UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

PREPARED ON BEHALF OF THE
NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

PROFESSIONAL PAPER 599-I
PLATE 1

EXPLANATION

Qs
Sedimentary deposits
Unconsolidated surficial deposits of clay, silt, sand, gravel, and boulders in flood plains, playas, valleys, washes, fans, and craters

Qba
Basaltic ejecta aprons
Black and red basaltic ash, lapilli, bombs, and blocks with rare fragments of Tertiary ignimbrites; older, intermediate, and younger age deposits cannot be differentiated on the basis of lithology

Qm
Maar ejecta rims
Loose to consolidated ejecta deposits of coarsely bedded palagonite tuff with fragments as large as boulder size of basalt and Tertiary ignimbrites

Qbc
Cinder cones
Basaltic ash, lapilli, bombs, blocks, and interbedded flows of dense to vesicular scoriaceous basalt; Tertiary ignimbrite fragments sparse

Qb3, Qb2, Qb1
Basalt flows

QUATERNARY / QUATERNARY (?)

Qb_3, *younger.* *Predominantly flows of fresh-looking dense black jagged unweathered basalt without vegetation; xenoliths of olivine-rich lherzolite, wehrlite, and dunite; xenocrysts and microphenocrysts of olivine, clinopyroxene, and plagioclase; includes small mounds of pyroclastic ejecta occurring among Tertiary rhyolitic lava flows and ignimbrites in the vicinity of Black Rock Summit*

Qb_2, *intermediate.* *Black to gray weathered basalt; smooth to rough surfaces; some vegetation and sandy soil cover; phenocrysts of olivine, pyroxene, and plagioclase partly altered and eroded; ultramafic and mafic xenoliths in places; includes dike at Lunar Crater. May include some flows of unit Qb_1 south of Lunar Crater*

Qb_1, *older.* *Black to light-gray weathered basalt flows; smooth to ropy surfaces; lightly covered with eolian sand and vegetation; tilted in places by normal faults; phenocrysts of highly altered and eroded olivine, plagioclase, and pyroxene scarce to locally abundant; silica content generally higher than in younger flows*

UNCONFORMITY

Ti / Tr
Ignimbrite and rhyolite flows
TERTIARY

Ti, *ignimbrite, rhyolitic to andesitic crystal vitric to vitric; welded and nonwelded ash-flow tuffs and minor air-fall tuffs and water-laid sedimentary rocks*
Tr, *rhyolitic lava flows overlying and underlying ignimbrite sequence*

UNCONFORMITY

Ps
Sedimentary rocks
PALEOZOIC
Dolomite and quartzite in megabreccias occurring as gravity slides over Tertiary ignimbrites

(Explanation continued at lower right)

Geology mapped by D. H. Scott, 1967–68

Base from U.S. Geological Survey Tonopah and Lund 1:250,000, 1956–62

SCALE 1:62 500

1 ½ 0 1 2 3 MILES
1 .5 0 1 2 3 KILOMETERS

APPROXIMATE MEAN DECLINATION, 1971

EXPLANATION (CONTINUED)

Contact
Dashed where approximately located; short dashed where inferred

Fault
Dashed where approximately located; short dashed where inferred. Bar and ball on downthrown side

Gravity slide fault
Short dashed where inferred. Sawteeth on upper plate. Slide inferred from geologic relations largely outside mapped area

Strike and dip of beds and of large-scale layering in ignimbrite units

Cinder cone or maar prominence
Hachures show crater or breached wall

F ——— F′
Cinder cone profile

×7
Location of sample for chemical analysis
See table in text

GEOLOGIC MAP OF THE LUNAR CRATER VOLCANIC FIELD, NYE COUNTY, NEVADA

420-710 O - 71 (In pocket)