

Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : Marathon Oil Company

Date : 04-08-1988

Location: J.W. Grizzell - Well #1; Middle Tank (on 03-28-1988)

	<u>Sample 1</u>
Specific Gravity:	1.051
Total Dissolved Solids:	71754
pH:	6.92
IONIC STRENGTH:	1.396

<u>CATIONS:</u>		<u>me/liter</u>	<u>mg/liter</u>
Calcium	(Ca ⁺²)	113	2260
Magnesium	(Mg ⁺²)	133	1610
Sodium	(Na ⁺¹)	993	22800
Iron (total)	(Fe ⁺²)	0.870	24.3
Barium	(Ba ⁺²)	0.002	0.150
Manganese	(Mn ⁺²)	0.011	0.292

<u>ANIONS:</u>			
Bicarbonate	(HCO ₃ ⁻¹)	11.4	695
Carbonate	(CO ₃ ⁻²)	0	0
Hydroxide	(OH ⁻¹)	0	0
Sulfate	(SO ₄ ⁻²)	65.6	3150
Chloride	(Cl ⁻¹)	1160	41200

SCALING INDEX (positive value indicates scale)

	<u>Temperature</u>	<u>Calcium</u>	<u>Calcium</u>
86°F	30°C	<u>Carbonate</u>	<u>Sulfate</u>
		0.42	-9.3

JUN 9 1989

REC'D
HONORARY OFFICE