

Water Analysis of Proposed Injection Fluid

A Mixture of Produced Water from the McKee Waterflood, Warren Unit, and Skaggs Waterflood

Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : CONOCO, INC. - Mr. Paul Adams - Hobbs, NM
Date : 05-22-1990
Location: WARREN UNIT - SWD #24 (on 05-18-1990)

Specific Gravity: 1.055
Total Dissolved Solids: 77557
pH: 7.00
Resistivity: 0.093 ohms @ 74°F
IONIC STRENGTH: 1.538

CATIONS:		me/liter	mg/liter
Calcium	(Ca ⁺²)	232	4640
Magnesium	(Mg ⁺²)	120	1460
Sodium	(Na ⁺¹)	1000	23000
Iron (total)	(Fe ⁺²)	0.716	20.0
Barium	(Ba ⁺²)	0.150	10.3
ANIONS:			
Bicarbonate	(HCO ₃ ⁻¹)	10.6	647
Carbonate	(CO ₃ ⁻²)	0	0
Hydroxide	(OH ⁻¹)	0	0
Sulfate	(SO ₄ ⁻²)	16.7	800
Chloride	(Cl ⁻¹)	1330	47000

SCALING INDEX (positive value indicates scale)

Temperature	Calcium	Calcium
86°F	Carbonate	Sulfate
30°C	0.77	-22

EXHIBIT 10

BEFORE EXAMINER CATANACH
OIL CONSERVATION DIVISION

EXHIBIT NO. 10

CASE NO. 9971

Submitted by Conoco Inc.

Hearing Date 6-27-90