

December 3, 2004

Mr. Peter Grout
Manager Regulatory Affairs
Mackenzie Gas Project
Imperial Oil Resources Ventures Limited
P.O. Box 2480, Station M
Calgary, Alberta T2P 3M9

Dear Mr. Grout:

Re: Initial Review of Environmental Impact Statement (“EIS”) for the Mackenzie Gas Project (the “Project”)

The Joint Review Panel (“the Panel”) is writing to convey comments arising from its initial review of the Environmental Impact Statement (“EIS”).

Pursuant to Section 4.4 of the Schedule to the Agreement for an Environmental Impact Review of the Mackenzie Gas Project, the Panel is conducting a conformity check to determine whether the EIS contains sufficient information to proceed to the technical analysis. To that end, the Panel has been reviewing the EIS in the context of the Terms of Reference (“TOR”) that were provided in draft form in October 2003 and in final form in August 2004. As is stated in Section 2 of the TOR, the purpose of the TOR is to “serve as a basis for the Panel’s review and evaluation of the potential impacts of the Project on the environment” and that “it is the responsibility of the Proponent to provide the information described in the TOR”.

The purpose of this letter is to highlight those areas in the EIS that require further information. The information provided should be sufficient to enable the Panel, “regulators and members of the public to understand the Project, the receiving environment and potential adverse or beneficial impacts, including how the Project could change the lives of the people in the Project area” (TOR Section 2.0). As well, the information provided should “identify, describe and determine the significance of potential impacts on the environment that could arise from the Project” (TOR Section 6.0).

The Panel notes the acknowledgement in Volume 1, Section 1.6.4 of the EIS that “if areas require further clarification or data, the proponents will file supplementary reports or respond to formal information requests.” The additional information requested in this letter, indicated with an “>”, will require either amendment of existing volumes of the EIS or submission of supplementary reports or a combination thereof.

The Panel notes that there may be information related to the EIS that is contained in documents the Proponent has submitted to other agencies. The Panel reminds the Proponent that the EIS is a stand-alone document required for compliance with the TOR. To the extent that information is

relevant to the TOR and it has not been submitted to the Panel, the Panel requests that it be contained in the supplementary EIS reports the Proponent will be filing with the Panel.

The Panel is continuing its review of the EIS and will, in due course, be forwarding detailed information requests in specific areas of the EIS.

1. Sustainability

The TOR establish the principle of sustainability as a “fundamental purpose of EIA” and call for an assessment of the Project’s overall “contribution towards achieving sustainability”, particularly with regard to “reconciling economic development, social equity and environmental quality” (TOR Section 5.1). Sustainability is also an important goal of land claim agreements.

The EIS (Volume 1, Section 2.4.1.7) recognizes this principle and cites criteria that may be used in evaluating a project’s contribution towards sustainable development goals. The EIS also documents sustainability issues that were raised in regional meetings with affected communities.

- The Panel requests the Proponent to provide further information, especially at the community and regional levels, as well as for the Northwest Territories and Canada, for the Panel to conduct an explicit and consolidated assessment of the extent to which the Project makes a positive overall contribution towards environmental, social, cultural and economic sustainability, particularly with regard to the following as established in the TOR (Section 5.1):
 - the potential impacts of the Project in relation to the social, economic, cultural and environmental goals and values of affected communities, the North and the rest of Canada;
 - the capacity of natural systems to maintain their structure and functions and to support indigenous biological diversity and productivity;
 - the capacity of the social and economic systems of the human environment to achieve, maintain or enhance conditions of self-reliance and diversity;
 - the capacity of human environments, including local and regional institutions, to respond to and manage externally induced change;
 - the attainment and distribution of lasting and equitable social and economic benefits;
 - the rights of future generations to the sustainable use of renewable resources; and
 - protection and conservation of wildlife and the environment for present and future generations.

2. Traditional and Local Knowledge

The TOR, Section 5.2 states that many Aboriginal persons and communities have unique knowledge about the local environment, how it functions, and the ecological relationships that characterize it. Section 5.2 of the TOR also indicates traditional knowledge, in combination with other information sources, is valuable in achieving a better understanding of potential impacts of projects. The TOR go on to state that traditional knowledge may also contribute to Project siting and design, identification of issues, the evaluation of potential impacts, and their significance, the effectiveness of proposed mitigation, cumulative impacts and the consideration of follow-up and monitoring programs. Section 6 of the TOR states that the Proponent shall, with the cooperation of other parties, use and incorporate traditional knowledge into the EIS.

In Volume 1, Section 2.2.1 (Figure 2-1) of the EIS, the Proponent indicates that it will incorporate community input and traditional knowledge into the project concept and design and, following this step, the Proponent will develop management plans to mitigate potential project effects. In Volume 1, Section 3 of the EIS, the Proponent indicates that it has developed a community-based approach to the completion of the traditional knowledge studies. The Proponent further states traditional knowledge studies have been completed in some areas, have commenced in others and, in some instances, the terms and conditions for traditional knowledge studies are still being negotiated.

Use of Existing Traditional Knowledge Studies

The Panel recognizes that the Proponent has based its EIS on traditional knowledge studies from various sources. The Panel is unable to identify which specific, non-Mackenzie Gas Project, traditional knowledge studies were used in the EIS. For example, in Volume 1, Section 3 of the EIS, the Proponent states that the Arctic Science and Technology Information System (ASTIS) database was reviewed to identify documents referencing traditional knowledge in the study area and relevant sources were reviewed to identify relevant traditional knowledge from 42 documents (see also Volume 1, Table 3-2). It is unclear from the information provided in the various reference sections of the EIS whether or not these sources have been cited.

- The Panel requests the Proponent to provide a complete bibliographic listing of all non-Mackenzie Gas Project traditional knowledge literature that was used in the preparation of the EIS. The Proponent should also provide a detailed discussion of how this body of information was used in preparing the EIS.

In Volume 1, Section 3.2.2.5 (page 3-8), the Proponent states “under the TK working groups’ directions, community participants in some regions are conducting an extensive review of existing sources of TK. The data in these sources will form part of the TK study information base.” The Proponent goes on to state “the environmental consultants group has reviewed existing information, which will be provided to each TK working group. The working group will be asked to validate the documented information and will be encouraged to incorporate any relevant information in the TK studies it is conducting.”

- The Panel requests the Proponent to provide, for any traditional knowledge studies and data sources not identified in the previous bulleted request, a bibliographic listing of traditional knowledge studies referred to in Volume 1, Section 3.2.2.5 (page 3-8) of the EIS that are

being validated, and provide a best estimate of when the validation work will be completed by each of the traditional knowledge working groups.

Progress of Mackenzie Gas Project Traditional Knowledge Studies

In Section 3.3.5 of the EIS, the Proponent has provided an overview of progress towards completion of the traditional knowledge studies in the Mackenzie Gas Project study area.

- The Panel requests the Proponent to provide the following traditional knowledge study information for the Northwest Territories and northwestern Alberta communities identified in Table 3-1 of Volume 1 of the EIS.
 - An updated status report of all traditional and local knowledge study discussions that have occurred from the date of the last recorded meeting in each study area community (in most cases April-May 2004) to the end of November 2004. The information provided should include: the community or organization that was contacted, date of the activity, a description of the nature of the traditional knowledge discussion, the important issues discussed and the outcome or response. The Proponent should also provide a listing of all traditional and local knowledge study activities they are planning to undertake in the next 3-4 months or until finalization of each of the studies.
 - A table that indicates, on a community-by-community basis, the Proponent's best estimate of timelines for the completion of all of the traditional knowledge study reports for Northwest Territories and for northwestern Alberta and the likely timing of submission of these reports to the Panel. In those instances where the Proponent is unsure of the timing of completion of traditional knowledge studies for a particular community, the Proponent should provide a detailed description of these circumstances and efforts to complete the studies.

Incorporating Traditional Knowledge into the EIS

The effective incorporation of traditional and local knowledge from community information sessions and regional workshops into the EIS is important.

- The Panel requests the Proponent to provide a detailed description of how the EIS has incorporated traditional and local knowledge and, further, how the EIS will be supplemented to incorporate the information derived from the yet-to-be-completed traditional knowledge studies. The Proponent should also indicate how any new traditional knowledge information specific to the Mackenzie Gas Project would affect the selection of Valued Components (VCs), the determination of impacts, and the conclusions about significance for all VCs (human environment and biophysical environment) in the EIS.

Identification of Traditional Knowledge Study Communities

The Proponent has identified socio-economic study area communities (EIS Volume 4, Figure 1-1) and traditional knowledge study communities (EIS Volume 1, Figure 3-1). The traditional knowledge studies focus on communities that have a large proportion (or absolute number) of Aboriginal people. However, there are several predominantly Aboriginal communities in the

Deh Cho Region that, while in the socio-economic study area, are not included in the traditional knowledge studies including: Fort Liard, Fort Providence, Hay River Reserve, Nahanni Butte and West Point. The Panel also notes that there is an unincorporated settlement of Aboriginal people at Willowlake River in the Deh Cho Region that is inhabited year-round and is located near the proposed Mackenzie Valley Pipeline.

- The Panel requests the Proponent to provide a detailed description of whether – through the community consultation and public participation process – any of the communities identified in the previous paragraph indicated they wished to participate in the traditional knowledge studies, and if so, provide a detailed explanation as to why they were not selected.
- The Panel requests the Proponent to indicate the steps taken to include the Aboriginal settlement at Willowlake River in the traditional knowledge studies. Also, where possible, the Proponent is requested to provide specific references where the local and traditional knowledge of the residents of Willowlake River was used in the EIS.

3. Public Participation

The TOR, Section 10 states that public participation is an important component of the environmental impact review process and a means by which the concerns and interests of the public are taken into account.

In Volume 1, Section 4 of the EIS, the proponent describes its issues management system, which includes individual records of meetings and discussions and, for each issue or concern, the Proponent's resolution plan and follow-up. The Proponent states that summaries of contacts have been provided in the EIS up to the end of February 2004. In Volume 1, Section 4 of the EIS, the Proponent provides an overview of its public participation program, including community meetings and regional workshops.

Public Participation Information Updates

As the nature of public participation is dynamic and ongoing throughout the environmental impact review, and the most recent information on the Proponent's public participation program is February 2004, the Panel requires updated information.

- The Panel requests the Proponent to provide an update to the end of November 2004, on a community-by-community basis, of all stakeholder meetings, public information sessions and workshops held in the Northwest Territories and northwestern Alberta that are not described in the EIS.
- The Panel also requests the Proponent to provide, throughout the duration of the environmental review process, a monthly update of any additional stakeholder meetings, public information sessions and workshops. The information should be provided on a community-by-community basis for all study area communities in the Northwest Territories and northwestern Alberta and should include: the region and community where the contact took place; date of the contact; the stakeholder group or individual contacted; a summary of the concerns or issues raised, and the Proponent's responding actions or resolution plan and

follow-up. The Proponent should clearly identify whether the issue or concern discussed at the meeting has been identified previously in the EIS or is a new EIS-related issue. If it is a new issue, discuss whether it is a new VC and, if so, provide an assessment and conclusion about the significance of the new VC.

Public Participation and EIS Issues Identification

The Panel seeks further information from the Proponent regarding the direct link between issues and concerns identified in the public participation program and the identification and assessment of VCs in the EIS. For example, although the Proponent's issues management system (Section 4.1.4 of the EIS) includes the "proponent's resolution plan and follow-up", this important information is not displayed in the various tables of community information meetings and regional workshops shown in Volume 1, Section 4 of the EIS.

- The Panel requests the Proponent to provide a supplementary report that provides a clear link between the key issues/concerns raised at the community information meetings and regional workshops and the identification of VCs. The report should also indicate how these issues/concerns specifically link to the biophysical and socio-economic effects assessment and development of mitigation plans and follow-up programs in the EIS.

In Volume 1, Section 4 of the EIS, the Proponent states that the goals of the public participation program are to meet the requirements set out in Section 10 of the TOR for the EIS. In this regard, the Panel seeks further information regarding the involvement of elders, youth and women in the public participation process.

- The Panel requests the Proponent to report on those meetings or workshops where elders, youth and women participated and indicate, in general or specific terms, the concerns or issues raised by these groups and how the proponent incorporated this information into the EIS.

4. Project Description, the Proponent, and Personnel

Project Description

Volume 2, Section 3.2 of the EIS states that two options are under consideration for the Niglintgak gas conditioning facility - a barge-based design and a land-based option.

- The Panel requests the Proponent to provide the following:
 - the timeframe for selecting an option;
 - the criteria to be applied for making the selection; and
 - the timeframe within which further environmental details concerning the selected option will be submitted to the Panel.

In addition to reviewing the EIS, the Panel has considered a letter dated November 5, 2004 from Cook Roberts (copy enclosed), counsel for Dene Tha' First Nation, submitting that the EIS does not conform to the TOR with respect to, among other matters, the definition of the Project.

- The Panel requests the Proponent to provide its response to the issues raised in the Cook Roberts letter regarding those issues related to the conformity of the EIS with the TOR and to the communications between the Proponent and the Dene Tha' communities relating to public participation and traditional knowledge sharing and studies.

The Project Description in Appendix 1 of the TOR includes certain Nova Gas Transmission Limited (NGTL) facilities, namely the Dickins Lake Section and the proposed looping of the Northwest Mainline (Vardie River Section). The EIS (Volume 2, page 1-1) refers to NGTL's plans to construct an interconnect facility in northwestern Alberta, the Dickins Lake Section and the Vardie River Section, and describes these facilities as "an ancillary project" that will be the subject of an application in early 2005 by NGTL to the Alberta Energy and Utilities Board (EUB). The EIS continues:

In that application, NGTL will develop specific mitigation measures, including plans and programs developed to address its project's potential environmental and socio-economic aspects.

For the purpose of the EIS, the project has been scoped to include certain facilities that will connect into the NGTL interconnect facility in Alberta.

The EIS includes some information on the NGTL interconnect facility and the Dickins Lake Section. Some maps appear to identify areas that may be impacted by the Dickins Lake Section and there are frequent references to an undefined region identified as "Northwestern Alberta". The EIS does not appear to include any information on the Vardie River Section.

- The Panel requests the Proponent to clarify how the EIS has responded to the TOR definition of the Project in regard to the NGTL Dickins Lake Section and the Vardie River Section. Please include a description of the area identified as "Northwestern Alberta" and discuss how the EIS has addressed each of the provisions of the TOR insofar as they may apply to the area as defined. Where further information with respect to the NGTL facilities and their impacts may be forthcoming at a later date (e.g., after the filing of an NGTL application with the EUB in 2005), please describe that information and the means by which the Proponent proposes to submit it to the Panel.

The Proponent

- The Panel requests the Proponent to provide the complete information described in the second paragraph of Section 8.1 of the TOR.

Key Personnel

- The Panel requests the Proponent to identify key personnel, contractors, and/or sub-contractors responsible for preparing the EIS as described in Section 8.1 of the TOR.

Record of Environmental Performance

- The Panel requests the Proponent companies to provide a record of their respective environmental performance in conducting this type of project and in northern environments as described in Section 8.1 of the TOR.

5. Human Environment

Information Requirements

The TOR, Section 11.5.1 states that the EIS shall, in its description of the human environment:

... take a comprehensive approach that takes full account of the distinctive ways of life of the local communities, the critical requirements for their maintenance and enhancement, and the aspirations and plans of the communities. This approach shall have due regard for the distinctive economic and social role of subsistence and commercial harvesting at the household, community and regional levels, and other uses of lands and resources for traditional purposes by aboriginal and other local persons. It shall also consider the status, health, persistence, vulnerability and resilience of those features of the local economy. Context-sensitive information shall be provided in sufficient detail to address common and diverse public interests and concerns, and the variable significance of the potential impacts affecting communities throughout the Project area.

The Panel is of the view that additional information will be needed to address the comprehensive approach called for by the TOR, particularly with respect to:

- the distinctive ways of life of the local communities and the critical requirements for their maintenance and enhancement, and the status, health, persistence, vulnerability and resilience of those features;
- the distinctive economic and social role of subsistence and commercial harvesting, especially at the household level; and
- the common and diverse public interests and concerns, and the aspirations and plans for the communities.

The TOR, Section 15 also states:

For each VEC, the information must be sufficient to allow the Joint Review Panel to understand the nature of the potential impacts and how the Proponent's conclusions were reached. The assessment must provide a clear, traceable path of information from the baseline conditions through the identification of potential impacts, mitigation, residual impacts and determination of significance. The proponent should where appropriate address issues on a regional basis to reflect differences in communities. ... In the analysis, identify and take into account the particular needs and interests of various segments of the local populations (e.g., youth, elders, women, harvesters), and consider how the Project may affect each of them. The Proponent shall, to the best of its ability and within knowledge [sic], indicate how the direct and indirect impacts of the Project would enhance and/or impair both the current social, cultural and economic ways of life in the communities, and community aspirations for the future, including other economic opportunities.

Accordingly, the Panel understands the key questions the review must address include:

- What aspects of community life are going to be better or worse as a result of the Project?
- How will community development goals and aspirations be affected by the Project?
- What are the identified interests and concerns of each community, how do Project-related impacts affect them, and how do Project-related mitigation programs address them?

The Panel is of the view that additional information required on matters relating to the Human Environment is not simply at the level of missing data or particular pieces of information. The EIS needs to take a more comprehensive response to the intent of the TOR. Consequently, the Panel is requesting revisions to Volumes 4 and 6 of the EIS.

- The Panel requests the Proponent to provide more information on the following matters:
 - justification of the VCs and how they were selected (TOR Section 12.1); the Proponent is therefore requested to identify clearly the extent to which these were determined on the basis of public comment or, if also by professional judgment, the source and basis of this judgment;
 - identification and/or justification of workable key indicators for identified VCs; the Proponent is requested to clarify why the information selected was presented and how it actually relates to the identified VCs and their key indicators;
 - household demographic information and inter and intra-regional migration (TOR Section 11.5.2);
 - gender-specific and ethnic-specific baseline data (TOR Section 11.5.9);
 - consideration of the capacity of local, regional, territorial and federal governments to maintain services and service levels (TOR Section 11.5.1);
 - consideration of the distribution of costs and benefits of the Project (TOR Section 15.2), especially at the regional level and between levels of governments;
 - estimation of the incremental costs to municipal, territorial, and federal governments resulting from the Project (TOR Section 15.9);
 - the current status of the labour force in each region (especially in terms of skills); the proportion of the labour force in each region qualified for Project-related training and employment; education and skills development programs required for Project-related employment (TOR Section 11.5.4); and which of these programs would be provided by or sponsored by the Proponent (TOR Section 15.3);
 - whether the Proponent plans to use unionized labour for any aspect of Project construction, and if so, discuss how union requirements and arrangements could impact northern employment participation and income and discuss the Proponent's plans to

enhance the ability of non-unionized northerners to access union jobs (TOR Section 15.2);

- information on the Proponent's plans for rotational labour and leave schedules, pick up and drop off points, hiring points, and related employment policies, especially as these might affect harvesting activities, and the well-being of families, and any gender or age-specific effects (TOR Section 15.6);
- discussion of potential leakage of economic benefits out of the socio-economic study area both during and after the construction phase (TOR Section 15.2); and
- a description of human health status that includes indicators of determinants of health, including physical, social, cultural and economic aspects, with particular attention given to the positive and negative effects of the Project on determinants of health (TOR Section 11.5.8 and Section 15.0).

The Panel notes that there has been substantial local and regional northern experience with both the effects of industrial development (and particularly the boom-bust phenomenon), and their mitigation or enhancement. This experience has occurred both in the project area specifically, and in northern Canada, northern Alberta and Alaska more generally.

- The Panel requests the Proponent to review this experience and identify what concerns have been expressed about similar developments in recent decades, the extent to which these concerns have been addressed, and the effectiveness or otherwise of previous policies, programs, and actions (whether of industry, government, or others) with respect to mitigation and enhancement, and of public responses to them.

The Panel notes there is a substantial body of published literature that the EIS does not appear to have consulted: literature on the social and economic characteristics of the Project area; on the effects of recent developments in the Project area and in similar northern regions; and on northern community perceptions of industrial development. Further, there is a substantial amount of information in the form of unpublished but accessible reports and administrative and monitoring data, also not consulted. Many of these sources are available on request from agencies (both government and non-government) within and outside the Project area.

- The Panel requests the Proponent to consult additional published and unpublished sources as appropriate and to reference these in detail indicating, where appropriate for each source, the VCs, key indicators and their potential applicability to the EIS.

Organization and Presentation of Information

With respect to the organization and presentation of the existing body of information in Volumes 4 and 6, and the additional information requested above, the Panel notes that the Inuvialuit Final Agreement as well as Inuvialuit and federal and territorial government administrative reports pertaining to the Inuvialuit Settlement Region (ISR), typically include the Inuvialuit of Inuvik, and their organizations, in the ISR. However in the EIS, the town of Inuvik is excluded in the sections dealing with the ISR communities.

- The Panel requests the Proponent to include all relevant information for the town of Inuvik in the socio-economic baseline and assessment sections of the EIS dealing with the ISR. However, information on the town of Inuvik relevant to the Gwich'in Settlement Area (GSA) should remain in those sections.

Although some information is provided on land use patterns and project-related effects on them, it is generally descriptive and thus difficult to assess without maps.

- The Panel requests the Proponent to present the information requested in Sections 11.5.5, 11.5.6 and 15.7 of the TOR on maps at a scale of not less than 1:250,000 for affected communities.
- The Panel requests the Proponent to provide diagrams for each community that allow for comparison of the temporal distribution of selected harvesting activities by month with the temporal distribution of all phases of project activities and the identification of any conflicts arising between harvesting activities and project activities.

The Panel notes that socio-economic baseline information is presented in both Volume 4 and Volume 6 of the EIS. It is the Panel's view that the matters referred to above must be addressed in sufficient detail and with sufficient clarity that participants in the Panel's environmental impact review process can clearly understand "the Project, the receiving environment and potential adverse or beneficial impacts, including how the Project could change the lives of the people in the Project areas." (TOR Section 2.0)

- The Panel requests the Proponent to prepare and submit community-specific reports for each socio-economic study area community, including the following information:
 - geographical area of local interest for each community;
 - components of the Project to be constructed in that area, by what means, and according to what schedule;
 - an inventory of transportation-related traffic volumes in the area, with a year-by-year breakdown of vehicle, air, and barging components;
 - the potential effects of the specified Project activities, including potential accidents and malfunctions;
 - how the Proponent proposes to mitigate the identified effects;
 - any residual effects, and their significance to the community;
 - any cumulative effects, how they will be mitigated, and any residual effects and their significance to the community;
 - any proposed monitoring and follow-up measures, including any cooperative arrangements or agreements the Proponent may enter into with each community or regional body; and

- issues of particular community interest or concern that may be affected by the Project, including local goals and aspirations, project hazards and adverse effects, training, employment and business opportunities, harvesting impacts, and impacts on culture, and family and community health and well-being.
- The Panel requests the Proponent to prepare and submit the requested revisions and additional information pertaining to the content of Volumes 4 and 6 of the EIS as filed 7 October 2004 in replacement rather than supplementary volumes. All baseline information should be consolidated in a new Volume 4 and all impact assessment information (including the prediction of impacts, proposed mitigation measures, residual effects and their significance) in a new Volume 6. Both should be appropriately titled to indicate that they are “revised” volumes.

The Panel is of the view that determining how the Project contributes to the goals and aspirations of northerners is an important consideration in the TOR (Section 5.1) in the context of environmental assessment and the application of the principle of sustainability.

- The Panel requests the Proponent to prepare a table that documents community and regional social, economic and cultural goals and aspirations as contained in community, regional and territorial level plans and land claim agreements and to discuss how these may be affected by the Project.

6. Biophysical Environment

The TOR, Section 11.1 calls for the EIS to provide a description of the existing environment that “should identify and explain important interrelationships in the environment, its processes and systems...The inclusion of maps, photos or other diagrams to illustrate key points is encouraged.”

The TOR, Section 11.1 goes on to state that the description of the baseline environment in the EIS:

[W]hile necessarily relying on recent and current data and traditional knowledge, must recognize the dynamic nature of the environment. To assist in identifying and accounting for trends and changes in the environment that are not caused by the Project, but may either combine with those impacts related to the Project or cause a change to the Project:

1. describe any substantive changes to the physical, biological or human environment of the Project area that have occurred since 1940, to the extent known, and indicate whether those changes are ongoing;
2. specifically, describe any changes to wildlife and fish habitat and to distribution movements or abundance since circa 1970, as appropriate;
3. describe how the environment has changed in relation to recent hydrocarbon exploration, and transmission, and mining activities;
4. predict the condition of the environment within the expected lifespan of the Project, if the Project did not proceed. Considerations shall include, but not be limited to global climate change and variability (see section 16.1 Climate Change)... variation in wildlife and fish abundance and distribution...[and] ecological connectivity...

An important objective is to distinguish between the Project's effects on the environment and the effects of other factors, particularly those referenced in (1) through (4) above and the analysis should reflect this intent, without requiring new research.

The Panel is of the view that additional information will be required in order to address the comprehensive, dynamic and ecosystem-based approach called for by the TOR to describe and assess project impacts related to fish and fish habitat, marine mammals and marine mammal habitat, birds and bird habitat and wildlife and wildlife habitat, particularly with respect to:

- abundance and distribution, seasonal movements, habitat requirements (e.g. breeding, calving, feeding) and sensitive periods;
- species subject to exclusive or preferential rights granted by land claim agreements;
- species of particular importance to subsistence harvesters;
- habitat or sites of special value or sensitivity, including species use and timing;
- migratory patterns, routes and timing in relation to Project facilities and activities;
- current levels of natural and human-caused habitat fragmentation and connectivity;
- baseline contaminant concentrations in harvested species, that may change as a result of the Project; and
- any known issues with respect to the health of harvested species (e.g. parasites, disease condition).

The Panel understands the key questions the review must address include:

- What changes and trends in the environment are naturally occurring or may naturally occur, and how might these combine with Project-related impacts or cause an impact on the Project?
- What areas in the Regional Study Area ("RSA") are of high conservation value, are ecologically sensitive and/or represent critical habitat for fish, wildlife and birds, how are they affected by Project-related impacts, and how do Project-related mitigation programs address them?
- How will Project-related impacts on the environment, including species subject to exclusive or preferential rights granted by land claim agreements, affect the future ability of people in each community to exercise their harvesting rights in the short and long-term?

The Panel is of the view that additional information on matters related to the biophysical environment require revisions to Volumes 3 and 5 of the EIS.

➤ The Panel requests the Proponent to provide more information on the following:

- identification and description of the changes that have occurred to the environment in each region over the last 30 years or longer; identification of those changes that are ongoing, and, over the life of the Project, identification of those changes that may occur with and without the Project;

- identification and description of changes to the environment in each region that have occurred within the last decade as a result of mineral and hydrocarbon exploration, with special regard to effective habitat loss (including habitat avoidance) and effects on harvesters;
- include as VCs all harvested species that are subject to exclusive or preferential rights under land claim agreements (regardless of level of current use) and provide a complete description and impact assessment for each species (e.g. inclusion of chum salmon, furbearers and moose as VCs in the Inuvialuit Settlement Region);
- identification and description of all harvested species that are subject to exclusive or preferential rights under land claim agreements and assess how project-related impacts on the environment and these species may affect the ability of harvesters in each community to exercise their rights in the future;
- identification and description, including map information, of the current levels of effective habitat, habitat fragmentation and connectivity, and critical habitat for all VC species within the RSA;
- identification and description, including map information, of the expected increase or decrease in levels of effective habitat, habitat fragmentation and connectivity and critical habitat for all VC species within the RSA during project construction and during project operation;
- comparison by month, utilizing diagrams, of the temporal distribution of project activities with the temporal distribution in the RSA of grizzly bears, polar bears, barren ground caribou populations, woodland caribou populations, marine mammals and migratory birds in each region;
- baseline contaminant concentrations in harvested species that may change as a result of the Project; and
- any known issues with respect to the health of harvested species.

The TOR, Section 18 calls for the EIS to “consider the capacity of renewable resources that are likely to be significantly affected by the Project to meet the needs of the present and those of the future”.

- The Panel requests the Proponent to identify those resources likely to be significantly affected by the Project and to describe how the Project could affect their sustainable use.

The Panel notes that the Proponent indicates in Volume 3E, Section 10.2.2 of the EIS pertaining to the wildlife baseline description:

Traditional and local knowledge will provide additional information on wildlife population trends, habitat use, seasonal distributions, movements and animal health. Supplementary traditional knowledge studies, to be conducted as part of the baseline studies, will augment existing traditional knowledge databases and provide information specific to this project.

Pursuant to the Panel’s observations and requests stated above (“2. Traditional Knowledge”), and more specifically with respect to the biophysical environment:

- The Panel requests the Proponent to specify what additional traditional knowledge will be incorporated into the EIS, when it will inform the description of the biological environment and baseline, and how the EIS will be revised accordingly.

The description of the existing environment for Kendall Island Bird Sanctuary (“KIBS”) should allow an understanding of the relative importance, for migratory birds, of areas that could be impacted by the Project in relation to KIBS as a whole (TOR, Section 11.4.2.1).

- The Panel requests the Proponent to provide baseline information that describes the entire KIBS, not just the portion occupied by the Project, and that addresses the following as specified in TOR, Section 11.4.2.1:
 - migratory bird habitat types within KIBS;
 - migratory bird species present;
 - the spatial distribution and amount of each habitat type;
 - distribution and density of each migratory bird species; and
 - a comparison of the density of each migratory bird species by habitat type, in the Project area (footprint plus zones of influence – see Section 14.5.1) and in similar habitat elsewhere in KIBS.

The TOR, Section 11.4.2.1 calls for the Proponent to:

Identify and describe, with maps, important areas and their use (e.g., nesting, brood-rearing, moulting and staging) for waterfowl, waterbirds, shorebirds and songbirds within the Project area (footprint plus zones of influence) and in KIBS as a whole. Describe how habitat types, bird density, important areas and bird use were determined.

- The Panel requests the Proponent to give special attention in the EIS to the matter of habitat fragmentation and connectivity for all migratory bird species utilizing the Kendall Island Bird Sanctuary in its assessment of project impacts.

The TOR, Section 11.5.6 calls for the EIS to “identify areas of high conservation value, ecological sensitivity (see also Section 11.4 Biological Environment) and traditional use, including any in the Ecoregions affected by the Project and in the Ecoregions set out in the NWT Protected Areas Strategy Mackenzie Valley Five Year Action Plan.”

- The Panel requests the Proponent to adopt an ecosystem-based approach and to conduct an analysis of VCs in order to identify areas of high conservation value, ecological sensitivity and traditional use in the 16 Ecoregions intersected by the Project and referenced in the “NWT Protected Areas Strategy Mackenzie Valley Five Year Action Plan”. This should

include an assessment that gives particular attention to vulnerable or irreplaceable ecosystem elements, the significance of ecosystem values that concentrate or overlap in particular areas and at multiple scales of regional, national and international significance, and critical habitats for keystone species.

7. Cumulative Effects

As described in the TOR, Section 17.0, cumulative impacts may occur when the impacts of one project or activity combine with the impacts of other past, present and future projects and activities.

Although reasonably foreseeable land uses for the Project area were identified in the EIS (Volume 5, Section 12.1.6.2), they were assessed qualitatively, were not mapped and the total area of potential future disturbance was not calculated.

- The Panel requests the Proponent to provide information that maps the identified foreseeable land uses, and provides a quantitative assessment of the geographic area that could be disturbed.
- The Panel requests the Proponent to provide a description of a production, transportation, development and gathering system scenario that would require the Mackenzie Valley Pipeline to operate at its maximum capacity (51 Mm³) and to provide an assessment of the resulting impacts as outlined in TOR Section 17.0.

Volume 6, Section 9 of the EIS, presents the socio-economic cumulative effects assessment for the Project. This assessment lists the following VCs for which socio-economic cumulative effects have been identified: the economy, including demographics; infrastructure and community services; individual, family and community wellness; nontraditional land and resource use; and heritage resources.

In the EIS, the Proponent states (Volume 6B, page 9-2): “These results indicate that, despite the size and duration of operations, the contribution to cumulative socio-economic effects by the Mackenzie Gas Project on the regions and communities of the Northwest Territories is not expected to be significant.”

- The Panel requests that where changes occur to the baseline data (through the incorporation of traditional knowledge studies, additional information or community-based impact assessments) or assessment criteria, the Proponent provide a reassessment of the cumulative impacts that may occur as a result of the Project.

Information regarding the assessment of socio-economic cumulative effects is required for northwestern Alberta.

- The Panel requests the Proponent to provide for each of the VCs identified in Volume 6, page 9-1 of the EIS, an assessment and conclusion of significance of the cumulative effects of the Mackenzie Gas Project and the proposed NGTL facilities (Dickins Lake pipeline section, Vardie River pipeline sections and northwestern Alberta interconnect facility) on the

socio-economic study area communities of northwestern Alberta. The socio-economic cumulative effects assessment for northwestern Alberta should include those effects resulting from the Project in combination with other projects or activities that have been or will be carried out in northwestern Alberta.

8. Accidents and Malfunctions

The TOR, Section 19 states that the Proponent is to identify and discuss, for each project phase, the potential accidents and malfunctions that may occur as a result of the Project. The TOR also indicates the Proponent is to evaluate the potential impacts of Project-related accidents and malfunctions on the environment, including impacts on harvesting and social or cultural elements of the environment and human health.

The TOR, Section 19 also states that the Proponent is to focus particular attention on sensitive components of the environment that could be affected in the event of an accident or malfunction and that could make the consequences major or worse (e.g., proximity of communities, natural sites of particular value). The TOR also states the Proponent is to assess the probability of an accident or malfunction occurring, taking into account weather or external events that present contributing factors and requires identification of the contingency and/or emergency response measures that would be in place should an accident occur.

In Volume 1, Table 1-2 of the EIS, the Proponent states that “accidents and malfunctions” are addressed in Volume 7, Section 5.2 of the EIS. In that section of the EIS, the Proponent provides a general overview of accidents and malfunctions that might occur during the construction phase of the Project and during drilling.

- The Panel requests the Proponent to provide a supplementary report on “Accidents and Malfunctions” that specifically addresses the following:
 - for all Project (MGP and NGTL) facilities and activities, provide an assessment of the potential accidents and malfunctions that might occur during the operations phase of the Project. The report should include an assessment of all product streams (natural gas and natural gas liquids);
 - identify and assess, for all Project (MGP and NGTL) facilities and activities and for all phases of the Project (construction, operations, abandonment), the potential impacts of Project-related accidents and malfunctions on the environment, including impacts on harvesting and social or cultural elements of the environment and human health. Where possible, provide community-specific or regional information;
 - identify and assess, for all Project (MGP and NGTL) facilities and activities and for all phases of the Project (construction, operations, abandonment) the sensitive components of the environment including, but not limited to, proximity of communities and natural sites of particular value, that could be affected in the event of an accident or malfunction. Where possible, provide community-specific or regional information; and

- provide a detailed assessment for all Project (MGP and NGTL) facilities and activities and for all phases of the Project (construction, operations, abandonment) of the probability of an accident or malfunction occurring, taking into account weather or external events that present contributing factors. Where possible, provide community-specific or regional information.

9. Emergency Preparedness and Emergency Response

The TOR, Section 23 states: “Describe Company programs regarding facility monitoring, emergency preparedness... over the lifespan of the Project, by phase. The descriptions should be in sufficient detail in order to understand the scope of the programs, how they work, how they are developed, the link to any regulatory requirements and the expected components of these programs.”

- The Panel requests the Proponent to provide appropriate Emergency Response Plans for each phase of the Project. The plans should be linked to the assessment of accidents and malfunctions on a community-specific and regional level.

10. Unfinished Work Identified by the Proponent

In several sections of the EIS, the Proponent has identified specific information as being insufficient or missing pending the completion of further study or analysis.

- The Panel requests the Proponent to provide a status report for those matters in the EIS where the Proponent has indicated that work or information requires updating, studies are ongoing or information is incomplete or missing.

In Volume 6B, Section 8.6.2, the Proponent notes that heritage resource assessment studies for the NGTL facilities have not been conducted.

- The Panel requests the Proponent to submit its heritage resource assessment for the NGTL facilities located in northwestern Alberta, including the Dickins Lake pipeline section, the Vardie River looping sections and the interconnect facility.

In Volume 6B, the Proponent indicates that, for some Project facilities in the Northwest Territories, heritage resource assessments have not been completed.

- The Panel requests the Proponent to submit its heritage resource assessment information for the following proposed facilities:
 - Inuvialuit Settlement Region – access roads associated with borrow sites (Volume 6B, page 8-28);
 - Gwich'in Settlement Area – access roads associated with borrow sites (Volume 6B, page 8-37);

- Sahtu Settlement Area – access roads associated with infrastructure locations and borrow sites (Volume 6B, pages 8-50 and 8-51); and
- Deh Cho Region - access roads associated with infrastructure locations and borrow sites (Volume 6B, page 8-59).

In Volume 6B, page 8-57, the Proponent notes that, for heritage resources, "baseline conditions and investigations in the DCR are similar to those described in Section 8.3.2, Baseline Conditions, for the GSA".

- The Panel requests the Proponent to provide, for heritage resources in the Deh Cho Region, the information regarding baseline conditions and investigations.

It is unclear from the Proponent's submission in Volume 6B, Section 8.0, whether a heritage resources assessment has been conducted for the proposed all-weather road in the Gwich'in Settlement Area from the Dempster Highway to the Inuvik Area Facility or the proposed all-weather road in the Deh Cho Region from the Mackenzie Highway to the Trail River Compressor Station.

- The Panel requests the Proponent to confirm whether the proposed all-weather roads associated with the Project have been included in the heritage resource assessment in the EIS and, if not, indicate when this assessment will be completed and a report submitted to the Panel.

11. Additional Information Requested by the Panel

- The Panel requests the Proponent to provide, for each of the subject areas identified below, a best estimate of when the information will be provided to the Panel, and indicate how this supplementary information will affect the description of baseline conditions, the assessment of impacts, the assessment of cumulative effects, and any proposed monitoring or follow-up programs:
 - geotechnical field work and assessment in the Sahtu and Deh Cho regions; and
 - traditional knowledge, bathymetric and environmental studies from summer 2004 that pertain to two other production facility barging routes for the Niglintgak production area, namely the Garry Island route and the Shallow Bay route (Volume 2, page 8-10).

Commitments Table

The TOR Section 6.0 requires a commitments table "that summarizes the proposed mitigation and other company commitments with cross reference to environmental issues or potential impacts" and information regarding how this table will be kept current throughout the review process.

- The Panel requests the Proponent to provide a commitments table that conforms to the TOR Section 6.0 and discussion of the method by which the commitments table will be kept current throughout the review process.

Socio-Economic Management

The TOR Section 24.0 states: “Describe any commitments, policies and arrangements directed at promoting beneficial or mitigating adverse impacts to social or economic conditions where they have been presented as a form of mitigation. Discuss any requirements for contractors and sub-contractors to comply with these policies.” This statement is followed by a lengthy bulleted list of specific areas of socio-economic and cultural policies and commitment areas.

In Volume 6A (pages 3-27 to 3-40) of the EIS, the Proponent presents a series of socio-economic conceptual plans relating to northern procurement, education and training for employment, and northern employment. The Panel is of the view that these “conceptual plans” consist mainly of principles and a general strategy. There does not appear to be an approach to the management of community or regionally-based social and economic effects of the Project.

- The Panel requests the Proponent to prepare a new report addressing socio-economic management. The Proponent should:
 - use an approach similar to that used in preparing Volume 7, Environmental Management by providing more detail in relation to socio-economic management plans that will be used during the construction and operation of the Project; and
 - develop plans to manage socio-economic effects at the community and regional levels.

Socio-Economic and Environmental Agreements

The Panel also notes that the Proponent commits to negotiating and concluding a number of agreements with northern landowners, First Nations and governments. These agreements include Access Agreements, Environmental Agreements, Impact Benefit Agreements, a Benefits Plan and a Socio-economic Agreement. The Proponent may also enter into agreements with pipeline craft unions (e.g. Labourers, Teamsters, Operating Engineers, Pipefitters) or other unions (e.g. Carpenters and Joiners, Electrical Workers, Hotel and Restaurant Employees) for the construction of the Project. The results of these agreements will be an important consideration in assessing socio-economic and environmental impacts and their significance.

- The Panel requests the Proponent to provide for each of the agreements and plans listed in the preceding paragraph:
 - names of the parties with whom an agreement or plan is being negotiated;
 - the state of progress to date (including dates of meetings and stage of negotiations);
 - a tentative schedule for upcoming meetings or negotiation sessions;

- a best estimate of timing as to when the agreements or plans will be concluded;
- an overview of the contents of each agreement or plan;
- the socio-economic and environmental impacts that each agreement or plan is designed to manage; and
- the means of monitoring the effectiveness of the management measures contained in the respective agreements or plans designed to address impacts.

Closing Remarks

The Panel is continuing to review the EIS and, as stated above, will be providing specific information requests that are more narrowly focused than the information requested above. The Panel acknowledges the significant amount of work entailed in providing the information requested in this letter. Please provide, by December 31, 2004, your estimated timetable for submitting this supplementary information to enable the Panel to schedule subsequent phases of its review.

Sincerely,

Original signed by

Robert Hornal
Chair

Encl. Correspondence from Cook Roberts Lawyers to Paula Pacholek, November 5, 2004