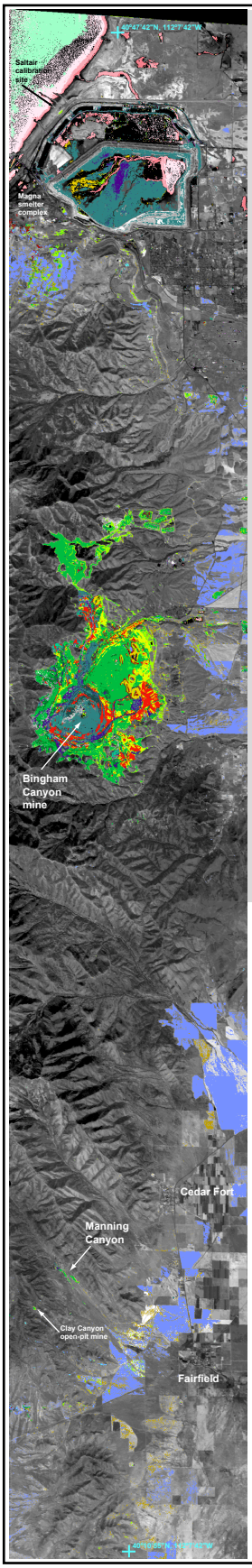

USGS - EPA Utah AML Project

SIR 2004-5241

Fe-bearing Minerals and Water

Oquirrh Mountains Region

AVIRIS high-altitude data
August 5, 1998
Run 6, NEW3 calibration
Tetracorder 3.6a9 Product

Iron Sulfide and Sulfate Minerals

- pyrite
- possible copiapite
- fine-grained jarosite
- coarse-grained jarosite
- goethite + jarosite

Iron Hydroxide Minerals

- goethite: coarse-grained
- goethite: medium-grained
- goethite: fine-grained
- goethite: thin coating

Iron Oxide Minerals

- hematite: medium- to coarse-grained
- hematite: fine-grained

Other Iron Minerals

- minerals with generic Fe^{2+} absorptions (including actinolite, chlorite, biotite, and illite/muscovite)
- generic Fe^{2+} with goethite and muscovite
- generic Fe^{2+} +/- hematite
- minerals with generic Fe^{3+} absorptions
- other Fe^{2+} minerals (mainly illite/muscovite), +/- jarosite, +/- goethite

Mineral Assemblages with Low to Moderate Acid-Neutralizing Potential

- chlorite + illite/muscovite
- chlorite + goethite

Water Classes

- increasing sediment load
- water + sediment
- water + red algae
- water with high chlorophyll content

N

2 km

Map information:

Data Type: high-altitude AVIRIS
Acquisition Date: August 5, 1998
Platform: NASA ER-2
Altitude: 65,000 feet ASL
Georeferencing:
roll, pitch, and yaw effects removed

Note: geographic coordinates are approximate

USGS
science for a changing world