

GEOSCIENCE BC PROJECT SUMMARY

ASTER Multispectral Satellite Imagery and Product Coverage for British Columbia

Proponent: Ward Kilby, M.Sc., P.Geo., Cal Data Ltd

Location: Various areas of the Province

Awarded: \$84,380 over one year

Project Summary

ASTER (Advanced Spaceborne Thermal Emission and Reflection Radiometer) imagery was included in the Image Analysis Toolkit (IAT) on the MapPlace in 2004. Thirty-eight images located along the Alaskan and southern BC border were provided as examples of this type of imagery. This project will acquire 100 additional ASTER images over areas with exploration potential elsewhere in the province.

The new images will be orthorectified and added to the IAT for online image analysis by MapPlace users. The most recent good quality imagery with the maximum possible rock exposure will be selected. A number of derivative products will be provided from all 138 ASTER images.

ASTER products will include;

- a downloadable copy of the original ASTER image data,
- downloadable digital elevation models generated during orthorectification of the ASTER images,
- three alteration image maps provided as layers on the MapPlace,
- virtual worlds (VRML) of each image to allow user controlled fly-throughs and perspective views generation,
- 3D MapPlace maps to allow online three dimensional viewing with anaglyph glasses (cyan & red lenses),
- user selected stereo image pair generation with an IAT tool, and
- a “Rocks Only” image mask to enhance image analysis in the IAT.

Online help videos will be constructed to guide the user through several analysis examples and a manual will describe ASTER imagery and how it can be used in the IAT or third party software to search for mineral resources.

Final Deliverables: In addition to the general deliverables expected for all projects, this project will deliver the following by December 31, 2005:

- a. MapPlace interface to allow download of image products; IAT tool to generate stereo pairs; Video to provide some help for virtual world viewing.

- b. ASTER scene products.
- c. Raw ASTER data available for download by MapPlace clients.
- d. Tutorial manual in PDF format and selected online tutorials to assist with the Image Analysis toolkit.
- e. Static images of alteration indices for clays, iron oxide and silica.