STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCE DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF:
APPLICATION OF WOODBINE PETROLEUM, INC. FOR AN EXCEPTION TO DIVISION ORDER NO. R-3221, EDDY COUNTY, NEW MEXICO.

CASE NO. 10282

REPORTER'S TRANSCRIPT OF PROCEEDINGS

EXAMINER HEARING

BEFORE: MICHAEL E. STOGNER, Examiner

May 2, 1991
9:15 a.m.
Santa Fe, New Mexico

This matter came on for hearing before the Oil Conservation Division on May 2, 1991, at 9:15 a.m. at the Oil Conservation Conference Room, State Land Office Building, 310 Old Santa Fe Trail, Santa Fe, New Mexico, before Susan G. Ptacek, a Certified Court Reporter No. 124, State of New Mexico.

FOR: OIL CONSERVATION DIVISION

BY: SUSAN G. PTACEK
Certified Court Reporter
CCR No. 124

I N D E X

May 2, 1991
Examiner Hearing
Case No. 10282

* * *

E X H I B I T S

	Admtd
WOODBINE PETROLEUM EXHIBIT	
1	21
2	21
3	21
4	21
5	21
6	21
7	21
8	21
9	21
10	21
11	21
12	21
13	21

A P P E A R A N C E S

FOR THE DIVISION:	ROBERT G. STOVALL, ESQ. General Counsel Oil Conservation Division State Land Office Building Santa Fe, New Mexico 87504
FOR THE WOODBINE PETROLEUM, INC.	MONTGOMERY & ANDREWS, P.A. Attorneys at Law BY: W. PERRY PEARCE, ESQ. 325 Paseo de Peralta Santa Fe, New Mexico 87501

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EXAMINER STOGNER: Call the next case, 10282.

MR. STOVALL: Application of Woodbine Petroleum, Inc. for an exception to Division Order R-3221, Eddy County, New Mexico.

EXAMINER STOGNER: Call for appearances.

MR. PEARCE: May it please the examiner, I am W. Perry Pearce of the Santa Fe office of the law firm of Montgomery & Andrews, appearing in this matter on behalf of the applicant. I have one witness who needs to be sworn.

EXAMINER STOGNER: Are there any other appearances? Will the witness please stand and be sworn at this time?

(Whereupon the witness was duly sworn.)

TOM MAIRS,

the Witness herein, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. PEARCE:

Q. For the record, would you please state your name and place of residence?

A. My name is Tom Mairs. I'm a consulting geologist and live in Dallas, Texas.

Q. Mr. Mairs, have you appeared before the Oil Conservation Division examiners previously and had your credentials as an expert in the field of petroleum geology

A. Woodbine is seeking an exception to Rule 3221 as amended to allow them to construct a salt water -- surface salt water disposal pit in the southwest of the southeast quarter or Unit O.

Q. And in the course of your study of this area have you found other exceptions to 3221 which have been granted in this area?

A. Yes, sir, I have.

Q. Let's look, please, at Exhibit 2 to this proceeding.

A. I might mention before we leave this, Mr. Pearce, that Woodbine Petroleum operates six wells on these leases and apparently are preparing to drill a seventh well. They operate four wells on the Yates Federal lease, two wells on the Hadson Federal lease and are preparing to drill a third well on the Hadson Federal lease. These wells produce -- the oil wells produce oil and salt water from the Yates Seven Rivers section between the depths of approximately 2500 and 2700 feet.

This lease is owned by the BLM, the U.S. Government lease, and all the contiguous offset sections are owned by the BLM and/or the state of New Mexico. I might add that this plat includes the subject section and the two contiguous offset sections and covers an area of 25 square miles which all the maps will cover this area.

Q. As I understand the proposal, only the wells on the Woodbine lease are going to be disposing of water into the proposed pit; is that correct?

A. That is correct.

Q. Let's look now to Exhibit 2, please.

A. Exhibit No. 2 also is on a scale of one to 2000 feet, showing the same area. Shows the exceptions to Rule 3221. It shows the order numbers, the dates that these exceptions were granted. As you can see on this map, there have been several exceptions in Section 12 of the same township and range; Section 3, one in Section 3; one in Section 1; and then sections 34 and 35 in Township 18 South of 31 East. This map also depicts the proposed salt water disposal location, salt water pit disposal location.

Q. Anything else on Exhibit 2?

A. No, sir. At this time, Mr. Mairs, to give us some indication of production in this area, would you look please at what we have marked as Exhibit No. 3 and describe that exhibit.

A. Yes, Exhibit No. 3 is designed to show the reservoirs from which all the wells in this map produce. Just south of Section 11 there is -- they're color coded here on the reservoirs. This is just south of Section 11 in sections of the southeast portion of this map. That is part of the West Lusk Unit. I think the predominant

production is from the Strawn. In the southwest corner of this map there is Yates Seven Rivers production. And I believe that's in the Hackeberry field. To the north of Section 11 is a lot of Queen Grayburg production and Yates Seven Rivers. That is in the Shugart field. And, of course, Section 11, although Woodbine's wells are classified in the Shugart field.

This also shows the current daily average production above the line by each well, and cumulative production through April of 1990 of each well.

Q. So, referring to either Exhibit 3 or turning back to Exhibit 2, I want to ask you a couple of questions about water wells in the area. Have you or someone under your supervision checked to see whether or not there are active water well permits in this area?

A. Yes, we have.

Q. And are there?

A. There are no active permits in this 25-mile square area.

Q. Do you know of any water wells permitted in this area?

A. I know of none that are permitted in this area.

Q. Looking at Exhibit 2 in the far southeast quarter of the 25-square-mile area, Section 19 --

A. Yes, sir.

Q. -- it appears that there is an exception in the southeast corner of this map. Can you tell us about that exception, please?

A. Yes, that was a Phillips Petroleum Company well drilled for the Environmental Protection Agency, and this is on their last gasoline plant site. This was an exploratory well to see if they could find fresh water. That particular well was drilled to a depth of 260 feet. The record indicates -- the driller's record indicates that water stood at 245 feet. They attempted to use this well for water for the plant, but it was not of sufficient quantity, and I think the well has been plugged.

Q. All right, sir. Anything else with regard to that?

A. No, sir.

Q. All right. Let's look, please, now at Exhibit No. 4. Could you describe that for us.

A. Yes, Exhibit No. 4 is lease production summary on the Hadson Federal lease. As I mentioned, there are two active producing wells. We have shown here the average -- they report production on a lease basis, so we've had to -- we're showing an average, 31-day production average, for each lease. That lease produces an average of 67 barrels of oil per day in this period. This average period was from the March 10, 1991 to April the 9, 1991. And also

produces 47 barrels of salt water per day.

The Yates Federal lease has two active wells at the time of this report, which were producing an average of 135 barrels of oil per day and 32 barrels of salt water per day. I might mention that the Yates Federal No. 3 and 4 have just recently been drilled. They were drilled in late March and early April. At the time we had no production data on them yet. They had just gone on production in late April.

The production figures in parentheses -- I might also mention that this field was discovered in October of 1990, and they're still in the development stage and are currently drilling development wells. They plan two future development wells on the Hadson Federal lease, anticipated oil production will be 65 barrels of oil per day and 120 barrels of salt water per day. They anticipate drilling two more -- excuse me -- they have already drilled the two more wells on the Yates Federal lease and they're anticipating 135 barrels of oil per day additional oil production and 100 barrels of water per day of water production.

The total current production is 202 barrels of oil per day and 79 barrels of salt water per day, and the total near future anticipated water -- anticipated production is 400 barrels of oil per day and approximately

300 barrels of salt water per day.

Q. On the basis of the estimated future water production, Woodbine Petroleum is seeking authorization to dispose of up to 300 barrels per day; is that correct?

A. That's correct.

Q. All right, sir. Anything else to highlight on Exhibit 4?

A. I don't believe so.

Q. All right, sir. Let's look at Exhibit No. 5, please, and would you describe that for us.

A. Yes, Exhibit No. 5 is a structural contour map. On the top of the Permian Rustler Anhydrite, which is an excellent correlative marker regional. And the contour on this is 20 feet, and the purpose of this map is to show the dip direction on the top of the Rustler Anhydrite.

And as you can see from this map, the dip from Section 11 is to the northeast. In this area the highest well encountered on the top of the Rustler was in Section 21 at approximately 3,092 feet. The lowest well encountered was in Section 6 over in Lea County of 18 South, 30 -- excuse me -- 19 South, 32 East at 2654. So you can see there is northeast dip throughout the area of this map.

The anatomic closure and nosing just south of Section 11 is a great reflection over the Capitan reef.

We're right at the very northern edge of the Capitan reef. The saddle shown just north or the sink line shown just north of Section 11 -- there is a sink line just north of Section 11 showing dip from the northern part of Section 11 northward. So the dip in this area for Section 11 is to the northeast and to the north.

Q. And in regard to that dip, have you done a calculation to determine what that dip is?

A. Yes, we have.

Q. Let's look, please, at Exhibit No. 6 and would you describe that exhibit for us.

A. Exhibit No. 6 is a three-point -- a solution to a three-point problem, which is an accepted way to define the straddle of a dip of an inclined plane. This utilizes the elevations of three wells, the Hadson Federal No. 1, the Yates Federal No. 2 and Yates Federal No. 4. We have constructed a strike line, and this shows dip in the northeast direction of approximately 1 degree.

Q. I'd ask you now to address your attention to what we have marked as Exhibit No. 7, and I would ask Valerie Schultz, your associate, to approach those exhibits and point out some information on them as you highlight it for the examiner, please.

A. Yes. Exhibit No. 7 is a structural cross section of A to A prime. The location of this cross

section is shown on the index map, with A being on the left side of the cross section and A prime on the right side of the cross section.

These locations or the location of this cross section also shown on Exhibit No. 5, the structural map. Generally this is a northwest southeast trending section that just about parallels structural strike in this area. The scale of this cross section -- the horizontal scale is one inch equals 200 feet. The vertical scale is one inch equals 100 feet. So the exaggeration is two times.

And the purpose of this cross section is to show the stratigraphic sequence encountered in this area of the Delaware Basin, the near surface stratigraphic sequence at approximately 1600 feet. And also to describe the lithology encountered in Woodbine's wells in Section 11.

Starting with the stratigraphic sequence, the upper -- there is a very thin veneer of silt or fine grain sand soil on the surface, underlain by approximately 10 to 25 feet of caliche. And this is all in the Quarternary alluvium. This is an alluvium section. The Quarternary alluvium is underlain unconformably by the Triassic Chinle formation. The majority of the Tertiary rocks or all of the Tertiary rocks, the Cretaceous and the Triassic rocks, are absent. So we go from Quarternarian into Tertiary. Then underneath -- beneath the Chinle are the Santa Rosa

formation -- is the Santa Rosa formation. These two formations comprise the Dockum group, Triassic age. Underneath the Santa Rosa formation is the top of the Permian, is also an unconfomity surface, and the first formation encountered is Rustler Anhydrite.

I would like to direct your attention there to the Hadson Federal No. 1 -- and the reason being this is where the salt water disposal pit will be located or the proposed location of the salt water disposal pit -- and discuss the lithology encountered in that well. The alluvium, Quarternary alluvium, was encountered from the surface down to a depth of 59 feet. These are semi-arid deposits, consisting of silts, siltstones, windblown sands, coarse grain sands, unconsolidated gravels and some gypsum. And these unconformably overlie the top of the Chinle formation, which is approximately 127 feet thick, and the Chinle formation consists of primary shales, siltstones, very low permeability, rocks, some limestone, and some gypsum.

This entire section, which is in this well 127 feet consists of a strata that are very low permeability and acts as a confining bed or an aquiclude. Beneath the -- let me explain the colors. Excuse me, I forgot to explain the colors. The dark brown we have denoted the very low permeability beds, which we consider to be

confining beds or aquicludes. The lighter brown are the known shales that we have correlated in this area.

The top of the Santa Rosa sandstone in that particular well was at 457 feet -- excuse me. It was at 127 feet and consists of an interval of about 427 feet down to the top of the Rustler Anhydrite. The Santa Rosa consists of shales and sandstones, Terrigenous sands, and in this area of the Clayton Basin most of the usable aquifers, fresh water, occur within the Santa Rosa section. We see no apparent aquifers in this area. And below the -- as you can see, the upper part of the Santa Rosa, about the upper 120 feet are primary shales and aquicludes, and there is a sandy section. About the lower 100 is a shale in the area. This unconformably overlies the Rustler Anhydrite, which consists of Anhydrite and forms an excellent aquiclude also.

Q. Anything else on the A prime?

A. No. I might point out -- excuse me. I mentioned this strike section. You see the evidence of this angular unconfomity on the right side of the section. You will see the beds below the Triassic unconfomity are dipping at a different direction than the beds of both in the Quarternary alluvium, and generally this cross section is getting lower towards the southeast in the near surface rocks.

Q. Let's direct your attention, please, to what we have marked as Exhibit No. 8.

A. Yes, Exhibit No. 8 is also a structural cross section, structural cross section of B - B prime, location of which is shown on the index map, and also on Exhibit 5 of the structural map. And this is a dip section, and the purpose of this is to show, once again, which way the formations are dipping, the near surface formations are dipping, in the area of Section 11 and away from Section 11.

This has the same color code. Shows the aquicludes and the shales, and definitely shows an angular unconfomity with beds being truncated westward at the top of the Chinle, and shows dip in the very shallow beds to be to the north northeast -- or the northeast east northeast, actually.

Q. Anything else on that?

A. No, sir.

Q. Thank you, sir. After reviewing the structure map and the cross sections, Mr. Mairs, water which enters the ground is likely to move in which direction?

A. Referring you back to the Hadson Federal No. 1, any water put on the surface there will infiltrate downward, vertically, until it hits confining bed, in this case an aquiclude or low permeability bed, shale, et

cetera. Then it will disperse along that bedding plane in a down dip or lateral strike direction.

Q. Which direction is that?

A. In this particular case it will be to the northeast and to the east.

Q. All right. Let's look, please, at Exhibit No. 9 to this proceeding, and could you describe that for us.

A. Yes, Exhibit No. 9 shows the location, the dimensions, et cetera, of the proposed salt water disposal pit. As I previously testified, is located in the southwest of the southeast quarter of Section 11 or Unit O. The proposed dimensions will be 100 feet long by 80 feet wide; the pit will be 12 feet deep with a two-foot berm. So the volume or the pit capacity with a two-foot freeboard will be 14,250 barrels.

I might -- I had also shown on this exhibit the average annual rainfall in the area is 15 inches per year. The normal annual runoff is .25 inches per year or practically none, very negligible. And the average evaporation in the area is 70 inches per year, and these are figures put out by the United States Geological Survey and the National Oceanic and Atmospheric Administration.

Q. Anything else on 9?

A. No, sir.

Q. Have you caused water analyses to be performed

on the water which you propose to be disposed of into the pit?

A. Yes, we have.

Q. Let's direct your attention, please, to Exhibit 10, and would you discuss that for us.

A. Exhibit 10 shows salt water analyses from producing wells on the subject leases. It's my understanding -- I have not seen the oil, but it's my understanding that this oil is -- the oil and the water are a mixture, mixable, and continue to put them in the heater treater until they go through the -- the volume goes through the heater treater, it's hard to separate it out. That's why you will see on this first one the sample was grabbed from the Hadson heater treater, and shows a total dissolved solids of 17,470 milligrams per liter. Chlorides are 15,000 milligrams per liter.

The Hadson No. 2 -- sample was taken from the Hadson Well No. 2, Hadson Federal No. 2. It shows very similar type salt water, 17,410 total dissolved solids. The one from the Yates heater treater is slightly higher. Shows a total of 18,220 total of dissolved solids.

All of those analyses, all those samples, were analyzed on April the 24th. As I mentioned the Woodbine is in the process of testing and completing the Yates Federal No. 3 and 4. Yates No. 4 is the only well that has been

completed thus far in Yates sandstone. The rest of the wells are in the Seven Rivers dolomites.

We had a sample taken on April the 30th, day before yesterday, and it indicates a little bit higher salinity, 22,680 milligrams per liter, and chlorides of 18,500 milligrams per liter. They did fracture that zone. Some of that may be due to the frac fluid they used which was field salt water from another area.

Q. Mr. Mairs, with regard to the necessity of economically disposing of water from these wells, I would ask you to address your attention to Exhibit No. 11, please, and describe that for us.

A. Yes, Exhibit No. 11 simply is a table showing the individual well costs of all the wells that have been drilled to date. Not all of the costs are in on the Yates Federal 3 and 4, so those are minimum costs. The average cost to drill a well out here to a depth of approximately 2800 feet is -- drill and complete the well is $152,773.

Q. So let's look quickly at Exhibit No. 12, and do a comparison of well costs and disposal costs; could you describe that for us, please?

A. Current disposal costs, including taxes, $1.34 per barrel; current water production, this is about $40,000 annually, with the anticipated near future water production of approximately 300 barrels. Total salt water disposal

costs would be approximately 147,000 barrels or the cost of one well per year.

Q. With manual disposal costs of approximately equal to the cost of drilling a well in this area, do you believe that those costs unless reduced will cause the premature abandonment of oil reserves in this area?

A. Yes, sir, I do.

Q. Mr. Mairs, after performing your geological study that you have discussed with us, do you have an opinion on whether disposal of this water into an unlined pit in this area provides adequate protection to freshwater resources?

A. Yes. From my studies and to the best of my knowledge, we will not contaminate any known aquifers in this area.

Q. You believe that the zones of reduced permeability act adequately to channel that water away from any water resources?

A. Yes, sir, I do.

Q. All right, sir. I would ask you to direct your attention quickly to what we have marked as Exhibit No. 13. Could you describe that for us, please?

A. These are notification letters sent to the Bureau of Land Management and the state of New Mexico with the receipt -- registered letter receipt attached to it.

Q. All right, sir. Did you have anything further at this time, Mr. Mairs?

A. No, sir.

MR. PEARCE: Mr. Examiner, I have nothing further of the witness at this time. I would move the admission of Woodbine Exhibits 1 through 13.

EXAMINER STOGNER: Exhibits 1 through 13 will be admitted into evidence.

(Woodbine Petroleum Exhibits 1 through 13 were admitted in evidence.)

EXAMINATION

BY EXAMINER STOGNER:

Q. In looking at your Exhibit No. 7, Mr. Mairs, from the surface to the top of the first aquiclude --

A. Yes, sir.

Q. -- what is that depth?

A. That is roughly 50 feet, average of about 50 feet.

Q. Have you done a percolation study or know what the percolation rate is through that 50-foot zone before hitting the aquiclude would roughly be?

A. I have not done a percolation study. We have read in literature the relative permeability or transmissivity of the water through that formation.

Q. You expect it to, obviously, go down?

A. Yes, it will go down.

Q. Any horizontal movement?

A. Not at the surface. There is negligible runoff in this area. This is a very dry, dry area.

Q. I guess what I should say, is in this 50-foot bed that the water has to go through --

A. No, I think there are some very permeable sands, unconsolidated sands, to the best of my knowledge in this interval. From sample descriptions, drillers' logs, this will go down very fast. It will infiltrate vertically at a rapid rate.

Q. Are there any minor -- I don't want to use the word "aquiclude." I don't know if that's right.

A. Before we get into that, I might mention there is a 10- to 15-foot caliche bed which -- near the surface, right at the surface. As a matter of fact, they use this caliche to build the pads for the drilling rigs. There may be some lateral runoff along that caliche surface. It undoubtedly has less permeability probably than the sands underneath.

Q. Now, that caliche bed, this 10- to 15-foot caliche bed that you referred to, is it primarily exposed or covered with the sand and other top material?

A. The pictures that I have seen of these leases

and discussing the topography with the operator, there is a very thin veneer of soil, siltsand or very fine sand, blow sand. There are no dunes here. Very thin veneer of soil. Fine grain silt.

Q. I guess what I am concerned about is, as water goes down, hits the caliche bed and extends out laterally, and does -- I will use the word -- "puddle" in other low-lying depressions, say between sand dunes or between a low-lying area, in which cattle or other livestock could venture on and have access to, is that a possibility or a danger out there?

A. No. There is such a thin veneer of soil above that it's going to evaporate very rapidly. The caliche will probably -- it is so dry, it will take water and I think the infiltration rate through that caliche and through the Quarternarian alluvium will be pretty hard.

The salt water pit, by the way, will be through the -- at the base of the caliche. Like I said, it's -- as a matter of fact, we estimated the Hadson Federal lease that is approximately 10 feet thick. So the bottom of the pit will be in the Quarternarian alluvium or very near it.

Q. Looking at a more expanded area or view -- I guess I will refer to Exhibit No. 5 -- the drainage is toward the northeast in this area and from your particular surface disposal, where does that eventually run into? Is

there a salt lake or a flat salt lake out in that area?

A. Not in the immediate area. In my opinion, from looking at the regional topo sheets and regional geology, this water will migrate to the east, to the northeast, some maybe to the north. It will eventually go along strike southeastward. There are some big salt lakes southeast of here in 32 East, 19 South, I believe, Laguna Plata, very saline lake. It will eventually end up down there. I don't know how long. I would assume it would eventually end up in that area. It's going to be moving east and south.

Q. But these low-depression areas, like you referred to, the Laguna Plata, are the collecting points for any drainage in this area; is that correct?

A. They're quite removed. I think Laguna Plata is, if I remember right, 13, 16 miles away. But they do collect a lot of water, Laguna Plata does, a very saline -- very saline lake.

Q. In looking at the pit construction, which exhibit was that?

A. I think that's Exhibit 12.

Q. How about 9?

A. Exhibit No. 9.

Q. Be 12 feet deep with a two-foot berm, and the berm will be made out of material that is being dug up, or

will that be a caliche berm?

A. It will a caliche berm.

Q. Will that be fenced off also?

A. Yes. They will have a fence around it and will have nets over the pit.

Q. How will the accidental disposal of any oils, crude or otherwise, been taken care of? Is there any chance of oils being dispersed into this pit?

A. They will have a -- the salt water line will be coming -- will be gathering water from all these wells coming out of the heater treater, salt water separator and if everything was perfectly handled, there should not be any oil spilled, but nothing is perfect. There could be oil put into the pit, as we all know. I presume they would clean it up as a reasonable operator, prudent operator.

Q. And being on federal land, the BLM does have field personnel, and they probably will be checking on it and they will abide by the rules and regulations by the Bureau of Land Management?

A. Yes, sir. I might add that Woodbine Petroleum operates such a salt water disposal pit in the Lusk field on federal lands. I think it's in Section 16 of 19 South, 32 East. They have been operating that pit for six months to eight months.

Q. You are anticipating once all the wells get

drilled on those two leases -- which by the way, is that the extent of the two leases, what is shown on Exhibit No. 1?

A. Yes, it is. The yellow shaded area are the leases, the extent of leases.

Q. The disposal into this pit will be just constricted down to the production from these two leases; is that correct?

A. That's correct.

Q. And no commercial facility?

A. No, no commercial facility. This is for their own use.

Q. But as your Exhibit No. 4 shows, an anticipated production or disposal of water is going to equal about 300 barrels a day.

A. That's the maximum anticipated. This is new production and, of course, they anticipate that water production may increase as the water table moves in, the water level moves in, as you remove oil. What they're anticipating is maximum salt water production. It would be more or less. In the short production history it appears that Seven Rivers has less water encroachment than maybe the Yates. But it's still too early to tell. They have not defined the water limits in this field. They're still in the development stage and still drilling wells.

Q. On Exhibit No. 2 you showed other surface facilities or surface disposal facilities in this 25-square-mile area.

A. Yes, sir.

Q. Do you know or have knowledge of how many of those are still in existence and are still being disposed into?

A. To the best of my knowledge I think all of them are. Still have active wells on them. Although we can look with the production map, same time, which is Exhibit No. 3, and the way to tell, you can really tell in Section 34, for instance, for 18 South, 31 East, there are still some active wells producing; in Section 35 there are still active wells producing; Section 2; and the well in southeast southeast of Section 3 is still producing. As of -- I might mention as of May 1, 1990. So to the best of my knowledge they're all still active salt water pits.

Q. And as you -- just repeating here again -- there are no freshwater wells or windmills in the area that you know of?

A. Not in the area of this map there are none.

EXAMINER STOGNER: Are there any other questions of Mr. Mairs?

MR. STOVALL: I have none.

EXAMINER STOGNER: Does anybody else have anything

further for this witness? If not, he may be excused.

Does anybody else have anything further in case number 10282.

MR. PEARCE: No, sir.

EXAMINER STOGNER: If not, this case will be taken under advisement.

(Whereupon, the hearing was concluded at the approximate hour of 9:50 a.m.)

* * *

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

REPORTER'S CERTIFICATE

I, Susan G. Ptacek, a Certified Court Reporter and Notary Public, do HEREBY CERTIFY that I stenographically reported the proceedings before the Oil Conservation Division, and that the foregoing is a true, complete and accurate transcript of the proceedings of said hearing as appears from my stenographic notes so taken and transcribed under my personal supervision.

I FURTHER CERTIFY that I am not related to nor employed by any of the parties hereto, and have no interest in the outcome thereof.

DATED at Santa Fe, New Mexico, this 7th day of June, 1991.

Susan G. Ptacek

SUSAN G. PTACEK
Certified Court Reporter
Notary Public

My Commission Expires:
December 10, 1993

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 10282 heard by me on 2 May 1991.

Michael E. Stogner, Examiner
Oil Conservation Division