

## 1 : 1,000,000 Mineral Resources Map of Angola Republic

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The *Mineral Resources Map of Angola* was created at the Polish Geological Institute, in 2004. All project's phases: digital compilation program, database structure, digital processing and final map compositions were prepared and done in the Department of Geological Cartography using ArcInfo 8.3 software system on PC workstations.

**Database structure.** Database consists of 37 tables, multi-thematic dictionary and styles prepared especially for this project. Coverages were divided into 2 groups: topography and geology.

Topographic layers are:

- HYDRO — including ocean, rivers, waterfalls and barrages,
- ISOBATHS — including isobaths for the part of the Atlantic Ocean,
- ELEVATIONS — including spot heights,
- BOUNDARY — including international boundary,
- CITIES — including the capital and main cities of Angola,
- ROADS — including main roads and railways,
- BRIDGES — including bridges,
- GEOGRID — graticule.

Geological layers are:

GEOLOGY — including geological divisions (rocks and rocks' formations and groups),

- DYKES — including dykes,
- KIMBERLITES — including kimberlites,
- FAULTS — including faults and overthrusts,
- STRIKES — including dips and strikes of beds,

METASOMATIC — including silification and metasomatic zones,  
MINERALS — including mineral resources.

Detailed description of database structure is given in the text document *Preliminary design of ArcGIS database structure of input data* appended to the project data on CD.

**Compilation.** Geology was compiled from four paper maps data sources that were published in Angola a couple of years ago. The formal requirement for our department was to make the true digital version of four separate paper maps. The sheets were scanned in full color and manually vectorised in reference to WGS84 coordinate system. As the final result, 8 topographic and 7 geological coverages with attribute tables and thematic dictionaries were prepared for further processing. The great amount of data: more than 3000 polygons and more than 5000 points and arcs involved many stages of visual and semi-automated error checking. Some problems also resulted from geological symbol classification ambiguities because of earlier, non-GIS-aided map preparation processes. The consolidated legend must have been prepared semi-automatically on the fourth map composition because of forced source map sheets division. The result of the compilation is four separate map compositions created in ArcMap and also converted to and saved in raster format (tiff).

**Conclusions.** As far as the *Mineral Resources Map of Angola* is concerned, the final solution, based on our experiences, is to create a new seamless, digitally integrated map composition for the entire country area for further analysis, database integration and hard-copy map distribution.

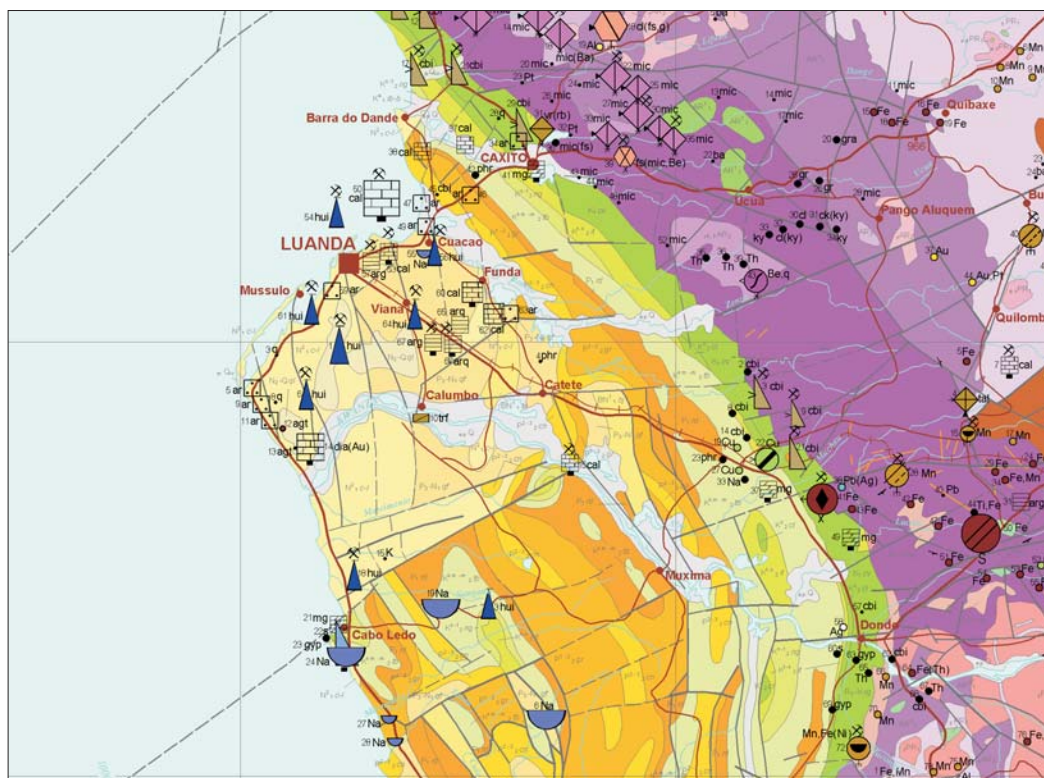


Fig. 1. Fragment of map composition

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