

CASE 2457: Application of MURPHY
H. BAXTER for waterflood project
in Maljamar (Grayburg-San Andres).

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lication, Transcript,
all Exhibits, Etc.

OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

January 4, 1962

Mr. Howard Bratton
Hervey, Dow & Hinkle
P. O. Box 10
Roswell, New Mexico

Gentlemen:

Enclosed herewith is Commission Order No. R-2156,
entered in Case No. 2457, approving the Murphy H. Baxter
Maljamar Waterflood Project.

According to our calculations, when all of the au-
thorized 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 504 barrels
per day. This is based upon the assumption that the wells on
each of the 40-acre tracts in the waterflood project area are
completed in and producing from the Maljamar (Grayburg-San
Andres) Pool.

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

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OIL CONSERVATION COMMISSION

P. O. BOX 871

SANTA FE, NEW MEXICO

Mr. Howard Bratton

January 4, 1962

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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

ALP/og
Encls.

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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. 2457
Order No. R-2156

APPLICATION OF MURPHY H. BAXTER
FOR A WATERFLOOD PROJECT IN THE
MALJAMAR POOL, LEA COUNTY, NEW
MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 o'clock a.m. on December 11, 1961, at Santa Fe, New Mexico, before Elvis A. Utz, Examiner duly appointed by the Oil Conservation Commission of New Mexico, hereinafter referred to as the "Commission," in accordance with Rule 1214 of the Commission Rules and Regulations.

NOW, on this 3rd day of January, 1962, the Commission, a quorum being present, having considered the application, the evidence adduced, and the recommendations of the Examiner, Elvis A. Utz, 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, Murphy H. Baxter, seeks permission to institute a waterflood project in the Maljamar (Grayburg-San Andres) Pool in an area comprising the SE/4 of Section 13, Township 17 South, Range 32 East, NMPM, the N/2 of Section 17, and the SW/4 and E/2 of Section 18, all in Township 17 South, Range 33 East, NMPM, Lea County, New Mexico, by the injection of water into the Grayburg-San Andres formation.

(3) That the proposed waterflood project should be authorized and should be governed by the provisions of Rule 701 of the Commission Rules and Regulations, including those provisions regarding allocation of allowables.

IT IS THEREFORE ORDERED:

(1) That the applicant, Murphy H. Baxter, is hereby authorized to institute a waterflood project in the Maljamar (Grayburg-San Andres) Pool, in an area comprising the SE/4 of Section 13, Township 17 South, Range 32 East, NMPM, the N/2 of Section 17,

-2-

CASE No. 2457

Order No. R-2156

and the SW/4 and E/2 of Section 18, all in Township 17 South, Range 33 East, NMPM, Lea County, New Mexico, by the injection of water into the Grayburg-San Andres formation through the following-described wells:

Baxter-State 18-B Well No. 2, located in
Unit H of Section 18;

Baxter-State 18-B Well No. 4, located in
Unit P of Section 18;

Baxter-State 18-B Well No. 6, located in
Unit J of Section 18; and

Baxter-State 18-B Well No. 8, located in
Unit B of Section 18;

all in Township 17 South, Range 33 East, NMPM, Lea County, New Mexico.

(2) That the operation of the waterflood herein authorized shall be governed by Rule 701 of the Commission Rules and Regulations, including those provisions regarding allocation of allowables.

(3) That monthly progress reports of the waterflood project herein authorized shall be submitted to the Commission in accordance with Rule 704 and Rule 1119 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



E. L. Mechem

EDWIN L. MECHEM, Chairman

E. S. Walker

E. S. WALKER, Member

A. L. Porter, Jr.

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

ear/

Case 2457

Heard 12-11-61

Rec. 12-19-61

1. Grant Baxter's request as follows:
(a) a pilot water flood consisting of
the following acreage:

State Lease 18-13, SE/4 sec. 13 - 175-32E

" " 18-13, SW/4 " 18 - 175-33E

" " 17, N/2 " 17 - " "

" " 18-B, E/2 " 18 " "

960 Acres more or less.

- (b) approve the following wells as
injection wells:

Baxter - State 18-B #2 H - 18-175-33E.

" - " " #4 P - 18 " "

" - " " #6 J - " " "

" - " " #8 B - " " "

2. Rule 701 shall further control the
flood.

Edward R. [Signature]



STATE OF NEW MEXICO

STATE ENGINEER OFFICE

SANTA FE

S. E. REYNOLDS
STATE ENGINEER

December 1, 1961

ADDRESS CORRESPONDENCE TO:
STATE CAPITOL
SANTA FE, N. M.

Re: Application of Murphy H. Baxter
Waterflood Project
Maljamar Grayburg-San Andres Field

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to our letter of November 28, 1961 regarding the above subject. The first paragraph of this letter refers to Mr. Baxter's state leases in Sections 17 and 18, Township 17 South, Range 32 East. The range is in error and should be corrected to read "Range 33."

Yours truly,

S. E. Reynolds
State Engineer

By: *Frank E. Irby*
Frank E. Irby
Chief
Water Rights Division

cc-Philip G. Dolbow
Howard C. Prutton
F. H. Hennighausen

Case 2457

MURPHY H. BAXTER
507 MIDLAND NATIONAL BANK BUILDING
MIDLAND, TEXAS

November 20, 1961

Mr. A. L. Porter
Secretary-Director
New Mexico Oil Conservation Commission
P.O. Box 871
Santa Fe, New Mexico

Dear Mr. Porter:

Murphy H. Baxter as operator of three State leases in the Maljamar Grayburg-San Andres Field, Lea County, New Mexico, respectfully requests that a hearing be scheduled before the New Mexico Oil Conservation Commission to consider its application for approval to:

1. Institute a secondary recovery pilot waterflood project on his three State leases in Sections 17 and 18, Range 33 E, T-17-S and in Section 13, Range 32 E, T-17-S.
2. Expand, develop and operate the waterflood project in accordance with all the provisions of Rule 701 of the Commission Rules and Regulations.

The following preliminary information is submitted in support of this application:

1. The area included and sought to be called the Murphy H. Baxter Waterflood Project is made up of these contiguous leases:

- a. State 17 in N/2 Section 17, Range 33 E, T-17-S
- b. State 18-B in E/2 Section 18, Range 33 E, T-17-S
- c. State 18-13 in SW/4 Section 18, Range 33 E, T-17-S
and in SE/4 Section 13, Range 32 E, T-17-S.

2. Each of the three leases contains approximately 320 acres, and each has eight wells producing from the Grayburg and San Andres formations. Top of the Grayburg production is approximately 4175 feet.

3. The proposed pilot waterflood is located on the State 18-B lease which is offset by operators cooperating to complete the pilot pattern.

4. The proposed pattern is a five-spot.

5. The producing wells proposed to be converted to water injection wells are:

Mr. A. L. Porter
November 20, 1961
Page 2

<u>OPERATOR</u>	<u>LEASE AND WELL</u>	<u>UNIT</u>	<u>S.T.R.</u>
Murphy H. Baxter	State 18-B #2	H	18-17-33
Murphy H. Baxter	State 18-B #4	P	18-17-33
Murphy H. Baxter	State 18-B #6	J	18-17-33
Murphy H. Baxter	State 18-B #8	B	18-17-33

6. The water supply will be from the Ogala formation and will be furnished by the Yucca Water Company.

7. Water injection rates will range from 150 to 300 B.W.P.D. per well after fillup.

8. The following attachments, in triplicate, are also submitted as preliminary information:

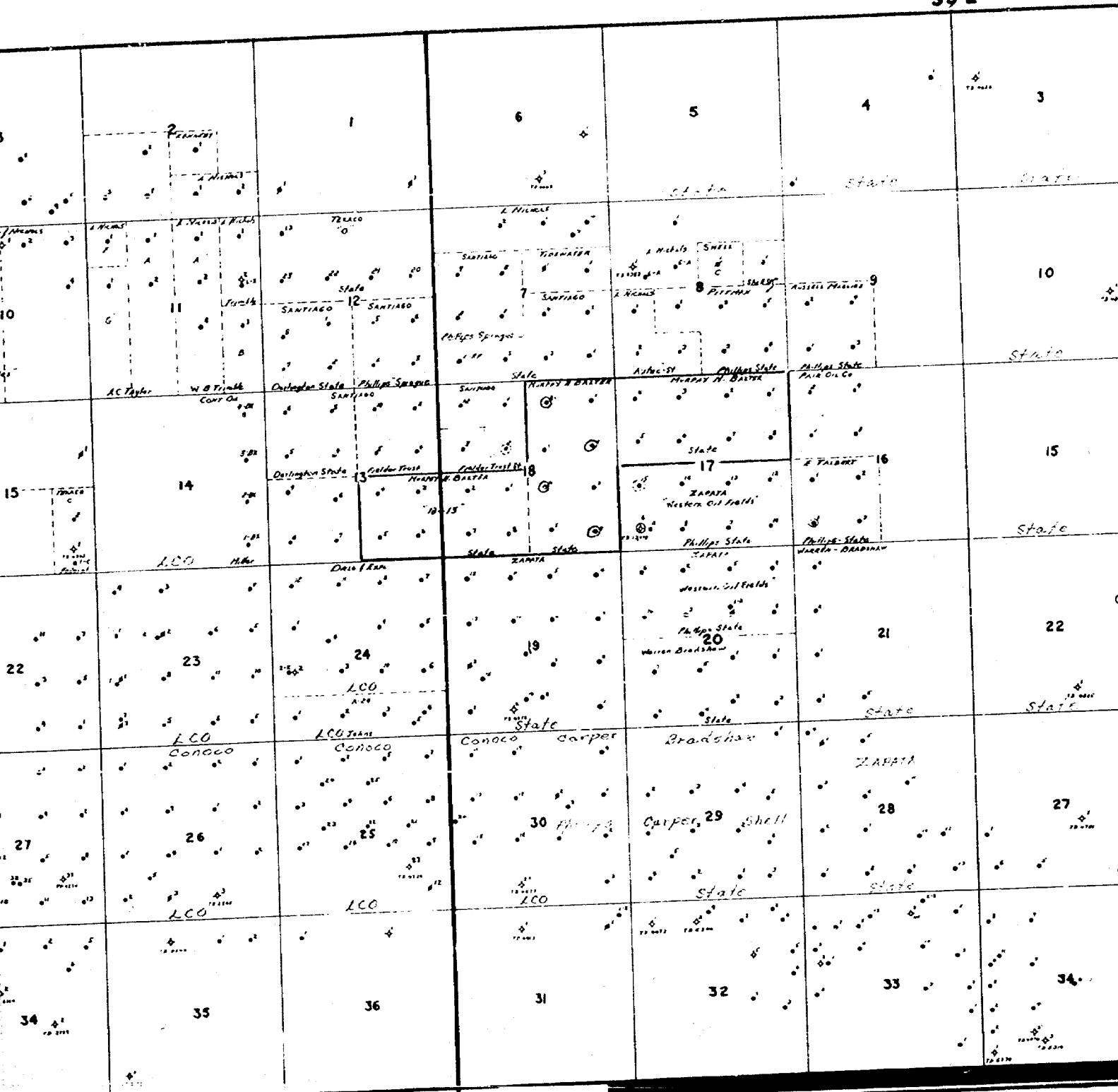
- a. Plat showing Murphy H. Baxter Waterflood project area with injection wells.
- b. Injection well logs.
- c. Injection well casing completion data.

Respectfully submitted,

Philip G. Dolbow

Philip G. Dolbow
Petroleum Engineer

PGD/brm
attachments



MALJAMAR FIELD, LEA COUNTY, NEW MEXICO
SCALE: 1" = 1000'

MURPHY H. BAXTER WATERFLOOD PROJECT
THREE STATE LEASES
MALJAMAR GRAYBURG-SAN ANDRES FIELD
LEA COUNTY NEW MEXICO

- Proposed Pilot Injection Wells
- Offset Operator Injection Wells
- Producing Oil Well-Grayburg and San Andres

INJECTION WELL CASING COMPLETION DATA
MURPHY H. BAXTER WATERFLOOD PROJECT
STATE 18-B LEASE

INJECTION WELL NO.	ELEV. KDB	TOTAL DEPTH	COMPLETION INTERVALS	SURFACE CASING			PRODUCTION CASING			BIT SIZE
				SIZE	DEPTH	SXS.CEMENT	SIZE	DEPTH	SXS.CEMENT	
2	4222'	4591'	4218 - 31	8-5/8"	293'	200 & Cir.	5½"	4593'	270	7-13/16"
			4270 - 79							
			4300 - 18							
			4344 - 68							
			4441 - 60							
			4534 - 50							
4	4220'	4639'	4200 - 14	8-5/8"	325'	250 & Cir.	5½"	4628'	260	7-7/8"
			4264 - 74							
			4308 - 18							
			4334 - 43							
			4360 - 76							
			4492 - 50							
6	4220'	4573'	4572 - 85	9-5/8"	316'	150 & Cir.	5½"	4573'	260	7-7/8"
			4193 - 207							
			4265 - 87							
			4305 - 11							
			4322 - 41							
			4447 - 55							
8	4226'	4544'	4530 - 40	8-5/8"	329'	150 & Cir.	5½"	4544'	260	7-7/8"
			4148 - 60							
			4180 - 90							
			4238 - 48							
			4254 - 68							
			4280 - 85							
			4299 - 320							
			4508 - 22							

No. 33-61

DOCKET: EXAMINER HEARING - MONDAY - DECEMBER 11, 1961

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

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

CASE 2447: (Continued)

Application of Humble Oil & Refining Company for approval of a pressure maintenance project in the Cha Cha-Gallup Oil Pool, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks permission to institute a pressure maintenance project in the Cha Cha-Gallup Oil Pool by the injection of water into certain wells located on the Navajo Indian Reservation in Sections 13 through 29 and 33 through 36, Township 29 North, Range 14 West, San Juan, New Mexico. Applicant further seeks the promulgation of special rules and regulations governing said project.

CASE 2429: (Continued)

Application of Standard Oil Company of Texas for approval of the Jurnegan Point Unit Agreement, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Jurnegan Point Unit Agreement embracing 10,240.84 acres, more or less, of State and fee lands in Township 24 South, Ranges 24 and 25 East, Eddy County, New Mexico.

CASE 2450:

Application of Texaco Inc. for an exception to Rule 309-A, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 309-A to permit the Abo production from its State "AB" Lease, located in Section 6, Township 18 South, Range 35 East, Lea County, New Mexico, to be transported prior to measurement on said lease to applicant's State "R" (NCT-1) Lease, located in said Section 6.

CASE 2462:

Application of Texaco Inc. for three triple completions, Lea County, New Mexico. Applicant, in the above-styled cause, seeks an order authorizing the triple completion of its V. M. Henderson Well Nos. 7, 8 and 9, located in Units F, E, and G, respectively, Section 30, Township 21 South, Range 37 East, NMPM, Lea County, New Mexico, in such a manner as to permit the production of oil from each well from the Penrose-Skelly, Paddock, and Drinkard Pools through parallel strings of 2 3/8-inch tubing cemented in common well bores.

- CASE 2451: Application of The Ohio Oil Company for a dual completion, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to complete its Lea Unit Well No. 6, located in Unit J of Section 11, Township 20 South, Range 34 East, Lea County, New Mexico, as a dual completion (conventional) adjacent to the Lea-Pennsylvanian Gas and Lea-Devonian Pools, with the production of gas from the Pennsylvanian formation and the production of oil from the Devonian formation through parallel strings of 2 3/8-inch tubing.
- CASE 2452: Application of Southwest Production Company for an order pooling all mineral interests in the Basin-Dakota Gas Pool in the W/2 of Section 7, Township 30 North, Range 11 West, San Juan County, New Mexico. Interested parties include Maleta Y. Brimhall, Phoenix, Arizona, and Barbara Brimhall Burnham, Aztec, New Mexico.
- CASE 2453: Application of Southwest Production Company for an order pooling all mineral interests in the Basin-Dakota Gas Pool in the E/2 of Section 7, Township 30 North, Range 11 West, San Juan County, New Mexico. Interested parties include Harold Marion Brimhall and his wife, Maleta Y. Brimhall, both of Phoenix, Arizona.
- CASE 2454: Application of Socony Mobil Oil Company, Inc., for an exception to Rule 303 (a), Lea County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Rule 303 (a) to permit the commingling of the production from the Denton-Devonian and the Denton-Wolfcamp Pools on its T. D. Pope lease, comprising the S/2 of Section 26 and the W/2 of Section 36, Township 14 South, Range 37 East, Lea County, New Mexico. Applicant proposes to meter the production from one pool only and to allocate production to the other pool according to the subtraction method; the API gravity of the crude from one of the pools is greater than 45°.
- CASE 2455: Application of Hondo Oil & Gas Company for an unorthodox oil well location, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks approval of an unorthodox oil well location in the Empire Abo Pool 660 feet from the East line and 2590 feet from the North line of Section 25, Township 17 South, Range 28 East, Eddy County, New Mexico.

CASE 2131: (Reopened)

In the matter of the application of Robinson Brothers Oil Producers for the establishment of 320-acre gas proration units in the TV-Pennsylvanian Gas Pool, Chaves County, New Mexico. Case 2131 will be reopened pursuant to Order No. R-1839 to permit the applicant and other interested parties to appear and show cause why the TV-Pennsylvanian Gas Pool should not be developed on 160-acre proration units.

CASE 2456:

Application of Great Western Drilling Company for a unit agreement and for a waterflood project, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Malmar Unit Agreement, covering 1,360 acres, more or less, in Township 17 South, Ranges 32 and 33 East, Lea County, New Mexico. Applicant further seeks authority to institute a waterflood project in the Maljamar (Grayburg-San Andres) Pool by the injection of water into the Grayburg-San Andres formation initially through six wells located in Sections 7 and 18, Township 17 South, Range 33 East, and in Sections 12 and 13, Township 17 South, Range 32 East, Lea County, New Mexico, said project to be governed by the provisions of Rule 701.

CASE 2457:

Application of Murphy H. Baxter for a waterflood project in the Maljamar (Grayburg-San Andres) Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to institute a waterflood project in the Maljamar (Grayburg-San Andres) Pool in Section 13, Township 17 South, Range 32 East and Sections 17 and 18, Township 17 South, Range 33 East, Lea County, New Mexico, with the injection of water initially to be through four wells located in Section 18, Township 17 South, Range 33 East; said project is to be governed by Rule 701.

CASE 2458:

Application of Zapata Petroleum Corporation for a waterflood project in the Maljamar (Grayburg-San Andres) Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to institute a waterflood project in the Maljamar (Grayburg-San Andres) Pool in Sections 17 and 20, Township 17 South, Range 33 East, Lea County, New Mexico, with the injection of water initially to be through three wells located in said Sections 17 and 20; said project is to be governed by Rule 701.

Dear Dick:

Also enclosed are a dozen Summons from
Eddy and Chaves Counties. If you need more,
please let me know.

H.B.

Case 2457

LAW OFFICES
HERVEY, DOW & HINKLE

HINKLE BUILDING

ROSWELL, NEW MEXICO

November 22, 1961

TELEPHONE MAIN 2-6510
POST OFFICE BOX 10

J. M. HERVEY 1874-1953
HIRAH M. DOW
CLARENCE E. HINKLE
W. E. BONDURANT, JR.
GEORGE H. HUNKER, JR.
HOWARD C. BRATTON
S. B. CHRISTY IV
LEWIS C. COX, JR.
PAUL W. EATON, JR.
CONRAD E. COFFIELD
HAROLD L. HENSLEY, JR.

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

Dear Dick:

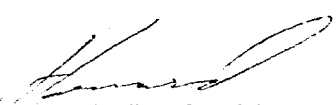
Enclosed herewith please find an Application of
Murphy H. Baxter for permission to institute a Waterflood
project in the Maljamar Grayburg-San Andres Pool, which
Application has three exhibits attached. This is the
Application about which I talked to you on the phone today,
and which it is my understanding you are advertising for
the December 11th Examiner hearing.

I am forwarding two copies of it and we will furnish
additional copies at the hearing.

If there is any further information which you need,
in connection with this matter, please let me hear from you.

Very truly yours,

HERVEY, DOW & HINKLE


Howard C. Bratton

HCB:lm

Enclosures

cc: Mr. Phillip G. Dalbow

*Packet
mailed
12/1/61*



STATE OF NEW MEXICO
STATE ENGINEER OFFICE
SANTA FE

S. E. REYNOLDS
STATE ENGINEER

November 28, 1961

ADDRESS CORRESPONDENCE TO:
STATE CAPITOL
SANTA FE, N. M.

Mr. A. L. Porter, Jr.
Secretary-Director
Oil Conservation Commission
Santa Fe, New Mexico

Dear Mr. Porter:

Reference is made to the application of Murphy H. Baxter which seeks to institute a secondary recovery pilot water flood project on his three state leases in Sections 17 and 18, Township 17 South, Range 32 East and in Section 13, Township 17 South, Range 32 East which is dated November 20, 1961.

I have a letter from Mr. Dolbow, Petroleum Engineer for Mr. Baxter and schematic drawings showing injection well detail which indicate that tubing and packer will be used in the injection and the packer will be set well below the top of the cement which surrounds the production string. It appears from the letter and the drawings that no threat of contamination to any fresh waters which may exist in the area will occur. Therefore, this office offers no objection to the granting of this application.

Yours truly,

S. E. Reynolds
State Engineer

By:

Frank E. Irby
Frank E. Irby
Chief

Water Rights Division

FEI/ma
cc-Philip G. Dolbow
Howard C. Bratton
F. H. Hernighausen

Joe:

When you return these transcripts, please send them directly to me so that I can check them in. Also, have you come across the transcripts in Cases 2457 and 2458 which I sent you on February 21st?

We have scheduled the first examiner hearing in August for the 8th.

Ida

I reserved your room for Tues.-17th

Ida:
still can't find 2457+2458. I
guess you'll have to charge them off
as a loss. JWR

BEFORE THE
OIL CONSERVATION COMMISSION
SANTA FE, NEW MEXICO
December 11, 1961

EXAMINER HEARING

IN THE MATTER OF:

Application of Murphy H. Baxter for a
waterflood project in the Maljamar
(Grayburg-San Andres) Pool, Lea County,
New Mexico. Applicant, in the above-
styled cause, seeks permission to in-
stitute a waterflood project in the
Maljamar (Grayburg-San Andres) Pool in
Section 13, Township 17 South, Range 32
East and Sections 17 and 18, Township 17
South, Range 33 East, Lea County, New
Mexico, with the injection of water in-
itially to be through four wells located
in Section 18, Township 17 South, Range 33
East; said project is to be governed by
Rule 701.

Case 2457

BEFORE:

Elvis A. Utz, Examiner.

TRANSCRIPT OF HEARING

MR. UTZ: The hearing will come to order. Case 2457.

MR. MORRIS: Application of Murphy H. Baxter for a
waterflood project in the Maljamar (Grayburg-San Andres) Pool,
Lea County, New Mexico.

MR. BRATTON: Howard Bratton, Roswell, New Mexico,
appearing on behalf of the applicant. We have one witness.

MR. UTZ: Are there other appearances in this case?

You may proceed.

(Witness sworn.)

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691



PHILLIP G. DOLBOW

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

DIRECT EXAMINATION

BY MR. BRATTON:

Q Will you state your name, address, by whom you are employed, and in what capacity?

A Phillip G. DolBow, 507 Midland National Bank Building, Midland, Texas. Employed as petroleum engineer by Murphy H. Baxter.

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

A The last name is D-o-l-B-o-w.

Q Have you previously testified before this Commission?

A No, sir.

Q Will you state, very briefly, your educational and professional background?

A Yes, sir. I was graduated from the University of Illinois in 1951 with a B.S. Degree in mechanical engineering. In 1957 I graduated from the Oklahoma University with a Masters Degree in petroleum engineering. From March 1957, until February of 1961, I was employed by Ohio Petroleum Company at which time I joined Murphy H. Baxter.

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

Q Are you familiar with the application in this hearing?

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1162

ALBUQUERQUE, N. M.
PHONE 243-6691

PAGE 3

and with the land in the project?

A Yes, I am.

Q Refer now to your Exhibit Number 1 and state what that is and what it shows.

A Exhibit Number 1 is an area plat originally submitted with the application letter. The exhibit shows, number one, the three leases requested to be designated the Murphy H. Baxter waterflood project. These three leases are outlined in red. Number two, the three leases are more particularly described as the State 17 lease, being in the North Half of Section 17, Township 17 South, Range 33 East; the State 18-B lease as being in the East Half of Section 18, Township 17 South, Range 33 East; and State 18-13 as being composed of the Southwest Quarter of Section 18, Township 17 South, Range 33 East, and the Southeast Quarter of Section 13, Township 17 South, Range 32 East. The proposed injection wells are circled in red on the State 18-B lease, as well as offset operator, proposed injection wells, those being the Great Western proposed pilot to the Northwest, and the Zapata proposed pilot to the Southwest. The plat also shows the wells and leases two miles on each side of the subject area.

Q Now, Mr. DolBow, with the changes requested by Great Western the two injection wells of theirs to the Southwest of their pattern would be eliminated and the one well in the Southeast of the Northwest of 18 would be added, which would



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

make a perfect five-spot pattern with your flood, is that correct?

A Yes, sir, that is correct.

Q And carrying on down into the Zapata flood?

A Yes, sir.

Q Now, turning to your Exhibit Number 2, Mr. DolBow.

(Whereupon, Applicant's Exhibit 2 was marked for identification.)

A Exhibit Number 2 is offered for the Examiner to show that the three leases in question have the common schools of the State of New Mexico as the beneficiary. It also shows that all offsetting leases or tracts also have the common schools as the beneficiary, with the exception of the Drilling and Exploration Company Federal lease in Section 24, Township 17 South, Range 32 East. This Exhibit was prepared by a bonded abstractor in the State of New Mexico at Santa Fe.

Q Let's go to your log number three, Exhibit Number 3.

(Whereupon, Applicant's Exhibit 3 was marked for identification.)

A Exhibit 3 shows the detailed log of a gamma ray neutron log run in Murphy H. Baxter, State Number 18-B No. 2 well. It is offered to show several things. It shows at the topmost markings there show the plus two hundred foot elevation above sea level upon which a later exhibit was based. It also shows the Grayburg marker upon which the structure map was based. It also shows the top of the San Andres for-



DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

mation along with the seven major producing zones, circled and numbered one through seven. We feel that the Grayburg formation is in the Guadalupe series of the Permian geologic system; second, that the San Andres formation is in between the Guadalupe and Leonard series in the Lea County area, all of which again is in the Permian geologic system.

Q This is the same area and zone being flooded in the Waterflood Associates flood to the Northwest?

A That's correct.

Q And in the three floods being presented here today?

A Yes, sir, to the best of my knowledge.

Q Turn then to your Exhibit Number 4, if you would please.

(Whereupon, Applicant's Exhibit 4 was marked for identification.)

A Exhibit 4 is offered as a structure map. This map was drawn on the Grayburg marker which we previously pointed out in regard to Exhibit Number 3. The Murphy H. Baxter water flood project is outlined in red as well as are the four proposed injection wells along with the proposed injection wells of our offset operators. The six injection wells currently being used by Waterflood Associates are also shown. The map further indexes four cross-sections which appear on Exhibit 5.

Q Now, refer to your exhibit Number 5 which is the large



exhibit on the wall.

(Whereupon, Applicant's Exhibit 5 was marked for identification.)

A This exhibit, termed a fence diagram, is offered for the Examiner to show the correlation of the seven major pay zones in the pilot area. Number two, it shows that the zones can be traced across lease lines of the various proposed pilots of our offset operators.

Q It starts from the top with your cross-section AA' and runs down to the bottom with your corss-section DD' as reflected on the previous exhibit, is that correct?

A That's correct.

Q It does show correlation and continuity throughout the three leases?

A To the best of our ability. Also shown for the benefit of the Examiner are four red arrows which are above those proposed injection wells.

Q Go to your Exhibit Number 6, then, your well completion data sheet.

(Whereupon, Applicant's Exhibit 6 was marked for identification.)

A Exhibit Number 6 shows the pertinent information of all 24 wells in the project area, the first eight columns we feel are self-explanatory, but furnish the necessary information. The last four columns show the 30-day top allowable for each well. The next column shows the present allowable, the next

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column shows the September, 1961 production, and the last column shows November, 1961 production which is the latest information we have. I might add that the next to the last column represents the numbers that appeared in Volume 11 of the Southeast New Mexico Monthly Statistical Report.

Q It also shows all your casing and perforation data?

A Yes, sir.

Q This will be flooded through the perforations?

A Yes, sir.

Q Is there anything else you care to point out in connection with this exhibit, Mr. DolBow?

A Yes, sir. This exhibit shows that all wells are far below their top unit allowable. It also shows that they are well below their former capacity to make top unit allowable, and we feel that these wells are in the advanced stage of depletion.

Q That is substantiated by your next exhibit, is it not, Mr. DolBow, Number 7, which is production performance curves on the three different leases?

A Yes, sir, that's correct.

Q Refer to those three sheets then, and explain what they indicate.

(Whereupon, Applicant's Exhibit 7 marked for identification.)

A Exhibit 7 is offered in three parts numbered 7-A,



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7-B, and 7-C. The source of the data presented on these curves is again from Volume II of the Southeast New Mexico Monthly Statistical Report, compiled by the New Mexico Oil Conservation Commission. The curves show the production performance on the three Murphy H. Baxter leases. Exhibit 7-A shows the production performance of the State 17 lease, this curve shows that development began in late 1957, that production reached a maximum some four to six months later but never really reached maximum allowable. Decline after reaching maximum allowable was at the rate of approximately 45 percent per year down to around 2400 barrels of oil per month for the lease. Thereafter, the rate of decline has been close to 30 percent. It was estimated that there are 13 months of production remaining, and that approximately 92 percent of ultimate primary oil has been produced.

Exhibit 7-B shows the same thing for the State 18-B lease. Here again development began in mid-1958, maximum capacity was reached one year later and the lease immediately began to decline at the rate of 41 percent thereafter until approximately 4,000 barrels of oil per month for the lease was being produced. At the present time, the decline is approximately 40 percent. The curve shows that there are approximately 22 months of production remaining and that the lease will be in a stripper stage in one or two months.

Q This is the lease on which you propose to start the



pilot program?

A Yes, sir. We further anticipate that approximately 85 percent of the ultimate primary has been produced to this date. Exhibit 7-C is offered to show the same production performance data on the State 18-13 lease. Development began in late 1958, the maximum capacity and allowable rates were reached six to eight months later. Decline in production rate actually started the latter part of April of 1961. The decline has been anticipated to be 55 percent. Exhibit Number 8 will be offered to substantiate this; however, the decline in bottom hole pressure during the last year has approximated 56 percent which we feel is very close to the anticipated drop in production rate on this lease.

Q To compare that with the relative declines in bottom hole pressure and production on the other leases, you did get a correlation where you can anticipate your 55 percent decline on this lease, is that correct?

A Yes, sir. In referring back to Exhibit 7-B, which is the curve for the State 18-B lease, we have determined that the decline in pressure has been approximately 43 percent the last two or three years, and that this is very close to the actual lease oil production rate decline of 40 or 41 percent.

Q So that on your 18-13 lease, it now is the best producer of the three leases, is that correct?

A Yes, sir.

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Q Also all your indications are that your rate of decline is going to be more severe on it?

A Everything that we have seems to indicate that this lease will decline at a much faster rate than the other two leases.

Q It came in later in the life of the field, did it not?

A That is correct.

Q Approximately what percent of your primary on your 18-13 do you think you have produced?

A We feel that approximately 83 percent has been produced on the 18-13.

Q Go to your Exhibit Number 8. Now, Mr. DolBow.

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

A Exhibit Number 8 is offered to the Examiner in four parts. They are numbered 8-A, 8-B, 8-C, and 8-D, and they refer to the daily well production tests on wells number one, two, four, and seven respectively on the State 18-13 lease. These are offered to show that the average of these four wells, as well as the other four wells on the lease, is between 50 and 60 percent with an actual calculated average decline of 56 percent. 55 percent was used to establish the decline on this lease as a result of these tests and this other information.

Q So, Mr. DolBow, as far as your 18-B lease where you are going to start your pilot, you actually will be well below



ten barrels a day average on it by the time you start your pilot, will you not?

A Yes, sir, we anticipate it will take at least two months to get water in the ground on the State 18-B lease if approved by the Commission, and at that time the lease production will be at the stripper stage.

Q By the time you get response you would certainly be well below ten barrels a day?

A That's correct.

Q And the same is true of the other two leases in the proposed project, by the time you expand into them and get any response you will be well below ten barrels a day and dropping rapidly?

A Yes, sir.

Q Turn to your Exhibit 9, then.

(Whereupon, Applicant's Exhibit 9 was marked for identification.)

A Exhibit Number 9 is a copy of the table attached to the original application, copy was also sent to Mr. Irby, Chief of the Water Rights Division. We believe it is self explanatory.

Q You sent a water analysis to Mr. Irby?

A Yes, sir, we did.

Q Have you received a letter from Mr. Irby indicating that he has no objection to the application?

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A Yes, sir, we received a letter from Mr. Irby stating that he had no objection to our application.

Q Turn then to your Exhibit Number 10, Mr. DolBow.

(Whereupon, Applicant's Exhibit 10 was marked for identification)

A Exhibit Number 10 is offered as a re-draft of the schematic drawing originally attached to our application to Mr. Irby, Chief of the Water Rights Division. The Exhibit shows that tubing and packer will be used to inject the water and that we feel no contamination of any fresh waters will occur. Otherwise, we believe it is self-explanatory.

Q Refer to your Exhibit Number 11, then.

(Whereupon, Applicant's Exhibit 11 was marked for identification)

A Exhibit Number 11 is the copy of logs submitted with the original application numbered 11-A, 11-B, 11-C, and 11-D. These logs are of the proposed injection wells and they show, among other things, the Grayburg marker in red, the top of the San Andres is marked, and also all of the perforations are shown.

Q Those logs are attached in the envelope in the back of the folio, is that correct?

A No, sir. The Exhibit Number 5 is attached in the back folder and two copies of Exhibit 11 were forwarded with the original application.

Q Referring to your proposal, Mr. DolBow, you propose to

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start injection in the four wells on the 18-B lease circled in red?

A Yes, sir, that's correct.

Q And this will cooperate with the Great Western and the Zapata floods?

A Yes. We are apparently making a line agreement with our offset operators so we will have a balanced flood which will protect everybody. These may even now be in the signing stage. The injection wells are as shown on Exhibit Number 1 or 4, are in proration units H, P, J, B for the Number 2, Number 4, Number 6, and Number 8 wells respectively. This pattern we feel conforms with the pattern approved by the Oil Conservation Commission Order Number R-1358, Case Number 1803, of November 27, 1959.

Q That's the Waterfloods Associates flood?

A Yes, sir.

Q What are your proposed injection rates and what do you anticipate at those rates?

A During fill-up, the rate should range from 250 to 500 barrels of water per day per well. It is anticipated that an average injection rate will approximate 400 barrels of water per day per well. After fill-up an injection rate of 150 to 300 barrels of water per day per well is anticipated.

Q How soon do you anticipate response, Mr. DolBow?

A In approximately 11 or 12 months, more probably 12

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months is anticipated.

Q So that it would be the end of '62, or the first part of '63 before you would anticipate response?

A That's correct.

Q What recovery do you anticipate?

A For the whole project area, which includes 24 wells, we reasonably expect 850,000 barrels of waterflood oil.

Q What rules are you requesting in this application, Mr. DolBow?

A We are, of course, expecting and will comply with all the provisions of Rule 701 for the expansion, development, and operation of the waterflood project, in addition to all other Commission applicable rules and regulations.

Q I think one thing we didn't state, Mr. DolBow, you are obtaining your water from the same source as Great Western, is that correct?

A That's correct. We are currently making arrangements with the Yucca Water Company to obtain fresh water for injection.

Q Is there anything else you care to state in connection with your application or with any of your exhibits?

A Yes, sir. We feel that the pilot proposed by ourselves Great Western, and Zapata Petroleum Company, will effectively flood this area of the field and enhance conservation of oil and gas.

Q Were Exhibits 1 through 11 prepared by you or under



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your supervision?

A Yes, sir.

MR. BRATTON: We would offer into evidence Exhibits 1 through 11 inclusive. We have no further direct examination.

(Whereupon, Applicant's Exhibits 1 through 11 offered in evidence)

MR. UTZ: Without objection the Exhibits 1 through 11 inclusive, including 7-A, 7-B, and 7-C, 8-A, 8-B, 8-C, and 8-D, and 11-A, 11-B, 11-C, and 11-D are entered into the record.

CROSS EXAMINATION

BY MR. UTZ:

Q Do I understand that this area is unitized?

A No, sir, it is not.

Q You are the operator and lessee of all these leases?

A Yes, sir.

Q And each lease will be operated on its own?

A That's correct. I might add here that two of the leases have common working interest and that at a later date we may request to combine or consolidate tank batteries in regard to those two leases.

Q Which leases are those?

A State 18-B and State 18-13.

Q I believe your exhibits showed that the average production was something less than ten barrels per day for each producing well?



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A I might answer that by saying that the State 17 lease is well below ten barrels a day, this is shown on Exhibit 7-A; and that the 18-B lease will reach the stripper stage in approximately one or two months.

MR. BRATTON: It's about 11 barrels a day now, is that correct?

A That's correct.

MR. BRATTON: Your State 18-13 is above the stripper stage, but with the severe decline, before you get to it it will be well below it, will it not?

A Yes, sir, that's correct.

Q (By Mr. Utz) I note that your 18-13 Number 5, September was only twenty barrels below normal unit; however, it dropped to 750 in November, do you anticipate that rate of decline?

A That rate of decline appears to be correct. By referring to Exhibit 7-C which shows the plots of the lease production, you might note that during October the lease dropped to 5500 barrels per month and in November the lease dropped to 4100 barrels of oil per month.

Q These four injection wells that you have testified to here are the same wells that you had in your application?

A Yes, sir.

MR. UTZ: The witness may be excused.

(Witness excused)



MR. UTZ: Any other statements in this case? The case will be taken under advisement.

STATE OF NEW MEXICO)
COUNTY OF BERNALILLO) ss

I, ADA DEARNLEY, Notary Public in and for the county of Bernalillo, State of New Mexico, do hereby certify that the foregoing and attached Transcript of Hearing was reported by me in Stenotype and that the same was reduced to typewritten transcript under my personal supervision and contains a true and correct record of said proceedings, to the best of my knowledge, skill and ability.

DATED this 11th day of December, 1961, in the City of Albuquerque, County of Bernalillo, State of New Mexico.

Ada Dearnley
NOTARY PUBLIC

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. 2452, heard by me on *December 11, 1961*.
Thos. A. [Signature] Examiner
New Mexico Oil Conservation Commission

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691



BEFORE THE
OIL CONSERVATION COMMISSION
Santa Fe, New Mexico
December 11, 1961

EXAMINER HEARING

DEARNLEY-MEIER REPORTING SERVICE, Inc.

FARMINGTON, N. M.
PHONE 325-1182

ALBUQUERQUE, N. M.
PHONE 243-6691

IN THE MATTER OF:

Application of Murphy H. Baxter for a waterflood project in the Maljamar (Grayburg-San Andres) Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to institute a waterflood project in the Maljamar (Grayburg-San Andres) Pool in Section 13, Township 17 South, Range 32 East and Sections 17 and 18, Township 17 South, Range 33 East, Lea County, New Mexico, with the injection of water initially to be through four wells located in Section 18, Township 17 South, Range 33 East; said project is to be governed by Rule 701.

CASE NO.
2457

BEFORE: Elvis A. Utz, Examiner

TRANSCRIPT OF HEARING

MR. UTZ: The next case will be 2457.

MR. WHITFIELD: Case 2457. Application of Murphy H. Baxter for a waterflood project in the Maljamar (Grayburg-San Andres) Pool, Lea County, New Mexico.

MR. MORRIS: Mr. Examiner, the Applicant and also Southwest Production Company have requested that this case be continued until tomorrow morning at 10:00 o'clock.



MR. UTZ: What is the reason they can't get here at 9:00 o'clock?

MR. MORRIS: No reason was given. That was the request.

MR. UTZ: All right. We'll continue it until 9:00 in the morning.

* * * *

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 11th day of December, 1961.

Ada Dearnley
COURT REPORTER-NOTARY PUBLIC

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. 2457, heard on Dec. 11, 1961.
Thomas G. Velt, Examiner
New Mexico Oil Conservation Commission

DEARNLEY-MEIER REPORTING SERVICE, Inc.

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ALBUQUERQUE, N. M.
PHONE 243.6691



OIL CONSERVATION COMMISSION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

January 23, 1973

*File
Case 2457*

Lynch, Chappell, Allday & Aldridge
201 Wall Towers East
Midland, Texas 79701

Attention: Mr. Martin L. Allday

Gentlemen:

Reference is made to the pooling agreement which you have prepared for circulation to owners of interests in State Lease B-2143 covering the E/2, E/2 SW/4, and Lots 3 and 4 of Section 18, Township 17 South, Range 33 East, and State Lease B-2229 covering the SE/4 of Section 13, Township 17 South, Range 32 East, Lea County, New Mexico.

Purpose of the pooling agreement would be to remove any inequities which might result from the drilling of an infill water flood producing well on or near the line separating the leases, and to permit handling and storage of the production from the two leases in common facilities although there is a small difference in the overriding royalty attributable to each lease.

Insofar as the Oil Conservation Commission is concerned, we feel that the agreement, when executed by the parties thereto, will afford ample protection for all concerned, and should be approved.

Very truly yours,

DANIEL S. NUTTER
Chief Engineer

DSN/dr

cc: State Land Office
Attention: Mr. Ray Graham

State of New Mexico



ALEX J. ARMIJO
COMMISSIONER



Commissioner of Public Lands

January 19, 1973

TELEPHONE

505-827-2748

P. O. BOX 1148
SANTA FE, NEW MEXICO

Mr. Martin L. Allday
Lynch, Chappell, Allday & Aldridge
Attorneys At Law
201 Wall Towers East
Midland, Texas 79701

Re: State of New Mexico Oil and Gas Lease Nos. B-2148 and B-2229

Dear Mr. Allday:

This is in reply to your recent correspondence concerning the contemplated operations by Mr. Murphy H. Baxter on the subject leases. We have no objection to the plan of operations as submitted, inasmuch as both leases are of the same beneficiary.

We have no jurisdiction over the distribution of the working interests and overriding royalty interests under the subject leases. These interests may be distributed in any manner satisfactory to the owners thereof.

In the absence of a formal unit agreement the royalties received from the production of each lease must be attributed to the respective lease.

We realize the possible inequities of drilling infill wells to be located not closer than 10' to the section line between Sections 13 and 18 will occur between leases; but again, in the absence of a formal unit agreement, this appears to be the only way this operation can be handled.

If we can be of further assistance, please advise.

Very truly yours,

Ray D. Graham
RAY D. GRAHAM, DIRECTOR
OIL AND GAS DIVISION

RDG:cw

cc: Commissioner

Mr. Dan Nutter ✓ New Mexico Oil Conservation Commission

LYNCH, CHAPPELL, ALLDAY & ALDRIDGE

ATTORNEYS

201 WALL TOWERS EAST
MIDLAND, TEXAS 79701

RAYMOND A. LYNCH (1913-1974)
CLOVIS G. CHAPPELL, JR.
MARTIN L. ALLDAY
CHARLES C. ALDRIDGE
RANDALL LUNDY
KENNETH W. NORDEMAN
GARY G. WISNER
JAMES M. ALSUP
ROBERT A. SPEARS
D. BRUCE POPE
DAVID W. CHILCRESS

AREA CODE 915
683-3351

December 20, 1972

Mr. Ray D. Graham
P. O. Box 1148
Santa Fe, New Mexico 87501

Mr. Dan Nutter
Oil Conservation Commission
Santa Fe, New Mexico 87501

Gentlemen:

Please refer to my past correspondence pertaining to pooling of State Leases B-2148 and B-2229. I know that this is an extremely difficult time of the year for everyone, but if it is at all possible, I would like to have some indication as to your reaction on my November 28, 1972 letter before the end of the year so that we might make appropriate steps in the direction that is recommended.

Many thanks for your help.

Merry Christmas



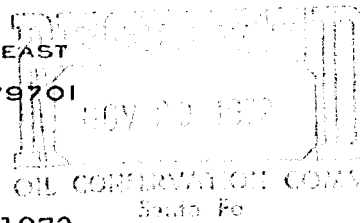
Martin L. Allday

MLA/meb

LYNCH, CHAPPELL, ALLDAY & ALDRIDGE

RAYMOND A. LYNCH (1913-1971)
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AREA CODE 915
683-3351

November 28, 1972

Mr. Dan Nutter
Oil Conservation Commission
Santa Fe, New Mexico 87501

Mr. Ray Graham
Office of the Commissioner of Public Lands
~~Santa Fe, New Mexico 87501~~

Re: State Leases #B-2148 and #B-2229

Gentlemen:

You will recall that I have had several conversations with each of you concerning the contemplated operations by our client, Murphy H. Baxter, who operates the above leases insofar as they cover the following lands in Lea County, New Mexico:

B-2148 - E/2, E/2 SW/4, and Lots 3 and 4 of Section 18, T-17-S, R-33-E; and

B-2229 - SE/4 of Section 13, T-17-S, R-32-E.

The indicated leases have been the subject of Oil Conservation Commission Order CTB No. 30, dated September 8, 1958, and Order R-2156 dated January 3, 1962, Administrative Orders WFX No. 149 dated August 21, 1963, WFX No. 173 dated May 1, 1964, WFX No. 185 dated October 20, 1964, WFX No. 211 dated June 18, 1965, and Order No. R-2156-A, copies of which are enclosed together with a plat of the Maljamar (Grayburg-San Andres) Field Area where these leases exist.

The beneficiary institution for both leases is the Common Schools as indicated in the enclosed certificate No. 2007.

Working interests in said leases and lands as well as the royalty is common as is an override owned by Phillips Petroleum

Mr. Dan Nutter
Oil Conservation Commission

November 28, 1972

Mr. Ray Graham
Office of the Commissioner of Public Lands Page 2

Company. Some eight (8) parties own various overriding royalty interests in the E/2 of Section 18 who do not own any interests in the SW/4 of Section 18 nor the SE/4 of Section 13.

Baxter has heretofore received administrative approval to drill an infill well in the center of the SW/4 of Section 18 which has been drilled. Approval for an infill well in the center of the SE/4 of Section 18 has been administratively granted and will soon be drilled. The enclosed plat shows producing wells and injection wells.

In the future Baxter desires to seek administrative approval to drill two additional infill wells which would be located on or near the North-South half-section line in Section 18 and on the Section line between Sections 13 and 18 at approximately the locations designated by squares on the attached plat.

Copy enclosed → In order to accomplish the foregoing and pursuant to a suggestion by Mr. Nutter, I have prepared an instrument designated "Pooling Agreement" for signature by all parties owning an interest in production from the two leases except the State of New Mexico. This instrument, if executed, would have the effect of spreading the now existing override in the E/2 of Section 18 throughout the pooled area on an equal basis. We have chosen to ignore the fact that the SW/4 of Section 18 with its two lots does not actually contain exactly 160 acres simply because the variation of interests would be so small as to not warrant such unless it be insisted upon by some party to the instrument. The working interests have been appropriately adjusted to accomodate the spreading of the override throughout the tracts involved.

Another reason for our "pooling" effort is to be able to utilize common tankage on the two leases which I assume could be approved since all interests in production would be common once the instrument is signed.

Both of you are requested to review the enclosures and advise me as soon as possible as to any recommended changes or if you see any flaws in accomplishing what is desired, i.e., obtaining the right to drill the two infill wells and to utilize common

November 28, 1972

Mr. Dan Nutter
Oil Conservation Commission

Mr. Ray Graham
Office of the Commissioner of Public Lands Page 3

tankage. Please check with each other if you are of a mind to do so and call me collect if you have questions or suggestions. We would, of course, like to have both your agencies approve the Pooling Agreement if possible and would appreciate comment with respect to this desire.

Yours truly,

Martin L. Allday

MLA/meh

cc: Murphy H. Baxter

GOVERNOR
EDWIN L. MECHEM
CHAIRMAN

New Mexico

OIL CONSERVATION COMMISSION

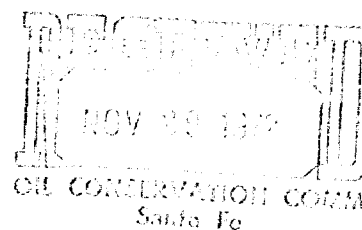
LAND COMMISSIONER, MURRAY E. MORGAN
MEMBER

STATE GEOLOGIST, A.L. PORTER JR.
SECRETARY DIRECTOR



P. O. Box 871
Santa Fe, New Mexico

September 8, 1958



Murphy H. Baxter, et al
c/o Raymond A. Lynch
Midland National Bank Building
Midland, Texas

Administrative Order CTB No. 30

Gentlemen:

Reference is made to your application dated August 19, 1958, for administrative approval of an exception to Rule 309 (a) of the Rules and Regulations of the Oil Conservation Commission to permit the commingling of the oil produced from the following described State of New Mexico oil and gas leases in the Maljamar Pool, to-wit:

State Lease No. B-2148
Township 17 South, Range 33 East, NMPM
Section 18: SE/4

State Lease No. B-2229
Township 17 South, Range 32 East, NMPM
Section 13: SE/4

By the authority vested in me under the provisions of Rule 309 (b) of the Rules and Regulations of the Oil Conservation Commission of New Mexico, I hereby authorize you to commingle the production from the above-described leases from the Maljamar Pool in a common tank battery.

Nothing contained herein shall be construed as authorizing the production of more than sixteen wells into a single tank battery.

Very truly yours,

A. L. Porter, Jr.
A. L. PORTER, Jr.,
Secretary-Director

ALP/EJF/og

cc: Oil Conservation Commission - Hobbs
Oil & Gas Engineering Committee - Hobbs

APPLICATION OF MURPHY H. BAXTER
TO EXPAND ITS BAXTER-MALJAMAR
WATER FLOOD PROJECT IN THE MALJAMAR
POOL IN LEA COUNTY, NEW MEXICO.

ADMINISTRATIVE ORDER
WFX NO. 149

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION COMMISSION

Under the provisions of Rule 701, Murphy H. Baxter has made application to the Commission on August 5, 1963, for permission to expand its Baxter-Maljamar Water Flood Project in the Maljamar Pool, Lea County, New Mexico.

NOW, on this 21st day of August, 1963, the Secretary-Director finds:

1. That application has been filed in due form.
2. That satisfactory information has been provided that all offset operators have been duly notified of the application.
3. That no objection has been received within the waiting period as prescribed by Rule 701.
4. That the proposed injection wells are eligible for conversion to water injection under the terms of Rule 701.
5. That the proposed expansion of the above-referenced water flood project will not cause waste nor impair correlative rights.
6. That the application should be approved.

IT IS THEREFORE ORDERED:

That the applicant, Murphy H. Baxter, be and the same is hereby authorized to inject water into the Grayburg-San Andres formation through the following described wells for purposes of secondary recovery, to wit:

Baxter-State 18-13 Well No. 2 located in the NW/4 SW/4 of Section 18 and Baxter-State 18-13 Well No. 8 located in the SE/4 SW/4 of Section 18 both in Township 17 South, Range 33 East, NMPM.

PROVIDED HOWEVER, That applicant shall inject water down tubing with packers set well below the top of the cement surrounding the oil strings of said wells.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


A. L. PORTER, Jr.,
Secretary-Director

SEAL

APPLICATION OF MURPHY H. BAXTER
TO EXPAND ITS MALJAMAR WATER FLOOD
PROJECT IN THE MALJAMAR POOL IN
LEA COUNTY, NEW MEXICO.

ADMINISTRATIVE ORDER
WFX NO. 173

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION COMMISSION

Under the provisions of Rule 701, Murphy H. Baxter has made application to the Commission on April 16, 1964, for permission to expand its Maljamar Water Flood Project in the Maljamar Pool, Lea County, New Mexico.

NOW, on this 1st day of May, 1964, the Secretary-Director finds:

1. That application has been filed in due form.
2. That satisfactory information has been provided that all offset operators have been duly notified of the application.
3. That no objection has been received within the waiting period as prescribed by Rule 701.
4. That the proposed injection well is eligible for conversion to water injection under the terms of Rule 701.
5. That the proposed expansion of the above-referenced water flood project will not cause waste nor impair correlative rights.
6. That the application should be approved.

IT IS THEREFORE ORDERED:

That the applicant, Murphy H. Baxter, be and the same is hereby authorized to inject water into the Grayburg-San Andres formation through the following described well for purposes of secondary recovery, to wit:

Baxter-State 17 Well No. 6 located in the SE/4 NW/4 of Section 17, Township 17 South, Range 33 East, NMPM.

PROVIDED HOWEVER; That applicant shall inject water through tubing with a packer set at approximately 4150 feet in the oil string of said well.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

A. L. Porter, Jr.
A. L. PORTER, Jr.,
Secretary-Director

SEAL

APPLICATION OF MURPHY H. BAXTER
TO EXPAND ITS MALJAMAR WATER
FLOOD PROJECT IN THE MALJAMAR POOL
IN LEA COUNTY, NEW MEXICO.

ADMINISTRATIVE ORDER WFX No.185

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION COMMISSION

Under the provisions of Rule 701, Murphy H. Baxter has made application to the Commission on October 5, 1964, for permission to expand its Maljamar Water Flood Project in the Maljamar Pool, Lea County, New Mexico.

NOW, on this 20th day of October, 1964, the Secretary-Director finds:

1. That application has been filed in due form.
2. That satisfactory information has been provided that all offset operators have been duly notified of the application.
3. That no objection has been received within the waiting period as prescribed by Rule 701.
4. That the proposed injection well is eligible for conversion to water injection under the terms of Rule 701.
5. That the proposed expansion of the above-referenced water flood project will not cause waste nor impair correlative rights.
6. That the application should be approved.

IT IS THEREFORE ORDERED:

That the applicant, Murphy H. Baxter, be and the same is hereby authorized to inject water into the Grayburg-San Andres formation through the following described well for purposes of secondary recovery, to wit:

Baxter-State 18-13 Well No. 4 located in the NW/4 SE/4
of Section 13, Township 17 South, Range 32 East, NMPM.

PROVIDED HOWEVER, That applicant shall inject water through tubing with a packer set at approximately 3950 feet in the oil string of said well.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


A. L. PORTER, Jr.,
Secretary-Director

SEAL

APPLICATION OF MURPHY H. BAXTER
TO EXPAND HIS BAXTER STATE WATER
FLOOD PROJECT IN THE MALJAMAR
POOL IN LEA COUNTY, NEW MEXICO.

Administrative Order
WFX No. 211

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION COMMISSION

Under the provisions of Order No. R-2156, Murphy H. Baxter has made application to the Commission on June 1, 1965, for permission to expand his Baxter State Water Flood Project in the Maljamar Pool, Lea County, New Mexico.

NOW, on this 18th day of June, 1965, the Secretary-Director finds:

1. That application has been filed in due form.
2. That satisfactory information has been provided that all offset operators have been duly notified of the application.
3. That no objection has been received within the waiting period as prescribed by Rule 701.
4. That the proposed injection wells are eligible for conversion to water injection under the terms of Rule 701.
5. That the proposed expansion of the above-referenced waterflood project will not cause waste nor impair correlative rights.
6. That the application should be approved.

IT IS THEREFORE ORDERED:

That the applicant, Murphy H. Baxter, be and the same is hereby authorized to inject water into the Grayburg-San Andres formation through the following-described wells for purposes of secondary recovery, to wit:

Baxter State 17 Well No. 8, Unit H of Section 17, Township 17 South, Range 33 East.

Baxter State 18-13 Well No. 6, Unit O of Section 13, Township 17 South, Range 32 East.

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

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

A. L. PORTER, Jr.
Secretary-Director

S E A L

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. 4788
Order No. R-2156-A

APPLICATION OF MURPHY H. BAXTER
FOR AN UNORTHODOX WELL LOCATION,
LEA COUNTY, NEW MEXICO.

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on August 9, 1972, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 22nd day of August, 1972, 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, Murphy H. Baxter, is the operator of the Murphy H. Baxter Maljamar (Grayburg-San Andres) Waterflood Project authorized by Order No. R-2156, Maljamar (Grayburg-San Andres) Pool, Lea County, New Mexico.

(3) That the applicant seeks authority to drill a well at an unorthodox location approximately in the center of the SW/4 of Section 18, Township 17 South, Range 33 East, NMPM, Lea County, New Mexico, as a producing well in said Maljamar (Grayburg-San Andres) Unit Waterflood Project.

(4) That the proposed unorthodox location is necessary to provide an efficient oil producing pattern.

(5) That the applicant also seeks the establishment of an administrative procedure whereby the Secretary-Director of the Commission may authorize additional producing wells and injection wells at orthodox and unorthodox locations within said Maljamar (Grayburg-San Andres) Unit Waterflood Project area as may be necessary to complete an efficient production and injection pattern.

-2-

Case No. 4788

Order No. R-2156-A

(6) That approval of the requested administrative procedure will afford the applicant the opportunity to produce its just and equitable share of the oil in the Maljamar (Grayburg-San Andres) Pool, provided said wells are drilled no closer than 330 feet to the outer boundary of the above-described unit area nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary.

(7) That the subject waterflood project should be governed by the provisions of Rules 701, 702, and 703 of the Commission Rules and Regulations, provided however, that the showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection.

IT IS THEREFORE ORDERED:

(1) That the applicant, Murphy H. Baxter, is hereby authorized to drill a well at an unorthodox location 1310 feet from the South line and 1310 feet from the West line of Section 18, Township 17 South, Range 33 East, NMPM, Maljamar (Grayburg-San Andres) Pool, Lea County, New Mexico, as a producing well in its Maljamar (Grayburg-San Andres) Unit Waterflood Project.

(2) That Order (2) of Order No. R-2156 is hereby amended to read in its entirety as follows:

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

PROVIDED HOWEVER, that the Secretary-Director of the Commission may approve such additional producing wells and injection wells at orthodox and unorthodox locations within the Maljamar (Grayburg-San Andres) Unit Waterflood Project area as may be necessary to complete an efficient production and injection pattern, provided said wells are drilled no closer than 330 feet to the outer boundary of the Maljamar (Grayburg-San Andres) Unit Area nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary, and provided that the application therefor has been filed in accordance with Rule 701 B of the Commission Rules and Regulations, and provided that the application has been sent to all offset operators, if any there be, and no such operator has objected within 15 days. The showing of well response as required by Rule 701 E-5 shall not be necessary before obtaining administrative approval for the conversion of additional wells to water injection."

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

-3-

Case No. 4788

Order No. R-2156-A

DONE at Santa Fe, New Mexico, on the day and year herein-
above designated.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION

BRUCE KING, Chairman

ALEX J. ARMIJO, Member

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

S E A L

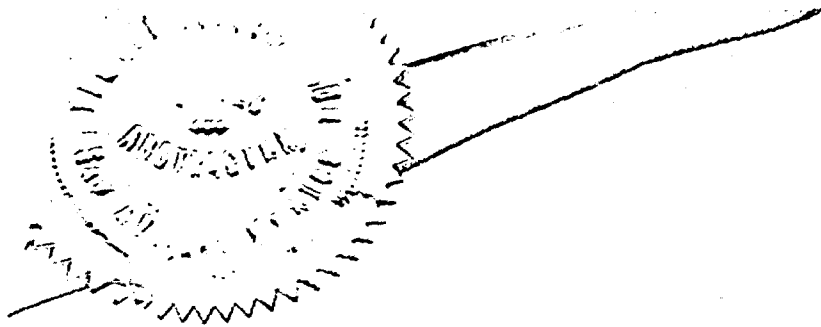
dr/

C E R T I F I C A T E

N O . 2 0 0 7

I hereby certify that I have carefully and thoroughly examined and searched the records of the office of Commissioner of Public Lands of the State of New Mexico and find that the beneficiary institution is Common Schools for the $N\frac{1}{2}$ of Section 17, and the $E\frac{1}{2}$ and $SW\frac{1}{4}$ of Section 18, in Township 17 South, Range 33 East, N.M.P.M., and that title to this land passed to the State of New Mexico from the United States Government, in Clear List No. 21, approved on November 25, 1916, under the provisions of the Act of Congress approved June 20, 1910 (36 Stat., 557), in part satisfaction of its grant of 1,000,000 acres, in payment of bonds issued by Santa Fe and Grant Counties, free from conflicts or other adverse claims of record and not mineral in character; that these bonds have been discharged; and that under the terms of the grant, the beneficiary institution has been changed to Common Schools:

THAT the beneficiary institution is Common Schools for the $SE\frac{1}{4}$ of Section 13, Township 17 South, Range 32 East, N.M.P.M., and that title to this land passed to the State of New Mexico from the United States Government, in Clear List No. 111 of School Indemnity Land Selections, approved on May 31, 1919, as indemnity for losses to the grant for the support of Common Schools, made under the provisions of the Acts of Congress approved June 20, 1910 (36 Stat., 557), free from conflicts or other adverse claims of record and not mineral in character:



THAT the beneficiary institution is Common Schools for the $S\frac{1}{2}$ of Section 7, the $S\frac{1}{2}$ of Section 8, and the $SW\frac{1}{4}$ of Section 9, in Township 17 South, Range 33 East, N.M.P.M., and for the $NE\frac{1}{4}$ and $W\frac{1}{2}$ of Section 13, Township 17 South, Range 32 East, N.M.P.M., and that title to this land passed to the State of New Mexico from the United States Government, in Clear List No. 111 of School Indemnity Land Selections, approved on May 31, 1919, as shown above:

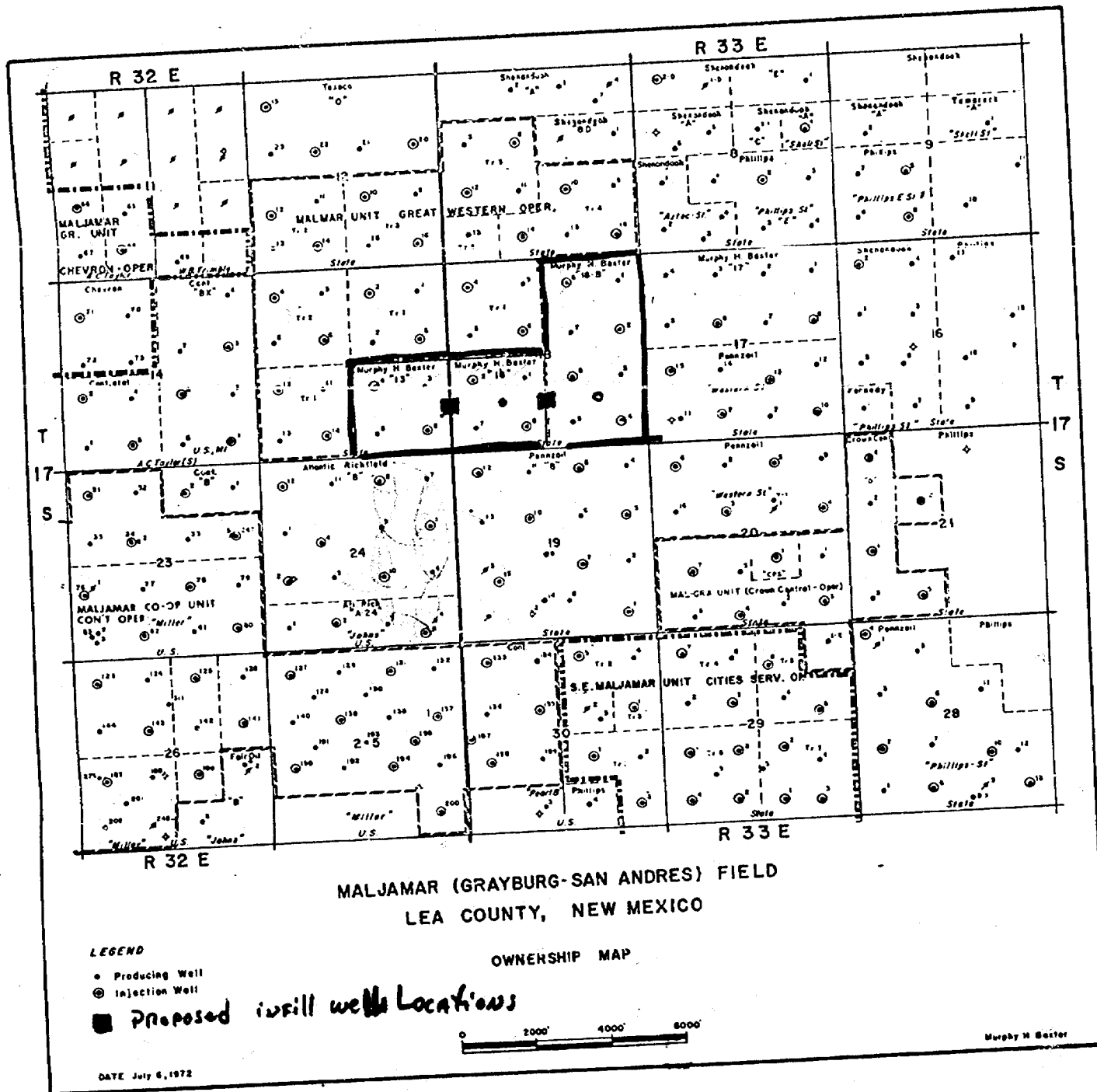
THAT the beneficiary institution is Common Schools for the $S\frac{1}{2}$ of Section 17, the $NW\frac{1}{4}$ of Section 18, all of Section 19, and the $N\frac{1}{2}$ of Section 20, in Township 17 South, Range 33 East, N.M.P.M., and that title to this land passed to the State of New Mexico from the United States Government in Clear List No. 21, approved on November 25, 1916, in Payment of Bonds Issued by Santa Fe and Grant Counties, as shown above:

AND THAT the beneficiary institution is Common Schools for the $W\frac{1}{2}$ of Section 16, Township 17 South, Range 33 East, and title to this land is claimed by the State of New Mexico under the grant made to the Territory of New Mexico for common school purposes, by Act of Congress which was approved on June 21, 1898, and confirmed by United States Patent No. 1202899 to the State of New Mexico, dated December 31, 1959.

DATED at Santa Fe, New Mexico, this 4th day of December, 1961, at 4:00 o'clock p.m.

(Certificate is void if seal is broken.)

Lyle Quintana Johnson
Bonded Abstractor,
State of New Mexico



EXHIBITS

FOR HEARING ON APPLICATION OF
MURPHY H. BAXTER
FOR
MURPHY H. BAXTER WATERFLOOD PROJECT
MALJAMAR GRAYBURG-SAN ANDRES FIELD
LEA COUNTY, NEW MEXICO
CASE No. 2457 BEFORE THE OIL CONSERVATION
COMMISSION OF NEW MEXICO

BEFORE EXAMINER UTZ
OIL CONSERVATION COMMISSION
Utz EXHIBIT NO. 1
CASE NO. 2457

MURPHY H. BAXTER
507 MIDLAND NATIONAL BANK BUILDING
MIDLAND, TEXAS

November 22, 1961

Mr. Frank E. Irby, Chief
Water Rights Division
State Engineer's Office
Main Office Capitol B
Santa Fe, New Mexico

Re: Application for Hearing
Murphy H. Baxter Waterflood Project
Maljamar Grayburg-San Andres Field
Lea County, New Mexico

Dear Mr. Irby:

We are submitting additional information for your consideration in regard to the above reference.

Murphy H. Baxter's letter of application was submitted to Mr. Porter's office through our attorney, Hervey, Dow & Hinkle, and a copy of that application should be forthcoming to your office.

We have attached an additional copy of that letter in case a copy has not reached your office at this time.

The first attachment to this letter shows the injection well details for the four wells requested in our application. These four wells are currently producing from the Grayburg and San Andres formations. They will be converted to water injection wells by setting a packer above the topmost perforation and injecting down 2-3/8" tubing. Other information pertinent to the "Injection Well Detail" are:

1. Surface Casing: No. 2, 4 and 8 wells had 8-5/8", 24#, H-40, 8RT, ST&C casing run. Well No. 6 had 9-5/8", 36#, J-55, 8RT, ST&C casing run. All casing was new seamless Spang.
2. Surface Cement: Well records indicate that 25 to 50 sacks of excess cement was circulated on all four wells.
3. Production Casing: All four wells had 5-1/2", 14#, J-55, 8RT, ST&C new seamless Spang casing run.
4. Production Casing Cement: All four casing strings were cemented with 150 sacks of Longhorn w/4% gel plus 110 or 120 sacks of Dowell Cement.

Top of cement behind the 5-1/2" production casing is shown on the last four attachments. In all cases the cement is 1000 feet or more above the topmost set of perforations.

Mr. Frank E. Irby
November 22, 1961
Page 2

The tubing packer will be a sealing-hookwall type with a hydraulic hold-down attached. The tubing-casing annulus will be loaded with lease crude or inhibited water for corrosion protection.

We will furnish you with this same kind of information on any further expansion of the pilot waterflood after approval by the Oil Conservation Commission.

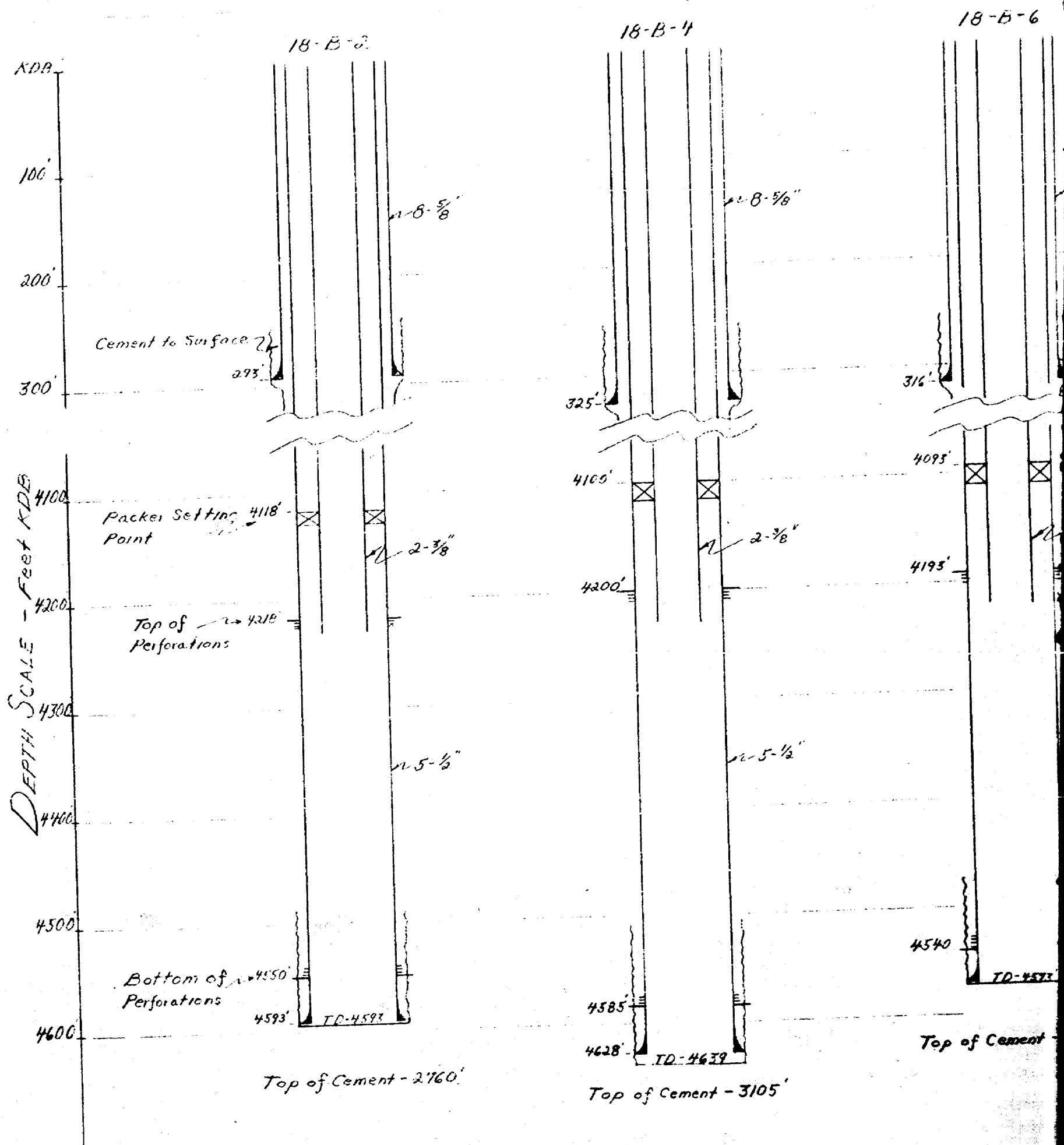
Respectfully yours,

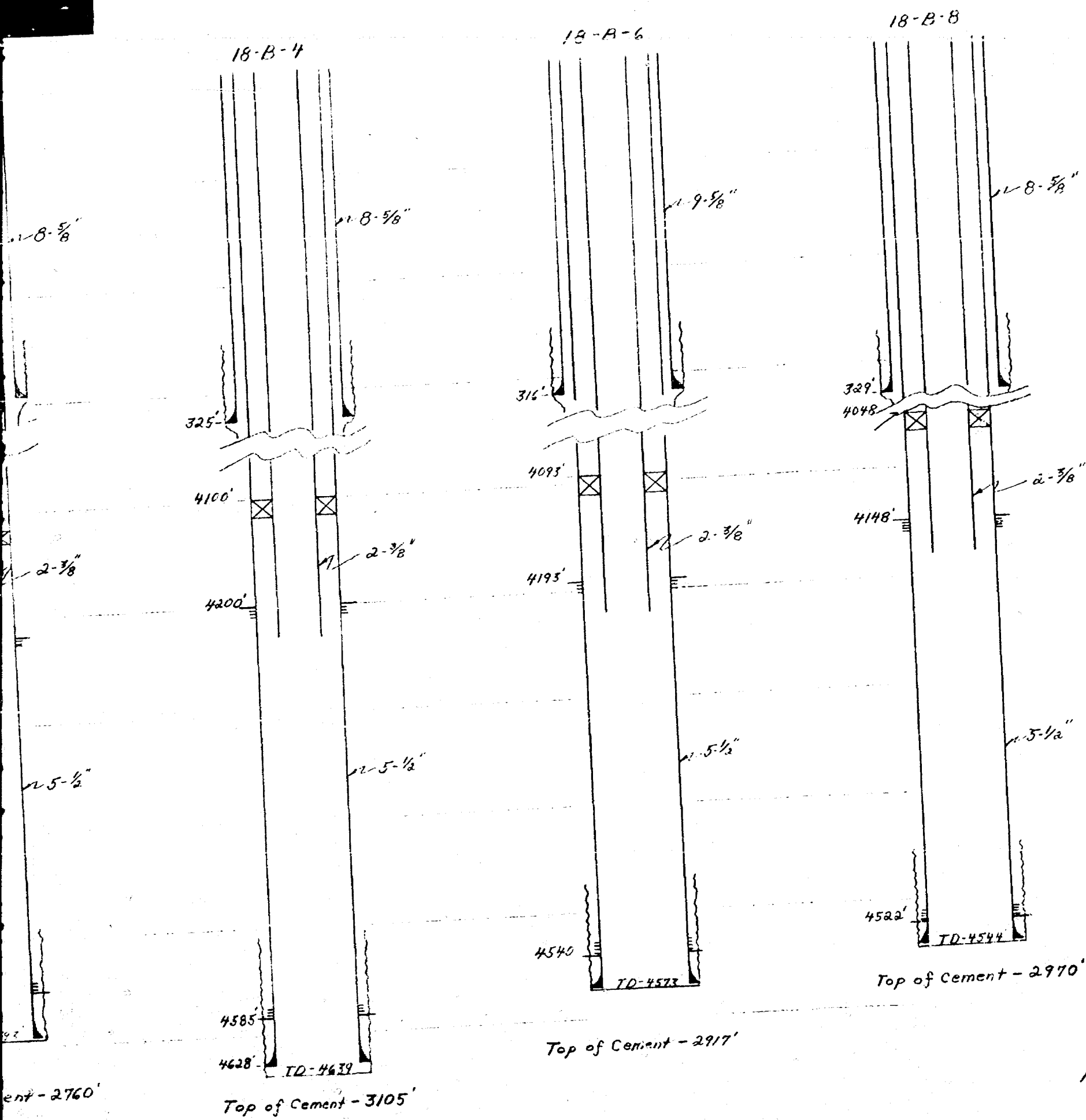
Philip G. Dolbow

Philip G. Dolbow
Petroleum Engineer

PGD/bm
attachments

MURPHY H. BAXTER WATERFLOOD PROJECT
INJECTION WELL DETAIL





11-20-61
P.G.D.

TEMPERATURE SURVEY

OPERATOR MURPHY H. BAXTER

LEASE STATE 18

WELL NO. 2

FIELD

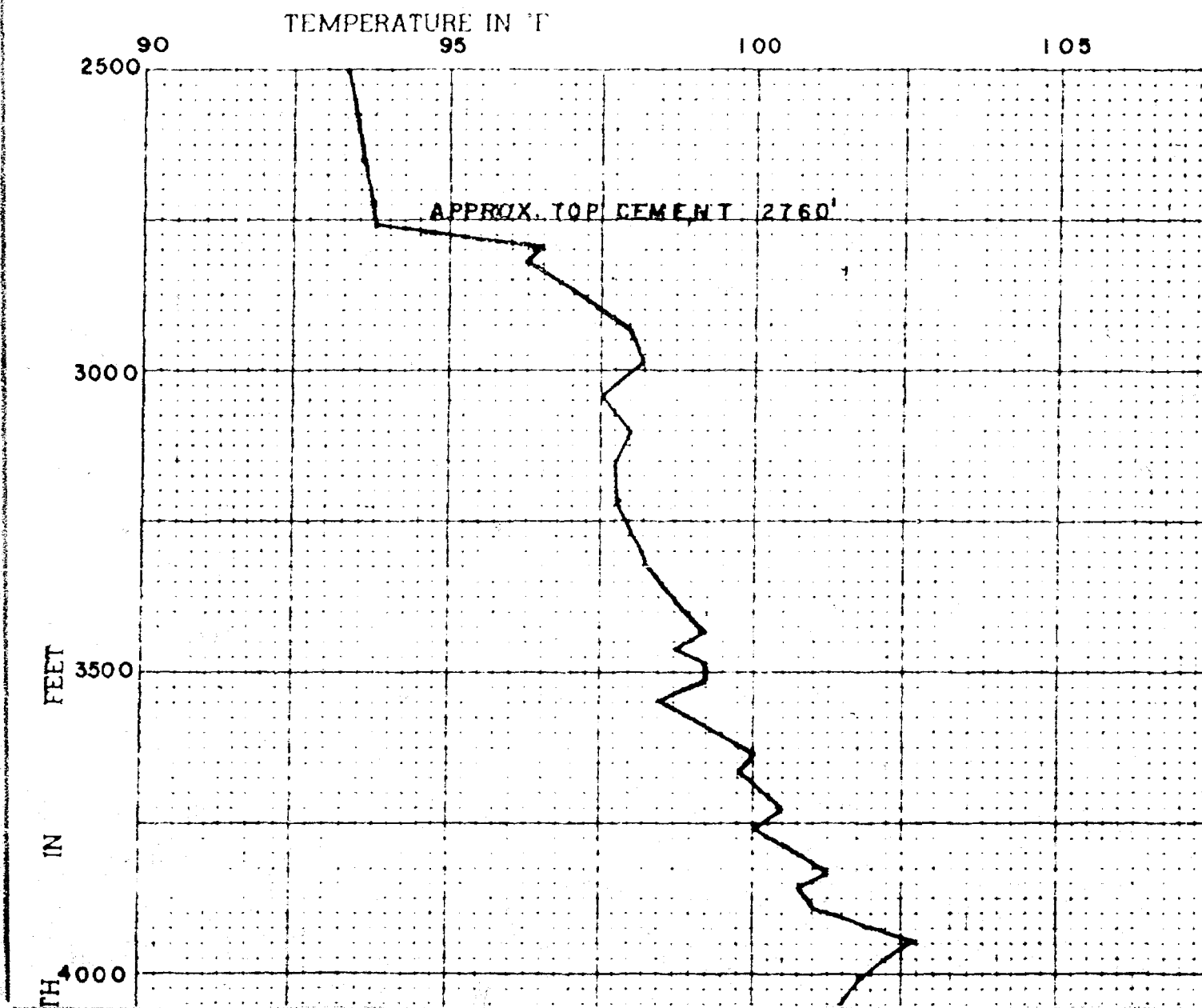
DATE & TIME CEMENT JOB COMPLETED 3.00 P.M. 8-7-58

DATE & TIME SURVEY MADE 6.00 P.M. 8-8-58

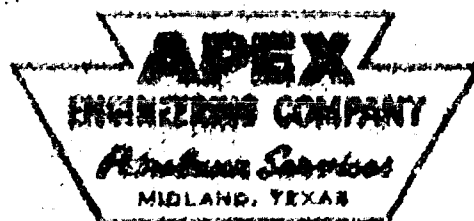
SURVEY RUN BY J. R. C.

DATUM KELLY BUSHING

WELL DATA 150" SACKS OF 4% GEL & 110 SACKS OF SEALMENT
BEHIND 4600' OF 5 1/2" CASING IN 7 7/8" HOLE.



*File 104
3rd 1144
Per 5-1-58*

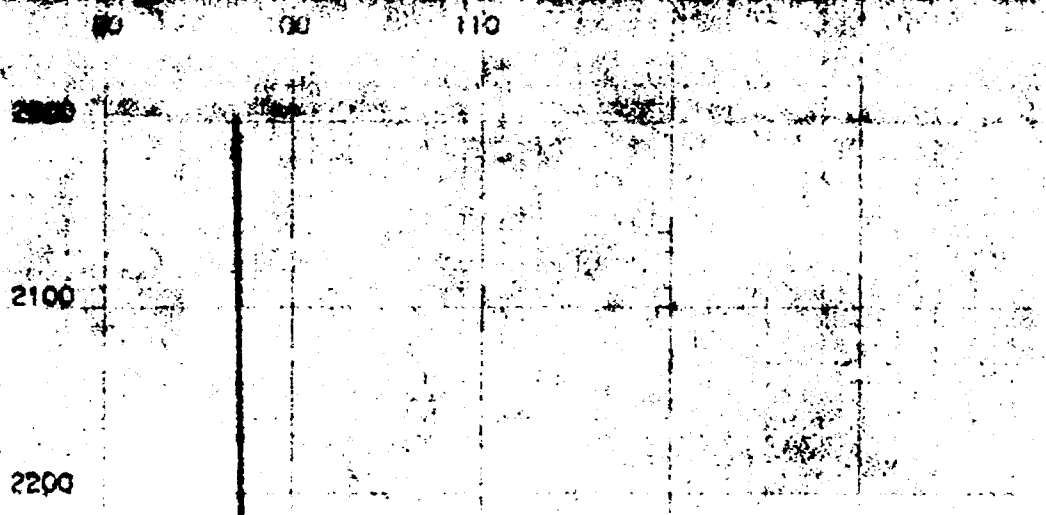


TEMPERATURE SURVEY

COMPANY		MURPHY H. BAXTER	
		507 MIDLAND NATIONAL BANK BUILDING, MIDLAND, TEXAS	
WELL	STATE 13 #4		
FIELD	ROBERTS		
COUNTY	LEA	STATE	NEW MEXICO
Type of Survey	MECHANICAL	CHART #4916	
Log Measured From	RKB	Elevation	
Drilling Measured From	RKB	Elevation	
Permanent Datum		Elevation	
Date of Survey	8-15-58	Time	3:00 P.M.
Date of Cementing	8-14-58	Time	11:00 A.M.
		Setting Time	hrs
Amount of Cement 1st Stage: 150 SACKS 4% GEL 1100 GAL. DOWELL SEALMENT			
2nd Stage			
Casing Size	Casing Depth	Diam. of Hole	Depth
5 1/2 from	0 to 4626	7 7/8 from	0 to 4640
Liner Size	Liner Depth		
from	to	from	to
D. V. Tool @		P. B. T. D. to	
Survey Begins at 2000		Fl. Ends at 4534 Ft.	
Run No. 1		Approx. Top Cement 3105 Ft.	
Recorded by TURNER		Witnessed by CREW	

REMARKS OR OTHER DATA

TEMPERATURE IN DEGREES FAHRENHEIT



2300

2400

2500

2600

2700

2800

2900

3000

3100

3200

Normal Geo-HETMA 1980 IN

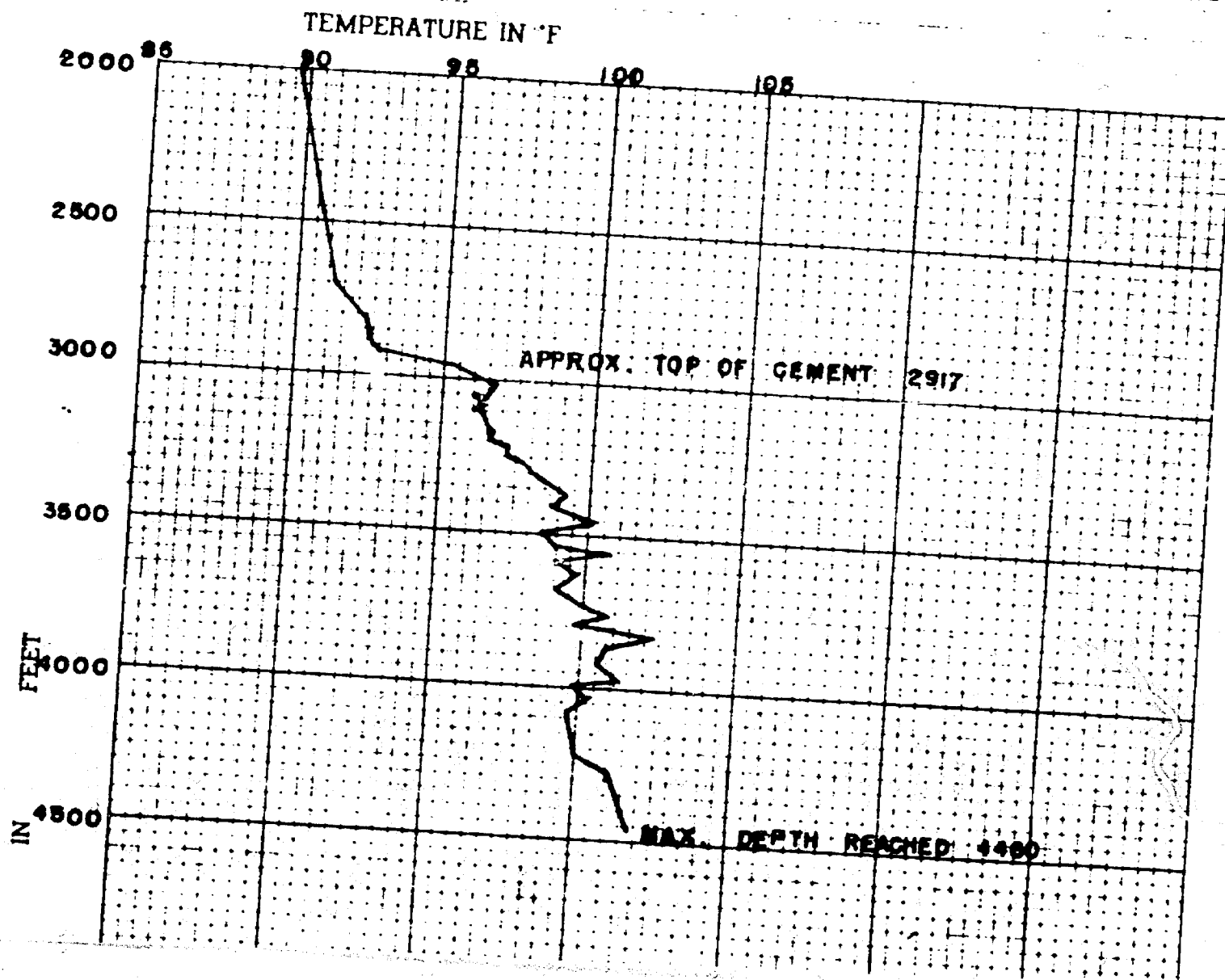
100 GCMEN 3100

JOHN W. WEST ENGINEERING CO.
412 NORTH DAL PASO, HOBBES, NEW MEXICO

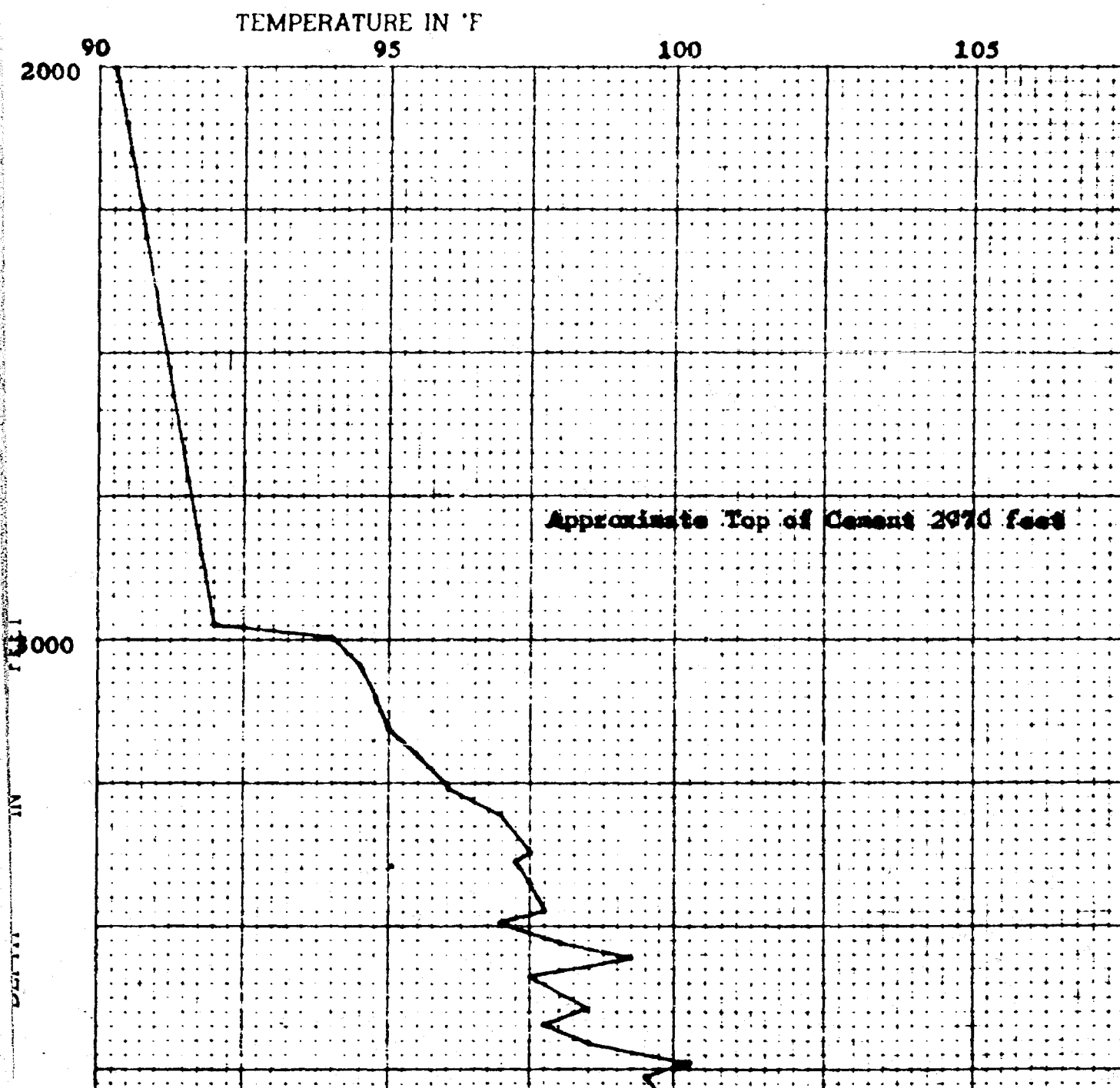
TELEPHONE 3-3842
3-6770

TEMPERATURE SURVEY

OPERATOR MURPHY H. BAXTER
LEASE STATE 18 B
WELL NO. 6
FIELD ROBERTS
DATE & TIME CEMENT JOB COMPLETED 12:30 PM 12-12-58
DATE & TIME SURVEY MADE 12:30 PM 12-13-58
SURVEY RUN BY C. BOND
DATUM K.B.
WELL DATA 150 SACKS OF 4% GEL AND 1200 GALLONS SEALMENT
RUN BEHIND 4573' OF 5 1/2" CASING IN A 7 7/8"
HOLE



OPERATOR **WHITNEY H. BAXTER**
LEASE **State 18-B**
WELL NO. **3**
FIELD **Maljamar**
DATE & TIME CEMENT JOB COMPLETED **6:00 P. M. 11-4-1958**
DATE & TIME SURVEY MADE **8:30 P. M. 11-5-58**
SURVEY RUN BY **J. C.**
DATUM **Kelly-Bushing**
WELL DATA **150 Sacks 4% Gel. & 1200 Gallons of Sealment behind 4544 feet
of 5 1/2 inch Casing in a 7 7/8 inch Hole**



POOLING AGREEMENT

Reference is made to the following described Oil and Gas Leases insofar only as the same cover and affect the Grayburg-San Andres Formations under the lands particularly described:

- (1) Lease No. B-2148 dated the 11th day of September, 1933, between the State of New Mexico, Lessor, and Phillips Petroleum Company, Lessee, insofar only as said lease covers and affects the E/2 and E/2 SW/4 and Lots 3 and 4 of Section 18, T-17-S, R-33-E, Lea County, New Mexico.
- (2) Lease No. B-2229 dated the 10th day of November, 1933, between the State of New Mexico, Lessor, and Phillips Petroleum Company, Lessee, insofar only as said lease covers and affects the SE/4 of Section 13, T-17-S, R-32-E, Lea County, New Mexico.

For and in consideration of the mutual benefits to be derived herefrom, and other good and valuable consideration, receipt and sufficiency of which is hereby acknowledged, the undersigned parties hereby pool, consolidate and unitize their various interests in production in, on, under and that may be produced from the Grayburg-San Andres Formations under all of the above particularly described leases and lands into a single pooled unit so as to result in the following interests in production being owned by the parties hereto under all of said leases and lands above described, and this instrument shall be deemed to contain such words of grant and conveyance as may be required in order to result in such ownership of production therefrom:

ROYALTY

State of New Mexico	.1250000
---------------------	----------

OVERRIDING ROYALTY

Phillips Petroleum Company	.0546875
W. H. Black and Dan P. Black, a partnership composed of W. H. Black, Jr. and Dan P. Black	.0136719
E. C. Johnston, a partnership	.0017089
E. C. Johnston, Jr.	.0017089
Gordon C. Johnston	.0017089
J. Glenn Johnston	.0017089
M. O. Johnston, Sr.	.0034179
M. O. Johnston, Jr.	.0017089
W. C. Johnston	.0017089

WORKING INTEREST

Murphy H. Baxter	.1982430
Rex Beasley	.0247803
Theo P. Beasley	.0991211
Jeanne L. Henry, Trustee of John W. Henry Estate	.0396484

George H. Jewell, Jr.	.2230224
J. A. LaFortune, Sr.	.0396484
J. A. LaFortune, Jr.	.0396484
Robert James LaFortune	.0396484
Betty Beasley McElroy	.0495605
Homer Wilcox, c/o Murphy H. Baxter	.0396484
Total	1.0000000

There is no intent herein to change or alter the ownership of the above indicated oil and gas leases (cost basis) and the same shall remain as presently indicated in the records of the Commissioner of Public Lands of the State of New Mexico and the County Clerk of Lea County, New Mexico, reference to which is here made for all purposes, and the only purpose of this agreement is to arrive at an agreed upon basis as to the manner in which production shall be shared from the above leases and lands as to the depths indicated during the waterflood operations now in progress and to permit common storage and commingling of production during such period of time, all subject to the rules and regulations of the Oil Conservation Commission and the office of the Commissioner of Public Lands of the State of New Mexico.

This instrument may be executed in counterpart with each having the force and effect of an original.

EXECUTED this 1st day of December, 1972; effective the 1st day of January, 1973, at 7:00 A. M.

PHILLIPS PETROLEUM COMPANY

By _____

W. H. BLACK AND DAN P. BLACK,
a Partnership

By _____
W. H. Black, Jr., Partner

Wife of W. H. Black, Jr.

By _____
Dan P. Black, Partner

Wife of Dan P. Black

E. C. JOHNSTON, a Partnership

By _____
E. C. Johnston, Partner

Wife of E. C. Johnston

Wife of E. C. Johnston, Jr.

E. C. Johnston, Jr.

Wife of Gordon C. Johnston

Gordon C. Johnston

Wife of J. Glenn Johnston

J. Glenn Johnston

Wife of M. O. Johnston, Sr.

M. O. Johnston, Sr.

Wife of M. O. Johnston, Jr.

M. O. Johnston, Jr.

Wife of W. C. Johnston

W. C. Johnston

Wife of Murphy H. Baxter

Murphy H. Baxter

Wife of Rex Beasley

Rex Beasley

Wife of Theo P. Beasley

Theo P. Beasley

Husband of Jeanne L. Henry

Jeanne L. Henry, Trustee

Wife of George H. Jewell, Jr.

George H. Jewell, Jr.

Wife of J. A. LaFortune, Sr.

J. A. LaFortune, Sr.

Wife of J. A. LaFortune, Jr.

J. A. LaFortune, Jr.

Wife of Robert James LaFortune

Robert James LaFortune

Husband of Betty Beasley McElroy Betty Beasley McElroy

Wife of Homer Wilcox

Homer Wilcox

THE STATE OF

X

COUNTY OF

X

X

The foregoing instrument was acknowledged before me this ____
day of December, 1972, by _____,

_____ of PHILLIPS PETROLEUM COMPANY, a corp-
oration, on behalf of said corporation.

My commission expires:

Notary Public in and for
County,

THE STATE OF TEXAS X
COUNTY OF BRAZORIA X

The foregoing instrument was acknowledged before me this ____
day of December, 1972, by W. H. BLACK, JR. and ____
BLACK, his wife.

My commission expires: _____

Notary Public in and for Brazoria
County, Texas

THE STATE OF TEXAS X
COUNTY OF MIDLAND X

The foregoing instrument was acknowledged before me this ____
day of December, 1972, by DAN P. BLACK and ____
BLACK, his wife.

My commission expires: _____

Notary Public in and for Midland
County, Texas

THE STATE OF TEXAS X
COUNTY OF _____ X

The foregoing instrument was acknowledged before me this ____
day of December, 1972, by E. C. JOHNSTON and ____
JOHNSTON, his wife.

My commission expires: _____

Notary Public in and for
County, Texas

THE STATE OF TEXAS X
COUNTY OF _____ X

The foregoing instrument was acknowledged before me this ____
day of December, 1972, by E. C. JOHNSTON, JR. and ____
JOHNSTON, his wife.

My commission expires: _____

Notary Public in and for
County, Texas

THE STATE OF _____ X
COUNTY OF _____ X

The foregoing instrument was acknowledged before me this ____
day of December, 1972, by GORDON C. JOHNSTON and ____
JOHNSTON, his wife.

My commission expires: _____

Notary Public in and for
County,

THE STATE OF X
COUNTY OF X

The foregoing instrument was acknowledged before me the _____
day of December, 1972, by J. GLENN JOHNSTON and _____
JOHNSTON, his wife.

My commission expires: _____

Notary Public in and for
County,

THE STATE OF X
COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of December, 1972, by M. O. JOHNSTON, SR. and _____
JOHNSTON, his wife.

My commission expires: _____

Notary Public in and for
County,

THE STATE OF X
COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of December, 1972, by M. O. JOHNSTON, JR. and _____
JOHNSTON, his wife.

My commission expires: _____

Notary Public in and for
County,

THE STATE OF X
COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of December, 1972, by W. C. JOHNSTON and _____
JOHNSTON, his wife.

My commission expires: _____

Notary Public in and for
County,

THE STATE OF TEXAS X
COUNTY OF HARRIS X

The foregoing instrument was acknowledged before me this _____
day of December, 1972, by MURPHY H. BAXTER and BETTY BAXTER, his
wife.

My commission expires: _____

Notary Public in and for Harris
County, Texas

THE STATE OF TEXAS X
COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of December, 1972, by REX BEASLEY and _____
BEASLEY, his wife.

My commission expires: _____

Notary Public in and for
County, Texas

THE STATE OF TEXAS X
COUNTY OF _____ X

The foregoing instrument was acknowledged before me this _____
day of December, 1972, by THEO P. BEASLEY and _____
BEASLEY, his wife.

My commission expires: _____

Notary Public in and for
County, Texas

THE STATE OF X
COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of December, 1972, by JEANNE L. HENRY and _____
HENRY, her husband, in the capacity therein stated.

My commission expires: _____

Notary Public in and for
County,

THE STATE OF X
COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of December, 1972, by GEORGE H. JEWELL, JR. and _____
JEWELL, his wife.

My commission expires: _____

Notary Public in and for
County,

THE STATE OF X
COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of December, 1972, by J. A. LA FORTUNE, SR. and _____
LA FORTUNE, his wife.

My commission expires: _____

Notary Public in and for
County,

THE STATE OF X
COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of December, 1972, by J. A. LA FORTUNE, JR. and _____
LA FORTUNE, his wife.

My commission expires: _____

Notary Public in and for
County,

THE STATE OF X
COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of December, 1972, by ROBERT JAMES LA FORTUNE and _____
LA FORTUNE, his wife.

My commission expires: _____

Notary Public in and for
County,

THE STATE OF X
COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of December, 1972, by BETTY BEASLEY McELROY and _____
McELROY, her husband.

My commission expires: _____

Notary Public in and for
County,

THE STATE OF X
COUNTY OF X

The foregoing instrument was acknowledged before me this _____
day of December, 1972, by HOMER WILCOX and _____
WILCOX, his wife.

My commission expires: _____

Notary Public in and for
County,