

MEWBOURNE OIL COMPANY
FEDERAL E-9
DL-2298

SEPTEMBER 4, 1986
LEA COUNTY, NEW MEXICO
PENROSE-QUEEN FORMATION
SUBMITTED BY: CECHEM CHEMICALS

DISSOLVED SOLIDS

CATIONS	MG/L	ME/L
SODIUM, Na (calc.)	74270	3229
CALCIUM, Ca	10827	540
MAGNESIUM, Mg	8991	739

ANIONS

CHLORIDE, Cl	158330	4465
SULFATE, SO ₄	2000	42
CARBONATE, CO ₃	0	0
BICARBONATE, HCO ₃	146	2

TOTAL DISSOLVED SOLIDS (calc.)

254565

IRON, Fe (total) 7
SULFIDE, as H₂S none detected

OTHER PROPERTIES

pH 7.3
SPECIFIC GRAVITY, 60/60 F. 1.173
RESISTIVITY (ohm-meters) 78 F. .04
HARDNESS, mg/L CaCO₃ 64060

REMARKS:

The Stiff-Davis equation indicates that the water has a Stability Index of 2.2 at 100 F. A positive index indicates a tendency toward calcium carbonate deposition.

The calculated solubility of calcium sulfate in this water is 19 me/L at 100 F. Analysis indicates the water contains 42 me/L, therefore calcium sulfate deposition is indicated.

R.S. DICKEY