

WATER ANALYSIS REPORT

Lab ID No. : 091489H

Analysis Date: September 14, 1989

Company : Pennzoil CO.
Field :
Lease/Unit : Chaparral Fed. Comm.
Well ID. : No. 1
Sample Loc.:

Sampled By : Pro-Kem, Inc.
Sample Date:
Salesperson: Gerald Phillips
Formation :
Location : Lovington, N. M.

CATIONS	MG/L	MEQ/L	ANIONS	MG/L	MEQ/L
Calcium as Ca++	2,243	112.2	Hydroxyl as OH-	0	0.0
Magnesium as Mg++	532	43.6	Carbonate as CO3=	0	0.0
Sodium as Na+ (Calc)	50,225	2,183.7	Bicarbonate as HCO3-	828	13.6
Barium as Ba++	Not Determined		Sulfate as SO4=	2,000	41.7
Oil Content	0		Chloride as Cl-	80,982	2,284.2

Total Dissolved Solids, Calculated: 136,810 mg/L.

Calculated Resistivity: 0.051 ohm-meters
mg/L. Hydrogen Sulfide: Not Present
mg/L. Carbon Dioxide: Not Determined
mg/L. Dissolved Oxygen: Not Determined

pH: 6.300
Specific Gravity 60/60 F.: 1.090
Saturation Index @ 80 F.: -0.080
@ 140 F.: +0.800

Total Hardness: 7,782 mg/L. as CaCO3
Total Iron: 110 mg/L. as Fe++

PROBABLE MINERAL COMPOSITION

COMPOUND	MG/L	MEQ/L
Ca(HCO3)2	1,100	13.6
CaSO4	2,836	41.7
CaCl2	3,158	56.9
Mg(HCO3)2	0	0.0
MgSO4	0	0.0
MgCl2	2,076	43.6
NaHCO3	0	0.0
Na2SO4	0	0.0
NaCl	127,659	2,183.7

Calcium Sulfate Scaling Potential Not Present

Estimated Temperature of Calcium Carbonate Instability is 82 F.

Analyst 02:37 PM