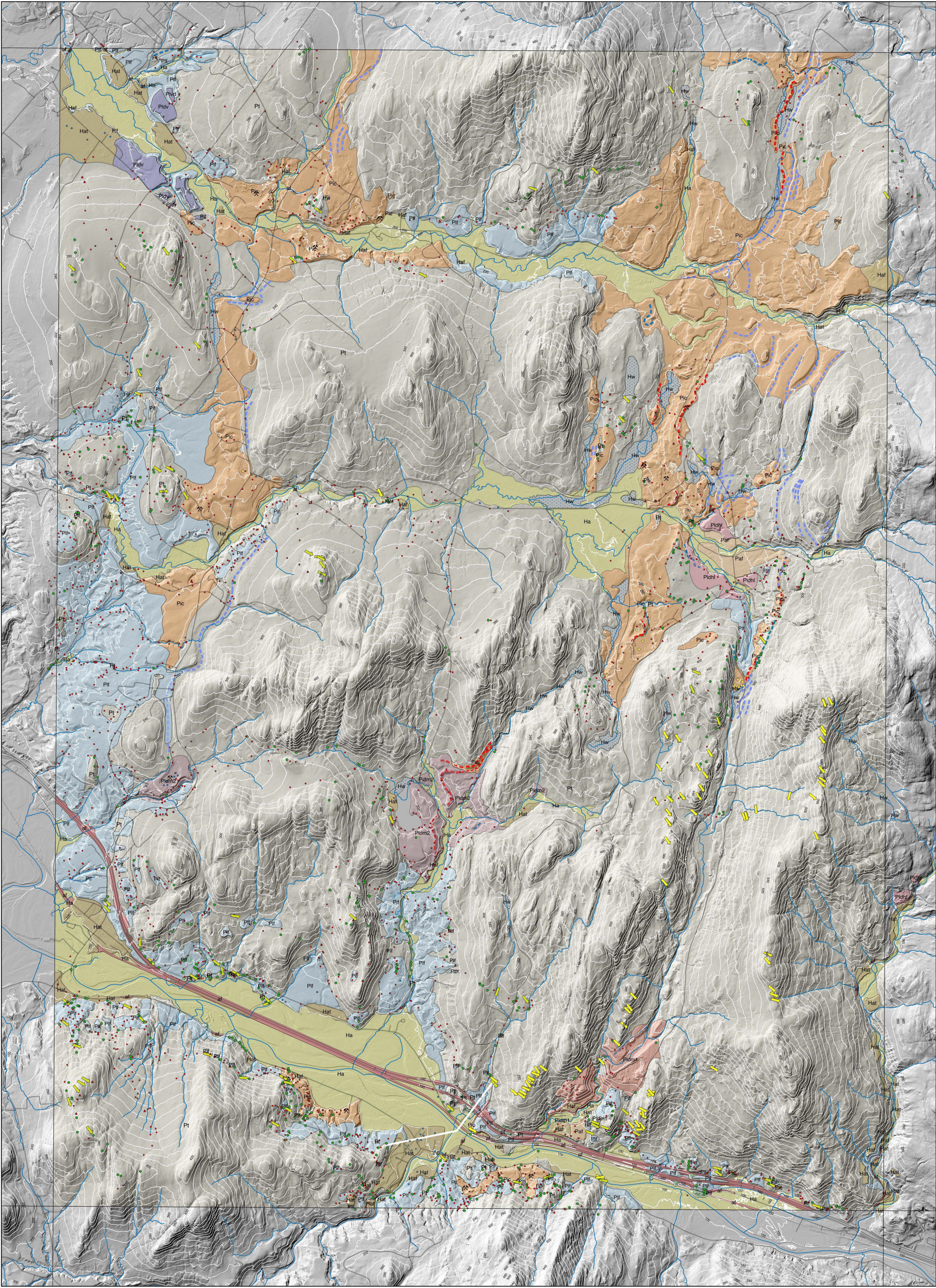


Surficial Geologic Map of the Richmond 7.5-Minute Quadrangle, Vermont

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Vermont Geological Survey Open File
Report VG2019-1, Plate 1



EXPLANATION OF MAP UNITS

Mapping Units

Holocene Deposits

- at Artificial Fill: Artificially-emplaced material along road beds, embankments, and in developed areas. Material may sand, gravel, till, or crushed and broken rock. Thickness varies.
- Hw Wetland Deposits: Accumulations of organic matter and/or clastic sediment in low-lying areas. Includes a wide variety of wetland types. Commonly overlying other deposits such as alluvium, lacustrine sediment, or till. Only larger deposits are shown.
- Haf Alluvial Fan: Boulder, pebble, and cobble gravel and pebbly sand deposited at sites where steep, stream gradients are sharply reduced. May include remobilized till at their apices. Common at the mouths of steep tributaries where they meet the main stream. Thickness varies.
- Ha Alluvium: Silt, sand, gravel, and organics deposited by modern streams. Includes stream channel, bar, and floodplain deposits. Wetland deposits are common within these areas and are not distinguished. Thickness generally equals depth of stream channel.
- Hat Alluvial Terrace Deposits: Silt, sand, and gravel deposited on terraces above the modern floodplains of streams. They are composed of a variety of channel, bar, and floodplain deposits. Generally less than 5 meters thick.

Pleistocene Deposits

- Paf Alluvial Fan: Haf Alluvial Fan: Boulder, pebble, and cobble gravel and pebbly sand deposited below deltas incised by streams following rapid reductions in glacial lake levels. Thickness varies.
- Plf Lacustrine Deposits, Fine-grained: Clay, silt, and very fine to fine sand deposited in the deeper waters of proglacial lakes some distance from the ice margin. Commonly laminated. Plfv (varved) where clear indications of annual layers are present.
- Pldv Delta-Glacial Lake Vermont Coveville Stage: Well-sorted sand and gravel deposited in Glacial Lake Vermont, Coveville Stage. Includes topset, foreset, and proximal bottomset beds.
- Pldm2 Delta-Glacial Lake Mansfield 2: Well-sorted sand and gravel deposited in Glacial Lake Mansfield 2. Includes topset, foreset, and proximal bottomset beds.
- Pldm1 Delta-Glacial Lake Mansfield 1: Well-sorted sand and gravel deposited in Glacial Lake Mansfield 1. Includes topset, foreset, and proximal bottomset beds.
- Pldhi Delta-Unnamed High-Elevation Lake: Well-sorted sand and gravel deposited in Unnamed High-Elevation Lake. Includes topset, foreset, and proximal bottomset beds.
- Pic Ice-Contact Deposits, Undifferentiated: Unsorted to poorly-sorted stratified gravel, sand, and silt deposited in contact with glacial ice. Includes stream sediments deposited adjacent to the ice margin and ice-proximal lacustrine deposits. Deposits are commonly terraced, cut by abandoned channels, and contain kettles.
- Pt Glacial Till: Very dense to loose, unsorted to very poorly sorted material deposited directly from glacial ice. Contains a wide range of grain sizes, from clay or silt up to large boulders. Surface boulders are generally common. Thickness is highly variable, from 0 to greater than 30 meters.

Bedrock

- Bedrock Outcrops: Includes only outcrops along Interstate

Map Symbols

Linear Features

- Geologic Cross Section
- Ice-Marginal Terrace: Channel Ice-Marginal Terrace: Ice-Marginal stream-eroded terraces and channels
- Wave washed Till (Lake Shore): Narrow terrace eroded in till at the elevation of a high-elevation glacial lake.
- Esker Ridge: Crest of esker ridge composed of gravel and sand (Pic) deposited in a subglacial tunnel.
- Abandoned Channel: Abandoned channel of Holocene stream.

Point Features: Field Observation Sites

- Surficial Material or Landform Observation
- Bedrock Outcrop
- Glacial Striations and Grooves
- Large (>4 m diameter) Erratic
- Domestic Water Well: Tag number recorded where available.
- Kettles
- Gravel Pit: Active and inactive pits are not differentiated.



View looks south along an esker in the Jericho Firing Range. The esker is bordered on both sides by wetlands, but the well drained sand and gravel within the esker supports a healthy mixed forest. The south end of this esker segment is a gravel pit.

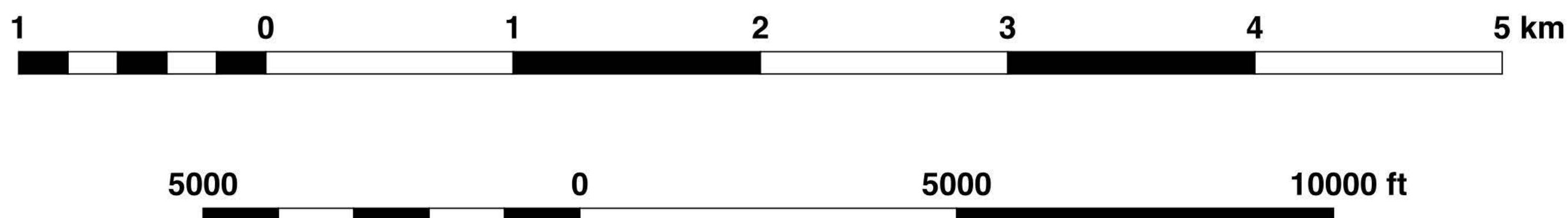
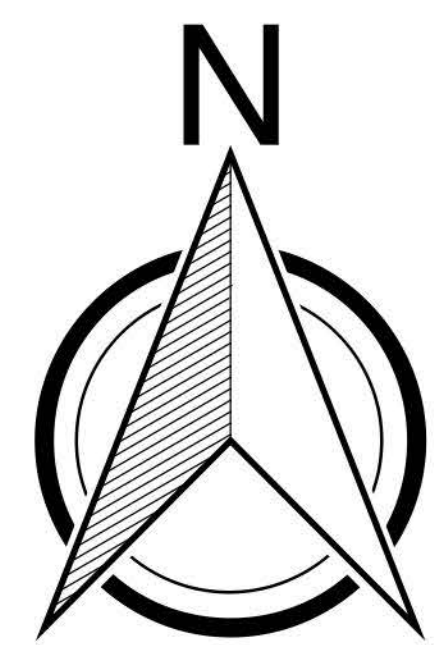


Gravel pit south of Jonesville is floored by gravel and fines upward to lacustrine silt/clay. Visible section is dominated by medium to fine sand with interspersed layers of gravel and was deposited in a subaqueous fan.

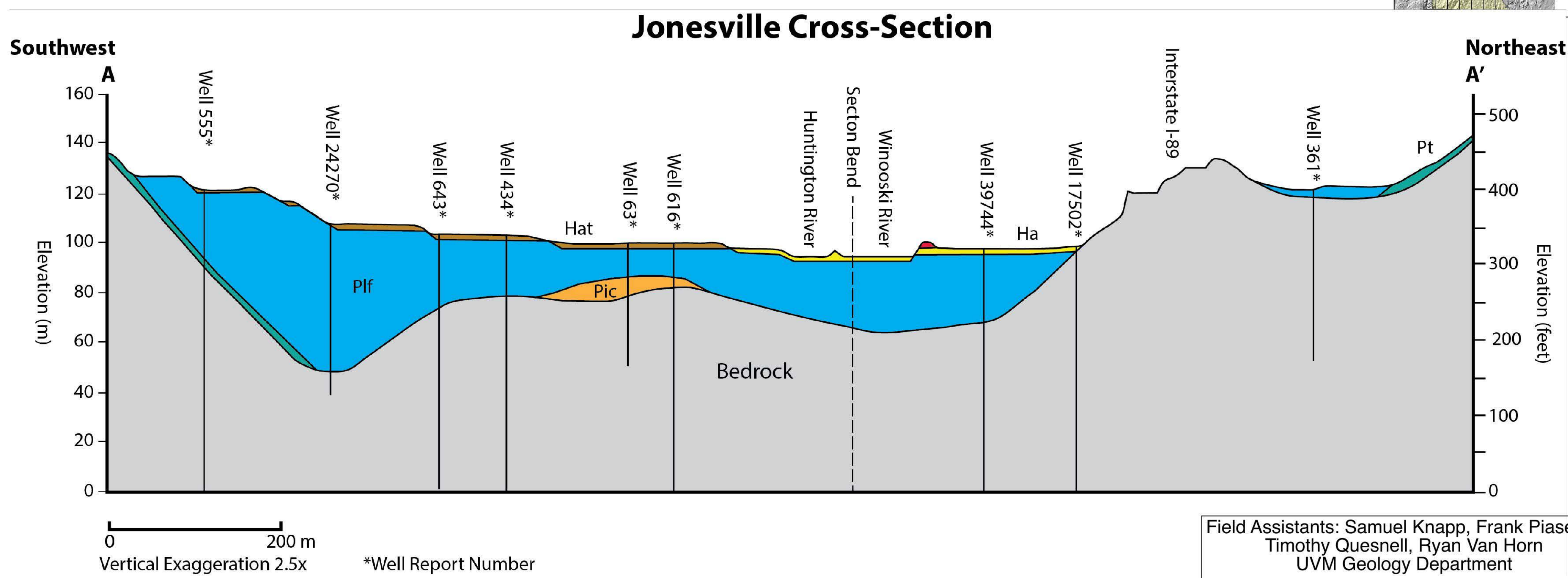
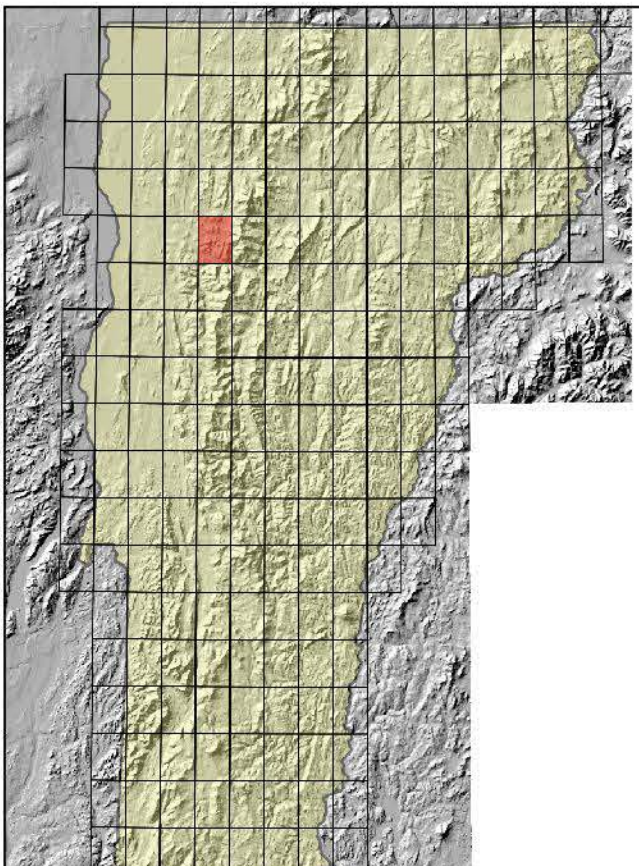


Glacial lake sediment exposed in a pit east of Jericho Village on the south side of the Lee River. Sediment largely consists of fine to very fine sand with dark layers of silt. Horizontal bedding indicates that the Lee River valley was filled to at least this elevation with glacial lake sediment. Deeper parts of pit once exposed coarse-grained ice-contact sediments.

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Contour Interval 20 meters



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