



Saturation Index Calculations

Champion Technologies, Inc.
(Based on the Torsion-Oddo Model)

Site Information

Company	Sonot Raton LLC
Field	VPR 4
Point	20
Date	9/24/1999

Water Analysis (mg/L)

Calcium	64
Magnesium	27
Barium	0
Strontium	0
Sodium*	619
Bicarbonate Alkalinity	1,539
Sulfate	14
Chloride	242

* - Calculated Value

Appended Data

CO2	2 mg/L
H2S	6 mg/L
Iron	6 mg/L

TD5-2,511

Physical Properties

Ionic Strength*	0.04
pH†	7.90
Temperature	90°F
Pressure	50 psia

* - Calculated Value † - Known/Specified Value

Calcite Calculation Information

Calculation Method	Value
pH	7.90
Bicarbonate Alkalinity Correction(s)	Value
None Used	---

SI & PTB Results

Scale Type	SI	PTB
Calcite (Calcium Carbonate)	1.20	52.0
Gypsum (Calcium Sulfate)	-3.30	N/A
Hemihydrate (Calcium Sulfate)	-3.06	N/A
Anhydrite (Calcium Sulfate)	-3.55	N/A
Barite (Barium Sulfate)	N/A	N/A
Celestite (Strontium Sulfate)	N/A	N/A