

EXPLANATION

- Q** QUATERNARY DEPOSITS-Undifferentiated: bouldery alluvial fan deposits near mountains grading to silt in valley bottom; Lake Bonneville deposits, horizontally laminated, yellowish gray silts and clays; older, elevated bouldery alluvial fan deposits
- Tc** CONGLOMERATE (TERTIARY)-Bouldery deposits derived from Conglomerate of Leamington Pass, largely unconsolidated
- Tcv** CONGLOMERATE (POST Oligocene)-Bouldery deposits derived from Conglomerate of Leamington Pass, includes boulders from Oligocene volcanics, largely unconsolidated
- Ti** INTRUSION (OLIGOCENE)-Glass rich basaltic silt intrusions in Permian rocks, phenocrysts of plagioclase and pyroxene; 0-50 m thick
- Tv** TUFF (OLIGOCENE)-Pinkish gray, andesite crystal tuff with phenocrysts of plagioclase, biotite, pyroxene and amphibole in matrix of glass; 0-50 m thick
- COPPERPOLIS LATITE (OLIGOCENE)**
- Tco** MIDDLE AGGLOMERATE MEMBER-Massive boulder agglomerate composed of rounded clasts of tuff and volcanic gravel. In adjacent areas this member is both underlain and overlain by thick flows of dark gray latite (Morris, 1977); 0-10 m thick
- Tcs** SAGE VALLEY LIMESTONE MEMBER-Lenses of light gray, thin bedded, crystalline, silty limestone within the agglomerate member (Morris, 1977); 0-30 m thick
- Tf** FERNOW QUARTZ LATITE (OLIGOCENE)-Light to medium gray, medium grained, welded tuff containing phenocrysts of quartz, andesine, and biotite and flame of black obsidian in a matrix of partly to wholly welded glass shards (Morris, 1977); 0-20 m thick
- TKc** CONGLOMERATE OF LEAMINGTON PASS (UPPER CRETACEOUS AND LOWER TERTIARY)
-Consolidated, pale red gray, poorly sorted conglomerate with red sandy matrix; clasts are rounded to subangular and range from 100% quartzite to 100% limestone in composition and from .02 to 1 m in diameter; 1050 m exposed
- Ppc** PARK CITY FORMATION (PERMIAN)-Yellowish light gray, medium bedded, fine to medium grained dolomite with some lenticular chert; top not exposed; approximately 570 m thick
- Pdc** DIAMOND CREEK SANDSTONE (PERMIAN)-Yellowish gray to grayish orange, fine to medium grained friable sandstone with pale blue chert lenses near top; approximately 260 m thick
- PPc** OQUIRH FORMATION (PERMIAN AND PENNSYLVANIAN)
-Upper part is light olive gray medium bedded, fine to medium grained dolomite; lower part is medium to dark gray, medium bedded, silty limestone; both include some chert and thin beds of fine grained, pale reddish brown sandstone; base not exposed; approximately 1700 m thick
- Mgb** GREAT BLUE FORMATION (UPPER MISSISSIPPIAN)-Medium dark gray, thin to medium bedded limestone interbedded with pale yellowish brown, medium grained, quartzose sandstone; approximately 250 m thick
- Mh** HUMBURG FORMATION (UPPER MISSISSIPPIAN)-Medium gray, medium to coarse grained limestone interbedded with pale yellowish brown, medium grained, quartzose sandstone; approximately 250 m thick
- Md** DESERT LIMESTONE (UPPER MISSISSIPPIAN)-Dark gray, thin to medium bedded, fine grained, fissile and argillaceous limestone; base not exposed; approximately 160 m thick
- Cu** UNDIFFERENTIATED CARBONATES (UPPER AND MIDDLE CAMBRIAN)-Unfossiliferous, pale red to pinkish-gray, irregularly bedded, sandy limestone; interbeds of medium light gray to grayish-orange, unfossiliferous dolomite; crystalline calcite common in vertical fractures; 100-300 m thick
- Cwh** WHEELER SHALE (MIDDLE CAMBRIAN)-Slightly calcareous light olive gray to pale yellow brown shale; interbeds of medium gray limestone up to 2 m thick, and calcareous siltstone up to one meter thick; *Elrathia*, *Paranoploia* and sponge spicules abundant; 10-30 m thick
- Cs** SWASEY LIMESTONE (MIDDLE CAMBRIAN)-Medium dark gray to medium light gray, medium to coarse grained limestone; 5 percent light brown silty laminae parallel to bedding; some calcite filling fractures; 150-200 m thick
- Cw** WHIRLWIND FORMATION (MIDDLE CAMBRIAN)-Calcareous, olive gray to yellow gray, slightly silty shale; interbeds of medium gray limestone with *Gambusia* hash in upper 30 m; trace fossils common in lower 20 m; 30-50 m thick
- Cd** DOME LIMESTONE (MIDDLE CAMBRIAN)-Massive, medium dark gray to light gray irregularly bedded limestone with some light brown silty laminae parallel to bedding; some shaley interbeds in upper portion; 50-60 m thick
- Cc** CHISHOLM FORMATION (MIDDLE CAMBRIAN)-Olive gray to light olive gray, micaceous shale; 35 percent medium gray to light gray, irregularly bedded limestone interbeds up to 3 meters thick with abundant limonite stained oncolites; *Glossoscolex* hash and trace fossils abundant; 60-80 m thick
- Ch** HOWELL LIMESTONE (MIDDLE CAMBRIAN)-Massive, medium dark gray to medium light gray, irregularly bedded limestone with some siltstone partings; oncolites abundant near base and irregularly shaped silty markings common near top; 80-100 m thick
- Cp** PIOCHE FORMATION (MIDDLE AND LOWER CAMBRIAN)
-Calcareous, olive gray to light gray, very micaceous shale; massive, medium to coarse grained, grayish orange to grayish brown quartzite interbeds with *Skolithus* burrows; some phyllitic siltstone interbeds with abundant trace fossils; 180-230 m thick
- Ci** TINTIC QUARTZITE (LOWER CAMBRIAN)-Grayish orange pink to dark yellow orange, evenly bedded, medium to coarse grained quartzite; some crossbedding; several pebble conglomerate interbeds near base; approximately 835 m thick
- PCm** MUTUAL FORMATION (PRECAMBRIAN)-Pale reddish purple to grayish red purple, medium to very coarse grained, massive quartzite with some crossbedding; numerous interbeds of medium red granule and pebble conglomerates with rounded to subangular, fractured quartzite clasts; approximately 500 m thick
- PCi** INKOM FORMATION (PRECAMBRIAN)-Micaceous, light olive gray to dusky purple phyllitic shale; arenaceous in upper part with interbedded thin, fine grained quartzite beds; 93 m thick
- PCc** CADDY CANYON QUARTZITE (PRECAMBRIAN)-Partially exposed as a moderate brown to light brown, medium to coarse grained quartzite with 1-1/2 m thick, even bedding; minor amounts of purple shale and mudstone, 2000+ m thick

SYMBOLS

- Strike and dip of beds Strike and dip of overturned beds
Strike of vertical beds Strike of horizontal beds
Silicic breccia related to Leamington Canyon Fault
Thrust fault, dashed where approximately located, dotted where concealed, sawtooth on upper plate
Normal fault, dashed where approximately located, ball on downthrown block
Strike-slip fault, dashed where approximately located
Depositional contact, dashed where approximately located



Geology of the Champlin Peak Quadrangle Juab and Millard Counties, Utah

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