12 November 2007

Rep. Ralph Samuels

Chair, Legislative and Budget Audit Committee

State Government of Alaska

cc. Members of the State House of Representatives and of the State Senate

Dear Rep. Samuels

Wood Mackenzie's *Government Take* Study

We watched the proceedings of the opening day of the special session (via the online feed) and would like to commend the State of Alaska for holding this important debate in such an open and transparent manner.

During the session, you mentioned that there was some ambiguity regarding what Wood Mackenzie is prepared to enter into the public domain from our recent *Government Take* study that could be shared with legislators. As you also mentioned, the study is confidential to those companies and organisations which subscribe to it, hence we cannot divulge the full content of the report to the session. We are pleased, however, that the State (through the DoR/DNR) has purchased a copy of the report and its staff will therefore be able to appraise the full range of issues analysed and the detail of the methodology and results.

To assist this process, we also provided the State and other study subscribers engaged in the debate with a complementary 38 page presentation summarising the Alaskan results and rankings. Further, we informed subscribers (including the State) that we generally have no objection to some limited material (such as selected graphs) being used within their submissions to the session to illustrate general points or opinions. Further to our recent communication and to avoid any further doubt and confusion we are now prepared to allow this 38 page presentation to be circulated to all legislators involved in the session and attach a copy to this letter for distribution. They should, however, be made aware of our disclaimer on the front page which states that Wood Mackenzie will not be held liable for the information contained in the report.

Fiscal Stability

During his testimony, Dr van Meurs made several remarks regarding the study. We are unsure if he has actually seen our report, but he clearly felt entitled to pass judgement on its methodologies and results, particularly with regard to our analysis of the issue of fiscal stability. While we totally respect anyone's right to disagree with the approach we used, some of his claims on the study were false and, we feel, may have potentially misled the committee on the study's methodologies and findings. While each legislator may now review the presentation and clarify these, we would like to address some of the specific remarks made by Dr van Meurs:

- "*To be regarded as unstable, all the study looks at is whether taxes have changed recently, which is unfair and unacceptable*".

  This is simply false. The fiscal stability rating in the study combines assessments of both "recent history" of fiscal changes and the "built-in flexibility" of the current fiscal terms. The two factors are weighted equally in our overall stability rating score (see the attached presentation).

  The rationale behind this approach is that when new investors ask "how stable is this fiscal regime?", which they do with increasing concern, we know that one factor they consider is how the government has responded to the recent change in the economic environment. We also know that they do not view all changes to fiscal terms in the same way.

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The study, therefore, makes a clear distinction in the "history" rating between fiscal changes that impact upon new exploration or field investment decisions and those which apply to existing cash flow from projects where investment has already been spent. It is the study's contention that investors will view the former as part of the evolution of the fiscal regime and this type of fiscal change therefore receives a "more stable" score than a change which results in a transfer of current value from investors to the government. According to our analysis, Alaska was one of only nine regimes to adversely change the terms on existing assets in the study period (by adding the satellite fields to the Prudhoe Bay severance tax ring fence, then introducing PPT).

The study estimates that, under base price assumptions, the Government Take from the remaining value of existing assets' production increased by US$10 billion, compared to what it would have been under the 2001 terms, representing a transfer of 15% of the investors' remaining NPV to government. Under the higher (US$75/bbl) price assumption, the investors' remaining NPV10 is reduced by US$21 billion (22%) compared to the NPV under 2001 terms). We regarded the overall impact of these changes as a "significant increase in take from existing assets" which is why Alaska received the lowest score on this measure.

Fiscal instability in Libya was mentioned by Dr van Meurs (and Mr Johnston) in the session but it was noted that the sharp increase in the take there was largely a result of the industry entering a bidding war and offering very onerous terms. Under the study's methodology we score these volunteered increases in take as less "unstable" than changes imposed by government, so Libya has a higher score than Alaska as a result.

Beyond the recent track record, we also expect investors to consider how the fiscal terms would respond to future changes in investment climate – whether this is driven by upward/downward shifts in prices, costs, or discovery sizes. The more regressive the system, the more likely it is to be under pressure to change in the future (either by government or industry). Our results for Alaska show a neutral / mildly regressive regime and the score reflects this. Our interpretation of both consultants' testimony is that they believe that progressivity within the fiscal terms is important to enable future fiscal stability, and their overall perception of the current regime is that it is essentially neutral or mildly regressive under all but the most favourable of scenarios. We agree with these observations and they are reflected in the stability index.

- *"They have forgotten to include Algeria in the study"*

  Again, this is simply false. On the "history" rating, Algeria scores the same as Alaska as a result of its introduction of a windfall profits tax on existing PSCs. The current terms in Algeria for new investors are marginally more progressive than Alaska's however, which means that Algeria receives a slightly higher overall "stability" rating than Alaska (Algeria ranks 98th to Alaska's 99th position).

- "*Alaska has been stable for 16 years and you are not unstable if you have a fiscal review every 10-15 years. In that period UK, Norway and Alberta has been much more unstable*"

  Our study bases "recent history" analysis on fiscal changes in the period from end 2001 through mid 2007. This may appear to be a short period to review "stability" but we believe it is an appropriate choice for the following reasons:

  - new investors are far more likely to be interested in the recent behaviour of governments than what they did (or did not do) to terms in the 1980s or 1990s
  - investors are far more interested in how governments respond to significant shifts in the perceived attractiveness of investment rather than how they behave when the industry is in a steady state. Between 1987 and 2001, oil prices were relatively low but stable and industry and governments worked closely together to ensure economic development of discoveries. As a result, fiscal policies around the globe became more lenient and previously closed countries opened their doors to investment.
  - we forecast, therefore, that if we extended the scope of "history" back to 1987 that most countries would demonstrate an unchanging fiscal regime or, where there was "fiscal instability", it was largely in countries where the expected take was actually reducing from discoveries (such as UK, Alberta, Indonesia, Colombia and most of the other countries mentioned by the consultants in the session). Some countries which opened their doors to foreign investment during this period had initial "teething troubles" – such as the Former Soviet Union – which would be expected. Also, in a few new, highly

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prospective, areas (such as deepwater Angola) terms for new investment did tighten a little by the turn of the century. We maintain, however, that it is only since prices started to increase in 2001/02 that fiscal policies have become notably less "investor-friendly" around the world. The manner and degree to which governments are reversing the fiscal trends of the 1980s and 1990s has been markedly different to date - and this is what we reflect in the index.

Government Take and the value of remaining production from existing fields

Another aspect of the study was a comparison of the Government/State Take from the remaining value of existing assets. In this, we found the average take in Alaska (approximately 61% under the long term price assumption of US$50 per barrel) to be lower than the weighted global average Government Take of 67%. A comparison of the weighted average pre-take NPV per boe of remaining reserves (i.e. the level of rent from remaining production) shows, however, that Alaska is also much lower than the global average – thus the take and available rent appear to be consistent. The uncertain timing and value of the development of the gas reserves is an important factor in this result. Excluding gas from the Alaskan result does not impact the weighted average Government Take but does increase the pre-take NPV per boe of the remaining (oil) reserves significantly.

We noted Mr Johnston's comments on the importance of using the right measure of Government Take when comparing international competitiveness in the debate. As he mentioned, our study includes both Government Take (royalty, taxes, etc.) and State Take (i.e. Government Take plus equity participation). Mr. Johnston cautioned you to always consider State Take in international comparisons, when considering full cycle investments.

Our analysis of the remaining value of projects is, by definition, not a full cycle calculation, but point forward. Thus, any government participation at this stage is on an equal funding basis and both consultants appeared to agree that, at this point, Government Take rather than State Take is the most appropriate measure. Thus we would suggest that when the session is discussing the international competitiveness of fiscal terms that it is mindful of what type of project is the basis for the comparison. We agree that State Take is appropriate for discussion of future exploration projects, which include exploration costs that may be carried. If the basis is an undeveloped discovery, where the exploration costs are treated as sunk, then either measure could arguably be used as equity participation is most likely being funded from this point. Where the discussion is on the comparative take from existing fields, such as Prudhoe Bay, then Government Take, without the participation component, seems the more appropriate measure. For the record, the study shows the global weighted average State Take from remaining production, under base price assumptions, is 72% (compared to the average Government Take of 67%).

Concluding remarks

We trust that, in the course of this letter and the attached presentation, that the legislature has a clear and accurate understanding of the thrust of our study, particularly regarding the fiscal attractiveness and fiscal stability methodologies and rankings.

In closing, we would like to make clear that the study does not pass any judgement on whether Alaska, or any of the other countries, was right or wrong to make changes when and in the way that they did. These are almost always the result of long discussions and analysis of numbers, such as you have begun in this session, and there will normally be very good reasons driving the change.

We wish you well with the remainder of your deliberations on this complex issue.

Yours sincerely

Graham Kellas
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(Head of fiscal advisory practice and principal author of *Government Take*)

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Wood Mackenzie has been a respected adviser to the energy industry for more than 30 years and has developed a reputation associated with quality and trust. Its energy coverage now extends across 93 countries covering upstream oil and gas, oil refining and marketing, downstream gas, power generation and coal. We combine experience with knowledge of the industry to provide energy companies and financial institutions with analysis which is commercial, forward looking and value based.

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A critical part of the upstream research analyst's role is to gather information on the fiscal and contractual terms that each asset is governed by. These terms are then modelled in our **Global Economic Model (GEM)** to enable evaluations of every asset, basin and company. A team of 10 dedicated petroleum economists ensures these models are updated regularly and are as accurate as possible. Over 1,000 different fiscal arrangements are currently modelled in GEM.

The *Government Take* study makes full use of the data and modelling capabilities included in GEM to ensure that it is the most up to date and comprehensive analysis of the subject of global upstream fiscal terms. Based on the unique depth of proprietary industry data and knowledge of fiscal regimes, Wood Mackenzie often acts as advisor to governments seeking to review their fiscal terms. Our most recent assignments have been with the provincial governments of Newfoundland and Labrador, Nigeria and the Nigeria-Sao Tome Joint Development Agency.

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