

Mobil Producing Texas & New Mexico Inc.

December 30, 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. 121,129,139,142,143,149,
155,163,203,204,206,209 & 230
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Gentlemen:

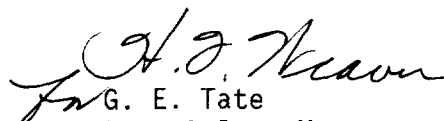
Mobil Producing Tx. & N. M., Inc. (MPTM) respectfully requests authority to inject fresh water into the Abo formation in the subject wells.

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/jp

Attachments

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

A:M535031A.CCS

INDEX OF ATTACHMENTS
ORGANIZED IN ACCORDANCE WITH FORM C-108

PROPOSED WATER INJECTION WELLS
NORTH VACUUM ABO UNIT
WELL NOS. 121, 129, 139, 142, 143
149, 155, 163, 203, 204,
206, 209 & 230
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.
 - 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 79702
Contact party: C. C. Smith Phone: (915) 688-1776
- 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 R-4430.
- 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. & Reg. Manager
Signature: [Signature] Date: 12-30-85
- * 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. R-4430 - 10-27-72, PMX-51 - 9-20-73, PMX-138 - 11-16-85

III. WELL DATA

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

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

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

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

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

XIV. PROOF OF NOTICE

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

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

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

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

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

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 #121
1930' FSL & 860' FWL, Sec. 13, Unit L, 17-S, 34-E
2. 13-3/8" @368' w/225 SX circ
9-5/8" @4984' w/2400 SX circ
7" Liner @10,550' w/1000 SX TOC @4813' (ToI)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8485'-8530' perforated
3. Originally drilled for production
4. Upper Penn Perfs, 10,108-10,185' Sqzd w/140 SX
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.

LOCATION 637 FSL 760 FWL 513.17534E SIGNED _____

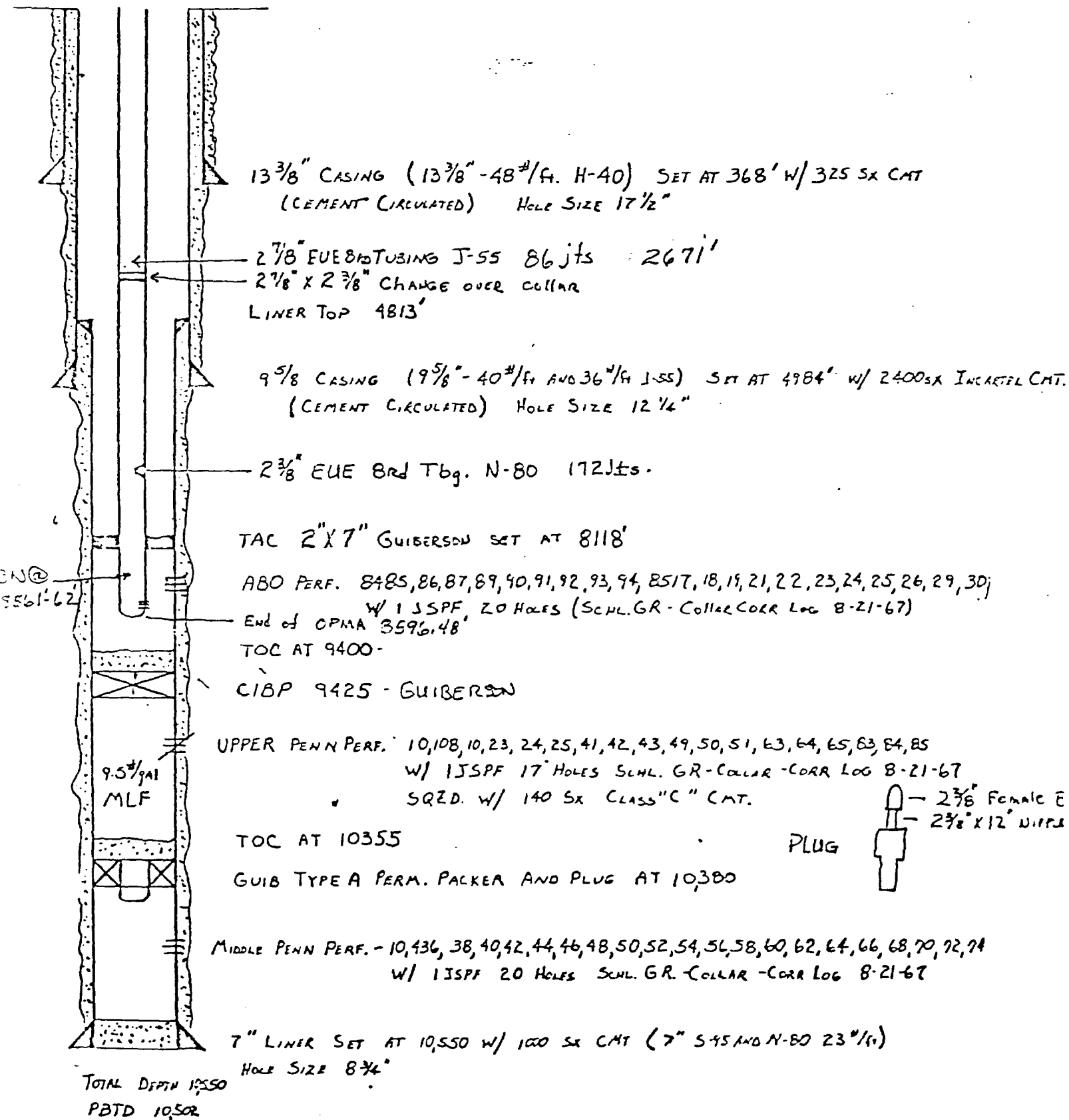
LEA COUNTY, NEW MEXICO

G.L. 4020

D.F. 4032

K.B. 4034

ZERO 14' AGL



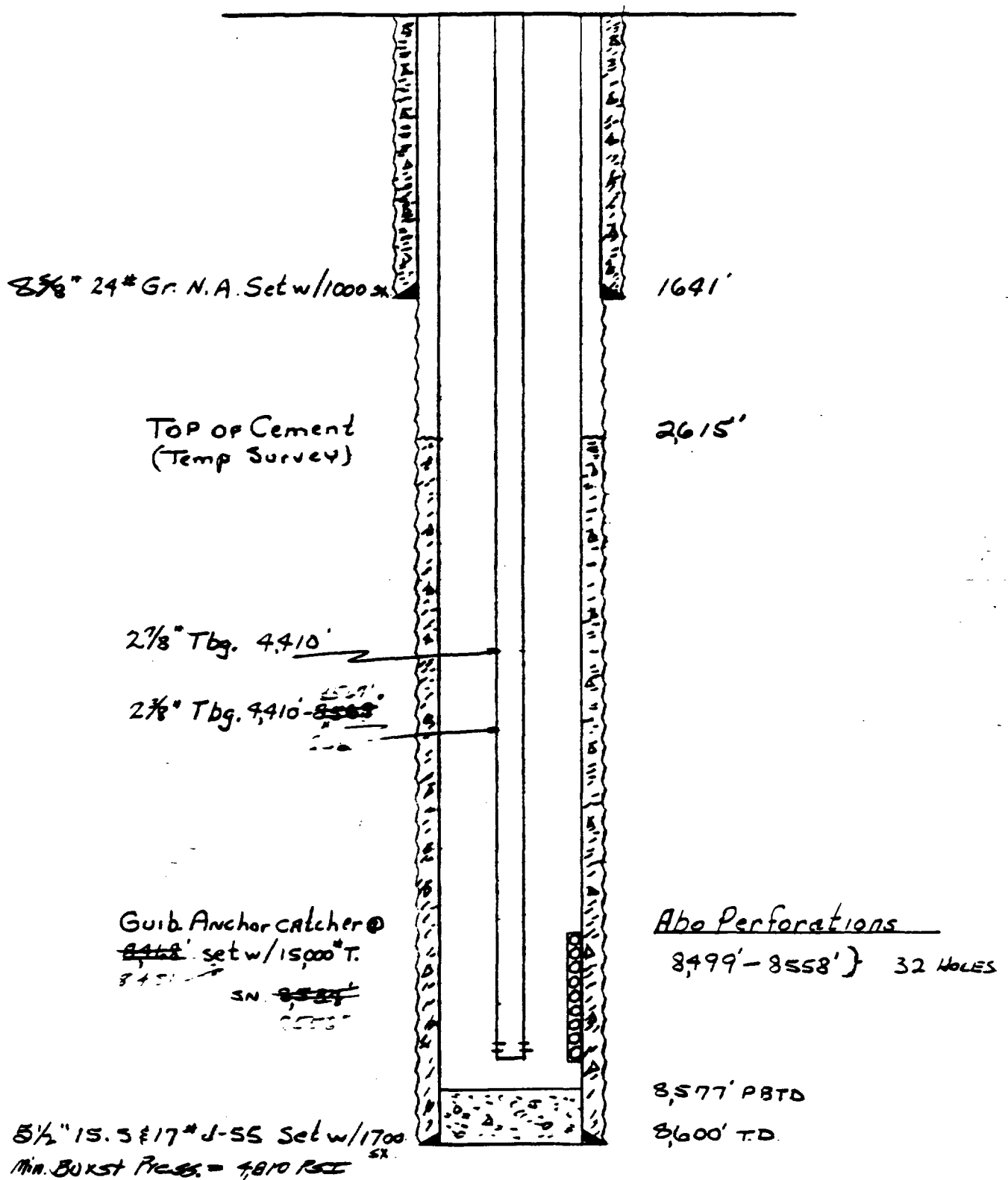
9/21/83
RF6

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 #129
860' FNL & 1980' FEL, Sec. 23, Unit B
2. 8-5/8" @1641' w/1000 SX circ
5-1/2" @8600' w/1700 SX circ
TOC @ 2615' (Temp Survey)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8499'-8558' perforated
3. Originally drilled for production
4. None
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.

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



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

Well Data

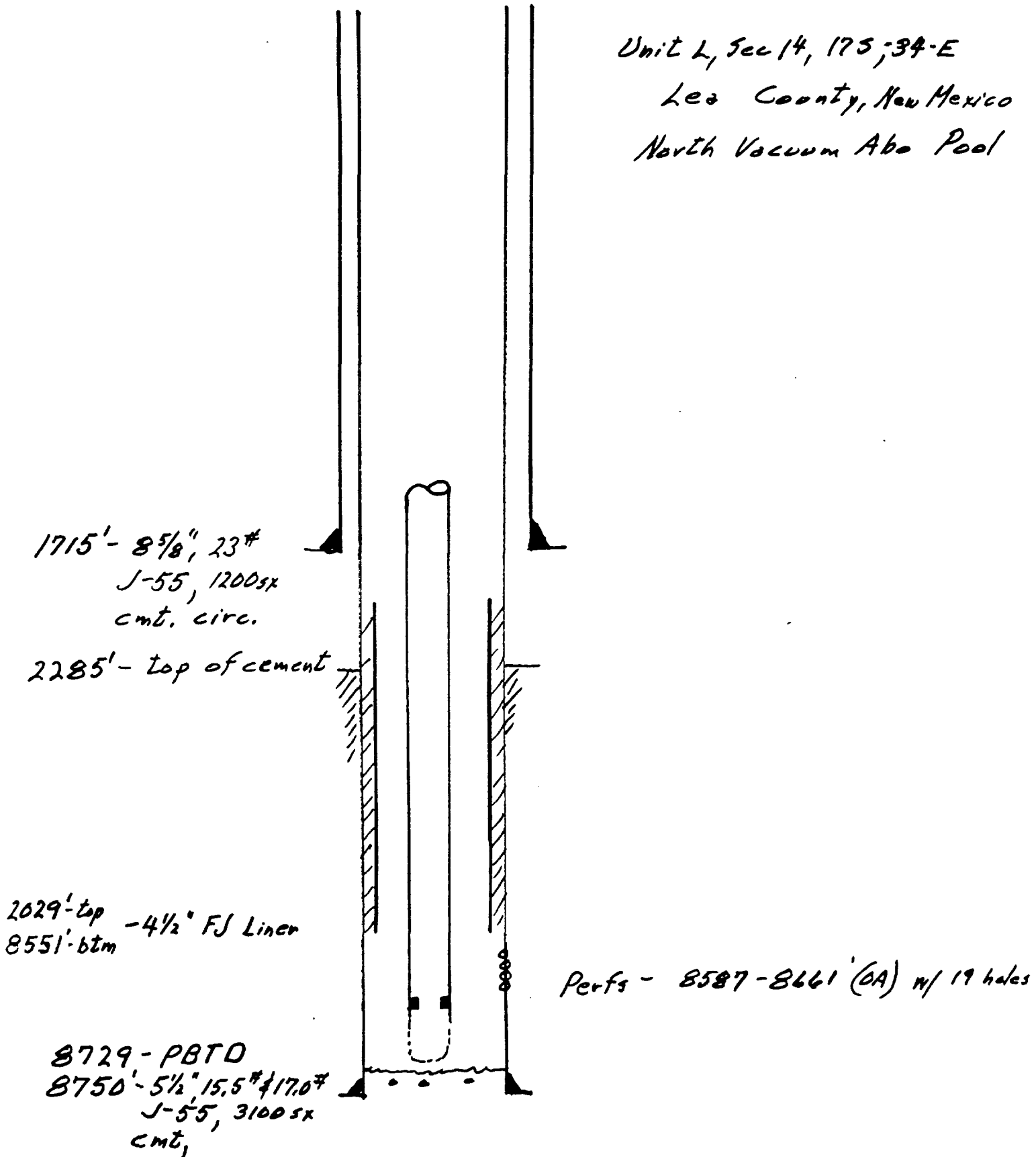
- III A. 1. North Vacuum Abo Unit #139
1980' FSL & 860' FWL, Sec. 14, Unit L, 17-S, 34-E
2. 8-5/8" @1715' w/1200 SX circ
5-1/2" @8750' w/3100 SX circ
4-1/2" Liner @2029'-8551' TOC @2285' (Temp Survey)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8587'-8661' perforated
3. Originally drilled for production
4. None
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.

NORTH VACUUM ABO UNIT 139

Unit L, Sec 14, 175;34-E

Lee County, New Mexico

North Vacuum Abo Pool

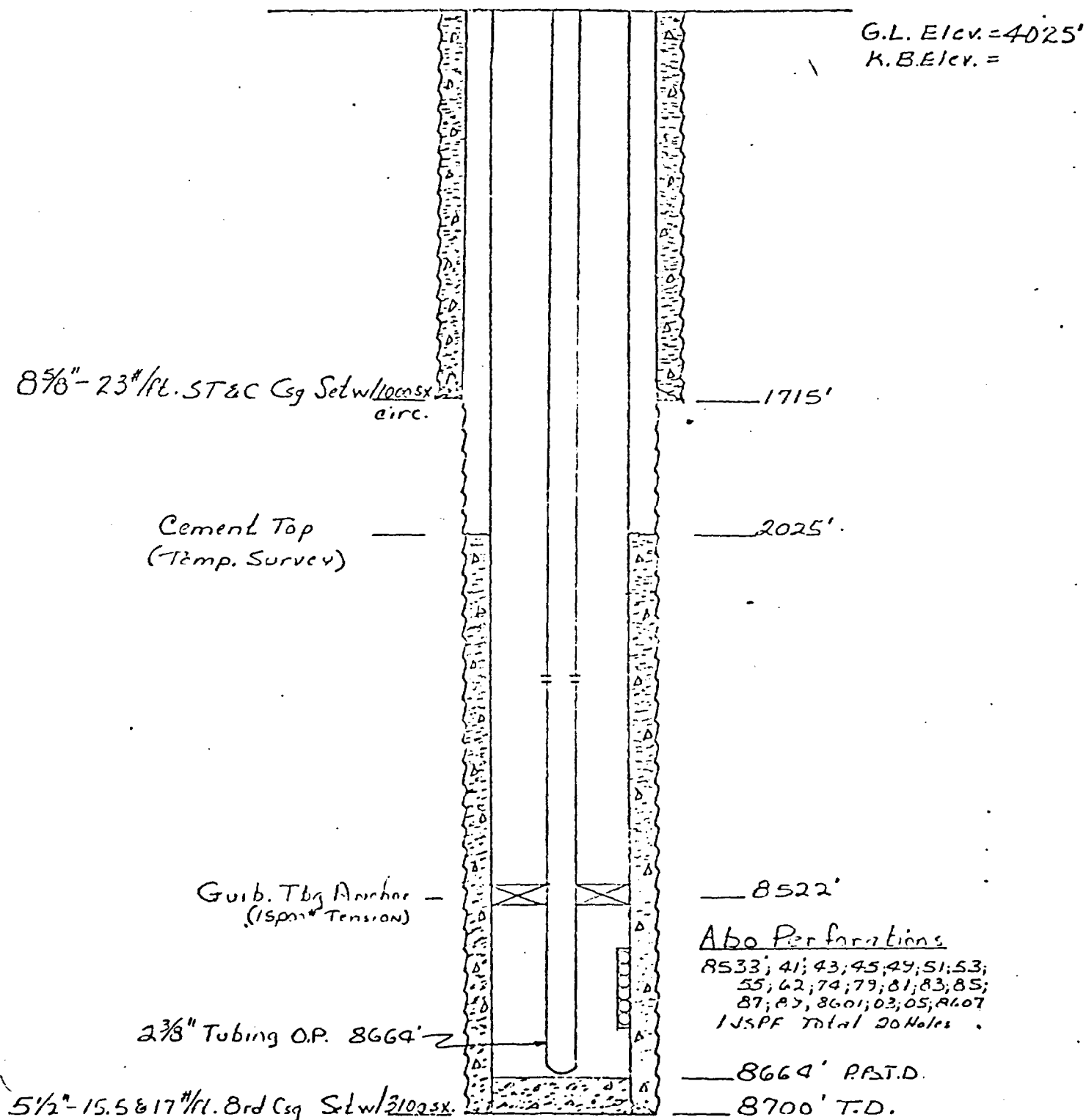


MOBIL PRODUCING TEXAS & NEW MEXICO INC.
PROPOSED WATER INJECTION WELLS
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Well Data

- III A. 1. North Vacuum Abo Unit #142
1807' FSL & 1880' FEL, Sec. 14, Unit J, 17-S, 34-E
2. 8-5/8" @1715' w/1000 SX circ
5-1/2" @8700' w/3100 SX circ
TOC @2025' (Temp Survey)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8533'-8607' perforated
3. Originally drilled for production
4. None
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.

Diagrammatic Well Sketch
Bridges State Well No. 142
Vacuum (Abo-theth) Field
Lea County, New Mexico



5-4-71

I.C.V.I.

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 #143
660' FNL & 1780' FEL, Sec. 27, Unit D, 17-S, 34-E
2. 8-5/8" @1655' w/1000 SX circ
5-1/2" @8745' w/3100 SX circ
TOC @1253' (Temp Survey)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8605'-8680' 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.

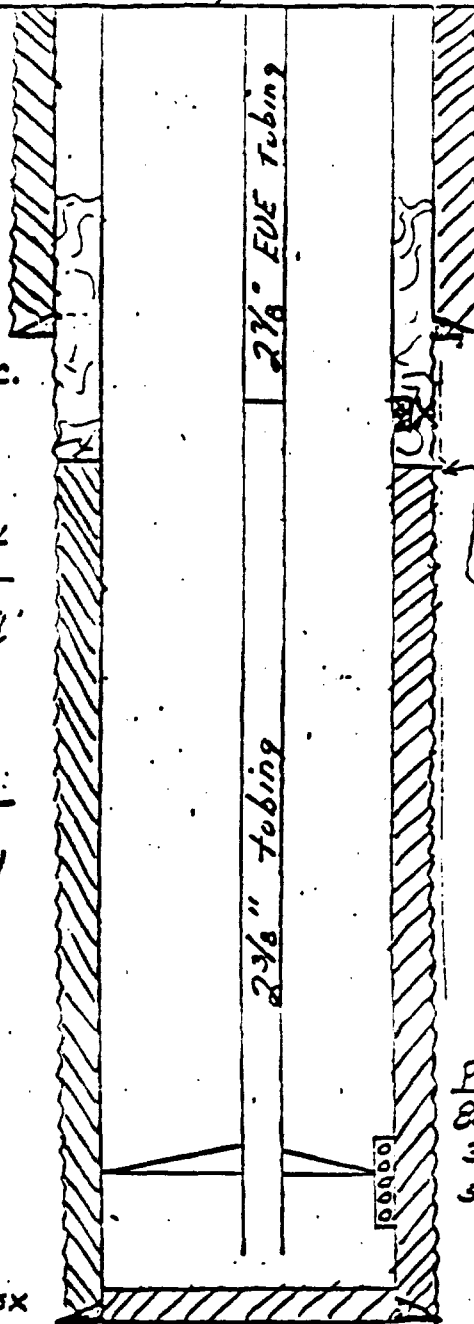
Indigo State 143
North Vacuum Field
Lea County, New Mexico

8⁵/₈", 23¹/₄" set
 w/ 1000 sx. circ.

Down hole Equipment

Baker Tubing A-8656
 Tubing Perfs-8706-09
 SN-8705
 2⁷/₈" tubing - Sur. to 1885
 2³/₈" tubing - 1885 to 8721

5¹/₂", set w/ 3100 sx



← 1253 (Temp. Survey)

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.

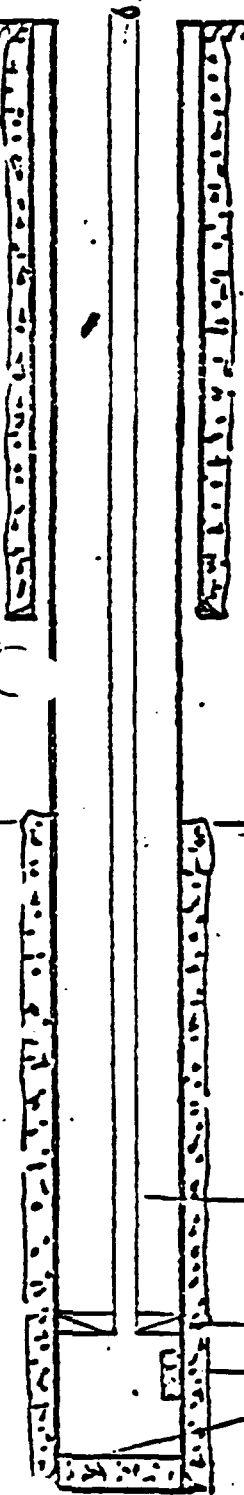
8730' - PBTD
 8745' - TD

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 #149
1980' FSL & 1780' FEL, Sec. 27, Unit J, 17-S, 34-E
2. 8-5/8" @1630' w/1000 SX circ
5-1/2" @8750' w/3100 SX circ
TOC @2610' (Temp Survey)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8628'-8673' perforated
3. Originally drilled for production
4. None
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. Ogalalla 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	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+gd cement
 Hole size 12 1/4 " cement circ

— cement Top - 8561' - Temp Surv.

2 3/8" tubing

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

Aba Perf. 8628' - 8673'

PTOD - 8708'
 15.5 x 17 1/2 in 8 rd J55.

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

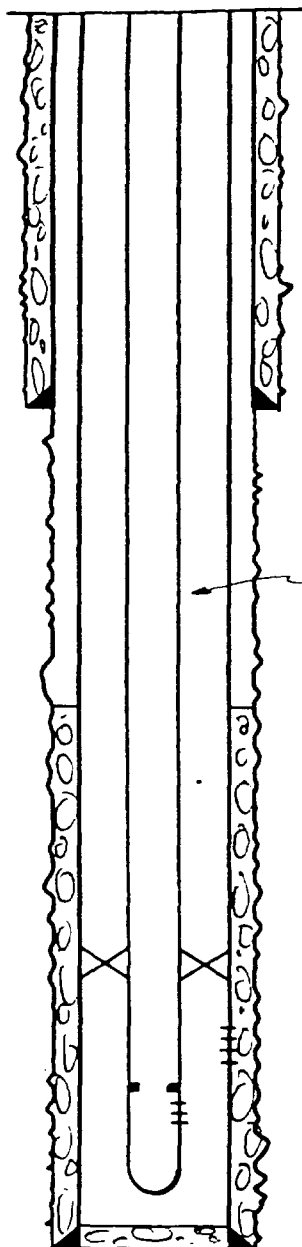
MOBIL PRODUCING TEXAS & NEW MEXICO INC.
PROPOSED WATER INJECTION WELLS
NORTH VACUUM ABO FIELD
LEA COUNTY, NEW MEXICO

Well Data

- III A. 1. North Vacuum Abo Unit #155
560' FNL & 560' FWL, Sec. 23, Unit D, 17-S, 34-E
2. 8-5/8" @1700' w/1000 SX circ
5-1/2" @8700' w/3100 SX circ
TOC @2595' (Temp Survey)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8593'-8654' perforated
3. Originally drilled for production
4. None
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 6/14/82 WELL NO. 155 LEASE NVAU FIELD VAC. ABO NORTH
LOCATION D-22-125-51E LEA COUNTY, NM

G.L. 4034'
D.F. 4046'
K.B. 4047'
ZERO 13' AGL



— 8 5/8", 23#, J-55 CSG SET @ 1700' w/ 800 SX CLASS H 8% GEL
CMT + 200 SX CLASS H NEAT CMT - 2% CACI IN ALL CMT. CMT CIRC.

— 2 3/8" TBG UP TO 8690', TA @ 8541', SNC @ 8669', TBG PERFS 8670-74'

— TOL 2595' (TEMP. SVY)

— BAKER TAC SET @ 8541' w/ 12000# T

— ABO PERFS:

8593; 94; 96; 8602; 104; 11; 12; 126; 28; 30; 39; 48; 51; 54 w/ 115PF - 14 HOU

— 5 1/2", 17.0 & 15.5#; N80 & J55, STIC & LTIC USED CSG SET @ 8700'
w/ 2900 SX TILW w/ 1/4" #/SX FLOCELE IN FIRST 1000 SX + 200 SX
INCOR NEAT. CMT DID NOT CIRC.

TD 8700'
POTD 8692'

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 #163
1980' FSL & 1980' FEL, Sec. 15, Unit J, 17-S, 34-E
2. 12-3/4" @260' w/400 SX circ
8-5/8" @3100' w/1500 SX circ
5-1/2" @8850' w/2700 SX circ
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8710'-8753' perforated
3. Originally drilled for production
4. None
5. Next upper 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.

NORTH VACUUM ABO UNIT NEW E 100

VACUUM ABO NORTH FIELD

LEA COUNTY, NEW MEXICO

J-15-T175-R34E

Elevation:

Howed cmt w/ 400sx class H
cmt w/ 2% CaCl. cmt circ

9 JTS 12 3/4", 33.38 #
CSG set @ 260'

Howed cmt w/ 1300sx TILW
w/ 17% salt/sx + 200sx class C
Neat w/ 2.6 # salt/sx. cmt circ.

65 JTS 2 7/8" TBG

6 3/8", 28#, H-40 CSG
set @ 3100'

214 JTS 2 7/8" TBG

GUIDE TA set @ 8649' w/
13000 # T

SVC 8777'
TBG PERFS: 8778-81'
8812'

ABO PERFS:
8710; 11; 21; 22; 26; 28; 29;
30; 38; 46; 47; 48; 49; 50;
51; 52; 53 w/ LBPF-1746

Howed cmt w/ 2500sx TILW w/
1/4# floccle in 1st 1000sx + 200sx
class C Neat. cmt circ.

TD 8850'
PBD 8820'

272 JTS 5 1/2", 17# & 15.5.
J-55 LTIC + STIC CSG
set @ 8850. 17#; 8850-5;
15.5 #; 5996-0'

ATE 5/5/81

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 #203
660' FNL & 1780' FEL, Sec. 22, Unit B, 17-S, 34-E
2. 8-5/8" @1710' w/1000 SX circ
5-1/2" @8900' w/3100 SX circ
TOC @2640' (Temp Survey)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8692'-8764' perforated
3. Originally drilled for production
4. None
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.

NORTH VACUUM ACO UNIT WELL #203

VACUUM (ABO) NORTH FIELD

LEA COUNTY, NEW MEXICO

E-22-T175-R-255

HOVED UNIT W/ 2800SX TLLW W/ 1/4" FLOCLE IN 1ST 1000SX + TAILLED W/ 200SX CLASS C. ENT DID NOT TCC 2640' (TEMP SURF.)

12 JTS 8 5/8", 23# ST PL
LSC SET @ 1710'

42 JTS 2 7/8" TBS

212 JTS 2 7/8" TBS

6.12 TH SET @ 2225'
12000 # T

6 JTS 2 7/8" TBS

EN @ 8512'

TRE TERFS: 8513-16'

11A SET @ 8546'

ABO PERFS:
8642, 93, 94,
5707, 08, 09, 15, 16, 28, 29,
36, 37, 38, 39, 40, 41, 46,
47, 50, 51, 52, 53, 57, 58,
59, 60, 61, 62, 63, 64 w/
1 & 2 - SPF - total 37 holes

HOVED UNIT W/ 2800SX TLLW W/ 1/4" FLOCLE IN 1ST 1000SX + TAILLED W/ 200SX CLASS C. ENT DID NOT TCC 2640' (TEMP SURF.)

TL 8900'
PST 8870'

255 JTS 5 1/2", 17# 9/15# ST PL
1" TPL J-55 LSS SET @ 1710'

TJB 5/1/81

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

Well Data

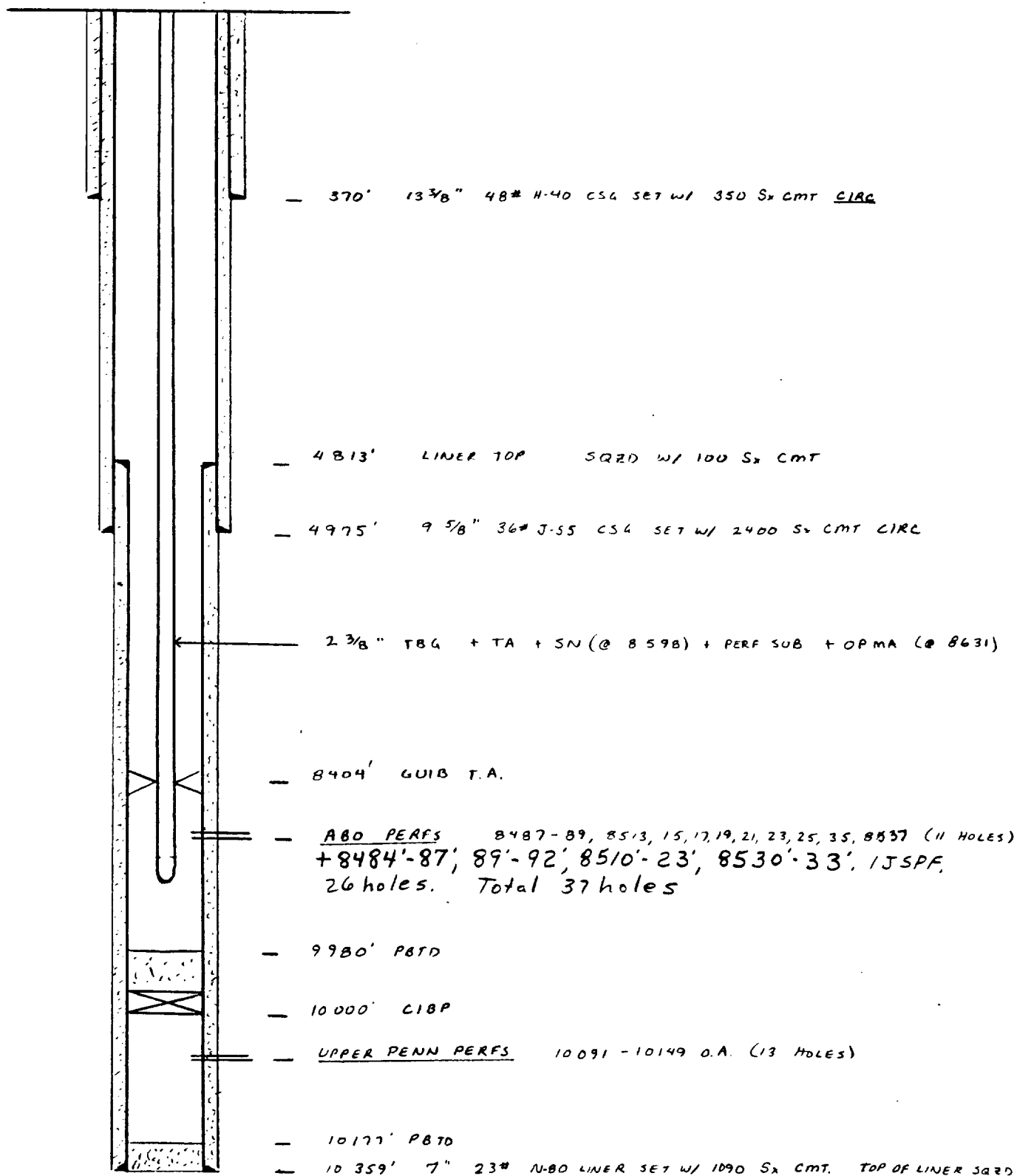
- III A. 1. North Vacuum Abo Unit #204
660' FNL & 860' FWL, Sec. 24, Unit D, 17-S, 34-E
2. 13-3/8" @370' w/350 SX circ
9-5/8" @4975' w/2400 SX circ
7" Liner @10,359' W/1090 SX-TOC @4813' (TOL)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8487'-8537' perforated
3. Originally drilled for production
4. None
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. Ogalalla water will be injected because of the adverse
affects of produced water on the tight formation of the
ABO zone.

DATE 8-16-84 WELL NO. 204 LEASE NVAU FIELD VACUUM

LOCATION 24 T-17-S R-34-E
660 FNL 860 FWL

SIGNED M E VASICEK

G.L. 4020'
D.F. _____
K.B. _____
ZERO



10359' 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 #206
660' FNL & 660' FWL, Sec. 19, Unit D, 17-S, 34-E
2. 8-5/8" @1795' w/900 SX circ
5-1/2" @8800' w/3100 SX circ
TOC @2770' (Temp Survey)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8597'-8658' perforated
3. Originally drilled for production
4. None
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.

FIELD	Vacuum Abu North	OPERATOR	Mobil Oil Corp	DATE	5-17-76
CASE	North Vacuum Abu Unit	WELL No	206	LOCATION	D-Sec 19, T17S, R35E

8⁵/₈ " casing set at 1795 ' with 900 sx of cl. 4 cement
Hole size 12¹/₄ " Cement Circ.

— cement Top - 2770' - Temp. Survey

— 2³/₈ " Tubing

— Guib Anch. — 8529'

— Abu Perf - 8597' - 8658'

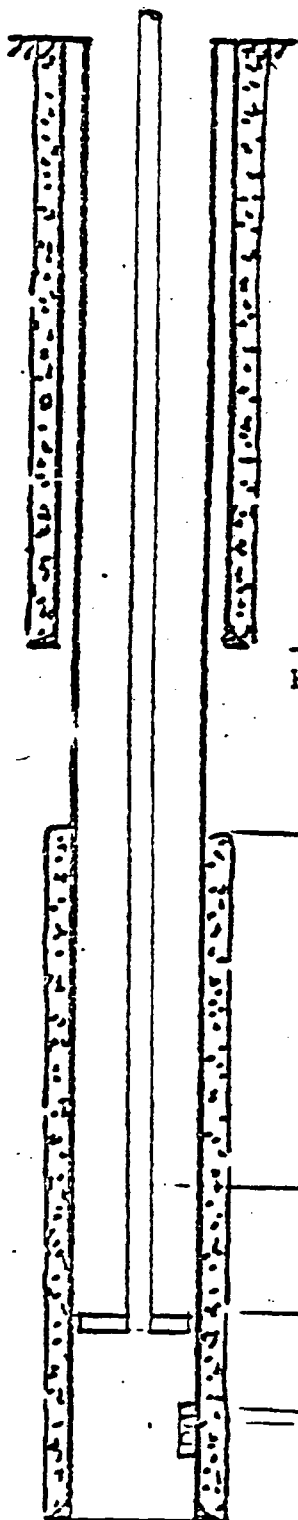
5¹/₂ " casing set at 3800 ' with 3100 sx of TLW cement
Total Depth 3800 ' Hole size 7⁷/₈ "

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 #209
1980' FSL & 1780' FEL, Sec. 22, Unit J, 17-S, 34-E
2. 8-5/8" @1675' w/900 SX circ
5-1/2" @8800' w/3100 SX circ
TOC @2340' (Temp Survey)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8654'-8718' perforated
3. Originally drilled for production
4. None
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.

FIELD	Vacuum Alba North	OPERATOR	Amabil Oil Corp	DATE	5-17-76
LEASE	North Vacuum Alba 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'

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

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

5-17-76
JHS

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

Well Data

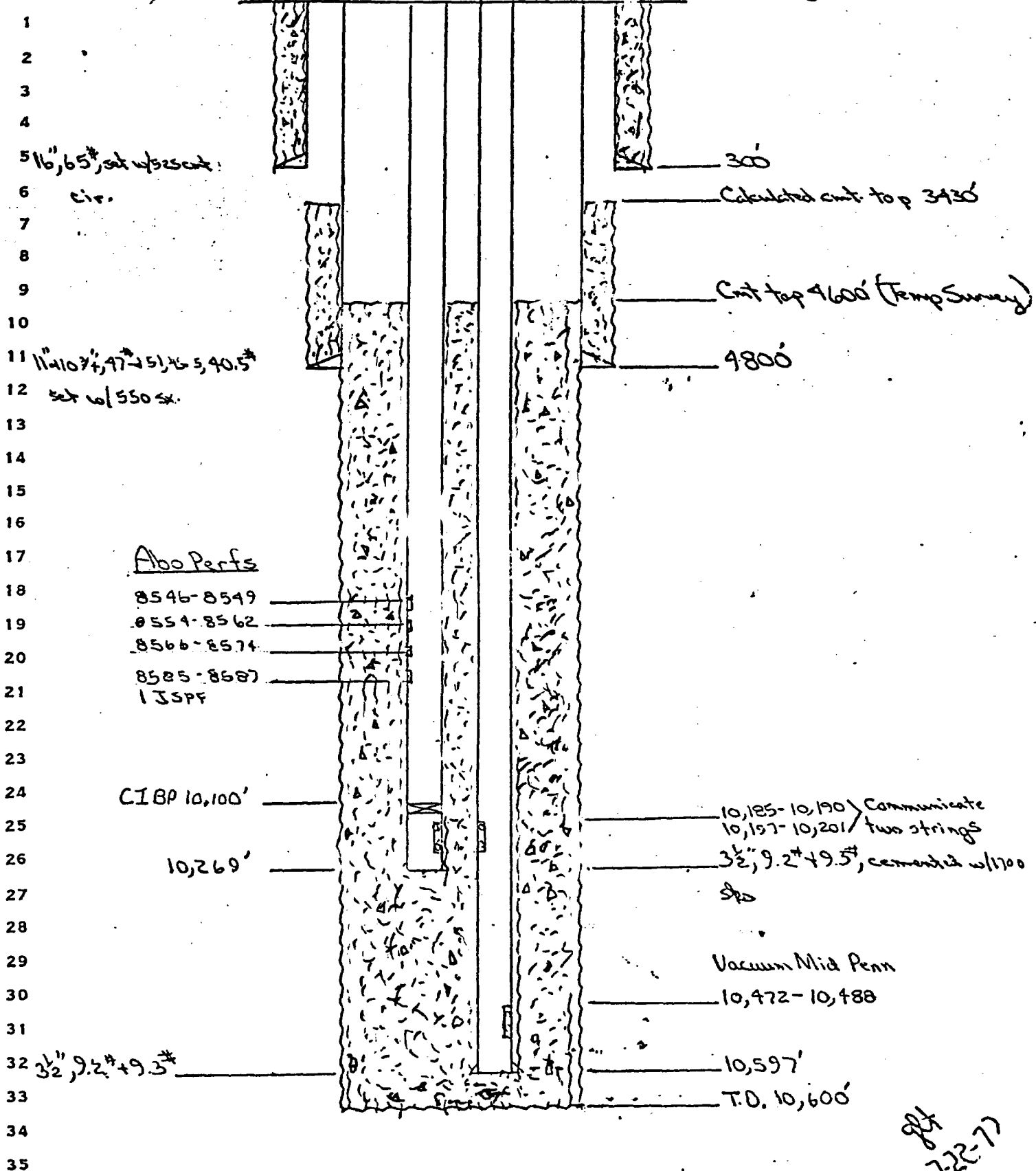
- III A. 1. North Vacuum Abo Unit #230
1880' FSL & 2130' FEL, Sec. 13, Unit J, 17-S, 34-E
2. 16" @300' w/525 SX circ
11" @4800' w/ 550 SX-TOC @3430' (Calc.)
8-1/2" @10,600' w/1700" SX-TOC @4600' (Temp Survey)
3. 2-3/8" N-80 Buttress Tubing
4. Baker Model NB Packer @8550'
- B. 1. Abo
2. 8546'-8587' perforated
3. Originally drilled for production
4. None
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.

CALCULATION AND DATA SHEET

CO-22-77

UNIT North Vac. m Abo
 FOR North Vacuum Abo
 LOCATION J-13-11-534 E, Lea County, New Mex
 SUBJECT North Vacuum Abo Unit #230

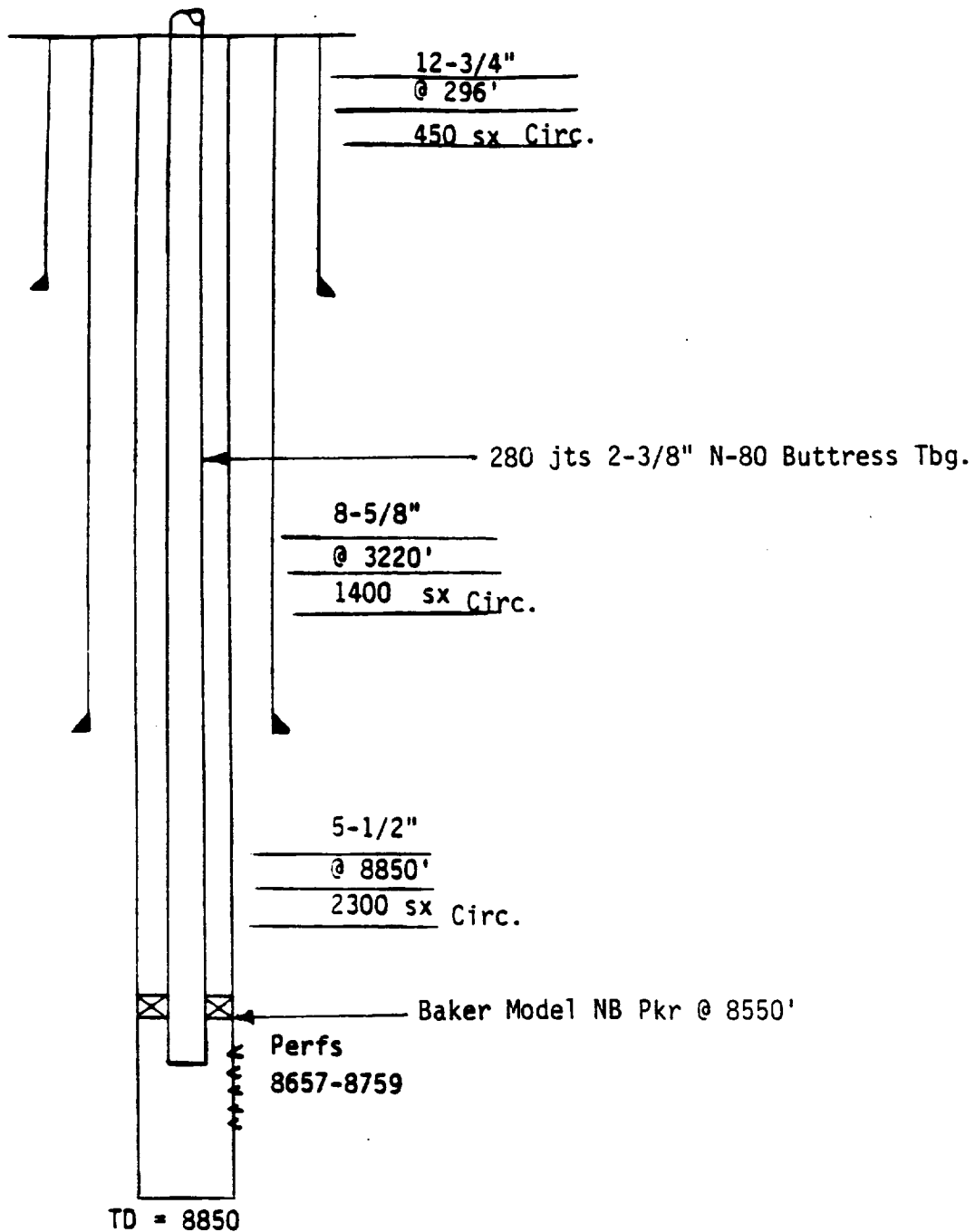
FILE NO. _____
 JOB OR AUTH. NO. _____
 PAGE _____
 DATE 7-22-77
 BY gary tumlinson

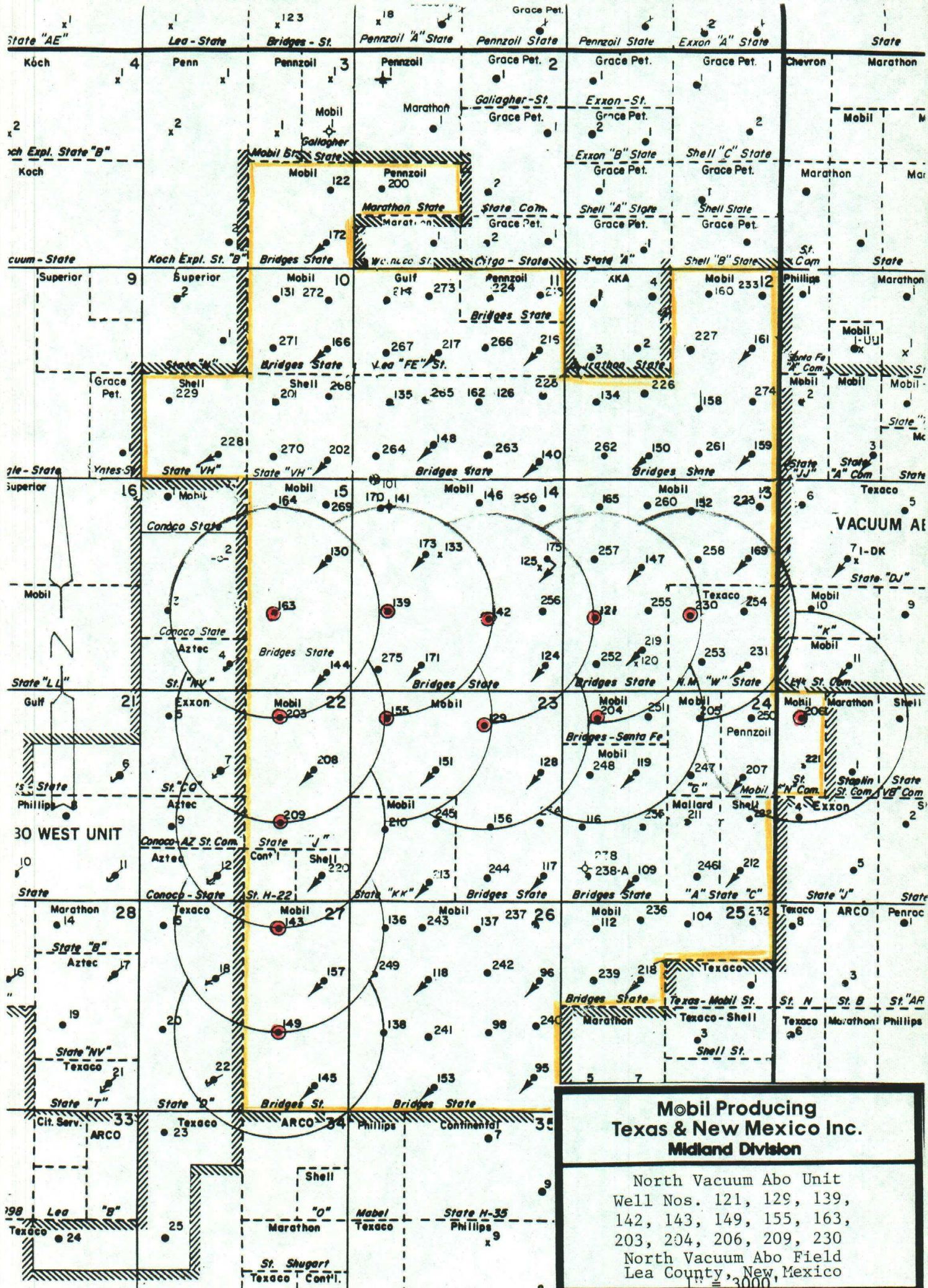


Typical Proposed Injector

North Vacuum Abo Unit

Lea County, New Mexico





**Mobil Producing
Texas & New Mexico Inc.
Midland Division**

North Vacuum Abo Unit
Well Nos. 121, 129, 139,
142, 143, 149, 155, 163,
203, 204, 206, 209, 230
North Vacuum Abo Field
Lea County, New Mexico
3000'

MOBIL PRODUCING TEXAS & NEW MEXICO INC.
 NORTH VACUUM ABO UNIT
 PROPOSED WATER INJECTION WELLS
 NOS. 121, 129, 139, 142, 143,
 149, 155, 163, 203, 204,
 206, 209 & 230
 I-17-S, R-34-E
 LEA COUNTY, NEW MEXICO

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

<u>OPERATOR 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.						
North Vacuum Abo Unit	119	2030' FNL & 1830' FWL Sec. 24, Unit F	I	12-66	12,391'	ABO 8,486'-8,507' WOLFCAMP 9,593'-9890' PENN 10,069'-10,114' ABO 8,514'-8,539' PENN 10,107'-10,148' ABO 8,494'-8,553' MORROW 11,465'-11,651' ABO 8,473'-8,515'
"	120	660' FSL & 1780' FWL Sec. 13, Unit N	P	06-67	10,400'	
"	124	660' FSL & 460' FEL Sec. 14, Unit P	I	04-68	8,623'	
"	125	2180' FNL & 660' FEL Sec. 14, Unit H	P	02-68	11,890'	
"	128	2005' FNL & 535' FEL Sec. 23, Unit H	I	02-69	8,590'	

OPERATOR LEASE	WELL NO.	LOCATION	WELL TYPE	DATE DRILLED	DEPTH	COMPLETION INTERVAL
OPERATOR - MOBIL PRODUCING TEXAS & NEW MEXICO INC.						
North Vacuum Abo Unit	130	1980' FNL & 660' FEL Sec. 15, Unit H	I	09-70	8,750'	ABO 8,654'-8,711'
"	133	1880' FNL & 2150' FWL Sec. 14, Unit F	P	02-70	12,215'	MORROW 11,693'-11,897'
"	144	460' FSL & 660' FEL Sec. 15, Unit P	I	10-70	8,800'	ABO 8,654'-8,694'
"	145	660' FSL & 860' FEL Sec. 27, Unit B	I	10-70	8,750'	ABO 8,575'-8,659'
"	147	2080' FNL & 1780' FWL Sec. 13, Unit F	I	11-70	11,315'	ABO 8,503'-8,552'
"	151	1980' FNL & 2130' FWL Sec. 23, Unit F	I	03-71	12,180'	PENN 10,442'-10,469'
"	152	660' FNL & 2180' FEL Sec. 13, Unit L	P	02-71	8,700'	MORROW 11,353'-11,881'
"	156	1980' FSL & 1780' FEL Sec. 23, Unit J	P	05-71	8,750'	ABO 8,535'-8,595'
"	157	2180' FNL 660' FEL Sec. 27, Unit H	I	08-71	10,490'	ABO 8,487'-8,548'
"	164	660' FNL & 1980' FEL Sec. 15, Unit B	P	07-71	8,850'	ABO 8,585'-8,639'
"	169	1980' FNL & 660' FEL Sec. 13, Unit H	I	03-72	8,742'	ABO 8,677'-8,734'
"	170	660' FNL & 740' FWL Sec. 14, Unit D	P	12-71	8,800'	ABO 8,607'-8,666'
"	171	660' FSL & 1780' FWL Sec. 14, Unit N	I	01-72	8,700'	ABO 8,579'-8,634'
"	173	1840' FNL & 1840' FWL Sec. 14, Unit F	J	03-72	8,712'	ABO 8,584'-8,641'
"	175	1980' FNL & 485' FEL Sec. 14, Unit H	I	02-73	8,712'	ABO 8,572'-8,629'
						ABO 8,484'-8,535'

OPERATOR LEASE	WELL NO.	LOCATION	WELL TYPE	DATE DRILLED	DEPTH	COMPLETION INTERVAL
OPERATOR - MOBIL PRODUCING TEXAS & NEW MEXICO INC.						
North Vacuum Abo Unit	205	660' FNL & 1980' FEL Sec. 24, Unit B	I	04-67	9,492	ABO 8,523'-8,570'
"	207	2121' FNL & 801' FEL Sec. 24, Unit H	I	09-68	8,620'	ABO 8,527'-8,582'
"	208	1980' FNL & 860' FEL Sec. 22, Unit H	I	01-71	8,800'	ABO 8,642'-8,704'
"	210	1840' FSL & 800' FWL Sec. 23, Unit L	P	03-72	8,800'	ABO 8,539'-8,609'
"	219	1030' FSL & 1973' FWL Sec. 13, Unit N	I	02-74	8,605'	ABO 8,500'-8,535'
"	220	660' FSL & 860' FEL Sec. 22, Unit P	I	06-74	8,800'	ABO 8,600'-8,650'
"	221	1850' FNL & 660' FWL Sec. 19, Unit E	P	01-75	8,710'	ABO 8,584'-8,653'
"	231	660' FSL & 660' FEL Sec. 13, Unit P	I	09-71	8,757'	ABO 8,584'-8,730'
"	248	2100' FNL & 659' FWL Sec. 24, Unit E	P	05-84	8,683'	ABO 8,485'-8,509'
"	250	650' FNL & 620' FEL Sec. 24, Unit A	P	06-84	9,100'	ABO 8,568'-8,710'
"	251	660' FNL & 2110' FWL Sec. 24, Unit C	P	07-84	8,700'	ABO 8,501'-8,540'
"	252	660' FSL & 790' FWL Sec. 13, Unit M	P	07-84	8,668'	ABO 8,489'-8,634'
"	253	761' FSL & 1823' FEL Sec. 13, Unit O	P	08-84	8,700'	ABO 8,562'-8,569'
"	254	1980' FSL & 746' FEL Sec. 13, Unit I	P	07-84	8,944'	ABO 8,598'-9,006'
"	255	1980' FSL & 2099' FWL Sec. 13, Unit K	P	08-84	8,697'	ABO 8,512'-8,553'

<u>OPERATOR 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.						
North Vacuum Abo Unit	256	1983' FSL & 533' FEL Sec. 14, Unit I	P	09-84	8,650'	ABO 8,530'-8,546'
"	257	1980' FNL & 739' FWL Sec. 13, Unit E	P	08-84	8,750'	ABO 8,490'-8,617'
"	258	1993' FNL & 1915' FEL Sec. 13, Unit G	P	08-84	8,680'	ABO 8,604'-8,616'
"	275	540' FSL & 660' FWL Sec. 14, Unit H	I	01-85	8,745'	ABO 8,616'-8,655'
North Vacuum Abo East	11	660' FSL & 1902' FWL Sec. 18, Unit N	I	11-71	8,850'	ABO 8,672'-8,722'
OPERATOR - EXXON CORPORATION						
New Mexico "J" State	4	2180' FSL & 660' FWL Sec. 19, Unit L	P	10-71	8,739'	ABO 8,567'-8,631'
OPERATOR - MARATHON OIL CO.						
Stephens State a/c 2 Com	1	1980' FNL & 1980' FWL Sec. 19, Unit F	P	11-71	8,800	ABO 8,630'-8,689'
OPERATOR - TEXACO, INC.						
North Vacuum Abo West	1	660' FSL & 1880' FWL Sec. 22, Unit N	P	04-72	8,900'	ABO 8,706'-8,812'
"	2	1980' FNL & 1980' FWL Sec. 15, Unit F	P	07-79	9,000'	ABO 8,761'-8,789'
"	3	1980' FSL & 660' FWL Sec. 15, Unit L	P	01-74	9,000'	ABO 8,836'-8,860'
"	4	660' FSL & 2180' FWL Sec. 15, Unit N	P	04-71	8,984	ABO 8,774'-8,812'

<u>OPERATOR 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 - TEXACO, INC.						
North Vacuum Abo West	7	2020' FWL & 1980' FWL Sec. 22, Unit F	P	08-76	8,900'	A80 8,750'-8,910'
"	9	1874' FSL & 766' FWL Sec. 22, Unit L	P	04-72	8,933'	A80 8,762'-8,850'
"	18	1980' FWL & 1980' FWL Sec. 27, Unit F	P	10-71	8,800'	A80 8,651'-8,722'
"	22	760' FSL & 1980' FWL Sec. 27, Unit N	P	02-72	8,800'	A80 8,654'-8,739'

DIAGRAMMATIC WELL SKETCH

N.V.A. UNIT WELL NO. 119

NORTH VALLEY (NEW) WOLF CAMP (P.M.) FIELD

LEA COUNTY, NEW MEXICO

GL ELEV = 4,034
ELEV =

13 3/8" - 48 #/FL. SET W/ 375 SX CIP

360'

LINER TOP SQZD. W/ 750 SX.

4,768'

3" - 40 #/FL. J-55 SET W/ 220 SX
MIN. BURST PRESS. = 2,570

5,000'

2 3/8" GST TBG

BOT TRIPLE ANCHOR

2 3/8" GST J 55 TBG

BOT HUSKY DUAL ZONE PRE.

ABO PERFORATIONS

3,435' - 8,507' - 10 HOLES

8,532'

2 3/8" TUBING

9,546'

NON-EQUALIZING SV

BOT PERM. PKR.

WOLF CAMP PERFORATIONS

9,593' - 9,890' - 15 HOLES

10,029'

10,030'

PENN PERFORATIONS

10,069' - 10,114' - 3 HOLES

7" - 23 #/FL. S-95 SET W/ 1000 SX
MIN. BURST PRESS. = 4,150

10,358' P.B.T.D.

10,425'

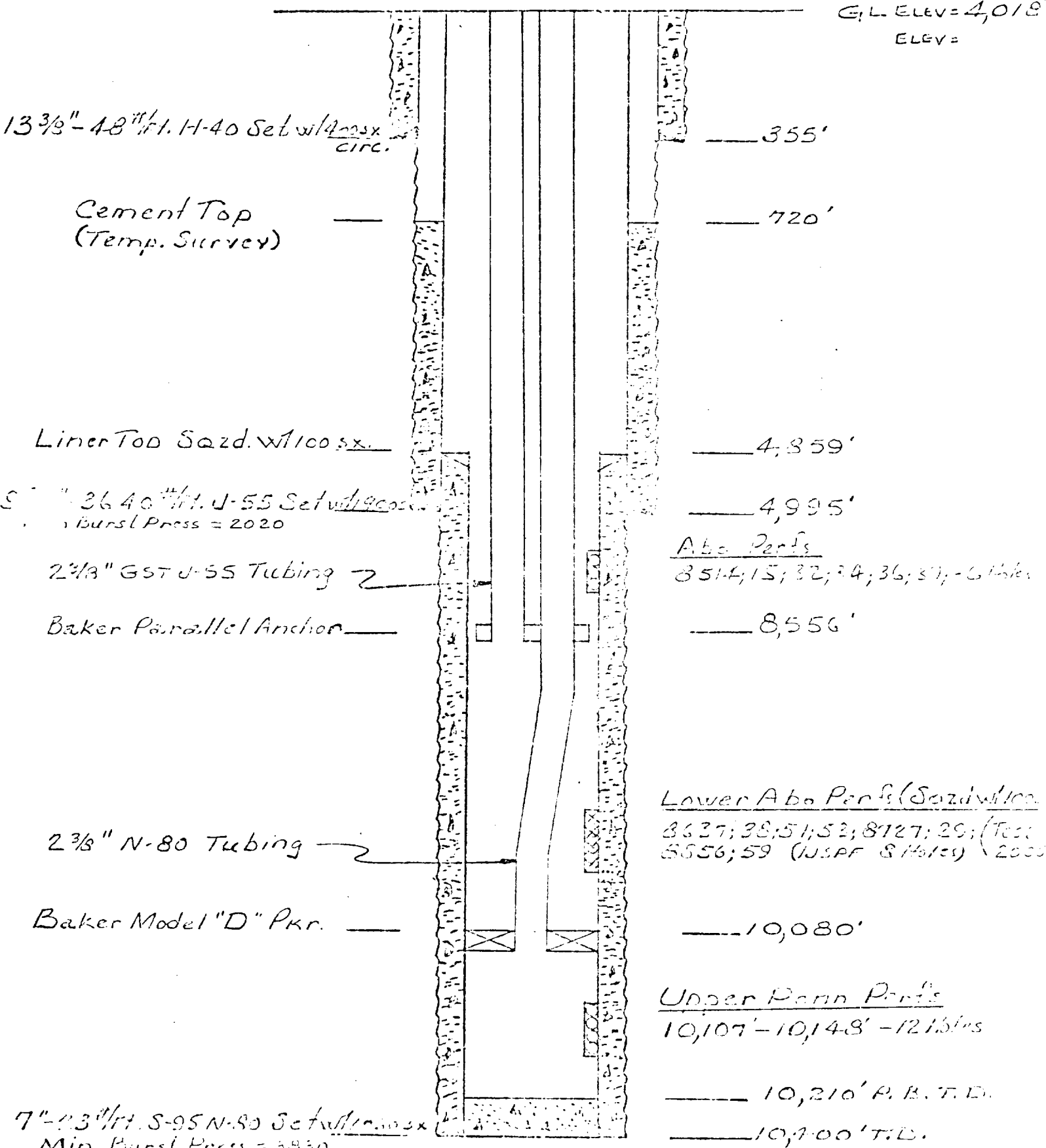
10-24-72

1000

10,000' T.D.

DIAGRAMMATIC WELL SKETCH
NORTH VACUUM AREA (WIT Well No. 120)
NORTH VACUUM (ARCO) PAD
LEA COUNTY, NEW MEXICO

E.L. ELEV = 4,018'
 ELEV =



DATE 3-23-83 WELL NO. 124 LEASE No. VACUUM Abo Unit FIELD VACUUM Abo North

LOCATION P-14-173-34 E

SIGNED M. J. DEER

G.L. 4011'

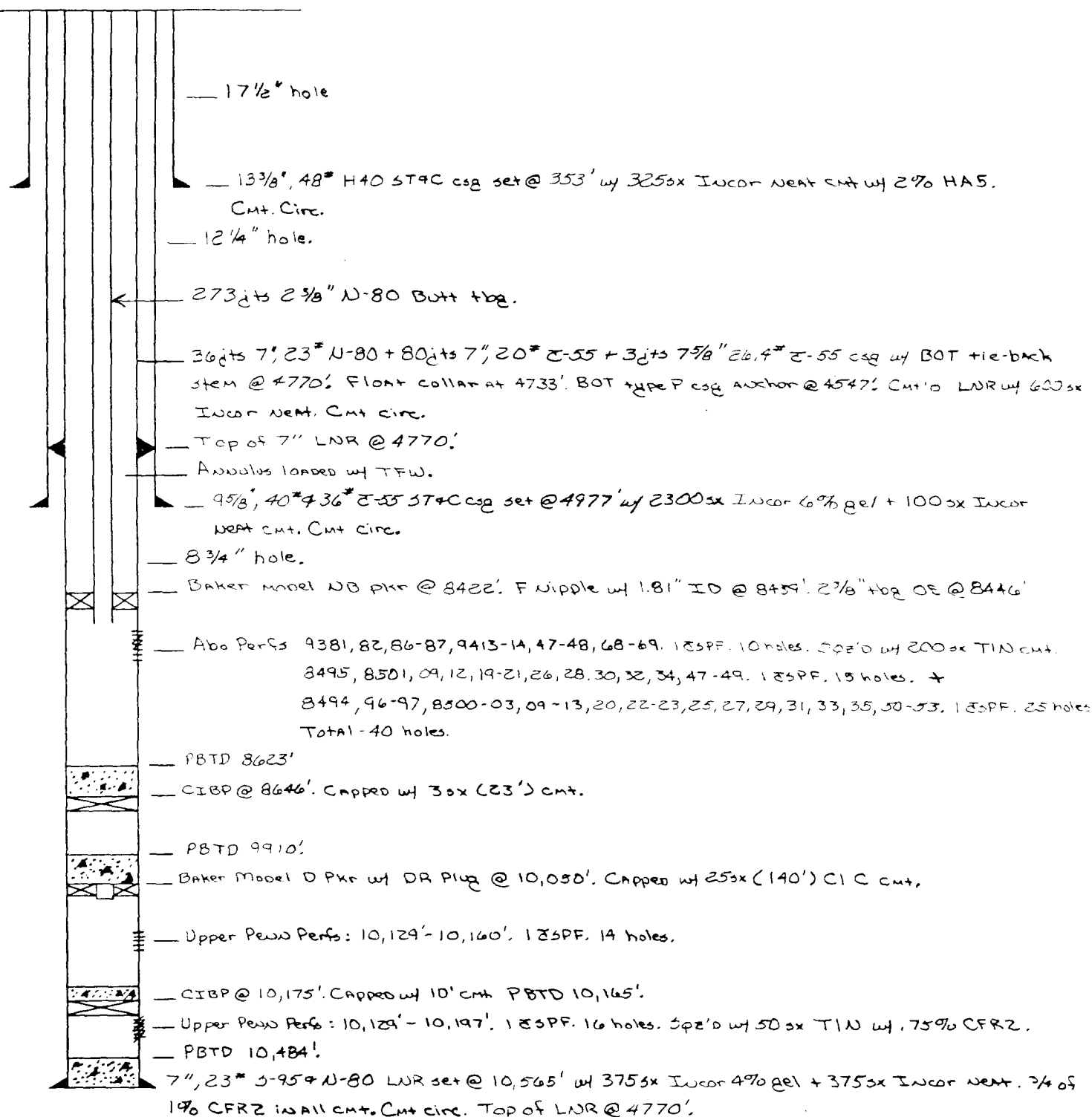
D.F. 4024'

K.B. 4025'

ZERO 14' AGL

660' FSL AND 460' FEL

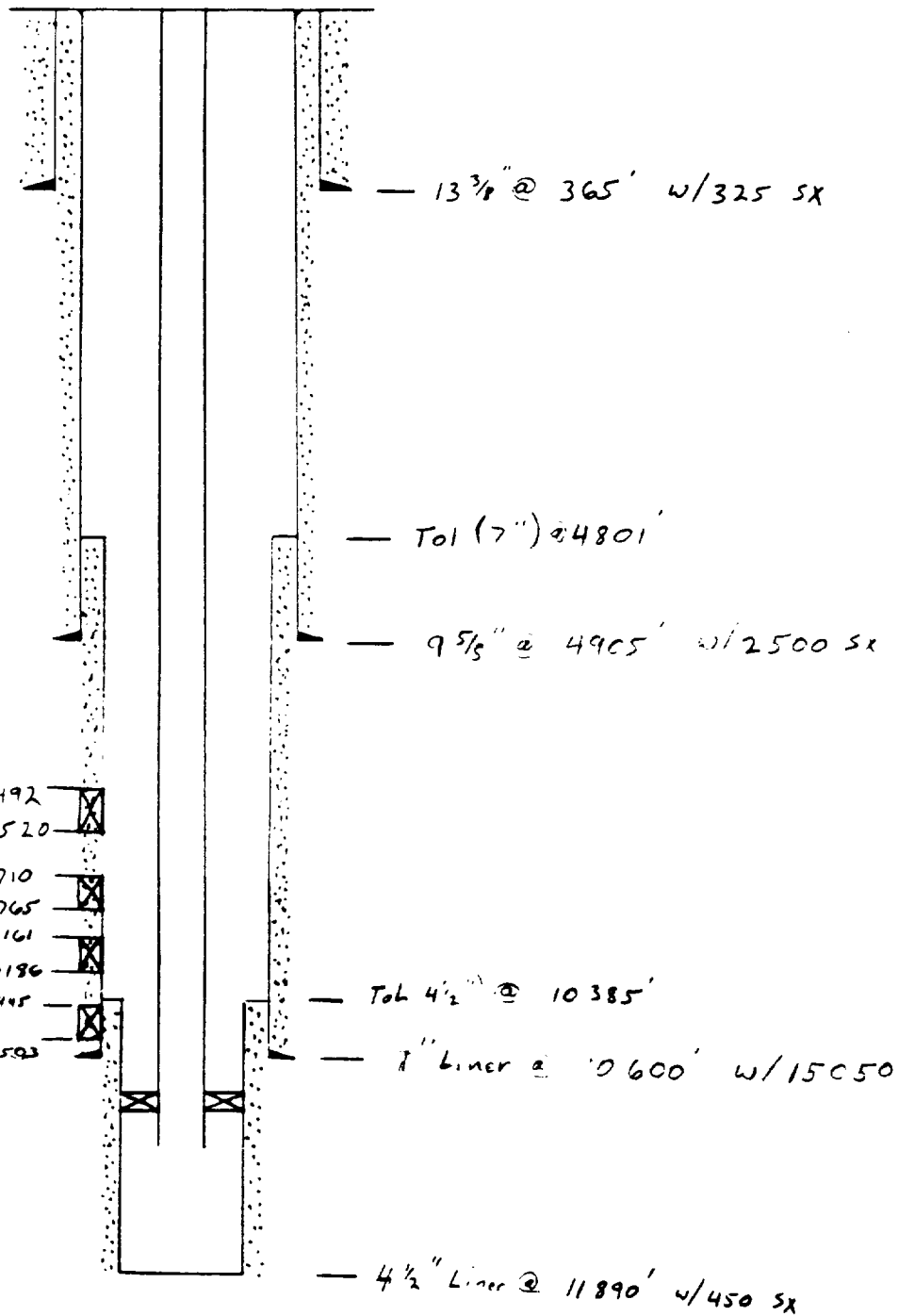
Lea County, New Mexico



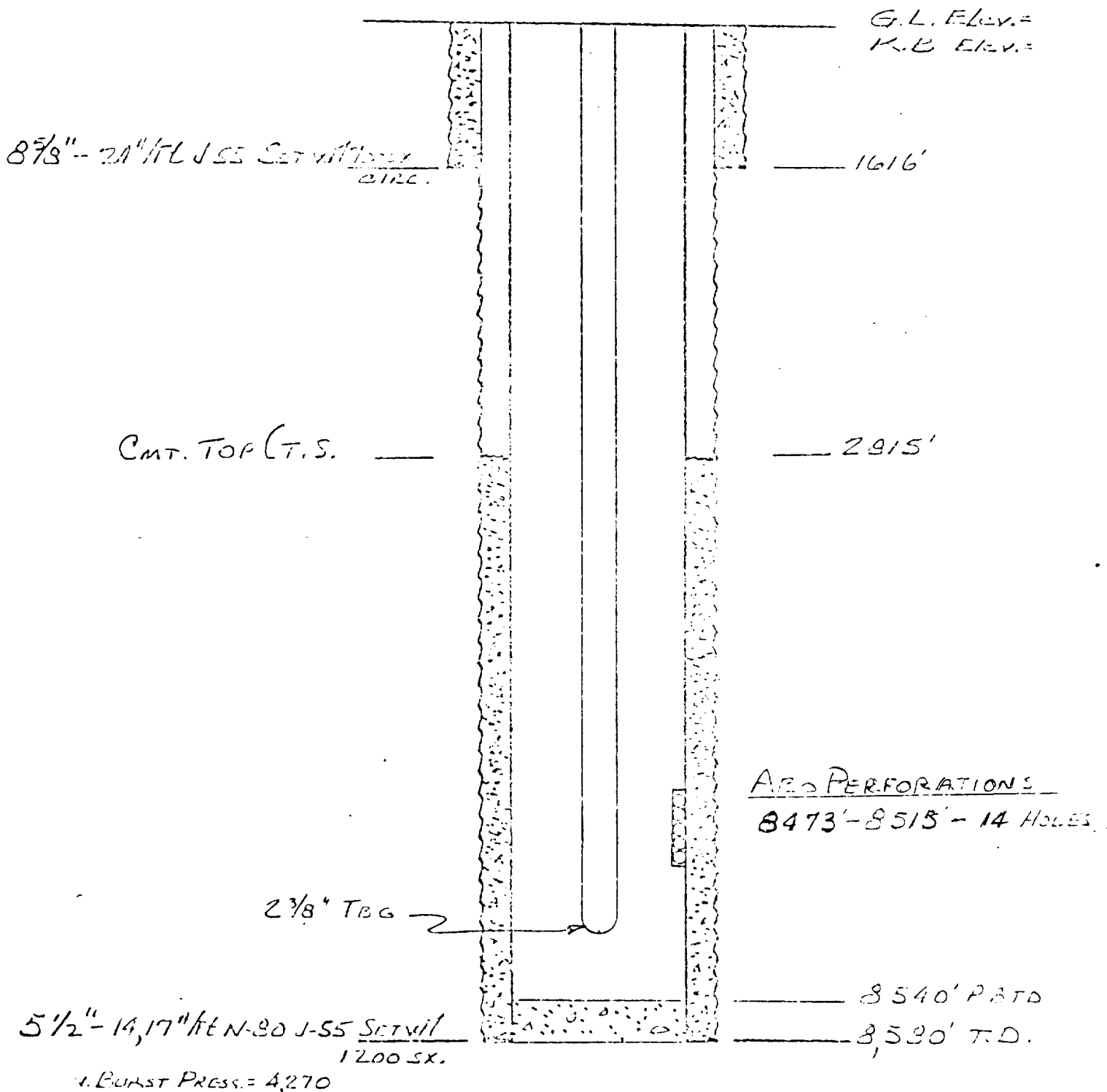
NORTH VACUUM ABO UNIT WELL # 125

LOCATION: 2180 FNL & 660 FEL
H, 14, 17- S, 34- E

DATE DRILLED: 2/68



_____ DIAGRAMMATIC WELL SKETCH
 _____ N.V.A UNIT Well No. 128
 _____ NORTH VACCUM (P.A.O.) POOL
 _____ LEA COUNTY, NEW MEXICO



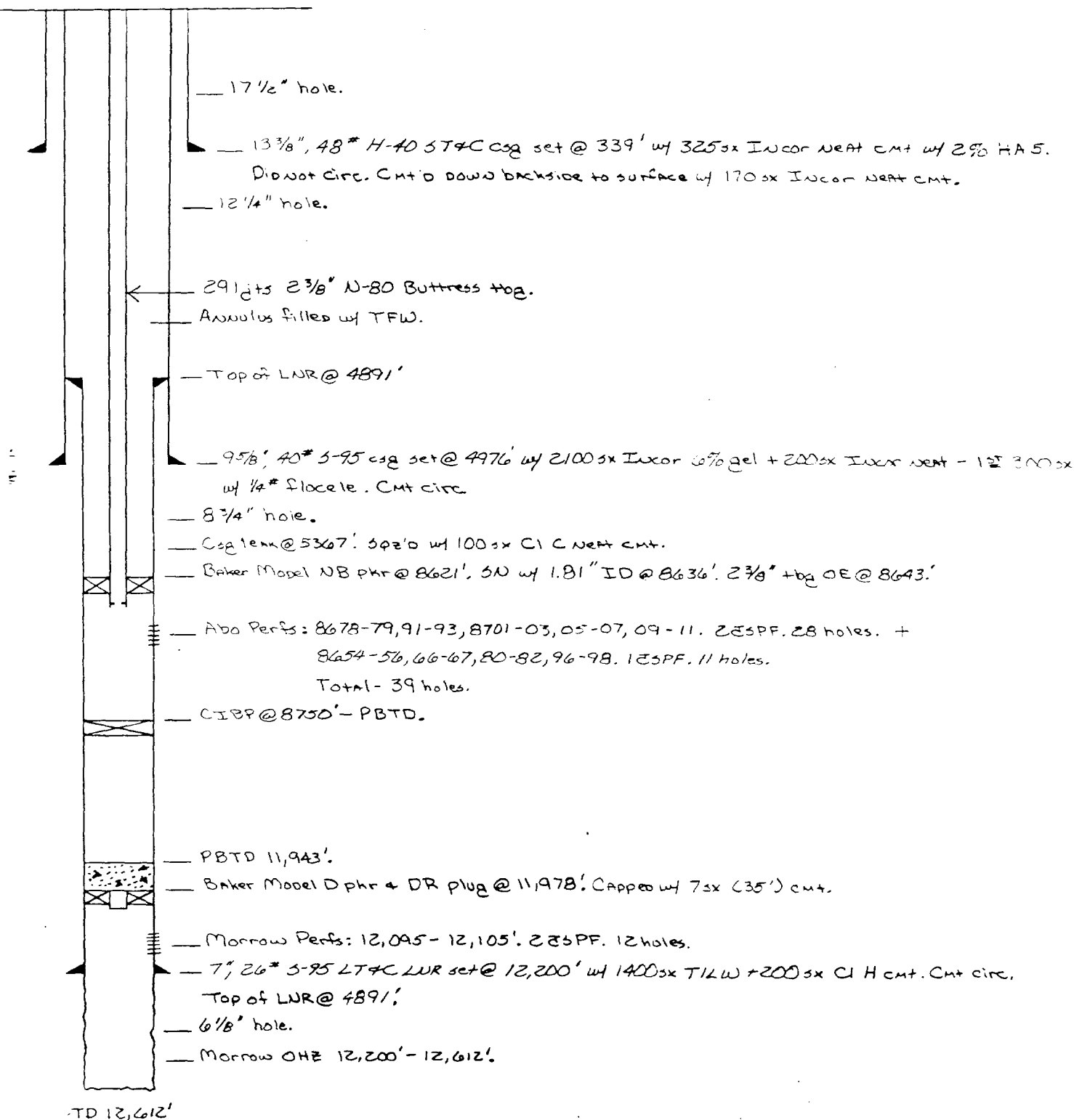
9-6-72
 1GW

DATE 3-23-83 WELL NO. 130 LEASE No. VACUUM Abo Unit FIELD VACUUM Abo North

LOCATION H-15-173-34E
1980' FNL AND 660' FEL
LEA County, New Mexico

SIGNED M. W. DEER

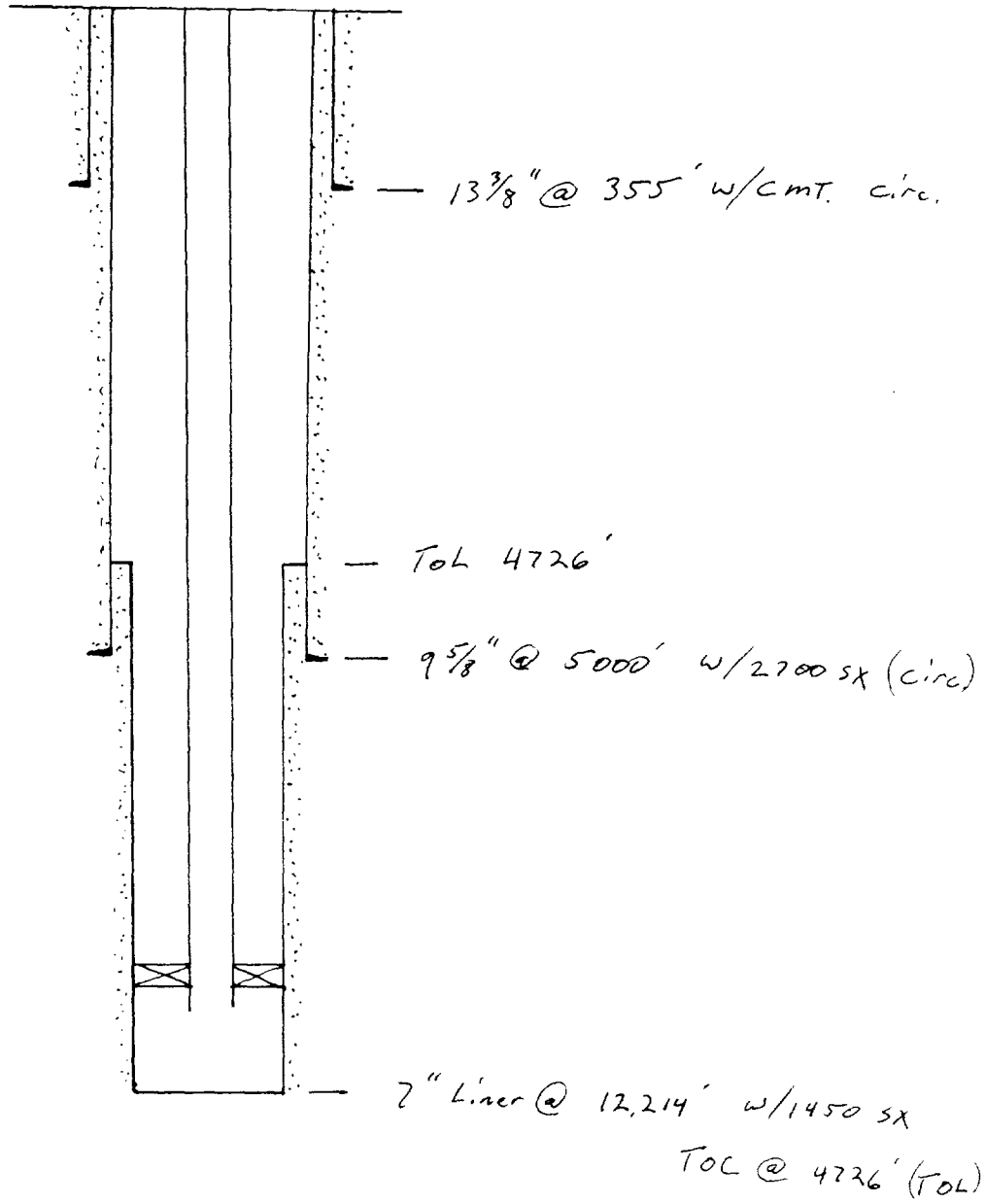
G.L. 4045'
D.F. 4050'
K.B. 4060'
ZERO 15' AGL



NORTH VACUUM ABO UNIT WELL # 133

LOCATION: 1880 FNL & 2150 FWL
F, 14, 17-S, 34-E

DATE DRILLED: 2/70



DATE 3-23-83 WELL NO. 144 LEASE No. Vacuum Abo Unit FIELD Vacuum Abo North

LOCATION P-15-17S-34 E

SIGNED M. W. DEER

G.L. 4041'

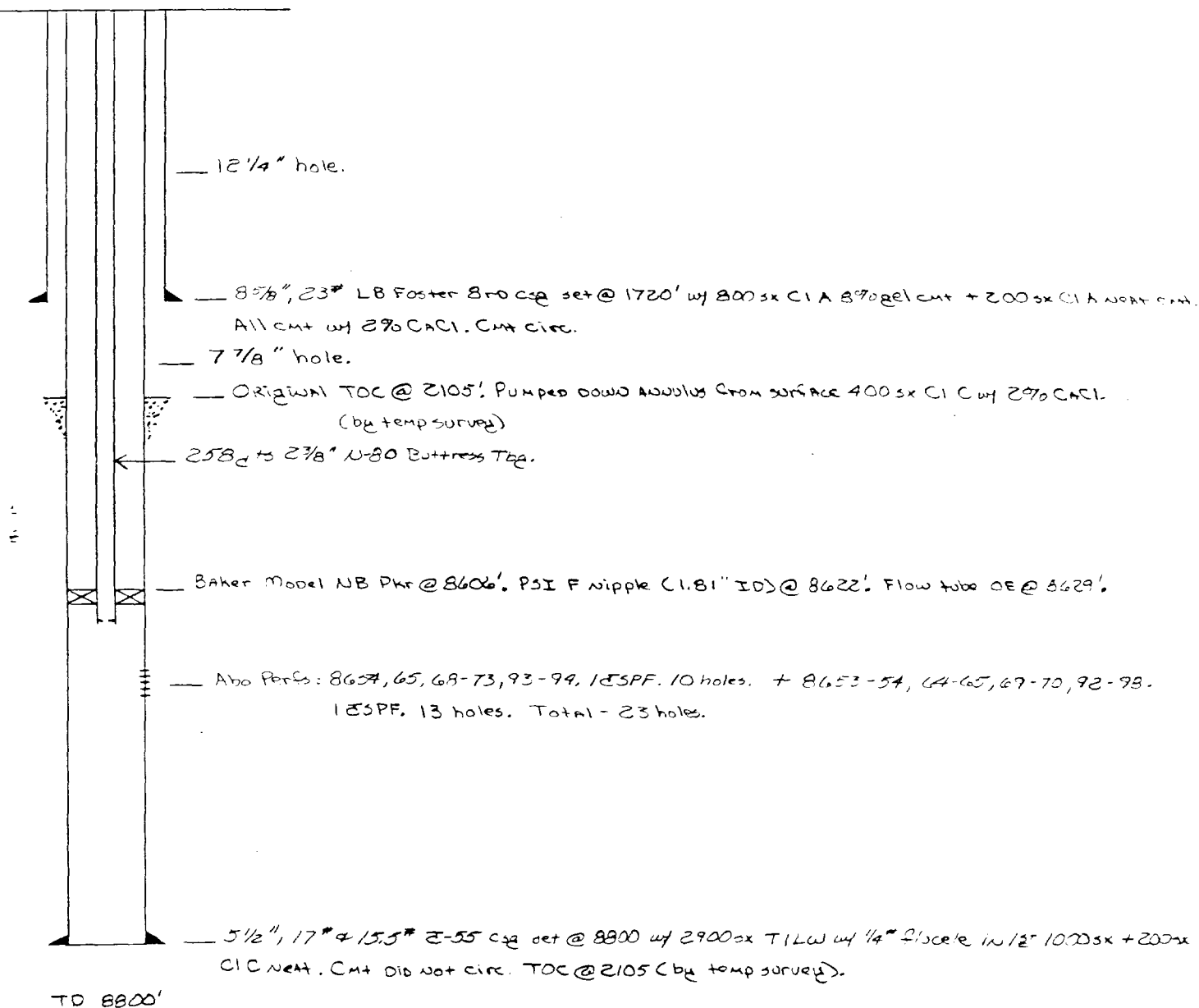
D.F. 4054'

K.B. 4055'

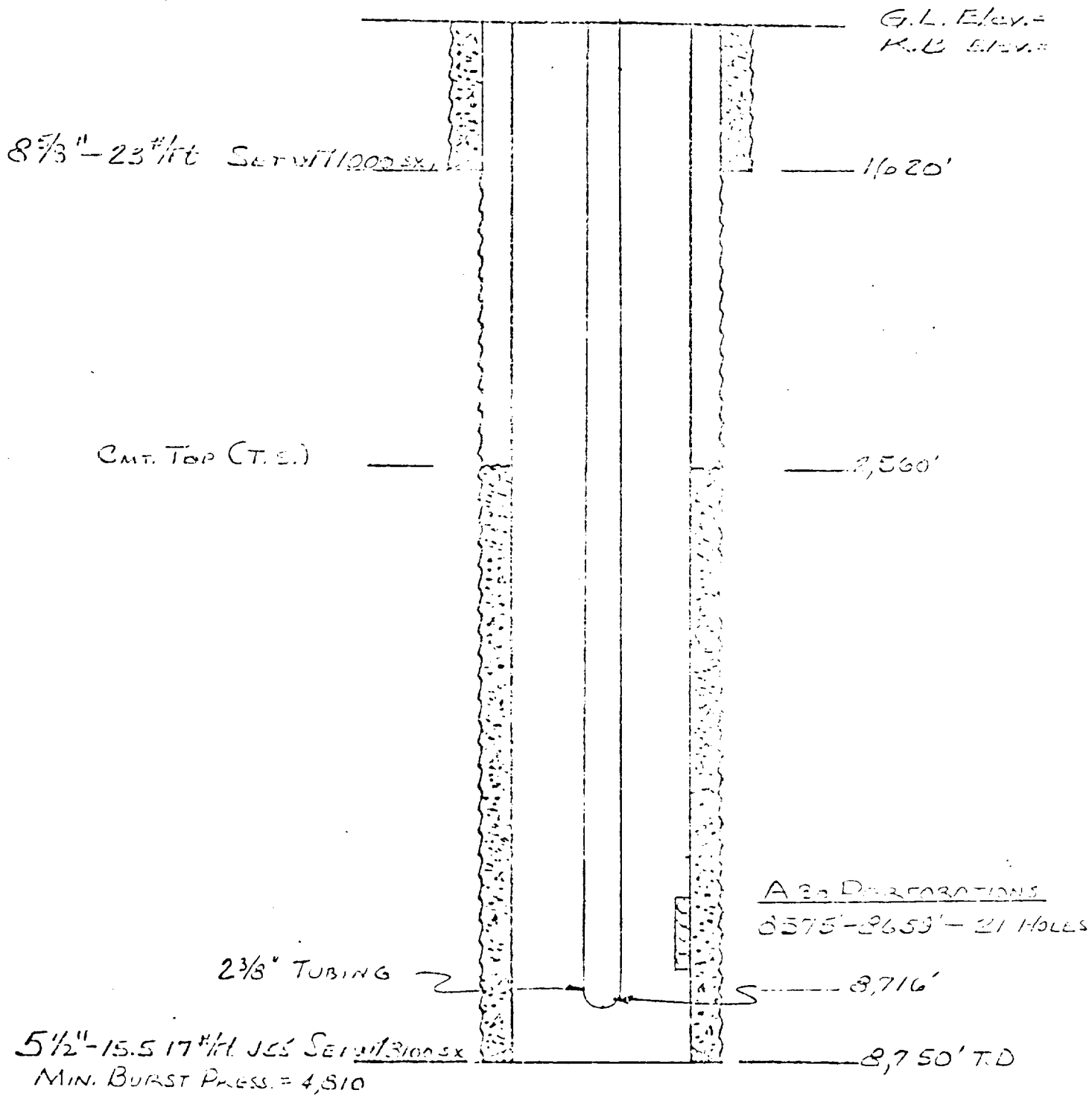
ZERO 14' AGL

460' FSL and 660' FEL

Lea County, New Mexico



DIAGRAMMATIC WELL SKETCH
N.V.A. UNIT Well No. 145
NORTH VACUUM (A/B) POOL
LEA COUNTY, NEW MEXICO



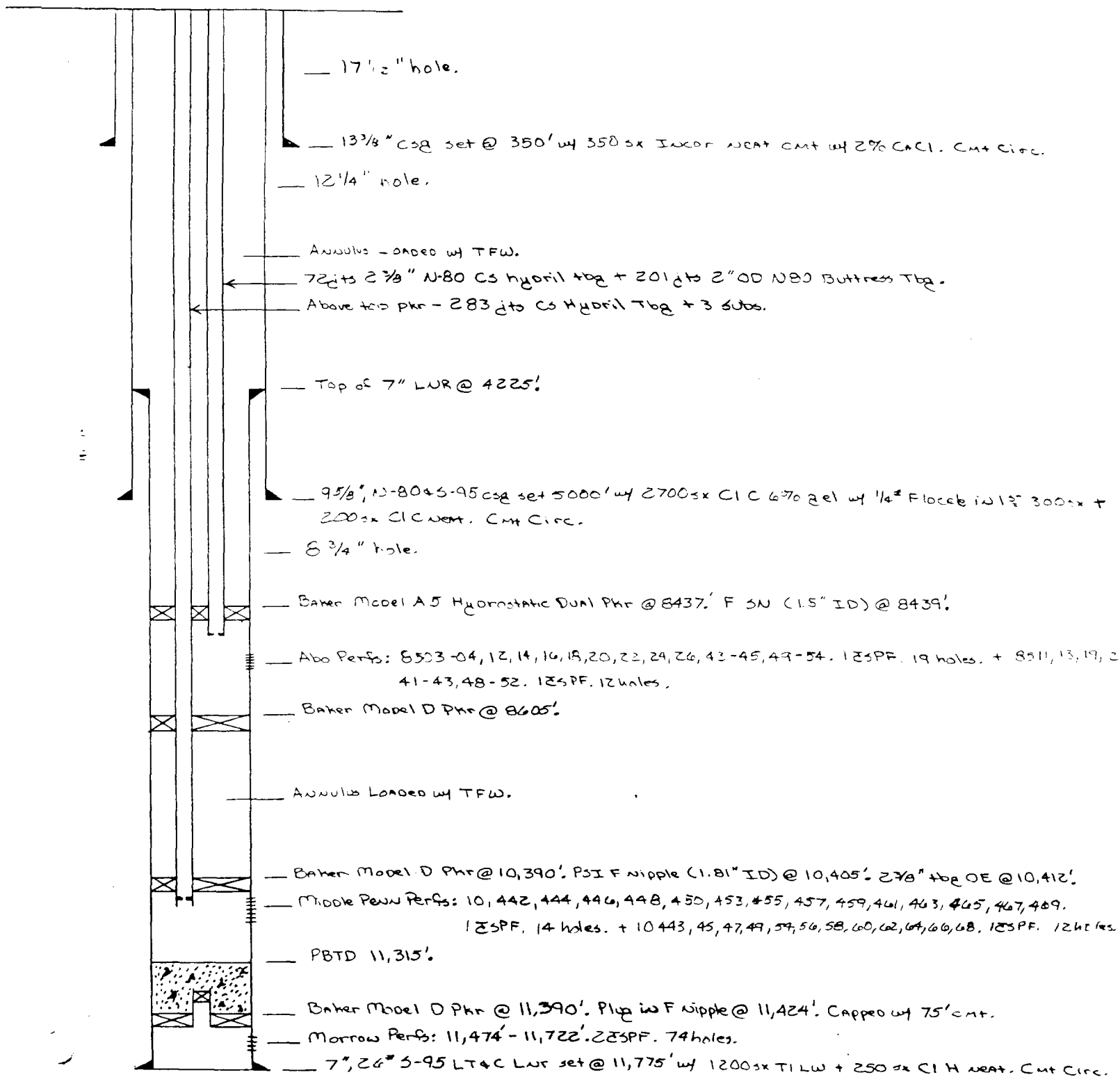
9-6-72
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DATE 3-23-83 WELL NO. 147 LEASE No. Vacuum Abn Unit FIELD Vacuum Abn North

LOCATION F-13-175-34E
2080' FWL AND 1780' FWL
Lea County, New Mexico

SIGNED M.W. DEER

G.L. 4021'
D.F. 4037'
K.B. 4039'
ZERO 18' AGL



TD 11775'

SYNTHETIC WELL SKETCH

N.V.A. UNIT WELL #151

M. H. V. (ADD) FIELD

LAKE COUNTY, ILLINOIS

G.L. ELEV = 403'
ELEV =

13³/₈" - 4854 #61 1/4" J-55 H 40
SET W/ 12' 15" SY. CIRC.

CENT. TOP (T.S.)

LINEAR TOP

40' 1/4" J-95 SET W/ 12' 15" SY.
MIN. BURST PRESS. = 3230

BAKER MOD "D" PER
W/ LATCH IN ASSY.

2³/₈" N-80 EUE 3RD. TBG 7
11300'

7" - 26" 1/4" J-95 SET W/ 17' 00" SY.
MIN. BURST PRESS. = 3070

10-23-72
1510

— 350'

— 780'

— 4253'

— 5050'

— 11,765'

MOD. CUI PERFORATIONS
11,953' - 11,991' - 250N-1514LES

— 12,178'
— 12,180' T.D.

LOCATION 13-L T-17-S R-34-E
660 FNL 2180 FEL

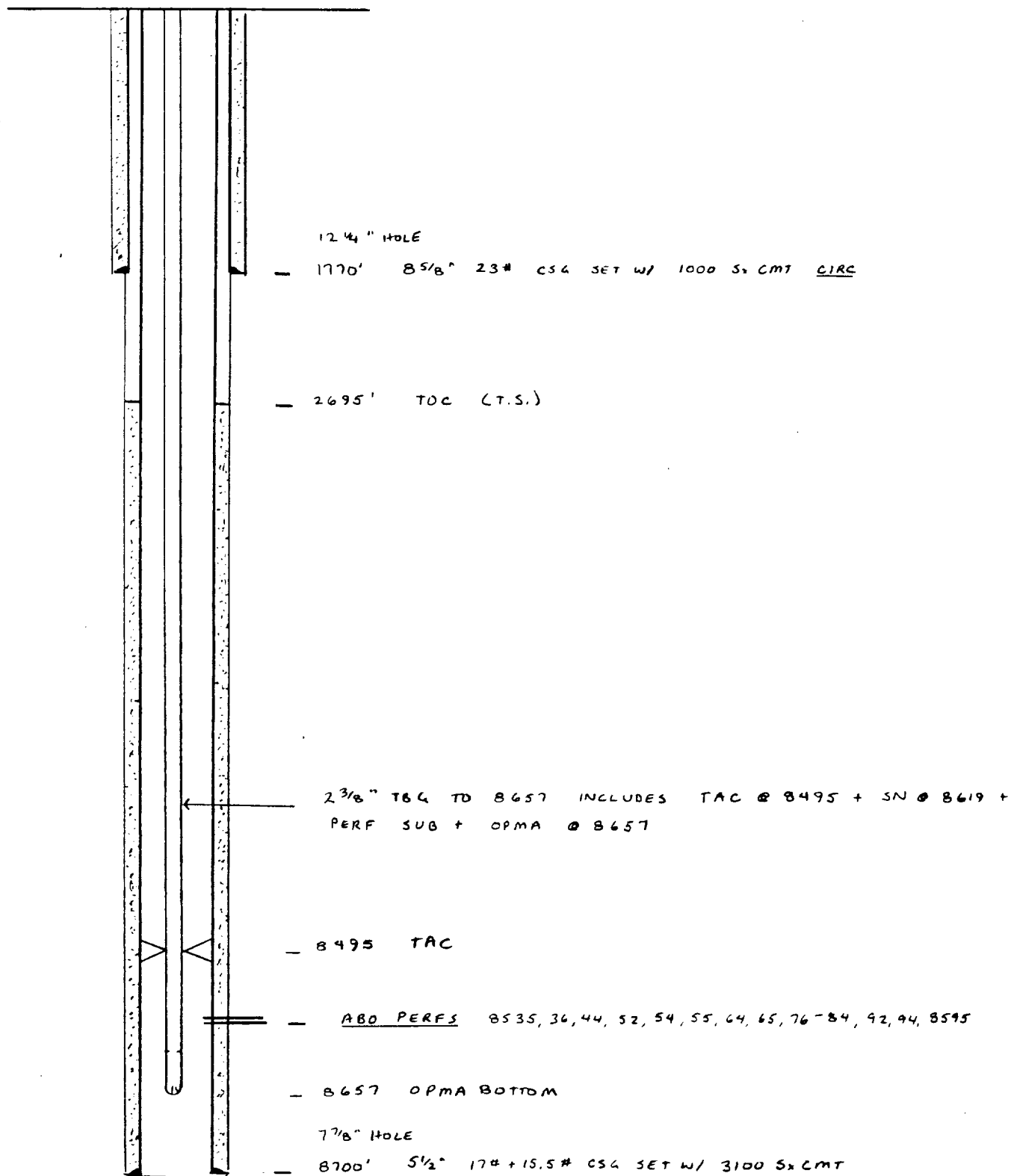
SIGNED M E VASICEK

G.L. 4022

D.F.

K.B.

ZERO

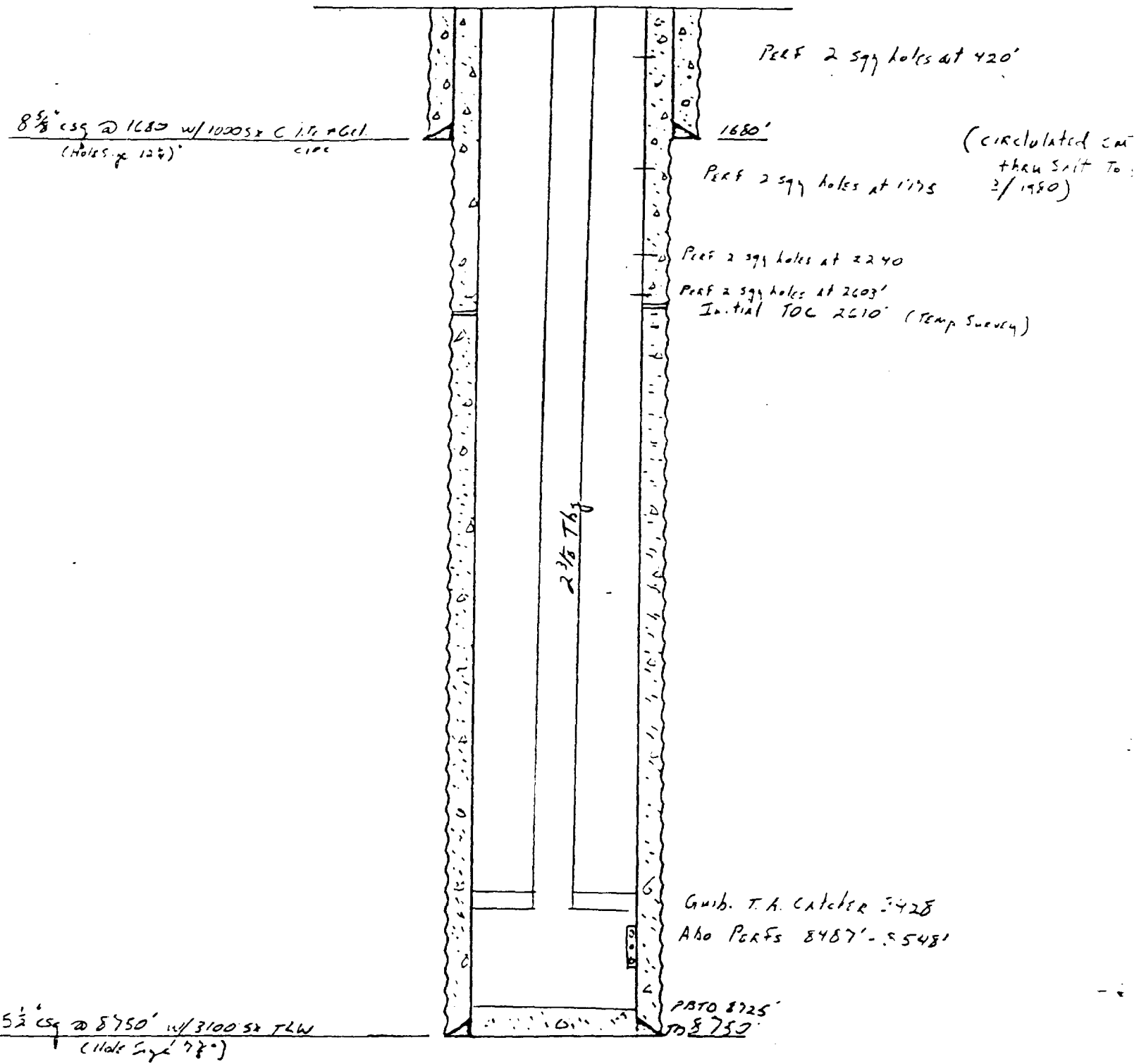


8700 TD

DIAGRAM WELL SKETCH

NVAU 156

I - 23 - 175 - 348



MKV 4/10/80

DIPPERMOUNT WELL SKETCH

N.V.A. UNIT WELL No. 157

NORTH VIRGINIA (1924) F-201

LEWIS COUNTY, NORTH CAROLINA

GL ELEV =
ELEV =

13 3/8" - 4 3/4" L.H. 40 SET W/ 1100 SW. CIRC.

350'

LINER TOP

4,303'

13 3/8" - 4 3/4" L.H. 3-95 SET W/ 2500 SW. CIRC.

5,000'

2 3/8" TEG

AREA OF CORRELATIONS

9535' - 9539' - 5430A - 19 HOLES

5,103'

C.I.B.P.

10,490' F.B.T.D.

10,500'

UPPER PENN F-115

10,573' - 10,710' - 11 HOLES

11,766'

BAKER MODEL "D" PER.

11,790'

MIDDLE PENN F-115

11,835' - 11,905' - 21 HOLES

7" - 2 1/2" L.H. 3-95 SET W/ 2100 SW. CIRC.
MIN. BORE AT PRESS 4250 PSI

12,500' T.D.

NVAU NORTH VACUUM ABO UNIT E 104

NVAU

VACUUM ABO NORTH FIELD

LEA COUNTY, NEW MEXICO

B-15-TTS-234E

Elevation:

Dowell cnt w/ 400sx class
cnt w/ 2% C3Cl. cnt circ.

6 JTS 12 3/4" 38# CSG
set @ 250'

Dowell cnt w/ 1200sx TLW
w/ 7 1/2 # salt/sx + 200sx class C
cnt w/ 2.6 # salt/sx. cnt circ.

64 JTS 2 1/8" TBG

77 JTS 2 5/8" L.P. FOSTER
28 # ST-C CSG set @ 3100'

211 JTS 2 3/8" TBG

BAKER TA set @ 8634' w/
21000 # T

SN @ 8760'
TBG PERFS: 8761-64'

ABO PERFS:
8677, 178;
8710, 121, 122, 131, 132, 133, 134
w/ 21SPF - 18 holes

8794'

TD 8850'

Dowell cnt w/ 2100sx TLW w/
1/4 # Floate in 1st 1000sx + 200sx
class C Neat. cnt circ.

271 JTS 17 1/2" 15.5 # ST-C
+ LTFC CSG set @ 8850'
4000' 17 # on 511 15.5 #
to surf.

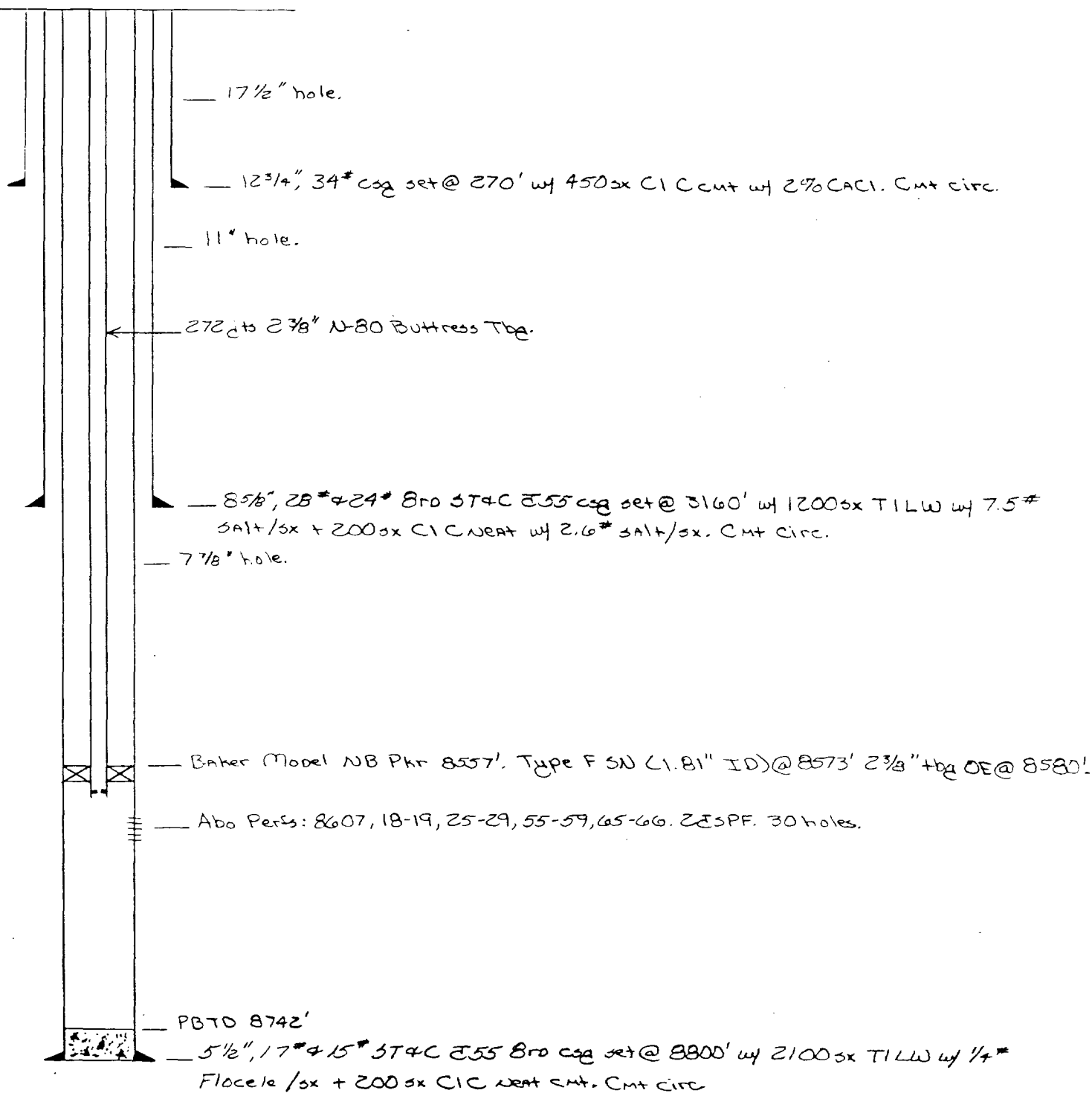
2/5/81

DATE 3-28-69 WELL NO. 169 LEASE No. Vacuum Abo Unit FIELD Vacuum Abo North

LOCATION H-13-175-34E
1980' FNL AND 660' FEL
Lea County, New Mexico

SIGNED M. W. DEER

G.L. 4020'
D.F. 4032'
K.B. 4033'
ZERO 13' AGL



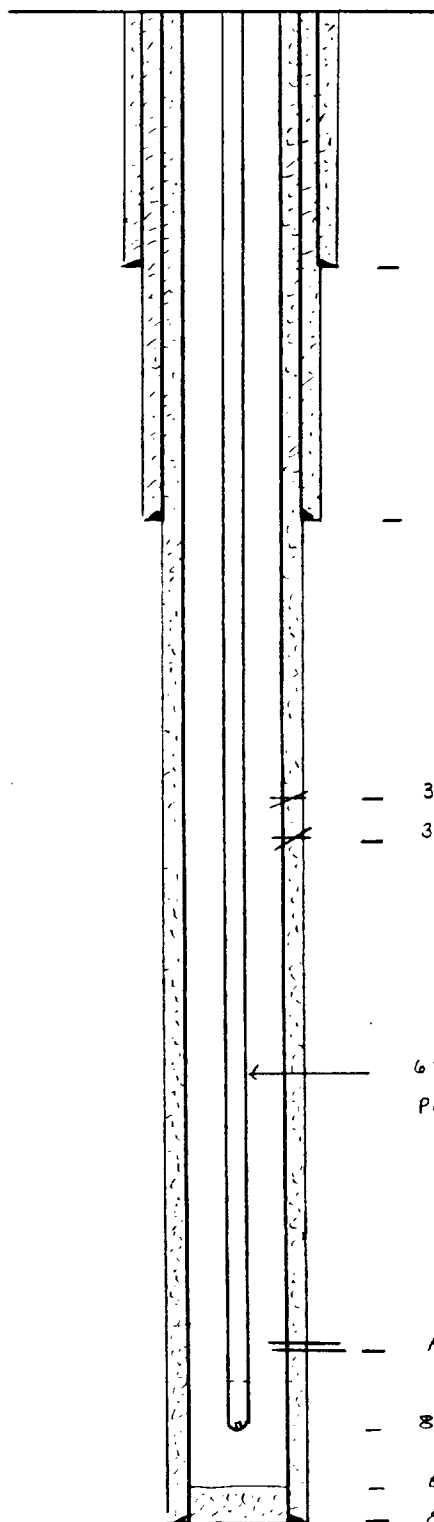
TO 8800'

DATE 8-16-85 WELL NO. 170 LEASE NVAU FIELD VACUUM ABO N.

LOCATION 14-D T-17-S R-34-E
660 FNL 740 FWL
LEA CO. N.M.

SIGNED M E VASICEK

G.L. 4037
D.F. _____
K.B. _____
ZERO



- 17 1/2" HOLE
- 270' 12 3/4" 38# CS4 SET W/ 450 Sx CMT CIRC
 - 3060' 8 5/8" 24# + 28# CS4 SET W/ 1700 Sx CMT CIRC
 - 3902'-07' SPLIT OR PARTED CS4 + 3917'-20' HOLE SQ2D W/ 300 Sx CMT
 - 3920'-24' SQ2 HOLES SQ2D W/ 300 Sx CMT
 - 63 JTS 2 7/8" EUE TB4 + 212 JTS 2 3/8" EUE TB4 + SN (@ 3657) + PERF SUB + OPMA (@ 8691)
 - ABO PERFS 8579, 80, 91-93, 8607-10, 16-21, 29, 8631-34 w/ 153PF (20 Holes)
 - 8691 OPMA BOTTOM
 - 8694 PSTD
 - 8800' 5 1/2" 17# + 15.5# CS4 SET W/ 2600 Sx CMT CIRC

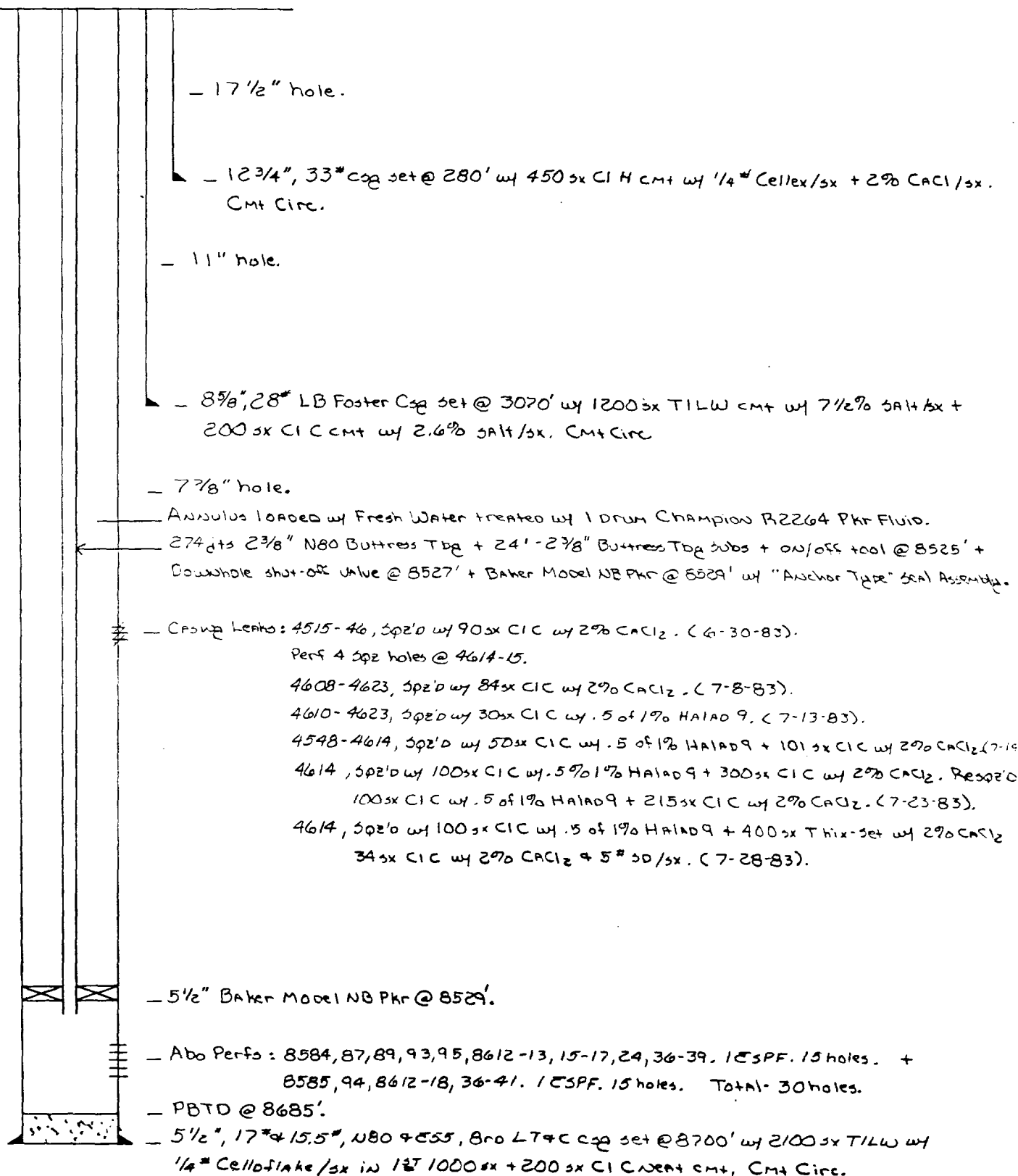
DATE 11-16-83 WELL NO. 171 LEASE North Vacuum Abn Unit FIELD Vacuum Abn North

LOCATION N-14-175-34E
660' FSL & 1780' FWL
Lea County, New Mexico

SIGNED MW DEER

G.L. 4032
D.F. —
K.B. 4046
ZERO 14' AG

Updated 1-23-84 mwd



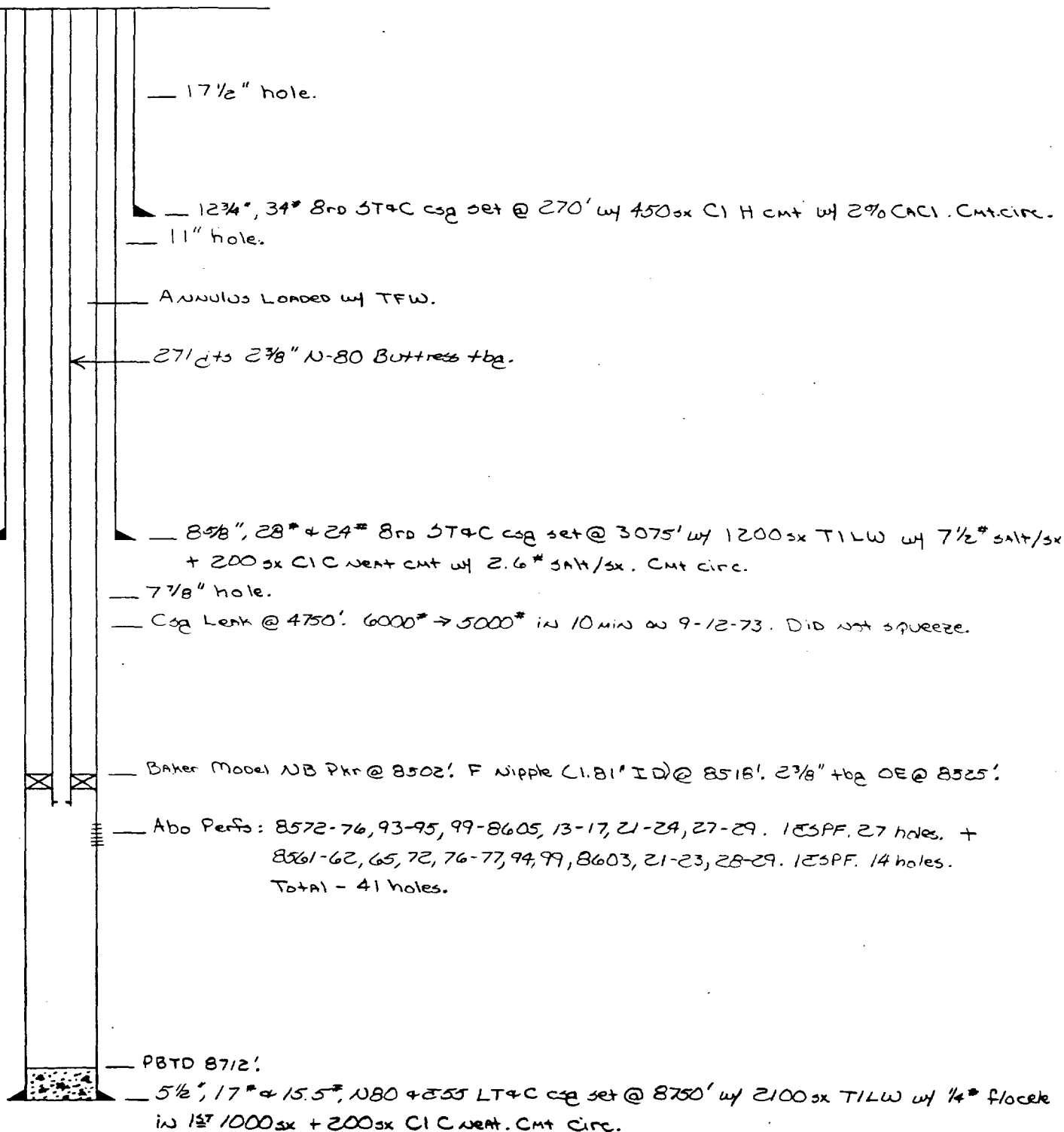
TD 8700'

DATE 3-29-83 WELL NO. 173 LEASE No. Vacuum Abu Unit FIELD Vacuum Abu North

LOCATION F-14-173-34E
1840' FNL and 1840' FWL
Lea County, New Mexico

SIGNED M.W. DEER

G.L. 4041'
D.F. 4054'
K.B. 4055'
ZERO 14' AGL



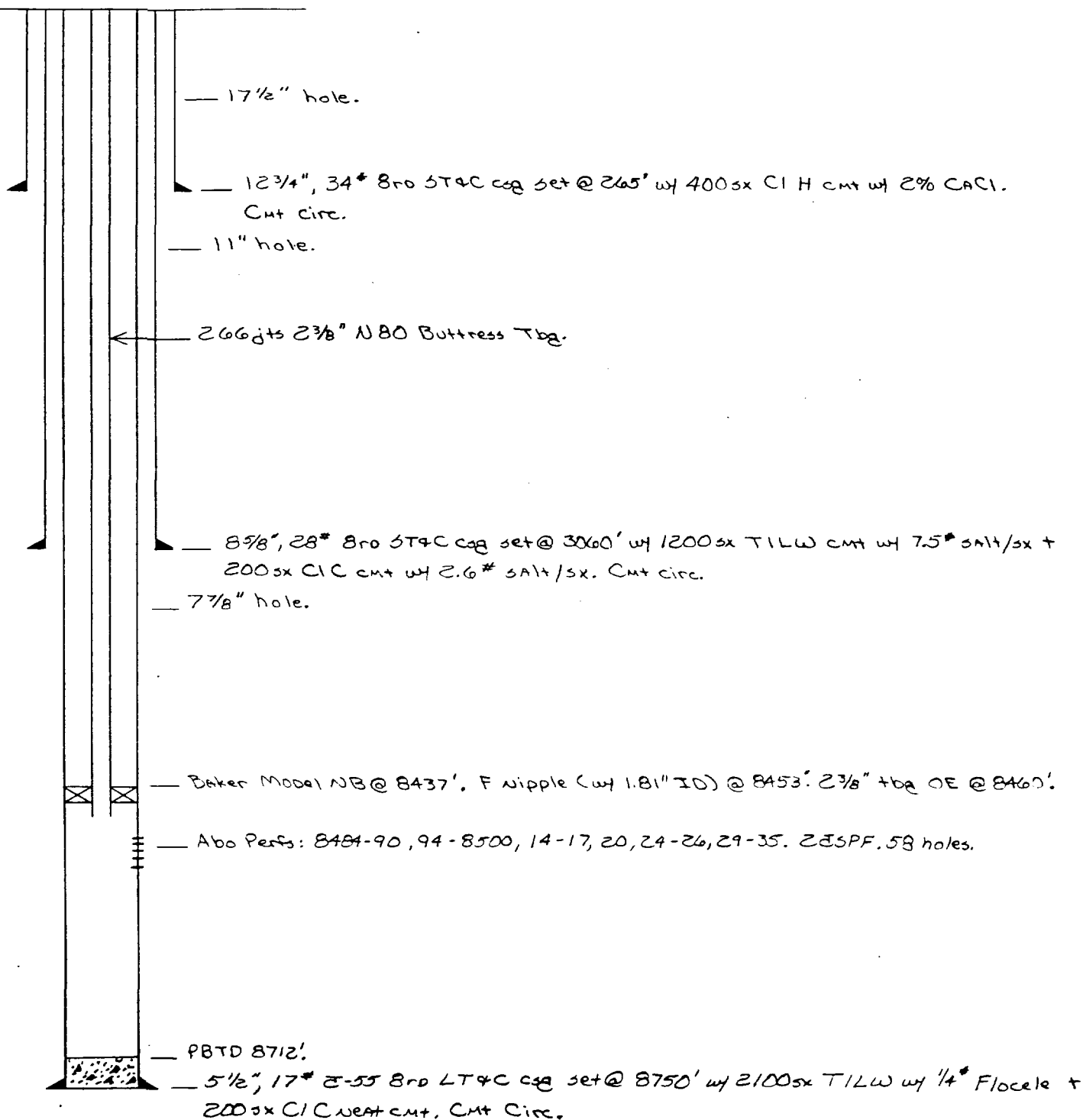
TD 8750'

DATE 3-29-83 WELL NO. 175 LEASE No. Vacuum Abo Unit FIELD Vacuum Abo North

LOCATION H-14-175-34E
1980' FUL and 485' FEL
Lea County, New Mexico

SIGNED M. W. DEER

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



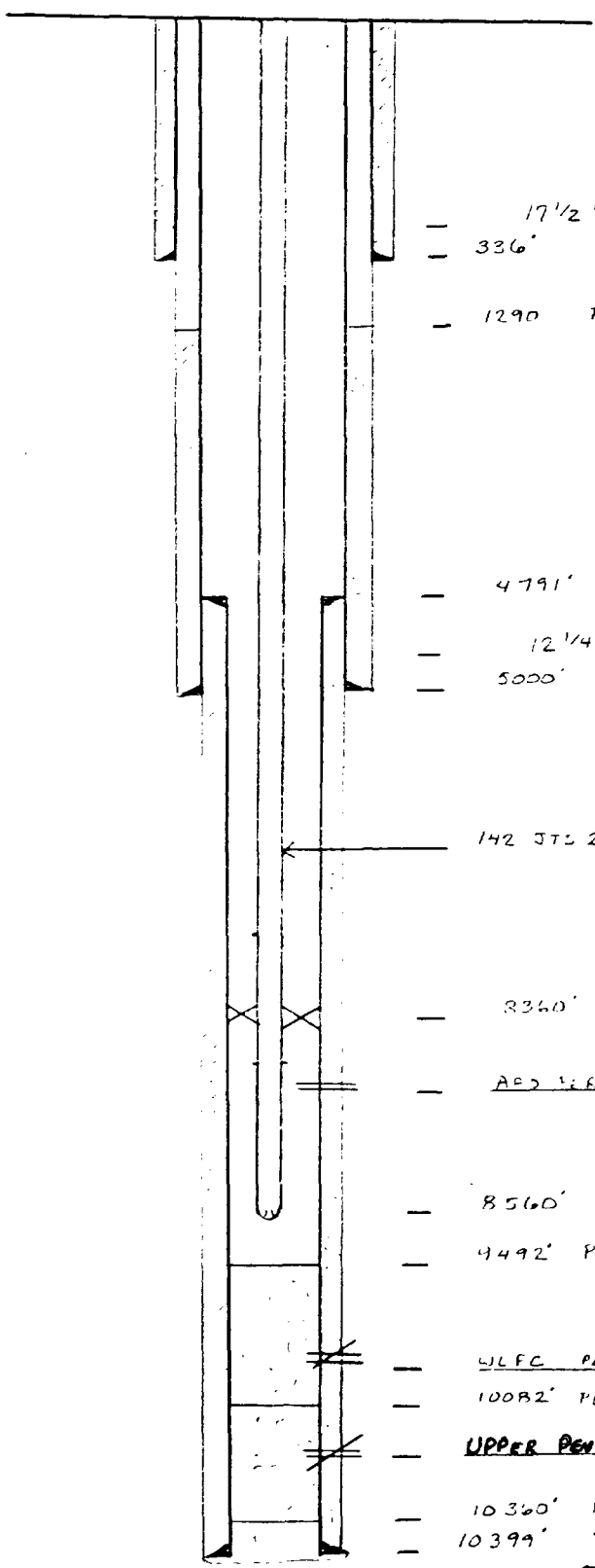
TD 8750'

DATE 8-2-85 WELL NO. 205 LEASE NVAU FIELD VACUUM

LOCATION C 24 - T11C - R24E
LEA COUNTY N.M.

SIGNED ME. VANCE

G.L. 700
D.F.
K.B.
ZERO



Current

- 17 1/2" HOLE
- 336' 13 3/8" C95 SET W/ 350 SX CMT CIRC
- 1290 TOP CEMENT (CALC)
- 4791' LINER TOP
- 12 1/4" HOLE
- 5000' 9 5/8" 40# C95 SET W/ 2200 SX
- 142 JTS 2 3/8" J55 TCS + 127 JTS 2 3/8" J55 TCS ONE SMD
- 8360' PA-10 TAC
- APD PERFS W/ 100 SF 8128-29 34 40-50, 50 60, 63, 70 120'
- 8560' OPMA
- 9492' PETD
- ULFC PERFS 9671-73, 75-79, 9708-10, 10010-14 (16 HOLES)
SQ 20 W/ 100 SX CMT
- 10082' PETD
- UPPER PENN PERFS 10334, 36, 38, 40, 42, 44, 46, 48, 50, 52 (10 HOLES)
SQ 20 W/ 100 SX CMT
- 10360' PETD
- 10399' 7" 23# C95 + NSD LINER SET W/ 900 SX INCOR NEAT CMT
8 3/4" HOLE

10401 TD

DIAGRAMMATIC WELL SKETCH
NORTH VACUUM APO UNIT WELL No. 207
NORTH VACUUM (APO) POOL
LEA COUNTY, NEW MEXICO

GL ELEV = 4,012'
 ELEV =

13 3/8" - 48 #/ft H-40 Set wt 290 sx.
 Min. Burst Press = 1730
 CIRC.

352'

Cement Top (Temp. Sun) —

2,430'

" - 24,32 #/ft. J-55 Set wt 720 sx
 Min. Burst Press = 2950
 Est. Cement Top —

4,000'

4,400'

2 3/8" 4.7 #/ft. J-55 Tubing —

Apo Perforations
 8527' - 8532' - 550A - 16 Holes

8,606'

4 1/2" - 10.5 11.6 #/ft. K-55 N-80 Set wt
 585 sx. in 2 stages.
 Min. Burst Press. = 4790

8,620' P.B.T.D.

8,655' T.D.

(Pennzoil-Mobil Sales Co.)

DIAGRAMMATIC WELL SKETCH
N.V.A. UT. STATE "J" Well No. 208
NORTH VAQUERA (ABO) POOL
LEA COUNTY, NEW MEXICO

GL ELEV = 4039'
 ELEV =

12 3/4" - 38 #/FL. SET W/ 15000x
 CIRC.

268'

- 20, 28 #/FL. J-55 SET W/ 14000x
 CIRC.
 MIN. BURST PRESS. = 2950

3065'

ABO PERFORATIONS
 8642' - 8704' - 23 HOLES

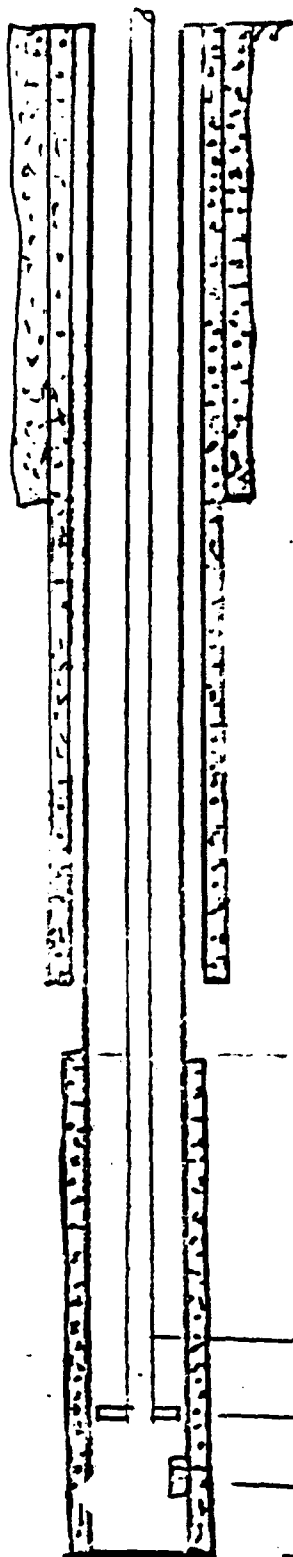
2 3/8" TUBING

8752'

5 1/2" - 19.517 #/FL. J-55 SET W/ 12000x
 CIRC.
 MIN. BURST PRESS. = 4,910

8800' T.D.

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



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

2 5/2" casing set at 3045' with 1400 sx of T1W cement
Hole size 11" cement Circ
Cement Top - 3050' - Temp Survey

2 3/8" Tubing

Baker Anchor Cat. - 8447'

Abo Perf. - 8539-8609 (17 holes)

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

17# / ft

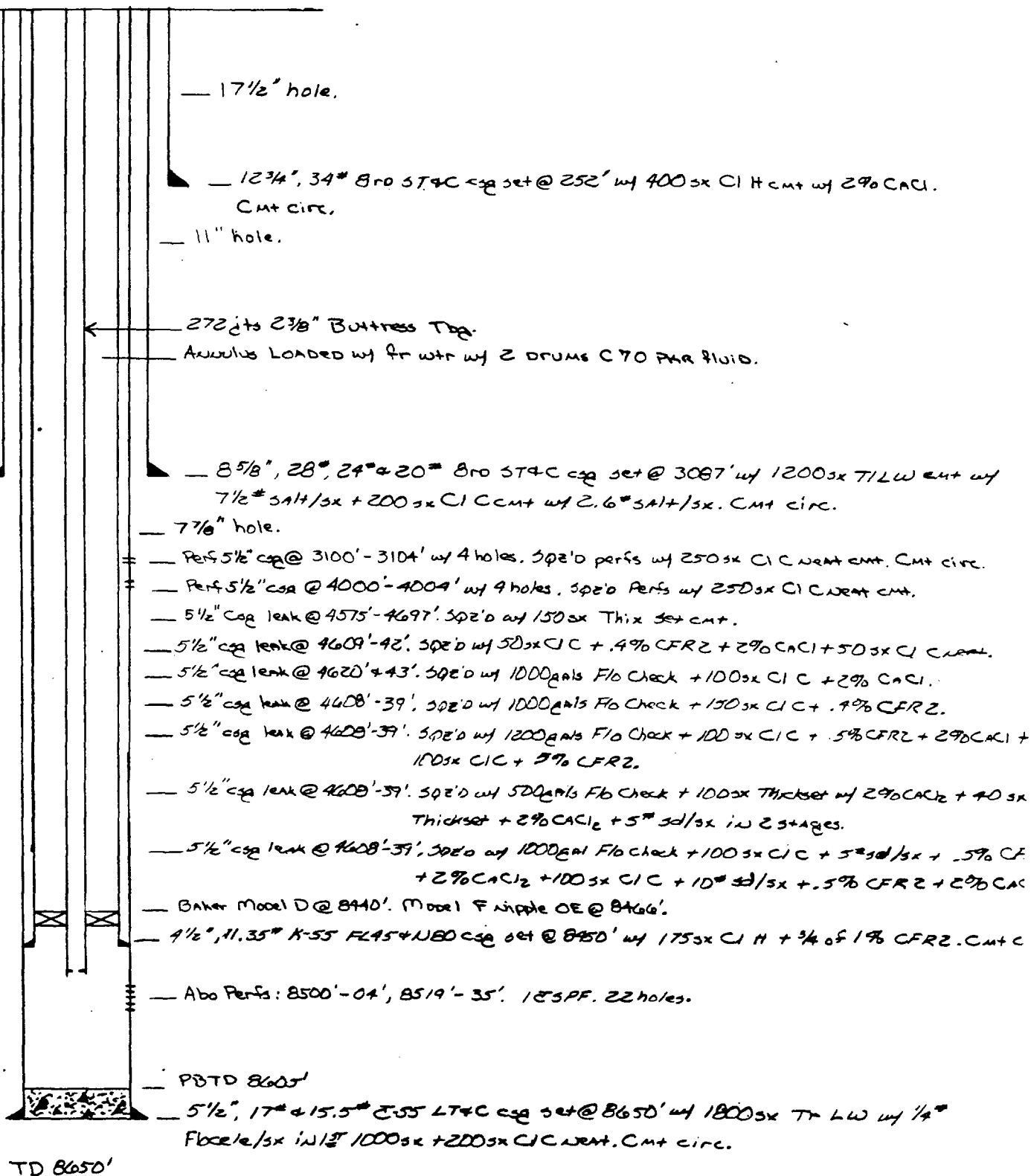
DATE 4-4-83 WELL NO. 219 LEASE No. Vacuum Abo Unit FIELD Vacuum Abo North

LOCATION N-13-175-34E

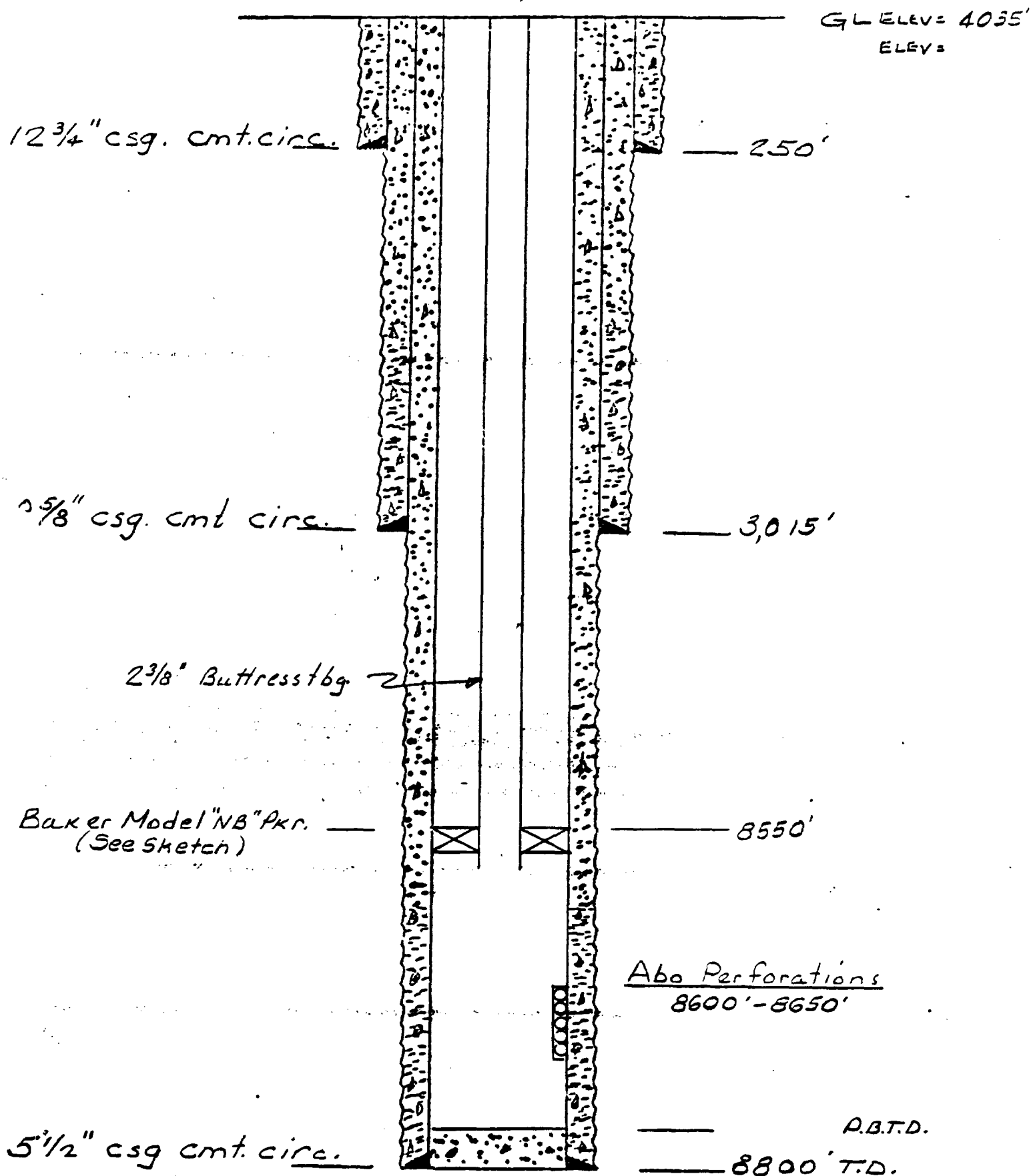
SIGNED M.W. DEER

G.L. 4016'
D.F. 4025'
K.B. 4026'
ZERO 10' AGL

1973' FWL and 1030' FSL
Len County, New Mexico



DIAGRAMMATIC WELL SKETCH
NORTH VACUUM ABO UNIT INJECTION WELL No. 220
NORTH VACUUM (ABO) POOL
LEA COUNTY, NEW MEXICO



NORTH VACUUM ABO UNIT WELL # 221

VACUUM (ABO) NORTH FIELD

LEA COUNTY, NEW MEXICO

Elevation:

CMT w/ 300 sx Class C w/
2 7/8 C&C - did not circ.
ran 2 7/8" tbg outside csq
f tbg TOC @ 40'. CMT thru
tbg w/ 50 sx Class C

12 3/4", 32#, 8V THD CSG
set @ 283'

CMT w/ 1400 sx Dowell TILW
w/ 7 1/2# s&H/sx + 200 sx Class C
next cmt w/ 2.6# s&H/sx.
CMT CIRC.

1966'

8 7/8", 28, 24 f 20#
BRD ST & C CSG set
@ 3165'

ABO PERFS:

8584 - 86'; 8588 - 93'

8598 - 99'; 8603 - 07'

8611 - 16'; 8622 - 25'

8627 - 35'; 8639 - 47'

8650 - 53'

1 JSPP, total 98 holes

TBG

215 JTS 2 3/8" + 65 JTS 2 7/8"
+ 10' spacer

TBG PERFS:

8671 - 8675'

GLIB TA set @ 8453'
w/ 14000# T

ABO PERFS

SN @ 8670'

CMT w/ 1800 sx Dowell TILW w/
1/4# cellostake/sx in first 1000 sx
+ 200 sx Class C next cmt.
CMT CIRC.

5 1/2", 17 f 15.5# K55
LT & C CSG (5660' 17#
on btm) set @ 8720'

TD 8720'

PBTD 8710'

WTB 1/6/80

DATE 4-4-83 WELL NO. 231 LEASE No. VACUUM Abo Unit FIELD VACUUM Abo North

LOCATION P-13-175-34E

SIGNED M. W. DEER

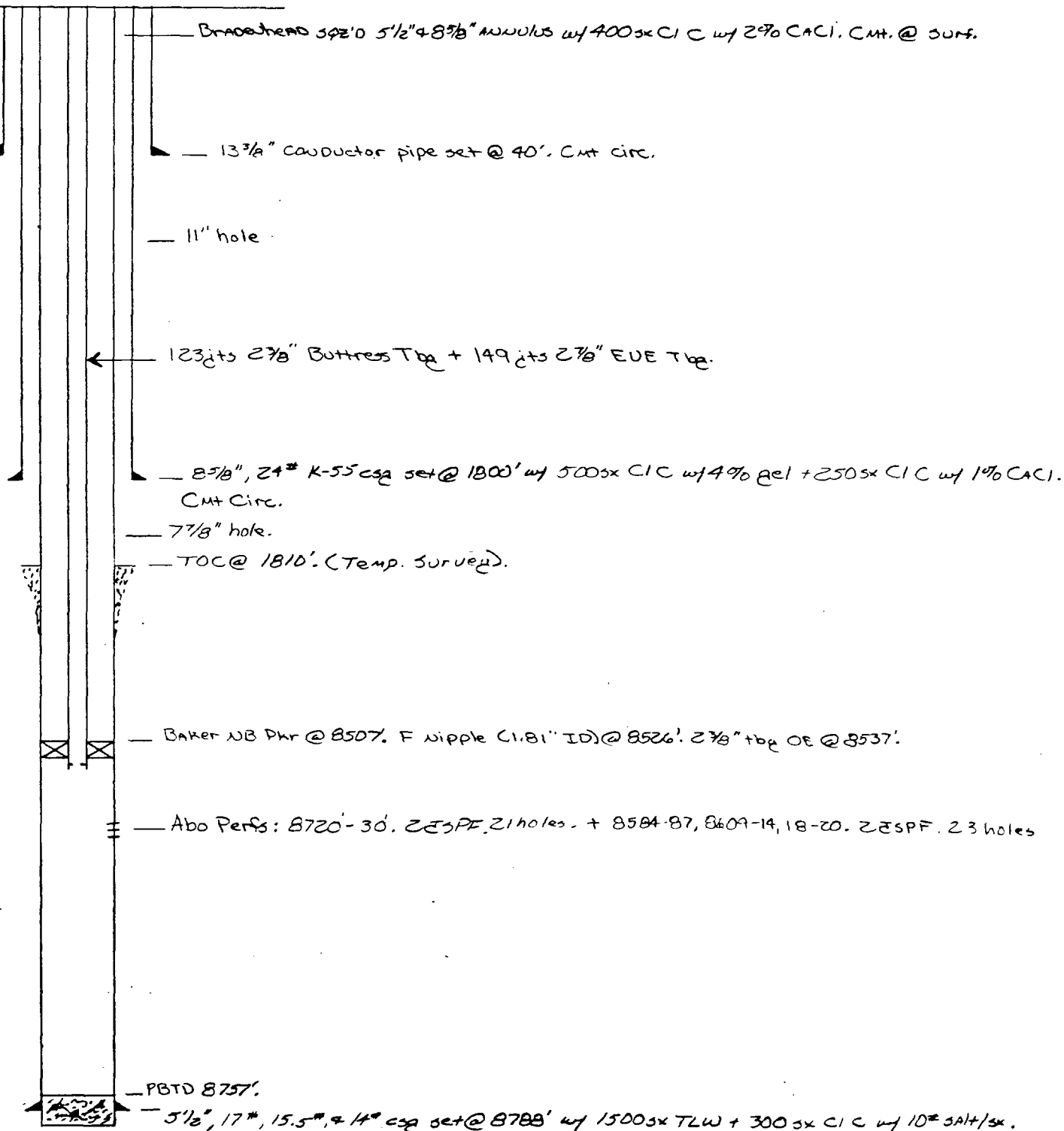
G.L. 4005'

D.F. 4015'

K.B. 4016'

ZERO 13.6' Above Csg Head
Flange.

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



TD 8800'

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.

PBTD 8683'
TD 8700'

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

— 17 1/2" hole

— 13 3/8", 48#, H40, STFC set @ 420' w/ 400 SK Cl. C cmt,
2% CaCl₂, 1/4 #/sk FC

— 12 1/4" hole

— TOL @ 4217'

— 8 5/8", 32#, S80# K55, STFC set @ 5000' w/ 1920 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

— 7 7/8" hole

— 2 7/8" + bg: OPMA @ 8760' + 4' perf sub + 2 3/8 SN + 2 7/8 SN
TAC @ 8479 set w/ 14,000# Ten.

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

— 5 1/2", 17# & 15.5# K55, STFC set @ 9099' w/ 1030 SK Cl. H cmt, 4% gel,
.3% HA9, 1/4 #/sk FC + 300 SK Cl. H cmt, .3% HA9, 1/4 #/sk FC.
PBTD 9059'
TD 9100'

DATE 11-28-84 WELL NO. 251 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit
LOCATION 660 FNL E 2110' FWL
Sec. 24, T17S, R34E
Lea County, New Mexico
SIGNED R.W. Petty
North
G.L. 4022'
D.F. 4034.5'
K.B. 4035.5'
ZERO 13.5' AGL

— 17 1/2" hole

— 13 3/8", 48# H40, STFC set @ 420' w/400 sk C.I.C cmt,
2% CaCl₂, 1/4 #/sk FC. Circ 100 sk cmt.

— 12 1/4" holes

— TOL @

— 8 5/8", 32# S80# K55, STFC set @ 5000' w/2000 sk C.I.C cmt,
4% gel, 15 #/sk Salt, 5 #/sk gilsonite; 1/4 #/sk FC + 300 sk C.I.C cmt,
2% CaCl₂ + 1/4 #/sk FC. Circ 250 sk cmt.

— 7 7/8" hole

— 2 7/8" tbg: OFMA @ 8625' + 4' perf sub + 2 3/8 SN + 2 7/8 SN @ 8588'
TAC @ 8377' set w/12,000# Ten.

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

— 5 1/2", 17# N80 LTFC 15.5# J55 STFC set @ 8699' w/800 sk C.I.H
cmt, 4% gel, .3% HA9, 1/4 #/sk FC + 300 sk C.I.H cmt, .3% HA9, 1/4 #/sk FC.

PBTD 8656'
TD 8700'

DATE 11-28-84 WELL NO. 252 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit
 LOCATION 790' FWL & 660' FSL SIGNED R. W. Petty North
Sec. 13, T17S, R34E G.L. 4014'
Lea County, New Mexico D.F. 4029'
K.B. 4030'
ZERO 16' AGL

— 17 1/2" hole

— 13 3/8", 48#, H40, STFC set @ 422' w/400 sk Cl. C cmt,
 2% CaCl₂, 1/4 #/sk FC. Circ 50 sk cmt.

— 12 1/4" hole

— TOL @ 4193'

— 8 5/8", 32#, S80# K55, STFC set @ 5000' w/2700 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 275 sk cmt.

— 7 7/8" hole

— 2 7/8" tbg: OPMA @ 8640' + 4' perf sub + 2 3/8 SN + 2 7/8 SN @ 8604'
 TAC @ 8333' set w/14,000# Ten.

— Abo Perfs: 8631'-34'. 2 JSPF. 8 holes. 8489'-95', 8513'-18', 22'-25',
 8531'-36'. 1 JSPF. 23 holes.

5 1/2", 17# N80 LTFC & 15.5# K55 STFC set @ 8699' w/700 sk Cl. H
 cmt, 4% gel, .3% HA9, 1/4 #/sk FC + 300 sk Cl. H cmt, .3% HA9, 1/4 #/sk FC.

PBTD 8668'
 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

— 13⅞", 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" tbg: 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#F15.5#, 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'

DATE 11-28-84 WELL NO. 254 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit North
 LOCATION 746' FEL #1980' FSL SIGNED R. W. Petty G.L. 4015'
Sec. 13, T17S, R34E Lea County, New Mexico D.F. NA
K.B. 4031'
ZERO 16' AGL

— 17½" hole

— 13⅜", 48#, H40, STFC set @ 415' w/ 400 sk Cl. C cmt,
 2% CaCl₂, ¼#_{sk} FC. Circ 70 sk cmt.

— 12¼" hole

— TOL @ 4170'

— 8⅝", 32#, S80' K55, STFC set @ 5000' w/ 3120 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 275 sk cmt.

— 7⅞" hole

— 2⅞" + bg: OPMA @ 8936' + 4' perf sub + 2⅞" SN + 2⅞" SN @ 8902'
 TAC @ 8511' set w/ 14,000# Ten.

— Abo Perfs: 8968'-74', 81'-83', 9004'-06'. 1JS PF. 13 holes. Sg z'd
 w/ 50 sk Cl. H cmt. 8801'-04', 27'-30', 46'-54', 57'-60'. 1JS PF
 18 holes. 8598'-8600', 8616'-22', 45'-52'. 1JS PF. 18 holes.

— 5½", 17# #15.5, K55, STFC set @ 9099' w/ 825 sk Cl. H cmt, 4% gel,
 .3% HA9, ¼#_{sk} FC + 300 sk Cl. H cmt, .3% HA9, ¼#_{sk} FC.
 PB TD 8944'
 TD 9100'

DATE 11-28-84 WELL NO. 255 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit North
LOCATION 2099' FWL 1980' FSL SIGNED R. W. Petty G.L. 4011'
Sec. 13, T17S, R34E D.F. NA
Lea County, New Mexico K.B. 4025'
ZERO 14' AGL

— 17½" hole

— 13⅜", 48[#], H40, STFC set @ 405' w/400 sk C.I.C cmt,
2% CaCl₂, ¼[#]/sk FC. Circ 105 sk cmt.

— 12¼" hole

— TOL @ 4210'

— 8⅝", 32[#], S80[#] K55, STFC set @ 5000' w/2350 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 60 sk cmt.

— 7⅞" hole

— 2⅞" +bg: OPMA @ 8679' + 4' perf sub + 2⅞" SN + 2⅞" SN @ 8643'
TAC @ 8403' set w/12,000[#] Ten.

— Abo Perfs: 8512'-18', 21'-23', 40'-53'. 1JSPF. 24 holes.

— 5½", 17[#] 15.5[#], K55, STFC set @ 8699' w/700 sk C.I.H cmt, 4% gel,
PBTD 8697' .3% HA9, ¼[#]/sk FC + 300 sk C.I.H cmt, .3% HA9, ¼[#]/sk FC.
TD 8700'

DATE 12-20-84 WELL NO. 256 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit
 LOCATION 1983' FSL & 533' FEL SIGNED KS OGIER North
Sec. 14 T17S, R34E
Lea County, New Mexico
 G.L. 4016'
 D.F. N/A
 K.B. 4032'
 ZERO 16' 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

— 12 1/4" hole

— TOL @ 4210'
 — 8 5/8", 32#, S80# K55, STFC set @ 5000' w/ 6000 SK Cl. C cmt,
 4% gel, 15 #/sk Salt, 5 #/sk gilsonite; 1/4 #/sk FC + 0 SK Cl. C cmt,
 2% CaCl₂ + 1/4 #/sk FC

— 7 7/8" hole

— 2 7/8" + bg: OPMA @ 8649 + 4' perf sub + 2 3/8 SN + 2 7/8 SN
 TAC @ 8424 set w/ 12,000# Ten.

— Abo Perfs: 8530-46. 1JSPF. 17 holes.

— 5 1/2", 17# #15.5, K55, STFC set @ 8699 w/ 600 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 11-28-84 WELL NO. 257 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit
LOCATION 739' FWL 51 1980' FNL SIGNED R.W. Petty North
Sec. 13, T17S, R34E G.L. 4023'
Lea County, New Mexico D.F. 4039.5'
K.B. 4040.5'
ZERO 17.5' AGL

— 17 1/2" hole

— 13 3/8", 48#, H40, STFC set @ 412' w/400 sk Cl. C cmt,
2% CaCl₂, 1/4 #/sk FC. Circ 102 sk cmt.

— 12 1/4" hole

— TOL @ 4' 99'

— 8 5/8", 32#, S80# K55, STFC set @ 5000' w/2750 sk Cl. C cmt,
4% gel, 5 #/sk Salt, 5 #/sk gilsonite; 1/4 #/sk FC + 200 sk Cl. C cmt,
2% CaCl₂ + 1/4 #/sk FC. Circ 440 sk cmt.

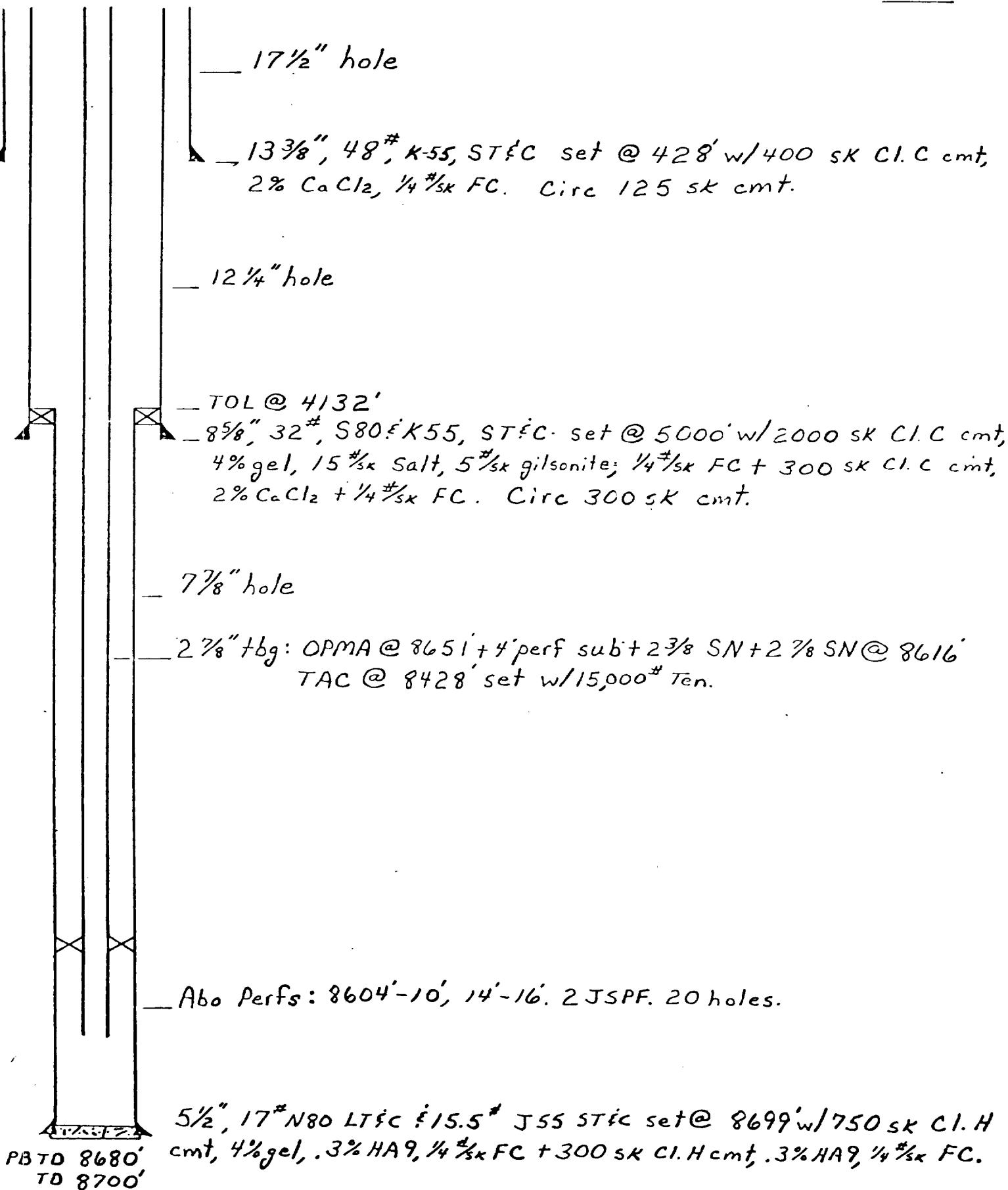
— 7 7/8" hole

— 2 7/8" tbg: CPMA @ 8847' + 4' perf sub + 2 3/8 SN + 2 7/8 SN @ 8811'
TAC @ 8435' set w/14,000# Ten.

— Abo Perfs: 8612'-17' 1JS PF. 6 holes. 8490'-97', 8518'-31' 1JS PF. 22 holes.

— 5 1/2", 17# 15.5#, K55, STFC set @ 9099' w/700 sk Cl. H cmt, 4% gel,
PB TD 8750' .3% HA9, 1/4 #/sk FC + 300 sk Cl. H cmt, .3% HA9, 1/4 #/sk FC.
TD 9100'

DATE 11-28-84 WELL NO. 258 LEASE North Vacuum FIELD Vacuum Abo
Abo Unit North
LOCATION 1993' FNL & 1915' FEL SIGNED R. W. Petty G.L. 4022'
Sec. 13, T17S, R34E Lea County, New Mexico D.F. 4039'
K.B. 4040'
ZERO 18' AGL



DATE 2-7-85WELL NO. 275LEASE North Vacuum FIELD Vacuum Abo
Abo Unit NorthLOCATION 540' FSL & 660' FWL
Sec. 14 T17S, R34E
Lea County, New MexicoSIGNED R. W. PettyG.L. 4030'D.F. 4052'K.B. 4054'ZERO 16' AGL— 17 1/2" hole— 13 3/8", 48#, H40, STFC set @ 425' w/450 sk Cl. C cmt,
2% CaCl₂, 1/4 #/sk FC. Circ 120 sk cmt.— 12 1/4" hole— TOL @ 4196'— 8 5/8", 32#, S80# K55, STFC set @ 5000' w/4400 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— 7 7/8" hole— 2 7/8" +bg: OPMA @ 8738' + 4' perf sub + 2 3/8 SN + 2 7/8 SN @ 8704'
TAC @ 8457' set w/12,000# Ten.— Abo Perfs: 8616'-20', 35'-40', 52'-55'. 1 & 2 JSPF. 21 holes.

PB TD 8745'
 TD 8800'

— 5 1/2", 17# F15.5#, K55, ^{LTFC} STFC set @ 8794' 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. 50% to
75% returns during cmt job. Lost returns last 10 bbls displacement.

Lease Name & Code North Vacuum East Unit

Well # 11 WIW

API #

Field Name & Code

County

Lea

State New Mexico

Location Unit N. Section 18, 17-S, 35-E

660' FSL & 1902' FWL

spud date 10/28/71 completion date 11/29/71

DF _____ GL _____ KDB _____

orig. TD 8850' current TD 8850'

Initial Completion

Csg. & Cmt.

Perfs 8672-8722 (see below)

Logs GR-Collar-Corr

8-5/8:

@ 3200'

1400 sx Circ.

IP Data P161 BNO + 4 BLW/24 hrs.
GOR 1285 grav. 37.7 @ 60°Initial Stimulation

Acidized perfs w/10,000 gals. 15% NE acid

5-1/2"

Workovers

@ 8850'

1750 sx Circ.

Conversion to WIW 4/21/79

Cleaned w/1500 gal. xlene

Perf 1 JSPF (8680-88, 8707-22 = 25 holes)

Set pkr. @ 8956'

Acidize perfs 8672-8722 w/5000 15% FE Hcl

Inj. Test

Completed, start inj. 5/2/79

Initial Abo Perfs(8672, 73, 75, 76, 81, 82, 83, 84,
85, 85, 91, 92, 8707, 09, 11, 13,
15, 17, 19, 20, 21, 22
@ 1 JSPF = 22 holes)Additional Perfs8680-8688 9 shots
8707-8722 16 shots

@ 1 JSPF = 25 Holes

TD = 8850

NOTES: Currently injector

Perfs - 47 shots in 31 different intervals

Last acidized 4/21/79

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

NO. OF COPIES RECEIVED	
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OPERATOR	

5a. Indicate Type of Lease
State ☒ Fee ☐

5. State Oil & Gas Lease No.

B-936

7. Unit Agreement Name

8. Farm or Lease Name

New Mexico "J" State

9. Well No.

4

10. Field and Pool, or Wildcat

Vacuum Abo N.

12. County

Lea

1a. TYPE OF WELL

OIL WELL ☒GAS WELL ☐DRY ☐

OTHER

b. TYPE OF COMPLETION

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

OTHER

2. Name of Operator

Exxon

3. Address of Operator

4. Location of Well

UNIT LETTER L LOCATED 2180 FEET FROM THE S LINE AND 660 FEET FROMTWP. W LINE OF SEC. 19 TWP. 17S RGE. 35E NMPM

15. Date Spudded

16. Date T.D. Reached

17. Date Compl. (Ready to Prod.)

18. Elevations (DF, RKB, RT, GR, etc.)

19. Elev. Casinghead

9-22-71

10-18-71

10-25-71

3995' DF

3983

20. Total Depth

21. Plug Back T.D.

22. If Multiple Compl., How Many

23. Intervals Drilled By

Rotary Tools

Cable Tools

8739'

8713'

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

8567'-8631'

25. Was Directional Survey Made

No

26. Type Electric and Other Logs Run

27. Was Well Cored

NO

28.

CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8 5/8"	24	1750'	11"	800 SX	
5 1/2"	14, 15.5, 17	8739'	7 7/8"	1625 SX	

29.

LINER RECORD

30.

TUBING RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET

31. Perforation Record (Interval, size and number)

8567'-74', 8580'-82', 8586'-88', 8605'-08',
8614'-22', 8624'-31'

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

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
8567'-8631'	12000 gals acid

33.

PRODUCTION

Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod. or Shut-in)	
10-22-71		Flow				Prod	
Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
10-26-71	24	2 1/2	→	370	64	20	173
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)	
125-175	215	→	370	64	20	36.1	

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

Test Witnessed By

35. List of Attachments

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

SIGNED

TITLE

DATE

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

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OPERATOR	

5a. Indicate Type of Lease
State ☒ Fee ☐

5. State Oil & Gas Lease No.
K-6023 B-2245

1a. TYPE OF WELL
OIL WELL ☒ GAS WELL ☐ DRY ☐ OTHER ☐

b. TYPE OF COMPLETION
NEW WELL ☐ WORK OVER ☐ DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER ☐

7. Unit Agreement Name

8. Farm or Lease Name
Staplin State A/c 2 Com.

2. Name of Operator
Marathon

3. Address of Operator

9. Well No.
1

4. Location of Well

10. Field and Pool, or Wildcat
Vacuum Abo N

UNIT LETTER F LOCATED 1980 FEET FROM THE W LINE AND 1980 FEET FROM

12. County
Lea

11. LINE OF SEC. 19 TWP. 17S RGE. 35E NMPM

15. Date Spudded 10-30-71 16. Date T.D. Reached 11-15-71 17. Date Compl. (Ready to Prod.) 11-22-71 18. Elevations (DF, RKB, RT, GR, etc.) 3783' GL 3993' KB 19. Elev. Casinghead 3981'

20. Total Depth 8800' 21. Plug Back T.D. 8760' 22. If Multiple Compl., How Many 23. Intervals Drilled By Rotary Tools Cable Tools

24. Producing Interval(s), of this completion - Top, Bottom, Name
Abo 8630' - 8689' OA

25. Was Directional Survey Made
TOTCO

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

28. CASING RECORD (Report all strings set in well)						
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD		AMOUNT PULLED
<u>9 5/8</u>	<u>29</u>	<u>498</u>	<u>11</u>	<u>195 SX</u>	<u>circ</u>	<u>-</u>
<u>7</u>	<u>24</u>	<u>3939</u>	<u>8 3/4</u>	<u>800 SX</u>	<u>circ</u>	<u>-</u>
<u>4 1/2</u>	<u>11.6</u>	<u>8800</u>	<u>6 1/4</u>	<u>625 SX</u>	<u>circ</u>	<u>-</u>

29. LINER RECORD				30. TUBING RECORD			
SIZE	TOP	BOTTOM	SACKS CEMENT	SIZE	DEPTH SET	PACKER SET	

31. Perforation Record (Interval, size and number)
8630'-36', 8649'-50', 8652'-53', 8666'-79', 8684'-89'.

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

DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
<u>8630'-8689'</u>	<u>10,000 gals 20% acid</u>

33. PRODUCTION

Date First Production <u>11-22-71</u>	Production Method (Flowing, gas lift, pumping - Size and type pump) <u>Flow</u>	Well Status (Prod. or Shut-in) <u>Prod</u>
Date of Test <u>11-22-71</u>	Hours Tested <u>24</u>	Choke Size <u>30/64</u>
Flow Tubing Press. <u>75</u>	Casing Pressure <u>0</u>	Calculated 24-Hour Rate <u>361</u>
Oil - Bbl. <u>361</u>	Gas - MCF <u>36</u>	Water - Bbl. <u>15</u>
Oil - Bbl. <u>361</u>	Gas - MCF <u>36</u>	Water - Bbl. <u>15</u>
Oil Gravity - API (Corr.) <u>35.4</u>		

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

35. List of Attachments

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

COUNTY LEA FIELD Vacuum, N. STATE NM 30-025-24032

OPR AZTEC OIL & GAS CO. (New Jacobs NVA WENTZ MAP 41)

1 Conoco - State

Sec 22, T-17-S, R-34-E

CO-ORD

660' FSL, 1880' FWL of Sec

Spd 2-28-72

Cmp 4-1-72

CLASS

EL

FORMATION	DATUM	FORMATION	DATUM
CSG & SX - TUBING			
8 5/8" at 1620' w/550 sx			
5 1/2" at 8899' w/1900 sx			
LOGS EL GR RA IND HC A			
TD 8900'; PBD 8848'			

IP (Abo) Perfs 8706-8812' P 136 BOPD. Pot based on 24 hr test.
GOR 904; Grav 37

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CONT. Cactus PROP DEPTH 8900' TYPE RT
DATE

F.R. 2-8-72; Opr's Elev. 4057' DF

PD 8900' RT (Abo)

Contractor - Cactus

3-6-72 Drlg. 4410' dolo

3-14-72 Drlg. 7215' sh

3-20-72 Drlg. 8420' dolo

3-28-72 TD 8900'; PBD 8848'; Prep Treat
Perf 8706-20', 8736-46', 8750-60', 8782-88',
8808-12'

Acid (8706-8812') 600 gals

4-3-72 TD 8900'; PBD 8848'; WO Potential

Acid (8706-8812') 10,000 gals

Ppd 136 BO in 24 hrs, GOR 904, Grav 37

4-10-72 TD 8900'; PBD 8848'; COMPLETE

LOG TOPS: Anhydrite 1593', Yates 3165',

LEA Vacuum, N. NM Sec 22,T17S,R34E
AZTEC OIL & GAS CO. 1 Conoco - State Page #2

4-10-72 Continued
Queen 3887', San Andres 4575', Glorieta
5924', Tubb 7520', Abo 8250'
4-15-72 COMPLETION REPORTED

Petroleum Information.

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COUNTY LEA FIELD Vacuum, N. STATE NM
 OPR COSEKA RESOURCES (U.S.A.), LTD Jeyaco API 30-025-24679
 NO 2 LEASE Conoco State (Cycles NVA West 24) MAP
 Sec 15, T17S, R34E COORD
 1980 FNL, 1980 FWL of Sec RE- 3-3-33 NM
 13 1/2 mi E/Maljamar RE-SPD 5-22-79 CMP 7-16-79

CSC	WELL CLASS. INIT DX FIN DO LSE. CODE			
	FORMATION	DATUM	FORMATION	DATUM
11 3/4-310-275 sx				
8 5/8-3130-470 sx				
5 1/2-8988-1200 sx				
	TD 9000 (ABO)		PBD 8889	

IP (Abo) Perfs 8761-89 P 6 BOPD + 5 BW. Pot based on 24 hr test. GOR 2833; gty 37

CONTR 4060 DF sub-s

3-15-82 F.R.C. 3-20-82 OWWO
 PD 8889 WO (Abo)
 (Orig. Taiga Energy, Inc., cmp 11-27-74 thru
 (San Andres) Perfs 4716-26, OTD 9000, OPB 4790)
 TD 9000; PBD 8889; Complete
 Sqzd (4716-26) 200 sx
 DO to 8889
 Perf (Abo) @ 8761, 8762, 8763, 8772, 8773,
 8782, 8785, 8787, 8789
 Acid (8761-89) 16,500 gals
 3-20-82 COMPLETION ISSUED

3-3-33 NM
 IC 30-025-70267-82

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

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OPERATOR	

5a. Indicate Type of Lease	
State ☒	Fee ☐
5. State Oil & Gas Lease No.	
B-3196	

1a. TYPE OF WELL	
OIL WELL ☒	GAS WELL ☐ DRY ☐ OTHER ☐
b. TYPE OF COMPLETION	
NEW WELL ☐ WORK OVER ☐	DEEPEN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ OTHER ☐

7. Unit Agreement Name	North Vacuum Abo West Unit
8. Farm or Lease Name	

2. Name of Operator	
Texaco	
3. Address of Operator	
4. Location of Well	

9. Well No.	3
10. Field and Pool, or Wildcat	
Vacuum Abo N.	

UNIT LETTER	L	LOCATED	1980	FEET FROM THE	S	LINE AND	660	FEET FROM
TRF	W	LINE OF SEC.	15	TWP.	17S	RGE.	34E	NMPM

12. County	Lea
------------	-----

15. Date Spud/Jed	16. Date T.D. Reached	17. Date Compl. (Ready to Prod.)	18. Elevations (DF, RKB, RT, GR, etc.)	19. Elev. Casinghead
9-23-73	10-15-73	10-29-73	4058' GR 4071' KB	4058'
20. Total Depth	21. Plug Back T.D.	22. If Multiple Compl., How Many	23. Intervals Drilled By	Rotary Tools
9003'	8967'			Cable Tools

24. Producing Interval(s), of this completion - Top, Bottom, Name	25. Was Directional Sur Made
8836'-8860' Abo	NO

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

28. CASING RECORD (Report all strings set in well)					
CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
11 3/4"	42#-H40	309'	15"	250 SX	-
8 5/8"	32#-K55	3120'	11"	400 SX	-
5 1/2"	17#-N80	9003'	7 7/8"	1250 SX	-

29. LINER RECORD				30. TUBING RECORD			
SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET

31. Perforation Record (Interval, size and number)	32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
	DEPTH INTERVAL	AMOUNT AND KIND MATERIAL USED
	8836'-60'	

33. PRODUCTION							
Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)				Well Status (Prod. or Shut-in)	
10-26-73		Swab & Flow				Prod	
Date of Test	Hours Tested	Choke Size	Prod'n. For Test Period	Oil - Bbl.	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
10-29-73	24	3/4"		197	205	84	1041
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API (Corr.)	
125	0		197	205	84	37	

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

35. List of Attachments

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

SIGNED _____ TITLE _____ DATE _____

COUNTY LEA FIELD Vacuum, N. STATE NM 30-025-23735

OPR AZTEC OIL & GAS CO. MAP

1 State "NV" (new JACO's NVA unit 24) #4

Sec 15, T-17-S, R-34-E CO-ORD

660' FSL, 2180' FWL of Sec

Spd 3-24-71 CLASS EL 4064E

Cmp 4-22-71

	FORMATION	DATUM	FORMATION	DATUM
CSG & SX TUBING				
8 5/8" at 1710' w/750 sx				
5 1/2" at 8984' w/2475 sx				

LOGS EL GR RA IND HC A

TD 8984'; PBD 8948'

IP (Abo) Perfs 8774-8812' F 260 BOPD. Pot based on 24 hr test thru 1/2" chk; COR 306; Grav 41; CP Pkr; TP 105#.

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CONT. Moran PROCP DEPTH 9000' TYPE RI
DATE

F.R. 3-23-71; Opr's Elev. 4048' GL
PD 9000' RI (Abo)
Contractor - Moran
5-6-71 AMEND FIELD NAME, Formerly reported as Undesignated.
3-30-71 Drlg. 4535' dolo
4-5-71 Drlg. 6780' lm & sd
4-13-71 Drlg. 8675' lm & sh
4-20-71 TD 8984'; Prep Perf
4-26-71 TD 8984'; PBD 8948'; Tstg
Perf 8774-88', 8790-94', 8802-12'
Acid (8774-8812') 10,000 gals (15% Ret)
Flwd 103 EO in 24 hrs thru 1/2" chk, TP 100#
5-3-71 TD 8984'; PBD 8948'; COMPLETE
LOG TOPS: Anhydrite 1630', Queen 3920', San
Andres 4660', Clorieta 6000', Tubb 7523', Ato 8220'
5-6-71 COMPLETION REPORTED

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LEA FIELD Vacuum, N. STATE NM

COUNTY LEA FIELD Vacuum, N. STATE NM

OPR EXXON CORP. (New Jyaco's NVA West #7) API 30-075-25001

NO 2 LEASE New Mexico "CO" STATE SERIAL 10-1-17 NM

Sect 22, T17S, R34E MAP

2020' ENL, 1980' FWL of S&S CO-ORD

3 mi NW/Buckeye ELEV 55

SPD 8-9-76 CMP 8-11-76 WELL CLASS: INT D FIN D0

CSG

FORMATION	DATUM	FORMATION	DATUM
8 5/8" at 1665' w/1100 sx			
5 1/2" at 8900' w/1550 sx			
TD 8900' (ASO)		PBD 8877'	

IP (Abc) Perfs 8711-8867' P 126 EOPD + 27 BW. Flt based on 24 hr test. GOR 833; gty 34.1

CONTR And OPR'S ELEV 4056' CL 4077' KE PO 9000' RI

E.R. 7-26-76
(Abc)

8-2-76 AMEND FOOTAGE: Formerly reported as 1839' ENL.
1839' FWL of S&S

8-2-76 AMEND LOCATION: Formerly reported as 1980' ENL,
1980' FWL of S&S

8-2-76 TD 1665': Prep Drill

8-16-76 Drlg 4862'

8-10-76 Drlg 7113'

8-10-76 Drlg 8800'

8-1-76 ID 8900'; PED 8877'; Prep Perf

9-12-76 ID 8900'; PBD 8877'; RUP
Perf (Abc) 8711-8867' w/65 shots (overall)
Acid (8711-8867') 20,000 gals

10-1-17 NM

COUNTY LEA FIELD Vacuum, N. STATE NM 30-025-24064
 OPR AZTEC OIL & GAS CO. (New Infaco's NVA Unit 74 map # 9)
 1 Conoco "AZ" State Com
 Sec 22, T-17-S, R-34-E CO-ORD
 1874' FSL, 766' FWL of Sec
 Spd 3-25-72
 Cmp 4-22-72

	CLASS		EL	
	FORMATION	DATUM	FORMATION	DATUM
CSG & SX - TUBING				
13 3/8" at 332' w/375 sx				
8 5/8" at 3110' w/600 sx				
4 1/2" at 8933' w/1100 sx				
LOGS EL GR RA IND HC A				
	TD 8933'			

IP (Abo) Perfs 8762-8850' P 122 BOPD. Pot based on 24 hr test.
 GOR 772; Grav 37

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CONT. Cactus PROP DEPTH 8900' TYPE RT
 DATE

F.R. 3-20-72; Opr's Elev. 4057' GL
 PD 8900' RT (Abo)
 Contractor - Cactus

3-28-72 Drlg. 2400'
 4-3-72 Drlg. 4872'
 4-11-72 Drlg. 8035'
 4-17-72 TD 8933'; Prep Perf
 4-24-72 TD 8933'; TO Pmp
 Perf 8762-68', 8791-98', 8810-22', 8840-50',
 Acid (8762-8850') 10,500 gals (20%)
 Ppd 122 BO in 24 hrs, COR 94

5-1-72 TD 8933'; COMPLETE
 LOG TOPS: Anhydrite 1596', Yates 3190',
 Queen 3811', San Andres 4650', Glorieta
 3998', Tubb 7525', Abo 8240'

5-6-72 COMPLETION REPORTED

COUNTY LEA FIELD VACUUM, N. STATE NM 30-025-23887
 OPR TEXACO INC. MAP
4 New Mexico "D" State NCT-1 (New NVA unit at 4 18)
Sec 27, T-17-S, R-34-E CO-ORD
1980' FNI, 1980' FWL of Sec
Spd 9-16-71 CLASS EL 4058'
Cmp 10-24-71

CSG & SX - TUBING

8 5/8" at 1650' w/850 sx
 5 1/2" at 8800' w/2630 sx.

LOGS EL GR RA IND NC A

TD 8800'; FPD 8768'

IP (Abo) Perfs 8651-8722' P 129 BOPD + 4 BW. Tot based on 24
 hr test. COR 927; Grav 39.8.

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CONT. DATE PROCP DEPTH 8800' TYPE SI

F.R. 9-21-71; Opr's Elev. 4058' RF
 PD 8800' RT (Abo)
 11-18-71 AMEND FIELD NAME, Formerly reported as Undesignated
 9-20-71 Drlg. 925' redbed
 9-27-71 Drlg. 3630' anhy
 10-4-71 Drlg. 6110' dolc
 10-11-71 Drlg. 7655' lm
 10-18-71 Drlg. 8280' lm
 10-25-71 TD 8800'; FPD 8768'; Swbg
 Perf @ 8651', 8653', 8671', 8678', 8682',
 8689', 8709', 8715', 8718', 8722' w/2 SPI
 Acid (8651-8722') 10,000 gals
 Swbd 30 ENC + 162 BLW in 19 hrs
 11-1-71 TD 8800'; FPD 8768'; TO Pmp
 Ppd 394 BNO + 254 BLW in 72 hrs (8651-8722')

COUNTY LEA FIELD Vacuum, N. STATE NM 30-025-23916

OPR TEXACO INC.

MAP

7 New Mexico "D" State NCT-1 (Now known NYAWAT Ut # 22)

Sec 27, T-17-S, R-34-E

CO-ORD

760' FSL, 1980' FWL of Sec

Spd 1-2-72

CLASS

EL

Cmp 2-1-72

FORMATION

DATUM

FORMATION

DATUM

CSG & SX TUBING

8 5/8" at 1650' w/1050 sx

5 1/2" at 8800' w/2400 sx.

LOGS EL GR RA IND HC A

TD 8800'

IP (Abo) Perfs 8654-8739' P 161 BOPD + 8 BW. Pot based on 24
hr test. GOR 775; Grav 36.5.

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CONT. Moran

PROP DEPTH 8800'

TYPE RT

DATE

F.R. 10-26-71; Opr's Elev. 4041' GL

FD 8800' RT (Abo)

Contractor - Moran

1-3-72

Drlg. 1592'

1-10-72

Drlg. 4714' lm

1-17-72

Drlg. 7468' lm

1-24-72

TD 8800'; Prep run casing

1-31-72

TD 8800'; TO Pmp

Perf @ 8654', 8663', 8665', 8682', 8687',

8691', 8695', 8703', 8712', 8718', 8721',

8730', 8734', 8739' w/2 SPI

Acid (8654-8739') 10,000 gals

Ppd 14 BNO + 181 BLW in 26 hrs

2-7-72

TD 8800'; TO Pmp

Ppd 161 BO + 8 BLW in 24 hrs

MOBIL PRODUCING TEXAS & NEW MEXICO, INC.
NORTH VACUUM ABO UNIT
WELL NOS. 121, 129, 139, 142, 143,
149, 155, 163, 203, 204,
206, 209 & 230
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
	30C
	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 *WSW* - 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	31.6
SODIUM	(NA), CALC.	1.9	43.8

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
	30C
	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

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	.1
MANGANESE	(MN)	NOT RUN

IONIC STRENGTH (MOLAL) = 9E-03

SCALING INDEX	TEMP
	30C
	86F
CARBONATE INDEX	1.65
CALCIUM CARBONATE SCALING	LIKELY
CALCIUM SULFATE INDEX	-18.
CALCIUM SULFATE SCALING	UNLIKELY

MOBIL PRODUCING TEXAS & NEW MEXICO INC.
NORTH VACUUM ABO UNIT
WELL NOS. 121, 129, 139, 142, 143
149, 155, 163, 203, 204 206
209 & 230
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.
P. O. Box 1610
Midland, Texas 79702

Shell Western E & P., Inc.
P. O. Box 2463
Houston, Texas 77001

Exxon
P. O. Box 1600
Midland, Texas 79702

Texaco, Inc.
P. O. Box 728
Hobbs, New Mexico 88240

Marathon Oil Co.
P. O. Box 2409
Hobbs, New Mexico 88240

SURFACE OWNER

New Mexico State Land Office
P. O. Box 1148
Santa Fe, New Mexico 87501

Mobil Producing Texas & New Mexico Inc.

December 17, 1985

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

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. 121, 129, 139,
142, 143, 149, 155, 163,
203, 204, 206, 209 & 230
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,

with

J. 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 ☒ Certified ☐ Express Mail	Article Number <i>P547380688</i>
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee <i>X</i> <i>Robert</i>	6. Signature - Agent <i>X</i>
7. Date of Delivery <i>DEC 19 1985</i>	
Addressee's Address (ONLY if requesting Restricted Delivery)	

Mobil Producing Texas & New Mexico Inc.

December 17, 1985

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Exxon
P. O. 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. 121, 129, 139,
142, 143, 149, 155, 163,
203, 204, 206, 209 & 230
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,

mill
e
g. Manager

SENDER: Complete items 1, 2, 3 and 4. Put your address in the "RETURN TO" space on the reverse. 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>Exxon</i> <i>P.O. Box 1600</i> <i>Midland, TX 79702</i>	
4. Type of Service: ☐ Registered ☐ Certified ☐ Express Mail	Article Number <i>P549380684</i>
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee <i>X</i>	
6. Signature - Agent <i>X</i> <i>[Signature]</i>	
7. Date of Delivery <i>DEC 17 1985</i>	
8. Addressee's Address (ONLY if registered and fee paid) <i>Exxon</i> <i>P.O. Box 1600</i> <i>Midland, TX 79702</i>	

Mobil Producing Texas & New Mexico Inc.

December 17, 1985

P.O. BOX 633
MIDLAND TEXAS 79702

MIDLAND DIVISION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Marathon Oil Co.
P. O. 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. 121, 129, 139,
142, 143, 149, 155, 163,
203, 204, 206, 209 & 230
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,

C. E. Smith

le
g. 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: Marathon Oil Co. P.O. Box 2409 Hobbs, N.M. 88240	
4. Type of Service: ☐ Registered ☐ Insured ☐ Certified ☐ COD ☐ Express Mail	Article Number P547380683
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature & Address X <i>C. E. Smith</i>	6. Signature - Agent X
7. Date of Delivery 12-20-85	8. Addressee's Address (ONLY if requested and fee paid)

Mobil Producing Texas & New Mexico Inc.

December 17, 1985

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Shell Western E & P., Inc.
P. O. Box 2463
Houston, Tx. 77001

7.01
NOTICE OF APPLICATION FOR
WATER INJECTION WELLS
MOBIL PRODUCING TX. & N.M., INC.
NORTH VACUUM ABO UNIT
WELL NOS. 121, 129, 139,
142, 143, 149, 155, 163,
203, 204, 206, 209 & 230
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,

P. C. Smith

J. 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>Shell Western E & P. Inc. P. O. Box 2463 Houston, TX 77001</i>	
4. Type of Service: ☐ Registered ☐ Certified ☐ Express Mail	Article Number <i>P547 380 682</i>
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee <i>[Signature]</i>	6. Signature - Agent <i>[Signature]</i>
7. Date of Delivery <i>DEC 23 1985</i>	8. Addressee's Address (ONLY if requested and fee paid)

Mobil Producing Texas & New Mexico Inc.

December 17, 1985

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Texaco, Inc.
P. O. 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. 121, 129, 139,
142, 143, 149, 155, 163,
203, 204, 206, 209 & 230
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,

B. B. Smith

te
ag. 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>Texaco, Inc. P.O. Box 728 Hobbs, N.M. 88240</i>	
4. Type of Service: ☐ Registered ☐ Insured ☐ Certified ☐ COD ☐ Express Mail	Article Number <i>P547380686</i>
Always obtain signature of addressee or agent and DATE DELIVERED.	
5. Signature - Addressee <i>X B. B. Smith</i>	6. Signature - Agent <i>X</i>
7. Date of Delivery <i>12-24-85</i>	
8. Addressee's Address (ONLY if requested and fee paid)	

Mobil Producing Texas & New Mexico Inc.

December 17, 1985

P.O. BOX 633
MIDLAND, TEXAS 79702

MIDLAND DIVISION

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

New Mexico State Land Office
P. O. 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. 121, 129, 139,
142, 143, 149, 155, 163,
203, 204, 206, 209 & 230
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,

Smith

te
leg. 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>New Mexico State Land Office P.O. Box 1148 Santa Fe, New Mexico 87501</i>	
4. Type of Service: ☐ Registered ☐ Insured ☒ Certified ☐ COD ☐ Express Mail	Article Number <i>9547380 689</i>
Always obtain signature of addressee or agent and DATE DELIVERED. <i>7/1</i>	
5. Signature of Addressee <i>Maric Macosuma</i>	6. Signature - Agent <i>X</i>
7. Date of Delivery DEC 23 1985	
8. Addressee's Address (ONLY if requested and fee paid)	

Mobil Producing Texas & New Mexico Inc.

December 17, 1985

P.O. BOX 633
MIDLAND TEXAS 79702

MIDLAND DIVISION

County Clerk
Ms. Pat Snipes
Post Office 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
WELL NOS. 121, 129, 139, 142, 143,
149, 155, 163, 203, 204, 206, 209
AND 230
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,

C.C. Smith

for - G. E. Tate
Environmental & Regulatory Manager

CCS/jp

Attachments

cc: Oil Conservation Division (w/attach)

A:M535231A.CCS

LEGAL NOTICE
APPLICATION FOR
AUTHORIZATION TO INJECT

1. Mobil Producing Tx. & N.M. Inc,
P.O. Box 633, Midland, Texas 79702
Attention Charlene Smith,
915/688-1776 will apply for permis-
sion to inject Fresh Water into the
following well/wells for the purpose
of: Secondary Recovery.

2. Well Name and Number:
North Vacuum Abo Unit #121
1930 FSL & 860 FWL
Sec. 13, Unit L, 17-S, 34-E

North Vacuum Abo Unit #139
1980 FSL & 860 FWL
Sec. 14, Unit L, 17-S, 34-E

North Vacuum Abo Unit #143
660 FNL & 1780 FEL
Sec. 27, Unit D, 17-S, 34-E

North Vacuum Abo Unit #155
560 FNL & 560 FWL
Sec. 23, Unit D, 17-S, 34-E

North Vacuum Abo Unit #203
660 FNL & 1780 FEL
Sec. 22, Unit B, 17-S, 34-E

North Vacuum Abo Unit #206
660 FNL & 660 FWL
Sec. 19, Unit D, 17-S, 34-E

North Vacuum Abo Unit #230
1880 FSL & 2130 FEL
Sec. 13, Unit J, 17-S, 34-E

North Vacuum Abo Unit #129
860 FNL & 1980 FEL
Sec. 23, Unit B, 17-S, 34-E

North Vacuum Abo Unit #142
1807 FSL & 1880 FEL
Sec. 14, Unit J, 17-S, 34-E

North Vacuum Abo Unit #149
1980 FSL & 1780 FEL
Sec. 27, Unit J, 17-S, 34-E

North Vacuum Abo Unit #163
1980 FSL & 1980 FEL
Sec. 15, Unit J, 17-S, 34-E

North Vacuum Abo Unit #204
660 FNL & 860 FWL
Sec. 24, Unit D, 17-S, 34-E

North Vacuum Abo Unit #209
1980 FSL & 1780 FEL
Sec. 22, Unit J, 17-S, 34-E

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 December 23, 1985.