As chairman of the Wisconsin Topographic Mapping Committee, State Geologist Dr. M.E. Ostrom received a letter from the U.S. Geological Survey on October 4, 1983. In it Mr. L.H. Borgerding, Chief of the Mid-Continent Mapping Center in Rolla, MO, stated the current status and confirmed completion dates for the state's 7 1/2' topographic quadrangle coverage (1:24,000). In part Mr. Borgerding said the following: "There are 204 7.5-minute maps (of a total 1154) remaining to be printed (as of September 30) to obtain complete coverage. Of this number, 93 have been shipped to our Reston (Virginia) facility for printing, with 36 more expected to be shipped there by December 31, 1983. The remaining work left on the other maps includes field revision and cartographic finishing on 62 7.5-minute T-map quadrangles. We have targeted the last of the Wisconsin maps to be shipped for printing by September 30, 1984. It is possible that all maps could be printed by December 31, but it also could be February or March 1985 before the last map comes off the press. We have little control over the map printing schedules, but will do what we can to compress the schedules for the Wisconsin maps."

As of early October the Wisconsin Geological Survey had over 82% of these 1154 topos available for sale. Currently the revision program for 7.5 minute maps has 43 in production in various phases. The latest report indicates that 15 of these maps have been released to printing. The 7.5-minute revisions are in work in the following 15-minute quad areas: Appleton, Green Bay, De Pere, Superior, Madison, Cross Plains, Sun Prairie and Monroe. In addition 14 quads are in revision as individual 7.5-minute map projects.

A meeting is scheduled between the Wisconsin Topographic Mapping Committee and officials of the U.S. Geological Survey for November 10, 1983 to review this current status and to discuss future mapping programs. The January Bulletin will report on the outcome of this meeting. (italic comments added for clarification)
These newly published 7½' topographic quadrangle maps (1:24,000) are listed by their location on the superseded 15' topographic map of the area. They are available from the Wisconsin Geological Survey, 1875 University Ave., Madison, WI 53706 (608) 263-7389. Topographic quadrangles are $2.00 each, plus tax, postage and handling.

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<th>No.</th>
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<th>NW</th>
<th>SW</th>
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<td>Spring Green '83</td>
<td>Lone Rock '83</td>
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</table>
NEW PRODUCTION FROM U.S. GEOLOGICAL SURVEY

Order 7½' quads by name, NOT by the index number or letter used here for location.

PHOTOREVISED 7½' QUADS

a Black Earth, '62, '80PR
d Rutland, '61, '80PR
b Sun Prairie, '62, '80PR
e Monroe N.W., '62, '80PR
c Cottage Grove, '62, '80PRf Brodhead West, '62, '62, '80PR

Wisconsin Mapping Bulletin 3 October 1983
LAND SURVEYOR REFRESHER

The UW-Extension Engineering & Applied Science Department will present the Land Surveyor Refresher course in eight, two-hour sessions over the Statewide Extension Education Network (SEEN) January 11-February 29, 1984. SEEN interconnects tele-conferencing rooms in over 25 Wisconsin communities. The course fee is $140.

This refresher course is intended for those surveyors who are preparing to take the Wisconsin Land Surveying registration examination. Both the fundamentals and principles and practice sections of the examination will be covered. Topics include the U.S. Public Land System, math, legal aspects, instrument adjustment, state plane coordinates, astronomy, photogrammetry, route surveying and property descriptions. Individuals will be able to review the basic concepts and skills of land surveying.

For course information contact Donald M. Walker, 608/262-7988; for course registration contact Janice Friis, 608/262-2026. They are both with the Dept. of Engineering & Applied Science, UW-Extension, 432 North Lake Street, Madison, WI 53706.

ANCIENT CLIMATE MAPPING

COHMAP stands for Climates Of the Holocene: MAPping which is an international research project conducted by the University of Minnesota, the University of Wisconsin, and Brown University. Prof. John Kutzbach, director of the UW Institute for Environmental Studies' Center for Climatic Research (CCR), is one of the principal investigators.

COHMAP is the first comprehensive attempt to document and analyze the world's climate and how it's changed during the past 18,000 years. Scientists around the world are collecting pollen data which can be used to reconstruct ancient climates. Kutzbach says they're developing a data bank from which they'll eventually be able to extract "slices of time" and map these "snapshot views." Actual mapping probably won't begin for at least a year. Prof. Kutzbach can be reached at the CCR, 1131 Meteorology and Space Science, Madison, WI 53706, 608/262-2839.
NEW MAPS

RAISED RELIEF MAP OF WISCONSIN
3-D in molded vinyl plastic, printed in 4 colors, showing elevations in addition to usual map features. 21" x 22", scale 1 inch = 17 miles. $19.95 plus UPS shipping $2.00 and 5% Wisconsin sales tax. Mounted in an oak frame: $39.95 plus UPS and sales tax. Milwaukee Map Service, Inc., 4519 W. North Ave., Milwaukee, WI 53208, 414/445-7361.

INDEX TO STATE PLANE COORDINATE (SPC) ZONE CODES
The 1:5,000,000-scale U.S. map shows the counties within each state plane coordinate zone and the type of projection used for the zone. $5. NOAA/National Geodetic Information Center (N/CG17 x 2) Rockville, MD 20852.

PLEISTOCENE GEOLOGY OF BROWN COUNTY, WISCONSIN
A full-color map with numerous cross-sections, both N-S and E-W. 1983 by Edward Need. Scale 1:100,000. Map 83-1, $4.00 from Map Sales, Wisconsin Geological Survey, 1815 University Ave., Madison, WI 53706, 608/263-7389. An information circular describing the pleistocene geology of Brown County is expected in late 1984.

SIMPLE BOUGER GRAVITY MAP, NORTHEAST SHEET
Complied by C. Patrick Ervin, K.K. Tuftee, and J.A. Funck, 1983, scale 1:250,000. Shows gravity contours at one milligal intervals as well as gravity stations. Black-and-white, southern boundary 45°00', western boundary 90°00'. Map 83-2, $2 from Map Sales, Wisconsin Geological Survey, 1815 University Ave., Madison, WI 53706, 608/263-7389.

U.S. GEOLOGICAL SURVEY INDEXES
U.S.G.S. recently sent us a packet of updated indexes. These indexes are available free from the National Cartographic Information Center, U.S.G.S. Mid-Continent, 1400 Independence Road, Rolla, MO 65401. The following descriptions are taken from U.S.G.S. National Mapping Division (NMD) correspondence. (Note: Two of the indexes are double-sided.)

Intermediate-Scale Index (1:100,000 Quadrangle Side)
This index has recently been completely reformatted and can now be used as both a status map for management and a new ordering tool for the general public. Several new features have been added, one of which is showing USGS topographic maps and BLM Surface Management and Surface-Minerals Management maps together. Another new feature of this index is the inclusion of the topographic-bathymetric 1:100,000-scale maps. The updating and printing for this index also has been changed from a 12-18 month cycle to a 6-month cycle to increase its timeliness to users.

Intermediate-Scale Index (County Map Side)
This index, shown on the reverse side of the above 1:100,000-scale index, has been increased in accuracy with regard to both 1:50,000-and 1:100,000-scale county maps now published as well as the monochromatic copy available only through the National Cartographic Information Center (NCIC). The index is also now on a 6-month update and printing cycle. Information regarding availability of Soil Conservation Service materials has been removed.

Orthophotoquad (OQ) Index
The complete reformatting of this index allows for increased accuracies showing (Continued on next page)
NEW MAPS, Continued

the status phases of preparation, including aerial photography and copy available from the NCIC's, and the published OQ's that are available from the distribution outlets. The new unique cartographic design also enables the indexing staff to quickly update, print, and make the index available on a 6-month schedule.

Status and Progress of Topographic Operations (7.5 and 15 minute mapping)
Some procedural changes have resulted in a more timely annual update and printing of this index. Plans have been formulated to speed up the FY 83 edition to December 1983. It should also be noted that the NMD indexing staff is working with Plans and Operations to obtain accurate status and progress information by automated methods. When successful, this effort will lead to fully automated annual updates rather than the manual updates now required.

Land Use and Land Cover Index (Land Use and Land Cover and Associated Maps side)
Completely reformatted, this index uses the same base as the other status indexes, thus allowing sufficient room to show all information on one side. It is both a status map for management use and well as an ordering tool for the public and includes open-file reports plus the L-series (Land Use) maps for the first time. It is updated and printed annually on a FY basis. Plans have been formulated to speed up the FY 83 edition to December 1983.

Land Use and Land Cover Index (Digital Data side)
This index, shown on the reverse side of the above LU/LC index, is the first index to show any of NMD's digital map products. It is updated, printed, and available annually.

USGS/DMA 1:50,000-scale, 15-Minute Quadrangle Index
This new index shows work in progress and published maps available from the USGS distribution outlets. It is updated and available on a 12-month cycle. It is both a status map for management use and an ordering tool for the public.

Digital Line Graph (DLG) and Digital Elevation Model (DEM) Data Index
For the past 2 years, the NMD indexing staff has worked toward producing this 2-sided index by automated methods. If all continues to go as expected, the new index will be available through the distribution outlets by the end of FY 83.

National Park Index
Much thought as to concept, design, and information gathering has already gone into this new index; however, other priorities temporarily placed its preparation on a back burner. The NMD indexing staff recently began to prepare a mock-up for review purposes; upon completion of the review phase, cartographic preparation will begin. NMD expects to have this index printed and available through the distribution outlets in the first quarter of FY 84.

National High Altitude Program (NHAP) Status Index
Responsibility for this monthly index was taken over from Plans and Operations in the spring of 1981 by the NMD indexing staff. Additional information has since been added and the distribution, handled by NCIC, is currently up to 475 copies each month.
STATE FOSSIL

This summer we brought you the state soil. (The Antigo Silt Loam for those who've forgotten.) This fall we're bringing you the state fossil—the trilobite. Trilobites flourished during the Cambrian Period approximately 450 million years ago. During much of this time a shallow sea covered what is now Wisconsin. The sediments deposited then are full of trilobite fossils. Trilobites belonged to the phylum arthropoda which also includes insects and crustaceans. Assembly Bill 596 passed the Assembly and now awaits passage by the Senate.

LAND USE & LAND COVER

LAND USE/LAND COVER IRON MT

Open-file Report 82-0243, Land use and land cover and associated maps for Iron Mountain, Wisconsin and Michigan, consists of one map coded for statistical data development and is keyed to the USGS 1:250,000 Iron Mt. topographic map. Also included is one black-and-white copy of the Iron Mt. cultural (no contours) base. Order for $3.25 from the NCIC-M, U.S. Geological Survey, Mid-Continent Mapping Center, 1400 Independence Road, Rolla, MO 65401.

LAND USE/LAND COVER RICE LAKE

Land use and land cover and associated maps for Rice Lake, Wisconsin is Open-file Report 82-0245. This data set consists of one map keyed to the USGS topographic map Rice Lake at 1:250,000 (1 inch = about 4 miles). The map shows codes for statistical data development. A black-and-white copy of the cultural (no contours) base for Rice Lake is also included. Order for $3.25 from U.S.G.S, Mid-Continent Mapping Center, address above.

DODGE AND ROCK COUNTIES

The Wisconsin Geological & Natural History Survey has two new ground-water publications with accompanying maps. Order from Map Sales, Wisconsin Geological Survey, 1815 University Ave., Madison, WI 53706. Call 608/263-7389 for mailing charges and sales tax information.

Ground-water Resources and Geology of Dodge County, Wisconsin. 1983. By R.W. Deval, C.A. Harr, and J.J. Schiller. Includes 17 page-size maps as well as a 2-color, 1:125,000-scale map titled "Water-table map of Dodge County 1977". Information Circular 44. $3.00.

Ground-water Quality of Rock County, Wisconsin. 1982. By Alexander Zaporozec. Includes 13 maps in the text plus 3 separate maps: "Generalized Geologic Cross Section of Rock County, West-East"; "Preliminary Map of the Thickness of Unconsolidated Material in Rock County", 2-color, 1:100,000; "Permeability of Soils in Rock County", 2-color, 1:100,000. Information Circular 41. $6.00.
D.O.T. PHONE CHANGES

The Document Sales Office of the Department of Transportation (3617 Pierstorff Street, Madison, WI 53707) has changed its phone number. It is now 608/246-3265. Document Sales sells D.O.T.'s county highway maps as well as state and municipality maps. Special Services handles aerial photography sales. Their number remains the same, 608/266-0309.

STORMPROOF

Now you can use your topo quad in the rain! Stormproof is a permanent water repellent treatment for all paper maps, charts, or blueprints. The clear liquid impregnates the paper without discoloring or stiffening it. A pint of Stormproof will treat 8 full-size NOAA charts, 14 topo maps or 100 sq. feet of paper. The price is $7.95 for each 1-pint and $4.95 for each ½-pint. UPS shipping is $1.65 for the continental U.S. Order from the Martensen Co., Inc., P.O. Box 261, Williamsburg, VA 23187, 804/220-2828.

GREAT LAKES DATUM

Extremely high lake levels in 1952 caused many problems on the Great Lakes. Additionally, the St. Lawrence River was about to be developed for improved navigation and increased power supplies. The governments of the U.S. and Canada met in 1953 to resolve the difficulties created by these events. They formed the Coordinating Committee on Great Lakes Basic Hydraulic and Hydrologic Data (CCGLBHHD) to study the problems and to establish a basis for development and acceptance of identical data by both countries. The result was the establishment of the International Great Lakes Datum (IGLD) 1955. Canada began using the bench mark elevations in June 1961. The U.S. began using them that September.

Any vertical control datum in the Great Lakes area requires revision at intervals of approximately 25 years because crustal movement changes the elevations of the bench marks. Crustal movement isn't uniform throughout the Great Lakes and it reaches magnitudes which are intolerable in many areas.

The U.S. began field leveling surveys in 1977 in conjunction with the releveling of the National Vertical Network. In late 1982, Canada and the U.S. signed a formal Memorandum of Understanding insuring the completion of the surveys by December 1983. By then the field parties of the National Geodetic Survey and the Geodetic Survey of Canada will have completed over 2,000 km of leveling at a cost of approximately $1.2 million. The CCGLBHHD expects to publish the new elevations in January 1986.

The Great Lakes and their interconnecting rivers remain as important to transportation, commerce, and industry in Canada and the U.S. as they were in 1952.

(ACSM Bulletin, August 1983)
There are several "Devils Lakes" in Wisconsin but only one is well known. That's Devils Lake State Park in Sauk County, south central Wisconsin. The park is one of the most popular, attracting over a million visitors a year. However it is not the largest Devils Lake in the state; its surface is only 373 acres.

The look-alike Devils Lake, shown on a portion of a 7.5 minute topo quad (below) is nearly 3 times as large, 1,001 acres. It's located approximately 230 highway miles from the previously mentioned state park. Incidentally there are 6 other Devils Lakes in Wisconsin, all much smaller.

Can you determine where the largest "Devils Lake" is located?

(topo quad reduced by 50%)

Wisconsin Mapping Bulletin 9 October 1983
UPDATES

WETLANDS
Steve Fix of the Department of Natural Resources Wetlands Program reports all 4 Lake Superior counties (DOUGLAS, BAYFIELD, ASHLAND, IRON) plus SAWYER County now have wetlands maps available. By the end of the year Shawano, Waupaca, Florence and Washburn will be available. Contact Steve at 608/266-8852 for more information.

COUNTY CATALOGS
The BAYFIELD County Cartographic Catalog is now available. IRON County will be available at the end of November. Contact the State Cartographer's Office 608/262-3065 for your free copy.

STAFF CHANGES
Carol Krug, a graduate student in Urban & Regional Planning, is now our Production Manager for the county catalog program. Carol comes to Wisconsin from the University of Akron, Ohio from which she will receive a master's degree in Urban Studies/Public Administration. Carol has had 5 years of planning experience.

On October 1st Brenda Skaggs (our entire office staff) married Brent Hemstead, also a University of Wisconsin employee. The new Brenda Hemstead can still be reached at 608/262-3065.

CART LAB NEWS

This information comes to the WMB from Jim Hilliard, Associate Director of the University of Wisconsin Cartographic Lab (UWCL). For more information contact Jim at 385 Science Hall, Madison, WI 53706, 608/262-1363.

WEAC DATABASE

UWCL recently generated a polygon database of Wisconsin school districts for the Wisconsin Education Association Council (WEAC). The cartographers at UWCL used their interactive digitizing system to digitize approximately 400 school districts at a scale of 1:500,000. They created the polygonal database from this digitized file using the OLYSSEY program on the Madison Academic Computing Center's VAX 11/780. The polygonal database can produce several color and black-and-white choropleth plots at various scales on different media (CRT, 35mm slides, paper). WEAC will use these map products as exhibits in a current court case.

UWCL will maintain this database for WEAC. They'll process requests by potential users who want to access the file for other applications.

MADISON PUBLIC SCHOOLS

UWCL aided the Madison Public Schools (MPS) Task Force on School Desegregation by generating software to summarize student information as provided by MPS and the City of Madison Planning Department. The software summarizes student ethnic and grade information by sectors (groups of city blocks) within Madison school districts.
The Green Bay area will be commemorating the 350th anniversary of the arrival of the French explorer Jean Nicolet with the 1984 Heritage Festival (June 29 - July 8, 1984). Parades, dance festivals, costume balls, firework displays, socials, ballet, concerts, yacht festivals, and exhibits will highlight this gala event.

A concurrent map and atlas exhibit will display maps of the Green Bay and Upper Great Lakes region from about the time of Nicolet's arrival (1634) through to the modern era. The development of cartography, as well as the Green Bay area, will be illustrated in this unique exhibit at Green Bay's Neville Public Museum.

A majority of the maps being displayed are originals provided by the American Geographic Society (AGS) Collection of the Golda Meir Library of UW-Milwaukee, the State Historical Society Library of Madison, the Area Research Center of UW-Green Bay, and other local and state offices. The public, as well as the professional community, is most cordially welcome.

Mark Steuer is arranging an introductory program for a kick-off to this map exhibit. Christine Reinhard will co-ordinate efforts with Mark to bring in speakers on the theme "Historical Cartography - Nicolet till Now".

Details on the Green Bay Heritage Festival will appear in future Mapping Bulletins. Anyone having suggestions and/or questions concerning this exhibit, please contact either:

Mark Steuer, Cartographer
Green Bay-Brown Co. Planning Commission
100 N. Jefferson, Room 608
Green Bay, WI 54301
414/497-3633

or

Michael Clegg
Executive Secretary
The Heritage Festival
P.O. Box 1411
Green Bay, WI 54305
414/432-0251

or

Christine Reinhard
Assistant State Cartographer
144 Science Hall
Madison, WI 53706
608/262-6850.

The U.S. Geological Survey recently issued a bibliography of their publications specifically about or containing references to Wisconsin. This 30-page List of Geological Survey Geologic and Water-Supply Reports and Maps for Wisconsin is divided into a section of books and one of maps. Out-of-print publications are indicated. A free copy of the 1983 List is available from U.S.G.S., 1200 South Eads Street, Arlington, VA 22202.
MAGNETIC PUBLICATIONS

Tables of Magnetic Declination—Wisconsin  A historical to present list using a 1° grid. $14 payable to Commerce/NESSIS/NGDC. Available from the National Geophysical Data Center, 325 Broadway, Boulder, CO 80303, 303/497-6478.

Magnetic Declination Chart—Wisconsin shows 5-year intervals. $5 from the U.S. Geological Survey, 200 South Eads Street, Arlington, VA 22202, phone 703/557-2751.

GREEN BAY MAP COMPANY
NOW OPEN

The Green Bay Map Company is a full service map company. Providing custom made map products for our clients and are authorized map dealers for the sale of published governmental and private maps, atlases and aerial photography.

• Custom Made Recreational Maps: We specialize in producing recreational maps for units of government and local Chambers of Commerce. By consulting with our clients, we can tailor a recreational map to their individual needs and provide them with quality economical printing in-house.

• Authorized Map Dealer: As authorized dealers for the United States Geologic Survey (USGS) and the National Oceanic and Atmospheric Administration (NOAA), we offer all of the Topographic Quadrangles and Nautical Charts for the entire Great Lakes Area.

• Aerial Photography: Custom flown oblique aerial photography of homes, businesses and recreational sites, as well as, distributor of 1" = 400' aerial photography of the entire state of Wisconsin.

• Rand McNally: Hundreds of different Rand McNally Atlases, Travel Guides and map related products are available for the traveler, outdoor enthusiast and businessman.

• Services: Our line of map services includes custom map work, offset printing, laminating, mounting and framing of all maps produced and sold through the Green Bay Map Company.

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(We provide this information as a service to our readers and not as an endorsement by the SCO.)
COMMERCIALIZATION

Prospective bidders for the U.S. civil remote-sensing satellite systems were given on-site orientation briefings and tours to familiarize firms with the operational procedures involved in managing the satellite systems.

After the orientation program was completed, the Source Evaluation Board for Civil Space Remote Sensing (SEB/CSRS), established by the Secretary of Commerce, developed a Request for Proposals (RFP) on the sale of both the land- and weather-sensing satellites. The draft RFP was released on October 21, 1983. Comments are due on November 21, 1983, with the final RFP to be issued one month later.

Potential bidders may bid for one or more of the three systems: Landsat, geostationary meteorological satellites, and polar meteorological satellites. The SEB/CSRS plans to make its final recommendation to the Secretary of Commerce in May 1984.

EARLY D-PRIME LAUNCH

The National Oceanic and Atmospheric Administration (NOAA) has requested that Landsat D', the backup satellite to Landsat 4, be launched as soon as possible because of system problems that have developed with Landsat 4.

Launch of Landsat D' could occur as early as February 1984, which would place it in orbit more than a year ahead of schedule. Even so, the situation is very tenuous, as Landsat 4 could suffer a complete loss of power at any time.

Because of the limited electrical power available, Landsat 4 has maintained a reduced mission for the past several months. In spite of this, Landsat 4 has been able to acquire full worldwide multispectral scanner (MSS) coverage. Thematic mapper (TM) data acquisitions have been curtailed due to other problems. If any additional power should be lost, ground controllers will lose command and telemetry capability, and therefore control of the satellite altogether.

In addition to making arrangements to launch D' as requested by NOAA, NASA is studying the possibility of retrieving and repairing Landsat 4 using the Space Shuttle. Launching the Shuttle into a polar orbit similar to Landsat's is a capability that will not exist until late 1985 or 1986. Because Landsat 4 will almost certainly have lost all power before then, and thus maneuvering capability, it will have to be brought down into a "parking orbit" while control still exists—there to await a rendezvous with the Shuttle.

NOAA and NASA have taken steps to assure that the problems that have occurred aboard Landsat 4 do not happen again aboard Landsat D'. It was planned that Landsat 4 would have had a mission life of three years, requiring no backup until 1985. At that time, Landsat D' was to be launched and provide service until 1988. If Landsat D' is to be launched early, NOAA will have to decide sooner than originally planned what to do for a follow-up after D'.
KARS

The Kansas Applied Remote Sensing (KARS) Program is an applied research program of the University of Kansas Space Technology Center established in 1972 by NASA. The Program publishes a quarterly KARS Newsletter which is available free of charge. A new brochure describing the facilities, services, and major research and applications areas of the KARS Program is now available. For your copy of the free brochure contact Carol Griffin, KARS Program, University of Kansas Space Technology Center, Lawrence, KS 66044.

LANDSAT INDEXES

The U.S. Geological Survey recently issued an index to the Landsat Worldwide Reference Systems (WRS). A total of 26 indexes cover the entire globe with Landsat 1, 2, 3 and 4 path-row nominal scene centers. Each sheet is a 1:10,000,000-scale navigation-type chart. The conterminous U.S. falls on Sheet no. 2. Alaska is on Sheet no. 6 and Hawaii is on Sheet no. 7.

The National Oceanic and Atmospheric Administration (NOAA) and NASA cooperated in producing the WRS series. More information and the indexes themselves are available from NOAA Landsat Customer Services, USGS EROS Data Center, Sioux Falls, SD 57198.

WISCONSIN TM COVERAGE

Thematic Mapper (TM) scenes for parts of Wisconsin are now available and can be ordered from NOAA/NESDIS Landsat Customer Services. Path 023 covers the eastern edge of Wisconsin, and path 027 provides coverage for the northwestern edge.

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Product key:

BW - Black and white film products
NCC - Natural color composite, bands 1, 2, 3
FCC - False color composite, bands 1, 3, 4
CCT - Computer compatible tape, bands 1-7
Slide - 35mm color composite slide
MSS - Concurrent Landsat 4 Multispectral scanner data

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