

Imperial-American Management Company

September 17, 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
Gulf Sarkeys Lease, Well No. 2
Drinkard and Wantz Abo 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 Drinkard Pool and the Wantz Abo Pool which are dually completed in our Gulf Sarkeys No. 2 Well located in Unit F, Section 25, T-21-S, R-37-E, Lea County, New Mexico. This dual completion was permitted by Administrative Order No. MC-1870, dated June 25, 1969.

We believe that this well qualifies for administrative approval of down-hole commingling under the Provisions of Rule 303-C. Both zones are classified as oil zones. The deepest perforation in the lower zone is at 7356' in this well. We attach Form C-116 which indicates that the production rates for both oil and water fall within the limits specified by Rule 303-C. We also attach copies of our production decline curve for each zone. Both zones are presently being artificially lifted by rod pumps; therefore, a rod pump will be utilized after commingling.

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. The reports indicate these will not be an instability problem caused by mixing these waters.

DHC-71
Due Oct 11

100-111111-11
10 SEP 21 1970

New Mexico Oil Conservation Commission
Attention: Mr. H. L. Porter, Jr.
Re: Request for Exception to Rule 303-A
Gulf Sarkeys Lease, Well No. 2
Drinkard and Wantz Abo Pools
Lea County, New Mexico

Page 2

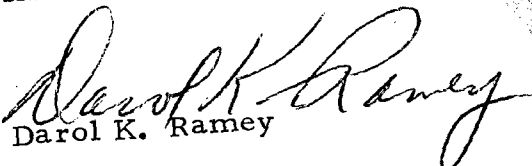
We also attach a data sheet on which we have indicated our estimates of the current bottom hole pressures of these zones and a calculation showing that the commingled production will not have less value than the individual streams sold separately.

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

This lease is on fee property. A copy of this application is being submitted to each offset operator shown on the attached list.

Very truly yours,

IMPERIAL-AMERICAN MANAGEMENT COMPANY


Darol K. Ramey

DKR:lb
Attachments

LIST OF OFFSET OPERATORS

Imperial-American Management Company
Gulf Sarkeys Lease
Lea County, New Mexico

Acoma Oil Corporation
812 Continental Life Bldg.
Fort Worth, Texas

Atlantic Richfield Company
P. O. Box 1978
Roswell, New Mexico

Getty Oil Company
P. O. Box 249
Hobbs, New Mexico

Gulf Oil Co. - U.S.
P. O. Box 1938
Roswell, New Mexico

Harper Oil Co.
904 Hightower Bldg.
Oklahoma City, Oklahoma

Mobil Oil Corporation
P. O. Box 1810
Hobbs, New Mexico

Pan American Petroleum Corporation
P. O. Box 68
Hobbs, New Mexico

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

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator Imperial-American Management Co.		Pool *See Below		County Lea										
Address 507 Midland Savings Bldg., Midland, Texas 79701		TYPE OF TEST - (X)		SCHEDULED ☐		COMPLETION ☐		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		OIL BBLs.
<u>Drinkard Pool</u>	2	F	25	21S 37E	9-10-70 P	Open	25	15	24	14	38.5	8	77.4	9675
<u>Gulf Sarkeys</u>	2	F	25	21S 37E	9-10-70 P	Open	25	38	24	20	39.5	30	60.8	2027
<u>Wantz Abo Pool</u>	*SPECIAL TEST - REQUEST FOR DOWN-HOLE COMMINGLING													
<u>Gulf Sarkeys</u>														

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

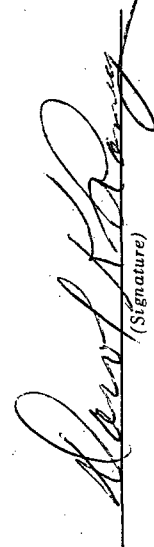
During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized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

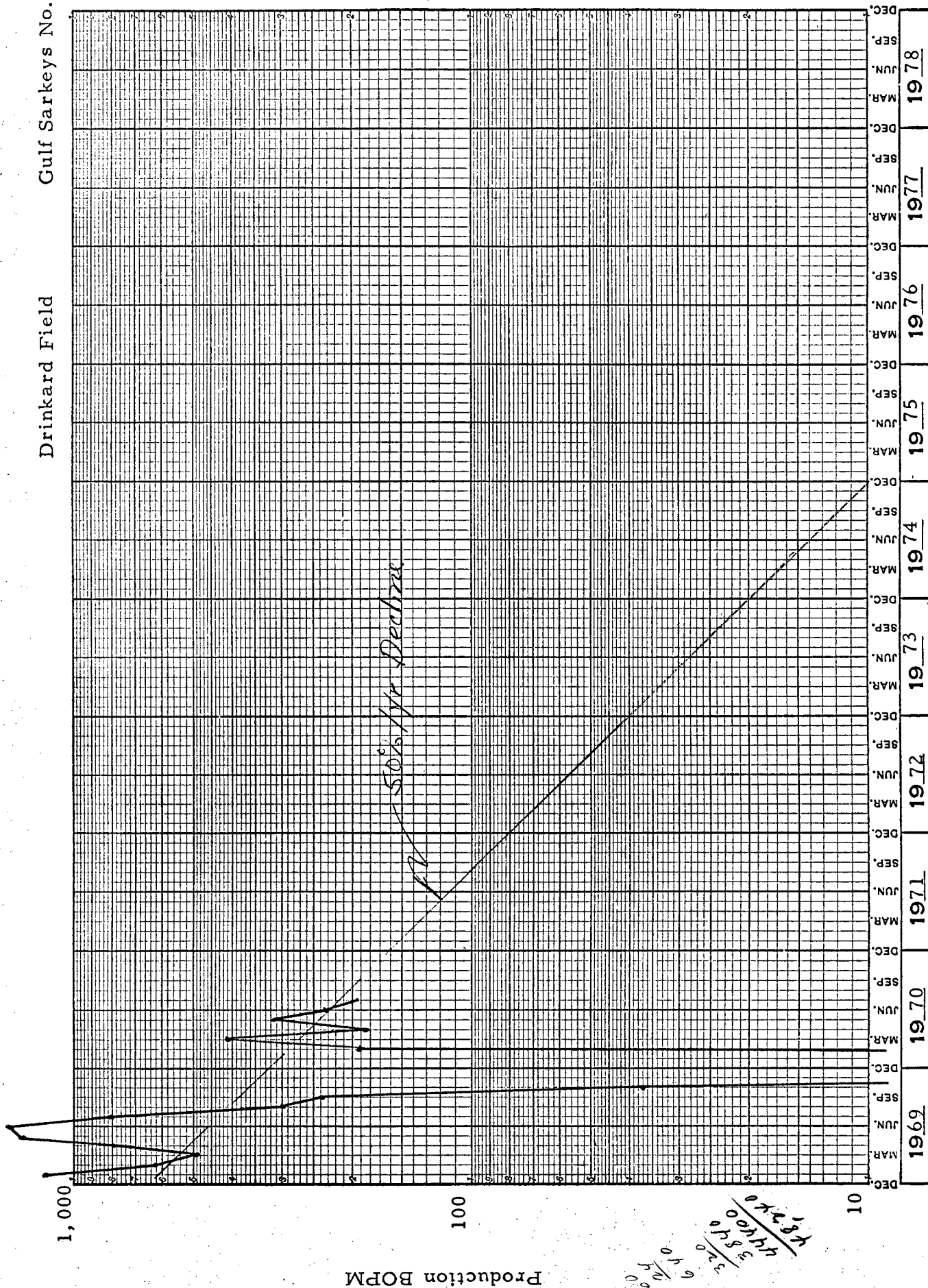
Division Manager

(Title)

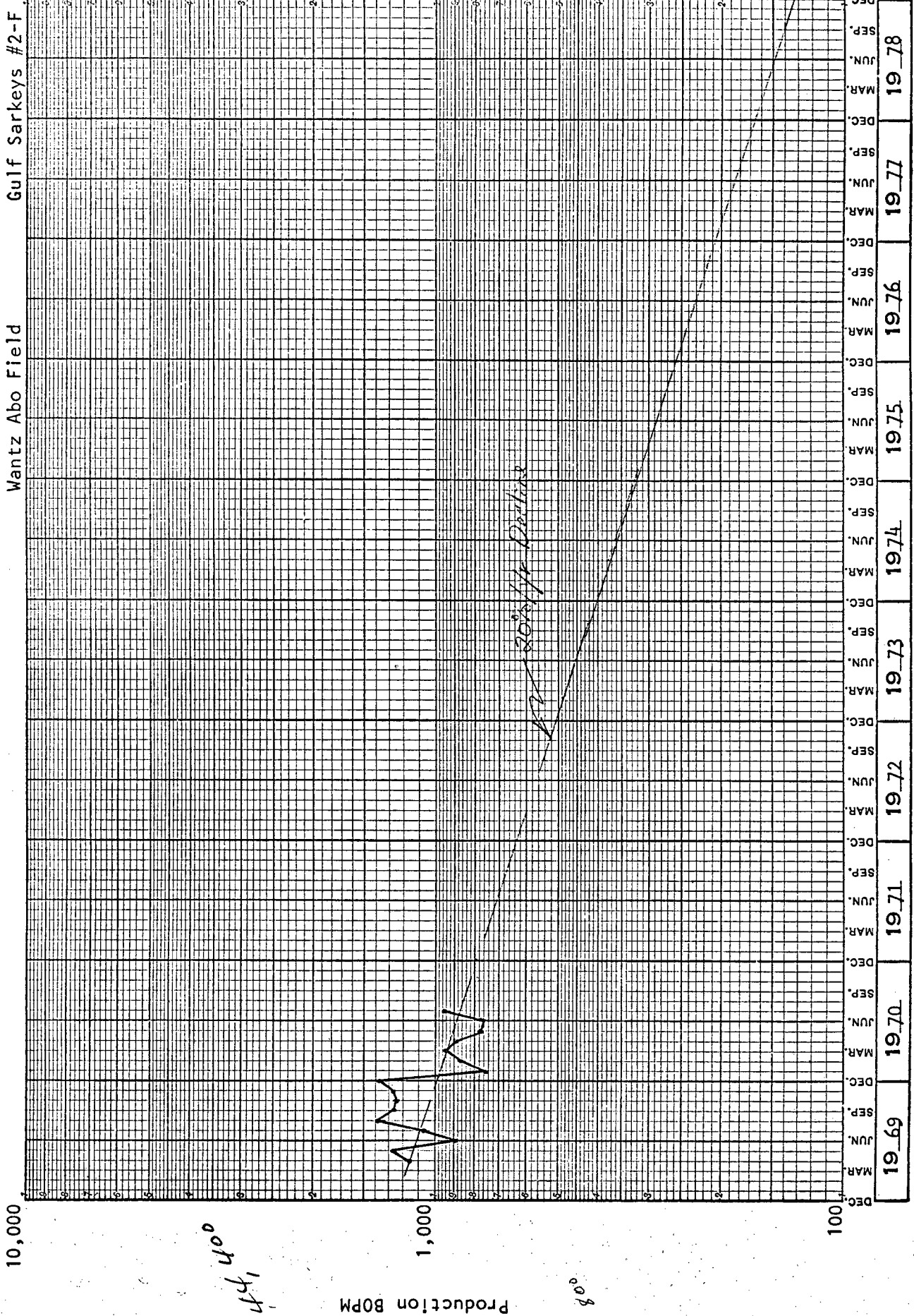
9-17-70

(Date)

Drinkard Field Gulf Sarkeys No. 2



48240
44100
320940/109
320940/109





BAROID DIVISION
NATIONAL LEAD COMPANY
PETROLEUM INDUSTRY CHEMICALS

WATER ANALYSIS TEST REPORT

SHEET NUMBER

COMPANY

Imperial American Management Co

DATE

9-9-70

FIELD

Eunice

COUNTY OR PARISH

Lea

STATE

New Mexico

LEASE OR UNIT

Gulf's Sarkey

WELL(S) NAME OR NO.

2

WATER SOURCE (FORMATION)

Drinkard

DEPTH, FT.

BHT, F

SAMPLE SOURCE

Well Head

TEMP, F

WATER, BBL/DAY

OIL, BBL/DAY

GAS, MMCF/DAY

TYPE OF OIL

API GRAVITY

0

TYPE OF WATER

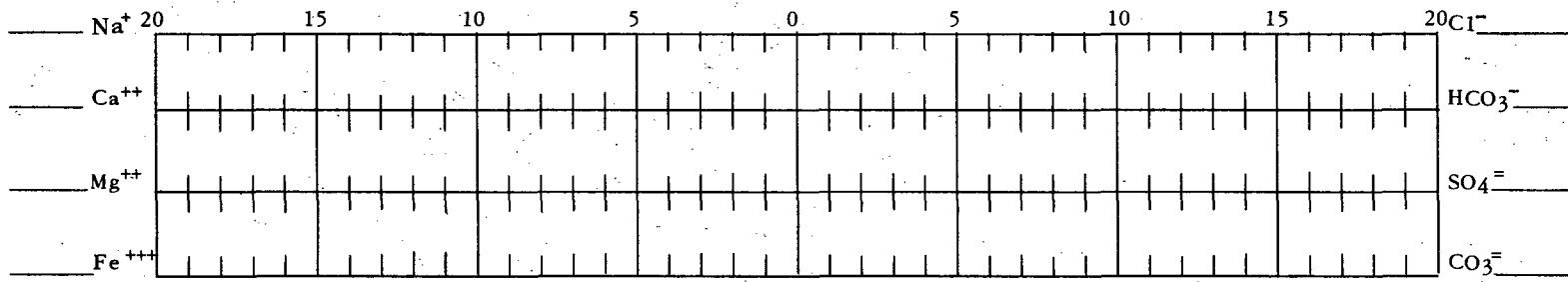
☒ PRODUCED WATER

☐ INJECTION WATER

OTHER

WATER ANALYSIS PATTERN

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



DISSOLVED SOLIDS

CATIONS

Total Hardness

me/l *
866

mg/l *
62675

Sodium, Na⁺ (calc.)

2725

62675

Calcium, Ca⁺⁺

614

12280

Magnesium, Mg⁺⁺

252

3074

Iron (Total), Fe⁺⁺⁺

5.0

100

ANIONS

Chloride, Cl⁻

3520

127,000

Sulfate, SO₄⁼

18

875

Carbonate, CO₃⁼

NT

Bicarbonate, HCO₃⁻

7.5

457

Hydroxyl, OH⁻

NT

Sulfide, S⁼

NT

Phosphate - Meta, PO₃⁼

Phosphate - Ortho, PO₄⁼

DISSOLVED GASES

Hydrogen Sulfide, H₂S

mg/l *

Carbon Dioxide, CO₂

mg/l *

Oxygen, O₂

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

CaSO₄ Solubility @ F

mg/l *

@ F

mg/l *

Max. CaSO₄ Possible (Calc.)

mg/l *

Max. BaSO₄ Possible (Calc.)

mg/l *

Residual Hydrocarbons

ppm (Vol/Vol)

SUSPENDED SOLIDS (QUALITATIVE)

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

REMARKS AND RECOMMENDATIONS:

A sample of the water from the Abo formation, from the well head, was not available, but using water from the Abo of well #1 indicates that comingling will not present a problem

* 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

Cliff G. Gardner

DIST. NO.

21

ADDRESS

Eunice, New Mexico

OFFICE PHONE

393-8622

HOME PHONE

394-2421

TESTED BY

Cliff G. Gardner

DATE

9-9-70

DISTRIBUTION

☐ CUSTOMER

☒ PIC ENGINEER OR

☐ PIC LAB

☐ AREA OR

☒ DISTRICT OFFICE

☐ PIC SALES SUPERVISOR

DATA SHEET

Request for Down-Hole Commingling
Imperial-American Management Company
Gulf Sarkeys Well No. 2

I. Estimated Bottom Hole Pressure

A. Drinkard Pool Completion

Unable to obtain a satisfactory sonic fluid level.
Zone pumps off, permitting only 20-25% pump efficiency.
Estimated Operating BHP - 200 psi
Estimated Static BHP - 600 psi

B. Wantz Abo Pool Completion

Lower zone, cannot obtain sonic fluid level.
Pressure low enough to limit pump efficiency to 50%.
Estimated Operating BHP - 300 psi
Estimated Static BHP - 800 psi

II. Value of Commingled Production

Oil from both the Drinkard and Wantz Abo is being sold to The Permian Corporation by truck. The price is based on Atlantic Richfield's posting for West Texas-New Mexico intermediate grade crude, with a top price of \$3.31/bbl. for 40° API and a 2¢/degree price differential for each degree below 40° API.

The Drinkard zone oil normally was 38.5° API with a price of \$3.25/bbl. The Wantz Abo oil normally runs 39.5° API with a price of \$3.29/bbl. At the current rates of production, the gravity of the mixture should be at least 39° API and receive a price of \$3.29/bbl.

Drinkard - Avg. price \$3.27/bbl. X 8 BOPD =	\$ 26.16/day
Wantz Abo - Avg. price \$3.29/bbl. X 30 BOPD =	98.70/day
	<u>\$124.86/day</u>

Mixture - Avg. price \$3.29/bbl. X 38 BOPD =	\$125.02/day
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No loss in value of product should result from commingling these zones in the well bore.

