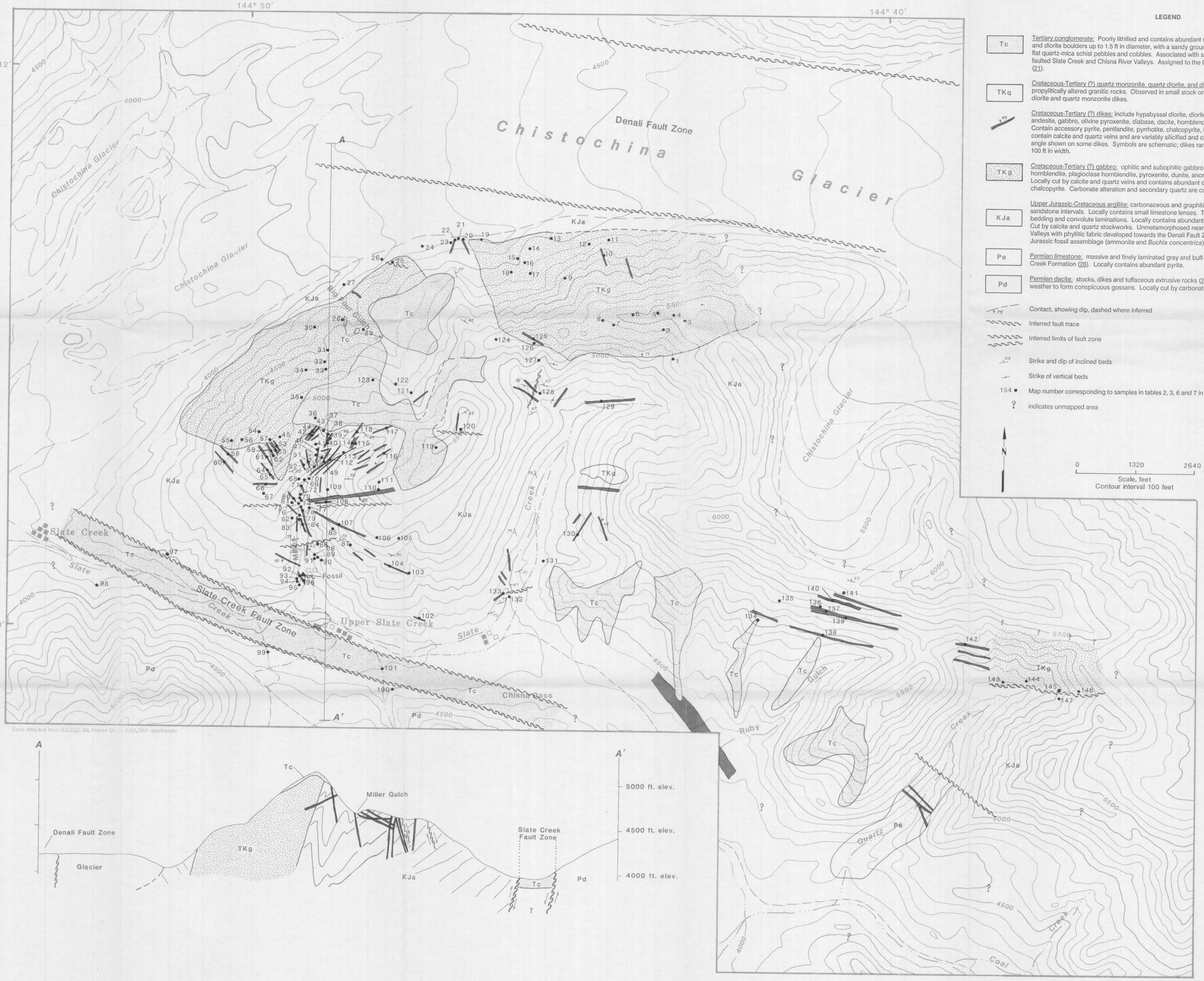

LEGEND

Tc — Tertiary conglomerate: Poorly lithified and contains abundant well-rounded greenstone, granite, and diorite boulders up to 1.5 ft in diameter, with a sandy groundmass. Also contains abundant flat quartz-mica schist pebbles and cobbles. Associated with sandstone and coal beds in down-faulted Slate Creek and Chisna River Valleys. Assigned to the Gakona Formation by Mendenhall (21).

TKq — Cretaceous-Tertiary (?) quartz monzonite, quartz diorite, and diorite: fine- to coarse-grained propylitically altered granitic rocks. Observed in small stock on upper Slate Creek with associated diorite and quartz monzonite dikes.

Cretaceous-Tertiary (?) dikes: include hypabyssal diorite, diorite porphyry, syenodiorite porphyry, andesite, gabbro, olivine pyroxenite, diabase, dacite, hornblendite, and plagioclase hornblendite. Contain accessory pyrite, pentlandite, pyrrhotite, chalcopyrite, hematite, and cinnabar. Locally contain calcite and quartz veins and are variably silicified and carbonate-altered. Dip direction and angle shown on some dikes. Symbols are schematic; dikes range from less than an inch to over 100 ft in width.

TKg — Cretaceous-Tertiary (?) gabbro: ophitic and subophitic gabbro with associated alkali gabbro, hornblendite, plagioclase hornblendite, pyroxenite, dunite, anorthosite, diorite, and serpentinite. Locally cut by calcite and quartz veins and contains abundant disseminated pyrite, pyrrhotite, and chalcopyrite. Carbonate alteration and secondary quartz are common.

KJa — Upper Jurassic-Cretaceous argillite: carbonaceous and graphitic with slaty cleavage and sandstone intervals. Locally contains small limestone lenses. Turbidite sequence with rhythmic bedding and convolute laminations. Locally contains abundant fine-grained disseminated pyrite. Cut by calcite and quartz stockworks. Unmetamorphosed near Slate Creek and Chisna River Valleys with phyllitic fabric developed towards the Denali Fault Zone. Basal portion contains upper Jurassic fossil assemblage (ammonite and *Buchia concentrica*).

Pe — Permian limestone: massive and finely laminated gray and buff-colored limestone of the Eagle Creek Formation (28). Locally contains abundant pyrite.

Pd — Permian dacite: stocks, dikes and tuffaceous extrusive rocks (28). Contain abundant pyrite and weather to form conspicuous gossans. Locally cut by carbonate-altered basaltic dikes.

Contact, showing dip, dashed where inferred

Inferred fault trace

Inferred limits of fault zone

Strike and dip of inclined beds

Strike of vertical beds

154 ● Map number corresponding to samples in tables 2, 3, 6 and 7 in text

? indicates unmapped area

N

0 1320 2640
Scale, feet
Contour interval 100 feet

Figure 2. – Geologic map of the Slate Creek area, showing sample localities and cross section.

OFR 14-90
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