



INTERNATIONAL GEOLOGICAL CORRELATION PROGRAM

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IGCP-163-IGBA
Circular 80-3

Inclusion of material from secondary references in the new data base

W. Greenwood of the U. S. Group has submitted coding forms containing descriptions of all specimens of igneous rocks of which analyses are tabulated in F. W. Clarke's Data of Geochemistry (4th edition, USGS Bull. 695). This massive and expertly coded contribution raises many puzzling questions about which we must reach some reasonable consensus. Herewith an attempt to provide background for a general discussion out of which such a consensus might emerge. Your comment and criticism are invited.

I. Secondary references in general. Excellent tabulations have appeared in many countries and at many times, so the question of whether to incorporate them in the base will be a recurring one. From the outset it has been project policy to include only material from original (published) sources, but it may be useful to review the basis for this decision.

1. The most important single objection to secondary material is that it is usually incomplete. The analysis always survives, of course, and in the better collections--of which Clarke is a shining example--the mineral assemblage may also be retained. In tables, petrographic description is usually truncated and often simply omitted, however, and there is usually little or no information about geological occurrence, age or mode of occurrence. In large reference works, on the other hand, there may be much detail of this type but there is usually no way to tell how much of it was actually obtained from or applies directly to the analyzed specimen. Detailed specimen localities are rarely recorded in either type of compilation. In both types rock names may be changed to conform to the taste of the compiler and citations of original source references are often sketchy and sometimes lacking. In short, barring objection 2, below, all one can be sure of is a collection of "essential oxide" analyses. That is certainly useful, but does its utility warrant the broad and intricate cooperative venture we have launched?

I don't think so. Our mission is essentially exploratory and there is no longer any serious difficulty about building and operating an "oxide" base. Several project members own, and most realize they already have inexpensive access to, one or other of such bases.

2. Transcription errors are readily introduced in the movement of data from primary to secondary references.

*The International Geological Correlation Program (IGCP) is a joint undertaking
of the International Union of Geological Sciences and UNESCO.*

3. The arrangement of data in many (not all) tabulations raises serious practical problems. The logical record structure of the IGBA base is basically geographic; the organization of most major tabulations is basically chemical but is not the same from tabulation to tabulation. Transfer of data from any of the larger tabulations to the IGBA base would require a major pre-electronic editing effort, and probably an extensive electronic pre-edit as well, before the material was ready for incorporation. If original sources were no longer available there might be some justification for such an expenditure of time and effort. Given objections 1 and 2, however, and the fact that our international organization will ultimately give us ready access to any public primary sources likely to be useful, I think the extensive and virtually unavoidable preliminary processing of secondary data is an unwarranted extravagance. There surely could be reasonable exceptions, but each should be considered individually.

4. In an organization that, like Project 163, seeks to minimize central administration and maximize local and individual autonomy, the use of secondary sources greatly increases the risk of duplication of effort. In the case at hand, for instance, Clarke points out (5th ed., p. 437) that the norm he lists for each analysis is drawn from Washington's Tables-- which must therefore also contain the analysis--and that he has drawn most of the analyses themselves from USGS Bulletin 591. There are thus at least 4 sources from which most of the information might be drawn, and in routine operation the central office probably would not learn that it had in fact been drawn from more than one until duplicate or replicate coding forms were submitted, i.e., until the damage was done, and two or more contributors had done what need have been done by only one.

Of course, the risk of duplication of effort cannot be entirely eliminated in any case, but the use of non-primary source references greatly increases it. On this ground alone it seems to me impractical for a project like ours to use anything but primary sources.

II. Certain famous secondary tabulations. Contributors should always be on guard against including "borrowed" analyses used by an author for comparison with his own, newly published data, a standard and very useful procedure. Most petrological papers contain some information of this sort, and in many the number of borrowed analyses greatly exceeds that of the new ones. Only the new ones should be coded for inclusion in IGBA.

For some purposes, however, it might be useful to prepare IGBA-like files containing complete secondary tabulations, such things, for instance, as the Clarke data Dr. Greenwood coded, Washington's Tables, the tables of von Wolff's Vulkanismus, the tabulated data from Rosenbusch-Wülfing, or de la Camara's table of Spanish data. Our own base, for example, will go back only to 1917, and a user might wish to compare synoptic results derived from it with what was already implicit in the earlier data. For this purpose an IGBA-like file that contained Washington's Tables would be extremely helpful.

Can we afford to spend time just now on such refinements? I believe we can not, and should not attempt to do so. But perhaps it is not too soon to begin thinking about and planning for such activity

I hope this discussion clarifies current project policy on the use--more correctly, the non-use!--of other than primary sources. If not, or if you feel the policy should be modified, please let me know.

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III. A further note on avoiding duplication of effort.--Although each type of assignment has strong support, the coexistence of areal, rock-type and publication assignments creates a considerable possibility of duplication. In the U. S. systematic literature scan, for instance, a number of articles about Hawaii have already been coded, even though it has been announced that Hawaii has been allocated as an areal assignment. What general policy we should follow to conserve effort in these cases I don't know. Your comment and advice are solicited.

Three areal assignments--the Canary Islands, Etna and Turkey--have progressed to such an extent that general contributors are advised not to take time coding further literature about them. If an article appears in a well known or widely circulated publication, it will almost certainly have been scanned. If the publication is not generally available or the language is unusual, please inform one of the following of the existence of the article:-

Canary Islands	Dr. Jose Brandle Dept. De Petrologia Y Geoquimica Universidad Complutense Ciudad Universitaria Madrid 3, SPAIN
Etna Region	Prof. Renato Cristofolini Istituto di Mineral. E. Petr. U. degli Studi Catania Corso Italia 55 95129 Catania, ITALY
Turkey	Dr. Coskun Unan 1667-Orta Dogu Tek. University Jeoloji Mueh. Boel. Ankara, TURKEY

This suggestion is prompted by a curious extracurricular reading experience. Who would expect to find a thorough study of Cotopaxi volcano, Ecuador, in a Polish publication? But there it is, with lots of exactly

the kind of information we want! Specifically:

Paulo, Andrezy, et al (1979) Geology, Geochemistry
and Petrogenesis of Volcanics of Cotopaxi, Ecuador
(in English) Min. Trans. 61, Polish Academy of
Sciences, Warsaw.

If we had someone covering the Ecuadorean Andes (we don't), he
might like to know of this article.



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