interval is more widespread than has heretofore been recognized and is readily identified since it carries the distinctive trilobite Eldoradia, sometimes in coquinas and sometimes as isolated specimens within intraformational conglomerate layers. In the eastern Great Basin the Eldoradia horizon has been previously reported from the East Tintic, Fish Springs, and Deep Creek ranges and near Pioche. This note calls attention to its presence in the Cricket, Drum, Dugway, and Wah Wah ranges.

VOLCANISM AND PLUTONISM IN THE GREAT BEAR BATHOLITH

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The 1760-million-year-old Great Bear Batholith consists of post-orogenic volcanics, hypabyssal porphyries and epizonal plutons developed outboard of the Coronation Geosyncline in the northwest corner of the Canadian Shield.

The volcanics are rhyolitic to andesitic ignimbrites with intercalated shoshonitic basalt and sediments. The only recognizable centers are andesitic shield volcanoes built in rhyolitic plateaus. Porphyries, having identical phenocryst populations as the ignimbrites, were intruded during volcanism. The volcanics make-up a conformable homocline of more than 120,000 feet aggregate thickness. Volcanism was accompanied by high-angle faulting of great structural relief, probably in an environment of crustal attenuation like the Basin and Range Province.

Plutonism did not begin until after extrusion and folding of the entire volcanic succession, and was not accompanied by faulting. Early plutons are vertical-sided granodiorite with quartz monzonite cores. Late plutons are homogeneous granite with roofs near the present erosion surface. The overlying volcanics are not displaced but are cut by swarms of granitic porphyry dikes.

Thus, the magmatic history begins with volcanism and ends with plutonism, with clear temporal separation of the two.

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GEOTHERMAL SYSTEMS OF NORTHERN NEVADA ✱ 144

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Hot springs are numerous and nearly uniformly distributed in northern Nevada. Most occur on the flanks of basins, along Basin and Range (late Miocene to Holocene) faults, while some occur in the inner parts of the basins. Surface temperatures of the springs range from slightly above ambient to boiling; some springs are superheated. Maximum subsurface water temperatures calculated on the basis of quartz solubility range as high as 252°C, although most are below 190°C. Flows range from a trickle to several hundred liters per minute.

The Nevada geothermal systems differ markedly from the power-producing system at The Geysers, Calif., and from those areas with a high potential for power production (e.g., Yellowstone Park, Wyo.;