

PETROLITE OILFIELD CHEMICALS GROUP
ARTESIA, NEW MEXICO
WATER ANALYSIS REPORT

COMPANY NAME : J.M. WELCH
LEASE NAME : GULF B
SAMPLE POINT : WELL #1
SAMPLE DATE : 2-21-87

PH = 6.50
SAMPLE TEMP. = N/A
H2S (QUALITATIVE) = NEG.
SPECIFIC GRAVITY = 1.120

TITRATED AND CALCULATED IONS

HC03 (MG/LTR) =	207.00	HC03 (MEQ/LTR) =	3.39
CL (MG/LTR) =	92312.00	CL (MEQ/LTR) =	2600.34
SO4 (MG/LTR) =	1500.00	SO4 (MEQ/LTR) =	31.25
CA (MG/LTR) =	7120.00	CA (MEQ/LTR) =	356.00
MG (MG/LTR) =	4058.00	MG (MEQ/LTR) =	332.62
NA (MG/LTR) =	44735.00	NA (MEQ/LTR) =	1945.00

IONIC STRENGTH = 2.00
TOTAL HARDNESS = 34499.59
TOTAL DISSOLVED SOLIDS = 149781.68
TOTAL IRON (FE) = 0.0

CA(HC03)2 (MG/LTR) =	275.00	CA(HC03)2 (MEQ/LTR) =	3.39
CAS04 (MG/LTR) =	2127.18	CAS04 (MEQ/LTR) =	31.25
CACL2 (MG/LTR) =	17835.29	CACL2 (MEQ/LTR) =	321.35
MG(HC03)2 (MG/LTR) =	0.0	MG(HC03)2 (MEQ/LTR) =	0.0
MGS04 (MG/LTR) =	0.0	MGS04 (MEQ/LTR) =	0.0
MGCL2 (MG/LTR) =	15839.50	MGCL2 (MEQ/LTR) =	332.62
NAHC03 (MG/LTR) =	0.0	NAHC03 (MEQ/LTR) =	0.0
NA2S04 (MG/LTR) =	0.0	NA2S04 (MEQ/LTR) =	0.0
NACL (MG/LTR) =	113704.70	NACL (MEQ/LTR) =	1945.00

CALCULATED SCALING TENDENCIES

SCALING INDEX

CAC03 @ 80 DEG F = 0.28
CAC03 @ 120 DEG F = 0.79

SATURATION POINT

CAS04 @ 70 DEG F (MG/LTR) = 2340.04
CAS04 @ 110 DEG F (MG/LTR) = 2319.94
THIS SAMPLE CONTAINED 2127.18 MG/LTR