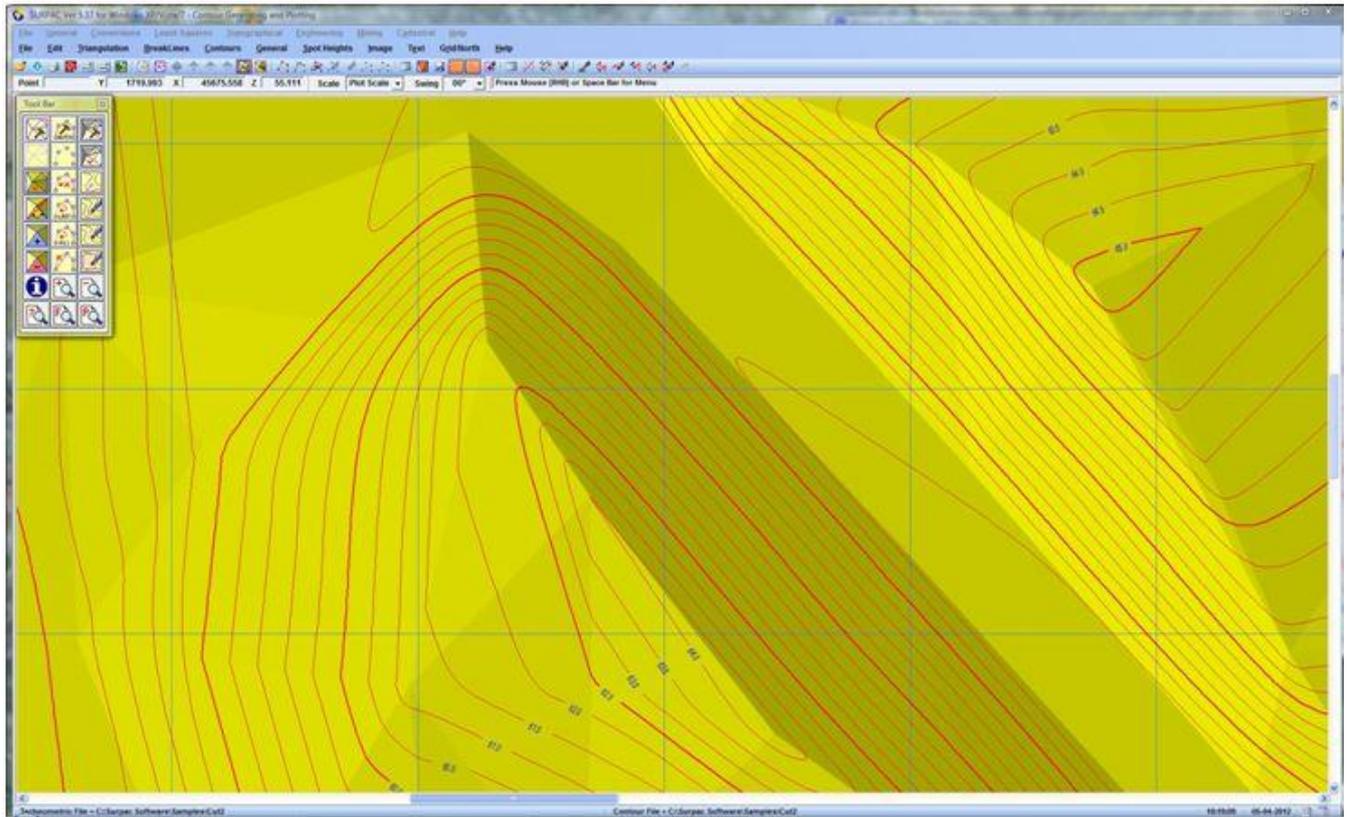
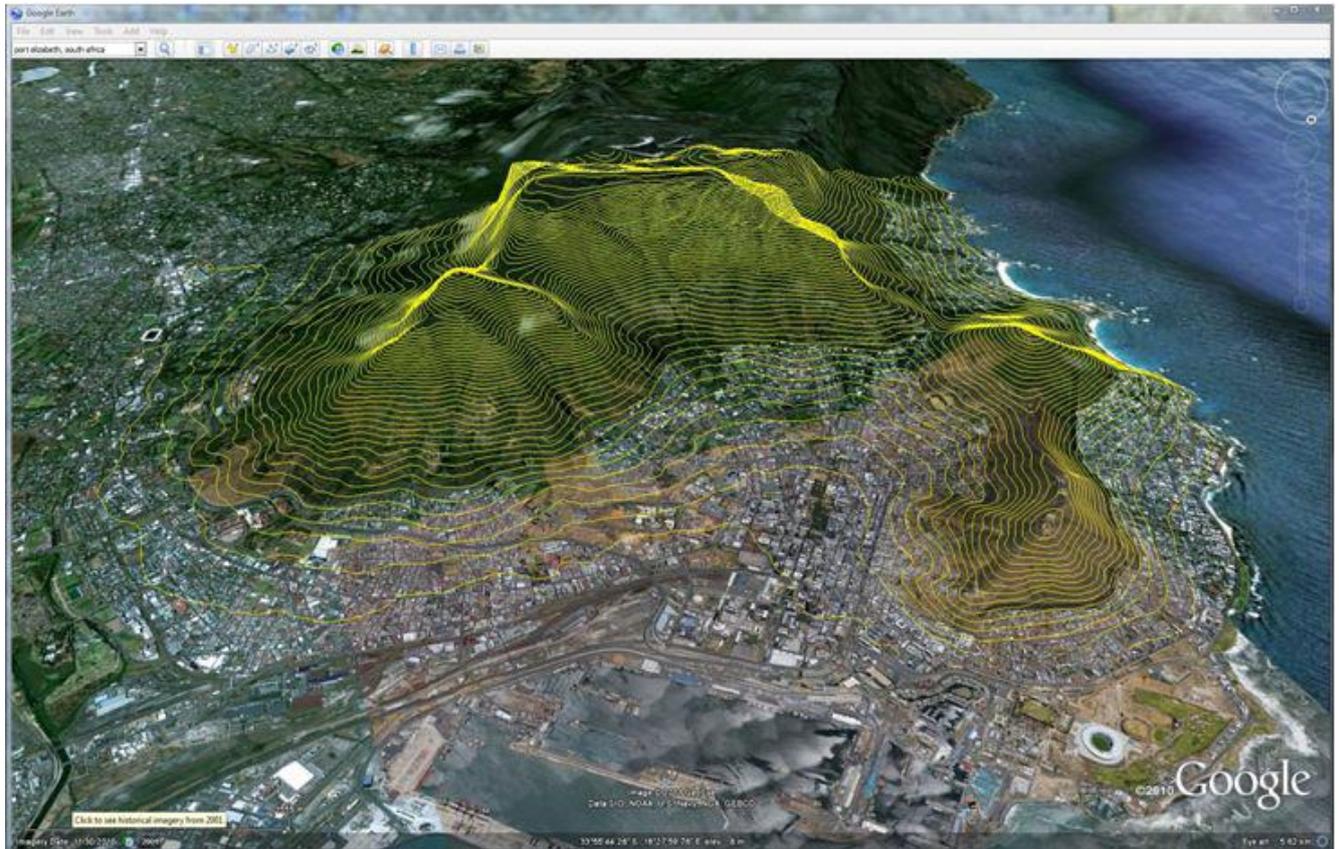


**A Contour Plot showing Headings, Grids and North Point**



**A Contour Plot showing - Smoothed Contours with Labelling and Spot Heights.**



A SURPAC Contour Plot developed from interpolated Google Earth heights and displayed on Google Earth



### **Contour Creation/Plotting CAD**

- This application carries out the functions of :-
  - Plotting of Tacheometric Data in the form of Spot Heights, with attached information,
  - Point addition, editing or deleting,
  - BreakLine creation (if required), using manual and/or auto-selection functions,
  - Background shading for quasi 3D effects,
  - Generation of Surface and Base model Triangulation,
  - Dynamic Contour editing through Triangle adding, deleting, or modifying,
  - Dynamic Contour editing through Point adding, deleting, or modifying,
  - Importing and manipulation of background graphic images,
  - Importing of defined SURPAC Plot File data as background information,
  - Contour labelling at User defined locations (at any positions along Contour Lines),
  - Erasing Contour Lines within a User defined polygon (such as a building),
  - General Text writing and editing functions,
  - Grid and North Point plotting,
  - Dynamic Point height determination from an associated DTM,

- Dynamic modification of an existing DTM when the Triangulation is modified.
- When creating Contours, Users have two routes they can follow, namely :-
  - First, Surface Triangulation can be generated with, or without, BreakLine information. Triangles are then User modified, as required. Contours are modified as changes to the Triangulation are made. Normally, a shaded background would be displayed giving a 3D effect and making any errors in the Triangle network easier to detect. Once the Triangulation has been completed, and the Contours stored, a DTM (using the DTM application) may be generated from the Triangulation network. This technique uses Linear DTM interpolation.
  - Alternatively, the User can generate all necessary BreakLines (using the Auto BreakLine function, where possible), then generate a DTM (using the DTM application) from the combined Point data and BreakLine data. This technique uses a Least Squares Curvilinear DTM interpolation. Finally, from the Contours can then be generated from the DTM information.
- The first method produces better looking Contours, as Spline curves are fitted to the Contour lines for display and plotting. The second method, however, tends to produce better volume results (volumes are computed in the DTM application), due to its curvilinear interpolation approach.
- Contours, BreakLines and/or Triangulation can be generated separately for a Surface model and a Base model. The existence of Base model data is recognized by the application via reserved Point Description and/or BreakLine Descriptions. Using both model types in one file allows easy volume calculations when using the DTM application.
- The application includes a floating Tool Bar for the rapid selection of the most popular commands.