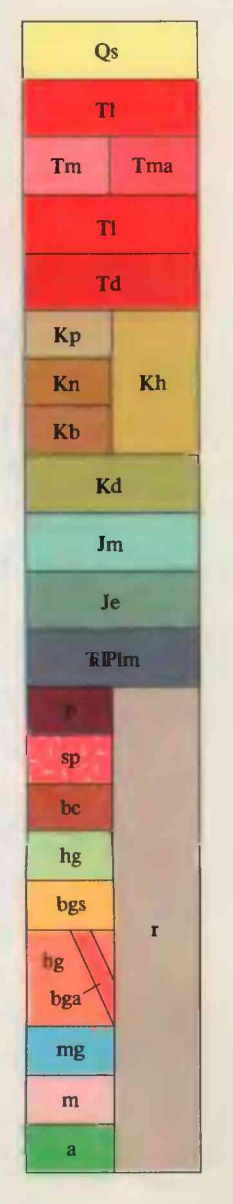


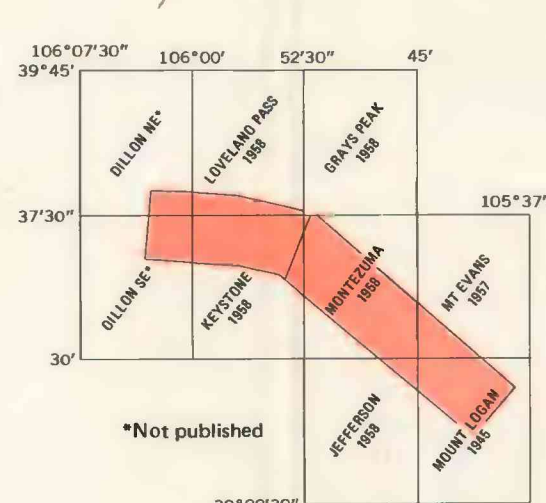
CORRELATION OF MAP UNITS



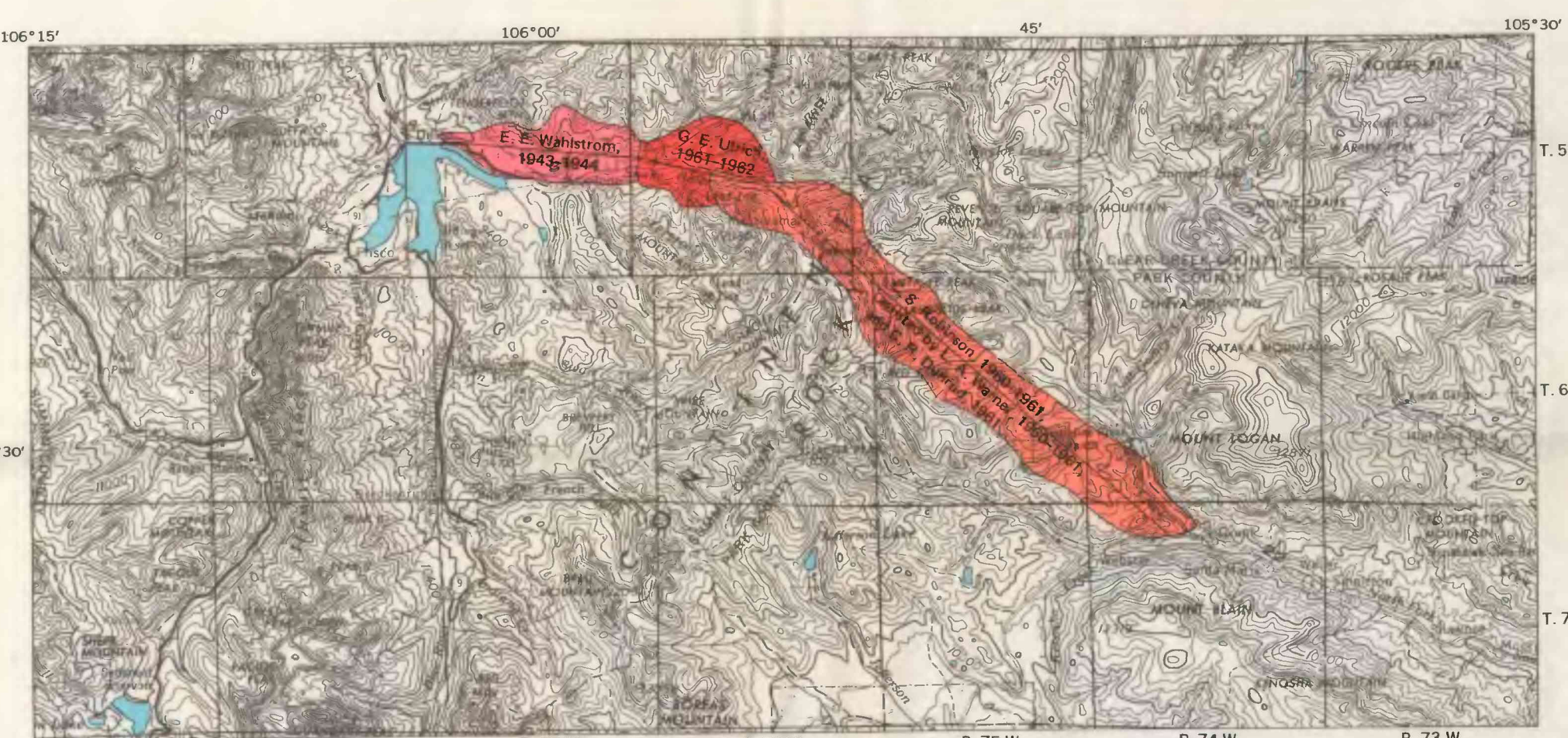
DESCRIPTION OF MAP UNITS

- Q** SUBSIFICAL DEPOSITS (QUATERNARY) - Includes glacial and fluvial deposits
- Tn** LATE TERTIARY AND BRUYETTE PORPHYRY DEPOSITS AND SILLS (TERTIARY) - Dikes generally fine grained to porphyritic and perphyritic. Older and younger than Montezuma
- Tm** MONTUZUMA QUARTZ MONZONITE (TERTIARY) - Medium grained and generally porphyritic; phenocrysts of orthoclase
- Tm** Fine grained quartz basalt facies dikes
- Tm** ALGITE AND HORNBLende DORITE DIKES (TERTIARY) - Fine grained to aphanitic and porphyritic; quartz altered to kaolinite
- Kp** PIERRE SHALE (UPPER CRETACEOUS) - Brownish gray shaly shale, shaly siltstone, and shaly sandstone
- Ks** NEBRASKA FORMATION (UPPER CRETACEOUS) - Light to dark gray shaly shale and shaly limestone
- Ks** BOSTON SHALE (UPPER AND LOWER CRETACEOUS) - Dark gray shale and limy shale
- Ks** BAKED SHALE AND HORNVELLS (UPPER AND LOWER CRETACEOUS) - Metamorphosed Pierre Shale and possibly Niobrara Formation and Boston Shale
- Ks** DAKOTA GROUP (LOWER CRETACEOUS) - Quartzite and sandstone; and interbedded dark gray shale
- Jm** MORRISON FORMATION (UPPER JURASSIC) - Light gray claystone and shaly siltstone
- Jm** ENTRADADO SANDSTONE (UPPER JURASSIC) - Light gray medium grained crossbedded sandstone in section only
- Tr** LYONS FORMATION (TRIASSIC AND PERMIAN) AND MARION FORMATION (PERMIAN AND PENNSYLVANIAN) - Red siltstone, dolomitic siltstone, sandy siltstone, and sandstone. In section only
- Tr** PEGMATITE AND ALGITE (PRECAMBRIAN)
- Tr** SILVER PLUME GRANITE (PRECAMBRIAN) - In dikes, sills, and irregularly shaped plutons
- Tr** BOULDER CREEK GRANITE (PRECAMBRIAN) - Irregularly shaped stock mass Station 900+00
- Tr** HORNBLende GNEISS (PRECAMBRIAN) - Interlayered hornblende gneiss, amphibolite, and biotite-quartz-plagioclase gneiss, medium to fine grained
- Tr** SILLIMANITE BIOTITE GNEISS AND SCHIST (PRECAMBRIAN) - Intermixed biotite-quartz-plagioclase gneiss and schist, medium to fine grained
- Tr** BIOTITE GNEISS AND SCHIST (PRECAMBRIAN) - Biotite-quartz-plagioclase gneiss and schist, biotite-muscovite gneiss, and the layers of hornblende-plagioclase gneiss and quartzite
- Tr** Layers of amphibolite
- Tr** MICROCLINE GNEISS (PRECAMBRIAN) - Microcline-quartz-plagioclase-biotite gneiss, medium grained
- Tr** MCGRAWITE (PRECAMBRIAN) - Biotite-quartz-plagioclase and biotite-quartz-microcline-plagioclase gneiss and schist interlayered with granitic material; fine to medium grained
- Tr** AMPHIBOLITE AND RELATED ROCKS (PRECAMBRIAN) - Amphibolite and pyroxene-plagioclase gneiss, quartzite, and marble, fine to medium grained
- Tr** PRECAMBRIAN ROCKS UNDIFFERENTIATED - In Williams Range thrust plate. In section only

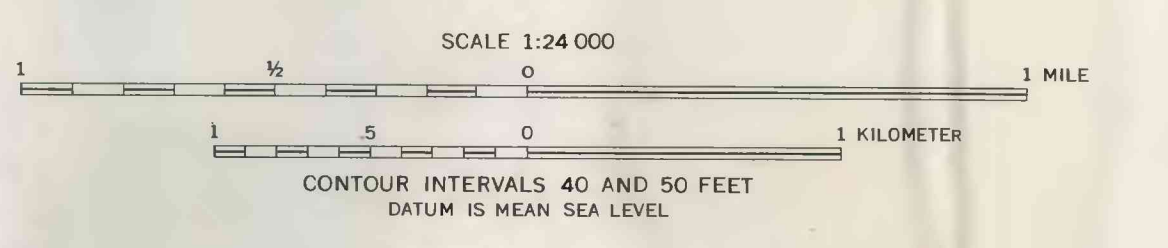
- CONTACT** - Dashed where approximately located
- FAULT** - Showing fault zone. Dashed where approximately located
- THRUST FAULT** - Dashed where approximately located
- FAULT OR SHEAR ZONE** - Boundaries are indefinite
- STRIKE AND DIP OF BEDS**
- STRIKE AND DIP OF FOLIATION AND PLUNGE OF LINIATION**
- INCLINED** - Measured on granitic dikes in metamorphic rocks
- VERTICAL** - Measured on inclusions of metamorphic rocks in granite
- VERTICAL FOLIATION**
- INCLINED FOLIATION AND HORIZONTAL LINIATION**
- VEIN** - Shown as faults at tunnel level in section
- SHAFT**
- ART OR TUNNEL PORTAL**
- TUNNEL STATION**



INDEX TO U.S. GEOLOGICAL SURVEY TOPOGRAPHIC QUADRANGLES USED FOR THIS MAP



INDEX TO SURFACE MAPPING OF THE GEOLOGY ALONG THE LINE OF THE ROBERTS TUNNEL



GEOLOGIC MAP AND SECTION ALONG THE ROBERTS TUNNEL LINE, PARK AND SUMMIT COUNTIES, COLORADO