the dual equipment in the wellbore.

Q But when you compare the 1300 pound pressure that we found in the Middle Bone Spring in our well with the 3600 pound pressure in the Upper Bone Spring in our well, would that indicate that those two were probably geologically separated?

A Yes.

Q All right, sir. What type of production tests did we run with only the Upper Bone Spring open that revealed to us the probable low reserve, low areal extent of the Upper Bone Spring?

A Well, as I mentioned earlier, the initial bottom hole pressure on perforating was 3600 pounds. After producing approximately 5000 barrels we ran a subsequent bottom hole pressure and it was only 2405 pounds, which indicates that we had a 1200 pound drop while producing only 5000 barrels of oil.

Q Would that indicate to you in all probability that it would be economically unfeasible to separately complete in and produce the Upper Bone Spring?

A I think it would, yes, sir, in my opinion.

Q Is the Upper Bone Spring a well developed in the other three logs on our Exhibit Number Two, as is the case in our No. 1 Well?

A No, sir, it's not. It thins considerably in our State FC No. 2 and the Gulf V# No. 1, and almost dis-

appears completely in their State Well No. 2.

Q Do you feel that our current application, which is to create only the Air Strip-Lower Bone Spring Oil Pool, and all the remainder other than the vertically defined limits of that pool will just be considered the Air Strip-Bone Spring Pool?

A Yes, sir.

Q In that manner, in these other wells, our No. 2 Well and the Gulf Well, where it's not as well developed, would that give the opportunity in those wells to produce those stringers in the upper along with the middle and recover oil that would probably otherwise not be recovered?

A Yes, sir, it would.

Q All right, sir, let's go now to the lower zone. Do we have any pressure data on what we're calling the Lower Bone Spring to indicate that it is not only geologically separate from the other Bone Spring, but do we also have pressure data to show that it is separate?

A Yes, sir, we do. We took a bottom hole pressure build-up test in this well after producing about 1500 barrels of oil, and we had a pressure of 4476 psi. At this time this zone is also shut off with a bridge plug and we're testing the -- what is referred to as the Middle

Bone Spring.

Q About how much vertical separation is there between the uppermost productive interval in the Lower Bone Spring in our No. 2 Well and the lowest productive interval in what we've heretofore in this application called the Middle Bone Spring?

A Oh, approximately 800 feet.

Q Do you feel these data show conclusively that the Lower Bone Spring is not only geologically separate but is -- the pressure data conclusively shows that it is separate?

A In my opinion, yes sir.

Q It is your recommendation to the Commission here today that the Air Strip-Lower Bone Spring Pool be created?

A Yes, sir. I would not produce this zone with the others.

Q It is also your recommendation that the testing of the Lower Bone Spring in our No. 2 Well discovered a new accumulation of Bone Spring oil and that the No. 2 Well should be granted a discovery allowable?

A Yes, sir.

Q Do we contemplate an immediate completion in the Lower Bone Spring in our No. 2 Well, the discovery

well?

A Not at this time. We are considering a dual completion but we do have 5-1/2 inch casing, which does, of course, limit our ability to dually complete this well.

I think a lot of it would be based on what our testing the two intervals up here reveals. At this time we're talking about 118 barrels a day of oil here and we have yet to open the uppermost zone.

Q In your opinion, and based on your study of this area, is the Lower Bone Spring oil accumulation being produced in any other well in this area?

A No, sir, it's not.

Q It, then, is not a competitive zone?

A No, sir.

Q The other Bone Spring up the hole from our Lower Bone Spring is competitive, is it not?

A Yes, sir, it's being produced in both the Gulf wells.

Q So would it be your further recommendation to the Commission that in the granting of the discovery allowable to our State FU No. 2 Well, that it be made effective from the date that we are able to make a completion in that well in the Lower Bone Spring?

A Yes, sir.

Q Do you feel that the approval of our amended application in this case will protect the correlative rights of all the interest owners in the area, as well as serve conservation by preventing waste, Mr. Allen?

A In my opinion, yes, sir.

Q Do you have anything else that you'd care to add at this time to your testimony?

A Just might clear up the one area I've marked here as the Scharb. This is, to the best of our ability, the interval which is productive some mile and a half or two miles or more, I guess, to the southeast of us. It is extremely tight in all the wells here and does not appear to be productive at all.

Q But that is the vertical interval that you've correlated from the Scharb-Bone Spring Oil Pool over into our area?

A Yes, sir, and that correlation is very difficult.

MR. BUELL: May it please the Examiner -- do you have anything else, Mr. Allen?

A No, sir.

MR. BUELL: May it please the Examiner, that's all we have on direct. I would like to formally offer our Exhibits One and Two into evidence.

MR. NUTTER: Amoco Exhibits One and Two will be admitted in evidence.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Allen, now I see on the State FU No. 1 some perforations way down here in the lower section. Are those the Wolfcamp perforations?

A Yes, sir, they are, and we produced about 85,000 barrels of oil prior to the plugback to the Bone Spring.

Q Has the No. 2 been completed in the Wolfcamp, also?

A No, sir, we did not test the Wolfcamp here. It did not look as well as it did over here, and of course, we did have the competitive Bone Springs.

Q Did either of the Gulf wells go to the Wolfcamp?

A Yes, sir, they did. I've forgotten which well it was that did have a test across the Wolfcamp, I believe. I see the Wolfcamp down in here. I believe that they did. Let me check my notes.

Q No, that's all right.

MR. NUTTER: Are there any further questions of Mr. Allen? He may be excused.

Do you have anything further -- now, let's see, Mr. Buell, we want to disriss the creation of the Upper and Middle, as defined in the advertisement, and create a Lower Bone Spring from 10,300 feet to 10,400 feet, and to create an Air Strip-Upper Bone Spring Pool encompassing the rest of the Bone Spring formation above the lower pool.

MR. BUELL: Yes, sir, Mr. Examiner, that is correct, or you could just call -- create the Air Strip-Lower Bone Spring and then the Air Strip-Bone Spring, which you already have a --

MR. NUTTER: No, I'd rather have an Upper and a Lower.

MR. BUELL: All right, then --

MR. NUTTER: We'll have an Upper and a Lower, so the Upper will comprise what you had called Upper and Middle.

MR. BUELL: Yes, sir.

MR. NUTTER: And then you also seek a discovery allowable for the No. 2 in the Lower Pool, and you requested that allowable be deferred for production until such time as the well was put on production in the Bone Spring.

MR. BUELL: Yes, sir.

MR. NUTTER: In the Lower Bone Spring.

MR. BUELL: Yes, sir.

MR. NUTTER: Now, normally a period of 730 days is allowed for the production of a discovery allowable, so you'd request that the 730 days commence on the date of completion in the Lower Bone Spring.

MR. BUELL: Yes, sir, that is our recommendation. In view of the fact that we have competitive Bone Spring up the hole, we feel that it's in the best interest of all the owners, including the State as royalty owner, to produce the No. 2 in the competitive zones at this time.

MR. NUTTER: If there are no further questions of Mr. Allen, he may be excused.

Do you have anything further, Mr. Buell?

MR. BUELL: No, Mr. Examiner, that's all we have.

MR. NUTTER: Does anyone have anything they wish to offer in Case Number 6756?

We'll take the case under advisement.

(Hearing concluded.)

REPORTER'S CERTIFICATION

I, SALLY W. BOYD, a Certified Shorthand Reporter,
DO HEREBY CERTIFY that the foregoing and attached 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 from my notes taken at the time of the hearing.

Sally W. Boyd, C.S.R.

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 6752
heard by me on 12/12 1979.

[Signature], Examiner
Oil Conservation Division