



Saturation Index Calculations
Champion Technologies, Inc.
 (Based on the Tomsen-Oddo Model)

Site Information

Company	Sonat Raton LLC
Field	VPR A
Point	11
Date	9/25/1999

Water Analysis (mg/L)

Calcium	56
Magnesium	22
Barium	0
Strontium	0
Sodium*	1011
Bicarbonate Alkalinity	1,366
Sulfate	27
Chloride	909

* - Calculated Value

Appended Data

CO2	2 mg/L
H2S	0 mg/L
Iron	4 mg/L

TDS - 3,395

Physical Properties

Ionic Strength*	0.05
pH†	7.50
Temperature	90°F
Pressure	50 psia

* - Calculated Value † - Known/Specified Value

Calcite Calculation Information

<i>Calculation Method</i>	<i>Value</i>
pH	7.50
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<i>Bicarbonate Alkalinity Correction(s)</i>	<i>Value</i>
None Used	---

SI & PTB Results

<i>Scale Type</i>	<i>SI</i>	<i>PTB</i>
Calcite (Calcium Carbonate)	0.64	36.7
Gypsum (Calcium Sulfate)	-3.09	N/A
Hemihydrate (Calcium Sulfate)	-2.86	N/A
Anhydrite (Calcium Sulfate)	-3.34	N/A
Barite (Barium Sulfate)	N/A	N/A
Celestite (Strontium Sulfate)	N/A	N/A