

**Oil and Gas Petroleum Basin Studies for AK Peninsula,  
Bristol Bay and Cook Inlet**

**FY2006 Request: \$252,000  
Reference No: 39992**

**AP/AL:** Appropriation

**Project Type:** Planning

**Category:** Development

**Location:** Statewide

**Contact:** Mark Myers

**House District:** Statewide (HD 1-40)

**Contact Phone:** (907)269-8800

**Estimated Project Dates:** 07/01/2005 - 06/30/2007

**Brief Summary and Statement of Need:**

The administration's policy of accelerate petroleum resource development by attracting new entrants and investment in the state is hampered by a lack of publicly available data, including geological, geophysical and engineering information. This project will obtain and make key information publicly available addressing the geological character and petroleum potential of several petroliferous basins within the state. All proposed studies can be accomplished in conjunction with the DGGS energy program and might attract federal funding and technical support. Early disclosure of the information is essential if new oil and gas companies are to be attracted to the state.

| <b>Funding:</b> | <u>FY2006</u> | <u>FY2007</u> | <u>FY2008</u> | <u>FY2009</u> | <u>FY2010</u> | <u>FY2011</u> | <u>Total</u> |
|-----------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------|
| Gen Fund        | \$252,000     | \$135,000     | \$97,000      |               |               |               | \$484,000    |
| <b>Total:</b>   | \$252,000     | \$135,000     | \$97,000      | \$0           | \$0           | \$0           | \$484,000    |

|   |   |  |   |                                   |
|---|---|--|---|-----------------------------------|
| <input type="checkbox"/> State Match Required | <input type="checkbox"/> One-Time Project | <input checked="" type="checkbox"/> Phased - new | <input type="checkbox"/> Phased - underway  | <input type="checkbox"/> On-Going |
| 0% = Minimum State Match % Required           |   | <input 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:**

This is a new project request.

**Project Description/Justification:**

There is a significant lack of recently published information regarding the oil and gas potential of Alaska, particularly of those sedimentary basins within state lands and under state management. The major companies with long histories in the state have compiled and protected copious studies for their own use. A few consultants have marketed the results of several useful studies, none of which the Division has been able to justify purchasing in the past. State resource management agencies have sponsored few detailed studies or published few significant reports regarding the petroleum potential of state lands during the last 20-30 years. Smaller oil and gas operators, unable to finance the cost of costly diverse field work, but interested in joining the chase in Alaska, are at a distinct disadvantage. If we are to encourage their participation in exploration for and development of the state's oil and gas and if the Division is to determine leasing terms and stipulations the DNR must provide such information. To that end the Division recommends the following studies, designed to publish critical source rock and reservoir quality information needed for risk assessment, be initiated or acquired during FY06.

**Task 1:** A petrographic study of the physical and chemical character of the geologic surface and subsurface strata in the Alaska Peninsula, Bristol Basin and Cook Inlet Basin areas should be undertaken and the results published as they become available. The goal is to determine the reservoir quality of the potential reservoirs in those areas by determining the sedimentary history of the basins and to correlate the information to well logs. Sample collection and petrographic analyses will be accomplished by Division staff, but will take about two years to complete. Samples of surface outcrops and of well cores and cuttings will have to be collected and thin sections prepared for petrographic analyses. Existing samples and thin sections available at the state's Geologic Materials Center will have to be recovered,

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inventoried and reviewed for suitability, but preparation of new and additional thin sections will have to be outsourced, as will the requisite X-ray diffraction analysis. The results will be published by the Division as they become available. Priority will be given to the Alaska Peninsula areawide lease sale area although the initial lease sale in that area will probably be held before the petrographic study is complete.

**Task 2:** A micropaleontological study of the Alaska Peninsula will be acquired from a certified vendor and made available to the public prior to the first areawide lease sale in that area. Fossil foraminifera and palynological fossils allow experts to age-date the geologic strata and to identify the paleo-environment existent at the time of deposition. This information is also correlated to well information to provide chronological characterization of subsurface strata and additional information regarding the sedimentary processes occurring throughout the basin's geohistory.

**Task 3:** Despite the apparent maturity of the Cook Inlet basin, exploration opportunities there have recently attracted a number of small independents. It is apparent, however, that some are unprepared to be effective explorers in the area. An industry information package similar to that prepared by the Division for the Alaska Peninsula lease sale area would be valuable to the new players. It will consist of a comprehensive and detailed atlas of the geology and hydrocarbon potential of the area as compiled from publicly available information and data by Division staff. Featured will be geology, engineering, environment, regulatory and fiscal regimes, economics, and development history of the region. This atlas will provide the Department and the public with an excellent, much needed, compendium of the existing knowledge the petroleum potential of the region and will serve as an excellent training and briefing source. A temporary full-time geologist or a consultant might be required to coordinate this project.

**Why is this Project Needed Now:**

- ? To timely provide publicly available geological data and information critical for assessment of the oil and gas resource potential of the Alaska Peninsula, Bristol Bay Basin, and Cook Inlet Basin areas for the benefit of companies new to the state who are evaluating Alaska opportunities, including the smaller independents.
- ? To compile and analyze that same information in support of the Division's role of responsibly encouraging and managing the development of the state's petroleum resources for the benefit of the citizens of the state.
- ? To provide the Division with additional information with which to determine appropriate lease sale management terms and stipulations.

**Specific Spending Detail:**

| Line Item Expenditures   | FY06             | FY07             | FY08             |
|--|------------------|------------------|------------------|
| 71000 Personal Services  | \$ 0             | \$ 0             | \$ 0             |
| 72000 Travel: interagency conferences, field work, training, outreach, per-diem                | \$ 16,000        | \$ 12,000        | \$12,000         |
| 73000 Services: geological consultant, sample preparation, laboratory analyses, data purchases | \$209,000        | \$115,000        | \$80,000         |
| 74000 Commodities:   | \$ 0             | \$ 0             | \$ 0             |
| 75000 Capital Outlay: microscope accessories, computers, software.                             | \$ 27,000        | \$ 8,000         | \$ 5,000         |
| <b>TOTAL</b>   | <b>\$252,000</b> | <b>\$135,000</b> | <b>\$ 97,000</b> |

**Project Support:**

This project is likely to be supported by virtually all agencies dependent upon oil and gas revenue, Native groups, oil and gas explorers and producers, and supporting industries and associations.

**Project Opposition:**

None expected.