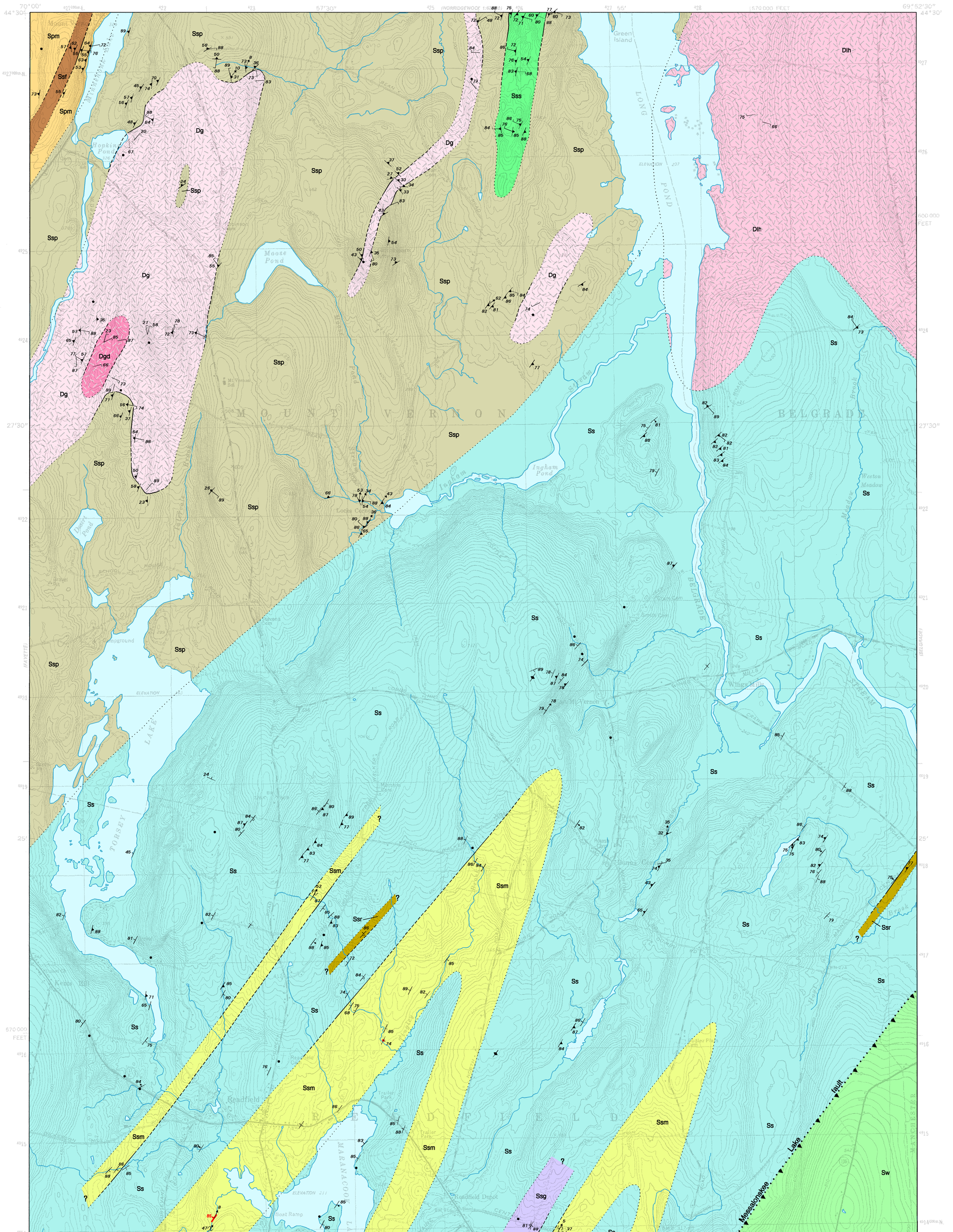

EXPLANATION OF UNITS

INTRUSIVE ROCKS

Devonian (?)

Dlh — **Lord Hill Pluton.** Medium-grained, equigranular, biotite-muscovite granite.

Dg — **Granite.** White to light gray leucogranite to granite with a trace to 10% biotite and commonly 1-3% garnet. Also occasionally contains muscovite. The rock is generally nonfoliated, massive, equigranular, and medium-grained. Occasionally contains megacrysts of K-feldspar. May include small xenoliths of foliated metamorphic rocks.

Dgd — **Granodiorite.** Medium to dark gray, nonfoliated, massive, medium-grained to coarse-grained granodiorite with approximately 15-25% biotite.

STRATIFIED ROCKS

Silurian

Ssf — **Smalls Falls Formation.** Rusty-weathering muscovite-bearing schists.

Spm — **Perry Mountain Formation.** Light gray, medium-grained, well foliated, equigranular, platey-weathering, biotite-quartz-feldspar granofels to gneiss and muscovite-biotite feldspathic schist.

Ss — **Sangerville Formation.** Medium-grained, purplish-gray biotite-muscovite-quartz-feldspar granofels with beds typically from 2-20 cm; some beds exceed 1 meter in thickness. Calc-silicate lenses range from a few cm to one meter in length and 10 cm in width and contain green calc-silicate minerals and commonly orange grossular garnet. The granofels is interlayered on a variable scale with biotite-muscovite-quartz-feldspar schist. Schist commonly contains small (1-3 mm) pink garnet porphyroblasts and black staurolite porphyroblasts to 5 mm.

Ssp — **Patch Mountain Member.** Variably interlayered calc-silicate and biotite-quartz-feldspar granofels. The calc-silicate rock is green and white on a fresh surface, medium-grained and equigranular. The biotite-quartz-feldspar granofels is gray, fine-grained to medium-grained and commonly layered. This unit also contains subordinate amounts of a purplish-gray biotite quartzite, impure marble, and feldspathic schist.

Ssm — **Marble.** Thinly bedded, brown-weathering gray marble in beds 2-5 cm. Interbedded with biotite-muscovite schist in beds 0.5-1 cm thick. Differential weathering creates distinctive schist ribs. This unit is distributed in several belts.

Sss — **Schist.** Medium-grained to coarse-grained muscovite-biotite schist, commonly containing garnet and sillimanite. Schist is occasionally feldspathic. Similar to some parts of the Waterville Formation.

Ssg — **Gray slate.** Medium gray, thinly bedded slate. Some thin granofels beds. Some layers contain abundant biotite, staurolite, and small garnets.

Ssr — **Rusty-weathering schist.** Dark gray biotite-muscovite-quartz schist with a significant sulfide concentration. Includes a few thin granofels beds.

Sw — **Waterville Formation.** Thinly bedded, purplish-gray granofels and schist. Beds typically 1 cm thick. Thick sections of schist are common. Schist is composed of biotite, quartz, and feldspar, with minor muscovite. Quartz laminae of 1-2 mm thickness are common. Some sections have thicker granofels beds up to 10 cm. Thin (1-10 mm) brown limestone layers are common.

EXPLANATION OF LINES

Stratigraphic or intrusive contact between rock units (well located, approximately located, poorly located).

Interpreted thrust fault (poorly located).

EXPLANATION OF SYMBOLS

Note: Structural symbols are drawn parallel to strike or trend of measured structural feature. Barb or tick indicates direction of dip, if known. Annotation gives dip or plunge angle. For most planar features, symbol is centered at observation point; for joints, observation point is at end of strike line opposite dip tick. For linear features, tail of symbol is at observation point. Multiple measurements at a site are represented by combined symbols.

- Outcrop of mapped unit.
- Occurrence of medium gray aphanitic dike.
- Mafic dike (inclined).
- Bedding, tops unknown (inclined, vertical).
- Bedding, tops known (inclined, overturned).
- Dominant foliation (inclined, vertical). May include slaty cleavage and schistosity. Represents foliation in xenoliths when shown within the bounds of an igneous body.
- Fold hinge (rotation unknown, left-handed asymmetry, right-handed asymmetry).
- Fold hinge (syncline).
- Mineral lineation on foliation surface (plunging).
- Late slaty cleavage; cross-cuts dominant foliation (inclined).
- Joint (inclined, vertical).

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GEOLOGIC TIME SCALE

Geologic Age		Absolute Age*
Cenozoic Era		0-65
Mesozoic Era	Cretaceous Period	65-142
	Jurassic Period	142-200
	Triassic Period	200-253
Paleozoic Era	Permian Period	253-300
	Carboniferous Period	300-360
	Devonian Period	360-418
	Silurian Period	418-443
	Ordovician Period	443-489
	Cambrian Period	489-542
Precambrian time		Older than 542

* In millions of years before present. (Okulitch, A. V., 2004, Geological time chart, 2004: Geological Survey of Canada, Open File 3040 (National Earth Science Series, Geological Atlas) - REVISION.)

Bedrock Geology of the Readfield Quadrangle, Maine

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Open-File Map 13-21
2013

Quadrangle Location

SCALE 1 : 24,000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET

TRUE NORTH

SOURCES OF INFORMATION

Field work by R. G. Marvinney and T. W. Grover, 2010.

MAPPING RESPONSIBILITY

GROVER

MARVINNEY

Topographic base from U.S. Geological Survey Readfield quadrangle, scale 1:24,000 using standard U.S. Geological Survey topographic map symbols. Magnetic declination 17° west of North.

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