

INTRODUCTION

This catalog characterizes each of 267 individually numbered rock samples in the Apollo 15 collection, showing what each sample is and what is known about it. Unconsolidated regolith (soil) samples are not included. The catalog is intended to be used by both researchers requiring sample allocations and a broad audience interested in Apollo 15 rocks. The sample descriptions are arranged in numerical order, closely corresponding to the sample collection stations. Some samples which were numbered as rocks are actually collections of small fragments.

Information on sample collection, petrography, chemistry, stable and radiogenic isotopes, surface characteristics, physical properties, and curatorial processing is summarized and referenced as far as it is known. The intention has been to be comprehensive—to include all published studies of any kind which provide information on a sample, as well as some unpublished information. Some exceptions are made where the same research group published the same data and conclusions in two journals, in which case one reference (usually the earlier) is chosen; if one is the Proceedings of the Lunar Science Conference, this reference is selected. References which are primarily bulk interpretations of existing data (such as mixing models) or mere lists of samples are rarely included. The references are complete to early 1985. Foreign language journals were not scrutinized, but as far as we can tell little data has been published only in such journals.

This catalog differs from the Catalog of Apollo 16 Rocks, JSC 16904 (1980) in that all chemical data is tabulated, instead of "best-guess" averages. Rare-earth diagrams are computer-plotted to a consistent scale for easy comparison; analyses with fewer than three rare-earth points are in most cases not plotted.

Much valuable information exists in the original Apollo 15 Sample Information Catalog (1971). However, that catalog was compiled and published only three months after the mission itself, from rapid descriptions of usually dust-covered rocks, usually without anything other than macroscopic observations, and less often thin sections, since then, the rocks have been studied, analyzed, and split, with many published papers. These make the original catalog inadequate, outmoded, and in some cases erroneous, providing the motivation for this revision. However, the Apollo 15 Sample Information Catalog (1971) contains more information on macroscopic observations for most samples than does the present volume.