



## Saturation Index Calculations

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

### Site Information

|         |                  |
|---------|------------------|
| Company | Soniat Raton LLC |
| Field   | VPR A            |
| Point   | 17               |
| Date    | 9/24/1999        |

### Water Analysis (mg/L)

|                        |       |
|------------------------|-------|
| Calcium                | 48    |
| Magnesium              | 36    |
| Barium                 | 0     |
| Strontium              | 0     |
| Sodium*                | 773   |
| Bicarbonate Alkalinity | 1,512 |
| Sulfate                | 25    |
| Chloride               | 485   |

\* - Calculated Value

### Appended Data

|                  |        |
|------------------|--------|
| CO <sub>2</sub>  | 3 mg/L |
| H <sub>2</sub> S | 0 mg/L |
| Iron             | 4 mg/L |

TDS - 2,883

### Physical Properties

|                 |         |
|-----------------|---------|
| Ionic Strength* | 0.04    |
| pH†             | 7.80    |
| Temperature     | 90°F    |
| Pressure        | 50 psia |

\* - Calculated Value † - Known/Specified Value

### Calcite Calculation Information

| Calculation Method                   | Value |
|--------------------------------------|-------|
| pH                                   | 7.80  |
| <hr/>                                |       |
| Bicarbonate Alkalinity Correction(s) | Value |
| None Used                            | ---   |

### SI & PTB Results

| Scale Type                    | SI    | PTB  |
|-------------------------------|-------|------|
| Calcite (Calcium Carbonate)   | 0.97  | 37.1 |
| Gypsum (Calcium Sulfate)      | -3.17 | N/A  |
| Hemihydrate (Calcium Sulfate) | -2.94 | N/A  |
| Anhydrite (Calcium Sulfate)   | -3.43 | N/A  |
| Barite (Barium Sulfate)       | N/A   | N/A  |
| Celestite (Strontium Sulfate) | N/A   | N/A  |