ALTERATION ASSEMBLAGES

QA	Quartz-alunite assemblage--Fine-grained quartz and alunite replacement of volcanic rocks
SIL	Silicified assemblage--Fine-grained quartz and chalcedony replacement of volcanic rocks
ARG	Argillic assemblage--Kaolinite alteration, feldspars completely altered
QSP	Quartz-sericite-pyrite assemblage--Includes silica stockwork veinlets; sericite 2M1 and 1M polytypes
QSP-K	Quartz-sericite-pyrite assemblage overprinted by kaolinite--Some kaolinite probably supergene
QSP-PX	Quartz-poorly crystalline sericite-pyrite assemblage--All sericite poorly crystalline
W-AS	Weak argillic/sericitic assemblage--Contains kaolinite and (or) sericite; feldspars metastable
PROP	Propylitic assemblage--Weak alteration; chlorite, epidote, and calcite mainly after mafic minerals; feldspars mostly unaltered
F	Unaltered rocks
Q	Mixed Quaternary units--alteration not mapped

SO4 ppm
Symbol is at sample location

- 11000 to 14000
- 2155 to 11000
- 1030 to 2155
- 325 to 1030
- 120 to 325
- 0 to 120

AL3 ppm

- 360 to 400
- 85 to 360
- 62 to 85
- 17 to 62
- 4 to 17
- 0 to 4

FE TOTAL ppm

- 1380 to 2000
- 265 to 1380
- 150 to 265
- 40 to 150
- 5 to 40
- 0 to 5

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards or with the North American stratigraphic code.

ALTERATION MAP OF THE IRON, ALUM, AND BITTER CREEK AREAS, UPPER ALAMOSA RIVER, SOUTHWESTERN COLORADO

WITH SELECTED GEOCHEMICAL DATA

By Dana J. Bove, Thomas H. Barry, Anna B. Wilson, Jeffrey Kurtz, Ken Hon, and R. E. Van Loenen

0 0.25 0.5
Kilometers

SCALE 1:12,000

PLATE 6