

KATANGA PLATINUM GROUP MINERALS

FOREWORD

The materials presented here are an introduction to the topic of Katanga Platinum Group Elements (PGE), Minerals (PGM) and ores. Although most of these materials have already been published elsewhere as a more formal paper (Jedwab, 1997), their publication on the web as an English version was deemed useful, to make this topic better known, and basic data easily available from everywhere to everybody.

Indeed, the existence of the Katanga PGE-PGM ores, their mineralogy and geology, are generally very poorly known, or even completely ignored, by the specialized literature of PGM and ore geology, in spite of their very unconventional aspects. And the contemporary revival of PGE-PGM studies, triggered by the need for rare elements so highly valued for their manifold properties, justifies the reassessment of old observations, made in out-of-the-way deposit types. It is hoped that as many people as possible will find some interest in the facts presented in this web site, and consider their implications.

The web site is comprised of the following related chapters:

- A description of the geological samples, studied by the present author. All samples are historical, and have been collected by distinguished mineralogists, at locations already known to contain PGE, although PGM were still invisible in their time;
- A brief description of the investigation methods which have been used by the author;
- A series of excerpts from the Katanga PGE-PGM literature, translated in English when appropriate; most of these texts were published in poorly accessible journals, books and reports. A few personal opinions and comments have been added when necessary;
- Two tables presenting the scanty data of Au, Pd and Pt productions, and ore grades, available in the published literature;
- A table of all PGM discovered to date (defined and undefined species, still undetermined species and compounds), and of the more common species containing minor amounts of PGE;
- A list of references pertaining directly to the topic;
- A set of six plates, displaying some of the PGM found in the investigated rocks and ores. The corresponding captions are available either as a running-text entitled "Figure Captions", or as "Comments" attached to each plate;
- A list of conclusions, which is certainly a still open one.

The genetic aspects have been skipped, since they are certainly complex, many sided, and mostly unresolved. The theoretical difficulties are the same as those raised by the other Katanga accumulated elements: Cu, Co, U, Mo, Ni, Re, Ge, etc. Moreover, one ought to take into account the overall absence of preserved or recognizable ultrabasic rocks in the area. However, recent theoretical approaches could circumvent that difficulty, and shed some light on the whole problem: the unconformity-related U-Au-PGE-Co-Cu-Mo ore type is especially in our line of sight (Cox and Singer, 1986; Jaireth, 1992).

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