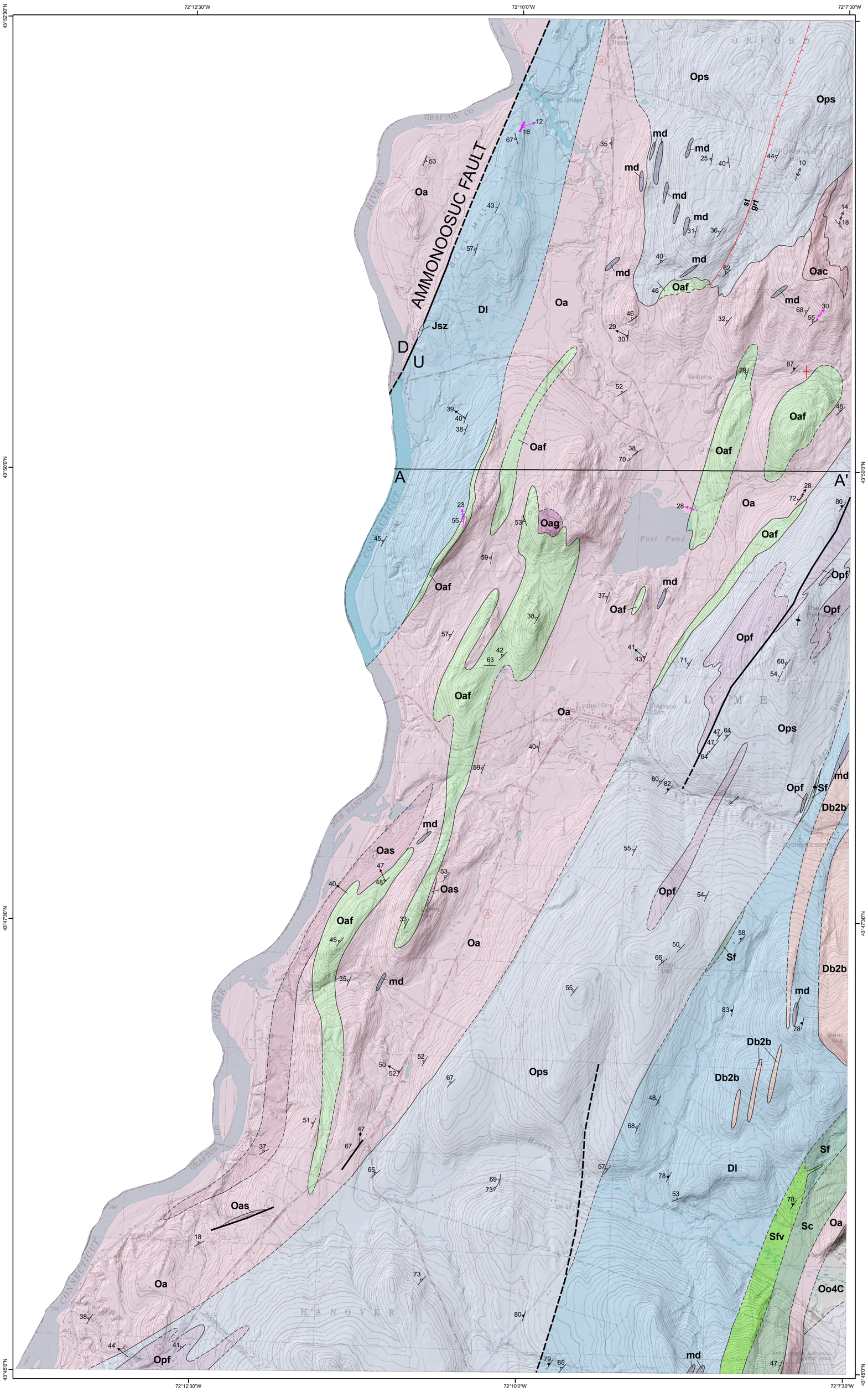
Bedrock Geologic Map of the Lyme 7.5' Quadrangle, New Hampshire



DESCRIPTION OF MAP UNITS

INTRUSIVE ROCKS

Db2b — **Bethelehen Gneiss (Devonian)** — Gray to pink, moderately foliated quartz-plagioclase-orthoclase-biotite-muscovite granodiorite, slightly porphyritic (orthoclase up to 2 cm). Hornblende granite locally, for example on Bear Hill.

Oo4C — **Oliverian quartz monzonite gneiss (Ordovician)** — quartz monzonite gneiss of the Mascoma dome

FAULT ROCKS

Jsz — **Silicified zone (Jurassic)** — Silicified country rock and massive quartz associated with the Ammonoosuc fault

METAMORPHIC ROCKS

Dl — **Littleton Formation (Devonian)** — Gray, fine-grained quartz-muscovite-biotite+/- garnet,+/- staurolite schist with sandyto silty layers up to several cm thick. Rusty on some foliation surfaces, but not pervasively so.

Sf — **Fitch Formation (Silurian)** — Gray, smooth-weathering biotite-quartz feldspar granofels, buff sandy marble, calc-silicate granofels and schist, and calcareous quartzite and schist.

- **Sfv** — **Metavolcanics of the Silurian Fitch Formation** — White-spotted, dark green, medium-grained hornblende gneiss. Feldspars up to 1 cm.

Sc — **Clough Quartzite (Silurian)** — White to gray, well bedded quartzite, quartz pebble conglomerate with quartz matrix and quartz-muscovite-biotite-garnet schist.

Ops — **Partridge Formation (Ordovician)** — Dark gray phyllite and fine-grained schist, commonly with biotites across the foliation, +/- garnet,+/- staurolite. Pyrite-rich layers weather very rusty, but elsewhere difficult to differentiate from Littleton. Locally with tiny feldspar and blue quartz phenocrysts and/or pyroclastic textures. Biotite marks the foliation in some horizons.

- **Opf** — **Felsic Metavolcanics of the Ordovician Partridge Formation** — rusty brown- to white weathering, gray to white, aphyric felsite, interpreted as rhyolitic tuff.

Oa — **Ammonoosuc Volcanics (Ordovician)** — Black to dark green,fine- to coarse-grained, hornblende +/- epidote +/- garnet amphibolite. Pillows are well exposed at several localities, with more resistant epidote-rich rims. Pyroclastic textures range from breccia to agglomerate.

- **Oag** — **Hornblende Gneiss** — Massive, coarse-grained hornblende gneiss interpreted as metagabbro.
- **Oas** — **Dark gray schist** — Fine-grained, dark gray, rusty schist similar to schists of the Ordovician Partridge Formation.
- **Oac** — **Coticule-bearing quartzite/garnet schist** — Thinly bedded quartzite and garnet schist (ribbon chert?), found locally with coticule layers west of Skunk
- **Oaf** — **Felsic Metavolcanics of the Ordovician Ammonoosuc Volcanics** — Similar to felsic metavolcanics of the Partridge Formation, interpreted as rhyolitic tuff.

md — **Metadiabase dike** — Dark, even-grained hornblende gneiss

EXPLANATION OF MAP SYMBOLS

- Inclined S_0 bedding
- intersection (S1 and S2)
- intersection (S0 and F1)
- axis of F3 fold (z)
- axial plane F3
- axial plane F1
- axis of F3 fold
- axis of F1 fold (z)
- Overturned S_0 bedding
- Inclined S_1 foliation
- Inclined S_1 foliation (multiple measurements present)
- Inclined S_2 foliation
- Vertical S_2 foliation
- Mineral lineation
- Slickenlines
- Spaced cleavage
- Spaced cleavage (vertical)
- Crenulation
- Calcite veins
- Contact, observed
- Isograd, inferred
- Isograd, observed
- Contact, inferred
- Fault, observed
- Fault inferred

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Digital Compilation by Sarah W. Baker and Gregory A. Barker, 2016
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Topographic basemap from the USGS 1998 Lyme 7.5' quadrangle
Projection: North American Datum 1983 New Hampshire State Plane Feet.
1000 meter grid in UTM zone 19 North, Contour Interval 20 ft

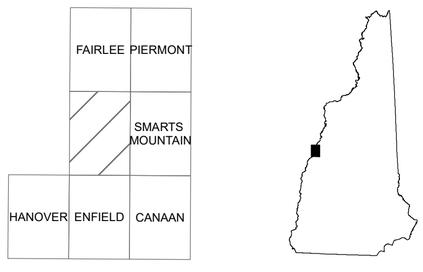
Hillshade produced from high resolution (1 meter) LiDAR data acquired from 2015 Connecticut River Joint Project

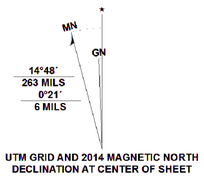
Scale 1:24,000

0 1,450 2,900 5,800 Feet

0 0.5 1 2 Miles

0 1 2 4 Kilometers





UTM GRID AND 2014 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

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Interpretive Cross Section A - A' (No Vertical Exaggeration)