OREGON DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
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Thermal Infrared Information Data for Oregon released

Portland, Oregon: The Oregon Department of Geology and Mineral Industries (DOGAMI) has released **Digital Data Series TIRILO-1, Thermal Infrared Information Layer for Oregon, release 1**, compiled by Clark A. Niewendorp.

Remotely sensed thermal infrared (TIR) imagery has been used in geothermal exploration for decades both as airborne and satellite based imagery to look for warm ground and thermal features. The goal with this project was to test whether TIR data with very high spatial resolution and accuracy could be used to identify warm springs or ground that was only slightly warmer than background levels. The other unique aspect of this study was combining high resolution lidar topographic imagery with TIR imagery.

Location map of the five TIR flight areas (red) in parts of Lake, Harney, and Malheur counties: 1. Summer Lake, 2. Paulina Marsh, 3. Christmas Valley, 4. Oregon Military Department, and 5. Baker Pass. Combined, the five flight areas represented 257 square miles.

This digital data release includes thermal infrared (TIR) intensity images, image-frames rectified, native image frames, and thermal infrared mosaics. Lidar data were co-acquired and include bare-earth and highest-hit data with metadata; shp files of 7.5-minute U.S. Geological Survey (USGS) quadrangles of Oregon, 1/100th USGS quadrangles of Oregon. Lidar ASCII point data are available in LAS format. The lidar imagery was collected to help accurately georeference the TIR data and to provide a detailed and accurate paired basemap for analysis of the thermal imagery. All data are format specific to Esri format. Data must be viewed using specialty software capable of viewing .shp, geotif, and Esri grid formats.

***DOGAMI's mission** is to provide earth science information and regulation to make Oregon safe and prosperous.*

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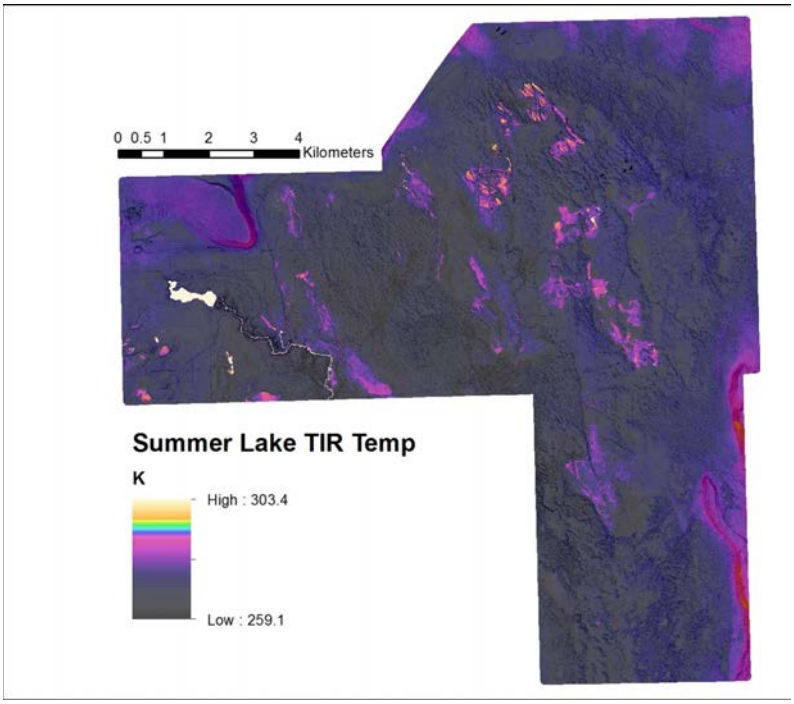
"This experiment in the collection of high resolution, high accuracy TIR and lidar imagery for geothermal exploration has been generally successful," says Ian Madin, DOGAMI Chief Scientist. The combined imagery was able to locate several low-thermal-amplitude, long-spatial-wavelength anomalies, several of which were almost certainly associated with true ground temperature differences (though not necessarily geothermal).



Example mapview of a TIR mosaic image of radiant temperature for the Summer Lake flight area, Lake County, Oregon.

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To learn more about the TIRILO-1, visit: http://www.oregongeology.org/pubs/dds/p-TIRILO-1.htm.
DOGAMI TIRILO-1 can be obtained by sending DOGAMI a blank, portable external 500 GB hard drive to the **Nature of the Northwest Information Center (NNW)**, 800 NE Oregon Street, Suite 965, Portland, Oregon, 97232. You may also call NNW at (971) 673-2331 or order online at **http://www.naturenw.org**. There is a $150 fee for this item.

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