#### BEFORE THE

# OIL CONSERVATION COMMISSION Santa Fe, New Mexico June 1, 1960

#### EXAMINER HEARING

IN THE MATTER OF:

Application of Amerada Petroleum Corporation for approval of an oil-oil dual completion. Applicant, in the above-styled cause, seeks an order authorizing the dual completion of its State LM "T" Well No. 5, Located in Unit A, Section 36, Township 23 South, Range 36 East, Lea County, New Mexico, in such a manner as to permit the production of oil from the Jalmat Gas Pool and the production of oil from the Langlie-Mattix Pool through parallel strings of l-inch tubing and 2-3/8 inch tubing respectively, utilizing a retrievalbe type packer to separate the two producing horizons.

Case 1975

BEFORE: Elvis A. Utz, Examiner

# TRANSCRIPT OF HEARING

MR. UTZ: Case 1975.

MR. PAYNE: Application of Amerada Petroleum Corporation for approval of an oil-oil dual completion.

MR. KELLAHIN: Jason Kellahin, Kellahin and Fox, Santa Fe, New Mexico, appearing on behalf of the applicant. We will have one witness, Mr. Snyder.

(Witness sworn.)

### A. E. SNYDER

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



follows:

#### DIRECT EXAMINATION

### BY MR. KELLAHIN:

(Marked Amerada's Exhibits Nos. 1, 2 & 3, for identification.)

- Q Would you state your name, please?
- A A. E. Snyder.
- Q By whom are you employed and what position?
- A District Engineer with Amerada Petroleum Corporation.
- Q Mr. Snyder, have you ever testified before this Commission?
  - A No. I haven't.
  - Q Are you a petroleum engineer?
  - A Yes, sir.
- Q Would you state briefly what your educational background and experience has been as a petroleum engineer?
- A I received a degree in petroleum engineering from the
  University of Tulsa in 1950 and worked four years with Pan American
  Petroleum Company and six years with Amerada.
  - Q Has your experience been in New Mexico with Amerada?
  - A Some of it has, yes, sir.
- Q How long have you been in the district where you are now employed?
  - A I have just been here two months.



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- Q Is the well which is the subject of this application within your district?
  - A Yes, sir.
- MR. KELLAHIN: Are the witness's qualifications acceptable?
  - MR. UTZ: Yes, sir, they are.
- Q Are you familiar with the application in Case 1975, Mr. Snyder?
  - A Yes, sir.
- Q Would you state briefly what is proposed in this application?
- A We propose to dually complete a well in the Langlie-Mattix oil zone and the Jalmat oil zone.
  - Q This well is presently dually completed, is it not?
  - A Yes, sir.
- Q Would you discuss the history of the well and showing the reason for the present application?
- A This well we are considering is Amerada's State LM "T"

  No. 5. It's located in the Northeast Northeast Section 36,

  Township 23 South, Range 36 East, Lea County, New Mexico. This well was completed as an oil well in the Langlie-Mattix zone in April of 1949. In March of 1953 Amerada made an application to the Commission to dually complete the well in the Langlie-Mattix oil and the Jalmat gas zone. This application was granted by



Commission Order 5295, the well was actually dually completed in February, 1954, and the method of completion was the oil was producing through a 2-3/8 inch tubing string and the gas, Jalmat gas zone was producing through the casing annulus.

In August of 1959 we fracked the Jalmat zone in an attempt to increase its capacity, and after the frack job the gas-oil ratio of the well decreased to less than 100,000 to 1, which automatically classifies it as an oil well.

We secured additional testing time permission from the Commission to test the well to see if the ratio would go back up. It never has. It seems to have settled down to around 55,000. So we're asking permission to produce the Jalmat gas zone through one inch tubing string and we would like to do that without pulling the present completion there, the present packer and 2-3/8 inch tubing string.

Q Now, referring to what has been marked as Exhibit No. 1, will you state what that shows?

A Exhibit 1 is a plat of the area in question, the Amerada State LM "T" Lease is outlined in red, and Well No. 5 is circled in red.

Q Now, referring to what has been marked as Exhibit No. 2, would you discuss that exhibit, please?

A Exhibit No. 2 is a diagramatic sketch of the equipment that is presently in the well and we have added diagramatically



the one inch string of tubing. This sketch shows the 8-5/8 inch surface casing set at 307 feet, the  $5\frac{1}{2}$  inch production casing set at 3485 feet with cement top at 2200 feet. It shows the Brown Duo-Pac Packer set at 3468 feet with 2-3/8 inch tubing at 3572. The Langlie-Mattix zone is producing through open hole below the casing from 3485 to 3600. The Jalmat top perforations are 2835 and the base perforations are 3420.

- Q The Brown Duo Packer, is that the packer that was installed pursuant to the authority granted by Order R-295 to which you have referred?
  - A Yes, sir.
  - Q And it has been in there since that date?
  - A Yes, sir.
- Q What has been your experience with that packer, Mr. Snyder?
- A We have had no problem with the packer. We take our packer leakage test, the last one we took in February of this year and we still have experienced no problems with the packer, it is still holding good.
  - Q What is the pressure between the two zones, if you know?
- A I don't know exactly. I failed to check that. But the two zones I believe are pretty close together, probably within a couple hundred pounds of each other.
  - Q Do you know anything about the gravities of the fluid



being produced from the two zones?

- A The gravity from the Jalmat zone, the fluid is about 35 degrees API and the Langlie-Mattix zone is 33.9.
  - Q And how about the gas-oil ratios in the two zones?
- A The gas-oil ratio in the Langlie-Mattix zone is about 9.000 and in the Jalmat zone it's 55,000.
- Q Youyda propose to produce the two zones and measure the products thereof separately, do you not?
- A I believe not. I checked and we have, currently have authority to commingle those, the production from those two zones.
  - Q That has already been approved by the Commission?
  - A Yes.
  - Q How about the gas production from the two zones?
  - A The gas production will be kept separate.
- Q Referring to what has been marked as Exhibit No. 3, is that the log of the subject well?
- A Yes. This is the electric log of the well in question. On this exhibit I have marked the top of the Jalmat zone and the intervals that are perforated, the top of the Langlie-Mattix zone and shown that we are producing the Langlie-Mattix from open hole 3485 to 3600.
- Q What is your reason for wanting to make the type of completion you are proposing here, Mr. Snyder?
  - A Economics actually are the basis of this application.



If we have 5½ inch casing in the well and if we go to run two paralletry strings of tubing that are permissible according to Commission rules and regulations, it would necessitate pulling one we have or run two strings of hydril tubing, which is pretty expensive pipe, so we would propose to run the one inch string because of economics. We can do it about \$6,000 cheaper by pulling the present pipe and running the two strings of expensive tubing.

- Q The present completion has proved satisfactory since 1954, as I understand your testimony?
  - A Yes, sir.
- Q In your opinion is this type of completion, will it achieve effective separation of the two producing zones?
  - A Yes, sir.
- Q In your opinion is it in the interest of conservation and the prevention of waste to approve this application?
  - A Yes, sir.
- Q Were Exhibits 1, 2 and 3 prepared by you or under your supervision?
  - A Yes, they were.
- MR. KELLAHIN: We would like to offer in evidence Exhibits 1, 2 and 3.
- MR. UTZ: Without objection Exhibits 1, 2 and 3 will be entered into the record.



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MR. KELLAHIN: That's all I have, Mr. Utz.

#### CROSS EXAMINATION

### BY MR. UTZ:

Q Would you tell us a little bit about the Brown Duo Packer?
What sort of a packer is it?

A The Brown Duo-Pac Packer is a retrievable packer, you run it in on tubing, set it with water on it, set it with the tubing in compression. It has, besides the regular sealing element it has a rubber cup looking up and another cup looking down that help act as a seal to prevent movement of fluid either up or down the hole.

- Q That is in addition to the regular packer?
- A Yes.

MR. PAYNE: When was this packer installed, Mr. Snyder?

A In 1954.

MR. PAYNE: Did you have permission to install the retrievable type packer?

A Yes, sir.

MR. PAYNE: After hearing?

- A Yes, sir.
- Q (By Mr. Utz) Where is the cement on the 8-5/8ths?
- A We have the top of the cement on the 8-5/8ths, it was probably circulated or came close to the top. We used 175 sacks on 307 feet.
  - That ought to be close to circulation?



- A Yes, sir.
- Q This packer, how much pressure is it designed to withstand?
- A I don't recall the exact pressure design on the packer, but I know it is used many times for a treating packer for fracking or acidizing.
- Q It stands up to how much pressure? How much pressure do you use to treat with?
  - A Varying amounts.
  - Q You go up to around 5,000 pounds, don't you?
  - A Yes.

MR. UTZ: Any other questions?

### BY MR. PAYNE:

- Q Which zone are you producing now?
- A We are presently producing only the Langlie-Mattix zone. On February 24 we shut in the Jalmat zone at the end of our testing period that had been granted.
  - Q What did the Jalmat zone test at?
- A It tested about 15 barrels of oil by a gas-oil ratio of 55,000.
- Q So you feel that one inch tubing will be adequately able to handle that oil production?
- A Yes, sir, with the way the allowable will be set up.

  The allowable will be lower than that, we will not be able to produce it at that rate.



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Q It will be a penalized well?

A Yes.

MR. PAYNE: Thank you.

MR. UTZ: Any other questions? If not, the witness may be excused.

(Witness excused.)

MR. UTZ: Any other statements in this case? If there are none, the case will be taken 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 8th day of June, 1960.

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. 1975.

New Mexico Oil Conservation Commission

