

Mapping with Remote Sensing & GIS

Jim Ellis, Ph.D.
Ellis GeoSpatial
Walnut Creek, California

Environmental and geologic mapping is being significantly improved with remote sensing & GIS technologies. New airborne and satellite sensors can map different minerals, differentiate vegetation communities, measure vegetation vigor, and detect oil seeps and spills. The scale of mapping can range from regional to highly detailed (6" ground resolution). Using GIS to integrate imagery and derived maps with digital elevation models, published maps, and field observations can enhance understanding of geology and environment. Data access is remarkable for earth scientists working in the USA - you can now download all types of images and GIS maps directly into your PC via the Internet. The application of these technologies for environmental and geologic mapping will be demonstrated through several case histories. Editor note: We understand that 3D glasses may be provided to help visualize some of the images.

BIOGRAPHY

Jim Ellis began his remote sensing career with Gulf Oil in 1982. He joined Chevron in 1985 to implement remote sensing and associated technologies for international environmental and exploration applications. He helped found The MapFactory in 1997 to expand into other applications. In 2002 he established Ellis GeoSpatial (www.ellis-geospatial.com) to provide focused remote sensing & GIS solutions to industry and government. Jim has over 25 industry publications and has taught several workshops at conferences. He teaches part-time at Diablo Valley College (Physical Geology and Remote Sensing). He received his Bachelors from the University of Rochester and his Masters and Ph.D. from the State University of New York at Buffalo. He is a State of California Registered Geologist, Certificate No. 7391.