Mapping

TERRASCIENCES provides one of the most advanced, yet easy to use, packages for the display and analysis of map data available today. TerraStation II provides a comprehensive suite of mapping tools and a variety of display types for spatial data. The Mapping module is designed to aid in the development of geological models. When combined with the DEXTR and Correlation modules, these software tools provide an immensely powerful capability for the analysis and visualization of data. Field wide scenarios can be quickly explored and evaluated.

Map Types

The Mapping module permits rapid construction of base maps, contour maps, 3D perspective views of one or more horizons, bubble maps, curve profile maps, and more. Kriged grids can also be generated and mapped. Isopach values can be calculated, displayed, and contoured.

Display Control

The user has full control over the scaling of maps. Values can be displayed in feet or meters and as measured depths, TVD's, TST's, or TVT's. The user has full control over the style of the display, including colors, fonts, sizes, and symbol appearance. Information such as production rates and any other variable data can be shown on base maps. Curve profiles for specific depth zones can be added easily by using saved IMAGELog templates.

Deviated Wells

Deviated and horizontal well data do not present a problem for TerraStation's Mapping module, as multiple Z values can be stored for each horizon identified. The borehole trace, together with a variety of well information, can be viewed in the Correlation module. In addition, borehole traces can be superimposed on any map display.

Analysis

With the geostatistical options, it is possible to perform spatial analysis. Relationships between one log derived parameter and another can be explored on a field wide scale. Variograms of any variable can be used to build a model and produce the kriged map.

DEXTR

The Data EXTRaction (DEXTR) module is one of the most powerful of all TerraStation's capabilities. It allows curve data to be 'extracted' from wells for a given interval, and perform calculations of such things as net sand thickness, gross sand thickness, net/gross, mean porosity and/or Sw, etc. The results are immediately available for mapping.

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.
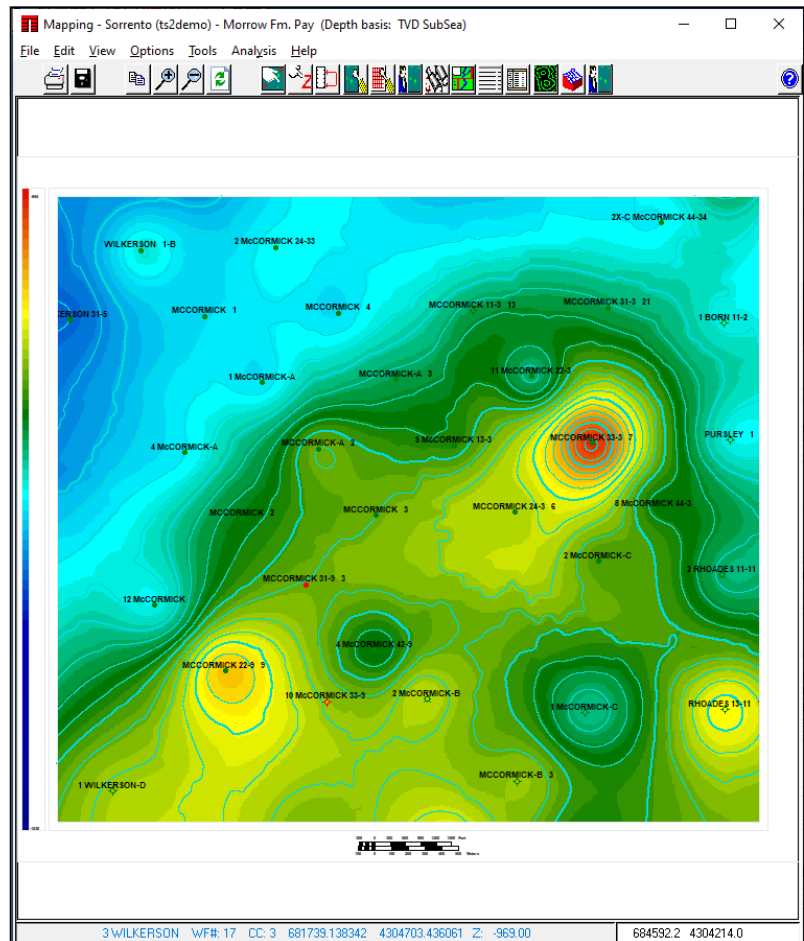
Product Specifications

☑ Mapping module is completely integrated with Cross Section module (changing tops in one changes them in the other).

☑ Handles unlimited number of data points.

☑ Correct handling of tops on deviated and horizontal wells.

☑ Grid based and triangulation based mapping functions.

☑ User definable grid filtering operations.

☑ Surface to surface and grid to grid calculation options.

☑ Three-dimensional viewer of several surfaces.

☑ Volumetrics with computed data cutoffs, such as porosity, vshales, etc.

☑ Full base mapping capability.

☑ Bubble map function.

☑ Curve profile maps.

☑ Rose diagrams and many more zone based plots.

☑ Trend surface and residual analysis.

☑ Overlaying of several maps.

☑ Geostatistical analysis options for spatial analysis, including kriging.

☑ Correct plotting of piercing points of formation tops (intersection of well and formation top).

☑ If tops are modified, related isopachs are recalculated each time an isopach map is made.

☑ Curve profile function (plot shaded curves from log templates next to well).

☑ Grids can be loaded and exported in Surfer™ and ZMAP™ formats.

☑ Graphics output to CGM, Postscript, PDF, EMF, BMP, JPEG, HPGL/2, and more
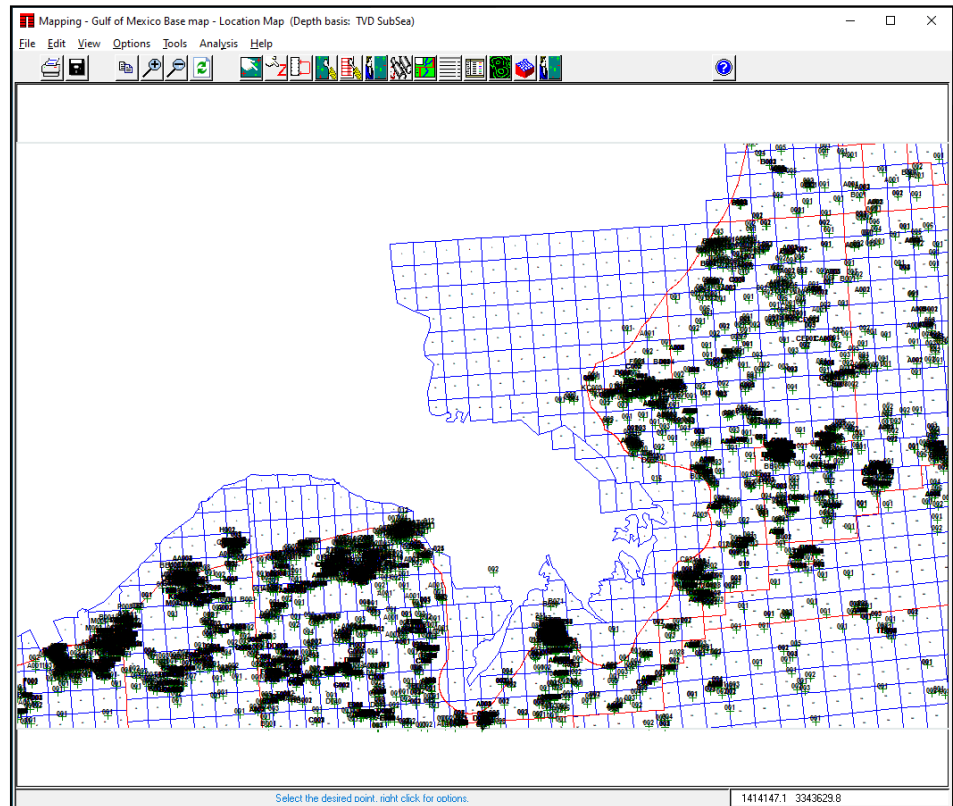
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