

## Fault Seal Analysis

Fault Seal Analysis provides a rapid method of computing routine smear gouge analysis and qualitatively assessing fault seal risk. The program computes Smear Gouge Ratios (SGR) for one or more reservoir intervals and allows presentation of plots of SGR against displacement.

The rapidity of the analysis enables easy "what-if" scenarios for risk faulting when the stratigraphy has not been confirmed by drilling.

In addition a number of single displacement analysis options are provided. This module is part of the TerraStation geological workstation, which allows easy incorporation of computed shale volume curves, as well as providing user control of the ranges of fault displacement.

### Required Input Data

The required data for the fault seal module is simply a shale indicator, such as GR or Vshale, and an option sonic curve for indicating brittle vs ductile shales.

### Calculations

The fault seal module provides for the use of Smear Gouge Ratio, Clay Smear Potential, Shale Gouge and Smear Factor for single displacement analysis. Smear Gouge Ratio is used when performing a multiple displacement analysis.

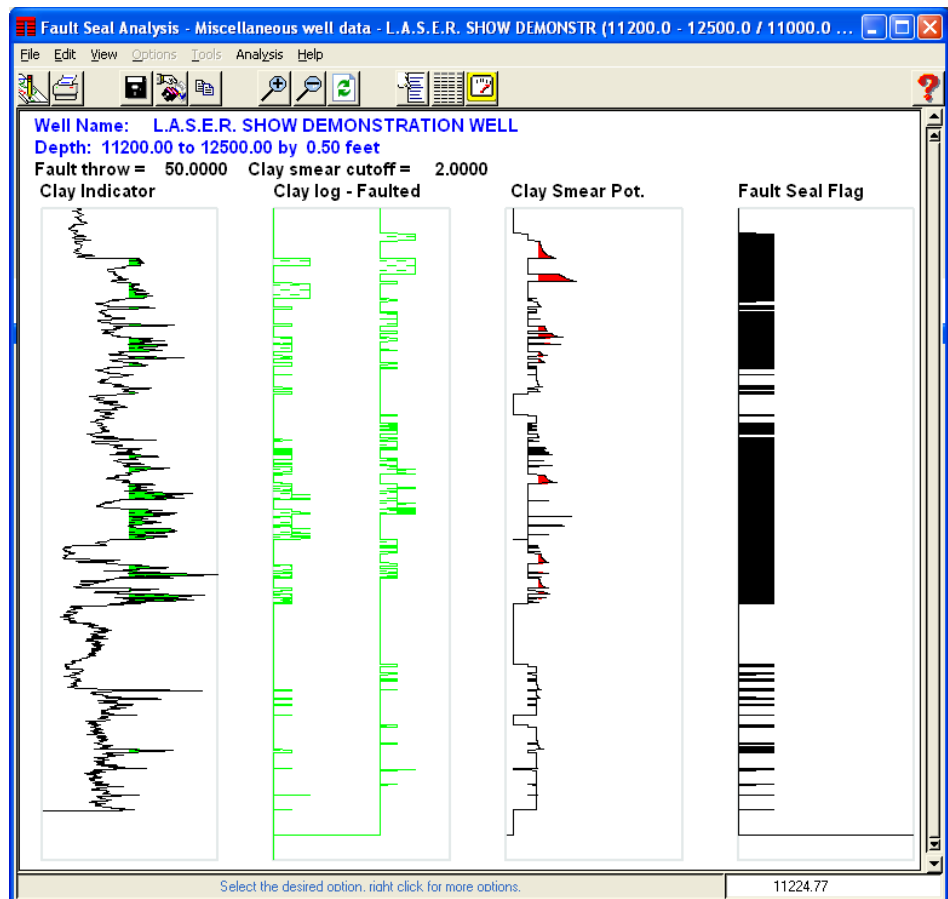
### Display capabilities

In single displacement work, a screen shows the computed result graphically, as well as a flag indicating whether there is leaking across the fault at any given depth.

Multiple displacement analysis displays cross plots of cross seal and dip seal.

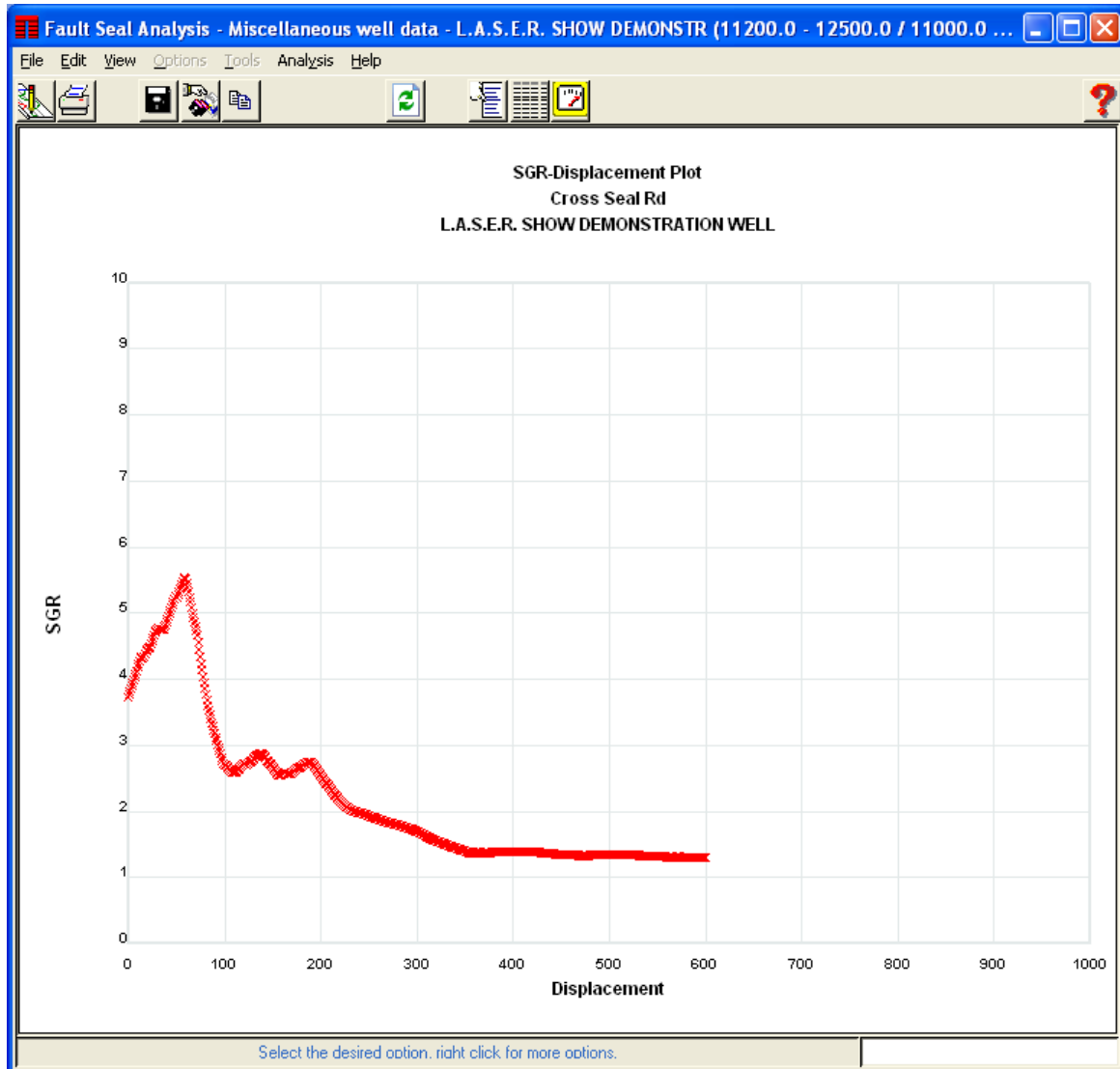
### Support and Training

TERRASCIENCES provides immediate telephone and email support by trained earth science professionals. A regularly updated web site, electronic newsletter, and training courses are also available. All product upgrades are included in the maintenance and support fee.





- ✓ Data loading from all common formats including LIS, DLIS, LAS, and other ASCII files.
- ✓ Unlimited depth intervals, up to 10,000 wells per project.
- ✓ Multiple displacement Smear Gouge Ratio analysis with crossplot of cross and dip seal.
- ✓ Single displacement analysis using Smear Gouge, Clay Smear Potential, Shale Gouge and Smear Factor.



**Example of a multi displacement crossplot**

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