Sioux Falls
ARGUS-LEA
A Speidel Newspaper
Sioux Falls, S.D.
Daily and Sunday
Tuesday, February 12, 1974

EROS Visitors Arrive

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(Photo by Lloyd B. Cunningham)

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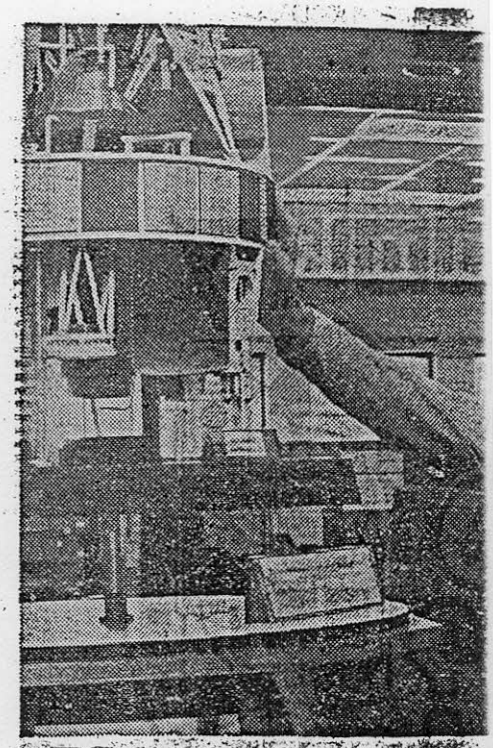

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S.D. Tourism Division

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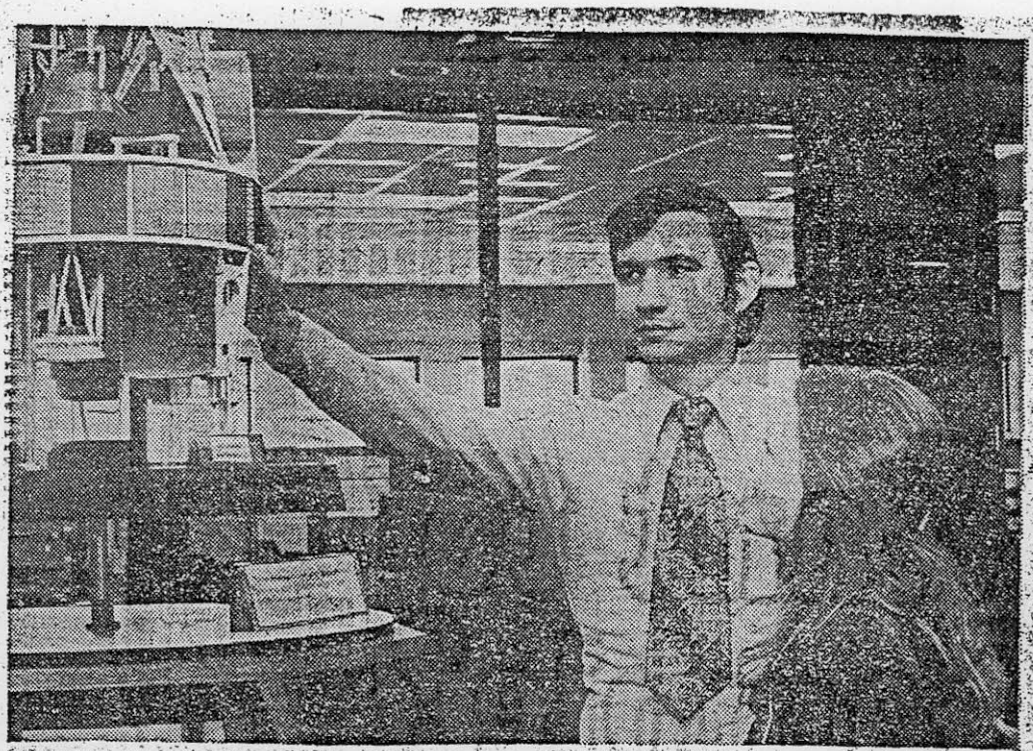

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The Earth Resources Observation System (EROS) Data Center is an awesome place. But visitors are making a mistake if they let phrases like "infrared bands of the electromagnetic spectrum" shy them away from this scientific station. It is confusing and awesome but it is also fascinating. The personnel at EROS conduct a half-hour tour which fractures the imagination. Fourteen panels in the center's lobby give detailed explanations about the station's function, and the guides understand a visitor's confusion. Constantly asking, "Are there any questions?" the guides offer easily understood answers.

After a tour of the building, groups are shown a 30-minute color film produced by NASA. The film tells about the Earth Resources Technology Satellite (ERTS), and how its "pictures" reach the earth. Diagrams explain the satellite with its TV system and a scanner, making 13 orbits around the earth every day.

The 1,778-pound flying observatory scans and senses the entire earth in four wavelength bands, covering the same area every 18 days. Signals are transmitted to receiving stations in California, Alaska and Maryland where they are again relayed to the station in Greenbelt, Md., and processed into photographic imagery. The final resting place for the ERTS images, plus film from Skylab and various aircraft, is the Sioux Falls Data Center. Canada and Brazil also have installed antennae in their countries and are receiving data about the earth.

As one of the center's receptionist-guides puts it, "It's really simple. EROS Data Center stores and prints images of the earth. The part that is confusing is how the images are made, relayed and used."

Phyllis Wiepking, community and experienced in photo interpretation and remote sensing," adds Mrs. Wiepking.

One of the questions a visitor always asks is, "Can I order a print?" The answer is a quick "Yes." Every guide and worker at the center stresses that the images are for everyone's use. They may be ordered by anyone in the United States or any foreign country. In fact, Eastman Kodak paid for an ad in the Natural History magazine which states just that. The heading reads, "Taxpayers, you have invested in the space program. Now benefit from your investment." The ad states that "anyone with $1.75 to spend" can order a nine-inch square black and white print of any place on the globe. The print will encompass 115 square miles.

According to Mrs. Wiepking, the center offers classes on understanding the data center's images. Short courses of a few days up to 30 days of schooling for foreign scientists are given by the center's training section.

South Dakotans may be interested in learning that their number one industry—agriculture—is one of the principal beneficiaries of the center's images. A report from NASA states," . . . The ultimate goal of agriculturists is a global crop inventory system to monitor planting cycles, identify crops, assess growth, estimate yields, monitor harvests, and reveal trouble zones requiring ecological action."

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Mundts' Office Announces White House D

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Of Satellite Data

U.S. Sen. Karl Mundt's office announced in Washington late Monday that Sioux Falls has been chosen as the location for an international data reception center for the federal government's earth resources program if experimental satellites prove successful.

Robert L. McCaughey, Mundt's administrative assistant, said the decision to locate the center in Sioux Falls was approved at the White House following a direct appeal to President Nixon by the South Dakota senator earlier this month.

The selection of the site — which had been targeted for a location in the Midwest — had been delayed for several months because funds for the program, called EROS for "Earth Resources Observational Satellite," had not been released by the Bureau of the Budget.

The appropriation involved approximately $300,000 which had been obtained by Sen. Mundt in an amendment to the EROS program. Mundt's amendment called for site selection and architectural and engineering planning for the proposed data center which is to receive signals from a satellite, McCaughey said.

McCaughey, speaking for Mundt who is hospitalized, said:

"Approval of South Dakota as the EROS data center through location at Sioux Falls marks a most significant victory for Sen. Mundt in his service to South Dakota and he has asked me to express his great pleasure and satisfaction over this decision."

The EROS program, McCaughey said, will utilize satellites for "remote sensing" in which data is collected from the earth's surface through devices such as cameras.

He said information collected by the satellite remote sensing equipment must be transmitted to a ground station for processing and dissemination.

This ground station, or data reception center, McCaughey said, will be developed and operated at Sioux Falls by the Department of Interior's Geological Survey agency which directs the EROS program.

The first earth resources experimental satellite to serve EROS is expected to be launched by the National Aeronautics and Space Administration (NASA) sometime during the first six months of 1972, McCaughey said.

This satellite is called ERTS for "Earth Resources Technology Satellite," he said, and will precede another launching 1973 of a similar satellite wh will be called ERTS-B.

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e Site Center

Designation of Sioux Falls as the site and Presidential release of the funds for the EROS program, McCaughey said, will permit Geological Survey to begin planning of the center in an effort to have plans prepared for construction of the center, once the initial experiment proves successful.

When constructed and during the first year of operation, Mundt's aide said, the center is expected to employ 150 persons with an annual payroll of $1.8 million. Most of the personnel will be individuals with scientific and technical backgrounds.

McCaughey said the first operational year of ERTS-A is expected to yield a transmission of approximately a quarter of a million photographs to the Sioux Falls center for subsequent processing and distribution and study.

EROS programmers, he said, plan to have 50,000 of these photographs taken of the conterminous United States.

McCaughey said that a recent evaluation by RCA, which made the study for Geological Survey of a ground date-handling system and potential sites, indicates that after about two years of operation about 1.5 million prints, both color and black-and-white, will be needed each year to supply public demand for resources information.

Mundt's assistant said the data center would be expected to attract to Sioux Falls representatives from a broad spectrum of industries to obtain a rapid "first look" at the returned data.

McCaughey said other nations will also be obtaining data returned from the satellite and it could be anticipated that Sioux Falls will be a focal point for not only visitations by representatives of foreign countries but possibly for location of those who wish a close proximity to the station and its valuable information.

He said: "When Sen. Mundt first took steps to obtain this installation at Sioux Falls following designation of the city as a potential candidate for the center's location, he felt at that time Sioux Falls could become a resources and environmental information center of the world.

"Since that time, this view has been considerably strengthened on the basis of information presented March 2 at the American Institute of Aeronautics and Astronautics Earth Resources Observations and Information System meeting in Annapolis, Md.," McCaughey said.

Selection Criteria Given

The selection of Sioux Falls, he said, was made on a number of criteria. Most important was geographic location. Sioux Falls is in a small portion of eastern South Dakota considered eligible for the center for coverage.

He said the ERTS satellite will be visible from Sioux

Data Center ... Continued on Page 2 Col. 1

Data Center

Continued from page 1

Sioux Falls to be 2 am pg 1 dr Falls whenever it is over any part of the conterminous United States, thus permitting transmission of pictures to the center as the actual photography is being made.

Other factors influencing the selection of Sioux Falls include:

- Freedom from radio interference;
- Adequate water supply;
- Freedom from seismic activity;
- High bearing strength soils;
- Communications facilities;
- Presence of supporting engineering and scientific services such as those available at Sioux Falls and Augustana colleges and at South Dakota State University, Brookings, where the Institute of Remote Sensing is located; and
- Availability of labor and other community resources such as industrial support and living support which deals with recreation, culture, education and housing advantages.

Credits Farrar, Others

McCaughey said: "Sen. Mundt's effort in behalf of Sioux Falls received great assistance from Governor Frank Farrar, other South Dakota state officials and from Merlyn Veren, the representative of the South Dakota Board of Regents and the State's Industrial Development Agency here in Washington, who has been most helpful since the first action taken by the Senator three years ago to involve South Dakota in this exciting new scientific endeavor.

"The capability of remote sensing as an environment tool has an unlimited potential," McCaughey said, "for its uses involve virtually everything ranging from identification of diseases in crops to the amount of water in snow and ice cover and its potential for flooding."

On the seacoasts, for example, he said it will be helpful in early detection of oil slicks and spills or other causes of pollution which might not otherwise be discovered until severe damage has been caused.

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Al A. Schock, president of the Sioux Falls Industrial and Development Foundation, Tuesday hailed selection of Sioux Falls as the site for a satellite data center.

Schock issued the following statement:

"There is only one word to describe the announcement that Sioux Falls has been selected as the site for the EROS Data Collecting Center; namely, thrilling.

"Accolades are due so many for the great effort that was exerted in obtaining this favorable decision that I hesitate to mention any by name. Obviously, it could not have been done without President Nixon's okay; the influence and hard work of Sen. Karl Mundt and his staff, particularly, Bob McCaughey; Representatives Ben Reifel and E. Y. Berry; and especially Merlyn Veren, special representative for the South Dakota Board of Regents who must be credited with doing most of the legwork in keeping up the enthusiasm for this project.

"On the state level we have had excellent leadership from Gov. Frank Farrar and Jack Gibson, state Republican chairman; and on the local level, men who have been extremely helpful were Ed Owen and Russ Pohl of Raven Industries, Louis Warren of Warren Radio Supply, the Harold Spitznagel architectural firm, and Mayor Mike Schirmer.

"The designation of our fine city as the site is but a preliminary and a very early step in the development of space science that will benefit not only the citizens of our nation but all of mankind living on this planet.

"In preparing for this great development, Sioux Falls and South Dakota will have to assume many responsibilities. These will be of no small magnitude. The cooperation of our entire citizenry will be required. As the chairman of the local Industrial and Development Foundation, I can report that to a man, the membership and directors will be dedicated to doing everything possible and necessary in expediting the construction of this center that will contribute much to improving the quality of life for all people."

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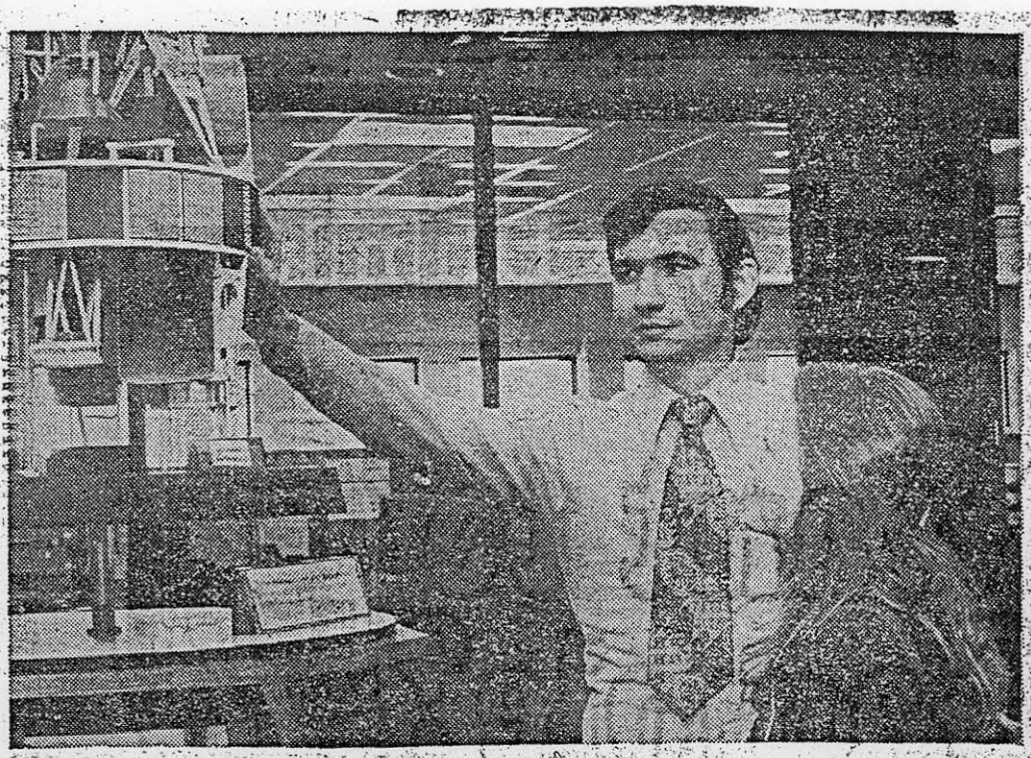

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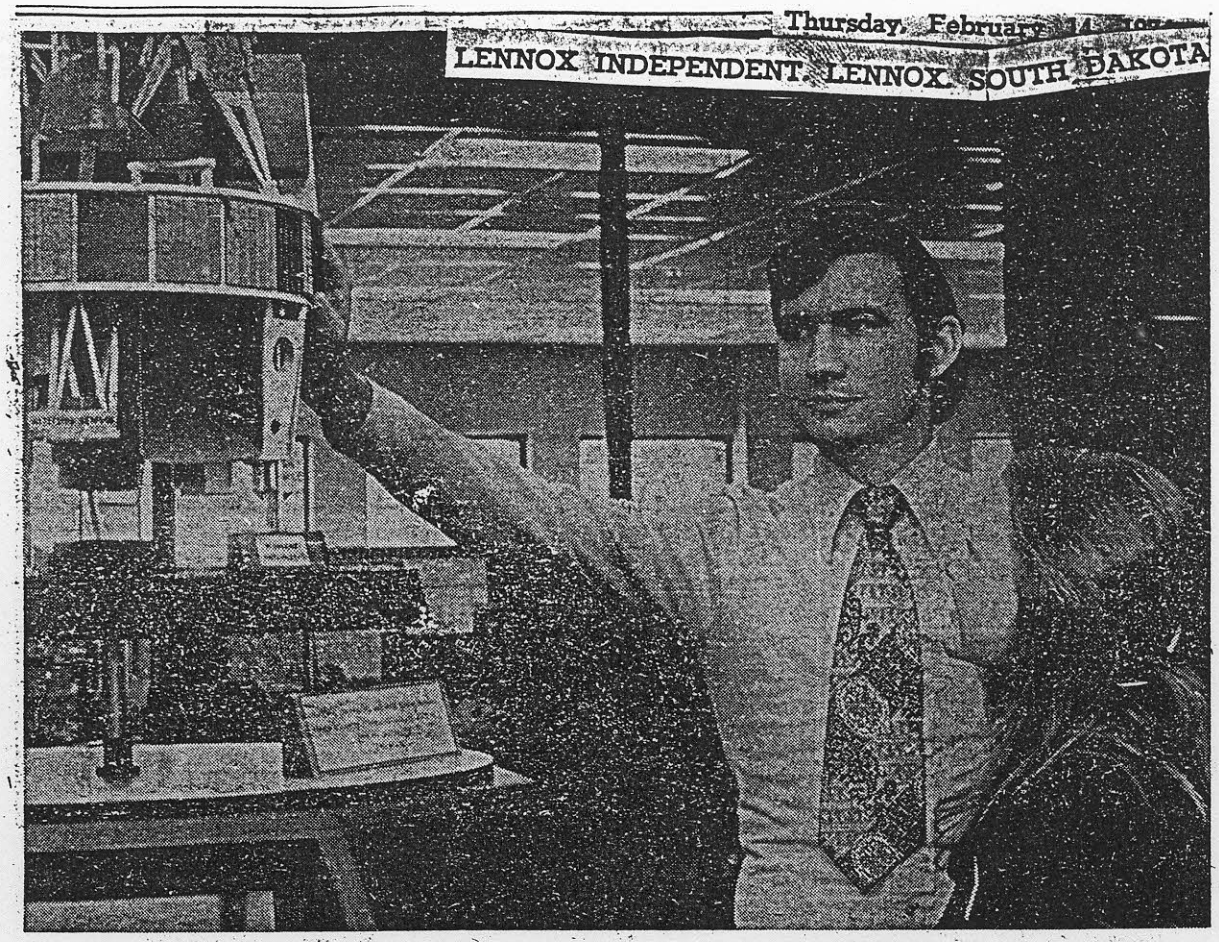

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EROS Center Is Storehouse Of Information For Scientist, Visitor

by Patty Pearson

In the middle of a pasture about 14 miles northeast of Sioux Falls sits a massive storehouse of information on the earth's treasures. The four million frames of photography now stored there will grow into 14 million in the coming years. Scientists, geologists, forest rangers, land planners, ranchers and countless other professionals, as well as curious laymen, will spend endless hours studying the photographs.

The Earth Resources Observation System (EROS) Data Center is an awesome place. But visitors are making a mistake if they let phrases like "infrared bands of the electromagnetic spectrum" shy them away from this scientific station. It is confusing and awesome but it is also fascinating. The personnel at EROS conduct a half-hour tour which fractures the imagination. Fourteen panels in the center's lobby give detailed explanations about the station's function, and the guides understand the visitor's confusion. Constantly asking, "Are there any questions?", the guides offer easily-understood answers.

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As one of the center's receptionist-guides puts it, "It's really simple. EROS Data Center stores and prints images of the earth. The part that is confusing is how the images are made, relayed and used."

Phyllis Wiepking, community affairs representative for the center, cautions visitors that they will not be able to sight an ore vein on the prints. "It takes scientific knowhow and an understanding of the images to read them. Although scientists have made amazing discoveries—such as potential target areas for mineral and petroleum exploration—using the images, they are trained and experienced in photo interpretation and remote sensing," adds Mrs. Wiepking.

One of the questions a visitor always asks is, "Can I order a print?" The answer is a quick "Yes." Every guide and worker at the center stresses that the images are for everyone's use. They may be ordered by anyone in the United States or any foreign country. In fact, Eastman Kodak paid for an ad in the Natural History magazine which states just that. The

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Many scientists believe that the satellite, launched July 23, 1972, is the beginning of a new era. One user of ERTS data, Dr. Robert Colwell of the University of California, desrcibes it as "the most important photographic mission in man's history."

South Dakota is an integral part of the technical and facinating venture into space. A tour of the Data Center at Sioux Falls gives citizens a better understanding of this part of the space program.

Mrs. Wiepking urges groups to contact the center before coming for a tour, and adds that although the film is not usually shown to drop-in guests, showings may be arranged. The EROS Data Center is located off Interstate 90 on County Road 121. Visitors are welcome from 8 a.m. to 4:30 p.m. during week days. Tour guides are on duty from 10:30 a.m. to 2:30 p.m.

The Data Center is open from 10 a.m. to 4:30 p.m. during the weekend, but tours are not provided. Guests are welcome to view the

EROS visitors from Albany, Georgia examine the model of the Earth Resources Technology Satellite during their tour of the Sioux Falls Data Center. Visitors are welcome at the center throughout the week.

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After a tour of the building, groups are shown a 30-minute color film produced by NASA. The film tells about the Earth Resources Technology Satellite (ERTS), and how its "pictures" reach the earth. Diagrams explain the satellite with its TV system and a scanner, making 13 orbits around the earth every day.

The 1,778-pound flying observatory scans and senses the entire earth in four wavelength bands, covering the same area every 18 their countries and are receiving data about the earth.

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According to Mrs. Wiepking, the center offers classes on understanding the data center's images. Short courses of a few days up to 30 days of schooling for foreign assess growth, estimate yields, monitor harvests, and reveal trouble zones requiring ecological action."

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Economic Growth Through Industrial Expansion Is Basic Goal Of Local Development Foundation

The basic goal of the Sioux Falls Development Foundation is to foster the growth of the local economy through industrial expansion.

Industrial growth consists of the expansion of existing industries, new plant startups and the attraction of out-of-state companies to this area.

Such expansion has the primary purpose of creating more employment opportunities and commerce which will, in turn, yield economic benefits to the community.

The past year has been a progressive period for the foundation with the completion of the Earth Resources Observation Systems (EROS) Data Center, expansion by many local industries, the location of new industries and the development of the 390-acre industrial park near the airport terminal.

All these operations, which contribute to the present-day increase in the local economy, will in the future prove to be a strong factor in the growth of local commerce.

A New Era

The most significant event was the opening of the EROS Data Center. The dedication of the international facility marked a new era for the broad spectrum use of space technology in practically all the sciences and disciplines related to man and his planet.

After more than two years of intense groundwork the center was dedicated. Interior Secretary Rogers Morton spoke at the ceremonies. International flags flew over the rolling South Dakota plains as the opening ribbon was cut by federal dignitaries, an entire contingent of congressional representatives, and Al Schock.

To Schock the dedication was a tremendous personal success. It was under his leadership that the Sioux Falls Development Foundation acquired the land and built the EROS building. The foundation, as owner, now leases the building to the government.

After four years Schock retired as president of the foundation and was succeeded by Russ Pohl of Raven Industries. Pohl, a hard advocate of the EROS project, has always stressed the many benefits EROS would bring to

Benefits Felt

Sioux Falls has felt the first in a long string of EROS benefits to come. More than scientists and industrial representatives from throughout the world came to Sioux Falls to attend the American Society of Photogrammetry Symposium. From 20 to 30 native tongues could be heard discussing the new remote sensing hardware on display in the International Room of the Downtown Holiday Inn.

NASA Skylab astronaut Rusty Schweikart piloted a jet aircraft into the airport and spoke of the many but as yet unheralded benefits of remote sensing from space.

Shortly after EROS was dedicated Goodyear Tire & Rubber began studying Sioux Falls as a prospective site for a huge manufacturing plant. When Goodyear announced that their representatives were to be in town, the Development Foundation executive vice president, Dave Stenseth, was out of town.

With less than a two-hour notice he was back in Sioux Falls coordinating an extensive campaign that eventually touched almost every city, county, education, industry and labor leader in the area. A team of 10 Goodyear corporate officials scoured the community sifting and searching for specific location criteria.

Labor Survey Conducted

An extensive labor survey was conducted. Survey forms were distributed through local and area newspapers. Radio and television stations responded through paid advertisements and public service spots. More than 1,600 forms poured into the foundation offices, expressing the intense interest of local citizens in new industry.

For what seemed like years, but was in reality two months, it looked as if Sioux Falls won! Disappointingly, however, Goodyear located close to the Gulf Coast area where most of their supplies come from.

Sioux Falls did come very close to capturing the major employer, and by coming so close knows it is fully capable not only of competing in the region but also with every city in the nation.

But Sioux Falls did have its share of industrial groundbreakings. More than 18 groundbreakings in 1973 alone signified continuing growth in Sioux Falls.

Providing for that growth is the primary purpose of the new industrial park. It is large and fully developed, a tract that offers a definite and distinct asset in the truly competitive marketplace of industrial development. It is towards the goal of expanding the industrial base of the community that the foundation again casts its eyes in 1974.

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PROGRESS '74

Data Center Employs Over 200; Payroll Nearing $2,500,000

By PHYLLIS WIEPKING
EROS Public Representative

The Earth Resources Observation Systems (EROS) Data Center marked the beginning of 1974 with the relocation of personnel and equipment from temporary downtown Sioux Falls facilities to the new Karl E. Mundt Federal Building.

All functions of the Data Center, administered for the Department of the Interior by the U.S. Geological Survey, are now at the permanent site, approximately 14 miles northeast of Sioux Falls and seven miles west of Garretson.

More than 200 are currently employed at the facility. The initial staff of 13 personnel occupied the downtown offices in October 1971. When groundbreaking ceremonies were held in April 1973 the staff had grown to 29 and by the launch of the Earth Resources Technology Satellite (ERTS) in California on July 23, 1972, to 58. The number of employes had increased to 70 by August 1973 and exceeded the 200 mark this month.

With the exception of key personnel, professionals educated and experienced in their various disciplines, the majority of the employes are residents of this area and have been trained at the Data Center. The annual payroll is approaching $2,500,000.

The EROS program bears the principal responsibility of supporting operational use of remote sensing data for the development, management and monitoring of earth resources.

The center is the national center for the processing and dissemination of space and aircraft acquired photographic imagery and electronic data of the earth's resources and for

orbiting observatory, at an altitude of approximately 570 miles images 115- by 115-mile areas of the earth through different wavelength bands of the visible and near infrared portions of the electromagnetic spectrum, in effect viewing the earth through different color filters. Each type of feature tends to exhibit a unique "tone signature" — the combination of brightness values seen in the multiband images or photographs. Once this signature is known, the feature can be identified. ERTS covers the same area every 18 days, thereby providing repetitive coverage for monitoring croplands and forests, studying snow pack and water storage and changes in coastal and inland wetlands. Other typical applications of the imagery include resources planning, mineral prospecting, and pollution monitoring.

A news story in the Feb. 10 issue of the New York Times states, "Results so far suggest that, as NASA reported, 'many of the major crops and species can be identified well enough for inventory from space; that forest fire and flood damage, even in the remotests areas, can be economically and quickly assessed; that snow surveys can be made with sufficient precision to aid in the control of hydraulic power from dams, and that new geological features can be found even in well-mapped areas.'"

Data from the satellite are transmitted to receiving stations in Fairbanks, Alaska; Goldstone, Calif.; and Greenbelt, Md., and recorded on magnetic tapes. The tapes are converted to film at the Goddard Space Flight Center at Greenbelt and master reproducibles are sent to the EROS Data Center where the photographic and electronic data products are processed and disseminated.

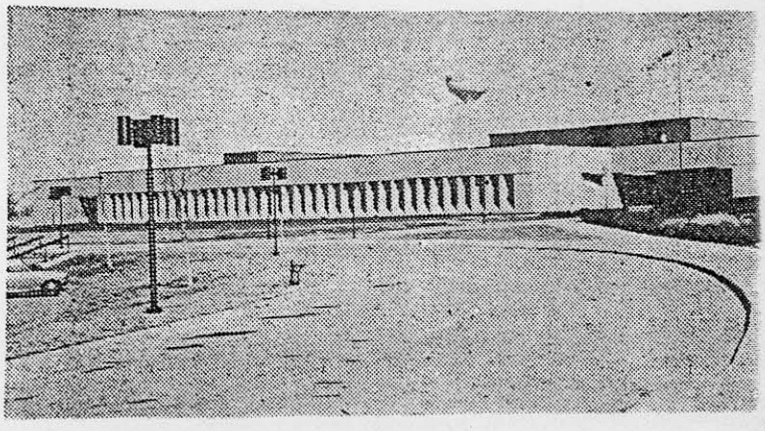
Who are the users of these space "photos"?

A recent survey shows that private industry and commercial concerns are the largest single category of users followed closely by agencies of the federal government, foreign industry and governments, universities and colleges, private individuals and state, county, city and local governments. The number of weekly requests for information and imagery from the Data Center has reached a current level of about 1,300 inquiries per week. It is projected that orders of imagery and electronic data will reach $850,000 for the current fiscal year.

ERTS images are in the public domain and can be ordered by any government agency, private industry or individual from any country in the world. Canada and Brazil have installed receiving stations and are now receiving data directly from the spacecraft. Several others nations are studying the possibility of installing antennas in their countries.

You wish to order a "photo" of your community taken from an altitude of 570 miles in space?

The accompanying photos trace such a space photo from the time the film arrives at the EROS Data Center until your photo is on its way to you.



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The center is the national center for the processing and dissemination of space and aircraft acquired photographic imagery and electronic data of the earth's resources and for training and assisting users in the application of such data.

The Data Center is a treasure trove of information on the earth and its resources. On March 30, 1974, holdings at the Center included 6,000 Apollo and Gemini frames of photography, 19,000 Skylab photos, 351,000 ERTS images, 1,331,000 NASA aircraft photos and 2,955,000 Department of Interior aerial mapping photos for a total of 4,662,000 frames of aircraft photos and space images.

From 12,000 to 12,500 ERTS frames are added to the data orbiting observatory, at an altitude of approximately 570 miles images 115- by 115-mile areas of the earth through different wavelength bands of the visible and near infrared portions of the electromagnetic spectrum, in effect viewing the earth through different color filters. Each type of feature tends to exhibit a unique "tone signature" — the combination of brightness values seen in the multiband images or photographs. Once this signature is known, the feature can be identified. ERTS covers the same area every 18 days, thereby providing repetitive coverage for monitoring croplands and forests, studying snow pack and water storage and changes in coastal and inland wetlands. Other typical applications of the imagery include resources planning, mineral prospecting, and pollution monitoring.

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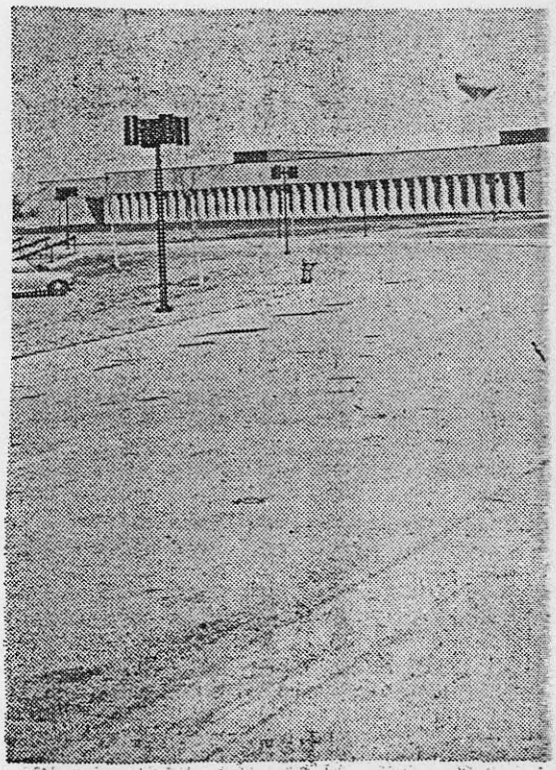


The Karl E. Mundt Federal Building, on 318 acres west of Garretson, covers nearly 110,000 square feet rectangle 314 by 342 feet. Included are two penth house for rooms, a computer condensor room and

FRIDAY, SEPTEMBER 19, 1969

Sioux Falls Considered For Satellite Data Unit

WASHINGTON, D.C.—Efforts by Sen. Karl Mundt, R-S.D., and Rep. Ben Reifel, R-S.D., have led to Senate Approapriations Committee action to strengthen the natural resources survey program of "remote sensing" called EROS, and possibly open a stronger role for South Dakota in this rapidly expanding scientific field.

EROS is the Department of Interior's Earth Resources Observation Satellite program to utilize remote sensing data acquired from special photographic equipment and other devices contained in satellites which will orbit the earth.

Mundt said the appropriations committee agreed to his proposal to add $300,000 to the EROS program for designing a central data reception facility to be located at a site to be selected, and for which a number of Midwest cities appear to be eligible, according to preliminary scientific findings.

He said preliminary indications are that the site facility must be located at a city containing a modern jet airport and a number of other facilities. The geographic area considered eligible for the facility, which would obtain data from satellites, includes a portion of Southeastern South Dakota containing Sioux Falls.

Mundt said geographic requirements for the proposed facility making eligible several midwest states results from necessity of a location, which provides complete coverage of the United States by a satellite.

"Sioux Falls would be one of a number of cities eligible for the facility, but the only one in South Dakota meeting the preliminary qualifications because of its geographic location and its up-to-date airport," he said. Mundt added, "I have received a definite promise from the operation agency destined to handle this large new data receiving and processing center that Sioux Falls will be among the cities personally visited and evaluated by the site selection panel."

Mundt said he and Reifel — each is ranking Republican on their respective interior appropriations subcommittees — have been working on the data center facility planning idea for several months.

"Through Congressman Reifel's efforts, the House included a provision to earmark $125,000 of the $3.8 million EROS budget specifically for planning the facility, which is nearly half of the amount required on the basis of estimates we have," he said.

"Our committee in the Senate has agreed to my recommendation for providing the other half of the amount through my amendment revising the House proposal by bringing the EROS funding to $4.1 million with $300,000 specifically directed to this data center facility planning and programming," Mundt said.

He said the committee action requires Senate approval and then in a House-Senate conference the Reifel and Mundt versions will be coordinated.

Mundt said the facility for processing data from a satellite conducting remote sensing will be required in the "not too distant future as the NASA satellite in late 1971 or early schedule calls for launch of the first earth resources technology 1972."

Remote sensing is already an institutionalized program in South Dakota at the State University in Brookings under direction of Victor I. Myers, one of the top scientists in the field, Mundt said.

Mundt said among the many examples of what can be accomplished through satellite remote sensing will be more accurate crop production forecasts by the Department of Agriculture made at considerably less expense as well as location of disease infestations in crops more quickly than the cumbersome effort of having crews of men making actual field surveys.

COPY

March 31, 1970

Honorable Richard M. Nixon
The White House
Washington, D.C. 20500

Dear Dick:

My Administrative Assistant has filled me in on the telephone of the report which he received from your staff advising them you had made the decision to designate Sioux Falls, South Dakota, as the site for the Data Receiving Center in the event the Satellites A and B of the ERTS-EROS program prove to be successful experiments.

Dick, words cannot express my deep appreciation for this wonderful decision in behalf of the State of South Dakota and especially Sioux Falls. I am sure that if the United States has the scientific ability to place a man on the moon that the ERTS-EROS program will prove successful and will mean much to the development of our resources and the control of pollution throughout the country.

South Dakotan's from all parts of the state have been calling my office asking that I convey to you their thanks for your part in designating Sioux Falls to be the site for the construction of this Data Receiving Center when the ERTS-EROS experiment is successfully concluded. I hope that the Administration will work with the representatives from Sioux Falls in the days and weeks ahead on the negotiations for the land, the construction of the needed building and other facets which are an integral part of the program so that the Earth Resources Observation Survey can be readily available for all who will avail themselves of this service which, in my opinion, will be another big step forward for mankind.

Again, Dick, my most sincere appreciation for this decision in favor of my home state and with best wishes and kindest personal regards, I am

Cordially yours,

Karl E. Mundt, U.S.S.

KEM:mmt

THE WHITE HOUSE

WASHINGTON

April 2, 1970

Dear Karl:

Thank you for your thoughtful letter of March 31. It was sincerely appreciated. I want you to know that I share your pleasure that it was possible to designate Sioux Falls as the site for the Data Receiving Center as part of the ERTS-EROS program.

With warm regard,

Sincerely,

Honorable Karl E. Mundt
United States Senate
Washington, D.C.

EROS Could Put Sioux Falls On

South Dakota, and Sioux Falls in particular, received a major shot in the arm when a decision was made March 30 to locate an international data reception center for the federal government's earth resources program of experimental satellites here.

"We look for this center to provide the city with an exciting future," Mayor M. E. Schirmer said, "this is something that could not only put Sioux Falls on the map of the United States, but also on the map of the world.

"We should caution people that there is much work to be done to build this center to its peak potential, and once it is done it will provide for the betterment of mankind throughout the world.

"We in Sioux Falls look at this as a project not only for Sioux Falls and South Dakota, but for the entire upper Midwest. If the project is as successful as most scientists feel it will be, foreign countries, colleges and universities throughout the world will be sending representatives to Sioux Falls to learn and in turn take the knowledge they learn and teach it to others.

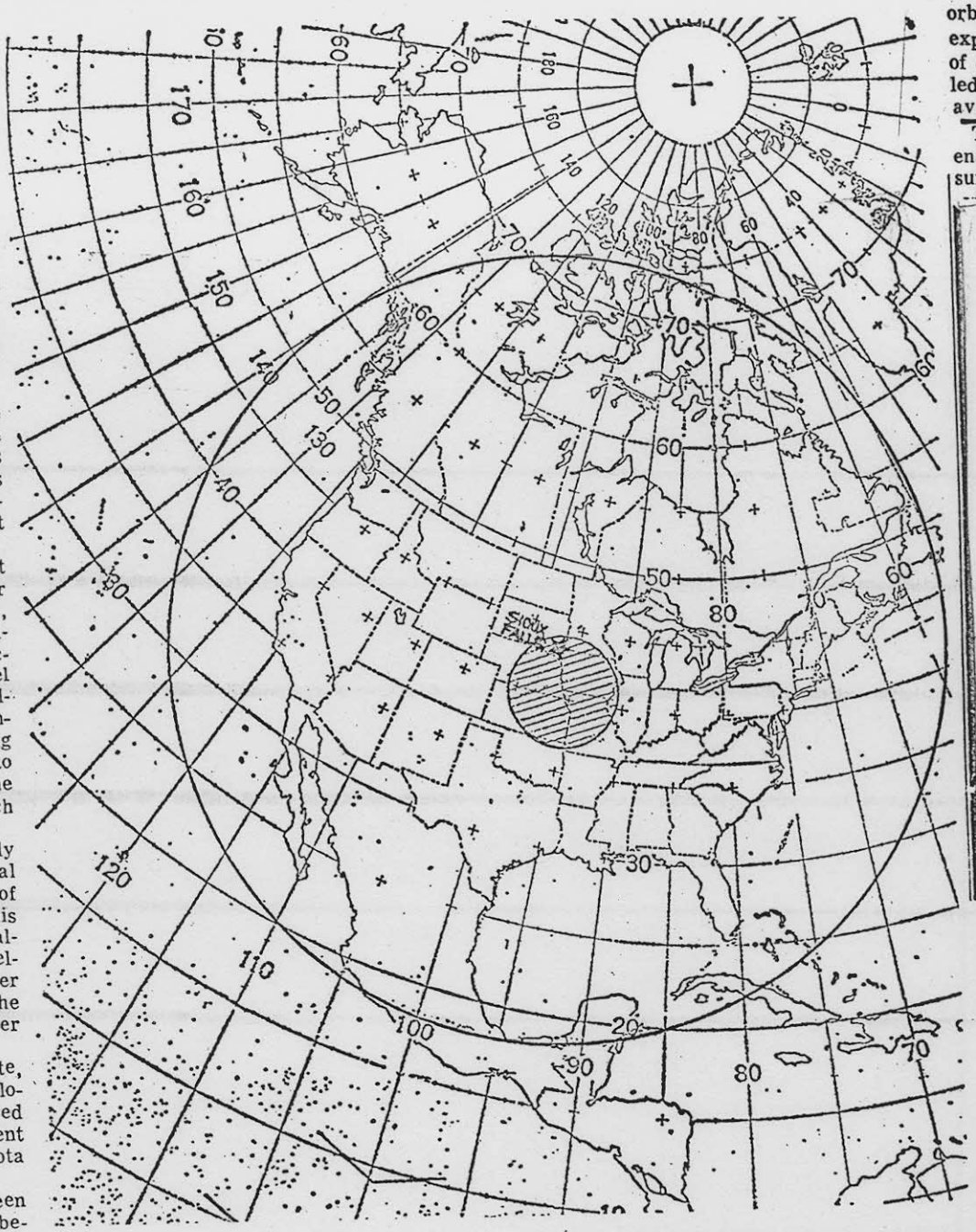
"The center will definitely have an effect on the cultural and economical development of the city. To what extent this effect will be is hard to visualize, but if the center is developed to its fullest capacity over the next 1-to 20-year period, the installation could be worth over $500 million."

The selection of the site, which had been targeted for location in the Midwest, followed a direct appeal to President Richard Nixon by South Dakota Sen. Karl Mundt.

The site selection had been delayed for several months because funds for it had not been released by the Bureau of the Budget. But following the appeal, approximately $300,000, which had been added to the program, called EROS for "Earth Resources Observational Satellite," by Mundt amendment, was released.

The $300,000 is the initial funding of the program here and will be used for site selection and architectural and engineering planning for the proposed center, which is to receive signals from a satellite.

After construction and during the first year of operation, the center is expected to employ



The big circle shows the area of North America that can be covered directly by the data reception center planned for Sioux Falls. The center will receive signals from spacecraft of the Earth Resouces Orbiting Satellite (EROS) if that program proves successful. A ground location anywhere within the small circle is capable of receiving signals from the spacecraft in real time for any geographic area within the contiguious United States. Any possible site location outside the small circle would have necessitated receiving satellite signals on a delayed basis for parts of the United States mainland rather than directly.

Designation of Sioux Falls as the site and presidential release of the funds for the program will permit Geological Survey to begin planning of the center in an effort to have plans prepared for construction of the center once the initial experiment proves successful.

McCaughey said the first op-

be used in coordination with data gathered by aircraft to survey and manage earth resources.

Managing the earth's limited resources — food, ocean life, minerals, water supply, etc. — is the key benefit of the EROS program, and by utilizing the satellites to obtain long-range

in the planning and later management of irrigation projects and other large engineering and reclamation projects.

Of special interest to South Dakotans and farmers throughout the Midwest is the fact that continuation of the satellite in

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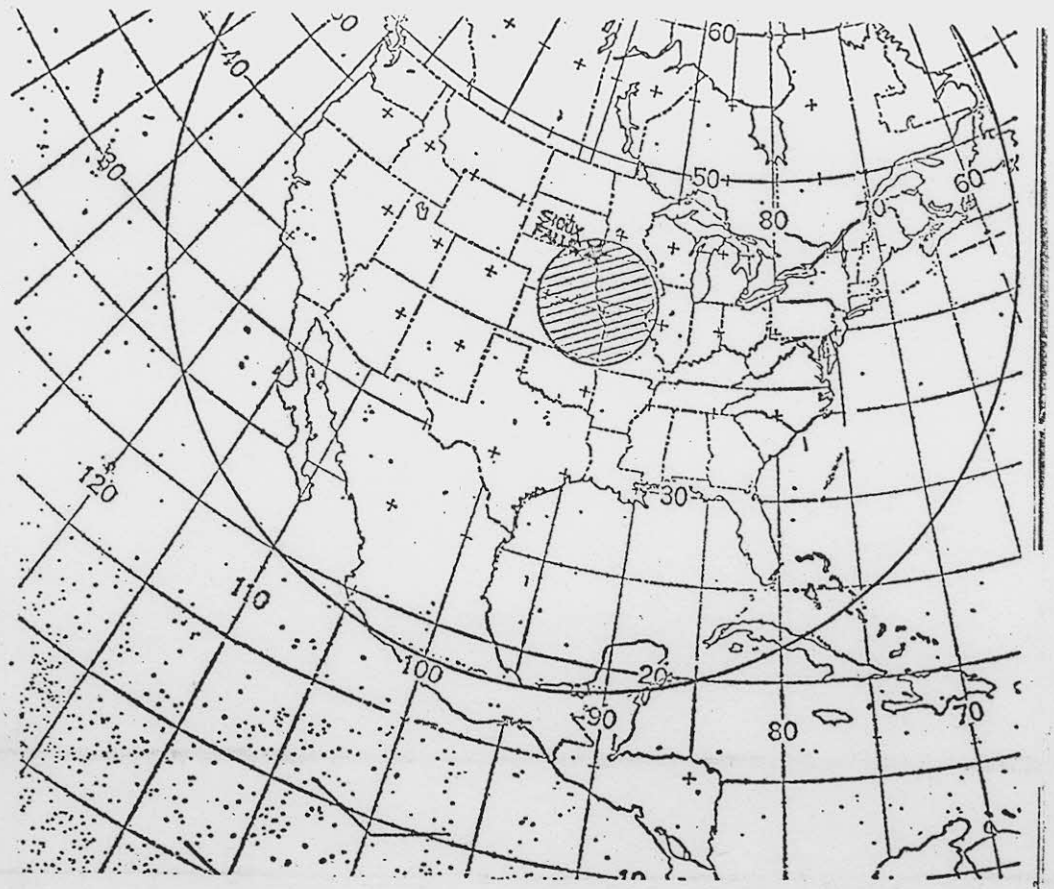
After construction and during the first year of operation, the center is expected to employ 150 persons with an annual payroll of $1.8 million. Most of the personnel will be individuals with scientific and technical backgrounds.

The center will be developed and operated in Sioux Falls by the Department of the Interior's Geological Survey agency which directs the EROS program.

The first experimental satellite to serve EROS is expected to be launched by the National Aeronautics and Space Administration (NASA) sometime during the first six months of 1972, according to Robert L. McCaughey, Mundt's administrative assistant.

That satellite, called ERTS for "Earth Resources Technology Satellite," will precede another launching in 1973 of a similar satellite called ERTS-B.



The big circle shows the area of North America that can be covered directly by the data reception center planned for Sioux Falls. The center will receive signals from spacecraft of the Earth Resouces Orbiting Satellite (EROS) if that program proves successful. A ground location anywhere within the small circle is capable of receiving signals from the spacecraft in real time for any geographic area within the contiguious United States. Any possible site location outside the small circle would have necessitated receiving satellite signals on a delayed basis for parts of the United States mainland rather than directly.

Designation of Sioux Falls as the site and presidential release of the funds for the program will permit Geological Survey to begin planning of the center in an effort to have plans prepared for construction of the center once the initial experiment proves successful.

McCaughey said the first operational year of ERTS-A is expected to yield a transmission of approximately a quarter-million photographs to the Sioux Falls center for subsequent processing, distribution and study.

Additional studies and evaluations by RCA for the Geological Survey of a ground date-handling system and potential sites indicate that after about [illegible] years of operation about 1.5 million prints, both color and black-and-white, will be needed each year to supply the public demand for resources information.

With growth, the center's annual operating budget is expected to be $16 million.

Once the system is in operation, every mile of the United States will be covered every 18 days. The satellite data will also be used in coordination with data gathered by aircraft to survey and manage earth resources.

Managing the earth's limited resources — food, ocean life, minerals, water supply, etc. — is the key benefit of the EROS program, and by utilizing the satellites to obtain long-range data, zeroing in with aircraft for clearer images and then processing both sets of photographs at the Sioux Falls center, this management can be obtained.

The pictures sent to the Sioux Falls center will be map-like in quality and will show the distribution of water, vegetation and cultural features and permit viewing of the bottoms of lakes and reservoirs to depths of over 100 feet. The maplike character of the picture makes sequential views easy to compare so that an accurate record can be developed of the changes taking place in this state and in the total environment.

The views of the earth from space will be especially helpful in the planning and later management of irrigation projects and other large engineering and reclamation projects.

Of special interest to South Dakotans and farmers throughout the Midwest is the fact that continuation of the satellite in

Falls On U.S. And World Map

orbit throughout the seasons is expected to add to the accuracy of crop forecasts and the knowledge of forage and timber availability.

This same characteristic will enable scientists to extend their surveys into the winter months. Observations of snow and ice distribution will be valuable to water managers and those interested in adding to the water supply by providing new knowledge about ground water.

The need for knowledge of soil moisture, ground water distributions and other resources information will bring direct benefits to the citizens of South Dakota and the nation. Thus, success in this effort could make South Dakota a major exporter of technology and attract students and scientists from throughout the world to this state.

1 Sioux Falls Argus-Leader
Tues., April 21, 1970
SECTION F
For mail delivery, April 22, 1970

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VOLUME 10 NUMBER 30 THURSDAY, APRIL 2, 1970 SECTION A, PAGE ONE

Area enters space age; picked for EROS center

"What does EROS mean?" "What is it all about?" These and hundreds of other questions were asked by people of this area Monday evening after the announcement from Senator Mundt's office that Sioux Falls had been designated the site for the EROS Center.

The EROS (Earth Resources Observation Satellite) program will use an orbiting satellite to photograph the earth and send back pictures to give information on a variety of conditions. In addition to cameras, the satellite will also have remote sensing equipment to further aid in interpreting soil and crop information, pollution of air and water, soil moisture and the accumulation of moisture in snow. One expert has described the program, saying, "It will have the most direct benefit to the greatest number of people" in helping "to survey and manage the Earth's limited resources -- food, ocean life, minerals, our water supply and the like."

Sioux Falls has been selected for the location of the ground installation which will receive, graphs taken of the continental United States. The satellite will be placed in a polar orbit and will send back pictures of South Dakota and other parts of the country at approximately 9:30 a.m., every 17 days. These pictures will be map-like in quality and will show the distribution of water, vegetation and cultural features, and permit viewing of the bottoms of lakes and reservoirs to depths of over 100 feet. Pictures taken over a period of time will be useful in marking the changes taking place in our environment.

The need for knowledge of soil moisture, ground water distribution and other resources information, goes beyond state and national boundaries. So the success in this effort could make South Dakota a major exporter of technology and attract students and scientists from throughout the world, to this state.

The first two mission planned for the satellites will provide for the development of the technology. The spacecraft technology has advanced to the point of being very predictable. Sensors and data handling are not as far along. Following the initial development work, the scientists predict they can proceed toward an operational system which will provide benefits to nearly everyone on earth

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Sioux Falls has been selected for the location of the ground installation which will receive, process and interpret these pictures from space.

Senator Mundt's office said the selection of Sioux Falls was made on a number of criteria. Most important was geographic location. Sioux Falls is located in a small portion of the country which can receive data from the satellite while it is over any part of the United States, thus permitting transmission of pictures to the center as the actual photograph is being made.

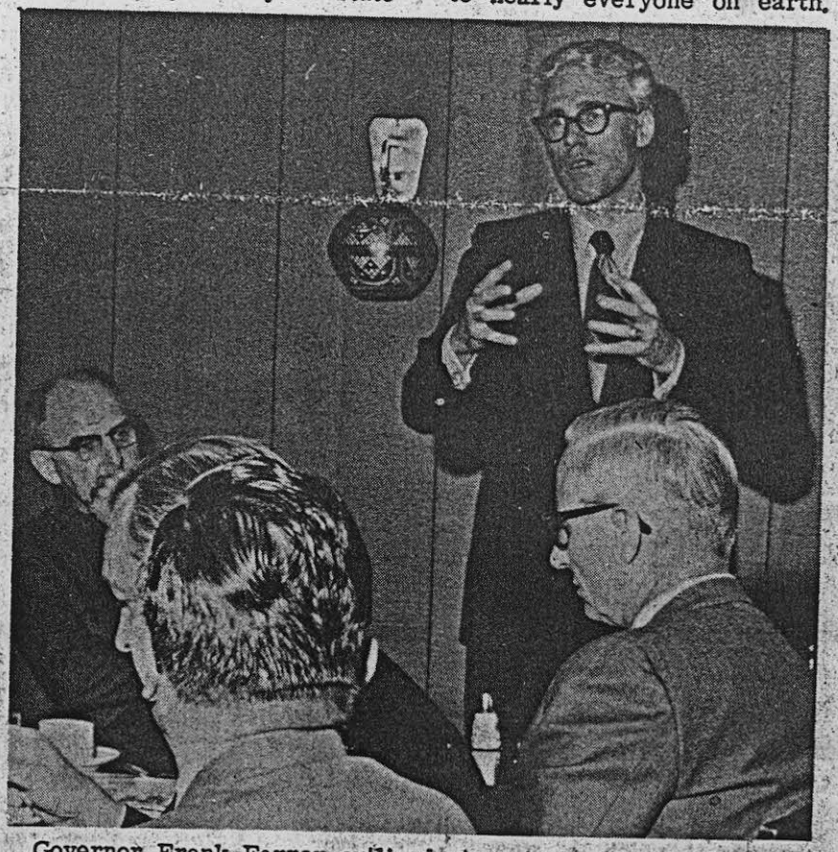
With the announcement that Sioux Falls had been selected for the data reception center, President Nixon also released $300,000 for the site plans and for architectural and engineering design. The satellite to serve EROS is expected to be launched by the National Aeronautics and Space Administration (NASA) sometime during the first six months of 1972, Robert Mc Caughey, Senator Mundt's administrative assistant, said. The Geological Survey will begin planning the center immediately, Mc Caughey said, in an effort to have plans prepared for construction of the center, once the initial experiment proves successful.

250,000 Pictures

When constructed, the first year of operation, Mundt's aide said, the center is expected to employ 150 persons with an annual payroll of $1.8 million. Most of the personnel will be individuals with scientific and technical backgrounds.

Mc Caughey said the first operational year of the first satellite is expected to yield a transmission of approximately a quarter of a million photographs to the Sioux Falls center for subsequent processing and distribution and study. EROS programmers, he said, plan to have 50,000 of these photos and reservoirs to depths of over 100 feet. Pictures taken over a period of time will be useful in marking the changes taking place in our environment.

The need for knowledge of soil moisture, ground water distribution and other resources information, goes beyond state technology has advanced to the point of being very predictable. Sensors and data handling are not as far along. Following this initial development work, the scientists predict they can proceed toward an operational system which will provide benefits to nearly everyone on earth.



Governor Frank Farrar outlined steps to be taken by the Sioux Falls community to insure continuing progress under the EROS programs at a Tuesday morning breakfast of city officials and community leaders. Farrar praised the local leaders for their cooperation on all levels of government in obtaining the EROS data collecting center for the Sioux Falls area. The governor announced that he was flying to Washington Wednesday to meet with officials of the Bureau of the Budget. (Photo by Bob Sanders)

Officials jubilant over EROS site selection

Sioux Falls' Mayor M. E. Schirmer said Tuesday morning that the long term benefits to this area from the location of the EROS Data Collection Center is "beyond anyone's comprehension". The mayor predicted that in addition to the EROS Center Sioux Falls would probably be selected for many laboratories and scientific companies for site locations.

While the initial operation of the EROS Center will employ about 150 people, it is predicted the eventual employment, if the program is successful, could exceed 4,000.

Governor Frank Farrar told Sioux Falls community leaders at a Tuesday morning breakfast that he is asking the State Planning Agency to consult extensively with members of the Sioux Falls city government and Minnehaha County officials on ways state government can help in long-range planning for the data center to assure smooth transition from the present size of the community to increased demands placed on the city by the EROS project.

Farrar said, "I am personally pleased with the splendid cooperation at all levels of government to help with approval and development of a major project, which could make Sioux Falls the resource information capital of the world."