

**Seismic Data Acquisition and Interpretation To Promote Oil Exploration & Leasing** **FY2002 Request: \$138,000**  
**Reference No: AMD 33977**

**AP/AL:** Appropriation **Project Type:** Planning  
**Category:** Development **Contact:** Ken Boyd  
**Location:** Statewide **Contact Phone:** (907)269-8800  
**House District:** Statewide (HD 1-40)  
**Estimated Project Dates:** 07/01/2001 - 06/30/2006

**Brief Summary and Statement of Need:**

State of Alaska statutes and regulations require oil and gas exploration companies to submit geophysical data acquired from state lands under Multiple Land Use Permits to the division. The state is required to pay the permittees for only the cost of reproducing the data for the state's use. Consequently, for the division to accomplish its mission of responsibly managing and encouraging development of the state's petroleum resources the division must have funding to acquire geophysical data from lands other than those owned by the state and to provide the interpretive computer systems utilized to support the program.

<b>Funding:</b>	<b>FY2002</b>	<b>FY2003</b>	<b>FY2004</b>	<b>FY2005</b>	<b>FY2006</b>	<b>FY2007</b>	<b>Total</b>
Gen Fund	\$138,000	\$155,000	\$105,000	\$90,000	\$80,000		\$568,000
<b>Total:</b>	<b>\$138,000</b>	<b>\$155,000</b>	<b>\$105,000</b>	<b>\$90,000</b>	<b>\$80,000</b>	<b>\$0</b>	<b>\$568,000</b>

<input type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input type="checkbox"/> Phased - underway	<input checked="" type="checkbox"/> On-Going
0% = Minimum State Match % Required		<input checked="" type="checkbox"/> Amendment	<input type="checkbox"/> Mental Health Bill	

**Operating & Maintenance Costs:**

	<u>Amount</u>	<u>Staff</u>
Project Development:	0	0
Ongoing Operating:	0	0
One-Time Startup:	0	0
<b>Totals:</b>	<b>0</b>	<b>0</b>

**Additional Information / Prior Funding History:**

SLA93/CH79 \$450.0, which will be depleted this year.

This amendment provides additional backup information but does not change the funding or scope.

**Project Description/Justification:**

**Brief Project Summary and Statement of Need:** State of Alaska statutes and regulations require oil and gas exploration companies to submit geophysical data acquired from state lands under Multiple Land Use Permits to the division. The state is required to pay the permittees for only the cost of reproducing the data for the state's use. These costs are included in the FY02 Governor's budget increment. Data acquired on private and federal lands, also necessary to support evaluation of adjoining state lands, are not subject to state regulations and must be purchased at full price. Consequently, for the division to accomplish its mission of responsibly managing and encouraging development of the state's petroleum resources the division must have funding to acquire geophysical data from lands other than those owned by the state and to provide the interpretive computer systems utilized to support the program.

**Detailed Project Justification:** In order to complete pre-oil and gas lease sale geologic and economic evaluations, as mandated by state statutes, and to evaluate the subsurface for oil and gas unit decisions, the division needs both 2-D and 3-D seismic data. Companies are continually gathering new data on state, federal and private lands. From 1995 to the present the division has issued about 45 seismic permits for approximately 60 seismic surveys. Virtually all have been for the acquisition of 3-D data (high-volume data sets requiring substantial computer capability and large database storage memory). Although data on state lands are available to the division under the permit submittal regulations, those acquired

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on other lands must be purchased. Seismic data are very expensive, typically costing thousands of dollars per mile for the 2-D data and \$10,000 or more per square mile of 3-D data. As is often the case in the Beaufort Sea, and on lands adjacent to the NPRA, it is necessary to purchase data on federal acreage in order to develop an understanding of the subsurface beneath state waters and adjoining state lands. There also are associated digital reproduction costs, whether the data are submitted or purchased, and these can be substantial. One company, as an example, charges \$6 per mile to digitally reproduce its data.

In addition to these data, there is a considerable amount of pre-1988 seismic data that is not available in digital format. Some of these regional surveys need to be converted into digital format so that they can be incorporated into ongoing interpretations. This consists of scanning paper seismic displays into a database that will allow for interactive interpretation on a computer. The division does not have the capability of completing this task. Funding will allow the division to contract with a company that specializes in scanning and converting seismic data.

Industry's continuing improvements to interpretive computer hardware and software and changes in seismic processing necessitate the periodic upgrade of equipment and the purchase of new software packages. As the division's storehouse of seismic information is increased (particularly with the advent of 3-D data) it has been necessary every few years to improve data storage capacity and computer processing speed.

This project will allow the division to:

1. reimburse permittees for reproduction costs of seismic/exploration data acquired under state MLUPs (not required if fully funded under general operating supplemental);
2. purchase seismic data from private and federal lands (not funded by general operating supplemental);
3. contract with a company to convert older data into digital format;
4. upgrade computer equipment when necessary (software purchases, licensing and maintenance to be funded by supplemental);
5. acquire seismic data made available by terms of the BP Amoco/ARCO merger "charter."

**Specific Spending Detail:**

	FY02	FY03	FY04	FY05	FY06
Student Intern	\$ 17.0	\$ 17.0	\$ 17.0	\$ 17.0	\$ 17.0
Permit Data Reimbursement		\$ 18.0	\$ 20.0	\$ 14.0	\$ 10.0
Data Acquisition and Purchase	\$ 85.0	\$100.0	\$ 60.0	\$ 50.0	\$ 40.0
Computer Upgrades & Software	\$ 18.0	\$ 18.0	\$ 14.0	\$ 13.0	\$ 13.0
Totals	\$138.0	\$155.0	\$105.0	\$ 90.0	\$ 80.0

**Project Benefits:** One of the main purposes of this project is to maximize the state's revenues generated by petroleum development. These increased revenues will benefit the public. Should any new companies become active in Alaska, the possibility of additional job opportunities should benefit the public. By continuing the purchase of seismic data, by converting older data into digital format and by enhancing the division's computer capabilities, the state will be able to make the best possible evaluations for future lease sales and oil and gas unit decisions. All of this is with the intent of maximizing revenues generated by oil and gas activity.

**Projected Revenue to the State:** The interpretation of seismic data is fundamental to decisions DNR must make in regards to lease sale terms and exploration and production units. Each decision has a direct effect on the state's oil and gas revenue, and is done with the intent of increasing revenue.

**Project Support:** This project will have a broad base of agency and public support since its intent is to maximize state revenues generated by oil and gas activity, and to attract new companies to the state.

**Project Opposition:** There should be no opposition.

**Does this project leverage other funding for the state?** No.

**Project History:** There have been several seismic CIPs over the past 20 years. It's an ongoing project that will always require funding. Data gathering, processing and interpretation technology continues to improve, and therefore, industry's State of Alaska Capital Project Summary Department of Natural Resources  
 FY02 Final Capital Budget Reference No: AMD 33977

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understanding of the subsurface continues to increase. In order for us to make informed decisions concerning oil and gas, our understanding of an area needs to be on par with industry's. This requires that we have access to the latest data and be able to utilize the newest interpretation techniques. The Seismic CIP in FY94 was \$450.0, which will be depleted this fiscal year.

**Alternative Approaches/Financing Considered:** There are no alternatives available that can substitute for the acquisition of seismic data; it would be cost prohibitive for the state to gather its own data. If not contracting a company to scan seismic data into a digital format, the division would have to purchase the necessary equipment and software, and hire additional personnel to perform this task. Attendance at industry trade shows is the most cost-effective method of getting the word out to companies about the opportunities and incentives to explore for oil and gas in Alaska. Advertising costs would greatly exceed the costs of attending trade shows.

**Annual Operating and Maintenance Costs:** None