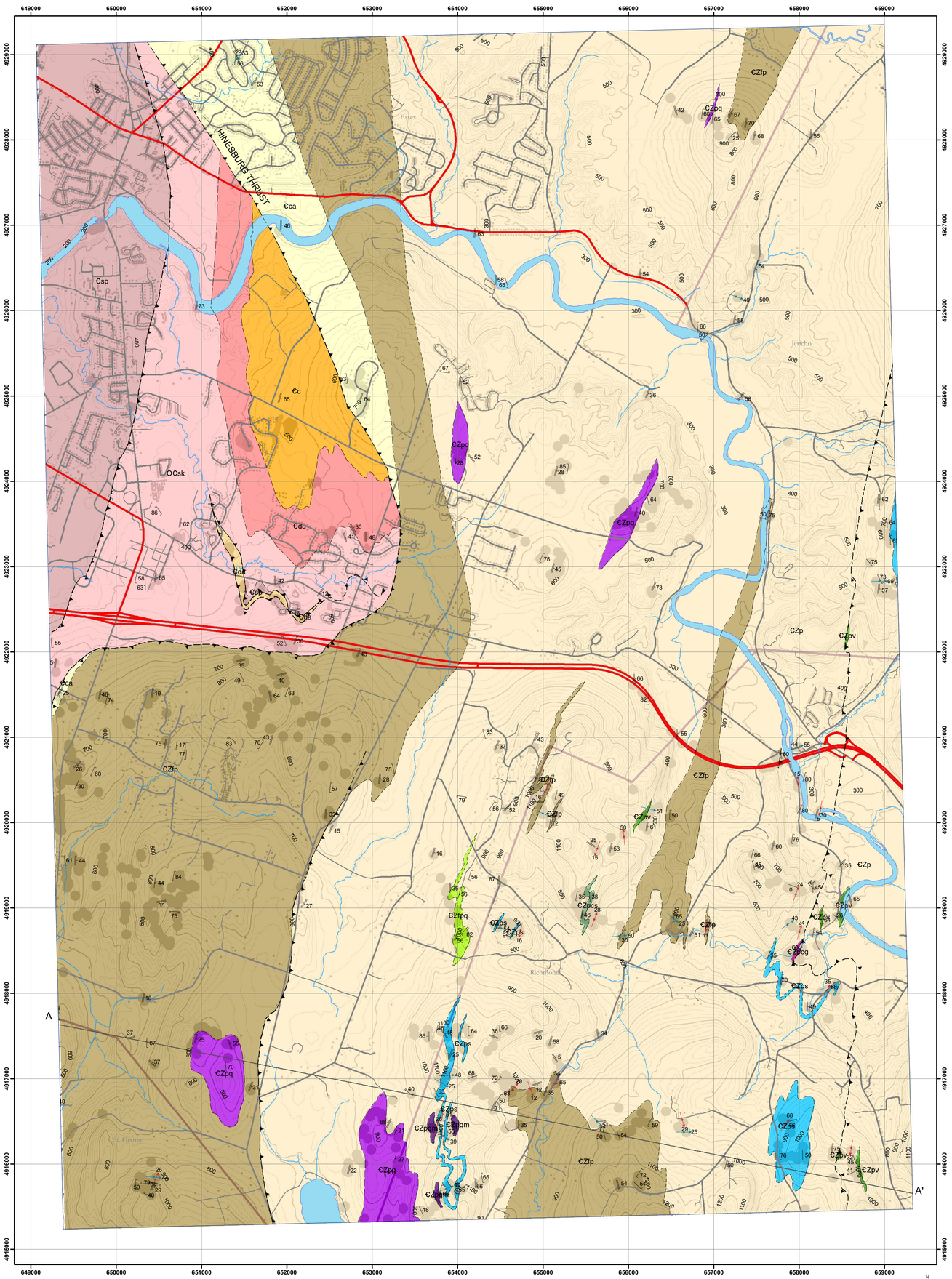
Vermont Geological Survey Open File Report VG12-3
Bedrock Geologic Map of the Essex Junction, VT Quadrangle



The 20 ft contours were generated
using the VTs "hydrologically Corrected" Digital Elevation
Model (VTHYDRODEM) available through VCGI.org.
The hydro digital elevation model was processed using
Spatial Analysts's focal statistics tool to smooth the dataset.
Coordinate system: Vermont State Plane, meters, NAD 83.
Grid overlay is Universal Transverse Mercator,
Zone 18N, NAD 83.
Digitization and digital cartography: M. Gale, 2012

Scale 1:24,000

Legend

Lower Ordovician to Cambrian

O€sk Skeels Corners Slate - Dark gray to gray phyllite and laminated slate with thin (1-5 mm) orange-weathering dolomite layers.

Cambrian

€sp Clarendon Springs Formation - Light to dark gray, massive, granular, recrystallized dolostone and breccia with chert and dolostone clasts.

€da Danby Formation - Fine to medium grained, gray dolomitic sandstone, commonly with visible rounded gray quartz sand grains.

€du Dunham Formation - Tan to brown weathering, buff to light gray, massively bedded dolostone.

Cheshire Formation

€c Cheshire Formation - Light to dark gray, massive, fine to medium grained quartzite and argillaceous quartzite.

€ca Argillaceous quartzite member -fine to medium grained, gray and rusty weathering, dark gray argillaceous quartzite with abundant quartz veins.

Cambrian to Neoproterozoic

Fairfield Pond Formation

€Zfp Fairfield Pond Formation - Silvery tan and rusty weathering, light green to gray, phyllite, schist and phyllitic granofels; locally interbedded with dark gray argillaceous quartzite; interlayered with Pinnacle Formation. Contact with overlying Cheshire Fm. is gradational.

€Zfpq Quartzite member - rusty weathering, dark gray argillaceous quartzite and dark gray schist, occurs locally north of Christmas Hill Rd.

Pinnacle Formation

€Zp Pinnacle Formation - light to medium gray, folaited to massive to pinstriped, muscovite-chlorite-biotite-feldspar-quartz schist, wacke and phyllite; commonly with blue quartz pebble conglomerate beds. Includes thick (up to 3 meters) bedded metawacke and quartzite, banded quartzite and pinstriped (1-2 mm) meatwacke and schist. Bedding is commonly transposed and two generations of pinstripes are evident. Interlayered with metavolcanic rocks and chlorite schist.

€Zpcg Large cobble conglomerate member - poorly sorted cobble conglomerate in a chaotic dolomitic phyllite matrix. Cobbles include gneiss, quartzite, quartz, limestone, dolostone, slate and felsic igneous rock. Some clasts appear stretched; clasts decrease in size to the west within 5 meters. Occurs locally south of Johnnie Brook Road at east side of quadrangle.

€Zps Metawacke and schist member - light to dark gray and gray-green, fine to medium grained schist and stripeed schist with magnetite.

CZpq Quartzite member - Coarse- grained, massive conglomerate with rounded blue-quartz pebbles; includes medium grained, massive, thick (1-3 meter) bedded, light and dark gray banded quartzite (CZpqm)

€Zpcs Chlorite schist - rusty weathering, fine grained, medium green chlorite schist; interbedded with CZp and CZpv.

€Zpv Greenstone member - rusty weathering, dark green, fine grained, epidote-albite-chlorite metavolcanic and calcareous greenstone; Interbedded with CZp.

- Strike and dip of bedding, commonly transposed (S0/S1)
- Strike and dip of compositional layering (S1)
- Strike and dip of schistosity and shear bands (S2)
- Strike and dip of older crenulate cleavage and associated axial planes of tight to open folds (F3) which deform compositional layering (S1)
- Strike and dip of superposed axial plane crenulate cleavage (F4)
- Trend and plunge of fold axis and crenulate lineation (L3)
- trend and plunge of fold axis (L4)
- Contact, long dash where approximate, short dash where inferred
- Thrust fault, teeth on upper plate
- Field Station
- Cross Section Line
- Roads
- Water
- USGS Quadrangle Boundary

References and acknowledgements:
Mapping was completed in 2007 for the Town of Williston and is available as:
Kim, J., Gale, M., Thompson, P.J., and Derman, K., 2007, Bedrock geologic map of the town of Williston, Vermont: Vermont Geological Survey Open File Report VG07-4, scale 1:24,000.
Mapping in the remainder of the quadrangle was completed in 2012 as part of this report.

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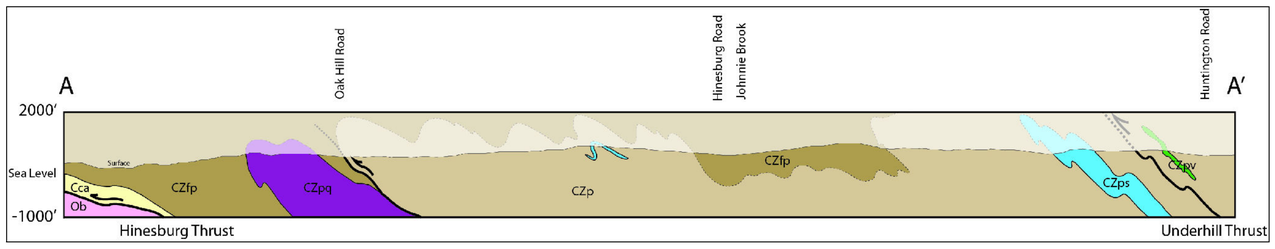

Fairfield Pond Formation
quartzite bed and close-up of phyllite

Pinnacle Formation
Overturned F3 fold, conglomerate, and pinstripe wacke with crenulate cleavage

Tight F4 folds deform the crenulate cleavage

Open, upright F3 fold in pinstripe metawacke

View to the northeast from St. George

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