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**EXAMINER HEARING**

Application of Byron McKnight for  
an exception to Order No. R-111-A,  
Lea County, New Mexico.

**Case No. 4270**

TRANSCRIPT OF HEARING

MR. UTZ: Case 4270.

MR. HATCH: Case 4270. Application of Byron McKnight for an exception to Order No. R-111-A, Lea County, New Mexico.

MR. LOSEE: Mr. Examiner, A. J. Losee of Artesia, representing the Applicant, I have one witness, the Applicant, Mr. McKnight.

(Witness sworn).

(Whereupon, Applicant's Exhibits 1 through 5 were marked for identification.)

BYRON MCKNIGHT

called as a witness, having been first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. LOSEE:

Q State your name.

A Byron McKnight.

Q What is your occupation?

A I am a petroleum geologist.

Q And you are located where?

A Hobbs, New Mexico.

Q You have not previously testified before this

Commission?

A That's right.

Q Where did you obtain your higher education?

A At the University of Texas, Austin, Texas.

Q What degrees did you obtain?

A A BS in geology.

Q And what year?

A In '57.

Q Since your graduation from school, have you attended any seminars or work programs?

A Yes, sir. I was employed by Humble Oil and Refining Company for ten years, and I attended several in conjunction with that.

Q What subjects were covered in some of those seminars?

A Carbonates catigraphy, interpretation of electric logs and related subjects.

Q Since your graduation from Texas University, what has been your employment?

A I worked for Humble for ten years, in the last two and a half years I have been independent in Hobbs, New Mexico.

Q During the ten years you were with Humble, what

position or positions did you hold?

A Well, I was evaluation geologist for six years, production geologist for two, and an exploration geologist for two.

Q During any portion of this time, was your work in southeast New Mexico?

A Yes, sir, four years of it.

Q And since you left Humble, you have been an independent petroleum geologist?

A Yes, sir.

MR. LOSEE: Are Mr. McKnight's qualifications acceptable?

MR. UTZ: Yes, they are. And, let me at this time ask for any other appearances in this case. You may proceed.

Q (By Mr. Losee) Would you state, briefly, the purpose of this application, Mr. McKnight?

A Yes, sir. We are seeking to amend the R-111-A ruling, which requires setting two strings of pipe; one into the Rustler and one into the salt section of the potash area, so designated in southeast New Mexico, and we would like to amend that to set only three hundred feet of pipe.

And then, set one long string proudction.

Q Now, that's for the two wells that you propose to drill in the potash oil area?

A Yes, sir.

Q One in the southeast of the quarter of the northeast quarter of Section 26, 1933, and the other in the southwest southeast of said Section 26; is that correct?

A Yes, sir.

Q Now, what depth is projected for these two wells, Mr. McKnight?

A Thirty-eight hundred feet bottoming in the Seven Rivers Formation.

Q Actually, the outer boundaries of the potash oil areas is located nearly a mile north of these wells; is it not?

A That's true.

Q Now, the potash lease owners in the area of these two locations are what persons or company? Is it Potash Company of America, Dan Harroun?

A Yes, sir.

Q Now, have Mr. Harroun and PCA been furnished copies of your plat, notice of intention to drill these wells?

A Yes, they have, quite a few weeks ago.

Q And that was on November third of 1969?

A Yes, sir.

Q Now, please refer to what has been marked as Exhibit 1 and explain what is shown by this exhibit.

A Well, this plat indicates the proposed location of the two test wells. It also indicates the oil and gas lease ownership of the adjacent section of land.

And it also indicates the proximity to the present production.

Q Now, in this area PCA's only lease within a mile of the outer boundaries of the proposed locations is their lease that embraces the north half of Section 36?

A Yes, that's true.

Q And although Mr. Harroun has not filed with the Commission, a list of his holdings, he, from your information, holds the remaining leases within a mile of these proposed locations?

A Yes, sir.

Q Please refer to what has been marked as Exhibit 2, being your notice of intention to drill the Ann No. 1 Well, and first, let me ask you if this is the copy of the notice of intention that was sent to the potash operators?

A Yes, it is.

Q Would you briefly set out the casing program and the cementing program proposed?

A Yes. It is proposed that we set eight and five-eighths inch casing, to three hundred feet, and circulate the cement.

And then, it is proposed that in the event of production, we set seven and seven-eighths inch casing -- I'm sorry, I mean four and a half inch casing, to thirty-eight hundred feet, and also circulate the cement.

Q Now, is that casing program in deviation of the requirements of R-111-A?

A Yes, sir, it is.

Q To what extent?

A Well, R-111-A states that the pipe be set into the Rustler Formation above the salt, to the red beds Rustler Formation, above the salt and also a protective string of pipe be set through the salt section.

Q And to that extent, your proposed casing program is in deviation?

A It is in deviation, yes.

Q Please refer to what has been marked as -- I'm sorry -- you talked about your surface casing. Would your long string be cemented and circulated to the surface?

A Yes, it would.

Q Now, please refer to what has been marked as Exhibit 2-A, being the notice of intention on the No. 1 well, southwest of the northeast of 26, and explain that casing program.

A The casing program for the A lease would be precisely the same as for the other lease, and would thereby have the same deviation from the rule.

Q Now, is that a copy of the notice of intention that was furnished to PCA and Mr. Harroun?

A Yes, sir, it is.

Q Have you discussed this casing program with the USGS?

A Yes, sir, we have. In their Hobbs office and have obtained from them verbal and tentative agreement with the program.

Q These are federal leases upon which these two wells are located?

A Yes, sir, it is.

Q Please refer to what has been marked as Exhibit C, being a log of the well and the area and explain the location of this well.

A The log in this exhibit is the one -- the well



drilled by Pan American Petroleum Corporation in the southwest quarter of Section 26 -- it was a discovery well for Yates Oil Field.

Q When was it drilled?

A It was drilled in 1968 -- in the second quarter of 1968.

Q All right. What is shown by this portion of the log?

A Well, reportedly, from the information that we have, the fact that this well was located within the potash area was overlooked by both the USGS and the operator, and the well was at total depth before this oversight was -- came to be noticed.

And so, there wasn't much to do, except go ahead and complete it, with a conditional program -- they did set two hundred and seventy-five feet of pipe.

Q Do you have that on another exhibit?

A Yes.

Q Why don't you tell me from this log what is shown with respect to the same hole?

A Well, it shows that the base of the salt is located approximately 2908, and the top of the eighth formation is located -- it is thirty-one ten -- the top

of the pay zone in this particular well, in the lower Yates, is thirty-three -- thirty-three fifty.

This well did not penetrate the Seven Rivers Formation.

Q Now, although not shown on this log, have you checked the reported top of the anhydrate?

A Yes, sir. It's approximately fifteen hundred feet -- thirteen hundred feet, I'm sorry.

Q And the top of the anhydrate is at --

A Is at about thirteen hundred feet.

Q Now, what is the reported top of the salt?

A About fifteen hundred feet.

Q Please refer to what has been marked as Exhibit 4, being the diagrammatic sketch of the casing program on the Pan American completion and explain what casing program and cementing program was utilized in that well.

A Well, Pan American set eight and five-eighths inch casing at two hundred and seventy-five feet, the reported number of sacks of cement used was one hundred and seventy-five, which may or may not have circulated the cement -- I don't have that data.

After an indication of commercial hydrocarbon, they set five and a half inch casing to thirty-three ninety-seven feet and did circulate the cement.

Q Please refer to what has been marked Exhibit 4-A, being a similar diagrammatic sketch of your casing and cementing program proposed on the No. 1 Ann and the No. 1 Ann-A --

A It is proposed that we set eight and five-eighths inch casing to a depth of three hundred feet, and circulate the cement.

In the event of production, it is proposed that we set either four and a half or five and a half inch casing to the -- in the end of pay zone at an adequate depth to produce the well.

It would be thirty-eight hundred feet or less.

Q Mr. McKnight, from your study of the geology in the area, do you know whether there is any commercial potash in the immediate area?

A Not to my knowledge -- it would seem that with the number of holes that have been drilled through there, also several exploratory tests for potash, that there is not.

Q Do you have an opinion as to whether this proposed casing and cementing program in your two wells will prevent the waste of potash deposits and not constitute a hazard to the potash, if any, in the area?

A I don't see that it would constitute any hazard to the potash deposits, if they do exist, other than as being -- the hazard that has been created by the other wells that have been drilled in that area.

Q Do you have an opinion as to whether the approval of this application will prevent waste of hydrocarbons that might otherwise not be recovered?

A Yes, it would prevent such waste, in that making the wells more economic to drill and complete, we can afford to drill more wells.

Q Have you received copies of letters from PCA and from Mr. Harroun, with respect to these proposed wells and the proposed casing program?

A Yes, sir, we have received letters from both, indicating their approval of this program.

MR. LOSEE: May I inquire of the Examiner if the files of the Commission reflect the existence of these letters?

MR. UTZ: Yes, sir, the Harroun letter -- that's all.

MR. LOSEE: Well, you ought to have a copy of a letter -- Mr. H. N. Clark, vice-president, PCA, dated November 10, and it shows a copy to Mr. Porter, Mr. Anders

and Mr. Fulton.

Q (By Mr. Losee) Let me ask you, Mr. McKnight, to read this letter into the record.

A Yes. This letter is addressed to Mr. A. J. Losee, Esquire, Drawer 239, Artesia, New Mexico, 88210, reference Byron McKnight, Ann No. 1 and Ann A No. 1 wells, Lea County, New Mexico.

"Dear Sir -- this will advise you that we do not intend to file a formal protest to Mr. McKnight's proposal to drill oil and gas test wells, as noted above in the southeast quarter, northeast quarter and the southwest quarter, northeast quarter of Section 26, Township 19 South, Range 33 East, Lea County. Signed by H. N. Clark, Vice-president."

MR. LOSEE: We would offer that letter in evidence, Mr. Examiner.

Q (By Mr. Losee) Both of these wells are located on Federal Oil and Gas Leases, which will expire at midnight on November 30, 1969; is that correct?

A Yes, sir.

Q And under the terms of your farm-out from Pan American Petroleum Corporation, you have to be drilling on the first of these wells on November 29?

A That's correct.

Q That's this Saturday; is it not?

A That's right.

Q And as result of this short fuse, do you request the Examiner to, if possible, to give you oral approval of the deviation of the casing program?

A Yes, sir; that would be very helpful.

Q And were Exhibits 1, 2, 2-A, 3, 4 and 4-A prepared by you, and Exhibit 5 received by your attorney?

A Yes, sir.

MR. LOSEE: We move the introduction of Exhibits 1 through 5.

MR. UTZ: Without objection, Exhibits 1 through 5 will be entered into the record of this case.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. McKnight, how do you propose to drill through the anhydrate and salt sections?

A We propose to use a saturated brine, thereby not causing excessive hole enlargement through the salt sections.

Q That would be from about thirteen hundred feet down; is that correct?

A We would use the brine to the total depth; yes, sir.

The salt section itself, of course, would create its own brine, after we drilled it to it.

Q Of course, that's what you want --

A Right.

Q -- a salt saturated solution when you go through the salt section?

A Yes, sir.

Q Is there any other wells in the potash area that have been drilled in the manner you propose?

A Yes, quite a few -- all of the ones that were drilled prior to the existence of the rule, which we seek an exception of, were all drilled with no regard for the potash at all.

MR. UTZ: Any other questions of the witness?

The witness may be excused.

(Witness excused).

MR. UTZ: Statements in this case? The case will be taken under advisement.

Mr. Losee, we will try to let you know tomorrow. I wouldn't want to say, yes, right here -- we will have to have a consultation.

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STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO ) ss

I, CA FENLEY, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Court Reporter

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 4270 heard by me on Dec. 25, 1969.

*[Signature]* Examiner  
The Mexico Oil Conservation Commission