DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

PREPARED IN COOPERATION WITH THE
MANNED SPACECRAFT CENTER
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION
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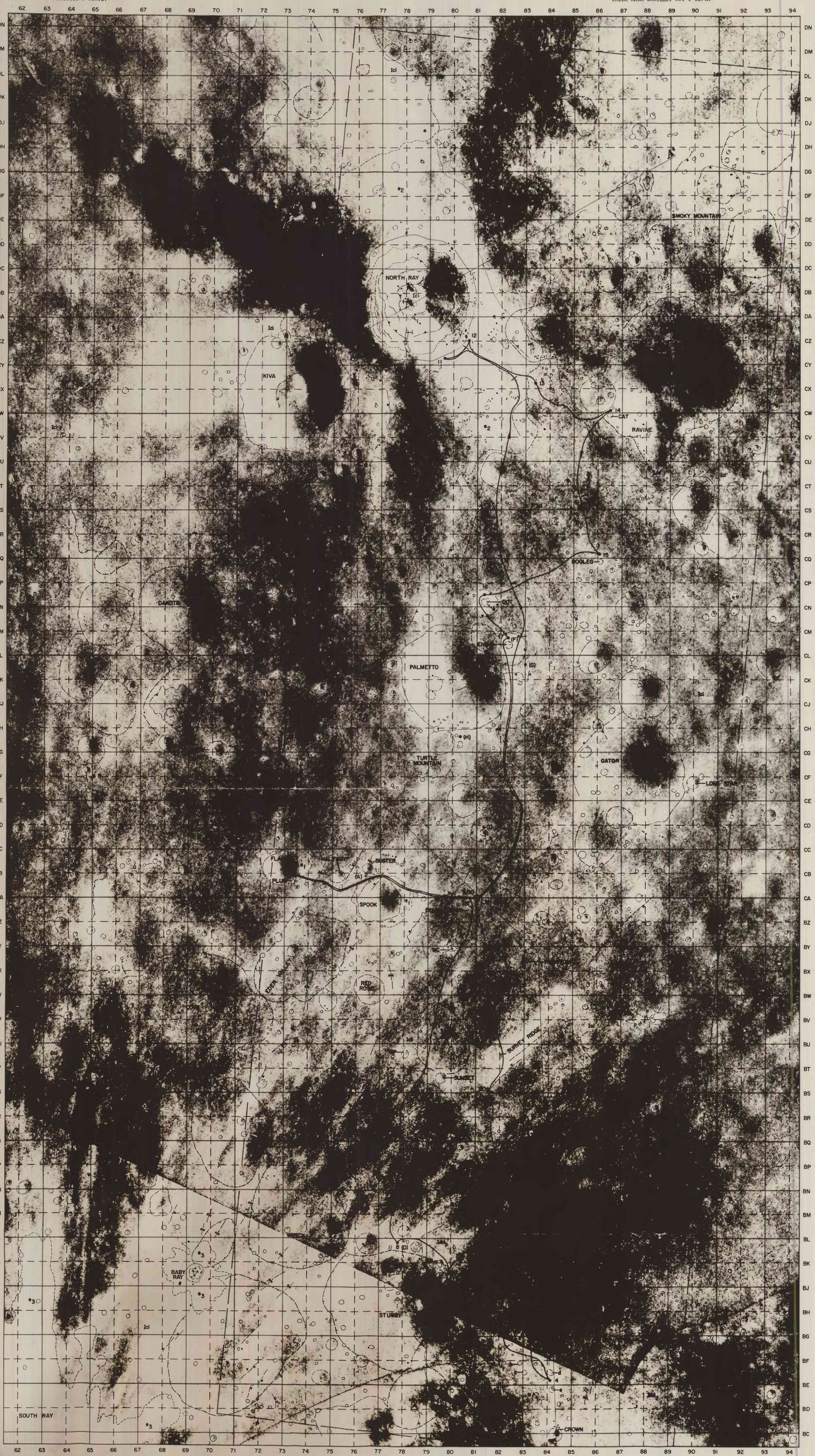

Base from controlled mosaic prepared by the U.S. Army Topographic Command from Apollo 14 photographs (500 mm). Topographic control for geologic section from 1:12,500 scale topographic map by U.S. Army Topographic Command, Washington, D.C.

Geology by D. P. Elston, E. L. Boudette, J. P. Schafer, and G. R. Scott, 1971-72, using stereographic analytic plotter and second generation film positives of Apollo 14 photographs 69-9520 and 69-9522 (500 mm).

SCALE 1:12,500

1000 500 0 1000 2000 3000 METERS
5000 0 5000 10,000 FEET

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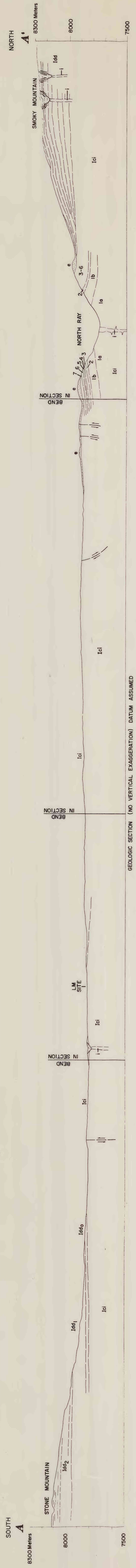
ENGINEERING GEOLOGY OF THE APOLLO 16 (DESCARTES) TRAVERSE AREA

By
E.L. Boudette, J.P. Schafer, and D.P. Elston
APRIL 1972



DESCARTES TRAVERSE AREA
APOLLO 16

EXPLANATION

e | e_3 e_2 e_1

RIM DEPOSIT OF DISTINCTLY RIMMED CRATER

e_3: Blocky; high albedo; rim crest sharp
e_2: Blocky; high-intermediate to intermediate albedo; rim crest moderately sharp
e_1: Smooth; intermediate albedo; rim crest rounded and rim deposit irregular
Interpreted to be continuous ejecta blanket of impact crater

Ici i

CAYLEY FORMATION

Stratified materials with layers about 10-40 m thick; forms rolling irregular surface. Seven possible stratification units of intermediate to high albedo occur in the southwest wall of North Ray Crater. A lower light-hued layer (unit 1 in geologic section) is relatively thick and appears to trace into the east wall without appreciable offset. Interpreted to be mafic to intermediate volcanics with minor intrusives (i).

Idd | Idd_2 Idd_1 Idd_0

MATERIALS OF THE DESCARTES MOUNTAINS

Stratified, with layers about 10-40 m thick; form domical mountains. Divided on Stone Mountain into a relatively thin, light-medium-gray, lowermost unit (Idd_0) which is morphologically transitional into materials of the underlying Cayley Formation; a light-medium-gray, relatively smooth, intermediate unit (Idd_1); and dark-medium-gray, rougher appearing uppermost unit (Idd_2). Each of these units probably consists of several layers. Interpreted to be intermediate to mafic volcanics with minor intrusives (i).

COPERNICAN
ERATOSTHENIAN
IMBRIAN

Morphologic boundary
Interpreted to be contact between major lithologic units. Within map units, marks contact between principal stratification units. Dotted where concealed

Boundary of continuous ejecta blanket

Inferred fault
Relative movement shown by arrows
(Geologic section only)

Outline of rimless or low-rimmed depression or trough
Interpreted to be collapse structure, possibly relict volcanic vent; inferred to be locally underlain by associated intrusives (unit i)

Inferred collapse structure
(Geologic section only)

Sharp Degraded Indistinct
Outline of rim crest of distinctly to perceptibly rimmed (impact) crater. Smallest craters all shown by solid lines, though most are degraded

Convex Escarpment
Mound
Concave Escarpment
Crease

Blocks

Nominal LM Site

11 12
LRV Traverse

•14 LRV
•(H) Walking
Traverse Station