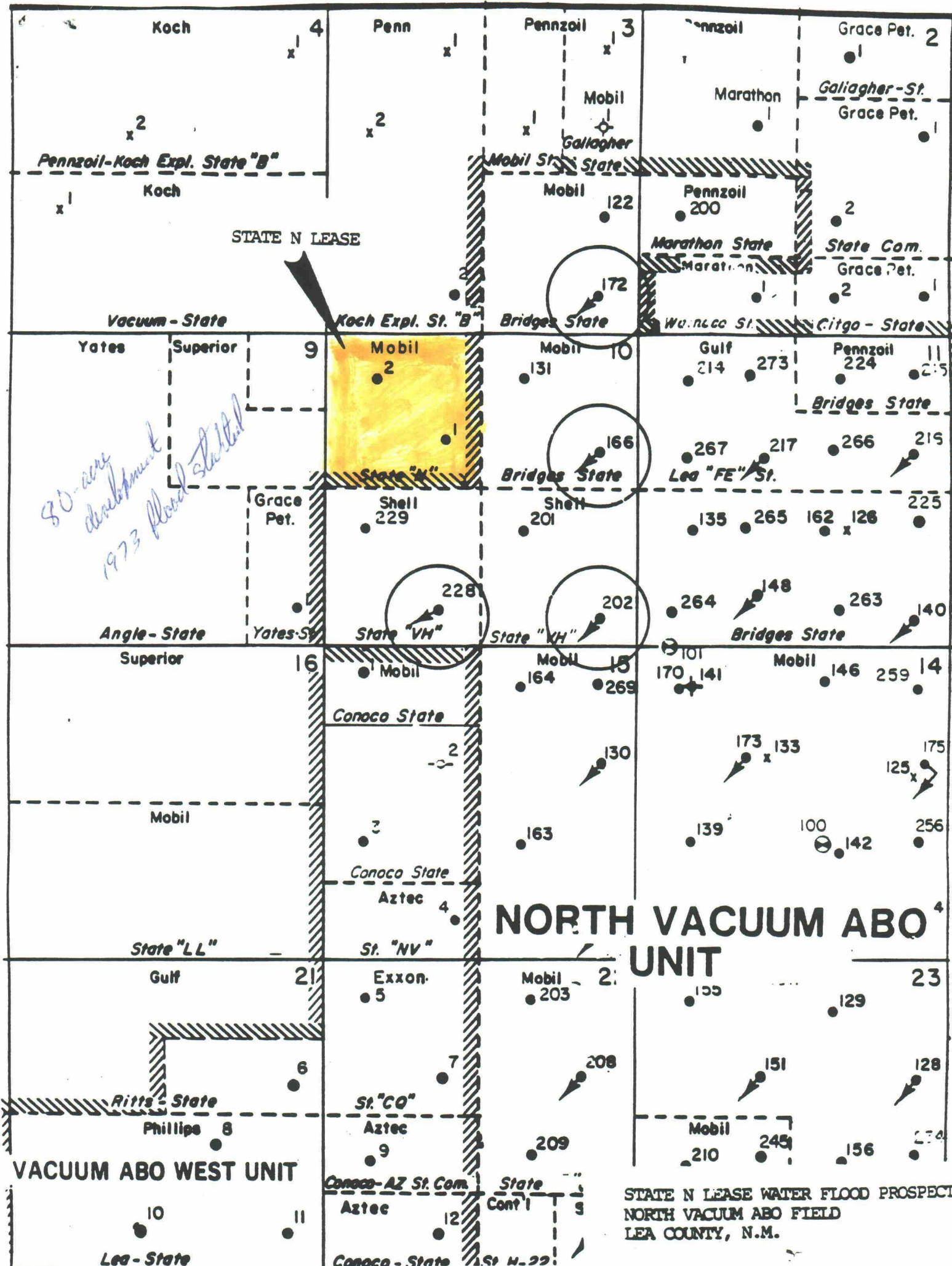
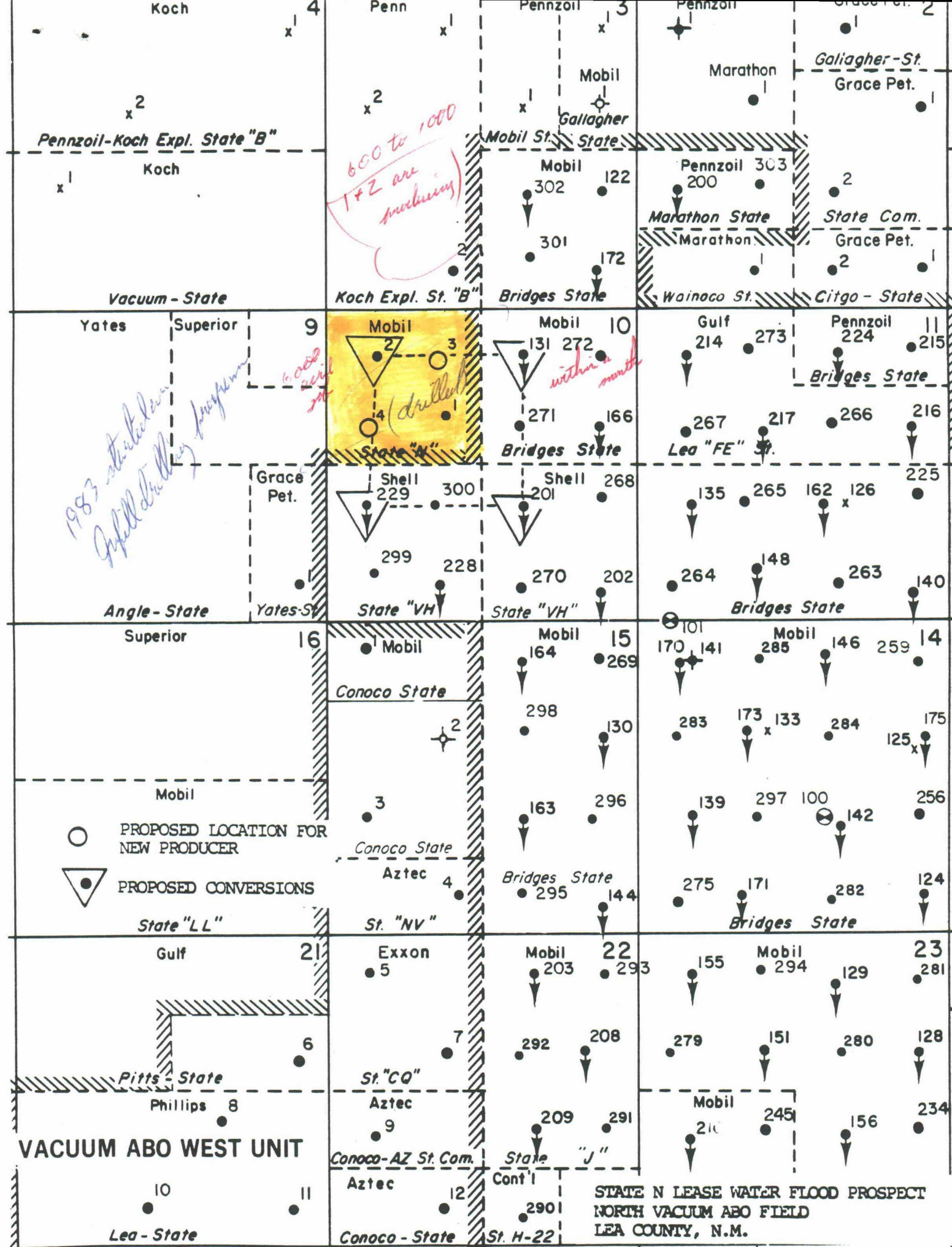






Mobil Producing Texas & New Mexico Inc.

P.O. BOX 633
MIDLAND, TEXAS 79702

January 21, 1987

MIDLAND DIVISION

State of New Mexico
Energy & Minerals Department
Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Charles E. Roybal
Acting Director

7.01
Application for Authorization to Inject
Mobil Producing TX. & N.M. Inc.
State N Well No. 2
735' FNL, 840' FWL, Unit D
Section 10, T-17-S, R-34-E
North Vacuum-Abo Field
Lea County, New Mexico

Dear Mr. Roybal:

Mobil Producing TX. & N.M. Inc. is requesting authority to commence secondary recovery operations on the State N Lease in the North Vacuum-Abo Field. Injection will be through perforations from 8714' to 8762' in the State N Well No. 2. The flooding will increase the ultimate production and prolong the expected life of the field.

Fresh water from the Ogalalla water table will be used for injection. The water will be produced from four of Mobil's water source wells in Section 14, T-17-S, R-34-E, Lea County. Water from the Ogalalla will be injected because of the adverse affects of produced water on the tight formation of the Abo injection zone.

The surface owner and all offset operators within one-half mile of the injection well have been furnished a copy of this application. Notice was by certified mail. Attached is proof of that notice and a copy of those letters with a list of operators.

Attached, in support of this application, is the data required per form C-108. The information is compiled according to the instructions on that form.

Yours very truly,



M. E. Sweeney
Environmental & Regulatory Manager

LLMaroney/dw

Attachments

xc: Mr. Jerry Sexton
NMOCD, Hobbs, NM

Mr. Perry Pearce, Attorney
P. O. Box 2307
325 Paseo De Peralta
Santa Fe, NM 87504-2307

Offset Operators

Surface Owner

APPLICATION FOR AUTHORIZATION TO INJECT

- I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☐ yes ☐ no
- II. Operator: Mobil Producing Tx. & N.M. Inc.
Address: P. O. Box 633, Midland, Texas 79702
Contact party: Lorraine Maroney Phone: (915) 688-1773
- 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: M. E. Sweeney Title Env. & Reg. Manager
Signature:  Date: January 21, 1987
- * 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. _____

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.

7.01
Application for Authorization to Inject
Mobil Producing TX. & N.M. Inc.
State N Well No. 2
735' FNL, 840' FWL, Unit D
Section 10, T-17-S, R-34-E
North Vacuum-Abo Field
Lea County, New Mexico

III. Well Data:

- A. (1) State N Well No. 2 is proposed injector
735' FNL, 840' FWL
Section 10, T-17-S, R-34-E
North Vacuum-Abo Field
Lea County, New Mexico

(2) Casing Detail:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Depth</u>	<u>Sx Cmt</u>	<u>TOC</u>	<u>Method</u>
15"	11-3/4"	250'	350	Surface	Circ.
11"	8-5/8"	3072'	1000	425'	Calculations
7-7/8"	5-1/2"	8970'	1435	1800'	Calculations

- (3) 2-7/8" N-80 tubing to be hung at 8650'
- (4) Permanent type packer with seal assembly to be hung at 8650'
- B. (1) Injection is the Abo formation of the North Vacuum-Abo Field
- (2) Injection will be through perforations from 8714'-8762'
- (3) The well was drilled as an oil producer and was completed in April 17, 1972
- (4) No other intervals have been perforated in the subject well bore
- (5) The next higher oil/gas zone is the Glorieta at 6090' which is more than 1 mile from the subject well
The next lower oil/gas zone is the Wolfcamp at 9800' which is more than 1/2 mile from the subject well

7.01

Application for Authorization to Inject
Mobil Producing TX. & N.M. Inc.

State N Well No. 2
735' FNL, 840' FWL, Unit D
Section 10, T-17-S, R-34-E
North Vacuum-Abo Field
Lea County, New Mexico

VI: TABULATION OF DATA OF WELLS WITHIN AREA OF REVIEW

<u>Operator Name</u> <u>Lease Name</u>	<u>Well No.</u>	<u>Location</u>	<u>Unit</u> <u>Letter</u>	<u>Type</u> <u>Well</u>	<u>(ft.)</u> <u>Depth</u>	<u>Completion</u> <u>Interval/ft</u>	<u>Date</u> <u>Drilled</u>	<u>Current</u> <u>Status</u>
Mobil Producing TX. & N.M. Inc. State N, Sec. 10, T-17-S, R-34-E	1	1780' FNL 1980' FWL	F	Oil	8810	8702-8771	2-18-72	Producing
	3	800' FNL 2010' FWL	C	Oil	8950	8706-8752	June 87	Testing
	4	1980' FNL 850' FWL	E	Oil	N/A	N/A	N/A	Drilling
North Vacuum Abo Unit Sec. 10, T-17-S, R-34-E	131	770' FNL 1980' FEL	B	WIW	8850	8663-8721	9-26-71	App WIW
	229	660' FWL 2000' FSL	L	WIW	8987	8745-8803	1976	Inj.
	271	1980' FNL 1980' FEL	G	Oil	8734	8704-8730	11-26-84	Producing
Koch Exploration Co. Miller "B" State Sec. 3, T-17-S, R-34-E	2	660' FSL 2105' FWL	N	Oil	8877	8687-8742	8-30-72	Producing

Mobil Producing Texas & New Mexico Inc.

P.O. BOX 633
MIDLAND, TEXAS 79702

January 21, 1987

MIDLAND DIVISION

Eidson Ranch
P. O. Box 1286
Lovington, NM 88260

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

7.01

Application for Authority to Inject
Mobil Producing TX. & N.M. Inc.
State N Well No. 2
Unit D, 735' FNL, 840' FWL
Section 10, T-17-S, R-34-E
North Vacuum-Abo Field
Lea County, New Mexico

Gentlemen:

Mobil Producing TX. & N.M. Inc. is applying to the New Mexico Oil Conservation Division for authority to inject fresh water into the Abo formation of the North Vacuum-Abo Field. Injection will be down the State N Well No. 2

Attached, per Statewide Rule 701.B (2), is a copy of the application. A hearing has been set for February 4, 1987 in Santa Fe, New Mexico.

Yours very truly,



M. E. Sweeney

LLMaroney/dw

Attachments

xc: NMOCD, Santa Fe & Hobbs, NM

Mobil Producing Texas & New Mexico Inc.

P.O. BOX 633
MIDLAND, TEXAS 79702

January 21, 1987

MIDLAND DIVISION

Koch Exploration
P. O. Box 2256
Wichita, Kansas 67201

Attn: Mr. Vernon J. Lowe

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

7.01
Application for Authority to Inject
Mobil Producing TX. & N.M. Inc.
State N Well No. 2
Unit D, 735' FNL, 840' FWL
Section 10, T-17-S, R-34-E
North Vacuum-Abo Field
Lea County, New Mexico

Dear Mr. Lowe:

Mobil Producing TX. & N.M. Inc. is applying to the New Mexico Oil Conservation Division for authority to inject fresh water into the Abo formation of the North Vacuum-Abo Field. Injection will be down the State N Well No. 2

Attached, per Statewide Rule 701.B (2), is a copy of the application. A hearing has been set for February 4, 1987 in Santa Fe, New Mexico.

Yours very truly,



M. E. Sweeney

LLMaroney/dw

Attachments

xc: NMOCD, Santa Fe & Hobbs, NM

Mobil Producing Texas & New Mexico Inc.

P.O. BOX 633
MIDLAND, TEXAS 79702

January 21, 1987

MIDLAND DIVISION

Yates & Yates
c/o John A. Yates
207 South 4th Street
Artesia, NM 88210

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

7.01
Application for Authority to Inject
Mobil Producing TX. & N.M. Inc.
State N Well No. 2
Unit D, 735' FNL, 840' FWL
Section 10, T-17-S, R-34-E
North Vacuum-Abo Field
Lea County, New Mexico

Dear Mr. Yates:

Mobil Producing TX. & N.M. Inc. is applying to the New Mexico Oil Conservation Division for authority to inject fresh water into the Abo formation of the North Vacuum-Abo Field. Injection will be down the State N Well No. 2

Attached, per Statewide Rule 701.B (2), is a copy of the application. A hearing has been set for February 4, 1987 in Santa Fe, New Mexico.

Yours very truly,



M. E. Sweeney

LLMaroney/dw

Attachments

xc: NMOCD, Santa Fe & Hobbs, NM

7.01
Application for Authorization to Inject
Mobil Producing TX. & N.M. Inc.
State N Well No. 2
735' FNL, 840' FWL, Unit D
Section 10, T-17-S, R-34-E
North Vacuum-Abo Field
Lea County, New Mexico

Offset Operators With 1/2 Mile Radius

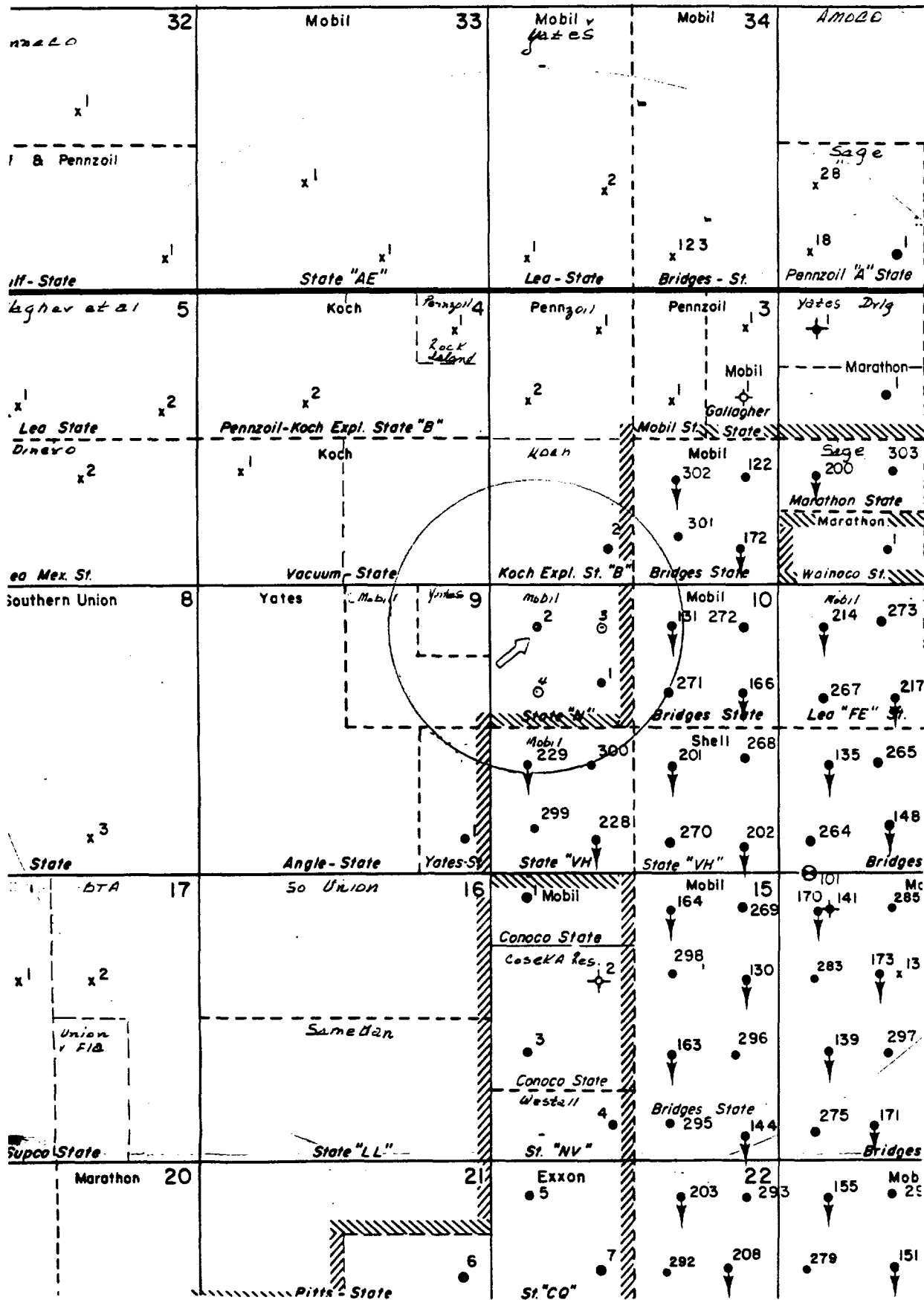
Koch Exploration
P. O. Box 2256
Wichita, Kansas 67201
Attention: Mr. Vance J. Lowe

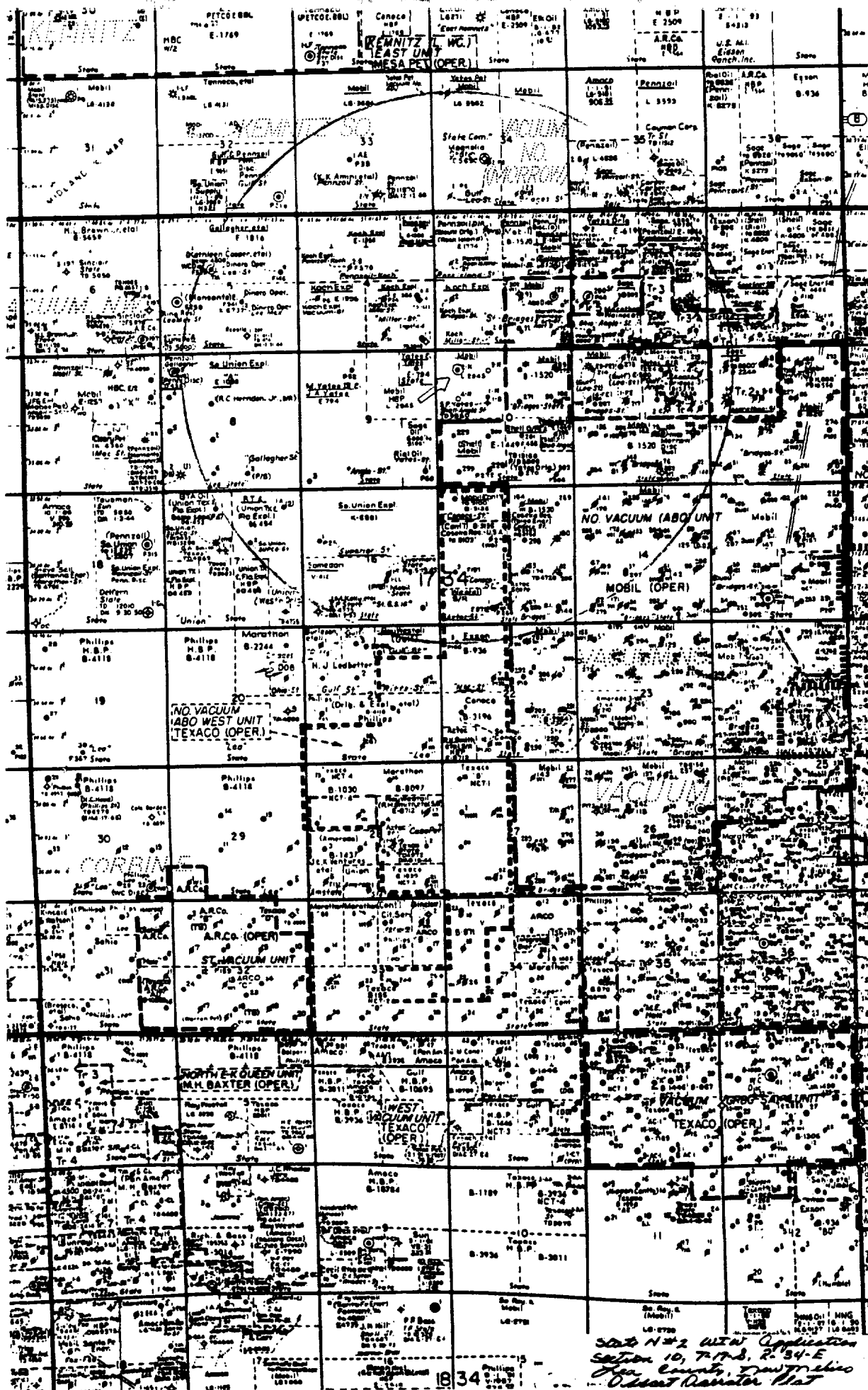
Yates & Yates
c/o John A. Yates
207 South 4th Street
Artesia, New Mexico 88210

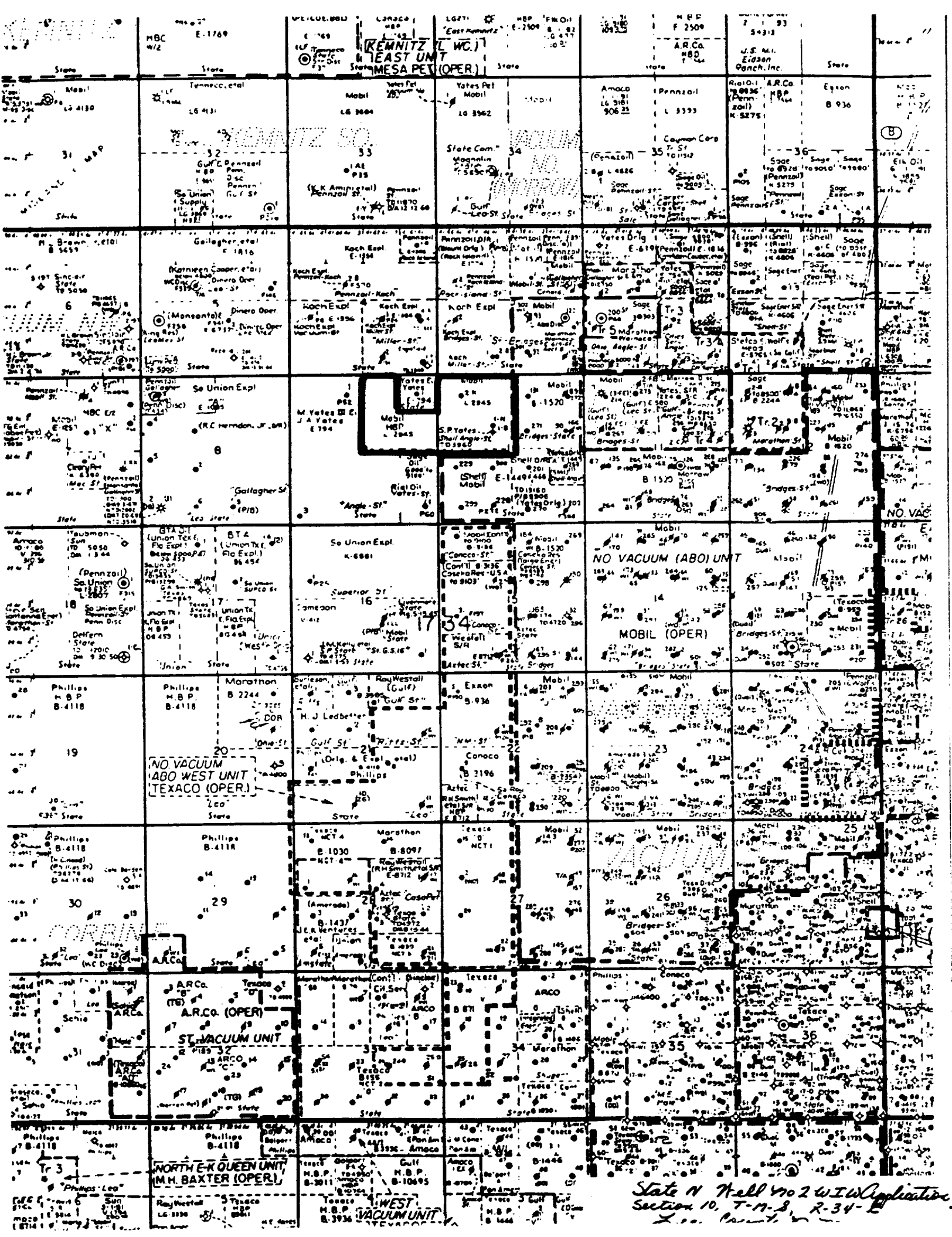
Surface Owner

Eidson Ranch
P. O. Box 1286
Lovington, New Mexico 88260

R - 34 - E







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LAND OFFICE	
OPERATOR	

Form C-105
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease
State ☒ Fee ☐
5. State Oil & Gas Lease No.
L-2945

1a. TYPE OF WELL	7. Unit Agreement Name
OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER ☐	
b. TYPE OF COMPLETION	8. Farm or Lease Name
NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER ☐	State "N"

2. Name of Operator	9. Well No.
The Superior Oil Company	2

3. Address of Operator	10. Field and Pool, or Wildcat
P. O. Box 1900, Midland, Texas 79701	Undesignated

4. Location of Well	12. County
UNIT LETTER <u>D</u> LOCATED <u>735</u> FEET FROM THE <u>North</u> LINE AND <u>840</u> FEET FROM	Lea

THE <u>West</u> LINE OF SEC. <u>10</u> TWP. <u>17-S</u> RGE. <u>34-E</u> NMPM	
---	--

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Casinghead
3-3-72	3-28-72	4-13-72	RKB: 4082, GL: 4070	4070

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools	Cable Tools
8970	8909	- - -	→	0-8970	- - -

24. Producing Interval(s), of this completion - Top, Bottom, Name	25. Was Directional Survey Made
Abo Zone Pay Top: 8714 Bottom: 8762	No

26. Type Electric and Other Logs Run	27. Was Well Cored
Schl. GR-Sidewall Neutron - Caliper & Dual Laterolog	No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
11-3/4"	43#	250	15"	350 Sacks circulated	None
8-5/8"	24# & 32#	3072	11"	1000 Sks. T cmt @ 425'	None
5-1/2"	15.5# & 17#	8970	7-7/8"	1435 sks. T cmt @ 1800'	None

29. LINER RECORD	30. TUBING RECORD
SIZE TOP BOTTOM SACKS CEMENT SCREEN	SIZE DEPTH SET PACKER SET
None	2-1/2" 8,774 None

31. Perforation Record (Interval, size and number)	32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.
8760-62', 8752-58', 8741-43', 8733', 8724-28', 8714-17' w/2 jet shots per foot. Total of 36 holes, I.D. of holes .50"	DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED
	8714'-8762' 3000 gal 20% acid
	8714'-8762' 20,000 gal 20% acid

33. PRODUCTION							
Date First Production	Production Method (Flowing, gas lift, pumping - Size and type pump)	Well Status (Prod. or Shut-in)					
4-5-72	Pump: 2-1/2" x 1-1/4" x 10' x 12' x 16'	Prod.					
Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
4-22-72	24	--	→	77	92	6	1195
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)	
---	25	→	77	92	6	36.6	

34. Disposition of Gas (Sold, used for fuel, vented, etc.)	Test Witnessed By
Vented at present pending pipeline connection.	A. B. Taylor

35. List of Attachments	THE SUPERIOR OIL CO.
GR - Sidewall Neutron - Caliper & Dual Laterolog	

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief. APR 27 1972

SIGNED <u>T. D. Clay</u> TITLE <u>Petroleum Engineer</u> DATE <u>4-24-72</u>
COPY TO: <u>M. U. BROUSSARD</u> <u>J. S. MARTIN</u> <u>J. A. BOBBITT</u> <u>M. L. LEIERER</u>

STATE "N" NO. 2
NORTH VACUUM FIELD
LEA COUNTY, NEW MEXICO

KB: 4082'
GL: 4070'
TD: 8970'
PBD: 8909'
TLD: 12.00'

11-3/4", 42#
H-40, ST&C
@250'
w/350 sks

8-5/8", 24#, & 32#,
K-55, ST&C, @ 3072'
w/1000 sxs,
(TOC @ 425')

279 jts of
2-7/8", 6.5#, J-55,
EUE, R-2, 8rd tubing
w/tail @ 8801'

5-1/2", 15.5# & 17#, N-80 &
K-55, L+ST & C @ 8970'
w/1435 sax
(TOC @ 1800')

Rods and Pump as ran:

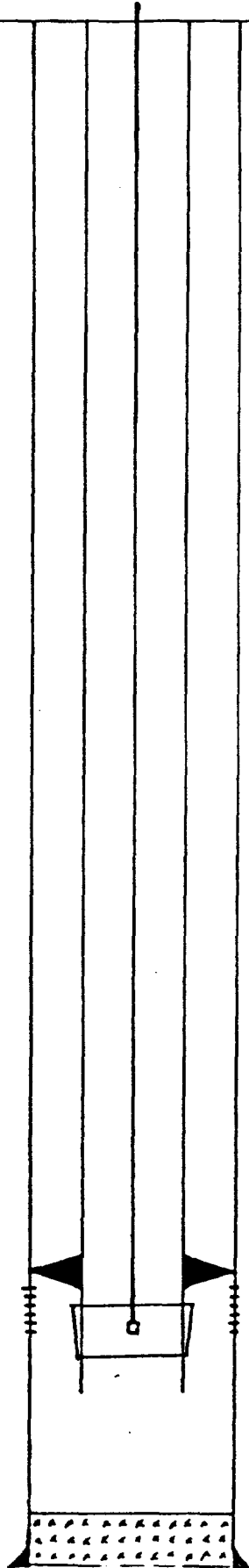
2-1/2" X 1-1/4" X 16' pump
@ 8769'
10 X 1" grade 75
207 X 3/4" grade 75
79 X 7/8" grade 81
53 X 1" grade 75

Baker Model "B" tension anchor
set w/19,000# and 50,000# shear
pins @ 8703'

Perforations 8714'-8762'0/A (36 holes)

2-1/2" FP mech SN w/out bushing
@ 8769'

PBD @ 8909'
TD @ 8970'



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LAND OFFICE	
OPERATOR	

**NEW MEXICO OIL CONSERVATION COMMISSION
WELL COMPLETION OR RECOMPLETION REPORT AND LOG**

Form C-105
Revised 1-1-65

5a. Indicate Type of Lease	
State ☒	Fee ☐
5. State Oil & Gas Lease No. L-2945	

1a. TYPE OF WELL		7. Unit Agreement Name	
OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER ☐		7. Unit Agreement Name 	
b. TYPE OF COMPLETION		8. Farm or Lease Name	
NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER ☐		State "N"	

2. Name of Operator The Superior Oil Company		9. Well No. 1	
3. Address of Operator P. O. Box 1900, Midland, Texas 79701		10. Field and Pool, or Wildcat North Vacuum-Abo	
4. Location of Well			

UNIT LETTER F LOCATED 1780 FEET FROM THE North LINE AND 1980 FEET FROM		12. County Lea	
THE West LINE OF SEC. 10 TWP. 17-S RGE. 34-E NMPM			

15. Date Spudded 1-20-72	16. Date T.D. Reached 2-18-72	17. Date Compl. (Ready to Prod.) 2-25-72	18. Elevations (DF, RKB, RT, GR, etc.) RKB: 4073, GR: 4061	19. Elev. Casinghead 4061
20. Total Depth 8910	21. Plug Back T.D. 8876	22. If Multiple Compl., How Many -----	23. Intervals Drilled By 0-8910	24. Was Directional Survey Made No

24. Producing Interval(s), of this completion - Top, Bottom, Name Abo Zone. Top: 8702' Bottom: 8771'		25. Was Directional Survey Made No
--	--	--

26. Type Electric and Other Logs Run Schl. GR-Sidewall Neutron-Caliper & Dual Laterolog	27. Was Well Cored No
---	---------------------------------

28. CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
11-3/4"	42#	250'	15"	350 Sks. circulated	None
8-5/8"	32# & 24#	3,082'	11"	1,000 Sks. T. Cmt. 600'	None
5-1/2"	17# & 15.5#	8,910'	7-7/8"	1,250 Sks. T. cmt. 3200'	None

29. LINER RECORD					30. TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
	None				2-1/2"	8756	Tbg. anchor at 8689'

31. Perforation Record (Interval, size and number) 8702'-8704', 8712'-8715' & 8740'-8750' with 2 jet shots per foot. Total of 30 holes I.D. of holes 0.51".		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
		DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
		8702-8750'	750 gal 15% Halib. MCA.
		8702-8750'	10,000 gal 20% NE acid.
		COPY TO: M. U. BROUSSARD J. A. BOBBITT	
		DATE: R. G. BIESELE E. E. BRANSON	

33. PRODUCTION							
Date First Production 2-24-72		Production Method (Flowing, gas lift, pumping - Size and type pump) Swab and Flowing			Well Status (Prod. or Shut-in) Prod.		
Date of Test 2-27-72	Hours Tested 8	Choke Size 1"	Prod'n. For Test Period 390	Oil - Bbl. 130	Gas - MCF 86	Water - Bbl. 8	Gas - Oil Ratio 662
Flow Tubing Press. Varied	Casing Pressure 0	Calculated 24-Hour Rate 390	Oil - Bbl. 390	Gas - MCF 258	Water - Bbl. 24	Oil Gravity - API (Corr.) 36.4°	

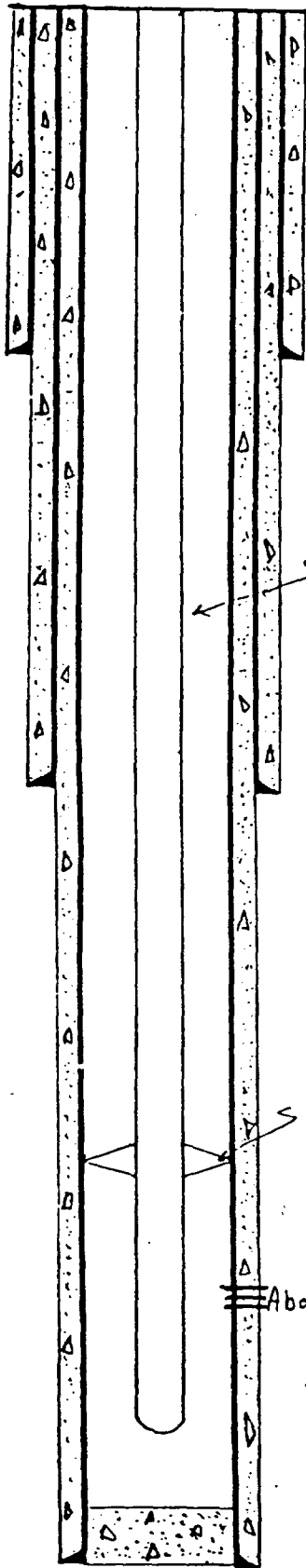
34. Disposition of Gas (Sold, used for fuel, vented, etc.) Vented at present pending pipeline connection	Test Witnessed By A. B. Taylor
--	--

35. List of Attachments GR-Sidewall Neutron-Caliper & Dual Laterolog
--

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.		
SIGNED T. D. Clay	TITLE Petroleum Engineer	DATE 3/14/72

DATE 2-4-86 WELL NO. 1 LEASE STATE N FIELD NORTH VACUUM ABO
 LOCATION F-1780 FNL-1980 FNL COU 1 LEA STATE N.M. GL 4061
10-175-34E SIGNED L. D. Gilpin DF 4073
 ZERO

PRESENT



— $11\frac{3}{4}$ ", 42" H-40, ST+C @ 250' w/ 350 sx, CIRC, 15" HOLE

← 282 JTS 6.5" J55 EUE $2\frac{7}{8}$ " Tbg TO 8787'

— $8\frac{5}{8}$ ", 24" + 32", K-55, ST+C, @ 3082, w/ 1000 sx
 (TOC @ 600'), 11" HOLE

← BAKER $5\frac{1}{2}$ " MODEL B TENSION Tbg ANCHOR @ 8685' w/ 16000 # T

≡ Abo PERFS @ 8702-04; 8712-15; 40-50 w/ 2JSPP + 36 HOLES

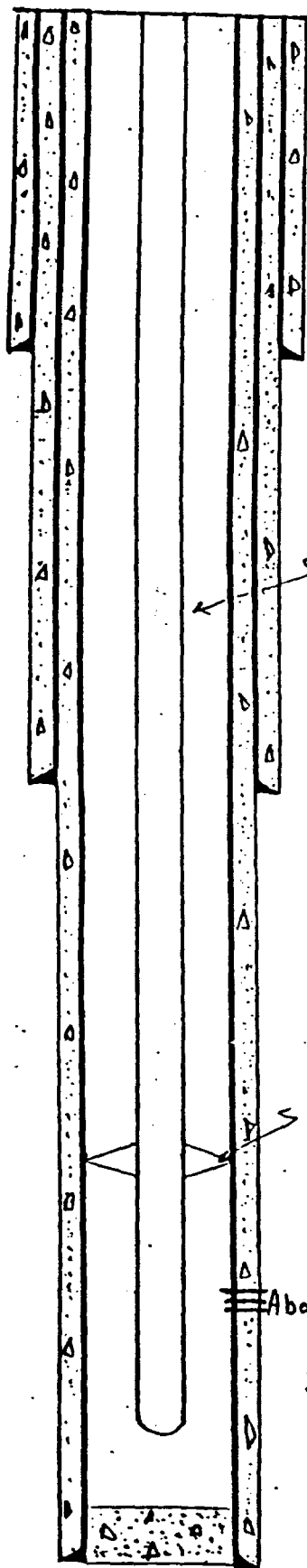
SN @ 8750'

— $5\frac{1}{2}$ ", 15.5" + 17", N-80 + K-55, L+ST+C @ 8910 w/ 1250 sx
 (TOC @ 3200'), $7\frac{7}{8}$ " HOLE

TD-8910'
 PBTD-8876'

DATE 2-4-86 WELL NO. 1 LEASE STATE N FIELD NORTH VACUUM Abo
LOCATION F-1780 FNL-1980 FNL COU...Y LEA STAT. N. M. GL 4061
10-175-34E SIGNED L. D. Gilpin DF KB 4073
ZERO

PROPOSED



— $11\frac{3}{4}$ ", 42" H-40, ST+C @ 250' w/ 350-sx, CIRC, 15" HOLE

← 282 JTS 6.5" J55 EUE $2\frac{7}{8}$ " Tbg to 8787'

— $8\frac{5}{8}$ ", 24" + 32", K-55, ST+C, @ 3082, w/ 1000 sx
(TOC @ 600'), 11" HOLE

← BAKER $5\frac{1}{2}$ " MODEL B TENSION Tbg ANCHOR @ 8685' w/ 16000 # T

← Abo Pearls @ 8702-04; 8712-15; 40-50 w/ 2JSPF + 30 HOLES - 8694-98; 8765-69
88-92; 8802-12; 18-24; 36-40; 48-50; 8857-64 w/ 1JSP 49 HOLES
SN @ 8750'

— $5\frac{1}{2}$ ", 15.5" + 17", N-80 + K-55, L+ST+C @ 8910 w/ 1250sx
(TOC @ 3200'), $7\frac{1}{8}$ " HOLE

TD-8910'
PBTD-8908

ILLEGIBLE

10-11-71

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Form C-105
Revised 1-1-65

NEW MEXICO OIL CONSERVATION COMMISSION WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5a. Indicate Type of Lease
State ☒ Fee ☐

5. State Oil & Gas Lease No.
8-1520

7. Unit Agreement Name

8. Farm or Lease Name

Bridges State

9. Well No.

131

10. Field and Pool, or Wildcat
Vacuum Abo, North

1a. TYPE OF WELL

OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER ☐

b. TYPE OF COMPLETION

NEW WELL ☒ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER ☐

2. Name of Operator

Mobil Oil Corporation

3. Address of Operator

Box 633, Midland, Texas 79701

4. Location of Well

UNIT LETTER **B** LOCATED **770** FEET FROM THE **North** LINE AND **1960** FEET FROM

THE **East** LINE OF SEC. **10** - TWP. **17-S** RGE. **34-E** NMPM

12. County

Lee

15. Date Spudded **9-2-71** 16. Date T.D. Reached **9-21-71** 17. Date Compl. (Ready to Prod.) **9-26-71** 18. Elevations (DF, RKB, RT, GR, etc.) **4061 GR** 19. Elev. Casinthead **-**

20. Total Depth **8,850** 21. Plug Back T.D. **-** 22. If Multiple Compl., How Many **-** 23. Intervals Drilled By Rotary Tools ☒ Cable Tools ☐

24. Producing Interval(s), of this completion - Top, Bottom, Name

8,663-8,721 Vacuum Abo, North

25. Was Directional Survey Made

Yes

26. Type Electric and Other Logs Run

Schl. GR-Collar-Corr. SWN. Dual Laterolog

27. Was Well Cored

No

28. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/4	334	255	17-1/2	450 X	-
8-5/8	284	3,052	11	1400 X	-
5-1/2	158 & 174	8,850	7-7/8	2300 X	-

29. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2-7/8	8,795	-

31. Perforation Record (Interval, size and number)

8,663, 67, 75, 96, 99, 8,704, 08, 10, 13 & 8,721

2-JSPF total of 20 holes

32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.

DEPTH INTERVAL **8,663-8,721** AMOUNT AND KIND MATERIAL USED
Ramco acidized w/10,000 gals 15% NE acid + 50 FR/1000 gals + 20 RCN Ball Sealers

33. PRODUCTION

Date First Production 9-26-71		Production Method (Flowing, gas lift, pumping - Size and type pump) Pump 2" x 1-1/4 x 12'				Well Status (Prod. or Shut-in) Prod.	
Date of Test 10-7-71	Hours Tested 24	Choke Size 2" Tub.	Prod'n. For Test Period	Oil - Bbl. 224	Gas - MCF 198.2	Water - Bbl. 8-BLN	Gas - Oil Ratio 885
Flow Tubing Press. -	Casing Pressure -	Calculated 24-Hour Rate	Oil - Bbl. -	Gas - MCF -	Water - Bbl. -	Oil Gravity - API (Corr.) 34.3	

34. Disposition of Gas (Sold, used for fuel, vented, etc.)

Sold to Phillips Petroleum

Test Witnessed By

H. R. Elledge

35. List of Attachments

(1) Daily Drilling Summary

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.

SIGNED

[Signature]

TITLE

Authorized Agent

DATE

10-11-71

X

WUM (ABO) NORTH FIELD

± 131

LEA COUNTY, NM

B-10-175-34E

Elevation:

BJ cmt w/ 450 SX Class H
cmt w/ 1/4 # celloflute/SX + 2%
CaCl₂/SX. cmt. circ.

9 JTS 12 3/4 33# J-55
LTFC CSG set @ 255'

BJ cmt w/ 1200 SX TLW w/
7 1/2 # salt/SX + 200 SX Class C
cmt w/ 2.6 # salt/SX. cmt circ.

2007'
76 JTS 8 5/8 28# STFC
L.B. FOSTER CSG set @ 235'

TBG: 64 JTS 2 7/8 to 2007'
212 JTS 2 7/8, GUIB
TA CATCHER, 5 JTS 2 7/8
to 8795'

GUIB TA set @ 8606'
w/ 21000 # T

ABO PERFS: 8663; 67; 75; 76;
8699'
8704; 08; 10; 13;
8721' w/ 215PF
- 20 holes

TBG PERFS: 8762-65'

PSTD 8817'
269 JTS 5 1/2 17# 15#

STIC & LTFC CSG set @ 8850'

SN @ 8761'

BJ cmt w/ 2100 SX TLW w/ 1/4 #
Floccle/SX in 1st 1000 SX + 200 SX
Class C float cmt. cmt circ.

TD 8850'

PSTD 8817'

diagram

MOBIL PRODUCING TEXAS & NEW MEXICO INC.
PROPOSED WATER INJECTION WELLS
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Well Data

North Vacuum Abo Unit #131
790' FNL & 1980' FEL, Sec. 10, Unit 8, 17-S, 34-E

12-3/4" @ 255' w/450 sx circ.
8-5/8" @ 2356' w/1400 sx circ.
5-1/2" @ 8850' w/2300 sx circ.

2-3/8" N-80 Buttress Tubing

Baker Model NB Packer @ 8550'

Abo

ION L-10-17S-34E

SIGNED R.W. Petty

N. Vacuum Abo Unit

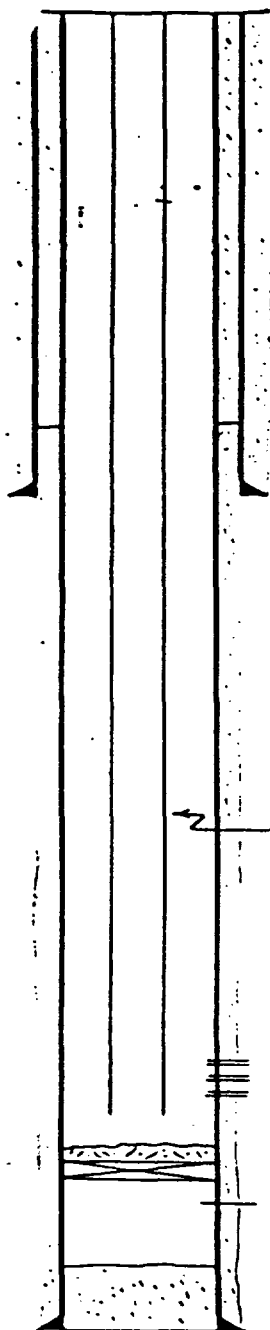
G.L. 4020

D.F. 4064

K.B. 4036

ZERO 16 AGL

NVAU #229



— 1635' 8 5/8" csg; 11" hole
cemented w/ 900 sx class C w/ 2% CaCl₂ + 4% gel +
200sx class C w/ 2% CaCl₂. cmt circ.

— 2 7/8" tbg

— 8745', 55', 75', 80', 92', 8800', 03'. 1 JS PF. 7 holes.

— 5 1/2" CI BP. Capped w/ 10' cmt. PBTD @ 8870'.

— Abo perfs: 8901', 06', 24'. 1 JS PF 3 holes

— 8945'

— 8987' 5 1/2", 17" csg; 7 3/8" hole
cemented w/ 250 sx Class H neat and 1000 sx Class C neat.

No completion report available.

NORTH VACUUM ABO UNIT W-1 R229

VACUUM ABO, NORTH FIELD

LEA COUNTY, NEW MEXICO

L-10-7175-R34E

Howea cement w/ 900 SX Class
C w/ 2% CaCl_2 + 4% gel +
200 SX Class C w/ 2% CaCl_2 .
cement circ.

est. TDC @ 1000'

8 5/8" 24# K-55 CSG set
@ 1634'

B1 cement w/ 250 SX Class H
neat in 1st sty 5' 1000 SX
class C neat in 2nd sty.
cement did not circ.

TD 8987'
PBD 8945'

ABO PERFS:

8745; 55; 75; 80; 92;

8800; 03;

8901; 06; 24 w/ JSPF-10 holes.

5 1/2" 17# N-80 LTIC (2621').

17# K-55 STIC (1895').

50# K-55 (3711') BTIC;

50# J-55 LTIC (1761') CSG

set @ 6987'

W-1 R229

MOBIL PRODUCING TEXAS & NEW MEXICO INC.
PROPOSED WATER INJECTION WELLS
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Well Data

North Vacuum Abo Unit #229
2000' FSL & 660' FWL, Sec. 10, Unit L, 17-S, 34-E

8-5/8" @ 1635' w/1100 sx circ.
5-1/2" @ 8987' w/1250 sx circ.

2-3/8" N-80 Buttress Tubing

Baker Model NB Packer @ 8550'

Abo

8745' - 8803'

Originally drilled for production

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Form C-105
Revised 10-83

NEW MEXICO OIL CONSERVATION COMMISSION WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1. Indicate Type of Lease	
State ☒	Fee ☐
2. State of Texas Lease No.	
B-1520-1	

10. TYPE OF WELL	
OIL WELL ☒	GAS WELL ☐ DRY ☐ OTHER ☐
11. TYPE OF COMPLETION	
NEW WELL ☐ WORK OVER ☐	DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER ☐

3. Well Agreement Name
North Vacuum Abo Unit
4. Name of Lease Name

5. Name of Operator
Mobil Producing TX. & N.M. Inc.

6. Well No.
271

7. Address of Operator
9 Greenway Plaza, Suite 2700, Houston, Texas 77046

8. Field, Pool, or Wildcat
Vacuum Abo, North

4. Location of Well	
UNIT LETTER <u>G</u> LOCATED <u>1980</u> FEET FROM THE <u>North</u> LINE AND <u>1980</u> FEET FROM <u>East</u> LINE OF SEC. <u>10</u> TWP. <u>17S</u> RGE. <u>34E</u>	

9. Well No.
271

15. Date Spudded	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (D.F., RKB, RT, GR, etc.)	19. Elev. Casinghead
11-1-84	11-26-84	12-18-84	4060 GR	-

20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools	Cable Tools
8800	8790			0-8800	

24. Producing Interval(s), of this completion - Top, Bottom, Name	25. Was Directional Survey Made
Pf. 8704-8730, Abo	No

26. Type Electric and Other Logs Run	27. Was Well Cored
	No

28. CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
13-3/8	48#	422	17-1/2	450sx C (528 CF - Circ.)	
8-5/8	32#	5000	12-1/4	2600sx C (5042 CF-Circ.)	

29. LINER RECORD					30. TUBING RECORD		
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
5-1/2#	4188	8800	100x C (1327 CF)		2-7/8	OPMA @ 8770	8640

31. Perforation Record (Interval, size and number) Pf. 8704-8708, 8714-8730 (w/1 JSPF - Total 22 holes)	32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
	DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
	8704-8730	Acidized w/5200 gal 15% NE FE Clay stabilized acid + 40 RCNBS

33. PRODUCTION							
Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod. or Shut-in)	
12-16-84		Pumping 2" x 1 1/2" x 24'				Producing	
Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Ebl.	Gas - MCF	Water - Ebl.	Gas - Oil Ratio
12-25-84	24			25	38	15	1320/1
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Ebl.	Gas - MCF	Water - Ebl.	Oil Gravity - API (Corr.)	
						37.6 @ 60	

34. Disposition of Gas (Sold, used for fuel, vented, etc.)	Test Witnessed by
Sold	T. J. Auld

35. List of Attachments
C-104, Inclination Survey & 1 set well logs

36. I hereby certify that the information shown on both sides of this form is true and complete to the best of my knowledge and belief.		
SIGNED <u>W.B. W</u>	TITLE <u>Authorized Agent</u>	DATE <u>1-14-85</u>

DATE 12-18-84 WE NO. 271 LEASE North VI um FIELD Vacuum Abo
Abo Unit North

LOCATION 1980' FEL & 1980' FNL
Sec. 10 T17S, R34E
Lea County, New Mexico

SIGNED R.W. Petty

G.L. 4060'
D.F. 4072'
K.B. 4073'
ZERO 13' AGL

— 17 1/2" hole

— 13 3/8", 48#, H40, STFC set @ 422' w/450 sk Cl. C cmt,
2% CaCl₂, 1/4 #/sk FC. Circ 115 sk cmt.

— 12 1/4" hole

— TOL @ 4188'

— 8 5/8", 32#, S80# K55, STFC set @ 5000' w/2300 sk Cl. C cmt,
4% gel, 15 #/sk Salt, 5 #/sk gilsonite; 1/4 #/sk FC + 300 sk Cl. C cmt,
2% CaCl₂ + 1/4 #/sk FC. Circ 170 sk cmt.

— 7 7/8" hole

— 2 7/8" +bg: OPMA @ 8770' + 4' perf sub + 2 3/8 SN + 2 7/8 SN @ 8733'
TAC @ 8640' set w/12,000# Ten.

— Abo Perfs: 8592'-94', 98'-8604', 24'-47', 51'-56'. 135PF. 40 holes.

— 5 1/2", 17 #/15.5#, K55, STFC set @ 8799' w/700 sk Cl. H cmt, 4% gel,
.3% HA9, 1/4 #/sk FC + 300 sk Cl. H cmt, .3% HA9, 1/4 #/sk FC.
PBTD 8790'
TD 8800'

COUNTY LEA FIELD Vacuum, N. STATE NM 30-025-24193
 OPR KOCH EXPLORATION CO. MAP
 2 Miller "B" State
 Sec 3, T-17-S, R-34-E CO-ORD
 660' FSL, 2105' FWL of Sec
 Spd 7-24-72 CLASS GL EL 40612
 Cmp 8-30-72

	FORMATION	DATUM	FORMATION	DATUM
CSG & SX - TUBING				
13 3/8" at 370' w/400 sx				
8 5/8" at 3100' w/375 sx				
5 1/2" at 8877' w/400 sx				
LOGS EL GR RA IND HC A				

TD 8877'; PBD 8835'

IP (Abo) Perfs 8687-8742' P 85 BOPD. Pot based on 24 hr test.
 GOR NR; Grav NR

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CONT. Moran PROP DEPTH 8900' TYPE RT
 DATE

F.R. 7-17-72; Opr's Elev. 4064' GL
 PD 8900' RT (Abo)
 Contractor - Moran
 7-26-72 Drlg. 2795'
 8-1-72 Drlg. 5928'
 DST 3840-3930', open 1 hr, rec 30' mud, NS, 1 hr
 30 min ISIP 148#, FP 63-63#, 2 hr FSIP 63#
 8-7-72 Drlg. 7730' lm
 8-14-72 TD 8877'; Rng 5 1/2" csg
 DST 8694-8877', open 1 hr, rec 300' DM, ISIP
 2995#, FP 71-142#, FSIP 2896#
 8-21-72 TD 8877'; WO Comp
 8-28-72 TD 8877'; WO Comp
 9-5-72 TD 8877'; PBD 8835'; RU Pmp
 Perf 8687-91', 8708-12', 8715-26', 8729-32',
 8735-42' w/2 SPF
 Acid (8687-8742') 500 gals
 Swbd 58 BLW & Swbd dry (8687-8742')

LEA
KOCH EXPLORATION CO.

Vacuum, N.
2 Miller "B" State

NM Sec 3, T17S, R34E
Page #2

"-5-72 Continued
 Acid (8687-8742') 12,000 gals
 Swbd 46 BF (70% oil) in 5 hrs
"-11-72 TD 8877'; PBD 8835'; TO Pmp
"-18-72 TD 8877'; PBD 8835'; TO Pmp
"-25-72 TD 8877'; PBD 8835'; COMPLETE
"-30-72 COMPLETION REPORTED

UNICHEM INTERNATIONAL

707 NORTH LEECH

P.O.BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : MOBIL PRODUCING TEXAS & NM

DATE : 12-19-86

FIELD, LEASE & WELL : BRIDGES STATE

SAMPLING POINT: WSW 94

DATE SAMPLED : 12-17-86

SPECIFIC GRAVITY = 1

TOTAL DISSOLVED SOLIDS = 769

PH = 7.35

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	3	60.1
MAGNESIUM	(MG)+2	5.6	68.0
SODIUM	(NA), CALC.	4.0	92.4

ANIONS			
BICARBONATE	(HCO3)-1	3.6	219.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	1.0	49
CHLORIDES	(CL)-1	8	280

DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	

IRON(TOTAL)	(FE)		.5
BARIUM	(BA)+2	NOT RUN	.13
MANGANESE	(MN)	0	.02

IONIC STRENGTH (MOLAL) = .017

SCALING INDEX

TEMP

	30C
	86F
CARBONATE INDEX	1.33
CALCIUM CARBONATE SCALING	LIKELY

CALCIUM SULFATE INDEX	-18.
CALCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

707 NORTH LEECH

P.O. BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : MOBIL PRODUCING TEXAS & NM

DATE : 12-19-86

FIELD, LEASE & WELL : BRIDGES STATE

SAMPLING POINT : WSW 179

DATE SAMPLED : 12-17-86

SPECIFIC GRAVITY = 1

TOTAL DISSOLVED SOLIDS = 628

PH = 7.44

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	2	40.0
MAGNESIUM	(MG)+2	6.2	75.3
SODIUM	(NA), CALC.	1.9	45.5
ANIONS			
BICARBONATE	(HCO3)-1	3.6	219.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	.58	28
CHLORIDES	(CL)-1	6	220
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		.3
BARIUM	(BA)+2	NOT RUN	.16
MANGANESE	(MN)	0	0

IONIC STRENGTH (MOLAL) = .015

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	1.44
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-18.
CALCIUM SULFATE SCALING	UNLIKELY

Yates	Mobil Oil Corp.	
Shell, et al		
State "U" Reserve None Special instructions Date work is commenced 19 Location approved by Location made by A. D. Bond		
THE STATE OF TEXAS COUNTY OF DALLAS I hereby certify that this plat truly represents conditions as they actually exist on this lease; that said plat which is drawn to the scale indicated hereon, in to the best of my knowledge true and correct; that it accurately shows said lease with all wells on same; that number and locations of said wells are as indicated hereon; and that this plat correctly reflects all pertinent and required data.		
MOBIL OIL CORPORATION MIDLAND PRODUCING AREA Midland, Texas LEASE Bridges State WSW #94 & 179 DISTRICT LEASE NO. NM-569 LOCATION MADE February 19 1974 WELL NO. 179 TOTAL ACRES IN LEASE 5281.38 DESCRIPTION Lot 2, SW 1/4 NE 1/4 & SE 1/4 Sec 3, NE 1/4 Sec 10; S 1/2 Sec 11; E 1/2 & SW 1/4 Sec 12; W 1/2 & NE 1/4 Sec 13; Sec 14; E 1/4 Sec 15; N 1/2 & SE 1/4 Sec 23; W 1/2 NW 1/4, SE 1/4 NW 1/4 & SW 1/4 Sec 24; NW 1/4 N-NE 1/4 & SW 1/4 NE 1/4 Sec 25, Sec 26, E 1/4 Sec 27, T-17 S, R-34 E, E 1/4 Sec 28; & E 1/4 Sec 34; T-16 S, R-34 E Lea County, New Mexico DRAWN BY Sovinsky DATE June 13, 1937 FIELD Vacuum SCALE 1000' FILE NO. 45		

UNICHEM INTERNATIONAL

707 NORTH LEECH

P.O.BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : MOBIL PRODUCING TEXAS & NM
 DATE : 12-19-86
 FIELD, LEASE & WELL : NORTH VACUUM ABO UNIT
 SAMPLING POINT: WSW 100
 DATE SAMPLED : 12-17-86

SPECIFIC GRAVITY = 1
 TOTAL DISSOLVED SOLIDS = 722
 PH = 7.36

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	2	40.0
MAGNESIUM	(MG)+2	4.4	53.4
SODIUM	(NA), CALC.	5.3	123.
ANIONS			
BICARBONATE	(HCO3)-1	3.4	207.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	.37	18
CHLORIDES	(CL)-1	8	280
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	
IRON(TOTAL)	(FE)		.3
BARIUM	(BA)+2	NOT RUN	.13
MANGANESE	(MN)	0	.01

IONIC STRENGTH (MOLAL) = .015

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	1.30
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-13.
CALCIUM SULFATE SCALING	UNLIKELY

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707 NORTH LEECH

P.O.BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : MOBIL PRODUCING TEXAS & NM
DATE : 12-19-86
FIELD, LEASE & WELL : NORTH VACUUM ABO UNIT
SAMPLING POINT: WSW 101
DATE SAMPLED : 12-17-86

SPECIFIC GRAVITY = 1
TOTAL DISSOLVED SOLIDS = 663
PH = 7.29

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	3.8	76.1
MAGNESIUM	(MG)+2	4.4	53.4
SODIUM	(NA), CALC.	2.4	55.8

		ME/L	MG/L
ANIONS			
BICARBONATE	(HCO3)-1	3.4	207.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	.23	11
CHLORIDES	(CL)-1	7	260

DISSOLVED GASES		
CARBON DIOXIDE	(CO2)	NOT RUN
HYDROGEN SULFIDE	(H2S)	NOT RUN
OXYGEN	(O2)	NOT RUN

IRON(TOTAL)	(FE)		.3
BARIUM	(BA)+2	NOT RUN	.07
MANGANESE	(MN)	0	0

IONIC STRENGTH (MOLAL) = .015

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	1.52
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-18.
CALCIUM SULFATE SCALING	UNLIKELY

VII. Data of Proposed Operation:

1. Proposed average injection rate is 100 BFWPD
Proposed maximum injection rate is 300 BFWPD
2. System will be closed
3. Proposed average pressure is 1700#
Proposed maximum pressure is 4300#
4. Source of injected water is from four Mobil water source wells in Section 14, T-17-S, R-34-E
5. Injection is for secondary recovery only
The injection of Ogallala water into the North Vacuum-Abo East Unit and into the North Vacuum-Abo Unit, which abuts the subject lease, proves the compatability of the injected water

VIII. Geological Data:

Zone of injection is Abo
Lithology is carbonate
Thickness is 50 to 100'
Depth is 8600-8750'
Zone of source water is Ogallala from 250' (top) to 500' (bottom)
No known source underlying the injection interval

IX. Proposed Stimulation Program:

Well will be treated with 6000 gals 15% HCl (not to exceed 5000#)

X. Logs filed with completion report on 4-24-72

XI. No water source wells within one mile of subject injection well

XII. Affirmative Statement by Mobil's W. E. Hermance, Geologist

"The examination of available geological and engineering data revealed no evidence of open faults or any other hydrologic connections between the injection zone and any underground source of drinking water."

XIII. Proof of Notice:

See attached letters with Certified Mail labels

True Loc. of
WSW 101

R 34 E

0+008 NW 1/4, Sec. 14, USBLD, LR S89°40'W-5291.88 (Call) NE 1/4, Sec. 14, USBLD, LR

595'

Socony Mobil Oil Company, Inc.

0+808=0+008

0+808=0+008

WSW-101

NO 005'W (Call)

W 1/4, Sec. 14, USBLD, LR



NO 005'W-5289.24 (Call)

T 17 S

WSW-100

51

210'

State Bridges

SW 1/4, Sec. 14, USBLD, LR

S89°41'W-5286.6 (Call)

NE 1/4, Sec. 14, USBLD, LR

Lea County, New Mexico

North Vacuum Abo Unit WSW #100 & 101

I, John H. Seeray, hereby certify that I am the Professional Engineer who prepared the above map and statement from field notes of actual surveys made by me or under my direction and that the same are true and correct to the best of my knowledge and belief.

John H. Seeray, Jr.
Registered Professional Engineer
License No. 3572

Mobil Producing Texas & New Mexico Inc.

P.O. BOX 633
MIDLAND, TEXAS 79702

January 21, 1987

MIDLAND DIVISION

Eidson Ranch
P. O. Box 1286
Lovington, NM 88260

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

7.01
Application for Authority to Inject
Mobil Producing TX. & N.M. Inc.
State N Well No. 2
Unit D, 735' FNL, 840' FWL
Section 10, T-17-S, R-34-E
North Vacuum-Abo Field
Lea County, New Mexico

Gentlemen:

Mobil Producing TX. & N.M. Inc. is applying to the New Mexico Oil Conservation Division for authority to inject fresh water into the Abo formation of the North Vacuum-Abo Field. Injection will be down the State N Well No. 2

Attached, per Statewide Rule 701.B (2), is a copy of the application. A hearing has been set for February 4, 1987 in Santa Fe, New Mexico.

Yours very truly,

M E Swamy

LLMaroney/dw

Attachments

xc: NMOCD, Santa Fe & Hobbs, NM

P-519 401 358

RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

To: Eidson Ranch		Postage		Certified Fee		Special Delivery Fee		Restricted Delivery Fee		Return Receipt showing to whom and Date Delivered		Return Receipt showing to whom and Date Delivered		Postage and Fees	
P.O. Box 1286		124		75						70		70		269	
Lovington, NM 88260															

U.S. POSTAGE
MIDLAND DIVISION
JAN 22 1987

Mobil Producing Texas & New Mexico Inc.

P.O. BOX 633
MIDLAND, TEXAS 79702

January 21, 1987

MIDLAND DIVISION

Koch Exploration
P. O. Box 2256
Wichita, Kansas 67201

Attn: Mr. Vernon J. Lowe

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

7.01
Application for Authority to Inject
Mobil Producing TX. & N.M. Inc.
State N Well No. 2
Unit D, 735' FNL, 840' FWL
Section 10, T-17-S, R-34-E
North Vacuum-Abo Field
Lea County, New Mexico

Dear Mr. Lowe:

Mobil Producing TX. & N.M. Inc. is applying to the New Mexico Oil Conservation Division for authority to inject fresh water into the Abo formation of the North Vacuum-Abo Field. Injection will be down the State N Well No. 2

Attached, per Statewide Rule 701.B (2), is a copy of the application. A hearing has been set for February 4, 1987 in Santa Fe, New Mexico.

Yours very truly,

John E. Lummey

LLMaroney/dw

Attachments

xc: NMOCD, Santa Fe & Hobbs, NM

P-519 401 360
RECEIPT FOR CERTIFIED MAIL
NO INSURANCE COVERAGE PROVIDED
NOT FOR INTERNATIONAL MAIL
(See Reverse)

Sent to <i>Koch Exploration</i>	Postage <i>\$ 1.70</i>	Certified Fee <i>75</i>	Special Delivery Fee	Restricted Delivery Fee	Return Receipt showing to whom and Date Delivered	Return Receipt showing to whom Date, and Address	TOTAL Postage	Postmark or
State and Zip Code <i>P.O. Box 2256</i>							<i>70</i>	<i>6269</i>
Post Office <i>Wichita, Kansas 67201</i>								

U.S.G.P.O. 153-506

USPS 1987
MIDLAND, TEXAS
JAN 22 1987

Mobil Producing Texas & New Mexico Inc.

P.O. BOX 633
MIDLAND, TEXAS 79702

January 21, 1987

MIDLAND DIVISION

Yates & Yates
c/o John A. Yates
207 South 4th Street
Artesia, NM 88210

CERTIFIED MAIL

RETURN RECEIPT REQUESTED

7.01
Application for Authority to Inject
Mobil Producing TX. & N.M. Inc.
State N Well No. 2
Unit D, 735' FNL, 840' FWL
Section 10, T-17-S, R-34-E
North Vacuum-Abo Field
Lea County, New Mexico

Dear Mr. Yates:

Mobil Producing TX. & N.M. Inc. is applying to the New Mexico Oil Conservation Division for authority to inject fresh water into the Abo formation of the North Vacuum-Abo Field. Injection will be down the State N Well No. 2

Attached, per Statewide Rule 701.B (2), is a copy of the application. A hearing has been set for February 4, 1987 in Santa Fe, New Mexico.

Yours very truly,

M E Summy

LLMaroney/dw

Attachments

xc: NMOCD, Santa Fe & Hobbs, NM

P-519 401 359	
RECEIPT FOR CERTIFIED MAIL	
NO INSURANCE COVERAGE PROVIDED NOT FOR INTERNATIONAL MAIL (See Reverse)	
Sent to <i>Yates & Yates c/o John A. Yates 207 South 4th St. Artesia NM 88210</i>	Postage
Street and No.	Certified Fee
P.O. State and ZIP Code	Special Delivery Fee
Postmark	Restricted Delivery Fee
Return Receipt showing to whom and Date Delivered	Return Receipt showing to whom Date and Address of Delivery
TOTAL Postage and Fees	\$
Postmark of Post Office	

U.S. G.P.O. 153576

1987 JAN 25
MIDLAND DIVISION
TX

BEFORE EXAMINER STOGNER
OIL CONSERVATION DIVISION

Mob. 1 EXHIBIT NO. 6

CASE NO. 9072