BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

Case No. 1540

TRANSCRIPT OF HEARING

October 22, 1958

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BEFORE THE
OIL CONSERVATION COMMISSION
October 22, 1958

IN THE MATTER OF:	
Application of E. P. Campbell for an exception to Rule 505 of the Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order granting an exception to Rule 505 of the Commission Rules and Regulations and assigning an allowable proportional factor of 1.33 for the oil pool in the Abo formation discovered by applicant's Cockerham No. 1 Well, NE/4 NE/4 Section 34, Township 18 South, Range 26 East, Eddy County, New Mexico, even though the depth of the casing shoe is 4205 feet. The top of the Abo pay is at approximately 5280 feet in the above-described well.	Case 1540

Mabry Hall
Santa Fe, New Mexico

BEFORE:

Elvis A. Utz, Examiner.

MR. UTZ: The hearing will come to order, please.

The next case on the docket will be 1540.

MR. PAYNE: Case 1540, "Application of E. P. Campbell for an exception to Rule 505 of the Commission Rules and Regulations."

MR. SWARTZ: I am Guy Swartz of Roswell, New Mexico representing Mr. E. P. Campbell in this case. We do not have legal counsel in this case and I am the only witness.

(Witness sworn in).

GUY A. SWARTZ

called as a witness, having first been duly sworn, testified as

follows:

DIRECT EXAMINATION

BY MR. PAYNE:

Q Will you please state your name and position again?

MR. UTZ: Are there other appearances in this case?

(No response).

MR. UTZ: Continue.

A My name is Guy A. Swartz and I am a consultant geologist in Roswell. I am under contract with Mr. E. P. Campbell from Lubbock, Texas.

Q Have you previously testified before this Commission as an expert witness, Mr. Swartz?

A Yes sir, I have testified on behalf of Gulf Oil Corporation and several industry committees in the past two years.

Q Are you familiar with Mr. Campbell's application in this case?

A Yes, sir.

MR. PAYNE: Are the witness' qualifications acceptable?

MR. UTZ: Yes, sir.

Q (By Mr. Payne) Please proceed, Mr. Swartz.

A E. P. Campbell in this case is seeking an order granting an exception to Rule 505 of the Oil Conservation Commission Rules and Regulations to assign an allowable proportion factor of 1.33 for the new oil pool in the Abo formation discovered by Mr. E. P. Campbell's Number 1 Cockerham.

This well is located 330 feet from the north and east lines of Section 34, Township 18 South, Range 26 East, Eddy County, New Mexico. Rule 505 regarding oil proration states: "The depth of the casing shoe or the top perforations in the casing, whichever is the higher in the first well completed in the pool, determines the depth classifications for the pool. Wells less than 5,000 feet in depth are assigned a prorationate factor of 1 and wells between 5,000 and 6,000 feet are assigned a prorational factor of 1.33."

The top of the Abo pay in this well is approximately 5280 feet while the depth of the casing shoe is 4200 feet. Application was made September 29, 1958 for an exception to this rule.

Exhibit Number 1 is a radio-activity log which I have prepared from two separate surveys on this well and illustrates the position of the casing shoe, the open-hole interval, top of pay and total depth.

The subject well was originally drilled to a depth of 3893 feet by the Lubbock Machine Company with cable tools between the dates of 4/9/51 and 2/15/52 and was completed as a dry hole April of 1952. The well was subsequently drilled to a depth of 4882 feet between the dates of 12/14/56 and 1/31/57 by Jones and McArthur. During the latter deepening operations, a six and a half inch hole was carried to a depth of 4282 feet and four and a half inch, nine and a half pound casing was set at 4200 feet with 500 sacks.

I believe there's a temperature survey on file with the Commission which indicated the top of the cement behind the four and a half inch casing at approximately 150 feet from the surface.

In the later operations, the annular space was filled to the surface with cement. The well was perforated at that time, completed, and tested in eleven different intervals between 940 feet and 4,045 feet, and in May--I'm sorry, in January 31, 1957, the test was temporarily abandoned.

On May 1st, 1958, the well was deepened to a total depth of 5626 feet drilling a three and seven eighths inch hole into the Abo formation. After securing production from the Abo formation, a bridge plug was set at 4,000 feet near the base of the four and a half inch casing, and on July 14, 1958, all perforations in the four and a half inch casing were squeezed with a total of a hundred sacks of cement and fifty cubic feet of stratocreat.

After testing the casing on 9/18/58 with 1,000 pounds of pressure, tubing with perforations from 5560 to 64 feet was set below a Gibson retrievable hook wall packer at 4100 feet. A potential was taken September the 19th, 1958 for 84 barrels of oil per day.

The top of the pay, although it is not readily apparent by examination of the radio-activity log, was picked primarily by samples and drilling time. The pay consists of brown granular dolamites typical of Abo shelf series and underlies a section of hard type Bone Spring limestone. Although some porosity is indicated

by the neutron survey in the Bone Spring section, this is attributed to the high percentage of argillaceous material existing in the limestone and this fact is readily verified by the gamma ray on the radio-activity survey.

No shows were indicated in this upper section above the top of the pay either by testing or by visual analysis. We took a swab test from 4995 to 5265 feet and this also indicated no shows. The basis for taking that test was an oil contamination in the samples. Although this well has an unusual amount of open hole section, it is believed that the well conforms to Rule 107 which requires that all oil, gas and water stratus be sealed off from a producing pay zone.

The sample cuttings above the depth of 4882 feet were not examined by myself; however, approximately two to three hundred feet of Bone Spring core still remains on the location and I just don't have any record of the interval that core came from, and the samples and the coring interval were unavailable to myself.

Although the two formations, the Bone Spring and the Abo, are present in the open hole, both formations are lateral equivelents of each other and the pay is actually made up of both formations. This well is located in a transition zone between shelf and basin sedimentary conditions.

The reason an exception is being asked in this instance is because it is felt that all regulatory rules of the Commission have been met and the long open hole section has been found to be barren.

If the size of the casing already in the hole prior to the deepening operation had been larger, we would have set a casing on the bottom and there are--we, at this time, have several other wells drilling in that area and out intention is to set casing on bottom.

I would like to offer Exhibit 1 in evidence if there are no objections, and that concludes my testimony if there are no questions.

MR. UTZ: Without objection, Exhibit Number 1 will be accepted.

Are there any further questions of the witness?

(No response).

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Swartz, are you tubing this well?

A Yes sir, the tubing has been set at 5560 with four feet of tubing perforations from 5560 to 64.

Q What size is that?

A That's two and three eighths inch, N-80 tubing, four and a half pounds.

Q Do you feel from your experience of this open hole, that it will be subject to caving?

A No sir, that limestone is very hard and brittle. It actually has no shale characteristics other than the amount of radioactivity. If the limestone is completely dissolved in acid, there is quite an arenaceous residue left, but in its present condition

in the well bore, it is very chrystalline, fine and chrystalline.

Q The main reason you did this is because of the size of the previous casing in the hole, was it not?

A Yes sir, the size of the casing determined the open hole diameter below and that was three and seven eighths, and it would have been very difficult to cement a string of three-inch casing or it would have had to have been hyd oil and I felt like the amount of cement behind the casing to be run to bottom would have been too thin to give any kind of strength. They don't make centralizers small enough to centralize that type of casing and its just been a mechanical problem all the way around.

Q Future wells you will set on top of the pay?

A Yes sir, more than likely we will set on through to total depth and probably perforate. That, at present, are our intentions.

MR. UTZ: Are there other questions of the witness?

CROSS EXAMINATION

BY MR. FISCHER:

Q Mr. Swartz, do you feel that this Bone Spring lime up above here and between your Abo and your casing shelf, is such that it is not going to develop any oil or gas, is it, sir?

A No sir, I don't believe it will. The lime is relatively tight, it is from the core that I have seen down there through that section. It offered no permeability and no porosity either and if there are any zones of porosity existing in that open hole,

section, I am unaware of them at this time.

Q Is it an organic lime?

A It is black.

Q Is it a relatively light lime?

A No sir, it is an argillaceous limestone.

MR. FISCHER: That's all I have.

MR. UTZ: Any other questions?

(No response).

MR. UTZ: If not, the witness may be excused.

(Witness excused).

MR. UTZ: Any statements to be made in this case?

(No response).

MR. UTZ: If not, the case will be taken under advisement.

The hearing is adjourned.

STATE OF NEW MEXICO)
: ss
COUNTY OF BERNALILLO)

I, JERRY MARTINEZ, Notary Public 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 in stenotype and reduced to typewritten transcript by me, and that thesame is a true and correct record, to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this 25th day of October, 1958, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Jerry Martinez
Notary Public

My Commission Expires:
January 24, 1962

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 1590 heard by me on Oct. 22, 1958.

....., Examiner
New Mexico Oil Conservation Commission