TEXAS PACIFIC OIL COMPANY
P. O. Box 1069
Hobbs, New Mexico 88240

April 6, 1971

'71 APR 7 AM 11 05

DHC - 86
Due 4/20 27

New Mexico Oil Conservation Commission
P. O. Box 2088
Santa Fe, New Mexico 87501

Attn: Mr. A. L. Porter, Jr.

Re: Exception to Rule 303A
WELL BORE COMMINGLING
S. E. Cone Well No. 4
Blinebry & Wantz Abo(Oil)Pools
Lea County, New Mexico

Gentleman:

Texas Pacific Oil Co., Inc. respectfully requests Administrative approval under the provisions of Order No. R-3845 to commingle in the well bore, oil production from the Blinebry oil pool and Wantz-Abo pool which are dually completed as permitted by Administrative Order No. MC-1775 dated July 16, 1967 in Well No. 4 on the S. E. Cone Lease located in Section 26, T-21-S; R-37-E, Lea County, New Mexico.

We believe the subject well for which well bore commingling approval is requested qualifies under the provisions of State wide Rule 303C, which provides for administrative application and approval of well bore commingling. Both zones are classified as oil zones and require artificial lift which produce oil, gas and water at rates below the limits specified in the subject order.

The fluids from these two reservoirs have been commingled on the surface in common storage and treating facilities allowed by Order No. PC-247 dated August 30, 1967. There has been no evidence of incompatible fluids or undesirable scale or precipitates. Ownership of the minerals in both zones is common and the value of the commingled fluids is not less than the total value of the fluids if they were marketed separately. Secondary recovery operations will not be jeopardized by approval of the application.

In further compliance with the above mentioned order, a data sheet is attached, listing all required data for the two reservoirs in the well. Also attached is a production decline curve for each zone, water analysis by Tret-O-Lite and well tests as submitted on Form C-116.

Copies of this application are being submitted to the offset operators listed below.

Sincerely,
TEXAS PACIFIC OIL CO., INC.

Sheldon Ward
Area Superintendent

CRT:tk

cc: Atlantic Richfield Oil & Gas Co.
P. O. Box 1610
Midland, Texas

Gulf Oil Corp.
P. O. Box 1150
Midland, Texas

Getty Oil Co.
P. O. Box 1231
Midlamd, Texas
Harper Oil Co.
904 Hightower Bldg.
Oklahoma City, Okla.

Oil Conservation Commission
P. O. Box 1980
Hobbs, New Mexico

Attachment
4-6-71

Data Sheet

A. Texas Pacific Oil Co., Inc.
P. O. Box 1069
Hobbs, New Mexico

B. S. E. Cone Well No. 4
Unit I, Sec. 26, T-21-S; R-37-E
Lea County, New Mexico

C. Wantz Abo and Blinebry pools dually completed authorized by O.C.C. Order No. MC-1775. Lowest Wantz Abo perforation is at 7289'.

D. Current 24 hour productivity test is shown on attached Commission Form C-116 which indicate combined rates of production fall within the limits specified by Rule 303C.

E. A production decline curve for both zones are attached.

F. Both zones are artificially lifted and the estimated bottom-hole pressure of each zone is: Wantz Abo - 800# PSI
Blinebry - 600# PSI

G. Oil production is compatible and cause no treating problem. Attached are water analysis of each brine and a 50/50 mixture of the two brines as made by the Tret-O-Lite Co. and will not be incompatible in the well bore.

H. Individual gravities of each zone is as follows:
Wantz Abo 41.6 Blinebry 36.0

I. Offset operators have been notified by being furnished a copy of this application

NEW MEXICO OIL CONSERVATION COMMISSION

GAS – OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
TEXAS PACIFIC OIL CO., INC.	BLINEBRY OIL	LEA

Address	TYPE OF TEST – (X)	Scheduled ☐	Completion ☐	Special ☒
P.O. Box 1069 - Hobbs, New Mexico				

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS – OIL RATIO CU.FT./BBL.
S. E. Cone	4	I	26	21	37	3-13-71	P	2"	60#	15	24	2		16	59	3687

Attachment to Request for Exception to Rule 303A

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

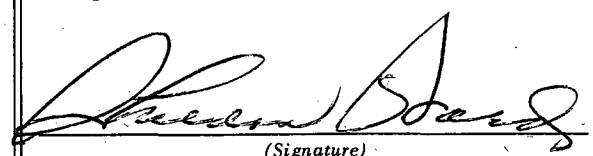
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized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



(Signature)

Area Superintendent

(Title)

4-6-71

(Date)

NEW MEXICO OIL CONSERVATION COMMISSION

GAS – OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
TEXAS PACIFIC OIL CO., INC.	WANTZ ABO	LEA

Address	TYPE OF TEST – (X)	Scheduled ☐	Completion ☐	Special ☒
P. O. Box 1069 - Hobbs, New Mexico				

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS – OIL RATIO CU.FT./BBL.
S. E. Cone	4	I	26	21	37	3-13-71	P	2"	55	21	24	1		19	51	2684

Attachment to Request for Exception To Rule 303A

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.

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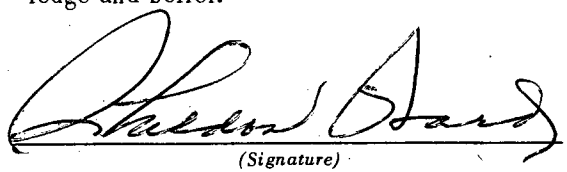


(Signature)

Area Superintendent

(Title)

4-6-71

(Date)

PETROLITE CORPORATION

TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) WO 1-3500/TWX 910-760-1660/Telex 44-2417

WATER ANALYSIS REPORT

COMPANY Texas Pacific Oil Company ADDRESS Hobbs DATE: 3-17-71

SOURCE S.E. Cone #4 ABO DATE SAMPLED 3-13-71 ANALYSIS NO. 72

Analysis	Mg/L		*Meq/L	
1. PH	6.55			
2. H_2S (Qualitative)	Negative			
3. Specific Gravity	1.125			
4. Dissolved Solids				
5. Suspended Solids				
6. Phenolphthalein Alkalinity ($CaCO_3$)				
7. Methyl Orange Alkalinity ($CaCO_3$)	400			
8. Bicarbonate (HCO_3)	HCO_3 488	÷61	8	HCO_3
9. Chlorides (Cl)	Cl 116,000	÷35.5	3268	Cl
10. Sulfates (SO_4)	SO_4 1800	÷48	38	SO_4
11. Calcium (Ca)	Ca 11,200	÷20	560	Ca
12. Magnesium (Mg)	Mg 3159	÷12.2	259	Mg
13. Total Hardness ($CaCO_3$)	41,000			
14. Total Iron (Fe)	43			
15. Barium (Qualitative)				
16.				

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION

*		*
560	Ca ⟵ ⟶ HCO_3	8
259	Mg ⟶ ⟶ SO_4	38
2495	Na ⟵ ⟶ Cl	3268

Compound	Equiv. Wt.	X	Meq/L	=	Mg/L
$Ca(HCO_3)_2$	81.04		8		648.32
$CaSO_4$	68.07		38		2586.66
$CaCl_2$	55.50		514		28527.00
$Mg(HCO_3)_2$	73.17				
$MgSO_4$	60.19				
$MgCl_2$	47.62		259		12411.28
$NaHCO_3$	84.00				
Na_2SO_4	71.03				
NaCl	58.46		2495		145857.70

Saturation Values Distilled Water 20°C

$CaCO_3$	13 Mg/L
$CaSO_4 \cdot 2H_2O$	2,090 Mg/L
$MgCO_3$	103 Mg/L

REMARKS Tolley

Respectfully submitted
TRETOLITE COMPANY
D. Lindly

PETROLITE CORPORATION

TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) WO 1-3500/TWX 910-760-1660/Telex 44-2417

WATER ANALYSIS REPORT

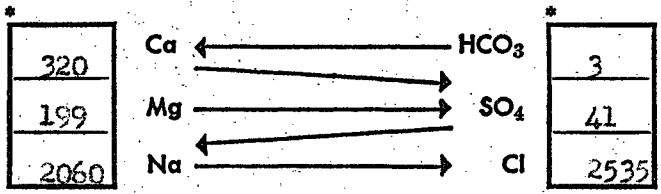
COMPANY Texas Pacific Oil Company ADDRESS Hobbs DATE: 3-17-71

SOURCE S.E. Cone #4 Blinebry DATE SAMPLED 3-13-71 ANALYSIS NO. 71

Analysis	Mg/L		*Meq/L	
1. PH	6.75			
2. H_2S (Qualitative)	Negative			
3. Specific Gravity	1.100			
4. Dissolved Solids				
5. Suspended Solids				
6. Phenolphthalein Alkalinity ($CaCO_3$)				
7. Methyl Orange Alkalinity ($CaCO_3$)	150			
8. Bicarbonate (HCO_3)	HCO_3 183	÷61	3	HCO_3
9. Chlorides (Cl)	Cl 90,000	÷35.5	2535	Cl
10. Sulfates (SO_4)	SO_4 1950	÷48	41	SO_4
11. Calcium (Ca)	Ca 6400	÷20	320	Ca
12. Magnesium (Mg)	Mg 2430	÷12.2	199	Mg
13. Total Hardness ($CaCO_3$)	26,000			
14. Total Iron (Fe)	5			
15. Barium (Qualitative)				
16.				

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Saturation Values	Distilled Water 20°C
$CaCO_3$	13 Mg/L
$CaSO_4 \cdot 2H_2O$	2,090 Mg/L
$MgCO_3$	103 Mg/L

Compound	Equiv. Wt.	X Meq/L =	Mg/L
$Ca(HCO_3)_2$	81.04	3	243.12
$CaSO_4$	68.07	41	2790.87
$CaCl_2$	55.50	276	15318.00
$Mg(HCO_3)_2$	73.17		
$MgSO_4$	60.19		
$MgCl_2$	47.62	199	9536.08
$NaHCO_3$	84.00		
Na_2SO_4	71.03		
NaCl	58.46	2060	120427.60

REMARKS

Respectfully submitted
TRETOLITE COMPANY

D. Lindly

PETROLITE CORPORATION

TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) WO 1-3500/TWX 910-760-1660/Telex 44-2417

WATER ANALYSIS REPORT

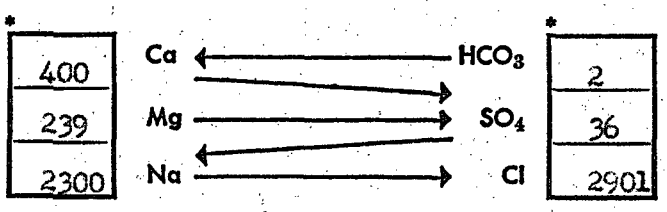
COMPANY Texas Pacific Oil Company ADDRESS Hobbs DATE: 3-17-71

SOURCE S.E. Cone #4 50/50 ABO Blinebry DATE SAMPLED 3-13-71 ANALYSIS NO. 73

Analysis	Mg/L		*Meq/L	
1. PH	6.75			
2. H_2S (Qualitative)	Negative			
3. Specific Gravity	1.115			
4. Dissolved Solids				
5. Suspended Solids				
6. Phenolphthalein Alkalinity ($CaCO_3$)				
7. Methyl Orange Alkalinity ($CaCO_3$)	110			
8. Bicarbonate (HCO_3)	HCO_3 134	÷61	2	HCO_3
9. Chlorides (Cl)	Cl 103.000	÷35.5	2901	Cl
10. Sulfates (SO_4)	SO_4 1750	÷48	36	SO_4
11. Calcium (Ca)	Ca 8000	÷20	400	Ca
12. Magnesium (Mg)	Mg 2916	÷12.2	239	Mg
13. Total Hardness ($CaCO_3$)	34,000			
14. Total Iron (Fe)	24			
15. Barium (Qualitative)				
16.				

*Milli equivalents per liter

PROBABLE MINERAL COMPOSITION



Saturation Values	Distilled Water 20°C
$CaCO_3$	13 Mg/L
$CaSO_4 \cdot 2H_2O$	2,090 Mg/L
$MgCO_3$	103 Mg/L

Compound	Equiv. Wt.	X Meq/L	= Mg/L
$Ca(HCO_3)_2$	81.04	2	162.08
$CaSO_4$	68.07	36	2450.52
$CaCl_2$	55.50	362	20091.00
$Mg(HCO_3)_2$	73.17		
$MgSO_4$	60.19		
$MgCl_2$	47.62	239	11452.88
$NaHCO_3$	84.00		
Na_2SO_4	71.03		
NaCl	58.46	2300	134458.00

REMARKS

Respectfully submitted
TRETOLITE COMPANY.

D. Lindly

PETROLITE CORPORATION

TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) WO 1-3500/TWX 910-760-1660/Telex 44-2417

STABILITY INDEX CALCULATIONS

Tendency for $CaSO_4 - 2\ H_2O$ (Gypsum) Scale

Stiff-Davis Method

Company Texas Pacific Oil Company Address Hobbs

Source S.E. Cone #4 50/50 ABO Blinebry Date 3-17-71

$$S = S_T \times F_1 \times F_2 \times F_3$$

where
- S = Solubility under Given Condition
- S_T = Solubility in Distilled water at the temperature T (mg/1 $CaSO_4$)
- F_1 = Common ion factor, or the influence of excess calcium or sulfate ions (meq. /1)
- F_2 = Magnesium ion factor (meq. /1)
- F_3 = Sodium factor (mg/1)

Factors:

Temperature 68 °F → S_T = 30.14

Temperature 104 °F → S_T = 31.00

F_1 = .53 F_2 = 3.55 F_3 = 1.69

$$S = S_T \frac{30.14}{31.00} \times F_1\ .53 \times F_2\ 3.55 \times F_3\ 1.69$$

S = 95.85 ppm $CaSO_4$ at 68 °F

S = 98.58 ppm $CaSO_4$ at 104 °F

Remarks: Water Sample Indicates No Calcium Sulfate Scaling Tendencies

D. Lindly

PETROLITE CORPORATION
TRETOLITE DIVISION
369 Marshall Avenue / Saint Louis, Missouri 63119
(314) WO 1-3500/TWX 910-760-1660/Telex 44-2417

STABILITY INDEX CALCULATIONS
(Stiff-Davis Method)
$CaCO_3$ Scaling Tendency

SAMPLE

Sample Test No. 73

Company Texas Pacific Oil Company — Sample Date 3-17-71

Address Hobbs — Submitted by Marr

Sample S.E. Cone #4 50/50 ABO Blinebry — Field Euince

S. I. = pH - pCa - pAlk - K

where S. I. = stability index
pH = pH as measured on fresh sample
pCa = negative logarithm of calcium concentration
pAlk = negative logarithm of total alkalinity
K = constant, depends upon temperature and salt content

pH = 6.75 pCa = .7 pAlk = 2.65

CALCULATION OF IONIC STRENGTH AND K VALUE

Na	(2300) X (2.2×10^{-5}) =	1.150
Ca	(400) X (5.0×10^{-5}) =	.400
Mg	(239) X (8.2×10^{-5}) =	.239
Cl	(2901) X (1.4×10^{-5}) =	1.451
HCO_3	(2) X (0.8×10^{-5}) =	.001
SO_4	(36) X (2.1×10^{-5}) =	.036

TOTAL IONIC STRENGTH = 3.277

K = 2.56 @ 68 °F.

K = 2.07 @ 104 °F.

SI at (68)° = (6.75) - (.7) - (2.65) - (2.56) or .84

SI at (104)° = (6.75) - (.7) - (2.65) - (2.07) or 1.33

SI = O or water is relatively stable at _____ °F.

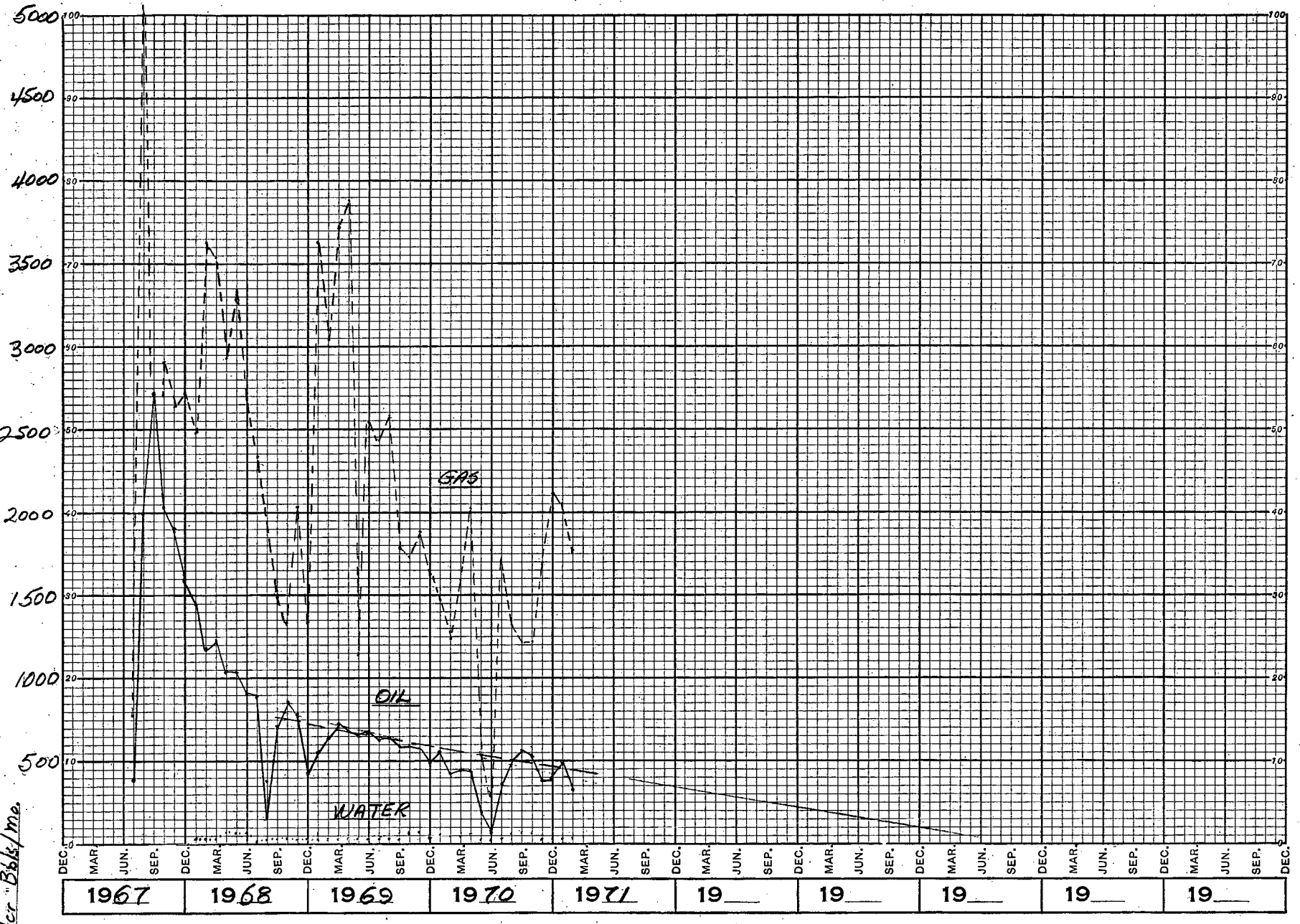
Remarks: Water Sample Indicates Calcium Carbonate Scaling Tendencies

D. Lindly

NO. 3136. TEN YEARS BY MONTHS X 100 DIVISIONS.
CODEX BOOK COMPANY, INC., NORWOOD, MASSACHUSETTS.
PRINTED IN U.S.A.

Texas Pacific Oil Co.
S.E. Cone Well #4
Wantz-Abo Zone

Production Decline Curve



Oil - Bbls Per month
Gas - MCF Per month
Water Bbl/mo.

NO. 3136. TEN YEARS BY MONTHS X 100 DIVISIONS.
CODEX BOOK COMPANY, INC., NORWOOD, MASSACHUSETTS.
PRINTED IN U.S.A.

Texas Pacific Oil Co.
SE. Cone Well #4
Blinebry Oil Zone

Production Decline Curve