

UNITED STATES DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Telluric profiles and location map for Vulcan Hot Springs
Known Geothermal Resource Area, Idaho

by
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Two telluric profiles were made near Vulcan Hot Springs, Idaho to help assess the geothermal potential of the area.

Both traverses were run east-west with the first and last stations situated on bedrock (quartz monzonite). The traverses crossed a narrow valley of Quaternary fill and their locations are shown in figure 1.

Traverse number 1 (fig. 2) shows a sharp drop in relative voltage between stations 1 and 3 equivalent to more than a two-order of magnitude drop in apparent resistivity. This is probably the result of both a north-south fault near the break in topography (approximately at station 1) and thermal water circulation with surface expression at Vulcan Hot Springs (near station 1). The continued drop in voltage towards station 3 may be indicative of an east-dipping fault and (or) alteration zone. The low between stations 6 and 7 probably indicates an alteration zone due to faulting with apparent resistivity increasing to the east (out of the valley).

Traverse number 2 (fig. 2) indicates probable faulting on both sides of the valley with fairly rapid changes in voltage (apparent resistivity) between stations 0-2 and 6-8. The amplitude of voltage change is smaller compared to that of traverse 1 probably indicating that alteration and (or) geothermal activity is minimal along traverse 2 or that the alluvial cover is thicker than along traverse 1.

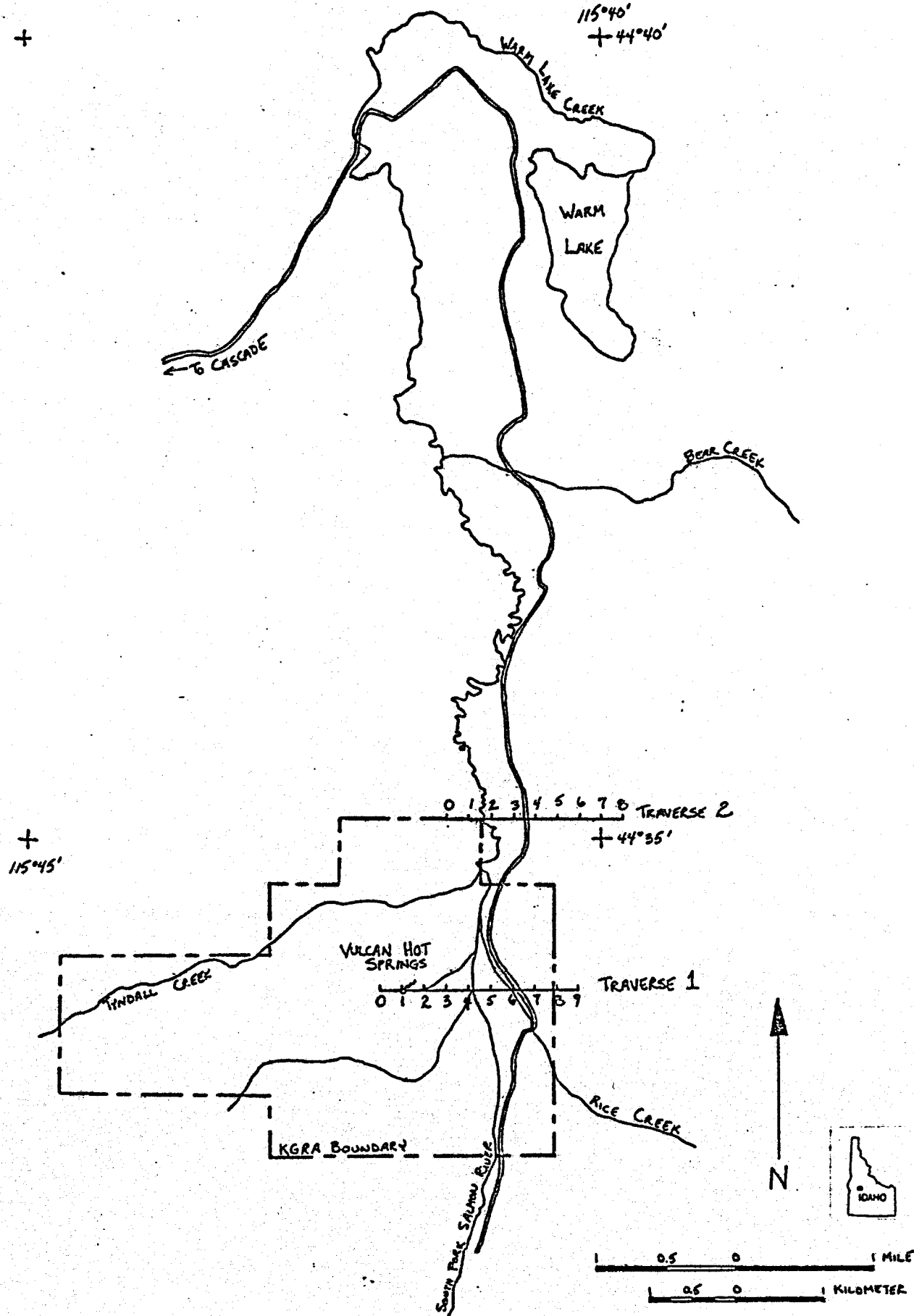


FIG. 1 - TELLURIC PROFILES LOCATION MAP
 VULCAN HOT SPRINGS ID-KGRA

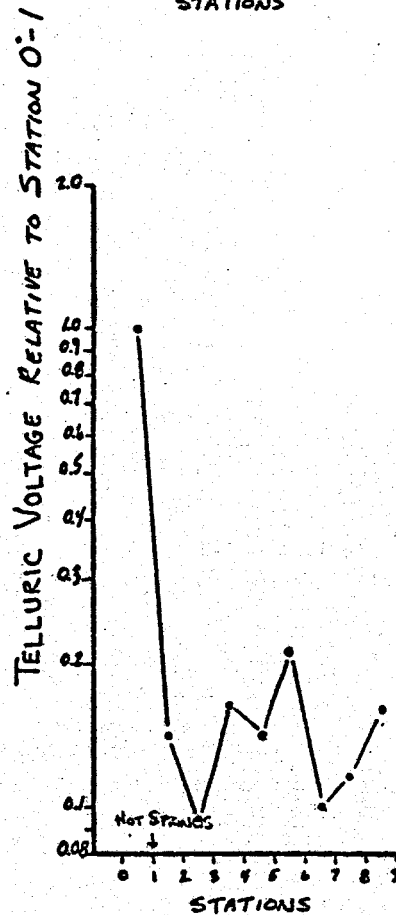
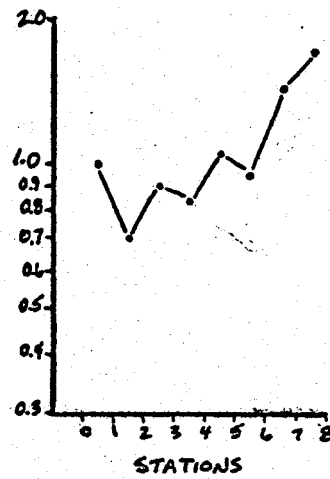


FIG. 2 - TELLURIC PROFILES -
 VULCAN HOT SPRINGS ID - KGRA
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