

**Outline Proposal to Develop Natural Gas Fiscal Excel Model for the Alaska Legislature to Aid in Evaluation of Wide Ranging Development Scenarios**

**David A. Wood & Dan E. Dickinson** (revised following discussions on 25 March 2009)

**Primary Objective:** To build, develop and use a compiled database and an Excel model integrated to calculate upstream and downstream multi-year cash flows to facilitate evaluation of natural gas fiscal designs appropriate for several development scenarios for Alaska's natural gas reserves and yet-to-find resources.

**Work schedule:** Commence work on 1 April 2009, complete work by 15 October, 2009 and present final results by 15 November 2009.

**Total man-hours of work:** 900 hours (split between David Wood & Dan Dickinson)

**Scope of work:** This work will be conducted in **four phases**.

**Phase 1 (1 Apr – 15 June: 250 hours)** – Compile database for gas development alternatives and competing other U.S.A gas supply:

- i) Alaska natural gas pipeline alternatives
- ii) Known upstream gas reserves (upstream cost / production data for Prudhoe Bay, Point Thomson, and Kuparuk fields from Department of Revenue)
- iii) Gas-to-liquids (GTL) plant on slope and elsewhere in Alaska
- iv) Gas liquefaction (LNG) plant and pipeline to Valdez / Kenai
- v) U.S.A Lower-48, top-ten gas producing states fiscal designs (including shale gas, coal bed methane and onshore conventional gas) plus deepwater Gulf of Mexico federal lease fiscal terms

**Phase 2 (16 June – 15 Aug: 250 hours)** – Rebuild Excel model to incorporate phase 1 alternatives in addition to the hypothetical field alternatives developed for the fiscal design study presented December 2008. Excel model will be developed to enable evaluation of a wide range of multiple case scenarios, assumptions and sensitivity analysis in a user friendly format. David Wood may visit Alaska (5 working days) to finalise Phase 2.

**Phase 3 (16 Aug – 15 Oct: 300 hours)** – Conduct multi-case analysis using the model and analyse and compile model results using a wide range of scenarios and sensitivities. Present of interim results and round-table workshop to discuss model scenario assumptions. Possible second trip to Alaska by David Wood.

**Phase 4 (16 Oct – 15 Nov: 100 hours)** – Present model and database analysis with three deliverables: A) written report B) final Excel model with user guidelines, and C) formal presentation to Legislature.

**Budget for Phases 1 through 4: Total not to exceed \$300,000** estimated as follows: 900 hours outlined above at an average rate of \$235 / hour (DED at \$220/hour; DW at \$250/hour) totalling \$211,500, plus 300 hours contingency, follow-up, training opportunities for legislative personnel or additional work as assigned by project director (\$70,500), plus costs, primarily travel (\$18,000).