

CASE 1142: Amerada Petr. Corp. application for
permission to convert non-productive H. C.
Posey "A" #2 Well into salt water disposal well

Case No.

1142

Application, Transcript,
Small Exhibits, Etc.

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

October 2, 1956

C
O
P
Y

Mr. R. S. Christie
Amerada Petroleum Corporation
P.O. Box 2040
Tulsa 2, Oklahoma

Dear Sir:

We enclose a copy of Orders R-885, R-890, R-893 issued September 27, 1956, by the Oil Conservation Commission in Cases 1142, 1092 and 1093, respectively.

Very truly yours,

A. L. Porter, Jr.
Secretary - Director

brp
Encls.

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
COMMISSION OF THE STATE OF NEW
MEXICO FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 1142
Order No. R-885

APPLICATION OF AMERADA PETROLEUM
CORPORATION FOR AN ORDER GRANTING
PERMISSION TO CONVERT ITS NON-
PRODUCTIVE 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, NMPM, 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 STATEWIDE RULES AND
REGULATIONS.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 10:00 o'clock a.m. on September 6, 1956, at Hobbs, New Mexico, before Warren W. Mankin, Examiner duly appointed by the New Mexico Oil Conservation Commission, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 27th day of September, 1956, the Commission, a quorum being present, having considered the application, the evidence adduced and the recommendations of the Examiner, Warren W. Mankin, and being fully advised in the premises,

FINDS:

(1) That due notice having been given as required by law, the Commission has jurisdiction of this case and the subject matter thereof.

(2) That Amerada Petroleum Corporation is the operator of its H. C. Posey "A" No. 2 Well located in the NE/4 SE/4 Section 11, Township 12 South, Range 32 East, NMPM, East Caprock-Devonian Pool, Lea County, New Mexico.

(3) That said well was completed as a dry hole at a total depth of 11,283 feet in the Mississippian formation on August 28, 1952.

(4) That the present method of disposal of Salt Water in open evaporation pits is inadequate.

(5) That applicant proposes to plug said well back to 1608 feet and perforate the casing from 1300 to 1450 feet opposite the Dewey Lake formation for water disposal.

(6) That the use of aforesaid well as a salt water disposal well is both feasible and practical.

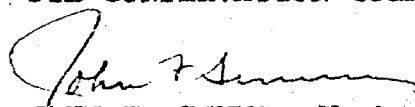
IT IS THEREFORE ORDERED:

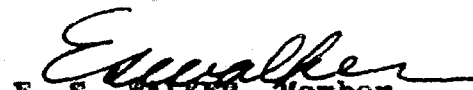
(1) That the application of Amerada Petroleum Corporation for an order granting permission to convert its non-productive H. C. Posey "A" No. 2 Well located in the NE/4 of the SE/4 of Section 11, Township 12 South, Range 32 East, NMPM, East Caprock-Devonian Pool, Lea County, New Mexico, into a salt water disposal well in the Dewey Lake formation in compliance with Rule 701 of the New Mexico Oil Conservation Commission State-wide Rules and Regulations, be and the same is hereby granted.


(2) That monthly injection reports on the water disposal project shall be submitted to the Commission in accordance with Rule 1119 of the Commission's Rules and Regulations.

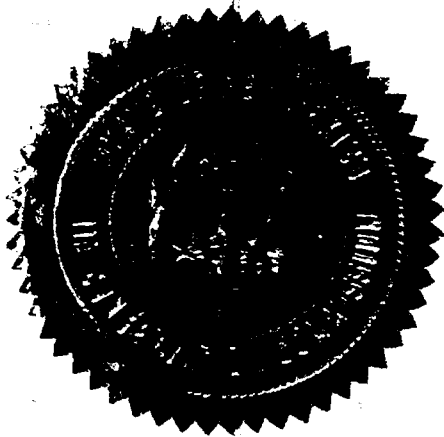
DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


JOHN F. SIMMS, Chairman


E. S. WALKER, Member


A. L. PORTER, Jr., Member & Secretary



lr/

CLASS OF SERVICE
This is a fast message unless its deferred character is indicated by the proper symbol.

WESTERN UNION TELEGRAM

W. P. MARSHALL, PRESIDENT

1220
(R 11-54)

SYMBOLS
DL=Day Letter
NL=Night Letter
LT=International Letter Telegram

The filing time shown on the face of a domestic telegram is STANDARD TIME at point of origin. Time of receipt is STANDARD TIME at point of destination.

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(54)

NEW MEXICO OIL CONSERVATION COMMISSION= 1956 SEP 4 PM 2 03

SANTA FE NMEX=

Case #114

ATTENTION: MR. W. W. MANKIN, EXAMINER

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=

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: |
|-------------------------|---|----------------------|
| <i>R. E. Murphy</i> | <i>Magnolia</i> | <i>Roswell</i> |
| <i>Blumstein W</i> | <i>"</i> | <i>"</i> |
| <i>S. P. Hannifin</i> | <i>✓</i> | <i>✓</i> |
| <i>J. M. McCann</i> | <i>Shell Oil Co.</i> | <i>Hobbs</i> |
| <i>JACK L. WARD</i> | <i>SHELL OIL CO.</i> | <i>HOBBS</i> |
| <i>C. L. Kelley</i> | <i>Standard Oil Co.</i> | <i>Roswell</i> |
| <i>Clark Newman</i> | <i>Standard Oil Co. - for Standard</i> | <i>Roswell</i> |
| <i>J. W. McK.</i> | <i>STANDARD OIL CO.</i> | <i>ROSWELL N.M.</i> |
| <i>Tom Boyd</i> | <i>Tom Boyd & Jack Plummer</i> | <i>Artesia N.M.</i> |
| <i>Neil B. Watson</i> | <i>attorney for Tom Boyd & Jack Plummer</i> | <i>Artesia, N.M.</i> |
| <i>W. G. Abbott</i> | <i>Artesia</i> | <i>Monument</i> |
| <i>J. C. Blackburn</i> | <i>✓</i> | <i>Monument</i> |
| <i>R. S. Christie</i> | <i>✓</i> | <i>Tulsa, OKla</i> |
| <i>R. J. Montgomery</i> | <i>OCC</i> | <i>Hobbs</i> |
| <i>Mrs. C. D. Biggs</i> | <i>✓</i> | <i>Napa</i> |
| <i>Geo. Hirschfeld</i> | <i>N. Mex. Oil & Gas Co.</i> | <i>Hobbs</i> |
| <i>H. C. Healdoff</i> | <i>H. C. Healdoff</i> | <i>Hobbs</i> |

AMERADA PETROLEUM CORPORATION
P. O. BOX 2040
TULSA 2, OKLAHOMA

RECEIVED
OCT 1 1956

Case 114

Sept 1 1956
Docket
on 8/21/56

Drawer D
Monument, New Mexico
August 17, 1956

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Re: Application to Recomplete
Amerada H.C. Posey "A" No. 2,
East Caprock Pool, Lea County,
New Mexico, as a salt water
disposal well.

Gentlemen:

By this letter of application Amerada Petroleum Corporation
wishes to state the following:

- (A) That Amerada Petroleum Corporation H.C. Posey "A" No. 2, located in the NE/4 of the SE/4 of Section 11, Township 12-S, Range 32-E, was completed as a dry hole at a total depth of 11,283 feet in the Mississippian Formation on August 28, 1952. The attached Exhibit "A" shows the location of this well on the Amerada H.C. Posey "A" Lease together with the location of all offset wells.
- (B) That water production in the East Caprock Pool, in which the subject well is located, is increasing and becoming difficult to dispose of. The current rate of water production is 5,500 barrels per day.
- (C) That Amerada Petroleum Corporation wishes to re-complete Amerada Posey "A" No. 2, a plugged and abandoned well, in the manner necessary to dispose of the current East Caprock Pool water production. The proposed recompletion will be done in the following manner:
 - 1. Wash out heavy mud to 1600 feet and set a cement plug in existing 8-5/8 inch OD casing.
 - 2. Perforate 8-5/8 inch casing from 1300 to 1450 feet with 600 shots.
 - 3. Wash perforations with mud acid and complete well for injection.

pp 1608
36 1/2 1700 500

- (D) The proposed zone of injection, from 1300 to 1450 feet, is in the Dewey Lake Formation of the Permian and is not productive of oil or gas.
- (E) That the present method of disposal of salt water in open evaporation pits is inadequate.
- (F) That the manner and method of the proposed injection is both mechanically feasible and practical.

Therefore, Amerada Petroleum Corporation requests that the Oil Conservation Commission set a certain day on which this application may be heard and after said hearing grant permission to the applicant to recomplete the subject well as a salt water disposal well in the manner proposed in this application.

Respectfully submitted,

AMERADA PETROLEUM CORPORATION

D. C. Gapps
D. C. Gapps
District Superintendent

DCC/WGA/vh

cc: Shell Oil Company
Box 1957
Hobbs, New Mexico

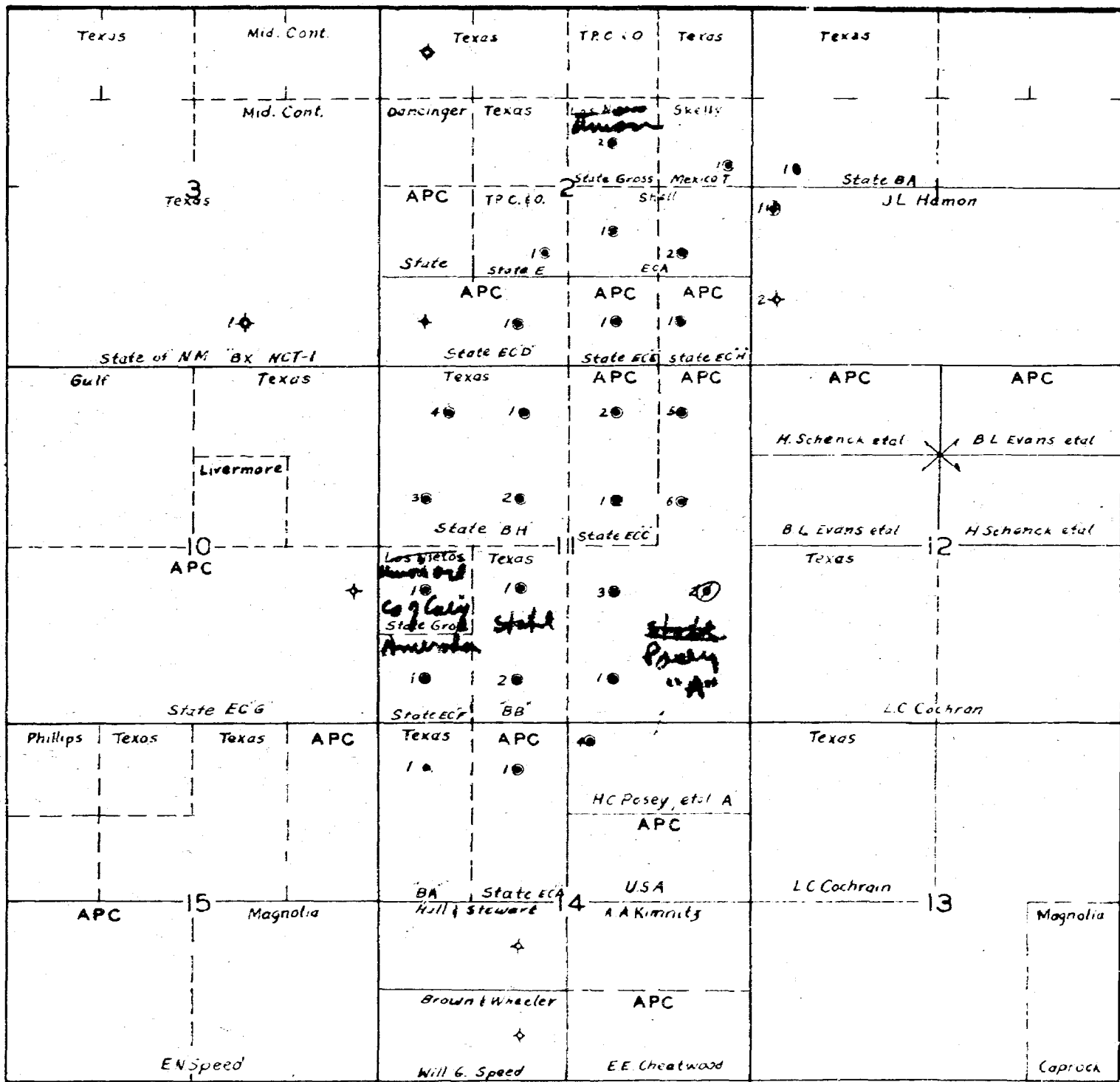
The Texas Company
Box 1270
Midland, Texas

Skelly Oil Company
Box 38
Hobbs, New Mexico

Texas Pacific Coal & Oil Co.
Box 2110
Fort Worth, Texas

Union Oil of California
Box 6584
Roswell, New Mexico

R 32 E



EAST CAPROCK POOL
LEA COUNTY, N.MEX.

SCALE 1 INCH = 2000 FEET
CONTOUR INTERVAL

EXHIBIT A

DOCKET: EXAMINER HEARING SEPTEMBER 5, 1956

Oil Conservation Commission 9:00 a.m. Mabry Hall, State Capitol, Santa Fe

The following cases will be heard before Warren W. Mankin, Examiner:

CASE 1085: (Readvertisement)

Application of Shell Oil Company for an order amending the Carson Unit Agreement as established by Commission Order R-828. Applicant, in the above-styled cause, seeks an order amending the Carson Unit Agreement in the following particulars:

- (a) To eliminate from the Unit Area All of Sections 3, 4, 9, 10, 15, 16, 21, 22, 27, 28, 33 and 34 of Township 25 North, Range 12 West, San Juan County, New Mexico.
- (b) To reduce the number of wells to be drilled under the agreement from five to four.
- (c) To consider any well commenced subsequent to July 15, 1956, within the amended area to have been drilled in accordance with the requirements of the Unit Agreement and as fulfilling part of the drilling requirements.

CASE 1138:

Application of R. E. Jackson for an order pooling all oil and gas interests in certain acreage in the Aztec-Pictured Cliffs Gas Pool, San Juan County, New Mexico, in accordance with Section 65-3-14 (c) New Mexico Statutes Annotated (1953). Applicant, in the above-styled cause, seeks an order pooling the rights and interests of all persons having the right to drill for, produce, or share production of oil, gas and liquid hydrocarbons, or any of them, underlying the SW/4 of Section 28, Township 29 North, Range 10 West, Aztec-Pictured Cliffs Gas Pool, San Juan County, New Mexico. The above-described quarter section is presently dedicated to the Bruington Pooled Unit Well No. 1 which is operated by Frances L. Harvey and located in the SW/4 SW/4 of said Section 28.

CASE 1139:

Application of Lowry, et al, Operating Account, for an order granting approval of a non-standard drilling and gas spacing unit in the South Blanco-Dakota Gas Pool, Rio Arriba County, New Mexico, in exception to Rule 104 (d) of the New Mexico Oil Conservation Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order granting approval of a 160 acre non-standard drilling and gas spacing unit in the South Blanco-Dakota Gas Pool consisting of the S/2 of the NE/4 and the N/2 of the SE/4 of Section 16, Township 26 North, Range 6 West, Rio Arriba County, New Mexico; said unit to be assigned to applicant's State Well No. D-268 located 1980 feet from the North line and 660 feet from the East line of said Section 16.

DOCKET: EXAMINER HEARING SEPTEMBER 6, 1956

New Mexico Oil Conservation Commission 10:00 a.m. Hobbs, New Mexico

Oil Conservation Commission Office, 1000 W. Broadway, Hobbs, New Mexico

The following cases will be heard before Warren W. Mankin, Examiner:

CASE 1140: Application of Magnolia Petroleum Company for an order granting approval of its proposed Tres Ranchos Unit Agreement embracing 1200 acres, more or less, in Eddy County, New Mexico, in accordance with Rule 507 of the New Mexico Oil Conservation Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order granting approval of its proposed Tres Ranchos Unit Agreement embracing 1200 acres, more or less, of State lands described as:

Township 19 South, Range 23 East

All Section 10

W/2 W/2 Section 11

W/2 NW/4 Section 14

N/2 Section 15 (All in Eddy County, New Mexico)

CASE 1141: Application of Tom Boyd and Jack Plemons for an order granting permission to commingle oil in exception to Rule 303 of the New Mexico Oil Conservation Commission Rules and Regulations. Applicant, in the above-styled cause, seeks an order granting permission to commingle oil from the Grayburg-Jackson and the Grayburg-Keeley Pools; said oil to be produced from applicant's Continental State 27 Well No. 4 located in the NW/4 NW/4 of Section 27, Township 17 South, Range 29 East, Grayburg-Keeley Pool, Eddy County, New Mexico, with oil production from applicant's Wells No. 1, 2 and 3 in the Grayburg-Jackson Pool.

CASE 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.

