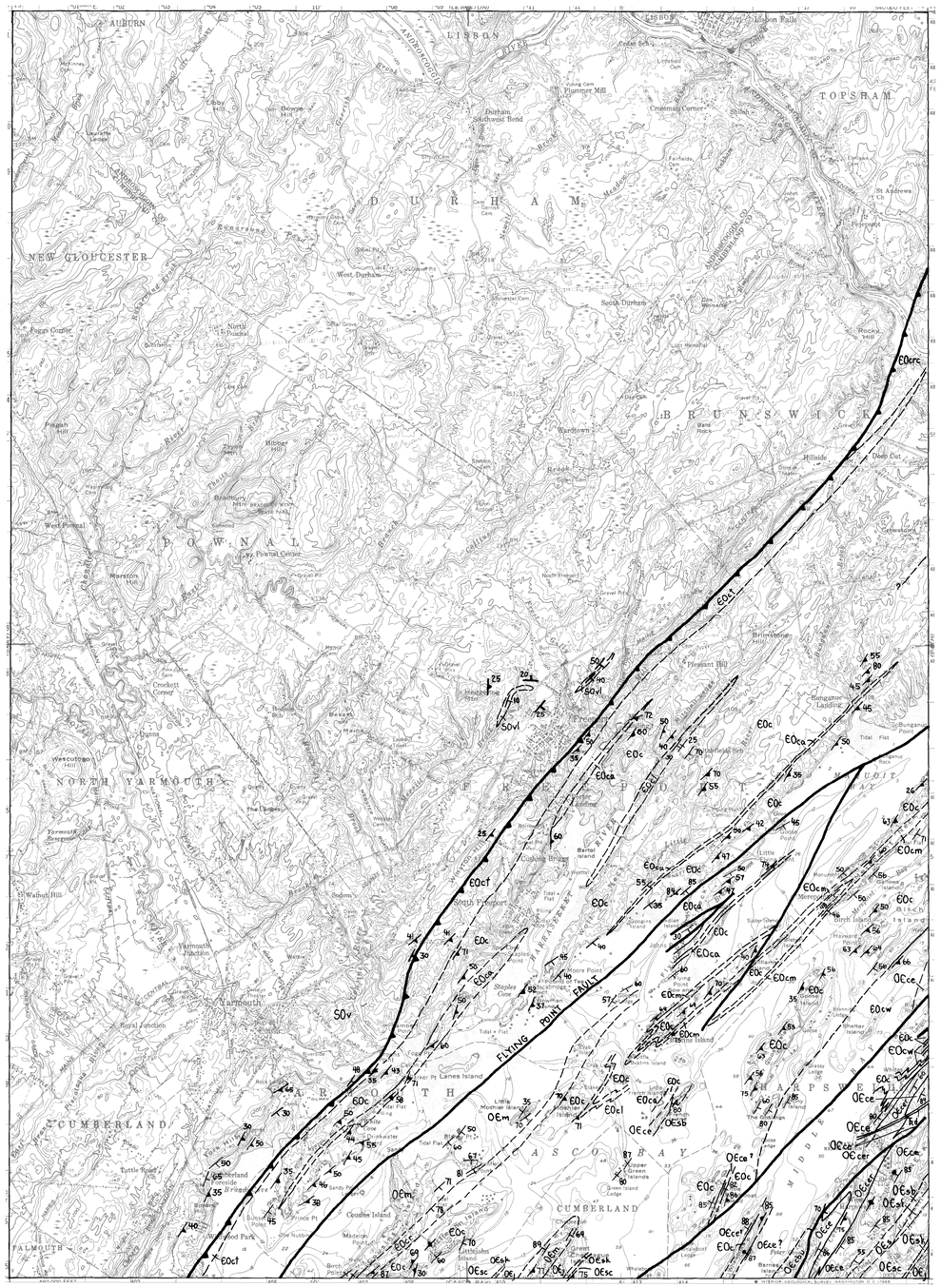


# EXPLANATION

## MERRIMACK GROUP

### VASSALBORO FORMATION

SOv

SOvl

SOv: Medium dark gray salt and pepper textured quartz-plagioclase-biotite ± hornblende granofels with sporadic thin interbeds of medium greenish gray hornblende-diopside calc-silicate granofels.

SOvl: Diopside and hornblende-bearing marble, in places moderately sulfidic.

## CASCO BAY GROUP

### UPPER CASCO BAY GROUP UNDIVIDED

ꞒOcbu

(Includes equivalents of Spring Point, Diamond Island, Scarboro, Spurwink, and Jewell Formations.)

### JEWELL FORMATION

ꞒOcj

ꞒOcj: Light and dark gray, sulfidic and non-sulfidic muscovite-biotite-chlorite ± garnet phyllite locally with staurolite, andalusite, and chloritoid.

### SPURWINK LIMESTONE

ꞒOcsk

Thin, ribbony-bedded medium gray metalimestone with thin quartz-biotite-chlorite phyllite interbeds.

### SCARBORO FORMATION

ꞒOcsc

Light and dark gray sulfidic and non-sulfidic muscovite-biotite-chlorite-garnet phyllite locally with chloritoid, staurolite, and andalusite.

### SPRING POINT FORMATION

ꞒOcsf

ꞒOcsb

ꞒOcsf: Thin bedded to massive weakly foliated light to medium gray quartz-plagioclase ± biotite ± muscovite granofels with minor dark gray biotitic amphibolite interbeds.

ꞒOcsb: Thin bedded to massive dark gray amphibolite locally with abundant garnet.

### CAPE ELIZABETH FORMATION

ꞒOcc

ꞒOccer

ꞒOcc: Thin bedded light to medium gray quartz-plagioclase-biotite-muscovite schist and granofels with minor slightly rusty weathering muscovite-biotite-garnet-quartz schist.

ꞒOccer: Rusty-weathering muscovite-biotite-garnet staurolite schist and phyllite.

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### CUSHING FORMATION

ꞒOcrc

ꞒOct

ꞒOca

ꞒOcr

ꞒOcl

ꞒOc

ꞒOcm

ꞒOc: Non rusty to slightly rusty weathering light to medium gray quartz-plagioclase-biotite granofels; light gray quartz-plagioclase-muscovite-biotite schistose granofels locally with relict coarse fragmental structure; minor amphibolite and calc-silicate granofels. Highly migmatized west of the Flying Point Fault.

ꞒOcrc: Richmond Corner Member (Exposures not observed, but outcrop belt inferred from relations in the Bath quadrangle to the east.) Quartz-plagioclase-biotite-garnet schist and granofels, rusty 2-mica schist, coticule, marble, and rare amphibolite.

ꞒOct: Torey Hill Member: Very rusty weathering muscovite-biotite-quartz-sillimanite-graphite schist.

ꞒOca: Amphibolite both fine and even grained, and coarse grained.

ꞒOcl: Fine to coarse grained calc-silicate granofels and skarn-like coarse grained rock.

ꞒOcr: Rusty weathering quartz-muscovite-biotite-sillimanite schist and gneiss. Includes thin marble on Moshier Island.

ꞒOcm: Mercpoint Neck Member: Very rusty-weathering muscovite-biotite-quartz schist and quartz-plagioclase muscovite-biotite granofels. Rare feldspathic quartzite beds.

### MACWORTH FORMATION (Stratigraphic relations uncertain)

ꞒOem

Medium brownish gray, thin, poorly bedded, locally pinstripe-laminated calcareous quartz-biotite phyllite with minor greenish gray quartz-plagioclase-actinolite granofels, and light gray chalky-weathering feldspathic metatuff.

## SYMBOLS

Contacts: dashed where inferred, solid where accurately located.

High angle post-metamorphic fault.

Thrust Fault. (Teeth on upper plate).

25 Bedding dip and strike.

30 Bedding (tops, known from graded bedding, in direction of ball).

35 Foliation and schistosity.

SCALE 1 62,500

1 ½ 0 1 2 3 4 MILES

3000 0 3000 6000 9000 12000 15000 18000 21000 FEET

1 .5 0 1 2 3 4 5 KILOMETERS

Quadrangle Location

RECONNAISSANCE

# BEDROCK GEOLOGY OF THE FREEPORT 15′ QUADRANGLE, MAINE

BY
ARTHUR M. HUSSEY

1981

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