

**STATEMENT
OF
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PRESIDENT, THE GEOSAT COMMITTEE, INC.
ON
THE LAND REMOTE SENSING POLICY ACT OF 1992
BEFORE
THE SUBCOMMITTEE OF SCIENCE, TECHNOLOGY AND SPACE OF
THE COMMITTEE ON COMMERCE, SCIENCE AND TRANSPORTATION OF
THE UNITED STATES SENATE**

MAY 6, 1992

I. INTRODUCTION

On behalf of the Geosat Committee and the industrial resource community we represent, I want to thank you for the opportunity to testify before this committee on the Land Remote Sensing Policy Act of 1992.

The Geosat Committee was organized in 1976 to demonstrate our recommendations to NASA on technical enhancements to the Landsat Multispectral Scanner (MSS) that would improve satellite remote sensing for geological applications worldwide.

In the succeeding sixteen years, we have become the only non-government spokesperson before Congress and elsewhere on behalf of remote sensing interests of the geological profession and the resource industries in general.

If the Geosat Committee went out of existence today, it is unclear who could represent the remote sensing interests of this important multi-industry segment of the U.S. national economy. Were we to disband, we could declare victory as our 1976 sensor recommendations are, or soon will be, entirely in space. However, these recommended capabilities are aboard non-U.S. satellite systems and are in direct competition with the Landsat program.

This pyrrhic victory in the U.S. may be because the Geosat Committee has spoken on civil remote sensing issues on behalf of the U.S. user industries' interests which are not represented institutionally within the federal government. This U.S. problem is in stark contrast to competitive satellite producing countries where the user industries have a "Seat at the Table" in policy development and implementation for their national satellite remote sensing programs.

This critical U.S. institutional industry-government gap is detrimental to U.S. exploration remote sensing development, which in turn restricts competitiveness in the global market place. Furthermore, this void inhibits the use of this vital technology in developing industry-government cooperation which would improve global environmental management while also assuring the provision of basic resources needed by our society.

A principal request of our testimony before this committee today is to seek Senate support for assuring a "Seat at the Table" for the U.S. resource and related industries as proposed in HR.3614 Sec. 201E. This section creates a Landsat Advisory Council to guide the future of the Landsat program and recognizes such action as being in the national economic interests of our society.

II. REMOTE SENSING AND THE CHANGING U.S. ENERGY AND MINERAL RESOURCE INDUSTRIES

The Geosat Committee's focus since 1976 has been on geologic applications for satellite and airborne remote sensing.

In recent years, this focus has broadened to include remote sensing for offshore oceanographic, exploration, engineering, and environmental applications. This broadened scope also includes interest in developing initiatives for proposed industry-government cooperative research and earth observations applications for global environmental study and management. We have just completed a report to be delivered to the U.S. Committee on Earth and Environmental Sciences (CEES) on suggestions for applying industry research to the U.S. Global Change Research Program. This document was undertaken to communicate our interest in jointly establishing the geophysical "truths" of the new measuring and monitoring remote sensing technologies in global change study and environmental management. This document offers suggestions for cooperative industry-government pilot research projects. A copy of the report suggestions is respectfully submitted for the record.

During the late 1970's and early 1980's, the Geosat Committee was supported mainly by large petroleum and mining companies who purchased raw Landsat and later SPOT data and then developed their own in-house value-added information for their internal proprietary uses.

Beginning in 1981, with general mining company responses to falling global metal prices and in 1983 with major ongoing restructuring in the petroleum industry, these large companies began downsizing their internal research and technical services departments and dropping their in-house remote sensing research and service capabilities.

This year, the major petroleum companies of the Geosat Committee have experienced their fourth 10-15% reduction in their research and technical services personnel and budgets in the last eight years. To put this in comparative perspective, if the four hundred thirty-five members of the House of Representatives had suffered the same cuts over the last eight years, there would be less than three hundred Congressmen left today to accomplish the same tasks. The same reduction in the U.S. Senate could be devastating.

These significant industry cut backs are coupled with major corporate strategy shifts to decrease or eliminate domestic exploration and focus on exploration for resources outside the U.S. to supply U.S. domestic consumption.

These structural changes are deep, institutional, long-term and industry-wide. Some senior management project the future survival of only five or six major domestic petroleum companies. This should alarm young Americans when they realize that there is no Cabinet-level government agency responsible and accountable for assuring that the future U.S. society has access to needed global energy and mineral resources.

The easy-to-find energy and mineral resources in the U.S. are gone. A Director of the Geosat Committee recently stated that "Data access isn't a sexy issue, until you don't have any". I would add to this and say to those in the U.S. who don't care about the U.S. resource industries, "Your energy and mineral supplies aren't very sexy issues, until you don't have any!"

For remote sensing, these major structural changes in the petroleum and mineral

industries will mean greater future reliance on remote sensing information provided by the value-added industry. While this may be good for the value-added industry which is struggling, it bodes ill for long-term U.S. industrial research on applied remote sensing.

III. CONTINUING REMOTE SENSING NEEDS FOR THE U.S. RESOURCE INDUSTRIES

In the previous twenty-six Congressional testimonies of the Geosat Committee, our resource industries' sensor needs have been well documented. However, our main concerns before your committee today are with our continuing needs under the policy issues being considered in the current legislative proposals to change the 1984 Landsat Commercialization Act. As requested, our testimony deals not with the specific language in S.2297 and HR.3614, but with the issues to be resolved between the House and Senate which will set future policy for the U.S. land remote sensing program.

First, we support **"the continuity of the Landsat program"** and the continued evolution of advanced remote sensing capabilities such as proposed in the Technology Demonstration section of HR.3614.

Secondly, we urge **"equatable pricing"** for all customers of Landsat data. As explained in detail in our testimony and answers to directed questions before the House Committee on Space, Science and Technology in November and December of 1991, The Geosat Committee, Inc. does not support multi-tiered pricing as we understand HR.3614. While we are willing to pay reasonable prices for data, we do not support industrial users paying discriminatory higher prices for data from a government satellite system supported by taxpayer dollars, while other potentially competitive users pay marginal costs. Multi-tiered pricing as proposed by HR.3614 will be difficult to manage, hard and expensive to police, inhibiting to new commercial developments and investments, anti-American, anti-industry, and anti-competitive while favoring subsidized foreign users. It is also generally contradictory to the findings of both S.2297 and HR.3614 which encourage **"broad civilian use"** of land remote sensing in the best interests of the nation.

The Geosat Committee seeks Congressional assurance that the Landsat program, being further developed and managed by the new Department of Defense (DOD)/NASA management programs, will strive to enhance the optimal non-discriminatory availability for these data to all sectors of U.S. society.

In order to enhance such data availability, we request that your sub-committee recommend U.S. Senate support of the creation of a Landsat Advisory Council as proposed in HR.3614. In our House testimony last November, we urged the creation of a National Remote Sensing Council for all U.S. civil remote sensing systems to include Landsat, EOS, and EOS-DIS. As S.2297 and HR.3614 deal only with Landsat, we seek your support in the final House and Senate Landsat Land Remote Sensing Policy legislation for the creation of a truly meaningful Landsat Advisory Council. We urge that the basic U.S. resource industries be assured a "Seat at the Table" by substantive representation on the Landsat Advisory Council. We further recommend that the reporting procedure be strengthened by reporting directly to the Director of the National Space Council, Congress, and to the NASA Administrator to assure that industrial as well as other legitimate non-DOD/NASA needs are adequately considered.

These recommendations, in support of the Landsat Advisory Council, are in line with the 1982 recommendations to Department of Commerce Secretary, Malcolm Baldrige,

by The Land Remote Sensing Satellite Advisory Committee (LARSSAC) chaired by Michel T. Halbouty to establish a Board of Directors for the Landsat program consisting of representatives of government, industry, and academia and reporting to the President of the United States.

IV. ON THE IMPORTANCE OF RECOGNIZING THE RESOURCE INDUSTRY NEEDS IN DEVELOPING POLICY FOR FUTURE U.S. LAND REMOTE SENSING

In both S.2297 and HR.3614, in agreement with recent National Space Council decisions, provision is made for funding and oversight management of the Landsat program primarily by the DOD for their intelligence needs and by NASA for their global change research needs.

After the 1979 Landsat privatization decision and the ensuing EOSAT commercialization experiment starting in 1984, the government seems to have decided to back-track and develop an "integrated civil-military satellite remote sensing system" as considered and discarded by the government in 1978-1979.

Our understanding of the current proposed Landsat Management Plan makes all non-DOD and NASA global change user needs the oversight management responsibility of NASA. In recent years, NASA has shown little interest or experience in serving the needs of the U.S. user industries.

While we are confident that Landsat will well serve DOD intelligence and NASA global change research needs, we are concerned that no real provision is being made for U.S. land remote sensing to serve the basic resource needs of this country. Fundamental to the continued economic strength of the United States is a sound economy based on access to both domestic and, increasingly, on foreign petroleum and mineral resources. In spite of political election gobbledygook, there is simply no acceptable economic way in which the U.S. can reduce its dependence on imported energy and mineral supplies in the next decade.

Remote sensing will play a significant role in ensuring U.S. industry remains competitive in securing and utilizing global resources. U.S. industry competes overseas with foreign public/private resource organizations who often have access to subsidized state-of-the-art remote sensing technology not readily available to U.S. industry. Current legislative proposals that would lead to discriminatory pricing and availability against U.S. resource industrial users place further anti-competitive economic burdens on such U.S. users.

What is often overlooked in the current debate to provide cheap Landsat data for security intelligence and for global environmental change research is that secure access to global resources is in the fundamental interest of the American people. Access ensures our ability to afford a strong defense and provide international leadership in global environmental stewardship.

The basic thinking of the Club of Rome's "Limits to Growth" in the early 1970's is valid today. The earth has finite limits to economic base resources. The impending doubling of the world's population in just two generations (when my grandson is fifty years old) places super critical importance on the U.S and all nations to better understand global energy and mineral, as well as food and fiber resources in order to wisely provide for and meet these basic resource needs of this ballooning world population. International competition for these global resources for this doubling population may become major issues of military dispute and national security concern.

Clearly, man's greatest impact on global environmental change in the next two generations will be the physical doubling of the world population and our collective need to provide basic resources for these net new 5 billion humane souls in an economically, environmentally, and secure manner. It should be understood by the American people that it is in their best interest for the U.S. resource industry to be involved with government in securing access to global resources for domestic consumption and access to data for cooperative industry-government research to better understand and manage our environment.

V. CONCLUDING COMMENTS

The title of Senator Gore's recent book "Earth in the Balance" is pertinent to our concerns on the significance of the future development of vital civil land remote sensing in the U.S. and in the world.

We believe that it is in the national interests of the people of the United States that the U.S. land remote sensing programs strike a balance in the needs of

our national intelligence communities,

NASA and the U.S. Global Change Research Program and society to understand man's impacts on natural global change leading to better industry-government wisdom in managing our environment, and

our global resource discovery and development requirements in an increasingly competitive and ballooning world population.

Mr. Chairman, on behalf of our children's and grandchildren's generations who will live with and be the most affected by our deliberations and resulting legislation today, I personally ask for the support of your Committee in the fundamental ideals I have outlined above.

On behalf of the Geosat Committee, thank you for your consideration.