

MURPHY H. BAXTER

814 BUILDING OF THE SOUTHWEST

TELEPHONE 915-684-6307

MIDLAND, TEXAS 79701

February 11, 1986

MAIL ADDRESS:

P. O. BOX 2040

MIDLAND, TEXAS 79702

Oil Conservation
P. O. Box 2088
Santa Fe, New Mexico 87501

RE: Convert to Water Injection
North EK Queen 2-2
1980' FNL & 660' FEL
Section 1, T18S, R33E
Lea County, New Mexico

Dear Sir:

Murphy H. Baxter is requesting permission to convert the North EK Queen Unit 2-2 well to water injection. We anticipate this conversion to offset production declines in our newer wells, North EK Queen 2-6 and 2-7.

Attached is the Form C-108 and other required information.

We converted the North EK Queen Unit 2-3 to water injection in June of last year. The NMOC assigned Well No. 2-3 a maximum injection pressure of 1900 psi. This pressure was determined from a step-rate test done on that well. In order to expedite the administrative order we request the same injection pressure be assigned to the North EK Queen Unit 2-2.

Murphy H. Baxter would appreciate your immediate attention to this application.

If you have any questions concerning this application please call me.

Yours truly;



Chuck Sledge
Petroleum Engineer

Attachments

APPLICATION FOR AUTHORIZATION TO INJECT

I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no

II. Operator: Murphy H. Baxter

Address: P. O. Box 2040, Midland, TEXas 79702

Contact party: Chuck Sledge Phone: 915-684-6307

III. Well data: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? ☐ yes ☒ no
If yes, give the Division order number authorizing the project _____.

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.

* VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resubmitted.)

* XI. Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.

XII. Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

XIV. Certification

I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

Name: Chuck Sledge Title Petroleum Engineer

Signature: Chuck Sledge Date: 1-30-86

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. 3-14-85 Further information available from

North EK Queen Water Injection Conversion (Order No. WXF548)

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate Division district office.

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; location by Section, Township, and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) the intended purpose of the injection well; with the exact location of single wells or the section, township, and range location of multiple wells;
- (3) the formation name and depth with expected maximum injection rates and pressures; and
- (4) a notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

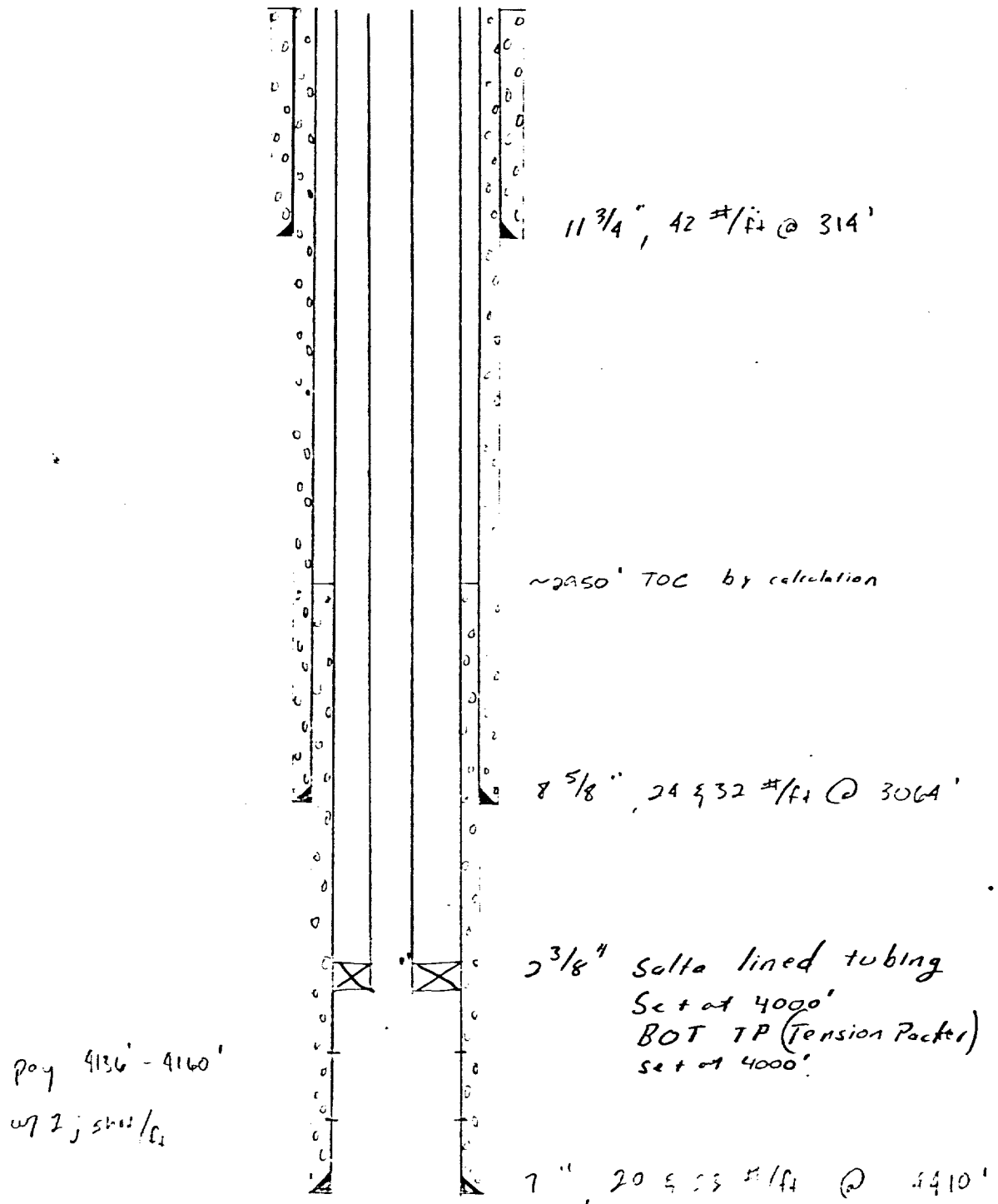
Part III

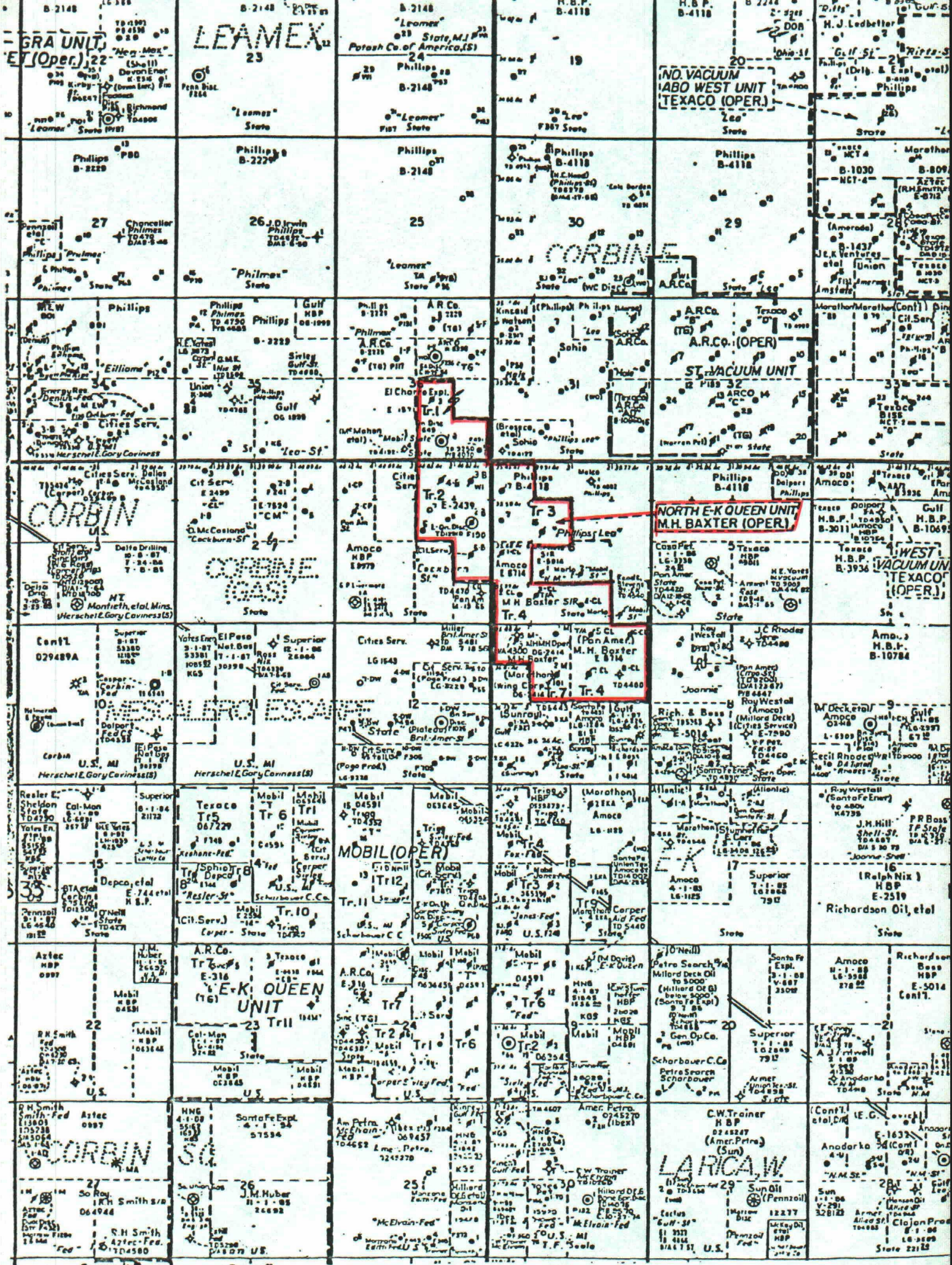
Well Data

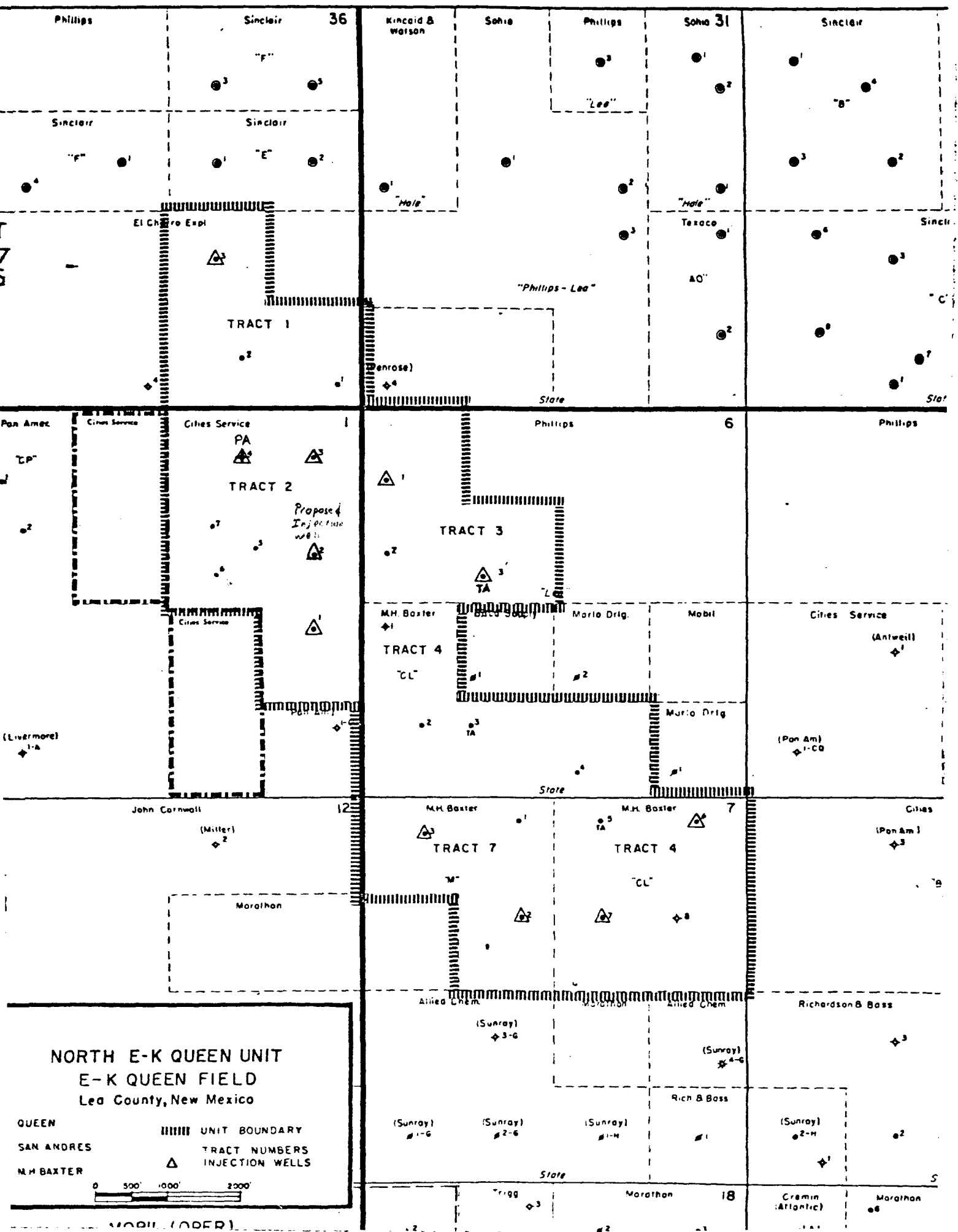
Well No. 2-2

- A
- 1) North EK Queen Unit Tract 2: Well No. 2-2, Section 1, Township 18S, Range 33E, 1980 ft from the North Line and 660 ft from the East Line.
 - 2) Surface: 11 3/4", 42#/ft, Set at 314' with 275 sxs of cement, 15" hole size, cement circulated.
Intermediate: 8 5/8", 24 & 32#/ft, set at 3064' with 250 sxs of cement, 11" hole size, cement circulated.
Production: 7", 20 & 23#/ft, set at 4410' with 650 sxs of cement, 7 7/8" hole size, cement top at 2950', made by calculation.
 - 3) 2 3/8" plastic lined tubing set at 4100'.
 - 4) 2 3/8" X 7" Brown TP (Tension) Packer set at 4100'.
- B
- 1) EK Yates Seven Rivers Queen
 - 2) Perforated 4136' - 4160'; 2 shots per foot
 - 3) Well was originally drilled to be an oil well
 - 4) -
 - 5) -

North EK Queen 2-2
Lea County, New Mexico







Part VI

Tract 1, Well No. 1
-- See Order No. WXF 548

Tract 2, Well No. 1
-- See Order No. WXF548

Tract 2, Well No. 3
-- See Order No. WXF548

Tract 2, Well No. 4
-- See Order No. WXF548

Tract 2, Well No. 5
-- See Order No. WXF548

Tract 2, Well No. 6
-- See Order No. WXF548

Tract 3, Well No. 1
-- See Order No. WXF548

Tract 3, Well No. 2
-- See Order No. WXF548

Section 31, T-17-S, R34E, Neville Penrose (Phillips)
330' FSL & 330' FWL
-- See Order No. WXF548

Tract 3, Well No. 3
-- Injection well (TA 11-15-82)
-- Section 6, T-18-S, R34E, 2301' FNL & 1650' FWL
Lea County, New Mexico
-- Spud 6-21-62, TD 4195', PBTD 4154'
-- Ran 8 5/8" csg to 302' with 325 sxs cement
Ran 4 1/2" csg to 4190' with 300 sxs cement
-- Perf 32/4117 - 4133', treated with 500 gal 15% acid.
Fraced with 15,000 gallons and 22,500# sand.
Completed 7-7-62

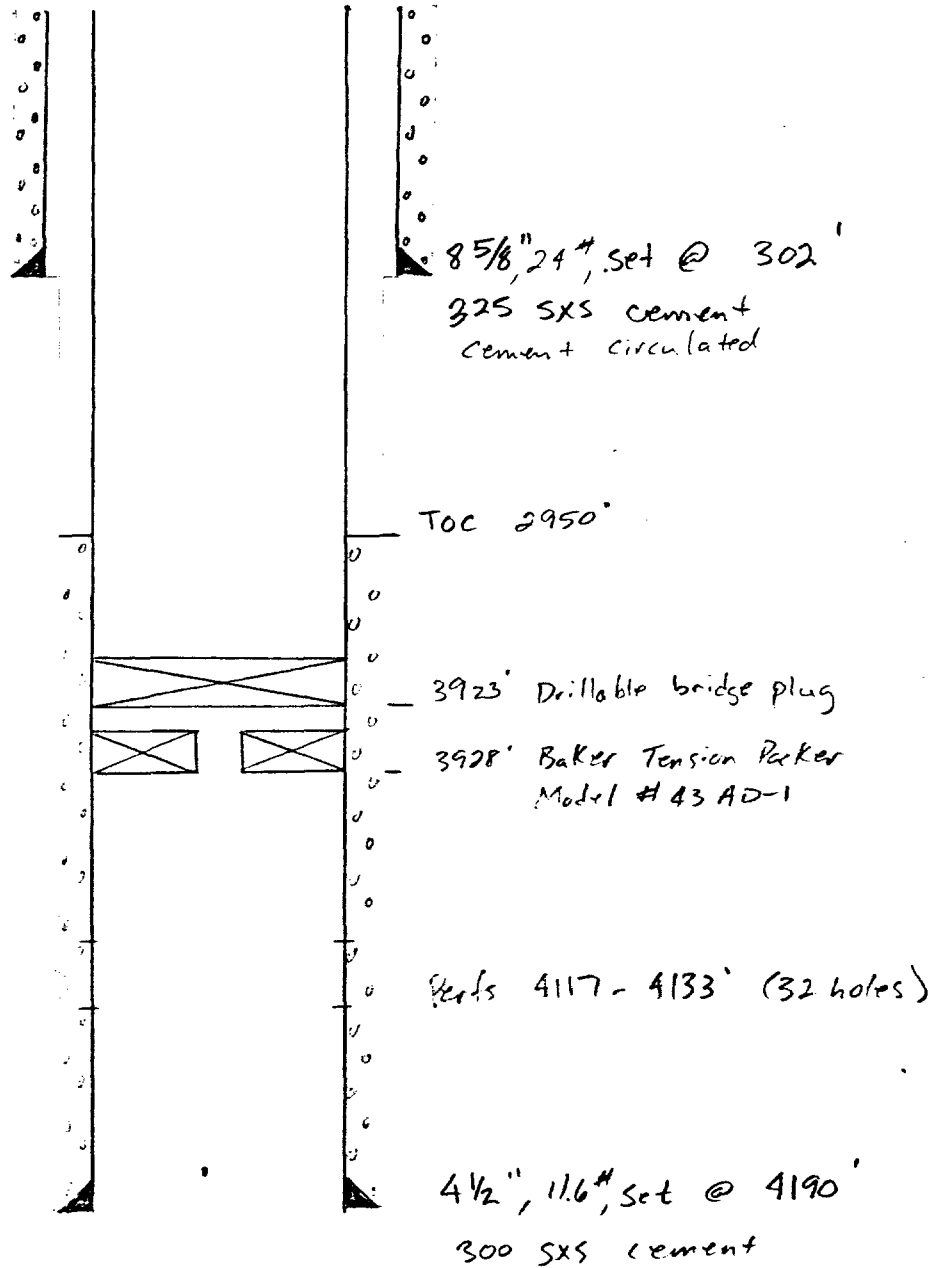
Tract 4, Well No. 1
-- See Order No. WXF548

Tract 2, Well No. 7
-- Oil well
-- Section 1, T-18-S, R33E, 1610' FNL and 2050' FEL
Lea County, New Mexico
-- Spud 2-14-85, TD 4300', PBTD 4214'
-- Ran 5 5/8" csg to 366', cemented w/ 225 sxs
Ran 4 1/2" csg to 4286', cemented w/ 1425 sxs
-- Perf 57/4116' - 4144' - Treated with 1500 gallons acid
Fraced w/10,000 gal, 1700# sand and 2226 gal CO₂
Completed 3-15-85

North EK Queen 3-3

Lea Co., N.M.

TA (11-15-82)



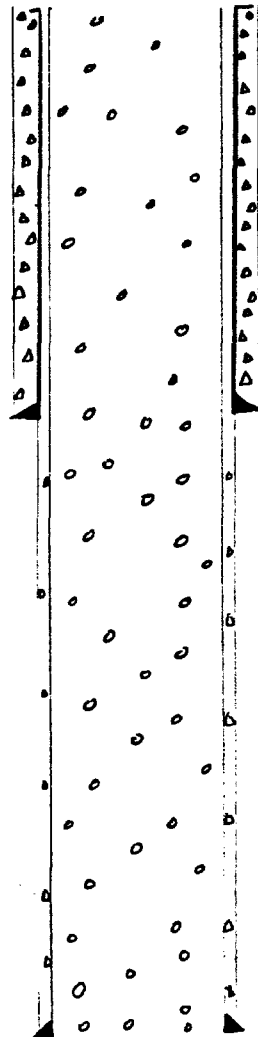
FAKI VI cont-

Pan American
990' FSL i 330 FEL
Sec 1 T18S' R33E
Lea County, New Mexico

Spud 6/4/62

COMP 7/3/62

Elev. 4098' DE



333' 13³/₈" csg cemented w/ 375SX

1745' 8⁵/₈"

Part VII

- 1) Average daily rate - 16 bbl/hr
Max daily rate - 20 bbl/hr
400 - 480 bbls fluid to be injected per day
- 2) This is a closed system
- 3) Average injection pressure - 1800#
Maximum injection pressure - 1900# - Determined by step -
rate test
- 4) Injecting produced water
- 5) -

Part VIII

See Order No. WXF548

Part IX

1500 gallons 15% HCL with Corrosion Inhibitor,
Iron sequesterant and clay stabilizer.

Part XI

See Order No. WXF548

Part XII

No faulting is shallow enough to affect aquifers
existing in the area. There is no hydrologic
connection between the injection zone and aquifers

SCHLUMBERGER

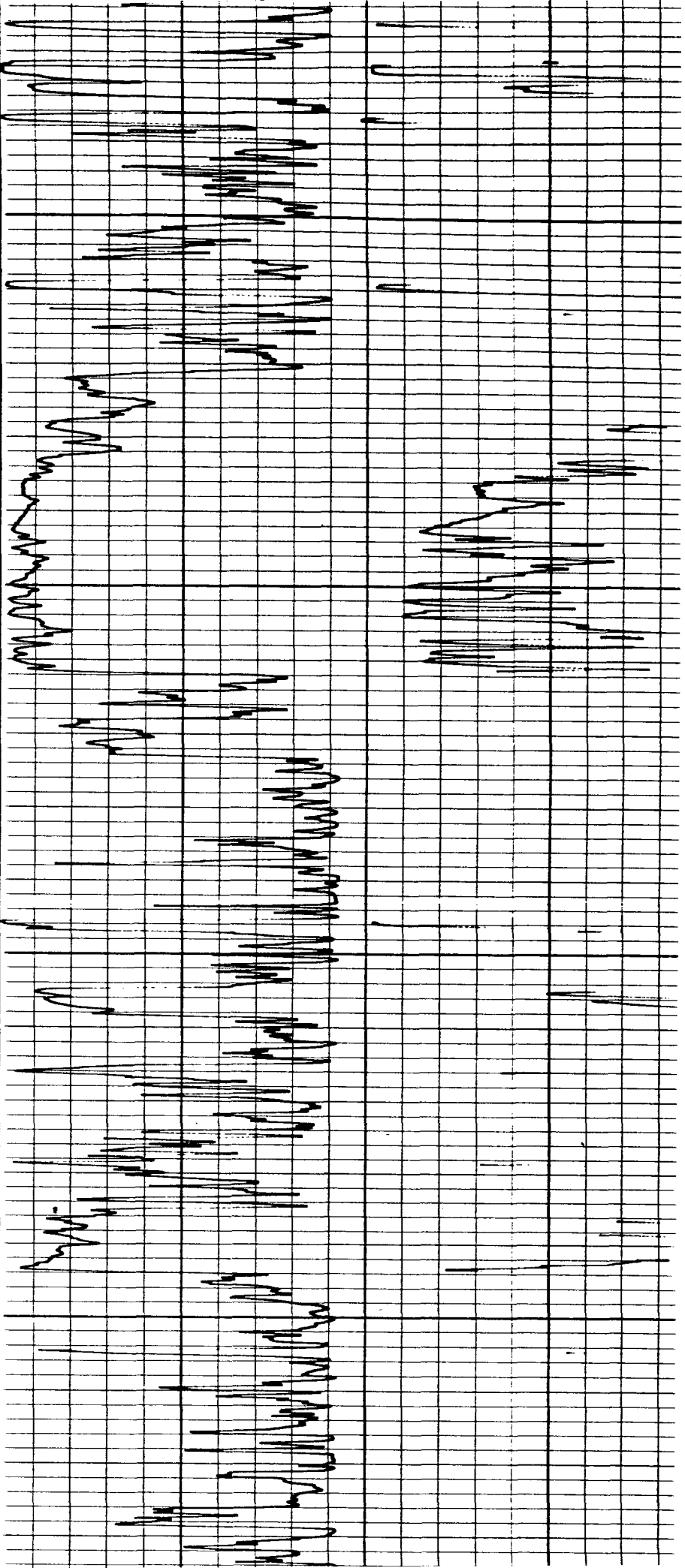
MICROLATEROLOG

SCHLUMBERGER WELL SURVEYING CORPORATION
Houston, Texas

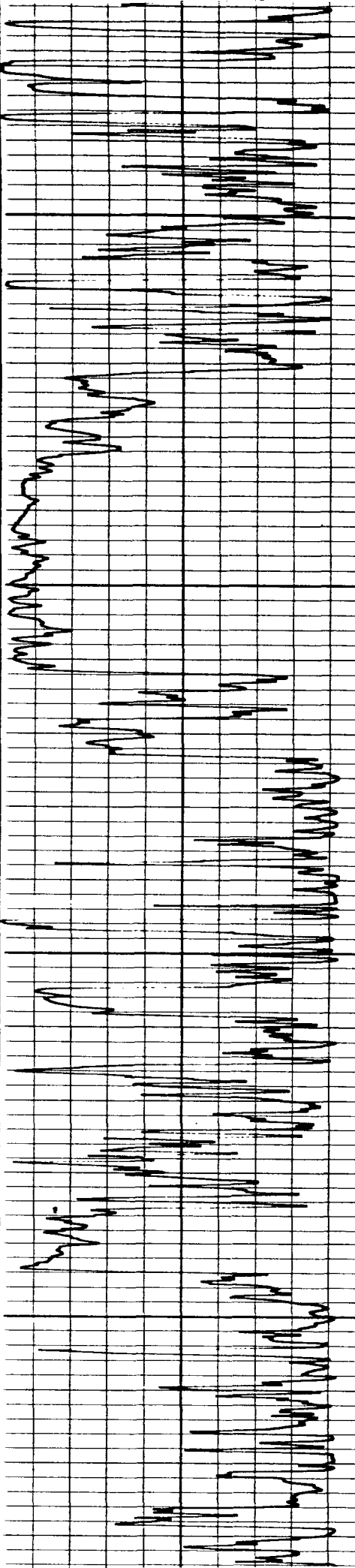
COUNTY LEA FIELD or LOCATION WILDCAT WELL CARPER-COCKBURN STATE # 2 COMPANY CARPER DRILLING COMPANY	COMPANY <u>Murphy H. Baxter</u> <u>CARPER DRILLING</u>	Other Surveys SGR, LL
	COMPANY <u>North EA Queen 2-2</u> <u>CARPER-COCKBURN</u>	Location of Well
	WELL <u>STATE Bz #2</u>	1980' FROM N/L 660' FROM E/L
	FIELD <u>WILDCAT #2-2</u>	
	LOCATION SEC. 1-18S-33E	
COUNTY LEA		Elevation: D.F.: K.B. 4106 or G.L. 4095
STATE NEW MEXICO		

Log Depths Measured From		KB	11	Ft. above GL	
RUN No.	ONE	TWO			
Date	7-17-61	9-6-61			
First Reading	3221	4500			
Last Reading	4000	3065			
Feet Measured	3221	1435			
Depth Reached	9222				
Bottom Driller	9220	12810			
Mud Nat.	SALT	SALT			
Dens. Visc.	9.5 36	9.2 44			
Mud Resist.	.057 @ 86 °F	.11 @ 75 °F		@	F
" Res. BHT	.04 @ 125 °F	.054 @ 160 °F		@	F
" pH	6 @	6 @		@	F
" Wtr. Loss	10.6 CC 30 min	6.4 CC 30 min			CC 30 min
" Rmf	.058 @ 80 °F	.08 @ 75 °F		@	F
" Rmc	@	@		@	F
Bit Size	7 7/8"	7 7/8" CSG. TO	1314		
Sonde Type	PMS-A				
Pad Type	H				
Opr. Rig Time	3 HOURS				
Truck No.	2526-HOBBS	2526-HOBBS			
Recorded By	WILSON	WILSON			
Witness	ROEDER	FOSTER			

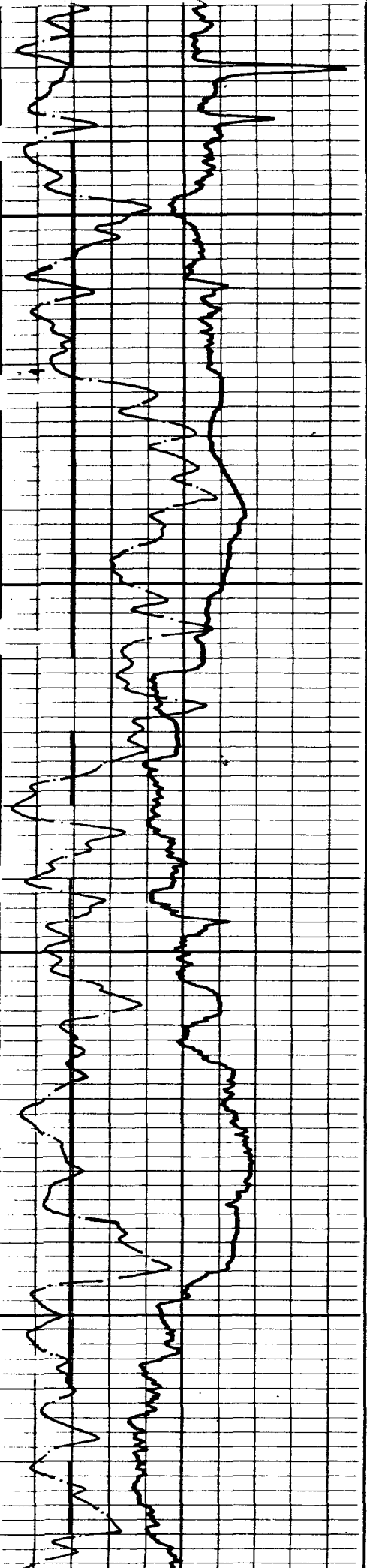
"CONFIDENTIAL"



4100



4200



MURPHY H. BAXTER

814 BUILDING OF THE SOUTHWEST

TELEPHONE 915-684-6307

MIDLAND, TEXAS 79701

MAIL ADDRESS

P. O. BOX 2040

MIDLAND, TEXAS 79702

February 4, 1986

Cities Service Oil Company
Mr. K. D. Van Horn
P. O. Box 1919
Midland, Texas 79702

RE: Convert Well to Water Injection
North EK Queen Unit 2-2
Section 1, T18S, R33E
1980' FNL & 660' FEL
Lea County, New Mexico

Gentlemen:

The attached AFE for \$8,000 will cover the cost to convert the North EK Queen Unit 2-2 to water injection.

This well is currently making a trace of oil and 100 barrels of water per day. We anticipate this conversion to offset production declines in our newer wells, North EK Queen 2-6 and 2-7.

Your .342389 share of the AFE will be \$ 2,739.11.
If this meets with your approval, please return one signed copy to this office.

Yours truly;

Chuck Sledge
Petroleum Engineer

Attachments

MURPHY H. BAXTER

814 BUILDING OF THE SOUTHWEST

TELEPHONE 915-684-6307

MIDLAND, TEXAS 79701

MAIL ADDRESS

P. O. BOX 2040

MIDLAND, TEXAS 79702

February 4, 1986

Phillips Petroleum Company
Mr. G. R. Glinsman
P. O. Box 1967
Houston, Texas 77001

RE: Convert Well to Water Injection
North EK Queen Unit 2-2
Section 1, T18S, R33E
1980' FNL & 660' FEL
Lea County, New Mexico

Gentlemen:

The attached AFE for \$8,000 will cover the cost to convert the North EK Queen Unit 2-2 to water injection.

This well is currently making a trace of oil and 100 barrels of water per day. We anticipate this conversion to offset production declines in our newer wells, North EK Queen 2-6 and 2-7.

Your .071415 share of the AFE will be \$ 571.32.
If this meets with you approval, please return one signed copy to this office.

Yours truly;

Chuck Sledge
Petroleum Engineer

Attachments

MURPHY H. BAXTER

814 BUILDING OF THE SOUTHWEST

TELEPHONE 915-684-6307

MIDLAND, TEXAS 79701

MAIL ADDRESS

P. O. BOX 2040

MIDLAND, TEXAS 79702

January 31, 1986

Scharbauer Cattle Company
P. O. Box 1471
Midland, Texas 79702

RE: North EK Queen Unit 2-2
1980' FNL & 660' FEL
Section 1, T18S, R33E
Lea County, New Mexico
Convert to Water Injection

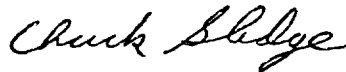
Gentlemen:

This letter is written to notify Scharbauer Cattle Company of
Murphy H. Baxter's intent to convert the North EK Queen Unit 2-2
well to injection.

The well is spotted on the attached unit map.

Thank you.

Yours truly;



Chuck Sledge
Petroleum Engineer

Attachment

MURPHY H. BAXTER

814 BUILDING OF THE SOUTHWEST
TELEPHONE 915-684-6307
MIDLAND, TEXAS 79701

MAIL ADDRESS:
P. O. BOX 2040
MIDLAND, TEXAS 79702

January 31, 1986

Amoco Productin Company
P. O. Box 68
Hobbs, New Mexico 88240

RE: North EK Queen Unit 2-2
1980' FNL & 660' FEL
Section 1, T18S, R33E
Lea County, New Mexico
Convert to Water Injection

Gentlemen:

This letter is written to formally notify Amoco Production Company of Murphy H. Baxter's intent to convert the North EK Queen Unit 2-2 to injection.

According to the application, Murphy H. Baxter must notify all leasehold operators within one-half mile of the wells location.

The well is spotted on the attached unit map.

Thank you.

Yours truly;

Chuck Sledge

Chuck Sledge
Petroleum Engineer

Form 3811, July 1983 447-845

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☐ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:
Amoco Production Company
P.O. Box 68
Hobbs, New Mexico 88240

4. Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number
P139
236456

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature - Addressee

X

6. Signature - Agent

X

7. Date of Delivery

8. Addressee's Address (ONLY if requested and fee paid)



DOMESTIC RETURN RECEIPT

Form 3811, July 1983 447-845

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☐ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:

Phillips Petro -
BH 1947
Houston - 77001

4. Type of Service:
☐ Registered ☐ Insured
☐ Certified ☐ COD
☐ Express Mail

Article Number

P186287574

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature - Addressee

X

6. Signature - Agent

X

7. Date of Delivery

FEB 10 1986

8. Addressee's Address (ONLY if requested and fee paid)

DOMESTIC RETURN RECEIPT

PS Form 3811, July 1983 447-845

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☐ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:
Scharbauer Cattle Company
P.O. Box 1471
Midland, Tx. 79702

4. Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number
P139
236457

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature - Addressee

X

6. Signature - Agent

X

7. Date of Delivery

8. Addressee's Address (ONLY if requested and fee paid)

2-4-86

DOMESTIC RETURN RECEIPT

PS Form 3811, July 1983 447-845

SENDER: Complete items 1, 2, 3 and 4.

Put your address in the "RETURN TO" space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for service(s) requested.

1. ☐ Show to whom, date and address of delivery.
2. ☐ Restricted Delivery.

3. Article Addressed to:

Cities Service Oil Co.
Mr. K.D. Van Horn
P.O. Box 1919
Midland, TX 79702

4. Type of Service:
☐ Registered ☐ Insured
☒ Certified ☐ COD
☐ Express Mail

Article Number

P186287569

Always obtain signature of addressee or agent and DATE DELIVERED.

5. Signature - Addressee

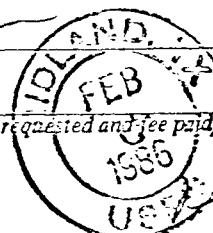
X

6. Signature - Agent

X

7. Date of Delivery

8. Addressee's Address (ONLY if requested and fee paid)



DOMESTIC RETURN RECEIPT



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION
HOBBS DISTRICT OFFICE

TONY ANAYA
GOVERNOR

March 3, 1986

POST OFFICE BOX 1980
HOBBS NEW MEXICO 88240
505/333-8161

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

RE: Proposed:

MC	_____
DHC	_____
NSL	_____
NSP	_____
SWD	_____
WFX	<u> x </u>
PMX	_____

Gentlemen:

I have examined the application for the:

Murphy H. Baxter	North EK Queen Ut. Tr-2 #2-H	1-18-33
Operator	Lease & Well No.	Unit S-T-R

and my recommendations are as follows:

OK -- but need to require step rate test for this well.

Yours very truly,

Jerry Sexton
Supervisor, District 1

/mc