STRATIGRAPHIC UNITS

Marius Group

nr

Narrow-ridge material

Material of steep-sided relatively small, narrow ridges; contacts mostly marked by scarps. Often superposed on broad ridge (br). Internal structure braided to en echelon in pattern. Locally appears to partly bury craters on the plateau plains (pp). Mostly viscous fissure flows; locally may be intrusive beneath impact regolith.

br

Broad-ridge material

Material of smooth-textured linear ridge of complex topographic form. Contact with adjacent plains marked either by gentle break in slope or by low scarp. Numerous smaller gentle scarps often occur within larger ridge. In southern and central part of map, trend is north-south; in north trend is north-northwest. Intrusive features which may, however, be locally extrusive. Probable surface expression of major deep seated north-south trending structures that interconnect the Marius Hills, Aristarchus Plateau and Rümker Hills.

pc

Punctured cone material

Material of steep-flanked relatively smooth, conical structures having single to multiple linear depressions with intervening septa at or near the summits. Most cones and summit depressions are elongate in plan and oriented parallel to regional structure. Heights up to 300 meters above surrounding plains. Generally superposed on steep-sided domes (sd). Pyroclastic deposits surrounding structurally controlled vents. If features are analogs of similar appearing cones in Hawaii and other differentiated terrestrial volcanic provinces, the composition may be trachytic.

sd

Steep-sided-dome material

Material of steep-sided rough-textured domes generally perched upon low domes (ld). Contact marked by gentle to steep scarp; more rectilinear in plan than low domes. Heights generally from 200-300 meters above surrounding plains. Composed of numerous small ribs and spurs that are oriented north-northeast or north-northwest along the prevailing local structural trends. May be extrusive structures resulting from differentiation of the more primitive magmas that produced the mare material (m) and the low domes (ld).

bd

Bulbous-dome material

Material of smooth-textured domes; steeply convex upward in form. Smaller domes tend to be equidimensional; larger are more irregular and show influence of structural control. Intrusive or more probably extrusive structures formed from very viscous lavas of intermediate composition.

ld

Low-dome material

Material of smooth-textured gently tumescent structures as much as 100 meters higher than surrounding plains. Contact located at gentle break in slope. Convex upward in profile. Some roughly circular in plan. Most, however, are elongated in north-south direction. Lack of flow front morphology suggests a laccolithic origin.

pp

Plateau-plain material

Material of smooth to gently undulating cratered plains lying between domes and cones of Marius Plateau. Average elevation on the order of several hundred meters above the adjacent maria. Probably consists of volcanic flows, interbedded pyroclastic deposits and a moderately thick impact regolith.

Dark mare plains material (Procellarum Group)

m

Mare material

Dark cratered-plains material typical of the central regions of Oceanus Procellarum. Detailed descriptions contained in U.S. Geol. Survey Apollo site maps (1:25,000 and 1:100,000 scales) now in preparation.

Crater units

bh

Bright halo crater material

Bright rim, interior slope, and floor materials of small widely separated craters. Material of relatively recent impact craters surrounded by bright blankets of pulverized bedrock and shock lithified regolith.

cc

Crater-cluster material

Material in and around clusters of closely spaced to overlapping small to medium-sized craters, generally with subdued rims. Mostly material of secondary craters from Kepler, Aristarchus, and Cavalerius.

c

Crater material

Exterior rim deposits, interior slope, and floor materials of moderately subdued widely scattered craters. From crater lip to limit of rim deposits profile is concave upward. Mostly material of impact craters modified by later seismic and impact events.

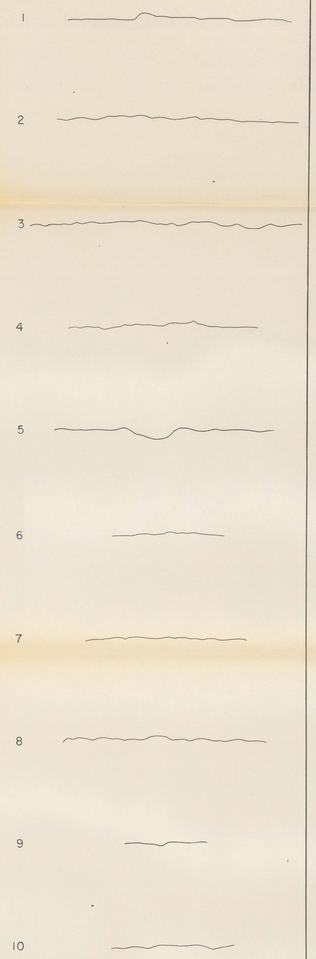
bc

Crater material, partially buried

Subdued-rimmed crater material partly buried or overridden by narrow ridge materials (nr). Numerous craters of similar form are present on all units but are not mapped unless partly buried. Probably material of older impact craters degraded by micrometeorite bombardment and mass wasting.

TOPOGRAPHIC PROFILE

Vertical and Horizontal Scale
1:160,000



EXPLANATION FOR MISSION TRAVERSES SHOWN ON PLATE 2*

ELM A — Landing site of Extended Lunar Module

—R-1— Lunar Rover Vehicle (LRV) traverse

— — — Extended Lunar Rover Vehicle traverse

—— • —F-II— Lunar Flying Unit (LFU) traverse

2 — Traverse station

Deploy communicator repeater

Deploy explosive charges for Active Seismic Experiment (ASE)

Deploy 3-geophone array for Active Seismic Experiment

Deploy 8-geophone array for Active Seismic Experiment

A — Deploy ALSEP

B — Alternate landing area

*Prepared by T. N. V. Karlstrom, and G. A. Swann.

Sinuous rille

sr srr

Contact marks edge of sinuous depression with smooth interior slopes and either a "V" shaped profile or, in the case of the largest sinuous rille, a broad rather flat floor. Estimated gradient from high end about 0.2 meters per kilometer. Unit srr marks elevated rim that flanks part of the northernmost example.

Linear trough

Steep-sided linear depression or closely spaced circular to elliptical depression.

b

Bedrock or block field

Exposures of bedrock on steeply sloping surfaces or block fields surrounding moderately fresh craters.

Contact
Dashed where indefinite

Buried contact

Inferred fault

Subdued trough

Crest of scarp; barbs point downslope.

Rimless circular depression

Irregular summit depressions

5 — Topographic profile line

PLEASE REPLACE IN POCKET
IN BACK OF BOUND VOLUME

(200)
R290
no. 1018

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EXPLANATION FOR GEOLOGIC MAPS OF THE MARIUS HILLS REGION