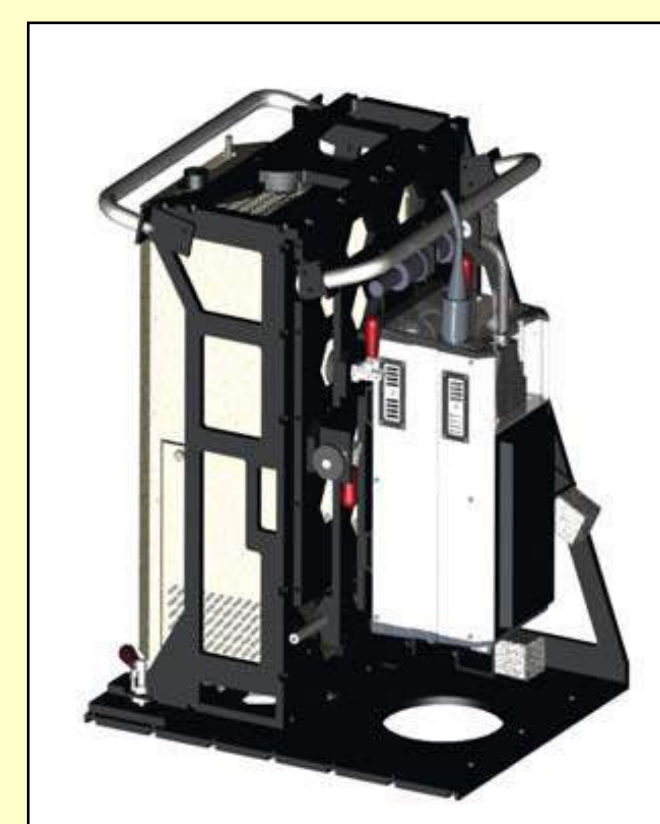


## Purpose

- To provide high spectral and spatial resolution
- hyperspectral image examples of British Columbia mineral exploration and mining sites to facilitate the evaluation of this technology by the general exploration community.
- To collect hyperspectral imagery over a variety of mineral deposit types and exploration terrains.
- To provide web-based access to the imagery for
- downloading and on-line preliminary analysis.
- To provide additional web-based analysis tools for use with
- hyperspectral imagery and include common spectral libraries to the analysis process.

## Hyperspectral Imagery by SpecTIR, LLC

Instrument: AISA DUAL (Eagle and Hawk sensors)  
Collection by Terra Remote Sensing Inc. for SpecTIR



- 178 bands .4 – .97 & .97- 2.45 nm
- 296 pixels wide
- 1.5 metre GSD/pixel, 1155 AGL
- Pushbroom array sensor
- Flown with LiDAR
- August 1, 2007

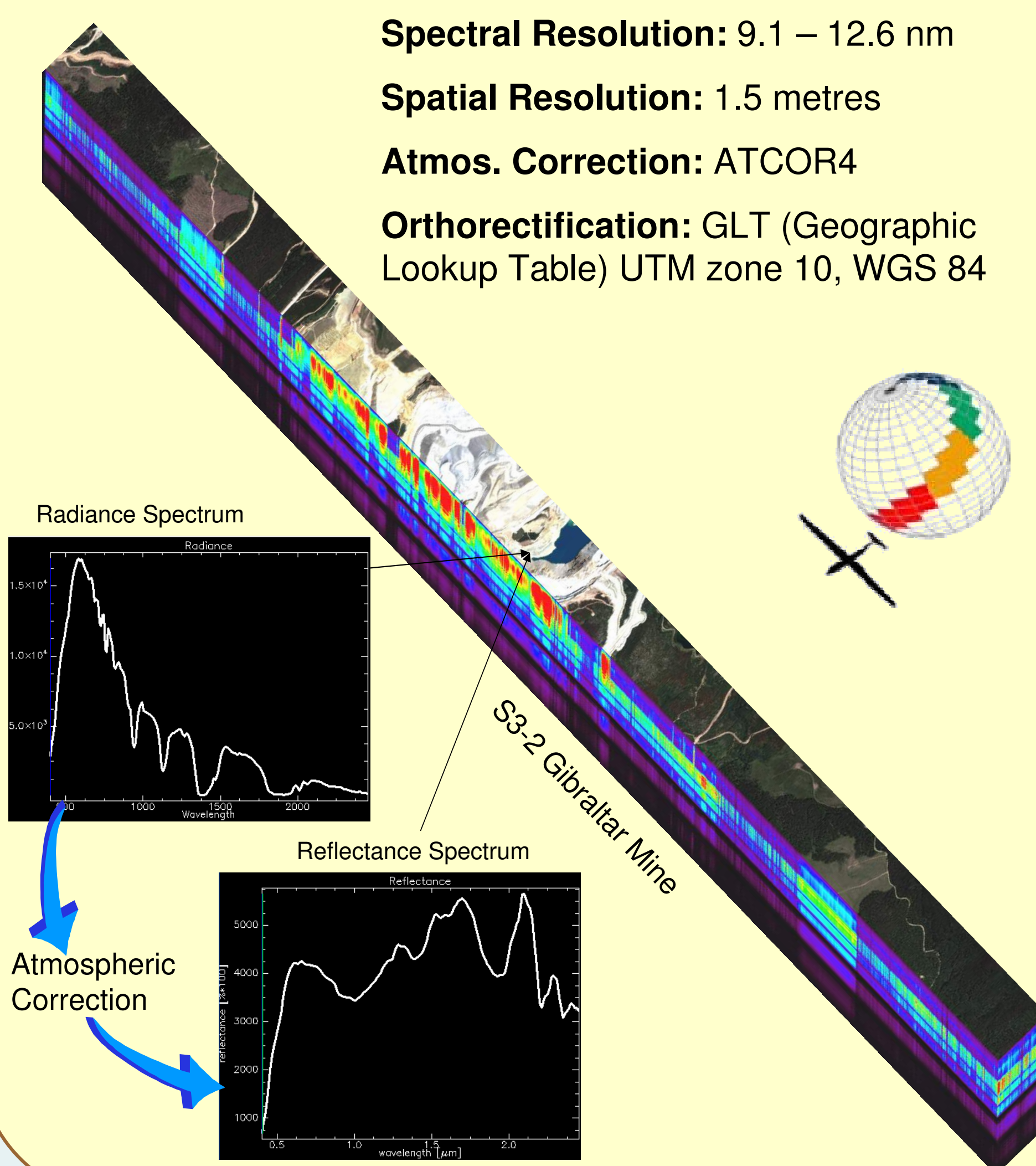
## Image Cube

Spectral Resolution: 9.1 – 12.6 nm

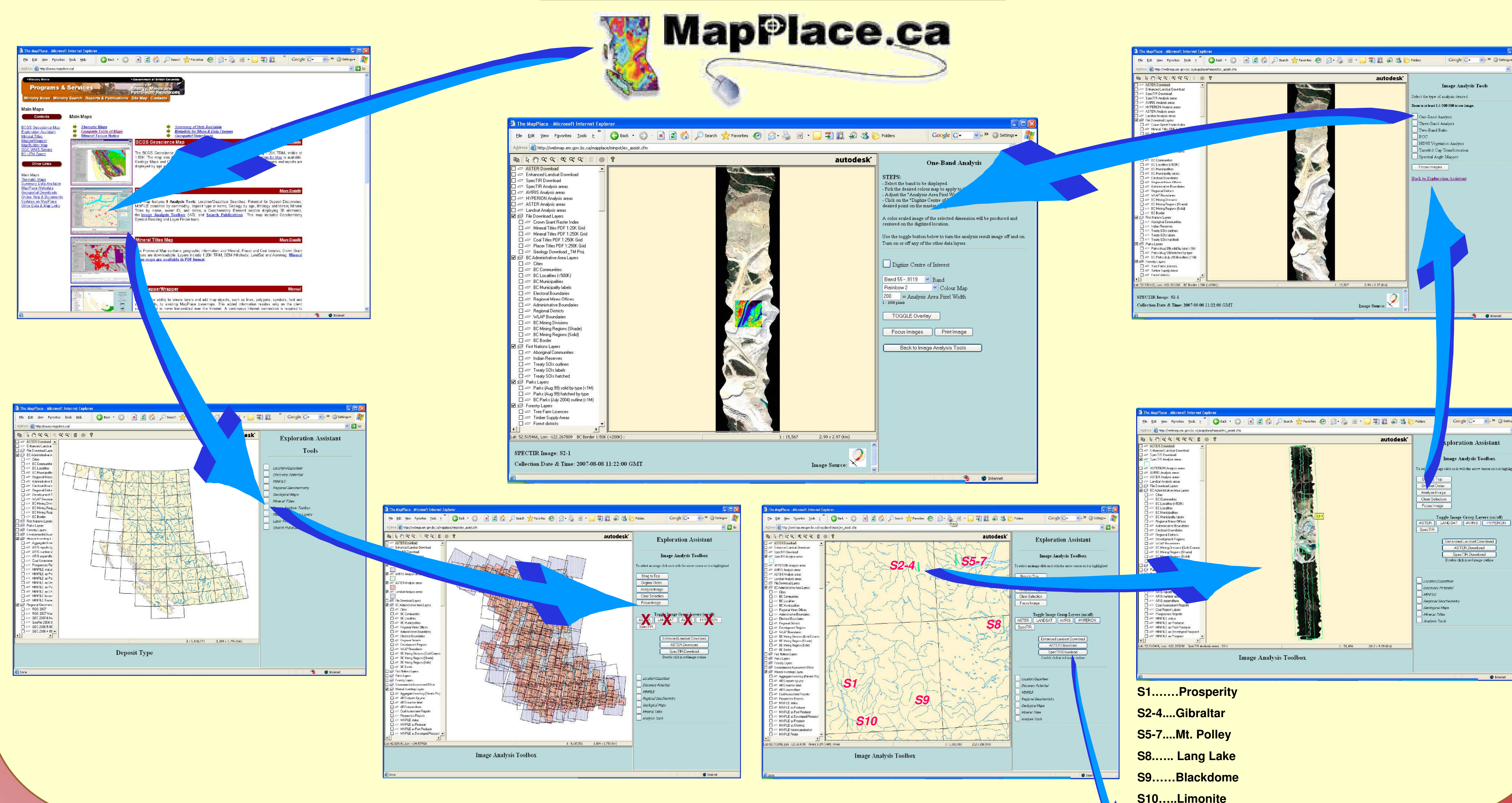
Spatial Resolution: 1.5 metres

Atmos. Correction: ATCOR4

Orthorectification: GLT (Geographic Lookup Table) UTM zone 10, WGS 84



## Site Navigation

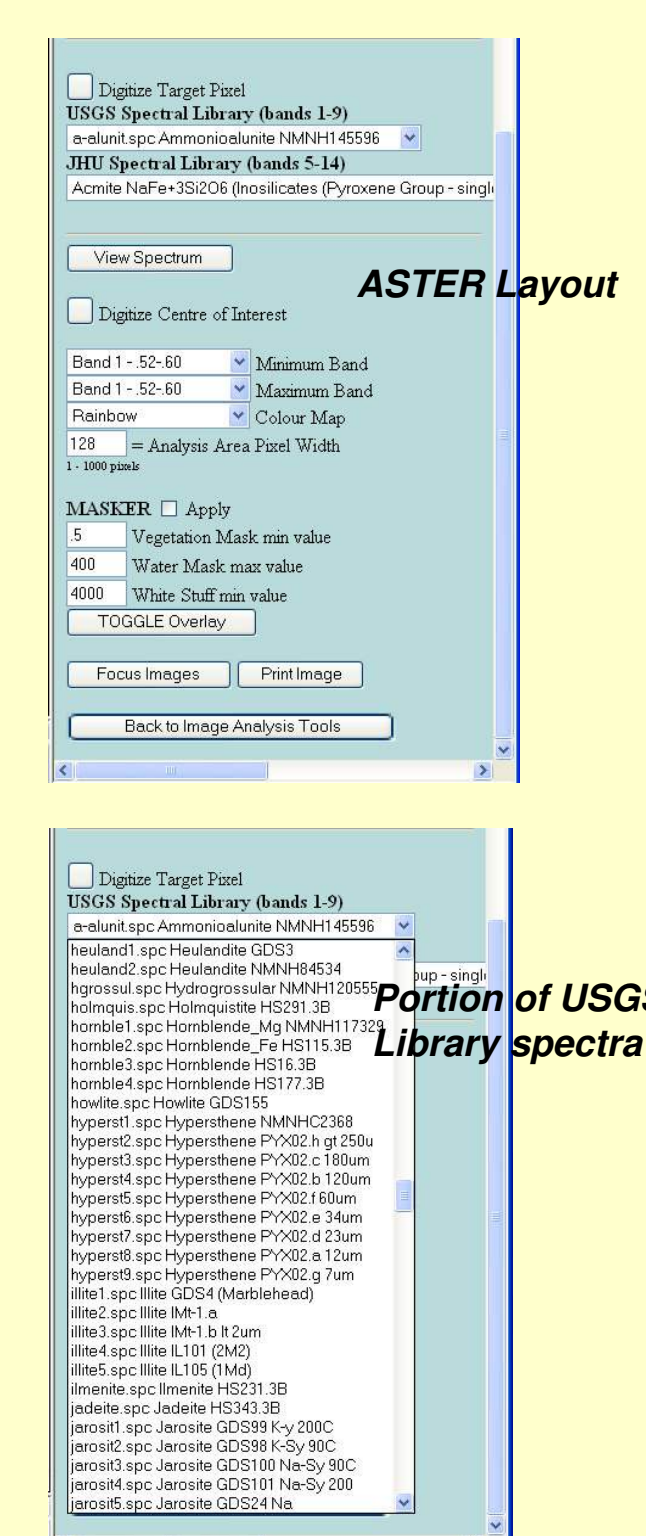


- S1.....Prosperity
- S2-4....Gibraltar
- S5-7....Mt. Polley
- S8..... Lang Lake
- S9.....Blackdome
- S10.....Limonite

## New IAT Features & Tools

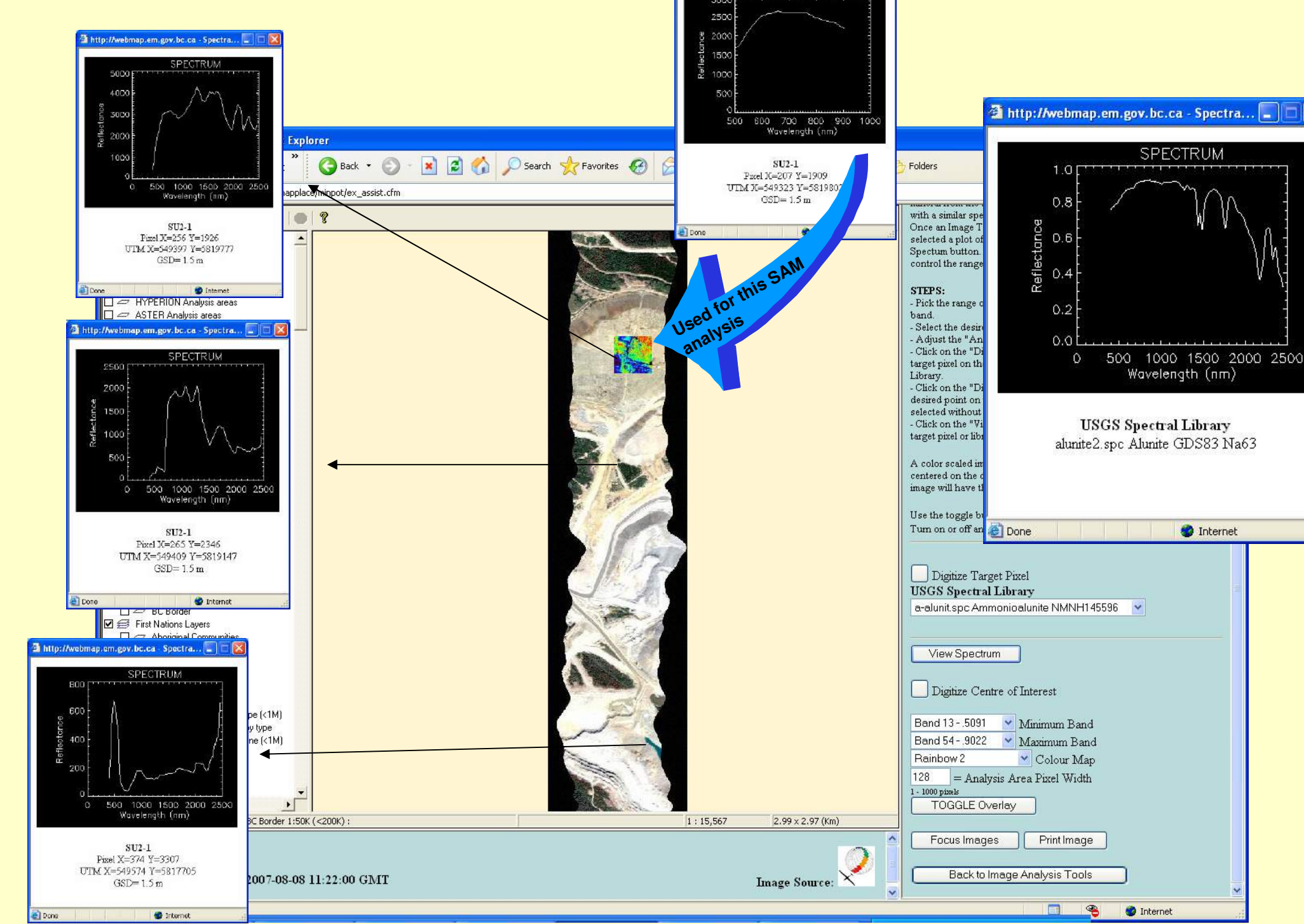
### Mineral Spectral Libraries Integrated

USGS Mineral Library (.3951-2.56µm)  
JHU Mineral Library ASTER only (2.08-25.04 µm)

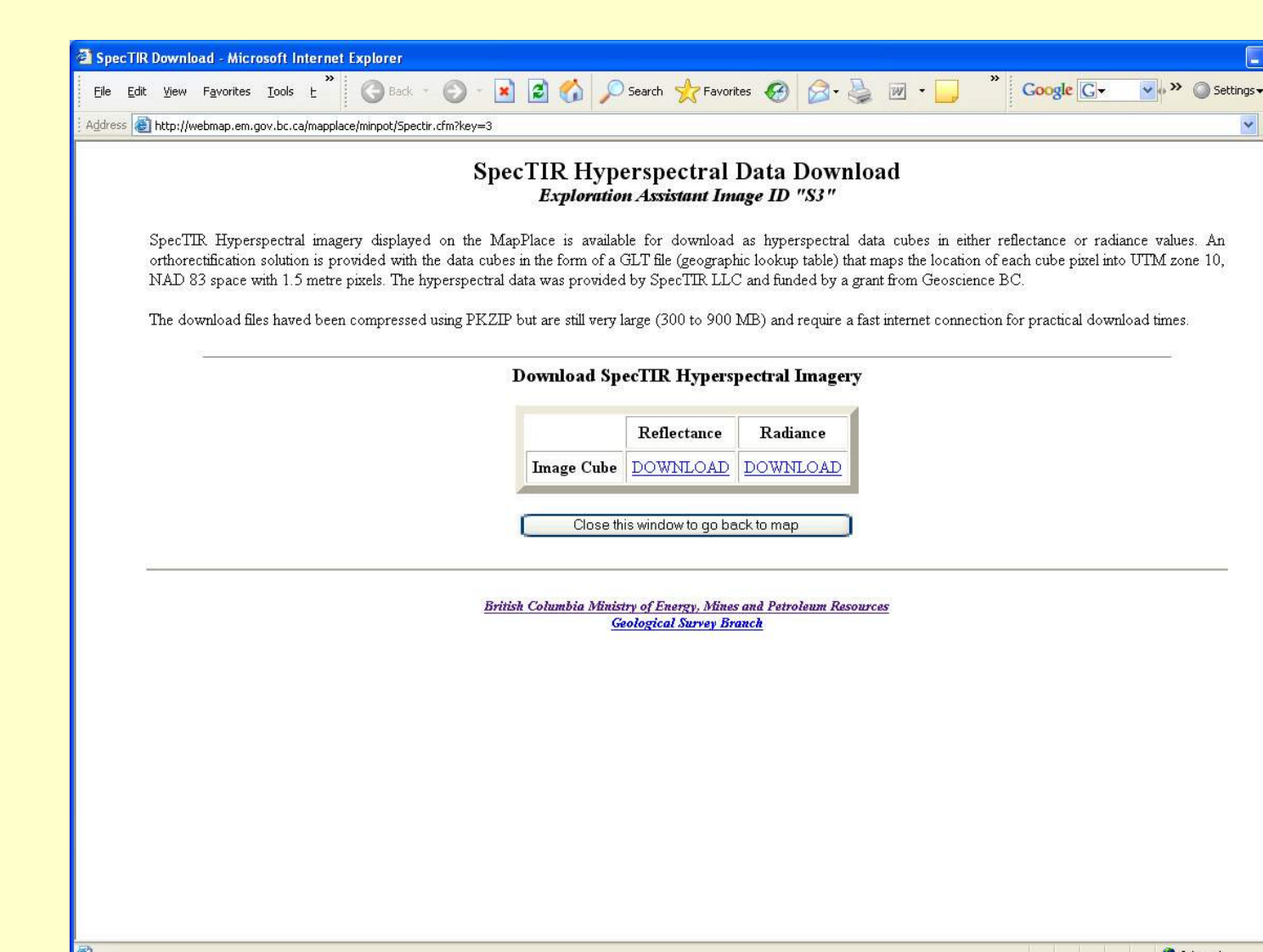


### Spectrum Plot Tool & SAM Analysis

- Select spectrum from image or Spectral Library
- Use selected spectrum for SAM analysis or plot spectrum plot
- Select band range for plot or analysis with min/max band option



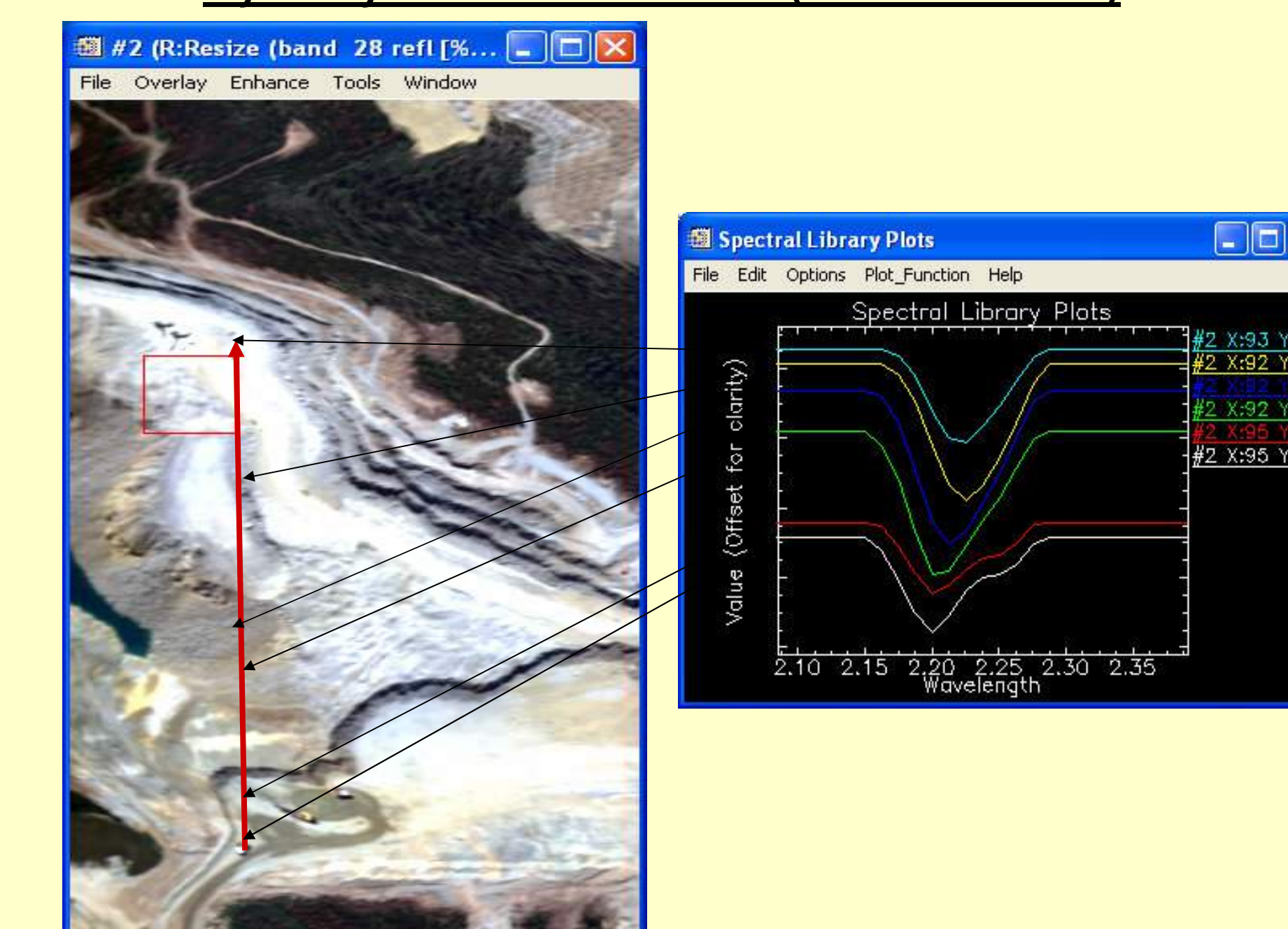
## Download



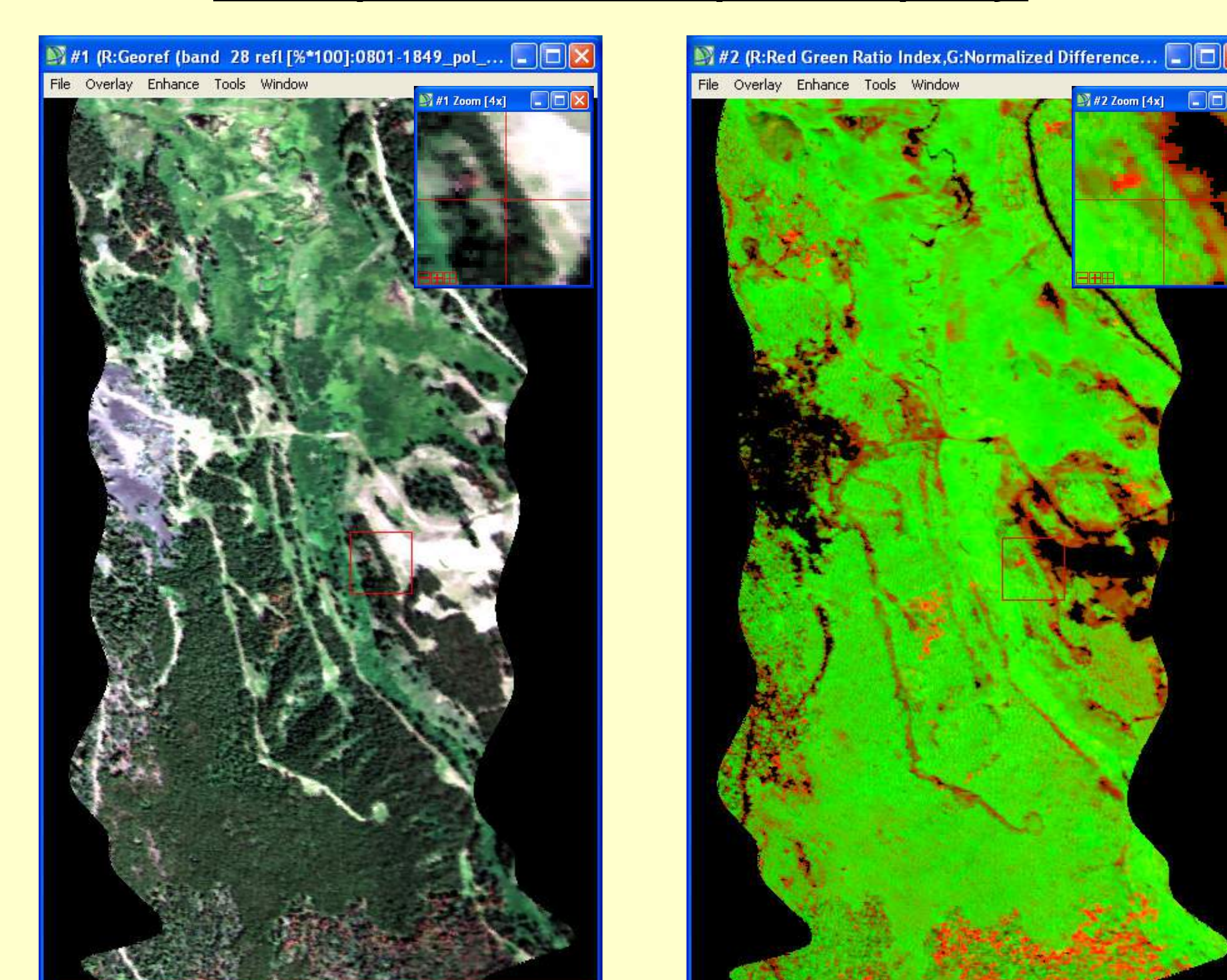
- ENVI Format
- Radiance or Reflectance values
- Orthorectification solution (GLT)
- 1.5 metre UTM zone 10

## Examples

### Hydroxyl Feature Variation (Gibraltar Mine)

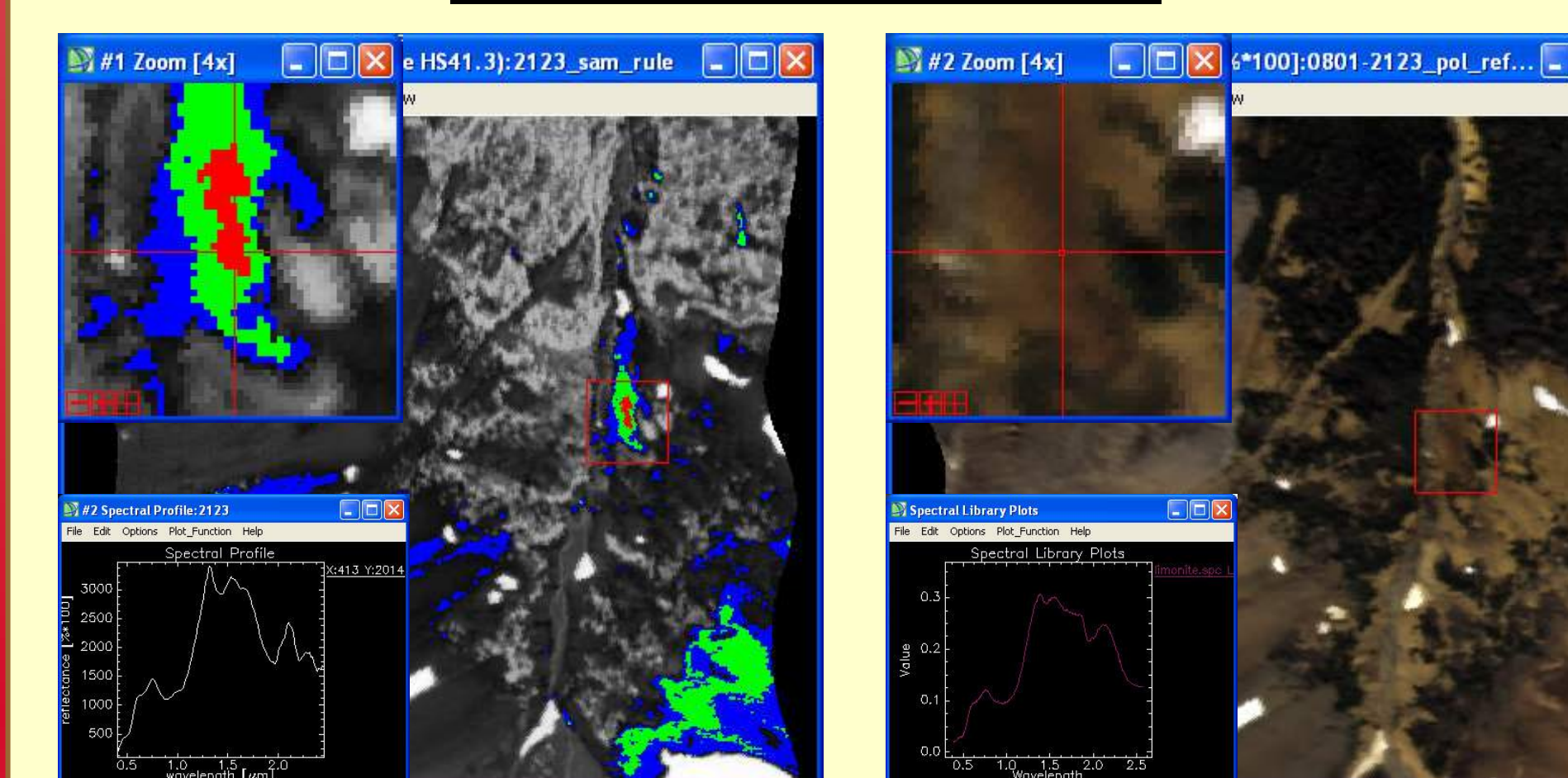


### Outcrop Detection Example (Prosperity)



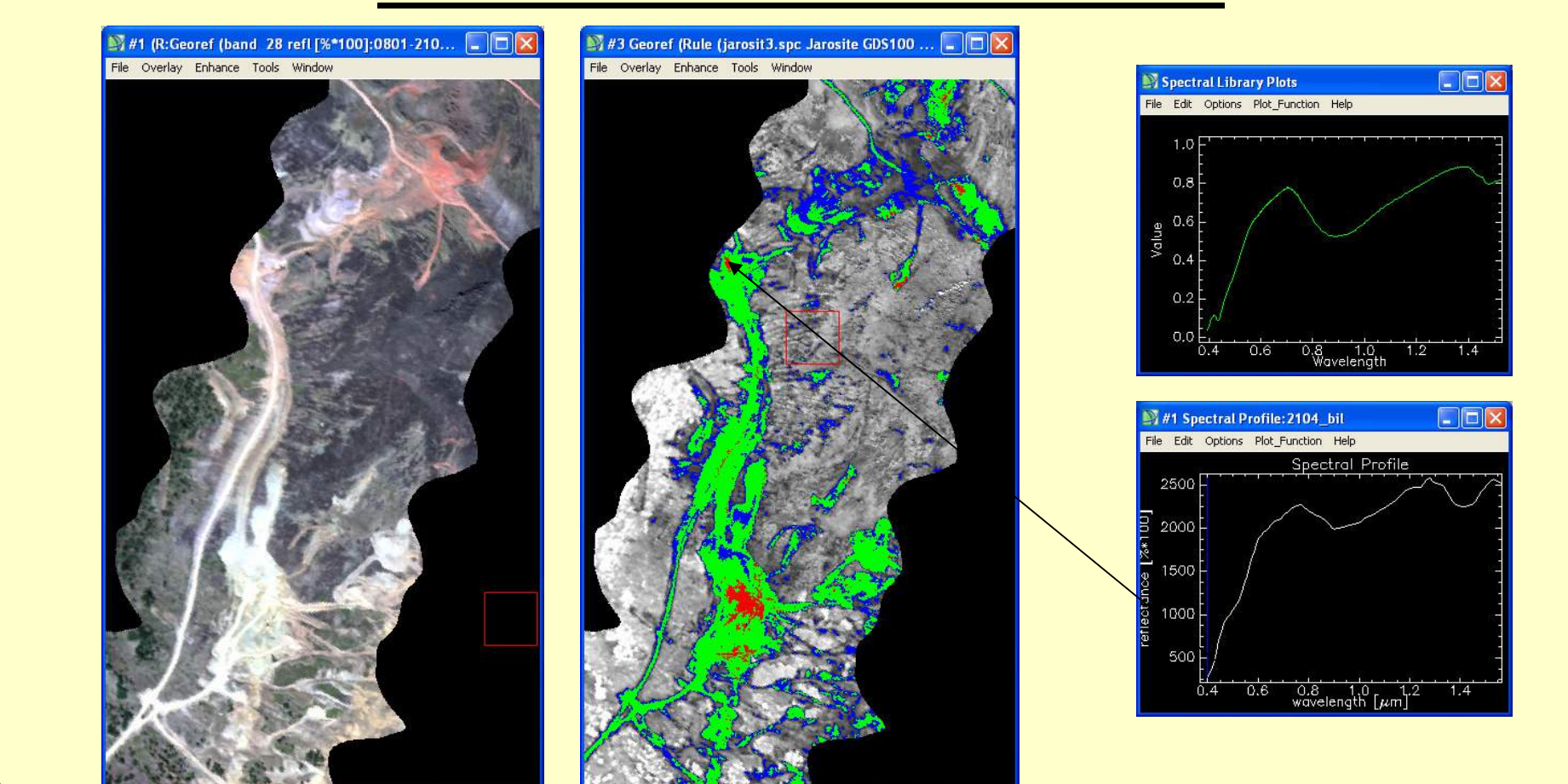
Black= bare ground and water, Red&Orange= beetle kill, Greens= green vegetation, Browns= sparse vegetation

### Limonite Search at Limonite



Results of Spectral Angle Mapper search for limonite using USGS Spectral Library spectrum (.4 – 1.5 µm).

### Jarosite Search near Blackdome



Results of Spectral Angle Mapper search for jarosite using USGS Spectral Library spectrum (.4 – 1.5 µm).