

# The Center Scene

MARCH 1986

## LAND COVER MAPPING IN ALASKA

*Edited by K.C. Webde*  
(Final in this series on EROS cooperative projects)

The 1980 Alaska National Interest Lands Conservation Act (ANILCA) mandated that the major land management agencies in Alaska prepare comprehensive resource and management plans to assess wildlife habitat, oil and gas exploration and development, wild and scenic rivers, land disposal, timber production, and archeological and cultural resources. The U.S. Geological Survey, in cooperation with several of the land management agencies, undertook a series of projects to classify land cover over major portions of the State of Alaska using Landsat digital data. Standard National Mapping Division land use and land cover map products could not be produced practically in the near term, so Landsat data and digital processing techniques were used to produce land cover maps (1:250,000 scale) and related products in Alaska. The National Mapping Division approved a plan, pending the outcome of map product evaluation, to expand this land cover mapping effort to cover the entire State of Alaska using a single classification scheme — an effort referred to as the interim land cover mapping program in Alaska. The Division has implemented a test of the interim mapping program on six quadrangles in Alaska; the resulting maps will be evaluated upon completion. The EROS Field Office is responsible for data set preparation and land cover classification on the Arctic, Valdez, Fairbanks, and Dillingham quadrangles, while the Geographic Investigations Office, Menlo Park, California, is preparing data sets and classification results for the Mt. Michelson and Meade River quadrangles.

(Cont. on page 3)

## "RUPE" RETIRES

Rupert B. "Rupe" Southard, Chief of the National Mapping Division, was honored on February 7, 1986, in celebration of his retirement after 40 years of distinguished service with the United States Geological Survey. In addition to his career association with the EROS Data Center, Rupe has been a longtime, personal friend of many EDC employees. In recognition of that friendship and in appreciation of Rupe's many efforts for and consistent support of EDC, a very special gift to signify our sincere best wishes was created by Lee McManus, Supervisor of the Technical Information Section and EDC artist.

Lee was asked to capture Rupe's likeness (he chose pastels as a medium), and to include highlights of his career. Included in this montage are scenes of Syracuse University, Rupe's alma mater; his Syracuse Orangemen football jersey Number 29; "Rupert Songbird" from the famed Department of the Interior roasts — the Pick and Hammer Shows; Mount Southard in Antarctica; early field work in Florida;

more recent satellite image mapping pioneering; development of orthophoto mapping equipment, serving in the United States Marine Corps; and ballooning over the South Dakota prairies at the EROS Data Center's 10th Anniversary.

We can all be proud of this tribute given on behalf of the Data Center to Rupe to celebrate his outstanding career, his many accomplishments, and his friendship for all of us.



*A montage in pastels, created by Lee McManus, portrays a panorama of Rupert B. Southard's life. The portrait was presented to "Rupe" at his retirement party in the National Center in Reston as a gift from his friends at EDC.*



## TGS, INC. RECEIVES UNITED WAY GOLD AWARD

by Mary Jungling

TGS, Inc. received United Way's Gold Award, an expression of appreciation to the employees of firms that reach 80 percent of their giving potential. This is the third consecutive year that TGS received the award and is a challenge to be met in future years.

Contributions again exceeded the previous year's giving. The dollar amount increased three percent for a total of \$13,620, and the number of employees who participated also increased.

TGS, Inc., also participated this year in the Loaned Executive program. Darla Werner, Computer Services Branch, served as Loaned Executive to the Sioux Empire United Way and assisted in the overall campaign to raise \$2.1 million. Werner presented the program to EROS Data Center (EDC) employees as well as to other businesses. The EDC presentation included representatives from four of the 35 benefitting agencies and a brief explanation of the services they offer — services that are used by one of every three people in the Sioux Empire. Werner's comments reflect the rewards of her service as a Loaned Executive: "Working with the United Way brought the needs of our community to reality for me. I felt that my experience as Loaned Executive was not only personally rewarding but also professionally rewarding. During the many meetings and rallies I attended, I was proud to represent TGS, Inc., and the EROS Data Center, which set such fine examples of community support."

cellence as a research, production, and educational facility in the Earth sciences. We expect that work will begin on the new antenna late this year.

Allen A. Watkins

## UP FRONT

### NEW SATELLITE FACILITY APPROVED FOR EROS

Funding was approved last month for a new data receiving and processing facility at EDC for data from National Oceanic and Atmospheric Administration (NOAA) meteorological satellites. The NOAA 1986 appropriations bill includes \$600,000 earmarked for the new antenna and processing system.

Senator Larry Pressler, author and sponsor of the funding amendment, was instrumental in obtaining the \$600,000 funding for the new facilities.

The USGS in cooperation with NOAA will establish and operate the system to acquire data from the Advanced Very High Resolution Radiometer (AVHRR) sensor on board the weather satellites.

This funding and the new system will have a major impact on future work at EDC. It will help ensure that the Center continues as a world leader in providing and using remote sensing and Earth information technology. The demand for this kind of data by land resource managers is increasing. EDC's research and development capabilities will generate new ways to use these data by merging it with other types of computerized Earth information including cartographic data from the National Digital Cartographic Data Base. Senator Pressler's efforts on behalf of EROS were responsible for creating this important role for our Center.

It is particularly gratifying to look forward to a new challenge at this time of budget pressures and constraints. As I have expressed in the past when discussing the commercialization of the Landsat system, our mission may undergo changes that will call for realignment of jobs and priorities but I am confident that we will work together to maintain our standards of ex-

## Van Poolers' Reports Bring Justice

Reprinted from *Tattle Tales*, Sioux Falls Humane Society

### JUDGEMENT OF THE COURT —

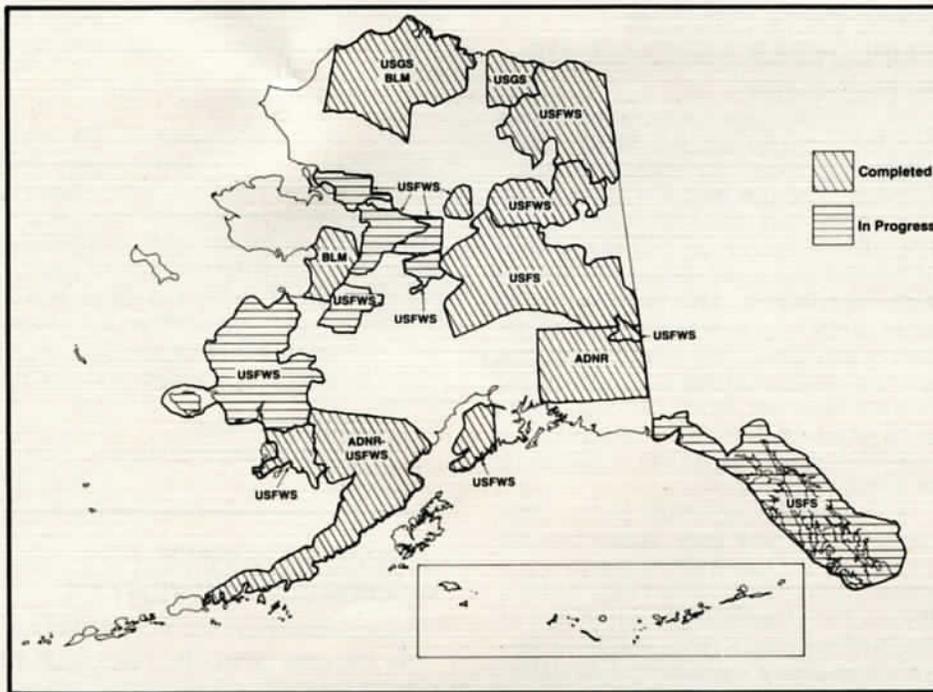
The van carried eleven people going home from their job outside of Sioux Falls. While on their way home, they saw a car parked along a gravel road. It appeared that two men were having a fist fight in the ditch. However, as they came closer, they saw there was just one man and he was beating his dog, pounding it with his fists. He then slammed it against his car and kicked the limp form over and over. Two passengers in his car sat by watching and made no effort to stop this brutality. The van's driver slowed to a stop and called to the young man. However, his crazed look frightened the passengers and they thought it best to leave the area. Later, one of the ladies returned in her own car and got the license number and called us. From that we were able to trace the perpetrator. In all, six of the van's riders called us and gave the same report, so we went to see the young man. He claimed he was "disciplining" his dog. Because of the brutal nature of this beating, he was told that charges would be filed against him for cruelty to an animal. Just before the case went to trial, he pled guilty and was fined \$100.00, sentenced to 30 days in jail with 25 days suspended if there were no further violations. He was also put on probation for two years. Then upon our recommendation, he was required to take the dog to obedience classes where he would learn how to train his dog properly. Taking the dog away from him would not have prevented him from getting another one. We felt learning the proper way of training and disciplining his dog would have longer range effects. We commend the judge for his cooperation and hope the young man will learn a new respect for his pet. By learning how his pet learns, maybe this cruelty will not be repeated.

(Editor's note: We were gratified to learn that it does pay to get involved when we witness an act of cruelty.)

Volume 3

Number 1  
March 1986

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Leon Callahan



*Status of Land Cover Classifications in Alaska*

**LAND COVER MAPPING IN ALASKA**  
(Cont. from page 1)

**Objectives Defined**

Objectives for the interim mapping program include: (1) reformatting existing land cover classifications to a common statewide map legend, (2) completing the land cover classifications for the remainder of the state, and (3) producing paper maps, statistics, and computer-compatible tapes (CCT's) containing the land cover data for each of the one hundred and fifty three 1:250,000-scale Alaskan quadrangles. Digital Landsat and terrain data are compiled in a digital data base. The terrain data are arc-second digital elevation models (DEM's), while the Landsat multispectral scanner (MSS) data are on computer-compatible tapes. Administrative boundary information or other interpretations made from aerial photographs (for example, identification of urban, built up, or settled areas), are usually in map or map-like form, and are transformed into digital formats before they are entered into the data base. The data base, with a grid-cell format, is used for making land cover classifications. Raster-based data sets (such as elevation and Landsat data) and image processing equipment are available and multiple data sets are easily integrated and analyzed. The EROS Field Office in Anchorage, Alaska, and the Geographic Investigations Office in Menlo Park, California, together with cooperating agencies (the Bureau of Land Management, the Alaska Department of Natural Resources, the U.S. Fish and Wildlife Service, the U.S. Forest Service, the U.S. Army Corps of Engineers, and the North Slope Borough) have produced

land cover classifications from digital Landsat data for nearly one-half of the State (see figure).

An important aspect of the land cover classification procedure using Landsat is to ensure consistency among adjacent Landsat scenes. In some cases, areas may need to be reclassified following establishment of new spectral classes. In other cases, misclassifications, such as misclassifying shadows on mountain slopes as water (a situation caused by the spectral similarity of water and shadow), are corrected by defining geographic regions where certain classifications cannot occur or by using digital elevation data parameters.

**Triple-Phase Interim Program**

The proposed triple-phase approach utilizes land cover classification and terrain data from previous, current, and potential cooperative projects. A separate strategy for completing the mapping is proposed for the remaining areas of the State, where classifications do not exist or are not planned. All existing classifications will be integrated and reformatted using a common land cover map legend.

**Phase I**

Phase I consists of identifying existing digital classifications that are suitable for use in the interim mapping program. The initial stages of this phase are being addressed as a research effort designed to identify and evaluate all the steps involved in converting the existing land cover maps from their agency-specific scheme to the interim scheme and onto standardized paper

map products. Existing land cover classifications which may be included in the proposed program come from the following projects or areas: (1) *National Petroleum Reserve of Alaska (NPRA)*, and the *Arctic Coastal Plain of the Arctic National Wildlife Refuge* — land cover classifications produced by the Western Mapping Center's Geographic Investigations Office in conjunction with various cooperators; (2) *Kenai, Togiak, Tetlin, Yukon Flats, Kanuti, and Arctic National Wildlife Refuges* — classifications produced cooperatively by EROS Field Office and U.S. Fish and Wildlife Service personnel; (3) *Bristol Bay Subregion* — classifications produced by EROS Field Office and Alaska Department of Natural Resources personnel for ADNR and the U.S. Fish and Wildlife Service; (4) *Nulato Hills* — classifications produced at the EROS Field Office by the Bureau of Land Management; (5) *Tanana River Basin* — classifications produced cooperatively between the U.S. Forest Service and the EROS Field Office; and (6) *Copper River Project* — classifications produced by EROS Data Center personnel for the Alaska Department of Natural Resources. Existing classifications which are usable in the program total approximately 135-million acres.

**Phase II**

Phase II involves intervention into ongoing projects to reformat the classifications to a common land cover map legend as a part of each project's final output. Projects in this phase include: (1) *Yukon Delta, Kanuti, Koyukuk, Nowitna, Selawik, and In-noko National Wildlife Refuges* — classifications being produced by EROS Field Office personnel for the U.S. Fish and Wildlife Service; (2) *Central Arctic quadrangles* (for example, Beechey Point and Sagavanirktok River quadrangles) — classifications being produced by Geographic Investigations Office personnel; and (3) *Southeast Alaska* — classifications being produced by the U.S. Forest Service at the EROS Field Office. The area encompassed by these projects is approximately 75-million acres.

**Phase III**

Phase III involves implementing a strategy to complete the land cover classifications for the remaining areas of the State. Such a plan includes: (1) entering into interagency agreements with cooperating Federal and State agencies to continue producing classifications which meet their individual mapping objectives, and (2) embarking on an internal National Mapping Division program to complete land cover classifications for the remaining unclassified areas of the State.

(Cont. on page 4)

**In Summary**

The interim mapping program, with the objective of producing land cover maps and digital data bases for 153 quadrangles covering the State of Alaska, represents one of the largest multi-agency resource mapping efforts ever undertaken in the United States. The program complements the National Mapping Division's national land use and land cover mapping program. The program also assists cooperating State and Federal agencies in developing information that they need to carry out their own resource management and planning mandates. Past and ongoing mapping efforts utilizing Landsat data will be the primary source of materials for carrying out the program. This will result in considerable cost savings as the necessary digital data bases and field reference data have already been developed. Future cooperative mapping projects will continue to provide the cooperating agencies with the specific thematic maps that they desire, while the data bases will be constructed to facilitate development of the quadrangle-based maps for the interim program.

More information may be obtained from *Dave Carneggie* or *Mark Shasby* at the EROS Field Office in Anchorage, Alaska.

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**LANDSAT SYSTEM  
TRANSFERRED TO EOSAT**

Management of the Landsat system was transferred to the Earth Observation Satellite (EOSAT) Company as a result of the Land Remote Sensing Commercialization Act of 1984 and the subsequent signing of a contract between the Government and EOSAT on September 27, 1985. Through cooperative agreements with the Department of Commerce and EOSAT, Landsat products will be produced at EDC during the interim period while EOSAT is completing new facilities in Maryland.

*Ray Byrnes*, Production Control Manager; *Juanita Roland*, Production Coordinator, and *Colleen Jucht*, secretary, comprise the on-site EOSAT staff.

**EROS DATA CENTER  
EMPLOYEES ASSOCIATION**

by *Terry Bobbie*

The EROS Data Center Employees Association (EDCEA) has nearly completed a very successful year. Highlights of the past few months included another great response to the Friendship Tree Project. Contributions of \$1,208 and seven boxes of clothing were distributed. The monetary gifts were given to the Make-A-Wish Foundation and the Senior Companion Program, and the clothing was given to the Gospel Mission. Brief excerpts from very gracious letters of appreciation from the recipients appear in this issue of *The Center Scene*.

A beautiful Christmas party, delicious dinner and gala dance was enjoyed by 275 employees and their guests at the Holiday Inn-City Centre. Winter festivities have included several Ski Parties at Great Bear, Stamp Collector's sales, and a Valentine's Day Raffle.

An EDCEA volunteer bowling team for the American Heart Association Celebrity Bowling Tourney made up of *Steve Covington*, *Peggy Keegan*, *Gordon Strom*, and *Ray Teske*, took first place in the Team Event. "Congratulations, Team." And thanks to all who contributed.

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**Excerpts from "Thank You"  
Letters to EDCEA:**

"The Board of Directors, Wish Families, and other volunteers would like to convey the very warmest gratitude to your members for the generous contribution they made to the Foundation...Again, Thank You and God Bless each of your members."

*Ann Nelson*  
Make-A-Wish Foundation

"Our deepest thanks on behalf of all the Senior Companions and those they assist to remain independent in their own homes, for the contribution of \$258 from the proceeds of your Christmas Friendship Tree. The Friendship Tree is a unique idea and the strong response from your employees is admirable. It is our hope that each individual who helped make this gift possible has found the satisfaction of having given the gift of friendship."

*Nathan Koehler*  
Senior Companion Fund

"I am a Senior Companion and I want to personally Thank You and others at the EROS Data Center for the gift of money...I have been a Senior Companion for five years; it is rewarding to me, a good feeling to be serving people less fortunate than I am. I have

seven clients. I spend two to four hours with them once a week...Thanks again"

*Elsie Christopherson*

"The Board of Directors, the staff, and friends of the Union Gospel Mission are pleased and excited to be able to write this brief note to express our thanks to you for the gifts of love that were shared with us this Christmas. We pray that the windows of Heaven will be opened unto each of you...Thank you very much for what you have done and whatever you are able to do in the future.

*Fran Stenberg*  
Union Gospel Mission

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**SOCIAL SECURITY,  
WOMEN AND POVERTY**

(From Central Region EEO Newsletter)

By the year 2050, the percentage of elderly Americans will nearly double—from 11.6% of the population to 22%. Today, women constitute 60% of elderly Social Security recipients, 70% of the elderly poor, and 83% of all elderly people living alone and in poverty. Social Security has been a lifeline for elderly women, but half of the 8.4 million single elderly women receiving benefits live at or near the poverty level.

**Benefit Levels**

In December 1984, retired female workers received an average monthly benefit of \$396 compared to \$518 for male workers. Disabled women workers received \$371 compared to \$519 for disabled men. Elderly widows received survivor benefits averaging \$416, and divorced women received spouse benefits averaging only \$240.

**Income Sources**

The median annual income for all women over age 65 from all sources (including earnings, interest, pensions, and Social Security) was only \$5,599, compared to \$8,766 for men over 65 in 1983. Only 10% of elderly women receive private pensions. The median income from private pensions in 1982 for women was \$1,520, compared to \$2,980 for men.

**Poverty Rates**

The poverty rate for elderly women is 17.5%, as compared to 10.4% for elderly men, 42.4% of all elderly black women and 31.4% of elderly Hispanic women live in poverty. 49% of elderly white single women and 80% of elderly black single women live at or near the poverty level. Women comprise 74% of the 1.5 million elderly Supplemental Security Income (SSI) recipients. SSI is an assistance program for our nation's poorest elderly, as well as the blind and disabled.

## EROS PEOPLE: *The Other Life*

A new column about EROS people is inaugurated in this issue of *The Center Scene*. We are a community of about 350 persons who are known by what we do — HERE. We are computer scientists, foresters, geologists, secretaries, purchasing agents, information specialists, hydrologists, laboratory technicians, photo scientists, administrators, electricians, agricultural scientists, plumbers, chemists, analysts, engineers, security guards, maintenance persons, and many other things. But there IS life in outer space — outside EDC, that is. The new column will focus on the interesting and exciting "other lives" of our colleagues. In fact, it will be called, "The Other Life." We are beginning a file of candidates for future columns, so please send suggestions of associates along with a few words telling why they should be featured in "The Other Life" to the Technical Information Office.

*Phyllis*

## COMBINED FEDERAL CAMPAIGN

EDC/USGS employees contributed \$4,056.00 to this year's Combined Federal Campaign, which has the theme, "Love Finding a Better Way." This exceeds the previous high giving of \$3,826. *Carol Van Winkle* served as the coordinator of the EDC campaign, which includes National Health Agencies, National Service Agencies, International Service Agencies, and the local United Way.

## The Other Life: *Doug Gordon, Swimming Coach*



DOUG GORDON

*by Mary Jungling*

Doug Gordon spends 40 hours each week writing scientific computer programs at EDC.

Doug's "other life" includes many hours every week as a coach, confidant, and "big brother" to about 100 young persons, ages five through 18, who are members of the Sioux Falls competitive swimming team, Snow Fox.

As an assistant coach, he oversees the members who swim five to six times a week working with them on starts and turns, lung capacity, and speed for the competitive strokes. He travels with the members to swim meets and helps with fund raisers because the team is independently sponsored and supported by parents.

Doug says, "The team members themselves are the best and most rewarding part of my coaching responsibilities — rewarding for the medals they win, the thanks, the big birthday celebration they gave me, and, most importantly, for the thought that I may have helped some youngsters grow and that I may have contributed something to their lives in another way."

It isn't unusual for them to seek him out for advice about things unrelated to swimming. Coaching has other benefits for him too. He has access to reading materials that keep him abreast of new techniques, and swim meets provide him the opportunity to discuss and exchange ideas with other coaches. Coaching helps him to stay current with things that would otherwise easily be forgotten.

Doug's interest in swimming began at an early age. By the time he was six he was swimming competitively. Most of his initial learning resulted from older brothers and sisters who were avid swimmers. He actually never had structured swimming lessons; his swimming abilities progressed through years of participating on a swim team and swimming competitively.

In fact, it is competitive swimming that helped Doug discover his niche — the butterfly stroke. His first encounter with this swimming maneuver developed into a lasting association. At one of his earlier swim meets, he was registered for a medley race that required each team of four to swim four different strokes. His teammates were a little bit quicker than Doug and signed up for the other available strokes first, leaving the butterfly stroke for him. Nobody really knew how to do the butterfly — including Doug. He learned the stroke that day, and interestingly, it has turned out to be his favorite competitive stroke.

Doug wants to continue coaching and maybe get back into water polo and competitive swimming. He swam in one meet last year and discovered his times were better than when he was swimming competitively a few years ago. After scouting out all of the available pools in Sioux Falls, Doug believes a pool should be built for competition as well as recreation; a pool that offers essential competition features would make competitive swimming more attractive for participants in this area. But for now, you can find him at the "Y" giving the best of his butterfly experience to a bunch of kids who admire him.

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## TEXTBOOK PUBLISHED

*David A. Hastings* is coauthor of a recently published textbook, *Geology and Mineral Resources of West Africa*. The book lists J. B. Wright as the principal author. Dave's contributions were written from previously reviewed and/or published materials.

# EMPLOYEE NEWS

## WELCOME ABOARD

by K.C. Webde

### U.S. GEOLOGICAL SURVEY

**Doris Johnson**, a graduate of the Aberdeen School of Commerce, joins the Data Center as a secretary in the Computer Services Branch. Doris has completed 15 years of Government employment, including positions with the U.S. Public Health Service, the Internal Revenue Service, and the Social Security Administration. A native of Aberdeen, she moved to Sioux Falls in 1983. She enjoys a host of activities including reading, movies, dancing, tennis, biking, walking, swimming, and most outdoor sports.

### EOSAT

**Colleen Jucht**, secretary for EOSAT, is originally from Bridgewater. Colleen is married, has two children, and one grandchild. Her hobbies include reading and traveling.

### TGS, INC.

**Leon Callaban**, Sioux Falls, is a graduate of the Southeast Area Vocational Technical Institute. Leon, whose past experience includes working with silkscreen printing for eight years, joins the Technical Information Section as an illustrator. He is a wildlife artist who enjoys photography, camping, fishing, hunting, and outdoor sports.

**Brian Davis**, a graduate of Augustana College with an Associate of Arts degree in Computer Science, joins the Production Control Section of the Computer Services Branch. From Dell Rapids, Brian and his wife, Nancy, have three boys: Jamie, 7, Michael, 4, and Shelden, 1.

**John Faundeen** is a Customer Service Representative in the User Services Section. John majored in geography, earning a Bachelor of Arts degree from St. Cloud State University and a Master of Science degree from South Dakota State University. He also participated in a summer internship at the Remote Sensing Institute, Brookings. Originally from Blue Earth, Minnesota, John and his wife, Cheryl, now live in Sioux Falls. John enjoys racquetball, water skiing, and snow skiing.

**Chris A. Haugen**, Crooks, a graduate of Dakota State College with an Associate of Arts degree in Computer Science and a Bachelor of Science degree in Business Administration, is a programmer in the Software Development Section of the Computer Services Branch. Chris is a member of the South Dakota Air National Guard. He enjoys all sports.

**Ron Lietzow** joins the scientific staff of the Technique Development Section and Applications Branch. Ron, a native of Thief River Falls, Minnesota, earned his Bachelor of Science degree in Aeronautical Engineering from the University of Minnesota and his Master of Science degree in Forest Resources from the University of Idaho where he was a lecturer in remote sensing. As well as being a private pilot, Ron enjoys backpacking and fishing.

**Thomas R. Loveland** returns to the Technique Development and Applications Branch to join the scientific staff of the Bioscience Applications Section. A graduate of South Dakota State University with Bachelor's and Master's degrees in Geography, Tom's most recent position was the Directorship of the Resource Analysis Division of the Arizona State Land Department in Phoenix, Arizona. Tom, his wife Cam, and children Shannon, 4, and Bill, 2, live in Sioux Falls.

**Jane Stoterau** is filling a temporary position as a Data Technician in the Data Management Section. Jane has attended Dakota State College, Madison, and South Dakota State University, Brookings, and hopes to complete a degree in Physical Education and Recreation. She and her husband, Terry, live on a farm by Sherman, with daughters Sally, 3, and Tracy, 21 months. Jane enjoys horses and sports.

### VIKING ENGINEERING SERVICES COMPANY

**Nancy Hood** joins VESCO as a part-time draftsman. A graduate of Boise State University, Idaho, with a Bachelor of Science degree in Social Sciences, Nancy returns to the Data Center, having been previously employed by User Services and Quality Assurance Sections. Nancy farms at Pipestone, Minnesota, and works part-time in Computer Services at Sioux Valley Hospital. She enjoys putting together furniture kits and working with business programs on her home computer.

## EMPLOYEE AWARDS

**Bob Haas** received a special achievement award for his outstanding contributions as Technical Program Director for Pecora 10. His citation read that his effectiveness was an instrumental factor in the overall success of the symposium and reflected very favorably on the Data Center and the Geological Survey.

**Carol Nelson** was honored for undertaking extra responsibilities and completing an excellent performance on the Area Reduction Program. According to her nomination, her dedication, hard work and abilities surpassed expectations and resulted in a very successful program.

### Hermanson, Nelson Win National Awards

**Robin K. Hermanson**, Facility Engineer, Viking Engineering Service Company, and **William K. Nelson**, Engineering Assistant, received Energy Innovation Awards from Secretary of Energy John S. Herrington in ceremonies in Washington, D.C. Robin's award was for the Trickle Solar Wall/Deep Heat Radiant Floor project in the heavy equipment building. Bill's award was for the Computerized Load Management system.

## THE CENTER SCENE SPORTS A NEW LOOK

Your editor recently attended a workshop, "Newsletters: A Guide to Editing, Design, and Production," by Promotional Perspectives of Ann Arbor, Michigan. In addition to an intensive, in-depth classroom program, the workshop included a critique of attendees newsletters. The only adverse criticism received by *The Center Scene* was "too much copy" and "not enough white space." In this issue we are using some of the workshop faculty's recommendations to help make your newsletter more interesting and attractive: ragged bottoms and more space between articles and paragraphs. We hope you like it.