

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

Case No. 1543

TRANSCRIPT OF HEARING

November 6, 1958

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BEFORE THE
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IN THE MATTER OF:

Application of Drilling and Exploration Company, Inc. :
for an exception to the casing requirements for the pot- :
ash-oil area in Lea and Eddy Counties, New Mexico. :
Applicant, in the above-styled cause, seeks an order :
authorizing an exception to the shallow-zone casing re- : Case
quirements for the potash-oil area as set forth in : 1543
Order No. R-111-A for its Ballard No. 1 Well located :
1980 feet from the North and West lines of Section 27, :
Township 20 South, Range 34 East, Lea County, New :
Mexico. Applicant proposes to drill with cable tools to :
an approximate depth of 3,700 feet adjacent to the :
Lynch Pool. :

Mabry Hall
Santa Fe, New Mexico

BEFORE:

Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: The hearing will come to order, please.
The first case on the docket this morning will be Case 1543.

MR. PAYNE: Case 1543, "Application of Drilling and
Exploration Company, Inc. for an exception to the casing require-
ments for the potash-oil area in Lea and Eddy Counties, New
Mexico."

MR. DURAND: If the Commission please, I would like
for the record to show that Durand and Stewart, attorneys-at-law,
Hobbs, New Mexico, represent the applicant, Drilling and Explor-
ation Company, Box 445, Grants, New Mexico.

I would like to call Mr. Peterson.

(Witness sworn.)

KARL ANDREW PETERSON

called as a witness, having been first duly sworn, testifies as follows:

DIRECT EXAMINATION

BY MR. DURAND:

Q State your name, please, sir.

A Karl Andrew Peterson.

Q Where do you live, Mr. Peterson?

A 600 Nottingham Drive, Dallas, Texas.

Q And by whom are you employed?

A Drilling and Exploration Company, Incorporated.

Q And in what capacity are you employed with that company?

A Production Engineer.

Q How long have you been so employed?

A Four years.

Q Now, have you ever testified before this Commission, Mr. Peterson?

A No, I haven't.

Q Mr. Peterson, briefly state your educational background and your employment prior to your employment with Drilling and Exploration Company.

A Prior to--I graduated from the Wichita University with a BA in geology, January, '50. I worked for L & L Drilling Company for--until January, '54. At that time, I was employed by Twin Oil Company.

Q With the L & L Oil Company, in what capacity did you serve that company?

A I served as a geologist and tool pusher, driller and various sundry --

Q That was a small company?

A Small company.

Q Proceed, sir.

A Sir?

Q Proceed with your --

A And I went to work for Twin Oil Company January, '54, as Production Engineer, and they merged with the Drilling and Exploration Company in January, '55 and I have held the same position, District Engineer in Pampa and Division Engineer in Dallas.

MR. DURAND: If the Commission please, we submit the witness' qualifications.

MR. NUTTER: The witness is qualified. Please proceed.

Q (By Mr. Durand) Mr. Peterson, the Drilling and Exploration Company has filed an application with this Commission seeking an exception to the casing requirements of Order No. R-111A covering the casing requirements in the potash zone. Are you familiar with that application?

A I am, sir.

Q Have you compared that application with the order granted by the Commission in the Wilson Oil Company case and in the Hudson and Hudson case?

A I have.

Q Can you distinguish briefly the difference between your application and the order granted by the Commission to the cases referred to?

A Well, for all practical purposes, they are the same. We wish to cement our original surface string at seventy feet to the surface whereas theirs is merely set, I believe.

Q Now, the purpose of cementing from the bottom on that surface string to the surface is for what reason?

A Well, just for operational reasons, shut off any surface water.

Q Is that a more workable condition--

A Yes.

Q --than having it tacked in?

A Yes.

Q Now, Mr. Peterson, based on your application in which you have stated that you will set the different types of casing and tack them in and in the event of production, you will cement the production string, the five and a half inch, from the production horizon up to the surface and withdraw your intermediate string which you have set out there, which are 10 3/4 and 8 5/8. Bearing in mind your application and what you propose to do if production is encountered, in your opinion as a Production Engineer, do you believe that the casing program will protect any potash zone and salt zones which you encounter?

A I believe it will protect any zone, water, potash, salt, or any other zone as well as any other casing program.

Q Now, in the event production is encountered under

your application and what you proposed to do, will the completion of your well be in conformance with R-111A as to the cementing program and casing program?

A R-111A, Yes.

Q That's a potash-oil --

A Yes sir, and potash and oil.

Q Will it be in conformance with the order of the Commission entered in the case of the Wilson Oil Company for an order establishing new pool rules and special regulations on Township 20 South, Range 34 East, NMPM, being the potash-oil area, Lea County, New Mexico?

A It will be in accordance.

(Whereupon, the documents were marked as D & E's Exhibits One through Six for identification.)

Q (By Mr. Durand) Mr. Peterson, I hand you here what has been marked for identification as D & E's Exhibit Number One and ask you, can you state what that exhibit represents?

A Well, this exhibit in the enclosed area, red dotted enclosed area is a potash area, as defined by that potash order. The closed green area, Section 34, 35, that's the Lynch Field.

Q Now, may I interrupt? Under the rules of the Commission, if your proposed well is located within one mile of a delineated pool, you are subject to the pool rules. I will ask you whether or not your proposed location for which you filed this application for exception for the casing program is within one mile of the delineated area of the pool?

A It is.

Q All right, proceed.

A The Middle Lynch-Yates Field is outlined in black pencil. This is a new Wilson oil field.

Q Is that the one where you referred to the order for the casing program within that new pool?

A Right.

Q All right, sir. Now, the property or the location of the well that you seek to drill is shown on the map, is it not, sir, in Section 27?

A The proposed location for an exception for two casing requirements.

Q Now, that well, how far, approximately how far is that well located from the exterior limits of the delineated potash area?

A Well let's see, that is --

Q Well, roughly, does it appear to be one location?

A One full location away.

Q Now, directing your attention to well locations of the Hudson and Hudson Company in Section 28 there, I will ask you whether or not--what is the comparative distance between your proposed well and the Hudson and Hudson well in Section 28 insofar as the nearest to the exterior limit of the potash area?

A It's one-half mile farther in the potash area.

Q I direct your attention to the Wilson Oil Company well, being Well Number One in Section 21 in the northeast of the northeast and ask you in regard to that well, and its relationship to the exterior limits of the potash area, compare the exterior

limits from the proposed well of the Drilling and Exploration Company, how does that compare?

A It is the same for all practical purposes.

Q Now, Mr. Peterson, notice of intention to drill has been submitted to the USGS, has it not, for approval sought there?

A It has.

Q I hand you here what has been marked for identification as D & E's Exhibit Number Two, consisting of three sheets, and ask you whether or not that is the application together with the notation made by the USGS in regard to the application?

A This is our application.

MR. DURAND: If the Commission please, I have made photostatic copies of the application and I would like to introduce the photostatic copies and withdraw the original. This is the only copy we have for our file.

MR. NUTTER: That will be all right.

Q (By Mr. Durand) Mr. Peterson, I believe that I have asked you this, but in order that the record be clear, I will ask you whether or not in your opinion as Petroleum Engineer and in that capacity with the company, do you believe that a proper casing program of the D & E Company will adequately protect the potash area and all other areas as set out in your application?

A I do.

MR. DURAND: We will pass the witness.

MR. NUTTER: Are there any questions of Mr. Peterson?

MR. DURAND: If the Commission please, we would like

at this time to offer D & E's Exhibit One, One being the plan that was testified to by Mr. Peterson.

MR. NUTTER: And also --

MR. DURAND: And we want to offer D & E's Exhibit Number Two, being a photo copy of the application or notice of intention to drill and the noted reply by the USGS thereon. We also would like to offer in evidence order of the Commission Number R-968, being D & E's Exhibit Number Three and we would also like to offer D & E's Number R-999. I assume the Commission, while they are copies of orders sent to me, they were furnished me at my request, and I assume that they will be accepted to the record.

In connection with that, we would like to adopt the record in Case Number 1513, I believe it was, which was a prior hearing in this matter, for whatever it is worth and --

MR. NUTTER: That's Case 1513?

MR. DURAND: Yes sir, we adopt everything in regard to that case except the order of the Commission.

MR. NUTTER: Is there objection to the introduction?

MR. DURAND: I have one more exhibit I would like to introduce and offer, the letter of the Potash Company of America, being D & E's Exhibit Number Six, being a letter dated October 29, 1958, which is in reply to the Drilling and Exploration Company, Incorporated, letter dated October 8, 1958.

"Dear Sir: The above application by drilling and Exploration Company for an exception to the casing requirements of Order R-111A for its Ballard Number One Well to be located

1980 feet from the north line and west lines of Section 27, Township 20 South, Range 34 East, Lea County, New Mexico. Potash Company of America, under normal circumstances, would object to any deviation from OCC Order R-111A. However, since the subject well is but a short distance inside our potash lease area, and located where exploratory drilling has indicated the absence of potash mineralization in sufficient concentration to be of economic value, we do not feel that objection to the casing program outlined in the application defined under Case Number 1513 is justified."

Incidentally, both applications were identical with the exception of the addition of the USGS statement as an approved application.

"We wish to stress that our decision not to offer protest in this case is not to be construed as indicating that the casing program outlined by Drilling and Exploration Company is acceptable in known or potential potash areas."

If the Commission please, that's the Applicant's case.

MR. NUTTER: Are there any questions of Mr. Peterson, or first, is there objection to the introduction of the Drilling and Exploration Company's Exhibits One through Six inclusive?

If not, they will be admitted in evidence.

Is there objection to the introduction into the record of this case the record in Case 1513?

If not, the record will be consolidated.

Does anyone have any questions of Mr. Peterson?

MR. PAYNE: Mr. Peterson, is the purpose of your application economic saving?

A It's an economic saving.

MR. PAYNE: Approximately how much economic saving will result if the application is approved?

A In the neighborhood of twelve, fifteen thousand dollars.

MR. PAYNE: Thank you.

MR. NUTTER: Any further questions?

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Peterson, as I understand it, you propose in the drilling of this well to actually run different strengths of casing?

A Correct.

Q This first string of 13 3/8 inch casing will be cemented at approximately seventy feet?

A Correct.

Q And the cement on that string will be circulated to the surface?

A Yes, it will be circulated to the surface.

Q The second string will be ten and three quarters inch casing to be landed at approximately seven hundred feet. Could you tell me what formation you expect to cut that it would be bottomed in?

A I couldn't offhand without checking, but it will be your water shut-off string, it will set below your water, I believe.

Q Now, the requirements of Rule 111A call for a surface casing string of new or used filed casing in good condition to be set in the redbeds. Would that be the string that you are proposing to call the seven hundred foot string?

A I believe it would.

Q Your next proposed casing string is 8 5/8 inches to be landed at approximately 1250 feet. Do you have any idea where that will be bottomed as far as formation is concerned?

A I don't know the name, that would be your protection string there.

Q The next string of casing called for in Order 111A is a salt protection string to be set not less than one hundred feet nor more than six hundred feet below the base of the salt. Do you think that the 1250 feet would fall one hundred to six hundred feet below the base of the salt?

A I believe that's correct.

Q And then your five--this ten and three quarters and eight and five eights are both to be landed and cement used?

A They will be mudded.

Q They will be mudded in?

A And checked for water shut-off and a good set.

Q I see. Then your five and a half inch casing is going to be tacked in when you --

A It will be cemented with at least fifty sacks of cement for testing.

Q What formation do you anticipate that this well will be completed at?

A Well, it will be probably the Seven Rivers.

Q So the five and a half inch is going to be cemented at the top of the Seven Rivers or down in the Seven Rivers?

A In the Seven Rivers with production below it.

Q Where will the production be, in the middle or on the Seven Rivers?

A It will be probably in the middle of the Seven Rivers.

Q I see. And how many sacks of cement would you use for tacking the five and a half inch?

A Approximately fifty sacks.

Q Would the fillup then come up above the top of the Seven Rivers?

A It certainly would, yes.

Q Do you anticipate that there will be any gas pressure or other pressures encountered in the Seven Rivers formation in this well?

A Very low pressures.

Q Have other wells been drilled to that same formation in the nearby area?

A We have four producing wells in the nearby area.

Q Have gas pressures or other pressures been encountered in any of the wells of any magnitude?

A Not of any magnitude.

Q You would know, would you not, Mr. Peterson; whether there would be any pressure or any high pressure gas or oil in the Seven Rivers formation, and you would know whether they

existed or not prior to the time that you would pull the ten and three quarter or the eight and five eights inch pipe?

A Yes, we would.

Q Are there any other potash operators who own potash leases within one mile of this proposed location other than Potash Company of America?

A No, I believe not.

Q So that you have notified the only --

A Correct.

Q -- owner of a potash lease within one mile?

A Yes, sir.

Q Mr. Peterson, you are aware that although your well is within one mile of the Middle Lynch-Yates Pool for which special rules and regulations regarding casing programs have been promulgated, that Rule 3 of those rules states that the provision of Paragraph A of 104 of the Commission statewide rules and regulations which requires that a well located within one mile of the defined pool to be spaced, drilled, operated, prorated in accordance with the regulations in effect in said pool shall not apply to the Middle Lynch-Yates Pool?

A Yes, sir.

Q You were aware of that provision?

A I was aware, we are there in the Lynch Pool.

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

If Not, the witness may be excused.

(Witness excused.)

