

**Department of the Interior  
U.S. Geological Survey  
National Mapping Division**

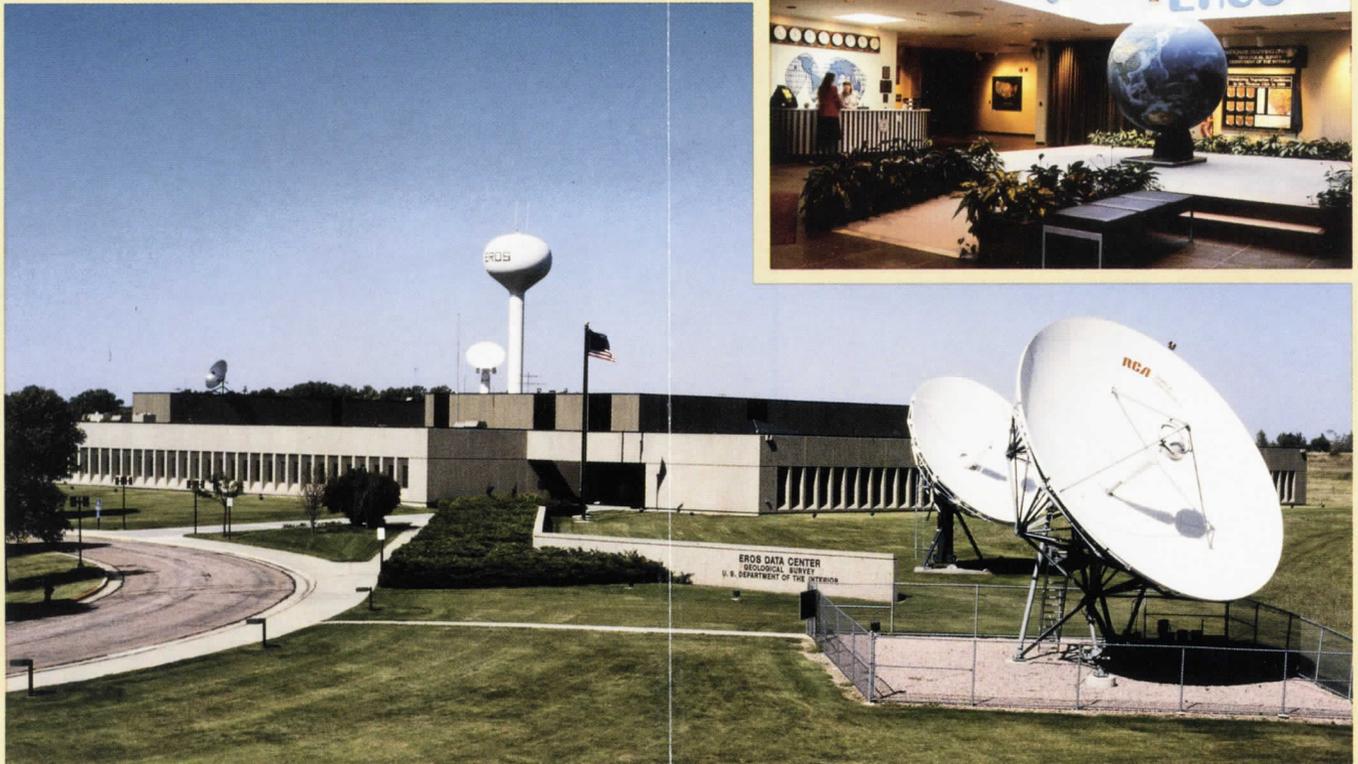


# **EROS DATA CENTER**

## The EROS Data Center

The Earth Resources Observation Systems (EROS) Data Center, located in Sioux Falls, SD, is a data management, systems development, and research field center of the U.S. Geological Survey's National Mapping Division. The Center was established in the early 1970's to receive, process, and distribute data from National Aeronautics and Space Administration (NASA) Landsat satellites. The Center holds the world's largest collection of space and aircraft acquired imagery of the Earth. These holdings include over 2 million images acquired from satellites and over 8 million aerial photographs. The Center is also a major focal point for information concerning the holdings of foreign Landsat ground reception stations and data acquired by other countries' Earth observing satellites.

The central U.S. location provides the Center with a unique capability to receive real-time electronic signals from Earth orbiting satellites, used for developing data sets of most of the North American continent.



The modern \$50 million space-age Center employs some 300 engineers, scientists and technicians involved in data management, systems development and research to support earth science studies.

*Landsat satellites were first launched in 1972 and have acquired over 2 million world-wide images of the earth. Landsat satellites continue to operate and return valuable scientific data from space.*



*Visitors are welcome to the lobby area of the Center from 8:00 AM to 4:00 PM week days. Tours are available for educational organizations by prior arrangement.*

The EROS Data Center carries out a broad range of activities in the management of global observations data, including the development and operation of advanced systems for receiving, processing, distributing, and applying land related Earth-science, mapping, and other geographic data and information. These data support scientific studies, resource management, and environmental monitoring activities world-wide. The Center is a major supplier of analytical and other support services to Federal agencies involved in the application of these data to research programs.

To support the Data Center's mission, the facility houses one of the largest computer complexes in the Department of the Interior. In addition to computers to support scientific processing and analysis of data, over 100 locations in Federal, State, and commercial offices are linked to the Center for data inquiries. More than 60,000 inquiries and orders are received annually, resulting in the distribution of over 250,000 products to scientists and resource managers around the world.



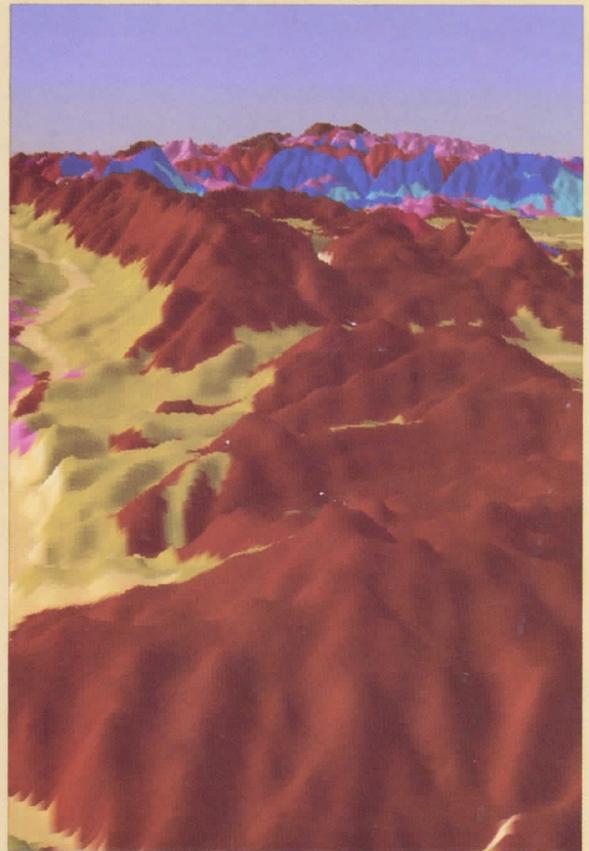
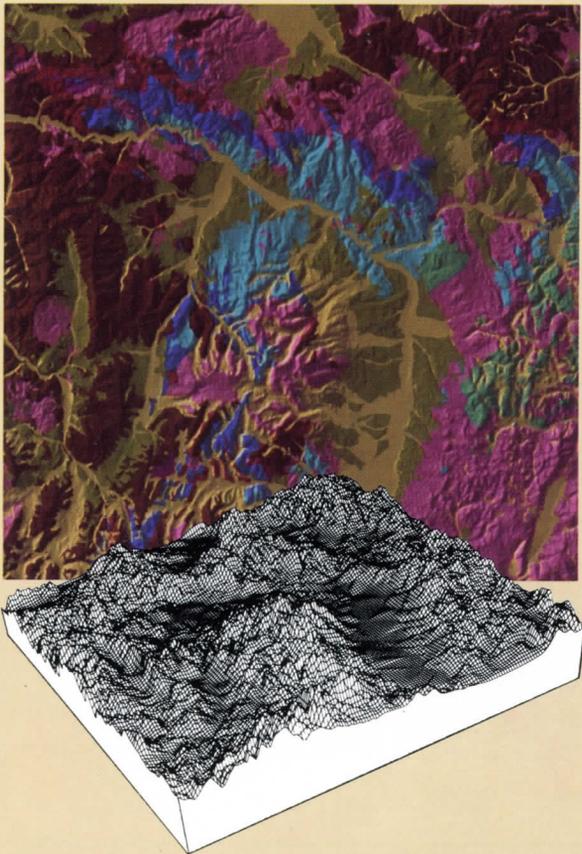
*Center facilities include advanced data processing and analysis equipment.*

The Center receives, processes, and carries out research on image data from the Advanced Very High Resolution Radiometers on polar orbiting meteorological satellites and from the U.S. Landsat satellites. The Center uses these data and data from French, Japanese, Soviet, and other foreign satellite systems to produce high quality image maps for a wide variety of scientific uses.

The Center works closely with NASA, the National Oceanic and Atmospheric Administration (NOAA), Department of the Interior organizations, and other Federal agencies to develop advanced systems and techniques for applying Earth observations and other geographic information to Earth science problems.



*Large regional and continental image maps are assembled at the Center to support environmental change analysis.*

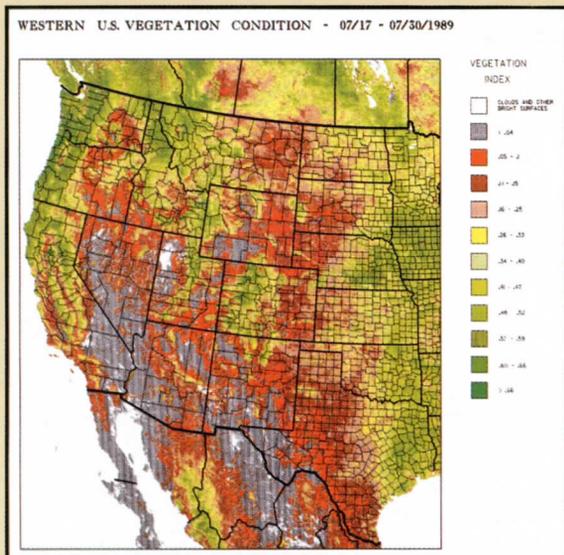


*Unique 3-D perspective visualization products are developed by combining topographic and geologic data using the Center's sophisticated analytical capabilities.*



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*This enhanced SPOT satellite scene of San Diego Bay is typical of the high quality images processed and stored at the Center.*



*Global land cover and vegetation productivity maps produced at the Center support important global change studies.*

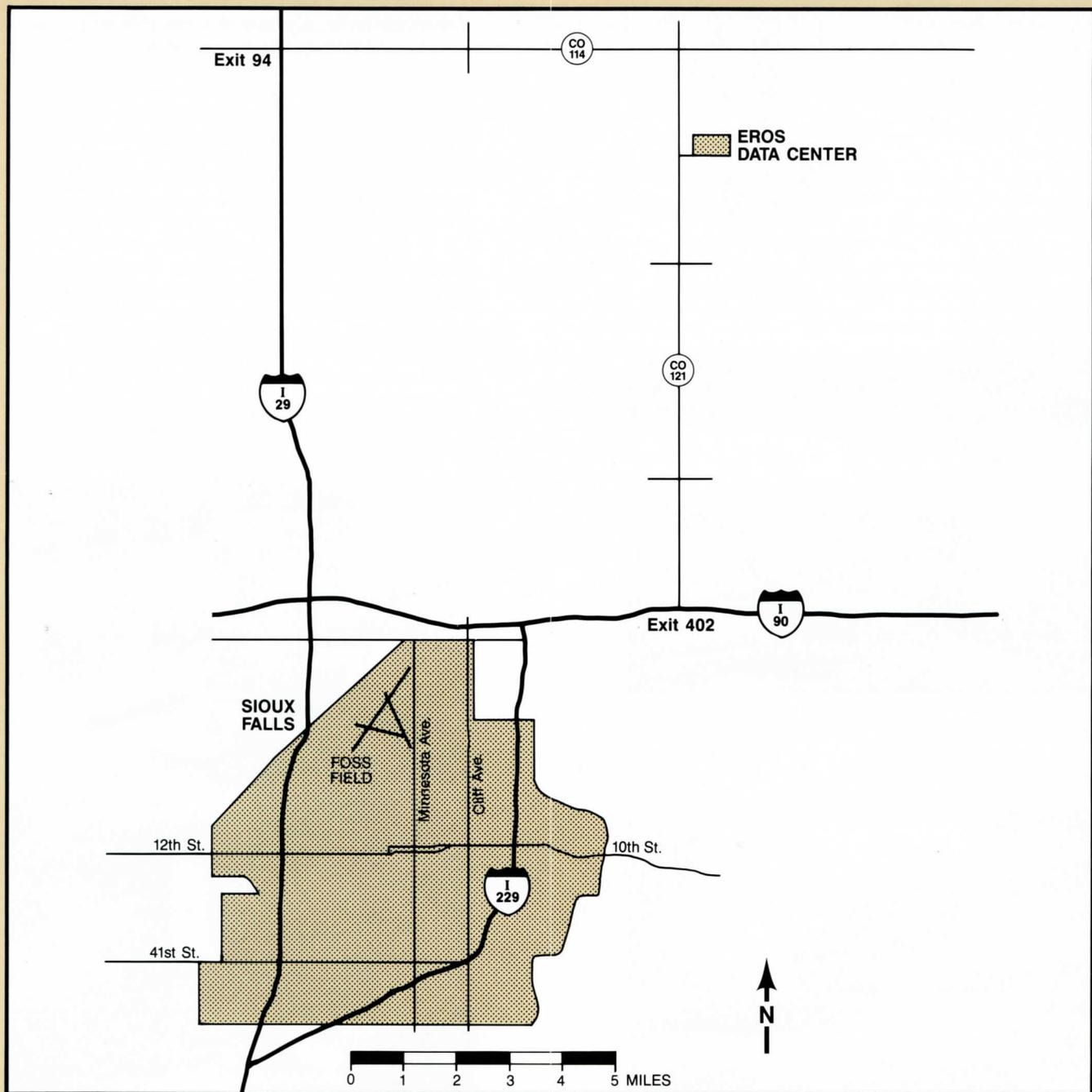
The Center uses these data and other Earth-science information to support a broad range of studies designed to improve our understanding of the mechanisms and processes leading to global environmental change. To support this research, the Center combines a multi-disciplinary scientific staff in geology, hydrology, cartography, geography, agronomy, soil science, forestry, meteorology and climatology with engineering expertise in systems development, telecommunications and the computer sciences.

Center activities include operation of the National Satellite Land Remote Sensing Data Archive, a legislatively mandated responsibility to maintain a high quality data base of space acquired images of the Earth suitable for use in future study of global change and related scientific programs, and the Federal Land Remote Sensing Research Program. This Program allows Federal agencies, universities, and other organizations to assign scientists and researchers to the Center on a full-time basis with complete access to the analytical equipment, data, and research facilities of the Center.

Facilities at EROS include advanced data and information analysis laboratories, production data processing systems and digitizing capabilities, business and scientific systems software development, geographic information systems development and implementation, and on-line computerized access to data directories, catalogs, and inventory information about the Center's holdings, and the land data holdings of other facilities.

As a major participant in the U.S. Global Change Research Program, EROS provides data to scientists from around the world to improve understanding and ability to predict change. The Center is also a key participant in NASA's "Mission to Planet Earth" and plans to process and archive land related data from the NASA Earth Observation System polar platforms and sensors aboard the NASA Space Station in the mid-1990's.

The EROS Data Center operates field offices in Alaska and North Africa to support resource and environmental studies in those regions.



*The EROS Data Center is located 15 miles northeast of Sioux Falls in a quiet rural environment. Sioux Falls is served by several major airlines with multiple daily non-stop flights from Minneapolis, Chicago, Denver, Salt Lake City, and St. Louis.*