OIL CONSERVATION COMMISSION
P. O. BOX 871
SANTA FE, NEW MEXICO

October 25, 1962

COPY

Mr. Elwyn C. Hale
P. O. Box 667
Hobbs, New Mexico

Re: Case No. 2670, Application of Elwyn C. Hale for a Quadruple Completion, Lea County, New Mexico

Dear Mr. Hale:

The above-styled case came on for hearing before Examiner Elvis A. Utz at 9 o'clock a.m. on Wednesday, October 24, 1962, in the Oil Conservation Commission Conference Room, State Land Office Building, Santa Fe, New Mexico. No one appeared on your behalf. As I felt there might be a possibility that there was some misunderstanding as to the hearing date or some other inadvertent reason for the non-appearance, I moved the examiner to continue your case to the next examiner hearing which will be held at 9 o'clock a.m. on November 8, 1962, in the Oil Conservation Commission Conference Room, State Land Office Building, Santa Fe, New Mexico. Please be advised that if no one appears for you on November 8, 1962, it will be necessary for me to move to dismiss the case for lack of prosecution.

I would appreciate your advising me, prior to November 8, 1962, if you no longer desire to continue with this application. Once again we will mail a copy of the docket to you prior to the hearing date.

Please contact me if you need any additional information concerning this matter.

Very truly yours,

JAMES M. DURRETT, Jr.,
Attorney

JMD/esr

DOCKET M...

Date 10/26/62

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
October 24, 1962

EXAMINER HEARING

IN THE MATTER OF:

Application of Elwyn C. Hale for a quadruple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the quadruple completion (combination) of his Hale State Well No. 3, located in Unit H of Section 2, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce oil from the Devonian, McKee, Waddell and Ellenburger Pools, North Justis Field, through two strings of 2 7/8 inch casing and two strings of 3 ½ inch casing all cemented in a common well bore. CASE 2670

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: Case 2670.

MR. DURRETT: Application of Elwyn C. Hale for a quadruple completion, Lea County, New Mexico.

MR. UTZ: Is Elwyn C. Hale or his representative present? Case 2670 will be set at the end of this docket for further disposition.

* * * * *

MR. UTZ: We have one more case which we'll call again, Case 2670.

MR. DURRETT: Application of Elwyn C. Hale for a quadruple completion, Lea County, New Mexico. If the Examiner

please, apparently there is no one here on behalf of the Applicant. I therefore move the Examiner to continue this case to the next Examiner Hearing.

MR. PORTER: I might add at this point, Mr. Examiner, that I tried to contact the party that filed the application without success this afternoon.

MR. UTZ: It is my understanding that the docket has already been made on the Examiner Hearing for November 8th. Is it necessary to advertise this on that docket?

MR. DURRETT: No, sir, it's not necessary to do it under the rules.

MR. UTZ: Case 2670 will be continued to the November 8th Examiner Hearing.

The hearing is adjourned.

(Whereupon, the hearing was adjourned.)

* * *

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STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Notary Public in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing was reported by me in stenotype, and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

WITNESS my Hand and Seal this 24th day of November, 1962, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Ada Dearnley
NOTARY PUBLIC

My Commission Expires:

June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2670, heard by me on Oct. 24, 1962.

Examiner
New Mexico Oil Conservation Commission

BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 8, 1962

EXAMINER HEARING

IN THE MATTER OF: (Cont)	
Application of Elwyn C. Hale for a quadruple completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the quadruple completion (combination) of his Hale State Well No. 3, located in Unit H of Section 2, Township 25 South, Range 37 East, Lea County, New Mexico, in such a manner as to produce oil from the Devonian, McKee, Waddell and Ellenburger Pools, North Justis Field, through two strings of 2 7/8 inch casing and two strings of 3 1/2 inch casing all cemented in a common well bore.	Case 2670

BEFORE: Daniel S. Nutter, Examiner.

TRANSCRIPT OF HEARING

MR. NUTTER: The hearing will come to order, please. The next case will be 2670.

MR. DURRETT: Application of Elwyn C. Hale for a quadruple completion, Lea County, New Mexico.

MR. HINKLE: Clarence Hinkle, Hervey, Dow & Hinkle, Roswell, appearing for Elwyn Hale. We have one witness, Mr. Howard Holmes.

(Witness sworn.)

HOWARD HOLMES

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

DIRECT EXAMINATION

BY MR. HINKLE:

Q Your name is Howard Holmes?

A Howard Holmes.

Q You live at Hobbs?

A In Hobbs, New Mexico.

Q By whom are you employed?

A I am employed as Superintendent for Mr. Elwyn C. Hale.

Q Can you state briefly to the Examiner your experience in the oil business?

A Started in the oil business in 1927. Have been continuously employed there. I was a drilling contractor for twenty-five years, from 1935 to 1960. I have drilled and supervised many wells. I am an owner of oil wells and I have been acting as Superintendent for Mr. Hale.

Q Did you supervise the drilling of the Hale State No. 3 well?

A I did.

Q Where is that well located?

A It's located in the Southeast Quarter of the Northeast

Quarter of Section 2, 25, 37.

Q Has the well been completed?

A It is in the process of being completed. The physical facts as shown on the plat are all completed, yes, sir.

Q Are you familiar with the application of Mr. Hale for a quadruple completion of the Hale State No. 3?

A I supervised the making of it and signed it.

(Whereupon, Applicant's Exhibit No. 1 was marked for identification.)

Q Mr. Holmes, refer to the Exhibit No. 1 and explain what it is and what it shows.

A This is a schematic diagram of the well as it has been put together physically, and also is in general a chronologic chart of what we have done. You want it in detail?

Q Yes, if you will go ahead and explain.

A You'll notice that we have set surface pipe as explained to the right and have cemented it and circulated cement. The surface pipe being approximately 507 feet.

Q That's shown by A, the surface pipe?

A That is correct.

Q Surface string?

A Yes, sir. Then we set intermediate 10-3/4" expanded at the top of the hole by some 45 of 10-3/8 for the purpose of

getting more room for a well head connection at the top and cemented it, 3800 sacks of cement, and circulated cement all the way around.

Q Did you use any special kind of cement?

A It was a 50-50 Posvex which was a light aggregate and an expander. We then drilled a 9-7/8 hole to 8480 feet, at which time we set two strings of 3-1/2" as indicated at the top of the plat by strings 1 and 2. We set two strings of 2-7/8" which are designated as 3 and 4. Three of the strings were set all of the way to bottom, and at the fourth string which we have designated as string 3 and which would be the Waddell string, did not get to bottom for mechanical reasons. It was our intention to put them all the way to bottom.

Q Is it through all of the producing formations?

A All strings are through all of the production formations except the one string which did not go through the Ellenburger. Each string is equipped with a float shoe and a float collar and each string had the centralizers, which we also used as turbulizers, in a staggered manner, which were to hold the various strings of pipe apart. The spacing is explained in the exhibit over here in N. We covered the Ellenburger, the Waddell, the McKee with one set of centralizers and turbulizers, or turbulizers on a 30 foot or one per joint base staggered, then we left an

interval and we covered the Montoya, the Fusselman and the Devonian with another series of centralizers or turbulizers, staggered, the turbulizer point being to disturb the cement and disturb its flow and cause it to circulate in all of the cracks and crannies around this. We pumped cement through all four strings simultaneously and we ran a temperature survey, finding the top of the cement at 800 feet from the surface of the ground, some 2600 feet up inside the intermediate string.

At that time we were concerned on the basis of some historic troubles in the field of an interval lying between the McKee and the Waddell Pool, and before we did anything else we went in and perforated on a guided basis, oriented basis.

Q That's between the two zones, the McKee and the Waddell?

A Two holes at 8127 in the best shale we could find between the two zones, and we pumped out and squeezed into the shale what we would call a block squeeze, for the purpose of dividing those two zones, 160 sacks of cement, which we kept on pumping until we squeezed that cement for a squeeze job of 5,000 pounds at maximum pressure.

Q Allow me to interrupt you there. What is the interval between the McKee and the Waddell formation?

A Roughly 60 feet.

Q That was cemented?

A We put what we think is a block or a dividing cement block in between the two, yes, sir. Then in our work of drilling out we discovered that this shorter string here --

Q Which one are you referring to now?

A String No. 3, which we are calling the Waddell string, when we drilled our plugs we found that we were getting, losing fluid through the end of the pipe or through the shoe. Then we pumped 200 sacks of en core cement out through the shoe and squeezed that with a pressure of 4,000 pounds which we, this was enough cement to fill 800 feet of hole and we considered that we had put a block squeeze in between the Waddell and the Ellenburger with that squeeze job. After that we perforated the four zones, the Ellenburger, and the perforations on those zones are shown in Q, and the McKee are shown in R and the Waddell, and they are shown in S, and the Devonian and they are shown in T.

Q Allow me to interrupt you again. Before you perforated the tubing in any of the formations, did you make any tests to see that you had a good cement job?

A Oh, yes. We put 2,000 pounds of pressure on each string of casing in this case and they all held. They were good cement jobs in terms of the pipe, but when we, but we did find a leak in the bottom of that No. 3 string which we corrected with this 200 sacks squeeze job.

Q Go ahead.

A After that, after having perforated, we opened up the perforations by putting 500 gallons of mud acid in the Ellenburger; the McKee, when we began to working with it, came in naturally and needed none. In the Waddell we put 500 gallons of mud acid and in the Devonian we put 500 gallons of mud acid. Then under the ruling of the Commission wherein we were instructed that no string larger than 2-7/8 could be produced in Southeast New Mexico without another string of tubing in them, we installed a string of tubing in strings 1 and 2, which were the two strings of 3-1/2. These were strings of 1-1/2" nominal, which is 1.90 on O.D. is 1.61 on I.D. These are U and V on the chart. They are with the 2.116 O.D., integral joints, it's N-80 seamless and on the bottom of each of those strings we put 20 feet of perforations bull plugged and set them to the depths indicated, 8437 on the Ellenburger and 7918.99 on the McKee.

Q What method did you use in perforating so that you would be sure that you would not rupture or perforate any of the other tubing strings?

A The method I think is at least semi conventional, it is the method of running radioactive material in the other three strings and orienting against those radioactive materials and perforating to the outside. At the same time we put pin

recorders on all of these strings of tubing and held pressure through on all other three strings while we perforated the fourth string in each case, and we had no indication of any change of pressure. Due to the perforations we conceived that we had perforated without perforating another string.

Q Is it your opinion that by this method of completion there can be any communication between the different zones?

A We have taken temperature surveys which do not indicate it. We have pumped pressure which do not indicate it. We have seen no indication of it in our swabbing; we squeezed between zones on a preventive basis, it is my opinion that we do not have communication.

Q Is it your opinion that this well can be produced in such a manner that the production from each zone can be kept separate and measured separately?

A Yes, sir. Without communication and with perforations out of each string into each separate zone, the oil from that zone would come through a separate and independent string of pipe. It is handled as an independent flow from the well through the flow lines. Each zone in each well on this lease, in other words, there are two duals, that is four zones, and there are four zones in this well. This is No. 3, makes a total of eight zones producing, and we have eight independent metering

separators applied to this zone, to this lease. My answer to that question would be yes.

Q Is there anything else you would like to observe with respect to the completion of this well?

A No. I think it has been carefully done. I know it has been carefully done. We have had no problems which indicated anything abnormal or odd in the matter. It was done after consultation with the local office of the Commission in Hobbs, and I think we can do what the order calls for as far as I know.

Q Have there been any other wells in the area that have used the same method of completion, quadruple completion?

A Yes, this is a common practice in this particular field. The Amerada and the Texas Company have been the two top exponents of the method, and I think Amerada have two wells and Texas Company have some ten wells completed on a multiple string basis with as many as a quadruple.

MR. HINKLE: We would like to offer Exhibit No. 1.

MR. NUTTER: Applicant's Exhibit No. 1 will be received in evidence.

(Whereupon, Applicant's Exhibit No. 1 was received in evidence.)

MR. HINKLE: That's all the direct.

CROSS EXAMINATION

BY MR. NUTTER:

Q Mr. Holmes, will it be possible to artificially lift each of the zones if it becomes necessary?

A Yes, we have full information in our files. As a matter of fact, I have it with me whereby we have investigated, the holes are of adequate size, they are perforated in an adequate manner, the tubing as run is adaptable, and the oil can be lifted by the hydraulic method similar to Kobe.

Q I see.

A In substantial volumes.

Q Are these four zones listed on the recent Commission memorandum which set out certain zones that would be elligible for administrative approval of quadruple completions similar to this?

A I do not know. I think not, because the order that I saw said that duals would be subject, I can't answer that.

MR. NUTTER: Are there any other questions of Mr. Holmes? He may be excused.

(Witness excused.)

MR. NUTTER: Do you have anything further, Mr. Hinkle?

MR. HINKLE: No, that's all.

MR. NUTTER: Does anyone have anything they wish to offer in Case 2670? We will take the case under advisement.

STATE OF NEW MEXICO)
) ss
COUNTY OF BERNALILLO)

I, ADA DEARNLEY, Court Reporter, do hereby certify that the foregoing and attached transcript of proceedings before the New Mexico Oil Conservation Commission at Santa Fe, New Mexico, is a true and correct record to the best of my knowledge, skill and ability.

IN WITNESS WHEREOF I have affixed my hand and notarial seal this 11th day of December, 1962.

Ada Dearnley
Notary Public-Court Reporter

My commission expires:

June 19, 1963.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner hearing of Case No. 2670, heard by me on 11-8, 1962.

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