

**Reservoir Studies to Evaluate Oil and Gas Resources on the North Slope Phase 2 of 2** **FY2010 Request: \$6,000,000**  
**Reference No: 45278**

**AP/AL:** Appropriation **Project Type:** Gasline  
**Category:** Development  
**Location:** Statewide **Contact:** Leta Simons  
**House District:** Statewide (HD 1-40) **Contact Phone:** (907)465-3379  
**Estimated Project Dates:** 07/01/2009 - 06/30/2014

#### Brief Summary and Statement of Need:

The primary purpose of this phase of reservoir studies is to determine the best way to maximize remaining Prudhoe oil recovery while optimizing gas for a North Slope gas pipeline. Qualified consultants that will be hired through the RFP process to work on the project. Results will enable the State to make informed technical decisions with regards to the impact of gas offtake on the recovery of remaining Prudhoe Bay oil reserves.

<b>Funding:</b>	<b>FY2010</b>	<b>FY2011</b>	<b>FY2012</b>	<b>FY2013</b>	<b>FY2014</b>	<b>FY2015</b>	<b>Total</b>
AHCC Rcpts	\$6,000,000						\$6,000,000
<b>Total:</b>	<b>\$6,000,000</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$6,000,000</b>

<input type="checkbox"/> State Match Required	<input type="checkbox"/> One-Time Project	<input type="checkbox"/> Phased - new	<input checked="" 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	
<b>Totals:</b>	<b>0</b>	<b>0</b>

#### Additional Information / Prior Funding History:

SLA08/CH29 \$ 4,000.0 30% complete by 6/30/09

#### Project Description/Justification:

One of the state's top priorities is provision of an adequate and dependable supply of gas from North Slope reservoirs through a gas pipeline. The reservoir studies will help to determine how much gas should be delivered through the pipeline, as opposed to how much gas should be used to provide for efficient production of the over 21 billion barrels of oil left in developed North Slope reservoirs. In addition, there are over 24 billion barrels of viscous oil contained in undeveloped reservoirs that may benefit from lean gas injection, miscible gas injection, fuel for enhanced oil recovery (EOR) techniques, or other useful alternatives. This project will provide the information needed to best determine how much gas can be produced for export while still providing sufficient gas for EOR or improved recovery of oil. In order to maximize the benefit of this valuable resource to the State, DNR needs to understand these complex reservoirs.

This project will provide critical information needed for planning as North Slope fields transition from oil to gas recovery. In FY09 a consultant has been hired via the RFP process and is ready to begin the first study of North Slope oil reservoirs. Studies will range from complex full field three-dimensional models to simpler material balance and mechanistic evaluations appropriate to the situation. Approval of this project will result in the development of optimal alternatives prior to establishing gas offtake plans from North Slope oil reservoirs. The State's stake could be an

**Reservoir Studies to Evaluate Oil and Gas Resources on  
the North Slope Phase 2 of 2**

**FY2010 Request: \$6,000,000**  
**Reference No: 45278**

incremental 250 - 600 million barrels of royalty oil. Legislative and public interest has been elevated by initiatives to encourage gas development on the North Slope. The undeveloped viscous oil and remaining unrecovered oil-in-place represent a 45 billion barrel target to apply gas for additional oil recovery. A 5 - 10% incremental recovery could recover an additional 2 - 4.5 billion barrels of recoverable oil. Gas not consumed in oil recovery would still be available for export. Since Prudhoe Bay Unit production began in 1977, the State has endeavored to encourage development of gas resources on the North Slope. Gas re-injection and cycling at Prudhoe have been effectively used to recover over 3 billion barrels of oil beyond initial estimates of 9.6 billion barrels. Today, gas from Prudhoe is being injected into at least six other North Slope reservoirs to improve and enhance oil recovery. Reservoirs at Endicott, Northstar, Pt. McIntyre, Alpine and Pt. Thomson will ultimately be gas resources once their oil and liquids have been depleted.

**Why is this Project Needed Now?**

The first CIP request was submitted and approved in the FY09 Capital Budget request for \$4 million with another \$6 million phased in through FY2013. It is critical to the success of the study to have all of the additional funds approved and obligated to ensure a complete and meaningful study can be completed.

**Specific Spending Detail:**

LINE ITEM	DOLLAR AMOUNT	DESCRIPTION
Services	\$ 5,250,000	Consultants
Commodities	\$ 750,000	Software licenses and computer hardware