

BEFORE THE
Oil Conservation Commission
SANTA FE, NEW MEXICO

IN THE MATTER OF:

CASE NO. 1142

TRANSCRIPT OF PROCEEDINGS

September 6, 1956

DEARNLEY-MEIER AND ASSOCIATES
COURT REPORTERS
605 SIMMS BUILDING
TELEPHONE 3-6691
ALBUQUERQUE, NEW MEXICO

BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
HOBBS, NEW MEXICO
September 6, 1956

IN THE MATTER OF:

CASE NO. 1142: Application of Amerada Petroleum Corporation for an order granting permission to convert its non-productive H. C. Posey "A" No. 2 well in the East Caprock Devonian Pool, Lea County, New Mexico, into a salt water disposal well in compliance with Rule 701 of the New Mexico Oil Conservation Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order granting permission to recomplete as a salt water disposal well its H. C. Posey "A" No. 2 well located in the NE/4 of the SE/4 of Section 11, Township 12 South, Range 32 East, Lea County, New Mexico. Said well is located 1980 feet from the South line and 660 feet from the East line of said Section 11. Applicant proposes to inject salt water into the Dewey Lake formation at an interval between 1300 and 1450 feet through casing perforations.

BEFORE:

Warren W. Mankin, Examiner.

T R A N S C R I P T O F P R O C E E D I N G S

MR. MANKIN: The next case is 1142.

MR. GURLEY: Application of Amerada Petroleum Corporation for an order granting permission to convert its non-productive H. C. Posey "A" No. 2 Well in the East Caprock Devonian Pool, Lea County, New Mexico, into a salt water disposal well in compliance with Rule 701 of the New Mexico Oil Conservation Commission Rules and Regulations.

MR. CHRISTIE: Appearing for Amerada Petroleum Corporation

in this case, Mr. W. G. Abbott, J. C. Blackwood and R. S. Christie. Mr. Abbott will be our witness in this case.

(Witness is sworn.)

W. G. A B B O T T

called as a witness on behalf of the applicant, having been first duly sworn on oath, testified as follows:

MR. ABBOTT: My name is W. G. Abbott, I am District Engineer for the Amerada Petroleum Corporation in New Mexico. I have testified before the Commission.

MR. MANKIN: Your qualifications are accepted.

MR. ABBOTT: First of all, I want to present our Exhibit No. 1 as a plat of the East Caprock Pool, showing the H. C. Posey "A" No. 2, circled in red.

MR. MANKIN: This is No. 1?

A Yes, sir. Those are just two copies. This well was spudded May 13, 1952, 660 feet from the East line and 1980 feet from the South line of Section 11, Township 12 South, Range 32 East. We temporarily abandoned the well on August 28, 1952. The well was running too low to make a Devonian well, producing well, out of it. We have 13 5/8 inch, 36 pound casings set at 296 feet with 225 sacks of cement. We have 8 5/8 inch, 32 pound casings set at 3,615 feet with 1,500 sacks of cement. The total depth of the well was 11,280 feet, and we have plugged it back to 1,608 feet. We went in the well and circulated the mud out of the casing and perforated the Dewey Lake formation from 1300 to 1450 with 600 shots. After that we swabbed the well dry. There was no influx of formation water. Then we acidized it with

a 1,000 gallons of mud acid, maximum pressure was 900 P.S.I. and minimum pressure was 700 P.S.I. with an average injection rate of 6 barrels per minute. We then fracked the well with 30,000 gallons of water and 30,000 pounds of sand. Maximum pressure was 1,200 P.S.I. and the minimum was a thousand with an average injection rate of 6 1/4 barrels per minute. We tested the injection of salt water at the rate of 7 barrels per minute with 800 pounds. At the rate of 9 barrels per minute the pressure was a thousand pounds. We consider that this is a fair injection well. I would like to offer as Exhibit No. 2 a cross section showing the electric log of the Posey "A" 2 together with the electric log of the State ECA No. 1 which is about half a mile southwest of the Posey "A" 2 and Amerada State Caprock A No. 1 which is about 9 1/2 miles southwest of the Posey "A" No. 2. The reason we drew this cross section up we did not run a complete electric log survey on our Posey "A" No. 2 as we already had the intermediate string set, but we had run it on a State ECA No. 1 and also we ran complete geological logs on State ECA No. 1. We included the State Caprock A No. 1 because it is a very good log. It is a clearer electric log than we usually get from wells that we drill with salt water. In using the geological sample log from the State ECA No. 1 we can correlate back to the Posey "A" No. 2 and place the top of the Dewey Lake Section. You will notice the Dewey Lake shows up very clearly on this SP curve of the ECA No. 1 and also the State Caprock A No. 1. Throughout the Dewey Lake Section you get a reversal in the SP curve and also your gamma ray clearly shows the sand present. I believe that is all

I have on that.

BY MR. MANKIN:

Q Mr. Abbott, you indicated you had drilled this well as to certain disposal rates. Do you not anticipate disposing of approximately 5500 barrels of water per day into this well?

A Yes, sir, that is correct. At the injection rate of 7 barrels per minute calculated on a daily basis, that would be 10,080 barrels a day so we --

Q Which would be almost twice the rate that you need?

A Yes, sir. Probably in time the salt water probably in East Caprock will reach that 10,000 barrels a day. And we think this well will be able to take care of it.

Q And you anticipated this disposal shall be from all the distillates from the East Caprock Devonian Pool?

A Yes, sir. And probably all the other operators in the East Caprock pool.

Q As a joint venture?

A Yes, sir.

Q Is it to be a closed system or open system?

A It will be a closed system.

Q Treatment will not be necessary?

A We don't anticipate any treatment at present.

Q I believe that the perforation that actually was completed in this well was at what depth?

A 1300 to 1450.

Q And the well had been plugged back to 1608, did you say?

A Yes, sir.

Q I would like to ask a question in regard to the Dewey Lake.

Is the Dewey Lake essentially as you have indicated on your Exhibit 2, that is, down to the top of the Hydrite?

A Yes, sir, the top of the Dewey Lake is the top of the Permian Section.

Q And the bottom of the Dewey Lake is the top of the Hydrite?

A Yes, sir.

MR. MANKIN: Any further questions of this witness?

BY MR. REIDER:

Q Mr. Abbott, do you know approximately, in this area where the Santa Rosa would come in?

A Yes, sir. On this cross section, the Santa Rosa sand shows up on the log of the State Caprock A No. 1 as that reversal in the SP curve, which looks like it is around 950 feet. It extends down to about 1,020 feet.

Q And I believe you stated that Dewey Lake was absolutely dry?

A Yes, sir. We swabbed it and didn't recover any fluid whatsoever.

Q Did any of the acid treatment or fracking treatments occur the sand to give up any more fluid?

A No, sir. We thought it might, that is why we gave it the mud acid and swabbed it back, but it did not cause the well to give up any fluid.

MR. MANKIN: In this same connection, to go on with this question, it did not give up any fluid, is that correct?

A Yes.

Q It likewise did not give up any after the fracking

treatment, it likewise was dry?

A Yes.

BY MR. MONTGOMERY:

Q Does this formation carry disposable water?

A I am not qualified to answer that, but as far as I know, it doesn't.

Q Where would be the next voracity zone that you might dispose of any water, if the Commission saw fit to deny this application?

A The next voracity in the East Caprock Well would probably occur down the Wolf Camp and Pennsylvanian. The San Andres was tight throughout and I doubt if we could get any water.

Q Do you have any wells, dry holes, that are suitably equipped at this time for disposable water?

A Even if we had, we would be hesitant to do that because it is productive.

Q What would be the difference in investment, say, if you had to drill a well to pay disposal water and if the Commission saw fit to approve this application, what would be the difference in investment?

A Oh, possibly a \$150,000.

MR. MANKIN: Any further questions of the witness? Did you wish to enter Exhibits 1 and 2 as evidence in this case? Being no objection, they will be so entered. The witness may be excused. Is there any statement to be made in this case?

(Witness excused.)

MR. GURLEY: If it pleases the Examiner, I would like to read a telegram from the Texas Company, dated September 4, 1956,

addressed to Mr. Warren W. Mankin. "The Texas Company, as an operator in East Caprock Devonian Pool, Lea County, N. M., is presently negotiating with Amerada Petroleum Corp. and the other operators in this field to establish a cooperative water disposal system to serve this field. Amerada's H. C. Posey Well No. 2 will serve as the injection well in this disposal system. The Texas Company recommends that Amerada's application in case 1142 be granted as applied for. J. A. Hale, Assistant Division Manager."

MR. MANKIN: Any further statements to be made in this case? If not, the case will be taken under advisement.

REPORTER'S CERTIFICATE

I, LOUIS R. GUEVARA, do hereby certify that the foregoing and attached Transcript of Proceedings, pages numbered 2 through 8, were reported by me in Stenograph at the time and place aforesaid; 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 17th day of September, 1956, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Louis R. Guevara
LOUIS R. GUEVARA, COURT REPORTER

NEW MEXICO OIL CONSERVATION COMMISSION

1000 West Broadway
Hobbs, NEW MEXICO

REGISTER

HEARING DATE Sept. 6, 1956

TIME: 10:00 a.m.

NAME:	REPRESENTING:	LOCATION:
RE Murphy	Magnolia	Roswell
Helmuth W	"	"
J.P. Hannifin	✓	✓
J.M. McCague	Shell Oil Co.	Hobbs.
JACK L. WARD	SHELL OIL CO.	HOBBS
C L Kelley	Stanolind Oil & Gas	Roswell
Clark Newman	Atwood & Malone - for Stanolind	Roswell
J.W. Dick	STANOLIND OIL & GAS CO.	ROS WELL N.M.
Tom Boyd	Tom Boyd & Jack Plemons	Artesia N.M.
Neil B. Watson	attorney for Tom Boyd & Jack Plemons	Artesia, N.M.
W.G. Abbott	Amerada	Monument
J.C. Blackwood	✓	Midland
R.S. Christie	✓	Tulsa, OKla
R.I. Montgomery	OCC	Hobbs
Mrs. C.D. Biggs	✓	Hobbs
Geo. Hirschfeld	N. Mex. Oil & Gas Engr Comm	✓
R.C. Heald	Humble	Hobbs.