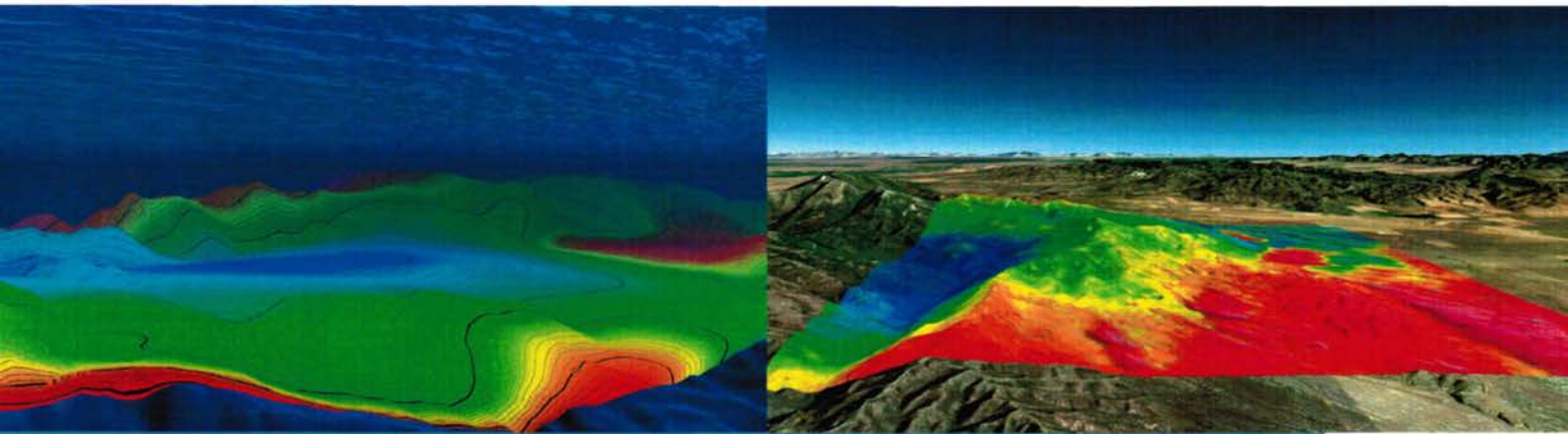


# ADVANCED DATA PROCESSING PROCEDURES

PROCESSING SERVICES FOR MARINE AND  
AIRBORNE GRAVITY AND MAGNETIC DATA

- Processing
- Reprocessing
- Survey integration
- 3D-Bouguer and deep-crustal corrections



RESOLUTION...RELIABILITY...RESULTS!





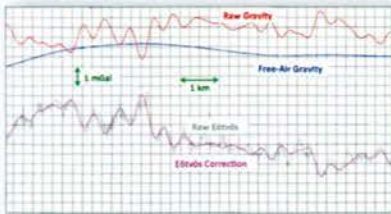
# Advanced Data Processing Procedures

EDCON-PRJ applies a range of processing procedures with the goal of revealing the highest resolution and accuracy inherent in every data set. These procedures and software are unique to EDCON-PRJ. Their success relies not only on proprietary software, but also on the experience and skill of our people.



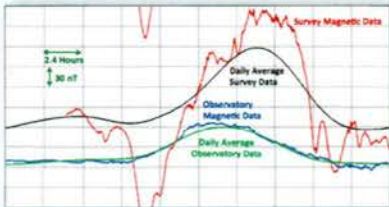
## EÖTVÖS correction

Time-varying de-correlation with gravity data using adjustable parameters to smoothly correct measured gravity

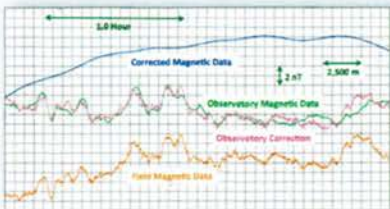


## Base Mag correction

The correction for events in the Earth's external field can be parsed into events of varying duration, amplitude, and phase. Survey lines are typically of shorter duration than the daily events that are particularly strong at low latitudes and often associated with the Electro-jet effect. Analysis and removal of these day-long effects precede analysis and removal of shorter-period events.

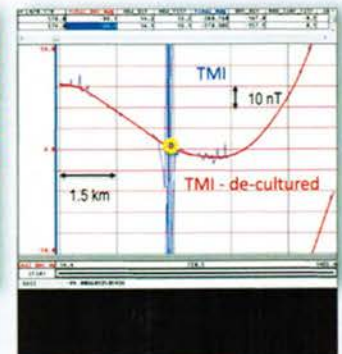
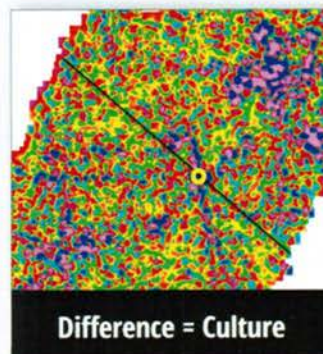
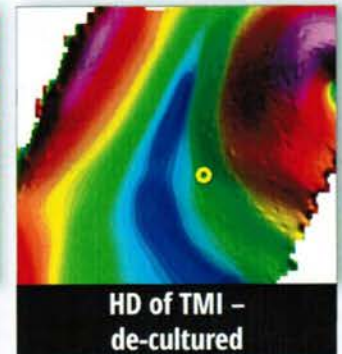
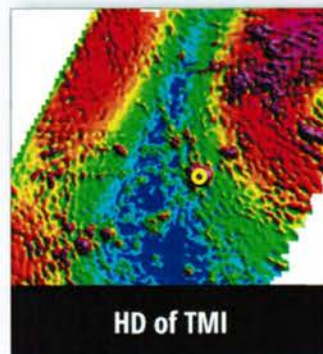
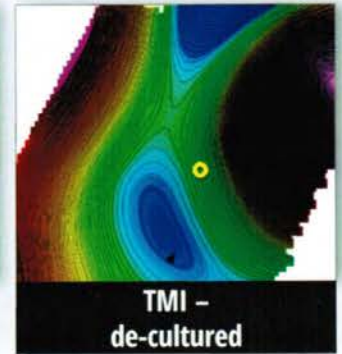
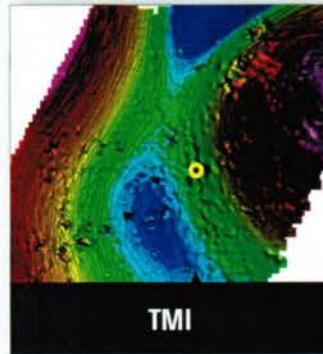


Over the time frame of a single survey line, survey magnetic data can be corrected for short and long-period diurnal events, including amplitude and phase differences between the field magnetic data and the observatory magnetic data. Final results are judged and adjusted based on mapped line-intersection differences and map quality.

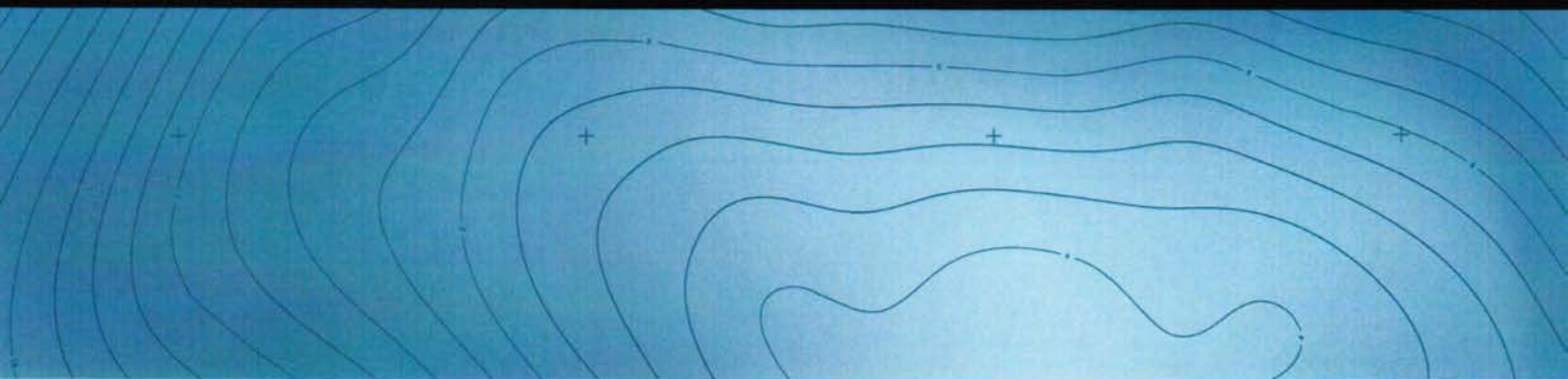


## Magnetic de-culturing

Minimizes magnetic cultural effects using recursive map and profile analysis



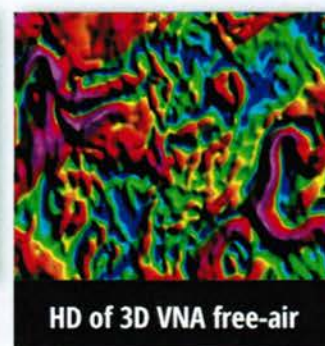
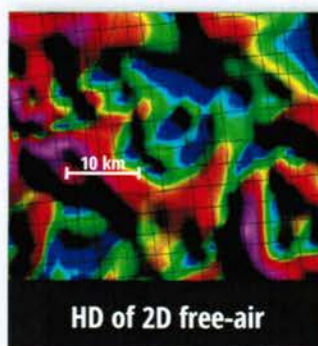
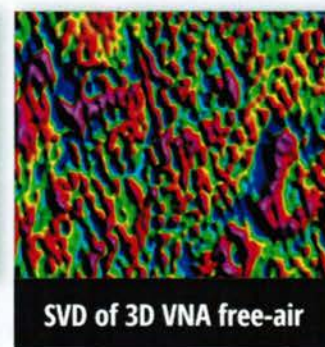
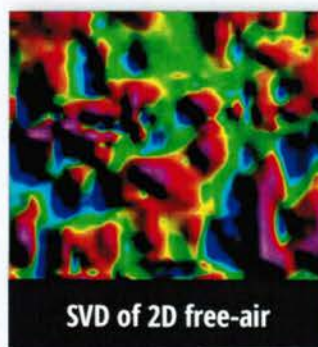
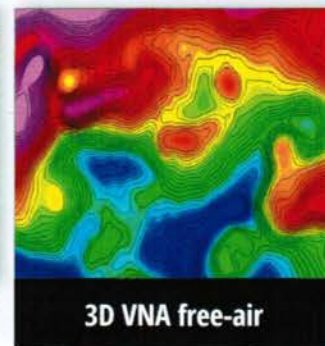
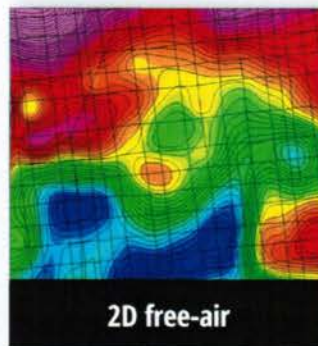
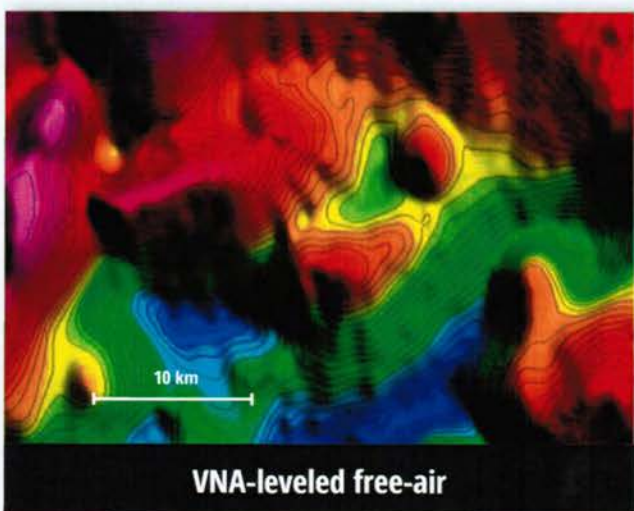
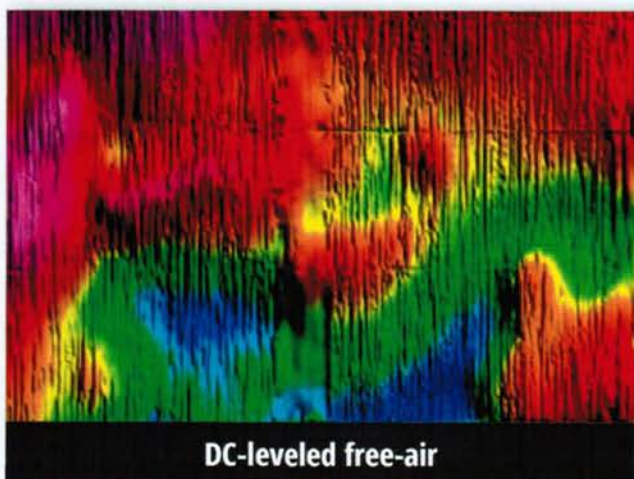




## VNA virtual network analysis

- Advanced micro-leveling
- Effective handling of sparse and near-miss intersections, multiple intersections, and line tails
- Preservation of details observed on profiles in final grids and maps

The six maps below compare results from 2D and 3D surveys over the same area. The close line spacing of the 3D survey and VNA leveling enhance detail. Derivative maps from each grid help to compare the data sets and the achievable detail.





### Intersection analysis

Statistical and graphical intersection adjustment, intersection-derived drift correction with no restriction on multiple crossing with the same line

### Complete 3D Bouguer correction

Forward modelling with extensions to avoid edge effects

### Integration with regional data sets

Preserving the character and detail of each data set's configuration

### VMON vertical velocity monitor

Real-time estimate of processed data quality dependent only on measured vertical velocity in cm/sec

VMON Value	Expected Processed Gravity Data Quality
Less than 8 cm/sec	0.2 mGal at wavelengths of 500m and greater
8-24 cm/sec	0.2 to 0.5 mGal wavelengths of 2km and greater
24-40 cm/sec	0.5 to 1.0 mGal at wavelengths of 4km and greater

### Gravity Tie

Systematic network tie with EGM2008 not requiring an in-port base

### Detailed Analysis of Raw Instrument Outputs

Computation of gravity from raw meter outputs, improving cross-coupling corrections and improving raw gravity and magnetic data for unique effects of vertical and horizontal motions



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