

WATERFLOOD INJECTION WATER

Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : CONOCO
Date : 12-10-1990
Location: Warren McKee - IPD (on 12-7-90)

Specific Gravity:	Sample 1
Total Dissolved Solids:	1.037
pH:	51594
IONIC STRENGTH:	7.30
	0.923

<u>CATIONS:</u>		<u>me/liter</u>	<u>mg/liter</u>
Calcium	(Ca ⁺²)	40.0	800
Magnesium	(Mg ⁺²)	16.0	194
Sodium	(Na ⁺¹)	823	18900
Iron (total)	(Fe ⁺²)	0.043	1.20
Barium	(Ba ⁺²)	0.004	0.300
Manganese	(Mn ⁺²)	0.003	0.090

<u>ANIONS:</u>			
Bicarbonate	(HCO ₃ ⁻¹)	5.20	317
Carbonate	(CO ₃ ⁻²)	0	0
Hydroxide	(OH ⁻¹)	0	0
Sulfate	(SO ₄ ⁻²)	28.1	1350
Chloride	(Cl ⁻¹)	846	30000

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>
	-0.03	-49

EXHIBIT 18

BEFORE EXAMINER STOGNER OIL CONSERVATION DIVISION
EXHIBIT NO. <u>18</u>
CASE NO. <u>10220</u>
Submitted by <u>Conoco Inc.</u>
Hearing Date <u>1-24-91</u>