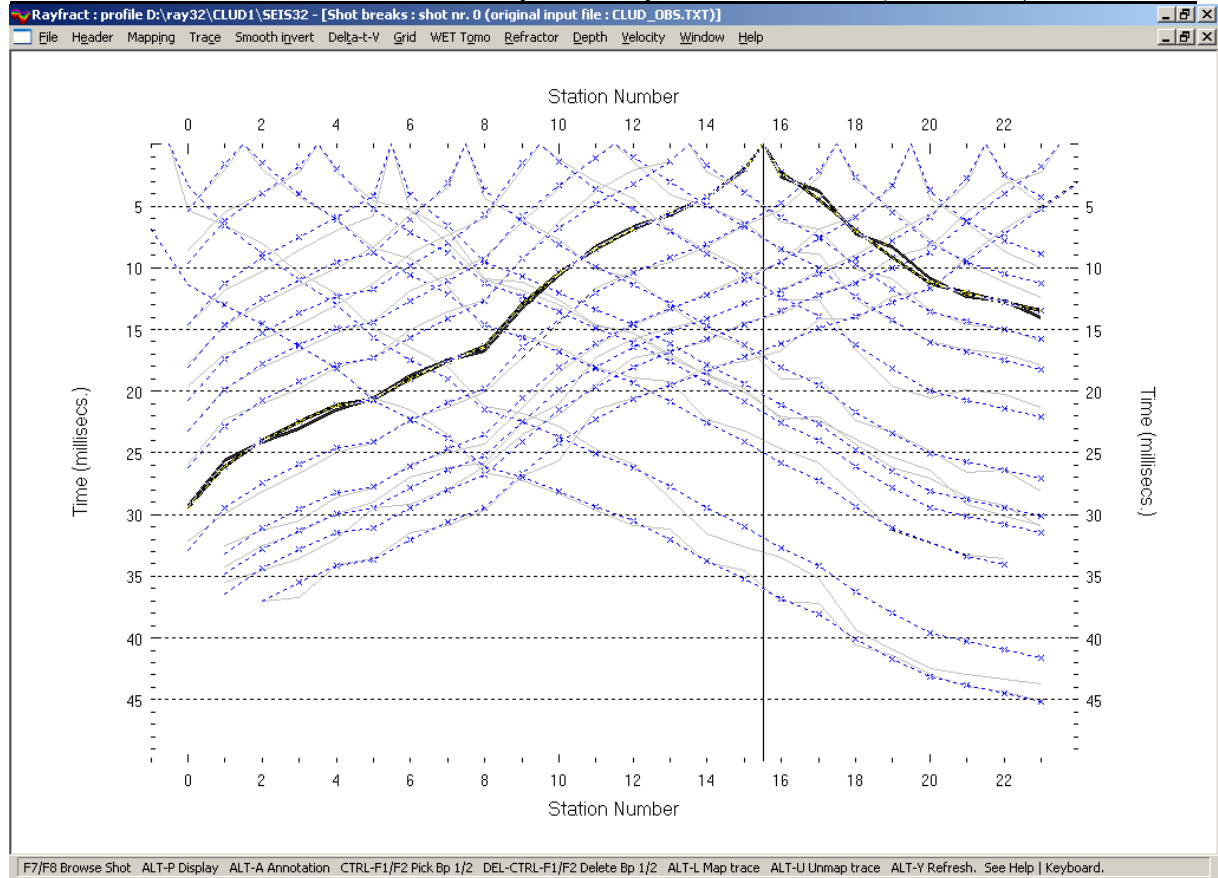
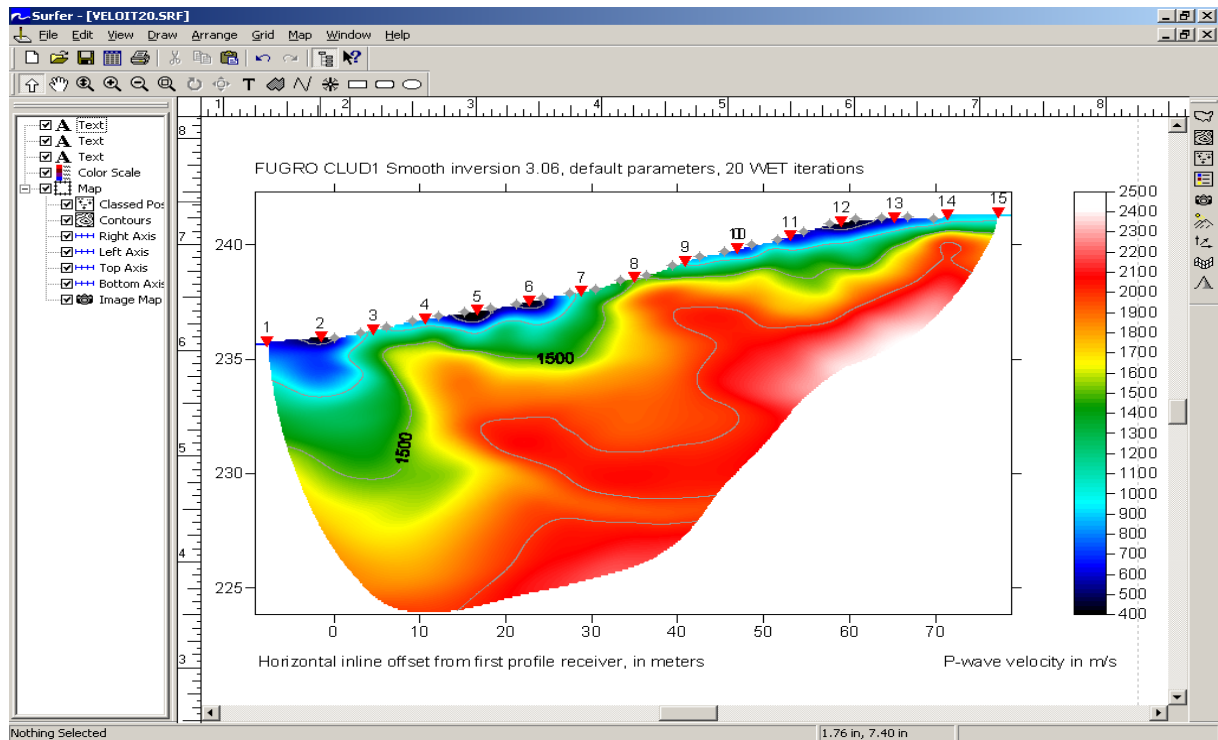


Smooth inversion FUGRO WEST CLUD1 Optim SeisOpt® data set with Rayfract® 3.21, Jan 21st 2012 :



Picked times (gray) and modeled picks (blue). Original data set available at <http://rayfract.com/tutorials/clud1.zip>.

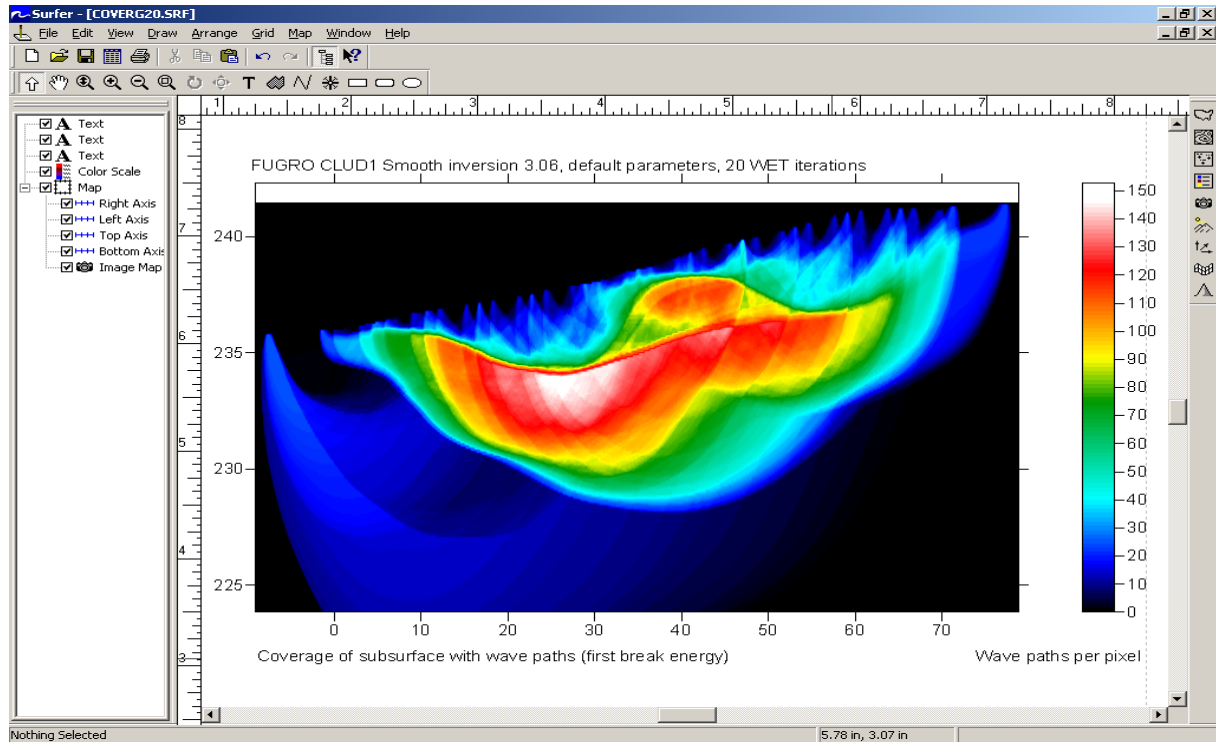


Smooth inversion CLUD1, default WET parameters. Station and receiver spacing 3.048 m, spread type "10: 360 channels".

To process the data with our Smooth inversion method, please proceed as follows :

- Download the original first break data and geometry files from <http://rayfract.com/tutorials/clud1.zip>.
- create a new profile database named CLUD1, with a *Station spacing* of 3.048 m. See our manual <http://rayfract.com/help/manual.pdf> chapter 1.1.

- copy archive CLUD1.ZIP to \RAY32\CLUD1\INPUT with Windows Explorer, and unzip it there.
- uncheck *File|Import Data Settings|Default distance unit is meter*, since input files specify coordinates in feet.
- import file CLUD_OBS as shown in chapter 1.2, with *Import data type* “OPTIM LLC SeisOpt” and *Default spread type* „10: 360 channels“. The import routine will detect the actual number of channels used for each shot.
- review first breaks, traveltimes curves and shot positions with *Refactor|Shot breaks*. See above manual chapter 1.3.
- uncheck *WET tomography Settings|Disable wavepath scaling for short profile*.
- invert the data with *Smooth invert|WET with 1D gradient initial model*. Proceed as lined out in chapter 1.4.



FUGRO WEST CLUD1 coverage of subsurface with first break energy/wavepaths.

For an independent third-party comparison of our Smooth inversion with Optim LLC SeisOpt® Pro and Geometrics SeisImager™ see

<http://rayfract.com/07-2353.pdf>

You may generate SeisOpt data files e.g. with W_GeoSoft WinSism 10. For Rayfract® import of SeisOpt files, disable *File|Import Data Settings* item *Default distance unit is meter* to specify distance unit feet. Disable setting *Default time unit is seconds*, to specify time unit milliseconds.

If there are dead traces missing from SeisOpt® or Interpex Gremix input data files, these missing traces are regenerated during import automatically for the active part of the receiver spread type specified

Processing was done on an HP Compaq nx7400 portable with Intel Core 2 Duo processor, running at 1.83 GHz and with 1 GBytes of RAM. Smooth inversion with default Delta-t-V and WET settings took about 3 minutes, for 15 shots into 24 receivers.

We would like to thank Thomas Blake of [FUGRO WEST](http://rayfract.com) for making available this interesting data set, complete with original SEG-2 formatted .SG2 binary trace data files as available at http://rayfract.com/tutorials/clud1_sg2.zip.