

Unichem International

707 North Leech

P.O.Box 1499

Hobbs, New Mexico 88240

Company : MARTINDALE PETROLEUM

Date : 12-02-1988

Location: PANCANA FEDERAL - HEATER TREATER (on 12-01-1988)

	<u>Sample 1</u>
Specific Gravity:	1.116
Total Dissolved Solids:	162260
pH:	6.56
IONIC STRENGTH:	3.110

<u>CATIONS:</u>		<u>me/liter</u>	<u>mg/liter</u>
Calcium	(Ca ⁺²)	400	8000
Magnesium	(Mg ⁺²)	152	1850
Sodium	(Na ⁺¹)	2270	52100
Iron (total)	(Fe ⁺²)	0.344	9.60
Barium	(Ba ⁺²)	0.013	0.900

<u>ANIONS:</u>			
Bicarbonate	(HCO ₃ ⁻¹)	2.00	122
Carbonate	(CO ₃ ⁻²)	0	0
Hydroxide	(OH ⁻¹)	0	0
Sulfate	(SO ₄ ⁻²)	24.5	1180
Chloride	(Cl ⁻¹)	2790	99000

SCALING INDEX (positive value indicates scale)

<u>Temperature</u>		<u>Calcium</u>	<u>Calcium</u>
		<u>Carbonate</u>	<u>Sulfate</u>
86°F	30°C	0.25	-5.9