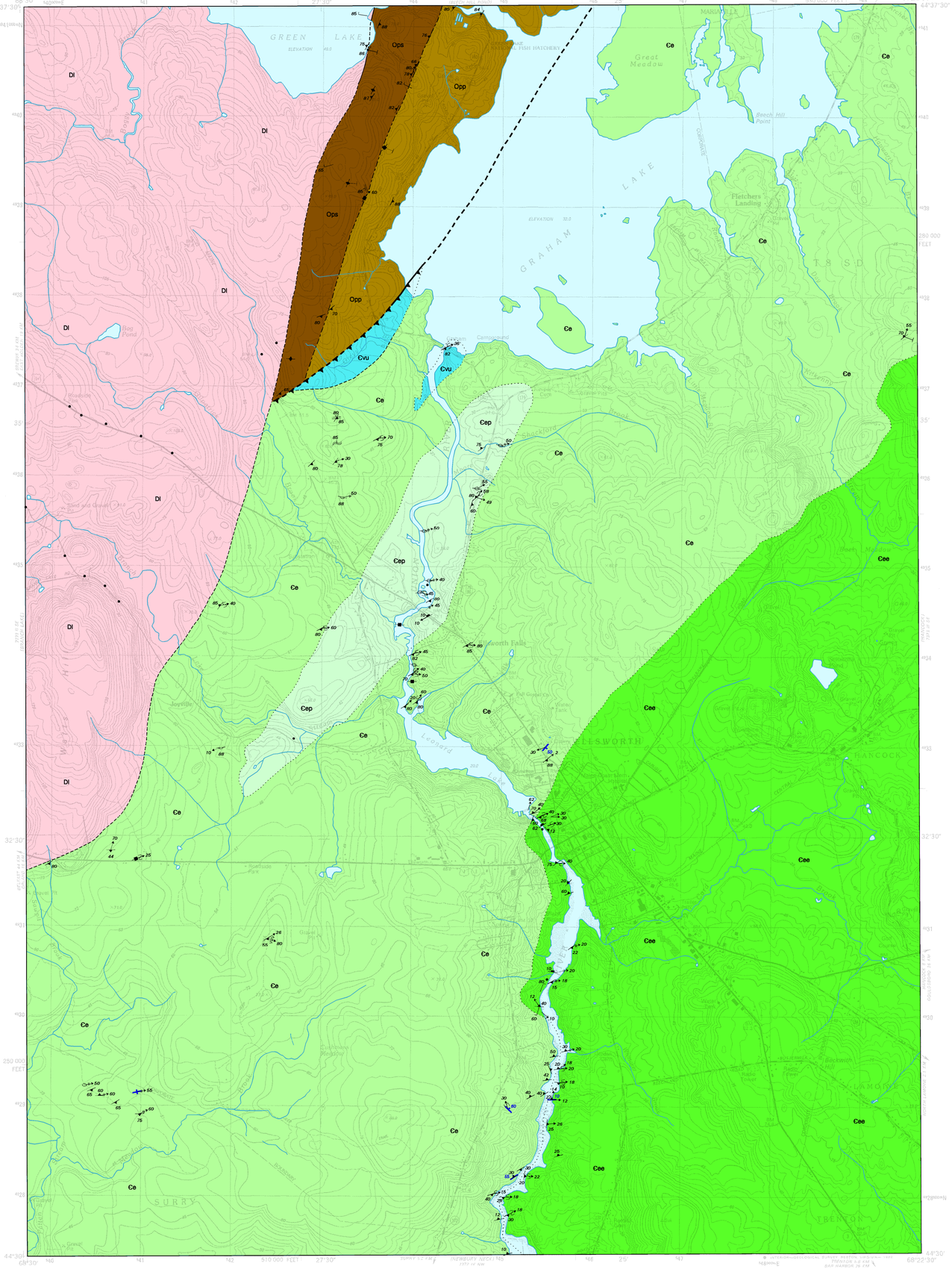

EXPLANATION OF UNITS

Intrusive Rocks

Devonian(?)

Dl — **Lucerne Granite.** Light gray, white weathering, massive, medium- to coarse-grained, seriate, biotite granite with subhedral feldspar. Contacts observed on the shore of Green Lake are sharp and well defined; meter-scale metasedimentary xenoliths of the Penobscot Formation are present along these contacts.

Stratified Rocks

Ordovician

Penobscot Formation.

Opp — **Pelite member.** Black to dark-gray weathering schist and pelitic slate that contains common rusty-weathered pyrite zones. Pelite occurs in centimeter- to meter-scale beds interbedded with coarser-grained, sandy-silty beds several centimeters to several meters thick. Some rocks contain cordierite in the contact-metamorphosed zone around the Lucerne granite.

Ops — **Psammite member.**

Cambrian(?)

Cvu — **Unnamed volcanic rocks.** Strongly deformed, epidote-bearing, altered volcanic rocks of intermediate composition (andesite-dacite). Present along the Ellsworth-Penobscot boundary, and at Graham Lake Dam. These occurrences may be structurally bounded in a thrust duplex that has yet to be delineated.

Cambrian

Ce — **Ellsworth Schist.** Dark green, light gray to green weathering, quartz-feldspar-muscovite-chlorite schist. Contains numerous disrupted fine-grained quartz veins showing multiple deformation. Layers of greenstone 20 centimeters to 1 meter in thickness, representing metamorphosed fine-grained mafic volcanic rocks, are present throughout the formation. Locally contains folded, meter-scale beds of metamorphosed felsic tuff and mafic flows. Intruded by mafic dikes up to 3 meters in thickness that postdate the main fabric in the schist but are folded by a later deformation.

Cee — **Egypt member.** Dark green schist with feldspar porphyroblasts.

Cep — **Quartz psammite member.** Laminated quartz psammite with a distinctive 'pin-stripe' texture. Laminae are typically several millimeters in thickness.

EXPLANATION OF SYMBOLS

- Outcrop of mapped unit.
- Strike and dip of greenstone dike. (Inclined, Vertical, Orientation unknown)
- Strike and dip of main phase metamorphic foliation. The main foliation is generally moderately to steeply dipping and parallel to compositional layers in the schist. Intrafolial sigmoidal-shaped folds in quartz veins and S-C fabrics are common. (Inclined, Vertical)
- Trend and plunge of lineation, best displayed by elongate quartz phenocrysts in metarhyolites. The lineation consistently plunges gently to the east.
- Strike and dip of fold axial plane. (Inclined, Vertical)
- Trend and plunge of fold hinge, with rotation sense indicated if known. (Sinistral, Dextral, Neutral, Unknown)
- Strike and dip of crenulation cleavage. (Inclined, Vertical)
- Trend and plunge of second generation fold hinge.
- Trend and plunge of third generation fold hinge.
- Strike and dip of shear zone.
- Strike and dip of quartz vein.
- Strike and dip of joint. (Inclined, Vertical)

EXPLANATION OF LINES

Contact between map units. Includes stratigraphic and intrusive contacts, as well as contacts of uncertain nature. (Well located, Approximately located, Inferred)

Gradational contact between members of the Penobscot Formation.

Thrust fault, teeth on upper plate. Sense of motion is deduced from steeply plunging lineation in rocks on both sides of the fault along the south shore of Graham Lake. (Well located, Approximately located)

Inferred fault, sense of motion unknown. (Location uncertain)

Bedrock Geology of the Ellsworth Quadrangle, Maine

Bedrock geologic mapping by
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Cartographic design and editing by:
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2008

Quadrangle Location

TRUE NORTH

SCALE 1 : 24,000

1 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 0 1 KILOMETER

CONTOUR INTERVAL 3 METERS

SOURCES OF INFORMATION

Field work was conducted by J. Pollock during the summer of 2004.

Topographic base from U.S. Geological Survey Ellsworth quadrangle, scale 1:24,000 using standard U.S. Geological Survey topographic map symbols.

The use of industry, firm, or local government names on this map is for location purposes only and does not impute responsibility for any present or potential effects on the natural resources.

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GEOLOGIC TIME SCALE

Geologic Age		Absolute Age*
Cenozoic Era		0-65
Mesozoic Era	Cretaceous Period	65-145
	Jurassic Period	145-200
	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	489-544
Precambrian time		Older than 544

* In millions of years before present. (Okulitch, A. V., 2002, Échelle des temps géologiques, 2002: Commission géologique du Canada, Dossier Public 3040 (Série nationale des sciences de la Terre, Atlas géologique) - RÉVISION.)