

Case Number.

4260

Application

Transcripts.

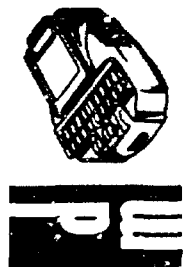
Small Exhibits

ETC.

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SPECIALIZING IN: DEPOSITIONS, HEARINGS, STATEMENTS, EXPERT TESTIMONY, DAILY COPY, CONVENTIONS

1120 SIMMS BLDG. • P. O. BOX 1092 • PHONE 243-6891 • ALBUQUERQUE, NEW MEXICO



BEFORE THE
NEW MEXICO OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
November 25, 1969

EXAMINER HEARING

IN THE MATTER OF:

Application of Tamarack Petroleum
Company, Inc., for a waterflood
expansion, Lea County, New Mexico.

Case No. 4260

BEFORE: Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: Case 4260.

MR. HATCH: Case 4260. Application of Tamarack Petroleum Company, Inc., for a waterflood expansion, Lea County, New Mexico.

MR. KELLAHIN: Mr. Examiner, if you please, Jason Kellahin of Kellahin and Fox, of Santa Fe, appearing for the Applicant.

We have one witness I would like to have sworn, Mr. Roy C. Williamson, Jr.

MR. UTZ: Any other appearances?

You may proceed.

(Witness sworn).

(Whereupon, Applicant's Exhibit 1 was marked for identification.)

ROY C. WILLIAMSON, JR.

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

DIRECT EXAMINATION

BY MR. KELLAHIN:

Q State your name, please.

A Roy C. Williamson, Jr.

Q What business are you engaged in, Mr. Williamson?

A I am a petroleum consultant.

Q And where are you located?

A In Midland, Texas.

Q Have you ever testified before the Oil Conservation Commission of New Mexico and made your qualifications a matter of record?

A Yes, I have.

MR. KELLAHIN: Are the witness' qualifications acceptable, Mr. Examiner?

MR. UTZ: Yes, sir.

Q (By Mr. Kellahin) Mr. Williamson, in connection with your work as a petroleum engineer, have you done any work for Tamarack Petroleum Company, Inc., in connection with Case 4260?

A Yes, sir, I have.

Q Referring to what has been marked as Applicant's Exhibit No. 1, and the figures which are attached to that exhibit, will you state briefly just what is proposed by Tamarack Petroleum Company in this application?

A We are requesting permission to convert the unit Well No. 13 to injection service.

Q Now, you have referred to some of these other wells as proposed injection wells, in reference to what has been marked as Exhibit 1, figure 1. And, what is shown

on that exhibit?

A On this exhibit are shown the wells that are currently on injection, which are designated by the blue dots.

The red dots, designated as proposed injection wells, consist of two groups of wells: the first group of wells, for permission to inject, was requested and granted along with a formation of the unit.

The well that we are requesting now is shown by a red arrow on figure No. 1, as unit Well No. 18.

Q Would you give the location of that well?

A That location is in Section 23, Unit L, Township 19 South, Range 35 East.

Q Now, in the northeast Pearl Queen Unit, there are several producing rights; are there not?

A Yes, there are.

Q And what zones do you propose to inject in this well?

A In this well, we will inject into the so-called zone five and zone seven, as shown on the last exhibit, or the next to the last exhibit, which shows the down hole configuration of the proposed injection well.

Q Now, the exhibits, figures No. 2 and --- two,

three and four; were they offered in the previous hearing?

A Yes.

Q Does this reflect that you will get an adequate flood of all of the horizons by using the injection wells, which have heretofore been approved and the proposed injection well?

A That's correct.

Q Do you have any other comments in connection with the exhibit?

A None other, except that zone five, which is declared present completed interval in well 18, will be squeezed, prior to commencing injection with the other two zones.

Q Is that zone making water at the present time?

A Yes, it is.

Q Now, referring to --

MR. UTZ: I would like some clarification here. You said zone five will be squeezed?

THE WITNESS: No, zone four will be squeezed.

MR. UTZ: Well, I thought you said zone five?

THE WITNESS: Well, I'm sorry. Zone four will be squeezed. Zone five and seven will be perforated for injection.

MR. UTZ: All these zones are in the Queen?

THE WITNESS: Yes. They are just at actually different production intervals within the Queen.

Q (By Mr. Kellahin) And they are all embraced within the unit; is that correct?

A Yes, that's correct.

Q Now, on the zone five, on figure three, you show that that zone as being wet in the Well No. 18. Do you know what the situation is there at the present time?

A From our study, we determined that the zone five is at the oil-water contact in this well.

However, that will not prevent it from being an effective injection well. The sand section is there and will accept water.

Q Now, the well is not presently open in either zone five or seven; is that correct?

A That is correct.

Q Now, referring to the diagrammatic sketch of your proposed completion: this reflects that you will be injecting through a plastic-lined tubing, and under a packer?

A Yes, that's correct.

Q Is that the same type of completion that you proposed in the other wells --

A Yes.

Q -- which have been approved?

A Yes, that is the same.

Q Will the casing tubing annulus be filled with an inert fluid?

A Yes, it will.

Q Will you install a pressure gauge at the surface?

A Yes.

Q And then, attached to the exhibit, is a log; what well is that of?

A This is of the requested well -- it's the old Gulf State No. 1, which has been redesignated as Unit Well No. 18.

It shows the zone four, five and seven, with the perf shown in zone four.

Q Now, how much water will you inject in this well?

A We plan to inject approximately one hundred and fifty barrels of water per day.

Q Under what pressure do you anticipate you will inject?

A We will have a surface pressure of approximately

twenty-five hundred pounds.

Q What is the source of water?

A In the Ogallala Formation.

Q Now, are you presently injecting water into the unit?

A Only in the three wells shown as blue, and that is for disposal purposes for the moment.

Construction is under way on the plant and distribution system, and injection should begin within the next few weeks.

Q You are injecting produced water in the well; aren't you?

A Yes.

Q Will you reject produced water --

A Yes.

Q -- throughout the life of the flood?

A Yes.

Q But in addition, you will make it up with Ogallala water?

A Yes.

Q What source?

A The water source is seven miles northeast of the unit.

Q Was Exhibit 1, with the attachments, prepared by you or by someone under your supervision?

A Yes.

MR. KELLAHIN: Mr. Examiner, we offer in evidence Exhibit No. 1 with its attachment.

MR. UTZ: How many parts?

MR. KELLAHIN: Let me count them. It is an eight-page exhibit.

MR. UTZ: Exhibit No. 1, consisting of eight pages, will be entered into the record of this case.

MR. KELLAHIN: That's all I have.

CROSS EXAMINATION

BY MR. UTZ:

Q At this time, you have the two injection wells on the unit, as shown on figure 1 of the Exhibit 1; is that correct?

A That's correct.

Q And this request is only for converting your No. 18 into an injection well?

A That's correct. The other pool was approved in an earlier hearing.

Q Is it your plan now, to reject produced water?

A Yes.

Q And that water will probably be brackish?

A Yes, sir.

Q And the Ogallala water is presently --

A Yes, sir.

MR. UTZ: Any questions of the witness?

Any statements? The witness may be excused.

(Witness excused).

MR. UTZ: The case will be taken under advise-

ment.

I N D E X

| <u>WITNESS</u> | <u>PAGE</u> |
|------------------------------------|-------------|
| ROY C. WILLIAMSON, JR. | |
| Direct Examination by Mr. Kellahin | 2 |
| Cross Examination by Mr. Utz | 9 |

E X H I B I T S

| | |
|-----------------------|---|
| Applicant's Exhibit 1 | 2 |
|-----------------------|---|

[illegible]

I, CA FENLEY, Court Reporter in and for the County of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing before the New Mexico Oil Conservation Commission was reported by me; and that the same is a true and correct record of the said proceedings to the best of my knowledge, skill and ability.

Alan Parker

Court Reporter

I do hereby certify that the foregoing is
a complete record of the proceedings in
the Examiner hearing of Case No. 4260
heard by me on Nov. 25, 1929.

New Mexico Oil Conservation Commission

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

December 2, 1969

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
P. O. Box 1769
Santa Fe, New Mexico

Dear Mr. Kellahin:

Enclosed herewith is Commission Order No. R-3888, entered in Case No. 4260, approving the expansion of the Tamarack NE Pearl Queen Waterflood Project.

Injection through the one newly authorized water injection well shall be through plastic-lined tubing set in a packer located at approximately 4900 feet. The casing-tubing annulus shall be loaded with an inert fluid and equipped with a pressure gauge at the surface.

As to allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 924 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices

OIL CONSERVATION COMMISSION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

-2-

December 2, 1969

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law
P. O. Box 1769
Santa Fe, New Mexico

C by letter of any change in the status of wells in the project
area, i.e., when active injection commences, when additional
injection or producing wells are drilled, when additional wells
are acquired through purchase or unitization, when wells have
received a response to water injection, etc.

O Your cooperation in keeping the Commission so informed
as to the status of the project and the wells therein will be
appreciated.

P Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

Y ALP/DSH/esr

cc: Oil Conservation Commission
P. O. Box 1980
Hobbs, New Mexico

Mr. D. E. Gray
State Engineer Office
Santa Fe, New Mexico

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 4260
Order No. R-3888

APPLICATION OF TAMARACK PETROLEUM
COMPANY, INC., FOR A WATERFLOOD
EXPANSION, LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 25, 1969, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 2nd day of December, 1969, the Commission, a quorum being present, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

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

(2) That the applicant, Tamarack Petroleum Company, Inc., seeks permission to expand its Northeast Pearl Queen Unit Waterflood Project in the Pearl-Queen Pool by the conversion to water injection of one additional injection well, its Unit Well No. 18, located in Unit L of Section 23, Township 19 South, Range 35 East, NMPM, Lea County, New Mexico.

(3) That the wells in the project area are in an advanced state of depletion and should properly be classified as "stripper" wells.

(4) That the proposed expansion of the Northeast Pearl Queen Unit Waterflood Project should result in the recovery of otherwise unrecoverable oil, thereby preventing waste.

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CASE No. 4260
Order No. R-3888

(5) That the subject application should be approved and the expanded project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Tamarack Petroleum Company, Inc., is hereby authorized to expand its Northeast Pearl Queen Unit Waterflood Project in the Pearl-Queen Pool by the injection of water into the Queen formation through its Unit Well No. 18, located in Unit L of Section 23, Township 19 South, Range 35 East, NMPM, Lea County, New Mexico.

(2) That the expanded waterflood project shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the expanded waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


DAVID F. CARGO, Chairman


ALEX J. ARMIJO, Member


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


esr/

ROUGH DRAFT FOR WATERFLOOD LETTERS

Mr. Jason Kellahin
Kellahin & Fox
Attorneys at Law - Box 1769
Santa Fe, New Mexico

Dear Sir:

Enclosed herewith Commission Order No. R-3888, entered in Case No. 4260, approving the *expansion of the Tamarack NE* *Queen* Waterflood Project. *Paul*

Injection through the one newly authorized water injection well shall be through plastic lined tubing set in a pocket located at approximately 4900 feet. The casing tubing annulus shall be packed with an inert fluid and equipped with a pressure gauge at the surface.

As allowable, our calculations indicate that when all of the authorized injection wells have been placed on active injection, the maximum allowable which this project will be eligible to receive under the provisions of Rule 701-E-3 is 924 barrels per day when the Southeast New Mexico normal unit allowable is 42 barrels per day or less.

Please report any error in this calculated maximum allowable immediately, both to the Santa Fe office of the Commission and the appropriate district proration office.

In order that the allowable assigned to the project may be kept current, and in order that the operator may fully benefit from the allowable provisions of Rule 701, it behooves him to promptly notify both of the aforementioned Commission offices by letter of any change in the status of wells in the project area, i.e., when active injection commences, when additional injection or producing wells are drilled, when additional wells are acquired through purchase or unitization, when wells have received a response to water injection, etc.

Your cooperation in keeping the Commission so informed as to the status of the project and the wells therein will be appreciated.

Very truly yours,

A. L. PORTER, Jr.
Secretary-Director

cc: OCC: Hobbs X
Artesia
Aztec

USGS

~~Mr. Frank Irby~~, State Engineer Office, Santa Fe, New Mexico

Mr. D. E. Gray

Case 4260

Heard 11-25-69

Rec. 11-26-69

Grant I amma permission to
expand their NE ^{Perm} ^{unit} ~~Perm~~ water-
flood by connecting their NE
Perm ~~Perm~~ unit #18 L-23-195-85E to
or water injection well.

Injection shall be thru plastic
coated tubing under a packer
and into ~~the~~ zone V & VI of the
Perm fm. A pressure gauge
shall be used at Permian
surface & Cementus filled w/
inert water fluid.

Thrate, W

NOTE: DUE TO THE THANKSGIVING HOLIDAY, THIS HEARING IS SCHEDULED FOR TUESDAY RATHER THAN WEDNESDAY AS CUSTOMARY.

Docket No. 32-69

DOCKET: EXAMINER HEARING - TUESDAY - NOVEMBER 25, 1969

9 A.M. OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING - SANTA FE, NEW MEXICO

The following cases will be heard before Daniel S. Nutter, Examiner, or Elvis A. Utz, Alternate Examiner:

CASE 4259: Application of Aztec Oil & Gas Company for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the San Andres formation in the perforated interval from 5112 feet to 5138 feet in its State "SS" Well No. 1 located in Unit F of Section 24, Township 17 South, Range 36 East, Spencer-San Andres Pool, Lea County, New Mexico.

CASE 4260: Application of Tamarack Petroleum Company, Inc. for a water-flood expansion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its Northeast Pearl Queen Unit Waterflood Project, Pearl-Queen Pool, by the conversion to water injection one additional injection well, its Unit Well No. 18, located in Unit L of Section 23, Township 19 South, Range 35 East, Lea County, New Mexico.

CASE 4261: Application of Pennzoil United, Inc., for special pool rules and unorthodox gas well location, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the promulgation of special pool rules for the Quail Ridge-Morrow Gas Pool, Lea County, New Mexico, including a provision for 320-acre spacing units. Applicant further seeks approval of the unorthodox location in said pool for its Mescalero Ridge Well No. 1 at a location 660 feet from the South line and 660 feet from the West line of Section 20, Township 19 South, Range 34 East.

CASE 4262: Application of Plains Radio Broadcasting Company for an exception to Order No. R-3221, as amended, Chaves County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-3221, as amended, which order prohibits the disposal of water produced in conjunction with the production of oil on the surface of the ground in Lea, Eddy, Chaves, and Roosevelt Counties, New Mexico. Said exception would be for the applicant's White Ranch Well No. 1 located in Unit E of Section 34, Township 11 South, Range 29 East, White Ranch Siluro-Devonian Pool, Chaves County, New Mexico. Applicant seeks authority to dispose of salt

water produced by said well in an unlined surface pit located in the vicinity of said well. In the alternative, applicant seeks authority to dispose of said produced water into the Siluro-Devonian formation in the perforated interval from 8743 feet to 8750 feet in its White Ranch Well No. 3 located in Unit M of said Section 34.

CASE 4263: Application of Wynn & Brooks for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Federal "E" Well No. 3, to be located 590 feet from the South line and 1590 feet from the West line of Section 13, Township 27 North, Range 8 West, Blanco-Mesaverde and Basin-Dakota Pools, San Juan County, New Mexico.

CASE 4264: Application of Wynn & Brooks for an unorthodox gas well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox location of its Federal "J" Well No. 1, to be located 2390 feet from the South line and 2410 feet from the East line of Section 11, Township 27 North, Range 8 West, Blanco-Mesaverde and Basin-Dakota Pools, San Juan County, New Mexico.

CASE 4265: Application of Union Oil Company of California for salt water disposal, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to dispose of produced salt water into the Yates, San Andres and other formations in the open-hole interval from approximately 4450 feet to 5890 feet in its Midway State Well No. 3 located in Unit J, Section 12, Township 17 South, Range 36 East, Lovington Field, Lea County, New Mexico.

CASE 4245: (Continued from the November 5, 1969, Examiner Hearing)
Application of Texas Pacific Oil Company, Inc., for several non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the dedication and rededication of certain acreage and the establishment of the following non-standard gas proration units in Townships 22 and 23 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico:

(Case 4245 continued)

A 160-acre unit comprising the W/2 SE/4 and the E/2 SW/4 of Section 8, Township 22 South, Range 36 East, to be dedicated to the State "A" a/c-2 Well No. 56 located in Unit J of said Section 8;

A 200-acre unit comprising the NW/4 and the NW/4 SW/4 of Section 11, Township 22 South, Range 36 East, to be dedicated to the State "A" a/c-2 Well No. 42 located in Unit E of said Section 11;

A 280-acre unit comprising the SE/4, S/2 SW/4, and the NE/4 SW/4 of Section 11, Township 22 South, Range 36 East, to be dedicated to the State "A" a/c-2 Well No. 36 located in Unit M of said Section 11;

A 200-acre unit comprising the N/2 NE/4, the SE/4 NE/4, and the NE/4 NW/4 of Section 15 and the SE/4 SW/4 of Section 10, Township 23 South, Range 36 East, to be dedicated to the State "A" a/c-1 Well No. 31 located in Unit H of said Section 15;

A 160-acre unit comprising the S/2 NW/4, SW/4 NE/4 and the NW/4 NW/4 of Section 15, Township 23 South, Range 36 East, to be dedicated to the State "A" a/c-1 Well No. 33 located in Unit F of said Section 15;

A 240-acre unit comprising the SW/4 of Section 3, and the N/2 NW/4 of Section 10, Township 23 South, Range 36 East, to be dedicated to the State "A" a/c-1 Well No. 35 located in Unit L of said Section 3;

A 160-acre unit comprising the S/2 NW/4 and N/2 SW/4 of Section 10, Township 23 South, Range 36 East, to be dedicated to the State "A" a/c-1 Well No. 37 located in Unit F of said Section 10.

CASE 4266: Application of Texas Pacific Oil Company, Inc., for several non-standard gas proration units, Lea County, New Mexico. Applicant, in the above-styled cause, seeks the dedication and rededication of certain acreage and the establishment of the following non-standard gas proration units in Township 22 South, Range 36 East, Jalmat Gas Pool, Lea County, New Mexico:

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(Case 4266 continued)

A 280-acre unit comprising the SW/4 of Section 9 and the E/2 SE/4 and SW/4 SE/4 of Section 8 to be dedicated to the State "A" a/c-2 Well No. 38 located in Unit K of said Section 9;

A 160-acre unit comprising the E/2 SW/4, SW/4 SW/4 and NW/4 SE/4 of Section 8 to be dedicated to the State "A" a/c-2 Well No. 56 located in Unit J of said Section 8;

A 120-acre unit comprising the S/2 NW/4 and NW/4 SW/4 of Section 8 to be dedicated to the State "A" a/c-2 Well No. 51 located in Unit F of said Section 8;

A 160-acre unit comprising the SW/4 of Section 5 to be dedicated to the State "A" a/c-2 Well No. 41 located in Unit M of said Section 5;

A 160-acre unit comprising the NW/4 of Section 5 to be dedicated to the State "A" a/c-2 Well No. 44 located in Unit F of said Section 5;

A 160-acre unit comprising the SE/4 of Section 5 to be dedicated to the State "A" a/c-2 Well No. 27 located in Unit P of said Section 5.

CASE 4267: In the matter of the hearing called by the Oil Conservation Commission on its own motion to permit Edward M. Kriss and all other interested parties to appear and show cause why the Edward M. Kriss Little Chama Valley Company Well No. 1, a wildcat well, located 545 feet from the North line and 1530 feet from the West line of Section 2, Township 1 North, Range 2 East, Rio Arriba County, New Mexico, should not be plugged and abandoned in accordance with a Commission-approved plugging program.

CASE 4268: Application of Texaco Inc., for a unit agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the State "JD" Unit Area comprising 160 acres, more or less, of State lands in the NW/4 of Section 27, Township 26 South, Range 37 East, Rhodes (Yates-Seven Rivers) Pool, Lea County, New Mexico.

- CASE 4269: Application of Texaco Inc. for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to institute a waterflood project in its State "JD" Unit Area by the injection of water into the Yates-Seven Rivers formations through two wells located in Unit D and Unit F of Section 27, Township 26 South, Range 37 East, Rhodes (Yates-Seven Rivers) Pool, Lea County, New Mexico.
- CASE 4270: Application of Byron McKnight for an exception to Order No. R-111-A, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to the potash-oil area casing and cementing rules as set forth in Commission Order No. R-111-A. Applicant proposes to drill to a depth of approximately 3800 feet in the Yates formation two exploratory wells located in the SW/4 NE/4 and SE/4 NE/4 of Section 26, Township 19 South, Range 33 East, Lea County, New Mexico, in such a manner as to eliminate the necessity of running the salt protection string required by said Order No. R-111-A provided the production string would be cemented to the surface.
- CASE 4271: Application of Texaco Inc. for a waterflood expansion and amendment of Order No. R-2748, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to expand its waterflood project in the Rhodes (Yates-Seven Rivers) Pool, authorized by Order No. R-2748, by the injection of water through four additional wells in Sections 22 and 27 of Township 26 South, Range 37 East, Lea County, New Mexico. Applicant further seeks amendment of said order to establish a procedure whereby additional injection wells as may be necessary to complete an efficient injection pattern may be approved administratively.
- CASE 4272: Application of Shell Oil Company for an unorthodox oil well location and to directionally drill, Lea County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Sanger Well No. 6 at an unorthodox surface location in Unit E 1490 feet from the North line and 330 feet from the West line of Section 27, Township 18 South, Range 38 East, Hobbs (Grayburg-San Andres) Pool, Lea County, New Mexico. Applicant further seeks authority to directionally drill said well in such a manner as to bottom the well in the subject pool at a point in Unit D of said Section 27 approximately 200 feet north of said surface location. Applicant proposes to dedicate said Unit D to the well.

November 25, 1969 - Examiner Hearing

Docket No. 32-69

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CASE 4273: Application of Tesoro Petroleum Corporation for an unorthodox oil well location and amendment of Order No. R-2807-A, McKinley County, New Mexico. Applicant, in the above-styled cause, seeks approval for the unorthodox oil well location of its Well No. 59, formerly classified as a water injection well, located 1430 feet from the South line and 2625 feet from the East line of Section 36, Township 18 North, Range 9 West, Hospah Upper Sand Oil Pool, McKinley County, New Mexico. Applicant further seeks the amendment of Order No. R-2807-A to permit a procedure whereby additional producing and injection wells in its Hospah Unit Area may be approved administratively.

CASE 4274: Application of Pan American Petroleum Corporation for an unorthodox oil well location, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks authority to drill its Navajo Tribal "N" Well No. 11 at an unorthodox location 1150 feet from the West line and 560 feet from the North line of Section 17, Township 26 North, Range 18 West, Tocito Dome-Pennsylvanian "D" Oil Pool, San Juan County, New Mexico.

BAILEY, SIPES, WILLIAMSON & RUNYAN, INC.

CONSULTING ENGINEERS

SUCCESSOR TO LLC&C ENGINEERING, INC.

ROBERT F. BAILEY, P.E., PRESIDENT
L. D. SIPES, JR., P.E.
ROY C. WILLIAMSON, JR., P.E.
E. E. RUNYAN, P.E.
T. SCOTT HICKMAN, P.E.

November 24, 1969

1100 V & J TOWER
MIDLAND, TEXAS 79701
915 683-1841

Mr. Albert Metcalfe
Tamarack Petroleum Co., Inc.
910 Building of The Southwest
Midland, Texas 79701

Dear Mr. Metcalfe:

Subject: Northeast Pearl Queen Unit
Pearl Queen Field, Lea County, New Mexico

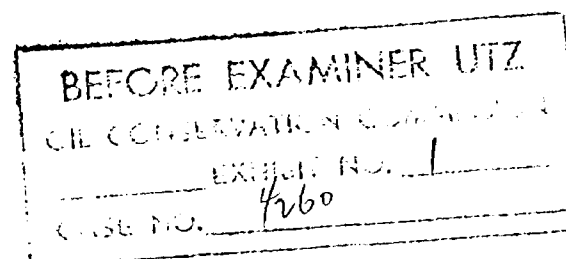
This letter presents supporting data for requesting the conversion of Unit Well No. 18 (Gulf State No. 1) to water injection service.

The subject Unit became effective October 1, 1969. The attached Figure No. 1 shows the outline of the Northeast Pearl Queen Unit. Figures 2, 3 and 4 are net effective pay isopach maps of pay zones designated as IV, V and VII respectively. All figures show current injection wells in blue and proposed injection wells in red within the unit area. Permission to inject into the other wells designated as "proposed" was requested at a hearing dated 9-10-69. This request was granted along with formation of the unit. Also attached is a down hole diagrammatic sketch and a log of Unit Well No. 18. The log shows pay designations and current and proposed perforations.

The following described land constitutes the proposed unit area.

| | | |
|-----------------------|---------|--|
| <u>T-19-S, R-35-E</u> | Sec. 15 | E/2 of SW/4, W/2 of SE/4 and SE/4 of SE/4 |
| | Sec. 22 | E/2 of NE/4 |
| | Sec. 23 | N/2 and N/2 of S/2 |
| | Sec. 24 | W/2 of NW/4, NE/4 of NW/4 and NW/4 of SW/4 |

The following table shows the proposed injection zones and the anticipated injection rates for Unit Well No. 18.



Mr. Albert Metcalfe
Tamarack Petroleum Co., Inc.
November 24, 1969
Page No. 2

Proposed Injection Well

| <u>Well</u> | <u>Zones</u> | <u>Injection Rates Bbls of Water/Day</u> |
|------------------|--------------|--|
| Unit Well No. 18 | V & VII | 150 |

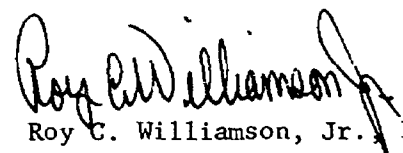
This well is located in Section 23, Unit L.

No cooperative injection program is anticipated with leases lying outside the unit area. There is no development to the north, east or south of the unit and the East Pearl Unit to the west of this proposed unit is already under injection.

If further information is required, please give us a call.

Very truly yours,

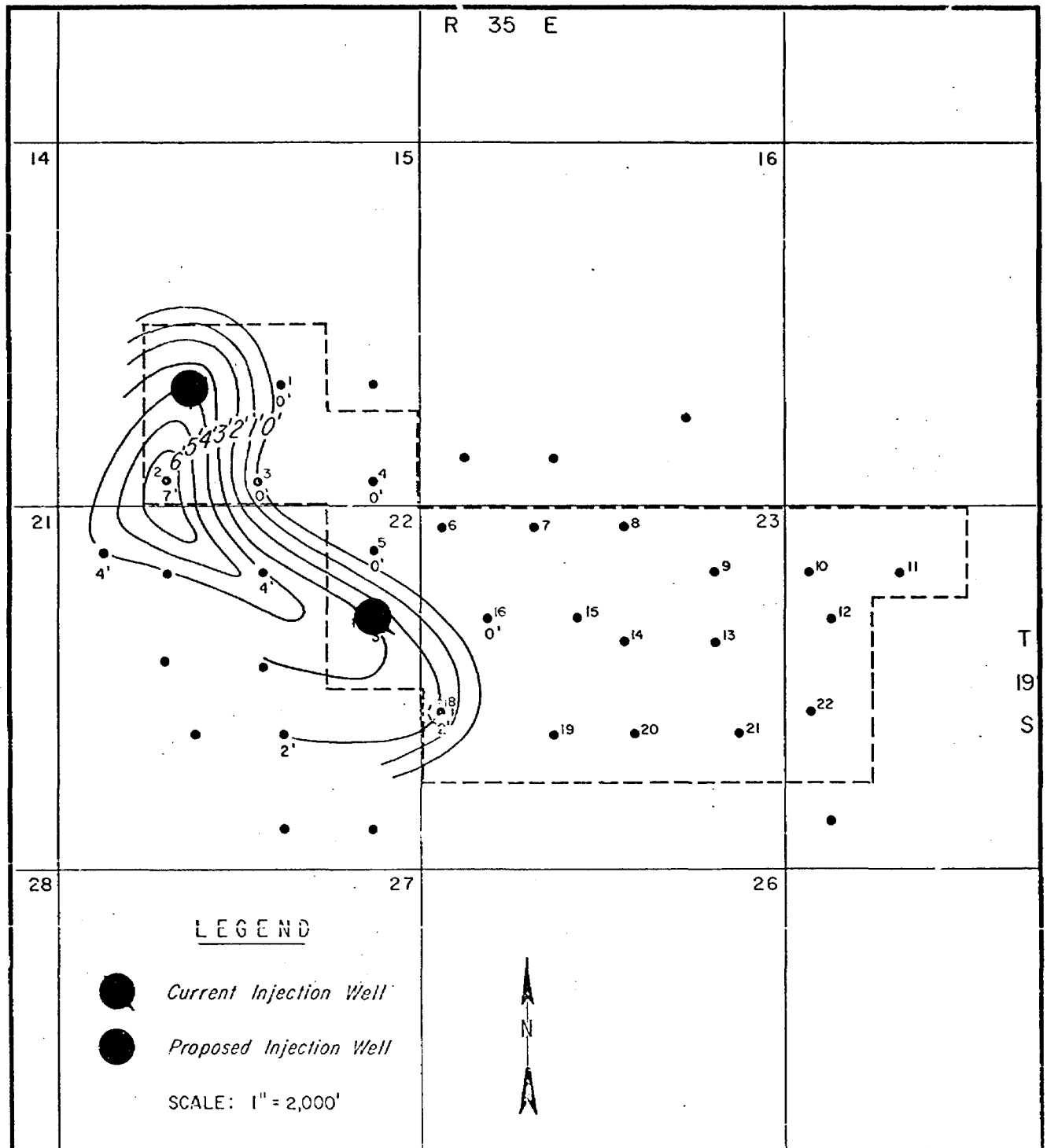
BAILEY, SIPES, WILLIAMSON & RUNYAN, INC.


Roy C. Williamson, Jr., P. E.

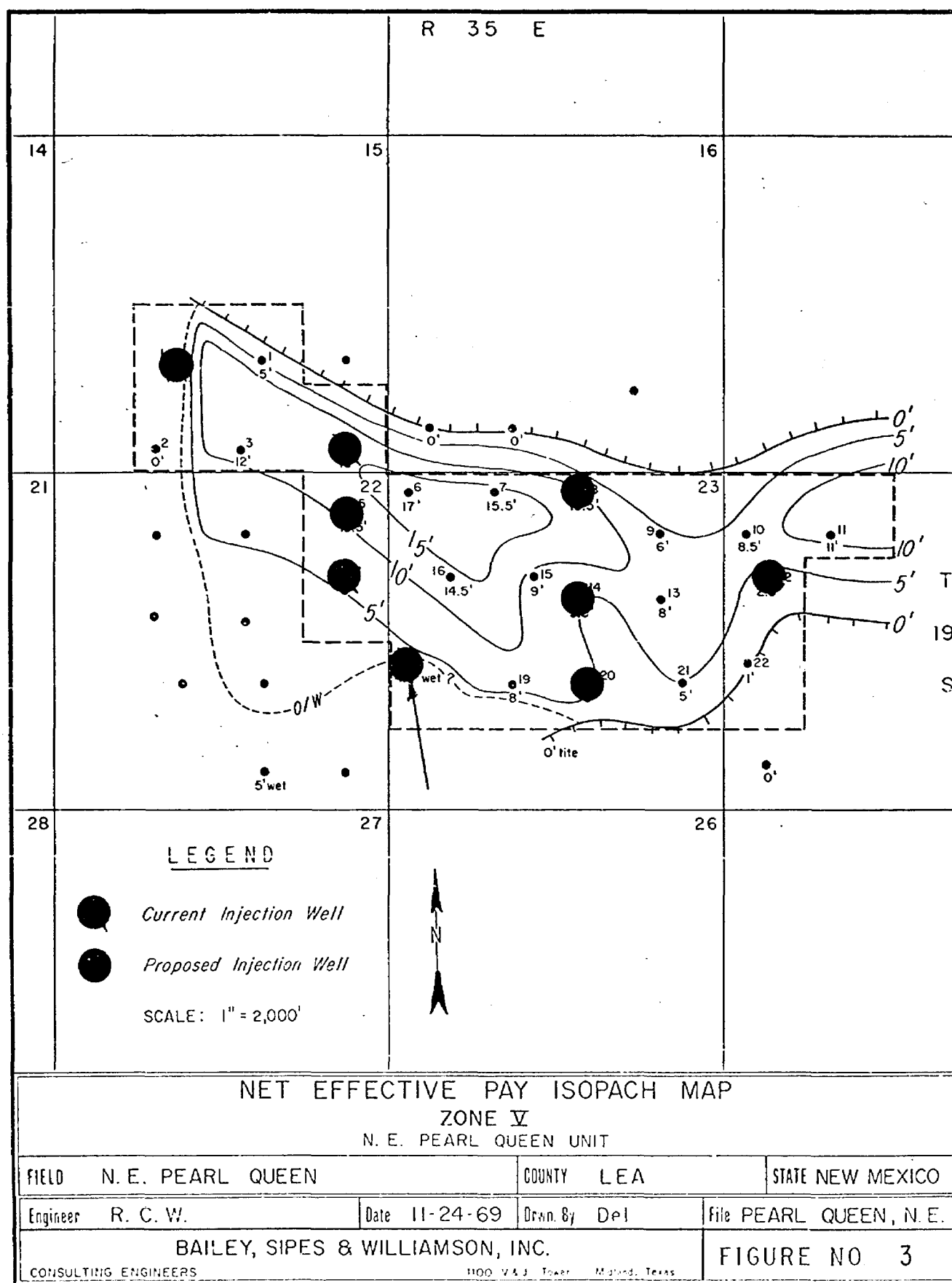
zt

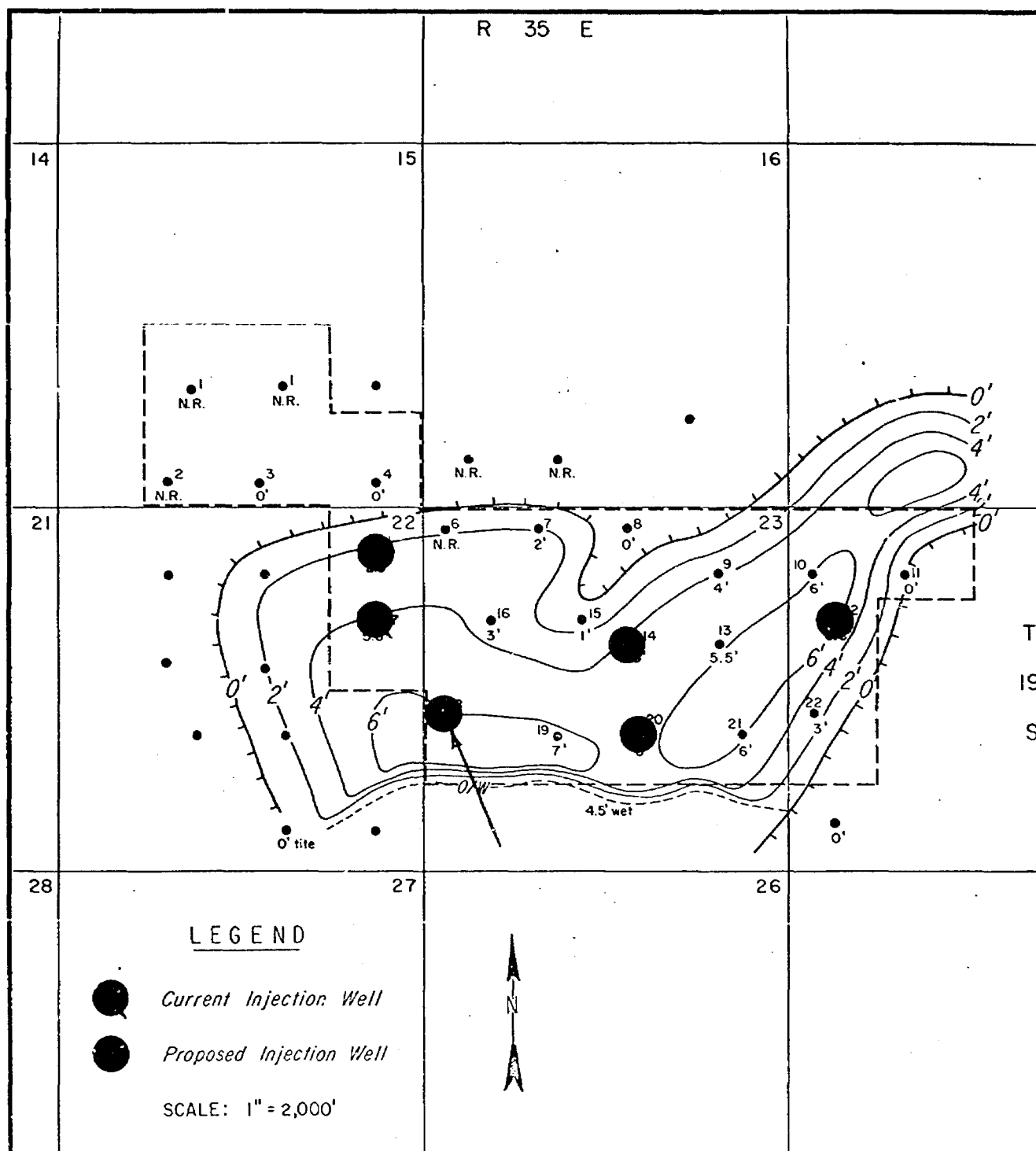
Attachments

| | | | | | |
|--|--|---------------|--|---|--|
| FIELD PEARL QUEEN | | COUNTY LEA | | STATE NEW MEX. | |
| Engineer R. C. W. | | Date 11-24-69 | | Drwn. By Del | |
| BAILEY, SIPES, WILLIAMSON & RUNYAN, INC. CONSULTING ENGINEERS | | | | FIGURE NO. 1 1100 W 8 J TOWER MIDLAND, TEXAS | |



| NET EFFECTIVE PAY ISOPACH MAP | | | |
|----------------------------------|---------------|-----------------------------------|-------------------------|
| ZONE IV | | | |
| N. E. PEARL QUEEN UNIT | | | |
| FIELD N. E. PEARL QUEEN | | COUNTY LEA | STATE NEW MEXICO |
| Engineer R. C. W. | Date 11-24-69 | Drawn By Del | File PEARL QUEEN, N. E. |
| BAILEY, SIPES & WILLIAMSON, INC. | | | FIGURE NO. 2 |
| CONSULTING ENGINEERS | | 1100 V & J, Trapp, Midland, Texas | |

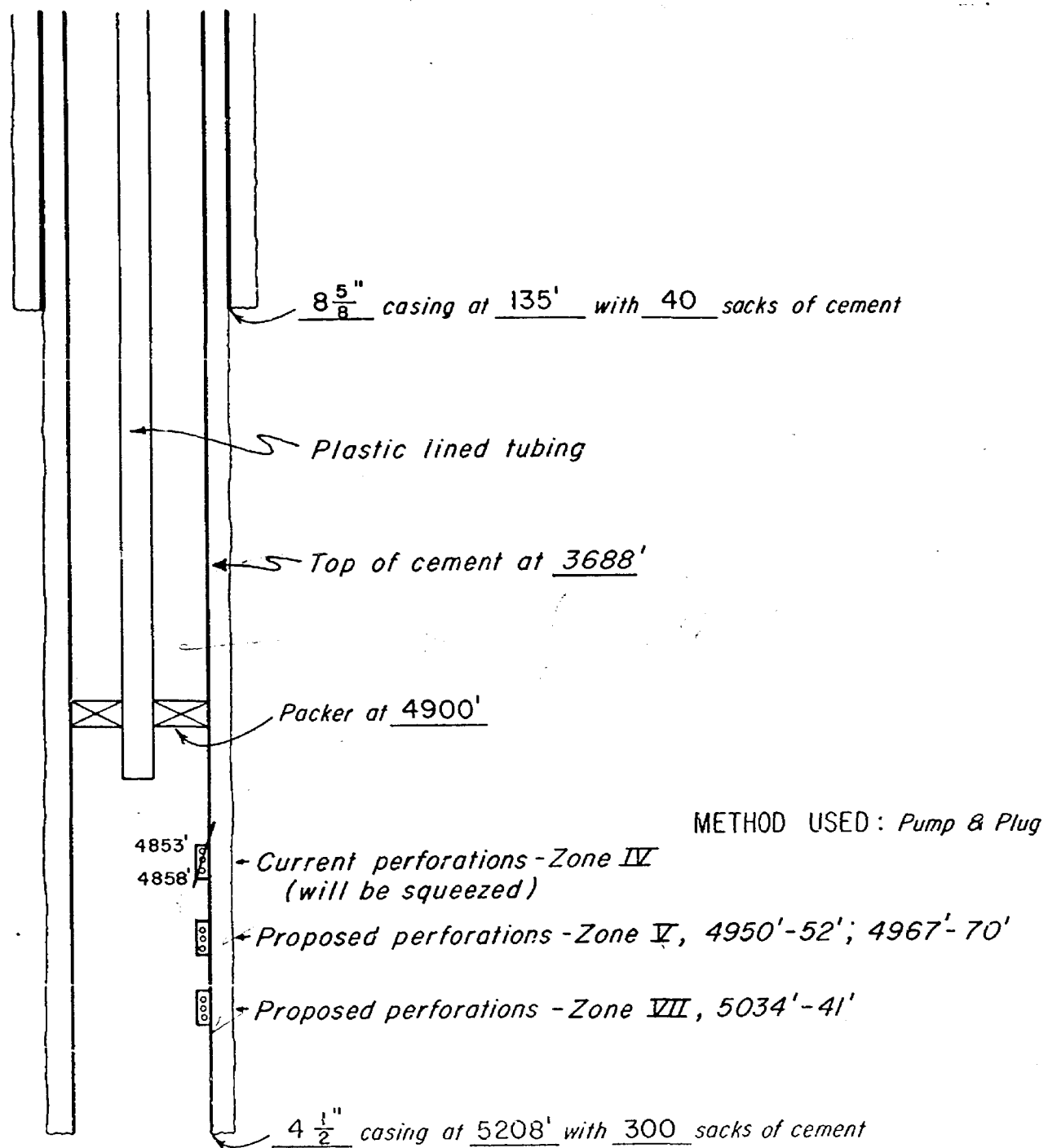




NET EFFECTIVE PAY ISOPACH MAP

ZONE VII
N. E. PEARL QUEEN UNIT

| | | | | | |
|----------------------------------|-------------------|--------|----------|----------|---------------------------------|
| FIELD | N. E. PEARL QUEEN | COUNTY | LEA | STATE | NEW MEXICO |
| Engineer | R. C. W. | Date | 11-24-59 | Drawn By | Del |
| BAILEY, SIPES & WILLIAMSON, INC. | | | | | FIGURE NO. 4 |
| CONSULTING ENGINEERS | | | | | 1100 V & J Tower Midland, Texas |



| UNIT WELL NO. 18 Gulf State No. 1 | | | |
|--------------------------------------|--------------------|----------------------|--|
| FIELD | N. E. PEARL QUEEN | COUNTY | LEA |
| STATE | NEW MEX. | Engineer | R. C. W. |
| Date | 11-24-69 | Drwn. By | Del |
| File | PEARL QUEEN, N. E. | CONSULTING ENGINEERS | BAILEY, SIPES, WILLIAMSON & RUNYAN, INC. |
| FIGURE NO. | | 1100 V.B.J. TOWER | MIDLAND, TEXAS |

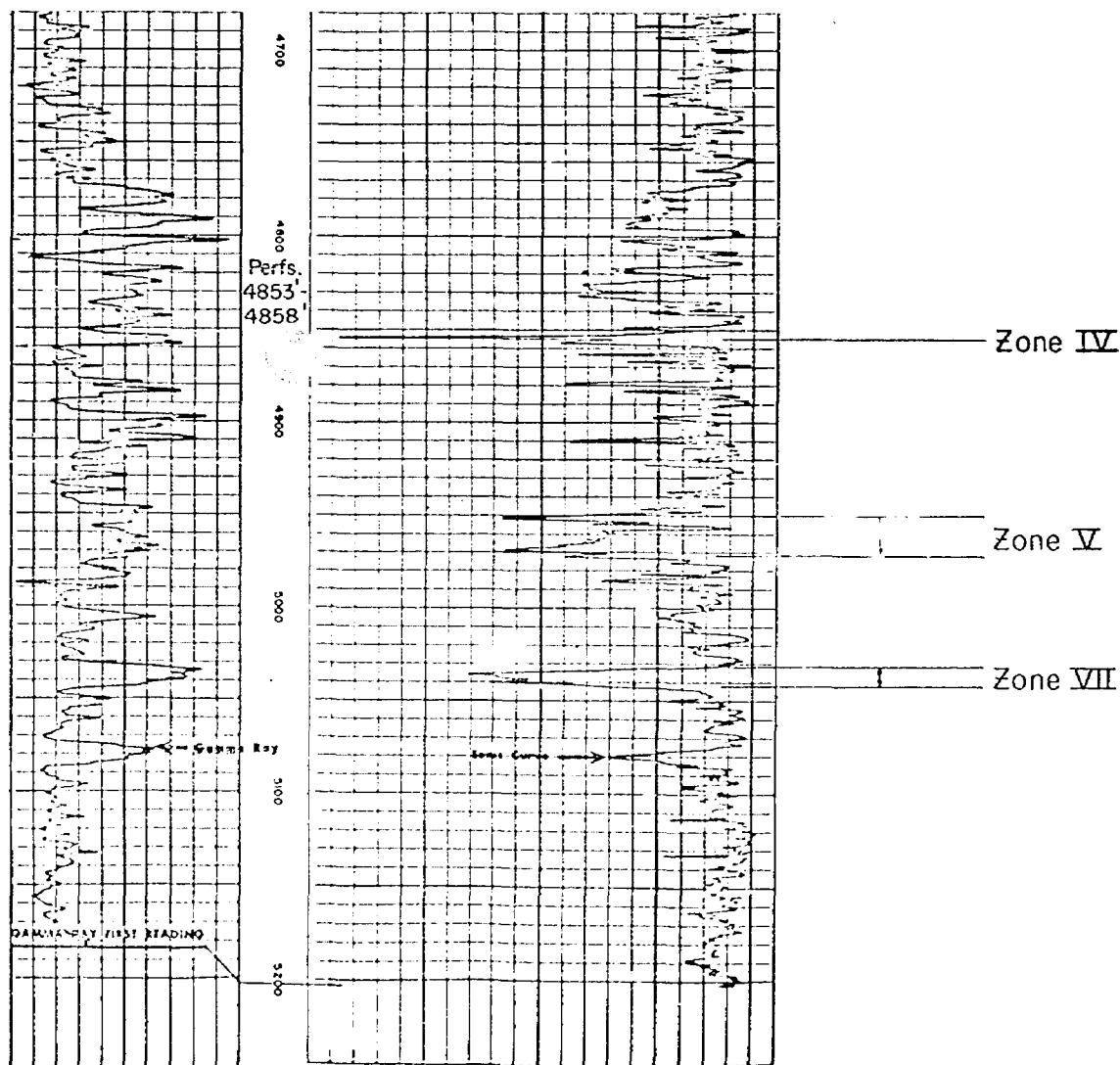
| | |
|---|---|
| SCHLUMBERGER | |
| COUNTY LEA FIELD or LOCATION UNDESIGNATED WELL GULF STATE - 1 COMPANY EARL G. COLTON | COMPANY EARL G. COLTON WELL GULF STATE - 1 FIELD UNDESIGNATED LOCATION SEC. 23-19S 35E COUNTY LEA STATE NEW MEXICO |
| Log Depths Measured From F.B. Lift. above G.L. | |
| RUN No. ONE Date 9-24-61 First Reading 5203 Last Reading 0 Feet Measured 5203 Csg. Schum. Csg. Driller 130 Depth Reached 5209 Bottom Driller 5210 Mud Npt. SALT-STARCH-GL Dens. & Visc. 4.5 Mud Resist. 0.042 @ 21°F Res. BHT 0.035 @ 100°F pH 7 Wire Loss 5.8 CC 30 min Rmt 0.04 @ 100°F Bit Size 7 7/8"-5010"-7 3/4" Spacing: T1 R. 1 R. 5203 To 3200 Yo Yo T1 R. 2 P. 3200 To 5209 Yo Yo Op. Log Time 6:30 PM Tool No. 2520-1085 Recorded By SCHAEFFER | |

Reproduced By
West Texas Electrical Log Service
 Dallas 2, Texas

REFERENCE W1655M



12 COMPLETION RECORD



TAMARACK PETROLEUM COMPANY, INC.



OCT 28 1969

910 BANK OF THE SOUTHWEST BLDG
MIDLAND, TEXAS 79701

October 27, 1969

TELEPHONE: MUTUAL 3-5474

Case 4260

New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico 87501

Attention: Mr. D. S. Nutter
Chief Engineer

Gentlemen:

Please consider this our application to convert to water injection our Northeast Pearl Queen Unit Well No. 18, located in Unit L, Section 23, T-19-S, R-35-E, Pearl Queen Field, Lea County. Injection will be into the Queen Sand Formation through perforations from 4966-70' and 5035-41'.

This will be an injection well in a waterflood project approved by the Commission in Case No. 4217, Order No. R-3837.

9/12/69

Very truly yours,

Albert G. Metcalfe
Albert G. Metcalfe

AGM:wat

DOCKET MAILED

Date 11-14-69

DRAFT

GMH/esr

BEFORE THE OIL CONSERVATION COMMISSION
OF THE STATE OF NEW MEXICO

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

CASE No. 4260

Order No. R-3888

APPLICATION OF TAMARACK PETROLEUM COMPANY, INC.,
FOR A WATERFLOOD EXPANSION, LEA COUNTY,
NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on November 25, 1969,
at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 26th day of December, 1969, the Commission, a
quorum being present, having considered the testimony, the record,
and the recommendations of the Examiner, and being fully advised
in the premises,

FINDS:

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

(2) That the applicant, Tamarack Petroleum Company, Inc.,
expand its Northeast Pearl Queen Unit
seeks permission to/~~expand its~~ Waterflood Project in the _____
~~unit~~ Pearl-Queen Pool by
by the conversion to water injection ~~one~~ additional injection
well, its Unit Well No. 18, located in Unit L of Section 23,
Township 19 South, Range 35 East, NMPM, Lea County, New
Mexico.

(3) That the wells in the project area are in an advanced
state of depletion and should properly be classified as "stripper"
wells.

expansion of the Northeast Pearl Queen Unit
(4) That the proposed/~~Waterflood~~ Project should result in
the recovery of otherwise unrecoverable oil, thereby preventing
waste.

(5) That the subject application should be approved and expanded the/project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

IT IS THEREFORE ORDERED:

(1) That the applicant, Tamarack Petroleum Company, Inc., expand its Northeast Pearl Queen Unit is hereby authorized to/~~xxxxxx~~ Waterflood Project in the ~~xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx~~ Unit ~~xxxx~~ Pearl-Queen Pool by the injection of water into the Queen formation ~~through the following described well in Township~~ ~~North, South, Range~~ ~~xxxxxx~~ ~~West, East, NMPM~~ ~~xxxxxx~~ ~~County, New Mexico~~

through its Unit Well No. 18, located in Unit L of Section 23, Township 19 South, Range 35 East, NMPM, Lea County, New Mexico.

~~(2) That the subject waterflood project is hereby designated~~
~~the~~ (2) That the expanded ~~xxxxxx~~ waterflood project ~~and~~ shall be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations.

(3) That monthly progress reports of the/^{expanded}waterflood project herein authorized shall be submitted to the Commission in accordance with Rules 704 and 1120 of the Commission Rules and Regulations.

(4) That jurisdiction of this cause is retained for the entry of such further orders as the Commission may deem necessary.

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