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Apollo 14 Insignia

INTRODUCTION

As a result of the Apollo 14 mission, approximately 42,285 grams of lunar material were returned. The samples include particles ranging from dust-size to "Big Bertha" (sample 14321), with a mass of almost 9000 grams. This booklet includes petrographic descriptions of all Apollo 14 samples larger than 1 cm in any dimension. It has been prepared as an intermediate step in the compilation of a new Apollo 14 sample catalog.

The format is different from that in catalogs previously prepared by the curatorial staff because many of the samples in this collection have been extensively investigated. Consequently, rock descriptions were compiled from many sources. First of all, we looked at the original notes taken by members of the preliminary investigation team (PET). Naturally, these descriptions were found to be widely variable, both in detail and in use of terminology. We have attempted to impart uniformity wherever possible; however, words used by different members of PET such as light and dark, coarse-, medium-, and fine-grained, etc., may not be used as consistently as we would have liked. In addition, we have attempted to summarize the petrographic literature, and again, we are faced with non-uniform terminology. A discussion of general nomenclature as applied to lunar breccias by various investigators has been included. Although we have adhered to commonly accepted usages of geologic terms, we have included a list of petrographic terms frequently used in rock descriptions for convenience.

When possible, we examined at least one representative thin section for each generic. Each section we described was photographed (110x) in transmitted light and is included herein. At least one photograph of each sample was selected from among those on file to provide a representative picture of the hand specimen.

The sample description format we follow in this booklet consists of five parts:

- 1) An introductory section which includes information on lunar sample location, orientation, and return containers taken from the paper by Swann et al. (1977);
- 2) A section on physical characteristics, which contains the sample mass, dimensions, and a brief description;
- 3) Surface features, including zap pits, cavities, and fractures as seen in binocular view;
- 4) Petrographic description, consisting of a binocular description and, if possible, a thin section description (Unless otherwise noted, the description is of the binocular view.);
- 5) A discussion of literature relevant to sample petrology is included for samples which have previously been examined by the scientific community.

Because the booklet was prepared in this fashion, some samples will be seen to have received more attention than others. Along these same lines, models and genealogies have been made for a few samples and have been included herein according to their availability. We welcome any constructive comments on these efforts, and they will be considered in the preparation of the forthcoming Apollo 14 sample catalog.

Having compiled this booklet, we wish to emphasize that there is no substitute to actually looking at the rock, and ask that investigators report all new or conflicting information on these (or any other) samples to the curator's office for incorporation in data packs kept on each generic.