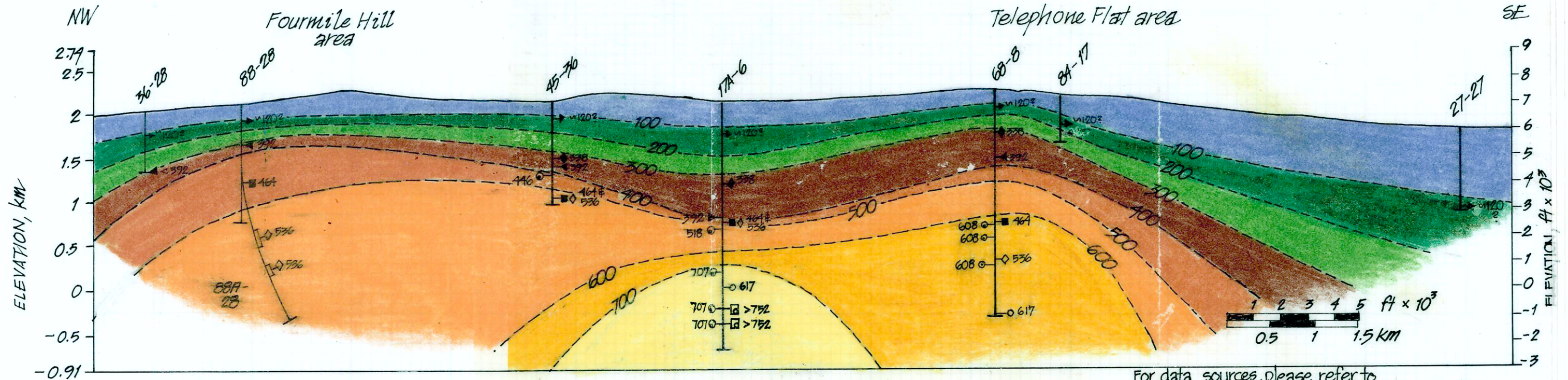


PEAK PALEO-TEMPERATURES



For data sources, please refer to accompanying, provisional alteration section

★★ Hydrothermal
★★ PEAK PALEOTEMPERATURE CROSS SECTION THROUGH GLASS MOUNTAIN VOLCANO

- Caveats:
- (1) Peak paleotemperatures may not have been reached contemporaneously.
 - (2) Peak paleotemperatures based on hydrothermal phases are approximate and may vary from system to system.
 - (3) Fluid inclusions not identified as primary or secondary*. If the latter, primary inclusions could yield higher paleotemperatures.
 * Except for secondary hypersaline inclusions

MAXIMUM PALEOTEMPERATURE FROM:

→	LOWER TEMPERATURE STABILITY OF SMECTITE (≈ 120°F)
◄	UPPER TEMPERATURE STABILITY OF SMECTITE (≈ 392°F)
◆	UPPER TEMPERATURE STABILITY OF MORDENITE & CLINOPTILOLITE (≈ 338°F)
■	LOWER TEMPERATURE STABILITY OF EPIDOTE (≈ 464°F)
◇	LOWER TEMPERATURE STABILITY OF ACTINOLITE (≈ 536°F)
○	LOWER TEMPERATURE STABILITY OF SECONDARY BIOTITE (≈ 617°F)
⊠	HYPERHALINE FLUID INCLUSION

(Draft) J. Hulen, 12/10/02

Note:
 Mineral thermal stabilities based on equilibrium-temperature occurrences in numerous Icelandic and other active high-temperature geothermal systems. Synthesized from multiple sources cited in Bargar and Keith, 1999