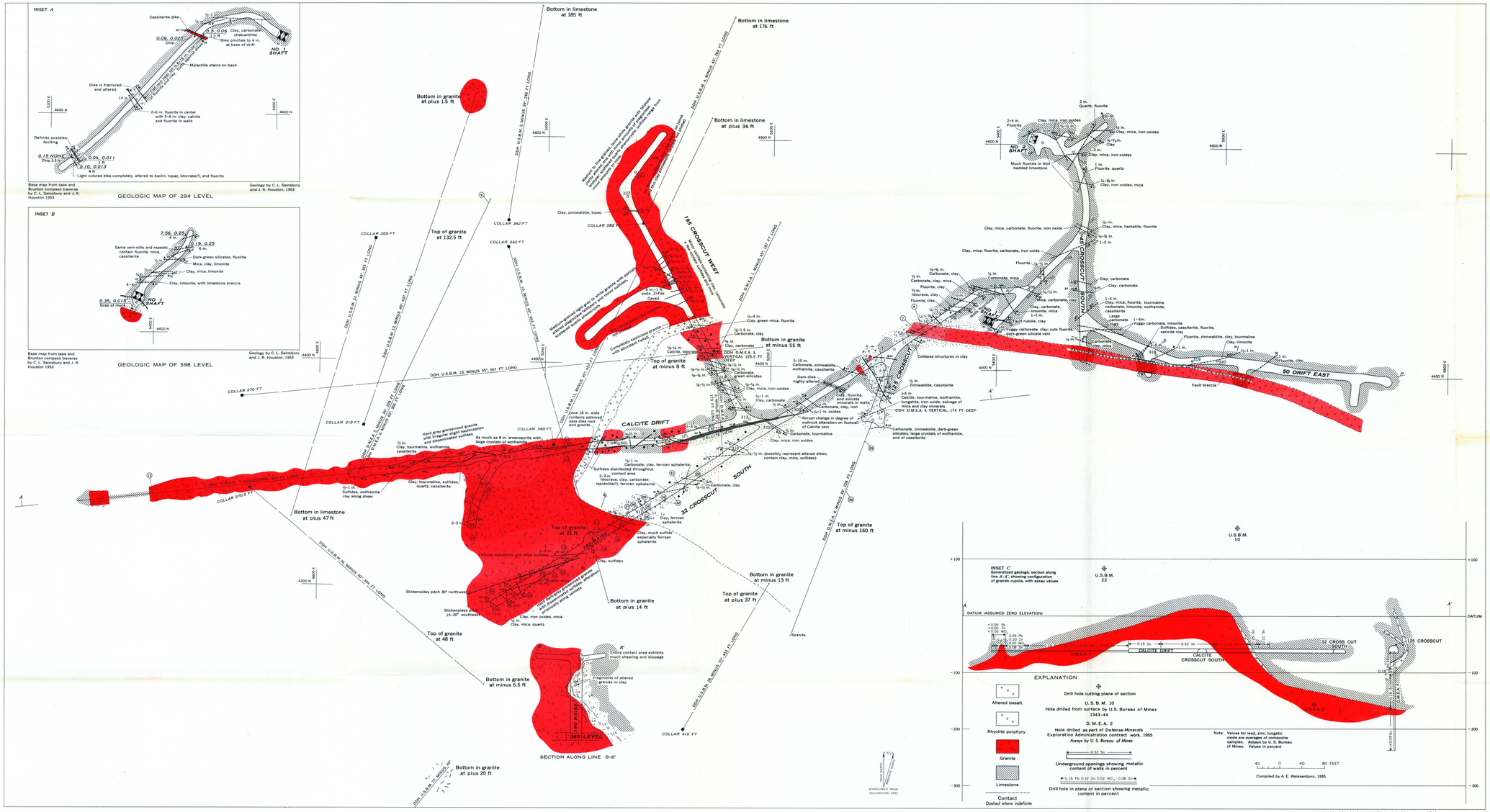

Base map modified slightly from transit survey map by U. S. Tin Corp.

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—10424

Geology by C. L. Sainsbury, J. R. Houston, A. E. Weissenborn and G. Donald Eberlein, 1953–55

GEOLOGIC MAP OF 365, 294, AND 398 LEVELS, LOST RIVER MINE, ALASKA

20 0 20 40 60 80 100 FEET
DATUM IS ASSUMED AS ZERO ELEVATION AT POINT 65 FEET ABOVE SILL OF 365 LEVEL

EXPLANATION

Kaolinized greisen or greisenized rhyolite dike rock
Soft, gray, green to purple. Pseudoporphyritic texture caused by kaolinite patches. Some facies contain high percentage of pink mica and fluorite; unit generally contains sulfide minerals, cassiterite, and minor amounts of wolframite

Clay derived from greisen or greisenized rhyolite dike rock
Soft, white to tan. Iron sulfide minerals mostly leached, but unit locally contains arsenopyrite, ferroan sphalerite, cassiterite, fluorite, specks of limonite, and traces of wolframite

Altered rhyolite
Dike rock; lithology unknown because of lack of exposures

Dike rock
Soft white, completely altered to kaolinite, topaz, mica, fluorite. Original lithology unknown. Exposed only on 294 level from inclined shaft and 125 crosscut

Amygdaloidal basalt dike rock
Firm to hard, dark-brown, purple or green, highly altered. Contains relict plagioclase laths

Granite
Medium- to fine-grained, bone-white; contains quartz, plagioclase, orthoclase, and biotite, feldspars partly sericitized, cut along joints by thin veinlets containing fluorite, topaz, mica, sulfide minerals, cassiterite and some dark-green silicate

Greisen or almost completely greisenized granite
Medium- to coarse-grained, hard, gray to dark-gray. Consists of quartz and topaz with minor amount of mica; sulfide minerals locally constitute several percent of rock; fluorite sparse to abundant; unit contains minor amounts of cassiterite and wolframite

Clay derived from limestone or tactite
Very soft, greenish-gray. Commonly contains small amounts of cassiterite, fluorite, and sulfide minerals. Thin irregular dashes denote shearing

Clay derived from limestone
Soft to firm, white to yellowish-gray. Contains pods and vugs of coarsely crystalline carbonate and sparsely disseminated sulfide minerals, cassiterite, and fluorite

Marmarized limestone
Cut by many thin veinlets containing one or more of following: fluorite, sulfide minerals, silicate minerals, carbonate minerals, cassiterite, and wolframite. Large dots indicate noticeable coarsely crystalline carbonate minerals; T's indicate (diagrammatically) isolated pods of tactite

Tactite
Contains residuals of marmarized limestone and pods of coarsely crystalline carbonate (large dots), usually contains pyrite, minor amounts of other ore minerals and calcite

Fault breccia and gouge
Showing dip of fault

Clay alteration
Spacing of dots denotes relative degree

Contact, showing dip
Dashed where gradational or inferred; queried where projected long distances

Fault, showing dip
Dashed where inferred; D, downthrown side; U, upthrown side

Plunge of small anticlinal drag fold

Strike and dip of beds

Strike and dip of joints

Carbonate vein of possible minable thickness
Showing dip, contains cassiterite and coarsely crystalline wolframite

Veinlet
Showing dip, average thickness, and major constituents as determined megascopically; joint symbol indicates veinlet formed along joint, and strike of vertical veinlet

Foot of two-compartment vertical shaft

Two-compartment inclined shaft going above and below level, showing inclination

Foot of raise

Mine workings

Timbered workings

Caved workings
Mapped before caving

Location of special sample
Showing sample width in feet (below bar). Sn content in percent followed by WO_3 content in percent (above bar)

DDH D.M.E.A. 8, MINUS 45°, 228 FT. LONG
Horizontal projection of diamond-drill hole of U. S. Tin Corp., drilled in 1955 under contract with Defense Minerals Exploration Administration

Location of vertical diamond-drill hole of U. S. Tin. Corp., drilled in 1955 under contract with Defense Minerals Exploration Administration

DDH U.S.B.M. 11, MINUS 45°, 457 FT. LONG
Horizontal projection of diamond-drill hole of U. S. Bureau of Mines drilled from surface, 1943–44

Location and reference number of clay sample listed in text table

U. S. Tin Corp. survey coordinates

U. S. Tin Corp. survey spad with number, where known

NOTE: Altitudes of collars of U. S. Bureau of Mines drill holes are taken from plate 2, and are approximately only