

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. 4831
Order No. R-4430

APPLICATION OF MOBIL OIL
CORPORATION FOR A PRESSURE
MAINTENANCE PROJECT, LEA
COUNTY, NEW MEXICO.

*also see
R-4430-A*

ORDER OF THE COMMISSION

BY THE COMMISSION:

This cause came on for hearing at 9 a.m. on September 27, 1972, at Santa Fe, New Mexico, before Examiner Elvis A. Utz.

NOW, on this 27th day of October, 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, Mobil Oil Corporation, seeks authority to institute a pressure maintenance project in the North Vacuum-Abo Pool in its North Vacuum-Abo Unit Area, Lea County, New Mexico, by the injection of gas and water into the Abo formation through 34 wells located in Sections 3, 10, 11, 12, 13, 14, 15, 22, 23, 24, 25, 26, and 27, Township 17 South, Range 34 East, NMPM, Lea County, New Mexico.

(3) That the applicant further seeks the designation of the project area and the promulgation of special rules and regulations governing said project including a provision for administrative approval for unorthodox locations for injection wells and producing wells.

(4) That initially the project area should comprise only the following-described area:

LEA COUNTY, NEW MEXICO
TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 2: SW/4
Section 3: SE/4
Section 10: E/2
Section 11: S/2
Section 12: NE/4 and S/2
Section 13: N/2 and SW/4
Section 14: All
Section 15: E/2
Section 22: E/2
Sections 23 and 24: All
Section 25: NW/4 and N/2 NE/4
Section 26: All
Section 27: E/2

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM
Section 19: W/2 NW/4

(5) That a pressure maintenance project, designated the Mobil North Vacuum-Abo Pressure Maintenance Project, comprising the above-described area is in the interest of conservation and should result in greater ultimate recovery of oil, thereby preventing waste.

(6) That an administrative procedure should be established whereby said project area may be expanded for good cause shown and whereby additional injection wells and producing wells at orthodox and unorthodox locations in the project area may be approved without the necessity of notice and hearing.

(7) That special rules and regulations for the operation of the Mobil North Vacuum-Abo Pressure Maintenance Project should be promulgated and, for operational convenience, such rules should provide certain flexibility in authorizing the production of the project allowable from any well or wells in the project area in any proportion, provided that no well in the project area which directly or diagonally offsets a well on another lease producing from the same common source of supply should be allowed to produce in excess of top unit allowable for the North Vacuum-Abo Pool until such time as the well has experienced a substantial response to water injection. When such a response has occurred, the well should be permitted to produce up to two times top unit allowable for the North Vacuum-Abo Pool. Production of such well at a higher rate should be authorized only after notice and hearing.

IT IS THEREFORE ORDERED:

(1) That the applicant, Mobil Oil Corporation, is hereby authorized to institute a pressure maintenance project in the

North Vacuum-Abo Pool in its North Vacuum-Abo Unit Area, Lea County, New Mexico, to be designated the Mobil North Vacuum Abo Pressure Maintenance Project, by the injection of gas and water into the Abo formation, through the following-described wells:

LEA COUNTY, NEW MEXICO
TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM

<u>OPERATOR</u>	<u>LEASE</u>	<u>WELL NO.</u>	<u>SECTION</u>	<u>LOCATION</u>
Mobil	Bridges State	172	3	P
Mobil	" "	166	10	H
Shell	State "VH"	1	10	P
Mobil	Bridges State	130 (a dual completion)	15	H
Mobil	" "	144	15	P
Mobil	State "J"	9	22	H
Shell	Location	to be drilled	22	P
Mobil	Bridges State	157	27	H
Mobil	" "	145	27	P
Mobil	" "	148	11	N
Mobil	" "	173	14	F
Mobil	" "	171	14	N
Mobil	" "	151 (a dual completion)	23	F
Mobil	State "KK"	1	23	N
Mobil	Bridges State	118	26	F
Mobil	" "	153	26	N
Mobil	" "	140	11	P
Mobil	" "	125 (a dual completion)	14	H
Mobil	" "	124 (a dual completion)	14	P
Mobil	" "	128	23	H
Mobil	" "	117 (a dual completion)	23	P
Mobil	" "	96	26	H
Mobil	" "	95 (a dual completion)	26	P
Mobil	" "	150	12	N
Mobil	" "	147 (a dual completion)	13	F
Mobil	" "	120 (a dual completion)	13	N
Mobil	" "	119 (a triple completion)	24	F
Mobil	" "	109 (a triple completion)	24	N
Mobil	" "	108 (a triple completion)	25	F
Mobil	" "	161	12	H
Mobil	" "	159	12	P
Mobil	" "	169	13	H
Pennzoil	Mobil State	1	24	H
Shell	State "C"	2	24	P

(2) That Special Rules and Regulations governing the operation of the Mobil North Vacuum-Abo Pressure Maintenance Project, Lea County, New Mexico, are hereby promulgated as follows:

SPECIAL RULES AND REGULATIONS
FOR THE
MOBIL NORTH VACUUM-ABO PRESSURE MAINTENANCE PROJECT

RULE 1. The project area of the Mobil North Vacuum-Abo Pressure Maintenance Project, hereinafter referred to as the Project, shall comprise the area described as follows:

LEA COUNTY, NEW MEXICO
TOWNSHIP 17 SOUTH, RANGE 34 EAST, NMPM
Section 2: SW/4
Section 3: SE/4
Section 10: E/2
Section 11: S/2
Section 12: NE/4 and S/2
Section 13: N/2 and SW/4
Section 14: All
Section 15: E/2
Section 22: E/2
Sections 23 and 24: All
Section 25: NW/4 and N/2 NE/4
Section 26: All
Section 27: E/2

TOWNSHIP 17 SOUTH, RANGE 35 EAST, NMPM
Section 19: W/2 NW/4

RULE 2. The allowable for the Project shall be the sum of the allowables of the several wells within the project area, including those wells which are shut-in, curtailed, or used as injection wells. Allowables for all wells shall be determined in a manner hereinafter prescribed.

RULE 3. Allowables for injection wells may be transferred to producing wells within the project area, as may the allowables for producing wells which, in the interest of more efficient operation of the Project, are shut-in or curtailed because of high gas-oil ratio or are shut-in for any of the following reasons: pressure regulation, control of pattern or sweep efficiencies, or to observe changes in pressures or changes in characteristics of reservoir liquids or progress of sweep.

RULE 4. The allowable assigned to any well which is shut-in or which is curtailed in accordance with the provisions of Rule 3 which allowable is to be transferred to any well or wells in the project area for production, shall in no event be greater than its ability to produce during the test prescribed by Rule 6,

below, or greater than the current top unit allowable for the pool during the month of transfer, whichever is less.

RULE 5. The allowable assigned to any injection well on an 80-acre proration unit shall be top unit allowable for the North Vacuum-Abo Pool.

RULE 6. The allowable assigned to any well which is shut-in or curtailed in accordance with Rule 3, shall be determined by a 24-hour test at a stabilized rate of production, which shall be the final 24-hour period of a 72-hour test throughout which the well should be produced in the same manner and at a constant rate. The daily tolerance limitation set forth in Commission Rule 502 I (a) and the limiting gas-oil ratio (2,000 to 1) for the pool shall be waived during such tests. The project operator shall notify all operators offsetting the well, as well as the Commission, of the exact time such tests are to be conducted. Tests may be witnessed by representatives of the offsetting operators and the Commission, if they so desire.

RULE 7. The basic allowable assigned to each producing well in the Project shall be equal to the well's ability to produce or to top unit allowable for the pool, whichever is less. Wells capable of producing more than top unit allowable may also receive transfer allowable, provided however, that no producing well in the project area which directly or diagonally offsets a well on another lease producing from the same common source of supply shall receive an allowable or produce in excess of two times top unit allowable for the pool. Each producing well shall be subject to the limiting gas-oil ratio (2,000 to 1) for the pool.

RULE 8. Each month the project operator shall submit to the Commission a Pressure Maintenance Project Operator's Report, on a form prescribed by the Commission, outlining thereon the data required, and requesting allowables for each of the several wells in the Project as well as the total project allowable based upon the pool's depth bracket allowable and the market demand percentage factor in effect. The aforesaid Pressure Maintenance Project Operator's Report shall be filed in lieu of Form C-120 for the Project.

RULE 9. The Commission shall, upon review of the report and after any adjustments deemed necessary, calculate the allowable for each well in the Project for the next succeeding month in accordance with these rules. The sum of the allowables so calculated shall be assigned to the Project and may be produced from the wells in the Project in any proportion except that no well in the Project which directly or diagonally offsets a well on another lease producing from the same common source of supply shall produce in excess of two times top unit allowable for the pool.

RULE 10. The Secretary-Director of the Commission is hereby authorized to approve such additional producing wells and injection wells at orthodox and unorthodox locations within the boundaries of the North Vacuum-Abo Unit Area as may be necessary to complete an efficient production and injection pattern, provided said wells are drilled no closer than 660 feet to the outer boundary of said unit nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary. To obtain such approval, the project operator shall file proper application with the Commission, which application, if it seeks authorization to convert additional wells to injection or to drill additional production or injection wells shall include the following:

(1) A plat showing the location of proposed well, all wells within the project area, and offset operators, locating wells which offset the project area.

(2) A schematic drawing of the proposed well which fully describes the casing, tubing, perforated interval, and depth.

(3) A letter stating that all offset operators to the proposed well have been furnished a complete copy of the application and the date of notification.

The Secretary-Director may approve the proposed well if, within 20 days after receiving the application, no objection to the proposal is received. The Secretary-Director may grant immediate approval, provided waivers of objection are received from all offset operators.

Expansion of the project area may be approved by the Secretary-Director of the Commission administratively when good cause is shown therefor.

(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

BRUCE KING, Chairman

ALEX J. ARMIJO, Member

S E A L

dr/

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

BEFORE THE
OF THE STATE OF NEW MEXICO

APPLICATION OF MOBIL OIL
CORPORATION FOR A PRESSURE
MAINTENANCE PROJECT, LEA
COUNTY, NEW MEXICO.

CASE NO. 4811
Order No. R-4430-A

NUNC PRO TUNC

BY THE COMMISSION:

It appearing to the Commission that due to clerical error Order No. R-4430, dated October 27, 1972, does not correctly state the intended order of the Commission,

IT IS THEREFORE ORDERED:

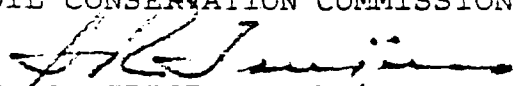
(1) That Rule 10 on Page 6 of Order No. R-4430 should read in its entirety as follows:

"RULE 10. The Secretary-Director of the Commission is hereby authorized to approve such additional producing wells and injection wells at orthodox and unorthodox locations within the boundaries of the North Vacuum-Abo Unit Area as may be necessary to complete an efficient production and injection pattern, provided said wells are drilled no closer than 460 feet to the outer boundary of said unit nor closer than 10 feet to any quarter-quarter section or subdivision inner boundary. To obtain such approval, the project operator shall file proper application with the Commission, which application, if it seeks authorization to convert additional wells to injection or to drill additional production or injection wells shall include the following:"

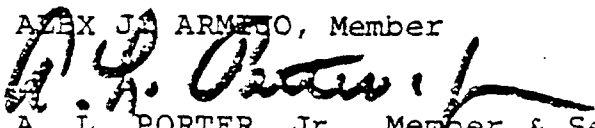
(2) That this order shall be effective nunc pro tunc as of October 27, 1972.

DONE at Santa Fe, New Mexico, this 30th day of November, 1973.

STATE OF NEW MEXICO
OIL CONSERVATION COMMISSION


I. R. TRUJILLO, Chairman

ALEX J. ARMISTO, Member


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

S E A L

dr/

Mobil Producing Texas & New Mexico Inc.

October 16, 1985

P.O. BOX 633
MIDLAND, TEXAS 79702

Oil Conservation Division (2)
Post Office Box 2088
Santa Fe, New Mexico 87051

7.01
WATER INJECTION WELLS
MOBIL PRODUCING TX. &
N.M., INC.
NORTH VACUUM ABO UNIT
WELL NOS. 98,112,116,
136,137,138,156,205,
210 & 211
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Mobil Producing Tx. & N.M. Inc. (MPTM) respectfully requests authority to inject fresh water into the Abo formation in the subject wells.

Conversion of these wells to water injection wells is necessary to complete an efficient production and injection pattern for the North Vacuum Abo Unit.

The supporting information for this application is organized in accordance with Form C-108.

MPTM has examined the available geological and engineering data and finds no evidence of open faults or any other hydrological connection between the Abo zone and any underground source of drinking water.

Yours very truly,



G.E. Tate
Env. & Reg. Manager

CCS/tm

Attachments

cc: Offset Operators
New Mexico State Land Office
County Clerk, Loving, New Mexico
District Director OCD - Hobbs

A:M526631A.CCS

INDEX OF ATTACHMENTS
ORGANIZED IN ACCORDANCE WITH FORM C-108

PROPOSED WATER INJECTION WELLS
NORTH VACUUM ABO UNIT
WELLS NO. 98,112,116,136,137,138,
156,205,210 AND 211
LEA COUNTY, NEW MEXICO

1. Form C-108
2. III. A. Well Data for each well proposed for injection and schematic for "Typical Proposed Injector".
3. V. A. Map of area of review with two mile radius circle drawn.

B. Map of area of review with one-half mile radius circle drawn.
4. VI. Tabulation of data on all wells of public record within area of review and schematics and/or completion reports.
5. IX. Stimulation program.
6. XI. Chemical analysis of fresh water.
7. XIII. Proof of Notice:
 - A. List of surface owner and offset operators.
 - B. Copies of letters with proof of notice attached.
 - C. Copy of legal advertisement which was published in the Lovington Daily Leader, and affidavit.
 - D. Copy of letter to County Clerk.

APPLICATION FOR AUTHORIZATION TO INJECT

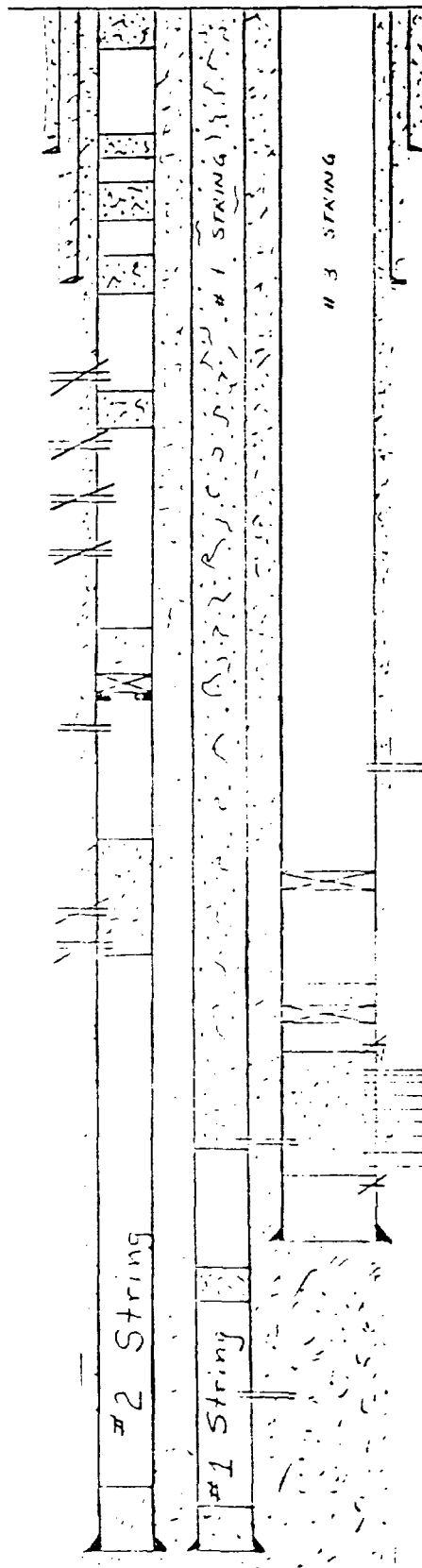
- I. Purpose: ☒ Secondary Recovery ☐ Pressure Maintenance ☐ Disposal ☐ Storage
Application qualifies for administrative approval? ☒ yes ☐ no
- II. Operator: Mobil Producing Texas & New Mexico, Inc.
Address: P.O. Box 633 Midland, Texas
Contact party: C.C. Smith Phone: (915) 688-1773
- III. Well data: 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: G.E. Tate Title Env. & Regulatory Manager
Signature: C.C. Smith for G.E.T. Date: 9/24/85
- * 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. Order No. R4430 - 10-27-72

DATE 8-21-85

WELL NO. 98

LEASE NVAU

FIELD VACUUM

LOCATION J-26 T-17-S R-34-E
LEA CO., N.M.SIGNED ME VASICEK
R.W. PettyG.L. 4015
D.F. 4032
K.B. 4032
ZERO 17' AGLPROPOSED— Cmt circ from $\pm 60'$ to surface— Cmt plug $\pm 325'$ to $\pm 425'$

— 362' 13 3/8" CSG SET W/ 350 SX CMT CIRC

— Cmt plug $\pm 2350'$ to $\pm 2450'$ — Cmt plug $\pm 4350'$ to $\pm 4450'$

— 4400' 10 3/4" 45.5# CSG SET W/ 1732 SX CMT CIRC

— GLOBET PERFS 6056, 58 60 69, 71, 73, 77, 79, 83, 87, 84, 91 (12 HOLES) SQZD W/ 50 SX CMT
LATER SQZD ALAR 2 BLIND RCT W/ 100 SX CMT LEFT 20 SX 10 CSG— Cmt plug $\pm 6250'$ to $\pm 6350'$ — UPPER BLINDARY PERFS 66 66, 40, 50, 52, 54, 56, 60, 64, 72, 74, 76, 78, 80, 92, 94, 6505,
6507, 09, 13, 33, 35, 37, 39 SQZD W/ 50 SX— BLINDARY PERFS 66 19, 22, 24, 28, 69, 71, 80, 83, 86, 6703, 05, 24, 61, 63, 71, 73, 75, 79, 80
SQZD W/ 500 SX CMT

— 6850 2 PERF HOLES SQZ'd.

— Cmt plug $\pm 8350'$ to $\pm 8250'$

— 8350' SIBP CAPPED W/ 1 SX CMT. BAKER MODEL D RT. PUMP SEAT @ 8350

— ABO PERFS 8414, 15, 16, 35, 39, 40, 41, 51, 53, 67, 68, 79, 80, 81, 8536, 37, 38, 45, 46, 57, 58 (21 HOLES)

— ABO PERFS 8414, 16, 28, 29, 31, 35, 36, 37, 40, 41, 51, 52, 53, 54, 67, 68, 69, 79, 80, 81, 8384, 85, 86,
8521, 22, 23, 31, 32, 36, 37, 38, 39, 40, 41, 45, 46, 47, 48, 51, 54, 56, 57, 58, 64, 65, 66 (20 HOLES)

— 8838' PBTD #2 STRING

— 9100' CIBP

— PERFS 9212, 9332 SQZD W/ 50 SX CMT

— PERFS 9231-318 DA SQZD W/ 50 SX CMT RE PERF (SAME). SQZD W/ 25 SX CMT

— 9950' CIBP CAPPED W/ 1 SX CMT

— 9975' PERFORATE 2 SQZ HOLES. BLOCK SQZD W/ 100 SX CMT REV OUT SS SX

— WOLF CAMP PERFS 9995, 97 97, 10001, 0608, 19, 12, 17, 19, 23, 25, 32, 35, 39, 41, 43, 45, 47, 54, 56,
10058, 60, 62, 64, 87, 89, 91, 93, 95, 97, 99, 1001, 103105, 107, 109, 115, 117, 119 (40 HOLES)

— DOWNHOLE WOLFCAMP/PENN COMANDED 10038-42 W/ 4 JSPF (20 HOLES)

— 10124' PERFS 2 SQZ HOLES BLOCK SQZD W/ 100 SX CMT

— 10180' PBTD #3 STRING

— 10217' 4 1/2" 11.6# CSG SET W/ 3450 SX CMT CIRC

— 10873 TIGHT SPOT #1 STRING

— PENN PERFS 11460-11500 #1 STRING

— 11580' PBTD #2 STRING

— 11595' PBTD #1 STRING

— 11657' 2 STRINGS OF 2 7/8" CSG SET W/ 325 SX CMT

6.5 1/4" buttress

Mobil Producing Texas & New Mexico Inc.
Proposed Water Injection Wells
North Vacuum Abo Field
Lea County, New Mexico

Well Data

- III. A. 1. North Vacuum Abo Unit #112
660' FNL & 860' FWL, Sec. 25
Unit D, 17-S, 34-E
2. 13-3/8" @ 380' w/350 sx circ.
9-5/8 @5000' w/2600 sx.
TOC @ 475' (Temp Survey)
7" @ 10,230' w/1450 sx, TOC @4718'(TOL)
3. 2-3/8 N-80 Buttress Tubing
4. Baker Model N.B. Packer @ 8850'
- B. 1. Abo
2. 8392'-8433' perforated
3. Originally drilled for production
4. Glorieta perfs 6009'-6038'sqzd w/200 sx cmt.
Re-perf 6011'-6036'sqzd w/100 sx cmt.
Wolfcamp perfs 9823'-9991' sqzd w/200 sx cmt.
5. Next higher perfs, Blinbry; next lower perfs,
Wolfcamp
- VII 1. Maximum 600 BBL/day/well avg 250 BBL/day/well
2. Closed system
3. Maximum pressure 4350 psi, avg 4150 psi
4. Ogallala water will be injected because of the
adverse affects of produced water on the tight
formation of the Abo zone.

DATE 8-1-85 WELL NO. 112 LEASE NVAU FIELD VACUUM

LOCATION D 25 - T 73 - 434E
LEH CO. N.M.

SIGNED M.E. VASILEK

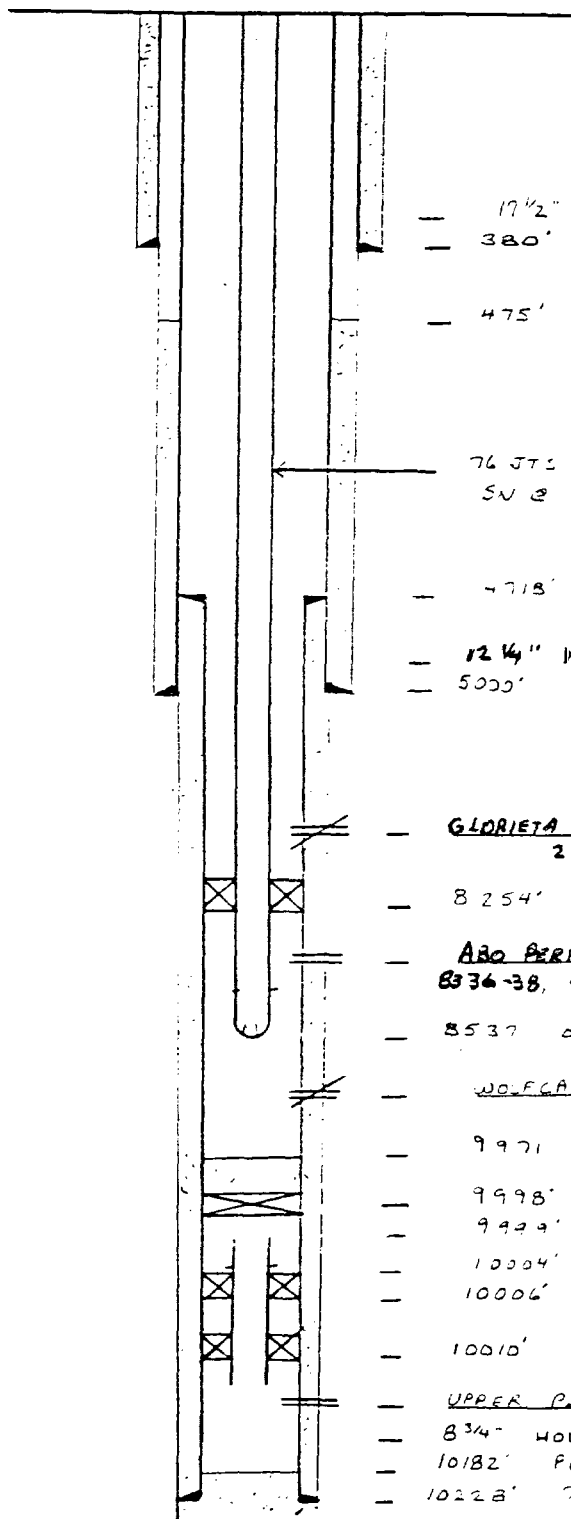
G.L. 4011
D.F. 4021
K.B. 4022
ZERO 11 AUG

RE ID

AUG 7 1985

G. E. TATE

Current



— 17 1/2" HOLE
— 380' 13 3/8" 48# CSU SET W/ 350 SX CMT 215'
— 475' TOP OF CEMENT (T.S.)

76 JTS 2 3/8" J55 TCU + 189 JTS 2 3/8" N-80 TCU +
SN @ 8554 + PERF 8554-00 + OFRM 8537

— 4718' TOP OF LINER

— 12 1/4" HOLE
— 5000' 9 5/8" 36"-40# CSU SET W/ 2600 SX CMT

— GLORIETA PERFS 6009, 11, 13, 15, 19, 21, 23, 28, 30, 32, 34, 36, 38 (13 HOLES) SQ 20 W/
200 SX CMT. RE PERF 6011, 13, 15, 19, 21, 23, 30, 32, 36 (11 HOLES) SQ 20 W/ 100 SX CMT

— 8254' TA SET W/ 14 P.T.B. T

— ABO PERFS W/ 1 ISPE 8392, 93, 96, 97, 8400, 01, 10, 11, 15, 17, 21, 32, 27, 29-33,
8336-38, 40, 42, 44, 46-48, 50, 52

— 8537 OFRM

— WOLF CANYON PERFS 9823, 28, 34, 39, 41, 69, 73, 75, 77, 96, 98, 9905,
OT, 09, 11, 13, 15, 17, 19, 33, 35, 37, 39, 81, 83, 85, 87, 89, 9991 (29 HOLES)
SQ 20 W/ 200 SX

— 9971 P.B.T.D

— 9998' CIBP

— 9999' TOP OF FISH 2 3/8" TCU

— 10004' SN

— 10006' GUID TYPE A PNR

— 10010' GUID TYPE A PNR

— UPPER PANN PERFS 10043, 45, 47, 61, 67, 69, 77, 79, 81, 83, 85, 92, 94, 96,

— 834" HOLE 10101, 103, 106, 109, 113, 117, 119, 121

— 10182' P.B.T.D

— 10228' 7" 23# S-95 LINER SET W/ 1000 SX CMT 615'

10230 TD

Mobil Producing Texas & New Mexico Inc.
Proposed Water Injection Wells
North Vacuum Abo Field
Lea County, New Mexico

Well Data

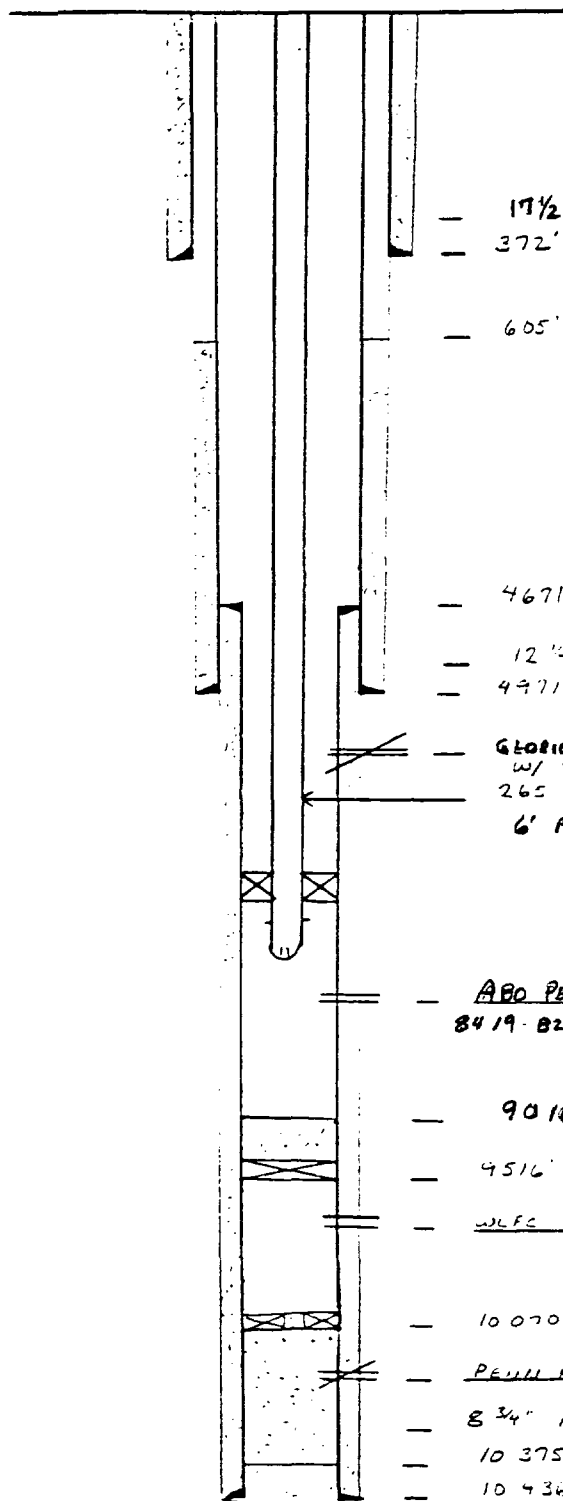
- III A. 1. North vacuum Abo Unit #116
1880' FSL & 510' FWL
Sec. 24, Unit L, 17-S, 34E
2. 13-3/8" @372' w/350 sx circ.
9-5/8" @ 4971' w/2300 sx
TOC 605' (Temp Survey)
7" @ 10,436' w/365 sx
TOC 8195' (Temp Survey)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model N.B. Packer @8550'
- B. 1. Abo
2. 8438'-8497' perforated
3. Originally drilled for production
4. Glorieta perms 6060-6110' sqzd w/200 sx cmt.
5. Next higher formation, Blinberry; next lower formation, Wolfcamp
- VII 1. Maximum 600 BBL/day/well, avg 250 BBL/day/well
2. Closed system
3. Maximum pressure 4350 psi, avg 4150 psi
4. Ogallala water will be injected because of the adverse affects of produced water on the tight formation of the Abo zone.

DATE 8-2-85 WELL NO. 1112 LEASE NVAU FIELD VACUUM

LOCATION 24 - TMC - F 24E
LEA CO., N.M.

SIGNED M.E. VASICEK

G.L. 4013
D.F. 4029
K.B. 4030
ZERO 12 JUL



Current

— 17 1/2" HOLE
— 372' 13 3/8" 49# 5.40 CSU SET W/ 350 SX CMT CINC

— 605' TOP OF CEMENT (T.S.)

— 4671' TOP OF LINER

— 12 1/4" HOLE
— 4971' 4 5/8" 40# + 36# J55 CSU SET W/ 2300 SX CMT

— ~~GLORIA PERFS 6060, 62, 65, 67, 77, 81, 83, 85, 87, 91, 93, 95, 97, 101, 103, 108, 110 SQZD~~
W/ 200 SX CMT. REV OUT 95 SX. GLORIA PERFS, RE SQZD W/ 85 SX CMT
265 JTS 2 3/8" J-55 T86 + BKR LOCKSET PKR + 2 JTS 2 3/8" T86 +
6' PERF SUR + 2 3/8" T86 TOPMA

— ABO PERFS W/ 1 JSPE 8438, 41, 45, 46, 48-51, 63, 67, 69, 71, 72, 74-76
8419-82, 84, 85, 87, 88, 91, 92, 95-97 (17 HOURS)

— 9016' P2TD

— 9516' CIBP CAPPED W/ 35 SX CMT

— WLEC PERFS 9605, 09, 11, 17, 31, 35, 43, 47, 50, 53, 57, 99-5, 79,
10024, 26, 36, 45, 52, 54

— 10070 BAKER MODEL D FAK

— PERM PERFS 10087, 89, 91, 93, 97, 101, 103, 106, 109, 118, 120, 123, 127, 132, 135,
10139, 141 SQZD BELOW BAKER PKR W/ 100 SX CMT

— 8 3/4" HOLE

— 10375' P2TD

— 10436' 7" 23# SAS UNIT SET W/ 965 SX CMT CINC

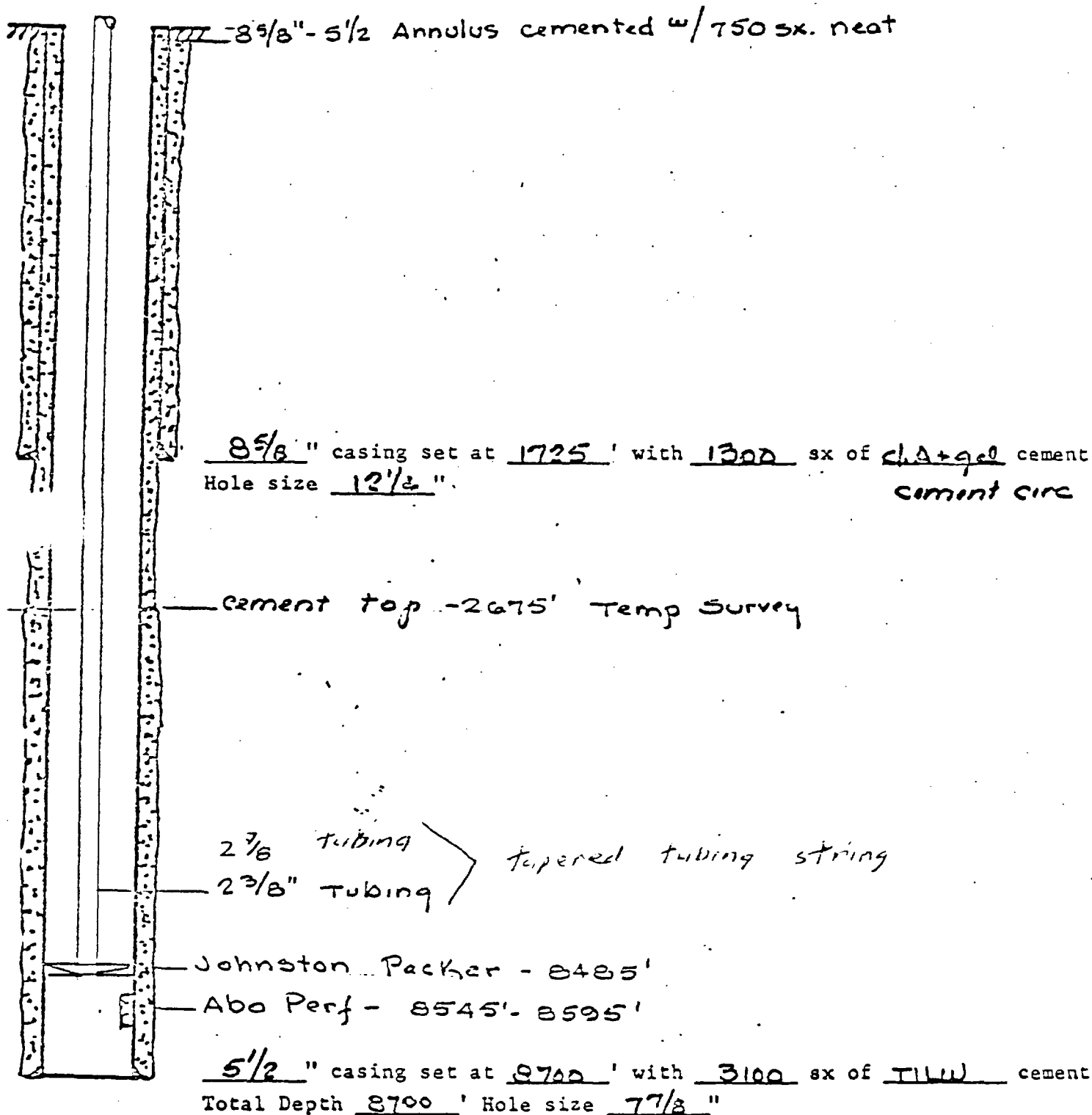
10436' TD

Mobil Producing Texas & New Mexico Inc.
Proposed Water Injection Well
North Vacuum Abo Field
Lea County, New Mexico

Well Data

- III A. 1. North Vacuum Abo Unit #136
660' FNL & 860' FWL, Unit D,
Sec. 26, 17-S, 34-E
2. 8-5/8" @ 1725' w/1300 sx circ.
5-1/2" @ 8700' w/3850' sx circ.
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model N.B. Packer @ 8550'
- B. 1. Abo
2. 8545'-8595' perforated
3. Originally drilled for production
4. None
5. Next higher formation, Blinbry; next lower
formation, Wolfcamp
- VII 1. Maximum 600 BBL/day/well, avg 250 BBL/day/well
2. Closed system
3. Maximum pressure 4350 psi, avg. 4150 psi.
4. Ogallala water will be injected because of the
adverse affects of produced water on the tight
formation of the Abo zone.

FIELD	Vacuum, Abu North	OPERATOR	Mobil Oil Corp	DATE	5-12-76
LEASE	North Vacuum Abu Unit	WELL NO	136	LOCATION	D. Sec 26, T17S, R24E



5-12-76
JAS

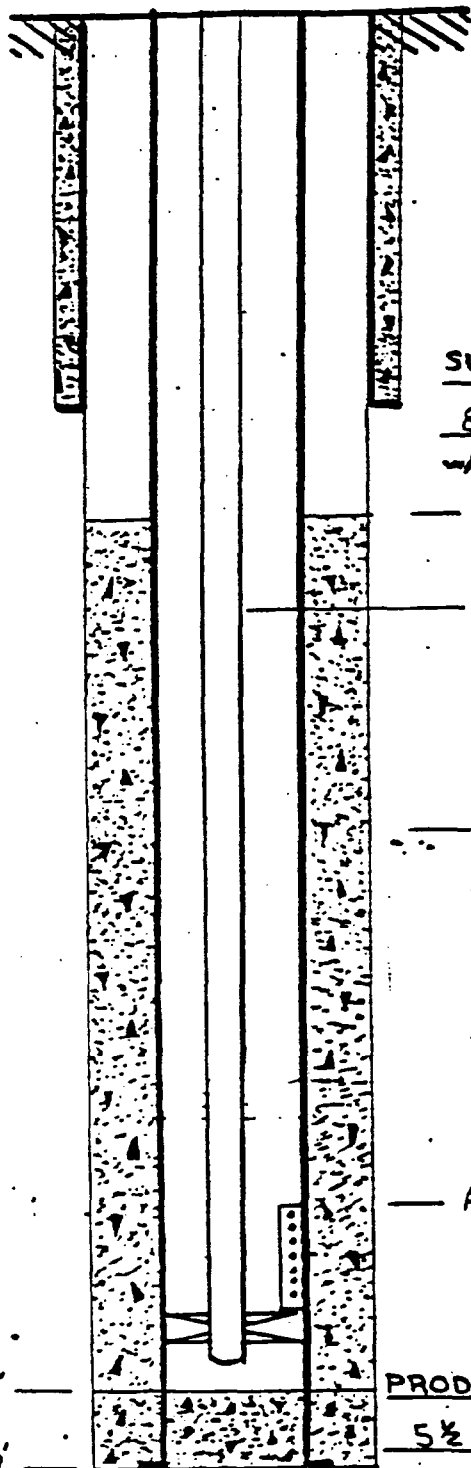
Mobil Producing Texas & New Mexico Inc.
Proposed Water Injection Well
North Vacuum Abo Field
Lea County, New Mexico

Well Data

- III A. 1. North Vacuum Abo Unit #137
660'FNL & 2130' FEL, Unit B,
Sec. 26, 17-S, 34-E
2. 8-5/8" @ 1655' w/1100 sx circ.
5-1/2" @ 8700' w/2900 sx circ.
TOC 2620 (Bond log)
3. 2-3/8" N-80 Buttress tubing
4. Baker Model NB Packer @ 8550'
- B. 1. Abo
2. 8481'-8525 perforated
3. Originally drilled for production
4. None
5. Next higher formation, Blinbry; next
lower formation Wolfcamp
- VII 1. Maximum 600 BBL/day/well, avg. 250 BBL/day/well
2. Closed system
3. Maximum pressure 4350 psi, avg. 4150 psi
4. Ogallala water will be injected because of the
adverse affects of produced water on the tight
formation of the Abo zone.

DIAGRAMMATIC WELLBORE SKETCH.

LEASE NVAU
 FIELD NORTH VACUUM ABO
 WELL 137
 COMPLETION DATE 7/27/70
 LOCATION 26/T175/R34E
 COUNTY & STATE LEA N.M.
 ELEVATION GL = 4022' O = 15' + 64
 DRAWN BY: S.L. MUNSELL
 DATE 7/1/82
 PRESENT



SURFACE

8 7/8" 23 lb at 1655'
w/ 1100 sz cmt. Cmt top CIRCULATED
2620' TOP OF CEMENT (BONE LOG)

64 JTS. 2 7/8" + 212 JTS. 2 3/8"
TA @ 8561'
SN @ 8564'

7 7/8" HOLE

ROOS:

191 - 3/4"
84 - 7/8"
63 - 1"
PUMP 2" x 1 1/2" x 24'

ADD PERFS: (WELEX CASED HOLE 7/16/70)

8481; 83; 89; 95; 97; 8504; 09; 13; 15; 19; 23; & 8525

w/ 2 JSPP (TOTAL OF 24 HOLES)

PRODUCTION

5 1/2" 17415.5 lb at 8700'

w/ 2900 sz cmt. Cmt top 2620'

T.D. 8700' P.B.T.D. 8600'

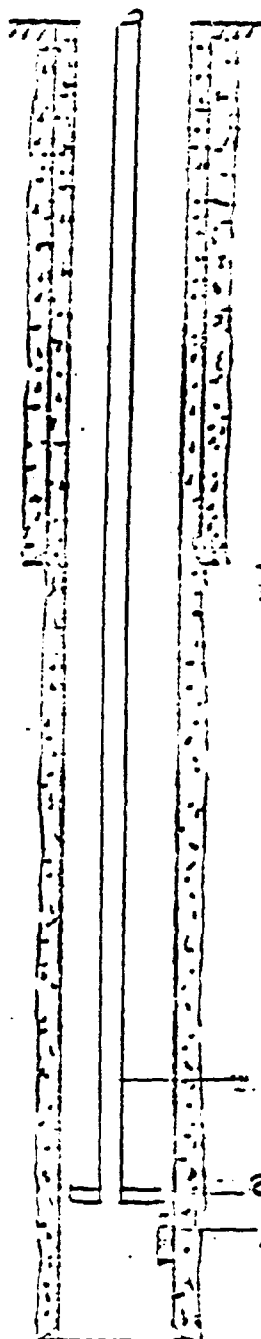
MWB

Mobil Producing Texas & New Mexico Inc.
Proposed Water Injection Well
North Vacuum Abo Field
Lea County, New Mexico

Well Data

- III A. 1. North Vacuum Abo Unit #138
1980' FSL & 860' FEL, Unit L
Sec. 26, 17-S, 34-E
2. 8-5/8" @ 1615' w/1200 sx circ.
5-1/2" @ 8700' w/3100 sx circ.
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model N-B Packer @ 8550'
- B. 1. Abo
2. 8508'-8600' perforated
3. Originally drilled for production
4. None
5. Next higher formation, Blinbry; next
lower formation Wolfcamp
- VII 1. Maximum 600 BBL/day/well avg. 250 BBL/day/well
2. Closed system
3. Maximum pressure 4350 psi, avg. 4150 psi.
4. Ogallala water will be injected because of the
adverse affects of produced water on the tight
formation of the Abo zone.

FIELD	Vacuum, Aba North	OPERATOR	Abba Oil Corp	DATE	5-12-76
LEASE	North Vacuum Aba Unit	WELL NO	138	LOCATION	W-52-26, T17S, R21E



8 7/8 " casing set at 1615 ' with 1200 sx of CLH-gel cement
Hole size 12 1/4 " cement circ.

2 3/8 " Tubing

Baker Anchor Catcher - 8430'

Aba-Perf. - 8508' - 8600'

5 1/2 " casing set at 8700 ' with 2100 sx of T1200 cement
Total Depth 8700 ' Hole size 7 7/8 " cement circ.

Mobil Producing Texas & New Mexico Inc.
Proposed Water Injection Well
North Vacuum Abo Field
Lea County, New Mexico

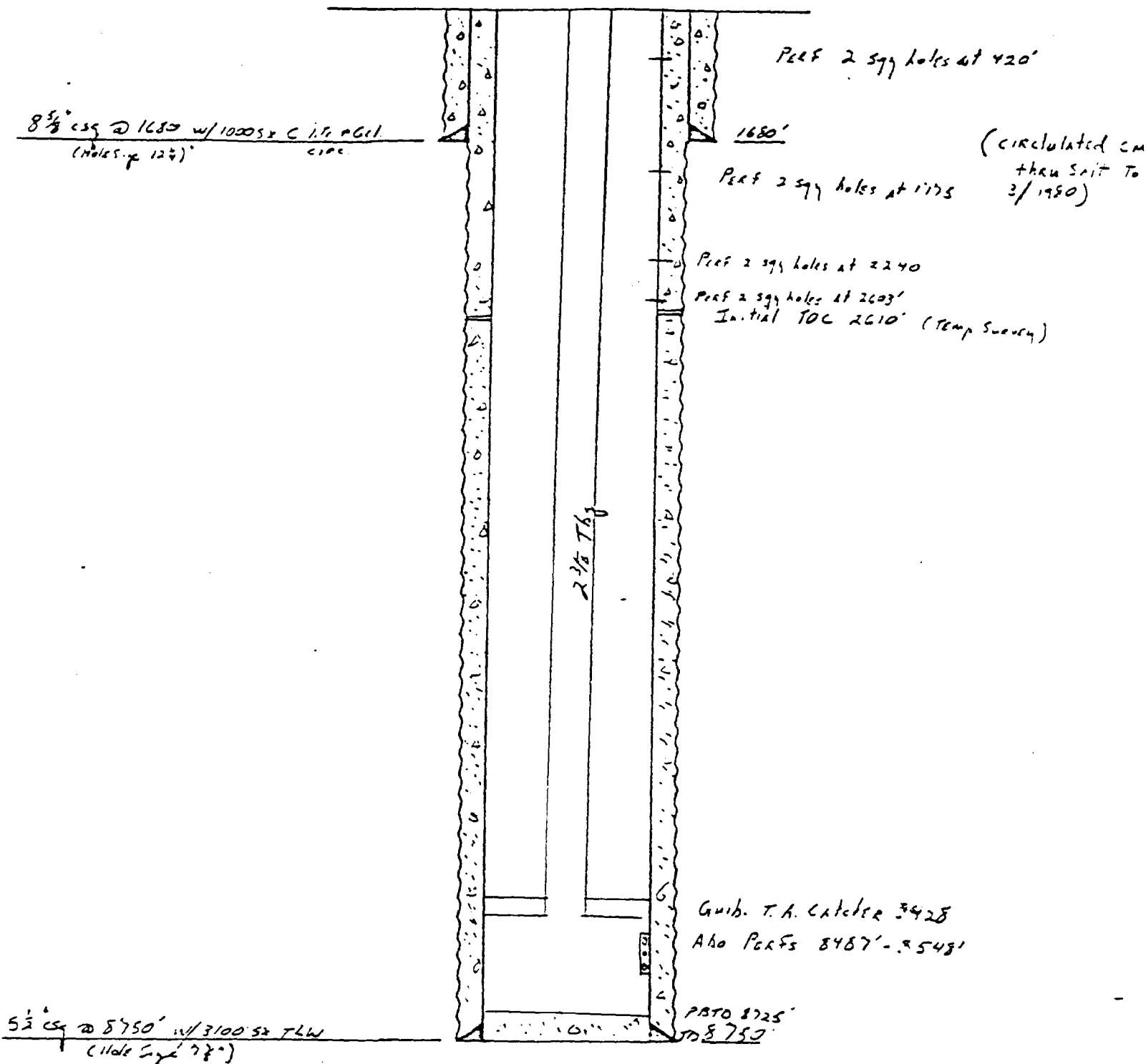
Well Data

- III A. 1. North Vacuum Abo Unit #156
1893' FSL & 1800' FEL, Unit J
Sec. 23, 17-S, 34-E
2. 8-5/8" @ 1680' w/1000 sx circ.
5-1/2" @ 8750' w/3100 sx circ.
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @ 8550'
- B. 1. Abo
2. 8487'-8548' perforated
3. Originally drilled for production
4. After circulating cement and running a Temp.
Survey, it was determined the top of cement was
2610'. In order to circulate to surface,
squeeze holes had to be perforated @ 420',
1175', 2240', & 2603'. (See attached well
sketch.)
5. Next higher formation, Blinbry, next lower
formation Wolfcamp
- VII 1. Maximum 600 BBL/day, avg 250 BBL/day
2. Closed system
3. Maximum pressure 4350 psi, avg. 4150 psi
4. Ogallala water will be injected because of the
adverse affects of produced water on the tight
formation of the Abo zone.

DIAGNOSTIC WELL SKETCH

NVAU 156

T - 23 - 175 - 248



MRU 4/10/80

Mobil Producing Texas & New Mexico Inc.
Proposed Water Injection Wells
North Vacuum Abo Field
Lea County, New Mexico

Well Data

- III A. 1. North Vacuum Abo Unit #205
660' FNL & 1980' FEL, Sec. 24,
Unit B, 17-S, 34-E
2. 13-3/8" @ 336' w/350 sx circ.
9-5/8" @ 5000' w/2160 sx
TOC @ 1290' (calc)
7" liner @ 10,401' w/900 sx
TOC @ 4791' (TOL)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model N.B. Packer @ 8550'
- B. 1. Abo
2. 8523'-8570' perforated
3. Originally drilled for production
4. None
5. Next higher perms, Blinbry; next
lower perms, Wolfcamp
- VII 1. Maximum 600 BBL/day/well, avg. 250 BBL/day/well
2. Closed system
3. Maximum pressure 4350 psi, avg. 4150 psi
4. Ogallala water will be injected because of the
adverse affects of produced water on the tight
formation of the Abo zone.

DATE 8-2-85

WELL NO. 205

LEASE NVAU

FIELD VAZUUM

LOCATION

B 24 - T 17 - R 3 - E

LFA 2000' N. N.

SIGNED

JRE JAL

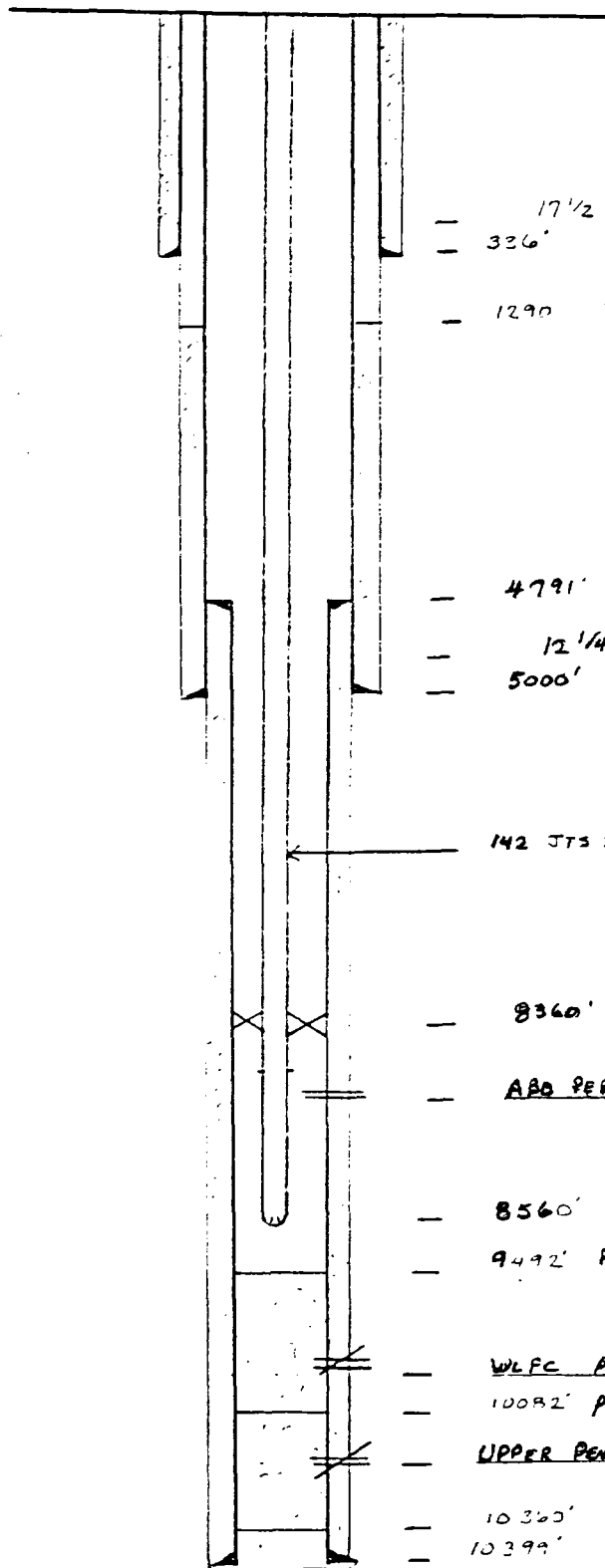
G.L. 700

D.F. 100

K.B. 100

ZERO

ILLEGIBLE

Current

17 1/2" HOLE
 336' 12 3/8" CSG SET W/ 350 SX CMT CIRC
 1290 TOP CEMENT (CALL)

4791' LINER TOP
 12 1/4" HOLE
 5000' 9 5/8" 40# + 36# J55 CSG SET W/ 2260 SX

142 JTS 2 7/8" J55 T&G + 127 JTS 2 7/8" J55 T&G SNR 8490

8360' BAKER TAC

ABB PERFS W/ JSPF 8523-29 34 46-50 56 60 68, 70 (20 HOLES)

8560' OPMA

9492' PBD

WLFC PERFS 9671-73, 75-79, 9708-10, 10010-14 (16 HOLES)
 SQ 20 W/ 100 SX CMT

UPPER PENN PERFS 10334, 36, 38, 40, 42, 44, 46, 48, 50, 52 (10 HOLES)
 SQ 20 W/ 100 SX CMT

10360' PBD
 10399' 7" 23" CAS + USS LINER SET W/ 900 SX INSIDE NEAT CIRC
 8 3/4" HOLE

10401 TD

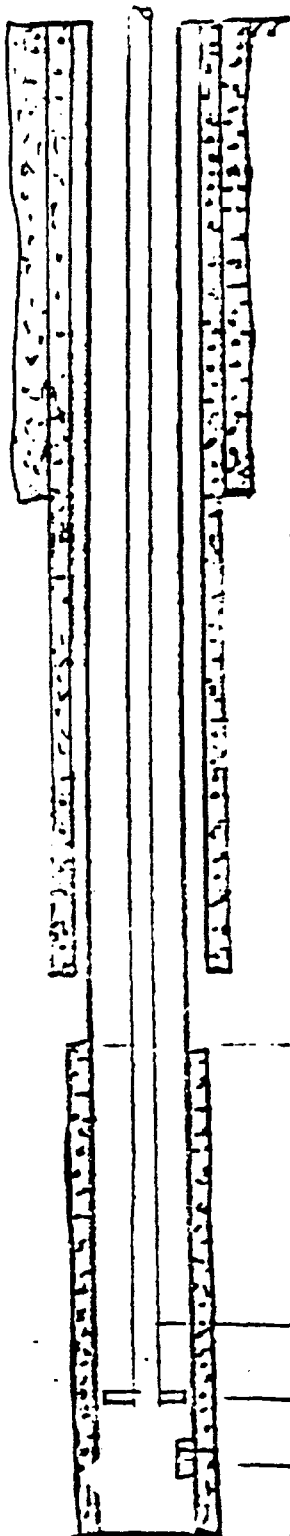
Mobil Producing Texas & New Mexico Inc.
Proposed Water Injection Well
North Vacuum Abo Field
Lea County, New Mexico

Well Data

- III A. 1. North Vacuum Abo Unit #210
1840' FSL & 800' FWL, Unit L,
Sec. 23, 17-S, 34-E
2. 12-3/4" @290' w/450 sx circ.
8-5/8" @ 3045' w/1400 sx circ.
5-1/2" @ 8800' w/ 2300 sx circ.
TOC 3050 (temp survey)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @ 8550'
- B. 1. Abo
2. 8539-8609' perforated
3. Originally drilled for production
4. None
5. Next higher formation, Blinbry; next
lower formation, Wolfcamp
- VII 1. Maximum 600 BBL/day/well, avg. 250 BBL/day/well
2. Closed system
3. Maximum pressure 4350 psi, avg. 4150 psi
4. Ogalalla water will be injected because of the
adverse affects of produced water on the tight
formation of the Abo zone.

OPERATOR	DATE
Vacuum Abo North	5-17-76
WELL NO.	LOCATION
210	N. Sec 23, T17S, R34E

SESS North Vacuum Abo Unit



2 3/4" casing set at 290' with 450 sx of CLC cement
Hole size 17 1/2" cement Circ

3 5/8" casing set at 3045' with 1400 sx of T1W cement
Hole size 11" cement Circ

Cement Top - 3050' - Temp. Survey

2 7/8" Tubing

Daker Anchor Cat. - 8447'

Abo Perf. - 8539-8609 (17 holes)

5 1/2" casing set at 8800' with 2300 sx of T1W cement
Total Depth 8900' Hole size 7 7/8"

17# / ft

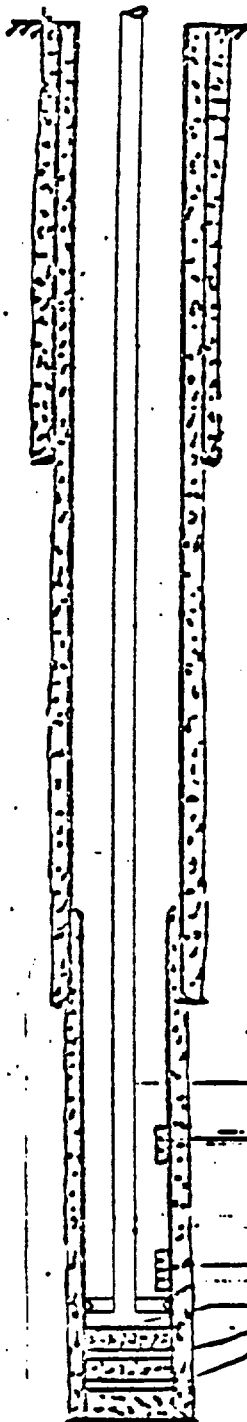
Mobil Producing Texas & New Mexico Inc.
Proposed Water Injection Well
North Vacuum Abo Field
Lea County, New Mexico

Well Data

- III A. 1. North Vacuum Abo Unit #211
2054' FSL & 2162' FEL, Unit J,
Sec. 24, 17-S, 34-E
2. 11-3/4" @ 397' w/400 sx circ.
8-5/8" @ 5000' w/1550 sx circ.
5-1/2" @ 9386' w/750 sx circ.
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8475'-8509' perforated
3. Originally drilled for production
4. Perfs 6097'-6159' sqzd w/100 sx cemt.
PBTD 9356' cemt. plug w/50 sx @ 9475'
cemt plug w/25 sx @ 10,025'
cemt plug w/25 sx @ 10,200'
5. Next higher formation, Blinbry; next
lower formation, Wolfcamp
- VII 1. Maximum 600 BBL/day/well, avg. 250 BBL/day/well
2. Closed system
3. Maximum pressure 4350 psi, avg. 4150 psi
4. Ogallala water will be injected because of the
adverse affects of produced water on the tight
formation of the Abo zone.

FIELD	Vacuum, Aba North	OPERATOR	Wahil Oil Co.	DATE	5-17-76
LEASE	North Vacuum Aba Unit	WELL NO	211	LOCATION	J. Sec 24 T17S R34E

(Formerly MALLARD-Site A #1)



11 3/4 " casing sec at 397' with 400 sx of CLH cement
Hole size 15 " cement circ.

4203' Liner top

8 3/8 " casing sec. at 5000' with 1550 sx of LU cement
Hole size 11 " cement circ

2 7/8 " tubing

Perf. 6097'-6159' Sqzd. w/100 sx Cement

Baker Mod. B. Anch. Cat- 8540'

Abs Perf. - 8473'-8509'

PGTO - 9354' Cement Plug w/50 sx at 9475'

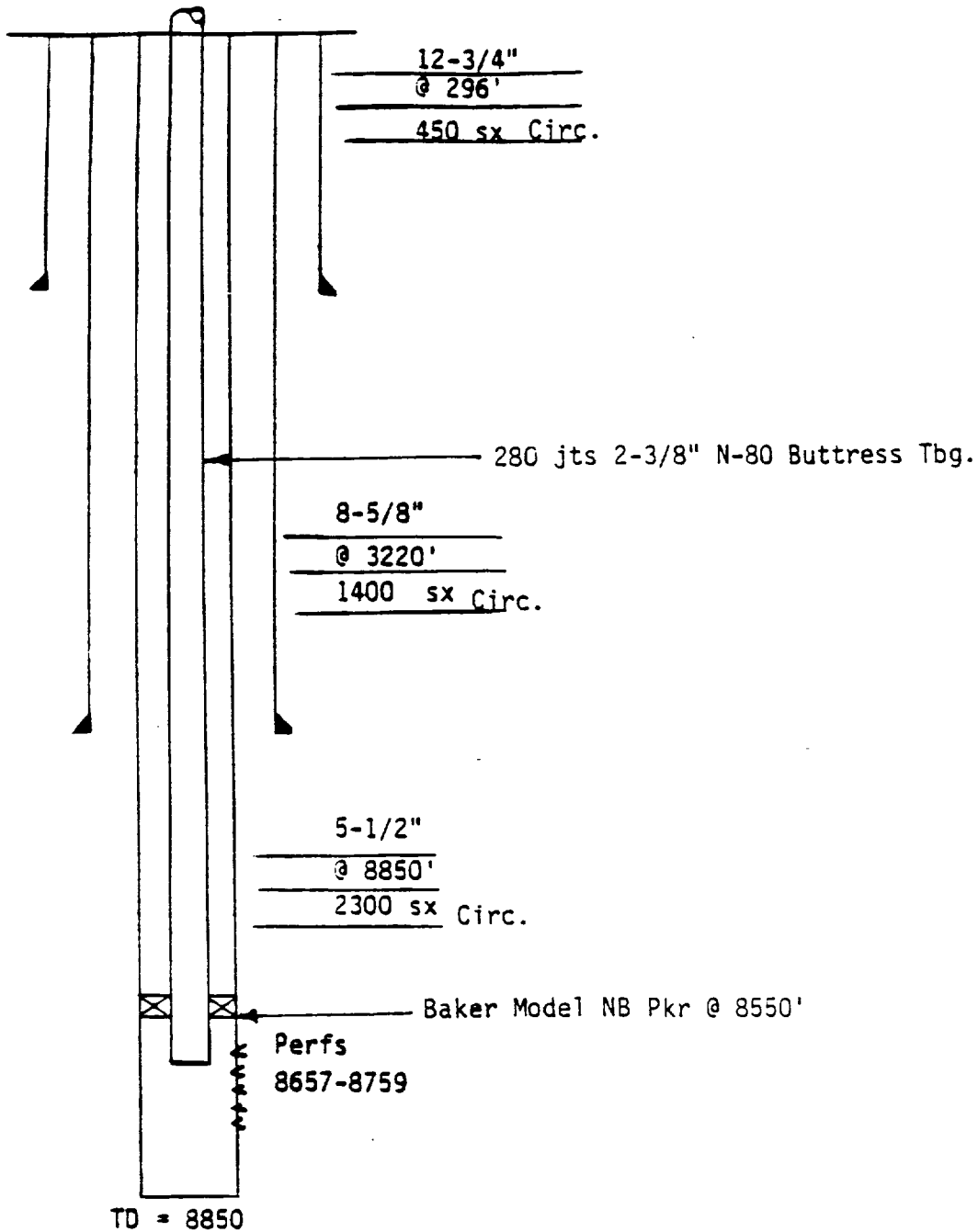
Cement Plug w/25 sx at 10025'

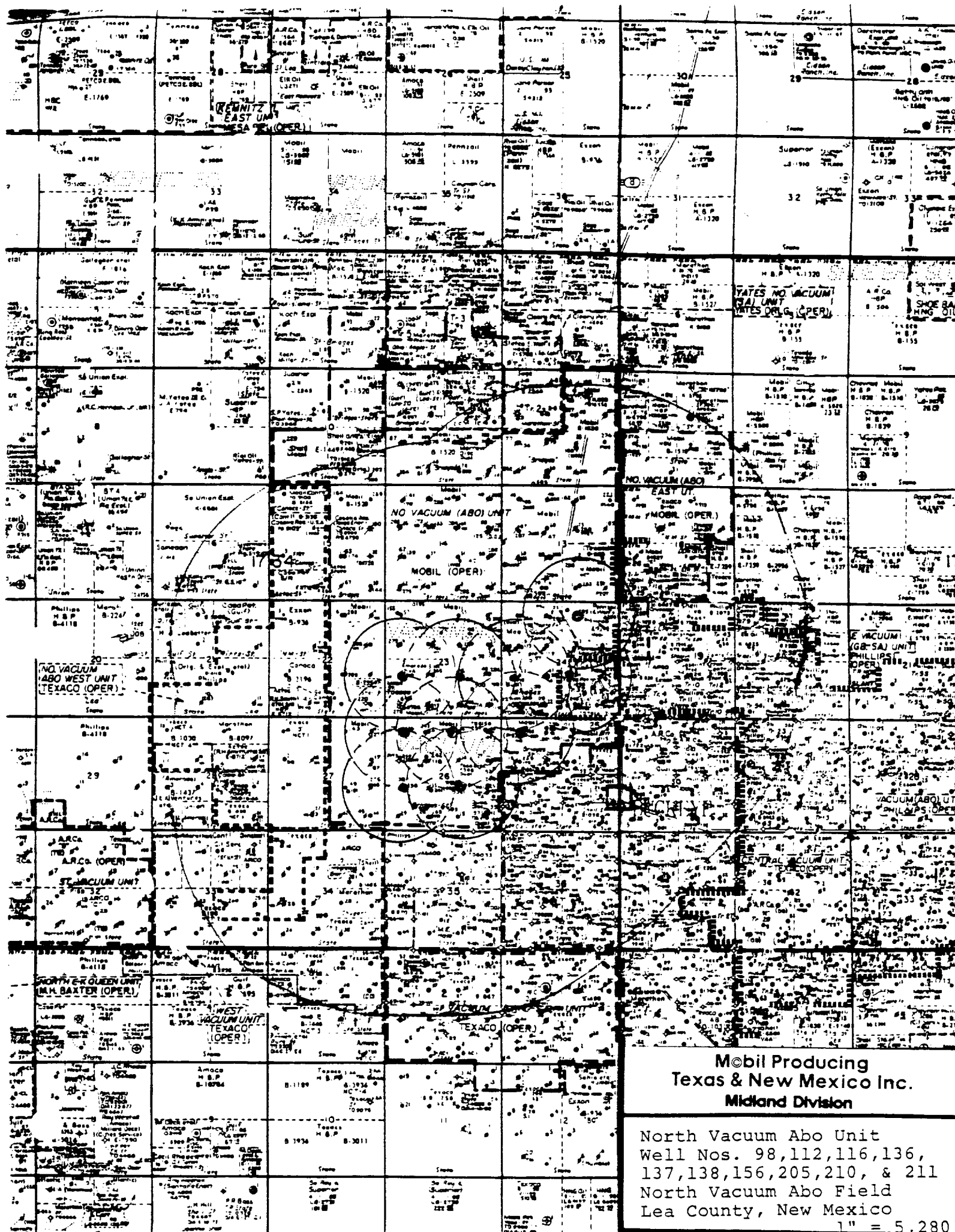
Cement Plug w/25 sx at 10200'

5 1/2 " liner sec at 9386' with 750 sx of HLW cement
Total Depth 10,200' Hole size 7 7/8 " cement circ

5-13-76
JHS

Typical Proposed Injector
North Vacuum Abo Unit
Lea County, New Mexico





Mobil Producing
Texas & New Mexico Inc.
Midland Division

North Vacuum Abo Unit
Well Nos. 98, 112, 116, 136,
137, 138, 156, 205, 210, & 211
North Vacuum Abo Field
Lea County, New Mexico

1" = 5.280'

MOBIL PRODUCING TEXAS & NEW MEXICO INC.
NORTH VACUUM ABO UNIT
PROPOSED WATER INJECTION
WELL NO. 98, 112, 116, 136, 137,
WELL NO. 138, 156, 205, 210, & 211
TWP 17-S, R-34-E
LEA COUNTY, NEW MEXICO

Tabulated data of all wells on public record within area of review.

OPERATOR LEASE	WELL NO.	LOCATION	WELL TYPE	DATE DRILLED	DEPTH	COMPLETION INTERVAL
OPERATOR - MOBIL PRODUCING TEXAS & NEW MEXICO INC.						
North Vacuum Abo Unit	95	860' FSL & 660' FEL Sec. 26, Unit P	I	3/64	13,816'	N Vacuum Abo 8362-8451'
"	96	1980' FNL & 510' FEL Sec. 26, Unit H	I	4/66	12,390'	N Vacuum Abo 8397-8459'
"	104	520' FNL & 2120' FEL Sec. 25, Unit B	P	4/67	10,200'	Abo 9212-9300' U. Penn
"	109	660' FSL & 1830' FWL Sec. 24, Unit N	I	5/66	12,470'	10,016-10,116' N Vacuum Abo
"	117	660' FSL & 460' FEL Sec. 23, Unit P	I	10/66	10,414'	8427-8484' N Vacuum Abo
"	118	1980' FNL & 1980' FWL Sec. 26, Unit F	I	7/70	8,700'	8445-8497' N Vacuum Abo
"	119	2030' FNL & 1830' FWL Sec. 24, Unit F	I	12/66	12,391'	8485-8567' N Vacuum Abo
"	120	660' FSL & 1780' FWL Sec. 13, Unit N	P	6/67	10,400'	8486-8508' U-Penn
"	128	2005' FNL & 535' FEL Sec. 23, Unit H	I	2/69	8,580'	10,107-10,148' N Vacuum Abo
"	129	860' FNL & 1980' FEL Sec. 23, Unit B	P	5/69	8,600'	8473-8525' N Vacuum Abo
"	143	660' FNL & 1780' FEL Sec. 27, Unit B	P	10/70	8,745'	8499-8558' N Vacuum Abo
"	145	660' FSL & 860' FEL Sec. 27, Unit B	I	10/70	8,750'	8605-8680' N Vacuum Abo
"	149	2180' FNL & 660' FEL Sec. 27, Unit B	P	2/71	8,750'	8575-8657' N Vacuum Abo 8628-8673'

MOBIL PRODUCING TEXAS & NEW MEXICO INC.
 NORTH VACUUM ABO EAST UNIT
 WELL NOS. 98, 112, 116, 136, 137, 138,
 156, 205, 210 & 211
 TWP 17-S, R-34E
 LEA COUNTY, NEW MEXICO

<u>LEASE</u>	<u>WELL NO.</u>	<u>LOCATION</u>	<u>WELL TYPE</u>	<u>DATE DRILLED</u>	<u>DEPTH</u>	<u>COMPLETION INTERVAL</u>
OPERATOR - MOBIL PRODUCING TEXAS & NEW MEXICO, INC. (cont'd)						
North Vacuum Abo Unit	151	1980' FNL & 2130' FWL Sec. 23, Unit F	I	3/71	12,180'	Abo 8550-8601'
"	153	610' FSL & 2130' FWL Sec. 26, Unit F	I	1/72	8,700'	Abo 8455-8528'
"	157	2180' FNL & 660' FEL Sec. 27, Unit H	I	8/71	12,500'	Abo 8585-8640'
"	204	660' FNL & 860' FEL Sec. 24, Unit D	P	6/67	10,359'	Abo 8487-8537'
"	206	660' FNL & 660' FWL Sec. 19, Unit D	P	6/71	8,800'	Abo 8597-8659'
"	207	2121' FNL & 801' FEL Sec. 24, Unit H	I	9/68	8,653'	Abo 8527-8587'
"	208	1980' FNL & 860' FEL Sec. 22, Unit H	I	1/71	8,800'	Abo 8642-8704'
"	209	1980' FSL & 1780' FEL Sec. 22, Unit J	P	6/71	8,800'	Abo 8654-8718'
"	212	795' FSL & 795' FEL Sec. 24, Unit P	I	4/68	10,200'	Abo 8503-8579'
"	213	460' FSL & 1980' FWL Sec. 23, Unit N	I	1/72	8,800'	Abo 8509-8565'
"	218	1880' FNL & 1975' FWL Sec. 25, Unit F	I	1/74	8,600'	Abo 8388-8428'
"	219	1030' FSL & 1973' FWL Sec. 13, Unit N	I	2/74	8,650'	Abo 8500-8535'
"	220	660' FSL & 860' FEL Sec. 22, Unit P	I	6/74	8,800'	Abo 8613-8664'
"	222	2100' FSL & 660' FEL Sec. 24, Unit I	P	1/75	8,660'	Abo 8511-8576'
"	230	1880' FSL & 2130' FEL Sec. 13, Unit J	P	12/67	10,600'	Abo 8546-8587'
"	231	660' FSL & 660' FEL Sec. 13, Unit P	I	9/71	8,800'	Abo 8584-8730'
"	234	1980' FSL & 545' FEL Sec. 23, Unit I	P	12/83	8,700'	Abo 8470-8622'

MORIL PRODUCING TEXAS & NEW MEXICO INC.
NORTH VACUUM ABO EAST UNIT
WELL NOS. 98, 112, 116, 136, 137, 138,
156, 205, 210 & 211
TWP 17-S, R-34E
LEA COUNTY, NEW MEXICO

<u>LEASE</u>	<u>WELL NO.</u>	<u>LOCATION</u>	<u>WELL TYPE</u>	<u>DATE DRILLED</u>	<u>DEPTH</u>	<u>COMPLETION INTERVAL</u>
OPERATOR - MOBIL PRODUCING TEXAS & NEW MEXICO, INC. (cont'd)						
North Vacuum Abo Unit	235	1880' FSL & 2000' FWL Sec. 24, Unit K	P	12/83	8,675'	Abo 8431-8610'
"	236	460' FNL & 1980' FWL Sec. 25, Unit C	P	10/83	8,700'	Abo 8400-8454'
"	237	530' FNL & 660' FEL Sec. 26, Unit A	P	11/83	8,700'	Abo 8425-8584'
"	238	660' FSL & 780' FWL Sec. 24, Unit M	P & A	10/83	5,000'	P & A'd
"	238-A	780' FWL & 643' FSL Sec. 24, Unit M	P	11/83	8,700'	Abo 8459-8479'
"	239	1992' FNL & 810' FWL Sec. 25, Unit E	P	3/84	8,700'	Abo 8374-8514'
"	240	2131' FSL & 665' FEL Sec. 26, Unit I	P	4/84	8,700'	Abo 8387-8564'
"	241	1882' FSL & 2001' FWL Sec. 26, Unit K	P	6/84	8,700'	Abo 8494-8666;
"	242	1980' FNL & 2100' FWL Sec. 26, Unit G	P	7/84	8,700'	Abo 8472-8608'
"	243	657' FNL & 1839' FWL Sec. 26, Unit C	P	4/84	8,700'	Abo 8494-8672'
"	244	589' FSL & 1859' FEL Sec. 23, Unit O	P	5/84	8,700'	Abo 8470-8608'
"	245	1932' FSL & 2155' FWL Sec. 23, Unit K	P	5/84	8,711'	Abo 8549-8684'
"	246	660' FSL & 1980' FEL Sec. 24, Unit O	P	3/84	8,700'	Abo 8444-8499'
"	247	2094' FEL & 2081' FNL Sec. 24, Unit G	P	4/84	8,710'	Abo 8493-8673'
"	248	2100' FNL & 659' FWL Sec. 24, Unit E	P	5/84	8,700'	Abo 8485-8509'
"	249	1850' FNL & 660' FWL Sec. 26, Unit E	P	7/84	8,720'	Abo 8534-8681'
"	250	650' FNL & 620' FEL Sec. 24, Unit A	P	6/84	9,100'	Abo 8568-8710'

MOBIL PRODUCING TEXAS & NEW MEXICO INC.
 NORTH VACUUM ABO EAST UNIT
 WELL NOS. 98, 112, 116, 136, 137, 138,
 156, 205, 210 & 211
 TWP 17-S, R-34E
 LEA COUNTY, NEW MEXICO

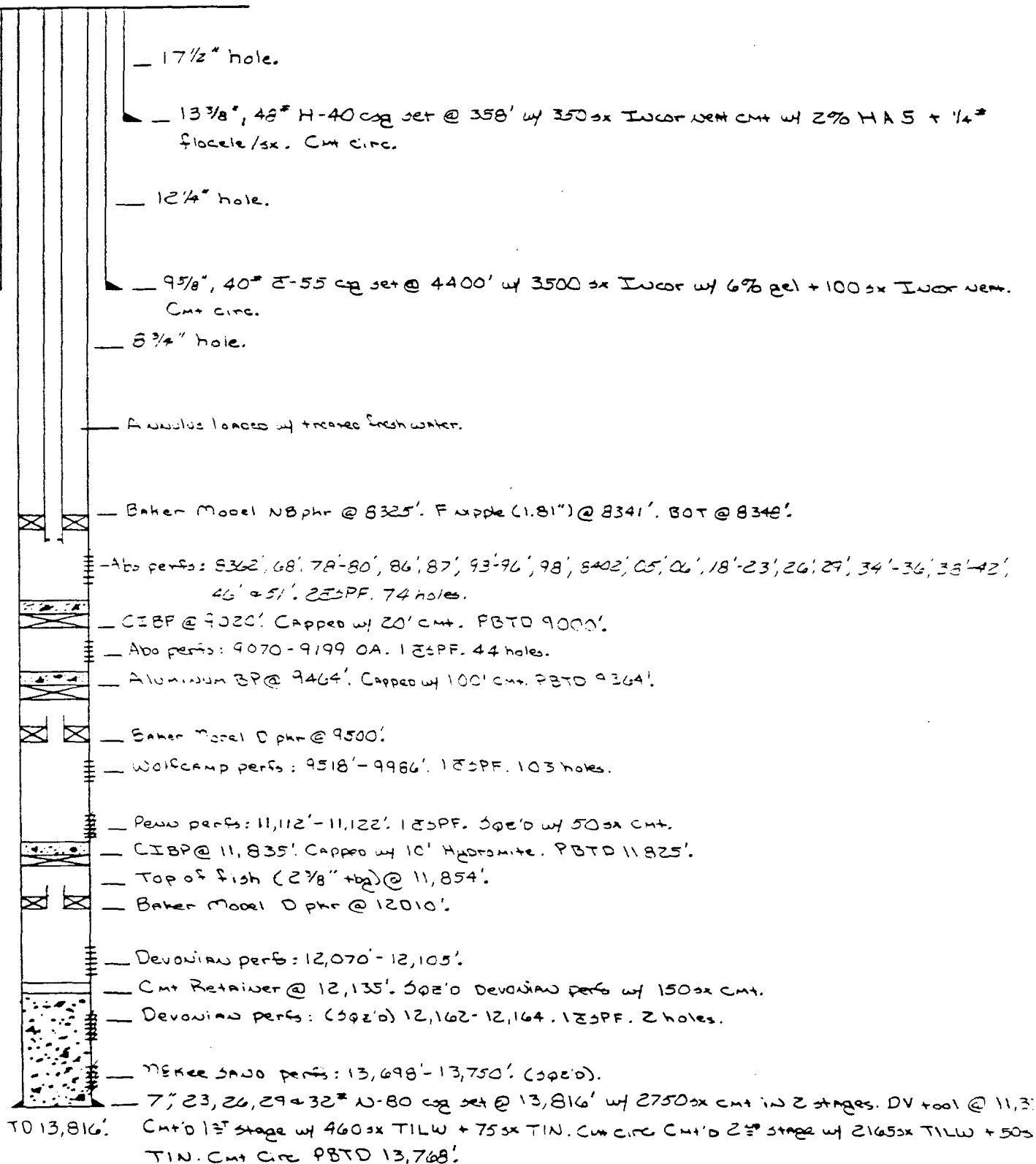
<u>LEASE</u>	<u>WELL NO.</u>	<u>LOCATION</u>	<u>WELL TYPE</u>	<u>DATE DRILLED</u>	<u>DEPTH</u>	<u>COMPLETION INTERVAL</u>
OPERATOR - MOBIL PRODUCING TEXAS & NEW MEXICO, INC. (cont'd)						
North Vacuum Abo Unit	251	660' FNL & 2110' FWL Sec. 24, Unit C	P	7/84	8,700'	Abo 8501-8540'
"	253	761' FSL & 1823' FEL Sec. 13, Unit D	P	8/84	8,700'	Abo 8562-8569'
OPERATOR - CONTINENTAL OIL CO.						
State H-35	7	660' FNL & 1780' FEL Sec. 35, Unit B	P	6/63	12,413	Abo 9154-9256'

DATE 3-22-83 WELL NO. 95 LEASE No. Vacuum Abn Unit FIELD Vacuum Abn North

LOCATION P-26-175-34 E
860' FSL and 660' FEL
Len County, New Mexico

SIGNED M.W. DEER

G.L. 4003'
D.F. 4013'
K.B. 4016'
ZERO 13' AGL

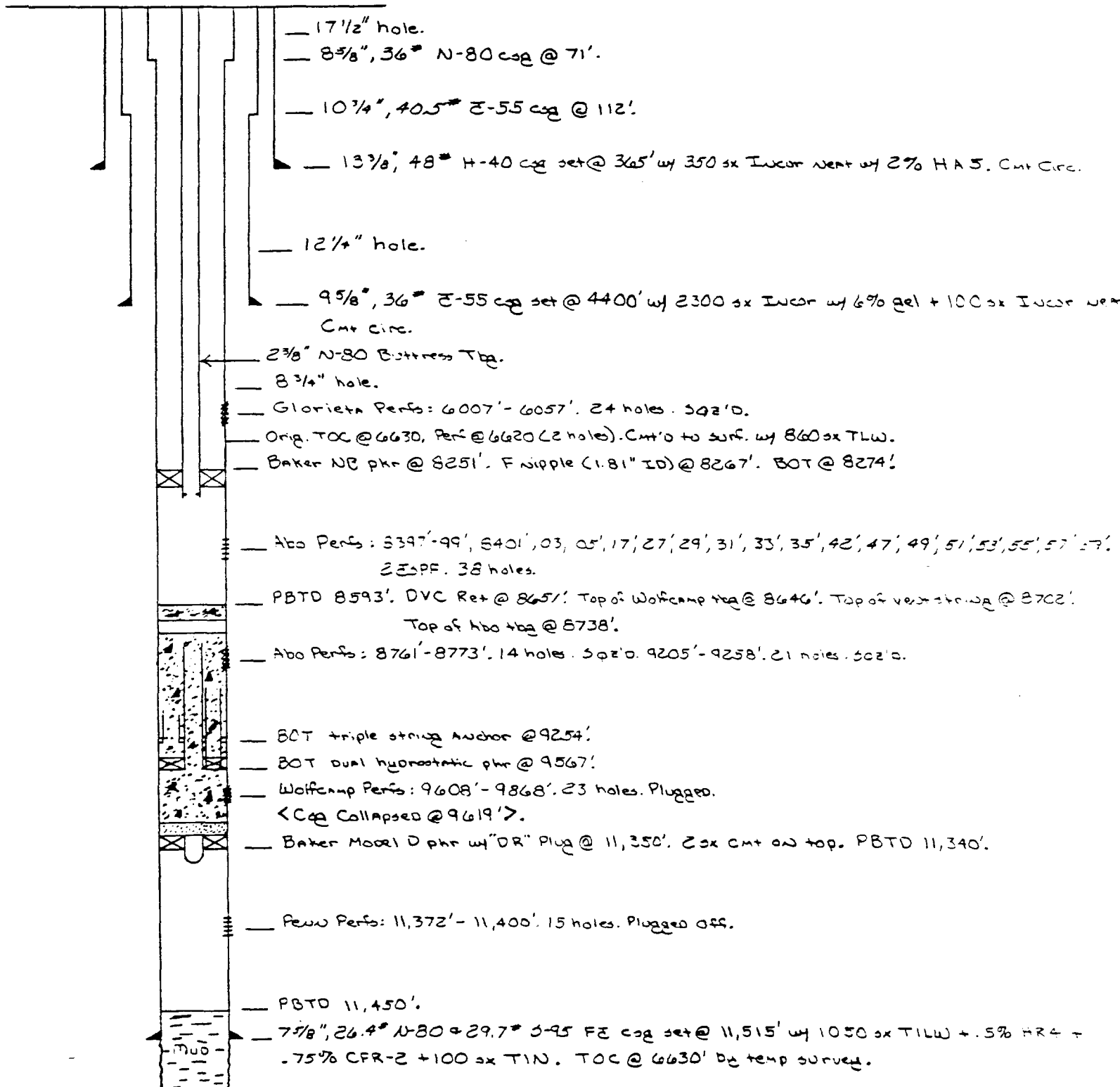


DATE 3-22-83 WELL NO. 96 LEASE No. Vacuum Abo Unit FIELD Vacuum Abo North

LOCATION H-26-175-34 E
 1980' FNL and 510' FEL
 Lea County, New Mexico

SIGNED M. W. DEER

G.L. 4013'
 D.F. 4030'
 K.B. 4031'
 ZERO 18' AG



TD 12,390'

FE 10-11-83

WELL NO. 104

BRIDGES STATE AND
LEASE North Vacuum Add Unit FIELD

VACUUM Upper Pe
VACUUM Add Unit

LOCATION B-25-175-34E

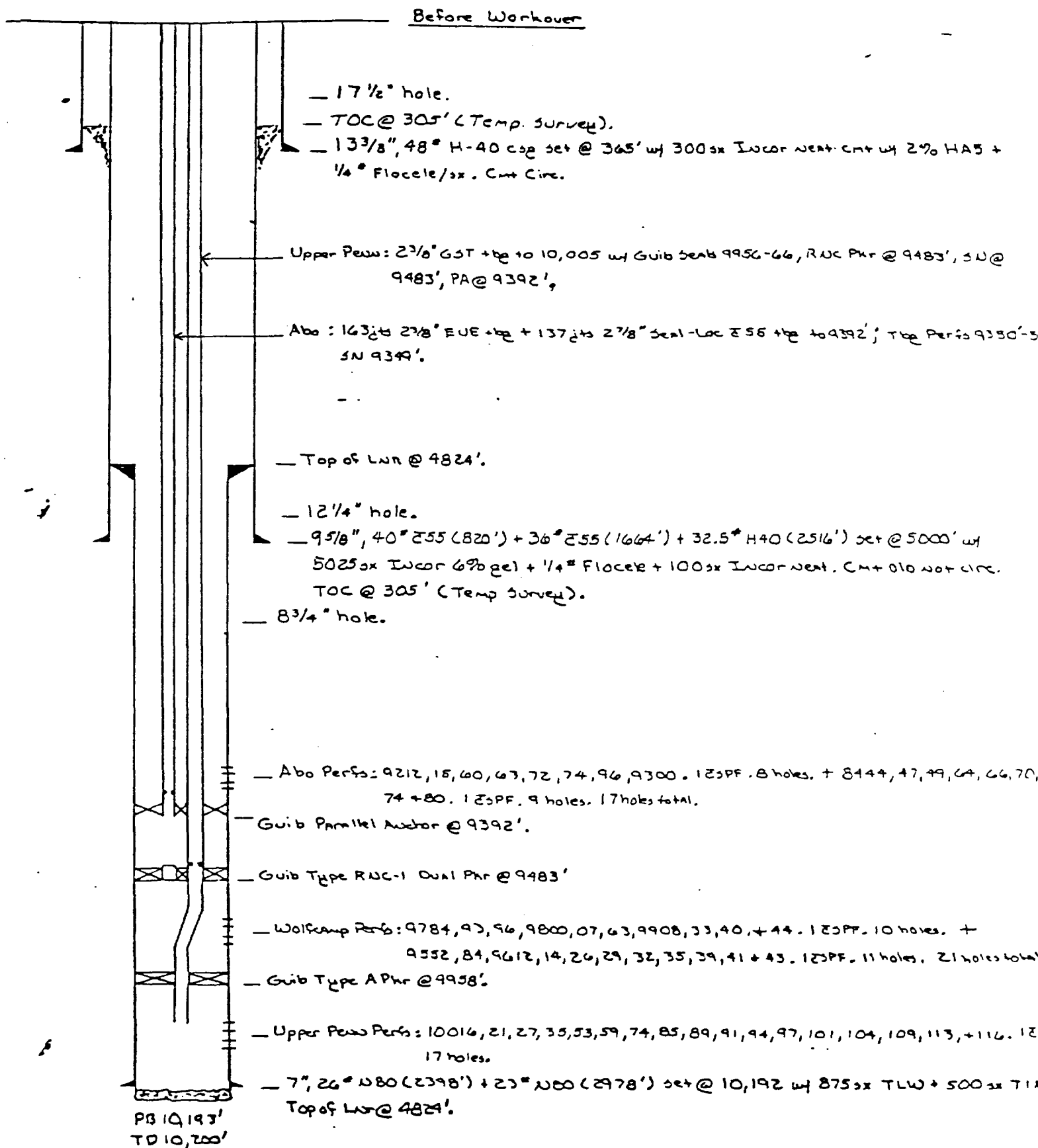
SIGNED M. P. Maurin

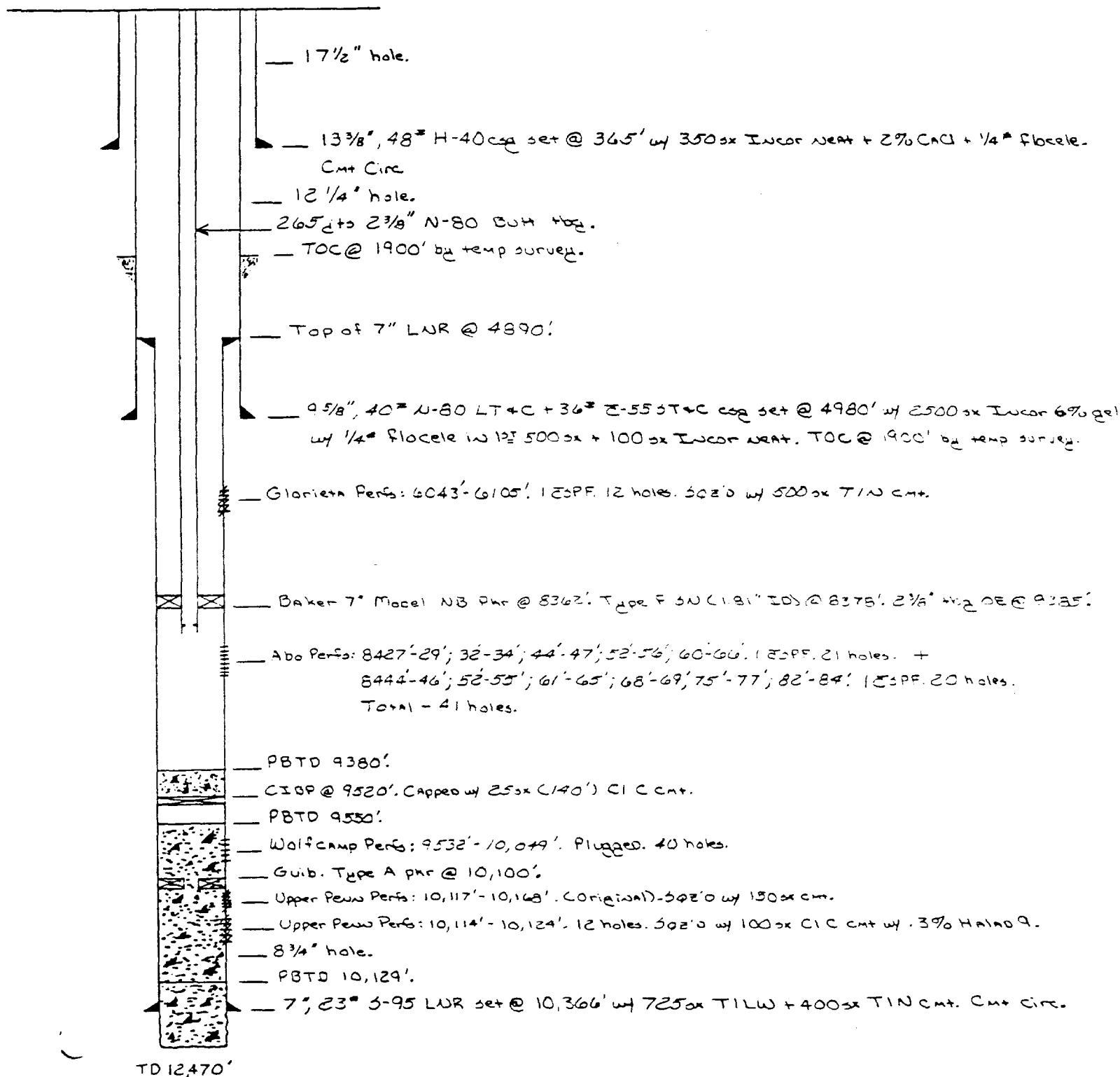
G.L. 3998'

D.F. 4008'

K.B. 4009'

ZERO 11' AGL



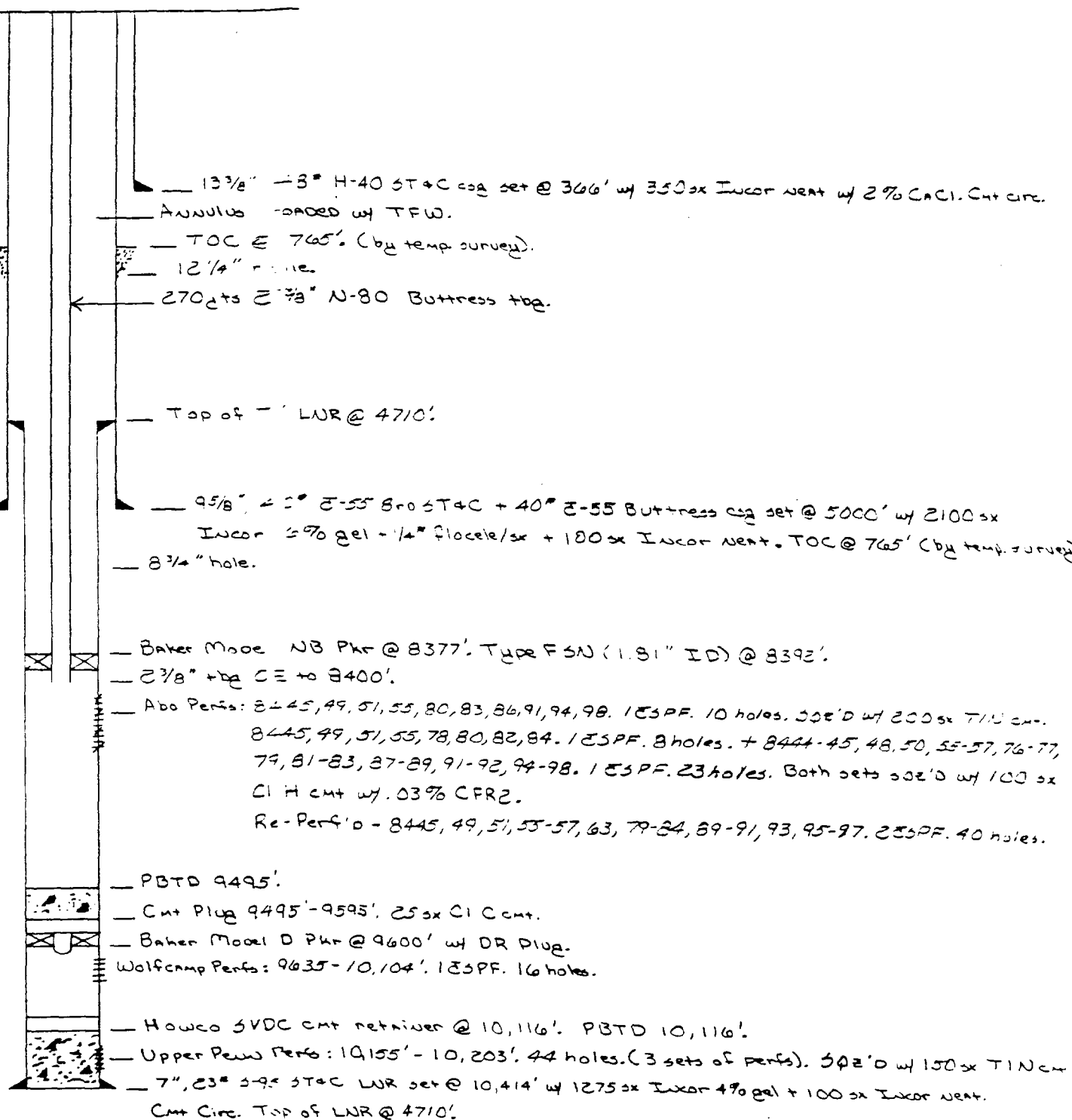
DATE 3-23-83WELL NO. 109LEASE No. Vacuum Abo UnitFIELD Vacuum Abo NorthLOCATION N-24-175-34ESIGNED M.W. DeerG.L. 4006.8'D.F. ---K.B. 4019'ZERO 12.2' AGL660' FSL and 1830' FWL
Lea County, New Mexico

DATE 3-23-83 WELL NO. 117 LEASE No. Vacuum Abu Dhabi FIELD VACUUM Abu Dhabi

LOCATION P-23-173-34E
660' FSL AND 46C FEL

SIGNED M. W. DEER

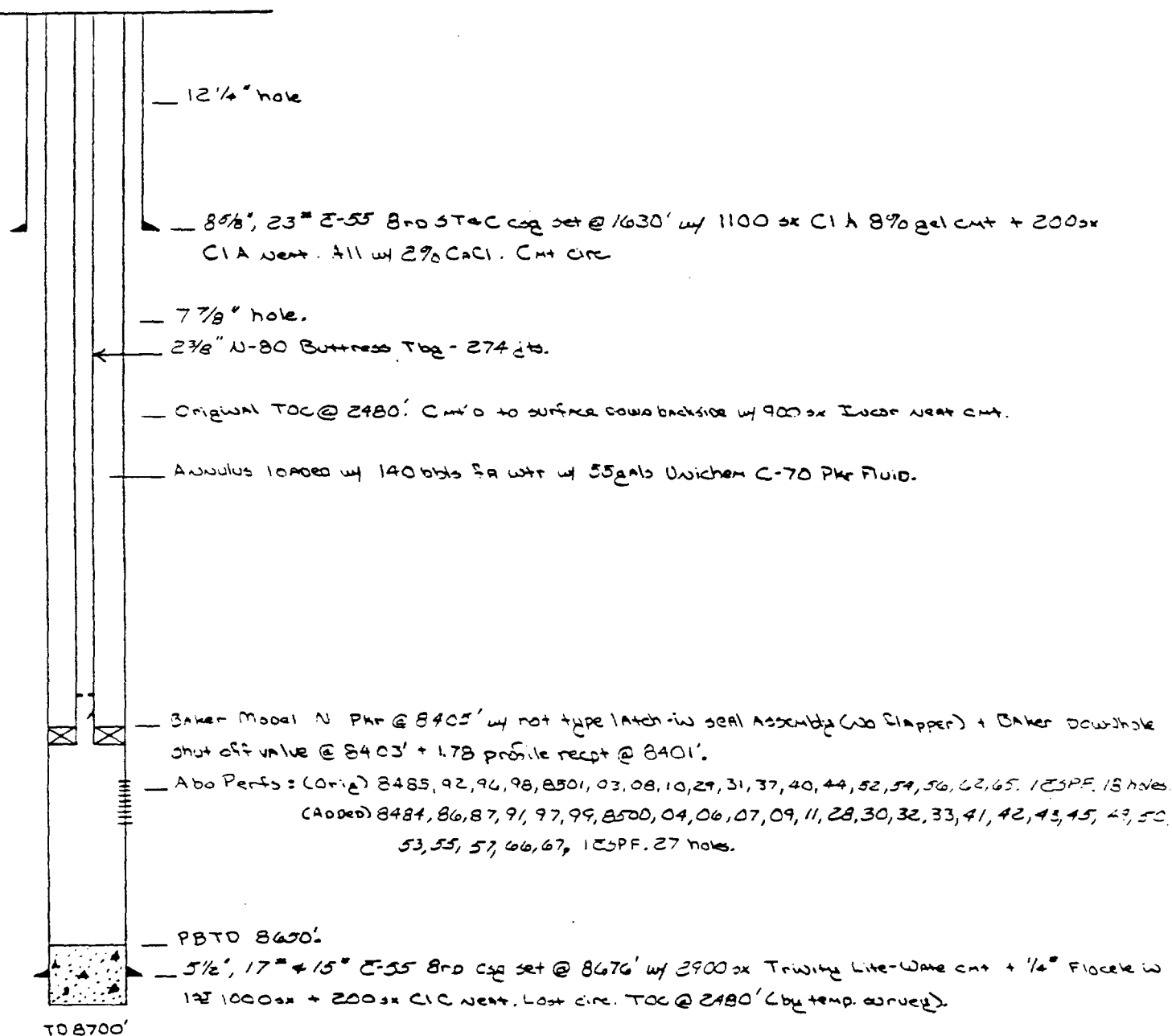
G.L. 4023'
D.F. 4035'
K.B. 4036'
ZERO 12' HGL



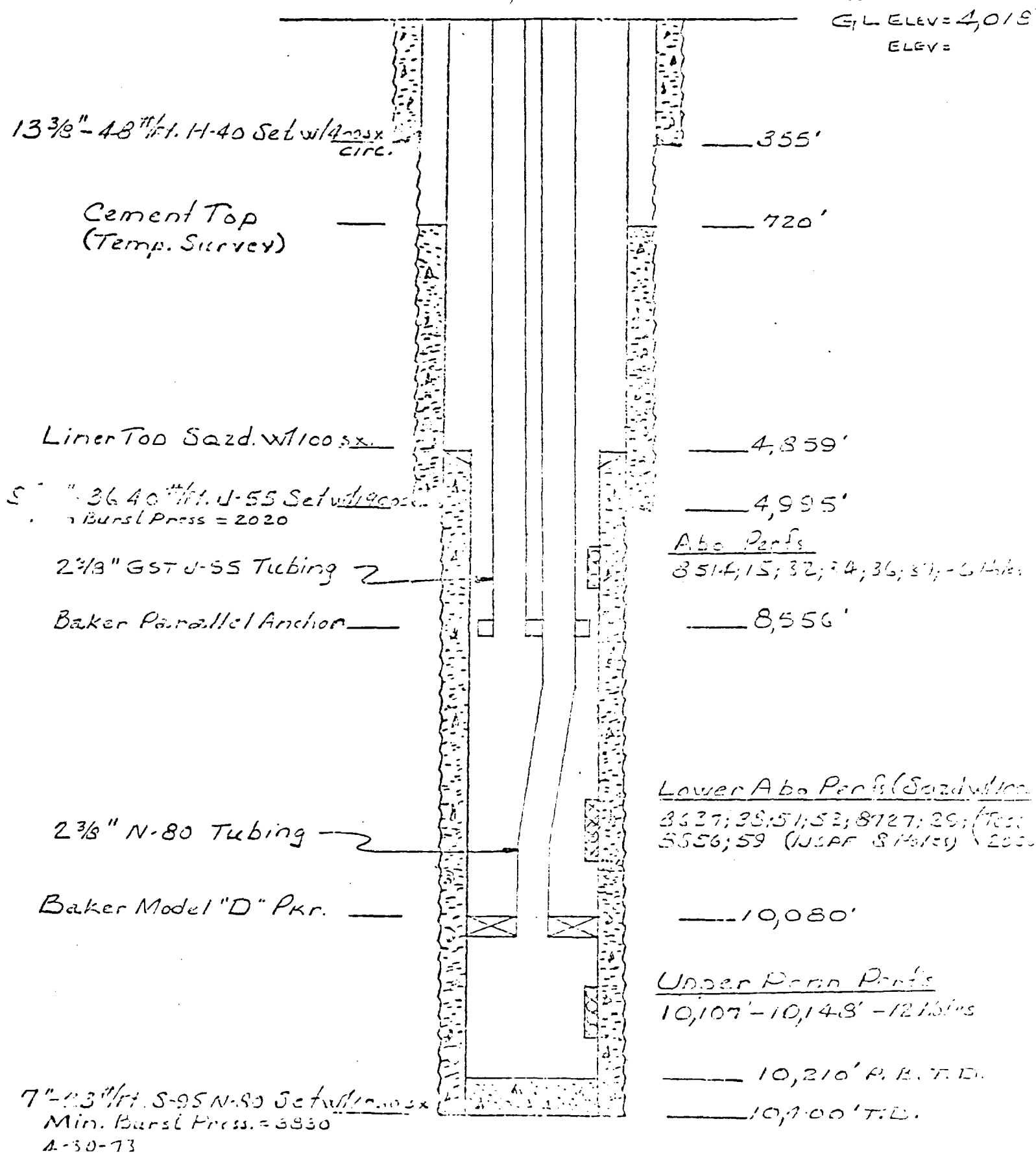
TD 10,414'.

DATE 3-23-83WELL NO. 118LEASE No. Vacuum Abo UnitFIELD Vacuum Abo NorthLOCATION F-26-175-34ESIGNED M.W. DEERG.L. 4030'D.F. 4044'K.B. 4045'ZERO 14' AGL1980' FNL w/o 1980' FNL
Lea County, New Mexico

Updated 1-23-84 MWD



DIAGRAMMATIC WELL SKETCH
NORTH VACUUM ACO UNIT WELL No. 120
NORTH VACUUM (A.C.) CO.
LEA COUNTY, NEW MEXICO

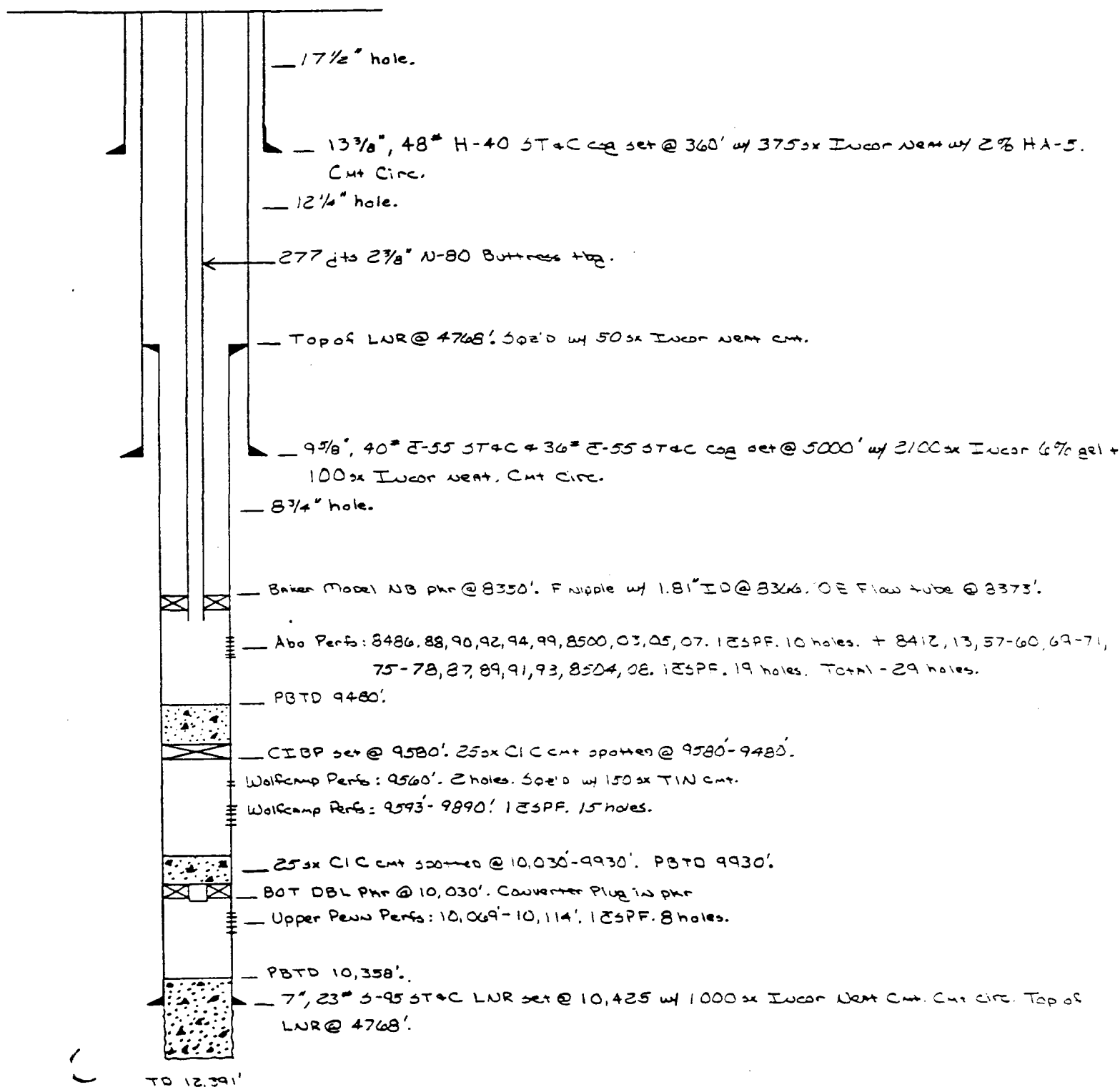


DATE 3-23-83 WELL NO. 119 LEASE No. Vacuum Abo Unit FIELD Vacuum Abo North

LOCATION F-24-175-34E
1980' FWL and 1780' FWL
Len County, New Mexico

SIGNED M. W. DEER

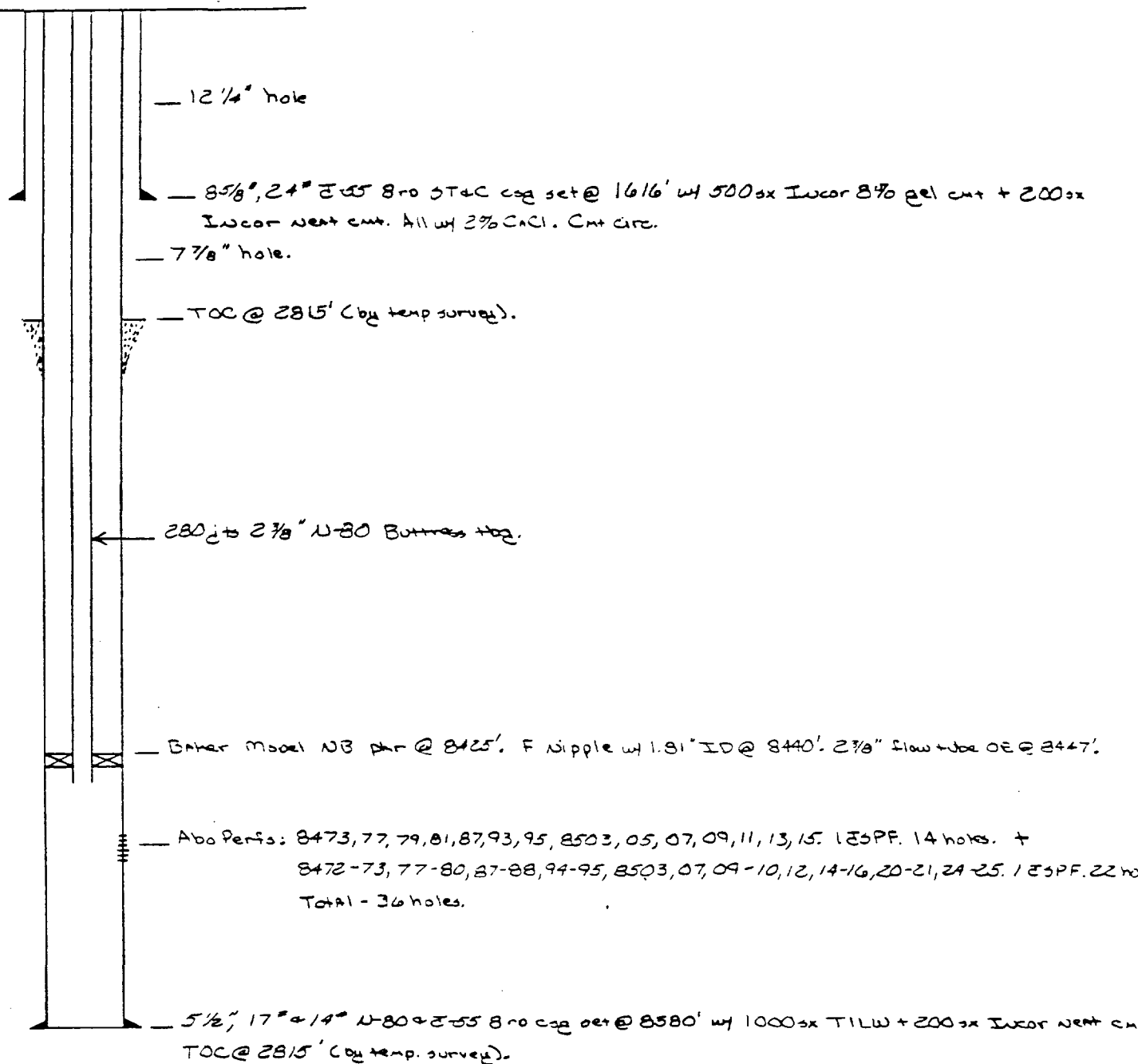
G.L. 4012.7'
D.F. 4023'
K.B. 4024'
ZERO 11.3' AGL



DATE 3-23-83WELL NO. 128LEASE No. Vacuum Abo UnitFIELD Vacuum Abo NorthLOCATION H-23-173-34ESIGNED M. W. DeerG.L. 4024'D.F. 4036'K.B. 4037'ZERO 13' AGL

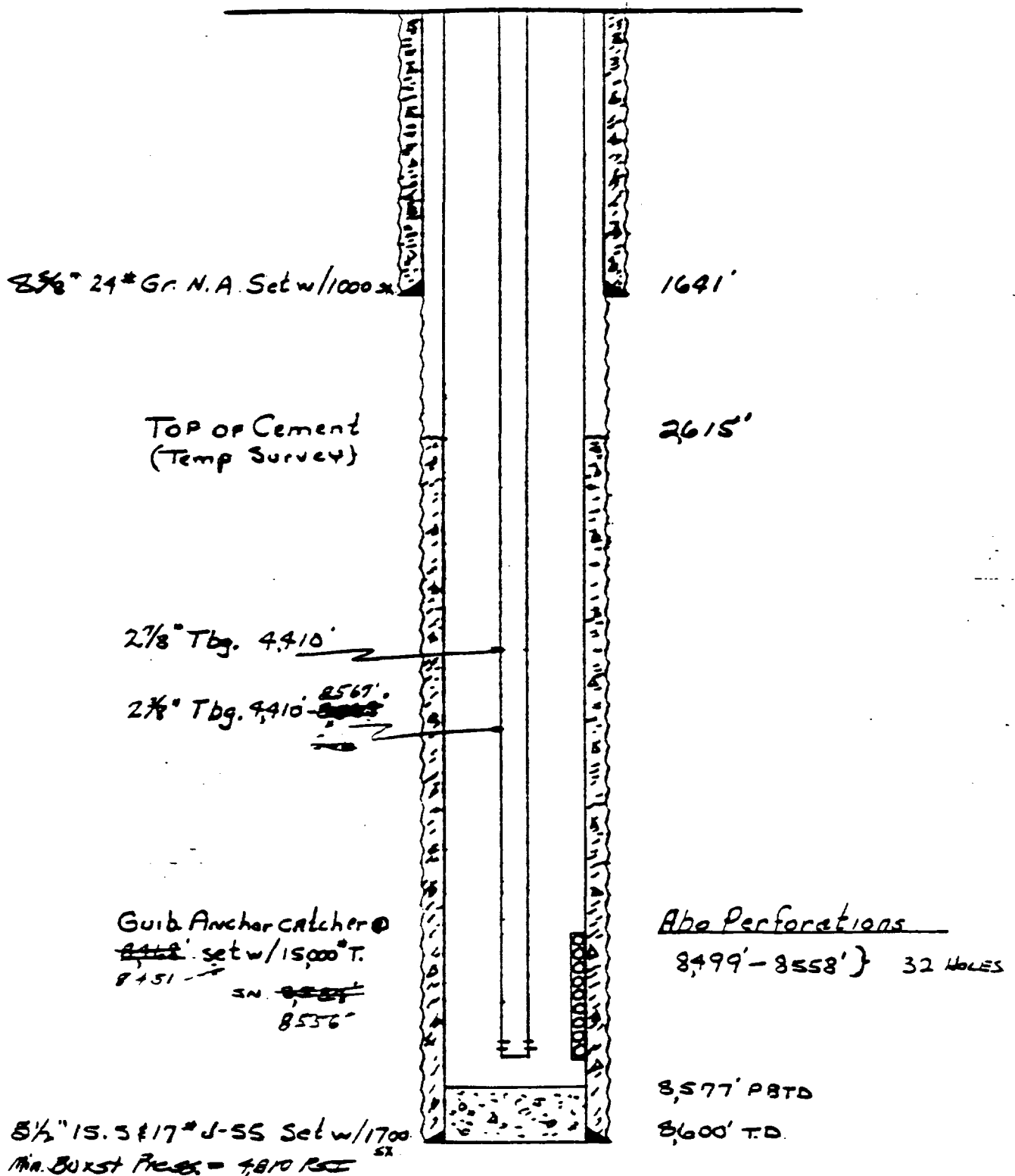
2005' FAUL AND 535' FEL

Len County, New Mexico



TD 8580'

Diagrammatic Well Sketch
 Bridges State Well No. 129
 Vacuum (North Abo) Field
 Lea County, New Mexico



— Ingos State 143 —

North Vacuum Field

Lea County New Mexico

8 $\frac{5}{8}$ " 23 $\frac{1}{4}$ " set
w/ 1000 sx. circ.

Down hole Equipment

Baker Tubing A - 8656

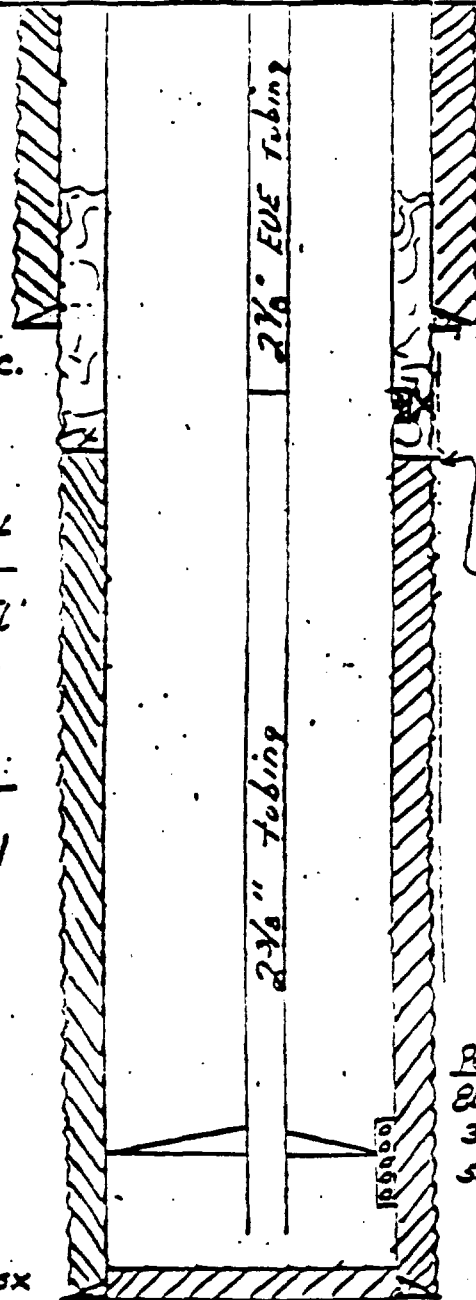
Tubing Perfs - 8706-09

SN - 8703

2 $\frac{7}{8}$ " tubing - Sur. to 1885

2 $\frac{3}{8}$ " tubing - 1885 to 8721

5 $\frac{1}{2}$ " set w/ 3100 sx



1655'

Perforated w/ 4 holes
@ 2300' - squeezed
w/ 525 sx. cmt.
Did not circulate.

Top of Cmt. 2340'
Temp. Survey - original
cementing work.

Perforations - ABO

8605, 08, 10, 19, 25, 27, 31, 37,
39, 43, 45, 47, 49, 51, 53,
55, 59, 64, 67, 73, 75, 8620.
22 holes.

8730' - PBTD

8745' - TD

DATE 3-23-83 WELL NO. 145 LEASE No. Vacuum Abo Unit FIELD Vacuum Abo Unit

LOCATION P-27-175-34E

SIGNED M.W. DEER

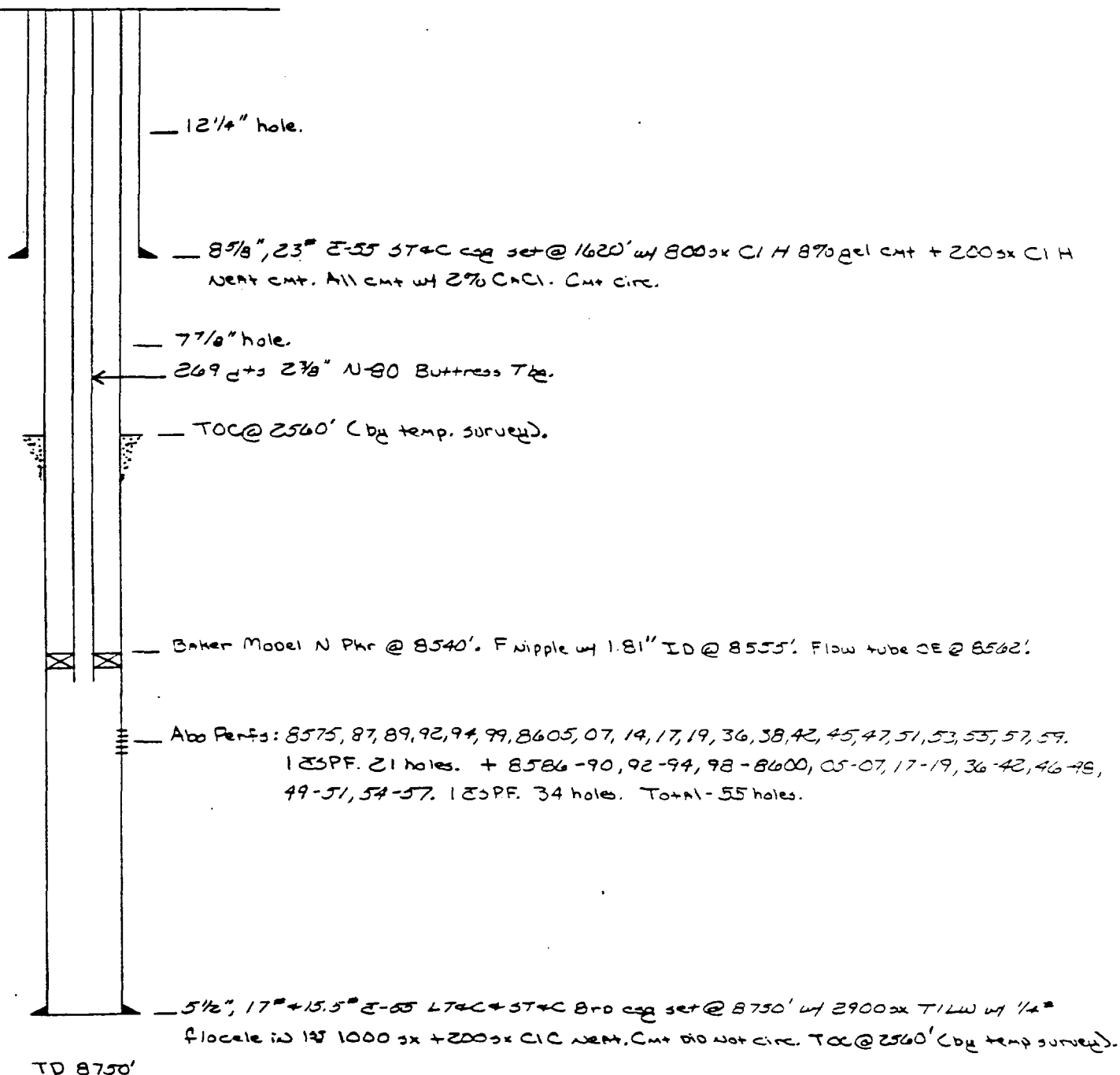
G.L. 4035'

D.F. 4048'

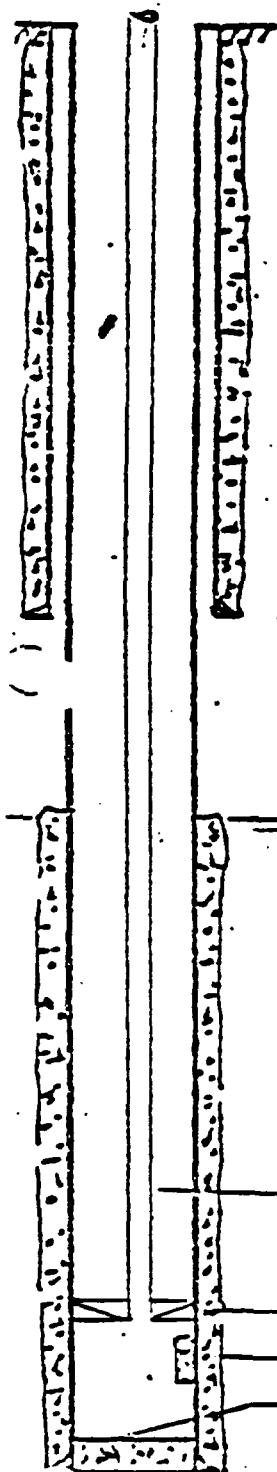
K.B. 4049'

ZERO 14' AGL

660' FSL AND 860' FEL
Lea County, New Mexico



FIELD	Vacuum Aba North	OPERATOR	Mobil Oil Corp	DATE	5-13-76
EASE	North Vacuum Aba Unit	WELL NO	149	LOCATION	J. Sec 27 T17S R34E



8 5/8 " casing set at 1630 ' with 1000 sx of cl. H+ad cement
Hole size 12 1/4 " Cement Circ

Cement Top - 2610' - Temp Surv.

2 3/8" tubing

Baker T.A. Catcher - 8561' w/ 12,000 lbs T.

Aba Perf. 8628' - 8673'

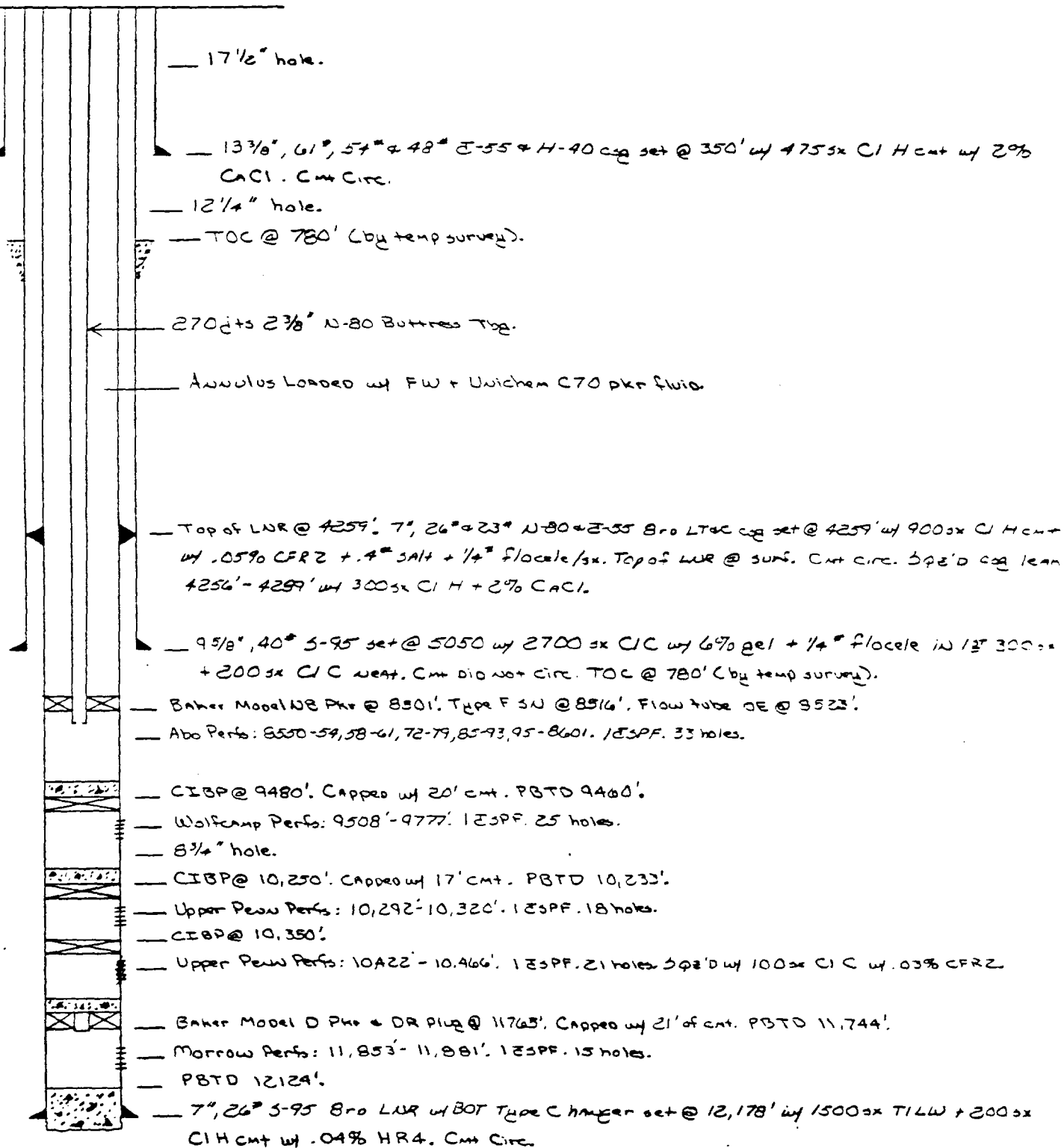
PTO - 8708'
 12 5/8" 11 1/2" 8 rd J55.

5 1/2 " casing set at 8750 ' with 3100 sx of TLW cement
Total Depth 8750 ' Hole size 7 7/8 "

DATE 3-24-83WELL NO. 151LEASE No. Vacuum Area UnitFIELD Vacuum Area NorthLOCATION E-23-175-34ESIGNED M.W. DEERG.L. 4030'D.F. 4042'K.B. 4044'ZERO 14' AGL

1980' FNL and 2180' FNL

Lea County, New Mexico



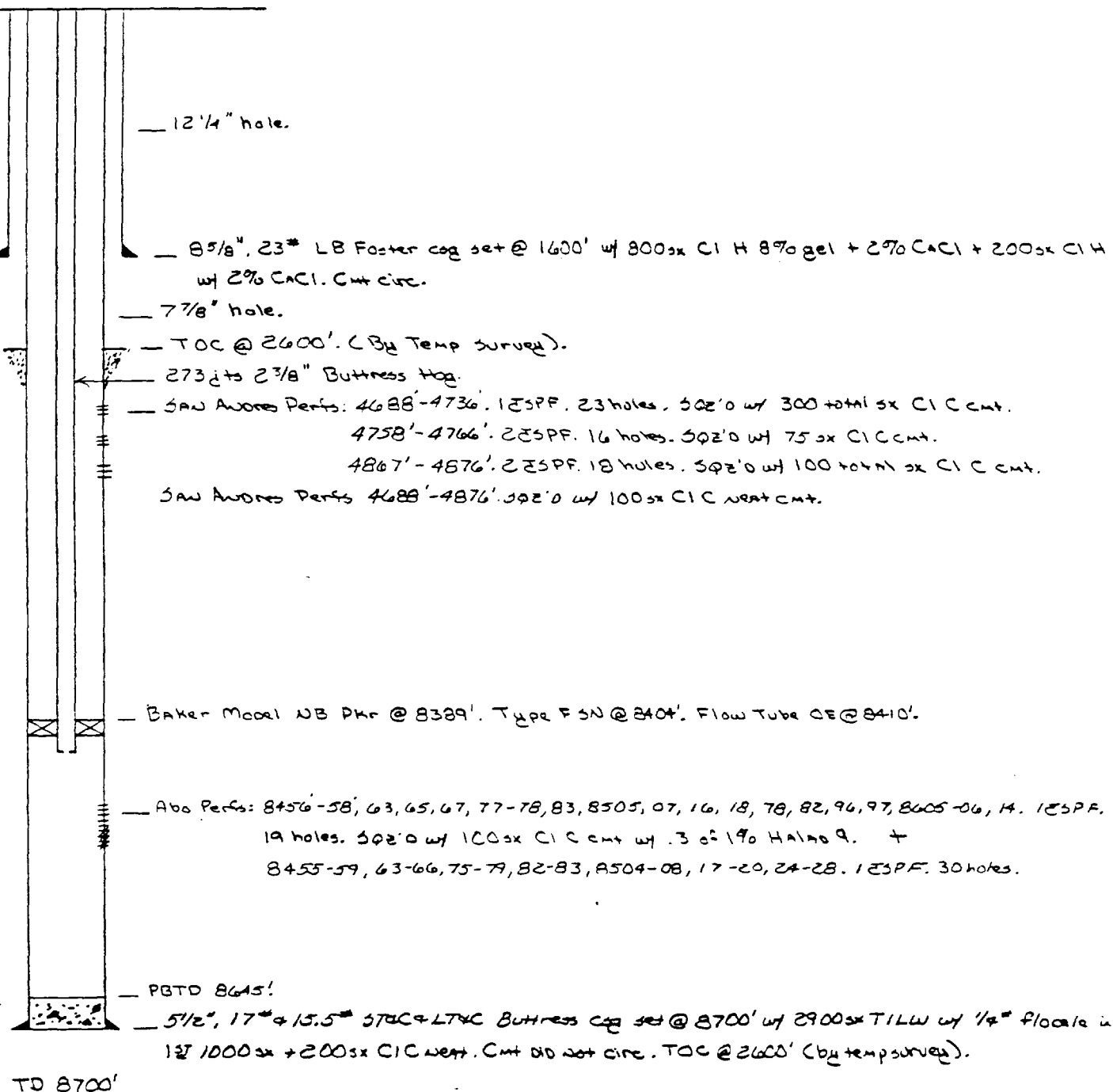
TD 12180'

DATE 3-24-83 WELL NO. 153 LEASE No. Vacuum Abn Unit FIELD Vacuum Abn North

LOCATION N-26-175-34E
660' FSL and 2180' FWL
Lea County, New Mexico

SIGNED M.W. DEER

G.L. 4009'
D.F. 4021'
K.B. 4023'
ZERO 14' AGL

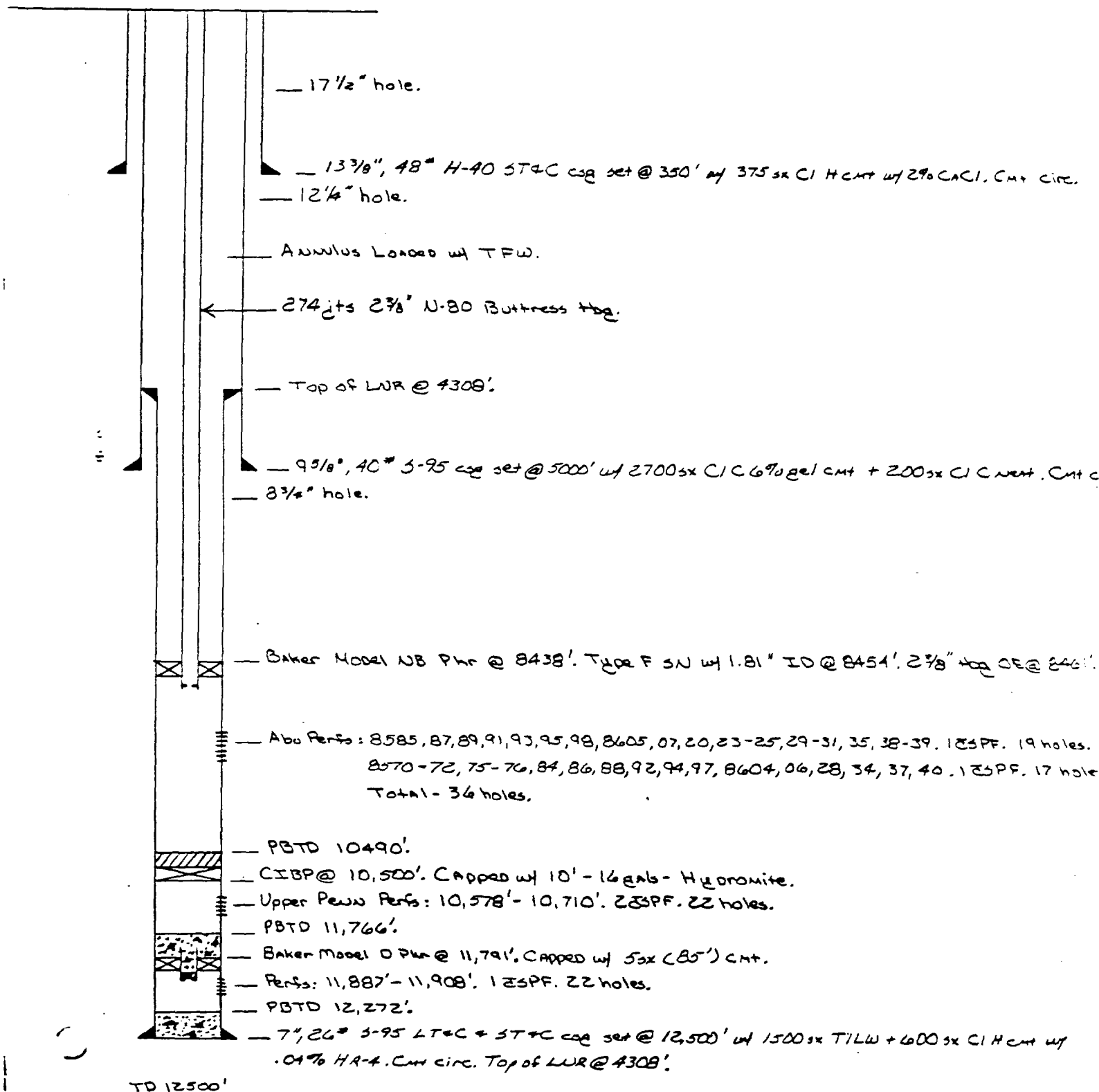


DATE 3-24-82 WELL NO. 157 LEASE No. Vacuum Abo Unit FIELD Vacuum Abo North

LOCATION H-27-175-34E
2180' FNL and 660' FEL
Lea County, New Mexico

SIGNED M. W. Dyer

G.L. 4035'
D.F. 4040'
K.B. 4040'
ZERO 14' AGC



DIAGRAMMATIC WELL SKETCH

BRIDGES SANTA FE STATE COM NO. 1

VACUUM (ABO) (PENN) FIELD # 204

LEA COUNTY, NEW MEXICO

GL ELEV. = 4020'
KB ELEV. =

1 3/8" - 48# / FT H-40 SET W/ 1350 SX
CIRC

370'

LINEAR TOP SAND W/ 1000 SX.

4813'

5/8" - 36# / FT U-55 SET W/ 12400 SX.

4975'

MIN. BURST PRESS. = 3520" CIRC

ABO PERFORATIONS

8487'-89'; 8513'; 15'; 17'; 19'; 21'; 23';
25'; 35'; 8537' (15 INT. 11-HOLES)

UPPER PENN PERFORATIONS

10091'-10149' - 13 HOLES

GUIB. ANCHOR CAT. 10137'

2 3/8" TUBING 10152'

10,177' PBD

7" - 23# / FT N-80 SET W/ 1090 SX.

MIN. BURST PRESS. = 6340

10,359' T.D

11-13-72
IEW

X

FIELD	Vacuum Abo North	OPERATOR	Nobil Oil Corp	DATE	5-17-76
LEASE	North Vacuum Abo Unit	WELL NO	206	LOCATION	D- Sec 19, T19S, R33E

8 5/8" casing set at 1795' with 920 sx of SLH cement
Hole size 12 1/4" cement circ.

- 400sx CIC cmt + 2% CaCl₂ pumped down 8 5/8" x
5 1/2" annulus to 1850' by tracer survey.

cement top- 2170' - Temp. Survey

RE ID

SEP 17 1985

G. E. TATE

2 3/8" tubing

- Quib Anch. - 8529'

Abo Perfs: 8597, 8609, 11, 16, 17, 22, 23, 29, 45, + 851, 57,
8658' 2 JSPF. 26 holes. + 8608'-10', 12', 15',
8621', 24', 28', 30', 44', 46', 47', 49', 50', 53', 56', 59'. 17SPF
16 holes.
17 and 19.5 H/H 555 LTIC and STIC

5 1/2" casing set at 8800' with 3100 sx of TLW cement
Total Depth 8800' Hole size 7 7/8"

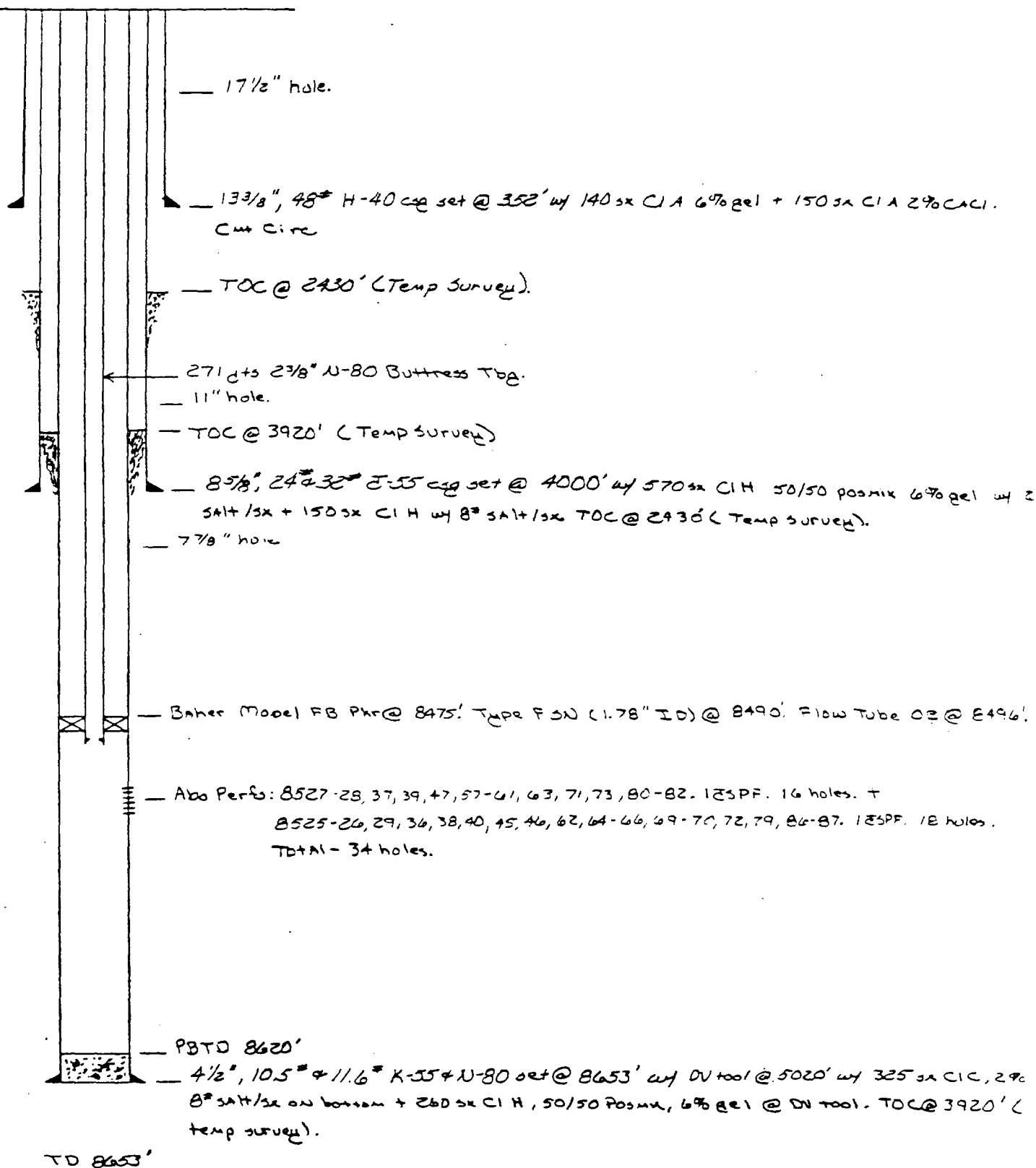
R.W. Petty
9-13-85

5-17-76
JMS

DATE 3-29-83WELL NO. 207LEASE No Vacuum Abn UnitFIELD Vacuum Abn NorthLOCATION H-24-175-34ESIGNED M. W. DEERG.L. 4015'D.F. 4025'K.B. 4026'ZERO 11' AGL

421' FAUL AND 801' FEL

Lea County, New Mexico



DATE 4-4-83 WELL NO. 208 LEASE No. Vacuum Abo Unit FIELD Vacuum Abo North

LOCATION 4-22-173-34E

SIGNED M.W. DEER

G.L. 4035'

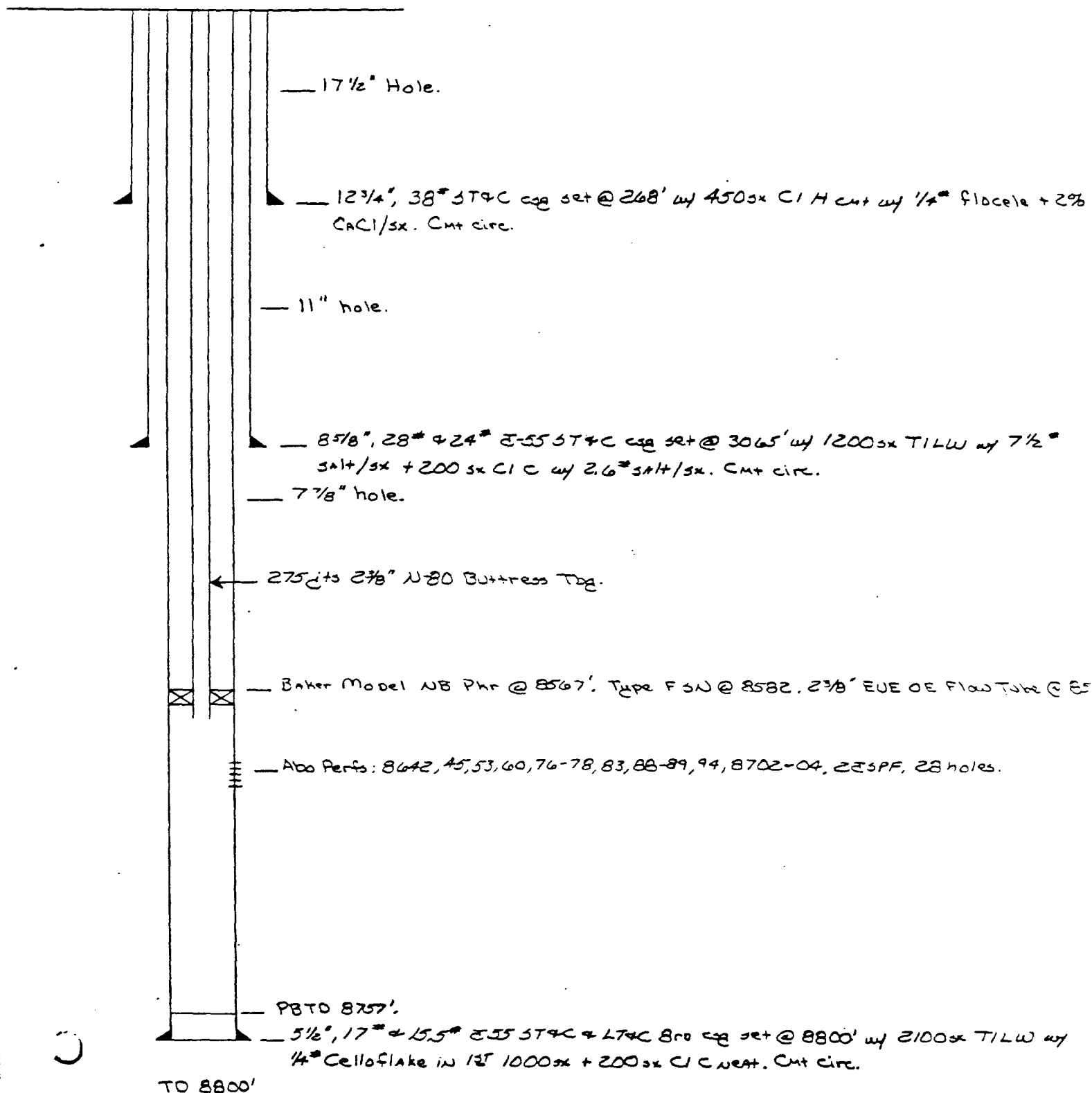
D.F. 4048'

K.B. 4049'

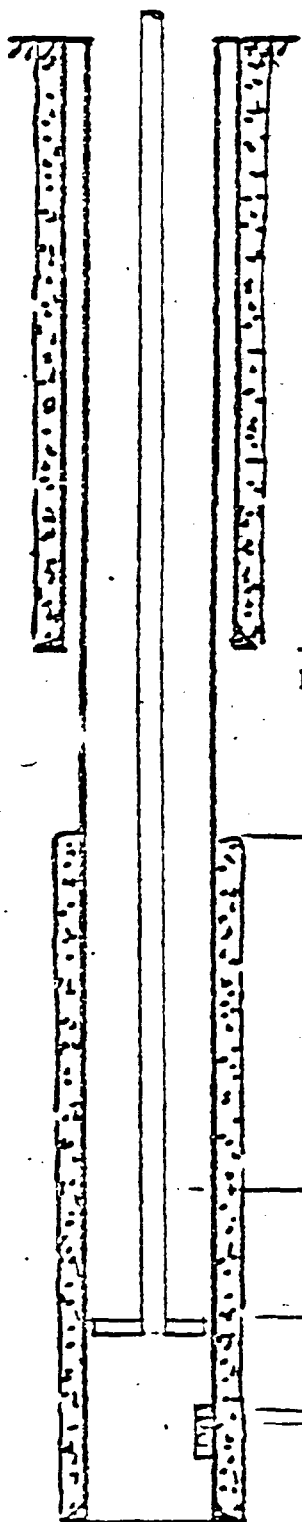
ZERO 14' 46"

1980' FAL AND 860' FEL

Lea County, New Mexico



FIELD	Vacuum Abo North	OPERATOR	Arabia Oil Corp	DATE	5-17-76
LEASE	North Vacuum Abo Unit	WELL NO	209	LOCATION	J - Sec 22 T17S R34E



8 5/8 " casing set at 1675 ' with 900 sx of SLH + gel cement
Hole size 12 1/4 " cement circ.

Cement Top - 2340 ' Temp. Survey

2 3/8 " tubing

Baker T.A. 8593 '

Abo Perf. - 8654 ' - 8718 ' (Proposed 8654 ' - 8720 ')

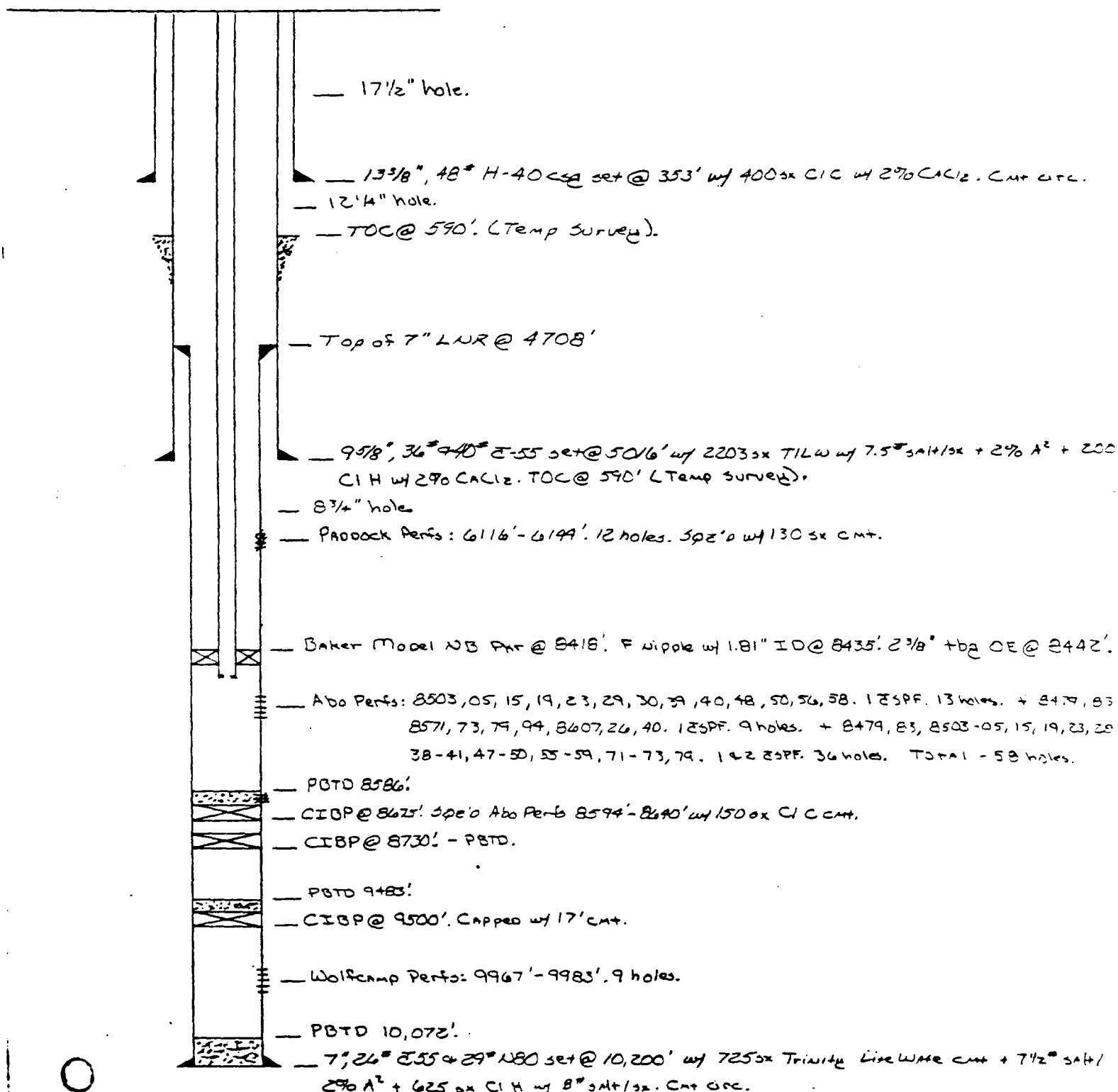
5 1/2 " casing set at 8800 ' with 3100 sx of TLW cemen
Total Depth 8800 ' Hole size 7 7/8 "

5-17-76
JHS

DATE 4-4-83WELL NO. 212LEASE No Vacuum Abo UnitFIELD Vacuum Abo UnitLOCATION D-24-175-34ESIGNED M.W. DEERG.L. 3997'D.F. 4013'K.B. —ZERO 1 1/2' AGL

795' FSL AND 795' FEL

Lea County, New Mexico

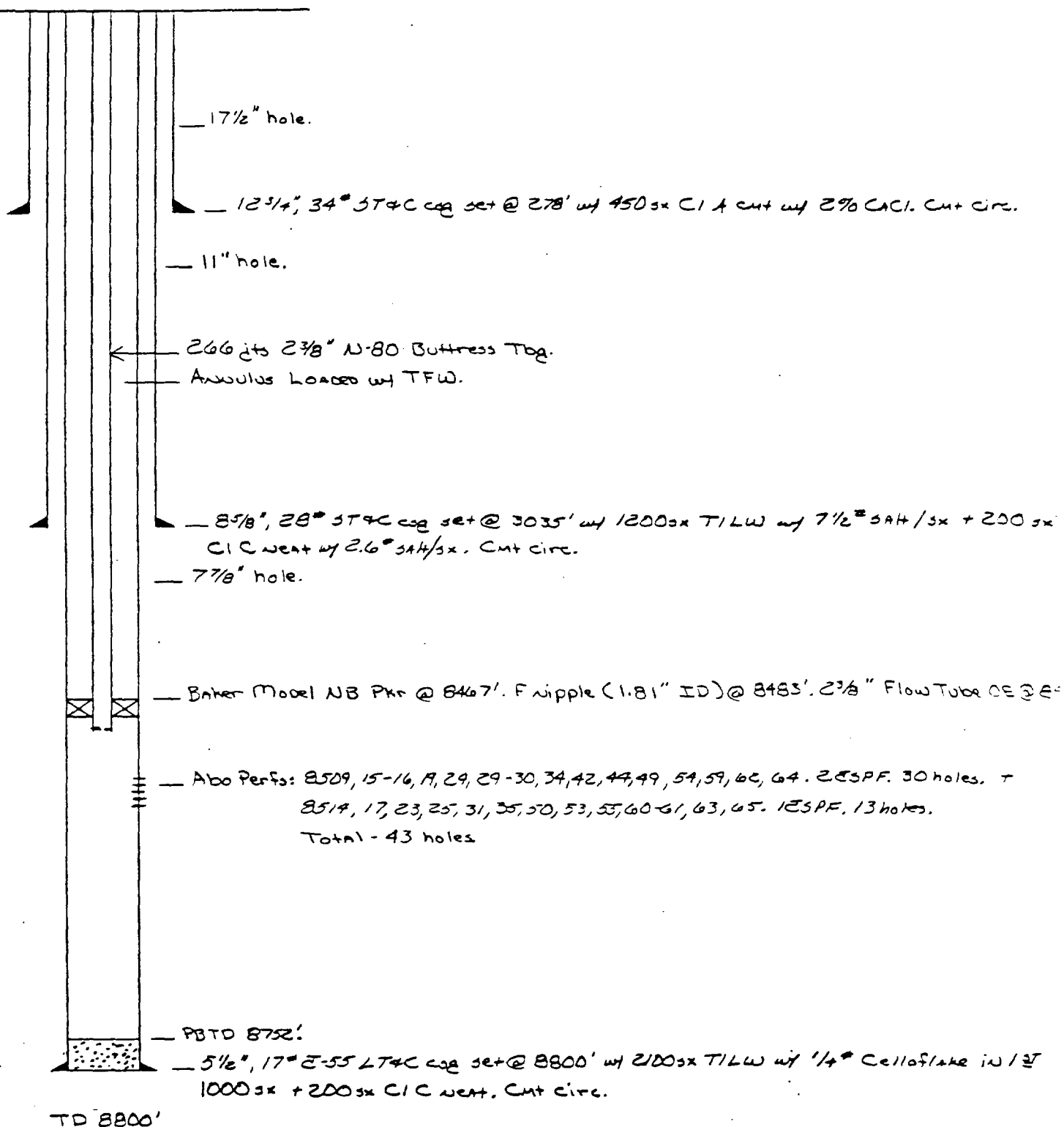


TD 10,200'

DATE 4-4-83WELL NO. 213LEASE No. Vacuum Area UnitFIELD Vacuum Area UnitLOCATION 11-23-175-34ESIGNED M. W. DeerG.L. 4028'D.F. 4042'K.B. 4044'ZERO 16' AGL

460' FSL AND 1980' FWL

Lea County, New Mexico

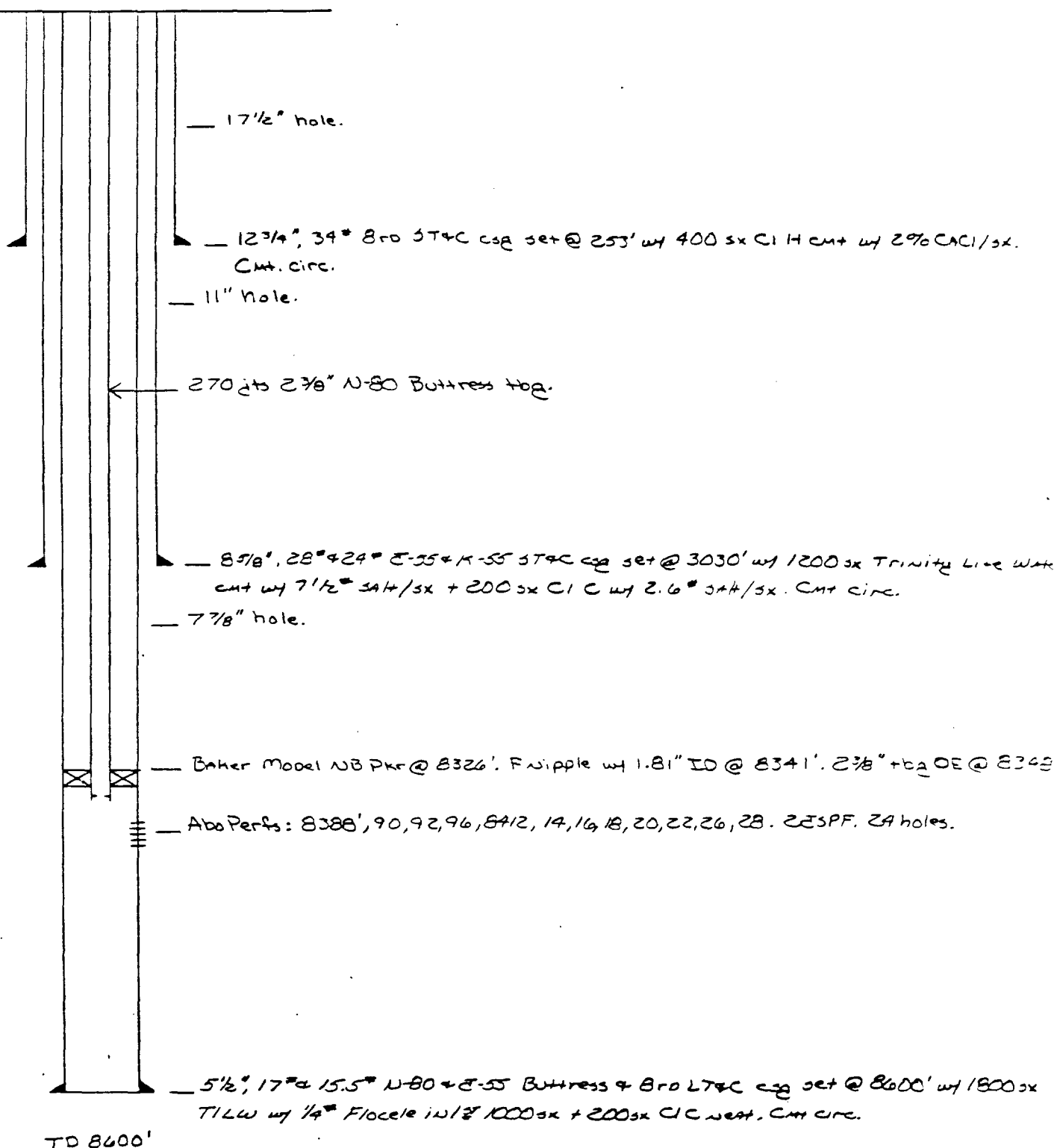


DATE 4-4-83 WELL NO. 218 LEASE No Vacuum Abo Unit FIELD Vacuum Abo North

LOCATION = -25-175-34E
1880' FWL AND 1974' FWL
Lea County, New Mexico

SIGNED M. W. DEER

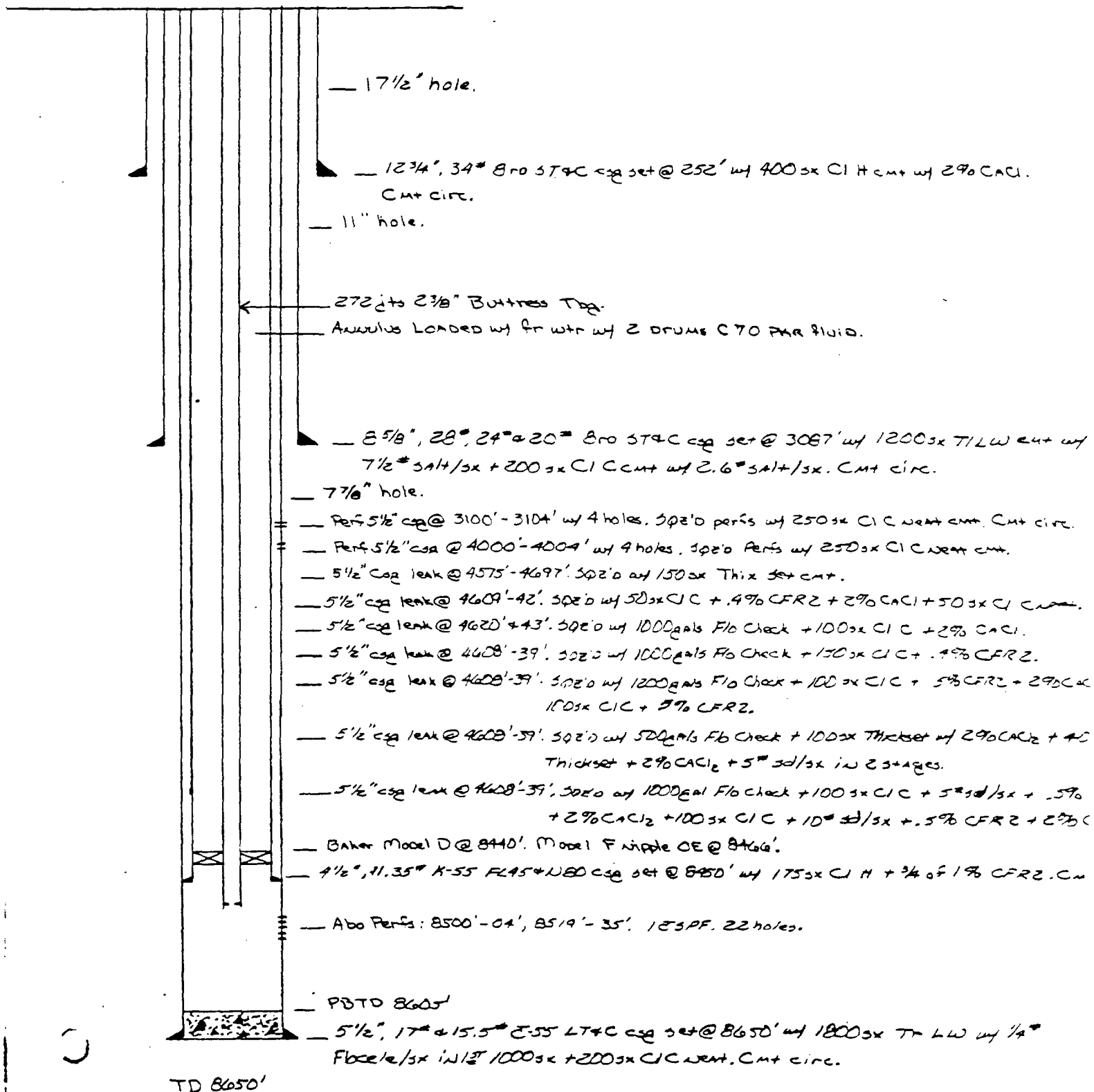
G.L. 4010'
D.F. —
K.B. 4020'
ZERO 10' AGL



DATE 4-4-83WELL NO. 219LEASE No Vacuum Abn UnitFIELD Vacuum Abn NorthLOCATION U-13-173-34ESIGNED M.W. DEERG.L. 4016'D.F. 4025'K.B. 4026'ZERO 10' AGL

1973' FWL AND 1030' FSL

Lea County, New Mexico

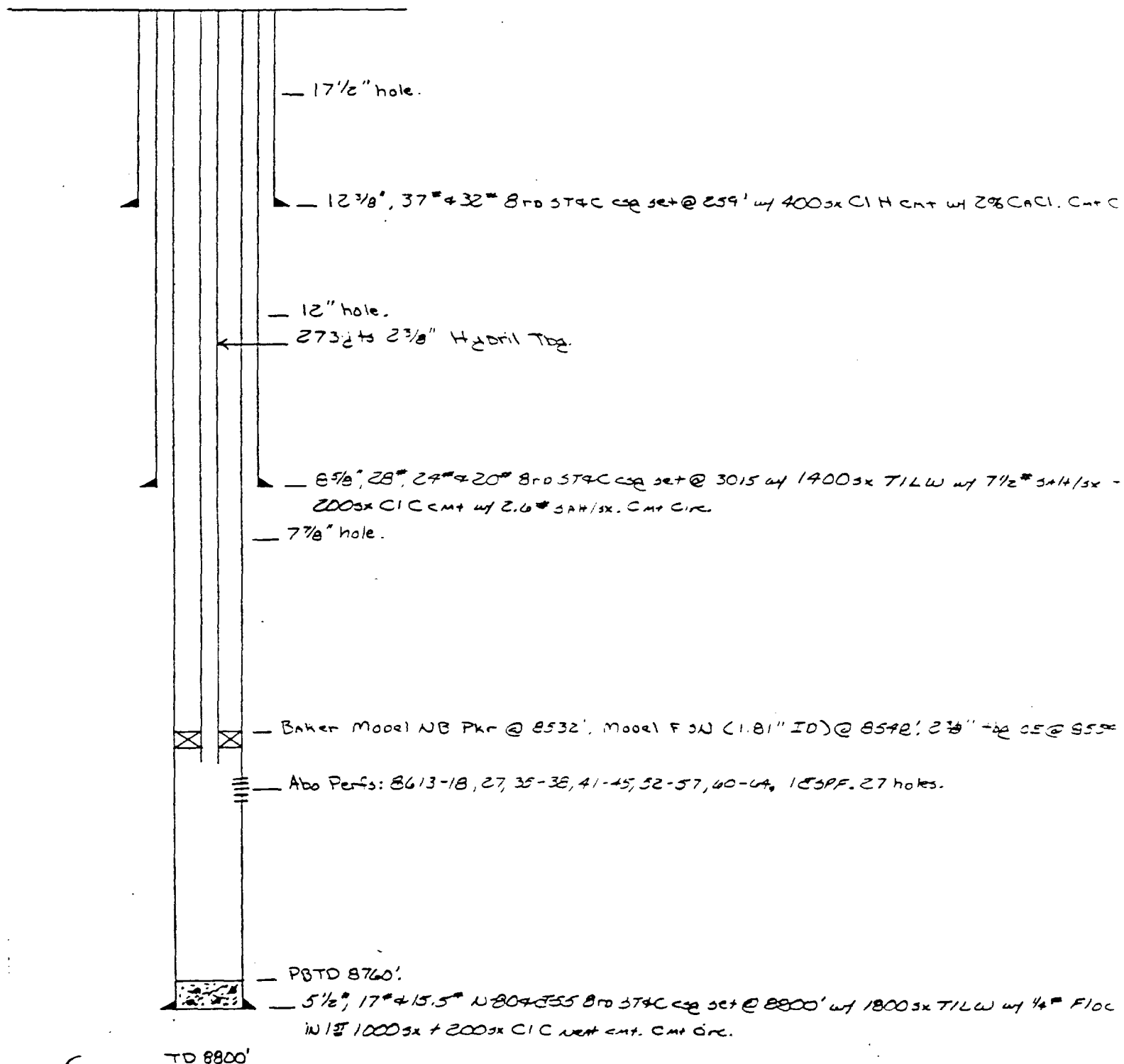


DATE 4-4-83 WELL NO. 220 LEASE No. Vacuum Abo Unit FIELD VACUUM Abo Unit

LOCATION D-22-175-34E
660' FSL AND 860' FEL
Lea County, New Mexico

SIGNED M. W. DEER

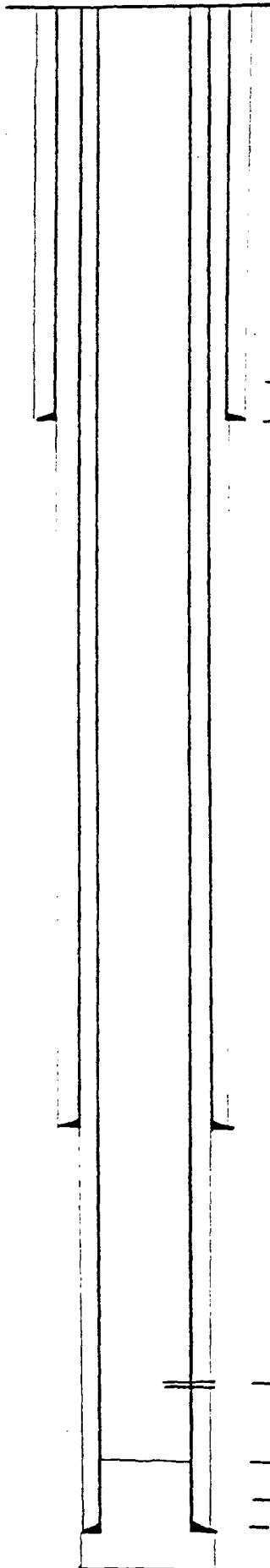
G.L. 4035'
D.F. —
K.B. 4044'
ZERO 9' AGL



DATE 7-16-85 WELL NO. 222 LEASE NVAU FIELD N. VACUUM

LOCATION 2100' FSL 660' FEL, Sec 24, T-17-S, R-54-E SIGNED M.E. VASICEK
LEA CO. N.M.

G.L. _____
D.F. _____
K.B. _____
ZERO _____



— 17 1/2" HOLE
— 250' 12 3/4" 34# H40 CSG SET W/ 400 S₂ CMT CIRC

— 12 1/4" HOLE
— 3072' 8 5/8" 20# 24" 28# CSG SET W/ 1765 S₂ CMT CIRC

— 180 PERFS 8511-518, 530-534, 539-540, 549-558, 562-564, 568-571
W/ 1 JSPP (38 HOLES)

— 8619' 78TD

— 7 7/8" HOLE

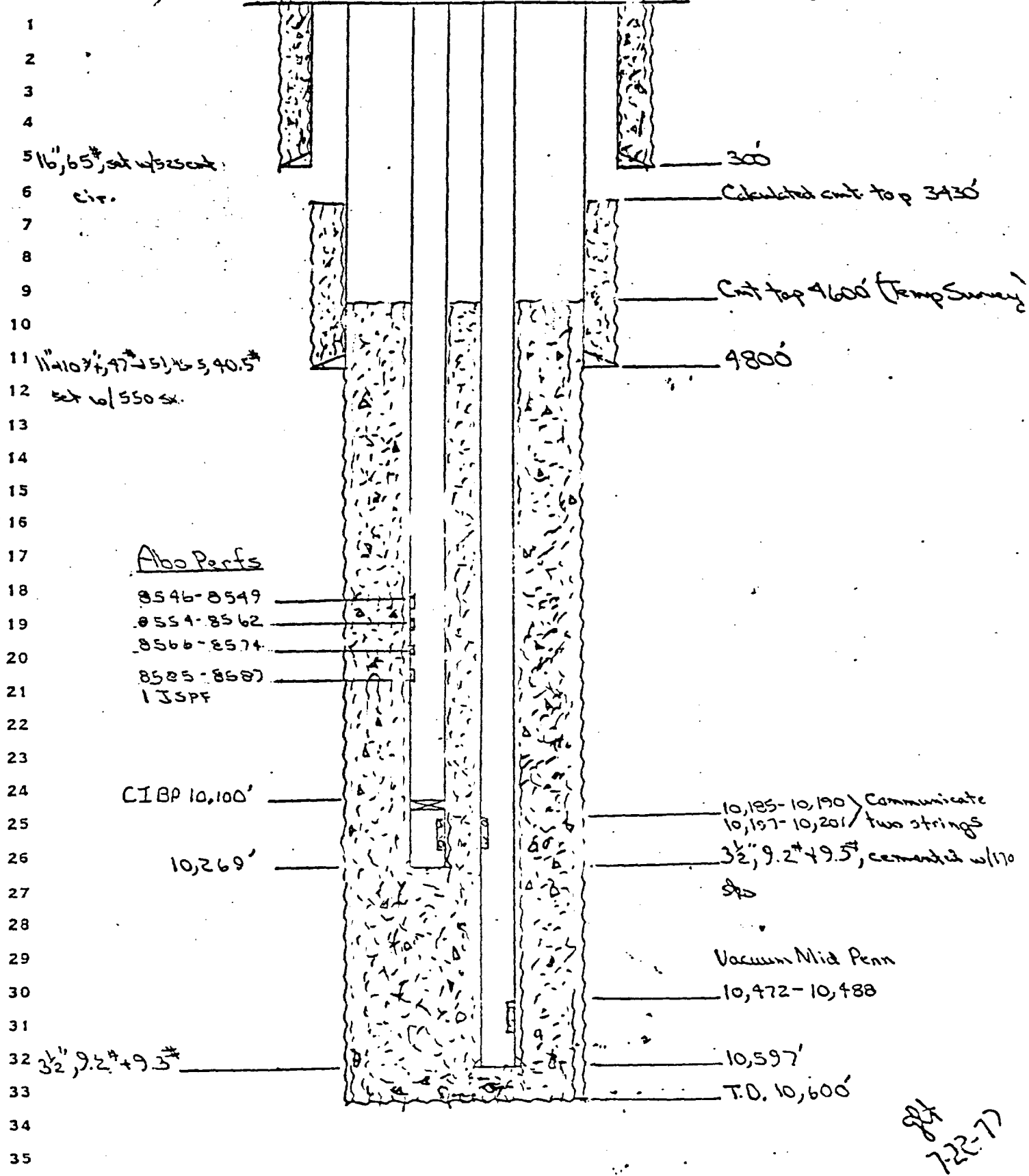
— 8650' 5 1/2" 15.5# + 17# K55 CSG SET W/ 1600 S₂ CMT CIRC

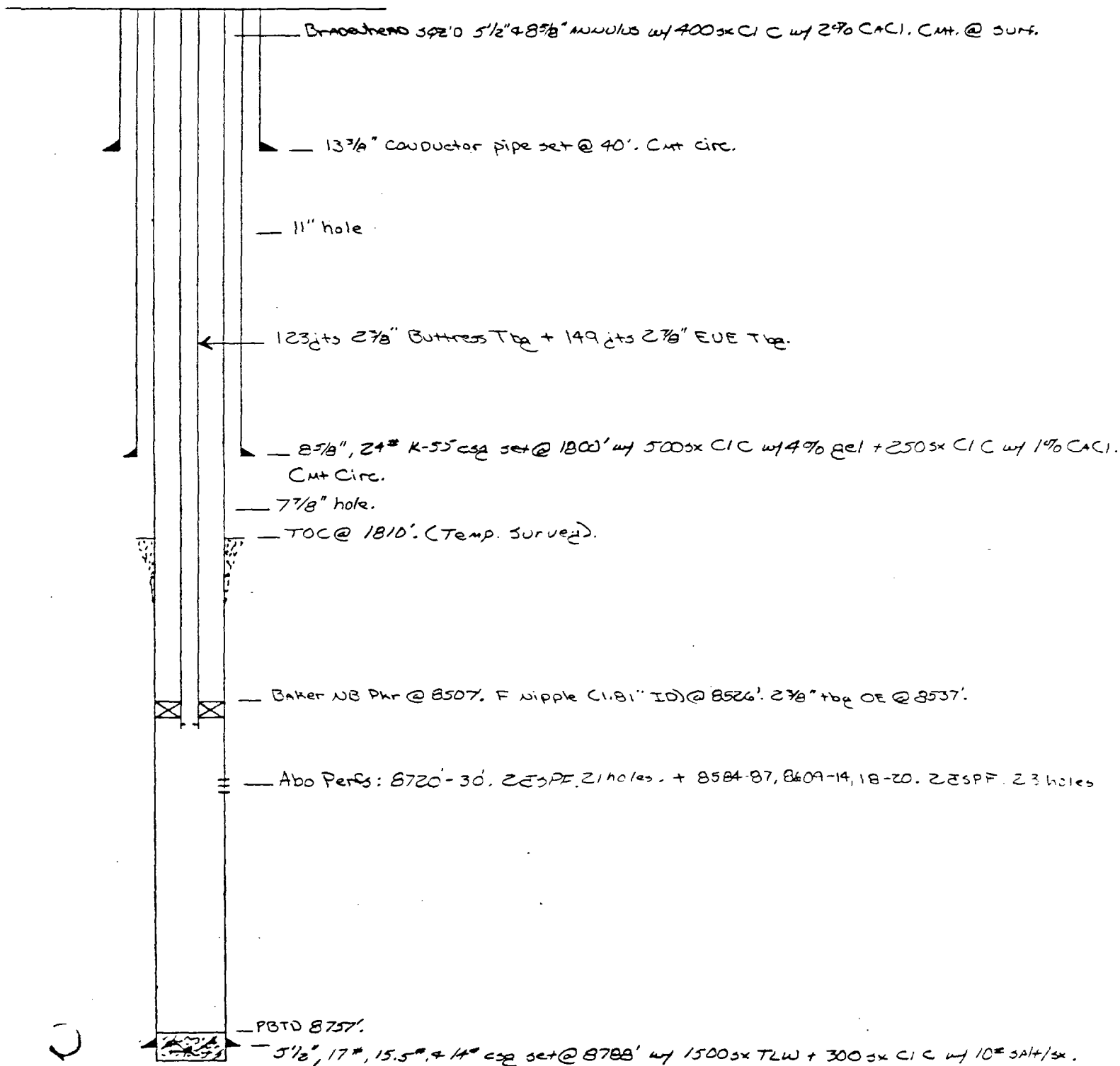
— 8660' TD

CALCULATION AND DATA SHEET

UNIT North Vac m Abo
 FOR North Vacuum Abo
 LOCATION J-13-17-S34-E, Lea County, New Mex
 SUBJECT North Vacuum Abo Unit #230

FILE NO. _____
 JOB OR AUTH. NO. _____
 PAGE _____
 DATE 7-22-77
 BY aguy timlin



DATE 4-4-83WELL NO. 231LEASE No. VACUUM Abn UnitFIELD VACUUM Abn UnitLOCATION P-13-175-34ESIGNED M. W. DEERG.L. 4015'D.F. 4015'K.B. 4016'ZERO 13 1/2' Above Csg Head Flange.660 FSL AND 660' FEL
Lea County, New Mexico

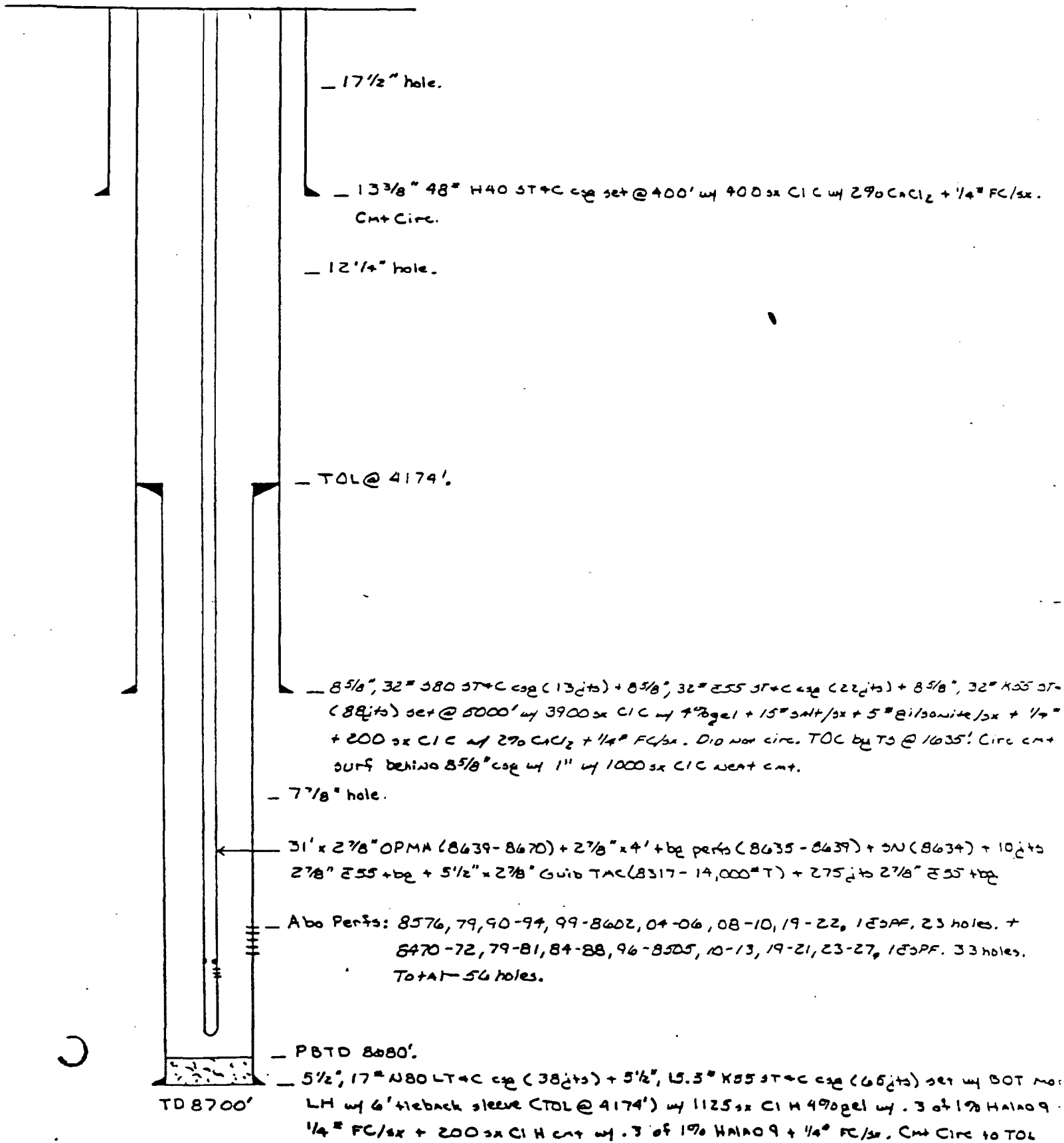
TD 8800'

DATE 3-23-84 WELL NO. 234 LEASE No. Vacuum Abo Unit FIELD Vacuum Abo North

LOCATION T-23-172-34E
545' FEL + 1980' FSL
Lea County New Mexico

SIGNED M. W. DEER

G.L. 4024'
D.F. 4035'
K.B. 4036'
ZERO 12' AGL

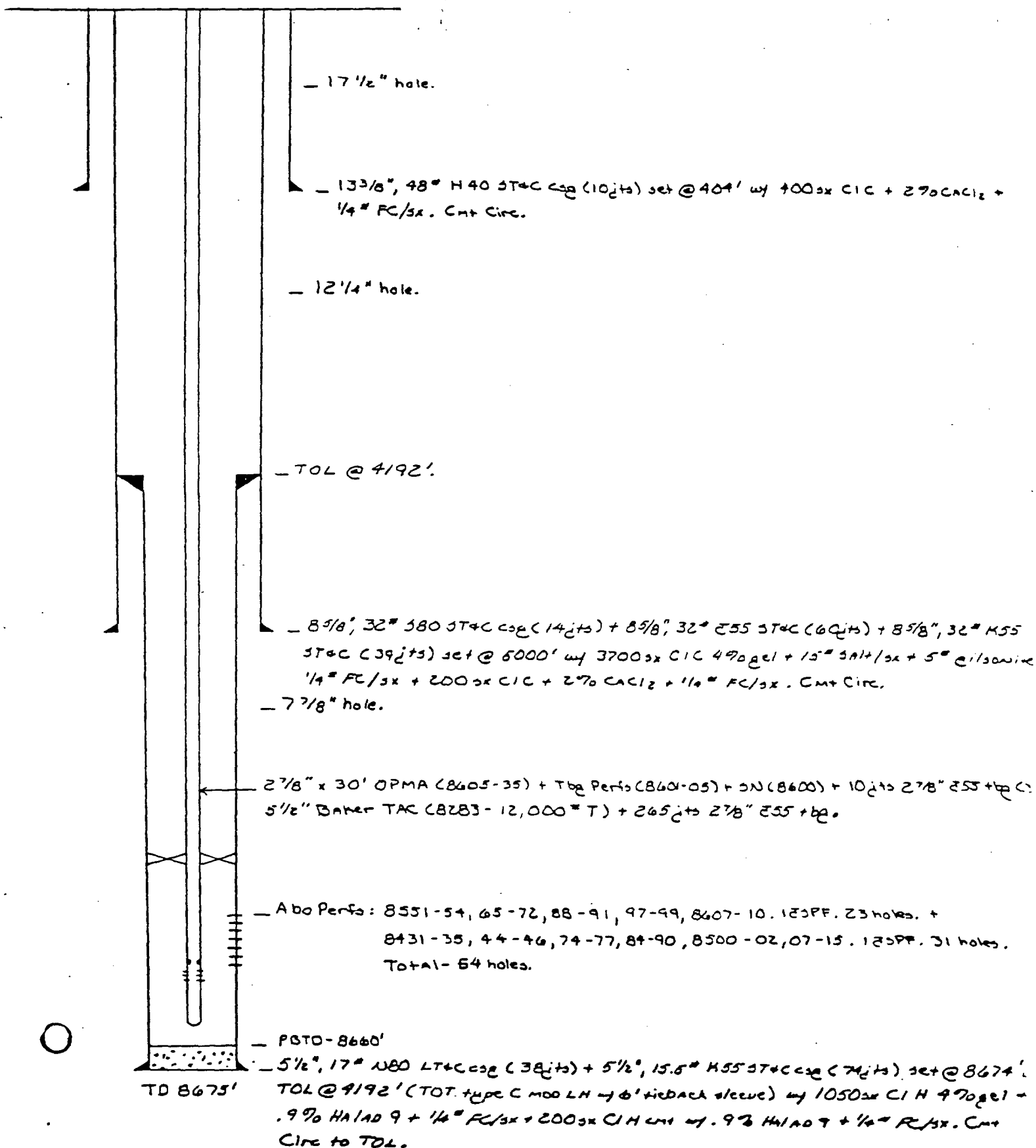


DATE 3-23-84 WELL NO. 235 LEASE No. Vacuum Abn Unit FIELD Vacuum Abn North

LOCATION K-24-175-34E
2000' FWL + 1880' FAL
Lea County, New Mexico

SIGNED MWD DEER

G.L. —
D.F. —
K.B. —
ZERO 12' AGL



DATE 3-23-84WELL NO. 236LEASE No. Vacuum Abr UnitFIELD Vacuum Abr NorthLOCATION C-25-T173-R34FFSIGNED M. W. DEERG.L. 4000'D.F. 4012'K.B. 4013'ZERO 13' AGL

460' FWL + 1980' FWL

Lea Co., New Mexico

- 17 1/2" hole.

- 13 3/8" 54.5" K55 ST+C cpg set @ 405' w/ 4250x CIC cm + w/ 290 CaCl₂ + 1/4" Flocc per sk. Cmt circ.

- 12 1/4" hole.

- Top of LWR @ 3908'.

- 8 5/8" 32" 255 ST+C cpg set @ 5000' w/ 35000x CIC cm + 4% gel + 15" salt/sk + 5" Gilsomite + 1/4" Flocc/sk + 2000x CIC + 290 CaCl₂ + 1/4" Flocc/sk. Cmt Circ.

- 7 7/8" hole.

← 267' to 27 1/8" + bg + Guib 5 1/2" TAC + 12' to 27 1/8" + bg + 2 3/8" SN + 2 3/8" x 4' perf + bg out 2 3/8" x 30' O.P.M.A. (8590'-8602'). Tbg Perfs 8586'-8590'. SN @ 8585'.

- Guib 5 1/2" TAC set @ 8207' w/ 13,000# T.

- Abo Perfs: 8400-05, 8417-31, 8443-47, 8450-54. 183PF. 31 hole. (Armadillo Wireline GR-Collar Log 10-29-83).

- PBTD 8650'.

TO 8700'

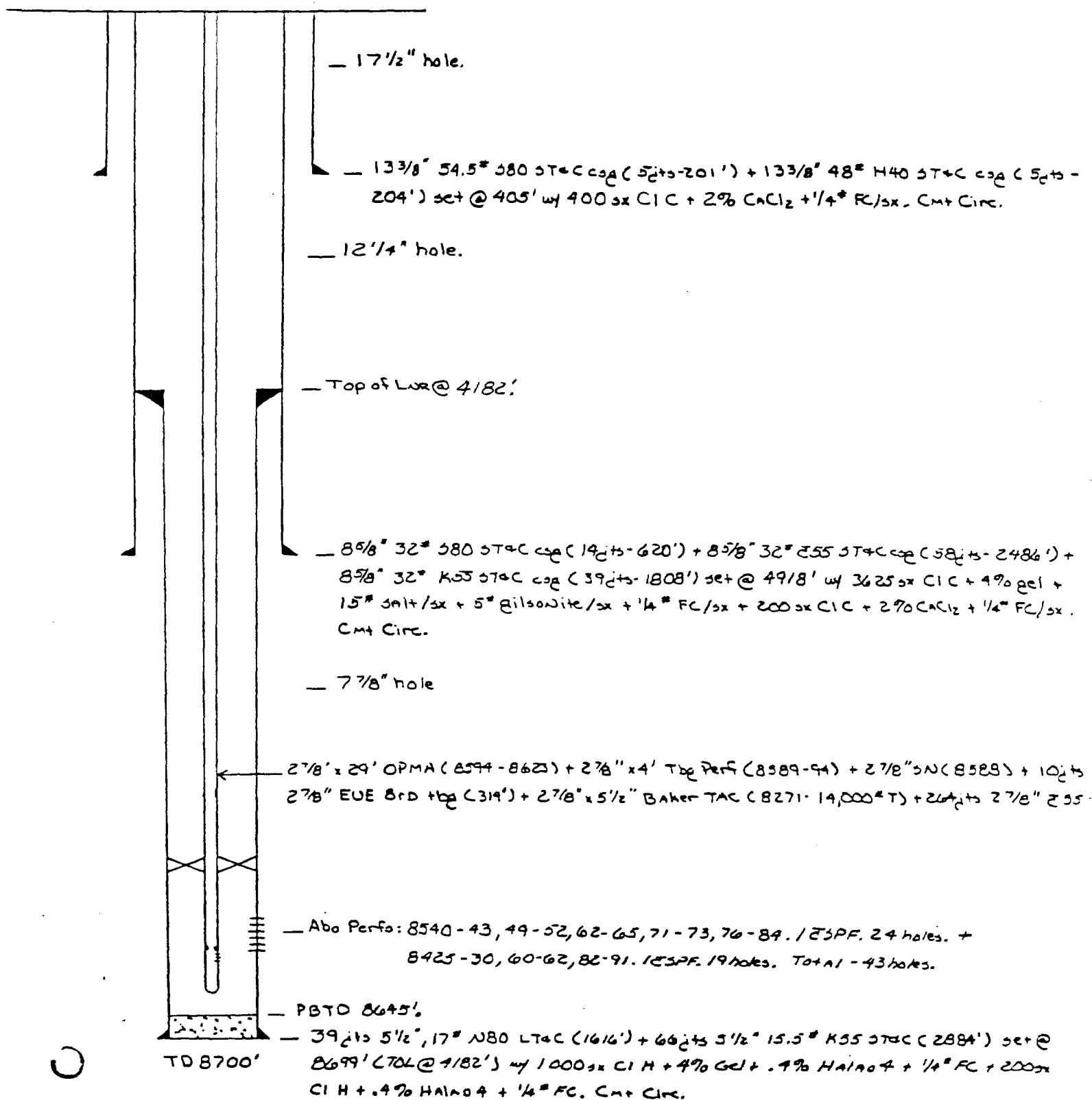
- 5 1/2" 15.5" K55 ST+C (57' to 2542') + 5 1/2" 17" N80 LT+C cpg (51' to 2225') w/ BOT Type C modified liner hanger set @ 8700' - Top of LWR @ 3908' - w/ 10000x CI H + 4% gel + .4% Hailad 4 + 1/4" FC/sk + 2000x CI H + .4% Hailad 4 + 1/4" FC/sk. Cmt Circ to LWR Top.

DATE 3-23-84 WELL NO. 237 LEASE No. Vacuum Abo Unit FIELD Vacuum Abo North

LOCATION A-26-T175-R34E
530' FNL + 660' FEL
Lea Co., New Mexico

SIGNED MIW DEER

G.L. 4026'
D.F. 4035'
K.B. 4036'
ZERO 10' AGL

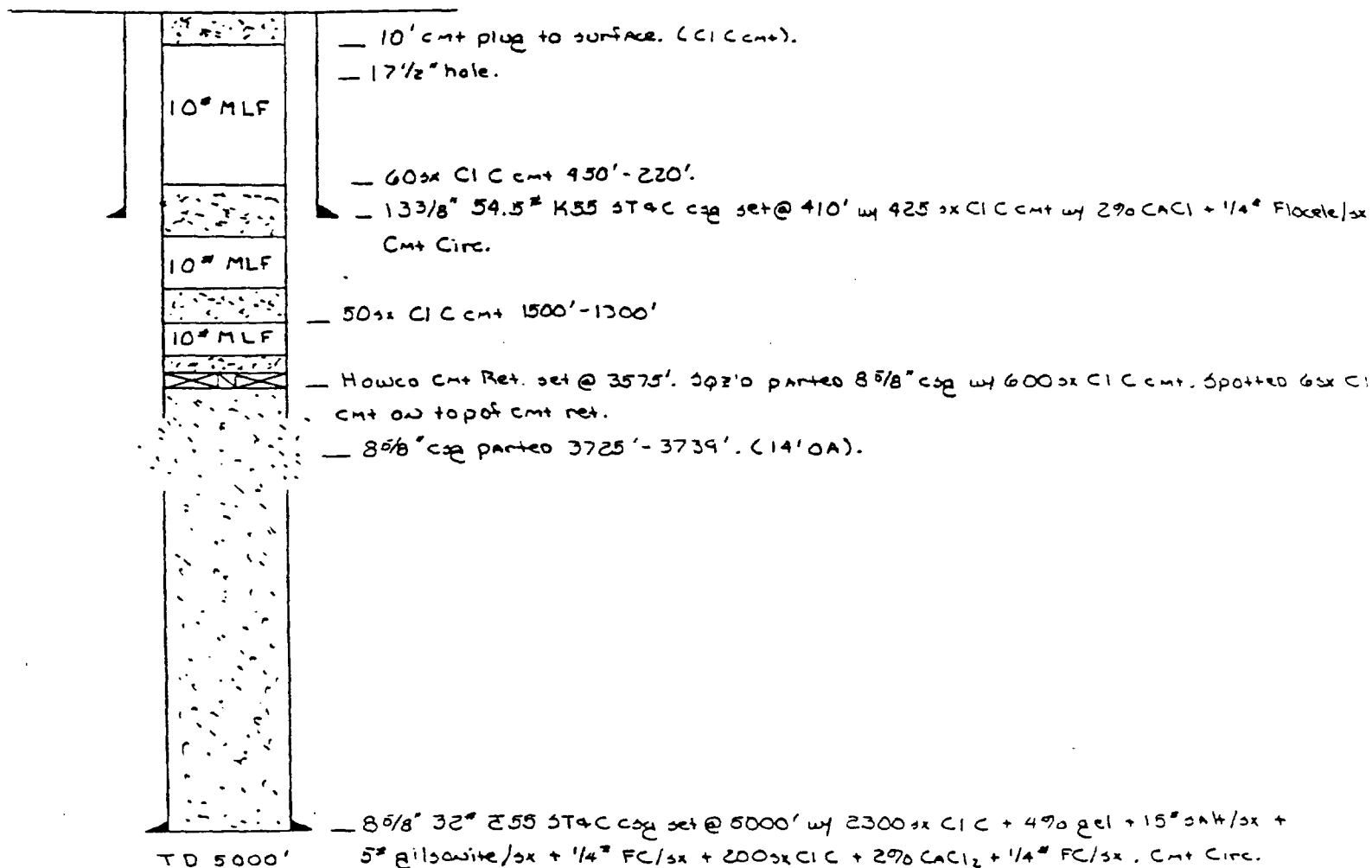


DATE 3-23-84 WELL NO. 238 LEASE No. Vacuum Abo Unit FIELD Vacuum Abo West

LOCATION M-24-T175-R34E
 780' FWL & 660' FSL
 Lea Co., New Mexico

SIGNED MLW DEER

G.L. N/A
 D.F. N/A
 K.B. N/A
 ZERO N/A

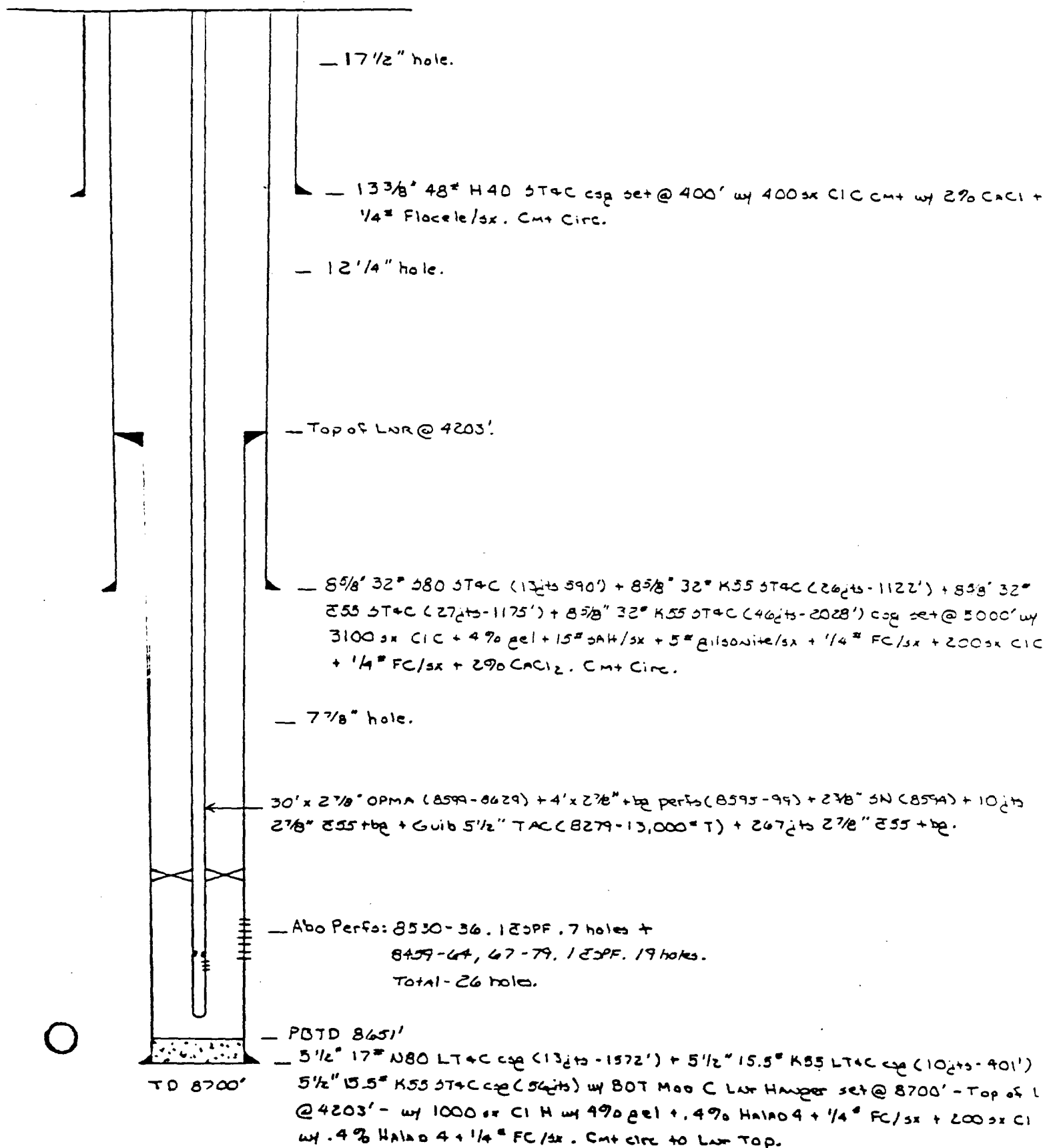


DATE 3-1-23-84 WELL NO. 238-A LEASE No. Vacuum Abo Unit FIELD Vacuum Abo North

LOCATION: ON M-24-T172-R34E
780' FWL + 643' FSL
Lea Co., New Mexico

SIGNED M.W. DEER

G.L. 4000'
D.F. 4009'
K.B. 4010'
ZERO 10' AGL



DATE 11-27-84 WELL NO. 239 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit North
LOCATION 1992' FNL & 810' FWL SIGNED R. W. Petty
Sec 25, T17S, R34E
Lea County, New Mexico
G.L. 4000' EST
D.F. 4014' EST
K.B. 4015' EST
ZERO 15' AGL

— 17 1/2" hole

— 13 3/8", 48#, H40, STFC set @ 400 w/400 sk Cl. C cmt,
2% CaCl₂, 1/4 #/sk FC. Circ 100 sk cmt.

— 12 1/4" hole

— TOL @ 4180'

— 8 5/8", 32#, S80# K55, STFC set @ 5000' w/3200 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 33 sk cmt.

— 7 7/8" hole

— 2 7/8" tbg: OPMA @ 8575' + 4' perf sub + 2 7/8" SN
TAC @ 8320' set w/14,000# Ten.

— Abo Perfs: 8374'-76', 90'-92', 8425'-29', 34'-41', 45'-50', 52'-56', 80'-83',
86'-90', 8502'-05', 08'-10', 12'-14'. 1 JSPP. 49 holes.

— 5 1/2", 17# & 15.5# K55, STFC set @ 8699' w/700 sk Cl. H cmt, 4% gel,
PBTD 8650', .3% HA9, 1/4 #/sk FC + 300 sk Cl. H cmt, .3% HA9, 1/4 #/sk FC.
TD 8700'

DATE 11-27-84 WELL NO. 240 LEASE North Vacuum FIELD Vacuum Abo

LOCATION 2131' FSL 665' FEL
Sec 26, T17S, R34E
Lea County, New Mexico

Abo Unit
SIGNED R.W. Petty

North
G.L. 4022'
D.F. NA
K.B. 4039'
ZERO 17' AGL

— 17 1/2" hole

— 13 3/8", 48#, H40, STFC set @ 427' w/ 400 sk Cl. C cmt,
2% CaCl₂, 1/4 #/sk FC. Circ 75 sk cmt.

— 12 1/4" hole

— TOL @ 4190'

— 8 5/8", 32#, S80# K55, STFC set @ 5000' w/ 2800 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 300 sk cmt.

— 7 7/8" hole

— 2 7/8" + bg: OPMA @ 8609' + 4' perf sub + 2 3/8 SN + 2 7/8 SN
TAC @ 8265' set w/ 12,000# Ten.

— Abo Perfs: 8509'-11', 26'-31', 34'-37', 62'-64'. 1JS PF. 16 holes.

8387'-90', 8404'-09', 14'-18', 26'-29', 56'-59'. 1JS PF 23 holes.

— 5 1/2", 17# 15.5#, K55, STFC set @ 8699 w/ 750 sk Cl. H cmt, 4% gel,
PB TD 8691' .3% HA9, 1/4 #/sk FC + 300 sk Cl. H cmt, .3% HA9, 1/4 #/sk FC
TD 8700'

DATE 11-27-84 WELL NO. 241 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit North
LOCATION 1882' FSL & 2001' FWL SIGNED R. W. Petty G.L. 4025'
Sec 26, T17S, R34E D.F. 4039'
Lea County, New Mexico K.B. 4040'
ZERO 15' AGL

— 17½" hole

— 13⅜", 48#, H40, STFC set @ 400' w/400 sk Cl. C cmt,
2% CaCl₂, ¼#_{sk} FC. Circ 70 sk cmt.

— 12¼" hole

— TOL @ 4197'

— 8⅝", 32#, S80# K55, STFC set @ 5000' w/3000 sk Cl. C cmt,
4% gel, 15#_{sk} Salt, 5#_{sk} gilsonite; ¼#_{sk} FC + 300 sk Cl. C cmt,
2% CaCl₂ + ¼#_{sk} FC. Circ 250 sk cmt.

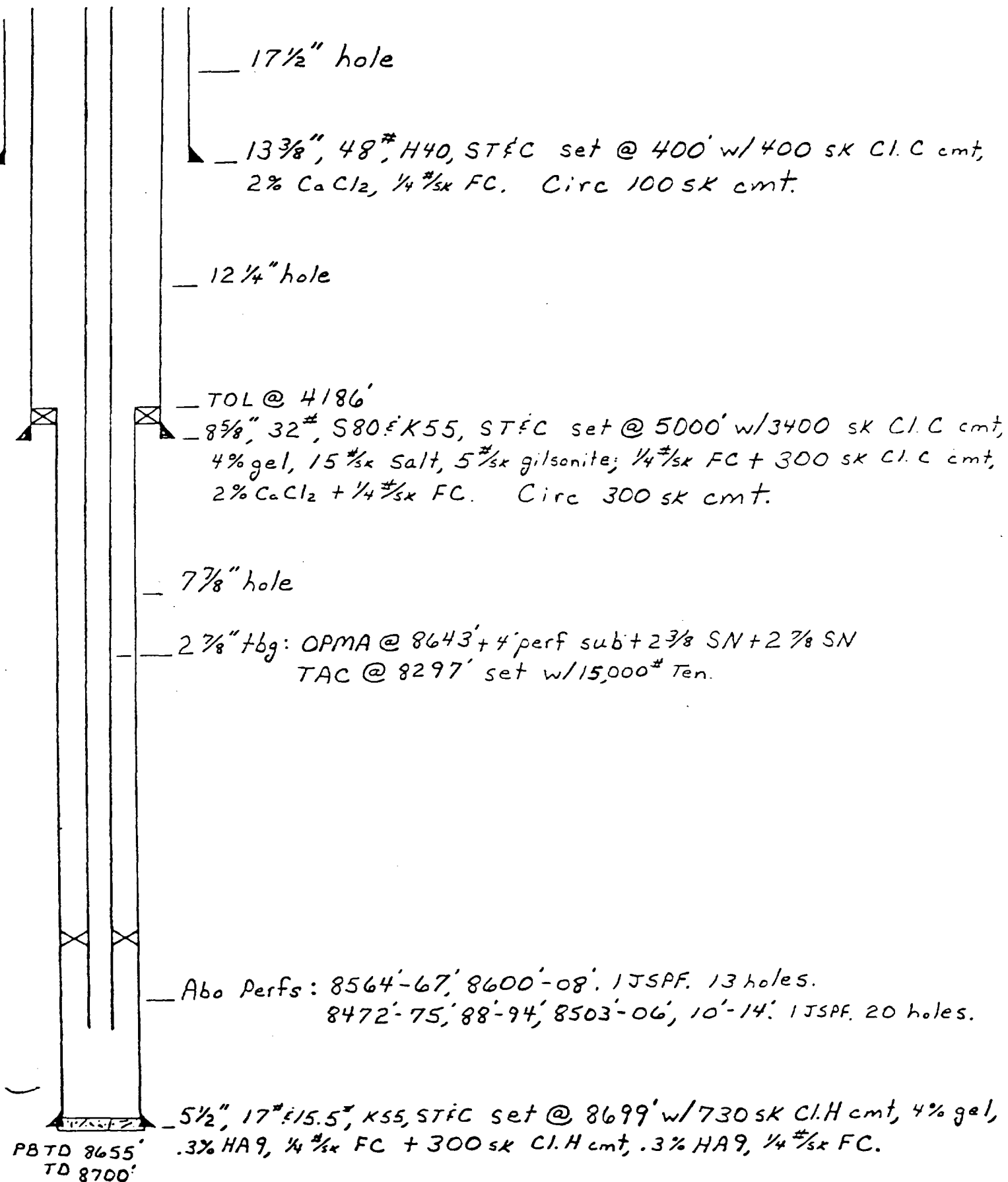
— 7⅞" hole

— 2⅞" tbg: OPMA @ 8695' + 4' perf sub + 2⅞" SN + 2⅞" SN
TAC @ 8371 set w/15,000# Ten.

— Abo Perfs: 8609'-26', 61-66. 1 JS PF. 24 holes.
8494'-99', 8506'-11', 25'-41'. 1 JS PF. 29 holes.

— 5½", 17# & 15.5#, K55, STFC set @ 8699' w/750 sk Cl. H cmt, 4% gel,
PB TO 8695' .3% HA9, ¼#_{sk} FC + 300 sk Cl. H cmt, .3% HA9, ¼#_{sk} FC
TD 8700'

DATE 11-27-84 WELL NO. 242 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit North
 LOCATION 1809'FNL & 1890'FEL SIGNED RW Petty G.L. 4019'
Sec. 26, T17S, R34E D.F. NA
Lea County, New Mexico K.B. NA
 ZERO 16'AGL



DATE 11-27-84 WELL NO. 243 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit North

LOCATION 1839' FWL ± 657' FNL SIGNED R. W. Petty
Sec. 26, T17S, R34E
Lea County, New Mexico

G.L. 4000' EST
D.F. 4016' EST
K.B. 4017' EST
ZERO 17' AGL

— 17 1/2" hole

— 13 3/8", 48#, H40, STFC set @ 400' w/400 sk Cl. C cmt,
2% CaCl₂, 1/4 #/sk FC. Circ 100 sk cmt.

— 12 1/4" hole

— TOL @ 4153'

— 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 375 sk cmt.

— 7 7/8" hole

— 2 7/8" tbg: OPMA @ 8692' + 4' perf sub + 2 3/8 SN + 2 7/8 SN
TAC @ 8367' set w/12,000# Ten.

— Abo Perfs: 8622'-25', 46'-50', 68'-72'. 1 JS PF. 14 holes
8494'-8508', 8524'-28', 31'-37', 50'-52', 54'-57', 59'-66'
8574'-76'. 1 JS PF. 45 holes.

— 5 1/2", 17 # ± 15.5#, K55, STFC set @ 8699' w/625 sk Cl. H cmt, 4% gel,
PB TD 8695' .3% HA9, 1/4 #/sk FC + 300 sk Cl. H cmt, .3% HA9, 1/4 #/sk FC.
TD 8700'

DATE 11-27-84 WELL NO. 244 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit North

LOCATION 1859' FEL 589' FSL
Sec. 23, T17S, R34E
Lea County, New Mexico

SIGNED R. W. Petty

G.L. 4000' EST
D.F. 4016' EST
K.B. 4017' EST
ZERO 17' AGJ

— 17½" hole

— 13⅜", 48#, H40, STFC set @ 422' w/ 400 sk Cl. C cmt,
2% CaCl₂, ¼ #/sk FC. Circ 59 sk cmt.

— 12¼" hole

— TOL @ 4175'

— 8⅝", 32#, S80# K55, STFC set @ 5000' w/ 2200 sk Cl. C cmt,
4% gel, 15 #/sk Salt, 5 #/sk gilsonite; ¼ #/sk FC + 300 sk Cl. C cmt,
2% CaCl₂ + ¼ #/sk FC. Circ 5 sk cmt.

— 7⅞" hole

— 2⅞" + bg: OPMA @ 8650' + 4' perf sub + 2⅞" SN + 2⅞" SN @ 8615',
TAC @ 8296' set w/ 15,000# Ten.

— Abo Perfs: 8544'-47', 56'-61', 82'-85', 8606'-08'. 1 JS PF. 17 holes.
8470'-84', 90'-92', 8508'-12', 14'-17', 23'-31'. 1 JS PF. 36 h.

— 5½", 17# 15.5#, K55, STFC set @ 8699' w/ 700 sk Cl. H cmt, 4% gel,
PBTD 8650' .3% HA9, ¼ #/sk FC + 300 sk Cl. H cmt, .3% HA9, ¼ #/sk FC.
TD 8700'

DATE 11-27-84 WELL NO. 245 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit North

LOCATION 2174'FWL & 1930'FSL
Sec. 23, T17S, R34E
Lea County, New Mexico

SIGNED R.W. Petty

G.L. 4027'
D.F. NA
K.B. 4042'
ZERO 15'AGL

— 17½" hole

— 13⅜", 48#, H40, STFC set @ 402' w/ 400 sk Cl. C cmt,
2% CaCl₂, ¼#_{sk} FC. Circ 30 sk cmt.

— 12¼" hole

— TOL @ 4185'

— 8⅝", 32#, S80# K55, STFC set @ 5000' w/ 2100 sk Cl. C cmt,
4% gel, 15#_{sk} Salt, 5#_{sk} gilsonite; ¼#_{sk} FC + 300 sk Cl. C cmt,
2% CaCl₂ + ¼#_{sk} FC. Did not circ. TOC @ 965' temp surv. Cmt
to surface w/ 1" w/ 600 sk Cl. C neat cmt.

— 7⅞" hole

— 2⅞" tbg: OPMA @ 8703' + 4' perf sub + 2⅞" SN + 2⅞" SN @ 8686'
TAC @ 8475' set w/ 14000# Ten.

— Abo Perfs: 8549'-51', 76'-78', 81'-84', 95'-98', 8627'-29', 55'-57'
8681'-84. 1 JSPF. 24 holes.

— 5½", 17# & 15.5# K55, STFC set @ 8710' w/ 750 sk Cl. H cmt, 4% gel,
PB TD 8705' .3% HA9, ¼#_{sk} FC + 300 sk Cl. H cmt, .3% HA9, ¼#_{sk} FC.
TD 8711'

DATE 11-27-84 WELL NO. 246 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit North

LOCATION 1980' FEL 660' FSL
Sec. 24, T17S, R34E
Lea County, New Mexico

SIGNED R.W. Petty

G.L. 3996'
D.F. NA
K.B. 4009'
ZERO 13' AGL

— 17½" hole

— 13⅜", 48[#], H40, STFC set @ 410' w/400 sk Cl. C cmt,
2% CaCl₂, ¼[#] sk FC. Circ 75 sk cmt.

— 12¼" hole

— TOL @ 4170'

— 8⅝", 32[#], S80' K55, STFC set @ 5000' w/2000 sk Cl. C cmt,
4% gel, 15[#] sk Salt, 5[#] sk gilsonite; ¼[#] sk FC + 300 sk Cl. C cmt,
2% CaCl₂ + ¼[#] sk FC. Did not circ. TOC @ 410 temp surv. Cmt
519' to surface w/1" w/200 sk Cl. C cmt.

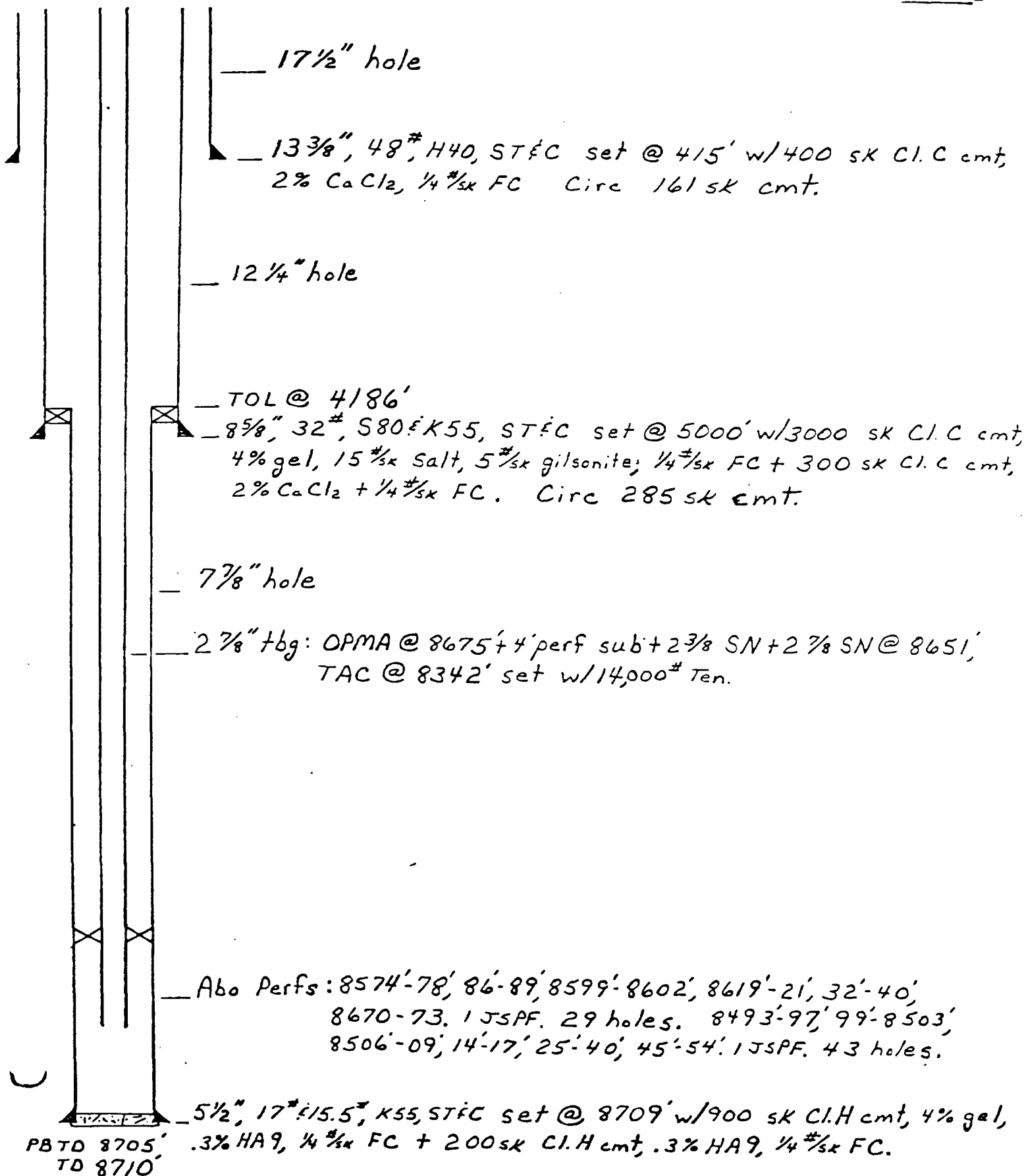
— 7⅞" hole

— 2⅞" tbg: OPMA @ 8546' + 4' perf sub + 2⅞" SN
TAC @ 8366' set w/12,000[#] Ten.

— Abo Perfs: 8444'-47', 52'-64', 75'-80', 83'-90', 93'-99'. 15 SP. 38 holes.

— 5½", 17[#] 15.5[#], K55, STFC set @ 8699' w/800 sk Cl. H cmt, 4% gel,
PB TD 8654' .3% HA9, ¼[#] sk FC + 300 sk Cl. H cmt, .3% HA9, ¼[#] sk FC.
TD 8700'

DATE 11-27-84 WELL NO. 247 LEASE North Vacuum FIELD Vacuum Ab
Abo Unit North
 LOCATION 2094' FEL & 2081' FNL SIGNED R.W. Petty G.L. 4017'
Sec. 24, T17S, R34E D.F. NA
Lea County, New Mexico K.B. 4032'
ZERO 15' AGL



DATE 11-27-84 WELL NO. 248 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit North

LOCATION 2100' FNL 659' FWL
Sec. 24, T17S, R34E
Lea County, New Mexico

SIGNED R. W. Petty

G.L. 4009'
D.F. 4023'
K.B. 4024'
ZERO 15' AGL

— 17 1/2" hole

— 13 3/8", 48#, H40, STFC set @ 400' w/400 sk Cl. C cmt,
2% CaCl₂, 1/4 #/sk FC. Circ 75 sk cmt.

— 12 1/4" hole

— TOL @ 4020'

— 8 5/8", 32#, S80# K55, STFC set @ 5000' w/4175 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. Did not circ. Toc @ 1260' temp surv. Cmt
695' to surf w/1" w/500 sk Cl. C cmt.

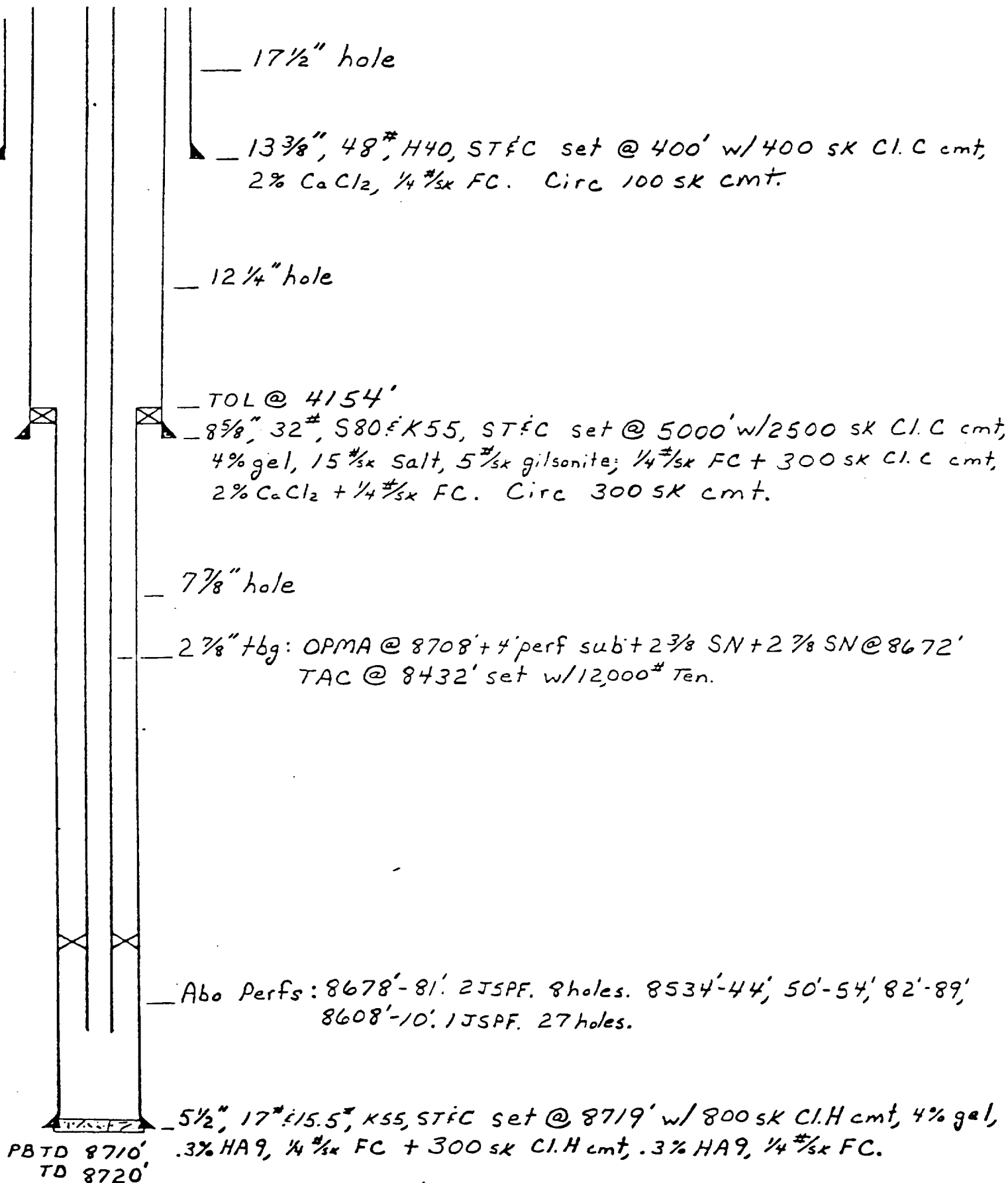
— 7 7/8" hole

— 2 7/8" tbg: OPMA @ 8650' + 4' perf sub + 2 3/8 SN + 2 7/8 SN @ 8625'
TAC @ 8439' set w/12,000# Ten.

— Abo Perfs: 8485'-87', 91'-95', 8502'-04', 07'-09'. 1 JS PF. 14 holes.

— 5 1/2", 17 #/15.5#, K55, STFC set @ 8696' w/850 sk Cl. H cmt, 4% gel,
.3% HA9, 1/4 #/sk FC + 300 sk Cl. H cmt, .3% HA9, 1/4 #/sk FC.
PB TD 8683'
TD 8700'

DATE 11-27-84 WELL NO. 249 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit
 LOCATION 1850' ENL 660' FWL SIGNED R. W. Petty North
Sec. 26, T17S, R34E G.L. 4033'
Lea County, New Mexico D.F. 4050'
K.B. 4051'
ZERO 18' AGL



DATE 12-20-84 WELL NO. 250 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit North

LOCATION 650' FNL ± 620' FEL
Sec. 24 T17S, R34E
Lea County, New Mexico

SIGNED KS OWER

G.L. 4007'
D.F. N/A
K.B. 4020.5'
ZERO 13.5' AGL

— 17½" hole

— 13⅜", 48[#], H40, STFC set @ 420' w/ 400 SK Cl. C cmt,
2% CaCl₂, ¼[#]/sk FC

— 12¼" hole

— TOL @ 4217'

— 8⅝", 32[#], S80[#] K55, STFC set @ 5000' w/ 1920 SK Cl. C cmt,
4% gel, 15[#]/sk Salt, 5[#]/sk gilsonite; ¼[#]/sk FC + 300 SK Cl. C cmt,
2% CaCl₂ + ¼[#]/sk FC

— 7⅞" hole

— 2⅞" tbg: OPMA @ 8760' + 4' perf sub + 2⅞" SN + 2⅞" SN
TAC @ 8479 set w/ 14,000[#] Ten.

— Abo Perfs: 8568-72, 75-78, 91-95, 8600-05, 8702-10. 1 JSPP. 29 holes.

— 5½", 17[#] F15.5[#], K55, STFC set @ 9099' w/ 1030 SK Cl. H cmt, 4% gel,
PBTD 9059' .3% HA9, ¼[#]/sk FC + 300 SK Cl. H cmt, .3% HA9, ¼[#]/sk FC.
TD 9100'

DATE 11-28-84 WELL NO. 251 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit
 LOCATION 660 FNL E 21110' FWL SIGNED R.W. Petty North
Sec. 24, T17S, R34E G.L. 4022'
Lea County, New Mexico D.F. 4034.5'
K.B. 4035.5'
ZERO 13.5' AGL

— 17½" hole

— 13½", 48# H40, STFC set @ 420' w/400 sk C.I.C cmt,
 2% CaCl₂, ¼#_{sk} FC. Circ 100 sk cmt.

— 12¼" holes

— TOL @

— 8½", 32# S80#K55, STFC set @ 5000' w/2000 sk C.I.C cmt,
 4% gel, 15#_{sk} Salt, 5#_{sk} gilsonite, ¼#_{sk} FC + 300 sk C.I.C cmt,
 2% CaCl₂ + ¼#_{sk} FC. Circ 250 sk cmt.

— 7⅞" hole

— 2⅞" tbg: CFMA @ 8625' + 4' perf sub + 2⅞" SN + 2⅞" SN @ 8588'
 TAC @ 8377' set w/12,000# Ten.

— Abo Perfs: 8501'-05', 17'-28', 34'-40'. 1 JSPF. 24 holes.

5½", 17# N80 LTFC 15.5# J55 STFC set @ 8699' w/800 sk C.I.H
 cmt, 4% gel, .3% HA9, ¼#_{sk} FC + 300 sk C.I.H cmt, .3% HA9, ¼#_{sk} FC.

PBTD 8656'
 TD 8700'

DATE 12-20-84 WELL NO. 253 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit
 LOCATION 761' FSL, 1323' FEL SIGNED KS OGIER North
Sec. 13 T17S, R34E G.L. 4011'
Lea County, New Mexico D.F. 4022'
 K.B. 4023'
 ZERO 12' AGL

— 17½" hole

— 13⅜", 48#, H40, STFC set @ 406' w/ 400 SK Cl. C cmt,
 2% CaCl₂, ¼#_{SK} FC

— 12¼" hole

— TOL @ 4195'

— 8⅝", 32#, S80# K55, STFC set @ 5000' w/ 2200 SK Cl. C cmt,
 4% gel, 15#_{SK} Salt, 5#_{SK} gilsonite; ¼#_{SK} FC + 300 SK Cl. C cmt,
 2% CaCl₂ + ¼#_{SK} FC

— 7⅞" hole

— 2⅞" +bg: OPMA @ 8624' + 4' perf sub + 2⅞ SN + 2⅞ SN
 TAC @ 8298 set w/ 12,000# Ten.

— Abo Perfs: 8562'-69'. 2 JSPP. 16 holes.

— 5½", 17# 15.5#, K55, STFC set @ 8699' w/ 700 SK Cl. H cmt, 4% gel,
 .3% HA9, ¼#_{SK} FC + 300 SK Cl. H cmt, .3% HA9, ¼#_{SK} FC.
 PBTD 8650'
 TD 8700'

COUNTY	Lea	FIELD	Vacuum	STATE	N.M.	NO
OPR	Continental Oil Company				MAP	
NO	7	USE	State H-35			
SEC	35	T	17S	BLK. R	34E	SUR
LOG	660' fr N Line & 1780' fr E Line of Sec.					
MI	FROM 10-28-63 (Abo)				CLASS	EL 4029
SPUD	2-6-63	COMP	6-5-63 (Wolfcamp)	FORMATION	DATUM	FORMATION
TRT	LOG:		Vatas	2804		
			Queen	3716		
CSG & SX			SA	4403		
13 3/8"	375'	375	Glor	5843		
9 5/8"	4950'	300	Abo	7930		
7"	12413'	1750	Strwn	10852		
TBG. DEPTH	SIZE		Miss	11478		
LOGS EL GR RA IND HC A			Wdfd	12100		
			-2 12413'		PS	10468'
PROD INT.	DAILY RATE	BS&W	GH	GOR	GTY	C P T P T
9154-9256'	Pmpd 32 BO + 57 BW			344	38	24
(Abo)						
9620-10066'	Flwd 150 BO + 5 BW 22/64"	1800	42	225#	75#	24
(Wolfcamp)						
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CONT	Sharp Drlg. Co.			PROP DEPTH	12,200'	TYPE
DATE						

F.R. 2-7-63
PD 12,200' - Abo, Wolfcamp & Devonian
Contractor - Sharp Drlg. Co.

2-11-63 Drlg. 3034' anhy.
2-18-63 Drlg. 4451'.
2-25-63 TD 4950', WOC.
Cored 4882-4911', rec 29' being:
15' dolo., w/scatt. PP & Vuggy Poro., scatt. BO&G,
poor to fair show, 14' dolo., w/scatt. bldg. sul.
wtr & oil, poor show.

3-4-63 TD 6018', on DST.
Cored 5260-5327', rec 66' being:
33' sdy dolo., w/PPP, stain & sat., fair show,
3' sd., & dolo., w/poor show, 15' sd. & dolo.,
W/PPP, poor show, 15' sdy dolo., NS.

3-4-63 -cont-
DST (Paddock) 5835-5942', open 1 hr,
rec 281' salt wtr & GCM,
45 min ISIP 2308#, FP 116-256#,
45 min FSIP 1733#.

3-11-63 Drlg. 7532' dolo. & lm.
DST (Paddock) 5958-6018', open 3 hrs 45 mins,
OTS 1 hr 32 mins, flwd 20 BO/2 hrs.
Rev out 33 bbls oil,
45 min ISIP 2245#, FP 375-892#,
1 hr FSIP 2106#.
DST (Blaine) 6410-62', open 25 mins,
rec 60' DM,
45 min ISIP 120#, FP 35-35#,
30 min FSIP 120#.

3-18-63 Drlg. 8740' lm. & sh.
3-25-63 Drlg. 9416'.
Cored 9073-9115', rec 42' being:
27' dense dolo., w/NS, 9' dolo., w/scatt.
poro. & frags., sli. stain & bldg., fair show,
6' dolo., NS.
Cored 9115-9158', rec 42' being:
3' dolo., w/sli. poro., poor show, 15' dolo.,
w/sh. stringers, NS, 11' dolo., sli. poro.,
BO & Some Wtr, fair show, 13' dolo., dense, NS.
Cored 9158-9203', rec 45' being:
19' dolo., w/scatt. frags., poor to fair show,
26' dolo., w/sh. stringers, NS.

4-1-63 Drlg. 9936' lm. & sh.
Cored 9610-39', rec 28' being:
3.5' sh., 1' lm., w/ch. incls., NS, 3' lm., w/

4-1-63 -cont-
DST 9607-9668', open 1 hr 20 mins,
Rec 120' DM,
45 min ISIP 1990#, FP 93-140#,
1 hr FSIP 1990#.

4-8-63 Drlg. 10652' lm., sh. & ch.
DST 9968-10030', open 2 hrs,
GTS in 17 mins,
Rec 90' DM + 300' GCM, w/tr. oil,
45 min ISIP 3565#, FP 109-109#,
1 hr 30 min FSIP 3857#.

4-15-63 Drlg. 11293' lm. & sh.
DST 11129-201', pkr failed.

4-22-63 Drlg. 11666' lm. & ch.

4-29-63 Drlg. 12162' sh.

5-6-63 TD 12413', lm. & dolo., prep to run casing.
DST 12247-270', pkr failed.
DST 12085-270', open 2 hrs, rec 280' DM,
45 min ISIP 1325#, FP 1009-1009#,
2 hr FSIP 1235#.

5-13-63 TD 12413', prep to treat.
Perf (Devonian) 12255-275' W/1 SPF

5-20-63 TD 12413', prep to plug back.
Attempted to treat, would not take.
Re-Perf (Devonian) 12255-275' W/1 SPF.
Ac. 1000 gals MA + 1500 gals reg. Ac.,
swbd dry, swbd load & 12 BNW/no time.
Set BP @ 12252', Perf 12226-250' W/1 SPF,
Ac. 2000 gals MA
swbd 82 BLW + 38 BNW/12 hrs. Set ret. @ 12173'.

5-27-63 TD 12413', PB 10541', prep to ac.
Perf (Atoka) 11331-345' W/1 SPF.

5-27-63 -cont.-
Set BP @ 11135'.
Perf 11026-045', 11070-086' W/1 SPF,
Ac. 2000 gals, swbd dry.
Set BP @ 10550',
Perf (Wolfcamp) 9948-60', 10,000-066' W/1 SPF
6-3-63 TD 12413', PB 10541', tstg.
Ac. 4000 gals, flwd 64 BLO + 55 BNO & 24 BAW/
14 hrs, flwd 177 BO + 15 BAW/24 hrs thru
17/64" chk., TP 450#.
Perf (Wolfcamp) 9620-40', 9730-50', 9800-08' &
1 SPF
Set BP @ 9879', Ac. 4000 gals.
Swbd & Flwd 48 BLO + 108 BNO & 90 BAW/19 hrs.
Flwd 129 BO + 5 BAW/21 hrs.

6-10-63 Re-Set BP @ 10,110',
swbd 370 BLW + 105 BO/40 hrs.
TD 12413', PB 10541', swbg.
Wolfcamp-flwd 177 BO + 5 BW/20 hrs thru 22/64
chk., TP 25-200#,
Set BP @ 9520',
Perf (Abo) 9154-70', 9193-9210', 9228-56',
W/1 SPF, Ac. 10,000 gals.
Flwd & swbd 60 BLO + 36 BNO & 144 BAW/43 hrs.
6-17-63 TD 12413', PB 10541', swbg.
Re-Ac. Perfs 9154-9256' W/20,000 gals acidfra
Swbd 64 BLO + 125 BNO & 210 BAW/18 hrs.
6-24-63 TD 21413', PB 10541', tstg. on pump.
Ppd. 160 BO in 24 hrs.
7-1-63 TD 12413', PB 10541', tstg. on pump.
Pmpd. 65 BO in 24 hrs.

7-8-63 TD 12413', PB 10541', tstg. on pump.
Ppd. 75 BO + 59 BW/24 hrs.

7-15-63 TD 12413', PB 10541', tstg. on pump.
Ppd. 92 BO + 100 BW/45 hrs.

7-22-63 TD 12413', PB 10541', tstg. on pump.
Ppd. 51 BO + 51 BW/24 hrs.

7-29-63 TD 12413', PB 10541', tstg. on pump.
Ppd. 35 BO + 46 BW/24 hrs.

8-5-63 TD 12413', PB 10541', tstg. on pump.
Ppd. 122 BO + 133 BW/72 hrs.

8-12-63 TD 12413', PB 10541', tstg. on pump.
Ppd. 112 BO + 75 BW/72 hrs.

8-19-63 TD 12413', PB 10541', tstg. on pump.
Ppd. 24 BO + 14 BW/24 hrs.

8-26-63 TD 12413', PB 10541', tstg. on pump.
Ppd. 9 BO + 14 BW/10 hrs.

9-3-63 TD 12413', PB 10541', tstg. on pump.
Ppd. 28 BO + 18 BW/24 hrs.
(Final posting until status changes)

9-23-63 TD 12413', PB 10468', swbg Wolfcamp.
Pushed BP @ 9520' to 10468', Set Pkr @ 9499',
Swbd (Wolfcamp 9620-10066') 66 BO + 194 BLW/20
hrs.

9-30-63 TD 12413', PB 10468', SI for BHP.
Swbd & flwd 101 BO + 4 BW/10 hrs.

10-7-63 TD 12413', PB 10468', tstg. on pump.
Ppd. 70 BO + 201 BW/24 hrs.

10-14-63 TD 12413', PB 10468', tstg. on pump.
Abo Perfs 9154-9256', pmpd 35 BO + 35 BW/10 hrs.

10-21-63 TD 12413', PB 10468', tstg. on pump.
(Final posting until well potentialed).

11-4-63 TD 12413', PB 10468', COMPLETED.

COUNTY LEA FIELD Vacuum STATE NM OWWO
 OPR CONTINENTAL OIL COMPANY MAP
7 State H-35
 Sec. 35, T-17-S, R-34-E CO-ORD
 660' FNL & 1780' FEL of Sec.
 Re-Spd 9-30-65 CLASS owd/P EL [REDACTED]
 Re-Cmp 10-21-65

CSG & SX - TUBING

	FORMATION	DATUM	FORMATION	D.
13 3/8" 375' 375				
9 5/8" 4950' 300				
7" 12413' 1750				

LOGS EL GR RA IND HC A

TD 12413', PBD 9500'

IP Glorieta Perfs 5982-96' Pmpd 96 BOPD + 40 BW. Pot. Based on 24 hr test, gravity 36., GOR 365.

Abn Perfs 9154-9256' - NO CHANGE

Distribution limited and publication prohibited by subscribers' agreement.
 Reproduction rights reserved by Williams & Lee Scouting Service, Inc.

CONT PROP DEPTH TYPE WO
 DATE

F.R.C. 12-9-65; OWWO
 (Orig. comp from Abn perfs 9154-9256' &
 Wolfcamp perfs 9620-10066', OTD 12413')
 Elev. 4029' DE, Orig.
 12-9-65 TD 12413', PBD 9500', COMPLETED.
 Set CIBP @ 3945' in Wolfcamp String
 Perf (Glorieta) @ 5982', 5984-88', 5996'
 W/1 SPF
 Ac. 1500 gals. 5982-96'.

MOBIL PRODUCING TEXAS & NEW MEXICO, INC.
NORTH VACUUM ABO UNIT
WELLS NO. 98,112,116,136,137,138,
156, 205, 210 AND 211
LEA COUNTY, NEW MEXICO

IX. Stimulation Program

Acidize with 5000 gals of 15% NE FE HCl Acid + 5% by volume of
mutual solvent + ball sealers. The acid will be displaced with
fresh water.

UNICHEM INTERNATIONAL

707 NORTH LEECH

P.O.BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : MOBIL PRODUCING TX & NM

DATE : 08/13/85

FIELD, LEASE & WELL : BRIDGES STATE

SAMPLING POINT: WELL #11-W - SE4 SE4, Unit P, Sec. 22

DATE SAMPLED : 08/07/85

SPECIFIC GRAVITY = 1

TOTAL DISSOLVED SOLIDS = 544

PH = 7.31

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	3.8	76.1
MAGNESIUM	(MG)+2	1.6	19.4
SODIUM	(NA).CALC.	2.7	62.0

		ME/L	MG/L
ANIONS			
BICARBONATE	(HCO3)-1	4	244.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	1.1	53
CHLORIDES	(CL)-1	3	90

		ME/L	MG/L
DISSOLVED GASES			
CARBON DIOXIDE	(CO2)	NOT RUN	
HYDROGEN SULFIDE	(H2S)	NOT RUN	
OXYGEN	(O2)	NOT RUN	

		ME/L	MG/L
IRON(TOTAL)	(FE)		.4
BARIUM	(BA)+2	0	.2
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) = .011

SCALING INDEX	TEMP
	300
	86F
CARBONATE INDEX	1.97
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-17.
CALCIUM SULFATE SCALING	UNLIKELY

UNICHEM INTERNATIONAL

707 NORTH LEECH

P.O.BOX 1499

HOBBS, NEW MEXICO 88240

COMPANY : MOBIL PRODUCING TX & NM

DATE : 08/13/85

FIELD, LEASE & WELL : BRIDGES STATE

SAMPLING POINT: WATER SOURCE WELL #1 *W50* - NE4 NW4, Unit C, Sec. 25

DATE SAMPLED : 08/07/85

SPECIFIC GRAVITY = 1

TOTAL DISSOLVED SOLIDS = 453

PH = 7.02

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	2.6	52.1
MAGNESIUM	(MG)+2	2.6	51.6
SODIUM	(NA), CALC.	1.9	43.5

		ME/L	MG/L
ANIONS			
BICARBONATE	(HCO3)-1	3	183.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	1.1	53
CHLORIDES	(CL)-1	3	90

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

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

IONIC STRENGTH (MOLAL) = .01

SCALING INDEX	TEMP
	300
	86F
CARBONATE INDEX	1.53
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

ILLEGIBLE

COMPANY : MOBIL PRODUCING TX & NM

DATE : 08/13/85

FIELD, LEASE & WELL : BRIDGES STATE - Phillips WSW

SAMPLING POINT: WATER SOURCE WELL #2 - SE4 NE4 Unit H, Sec. 24

DATE SAMPLED : 08/07/85

SPECIFIC GRAVITY = 1

TOTAL DISSOLVED SOLIDS = 427

PH = 7.46

		ME/L	MG/L
CATIONS			
CALCIUM	(CA)+2	1.2	24.0
MAGNESIUM	(MG)+2	2	24.3
SODIUM	(NA)+, CALC.	3.5	81.1

		ME/L	MG/L
ANIONS			
BICARBONATE	(HCO3)-1	2.2	134.
CARBONATE	(CO3)-2	0	0
HYDROXIDE	(OH)-1	0	0
SULFATE	(SO4)-2	1.5	73.3
CHLORIDES	(CL)-1	3	90

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

IRON(TOTAL)	(FE)		.8
BARIUM	(BA)+2	0	.1
MANGANESE	(MN)	NOT RUN	

IONIC STRENGTH (MOLAL) =9E-03

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	1.25
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-18.
CALCIUM SULFATE SCALING	UNLIKELY

MOBIL PRODUCING TEXAS & NEW MEXICO INC.
NORTH VACUUM ABO UNIT
WELL NOS. 98, 112, 116, 136, 137, 138
156, 205, 210 and 211
LEA COUNTY, NEW MEXICO

This application was sent to the surface owner of the land on which these wells are located and to each lease operator within one-half mile radius of the well location.

OFFSET OPERATORS:

Arco Oil & Gas Co.
Post Office Box 1610
Midland, Texas 79702

Conoco, Inc.
Post Office Box 1959
Midland, Texas 79702

Exxon
Post Office Box 1600
Midland, Texas 79702

Marathon Oil Co.
Post Office Box 2409
Hobbs, New Mexico 88240

Phillips Petroleum Co.
4001 Penbrook
Odessa, Texas 79762

Texaco, Inc.
Post Office Box 728
Hobbs, New Mexico 88240

SURFACE OWNER:

New Mexico State Land Office
Post Office Box 1148
Santa Fe, New Mexico 87501

Mobil Producing Texas & New Mexico Inc.

September 25, 1985

PO BOX 601
MIDLAND TEXAS 79702

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Arco Oil & Gas Co.
P.O. Box 1610
Midland, Texas 79702

7.01
NOTICE OF APPLICATION FOR
WATER INJECTION WELLS
MOBIL PRODUCING TX. & N.M., INC.
NORTH VACUUM ABO UNIT
WELL NOS. 98, 112, 116, 136, 137, 138,
156, 205, 210 and 211
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Mobil Producing Tx. & N.M., Inc. (MPIM) has made application to the Oil Conservation Division of New Mexico for authority to inject fresh water into a reservoir productive of oil or gas in the above captioned wells.

A copy of this application is furnished to you for your information.

Yours very truly,

C.C. Smith for

Regulatory Manager

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: <i>Arco Oil & Gas Co. P.O. Box 1610 Midland, TX 79702</i>	
4. Type of Service: ☐ Registered ☐ Insured ☐ Certified ☐ COD ☐ Express Mail	Article Number <i>4747380673</i>
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee <i>X</i>	6. Signature - Agent <i>X</i>
7. Date of Delivery <i>SEP 26 1985</i>	
8. Addressee's Address (ONLY if requested and fee paid)	

Mobil Producing Texas & New Mexico Inc.

September 25, 1985

P.O. BOX 603
MIDLAND, TEXAS 79702

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Conoco, Inc.
Post Office Box 1959
Midland, Texas 79702

7.01
NOTICE OF APPLICATION FOR
WATER INJECTION WELLS
MOBIL PRODUCING TX. & N.M., INC.
NORTH VACUUM ABO UNIT
WELL NOS. 98, 112, 116, 136, 137, 138,
156, 205, 210 and 211
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Mobil Producing Tx. & N.M., Inc. (MPTM) has made application to the Oil Conservation Division of New Mexico for authority to inject fresh water into a reservoir productive of oil or gas in the above captioned wells.

A copy of this application is furnished to you for your information.

Yours very truly,

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: <i>Conoco Inc.</i> <i>P.O. Box 1959</i> <i>Midland, Texas 79702</i>	
4. Type of Service: ☐ Registered ☐ Insured ☐ Certified ☐ COD ☐ Express Mail	Article Number <i>954735671</i>
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee <i>X</i>	6. Signature - Agent <i>X</i>
7. Date of Delivery <i>SEP 25 1985</i>	8. Addressee's Address (ONLY if requested for fee paid) <i>TX</i> <i>US. O.</i>

gulatory Manager

Mobil Producing Texas & New Mexico Inc.

September 25, 1985

P.O. BOX 1600
MIDLAND, TEXAS 79702

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Exxon
Post Office Box 1600
Midland, Texas 79702

7.01
NOTICE OF APPLICATION FOR
WATER INJECTION WELLS
MOBIL PRODUCING TX. & N.M., INC.
NORTH VACUUM ABO UNIT
WELL NOS. 98, 112, 116, 136, 137, 138,
156, 205, 210 and 211
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Mobil Producing Tx. & N.M., Inc. (MPTM) has made application to the Oil Conservation Division of New Mexico for authority to inject fresh water into a reservoir productive of oil or gas in the above captioned wells.

A copy of this application is furnished to you for your information.

Yours very truly,

G. A. Link

ulatory Manager

This form must be completed at the PO and compared against the customer's receipt. Do not furnish this form to customers.

1b. For return receipt after mailing ATTACH appropriate fee as shown in Section 932.2 of the DMM.		• CUSTOMER:—Complete items 1 or 2 and 3 through 9 below. Add your address in the "RETURN TO" space on reverse.	
Mailing post office postmark to indicate fee previously paid for item 2.		☐ 1 st AFTER MAILING: provide name of person who signed for article and date delivered.	
		☒ 2 nd DUPLICATE: provide name of person who signed for article and date of delivery.	
☐ 2 nd DUPLICATE: provide name of person who signed for article, date of delivery, and place of delivery.		3. MAILING DATE	4. COD NO.
5. REGISTERED NO.	6. CERTIFIED NO.	7. INSURED NO.	8. EXPRESS MAIL NO.
	PS47380669		
9. ARTICLE ADDRESSED TO			
Exxon PO Box 1600 Midland, TX 79702			
POSTAL RECORDS SHOW DELIVERY	10. TO		14. POSTMARK OF DELIVERY OFFICE
	11. DATE OF DELIVERY		
	12. ADDRESS (Complete only if requested)		
	K. Drive		13. CLERK'S INITIALS
	9-26-85		
			Do not process if Section 1b above is not completed.

Mobil Producing Texas & New Mexico Inc.

September 25, 1985

FD-304 (Rev. 11-1-80)
MILANO, TEXAS 77110

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Marathon Oil Co.
Post Office Box 2409
Hobbs, New Mexico 88240

7.01
NOTICE OF APPLICATION FOR
WATER INJECTION WELLS
MOBIL PRODUCING TX. & N.M., INC.
NORTH VACUUM ABO UNIT
WELL NOS. 98, 112, 116, 136, 137, 138,
156, 205, 210 and 211
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

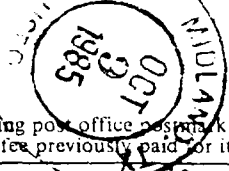
Gentlemen:

Mobil Producing Tx. & N.M., Inc. (MPIM) has made application to the Oil Conservation Division of New Mexico for authority to inject fresh water into a reservoir productive of oil or gas in the above captioned wells.

A copy of this application is furnished to you for your information.

Yours very truly,

for
Regulatory Manager

1b. For return receipt after mailing ATTACH appropriate fee as shown in Section 932.2 of the DMM.		• CUSTOMER:—Complete items 1 or 2 and 3 through 9 below Add your address in the "RETURN TO" space on reverse	
 Mailing post office responsible to indicate fee previously paid for item 2.		1 st AFTER MAILING: provide name of person who signed for article and date delivered.	
		2 nd DUPLICATE: provide name of person who signed for article and date of delivery.	
		2 nd DUPLICATE: provide name of person who signed for article, date of delivery, and place of delivery.	
3. MAILING DATE 9-25-85		4. COD NO.	
5. REGISTERED NO. 4547380667		6. CERTIFIED NO.	
7. INSURED NO.		8. EXPRESS MAIL NO.	
9. ARTICLE ADDRESSED TO Marathon Oil Co. Box 2409 Hobbs, N.M. 88240			
10. TO Mary M. S. Lujan		14. POSTMARK OF DELIVERY OFFICE	
11. DATE OF DELIVERY 9-26-85		13. CLERK'S INITIALS Luj	
12. ADDRESS (Complete only if requested) Box 2409		Do not process if Section 1b above is not completed.	

REQUEST FOR RETURN RECEIPT (AFTER MAILING)

Mobil Producing Texas & New Mexico Inc.

September 25, 1985

P.O. BOX 633
MIDLAND TEXAS 79702

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Phillips Petroleum Co.
4001 Penbrook
Odessa, Texas 79762

7.01
NOTICE OF APPLICATION FOR
WATER INJECTION WELLS
MOBIL PRODUCING TX. & N.M., INC.
NORTH VACUUM ABO UNIT
WELL NOS. 98, 112, 116, 136, 137, 138,
156, 205, 210 and 211
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Mobil Producing Tx. & N.M., Inc. (MPTM) has made application to the Oil Conservation Division of New Mexico for authority to inject fresh water into a reservoir productive of oil or gas in the above captioned wells.

A copy of this application is furnished to you for your information.

Yours very truly,

Regulatory Manager

1b. For return receipt after mailing ATTACH appropriate fee as shown in Section 932.2 of the DMM.		• CUSTOMER:—Complete items 1 or 2 and 3 through 9 below. Add your address in the "RETURN TO" space on reverse.	
Mailing post office mark to indicate fee previously paid for item 2.		1 st AFTER MAILING: provide name of person who signed for article and date delivered.	
		2 nd ATTACH appropriate fee as shown in Section 932.2 of the DMM.	
		2 nd DUPLICATE: provide name of person who signed for article and date of delivery.	
3. MAILING DATE		4. COD NO.	
9-25-85			
5. REGISTERED NO.	6. CERTIFIED NO.	7. INSURED NO.	8. EXPRESS MAIL NO.
	7547380672		
9. ARTICLE ADDRESSED TO			
Phillips Petroleum 4001 Penbrook Odessa, TX 79762			
10. TO			
Barbara Freeman			
11. DATE OF DELIVERY			
9-26-85			
12. ADDRESS (Complete only if requested)			
13. CLERK'S INITIALS			
Do not process if Section 1b above is completed.			

POSTAL RECORDS SHOW DELIVERY

REQUEST FOR RETURN RECEIPT AFTER MAILING

Mobil Producing Texas & New Mexico Inc.

September 25, 1985

P.O. BOX 601
MIDLAND, TEXAS 79702

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Texaco, Inc. Co.
Post Office Box 728
Hobbs, New Mexico 88240

7.01
NOTICE OF APPLICATION FOR
WATER INJECTION WELLS
MOBIL PRODUCING TX. & N.M., INC.
NORTH VACUUM ABO UNIT
WELL NOS. 98, 112, 116, 136, 137, 138,
156, 205, 210 and 211
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Mobil Producing Tx. & N.M., Inc. (MPTM) has made application to the Oil Conservation Division of New Mexico for authority to inject fresh water into a reservoir productive of oil or gas in the above captioned wells.

A copy of this application is furnished to you for your information.

Yours very truly,

ulatory Manager

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: Texaco, Inc. P.O. Box 728 Hobbs, N.M. 88240	
4. Type of Service: ☐ Registered ☐ Insured ☐ Certified ☐ COD ☐ Express Mail	Article Number
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee X <i>Stephen J. ...</i>	6. Signature - Agent X
7. Date of Delivery SEP 26 1985	8. Addressee's Address (ONLY if requested and not paid)

Mobil Producing Texas & New Mexico Inc.

September 25, 1985

P.O. BOX 933
MIDLAND, TEXAS 79702

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

New Mexico State Land Office
Post Office Box 1148
Santa Fe, New Mexico 87501

7.01
NOTICE OF APPLICATION FOR
WATER INJECTION WELLS
MOBIL PRODUCING TX. & N.M., INC.
NORTH VACUUM ABO UNIT
WELL NOS. 98, 112, 116, 136, 137, 138,
156, 205, 210 and 211
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

Mobil Producing Tx. & N.M., Inc. (MPTM) has made application to the Oil Conservation Division of New Mexico for authority to inject fresh water into a reservoir productive of oil or gas in the above captioned wells.

A copy of this application is furnished to you for your information.

Yours very truly,

ulatory Manager

1b. For return receipt after mailing ATTACH appropriate fee as shown in Section 932.2 of the DMAR.		● CUSTOMER:—Complete items 1 or 2 and 3 through 9 below. — Add your address in the "RETURN TO" space on reverse.	
Mailing post office postmark to indicate fee previously paid for item 2.		1 st AFTER MAILING: provide name of person who signed for article and date delivered. (Attach appropriate fee as shown in Section 932.2 of the DMAR)	
		2 nd DUPLICATE: provide name of person who signed for article and date of delivery.	
		3 rd DUPLICATE: provide name of person who signed for article, date of delivery, and place of delivery.	
3. MAILING DATE 9-25-85		4. COB NO.	
5. REGISTERED NO.	6. CERTIFIED NO. 547380670	7. INSURED NO.	8. EXPRESS MAIL NO.
9. ARTICLE ADDRESSED TO PO Box 1148 New Mexico State Land Office Santa Fe, NM. 87501			
10. TO		14. POSTMARK OF DELIVERY OFFICE	
11. DATE OF DELIVERY		Do not process if Section 1b above is not completed.	
12. ADDRESS (Complete only if requested)			
13. CLERK'S INITIALS			

REQUEST FOR RETURN RECEIPT (AFTER MAILING)

This form must be completed at the PO and compared against the customer's receipt. Do not furnish this form to customers.

Affidavit of Publication

STATE OF NEW MEXICO)
) ss.
COUNTY OF LEA)

Joyce Clemens being first duly sworn on oath deposes and says that he is Adv. Director of THE LOVINGTON DAILY LEADER, a daily newspaper of general paid circulation published in the English language at Lovington, Lea County, New Mexico; that said newspaper has been so published in such county continuously and uninterruptedly for a period in excess of Twenty-six (26) consecutive weeks next prior to the first publication of the notice hereto attached as hereinafter shown; and that said newspaper is in all things duly qualified to publish legal notices within the meaning of Chapter 167 of the 1937 Session Laws of the State of New Mexico.

That the notice which is hereto attached, entitled Application For Authorization To Inject

and numbered in the Court of Lea County, New Mexico, was published in a regular and entire issue of THE LOVINGTON DAILY LEADER and not in any supplement thereof, once each week on the same day of the week, for one (1) consecutive weeks, beginning with the issue of October 1, 1985 and ending with the issue of, 19.....

And that the cost of publishing said notice is the sum of \$ 15.84 which sum has been (Paid) ~~XXXXXX~~ as Court Costs

Joyce Clemens
Subscribed and sworn to before me this 14th day of October, 1985.
Mr. Leon Senior
Notary Public, Lea County, New Mexico
My Commission Expires Sept. 28, 1986.

LEGAL NOTICE APPLICATION FOR AUTHORIZATION TO INJECT

1. Mobil Producing Tx. & N.M. Inc, P.O. Box 633, Midland, Texas 79702

Attention: A.D. Bond, 915/688-1776 will apply for permission to inject Fresh water into the following well/wells for the purpose of: Secondary Recovery

2. Well Name and Number:
APPLICATION FOR AUTHORIZATION TO INJECT ITEM NUMBER TWO

North Vacuum Abo Unit #98
1980' FSL & 1780' FEL
Sec. 26, Unit J, 17-S, 34-E

North Vacuum Abo Unit #112
660' FNL & 860' FWL
Sec. 25, Unit D, 17-S, 34-E

North Vacuum Abo Unit #116
1880' FSL & 510' FWL
Sec. 24, Unit L, 17-S, 34-E

North vacuum Abo Unit #136
660' FNL & 860' FWL
Sec. 26, Unit D, 17-S, 34-E

North Vacuum Abo Unit #137
660' FNL & 2130' FEL
Sec. 26, Unit B, 17-S, 34-E

North Vacuum Abo Unit #138
1980' FSL & 860' FEL
Sec. 26, Unit L, 17-S, 34-E

North Vacuum Abo Unit #156
1893' FSL & 1800' FEL
Sec. 23, Unit J, 17-S, 34-E

North Vacuum Abo Unit #205
660' FNL & 1980' FEL
Sec. 24, Unit B, 17-S, 34-E

North Vacuum Abo Unit #210
1840' FSL & 800' FWL
Sec. 23, Unit L, 17-S, 34-E

North Vacuum Abo Unit #211
2054' FSL & 2162' FEL
Sec. 24, Unit J, 17-S, 34-E

County: Lea

3. Formation Name: North Vacuum Abo

Injection Interval: 8657' to 8759'

Maximum Injection Rate: 600 BBL/day/well

Maximum Pressure: 4,350 psi

4. Interested parties, who can show that they are adversely affected by this application, must file objections or requests for hearing with the Energy and Minerals Department, Oil Conservation Division, P.O. Box 2088, Santa Fe, New Mexico 87501 within 15 days after this publication.

Published in the Lovington Daily Leader October 1, 1985.

RECEIVED

OCT 16 1985

G. E. TATE

Mobil Producing Texas & New Mexico Inc.

September 25, 1985

P.O. BOX 633
MIDLAND TEXAS 79702

County Clerk
Ms. Pat Snipes
P.O. Box 1507
Lovington, New Mexico 88260

7.01
NOTICE OF APPLICATION FOR
WATER INJECTION WELLS
MOBIL PRODUCING TX. & N.M., INC.
NORTH VACUUM ABO UNIT
WELLS NOS. 98, 112, 116, 136, 137, 138,
156, 205, 210 and 211
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Dear Ms. Snipes:

Mobil Producing Tx. & N.M., Inc. (MPTM) has made application to the Oil Conservation Division of New Mexico for authority to inject fresh water into a reservoir productive of oil or gas in the above captioned wells.

The Oil Conservation Division requires that the enclosed application be sent to you for public information notice in the county in which the wells are located. Please post the attached application as you desire.

Yours very truly,



G.E. Tate
Environmental & Regulatory Manager

CCS/njc
Attachments

cc: Oil Conservation Division (w/attach)



TONY ANAYA
GOVERNOR

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION



1935 - 1985

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 327-5800

APPLICATION OF MOBIL PRODUCING TEXAS & NEW
MEXICO INC. TO EXPAND ITS PRESSURE MAINTENANCE
PROJECT IN THE VACUUM ABO POOL IN LEA COUNTY,
NEW MEXICO

ORDER No. PMX-138

ADMINISTRATIVE ORDER
OF THE OIL CONSERVATION DIVISION

Under the provisions of Order No. R-4430, Mobil Producing Texas & New Mexico Inc. has made application to the Division on October 16, 1985, for permission to expand its North Vacuum Abo Pressure Maintenance Project in the Vacuum Abo Pool in Lea County, New Mexico.

NOW, on this 12th day of November, 1985, the Division 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 701B.
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 pressure maintenance project will not cause waste nor impair correlative rights.
6. That the application should be approved.

IT IS THEREFORE ORDERED:

That the applicant, Mobil Producing Texas & New Mexico Inc., be and the same is hereby authorized to inject water into the Abo formation through plastic-lined tubing set in a packer at approximately 100 feet above the uppermost perforations in the following described wells for purposes of injection to wit:

<u>WELL AND LOCATION</u>	<u>MAXIMUM SURFACE INJECTION PRESSURE</u>
N. Vacuum Abo Unit No. 98 Unit J, Sec. 26, T-17-S, R-34-E, Lea County, New Mexico	1695 Psig.
N. Vacuum Abo Unit No. 112 Unit D, Sec. 25, T-17-S, R-34-E, Lea County, New Mexico	1678 Psig.
N. Vacuum Abo Unit No. 116 Unit L, Sec. 24, T-17-S, R-34-E Lea County, New Mexico	1688 Psig.
N. Vacuum Abo Unit No. 136 Unit D, Sec. 26, T-17-S, R-34-E Lea County, New Mexico	1709 Psig.
N. Vacuum Abo Unit No. 137 Unit B, Sec. 26, T-17-S, R-34-E Lea County, New Mexico	1696 Psig.
N. Vacuum Abo Unit No. 138 Unit L, Sec. 26, T-17-S, R-34-E Lea County, New Mexico	1702 Psig.
N. Vacuum Abo Unit No. 156 Unit J, Sec. 23, T-17-S, R-34-E Lea County, New Mexico	1697 Psig.
N. Vacuum Abo Unit No. 205 Unit B, Sec. 24, T-17-S, R-34-E Lea County, New Mexico	1705 Psig.
N. Vacuum Abo Unit No. 210 Unit L, Sec. 23, T-17-S, R-34-E Lea County, New Mexico	1708 Psig.
N. Vacuum Abo Unit No. 211 Unit J, Sec. 24, T-17-S, R-34-E Lea County, New Mexico	1695 Psig.

IT IS FURTHER ORDERED:

That the operator shall take all steps necessary to ensure that the injected water enters only the proposed injection interval and is not permitted to escape to other formations or onto the surface.

That the casing-tubing annulus (in each well) shall be loaded with an inert fluid and equipped with a pressure gauge at the surface or left open to the atmosphere to facilitate detection of leakage in the casing, tubing, or packer.

That the injection wells or systems shall be equipped with a pressure limiting device which will limit the wellhead pressure on the injection well to no more than .2 psi/ft. of depth to the uppermost perforations.

That the Director of the Division may authorize an increase in injection pressure upon a proper showing by the operator of said well that such higher pressure will not result in migration of the injected fluid from the Abo formation. That such proper showing shall consist of a valid step-rate test run in accordance with and acceptable to this office.

That the operator shall notify the supervisor of the Division's Hobbs District Office before injection is commenced through said wells.

That the operator shall immediately notify the Supervisor of the Division's Hobbs District Office of the failure of the tubing, casing, or packer in said wells or the leakage of water from or around said wells and shall take such steps as may be timely or necessary to correct such failure or leakage.

That the subject wells shall be governed by all provisions of Division Order No. R-4430 and Rules 702, 703, 704, 705, and 706 not inconsistent herewith.

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION



R. L. STAMETS,
Director

S E A L

STATE OF NEW MEXICO

ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION



BRUCE KING
GOVERNOR



POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87504
(505) 827-5800

April 14, 1992

Mobil Exploration & Producing U.S. Inc.
P.O. Box 633
Midland, Texas 79702-0633

Attention: Judy Dixon

*RE: Injection Pressure Increase
North Vacuum Abo Unit
Pressure Maintenance Project
Lea County, New Mexico*

Dear Ms. Dixon:

Reference is made to your request dated April 6, 1992, to increase the surface injection pressure on twelve wells within the North Vacuum Abo Unit Pressure Maintenance Project. This request is based on step rate tests conducted on these wells during February, 1992. The results of the tests have been reviewed by my staff and we feel an increase in injection pressure on these wells is justified at this time.

You are therefore authorized to increase the surface injection pressure on the following wells:

<u>WELL AND LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
NVAU No. 95 Unit P, Section 26	4040 PSIG
NVAU No. 98 Unit J, Section 26	4140 PSIG
NVAU No. 112 Unit D, Section 25	4170 PSIG

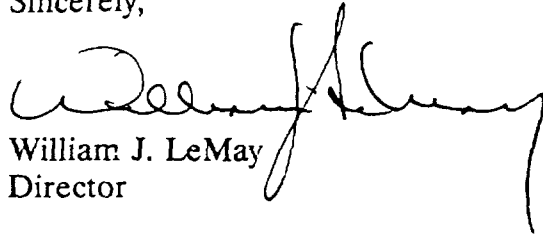
<u>WELL AND LOCATION</u>	<u>MAXIMUM INJECTION SURFACE PRESSURE</u>
NVAU No. 116 Unit L, Section 24	4245 PSIG
NVAU No. 136 Unit D, Section 26	4050 PSIG
NVAU No. 138 Unit I, Section 26	4365 PSIG
NVAU No. 143 Unit B, Section 27	4280 PSIG
NVAU No. 149 Unit J, Section 27	4215 PSIG
NVAU No. 152 Unit B, Section 13	4035 PSIG
NVAU No. 156 Unit J, Section 23	4200 PSIG
NVAU, No. 206 Unit D, Section 19	3100 PSIG
NVAU No. 211 Unit J, Section 24	4270 PSIG

All in Township 17 South, Range 34 East, NMPM
Lea County, New Mexico.

Mobil Exploration & Producing U.S. Inc.
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April 20, 1992

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

A handwritten signature in black ink, appearing to read 'William J. LeMay', written over the printed name and title.

William J. LeMay
Director

WJL/DC/jc

cc: Oil Conservation Division - Hobbs
File: PMX-138
PMX-140
WFX-557
D. Catanach
R. Brown