

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
HOBBS, NEW MEXICO

CASE NO. 1215

TRANSCRIPT OF HEARING

FEBRUARY 27, 1957
DEARNLEY-MEIER AND ASSOCIATES

COURT REPORTERS
605 SIMMS BUILDING
TELEPHONE 3-6691
ALBUQUERQUE, NEW MEXICO

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
HOBBS, NEW MEXICO
FEBRUARY 27, 1957

IN THE MATTER OF: :

CASE NO. 1215: Application of Wilson Oil Company 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 well in the NE/4 NE/4 of Section 21, Township 20 South, Range 34 East, Lea County, New Mexico: 13-5/8 inch casing in top of the red bed to approximately 70 feet; 10-3/4 inch casing as cave string to about 700 feet; 8-5/8 inch casing, this being the water shut-off string to about 1300 feet, but in any event below the water; 7 or 5 1/2 inch string to be set and cemented at a point selected by the operator above pay zone. The well location is on federal acreage and is to be drilled with cable tools and the first productive horizon is expected at 3605 feet.

BEFORE:

Warren W. Mankin, Examiner.

T R A N S C R I P T O F P R O C E E D I N G S

MR. MANKIN: Next case on the docket is Case 1215.

MR. COOLEY: Case 1215. Application of Wilson Oil Company for an exception from the casing requirements in the Potash-Oil Areas as established by Order R-111-A.

MR. LAMB: If Examiner Mankin please, I am Raymond Lamb, Petroleum Geologist for the Wilson Oil Company, and appear on their

behalf in Case 1215. I have testified as an engineering witness before the New Mexico Oil Conservation Commission a number of times. If my qualifications are acceptable to the Examiner, I will proceed with the testimony.

MR. MANKIN: They are accepted.

(Mr. Lamb sworn as a witness.)

MR. MANKIN: Mr. Lamb, your qualifications are acceptable.

MR. LAMB: Wilson Oil Company filed an application for Case 1215 on February 11, 1957, for an exception to Order R-111-A, which covers casing programs in the defined potash area. Copies of this application were mailed to all potash companies, offset oil operators and the U. S. Geological Survey.

As stated in the application, the Wilson Oil Company has obtained operating rights on the E/2 NE/4 and other subdivisions of Sec. 21-T20S-R34E, Lea County, New Mexico, N.M.P.M. These operating rights are under Federal lease, Las Cruces Serial Number 070315, with royalty being reserved by the U. S. Government. The Wilson Oil Company presented with the application, a plat indicating the proposed location of the well to be drilled on said tract. The boundary of the potash area as set out in Order R-111-A is designated on this plat. We wish to submit a copy of this plat as Exhibit "A".

(Exhibit "A" marked for identification.)

It will be noted from this plat that the proposed location is 660 feet from the North boundary and 660 feet from the East boundary

of the defined potash area.

We submit as Exhibit "B",

(Exhibit "B" marked for identification.)

a tabulation of casing records taken from the N. M. Oil Conservation Commission files, on wells drilled in the area of the proposed location. This tabulation gives the size, depth, and method of setting casing on these wells in T20S-R34E. To our knowledge, only four of the listed wells were drilled with rotary tools and 39 were drilled with cable tools. All of the 39 cable tool holes were drilled ~~with a~~ "dry hole" through the salt or Salado section. Thus, eliminating any contamination of the salt, potash section by water from overlying water zones.

We submit a diagram as Exhibit "C"

(Exhibit "C" marked for identification.)

showing the proposed casing program as set out in the application. This diagram shows that it is our plan to set 13-3/8 inch casing in the top of the Red Bed, thus will shut-off all fresh water zones in recently deposited beds.

Since I gather that corrections are the order of the day, may I point out that we have a typographical error which appeared in the application and in the notice of the case. You may have noted that the size of the casing recited as 13 and 5/8 should read 13 and 3/8; to my knowledge they don't make 13 and 5/8.

MR. MANKIN: Is there objections to this correction from

13 and 5/8 inch surface casing to 13 and 3/8 which would be the proper casing that it should have been? If not, the correction will be so entered.

MR. LAMB: A string of 10-3/4 inch casing will be set at about 700 feet, to shut-off water, and/or dry cave section.

Most wells drilled in the area have encountered water in the Santa Rosa formation, which will be sealed off by the setting of 8-5/8 inch casing at approximately 1300 feet. The Dewey Lake formation immediately below the Santa Rosa consists of competent shaley silt deposits which have not carried water in this area. Thus, the 8-5/8 inch string of casing will seal off all water zones existing above the Rustler and Salado sections. The Salado will be drilled with a "dry hole" with cable tools. In the event unexpected water zones should be encountered in the Dewey Lake, it will be necessary to underdig the 8-5/8 inch casing so that it may be lowered to shut-off any water prior to the drilling of the Salado section.

After drilling the Salado and Tansil formations, it is the operator's plan to set a string of 7 or 5-1/2 inch casing at a point above the known producing horizons. Based on the operator's interpretation of the available information, this point should be approximately 3605 feet, and will prevent the contamination of possible potash deposits. The production string would be tacked with cement, if deemed advisable, prior to the drilling of the known pay zone. In the event commercial production is developed, this string of casing will be cemented to the surface in stages if necessary. The

above out-lined casing program will prevent contamination of the salt section by the existing overlying water bearing zones. It will also protect possible potash deposits from contamination by lower oil, and/or gas bearing zones.

We have recited exact sizes of casing to be used in the drilling of this proposed well, in the selection of a drilling contractor, as well as changes of conditions, we request permission to increase the number of strings, the size of the string or the depth to which it is to be setoff the casing mentioned above. Any change in this direction would give us leeway for greater protection of possibly potash deposits and would be with the approval of the New Mexico O. C. C. and the U. S. G. S. representative.

It is our opinion that this program will adequately protect possible potash deposits under the conditions which should exist. However, if any unexpected conditions occur, the operator will take action to protect the potash deposits from contamination. In view of this possibility, it is therefore requested that the New Mexico Oil Conservation Commission establish and retain administrative jurisdiction over the drilling of the proposed well at the location above described.

Copies of the application were filed with the following potash companies:

- Potash Company of America
- National Potash Company
- U. S. Potash Company

Duwall Potash Company

International Mineral & Chemical Corporation

(Exhibit "D" marked
for identification.)

Southwest Potash Company

Kerr-McGee Oil Industries, Inc.

Farm Chemical Research Development Company

(Exhibit "E" marked
for identification.)

who own all the potash rights in the area, either under lease or permit, and this program has been discussed in detail with their representatives. Copy was sent to the National Potash Company, U. S. Potash Company, Duwall Potash Company, International Mineral & Chemical Corporation, Southwest Potash Company, and a copy was mailed to Kerr-McGee Oil Industries, but arrived at the Farm Chemical Resources Development Corporation, being designated as "D" and "E." Copies of the application were mailed to the following oil companies: Phillips Petroleum, Atlantic Refining and Kerr-McGee Oil Industries. Also, a copy of this application was mailed to the U.S.G.S. in Hobbs, New Mexico, and was discussed personally with them in detail. And we have Exhibit "F" from the U.S.G.S.

MR. GOOLEY: Does that conclude your testimony?

A Yes.

MR. MANKIN: Mr. Lamb, would you like to introduce Exhibits "A" through "F" in this case?

A Please.

MR. MANKIN: Is there objections to Exhibits "A" through "F" in this case? If not, they will be admitted in evidence. Is that all you had?

A Yes, sir.

Q (By Mr. Mankin.) Mr. Lamb, what is the primary reason that you desire to get exception to Rule Order R-111-A in this particular case as pertains to the salt string?

A As pertaining to the salt string --

Q Yes.

A -- or to the entire program?

Q The entire program, but primarily as it concerns the salt string.

A Well, the R-111-A requires a string of casing to be set in the top of or in it anhydrite above the salt section and cemented solid. It is my understanding that this would mean protection from the contamination of salt potash deposits from overlying water bearing zones, and it is our feeling in drilling of cable tools, we naturally will ~~have~~ "dry hole" through the salt section and prevent contamination of that salt section by the overlying water beds. That drilling the entire salt section to the base of the salt, the salt protection strings under R-111-A says that we may be permitted to drill one hundred to six hundred feet below the Salado, and set a string of casing to be tacked with cement, possibly later pulled, if so desired. This, in my understanding, would mean that protection from the Salado section by the underlying

possible oil and gas zones. It also says that it shall be set above any known oil and gas bearing zone. That is our plan to use a string of casing, it may be tacked, if deemed advisable, if not, it can be landed and later pulled, if no production is encountered.

Q (By Mr. Cooley.) Mr. Lamb, your answer is very informative but not quite responsive to the question. You propose certain casing program and R-111-A requires another. A Right.

Q What is the ground for the requested exception?

A We feel that there is no justification for the cementing of the shallow string 1700 foot string, cemented solid to the surface if we drill with cable tools through the salt section and there is no contamination from the overlying water.

Q The ground is, then, it would be an unnecessary expense, you would give the same point of protection for less money?

A That's correct.

MR. MANKIN: Going again on the same point, Mr. Lamb, it was your indication that you feel you would get adequate protection by landing the 8 and 5/8's at approximately 1300 feet instead of carrying it on down below the Salado -- A That's right.

MR. MANKIN: -- by going ahead and taking your 7 or 5 inch casing in the top of your proposed pay zone and then later recement it, if necessary? A That's right.

MR. COOLEY: Could you give me approximate cost figure if it were completed in accordance with 111-A?

A One item, the casing cemented solid, the value of it alone

is about five thousand dollars.

Q (By Mr. Cooley.) Difference?

A The value of the pipe, if we set it in the basis which I have proposed, you can salvage the entire string; if you set it and cement it, you lose the entire string. The pipe alone is worth about five thousand dollars, then you are out the additional expense of running and cementing.

Q What would you estimate that to be?

A I would say that would be approximately twenty-five hundred dollars.

Q Then a rough estimate of the difference?

A Would be around seventy-five hundred dollars on that string.

MR. MANKIN: I have one other question, Mr. Lamb. You indicated that you have presented this program to the Potash Company of America, which is the offset potash company in the area, you have nothing in writing from them?

A No, sir.

MR. MANKIN: I believe they have representation here. Is there any further questions of the witness in this case? You did indicate, did you not, Mr. Lamb, that you would desire this to be under the supervision of the Oil Commission and in the drilling of this well, did you not mean that this would be primarily under the supervision of the U. S. Geological Survey?

A I mentioned both.

MR. MANKIN: I see. If there are no further questions of the witness, the witness may be excused. Is there any statements to be made in this case?

MR. PROTZ: My name is D. Protz, Potash Company of America. As Mr. Lamb stated, we have discussed this particular well and program, and do not find we have any objections as it is laid out here. I do want to say that we will be on the well, too, quite a bit of the time, I suppose, and I have no questions of Mr. Lamb, I don't believe. That is all.

MR. MANKIN: Thank you.

MR. LAMB: I might add, Mr. Mankin, if there are any unusual conditions to be discussed with the U.S.G.S., and the Commission, the P.C.A. will be advised of these conditions.

MR. MANKIN: Is there further statements in this case? If not, we will take the case under advisement.

C E R T I F I C A T E

STATE OF NEW MEXICO)
: ss
COUNTY OF BERNALILLO)

I, THURMAN J. MOODY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Proceedings before the New Mexico Oil Conservation Commission was reported by me in stenotype and reduced to typewritten transcript by me and/or under my personal supervision, and that the same is a true and correct record to the best of my knowledge, skill and ability.

WITNESS my hand and seal, this, the 14th day of March, 1957, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Thurman J. Moody
Notary Public

My Commission Expires:
April 3, 1960.

February 27 12:15 PM '57
Walter Markin