



P.O. Box 2409  
Hobbs, New Mexico 88240  
Telephone 505/393-7106

DHC- 260

Due - 9/11/78

August 16, 1978

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

AUG 21 1978

ATTENTION: Mr. Joe D. Ramey, Secretary-Director

Gentlemen:

Re: Wellbore Commingling, Warn State A/C 1 Well No. 3, Vacuum Wolfcamp  
and Vacuum Upper Penn Pools, Lea County, New Mexico

Marathon Oil Company respectfully request administrative approval to permit downhole commingling of production from the Vacuum Wolfcamp and Vacuum Upper Pennsylvanian oil pools in the Warn State A/C 1 Well No. 3 located in Unit F, Section 31, Township 17-South, Range 35-East, Lea County, New Mexico.

✓ This well is a triple tubingless completion producing from Vacuum, North Abo; Vacuum Wolfcamp; and Vacuum Upper Pennsylvanian pools, Order No. MC-1509.

The Upper Pennsylvanian zone has depleted to the point where it is unable to flow without frequent swabbing. The other two zones, North Abo and Wolfcamp are currently being lifted via rod pump utilizing two Lufkin 228 pumping units.

In support of this request and in accordance with Rule 303, Paragraph C, the following facts and exhibits are submitted:

1. The attached plat shows the Warn State A/C 1 Lease and the location of Well No. 3.
2. Form C-116 showing current oil, water, and gas tests of Vacuum Wolfcamp and Vacuum Upper Penn pools.
3. Attached static bottom-hole pressure recording of the Vacuum Wolfcamp and Vacuum Upper Penn pools.
4. Attached production decline curves of each zone showing a steady rate of production decline.

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5. The produced fluids from these zones are currently commingled at the battery (Order No. PC-226, amended) and are known to be compatible. Since the oil is commingled at the surface, downhole commingling would not result in a reduction of oil value.
6. The ownership of the zones to be commingled is common.
7. Attached schematic diagrams of the wellbore showing the present completion and the proposed method of downhole commingling.
8. Downhole commingling will not jeopardize the efficiency of future secondary operations.
9. Copies of this application have been furnished to the offset operators.

Very truly yours,

*C. S. Hilton, Jr.*

C. S. Hilton, Jr.  
Operations Superintendent

AWR:mfm  
Enclosures

xc: Offset Operators  
Phillips Petroleum Company  
Phillips Building  
4th & Washington  
Odessa, Texas 79761

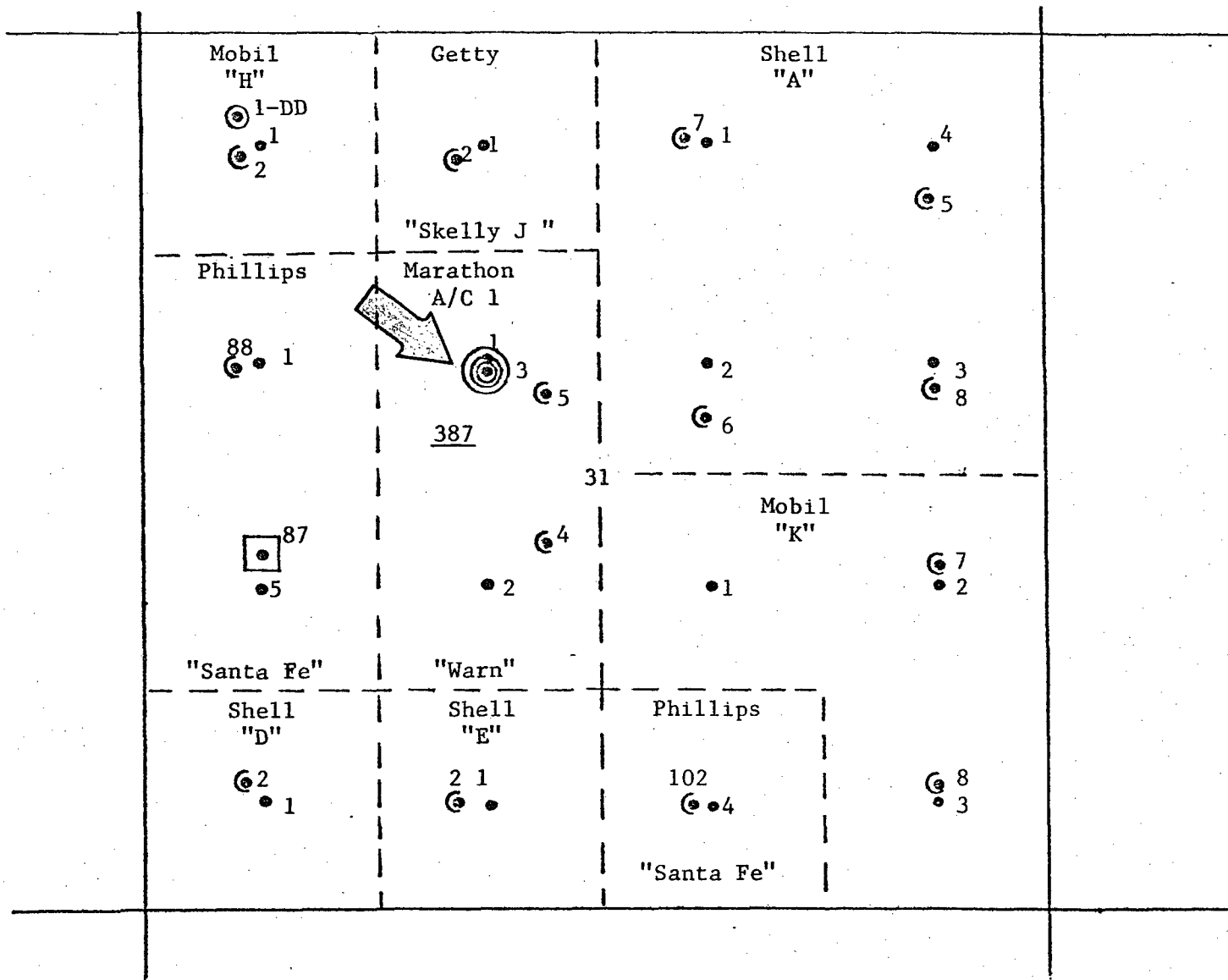
Mobil Oil Corporation  
P. O. Box 633  
Midland, Texas 79701

Getty Oil Company  
P. O. Box 1231  
Midland, Texas 79701

Shell Oil Company  
P. O. Box 1509  
Midland, Texas 79701

*wolfcamp 8 80 24 84 mcf 56*  
*Upper Penn 26 80 76 65 mcf 114*  
*34 149*

*Bottom of 10,031*



# LEGEND

- North Vacuum Abo
- Vacuum Grayburg - San Andres
- Vacuum - Glorieta
- ⊙ Triple - Vacuum(Wolfcamp, Penn) & North Vacuum (Abo)
- ◻ Triple - Vacuum(Wolfcamp, Glorieta) & North Vacuum (Abo)

SUBJECT WELL

MARATHON OIL COMPANY  
WARN STATE A/C 1 LEASE

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

AUG 21 1973

Santa Fe

**NEW MEXICO OIL CONSERVATION COMMISSION  
GAS-OIL RATIO TESTS**

C-116  
Revised 1-1-65

Operator <b>Marathon Oil Company</b>		Pool <b>Vacuum Upper Pennsylvanian</b>		County <b>Lea</b>										
Address <b>P. O. Box 2409, Hobbs, New Mexico 88240</b>				TEST - (X)										
LEASE NAME <b>Warn State A/C 1</b>				TYPE OF TEST - (X)										
WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	Completion <input type="checkbox"/>			Special <input checked="" type="checkbox"/>		
	U	S	T						R	PROD. DURING TEST				
									WATER DBLS.	GRAV. OIL DBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/DBL		
3	F	31	17S	35E	8-10-78	F 40/64	45	44	24	0	43	26	65	2,500

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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.

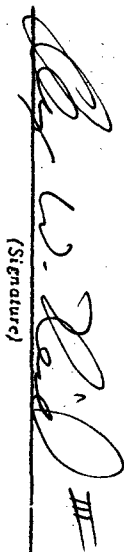
Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

Production Engineer

(Title)

August 17, 1978

  
(Signature)

C-116  
Revised 1-1-65

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

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

Null 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.

(Signature)  
Production Engineer

August 17, 1978<sup>(Title)</sup>

WARNER STATE A/C 1 Well No. 3  
 LEA COUNTY, NEW MEXICO  
 DATE: 8-8-78  
 ELEVATION: GL 3975'; DF 3988'  
 FORMATION: Upper Penn

SHUT IN PRESSURE DATA

<u>Depth</u>	<u>Pressure</u>	<u><math>\Delta</math> P</u>	<u>Gradient</u>
0	20		
6000	191	171	0.029
8000	829	638	0.319
9000	1138	309	0.309
9500	1337	199	0.398
9750	1459	122	0.488
10000	1581	122	0.488
10130	1641	60	0.462

PRESSURE @ DATUM -6100(10088) = 1641 PSI + (10088' - 10130')(0.462) = 1622 PSI.

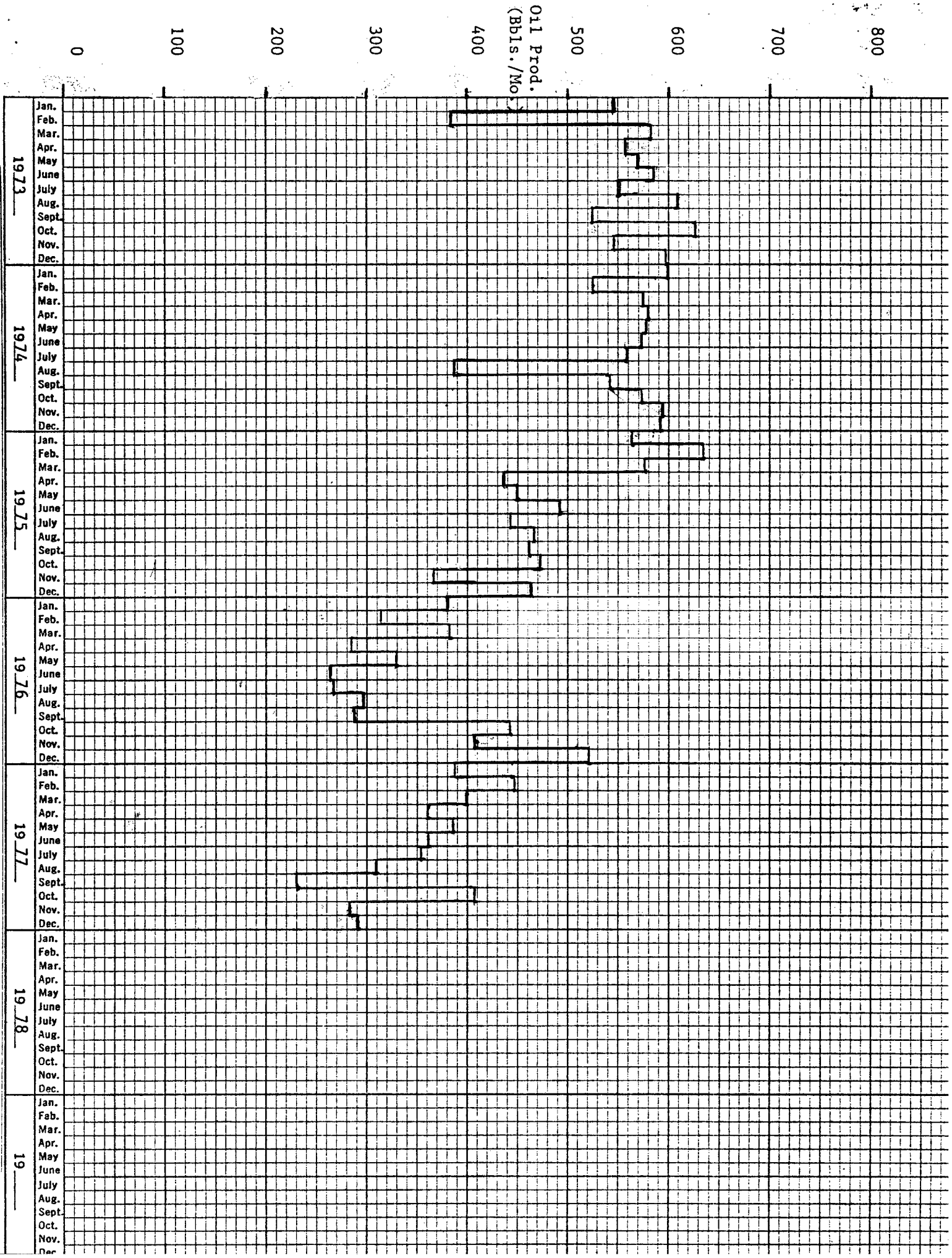
Remarks: 6-19-78 Tagged bottom at 10,210'.

WARN STATE A/C 1 Well No. 3  
LEA COUNTY, NEW MEXICO  
DATE: 8-14-78  
ELEVATION: GL 3975'; DF 3988'  
FORMATION: WOLFCAMP

SHUT IN PRESSURE DATA

<u>Depth</u>	<u>Pressure</u>	<u><math>\Delta</math> P</u>	<u>Gradient</u>
9250	541		
9500	640	99	0.396
9750	924	284	1.136

PRESSURE @ DATUM -5900(9888)=924 PSI + (9888'-9750')(1.136)= 1081 PSI



Warn State A/C 1 Well No. 3 (Wolfcamp)



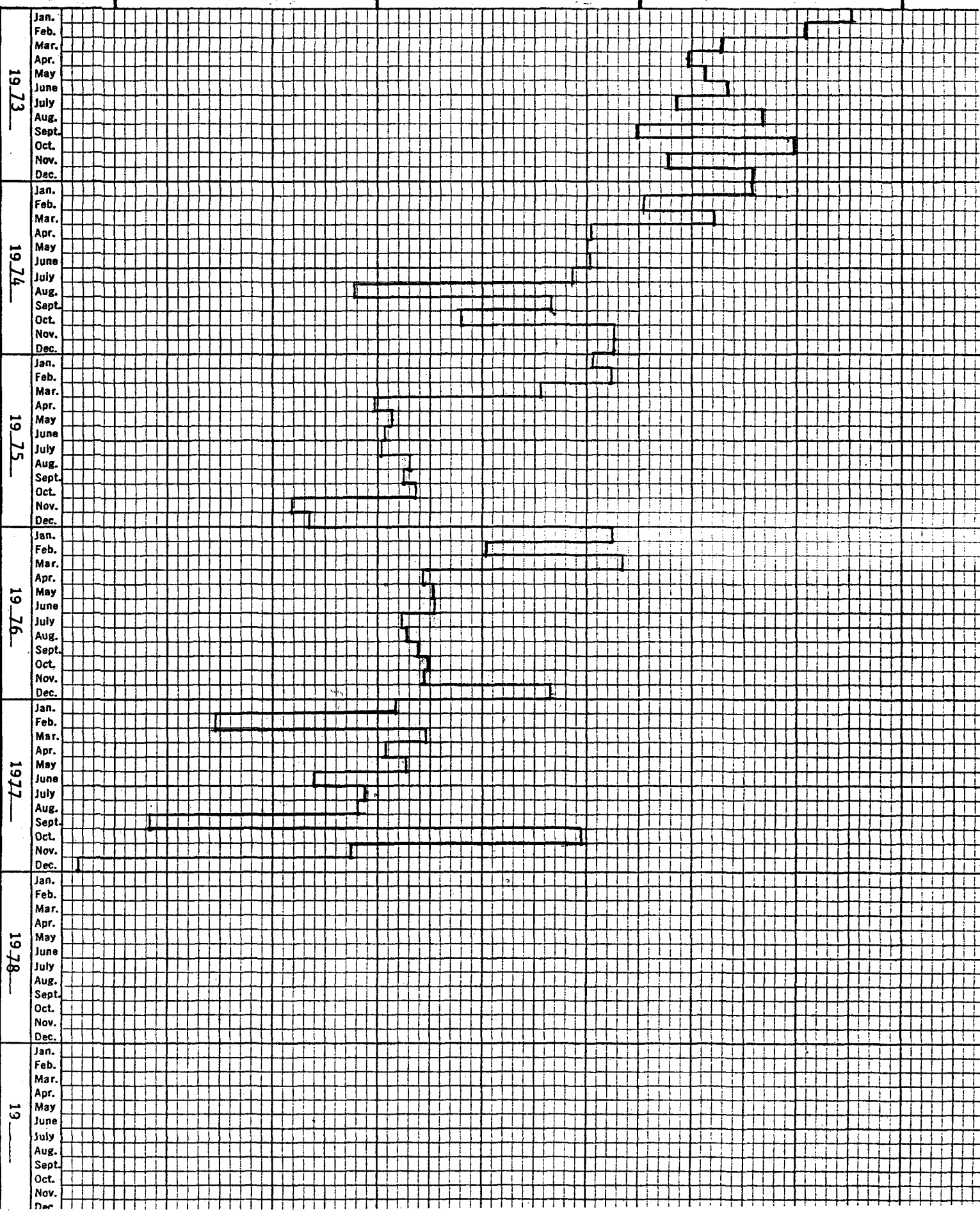
2000

1500

1000

500

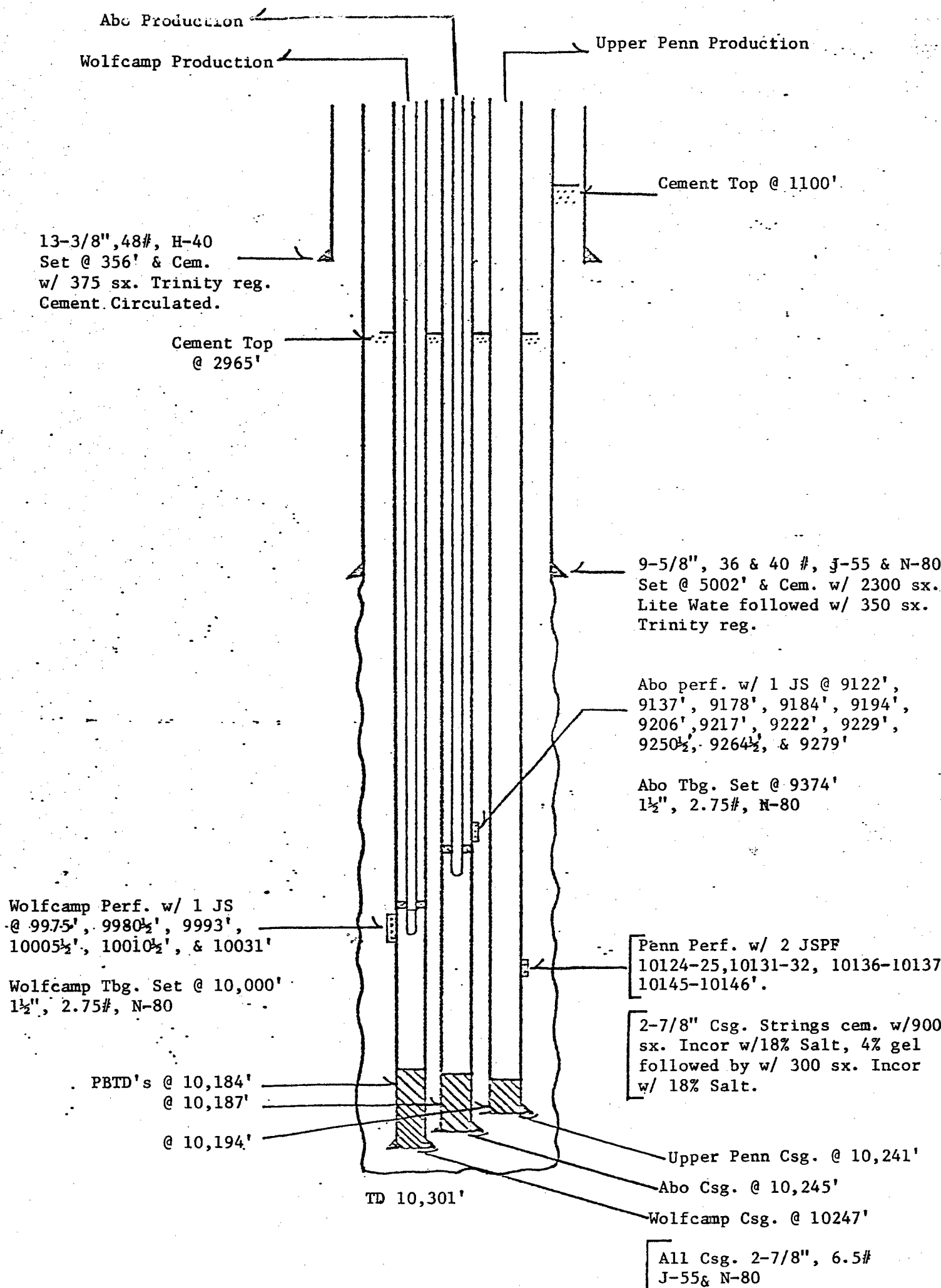
Oil  
Prod.  
(Bbls.  
/Mo.)



Warn State A/C 1 Well No. 3 (Upper Penn)

PRESENT COMPLETION:

St. Warn A/c 1, Well No. 3  
Unit F, Sec. 31, T-17-S, R-35-E 1908' FWL & 2080' FNL  
Lea County, New Mexico

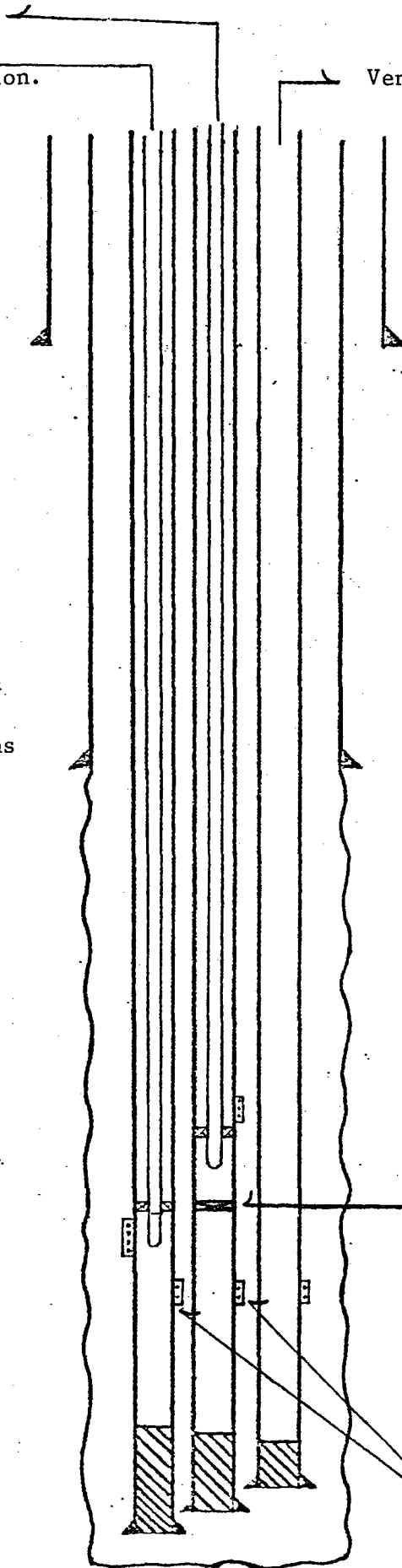


PROPOSED COMPLETION:

St. Warn A/c 1, Well no. 3  
Unit F, Sec. 31, T-17-S, R-35-E 1908' FWL & 2080' FNL  
Lea County, New Mexico

Abo Production  
Comingled Wolfcamp  
and Upper Penn. Production. Vent String

NOTE: All other specifications  
will remain unchanged.



Proposed Cast Iron  
Bridge Plug  
Set @ approx. 9450'

Proposed Comingling Perf.  
10124' - 10134' w/4 JSPF

OIL CONSERVATION COMMISSION  
HOBBS DISTRICT

OIL CONSERVATION COMMISSION  
BOX 2088  
SANTA FE, NEW MEXICO

DATE August 21, 1978

RE: Proposed MC \_\_\_\_\_  
Proposed DHC X \_\_\_\_\_  
Proposed NSL \_\_\_\_\_  
Proposed SWD \_\_\_\_\_  
Proposed WFX \_\_\_\_\_  
Proposed PMX \_\_\_\_\_

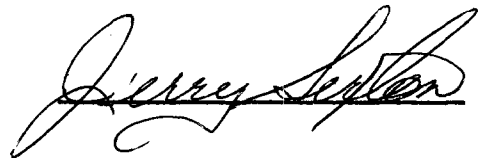
Gentlemen:

I have examined the application dated \_\_\_\_\_  
for the Marathon Oil Co. Warn State A/C 1 #3-F 31-17-35  
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

O.K.---J.S.

Yours very truly,



AUG 24 1978