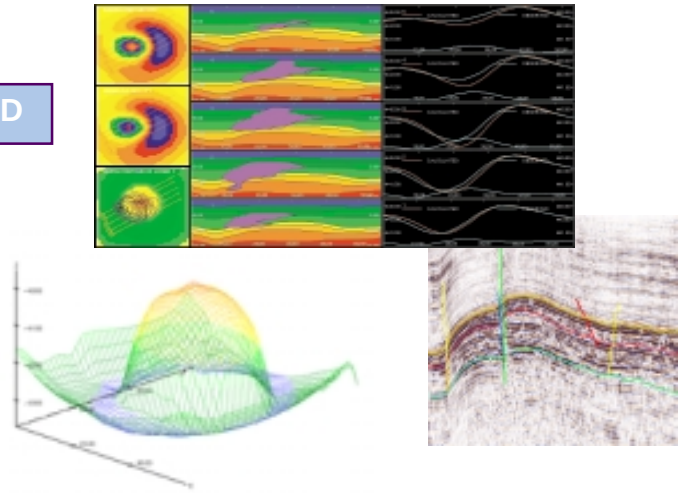
FUGRO-LCT

3-D Earth Modeling

3MOD™

3-D interactive modeling

3MOD



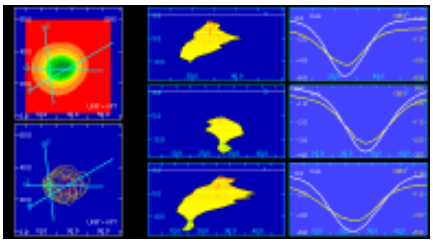
3MOD is an interactive, horizon-based program for producing realistic geologic models that satisfy known geologic, seismic, and observed gravity and magnetic data. A model displays as a series of stacked grids, each representing the depth to a particular geologic horizon. You can specify the density and velocity between these horizons in a variety of ways to create and alter the model.

3MOD uses a Fast Fourier Transform (FFT) approach, enabling interactive procedures. Changes occur to the model in real-time. Potential field response calculates immediately, allowing rapid convergence to an acceptable geologic model. A semi-automatic, iterative inverse mode to improve the structural model is also included.

Three-dimensional geologic modeling of gravity and magnetic fields.

Additional 3MOD Features

- User-defined model extension parameters minimize edge effects
- Calculation on either an irregular or flat observational surface
- Complex density or susceptibility properties, with optional definition of background density or magnetization
- Model modification along a cross section or in map view with local regridding, editing of model parameters, and Pan/Zoom
- Compatibility with industry-leading seismic modeling programs
- File input/output with an internal file management system
- Ability to interface with FUGRO-LCT's S3MOD



S3MOD

S3MOD™

S3MOD is an interactive, depth-contour-based, 3D gravity and magnetic field modeling program. S3MOD manages complex geologic problems, such as salt overhang thrust faulting and kimberlite pipes, with ease. With S3MOD, you can make changes to the model interactively. The computed gravity or magnetic field will update immediately along model cross sections. The computation of the field feature uses a modified, fully 3-D Talwani method for accurate computation.

The geologic model displays as a series of stacked depth contours. You can input density for both the background sediments and the S3MOD body as either constant densities or density versus depth functions.

In S3MOD, you can set vertical and horizontal shifting of contours, interactive placement, insertion and resampling of individual contour points, and regional stretching of individual polygon contours.

You can display and alter density vs. depth functions interactively. Select from a number of standard grid formats to input observed gravity and magnetic data grids.

S3MOD Features

- Instant computation of gravity/magnetic response to changes
- Calculation on various observational surfaces
- Variable density versus depth, absolute or contrast
- Induced and/or remanent magnetization
- Model modification along cross sections or map
- Convenient editing of model parameters
- Zoom of map and profile views
- Online help at any time in the modeling process

FUGRO-LCT INC.
6100 Hillcroft
Houston, Texas 77081, U.S.A.
Tel: 713-272-5400
Fax: 713-272-5410
E-mail: info@lct.com

Web site: www.lct.com

FUGRO-LCT Limited
5 Newmarket Court
Kingston, Milton Keynes, England MK10 0AG
Tel: +44 (0) 1908-286100
Fax: +44 (0) 1908-286101
E-mail: staff@fugro-lct.co.uk