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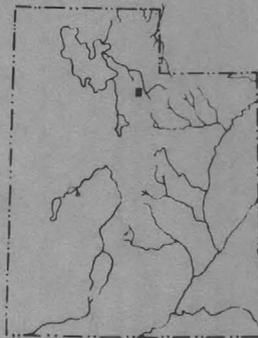
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DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

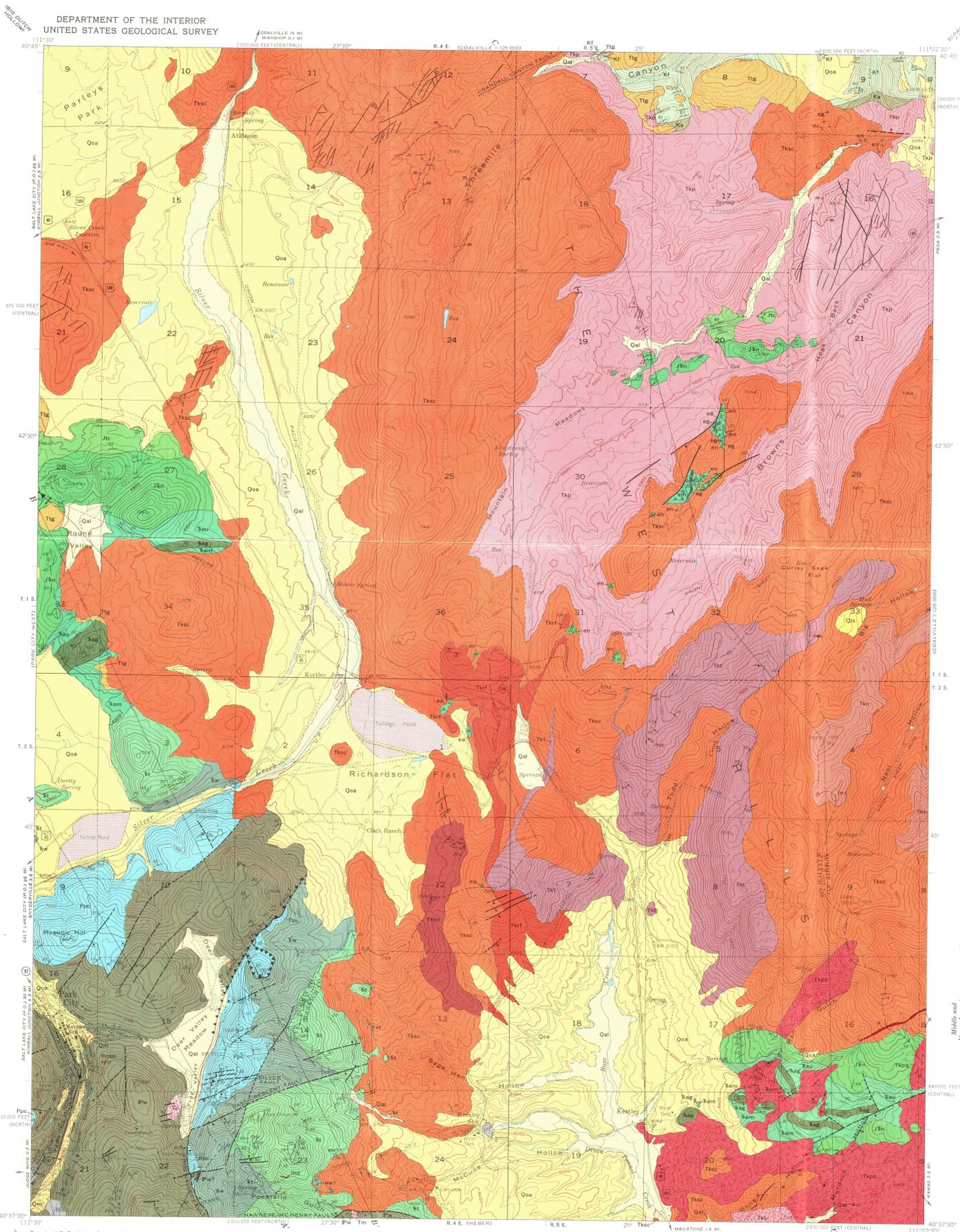
GEOLOGIC
 QUADRANGLE MAPS
 OF THE
 UNITED STATES

 GEOLOGIC MAP
 OF THE
 PARK CITY EAST QUADRANGLE
 SUMMIT AND WASATCH COUNTIES, UTAH
 By
 Calvin S. Bromfield and Max D. Crittenden, Jr.



QUADRANGLE LOCATION

PUBLISHED BY THE U. S. GEOLOGICAL SURVEY
WASHINGTON, D. C.
1971



EXPLANATION

Map symbols queried where identification uncertain

Surficial deposits
Qal, alluvium along larger drainages
Qm, landslide deposits

Alluvium and glacial deposits
Qoa, older alluvium; generally forms terraces adjacent to larger drainages, and caps high surfaces near Weber River just northeast of the map area. Not necessarily all of same age.
Qm, glacial moraine

Intrusive rocks
Tm, Mayflower stock; light- to medium-gray granodiorite porphyry containing phenocrysts of plagioclase, hornblende, and locally biotite, commonly 1 to 2 mm in size, in a microcrystalline to cryptocrystalline groundmass of orthoclase, quartz, and plagioclase.
Tp, small intrusive bodies of porphyry, probably granodioritic in composition; altered and poorly exposed.
To, Ontario stock; light-gray quartz monzonite porphyry; shown in structure section only.
Tkn, andesite of ridges along Neel Hollow; dark andesite flows and breccias forming the uppermost volcanic unit in the quadrangle.
Tkt, andesitic flow of Todd Hollow; deep-red, brown- or blue-gray-weathering andesite flows and associated breccia, with scattered plagioclase phenocrysts as much as 2 mm in size.
Tkt1, rhyodacitic rocks east of Richardson Flat; dark-gray hornblende rhyodacite flows and subordinate breccia.
Tkt2, rhyodacitic rocks north of Sage Hen Hollow; medium-gray hornblende-biotite rhyodacite flows.
Tkp, Tkt's north and east of Mountain Meadows; interbedded light-gray and yellowish-gray fine-grained tuff, lapilli tuff, volcanic gravels, and thin layers, in part probably deposited in a lake or reservoir by streams. Interbedded and intergrading upward into coarser breccias of Silver Creek (Tks). In part equivalent to the Poon Tuff of Wilkes (1962).
Tks, breccia of Silver Creek; chiefly light-gray rhyodacite to andesitic volcanic breccia, but also a few interbedded tuffs; in places the breccias are coarse and blocks from 50 to 200 tons are common. In part breccias are monolithologic and in places heterolithologic. Flow breccias in part, but probably lacustrine breccias more common. Similar to and probably equivalent in part to the volcanic breccias of Capote Canyon to the south in the Heber quadrangle.
Tm, marker bed.
Tks, breccia of Silver Creek; chiefly light-gray rhyodacite to andesitic volcanic breccia, but also a few interbedded tuffs; in places the breccias are coarse and blocks from 50 to 200 tons are common. In part breccias are monolithologic and in places heterolithologic. Flow breccias in part, but probably lacustrine breccias more common. Similar to and probably equivalent in part to the volcanic breccias of Capote Canyon to the south in the Heber quadrangle.
Tm, marker bed.
E, Eocene rocks, principally of extensively brecciated Mesozoic sedimentary rocks. Larger areas shown by triangle overprint and formation:
en, Nugget Sandstone
eu, upper member of Anarkah Formation
eg, Gortina Grit Member of Anarkah Formation
em, Mahogany Member of Anarkah Formation
ea, red beds of Anarkah Formation undifferentiated
et, Thynnes Formation
ew, Weber Quartzite
*, smaller exotic block undifferentiated

Frontier Formation
Light-yellowish-gray-weathering fine-grained ledge-forming sandstone and interbedded dark-gray and dark-brown-gray mudstone

Aspen Formation
Silver-gray-weathering dark-gray siliceous shale

Kelvin Formation
In section only

Morrison Formation
In section only

Stump Sandstone
In section only

Press Sandstone
In section only

Twin Creek Limestone
Olive-drab-weathering pencil-jointed dense limestone

Nugget Sandstone
Pale-orange medium-grained crossbedded sandstone

Quaternary
Tau, upper member; moderate-red, grayish-red, and grayish-purple mudstone and fine-grained sandstone
Teg, Gortina Grit Member; white to pale-purple massive crossbedded coarse-grained to pebbly quartzite
Tam, Mahogany Member; purple-gray and pale-red ripple-laminated sandstone, purple mudstone, and a few thin limestone beds

Tertiary
Tks, brown-weathering fine-grained limy sandstone and siltstone, interbedded with olive-green to dull-red shale and gray fine-grained fossiliferous limestone
Tkw, Woodside Shale
Dark- and purple-red shale, siltstone, and very fine grained sandstone

Permian
Ppc, Park City Formation
Pale-gray-weathering cherty and fossiliferous limestone and pale-orange and tan sandstone. As mapped includes a medial phyllosilic shale (Meadow Peak Phyllosilic Shale Member of Phosphoria Formation)

Carboniferous
Pw, Weber Quartzite
Pale-gray- and tan-weathering quartzite and limy sandstone; some interbedded gray to white limestone and dolomite
Ppv, Round Valley Limestone
In sections only
Pmo, Doughnut Formation
In section only
Pku, Paleozoic limestone of uncertain age
In section only

Geological Symbols
Contact
Dashed where approximately located; short dashed where inferred; dotted where concealed. See text on upper plate.
Fault, showing dip
Dashed where approximately located; short dashed where inferred; dotted where concealed; queried where probable. Bar and bolt on downthrown side.
Thrust fault
Dashed where approximately located; short dashed where inferred; dotted where concealed. See text on upper plate.
Anticline, approximately located
Showing direction of plunge. Dotted where concealed.
Strike and dip of beds
Inclined Vertical
Strike and dip of flow layering or compaction foliation
Joints or fracture lineaments
Mine dump
Trench Adit Shaft Prospect
Altered rock
Largely argillized, some silicified; locally some alunite developed

Geological Symbols
KI, Unconformity
Ka, Frontier Formation
Kk, Aspen Formation
Jm, Kelvin Formation
Js, Morrison Formation
Jp, Stump Sandstone
Jc, Press Sandstone
Jn, Twin Creek Limestone
Jn, Nugget Sandstone

Geological Symbols
Tg, Gravel
Boulder and cobble gravel composed principally of well-rounded gravels, chiefly of quartzite and sandstone; boulders of Nugget Sandstone common. Occurs locally immediately beneath the Kelvin Volcanics. In part may be equivalent to or derived from the Wasatch Formation (Knight Formation as used by some authors) to the north.

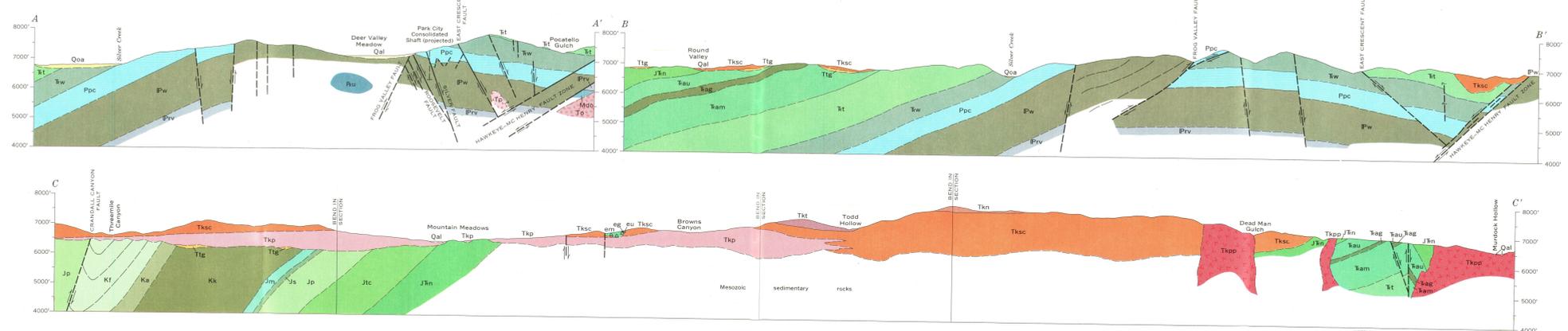
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Base by U.S. Geological Survey, 1955
10,000-foot grids based on Utah coordinate system, north and central zones

SCALE 1:24,000

CONTOUR INTERVAL 40 FEET
DATUM IS MEAN SEA LEVEL

Geology by M. D. Crittenden, Jr., 1961,
and C. S. Bromfield, 1963-67, assisted
by S. K. Grant, 1963



GEOLOGIC MAP OF THE PARK CITY EAST QUADRANGLE, SUMMIT AND WASATCH COUNTIES, UTAH

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