NMOCD file

February 5, 1980

Application for Exception to Rule
303-C--Santa Fe Well No. 87, Vacuum,
North (Abo) and Vacuum (Wolfcamp)
Zones, Lea County, New Mexico

New Mexico Department of
Energy and Minerals
Oil Conservation Division (2)
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention: Mr. Joe D. Ramey,
Director

Gentlemen:

Phillips Petroleum Company requests administrative approval to downhole commingle production from the North (Abo) and the (Wolfcamp) zones in Well No. 87 on the Santa Fe Lease, located in Unit L, Section 31, T-17-S, R-33-E, Lea County, New Mexico.

The subject well was a triple completion in the Vacuum (Wolfcamp), North (Abo), and Glorieta zones, authorized by Commission Order No. R-2667. It is currently dually completed in the Glorieta and Wolfcamp with the Abo Zone shut in behind a packer. The Abo was shut down in 1966 as uneconomical to operate. Recent well tests of the Abo Zone produced 13 BOPD and prompted this application to commingle with the Wolfcamp.

The commingling would be accomplished by opening a side door port in the Wolfcamp tubing at 9983', allowing the Abo production to enter at that point. Fluid would be produced by a rod pump set above the perforated tubing. The bottom hole pressures and completion configuration are sufficient to prohibit any crossflow between zones. No problems are anticipated from precipitates in the commingled fluids. The productivity tests and expected decline indicate that the allocation of production should be assigned 90 percent to the Wolfcamp and 10 percent to the Abo.

The value of the produced hydrocarbons will not be decreased by commingling. Since the Abo Zone is shut in and believed to be an uneconomical single completion, this production will not be realized unless Phillips can downhole commingle. Ownership of the two zones to be commingled is common in all respects.

RECEIVED

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OIL CONSERVATION DIV.

All offset operators shown on the attached list have been notified of this request with a copy of this application.

This well meets all requirements of Rule 303-C, and the necessary supportive data are attached on the following pages.

Regards,

PHILLIPS PETROLEUM COMPANY
Original signed by
G.R. Smith

G. R. Smith
Reservoir Engineering Director

REW:skm
Attachments

cc: Oil Conservation Division ✓
Box 1980
Hobbs, New Mexico 88240

Attachments

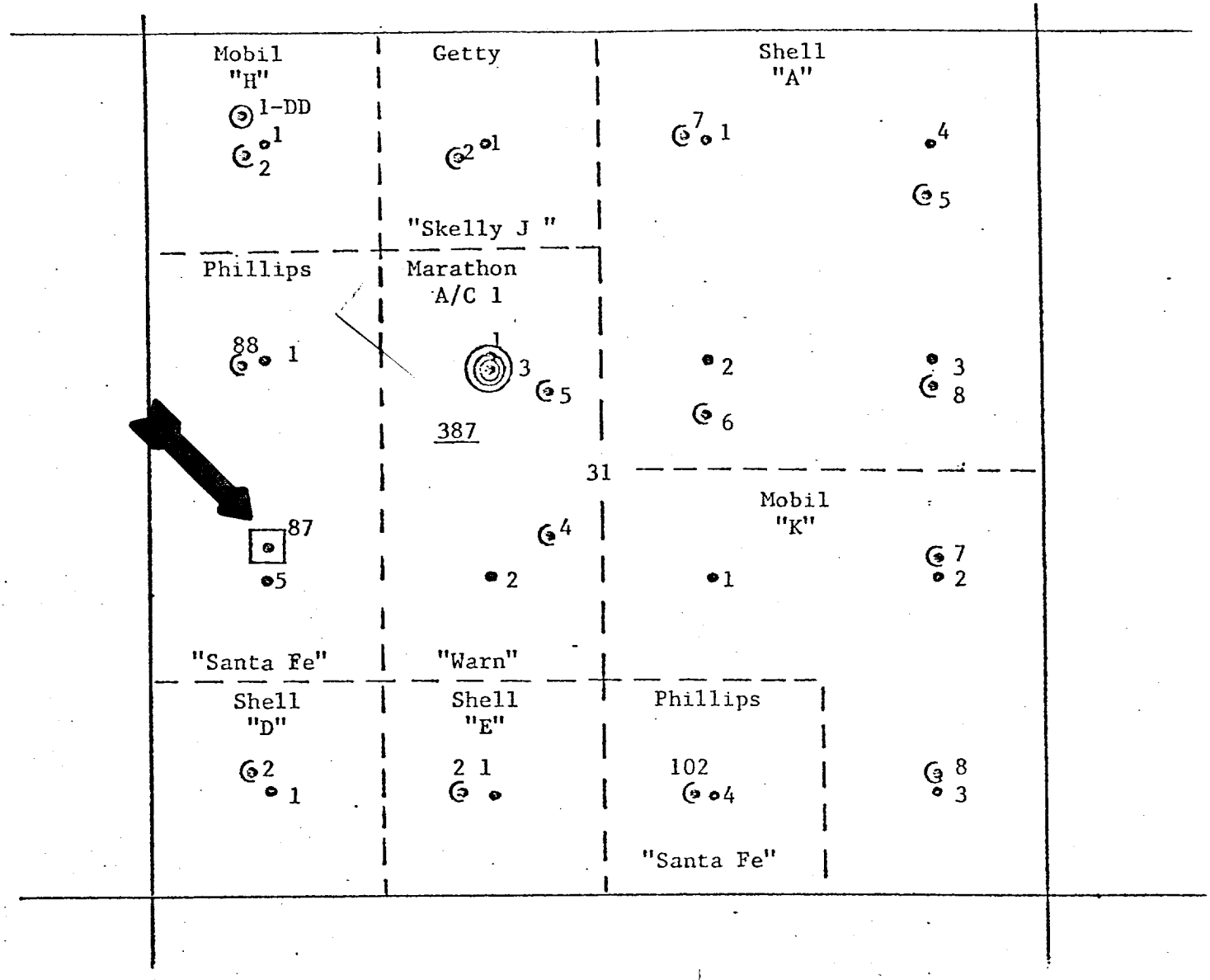
OFFSET OPERATORS
To
Phillips Petroleum Company
Santa Fe Well No. 87

Shell Oil Corporation
Attn: Division Production Manager
Mid-Cont. Division
P. O. Box 991
Houston, Texas 77001

Getty Oil Company
Attn: Audra B. Cary
P. O. Box 1231
Midland, Texas 79702

Mobil Oil Company
Attn: H. C. Patton
Nine Greenway Plaza, Suite 2700
Houston, Texas 77046

Texaco, Inc.
Attn: D. T. McCreary
P. O. Box 3109
Midland, Texas 79702



L E G E N D

North Vacuum Abo

Vacuum Grayburg - San Andres
(Texaco Central Vacuum Unit)

Vacuum - Glorieta

Triple - Vacuum(Wolfcamp,Penn) & North Vacuum (Abo)

Triple - Vacuum(Wolfcamp,Glorieta) & North Vacuum (Abo)

VACUUM FIELD
Lea County, New Mexico
Scale: 1"=1000'

EXHIBIT "A"
DATA SHEET

PHILLIPS PETROLEUM COMPANY
4001 PENBROOK STREET
ODESSA, TEXAS 79762

APPLICATION FOR EXCEPTION TO RULE 303(a) OF NEW MEXICO OIL CONSERVATION COMMISSION'S RULES & REGULATIONS ALLOWING DOWNHOLE COMMINGLING OF DUALLY COMPLETED OIL WELLS BY ADMINISTRATIVE PROCEDURE (ORDER NO. R-3845)

1. Lease Name: Santa Fe

2. Well No.: 87

3. Well Location: Unit L, 660 feet from West line, 2130 feet from South line of Section 31, Township 17-S Range 35-E, Lea County, New Mexico

4. Upper Zone: Vacuum, N. (Abo)

5. Completion Interval: 9162'-9300'

6. Lower Zone: Vacuum (Wolfcamp)

7. Completion Interval: 10006'-10016'

8. Triple Completion Authorized by Commission Order No. R-2667

9. Current Productivity Test Summary (Form C-116 attached)

	Vacuum N. Abo (Upper Zone)	Vacuum Wolfcamp (Lower Zone)
Producing Method	Shut-In	Pump
Oil Bbls/day	13	38
Gas Mcf/day	54	107
Water Bbls/day	33	43
GOR	4153	2816
GOR Limit	2000	2000

10. Bottom-hole Pressure of Upper Zone: 1100 PSI (est.)

11. Bottom-hole Pressure of Lower Zone: 1100 PSI (est.)

12. Fluid Characteristics of Each Zone: Both zones produce a compatible intermediate crude. Expect no problems from untreatable precipitates resulting from commingled production.

By: R. E. Williams

Date: January 15, 1980

EXHIBIT "B"

PHILLIPS PETROLEUM COMPANY
4001 PENBROOK STREET
ODESSA, TEXAS 79762

COMPUTATION OF RELATIVE
VALUES OF THE HYDROCARBON
PRODUCTIVE BEFORE AND
AFTER DOWNHOLE COMMINGLING
(STATEWIDE RULE 303-C-2-h)

LEASE AND WELL NUMBER: Santa Fe #87

	UPPER ZONE	LOWER ZONE	COMMINGLED
ZONE NAME	Vacuum, N. Abo	Vacuum Wolfcamp	
GRAVITY, API	38	37.8	37.8
SELLING PRICE/BBL.	32.40	32.40	32.40
DAILY PRODUCTION/BBL.	13	38	51
DAILY INCOME	421.20	1231.20	1652.40

TOTAL DAILY INCOME (ZONES SEPARATED) $ 1652.40

Net difference realized from downhole commingling based on current well test =

-0- /day--gain or loss.

REMARKS: The Abo zone is currently shut-in.

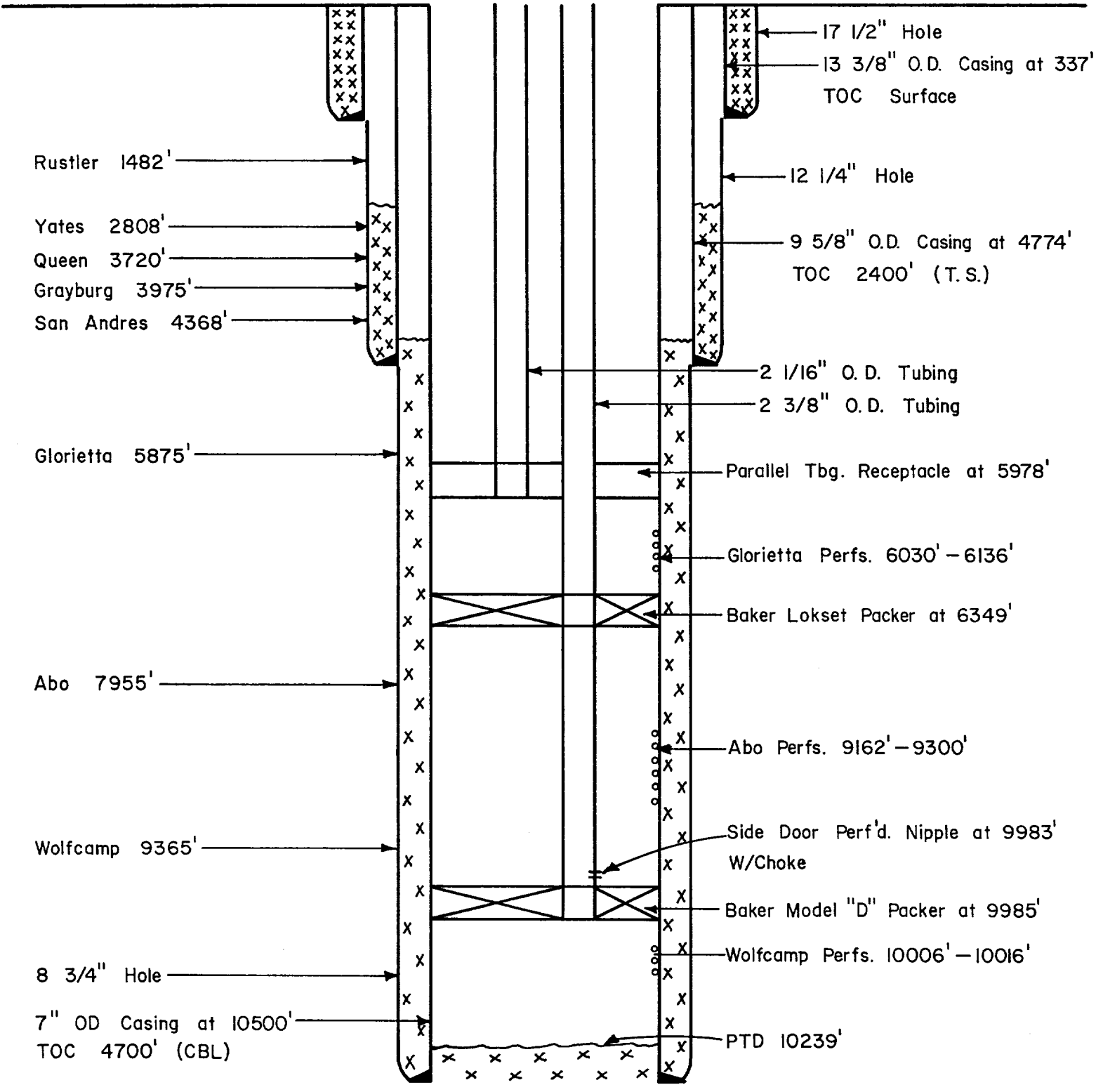
By: R. E. Williams

Date: January 15, 1980

PHILLIPS PETROLEUM COMPANY
SANTA FE WELL NO. 87

APPLICATION FOR EXCEPTION
TO RULE 303 (a)

WELLBORE SKETCH



NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
Phillips Petroleum Company	Vacuum, N. (Abo)	Lea

Address: Room 401, 4001 Penbrook Street, Odessa, Texas 79762

TYPE OF TEST - (X): Scheduled [ ] Completion [ ] Special [X]

LEASE NAME	WELL NO.	LOCATION U	LOCATION S	LOCATION T	LOCATION R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	PROD. DURING TEST GRAV. OIL	PROD. DURING TEST OIL BBLS.	PROD. DURING TEST GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL
Santa Fe	87	L	31	17	35	09-05-79	P			SI	24	33	38	13	54	4153

TESTED TO DETERMINE PRODUCING CAPACITY.

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

I hereby certify that the above information is true and complete to the best of my knowledge and belief.

R. E. Willian
(Signature)

Staff Reservoir Engineer
(Title)

January 15, 1980
(Date)

NEW MEXICO OIL CONSERVATION COMMISSION

GAS – OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
Phillips Petroleum Company	Vacuum (Wolfcamp)	Lea

Address: Room 401, 4001 Penbrook St., Odessa, TX 79762

TYPE OF TEST – (X): Scheduled [ ] Completion [ ] Special [X]

LEASE NAME	WELL NO.	LOCATION U	LOCATION S	LOCATION T	LOCATION R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	PROD. DURING TEST GRAV. OIL	PROD. DURING TEST OIL BBLS.	PROD. DURING TEST GAS M.C.F.	GAS – OI RATIO CU.FT/BE
Santa Fe	87	L	31	17	35	11-28-79	P			10	24	43	37.8	38	107	2816

Please adjust allowable.

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

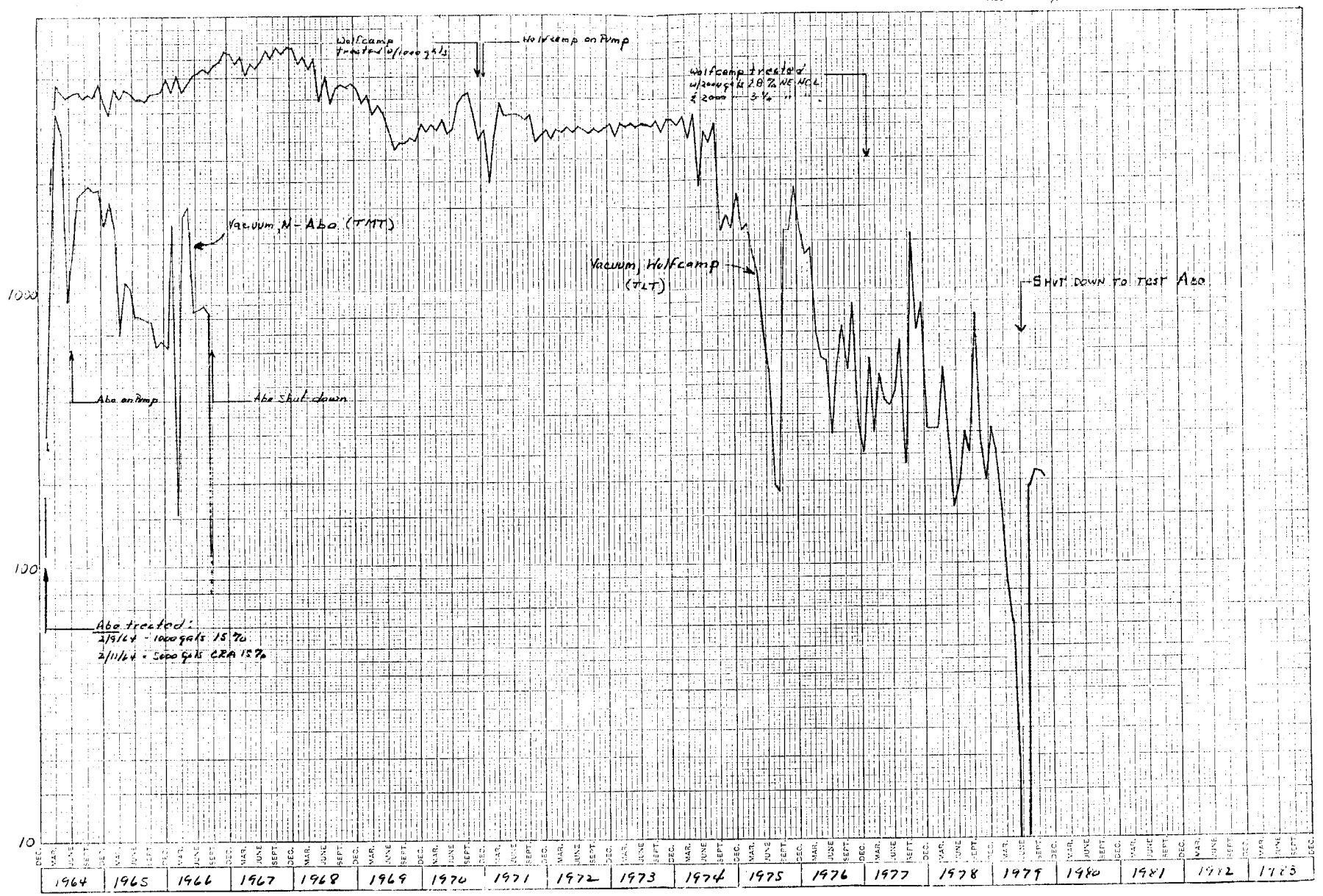
I hereby certify that the above informatio is true and complete to the best of my knov ledge and belief.

W. J. Mueller
(Signature)

Senior Engineering Specialist
(Title)

December 10, 1979

Santa Fe No 87
Vacuum Field
Lea County, New Mexico



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