

**MEMORANDUM**  
DEPARTMENT OF NATURAL RESOURCES

**State of Alaska**  
DIVISION OF OIL AND GAS

TO: Tom Irwin  
Commissioner

DATE: December 21, 2009

THRU:

FILE NO:

TELEPHONE: 269-8781

FROM: Kevin Banks  
Director

SUBJECT: Cook Inlet Gas Reserves  
Study

Over the course of the past 18 months, Alaskans along the railbelt have listened as varying opinions of the state of the Cook Inlet oil and gas basin have been presented. In the spring of this year, I asked our Resource Evaluation staff to conduct a scientific analysis of the remaining reserves in the Cook Inlet so that this important issue could be examined with as much information as was available. The attached report is the result of this analysis. In addition to the results themselves, the report includes a description of the methodology used in performing that analysis.

The availability of reliable and affordable energy is a concern shared by all Alaskans. Residents of south-central Alaska and, to a lesser degree, along the railbelt have for decades enjoyed the benefits of access to abundant and relatively cheap Cook Inlet natural gas for home heating and power generation. Recent years have seen a significant decline, however, in the reserves-to-production (R/P) ratio for natural gas. Predictably this decline has become a source of concern for energy consumers in the region. There are also concerns about the capability of the natural gas infrastructure to meet seasonal and peak demand in the winter. I am sure you would agree that fear and panic can create an urgency that frustrates the problem solving process. It is against that backdrop that we initiated the attached study, in an effort to identify the severity of the problems associated with gas reserves decline and provide a tool from which reasoned decisions can be made.

Our Resource Evaluation staff enlisted the involvement of staff from the Division of Geological & Geophysical Surveys. The analysis that has resulted from this collaboration is purely scientific in nature and focuses on the one critical aspect of a complex system that must be assessed first: available natural gas reserves. Great care has been taken to ensure that the report we provide to you and to affected Alaskans is fact-based and data-driven. Engineering analysis of well data and geological and geophysical review of well-log, production, and seismic data provide the clearest picture of the challenges we face. The methodologies employed in arriving at the scientific conclusions herein were determined based upon the data available to the Department's energy industry experts. In cases where confidential data were used in the analysis, the utmost care has been taken to protect those data.

Other equally important issues such as the capacity of the Cook Inlet natural gas market and the reliability of the infrastructure to supply seasonal and peak demand should be scrutinized in similar detail. The economic overlay necessary to determine the cost of increased deliverability

is a separate analysis involving specific expertise and data distinct from the current effort. Additionally, an engineering analysis of existing natural gas transportation infrastructure could identify potential opportunities to improve system deliverability on peak days. Finally, the highly complex issue of local demand must be understood. Continuing current efforts at energy conservation and efficiency will create economic benefits. Steady and deliberate conversion to alternative energy sources will result long-term in a more diverse and reliable energy grid. The local market took some time to degrade and will take a bit of time and a lot of effort to recover. Cooperation and coordination among all of the stakeholders is critical.

Consumers relying upon Cook Inlet natural gas to meet their energy needs should know that while there is no need to panic, there is also no time to waste. Although it is apparent that sufficient reserves remain to provide for railbelt needs for the coming decade or more, the cost of providing energy to these same consumers is likely to rise. The low-hanging fruit in the Cook Inlet has largely been picked and as such one thing seems clear—the basin is not running out of gas but it could well be running out of cheap gas. Investments in storage development, reserves replacement and pipeline infrastructure will place additional upward pressure on consumer energy prices.

The dedicated professionals in the DOG/DGGS have a wealth of knowledge and decades of experience in analyzing the technical challenges associated with hydrocarbon resource development. They did not have the luxury of setting aside their important day-to-day duties in order to tackle this assignment. It is because of their willingness to work tirelessly and to put in extra hours to complete this analysis that I am able to present it to you now. Should you require additional detail from staff, please do not hesitate to ask.