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**Company background.** The Bercha Group of companies forms an integrated service entity providing data acquisition, project management, engineering, and environmental analysis services to clients in the private and public sectors on a worldwide basis.

**Services.** The Bercha Group of companies specializes in the acquisition, processing and automatic analysis of remote sensing information on earth, atmospheric, and ocean resources in a variety of climate and habitat conditions, ranging from those characterizing the equatorial tropical regions to those associated with the Arctic and Antarctic. Through an associated aviation company, the group has access to, and is experienced with, a diverse range of airborne sensors covering the entire remote sensing spectrum from active and passive microwave to the visual and ultraviolet. The group has on staff specialists in the acquisition and interpretation aspects of remote sensing systems, including airborne radar (SLAR, SAR), infrared scanners, aerial cameras, magnetometers, laser profilometers, FLIR, multispectral cameras and scanners, scatterometers, passive microwave radiometers and satellite data; airborne analogue and digital recording and decoding; real-time downlink, ground station reception; and the associated processing services to generate meaningful information from the data records.

**Applications.** Included in applications are ice and iceberg surveillance and mapping, forestry and vegetation mapping, structural geology, geomorphology, drainage analysis, monitoring of coastal and alluvial swamps and associated flood phenomena, forestry and logging impacts, agricultural mapping and terrain analysis. Real-time capabilities enable preliminary maps to be transmitted to ground stations within seconds of acquisition utilizing a UHF downlink system. The group has operated successfully for many years and has carried out surveys in Australia, Fiji, Indonesia,

Brunei, Papua New Guinea, Taiwan, Nigeria, Equatorial Guinea, Guatemala, the United States, Canada, and the Arctic regions.

In the environmental analysis area, the companies have utilized a variety of data sources to supplement their own data gathering capabilities, including LANDSAT and NOAA satellites, as a basis for solution of resource management problems, engineering site optimization, agricultural planning, resource mapping, and economic analysis. The companies have worked worldwide with particular emphasis on the northern and

equatorial regions, where they have been particularly successful because of their innovative high-technology approaches to solutions in frontier resource mapping and industrial development projects.

The Bercha Group is able to provide a comprehensive range of services from data acquisition to data analysis and information interpretation, and a variety of multidisciplinary consulting services ranging from professional engineering to mathematical simulation.



Colour-enhanced digital radar (SLAR) image of rock structures from an aircraft at approximately 3 650 m (12 000 ft.) over Sarawak, Malaysia.