

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. 1620

TRANSCRIPT OF HEARING

MARCH 25, 1959

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BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO

IN THE MATTER OF:

Case 1620 Application of Sunset International Petroleum Corporation for an oil-gas dual completion. Applicatn, in the above-styled cause, seeks an order authorizing the dual completion of its SIPCO Kutz A Federal Well No. 1, located in the NE/4 SW/4 of Section 32, Township 28 North, Range 10 West, San Juan County, New Mexico, in such a manner as to permit the production of oil from an undesignated Gallup oil pool and the production of gas from the Angels-Peak Dakota Gas Pool through parallel strings of 2-1/16 inch Hydrill tubing.

Mabry Hall
Santa Fe, New Mexico
March 25, 1959

BEFORE:

Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: The next case will be 1620.

MR. PAYNE: Case 1620, "Application of Sunset International Petroleum Corporation for an oil-gas dual completion."

MR. SETH: Oliver Seth appearing for the applicant. We have one witness, Mr. Popp.

(Witness sworn in.)

MR. UTZ: Would you spell your name for the reporter, please?

MR. POPP: P-O-P-P.

MR. UTZ: Are there any other appearances to be made in this case?

If not, you may proceed.

THOMAS F. POPP

a witness, being first duly sworn, was examined and testified as follows:

DIRECT EXAMINATION

BY MR. SETH:

Q State your full name, please, Mr. Popp?

A Thomas F. Popp.

Q And by whom are you employed?

A Sunset International Petroleum Corporation.

Q And would you state for the Examiner, please, something of your educational background and your practical experience?

A I have an Engineering Degree from the University of Wisconsin, have been in drilling and completion work fairly steady except for attending college and time in the service. Since 1948, I have been in dual completions and workovers fairly consistent.

Q Your principal experience has been in well completions, is that correct?

A Yes, sir.

Q And have you had experience in well completions in San Juan County, New Mexico?

A Yes sir, I have had six Dakota wells in there dualled.

Q And what have you actually done in connection with these completions, just tell us a little bit more about what your position involves.

A I have supervised the drilling and completion all the way through to putting them on production and designing the batteries and production methods, just complete supervision of them.

Q Your experience before that was in Wyoming?

A In Wyoming.

Q For approximately how long a period of time?

A About ten years overall.

MR. SETH: May be testify as a Mechanical Engineer?

MR. UTZ: His qualifications are acceptable.

Q (By Mr. Seth) Are you familiar with the application of Sunset in this case, with the particular well involved?

A Yes, sir.

Q Would you state for the Examiner, please, the description of the well and a little bit of the completion practice that was followed in this well?

A I have some diagramatic sketches of the completion.

(Thereupon, the document was marked as Sunset's Exhibit No. 1 for identification.)

Q (By Mr. Seth) Referring to what has been marked as

Applicant's Exhibit Number One, would you state, please, what that describes, what it is and what it shows?

A We have this set at --

Q Would you describe what the exhibit is, what it does, what it --

A This is a diagrammatic sketch of the dual completion of our Kutz 1-A Federal.

Q What is the location of this well?

A Section 32, T 28 North, Range 10 West, San Juan County.

Q Now, would you in detail describe, please, what the exhibit shows?

A It shows the packer setting, the dual description of tubing and out installation of gas lift valves in the Gallup side of the tubing, and showing they are all in relation to the perforations and our --

Q Would you describe first the casing, what casing was used in the completion of this well?

A 10 3/4, 32-pound surface pipe set at 245 feet and 7 5/8, 2640 pound, 7 5/8 landed at 4465, and it was cemented with 200 sacks of cement, and there is a stage collar at 2126 KV below the Pictured Cliffs and it was cemented with 100 sacks of cement, and we hung a lipper 5 1/2 inch, 1550-pound casing from the bottom of the intermediate string, it's actually hung at 4365 from the intermediate string and it was cemented with 400

sacks and it is landed at 6597 KC. This is a base positive action type of liner hanger.

Q Is this a type of completion that is fairly common in the San Juan Basin at the present time?

A Yes sir, it is. It's used quite a bit south of us, in that general area.

Q Is there anything unusual, any unusual problems encountered in the completion of the well as far as the casing is concerned or anything else?

A Nothing unusual, and it is a common practice to set an intermediate string through troublesome formations where you have circulation troubles or sluffing or such.

Q Give us the approximate depths of the two producing horizons, the tops of those?

A The top of the Gallup formation, 5581, and the top of the Dakota is 6306.

Q You have encountered some oil in the Gallup, is that right?

A Yes sir, we attempted to go off from under intermediate with gas drilling and in the Gallup formation at 5750, I believe it was, we ran into oil and were unable to continue gas drilling. There was too much fluid to keep the hole clean and we had to mud up and continue the hole with mud.

Q And is that a designated oil pool under the rules of the Commission?

A It is undesignated as yet.

Q And where was the gas encountered?

A The gas was encountered in the Dakota formation with a show of gas in the Gallup.

Q This gas is in the Angels-Peak Dakota gas pool, is that correct?

A Yes sir, Angels-Peak.

Q Now, would you describe then next the proposed dual completion?

A The completion itself, we went in and perforated and sand fraced the Dakota formation, tested it, and went in and sat a packer above it and bridge-plugged above it also and perforated and sand fraced the Gallup, went back in and cleaned out the bridging plug, set a Baker Model "D" Production Packer between the two formations and run a string of two-inch Hydrill tubing into the Dakota formation and a dual string with four gas lift valves down through the Gallup perforations.

Q This is a Baker Model "D" Packer, did you say?

A Yes, it's a Baker Model "D" Production Packer.

Q That's a permanent type packer?

A Fermanent type packer.

Q Have you run any pressure, any packer leakage tests?

A Yes, I ran and submitted a packer leakage test to the Aztec Office and we had about a thousand pounds differential across the packer and no indication of any leaks on testing both

sides of the packer.

Q Describe this test in a little more detail. How long was it shut in, the Dakota formation?

A The Dakota was shut in for thirty-two days prior to a three-hour flow test on the Dakota side, and it maintained a static pressure of 1946 pounds, and during the three hour flow test, it calculated 1500 MCF per day; flowing with your Gallup side shut in, the deadweight readings on the Gallup side showed a formation pressure and the casing pressure held at 996 pounds throughout the test, and after the three-hour flow period the well was shut in again until the Gallup side, the Dakota side stabilized and it was hut in three days and the Gallup was open to a twenty-four hour production test. During that test, the Dakota was also deadweighted and showed a pressure buildup to 1946 pounds and remained there throughout the test. During the twenty-four hour flow period, the initial pressure on the Gallup was 996 pounds and immediately on opening, the pressure dropped to 704 pounds. While the tubing was opened, the well was on a meter flowing fifteen minutes per hour. At the conclusion of the twenty-four hour test, the pressure had dropped to 558 pounds and the Dakota had remained at 1946. During that twenty-four hour flow period I recovered 53 barrels of oil load and submitted 50,000 cubic feet of gas during the test.

Q In your opinion, will the mechanical features of this completion be such as to prevent any communication between the

two producing zones?

A As far as we can tell, we have no communication between the zones. The packer test definitely shows that we have no communication through there, and during the completion the casing was tested to 4500 pounds and there were no leaks in the casing, and we have cement logs and temperature surveys to show that we have good cement between the formations and during the completion of both zones, it clearly indicated that we could have no communication between the zones.

Q Could you give the size of the tubing that was used?

A Yes sir, 2 1/16 OD Hydrill type CS tubing.

Q Now, is this type of completion less expensive than the drilling of separate wells to each of the producing horizons?

A Yes sir, dual completions on the one well would be about two thirds the cost of two wells.

Q And will that lead to and permit a later abandonment date and be in the interests of conservation oil and gas if it is a dual completion?

A If for any reason one side is no longer productive, it is relatively simply to go in and squeeze off the dead production zone and continue producing the well as a single completion.

Q Is the completion such that tests may be made from time to time if requested by the Commission?

A Yes sir, we can run a test at any time the Commission desires.

MR. SETH: That's all the direct; we would like to offer Exhibit Number One, if the Commission please.

MR. UTZ: Is there objection to the entrance of Exhibit Number One?

If not, it will be so entered.

CROSS EXAMINATION

BY MR. UTZ:

Q Mr. Popp, do you have the COR for the Gallup formation or have you tested the well since the packer leakage test?

A I haven't run an official IP on the Gallup side. I was talking with Mr. Arnold of your office in Aztec and he recommended that we not turn in an IP on it until we recovered all of our load oil. We have approximately 2500 barrels of load oil in and we have only recovered 1180 barrels as of the 24th of this month.

Q Is the Dakota making any liquid?

A The Dakota has been shut in, and other than the two or three hour flow tests, I have no measure of the liquids, although it is wet gas and from all indications, it will be a distillate, a condensate well.

Q Do you have any gravity information on those two zones?

A The gas on the Dakota is .68 gravity and the wells in that area make between 50 and 60 gravity condensate. The Gallup crude is 34 API gravity and I haven't measured the Gallup gas.

Q The gravity is 240. Do you have any bottomhole pressures?

A Yes sir, we have run bottomhole pressures on the Dakota side and I don't have one on the Gallup side because of the gas lift valves.

Q What is the bottomhole pressure for the Dakota?

A I am sure it was 2540-something, approximately.

Q 2540, did you say?

A I am sure that's what it was.

Q And you have no idea what the bottomhole pressure is on the Gallup?

A No, sir; from estimating the curb, I would say it is about 1500 pounds buildup.

Q This 1500 MCF of gas that you produced on your three-hour packer leakage tests, was that through a two-quarter inch choke?

A That was a three-quarter inch choke.

Q What was the absolute flow?

A The rate of flow was --

Q The rate of flow was 327?

A Yes, sir.

Q Do you remember what the working pressure was?

A On that test itself, I didn't work that out, but from the initial potential, the working pressure was 2,002 pounds and the pressure on the choke was 436 pounds. During the test, the

same pressures were--during the packer leakage test, the pressures were 1945 pounds and 408 pounds on the choke.

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

If there are none, the witness may be excused.

(Witness excused.)

MR. UTZ: Are there other statements to be made in this case?

If not, the case will be taken under advisement.

MR. SETH: Thank you.

I do hereby certify that the foregoing is a complete record of the proceedings in the Examiner's hearing of Case No., heard by me on, 19.....

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

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 were reported by me in Stenotype, and that the same was reduced to typewritten transcript by me and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 28th day of March, 1959, 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 of the Examination of the State of New Mexico, held on March 25, 1959, at Albuquerque, New Mexico, and that the same was reduced to typewritten transcript by me and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.