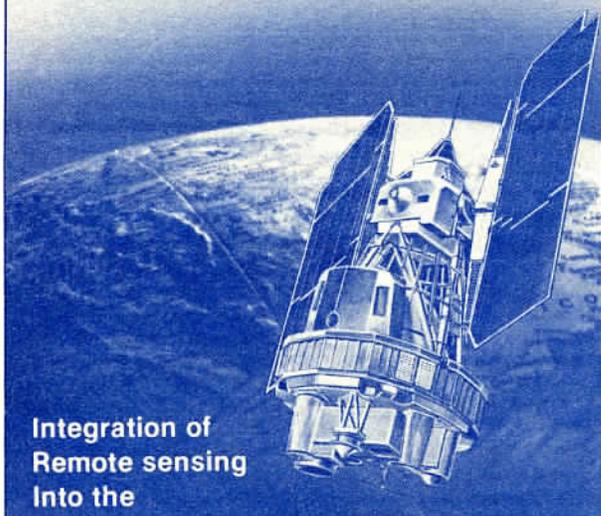


*Pecora Symp.*

(1980)

**An event of exceptional  
importance to energy  
and mineral explorationists  
is rapidly approaching:**



**Integration of  
Remote sensing  
Into the  
Exploration Process**

# **SIXTH ANNUAL PECORA SYMPOSIUM AND EXPOSITION**

Sioux Falls, South Dakota, April 13-17, 1980

Sponsored by:  
**Society of Exploration Geophysicists**

Cooperating Sponsors:  
United States Geological Survey  
American Association of Petroleum Geologists  
Geosat Committee  
National Aeronautics and Space Administration

**YOU ARE INVITED TO AN EVENT** of exceptional importance to energy and mineral explorationists. The Sixth Annual William T. Pecora Symposium and Exposition on Remote Sensing will be held April 13-17 in Sioux Falls, South Dakota.

## An Interdisciplinary Approach

The importance of Pecora VI centers around its development of the theme, **Integration of Remote Sensing into the Exploration Process**. The four-day program focuses on the application of remote sensing methods in conjunction with geophysical, geochemical and geological techniques in the search for hydrocarbons and minerals. The technical program is structured to unfold in logical sequence from the first day. It begins with a tutorial overview to familiarize delegates with the many forms of remote sensing and how they combine with state-of-the-art ground-based data gathering methods and concludes with Research Workshops exploring new directions and new applications.

An important objective of the technical program has been to intermix papers directed both toward mineral and hydrocarbon exploration with the intent of fostering the cross-fertilization of ideas between these exploration disciplines.

This uniquely conceived program offers geophysicists, geologists, and other explorationists an opportunity to "get in on the ground floor" of this sophisticated new method of exploration for oil and minerals — a method which is already yielding impressive results and will become even more important to the industry in coming years.

## The Sponsors

The Society of Exploration Geophysicists, and the four cosponsors of Pecora VI extend a warm invitation to you to attend this important conference. SEG takes special pride in serving as primary sponsor of Pecora VI during the Society's 50th Anniversary Year. Sharing sponsorship of the Symposium with SEG are: the American Association of Petroleum Geologists, the United States Geological Survey, the Geosat Committee and the National Aeronautics and Space Administration.

## The Exhibition

The Pecora VI Symposium Exhibition will be held in the Exhibit Center of the Sioux Falls Convention Hall in downtown Sioux Falls. The Exhibition area is immediately adjacent the technical sessions and will be open to delegates Tuesday and Wednesday, April 15 and 16, from 8:30 a.m. until 5:00 p.m. and Thursday, April 17, from 8:30 a.m. until Noon. A special period has been set aside both Tuesday and Wednesday, from 11:30 a.m. until 2:00 p.m., to afford delegates a special opportunity to visit the Exhibition during the lunch break between morning and afternoon technical ses-

sions. Many fascinating and informative exhibits from industry and government will be on display.

## SEG Short Course

The SEG short course, *Principles of Remote Sensing*, will be held Sunday, April 13, prior to the Symposium. Course instructors, Robert D. Regan, with Phoenix Corporation; and James V. Taranik, of NASA, provide an intensive orientation to remote sensing geared specifically to energy and mineral explorationists. The course tuition is **not** included in the Pecora VI registration fee and delegates must register in advance for the course. The course tuition includes a 438-page set of course notes.

## EROS Data Center Visits

Sioux Falls is the site of the multi-million dollar U.S. Geological Survey's EROS Data Center, the main data dissemination facility for NASA's Landsat series of earth resource satellites. Delegates will have an opportunity to tour the facility during the Symposium. The tours and the transportation to EDC from downtown Sioux Falls are included in the Pecora VI registration fee. A tour information booth will be set up in the Symposium registration area where delegates may select the most convenient tour time.

## The Kickoff Luncheon

Also included in the registration fee, the Pecora VI Kickoff Luncheon, Monday, April 14, will feature as keynote speaker, the Honorable Harrison Schmitt, U.S. Senator from New Mexico, a geologist and former astronaut with the Apollo Space Program. Senator Schmitt, who is currently the ranking member of the Science, Technology and Space Subcommittee of the Senate Committee on Commerce, Science and Transportation, will address attendees on: "The Politics of Remote Sensing".

The luncheon begins at 12:15 p.m. in the Sioux Falls Convention Hall, and continues until 1:45 p.m.

## Icebreaker Cocktail Party

Monday evening, delegates will have an opportunity to get acquainted at an Icebreaker Cocktail Party at the Downtown Holiday Inn between 6:30 and 8:00 p.m. Admission to the reception is included in the Pecora VI registration fee along with two vouchers for complimentary cocktails. Additional drinks may be purchased by the delegate.

## The Tuesday Banquet

Delegates may purchase a ticket to the Tuesday Pecora Banquet in advance or until 4:00 p.m., Monday, April 14, in the Symposium registration area. Admission to the banquet is **NOT** included in the Pecora VI registration fee.

Guest speaker at the banquet, which begins at 7:30 p.m., is Dr. George S. Benton, Associate Administrator of the National Oceanic and Atmospheric Administration (NOAA). NOAA, under the recent Presidential Directive 54, has been charged with developing an operational system of remote sensing satellites for extensive use by the private sector. Dr. Benton will gear his talk toward new opportunities in land remote sensing for explorationists and NOAA policy regarding the Landsat series of satellites, now within its jurisdiction. The banquet continues until 9:00 p.m. A no-host wine reception will be held prior to the banquet beginning at 6:30 p.m.

## Technical Program

All Technical Sessions will be held in the Theatre of the Sioux Falls Convention Hall, adjacent the Exhibition area.

A morning and afternoon technical session is scheduled each day, Monday, Tuesday and Wednesday. The morning sessions run from 8:30 a.m. to 11:30 a.m. (with the exception of Monday which is scheduled from 8:15 to 11:40 a.m.). Afternoon sessions begin at 2:00 p.m. and continue until 5:00 p.m.

Some highlights of the Pecora VI Technical Program:

**Monday Sessions** include a broad overview of remote sensing methods and how they integrate with each other and with surface methods; an excellent "orientation" session. Monday afternoon, a panel of explorationists from the energy and mineral resources industry will discuss their views on the overall application, significance and impact of remote sensing in the areas of exploration for/and development of energy and mineral resources.

**Tuesday and Wednesday Sessions** include many important papers on the key topics of data acquisition, processing, interpretation and case histories.

**Wednesday Evening's Wine and Cheese Poster Session** is another unique feature of the Symposium. It allows delegates to visit more than twenty different poster paper booths in an informal atmosphere encouraging one-to-one discussion. With wine and cheese service included, it adds up to a super way for a delegate to learn and share in-depth information with a colleague. The Wine and Cheese Poster Session will be held at the downtown Holiday Inn beginning at 6:30 p.m. The Session is included in the Pecora VI registration fee.

**Four Concurrent Research Workshops, Thursday morning** provide formal presentations along with opportunities for informal "give and take" between speakers and delegates. The Workshops, to be held in the Sioux Falls Convention Hall Theatre and second floor Meeting Rooms, begin at 8:30 a.m., Thursday. Workshops #1, #2 and #4 have "open ended" schedules to extend into early afternoon if participants wish to continue discussion beyond noon. Workshop #3, "Integration Techniques", is scheduled from 8:30 a.m. until 10:30 a.m.

(For Program details see inside)

## SHUTTLE BUS TRANSPORTATION

Shuttle buses will be provided for Pecora VI delegates lodged in hotels outside the downtown area for transportation to and from the Convention Hall complex each day. Delegates will receive a complete shuttle bus schedule with their Pecora VI registration packets.

## REGISTRATION

To register in advance for the Pecora VI Symposium, please complete the enclosed Advance Registration Form and mail for receipt by March 28 to: **Pecora VI, c/o Society of Exploration Geophysicists, P.O. Box 3098, Tulsa, OK 74101 U.S.A.**

The advance registration fee of \$95.00 includes admission to all technical program sessions, including the Thursday Research Workshops, the Monday Kickoff Luncheon (meal included), the Exhibition, the Monday evening Icebreaker Reception (two drinks), and the Wednesday evening Wine and Cheese Poster Session (two drinks and service from a varied selection of imported and domestic cheeses). Shuttle bus transportation and a tour of the EROS Data Center are also included in the registration fee.

The Sunday SEG short course is **not** included in the registration fee nor is the Tuesday Evening Banquet. These are priced separately (see the Advance Registration Form enclosed).

On site registration commences at 8:00 a.m. Sunday, at the Downtown Holiday Inn, and continues until 9:00 p.m. Special advance registration counters will also be open for advance registrants to pick up their identification badges and Symposium material. Registration counters will open from 8:00 a.m. to 5:00 p.m. Monday, Tuesday and Wednesday and until Noon on Thursday, **on the Concourse Level of the Sioux Falls Convention Hall and Theatre**. Registration at the door is \$125.00 and covers the same activities as included in the advance registration fee.

## HOTEL RESERVATIONS

Blocks of rooms have been reserved for Pecora VI delegates at the Sioux Falls hotels shown below. Rooms can be reserved by telephoning the **Pecora Housing Bureau** at (605) 336-1620. All room reservations **MUST** be made through the Pecora Housing Bureau. However, reservations will be confirmed directly by the hotel. The Bureau should be advised of room cancellations. All other changes in room reservations **MUST** be made directly with the hotel.

| Hotel                      | No. Rooms Available | Single  | Double  | Twin    |
|----------------------------|---------------------|---------|---------|---------|
| Holiday Inn (Downtown)     | 309                 | \$25.00 | \$30.00 | \$30.00 |
| Townhouse (Downtown)       | 50                  | \$20.00 | \$26.00 | \$26.00 |
| Ramada Inn (Airport)       | 195                 | \$25.00 | \$25.00 | \$25.00 |
| Howard Johnson's (Airport) | 98                  | \$23.00 | \$27.00 | \$34.00 |
| Brimark Inn (Airport)      | 75                  | \$15.00 | \$18.00 | \$21.00 |
| Holiday Inn (Airport)      | 75                  | \$28.00 | \$33.00 | \$33.00 |

Rates do not include 6% city and state tax. Rooms will be held until 6:00 p.m. the day of arrival unless guaranteed by the occupant.

Note: The Holiday Inn Downtown is two blocks from the Convention Hall and Theater, the Townhouse is eight blocks from the Hall and Theater, and the airport hotels are approximately three miles from the Convention Hall Complex.

4

## Thursday Workshops (CONT'D)

**The Use of Terrain Viewing for Exploration** — George Swanlund, Control Data Corporation

**Exploratory Analysis Techniques for Multi-Source Integrated Geological Data** — George Wecksung, Los Alamos Scientific Laboratory

**Advances in Techniques for Classification and Mensuration of Crops Using Landsat** — Thomas Minter, Lockheed

**Optimization of Atmospheric Corrections to Landsat Data for Limonite Discrimination** — William Kowalik, Stanford University

### Workshop #3: Integration Techniques

#### Workshop Co-Chairmen

Andrew Green, CSIRO, Australia  
J. Robert Porter, Earth Satellite Corp.

This workshop addresses theoretical and practical problems associated with the interpretation of combined data sets as applied in mineral and petroleum exploration. Several authors of poster papers provide an expanded overview of their results and speculate on the integration of their methodology with other techniques.

**The Geosat Patrick Draw, Brady Petroleum Test Program: An Overview of Results** — Willis Alderman, Amoco; Aberbal Correa, Conoco; Lee Lundell, ARCO; Robert Reed, Cities Service Co.; Floyd Sabins, Chevron Oilfield Research Co.; and Harry Stewart, Jet Propulsion Laboratory

**Combined Display of Landsat and Geophysical Data for Improved Interpretation** — A. A. Green, CSIRO Mineral Physics, Sydney, Australia

**Techniques for Integration and Display of Landsat Topographic, and Geophysical Data** — Donald G. Orr, USGS, EROS Data Center; David D. Greenlee and Cynthia A. Sheehan, Technicolor Graphic Services, Inc. EROS Data Center

**Data Preprocessing of Geological, Geophysical, and Landsat Information in Mineral Exploration** — Alfredo Prelat, Stanford Remote Sensing Laboratory

### Workshop #4: Geobotanical Remote Sensing

#### Workshop Co-Chairmen

Charles Schnetzler, NASA Goddard,  
James Barber, Imperial College, London

**Toxic Effects of Heavy Metals on Plants** — Sheng-Hui Chang and William Collins, Henry Krumb School of Mines, Columbia University

**Effects of Metal Stress on Optical Properties of Plants** — D. N. H. Horler, J. Barber, and R. A. Blackman, Imperial College of Science and Technology, London, England; and A. R. Barringer, Barringer Research Inc.

**The Contribution of Remote Sensing to Geochemical and Geological Applications in Unexposed Regions: Two Cases** — Marie-Jose LeFevre, B.R.G.M. — G.D.T.A., Toulouse, France

**Airborne Geobotany: A Data Collection System for Exploration of Biogeochemical and Biomass Anomalies** — R. J. P. Lyon and K. Lanz, Stanford Remote Sensing Laboratory.

5