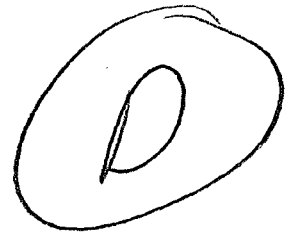


Art Yeager #1
Water Analysis
7/16/82



PH-- 6.5

Cations:

Calcium --9,057 (mg/liter)
Magnesium --2,964 "
Total Iron -- 0 "

Anions:

Chlorides --79,874 (mg/liter)
Sulfate --1,491 "
Carbonate -- 0 "
Bicarbonate--239.1 "

Total Dissolved Solids --174,179 (mg/liter)

Specific Gravity --1.112

Scaling Tendencies:

Calcium Carbonate--Slight @ 120 degrees F

BEFORE EXAMINER STAMETS OIL CONSERVATION DIVISION	
EXHIBIT NO.	<u>5</u>
CASE NO.	<u>7737</u>
Submitted by	<u>Am</u>
Hearing Date	<u>11/01/23</u>

WATER ANALYSIS TEST REPORT

COMPANY Imperial American Management Co		DATE 9-9-70	
FIELD Eunice		COUNTY OR PARISH Lea	STATE New Mex
LEASE OR UNIT Art Yeager	WELL(S) NAME OR NO. 1	WATER SOURCE (FORMATION) Drinkard	
DEPTH, FT.	BHT, F	SAMPLE SOURCE well head	TEMP, F
TYPE OF OIL		API GRAVITY 0	TYPE OF WATER ☒ PRODUCED WATER ☐ INJECTION WATER OTHER _____

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

	Na ⁺ 20	15	10	5	0	5	10	15	20 Cl ⁻
Ca ⁺⁺									HCO ₃ ⁻
Mg ⁺⁺									SO ₄ ⁻
Fe ⁺⁺⁺									CO ₃ ⁻

DISSOLVED SOLIDS

CATIONS	me/l*	mg/l*
Total Hardness	<u>784</u>	
Sodium, Na ⁺ (calc.)	<u>2670</u>	<u>61410</u>
Calcium, Ca ⁺⁺	<u>554</u>	<u>11080</u>
Magnesium, Mg ⁺⁺	<u>230</u>	<u>2806</u>
Iron (Total), Fe ⁺⁺⁺	<u>3.5</u>	<u>65</u>
ANIONS		
Chloride, Cl ⁻	<u>3430</u>	<u>122000</u>
Sulfate, SO ₄ ⁼	<u>20</u>	<u>980</u>
Carbonate, CO ₃ ⁼		
Bicarbonate, HCO ₃ ⁼	<u>8.3</u>	<u>508</u>
Hydroxyl, OH ⁻		
Sulfide, S ⁼		
Phosphate - Meta, PO ₃ ⁼		
Phosphate - Ortho, PO ₄ ⁼		

F

DISSOLVED GASES

Hydrogen Sulfide, H ₂ S	_____	mg/l
Carbon Dioxide, CO ₂	_____	mg/l
Oxygen, O ₂	_____	mg/l

PHYSICAL PROPERTIES

pH	<u>7.2</u>	
Eh (Redox Potential)	_____	MV
Specific Gravity	_____	
Turbidity, JTU Units	_____	
Total Dissolved Solids (Calc.)	_____	mg/l*
Stability Index @ _____ F	_____	
CaSO ₄ Solubility @ _____ F	_____	mg/l*
Max. CaSO ₄ Possible (Calc.)	_____	mg/l*
Max. BaSO ₄ Possible (Calc.)	_____	mg/l*
Residual Hydrocarbons	_____	ppm(l)

SUSPENDED SOLIDS (QUALITATIVE)

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

REMARKS AND RECOMMENDATIONS: A sample of water from the above formation in this well was not available from the well head so comparison was made with the above water from Gulf Sarkeys #1. Comingling of these waters should be no problem.

* NOTE: me/l and mg/l are commonly used interchangeably. When epm and ppm respectively. When 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 394-2
TESTED BY Cliff G. Gardner	DATE 9-9-70	DISTRIBUTION ☐ CUSTOMER ☐ AREA OR ☐ DISTRICT OFFICE ☐ PIC ENGINEER OR ☐ PIC LAB ☐ PIC SALES SUPERVISOR		

Gulf Sarkeys #2
Water Analysis
11/22/82

F

PH-- 5.8

Cations:

Total Hardness--	35,500 (mg/liter)
Calcium	--10,000 "
Magnesium	--2,430 "
Total Iron	-- 2.0

Anions:

Chlorides	--98,812 (mg/liter)
Sulfates	--1,250 "
Carbonate	--200 "
Bicarbonates	--244 "

Total Dissolved Solids --161,235 (mg/liter)

Specific Gravity -- 1.115

Scaling Tendencies:

Calcium Carbonate--	Slight @ 120 degrees F
Calcium Sulfate	--Slight @ 70 degrees F