

BEFORE THE  
OIL CONSERVATION COMMISSION  
Santa Fe, New Mexico  
April 26, 1957

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IN THE MATTER OF: \*  
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CASE NO. 1249 \*  
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TRANSCRIPT OF PROCEEDINGS

## NEW MEXICO OIL CONSERVATION COMMISSION

Mabry Hall

Santa Fe, NEW MEXICO

REGISTER

HEARING DATE \_\_\_\_\_ EXAMINER \_\_\_\_\_ April 26, 1957 TIME: 10:00 a.m.

NAME:	REPRESENTING:	LOCATION:
S. Elroy	Patash Co of America	Carlsbad
Nancy Royal	N.M. Statehouse Reporting Service	S. F.
Lamar Hunt	Hudson & Hudson, Inc	S. F.
Leroy Gideon	Rowan Oil Co.	St. Wash, Tex.
E. Kirk Newman	Atwood & Malone	Roswell
A. W. G.	O C C	S F

BEFORE THE  
OIL CONSERVATION COMMISSION  
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\* \* \* \* \*

IN THE MATTER OF:

The application of Hudson and Hudson, Inc. for an exception from the casing requirements in the Potash-Oil Area as established by Order R-111-A. Applicant, in the above-styled cause, seeks an order authorizing the following casing program, in lieu of the shallow zone casing requirements established by Order R-111-A for its proposed Hover-Federal No. 1 Well to be located 1980 feet from the South line and 660 feet from the East line of Section 28, Township 20 South, Range 34 East, Lea County, New Mexico:

13 3/8" casing to a depth of approximately 60 feet;

10 3/4" casing to the top of the Santa Rosa formation, at approximately 800 feet;

8 5/8" casing to the shale immediately above the anhydrite at approximately 1250 feet;

5 1/2" casing to the Yates formation at approximately 3850 feet in the event oil or gas is encountered, in which case all of the larger pipe in the hole will be pulled.

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BEFORE:

Daniel S. Nutter, Examiner

EXAMINER NUTTER: The Hearing will please come to order. The first case on the Docket this morning will be Case No. 1250, correction, Case 1249.

CASE NO. 1249

MR. COOLEY: Case 1249, the application of Hudson & Hudson Incorporated for an exception from the casing requirement in the Potash oil area as established by Order R-111-A.

MR. LUNT: Examiner Nutter please, I am Lamar Lunt, Petroleum Engineer, appearing in behalf of Hudson and Hudson Incorporated in Case 1249.

EXAMINER NUTTER: Mr. Lunt, will you be the only witness in this case?

MR. LUNT: Yes sir.

THE WITNESS, HAVING FIRST BEEN DULY SWORN IN, TESTIFIED AS FOLLOWS:

MR. LUNT: I have testified previously as an engineering witness before the New Mexico Oil Conservation Commission and if my qualifications are acceptable to the Examiner, I will proceed with the testimony.

EXAMINER NUTTER: Would you proceed, Mr. Lunt?

MR. LUNT: Hudson and Hudson filed an application for Case 1249 on April 10, 1957, for exception to Order R-111-A, which order covers casing programs in the potash area. Copies of the application were mailed to all Potash Companies in the area, offset operators, and U. S. Geological Survey. As stated in the application, Hudson and Hudson have attained operating rights in the S/2 of 28, Township 20 South, Range 34 East, Lea County, New Mexico. These rights are under Federal Oil and Gas Lease, Las Cruces Serial Number 067614, royalty being reserved by the United States. An ownership plat showing the proposed location of the well to be drilled is herewith submitted as Exhibit "A". The proposed location of the test Hudson and Hudson plan to drill is 1980 feet from the South and 660 feet from the East line of Section 28, Township 20 South, Range 34 East, Lea County, New Mexico. I submit Exhibit "B," tabulation of casing

records taken from the files of the New Mexico Oil Conservation Commission showing the size, depth, and method of setting casing in the wells in Township 20 South, Range 34 East. It is indicated that only four wells were drilled with rotary tools and thirty-nine wells with cable tools in this township. The cable tool wells were drilled dry through the salt section and so eliminated the contamination of the salt in the potash section with water from the overlying zone. I submit Exhibit "C" showing the diagram of the proposed casing program as set out in the application. From the diagram, it is shown that the plan is to set 13 3/8" casing in the top of the red beds, setting off any shallow fresh water zones. A string of 10 3/4" casing will be set at approximately 800 feet to shut off any water below the 13 3/8" casing point in control of caving red beds through this section. At approximately 1250 feet, a string of 8 5/8" casing will be set to seal off all water zones above this point. Water is not usually found in drilling to the Rustler in the Salado formation, and this part of the hole will be drilled dry. If water should be encountered below the point where the 8 5/8" casing is landed, it would become necessary to underream the casing and lower it to shut off the water before drilling the salt section. It is the operator's plan to drill into the Yates formation and in the event oil is encountered, a string of 5 1/2" casing will be run and set, and in the event commercial production is obtained, this string of casing will be cemented to the surface and the other strings of casing pulled. No contamination of the salt section and the overlying waters should occur using this casing program and there will be no contamination of the salt section by the lower oil or gas zones. It is our opinion that this program will adequately protect any possible potash deposits under conditions which are

expected to exist, however, if any unexpected conditions are shown to have developed, the operator will make adequate provisions for the protection of the potash deposits from contamination. In view of this possibility, it is requested that the New Mexico Oil Conservation Commission establish and maintain administrative jurisdiction over the drilling of the proposed well at the designated location. Copies of the application were filed with the following Potash Companies: Potash Company of America, National Potash Company, Duval Sulphur and Potash Company, International Mining and Chemical Company, Southwestern Potash Company, and Farmer's Chemical Resources Development Company. Exhibit "D" submitted being a letter received from the Potash Company of America, stating that they had no objections to the casing program provided that provisions as outlined previously were complied with.

MR. COOLEY: Is that Exhibit "D" as in dog?

A. Exhibit "D".

EXAMINER NUTTER: Mr. Lunt, do you care to offer Exhibits "A" through "D" in Case 1249 at this time?

A. Yes sir.

EXAMINER NUTTER: Without objections, Exhibits "A" through "D" in Case 1249 will be received in evidence. Does anyone have any questions of the witness?

MR. MANKIN: Mr. Lunt, it is noted that you notified six of the Potash companies, however, you did not notify the U. S. Potash Company.

A. Yes they were notified.

MR. MANKIN: I see.

A. We have a letter from them as Exhibit "T".

MR. MANKIN: No. U. S.

A. Oh, U. S., pardon me. They were notified, but apparently no reply was received from them. I did not include it in that list. I must have skipped it. They were notified.

MR. MANKIN: Mr. Lunt, is this casing program quite similar to the casing program previously approved in Case 1215 and Form R-968, the Wilson Oil Company, which is about a mile north of this particular well, a mile or a mile and one-half?

A. Yes, sir. Very similar.

MR. MANKIN: Actually the only Potash Company in the particular area surrounding this well is Potash Company of America, is that correct?

A. I believe they own the potash lease under this particular tract of land.

MR. MANKIN: There is to the best of your knowledge, no actual potash mining operations going on, on this area at the present time?

A. As far as I know, there is not.

EXAMINER NUTTER: Mr. Lunt, these first three strings of casing must be wrong, that is the 13 3/8, 10 3/4, and 8 5/8. Will those merely be landed or will there be some cement?

A. They will probably just be landed and mudded behind the shoes.

EXAMINER NUTTER: In the event that they fail to obtain a water shut-off upon landing this casing, what steps will be taken?

A. I am sure that they will do like most operators that have that condition occur, they will probably reset the pipe and either get a better shut-off as they really need to have the section dry when they drill through the salt, if they don't there are large cavities formed from this water acting on the salt section, making

it a little rough drilling with cable tools.

EXAMINER NUTTER: Will every effort be made to obtain a water shutoff?

MR. LUNT: Yes, sir.

Q. A water shutoff will be obtained.

A. That's right.

Q. Now, sir, in the event that water is encountered in the Rustler or Salado formation, you stated that the 8 5/8 would be underreamed and lowered.

A. Yes, sir. If it is found very much below the setting point, I would think they would probably set a string of 7" casing because they would have room to do that.

Q. They could run - - - - -

A. They could run an additional string of casing, yes, sir.

Q. So that in any event water shutoff will be obtained.

A. Yes, sir.

Q. Does anyone else have any questions? Mr. Mankin?

MR. MANKIN: Mr. Lunt, possibly if the mud is not adequate for a shutoff from these upper strings of casing, would not possibly attacking with a small amount of cement be - - - - -

A. Yes, sir. That would be done ordinarily, if mud does not give the necessary seal or they cannot find a sufficiently hard shoulder to set it on.

MR. MANKIN: Yes, sir.

EXAMINER NUTTER: Anyone else? Mr. Cooley?

MR. COOLEY: Mr. Lunt, in your professional opinion, will the casing program here proposed by the applicant provide as great a degree of safety for

the potash horizons in the area as would the shallow zone casing program set out in Order R-111-A?

A. I believe that it would, yes, sir, and a great saving in cost.

MR. COOLEY: That was my next question, then the applicant's objective in filing this application is an economic saving?

A. Yes, sir. That is correct.

MR. COOLEY: With equal protection?

A. With equal protection. Fully as good a protection.

MR. COOLEY: Thats all, thank you.

EXAMINER NUTTER: Does anyone else have questions of the witness?

Mr. Protz?

MR. PROTZ: D. E. Protz, Potash Company of America. One thing - - - -

EXAMINER NUTTER: Would you come forward please, this recorder isn't picking you up from there. Would you state your name again?

MR. PROTZ: D. E. Protz, Potash Company of America. One thing that wasn't quite clear to me in reading your report - - - - was about the drilling in the salt section, it seems that - - - - I believe that the Wilson Oil Company suggested and went ahead and used brine for the drilling solution in the salt section and I don't know whether Hudson & Hudson suggested that or not - - - I forgot my file, I misplaced it or something and I would suggest that they use that - - - - -

MR. LUNT: Use brine?

MR. PROTZ: Use brine.

MR. LUNT: With a cable tool hole, there will be no fluid.

MR. PROTZ: Yes, I know but - - - - I was at the Wilson Oil Company operations and they mixed - - - - -

MR. LUNT: They used the brine solution?

MR. PROTZ: They used the brine - - - - -

MR. LUNT: They used the brine to keep from dissolving that section up.

MR. PROTZ: They used a minimum of solution.

MR. LUNT: Yes, sir.

MR. PROTZ: From dissolving out - - - - -

MR. LUNT: What is the thing there - - - - - you mean they use a saturated solution of brine.

MR. PROTZ: Yes.

MR. LUNT: So the salt wouldn't be washed out any further?

MR. PROTZ: That's right - - - - and they get a minimum of - - - - they get a straight hole. It saves in cementing - - - - it does give them a better hole and there is less - - - - well, there is no danger really, but it is just a suggestion for improvement, I think.

MR. LUNT: With all our rotary holes, I think thats absolutely necessary to keep the section saturated.

MR. PROTZ: Yes, I know.

MR. PROTZ: Yes, its better.

MR. LUNT: On this new - - - - - the cable tool procedure, the only advice seems to be to pick up the samples then, wouldn't it?

MR. PROTZ: Yes, if it helps that - - - - that isn't really necessary - - -

MR. LUNT: Well, Mr. Protz, was the Wilson hole drilled with cable tools?

MR. PROTZ: Yes, and it just happens that the same driller is going to drill the other one - - - - I am not sure, but I rather suspect he would use it anyway, but I just wanted to make it a point of record.

EXAMINER NUTTER: This is merely a suggestion and not a request, Mr. Protz?

MR. PROTZ: Well, I don't know if I mentioned it in my letter or not, I don't have a copy of it.

MR. LUNT: I don't believe it was mentioned, but I'm sure that they will - - -

MR. PROTZ: Its in the R-111, I know for ordinary - - - - and it wasn't in my letter?

MR. PORTER: Mr. Nutter,

EXAMINER NUTTER: Yes, sir.

MR. PORTER: Lets go off the record here just a moment. (OFF THE RECORD.)

EXAMINER NUTTER: Mr. Lunt, would Hudson & Hudson be willing to abide by all the requirements of Order R-111-A?

A. Yes, sir.

Q. In drilling and completing this well?

A. Yes, sir.

Q. Except the specific exceptions to the casing program which are the subject of this Hearing today?

A. Yes, sir.

EXAMINER NUTTER: All right sir, Now does anyone else have any questions of the witness? Does anyone have any statements they wish to make in this case? If not, the witness may be excused and we will take the case under advisement.

