

BEFORE THE  
OIL CONSERVATION COMMISSION  
Hobbs, New Mexico  
March 1, 1956

IN THE MATTER OF:

Case No. 1022

TRANSCRIPT OF PROCEEDINGS

NEW MEXICO OIL CONSERVATION COMMISSION  
MABRY HALL - STATE CAPITOL  
SANTA FE, NEW MEXICO

REGISTERHEARING DATE March 1, 1956TIME: 10:00 a.m.

NAME:	REPRESENTING:	LOCATION
Chas N Stone	W. Marine Oil Co	Midland, Texas
AT Sindel	-	-
Jack M Campbell	Campbell + Russell	Roswell, N.M.
J. J. Ferrell Couch	The Ohio Oil Co	Houston
D. K. Spellman Jr	"	"
Clyde Altan	"	Hobbs
John A. Weideman	Continental Oil Co.	Roswell, N.M.
J. M. M. Cague	Shell Oil Co.	Hobbs
R. F. Montgomery	OCC	Hobbs
C. W. Luedel	OCC	Hobbs.
M. A. Calligan	W. Ishiro Oil Co	Midland, Texas
John A. Orlich	Worth Well Surveys	Odena, Tex.
P. O. Seaman	Sinclair O & G.	FT Wth, Tex
Rayton G. Webb	SINCLAIR O & G Co	FT Worth, Tex
A. H. Shroyer	"	Roswell
R. S. Dewey	Humble Oil & Refg Co	Midland Texas
C. M. Bumpass	Gulf Oil Corp	Hobbs

BEFORE THE  
OIL CONSERVATION COMMISSION  
March 1, 1956  
Hobbs, New Mexico

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Application of Vickers Petroleum Company, )  
Inc. , for an order approving the drilling of )  
a well as a "five-spot" unorthodox location )  
within the boundaries of the Square Lake Oil )  
Pool as an exception to Rule 104 (c) of the )  
Statewide Rules and Regulations of the New )  
Mexico Oil Conservation Commission. )  
)

Applicant, in the above-styled cause, seeks )  
approval of the drilling of a well as a "five- )  
spot" unorthodox location within the boundaries )  
of the Square Lake Oil Pool; said location to )  
be at a site 1345 feet South of the North line )  
and 1345 feet West of the East line of Section )  
30, Township 16 South, Range 31 East, Eddy )  
County, New Mexico. )  
)  
----- )

Case No. 1022

BEFORE:

Warren W. Mankin, Examiner

TRANSCRIPT OF HEARING

EXAMINER MANKIN: The hearing will come to order. The first case on the docket today is Case 1022, the application of Vickers for an order approving the drilling of a well as a "five-spot" unorthodox location in exception to Rule 104 (c). Proceed.

MR. CAMPBELL: Mr. Examiner, I am Jack M. Campbell, Campbell and Russell of Roswell, New Mexico, appearing on behalf of the applicant, Vickers Petroleum Company, Inc. We have one witness, Mr. Phillips, who should be sworn .

CHARLES M. PHILLIPS

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

DIRECT EXAMINATION

By MR. CAMPBELL:

Q. State your name please.

A. Charles M. Phillips

Q. And where do you live, Mr. Phillips ?

A. In Midland.

Q. By whom are you employed?

A. I am in a consulting firm, Berry and Phillips, representing Vickers here.

Q. In what capacity are you employed there?

A. Consultant Petroleum Engineer.

Q. You have never testified before this Commission have you?

A. No, sir.

Q. Would you please give a brief statement of your educational and professional background?

A. I graduated from Texas A & M in 47 as a petroleum engineer. I worked for Core Laboratories for possibly six months and Standard Oil Company of Texas for approximately five years. Then I went with Robert W. Harrison Company in Houston, Consulting Engineers, and I was with them until September when I came out to Midland and I opened up Berry and Phillips.

Q. And since that time have you been doing consulting work in West Texas?

A. Yes, sir.

Q. New Mexico?

A. Yes, sir.

Q. Have you testified before the Railroad Commission of Texas in your professional capacity?

A. Yes, sir.

Q. Mr. Phillips, have you been consulted by Vickers Petroleum Company in connection with their application for a "five-spot" location in the Square Lake Field, Eddy County, New Mexico?

A. Yes, sir.

Q. I hand you what has been marked as Vickers Exhibit No. 1 and ask you to state what that is.

A. That is a plat showing the lease on which they desire the "five-spot" well to be drilled.

Q. How many wells are presently situated on that lease?

A. There are six wells now on the lease. The application states four, but that four has been referred to the northeast quarter of that section. The lease includes two 40-acre units in the adjoining section to the north.

Q. And that lease is a federal lease, Las Cruces No. 029431, is that correct?

A. Yes, sir.

Q. What does that plat reflect as to the location of the proposed fifth well, Mr. Phillips?

A. The proposed fifth well in this northeast quarter of the section containing 160 acres is 25 feet from the North line and 25 feet from the East line of the center of that northeast quarter.

Q. Then it is actually situated in the southwest quarter of the northeast quarter of the section, is that correct?

A. Thats right. The same 40 acres as Well No. 3.

Q. Now you have testified that that is a federal lease. I hand you what has been identified as Vickers Exhibit No. 2, and ask you to state what that is?

A. That is a photostatic copy of a letter from the Department of Geological Survey giving their approval to this well.

Q. Now, in connection with the consulting work that you have done on this area in this application, have you made a study of the well data concerning the six wells on this lease and including of course the four wells now situated within the quarter section involved?

A. Yes, sir. That was Exhibit 3, I summarized on Exhibit 3 the well data.

Q. I hand you what has been identified as Vickers Exhibit 3 and ask you to state what that is?

A. That is a well data table giving the pertinent information on the wells, the locations, the completion date, where the pipe is set, what it is producing from and the approximate estimated current producing capacity of these wells.

Q. Were those figures obtained from the records of Vickers Petroleum Company in connection with the drilling and operation of those wells?

A. Yes, sir.

Q. I now hand you what has been marked as Vickers Exhibit No. 4 and ask you to state what that is.

A. Well, that is a plot of bottom-hole pressures, first--accumulated production from this lease.

Q. And was that prepared by you or under your supervision?

A. Yes, sir.

Q. Was it prepared from well data furnished you by Vickers Petroleum Company?

A. Yes, sir.

Q. Now, Mr. Phillips in connection with your study of the well data and your interpretation as reflected on Exhibit No. 4, will you state for the Examiner, what the reason is for the application for a fifth well on that 160-acre tract?

A. The six wells have declined considerably and are only making a little over 10 or 11 barrels a day at the present time on an average of less than two barrels per well which is very close to the economic limit and in order to continue producing this lease, something has to be done and Vickers believes that the best thing is to drill a new well and frac it if necessary. The wells that are currently on the lease are all completed open hole and have been shot with nitroglycerin and Vickers does not believe, and I agree with them, that attempting to frac a well that has been completed open hole and has been shot with nitroglycerin is not too desirable. Also, if you will note from Exhibit 4, the bottom-hole pressure on April of 1955 was 322 pounds, which was a fairly good bottom-hole pressure for this depth and yet the wells are making less than two barrels per day each and to me that indicates that the formation is very tight and that is probably not draining in any great area. Also, as you will note from the curve, this curve has a very odd shape. It curves down for awhile and then it flattens out. To me that indicates also a tight reservoir and limited radius of drainage and indicates that the radius of drainage has increased during this time shown by the dash interval and as I visualize it at a higher economic radius the drainage area was very limited and you may be draining a little more area now at these lower rates and the tight parts of the reservoir are feeding into the more permeable parts very slowly.

Q. Then that would indicate that if the wells presently on the 160-acre tract are draining the center of the 160 acres, it is being done at a very slow rate.

And all of the presently existing wells are approaching the marginal stage are they not?

A. Thats right.

Q. Is it your opinion that if this application is granted and you are permitted to drill a fifth well, that it will recover oil that otherwise might not be recovered by the four wells now on the tract?

A. Yes, sir. I believe it would.

Q. Do you believe that the drilling of this well and the granting of an allowable to it would adversely effect the correlative rights of operators offsetting this 160-acre quarter section?

A. No, sir, I don't. It is located right in the center and any drainage that would have taken place would had to of been done by the wells now on the lease.

Q. If this unorthodox location is approved and you obtain a producing well, are you willing to have the allowable for that well charged against the normal 40-acre unit allowable for the SW/4 NE/4 of the section?

A. Yes, sir.

Q. In other words you are not seeking any additional allowable for this 160-acre tract?

A. Thats right. It was in this manner that the Wells No. 3 and 7 in this 40-acre would be treated just as one well they would be entitled to a normal unit allowable if they could make it.

Q. I believe thats all. Do you have something else that you-----

A. I understand that there have been other applications of this type granted in this field.

Q. I believe thats all.

MR. MANKIN: That is a question which I was going to ask you Mr. Phillips, I believe there has been similar applications in this immediate area or in this same field, the Square Lake Field, where similar situations exists.

A. Yes, I believe that is true.

MR. CAMPBELL: If the Examiner please, I was going to call that to the attention of the Examiner, in Order No. R-648 in June of 1955, the Texas Trading Company received approval for a "five-spot" location in Section 29. I believe the SW/4 of Section 29, Township 16 South, Range 31 East, in the same oil pool. Do you have anything further you want to add?

A. No, sir.

Q. I have no more questions.

MR. RIEDER: Mr. Phillips, what was the-----which well did you use for your bottom-hole pressure information or is this-----

A. Thats the arithmetic average of at least five wells, no at least four wells for each survey and sometimes five and six.

MR. RIEDER: What was the range of those pressures or were they-----

A. They range from----well, I will put it this way, that the range--- the average, just looking at it here appears to be approximately 30 or 40%. In other words, there was a range, 30 to 40% around the average on the individual wells, which also might indicate there is limited drainage because if there was good drainage then they would all have the same pressure.

MR. RIEDER: You have not plotted the wells individually?

A. No , sir.

