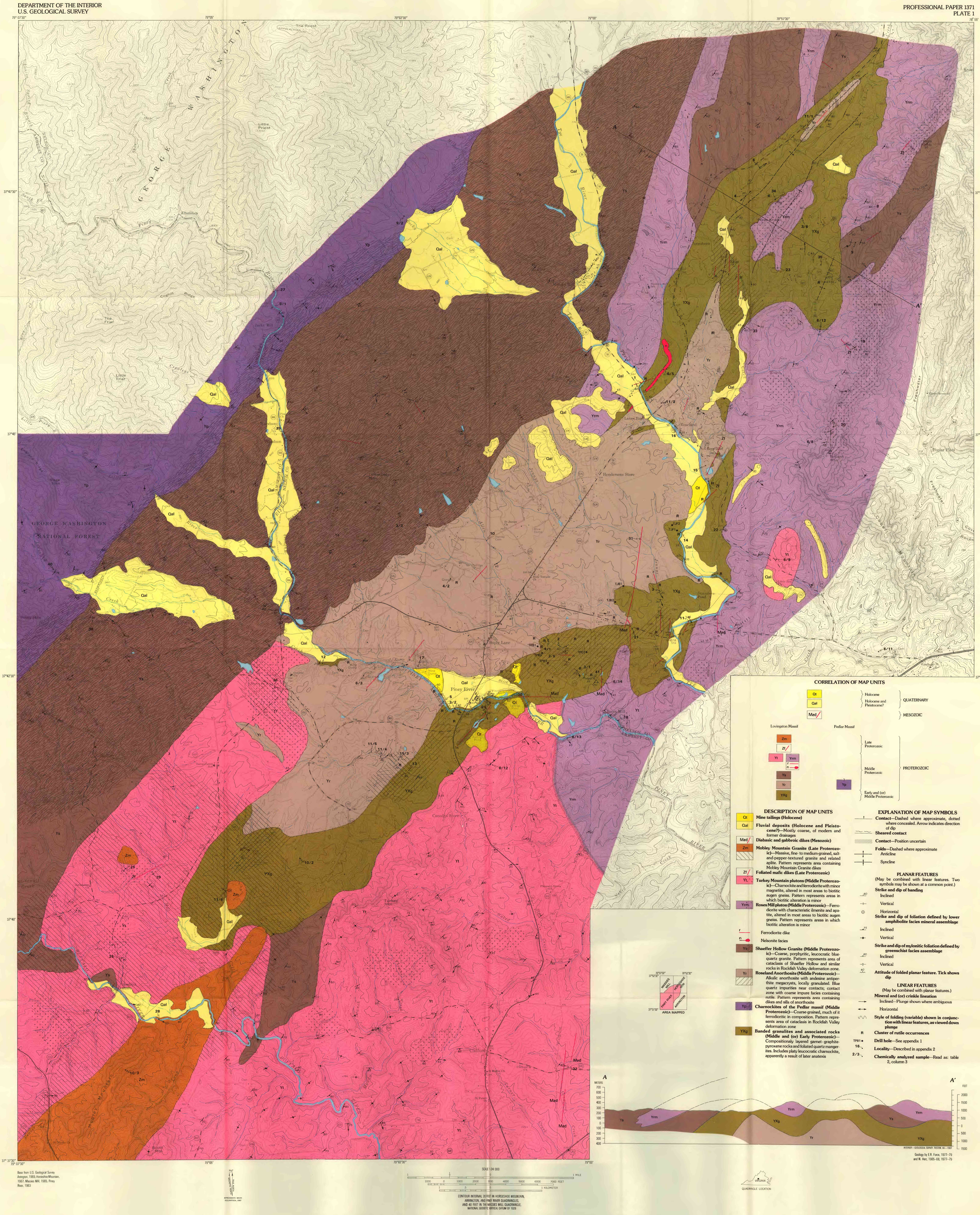
DEPARTMENT OF THE INTERIOR
U.S. GEOLOGICAL SURVEY

PROFESSIONAL PAPER 1371
PLATE 1



Base from U.S. Geological Survey
Arrington, 1969; Horseshoe Mountain, 1967; Massies Mill, 1965; Piney River, 1963

APPROXIMATE MEAN DECLINATION, 1967

SCALE 1:24 000
1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 .5 0 1 KILOMETER
CONTOUR INTERVAL 20 FEET IN HORSESHOE MOUNTAIN, ARRINGTON, AND PINEY RIVER QUADRANGLES; AND 40 FEET IN THE MASSIES MILL QUADRANGLE. NATIONAL GEODETIC VERTICAL DATUM OF 1929

CORRELATION OF MAP UNITS

Qt	Holocene	QUATERNARY
Qal	Holocene and Pleistocene?	QUATERNARY
Mzd		MESOZOIC
Zm	Late Proterozoic	PROTEROZOIC
Zf	Late Proterozoic	PROTEROZOIC
Yt	Middle Proterozoic	PROTEROZOIC
Yrm	Middle Proterozoic	PROTEROZOIC
Ys	Middle Proterozoic	PROTEROZOIC
Yr	Middle Proterozoic	PROTEROZOIC
YXg	Early and (or) Middle Proterozoic	PROTEROZOIC
Yp	Early and (or) Middle Proterozoic	PROTEROZOIC

Lovingston Massif — Pedlar Massif

DESCRIPTION OF MAP UNITS

Qt **Mine tailings (Holocene)**

Qal **Fluvial deposits (Holocene and Pleistocene?)**—Mostly coarse, of modern and former drainages

Mzd **Diabasic and gabbroic dikes (Mesozoic)**

Zm **Mobley Mountain Granite (Late Proterozoic)**—Massive, fine- to medium-grained, salt-and-pepper-textured granite and related aplite. Pattern represents area containing Mobley Mountain Granite dikes

Zf **Foliated mafic dikes (Late Proterozoic)**

Yt **Turkey Mountain plutons (Middle Proterozoic)**—Charnockite and ferrodiorite with minor magnetite, altered in most areas to biotitic augen gneiss. Pattern represents areas in which biotitic alteration is minor

Yrm **Roses Mill pluton (Middle Proterozoic)**—Ferrodiorite with characteristic ilmenite and apatite, altered in most areas to biotitic augen gneiss. Pattern represents areas in which biotitic alteration is minor

r — Ferrodiorite dike

n — Nelsonite facies

Ys **Shaeffer Hollow Granite (Middle Proterozoic)**—Coarse, porphyritic, leucocratic blue-quartz granite. Pattern represents area of cataclasis of Shaeffer Hollow and similar rocks in Rockfish Valley deformation zone.

Yr **Roseland Anorthosite (Middle Proterozoic)**—Alkalic anorthosite with andesine antiperthite megacrysts, locally granulated. Blue quartz impurities near contacts; contact zone with coarse impure facies containing rutile. Pattern represents area containing dikes and sills of anorthosite

Yp **Charnockites of the Pedlar massif (Middle Proterozoic)**—Coarse-grained, much of it ferrodioritic in composition. Pattern represents area of cataclasis in Rockfish Valley deformation zone

YXg **Banded granulites and associated rocks (Middle and (or) Early Proterozoic)**—Compositionally layered garnet-graphite-pyroxene rocks and foliated quartz mangerites. Includes platy leucocratic charnockite, apparently a result of later anatexis

EXPLANATION OF MAP SYMBOLS

Contact—Dashed where approximate, dotted where concealed. Arrow indicates direction of dip

Sheared contact

Contact—Position uncertain

Folds—Dashed where approximate
Anticline
Syncline

PLANAR FEATURES
(May be combined with linear features. Two symbols may be shown at a common point.)

Strike and dip of banding
60 Inclined
Vertical
Horizontal

Strike and dip of foliation defined by lower amphibolite facies mineral assemblage
75 Inclined
Vertical

Strike and dip of mylonitic foliation defined by greenschist facies assemblage
80 Inclined
Vertical

40 **Attitude of folded planar feature. Tick shows dip**

LINEAR FEATURES
(May be combined with planar features.)

Mineral and (or) crinkle lineation
Inclined—Plunge shown where ambiguous
Horizontal

Style of folding (variable) shown in conjunction with linear features, as viewed down plunge

R **Cluster of rutile occurrences**

TPB1 ● **Drill hole**—See appendix 1

16 **Locality**—Described in appendix 2

2/3 **Chemically analyzed sample**—Read as: table 2, column 3

INTERIOR—GEOLOGICAL SURVEY, RESTON, VA—1987

Geology by E.R. Force, 1977–79 and N. Herz, 1965–68, 1977–79

QUADRANGLE LOCATION

GEOLOGIC MAP AND CROSS SECTION OF THE ROSELAND DISTRICT, CENTRAL VIRGINIA