Imperial-American Management Company

'70 SEP 14 AM 10

69

DHC-

Due Oct 4

September 11, 1970

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

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

Re: Request for Exception to Rule 303-A
Down-Hole Commingling - Per Rule 303-C
Fanning "B" Lease, Well No. 1
Teague Blinebry and Imperial Tubb Drinkard Pools
Lea County, New Mexico

Gentlemen:

Imperial-American Management Company respectfully requests administrative approval under the Provisions of Order No. R-3845 to commingle, in the well bore, oil production from the Teague Blinebry Pool and the Imperial Tubb Drinkard Pool which are dually completed in our Fanning "B" No. 1 well located in Unit A, Section 33, T-23-S, R-37-E, Lea County, New Mexico. The dual completion was permitted by Administrative Order No. MC-1842 dated January 3, 1969.

It is our belief that the subject well qualifies for administrative approval of down-hole commingling under the Provisions of Rule 303-C. Both zones are classified as oil zones. We attach Form C-116 which indicates that production rates of both oil and water fall within limits specified by Rule 303-C. Both zones are presently artifically lifted by rod pumps, therefore, a rod pump will be utilized after commingling. We also attach a copy of our production decline curve for each zone.

We have had water samples collected from each zone and have had these samples checked for compatability by Baroid. Copies of their reports are attached. Their reports indicate there will not be an instability problem caused by mixing these waters.

507 Midland Savings Building - Midland, Texas 79701 - 915-684-8241
Cable Address - IMPAM

New Mexico Oil Conservation Commission
Attn: Mr. A. L. Porter, Jr.
Re: Request for Exception to Rule 303-A
Fanning "B" Lease, Well No. 1
Lea County, New Mexico

We also attach a data sheet on which we have indicated our estimate of the current bottom hole pressures of these zones and a calculation showing that the commingled production will not have less value than the individual streams sold separately.

Ownership of the production from both zones to be commingled is common as to working interest, royalty and overriding royalty.

All offset operators are being notified of this request by a copy of this letter. A list of offset operators is attached.

Very truly yours,

IMPERIAL-AMERICAN MANAGEMENT COMPANY

Darol K. Ramey

Darol K. Ramey

DKR:lb
Attachments

507 Midland Savings Building - Midland, Texas 79701 - 915-684-8241
Cable Address - IMPAM

LIST OF OFFSET OPERATORS

Imperial-American Management Company
Fanning "B" Lease
Lea County, New Mexico

Gulf Oil Corporation
P. O. Box 1938
Roswell, New Mexico 88201

Resler & Sheldon
Artesia, New Mexico 88201

Carter Foundation Production Co.
P. O. Box 1036
Fort Worth, Texas 76101

NEW MEXICO OIL CONSERVATION COMMISSION

GAS – OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
Imperial-American Management Co.	*See Below	Lea

Address	TYPE OF TEST – (X)	Scheduled ☐	Completion ☐	Special XX
507 Midland Savings Bldg., Midland, Texas 79701				

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS – OIL RATIO CU.FT./BBL.
Teague Blinebry Field																
Fanning "B"	1	A	33	23S	37E	9-3-70	P	Open	25	29	24	2	38	23	24	1043
Imperial Tubb Drinkard Field																
Fanning "B"	1	A	33	23S	37E	9-3-70	P	Open	25	18	24	1	39	12	20	1667

*SPECIAL TEST: REQUEST FOR DOWN-HOLE COMMINGLING

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.

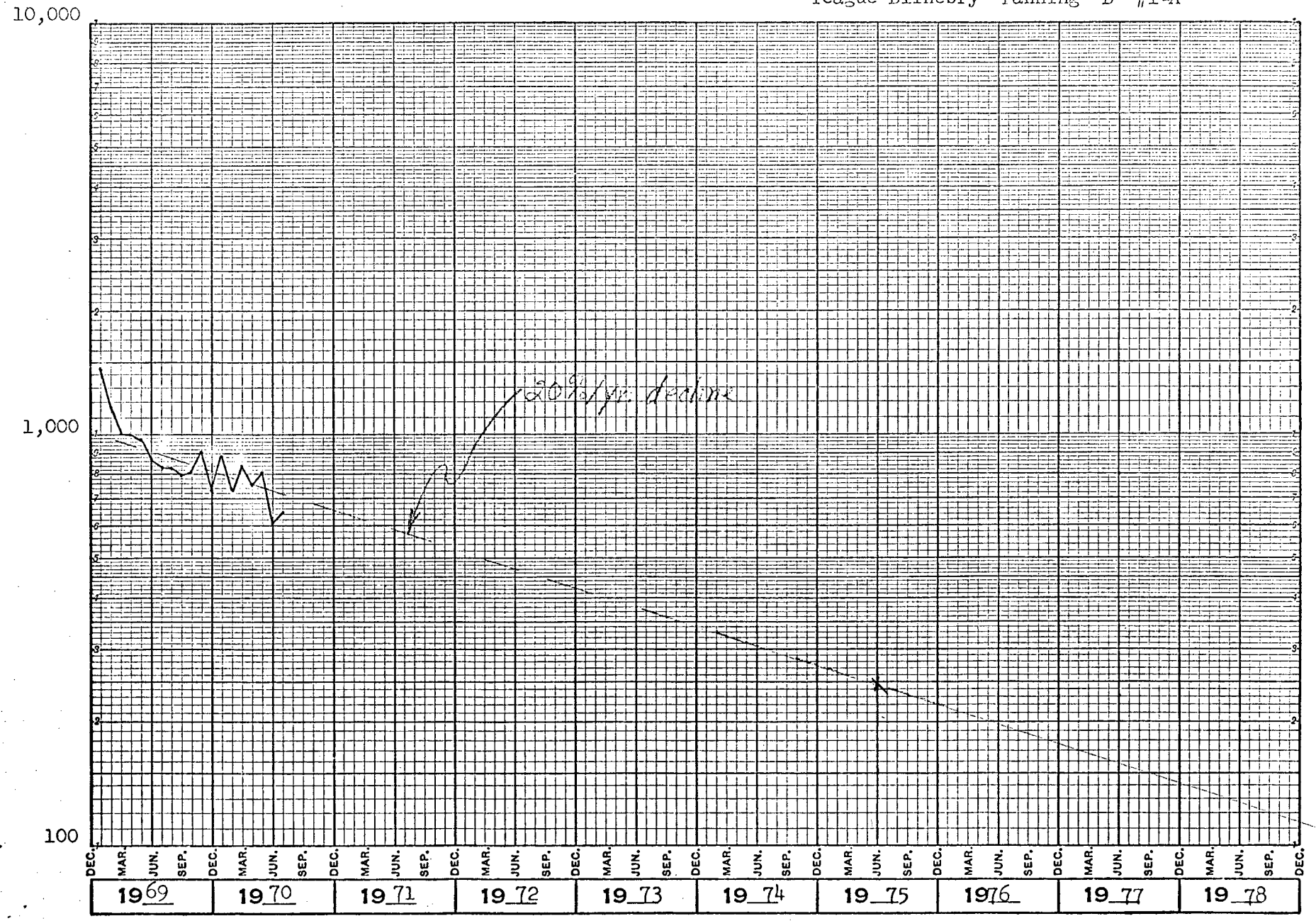
I hereby certify that the above information is true and complete to the best of my knowledge and belief.

David K Ramey
(Signature)

Division Manager
(Title)

9-11-70
(Date)

Teague Blinebry Fanning "B" #1-A



35%

385

Imperial Tubb Drinkard Fanning "B" No. 1

10,000
1,000
100

Curve Failure

Equip Repair

285 MCF decline

65%

500

DEC. MAR. JUN. SEP. DEC. MAR. JUN. SEP. DEC. MAR. JUN. SEP. DEC. MAR. JUN. SEP. DEC. MAR. JUN. SEP. DEC. MAR. JUN. SEP. DEC. MAR. JUN. SEP. DEC. MAR. JUN. SEP. DEC. MAR. JUN. SEP. DEC.

1969	1970	1971	1972	1973	1974	1975	1976	1977	1978

BAROID DIVISION
NATIONAL LEAD COMPANY
PETROLEUM INDUSTRY CHEMICALS

WATER ANALYSIS TEST REPORT

SHEET NUMBER

COMPANY: Imperial American Management Co

DATE: 9/9/70

FIELD: Teague

COUNTY OR PARISH: Lea

STATE: New Mexico

LEASE OR UNIT: Fanning B

WELL(S) NAME OR NO.: 1

WATER SOURCE (FORMATION): Blinebry

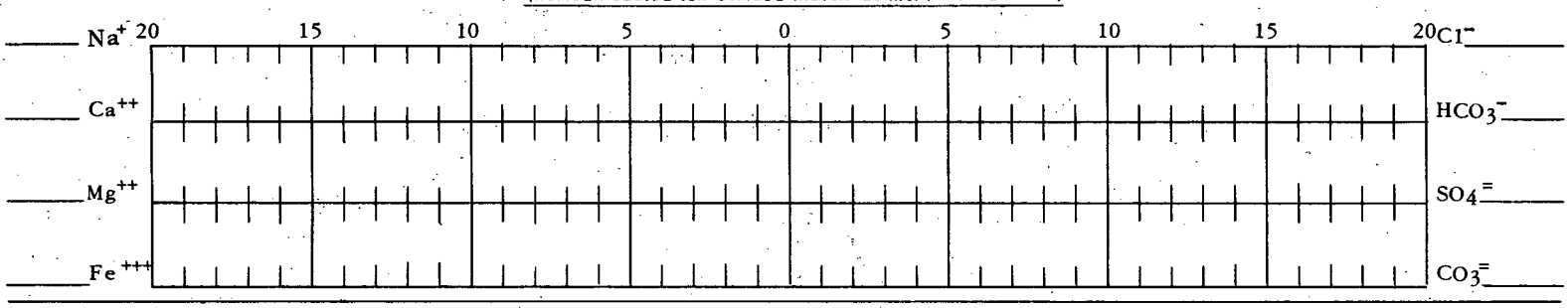
DEPTH, FT.	BHT, F	SAMPLE SOURCE	TEMP, F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY
		Well Head				

TYPE OF OIL:

API GRAVITY: °

TYPE OF WATER: [X] PRODUCED WATER [ ] INJECTION WATER OTHER _____

WATER ANALYSIS PATTERN
(NUMBER BESIDE ION SYMBOL INDICATES me/l * SCALE UNIT)



DISSOLVED SOLIDS

CATIONS	me/l *	mg/l *
Total Hardness	399	
Sodium, Na^+ (calc.)	1832	42136
Calcium, Ca^{++}	332	6640
Magnesium, Mg^{++}	67	817
Iron (Total), Fe^{+++}	.9	18
ANIONS		
Chloride, Cl^-	2169	77000
Sulfate, $SO_4^=$	49	2375
Carbonate, $CO_3^=$		
Bicarbonate, HCO_3^-	14.1	660
Hydroxyl, OH^-		
Sulfide, $S^=$		NT
Phosphate - Meta, PO_3^-		
Phosphate - Ortho, $PO_4^{\equiv}$		

DISSOLVED GASES

Hydrogen Sulfide, H_2S		mg/l *
Carbon Dioxide, CO_2		mg/l *
Oxygen, O_2		mg/l *

PHYSICAL PROPERTIES

pH	6.8	
Eh (Redox Potential)		MV
Specific Gravity		
Turbidity, JTU Units		
Total Dissolved Solids (Calc.)		mg/l *
Stability Index @ ____ F		
@ ____ F		
$CaSO_4$ Solubility @ ____ F		mg/l *
@ ____ F		mg/l *
Max. $CaSO_4$ Possible (Calc.)		mg/l *
Max. $BaSO_4$ Possible (Calc.)		mg/l *
Residual Hydrocarbons		ppm(Vol/Vol)

SUSPENDED SOLIDS (QUALITATIVE)

Iron Sulfide [ ] Iron Oxide [ ] Calcium Carbonate [ ] Acid Insoluble [ ]

REMARKS AND RECOMMENDATIONS:

This water and the Tubb Drinkard should Comingle without presenting any problems.

* NOTE: me/l and mg/l are commonly used interchangeably for epm and ppm respectively. Where epm and ppm are used, corrections should be made for specific gravity.

PIC ENGINEER	DIST. NO.	ADDRESS	OFFICE PHONE	HOME PHONE
Cliff G. Gardner	21	Eunice, New Mexico	393-8622	394.2421

TESTED BY	DATE	DISTRIBUTION
Cliff G. Gardner	9/9/70	[ ] CUSTOMER [ ] AREA OR [ ] DISTRICT OFFICE [ ] PIC ENGINEER OR [ ] PIC LAB [ ] PIC SALES SUPERVISOR

FORM #BR-2149A

BAROID DIVISION
NATIONAL LEAD COMPANY
PETROLEUM INDUSTRY CHEMICALS

WATER ANALYSIS TEST REPORT

SHEET NUMBER

COMPANY: Imperial American Management Co

DATE: 9-9-70

FIELD: Teague

COUNTY OR PARISH: Lea

STATE: New Mexico

LEASE OR UNIT: Fanning B

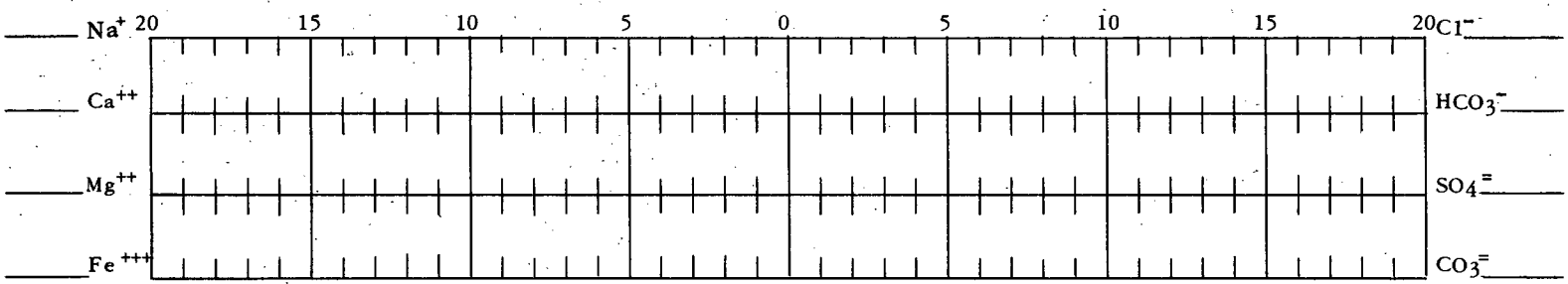
WELL(S) NAME OR NO.: 1

WATER SOURCE (FORMATION): Imperial Tubb Drinkard

DEPTH, FT.	BHT, F	SAMPLE SOURCE	TEMP, F	WATER, BBL/DAY	OIL, BBL/DAY	GAS, MMCF/DAY
		Well Head				

TYPE OF OIL | API GRAVITY: ° | TYPE OF WATER: ☒ PRODUCED WATER ☐ INJECTION WATER OTHER _____

WATER ANALYSIS PATTERN
(NUMBER BESIDE ION SYMBOL INDICATES me/l * SCALE UNIT)



DISSOLVED SOLIDS

CATIONS	me/l *	mg/l *
Total Hardness	449	
Sodium, Na^+ (calc.)	1942	45566
Calcium, Ca^{++}	332	6640
Magnesium, Mg^{++}	117	1300
Iron (Total), Fe^{+++}	3.7	69
ANIONS		
Chloride, Cl^-	2352	83,000
Sulfate, $SO_4^=$	32	1578
Carbonate, $CO_3^=$		
Bicarbonate, HCO_3^-	11.2	683
Hydroxyl, OH^-		
Sulfide, $S^=$		
Phosphate-Meta, PO_3^-		
Phosphate-Ortho, $PO_4^{\equiv}$		

DISSOLVED GASES

Hydrogen Sulfide, H_2S		mg/l *
Carbon Dioxide, CO_2		mg/l *
Oxygen, O_2		mg/l *

PHYSICAL PROPERTIES

pH	7.1	
Eh (Redox Potential)		MV
Specific Gravity		
Turbidity, JTU Units		
Total Dissolved Solids (Calc.)		mg/l *
Stability Index @ ____ F		
@ ____ F		
$CaSO_4$ Solubility @ ____ F		mg/l *
@ ____ F		mg/l *
Max. $CaSO_4$ Possible (Calc.)		mg/l *
Max. $BaSO_4$ Possible (Calc.)		mg/l *
Residual Hydrocarbons		ppm(Vol/Vol)

SUSPENDED SOLIDS (QUALITATIVE)

Iron Sulfide ☐ Iron Oxide ☐ Calcium Carbonate ☐ Acid Insoluble ☐

REMARKS AND RECOMMENDATIONS:

* NOTE: me/l and mg/l are commonly used interchangeably for epm and ppm respectively. Where epm and ppm are used, corrections should be made for specific gravity.

PIC ENGINEER	DIST. NO.	ADDRESS	OFFICE PHONE	HOME PHONE
Cliff G. Gardner	21	Eunicem New Mexico	393-8622	394-2421

TESTED BY	DATE	DISTRIBUTION
Cliff G. Gardner	9-9-70	☐ CUSTOMER ☐ AREA OR ☐ DISTRICT OFFICE ☐ PIC ENGINEER OR ☐ PIC LAB ☐ PIC SALES SUPERVISOR

FORM #BR-2149A

DATA SHEET

Request for Down-Hole Commingling
Imperial-American Management Company
Fanning "B" Well No. 1

I. Estimated Bottom Hole Pressure

A. Teague Blinebry Completion
Unable to obtain satisfactory sonic fluid level.
Zone pumps off-permitting only 30% pump efficiency.
Est. Operating BHP - 200 psi
Est. Static BHP - 600 psi

B. Imperial Tubb Drinkard Completion
Lower Zone cannot take sonic fluid level.
Zone pumps off-permitting only 20% pump efficiency.
Est. Operating BHP - 200 psi
Est. Static BHP - 800 psi

II. Value of Commingled Production

Due to atmospheric temperature differences and increased weathering during summer, the gravity of the oil from both zones will fluctuate about 1° API from summer to winter. The Blinebry oil will fluctuate from 37.5° API to 38.5° API. The Tubb Drinkard oil will fluctuate from 38.5° API to 39.5° API. The gravity of the mixture should fluctuate from 38.0° - 39.0° API.

Oil from both zones is being sold to Shell Oil Company. The price is based on Shell's posting for West Texas-New Mexico, Intermediate grade crude, with a top price of $3.31 for 40° API and a 2¢ differential for each degree API below 40° API.

The average year-round price for Blinebry oil will be approximately $3.26/bbl. The average year-round price for Tubb Drinkard oil will be approximately $3.28. The year-round average price of the mixture should be approximately $3.27.

Blinebry - Avg. price $3.26/bbl. x 23 BOPD =		$ 74.98/day
Tubb Drinkard - Avg. price $3.28/bbl/ x 12 BOPD =		39.36/day
	Total	$114.34/day

Mixture - Avg. price $3.27/bbl. x 35 BOPD = $114.45/day

No loss in value of product should result from commingling these zones in the well bore.

David K. Ramey