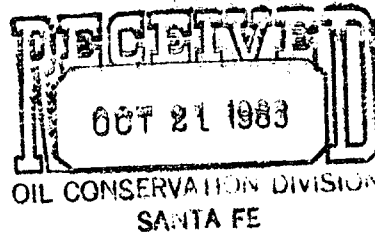




Sun Production Division
Southwestern District



**Sun Exploration and
Production Company**
901 W Wall
Post Office Box 1861
Midland Texas 79702
915 685 0300

October 13, 1983

Mr. Joe D. Ramey
Energy and Minerals Dept.
Oil Conservation Division
P. O. Box 2088
Santa Fe, N.M. 87501

Re: Application of Sun Exploration &
Production Company for approval of
downhole commingling of production
in the Elliott B-13 Well No. 2 (Unit
E, Sec 13, T-22-S, R-37-E), Drinkard
and Wantz Granite Wash Pools.

Dear Mr. Ramey:

Sun requests your administrative approval for an exception to Rule 303-A to permit down hole commingling of production in the subject well from the Drinkard and Wantz Granite Wash Pools.

Currently this is a dual completed well pumping from the Wantz Granite Wash formation and the Drinkard formation. Both zones are classified as oil zones. Ownership of the two zones is common. The total daily oil production from both zones before commingling does not exceed 50 barrels per day, and neither zone produces more water than the combined oil limit. Please note that our Walter Lynch No. 2L (Unit L, Sec 1, T-22-S, R-37-E) is already commingled in the Drinkard and Wantz Granite Wash as per Administrative Order DHC-272.

The additional information concerning this application as outlined in Rule 303-C is attached for your consideration.

Yours truly,

Coby Osborne
Production Engineer

CO/nc

cc: R. K. Beggs
Tom Golden
Fritz Brandes
Deann Kemp
Tom Fox
Well file

10/12/83

A. OPERATOR:

Sun Exploration and Production
Sun Production Division
P. O. Box 1861
Midland, Texas 79702

B. LEASE:

Elliott B-13 #2
Unit E, Sec. 13, T-22-S, T-37-E
Lea County, New Mexico

C. Well is completed in the Drinkard and Wantz Granite Wash as a dual completion as per Order No. MC-2250

D. The C-116 for both zones is attached.

E. Production decline curves for both the Drinkard and Wantz Granite Wash zones are attached.

F. BOTTOM HOLE PRESSURE DATA:

Drinkard: 24 hr. SIBHP - 745 psi (9/30/83)
Granite Wash: 41 hr. SIBP - 1070 psi (9/30/83)

G. FLUID CHARACTERISTICS:

There is no evidence of fluid incompatibility. Sun's Walter Lynch #2L is already downhole commingled in the Drinkard and Wantz Granite Wash pools.

H. VALUE OF COMMINGLED FLUIDS:

Because Drinkard and Granite Wash production is already surface commingled as per Administrative Order PC-528, the value of both crudes will not be affected by downhole commingling in Well #2.

I. ALLOCATION FORMULAS:

$$X = \frac{Y}{Z} (100)$$

where X = percent allocation of commingled production to desired zone.

Y = latest daily oil rate of desired zone, BOPD

Z = total combined Drinkard and Wantz Granite Wash daily oil rate, BOPD

Drinkard:

$$X = \frac{14}{14 + 22} (100) \\ = 38.9\%$$

Wantz Granite Wash:

$$X = \frac{22}{14 + 22} (100) \\ = 61.1\%$$

J. All offset operators have been notified by a copy of this application:

1) Gulf Oil Exploration and Production Co.

Box 670

Hobbs, New Mexico 88240

2) Sohio Petroleum Co.

Box 3000, Rankin Hwy.

Midland, TX 79702

3) Samedan Oil Corp.

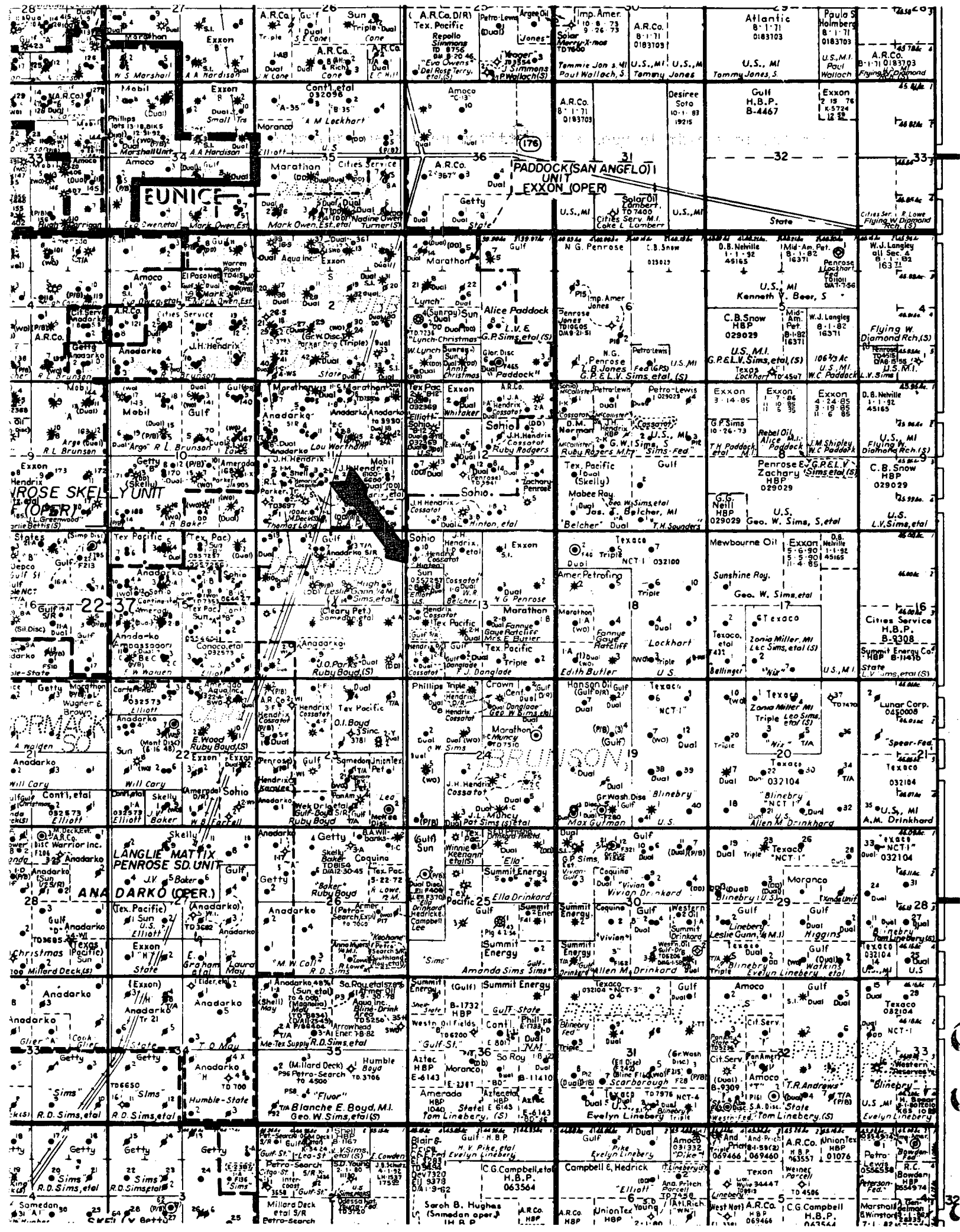
900 Wall Towers East

Midland, TX 79701

4) John H. Hendrix Corp.

525 Midland Tower

Midland, TX 79701



Elliott B-13 #2
Drinkard

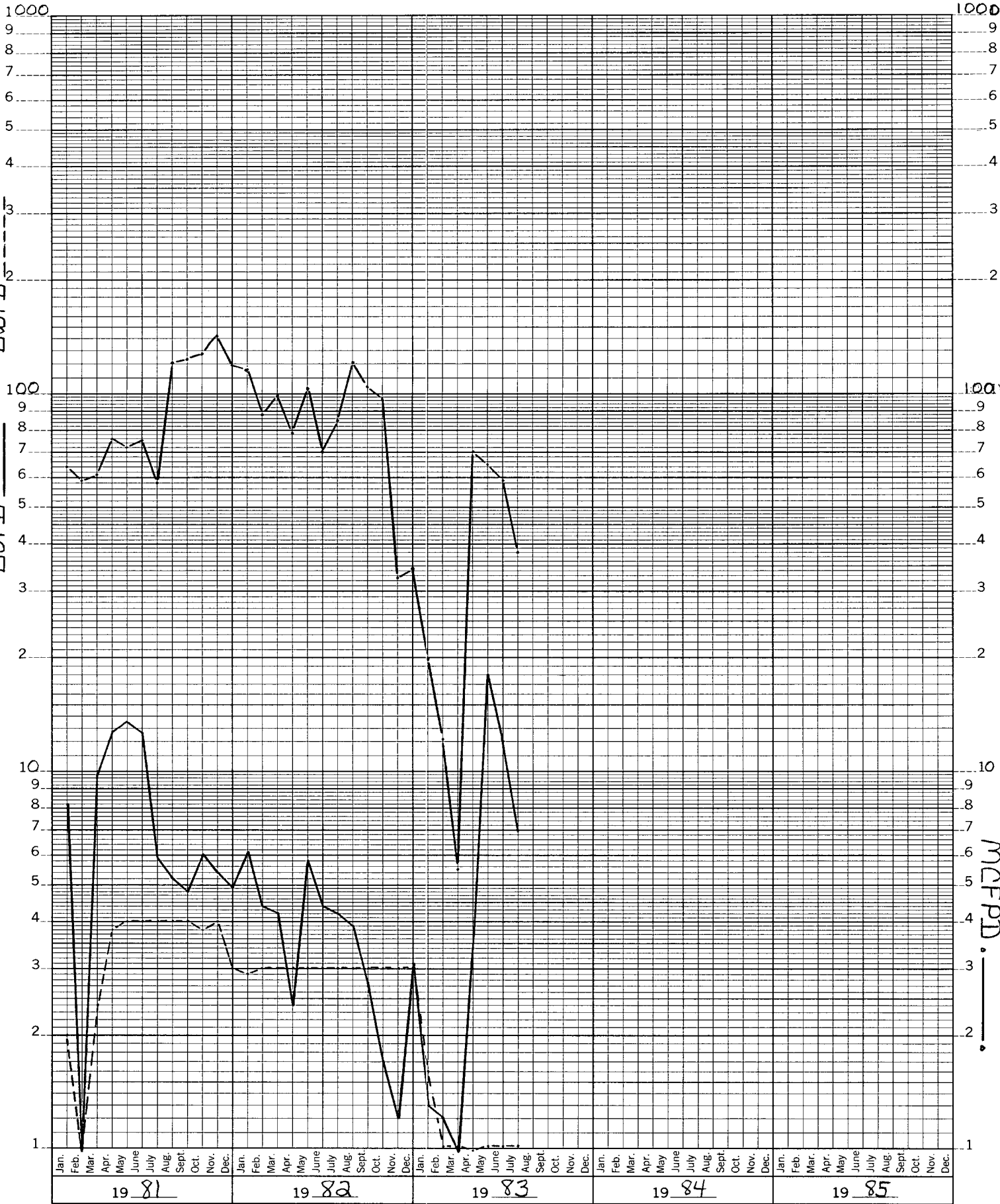
K&E 5 YEARS BY MONTHS x 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

BWPD

46 6690

BOPD

MCFPD

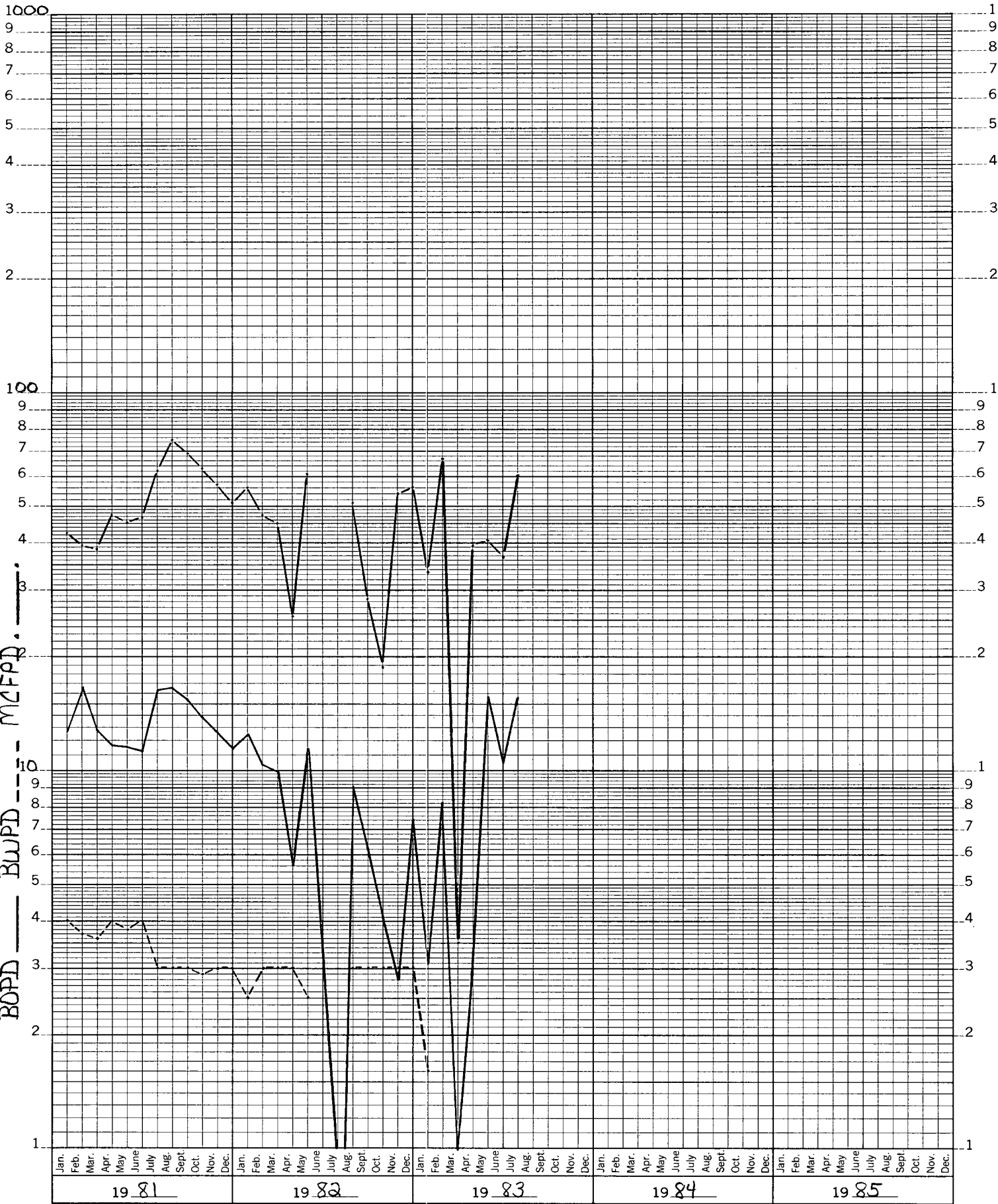


Elliott B-13 #2
Wantz Granite Wash

46 6690

KE 5 YEARS BY MONTHS X 3 LOG CYCLES
KEUFFEL & ESSER CO. MADE IN U.S.A.

BOPD --- BWPD --- MCFPD



ENERGY AND MINERALS DEPARTMENT

GAS-OIL RATIO TESTS

Operator		Pool		County		Lea							
Sun Exploration & Production		Linkard											
Address		P.O. Box 1861 Midland, Texas 79702		TYPE OF TEST - (X)		Scheduled ☒ Special ☐							
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	Completion ☐			GAS - OIL RATIO CU. FT./BBL.
		U	S	T						R	WATER BBLs.	PROD. GRAV. OIL	
Boyd	3	A	23	22	37	T.A.							
	5L	B	23	22	37	T.A.							
Cone, S.E.	1	J	26	21	37	3-8-83	F	17/64	28	1	24	0	55
	2	I	26	21	37	3-9-83	F	14/64	30	2	24	1	15
Lanclade	3	O	13	22	37	3-15-83	F	24/64	25	6	24	1	31
	2	J	15	22	37	4-12-83	F	52/64	22	Gas well	24	1	143
Elliott A-15	3	D	9	22	37	1-12-83	F	2"	35	14	24	8	33
	4	C	9	22	37	1-15-83	F	2"	100	6	24	3	208
Elliott B-9	2	D	12	22	37	4-12-83	F	32/64	55	Gas well	24	0	295
	21	E	13	22	37	4-13-83	F	2"	26	14	24	1	55
Elliott B-13	1	B	15	22	37	3-11-83	F	19/64	30	1	24	0	68
	4	A	15	22	37	3-12-83	F	26/64	110	Gas well	24	0	200

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 Division.

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.

Well original and one copy of this report to the district office of the New Mexico Oil Conservation Division in accordance with Rule 331 and appropriate pool rules.

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

SR. ENGR. TECH.

April 14, 1983

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator		Pool		County										
SUN OIL COMPANY		Wantz Granite Wash		Lea										
Address		P. O. Box 1861 Midland, Texas 79702		Type of Test - (X)										
				Scheduled ☒ Special ☐										
LEASE NAME	WELL NO.	LOCATION				DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT./BBL
		U	S	T	R						WATER BBLs.	GRAV. OIL BBLs.	GAS M.C.F.	
Elliott B-12	2	D	12	22	37	4-10-83	32/64	0	0	24	0	0	0	0
	2	E	13	22	37	4-11-83	2"	20	22	24	2	22	55	2,500
	1	N	1	22	37	4-18-83	2"	20	15	24	0	15	139	92,667
Annie Christmas DHC Permit # R-5482														
Walter Lynch	1	K	1	22	37	4-18-83	This well has a workover going at this time.							
	2	L	1	22	37	4-8-83	2"	20	16	24	0	8	100	12,500
	5	M	1	22	37	4-12-83	2"	18	16	24	1	5	18	3,600

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.

Jack McElroy
SR. ENGR. TECH. (Signature)

April 20, 1983
(Date)

KUYKENDALL BOTTOM HOLE PRESSURE SERVICE CO.

P.O. Box 11296 / A/C 915 563-5231 / Odessa, Texas 79760

BOTTOM HOLE PRESSURE REPORT

Operator Sun Exploration & Production Lease Elliott B-13 Well No. 2
Field Drinkard Reservoir Drinkard Datum MP 6394
Test Date September 30, 1983 Well Status Shut In Hours Shut In 24
Tubing 2-3/8 Depth 6773 End Packer 6771 S. N. 6771
Casing 7 Depth 7440 Perf. 6261 - 6528 Total Depth 7440

	Depth	Press. Lbs/Sq. In.	Δ Press	Gradient Lbs/Ft.
Tubing Press <u>572</u>	-0-	572		
Casing Press <u> </u>	2,000	600	28	.014
Top Of Fluid <u>None</u>	4,000	626	26	.013
Top Of Water <u> </u>	5,000	653	27	.027
Temp. <u> </u> °F @ <u> </u>	6,000	713	60	.060
Elev. KB <u>GI</u>	6,500	745	32	.064
Last Test Date <u> </u>				
Press. Last Test <u> </u>				
Change <u> </u> Per Day <u> </u>				
Inst. No. <u>38116</u> Cal <u>9-83</u>				
Tested By <u>Otwell</u>				
Calcu. By <u>Spruell</u>				
Prod. Index <u> </u> Bbls/Day/Lb. <u> </u>				
Drop <u> </u>				
Cumulative Prod <u> </u>				

Remarks:

KUYKENDALL BOTTOM HOLE PRESSURE SERVICE CO.

P.O. Box 11296 / A/C 915 563-5231 / Odessa, Texas 79760

BOTTOM HOLE PRESSURE REPORT

Operator Sun Exploration & Production Lease Elliott B-13 Well No. 2
 Field Drinkard Reservoir Granite Wash Datum MP 7378
 Test Date September 30, 1983 Well Status Shut In Hours Shut In 41
 Tubing 2-3/8 Depth End 7178 Packer 7207 S. N. 7179
 Casing 7 Depth 7440 Perf. 7321 - 7426 Total Depth

	Depth	Press. Lbs/Sq. In.	Δ Press	Gradient Lbs/Ft.
Tubing Press <u>10</u>	-0-	10		
Casing Press <u> </u>				
Top Of Fluid <u>4272</u>	2,000	13	3	.002
Top Of Water <u> </u>	4,000	15	2	.001
Temp. <u> </u> °F @ <u> </u>	6,000	603	588	.294
Elev. KB <u> </u> GI <u> </u>	7,000	942	339	.339
Last Test Date <u> </u>	+ 378	+ 128		
Press. Last Test <u> </u>				
Change <u> </u> Per Day <u> </u>				
Inst. No. <u>38116</u> Cal <u>9-83</u>	7,378	1,070	(Mid Perf.)	(.339)
Tested By <u>Otwell</u>				
Calcu. By <u>Spruell</u>				
Prod. Index <u> </u> Bbls/Day/Lb. <u> </u>				
Drop <u> </u>				
Cumulative Prod <u> </u>				

Remarks:

WELL COMPLETION SKETCHES SUN-5036-4-A

WELL

Elliott B-13 #2

FIELD

Drinkard/Granite Wash

DATE

10/11/83



PRESENT COMPLETION



SUGGESTED COMPLETION

PERMANENT WELL BORE DATA

DATA ON THIS COMPLETION

GL-3333

DF-3343

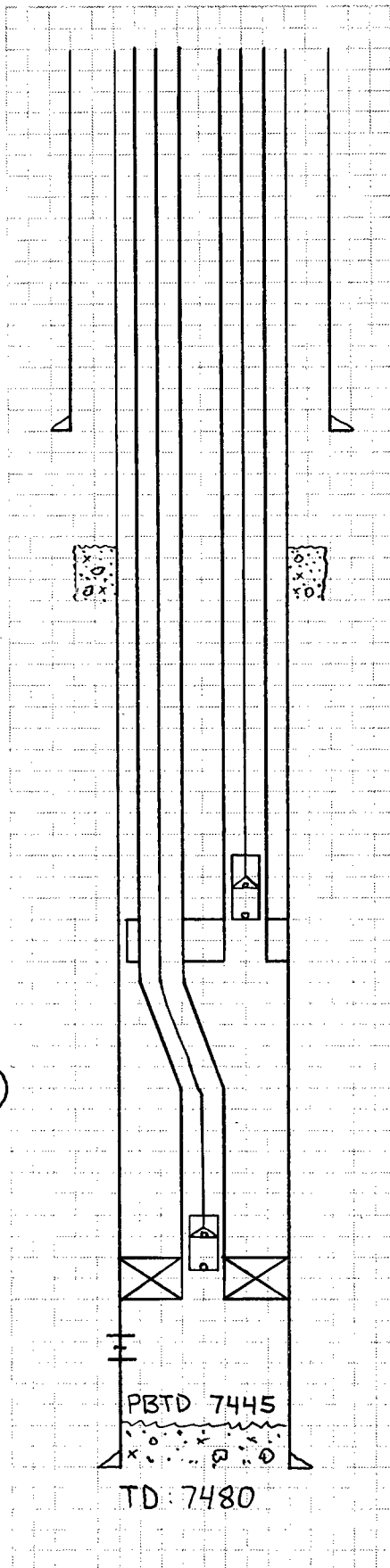
9⁵/₈" csg @ 1120

TOC-1200

Perfs 6261-7125 (Drinkard)

Perfs 7321-7426
(Granite Wash)

7", 23 + 26 # csg @ 7480



2³/₈" long + short
string tbg

SN 6771
Otis parallel string
anchor 6772
1¹/₄" pmp on 76 RS

Otis "C" SN 7179
Otis OSTSD 7199
Otis "X" nipple 7199
(I.D. - 1.875")
Otis PL pkr. 7200
1¹/₄" pmp. on 76 RS

OIL CONSERVATION DIVISION
DISTRICT 1

FILE # DHC - 442

OIL CONSERVATION DIVISION
P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

DATE October 24, 1983

RE: Proposed MC
Proposed DHC X
Proposed NSL
Proposed NSP
Proposed SWD
Proposed WFX
Proposed PMX

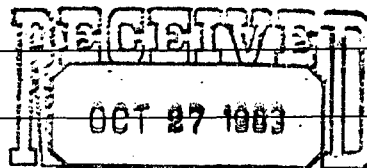
Gentlemen:

I have examined the application for the:

Sun Oil Company	Elliott B-13	#2-E	13-22-37
Operator	Lease and Well No.	Unit, S - T - R	

and my recommendations are as follows:

O.K.---J.S.



OIL CONSERVATION DIVISION
SANTA FE

Yours very truly,

A handwritten signature in dark ink, appearing to read "Jerry L. [unclear]". The signature is fluid and cursive, written over a horizontal line.

/mc