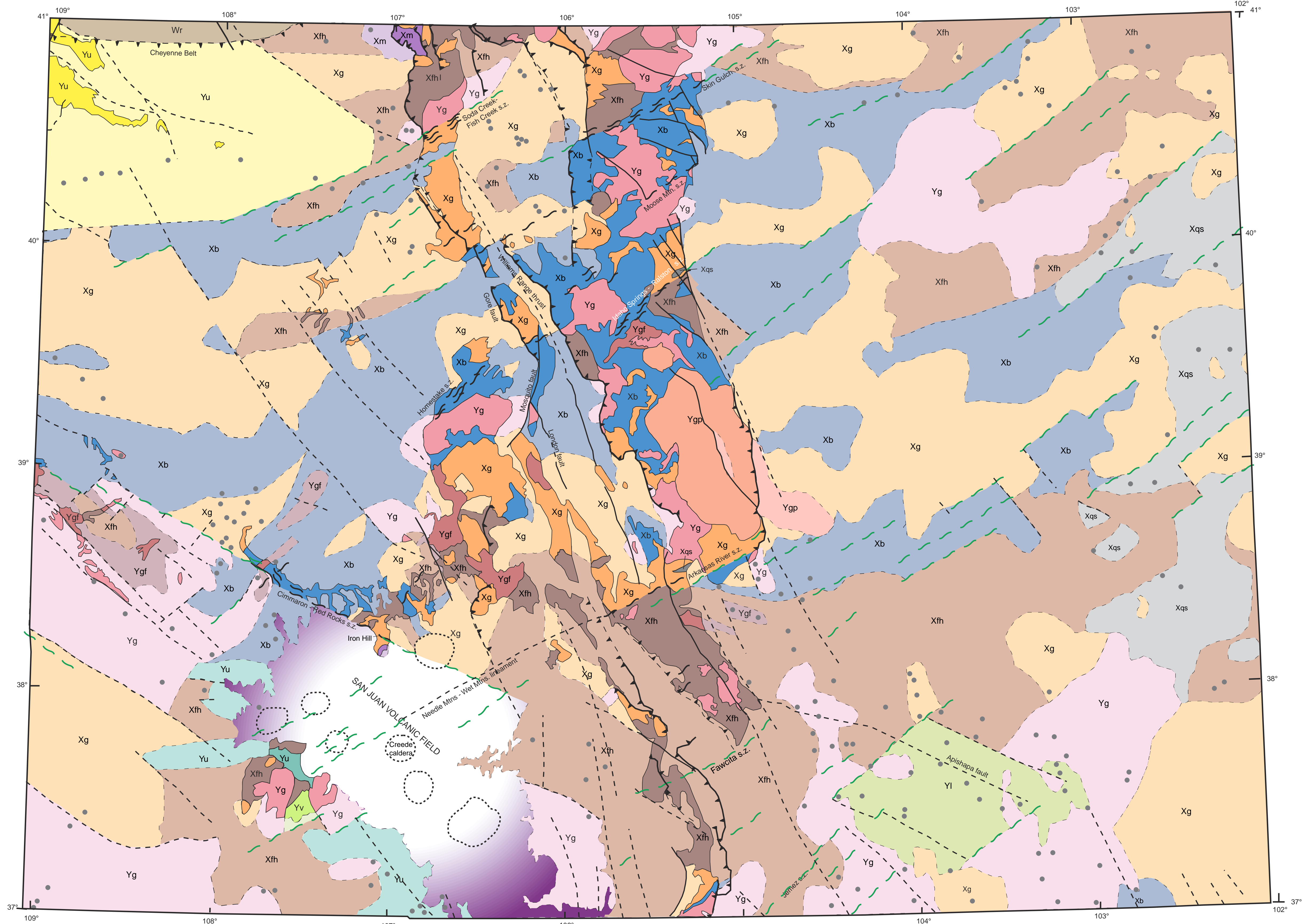


Precambrian Basement Map of Colorado

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PLATE 1



EXPLANATION

Description of Map Units

- | Surface | Subsurface | |
|---|------------|---|
| MESOPROTEROZOIC (1,600 -- 900 Ma) | | |
| | | Rocks of Pikes Peak batholith (~1,010 Ma) |
| | | Pink, coarse-grained biotite granite intruded by plutons of cogenetic, fine-grained granite, fayalite granite, riebeckite granite, alkali granite, syenites, and gabbro |
| | | Las Animas Formation -- Dark slate, phyllite, graywacke, and chert, and, in upper part, subordinate volcanic and carbonate rocks |
| | | Uinta Mountain Group -- Quartzite, conglomerate, and shale |
| | | Uncompahgre Formation -- Gray and green quartzite, slate, and phyllite |
| | | Vallécito Conglomerate -- Gray, crossbedded conglomerate and quartzite |
| | | Granitic rocks of ~1.4 Ga age group -- Gray to pink, muscovite -- biotite or biotite granite and minor syenitic rocks |
| | | Foliated granodiorite of ~1.4 Ga age group -- Gray, foliated granodiorite to monzogranite |
| PALEOPROTEROZOIC (2,500 -- 1,600 Ma) | | |
| | | Granitic rocks of ~1.7 Ga age group -- Gray, equigranular to porphyritic, foliated to massive, granodiorite and associated intermediate rocks |
| | | Mafic rocks of ~1.7 Ga age group -- Gabbro and diorite |
| PALEOPROTEROZOIC GNEISS COMPLEX | | |
| | | Biotite gneiss and migmatite -- largely metasedimentary |
| | | Quartzite and mica schist facies of Xb unit |
| | | Felsic and hornblende gneisses -- largely metavolcanic |
| ARCHEAN (2,500 Ma and older) | | |
| | | Late Archean rocks -- Metaquartzite, mica schist, amphibolite and tectonic slivers of felsic gneiss in northwest corner of state. Includes Paleoproterozoic continent-margin metasedimentary rocks. |
| | | Contact, or limit of basement at surface |
| | | Boundary between geologic units inferred from subsurface data, including aeromagnetic data |
| | | High-angle fault -- Solid where basement is at surface; dashed in subsurface |
| | | Thrust fault - Sawteeth on upper plate; solid where basement is at surface; dashed in subsurface |
| | | Precambrian ductile shear zone -- black in exposed areas; green in covered areas |
| | | Borehole to basement (after Tweto, 1987) |
| | | Caldera boundary |
| | | Shear zone |
| | | Volcanic field -- shown only to south of Cimarron -- Red Rocks shear zone |
| | | Surface exposures from Tweto, 1979. |

