

MEDICINE Lake Preliminaries Norton Apr 14 2000

Construct hypothetical section of system that approximate pluton heat sources, then compute hydrothermal history for an ensemble of conditions.

1) Surface distribution of volcanic mass.

- volcanics lie on Modoc Plateau base (4500' elev)
- E-W elongate topo feature rises abruptly from 4500' to ~8000'
- highest point is on Glass Mtn just east of Medicine Lake.
- topo anomaly is marked by small outlier peaks for both the 5000' & 6000' contours.
- this suggests an evolving constructional volcanic edifice.

Volcanic Volume

@ Elev above 4500' 5.13 km³ distributed over 34 km².

22-141 50 SHEETS
22-142 100 SHEETS
22-144 200 SHEETS



Although the highest elevations and "young" looking rhyolite flows are distributed circumferentially about The Lake; no evidence for a ring fracture or caldera collapse is present in the topography nor could I find such on the ground.

The distribution of volcanic mass suggests the entire 34 km^2 area is prospective in terms of young cooling plutons at depth Δ

- A recon map of the small topo outliers w/ to their composition & perhaps age would provide useful baseline information on detection of the current ^{or recent} intrusive activity.

- this could detect regions away from Telegraph Flat that warrant drilling.

Medloc



Note: outliers appear to be postures. D