



**THE HARRIS
CENTRE**
Memorial University

& The Oil And Gas Development Partnership

**ECONOMIC DEVELOPMENT BENEFITS OF THE OIL AND GAS
INDUSTRY IN NEWFOUNDLAND AND LABRADOR**

Conference Report - September 2007

**ECONOMIC DEVELOPMENT BENEFITS OF THE OIL AND GAS
INDUSTRY IN NEWFOUNDLAND AND LABRADOR**

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Conference Report

September 2007

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On behalf of:

The Leslie Harris Centre of Regional Policy and
Development, Memorial University of Newfoundland
www.mun.ca/harriscentre

And

The Oil and Gas Development Partnership,
Memorial University of Newfoundland
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Video files and individual presentations are available at
www.mun.ca/harriscentre and at www.mun.ca/OGDP

TABLE OF CONTENTS

Organizers and Sponsors	1
Preface	2
Executive Summary	
Major Conference Themes	5
Major Successes in Fostering Oil and Gas Development	6
Future Action Priorities: The Way Forward	6
Harris Centre / OGDG Conference on Economic Development Benefits of the Oil and Gas Industry in Newfoundland and Labrador	
Synopsis of Group Discussions / Recommendations	8
Introduction	
Conference Origins	11
Conference Objectives, Themes and Format	11
Conference Participants	12
Conference Proceedings	
Keynote Address: <i>Newfoundland and Labrador, Its Energy Future and Offshore Petroleum</i> , Honourable Kathy Dunderdale, Department of Natural Resources	13
Plenary Panel I: Setting the Stage	
i. <i>Geological Potential of Newfoundland and Labrador's Oil and Gas Industry</i> , Ian Atkinson, Oil and Gas Development Partnership, Memorial University	15
ii. Newfoundland and Labrador Experiences of Offshore Oil and Gas Benefits - <i>Building an Industry; Building an Economy</i> , Mark Shrimpton, Principal, Jacques Whitford and Adjunct Professor of Geography, Memorial University	16
- <i>At a Cross-Roads: Recognizing the Objectives and Constraints of Newfoundland and Labrador's Offshore Oil and Gas Industry</i> , Dr. Wade Locke, Professor, Department of Economics, Memorial University	17
iii. National and International Experiences of Offshore Oil and Gas Benefits, Tony MacKay, Managing Director, MacKay Consultants	18
iv. Discussion Synopsis	19
Plenary Panel II: Experience on the Ground	
i. Sam Synard, Mayor, Marystown	21
ii. Patrick Laracy, Chairman and President, Vulcan Minerals Inc	21
iii. John Henley, Vice President, Offshore Services and Development, GJ Cahill	22

iv. Grant Leckie, Business Services Manager, PSN Canada	22
v. Discussion Synopsis	23
Keynote Address: <i>Memorial University's Role in Oil and Gas Industry-related Economic Development in Newfoundland and Labrador</i> , Dr. Axel Meisen, President and Vice-Chancellor, Memorial University	25
Furthering Economic Development: Current Successes, Future Challenges (Breakout session and individual survey summary)	
Current Successes	26
Action Priorities	27
Closing Plenary Panel with Ted Howell, President and CEO, NOIA, Sharon McLennon, Chair of the Oil and Gas Committee, Greater Corner Brook Board of Trade, Tony Mackay, Mackay Consultants, and Cyril Organ, Chair, Community Development Committee, Stephenville Task Force	
Challenges to Oil and Gas Development	29
The Way Forward	30
Conference Postscript	31
Appendix A – Program Committee	33
Appendix B – Conference Organizing Team	34
Appendix C – Conference Agenda	35
Appendix D – Participants List	36
Appendix E – Conference News Release	39
Appendix F – Conference Evaluation	41

ORGANIZERS AND SPONSORS

Conference Organizers

The conference was co-chaired by Dr. Robert Greenwood, Director of the Leslie Harris Centre of Regional Policy and Development and Dr. Randolph Cooper, Executive Director of the Oil and Gas Development Partnership (OGDP).

As centres of Memorial University of Newfoundland, the Harris Centre and the OGDP emphasize the integrity, independence and expertise of university faculty, staff and students. Leveraging the resources of the university, they are committed to facilitating policy discussions among university, community, industry and government partners and then mobilizing this knowledge to contribute to better informed policy and practice. The Harris Centre and the OGDP work to make a practical contribution to policy development and implementation for the benefit of all Newfoundlanders and Labradorians.

The Harris Centre and the OGDP thank the program committee (listed in Appendix A) and the conference organizing team (listed in Appendix B) for their efforts as well as the conference sponsors, listed below.

Conference Sponsors

- Department of Innovation, Trade and Rural Development, Government of Newfoundland and Labrador
- Department of Natural Resources, Government of Newfoundland and Labrador
- Memorial University of Newfoundland
- Canadian Association of Petroleum Producers

PREFACE

Misconceptions about the economic development benefits of the oil and gas industry to Newfoundland and Labrador are common throughout the province. All too often benefits are seen to be limited to St. John's, to be short term, and to be manifest strictly in the form of revenues to government, that can then be allocated to other social and economic investments. Oil and gas is seldom seen as a sector which creates competitive businesses in the province, which can sell their products and expertise into other markets. It is seldom seen as a sector which generates sustainable competitive advantage in communities and regions, with skilled work forces, specialized infrastructure, and advanced research and development capabilities.

These views were particularly evident during the Harris Centre's four regional workshops and a provincial conference in the fall of 2004, "A Symposium on Growing the Economy of Newfoundland and Labrador."¹ When asked to list priorities for economic development, *none* of the industry, community and government stakeholders noted the oil and gas sector in the top five priorities, a trend notable in other conferences, workshops and discussions on economic development in the province. At the same time, many of the individuals and organizations already involved in the industry have not connected with communities, organizations and businesses outside the areas where oil and gas activity is already present. There was a need to bring these two worlds together.

Mark Shrimpton, Principal with Jacques Whitford and Adjunct Professor of Geography at Memorial University, was the first to suggest a conference to address this lack of awareness and to stimulate more inclusive debate on the potential future of this industry in the province. In response, the Harris Centre and the OGDG developed the conference with Shrimpton's assistance as Conference Coordinator.

The key oil and gas industry stakeholders (from the east and west coasts of the province and from the Burin Peninsula) agreed to serve on the program committee, as did the key economic development organizations. Sponsorship was provided by:

- Department of Innovation, Trade and Rural Development, Government of Newfoundland and Labrador
- Department of Natural Resources, Government of Newfoundland and Labrador
- Memorial University of Newfoundland
- Canadian Association of Petroleum Producers

The conference had two major objectives. It aimed to build awareness about the oil and gas industry in the province, thereby informing a range of stakeholders about the opportunities and challenges for maximizing economic development benefits from this industry. Second, it aimed to initiate a realistic dialogue with an important cross-section of stakeholders on how the industry could be a priority for growing the provincial economy. Ultimately, however, the goal of the conference was to identify ways in which economic development from the oil industry is

¹ The presentations and the final report are available through the Harris Centre's website at the following addresses: www.mun.ca/harriscentre/Conferences_Workshops/Growing_Economy/Symposium.php and at www.mun.ca/OGDP/

being fostered right now and specific new opportunities to make the most of the industry in the future. Hence the afternoon sessions responded to these questions: What are we doing to maximize these benefits? What else could we be doing? Who needs to do what?

To meet these objectives, the conference was organized around themes addressing the on-the-ground economic impacts of the industry, how various stakeholders are engaging with it and how communities and regions might benefit in the future from the oil and gas sector. Benefits were understood broadly to include impacts such as business, employment, education, training and research & development, with attention to both onshore and offshore oil and gas development benefits not only in St. John's but also on the Avalon Peninsula, the Burin Peninsula, the west coast and elsewhere.

Within these themes, discussions spanned the following topics: the geological potential for oil and gas developments in the province; local to international experiences with these developments, past and present; the impact of the industry on municipalities; businesses' experiences engaging with the oil and gas industry; and the role of post-secondary institutions and the provincial government in supporting the industry. Some 80 participants from the community, government and industry took part and the evaluations were very positive.

The meat of the session was the group discussion when each table, with 10-15 participants, discussed two key issues and agreed on their priority responses. Each table combined representatives from the oil and gas industry, the supply industry, government regulators and government development staff, university and college faculty and staff, and community representatives from all over the province, involved with municipal government, Regional Economic Development Boards, and other development organizations. In most cases the oil and gas industry stakeholders, from the public and private sectors, were familiar with each other, but seldom had they met community stakeholders committed to rural and regional development. The evaluation forms for the day (see Appendix F) highlighted the benefits of simply bringing together these people to learn from each other for the first time.

The results of each table discussion were captured on report back forms. Individuals were also encouraged to submit their own views at the end of the day. The results of the group discussions are particularly instructive, as they reflect the results of a cross section of informed stakeholders discussing and debating the issues and agreeing on the priorities. This does not pretend to be a scientific survey result, but for complex, multi-faceted economic, social and political issues, such a rich dialogue captures details and judgments that more rigorous but simplified research cannot. The attached table lists the results from all the group report back forms, in the order of frequency in which all the tables included them in their lists.

When asked "What are we doing to foster economic development from the oil and gas industry in Newfoundland and Labrador?" it was clear that a lot is being done. The most frequent responses related to (in order of frequency):

- Education and training and skills development
- Government development and regulatory regimes and benefits requirements
- Research and Development
- Information and Awareness
- Development of industry best practices

- Investment in infrastructure
- Development of business and industry organizations

When it came to the issue of what we could be doing better and who needed to do it, the debate was wide-ranging, but the clustering of several key issues across all groups is telling. The key areas where we could be doing a better job were, in order of frequency:

- The need for more continuity and phased development, including government supports for more exploration
- The need for increased public awareness of the benefits of the industry, and of opportunities for individuals, businesses and communities to benefit, as well as more dialogue between stakeholders, including key decision makers
- The need for government to clarify the ground rules up front, and to provide stability in the royalty and regulatory regimes
- The need to increase promotion of career opportunities, especially in rural areas; and to increase immigration and women's participation
- The need for businesses and business organizations to collaborate to increase competitiveness and chase external opportunities
- The need for government to demonstrate that we are open for business and improve federal-provincial cooperation
- The need for more informed public debate and for stakeholders to challenge political leaders
- The need to strengthen regional planning, and improve communication with and between rural areas
- The need to address the equalization issue and gain an equity position for the province in the industry

The conference evaluations were extremely positive (see Appendix F). There is an appetite in Newfoundland and Labrador for informed discussion and debate on issues of importance in regional and resource policy and development. We are hopeful that this conference played a constructive role in advancing the work of all the stakeholder organizations on the conference planning committee, for all the participants, and for all those who read this report and view the conference sessions via the digital links on our websites.

Robert Greenwood, Ph.D.
Director
The Leslie Harris Centre of Regional Policy and Development
Memorial University of Newfoundland

EXECUTIVE SUMMARY

Major Conference Themes

Geological Potential. The province's three producing fields are now at peak production and will begin to decline in 2009. However, there is great potential remaining in the Jeanne d'Arc Basin, in western Newfoundland (onshore and offshore), offshore Labrador and in "frontier" basins in the Orphan Basin and Laurentian Basin.

Benefit Misconceptions and Realities. The benefits of the oil and gas industry are commonly misconceived to be limited to St. John's, restricted to government revenues and only short term in duration. In reality, the benefits reach far beyond St. John's and are multiple and long term. The oil industry is creating employment (thus mitigating out-migration), adding significantly to provincial government revenues through income and sales taxes as well as royalties, building local labour force and business capacity which permits economic diversification into other sectors, inciting infrastructure investments, increasing housing and retail sales, stimulating demands for training, education and research, and indirectly benefiting other sectors of the economy. These are long term benefits felt not only in St. John's but also on the Avalon Peninsula, the Burin Peninsula, the west coast and elsewhere.

Continuity. Without continuity (defined as a steady flow of industry activity and associated support for business and employment which is often assured via continuous exploration), investment is slowed or deterred. Likewise, there are labour force and expertise losses when workers and companies leave the province to seek opportunities in other regions. To ensure continuity, more exploration and new projects are needed. Waiting to develop new projects may also mean the province will miss opportunities associated with currently high oil prices, such as the greater availability of corporate investment dollars.

Awareness Disconnections. The oil and gas industry is a major and growing contributor to the provincial economy but there is limited discussion of these impacts and their community economic development potential. The industry is still not considered a development priority within the economic development community and within the general population.

Benefit Concentration. While benefits from the oil and gas industry will be multiple and long term, realistically they will most likely be concentrated in the areas closest to current and future oil and gas fields and infrastructure (the Avalon and Burin Peninsulas, the west coast, and Labrador).

Post-Secondary Institution Commitment. Post-secondary institutions are focused on developing this industry, as exemplified by Memorial University's and the College of the North Atlantic's oil and gas related facilities, partnerships, research and programs.

Major Successes in Fostering Oil and Gas Development

Investing in the Industry. Industry as well as Government (Federal & Provincial) are investing in the petroleum sector with an emphasis on the following areas: Research and development, work force development, infrastructure.

Developing Communication among Stakeholders. Good communication on oil and gas developments and benefits is developing through industry associations, multiple partnerships between stakeholders (industry, government, post-secondary institutions and community organizations), and trade shows and conferences.

Future Action Priorities: The Way Forward

Continuity. Industry and federal and provincial governments should ensure continuity through continuous exploration, onshore and offshore. To do this, the high costs of exploration need to be managed.

Investment. Government and industry should continue investing in strategic infrastructure, local companies and education and training capacities in strategic areas.

Regulatory Clarity and Certainty. Federal and provincial governments should establish and communicate clear, streamlined rules about oil and gas developments to all stakeholders.

Research and Development. Federal and provincial governments, Memorial University, the Canada-Newfoundland and Labrador Offshore Petroleum Board (C-NLOPB), and industry should continue funding research and development in the oil and gas sector and making this research accessible.

Continued Workforce Development. The provincial government, post-secondary education institutions, labour organizations and industry need to understand labour force demographics and labour requirements and then address these through timely programs and recruitment.

Local Benefits Capture. The benefits of the oil and gas industry should be maximized locally through value-added production and through marketing of local products within Newfoundland and Labrador and beyond.

Economic Diversification. To ensure a sustainable, long term economy, the provincial government and industry should ensure the benefits from the finite oil and gas resources are reinvested back into the province to build other sectors. Businesses should use experiences with the oil and gas industry to move into other oil and gas producing regions or into other sectors.

Increased Competition. Government and industry should encourage competition in this sector. New companies must be encouraged to do business in the province.

Localized Decision Making; Increased Federal Presence. Industry decision makers should be located in the province. There needs to be stronger federal support of the province's oil and gas sector.

Improved Communication and Awareness. Better communication is needed among the provincial government, industry and educational institutions, as well as between these three organizations and the general public, especially rural people. Local businesses or economic development associations and municipalities should also lead outreach initiatives.

Improved Federal-Provincial and Provincial-Industry Relations. Rather than confrontation, there needs to be agreement among these parties on a framework to move forward.

Improved Perceptions of Newfoundland and Labrador. The Province should be perceived as "open for business". There is also a need to acknowledge provincial achievements and capacity in the oil and gas industry rather than focussing on past mistakes. There should be strategic, proactive thinking at all levels.

HARRIS CENTRE / OGDG
CONFERENCE ON ECONOMIC DEVELOPMENT BENEFITS OF THE
OIL AND GAS INDUSTRY IN NEWFOUNDLAND AND LABRADOR

Synopsis of Group Discussions / Recommendations
(In order of frequency listed by break out groups)

What are we doing to foster economic development from the oil and gas industry in Newfoundland and Labrador?

1. Education & training, expertise, research (MUN, CNA, Skills Task Force) (15)
2. Government strategy, regulatory streamlining, fiscal regime, benefits requirements (12)
3. Support R&D, R&D facilities, technology transfer, CNLOPB spending requirements (8)
3. Information sharing, awareness, (industry & public sectors) (8)
4. Supply industry best practices, supply chain management, partnering (6)
4. Infrastructure (including Marystown) (6)
4. Industry Associations, Boards of Trade / Chambers of Commerce (6)
5. Federal / Provincial Government investment in industry (education, infrastructure, programs, R&D) (5)
6. Fostering exploration, seismic, data, land tenure (3)
6. Export development, promotion, trade shows (3)
7. Confidence, understand our strengths (2)
7. Industry investment (projects, students, facilities, equipment) (2)
7. Municipal Government investment and services (2)
8. Safety culture, awareness (1)
8. Industry cluster development (1)
8. Community sponsorships, donations, volunteerism (1)
8. Exploration (1)

What could we do better? Who needs to do what?

1. Increase exploration, continuity of exploration, including on shore; continuous, phased development; bring down costs of exploration, Provincial Government buy rigs and lease to exploration companies, companies pool resources for longer term rental of rigs, improve data sharing, basin assessment (CNLOPB, Governments) (16)

1. Increase public awareness, more information sessions on development benefits and opportunities, improve communications; more dialogue, including industry (public and private sectors; MUN, Harris Centre role); get decision makers in the same room; promote ourselves to ourselves; establish realistic expectations, benefits maximization will take time (16)

2. Clarify ground rules up front, clarity and stability of royalty and regulatory regimes, improve federal-provincial relations for joint management (Federal & Provincial Governments); reduce red tape (11)

3. Increase promotion of career opportunities, especially in rural areas (industry, educational institutions and government); address labour shortages; invest in education and training in strategic areas (industry, governments, educational institutions); reinstate coop scholarship fund; increase immigration, revise visa rules; increase women's participation (8)

4. Increase business competitiveness to chase external opportunities; exploit our unique strengths; support those that succeed; focus on innovation and small technology businesses; support joint ventures; local businesses and development groups lead outreach initiatives (6)

4. Improve industry environment, attractiveness, "open for business;" improve negotiation approach; improve federal-provincial cooperation (6)

5. More informed public debate, focus on problem solving, challenge political leaders (educational institutions, all stakeholders, public); need public task force, made up of members of the community (5)

6. Strengthen regional planning, coordinated with provincial planning (Regional Economic Development Boards); improve communication with and between rural areas; greater regional benefits; rural areas need to be more vocal about opportunities (4)

6. Address equalization issue; elect new Federal Government; Newfoundland and Labrador separate from Canada; lobby for 8.5% of Hibernia; lobby federal government for provincial taxes to go to where resources are produced, not where head office is (4)

7. Exploit location for downstream opportunities, value added production, Liquid Natural Gas plant (3)

7. Increase business competition, more offshore players; financially support junior companies (3)

8. Become more strategic, more proactive (all stakeholders) (2)

- 8. Exploit co-generation opportunities (2)
- 8. Invest in strategic infrastructure (2)
- 8. More offices and decision makers here (Federal Government) (2)
- 8. More research and analysis, impact studies, arts as well as geosciences and engineering (MUN, CNA); role for Harris Centre to report back (2)
- 8. Invest in sustainable industries outside oil and gas; establish legacy fund (2)
- 9. Improve measurement of benefits (1)
- 9. Increase external promotion, marketing (1)
- 9. Streamline regulations (CNLOPB, CEAA, Governments) (1)
- 9. Industry long-term investment, invest in R&D, promote opportunity awareness (1)

INTRODUCTION

Conference Origins

This conference was organized in response to a surprising disconnect in Newfoundland and Labrador: while petroleum exploration and production are major, growing contributors to the provincial economy, there is very limited discussion of these impacts and their community economic development potential.

Why this lack of discussion? The benefits of the oil and gas industry are commonly misconceived to be limited to St. John's, or restricted to government revenue regimes as opposed to more generalized economic development. Yet, in reality, petroleum activity is creating employment, income and economic activity, helping to mitigate out-migration, and stimulating training, education and research and development in many areas of the province. Numerous Newfoundland and Labrador companies have learned to succeed in this competitive industry and are now selling goods and services nationally and internationally. Some of them have applied their petroleum industry expertise to other industrial sectors. Further, evidence suggests the industry will play an important role in the provincial economy for many decades to come.

Misconceptions about the benefits of the oil and gas industry were particularly evident during the Harris Centre's four regional workshops and a provincial conference in fall 2004, "A Symposium on Growing the Economy of Newfoundland and Labrador."² When asked to list priorities for economic development, *none* of the industry, community and government stakeholders noted the oil and gas sector in the top five priorities, a trend notable in other conferences, workshops and discussions on economic development in the province. At the same time, many of the individuals and organizations already involved in the industry have not connected with communities, organizations and businesses outside the areas where oil and gas activity is already present. There was a need to bring these two worlds together.

Mark Shrimpton, Principal with Jacques Whitford and Adjunct Professor of Geography at Memorial University, was the first to suggest a conference to address this lack of awareness and to stimulate more inclusive debate on the potential future of this industry in the province. In response, the Harris Centre and the OGDG developed the "Economic Development Benefits of the Oil and Gas Industry in Newfoundland and Labrador" conference with Shrimpton's assistance as Conference Coordinator.

Conference Objectives, Themes and Format

The conference had two major objectives. It aimed to build awareness about the benefits of the oil and gas industry in the province, thereby informing a range of stakeholders about the opportunities and challenges for maximizing economic development benefits from this industry.

² The presentations and the final report are available through the Harris Centre's website at the following address: www.mun.ca/harriscentre/

Second, it aimed to initiate a realistic dialogue with an important cross-section of stakeholders on how the industry could be a priority for growing the provincial economy. Ultimately, however, the goal of the conference was to identify ways in which economic development from the oil industry is being fostered right now and specific new opportunities to make the most of the sector in the future. Hence the afternoon sessions responded to these questions: What are we doing to maximize these benefits? What else could we be doing? Who needs to do what?

To meet these objectives, the conference was organized around themes addressing the on-the-ground economic impacts of the industry, how various stakeholders are engaging with it and how communities and regions might benefit in the future from the oil and gas sector. The complete agenda is available in Appendix C of this report. Note that benefits were understood broadly to include impacts such as business, employment, education, training and research and development, with attention to both onshore and offshore oil and gas development benefits not only in St. John's but also on the Avalon Peninsula, the Burin Peninsula, the west coast and elsewhere.

Within these themes, discussions spanned the following topics:

- The geological potential for oil and gas developments in the province.
- Local to international experiences with these developments, past and present.
- The impact of the industry on municipalities and businesses in engaging with the oil and gas industry.
- The role of post-secondary institutions and the provincial government in supporting the industry.

The closing panel synthesized the most important elements of these discussions.

Conference Participants

Acknowledging that the misconceptions and lack of awareness about the oil and gas sectors might be due to a lack of communication among stakeholders, the organizers aimed to make the conference highly inclusive and interactive. Conference participants represented a wide range of stakeholders from communities, economic development groups (such as chambers of commerce and regional economic development boards), oil companies, supply and service businesses, labour organizations, all levels of governments and post-secondary education institutions. A full list of participants is included in Appendix D.

CONFERENCE PROCEEDINGS

Keynote Address

Newfoundland and Labrador, Its Energy Future and Offshore Petroleum

Honourable Kathy Dunderdale

Department of Natural Resources, Government of Newfoundland and Labrador

Minister Dunderdale's keynote address emphasized the provincial government's oil and gas management principles and relationship with industry. She also noted the benefits currently experienced by the province and the government's plan to move this industry forward.

Provincial Government's Oil and Gas Management Principles. Minister Dunderdale began by stressing the provincial government's position as the steward of provincial resources with the responsibility to develop oil and gas resources for the benefit of all parties. In particular, as the people of the province are the owners of these resources, they should be the principal beneficiaries. She then noted the government's aim to get long term benefit from these resources for all sectors of the economy and for all people of the province. At the same time, Minister Dunderdale acknowledged the finite nature of oil and gas resources: "these resources will not last forever." Therefore, the government is investing in new sectors such as renewable energy (hydro and wind) while continuing to develop specializations in cold-ocean science and technology. These investments would create a "living legacy from finite resources."

To ensure long term, widespread benefits from oil and gas developments, Minister Dunderdale underscored the Province's efforts to have more control over and participation in the development of the oil and gas industry. Examples include the provincial government's current efforts to develop a land tenure system that encourages timely development and to secure an equity stake in petroleum developments.

Equity was discussed in more detail. Minister Dunderdale began by noting that "Equity has not been an historical component of our resource management, but it is a key principle going forward" (hence the government's negotiations on Hebron). Equity is not unreasonable compared to common international practices—over 88% of global world reserves are government controlled. Also, equity is fair given the current low provincial government returns. Minister Dunderdale argued that the Province's benefits from oil resources are minimal compared to the benefits going to other governments and to the companies:

The majority of the revenues generated to date have gone to the oil companies and the federal government. Our three offshore oil projects have generated about 11 billion dollars for companies, five billion for the federal government and two billion dollars for Newfoundland and Labrador.

Alongside these standards of control and active participation, another important principle is the provincial government's maintenance of a "solid relationship" with industry and its understanding of industry's need for profitability and regulatory certainty. The provincial government wants oil producers to "succeed and remain a part of our province's business community" and it aims to work with industry as "partners in developing the resource."

Minister Dunderdale observed the transparent and mutually trusting relationship between the provincial government and companies operating offshore.

Provincial Benefits from Oil and Gas. Minister Dunderdale then elaborated on the value of the sector based on its diverse economic benefits to the province. She referred to the direct employment benefits derived from the oil and gas industry (6,100 people were employed at the peak of the Hibernia gravity based structure construction, 2,400 at peak construction of both the Terra Nova and White Rose floating production, storage and offloading (FPSO) vessels and 2,800 people currently employed at the three producing oil fields), employment that provides local workers with technical and engineering knowledge, thereby enhancing the province's "human resources capacity and attractiveness." She also noted the benefits in terms of provincial government revenues, benefits evident in the Province's ability to eliminate the deficit, pay down the debt and deliver the recent budget which provides lower income taxes, support for all levels of education and more research and development spending.

Forwarding the Industry. Looking forward, the government aims to continue these benefits, give industry the regulatory certainty it needs and modernize its oil and gas regulations by releasing its Energy Plan, a short and long term strategy for the province's energy sector. Minister Dunderdale stated that it will be released when the government is "satisfied it accomplishes what we want to achieve." She also pointed to the provincial attention to skilled trades development, exemplified in the recent Skills Task Force report.

The future of the oil and gas industry in the province looks promising. Minister Dunderdale described notable recent advances including record-breaking seismic data acquisition offshore in 2005 (companies gathered nearly 15,000 kilometres of 2D and more than 380,000 kilometres of 3D seismic data), land sales in the Jeanne d'Arc Basin (ranking as the second highest on record in terms of work commitment dollars per hectare), and renewed commitment to west coast oil and gas development, both onshore and offshore.

Plenary Panel: Setting the Stage

i. *Geological Potential of Newfoundland and Labrador's Oil and Gas Industry*

Ian Atkinson

Oil and Gas Development Partnership, Memorial University of Newfoundland

Atkinson provided a geological overview of the province's oil and gas reserves as well as a short and long term forecast of potential oil and gas development. He began by summarizing the major onshore and offshore oil and gas basins in the province (represented in map 1 below "Sedimentary Basins of Atlantic Canada" (page 9 of his presentation) and by surveying current production occurring in the Jeanne d'Arc Basin (represented in map 2 "Oil Production Forecast - Base Case" (page 14 of his presentation). He demonstrated that the province is now at peak production in its three producing fields, Hibernia, Terra Nova and White Rose. We could expect declines in the total production from these fields starting in 2009. However, new reserves from White Rose satellite fields and South Hibernia may come onstream in 2008-10.

There are several options to delay this decline and continue the industry. First, Atkinson elaborated on the great potential remaining in the Jeanne d'Arc Basin and noted oil companies' recent success in finding additional reserves around currently producing fields, for example the White Rose extensions. He also predicted oil to flow from Hebron/Ben Nevis in 2012-13 and observed the potential of extracting gas from currently producing oil fields. In addition, Atkinson noted developments in western Newfoundland, onshore and offshore, and he remarked on the great interest and confidence of junior companies onshore that have been aided by the lower development costs due to the milder onshore environment. In his words, "We are pretty confident there's a big prize to be found there." Depending on these discoveries, oil production could begin within five years.

Beyond these commonly discussed fields, there are significant discoveries of gas and natural gas liquids (NGL) in five fields on the Labrador shelf, a basin recently proven to be much wider than originally expected. These gas reserves are more attractive today given higher prices and advances in dealing with ice conditions, thus Atkinson expects gas could be extracted in five to ten years if infrastructure (such as pipelines) is developed. There is a lot of potential here in the medium term. In the longer term, there are "frontier" drilling prospects sites in deep waters or farther offshore, for example the Orphan Basin and Laurentian Basin. Although exploration costs are high here (for example, over \$100 million per well in the Orphan Basin), companies are beginning to drill. In Atkinson's words, "clearly the companies think there's something there" for they would not be risking their money if they did not believe there was great potential in this area.

Atkinson's message was a positive one. There are not many new oil and gas reserves left in the world where large returns might be found and he is confident the province's reserves will be developed, especially given the nature of these reservoirs which often set records once they start flowing. But developing them will require more geological understanding as well as long term work and commitment.

ii. Newfoundland and Labrador Experiences of Offshore Oil and Gas Benefits

Building an Industry; Building an Economy

Mark Shrimpton

Principal, Jacques Whitford and Adjunct Professor of Geography, Memorial University

Shrimpton opened his comments by remarking on the longstanding interest in using the benefits of oil and gas to address the province's economic problems and to overcome regional disparities. Today, oil and gas is a new sector of the provincial economy and a tremendous economic development success story, one that should be acknowledged as central in the province's last century of economic history. As shown below in terms of yearly averages, Shrimpton's research (focussed on offshore developments) demonstrates that between 1999 and 2004 the oil industry contributed to the Newfoundland and Labrador economy in multiple economic measures.³ Even more significant is the *trend* in benefits: the far right column shows that in 2004 these benefits were even greater than in previous years.

	1999 – 2004	2004
Real GDP	18.4% increase	24.3% increase
Personal Income	5.9% increase	7.6% increase
Retail Sales	5.1% increase	6.4% increase
Housing Starts	85 more	119 more
Total Employment	12,500 more jobs (6.0% of all employment)	17,300 more jobs (8.0% of all employment)
Unemployment Rate	2.3% decrease	3.1% decrease
Population Increase	9000 people	16,000 people

Other benefits from the oil industry include infrastructure, more than \$1.2 million worth, which has been built or improved in response to the industry. Examples include construction and transportation infrastructure such as the Bull Arm construction site, the Marystown Shipyard, the NEWDOCK sub-sea fabrication centre and the Newfoundland Transshipment Terminal as well as education, research and development facilities (such as multiple new facilities at Memorial University, the Marine Institute and the College of the North Atlantic).

Economic diversification is yet another benefit experienced in the province. By working in the oil industry, local businesses have grown to export their petroleum industry expertise, goods and services or to transfer them to other industries. Businesses are applying skills learned in the oil industry to other industries, in some cases eventually moving out of the oil and gas sector. Also important is the qualitative change in local companies who have engaged with the oil industry: Shrimpton notes their increased entrepreneurship, self-confidence and ambition.

³ Shrimpton's comments are informed by his Petroleum Research Atlantic Canada studies on the socio-economic benefits from petroleum industry activity in Newfoundland and Labrador in 1999 to 2002 and 2003 to 2004, research including direct, indirect, and induced impacts (see http://www.pr-ac.ca/files/PRAC_Benefits_Study.pdf for the most recent study). Updated research for 2005 to 2006 is forthcoming.

At a Cross-Roads: Recognizing the Objectives and Constraints of Newfoundland and Labrador's Offshore Oil and Gas Industry

Dr. Wade Locke

Professor, Department of Economics, Memorial University of Newfoundland

Locke discussed the provincial government revenues from oil and gas developments. The benefits are tremendous with \$18.6 billion in total revenue accrued to governments to date from the three producing fields. He expects \$1.37 billion in 2007-08 from oil and gas revenues, which could increase to \$1.6 billion per year in the following years. These numbers do not include revenue from the White Rose extension or other oil or gas fields that might be developed in the future. Based on these expected revenues from this sector, Newfoundland and Labrador will be a "have" province in two years and will not qualify for or need to receive equalization. In Locke's words, "There are significant amounts of money available [from offshore developments] for meeting whatever our priorities happen to be." He noted that oil revenues represent 30% of all government revenues, a percentage that will increase over time as projects hit pay out.

Locke cautioned, however, that the benefits could be constrained by several factors. First, Newfoundland and Labrador is but one of many investment opportunities in the world—provincial production is small in global terms, representing only 0.4% of the world's daily oil production in 2005. (Yet the more a company's portfolio is invested in the province, or the less it has alternative reserves, the more receptive this company would be to provincial requests or demands.) Second, to ensure new projects in the future, there needs to be continuity. Therefore, for example, exploration must be increased. There needs to be a better analysis of the cost of waiting. Third, development may be hindered by skilled labour and technical capacity shortages, especially given the "pull of Alberta" and the multiple other provincial projects under discussion. Fourth, economic benefits might not be equally distributed in the province. Fabrication and construction will be concentrated on specific areas (around Marystown, Bull Arm and St. John's). The Stephenville area will benefit from west coast developments, but generally the west coast will not see great benefits in terms of fabrication, manufacturing and construction from east coast developments. Fifth, economic development benefits depend on the technology used. For example, economic benefits from Labrador gas exploration depend on the technology selected.

In closing, Locke observed that the province is at a crossroads. Its future economic development depends on the development of offshore oil and gas yet it is waiting on multiple projects (Hebron, the White Rose extension, Hibernia South, the Orphan Basin, natural gas and further exploration activity). Thus Locke argued the Province must take a proactive stance in making offshore Newfoundland and Labrador an attractive place to do business that benefits both the residents of the province and investors.

iii. National and International Experiences of Offshore Oil and Gas Benefits

Tony MacKay

Managing Director, MacKay Consultants, Scotland

MacKay reflected on over three decades of oil and gas experiences in Scotland and Norway, two mature oil and gas producers, to identify trends of interest to Newfoundland and Labrador. However, MacKay stressed key differences between the industry in the province and these two countries in terms of expenditure, fields and production. For example, in 2005, offshore expenditures in this province were, in Canadian dollars, \$1,345 million, compared to \$20,785 million in the U.K. and \$24,600 million in Norway. The province's three producing fields are few compared to the 300 fields in the U.K. and the 54 fields in Norway. The U.K. produces twelve times more oil and gas than Newfoundland and Labrador while Norway produces fifteen times more.

With these numeric differences in mind, there are trends in Scotland and Norway that may speak to oil and gas development in Newfoundland and Labrador. MacKay emphasized the factors impacting on the distribution (or concentration) of oil and gas benefits throughout these countries. He explained how most (80%) of activity and employment from oil and gas development in Scotland has been concentrated in the Aberdeen area and this concentration has only increased following the closure of platform fabrication yards and due to economies of scale and proximity after the oil price collapse in the 1990s. MacKay describes the "critical mass" of service companies in Aberdeen: 800 companies have clustered around this area. The other 20% of activity and employment is spread throughout several different regions specializing in, for example, oil terminals, pipeline fabrication and supply bases. Within this 20%, Shetland is perhaps the most relevant example for Newfoundland and Labrador of an area effectively receiving and using oil and gas benefits. In the 1970s, Shetland negotiated a royalty on every barrel of oil moving through its Sullom Voe terminal and these funds have been reinvested in other local industries (salmon farming, fish processing, information technology and tourism) and infrastructure (airports, ferry terminals and higher education facilities). This was possible due to a very active local authority, the Shetland Islands Council.

Benefits from the industry in Norway, however, are more widely distributed due to the geographic range of the oil fields. While Stavanger is the main oil centre in the country, there are terminals and fabrication yards in other regions. Also, Norway's oil and gas policies have been more protectionist than in the U.K. with state companies, Statoil and Norsk Hydro, dominating production and expenditure. The effect of these policies has been increased national and local benefits as well as greater economic stability (government policies smoothed out boom and bust industry cycles). Norway has insured that Norwegians benefit first from their oil and gas resources.

Another central point made by MacKay was the adaptation of local businesses to new production conditions. He notes that to cope with declining production in Scotland, oil and gas companies have diversified into the decommissioning market, into other regions (Norway, West Africa, the Gulf of Mexico and the Caspian Sea), or into other energy markets (wind and wave/tidal energy). At the same time, where multinationals are losing interest in the North Sea, new junior companies are now taking over older fields and extending their life.

iv. Discussion and Question Period Synopsis

The discussion elaborated on five major points raised in the presentations: continuity, the cost of delaying development, public awareness, federal presence and diversifying the supply and service industry.

How can the province sustain this industry over the long term? What lessons can Scotland and Norway teach Newfoundland and Labrador? MacKay noted that in Scotland in the early 1970s, few people expected the industry to continue for more than a decade. Yet Scotland's industry has lasted for thirty years and is expected to last another thirty. So, given the data on oil and gas reserves presented by Atkinson, he suggested the Province take a long term perspective. He also noted the risk of losing skilled labour during breaks in activity and advised efforts to smooth out these fluctuations in development following the Norwegian example. The U.K. has experienced boom and bust cycles in its industry, but Norway has been better at phasing developments to allow for a stable level of activity.

Locke then listed measures needed to ensure continuity and continued benefits. He mentioned research and development to address cost issues and specific problems in the province, supplier development initiatives and fiscal initiatives (through an innovative approach to royalties, for example).

How do we measure the opportunity cost of delaying oil and gas developments? Has there been research on these costs? While there has been no specific research on this point, Locke responded that the costs are threefold. First, if new projects or fields are not developed, companies might leave the region and take their oil and gas expertise with them so that the province does not have the expertise to develop new projects. Second, oil prices might fall and make a field like Hebron look less interesting. Third, due to recent high oil prices, companies have investment money available to develop right now but perhaps not in the future.

In contrast, MacKay added that waiting on developments in the past has proven beneficial to the province given recent price increases. Therefore, in his words,

from an economic point of view, these delays have actually been of great economic benefit or great potential benefit. If you develop Hebron now when prices are at sixty or fifty-five dollars a barrel, compared with twenty, then the long term financial benefits to Newfoundland and Labrador are actually substantial. It's not a loss. It could be a real benefit. That's just the luck with prices.

That said, MacKay does not think prices will fall any lower than \$50 a barrel.

What can be done about the lack of public awareness about the benefits of oil and gas developments in Newfoundland and Labrador? Did Norway and Scotland experience this problem and if so, how was it addressed? MacKay answered that he does not think this was a problem in Scotland given that the industry has been a high-profile, long-lasting one that

reaches into rural areas. Also, professional enterprise entities made sure local groups and communities were aware of the opportunities. With regards to Norway, he noted the strong state policies developed to prevent U.S. companies from reaping all the benefits of its oil and gas.

Shrimpton added that while the media frequently cover royalty and revenue oil and gas issues, the industry is "literally out of sight and out of mind." Yet he has tracked some of the diffused but very significant ways money from the industry has filtered through the economy. For example, the Hibernia project added \$25 million a year to the tourism sector.

Is the presence of the federal government in the oil and gas industry (for instance in terms of jobs and funding) greater in other provinces, for example in Nova Scotia? How does the presence of the federal government compare in Newfoundland and Labrador? Shrimpton responded that there has been no clear research on this point to date. He suspects there is more federal presence in the industry in other places and cites the example of the Fisheries and Oceans Canada Centre for Offshore Oil and Gas Environmental Research (COOGER) in Dartmouth. This centre clearly relates to issues relating to the offshore industry in Newfoundland and Labrador such as ice yet there is little local connection between this province and that federal initiative.

MacKay noted that in the U.K. supply and service companies do approximately 32% of their work outside the country. How did the supply and service industry build to this point? MacKay responded that one of the significant differences between this province and the North Sea is that since 1970 in Scotland and Norway, new fields have been *continually* found. As the industry moved northwards, there were approximately ten new large discoveries per year therefore supply and service companies knew there would be steady work. This is very different from the "stop-start" problem in Newfoundland and Labrador. More continuity or stability is needed to make it easier for people to invest.

Atkinson also noted that Newfoundland and Labrador is drilling only two or three exploration wells per year, whereas hundreds have been drilled in the U.K. He stressed the need for more exploratory drilling.

Plenary Panel: Experience on the Ground

i. Sam Synard

Mayor, Marystown

Synard described Marystown as an example of both the positive and negative impacts of offshore oil and gas development on rural areas of the province since the 1980s. Projects like commissioning and repairs to the Erik Raude drill rig symbolize his community's boom and bust: when these projects arrive, they bring huge salaries to rural workers and inject a great deal of money into the local economy, but when they leave the local economy collapses.

He explained the local benefits, the "boom," from a project like the Sea Rose FPSO in Marystown which created 6 million personnel hours of employment and thus helped develop a local world class trained workforce, involved \$395 million in fixed costs and resulted in infrastructure improvements. Yet he argued the best benefit from the oil and gas industry in his community is that some companies have used experiences in this sector to move into more stable, longer term industries, such as the Joint Support Ship Project.

Looking into the future, what would the Hebron project mean locally? He estimated 1,100 jobs per year for four years along with infrastructure and workforce improvements. Similar impacts would be noted in the case of the Laurentian Sub Basin development which has been delayed until 2009 due to world demand for drill rigs and long delays in the gas royalty regime. Here Synard questioned why it should take two decades to develop this gas royalty regime when other jurisdictions move so much quicker. He cautioned that the province might be losing its place in this global industry.

ii. Karla Metcalfe

Former Project Manager for Petroleum Exploration, Vulcan Minerals Inc.

(Speaking on behalf of Patrick Larcy, Chairman and President, Vulcan Minerals Inc.)

Metcalfe elaborated on the challenges and constraints experienced by Vulcan Minerals Inc., a company focussing on west coast onshore oil developments, as well as the major lessons learned in this industry. She noted difficulties related to regulation, labour retention, suppliers and local culture.

A major obstruction to oil developments onshore is government regulations. For example, crown lands exploration applications take four months to complete and therefore impede a continuous flow of operations. Second, unstable work in western Newfoundland makes skilled labour retention difficult. Vulcan can offer only temporary full time work four or five months at a time which means skilled workers who have gained experience in the local industry cannot be retained. Third, Metcalfe noted a lack of local specialized or adequate suppliers. Vulcan Minerals Inc. finds it difficult to find suppliers within the province specializing in oil and gas developments. This creates a logistical challenge due to the risk of delays in receiving equipment from Nova Scotia. Hence Metcalfe notes an opportunity for local businesses. The final issue relates to the lack of an "oil field mentality" in western rural Newfoundland. Metcalfe observed that suppliers are not available twenty-four hours a day, seven days a week,

as is commonly expected in the oil industry. New entrants providing such a service would have an advantage in this area.

iii. John Henley

Vice President, Offshore Services and Development, GJ Cahill & Company

Henley, representing GJ Cahill & Company (an Atlantic Canadian industrial contractor that has managed multiple oil related projects in the province), noted the technical benefits gained by businesses engaging with the oil industry as well as how this industry can serve as a role model and motivator to other businesses.

Henley cited standards and practices learned from working with the oil industry relating to safe work practices, environmental awareness and monitoring procedures, and quality assurance and control processes. The oil and gas industry has very high standards in these areas and local contractors must adhere to them. While they might be challenging to establish (for example, quality assurance processes are costly to develop), once they are in place they can be transferred or adapted to many other industries.

Another major benefit to companies working with the oil industry is the exposure to complex process equipment, some of which was not previously used in the province (such as 22 MW jet engines, axial flow gas compressors, high pressure pumps and high volume pumps). Likewise, the engineering technical work force in the province has gained experience with state of the art design systems including 3-D modeling, process simulation, international design codes, sophisticated project management, shutdown planning and so forth. These skills and experiences can be exported to other producing areas or used in more conventional commercial projects across the country.

Beyond these specific benefits to local industry, Henley explained two more general impacts of engaging with the oil and gas industry in this province. First, the industry provides role models and incentives for people in the province to get the education and experience needed to participate in the industry. He noted that people from this province working in the industry often find they are as well trained and as capable as any other workers. Second, the oil and gas industry serves as a model for other industries of private companies investing capital wisely in long term projects.

iv. Grant Leckie

Business Services Manager, Production Services Network (PSN) Canada

PSN Canada as an example of a major, independent, international service contractor to oil, gas and other process industries. PSN manages the full life cycle of oil and gas developments from pre-operations to de-commissioning and has established an engineering resource centre in St. John's as its Canadian business headquarters. (PSN was the engineering, procurement and construction (EPC) contractor on Hibernia since 1995 and Terra Nova since 1999. The St. John's office currently has 200 employees, although it had 300 at its peak last year.)

Leckie outlined several key business cycle management and workforce development strategies. To smooth over the work cycle, PSN moves workers around the world to match them with available work or it imports work from other regions. PSN Canada currently focuses on bringing work from Alberta to St. John's by networking with established engineering and construction/fabrication/maintenance companies in Alberta as well as with Newfoundland and Labrador fabrication and transportation companies. At the same time, to develop its staff, PSN has a Global Graduate Development Scheme which employs many Memorial University graduates and an international secondment program that sends staff to other locations to gain global oil and gas industry experience.

v. Discussion and Question Period Synopsis

This discussion enlarged on points raised by the speakers in reference to local knowledge clusters, business diversification, labour trends, opportunities from Alberta and technical issues relating to docking facilities and rig availability.

How can research and development or knowledge clusters be facilitated here? And who should do it? Henley drew attention to the ineffective tendency to copy ideas or technology that others have already developed. Instead, he recommends businesses to imagine where the industry is going or what it will need in the future and to solve these new problems, or better still, to ask the oil and gas industries what problems they face and work on those. A collegial working relationship with companies is required for this. Henley also suggested businesses in the province recognize offshore issues here as globally unique and work to apply lessons learned here in the oil and gas industry to other similar regions or to other industries. At the same time, Henley stated that failure should be expected in research and development. Any funds invested in research may take a long time to produce tangible results.

Synard added here that Newfoundland and Labrador lags in research and development. Also, there is a lack of interest in applying for the research funds that are available.

How can oil and gas be a stepping stone to other industries? Henley responded that GJ Cahill does not rely on any one industry or region. The majority of its work is in Atlantic Canada but now, in response to suggestions from their own workforce, the company is moving west. He repeated that the company could grow based on its exposure to the detailed and methodical way oil companies make contractors do their work. This frustrates new entrants but, once a company adjusts to this way of working, it can easily move into other industries.

What are the trends in labour movement in the province? Are skilled workers moving away permanently? Henley remarked on the wealth of skilled trades people in this province who prefer to stay here but will no longer do so for short term employment—workers are looking for at least eighteen months of work, not four or five months. The draw of long term work in Alberta is too strong.

Synard added that there is a dedicated workforce of 700 or 800 people interested in returning to the Marystown area (many still have families in the area). In response, another participant emphasized the province's dependence on Alberta: people are working in Alberta but returning to their families in Newfoundland and Labrador and spending money here; therefore, despite serious out-migration, some rural economies are maintained. What would be the effect on rural areas if these families moved?

Synard also added that not every worker leaving the province is skilled and making high wages in Alberta, so not all communities are benefiting equally from wages earned in western Canada.

What work is being sought by PSN from Alberta? Leckie elaborated on PSN partnerships with engineering companies in Alberta to move some of the engineering work back to St. John's, for instance, upgrader plant engineering, procurement and construction (EPC) contracting work.

Instead of sending FPSOs as far as Europe for servicing (due to the lack of a large dry dock in the province), why not build an appropriately sized dry-dock or graving dock to service them here? Synard stated that it is part of his vision for Marystown to be able to build Marine Atlantic vessels and retrofit FPSOs. If the private sector will invest in a graving dock for smaller ships, the provincial government should agree to enlarge it to accommodate larger vessels such as FPSOs.

Given the difficulty in securing drilling rigs, why doesn't the Province build its own for local use and for chartering elsewhere? Leckie stated that companies are reducing drilling due to high costs of rigs which are currently undersupplied in the market. So drilling rigs would be a good investment. However, Henley argued there is not enough continuous work to support a shipbuilding facility in Newfoundland and Labrador. The critical mass does not exist to support it and such a facility might be wasted capital.

Keynote Address

Memorial University's Role in Oil and Gas Industry-related Economic Development in Newfoundland and Labrador

Dr. Axel Meisen

President and Vice-Chancellor, Memorial University of Newfoundland

Memorial University is facilitating the transformation of Newfoundland and Labrador into an international centre of expertise for oil and gas with an emphasis on operations in harsh environments. The university is already having a major impact on the regional oil and gas industry through research, teaching and facilities focussed on this sector. Between 2003 and 2010, more than \$88 million dollars has been raised for oil and gas related research, programs and facilities. (New facilities include a harsh environment bridge simulator, the Landmark Graphics Visualization Lab and the Inco Innovation Centre.)

The university generates significant geological, engineering and marine research on oil and gas through 19 new faculty members (including a \$2.5 million Husky Energy Chair in Oil and Gas Research) committed to studying areas related to this industry. Their current research relates to, for example, seismic imaging and inversion, production systems engineering, offshore safety and reservoir characterization. New research areas will focus on innovative exploration drilling, greenhouse gases and oceans, ocean geo-technology and oil and gas processing.

Students engage with this research through programs like the new Master's of Oil & Gas Studies, a globally unique executive-level program covering the entire petroleum industry at key oil and gas development sites around the world, as well as numerous other new programs related to the oil and gas industry in engineering, geology and marine studies. Over one hundred graduate students are currently enrolled in these programs and past graduates from them are now employed in all areas of the petroleum industry. Dr. Meisen also anticipates Memorial University will soon build on these programs by developing a new Executive MBA Petroleum program.

Memorial University collaborates with universities, industry stakeholders and all levels of government through its Oil and Gas Development Partnership, as well as through the Pan Atlantic Petroleum Systems Consortium and an industry, university and government research and development consortium.

Furthering Economic Development: Current Successes, Future Challenges (Summary of Reports from Breakout sessions and Individual surveys)

The afternoon session of the conference revolved around conversations in breakout sessions among diverse stakeholders on the following questions:

- What are we doing to foster economic development from the oil and gas industry in Newfoundland and Labrador?
- What could we do better?
- Who needs to do what?

Participants were encouraged to consider different activity phases as well as short, medium and long term benefits. In addition, participants submitted individual responses to these questions. These individual comments elaborated on the group contributions according to the responders' specializations. The major points from both the sessions and individual submissions are summarized below. See the Preface for a synopsis that groups the responses and puts them in order of frequency.

Current Successes: What are we doing to foster economic development from the oil and gas industry in Newfoundland and Labrador?

- Improving the Regulatory and Fiscal Regime. The provincial government is achieving this by developing an energy policy, streamlining regulation and reworking royalties and taxes.
- Investing in the Industry. Industry and governments are investing in oil and gas development. Examples include industry's capital investments in exploration and development projects and the provincial government's investments evident in the 2007 budget. More specifically, participants emphasized:
 - *Investments in research and development* from sources such as the Natural Sciences and Engineering Research Council of Canada (NSERC), the Atlantic Canada Opportunities Agency (ACOA) and its Atlantic Innovation Fund (AIF), the Canada Foundation for Innovation (CFI), the Canada-Newfoundland Offshore Development Fund and the Department of Natural Resources.
 - *Investments in workforce and human resource development* for example, provincial government and industry investments in programs, facilities and research at postsecondary institutions relating to the oil and gas sector as well as industry's hiring of students. The recent release of the Province's Skills Task Force report was also noted.
 - *Investments in infrastructure and facilities* relating to oil and gas developments by industry and government as well as equipment sharing and technology transfer initiatives.
- Building Partnerships and Sharing Information. Participants noted the efforts of industry associations like the Newfoundland Ocean Industries Association (NOIA) and the Canadian Association of Petroleum Producers (CAPP) as well as partnerships between public and private sectors and between boards of trade or chambers of commerce with industry.

Participants also remarked on the role of the Harris Centre in facilitating knowledge exchange.

- Ensuring Local Benefits. Local benefits are experienced via development plans requiring local content such as employment. Participants also noted the oil and gas industry's community contributions through sponsorship, charities and volunteerism.
- Building Awareness. Trade shows and conferences, hosted by academic, business or industry associations like NOIA or the Greater Corner Brook Board of Trade build awareness about the industry.
- Supporting the Industry at the Municipal Level. Municipalities provide necessary infrastructure, services, social, and cultural activities to the oil and gas industry.
- Developing the Supply/Service Sector and Increasing Export Capability. This is achieved by identifying opportunities in the sector with local companies, building a better understanding of supply chain management and promoting exports, for instance at international conferences.

Action Priorities: What could we do better? Who needs to do what?

- Development Continuity. Industry and federal and provincial governments should ensure continuity through continuous exploration, onshore and offshore. To do this, participants stressed the need to decrease the cost of exploration (for example, by buying drilling rigs as a province and leasing them to explorers, by building rigs locally or by companies pooling resources for longer term rig rentals). Exploration could also be encouraged through tax incentives.
- Regulatory Clarity and Certainty. The provincial and federal governments should establish and communicate clear rules about oil and gas developments to all stakeholders, otherwise there is too much political instability for business investment and regional planning. Specific issues raised included the royalty regime for oil and gas, fallow field regulations and immigration rules. The need to "streamline" regulations was also emphasized.
- Continued Research and Development. Federal and provincial governments, Memorial University, the C-NLOPB and industry should forward research and development in the oil and gas sector. Key areas for new or continued research include monitoring socio-economic impacts, improving benefit measurements, building on resource assessments data, analyzing demographic changes and their effect on workforce capacity, fostering innovative technology and conducting comparative research in other oil and gas development sites. Participants emphasized the importance of both collecting and disseminating research from all fields (from the arts and social sciences as well as from geosciences and engineering).
- Continued Workforce / Human Resources Improvements. The provincial government, post-secondary education institutions, labour organizations and industry need to understand labour force demographics and required skills and expertise. Participants noted the importance of timely education programs, recruitment (especially of women), and worker training and retraining

- Continued Investment. Participants cited the role of government and industry to invest in strategic infrastructure, local companies and education and training capacities in strategic areas. The provincial government's commitment to a legacy or heritage fund was also recommended.
- Improved Federal-Provincial, Provincial-Industry Relations. Related to the aim of improved communications, participants noted the need for improved relations between levels of government and between the provincial government and industry. Rather than a confrontational approach, there needs to be agreement among these parties on a framework to move forward.
- Localized Decision Making. Industry senior management should ensure decision makers in the local oil and gas industry are located in the province. Likewise, the federal government needs to build a federal presence here.
- Capture Benefits Locally. The benefits of the oil and gas industry should be maximized locally through value-added production, such as an LNG plant in Labrador. Also, government and industry could facilitate the marketing of local products within the province and beyond. The province needs to better exploit its strategic location to capture transportation and downstream opportunities.
- Improved Communication and Awareness. Better communication is needed among the provincial government, industry and educational institutions, perhaps through joint ventures or partnerships, as well as between these three organizations and the general public. Organizations such as NOIA and the Harris Centre need to continue to build on public outreach in a way that is realistic about the industry and its benefits, with emphasis on rural areas. Likewise, local businesses or economic development associations and municipalities should be encouraged to lead outreach initiatives. Participants also noted the need for informed public debate led by educational institutions.
- Improved Perceptions of Newfoundland and Labrador. Newfoundland and Labrador needs to be perceived as a place "open for business." Inside the province, there is a need to acknowledge provincial achievements and capacity in the oil and gas industry rather than focussing on past mistakes. There must be strategic thinking at all levels and a proactive rather than reactive approach.
- Economic Diversification. The provincial government and industry should ensure the benefits from oil and gas development are reinvested back into the province to build a sustainable economy.
- Increased Competition. Government and industry should encourage competition in this industry by, for example, encouraging new companies to do business in the province.

Closing Plenary Panel

Panel Participants

- Ted Howell, President and CEO, NOIA,
- Sharon McLennon, Chair of the Oil and Gas Committee, Greater Corner Brook Board of Trade
- Tony Mackay, Mackay Consultants
- Cyril Organ, Chair, Community Development Committee, Stephenville Task Force

The closing panel and discussion brought together the major themes from the day. These fell into two broad categories: challenges faced by various stakeholders and ways to move the industry forward to enhance benefits.

Challenges to Oil and Gas Development

- Lack of Continuity. A lack of continuity deters investment and results in workers seeking employment in other regions. To ensure continuity, more exploration must occur and this data needs to be amassed and made available. New projects, such as Hebron, must begin.
- High Exploration Costs. Major oil companies are very cautious and they are reluctant to explore at high costs. Drilling off Newfoundland and Labrador can be five times as expensive as drilling in the North Sea. Yet the potential reward for taking this exploration risk is high, given the size of the offshore basins.
- Awareness Gaps. Conferences like this one are needed to improve communication awareness about the oil and gas industry and its benefits. But this awareness raising must be realistic: some oil and gas development will not be evenly distributed throughout the province. Likewise, collaboration between Memorial University and the College of the North Atlantic is needed. It was also noted that the role of Newfoundland and Labrador Hydro was not adequately addressed during this conference, yet it is going to be a significant player in the province's energy development.
- Research Gaps. Participants noted several areas requiring more research. For example, better methods for monitoring benefits from the oil and gas industry in the province are needed to create good public policy and to foresee business opportunities. It was also suggested that the province would benefit from a "resource inventory," a full view of the reserves, industry and the players in this province to help in communications about this sector. More generally, a study is needed on the perception of Newfoundland and Labrador from the perspective of non-local industry. And if there is a negative perception about doing business here, work is required to correct these perceptions.
- Regulatory Instability. Industry needs regulatory stability from governments. Concern was expressed about the provincial government's delay in releasing its energy strategy.

The Way Forward

Participants also noted what they considered to be the most important suggestions for building the industry and continuing its benefits.

A major point related to learning from international trends in the oil and gas industry. Experiences from other regions might indicate patterns applicable to Newfoundland and Labrador. For instance, supermajor companies are moving out of mature fields and junior companies are replacing them to extend field life. Also, there is a transition from fixed to mobile drilling structures. In addition, high health, safety and environmental standards are now essential to success in this industry.

The panel also stressed the importance of continued research from Memorial University on the oil and gas industry and the need to ensure local companies have the opportunity to seize benefits from this industry. Simultaneously, the economy must be diversified to lessen the province's dependence on the oil and gas industry. It was recommended that the Government of Newfoundland and Labrador as well as the general population understand oil and gas as an enabler of other industries. This economic diversification requires long term planning to avoid outcomes like the collapse of the fishery. In another direction, industry participants should work to diversify into oil and gas industry in other regions, for instance, by bringing elements of Alberta's boom back to Newfoundland and Labrador.

Finally, panel participants noted the suggestion that had been raised during the conference recommending stakeholders to communicate with industry on increasing benefits from oil and gas. For instance, it was suggested that local businesses and researchers ask oil companies about their needs.

CONFERENCE POSTSCRIPT

In hindsight, it can be said that the timing of the May 16th 2007 "Conference on Economic Development Benefits of the Oil and Gas Industry in Newfoundland and Labrador", was quite auspicious. In the one-hundred and twenty days following the gathering, three news events occurred that influenced the way people of this province thought about such benefits and their security.

- **The Announcement of a Hebron MOU**
The Memorandum of Understanding covering oil production for Hebron lifted spirits in the province with regard to fixing a positive driver for the next major round of economic activity and benefits derived from the oil industry.
- **The Disclosure of the White Rose Extension**
The White Rose Extension held the prospect of not only increasing oil revenue but also of 'filling the revenue gap' that was predicted to occur between its peak production period and the date of Hebron's first production.
- **The Release of the Provincial Government's Energy Plan**
"Focusing Our Energy", the official title of the energy plan, included a formula for calculating a natural gas royalty "comprised of two components: basic and net".⁴ This sent a positive signal that the province was ready to begin serious discussion on gas production and the revenue generation that would result.

Suffice to say that it is impossible to recapture all of the 'table talk' that accompanied the conference. However, it would be a mistake not to comment in general terms on the 'anticipatory buzz' that permeated the room on the 16th of May. Attendees, in general, were keenly aware of the province's potential to make great strides with regard to economic competitiveness thanks to oil and gas industries and their support networks. Admittedly, there were some naysayers who voiced sarcasm over the issue of petroleum accounting, but by far the majority were confident that the province had benefited greatly and that it was poised to make greater strides in the years ahead. Although few in the room would have guessed that progress on Hebron would be measured in weeks.

The other unreported aspect of the conference, with profound historic resonance, revolves around the issue of 'how do you define the term Economic Development Benefits (EDBs)?' There were some participants who were capable of taking a rather detached and dispassionate look at EDBs as if they too were commodities to be measured, assayed and refined. Ironically, while that may seem an academic approach, not all academics in the audience were capable of such detachment. Indeed some of them became entwined in the linkage between resource-driven benefit entitlement and geo-political identity. On a personal level, divorced from political agenda, this inextricable linkage telegraphed something beyond provincial pride; rather it spoke

⁴ "Focusing Our Energy", Newfoundland and Labrador Energy Plan, 2007, See Natural Gas Royalty Regime, Appendix D, p87.

to a sense of Newfoundland proto-nationalism. This phenomenon also carried a certain amount of baggage in the form of unspoken fears that accompanied the conference. Newfoundland was left with serious economic and emotional scars following the 1992 northern cod-fishing moratorium and those scars were broadly categorized as stemming from over-reliance on a 'natural resource based economy'. Oil and gas related EDBs are, in a sense, a continuance of the natural resource based economy and so the ghosts of 1992 influenced the hopes, dreams, fears and aspirations of many participants.

Future researchers who read this document to gain an understanding of 'oil and economics', as found in Newfoundland in 2007, should consider how Newfoundland looked in comparison to the rest of the 'petroleum world'. The Conference played out against the backdrop of war in Iraq, tension in Nigeria and authoritarian uncertainty in Venezuela. And while those aspects of global geopolitical risk served to spike the price of oil on world markets in 2007 – and thereby add to the attractiveness of Newfoundland and Labrador's resources – there were signs that global climate change could influence the economic development of gas versus oil. Would future demands for a clean fuel eventually mean gas could eclipse oil on world markets? Who could say in 2007? That Newfoundland and Labrador would move forward with the development of petroleum resources was a certainty to those attending the conference. That progress was being made in achieving a more holistic understanding of EDBs was a given. However, what remained to be seen following the meeting was the degree to which 'petroleum output' and 'benefit attainment' could be harnessed in unison to meet the expectations of the province's residents as stakeholders.

Randolf Cooper, Ph.D.
Executive Director
Oil and Gas Development Partnership
Memorial University of Newfoundland

APPENDIX A: PROGRAM COMMITTEE

Robert Greenwood and Randolph Cooper
Harris Centre / Oil and Gas Development Partnership (Conference Co-chairs)

Jim Wright
Memorial University of Newfoundland

George Osmond
Atlantic Canada Opportunities Agency

Byron Sparkes
Department of Natural Resources, Government of Newfoundland and Labrador

John Davis
Department of Innovation, Trade and Rural Development, Government of Newfoundland and Labrador

Craig Pollett
Newfoundland and Labrador Federation of Municipalities

Ray Dillon and Gail Ryan
St. John's Board of Trade

Sharon McLennon
Greater Corner Brook Board of Trade

Kerry Murray
Newfoundland and Labrador Federation of Labour

Victoria Belbin
Newfoundland and Labrador Regional Economic Development Association

Paul McGinn
Schooner Regional Economic Development Board

Ted Howell and Deirdre Robinson-Greene
Newfoundland Ocean Industries Association

Paul Barnes
Canadian Association of Petroleum Producers

APPENDIX B: CONFERENCE ORGANIZING TEAM

Mark Shrimpton, Conference Coordinator
Principal, Jacques Whitford and Adjunct Professor of Geography, Memorial University

Michelle Butt and Louise Green
Oil and Gas Development Partnership

Renee Fitzgerald, John Duff and David Yetman
Harris Centre

Megan Ibner
Department of Economics

Angela Carter
Government Department, Cornell University

Kelly Foss
Marketing and Communications, Memorial University of Newfoundland

Jeff Collingwood
Total Group Inc.

APPENDIX C: CONFERENCE AGENDA

8:00 a.m. **Registration**

8:30 – 8:40 a.m. **Welcome**

Dr. Robert Greenwood, Director, The Leslie Harris Centre of Regional Policy & Development

8:40 – 9:15 a.m. **Keynote Address**

Honourable Kathy Dunderdale, "Newfoundland and Labrador, Its Energy Future and Offshore Petroleum"

9:15 – 10:45 a.m. **Setting the Stage**

- Geological Potential: Ian Atkinson, Oil and Gas Development Partnership, Memorial University
- Newfoundland and Labrador Experience of Offshore Petroleum Industrial Benefits: Dr. Wade Locke, Professor, Department of Economics, Memorial University and Mark Shrimpton, Jacques Whitford
- National and International Experiences of Offshore Petroleum Industrial Benefits: Tony MacKay, Managing Director, MacKay Consultants, Scotland
- Discussion

10:45 – 11:00 a.m. **Refreshment Break**

11:00 – 12:15 p.m. **Panel: Experience on the Ground**

- Sam Synard, Mayor, Marystown
- Patrick Lacey, Chairman and President, Vulcan Minerals Inc.
- John Henley, Vice President, Offshore Services and Development, GJ Cahill
- Grant Leckie, Business Services Manager, PSN Canada

12:15 – 1:30 p.m. **Lunch Speaker**

Dr. Axel Meisen, President and Vice-Chancellor, "The Role of Memorial University in Oil and Gas Industry-related Economic Development in Newfoundland and Labrador"

1:30 – 3:00 p.m. **Break-out Sessions**

Facilitator: Dr. Robert Greenwood. Group discussions on the following questions, in reference to the different activity phases and to achieving short, medium, long term benefits:

- What are we doing to foster economic development from the oil and gas industry in Newfoundland and Labrador?
- What could we do better?
- Who needs to do what?

3:00 – 3:15 p.m. **Refreshment Break**

3:15 – 4:00 p.m. **Report Back and Discussion**

4:00 – 4:55 p.m. **Panel Discussion**

Chair: Dr. Randolph Cooper, Executive Director, Oil and Gas Development Partnership, Memorial University

- Ted Howell, President and CEO, NOIA
- Sharon McLennon, Chair of the Oil and Gas Committee, Greater Corner Brook Board of Trade
- Tony Mackay, Mackay Consultants
- Cyril Organ, Chair, Community Development Committee, Stephenville Task Force
- Discussion

4:55 – 5:00 p.m. **Closing and Adjournment**

Dr. Robert Greenwood

5:00 – 6:00 p.m. **Reception**

APPENDIX D – PARTICIPANTS LIST

AMEC Earth & Environmental
Susan Sherk

Argentia Management Authority Inc.
Harvey Brenton

ASCO Canada Ltd.
Robert Crosbie

Atlantic Business Magazine
Dawn Chafe

**BC Offshore Oil and Gas Ministry of
Energy Mines & Petroleum Resources**
Jennifer Davison

**Canada–Newfoundland Labrador Offshore
Petroleum Board**
Sean Kelly
Jonathan MacDonald
Max Ruelokke
Lorne Spracklin
Hal Stanley
Fred Way
Andy Wells

**Canadian Association of Petroleum
Producers**
Paul Barnes - Program Committee
Jill Fleming

Chevron Canada Ltd.
Tim Murphy

City of St. John's
Elizabeth Lawrence
Heather Mills Snow
Art Puddister

Coast of Bays Corporation
Wesley Harris

College of the North Atlantic
Norris Eaton
Arthur Leung

John Oats
Gary Tulk
Robin Walters

D. F. Barnes
Jerry Byrne

Fortis Properties - Holiday Inn
Patsy Yetman

GJ Cahill
John Henley - Speaker

Government of Canada

**Atlantic Canada Opportunities
Agency George Osmond – Program
Committee**

Industry Canada
Dawn Lemessurier

**Public Service Commission of
Canada**
Trent Abbott

**Treasury Board of Canada
Secretariat**
Ellen Alcock

Government of Newfoundland & Labrador
**Department of Education, Adult
Learning and Literacy**
Candice Ennis-Williams

Department of Finance
Brian Hurley
Dominic White

**Department of Innovation, Trade
& Rural Development**
Paul Alexander
Leanne Combden
John Davis - Program Committee

Keith Payne
Kay Riggs
Kirk Tilley

Department of Municipal Affairs
Sherry Appleby

Department of Natural Resources
Minister Kathy Dunderdale -
Speaker
Brian Condon
Tracy English
Byron Sparkes - Program
Committee

Greater Corner Brook Board of Trade
Sharon McLennon - Program Committee /
Speaker

Humber Economic Development Board
Gary Gale

Husky Energy
Margaret Allan
Kathy Knox
Ron LeDrew
Colleen McConnell
Sheldon Winsor

Ilkley Education Services – Victoria, BC
John Schofield

Jacques Whitford
Dana Feltham
Mark Shrimpton - Program Committee /
Speaker
Elizabeth Way

Labrador Straits Development Corporation
Bruce Moores

Mackay Consultants – Scotland
Tony Mackay - Speaker

Memorial University of Newfoundland
Department of Earth Sciences
John Hanchar

Department of Economics
Dr. Wade Locke – Speaker

Genesis Group
Carol Bartlett

Major Research Partnerships
Jim Wright – Program Committee

Marketing and Communications
Kelly Foss
Ivan Muzychka

Marine Institute
Robert Rutherford

Office of the President
Dr. Axel Meisen, President -
Luncheon Speaker

**Office of the Vice-President
(Research)**
Dr. Christopher Loomis

**Oil and Gas Development
Partnership**
Ian Atkinson – Speaker
Randolf Cooper – Co-Chair
Michelle Butt
Louise Green

Sociology
Leah Fusco

**The Leslie Harris Centre of
Regional Policy & Development**
Robert Greenwood – Co-Chair /
Speaker
Angela Carter
John Duff
Megan Eibner
Renee Fitzgerald
Dave Yetman

**Newfoundland and Labrador Association
of Public and Private Employees**
Carol-Ann Furlong

**Newfoundland and Labrador Business
Caucus**
Gerry Heffernan

**Newfoundland and Labrador Federation
of Labour**
Kerry Murray

**Newfoundland and Labrador Regional
Economic Development Association**
Sean Wiltshire

**Newfoundland Offshore Industries
Association**
Ted Howell - Program Committee / Speaker
Deidre Robinson-Greene - Program
Committee

Newfoundland Transshipment Ltd.
Paul Adams

Ocean Resources Magazine
Donna Endicott

Oceans Advance
Les O'Reilly

Petroleum Research Atlantic Canada
Dave Finn
Dorothea Hanchar
Jennifer Barnable

PSN Canada
Grant Leckie - Speaker

**Schooner Regional Development
Corporation**
Paul McGinn - Program Committee

Service Canada
Rosemary Norris

Stephenville Task Force
Cyril Organ - Speaker

Town of Bishop's Falls
Jody Fancey

Town of Lewisporte
Perry Pond
Les Watton

Town of Marystown
Sam Synard - Speaker

Vulcan Minerals
Patrick Larcey - Substitute - Karla Metcalfe

**Women in Resource Development
Committee**
Paula Bruce
Dawn Green

APPENDIX E –CONFERENCE NEWS RELEASE

Subject: Conference to focus on economic development benefits from the oil and gas industry

Date: May 9, 2007

Despite recent impacts of oil and gas development on the provincial economy, Newfoundlanders and Labradorians still do not consider the industry as a priority for growing the provincial economy.

Memorial University's Leslie Harris Centre for Regional Policy and Development and the Oil and Gas Development Partnership are hoping to change that mindset with an initiative aimed at bringing together community leaders, representatives of economic development groups, oil companies, the supply and service community, business groups, labour, governments and academe.

A conference, titled Economic Development Benefits of the Oil and Gas Industry in Newfoundland and Labrador is being held Wednesday, May 16, 2007, at the Delta Hotel in St. John's from 8:30 a.m. to 5 p.m. This conference is designed to enable information sharing, debate and education on opportunities for economic development benefits from the oil and gas industry in the province.

"Very often, stakeholders mistakenly believe the industry is limited to St. John's, will produce revenues for governments but not economic development and is short-term," said Dr. Rob Greenwood, director of the Leslie Harris Centre.

"By bringing industry and community stakeholders together, we aim to inform both sides as to the opportunities and challenges for maximizing economic development benefits in all areas of the province."

Kathy Dunderdale, provincial minister of Natural Resources, is the keynote speaker for the conference, and will discuss the province's energy future and offshore petroleum. Dr. Axel Meisen, president and vice chancellor of Memorial University, will discuss the university's role in industry-related economic development and Tony MacKay, an expert on the Scottish and Norwegian experience in maximizing economic development from the industry will speak on lessons that can inform efforts in this province. In addition, Ian Atkinson, of the Oil and Gas Development Partnership; Wade Locke, from the Department of Economics at Memorial University; and Mark Shrimpton of Jacques Whitford, will discuss the potential and experience in Newfoundland and Labrador, and a panel of municipal and industry leaders will give their views of the experience on the ground.

"This is an opportunity for municipal, regional development and business leaders from throughout the province to meet with large and small companies in the oil and gas industry to learn about ways that business and economic development is already happening, and to explore new opportunities to make the most of the industry," said Dr. Greenwood. "The key to the conference will be the afternoon sessions which will allow participants to debate what we are currently doing to foster economic development from the oil and gas industry, what else could we be doing, and who needs to do it."

The Harris Centre and the OGDG will draw on the conclusions from these sessions and produce a report capturing recommendations for moving forward. This report will be shared with industry, community and government stakeholders, as well as the university, to inform actions moving forward. Media agencies are encouraged to send representatives.

For further information on registering for the conference, please contact Louise Green, Oil and Gas Development Partnership, Memorial University, at (709) 737-4519, fax (709) 737-

3047, e-mail ogdp@mun.ca or visit www.mun.ca/ogdp. For more information, contact Kelly Foss, communications co-ordinator, Faculty of Engineering and Applied Science, Memorial University, at (709) 737-8287 or e-mail kfoss@engr.mun.ca.

APPENDIX F –EVALUATION

Harris Centre/OGDP

Conference on Economic Development Benefits of the Oil and Gas Industry in
Newfoundland and Labrador

EVALUATION FORM

(40 forms were returned)

Keynote Address and Setting the Stage:

A. The topics discussed were appropriate in the conference goals.

Agree: 25

Strongly Agree: 15

B. The Speakers were well informed and provided relevant information.

Agree: 30

Strongly agree: 9

Neither Agree nor Disagree: 1

Comments:

- Additional discussion in certain areas would have been beneficial
- Good speakers, topic were focused, set the stage for the afternoon
- A lot of info would be common knowledge to people informed about oil and gas play in NL and indeed globally
- It was very interesting to hear the experiences from the North Sea and also to hear the opinions of an "outsider" with industry experience
- Excellent. Really pertinent info
- I found this is most informative and interesting panel
- Nothing really new
- Vast knowledge regarding past experience in other countries
- Good opportunity to hear how the industry has changed/consolidated in the North Sea
- Excellent backdrop for the day's proceedings
- Presentations were too short. Speakers in the first panel should have been given more time

In reference to the Experience on the Ground Panel:

C. The presentations were delivered in a clear and concise manner.

Disagree: 1

Agree: 27

Strongly Agree: 7

Neither Agree nor Disagree: 5

- D. The Panelists were well informed and provided relevant information.
Agree: 25
Strongly Agree: 9
Neither Agree nor Disagree: 6
- E. The session allowed sufficient time for Q&A.
Agree: 28
Strongly Agree: 12
- F. The session has given me a better understanding of the issues involved.
Disagree: 3
Agree: 24
Strongly Agree: 5
Neither Agree nor Disagree: 8

Comments:

- Would like to see these questions for each presenter. I thought that some of Sam's info was not really relevant, though informative. Also, Karla's presentation seemed disorganized
- I think there could have been better speakers/examples of the actual ground experience. I found the mayor of Marystown very relevant and the rest were as well, but perhaps not quite as specific to the topic as they could have been
- The presentation by Vulcan Minerals and the Mayor of Marystown were very interesting and proposed interesting questions for participants to take away
- Could be a bit more focused in the case of some speakers
- Have heard many of these issues discussed before
- A little preaching to the choir

In reference to the break-out session, report back and discussion

- G. The goals and process were clear.
Disagree: 1
Agree: 27
Strongly Agree: 8
Neither Agree nor Disagree: 1
No Answer: 3
- H. The break-out session, report back and discussion were facilitated well.
Agree: 30
Strongly Agree: 6
Neither Agree nor Disagree: 1
No Answer: 3

- I. The session allowed sufficient time for effective discussion of what is currently being done, what could be done better, and by whom.

Disagree: 2

Agree: 30

Strongly Agree: 5

No Answer: 3

Comments:

- Again, preaching to the choir
- Discussion was meaningful due to the diversity of backgrounds and expertise resident among the participants. E.g., federal, provincial governments, MUN, and development associates
- Could have been shorter. Discussion sometimes wandered off topic within group
- Sometimes the discussion got off track
- I think the amount of time could have been reduced quite a bit
- Good discussion, ample time
- Emulate Norway
- The break-put sessions may have worked better if recorders/reporters had been identified in advance and had a chance to meet as a group beforehand
- The discussion was good but it might have been better if the Harris Centre had provided a reporter for each table who had been briefed beforehand
- Perhaps an opportunity should have been given after the breakout session for plenary questions/comments
- Questions were too broad and not focused enough to address
- Best part of the conference. Excellent discussions at the table level. For the most of us it was the first gathering of this kind

In reference to the closing Panel Discussion

- J. The presentations were delivered in a clear and concise manner.

Agree: 31

Strongly Agree: 3

Neither Agree nor Disagree: 2

No Answer: 4

- K. The panelists were well informed and provided relevant information.

Disagree: 1

Agree: 27

Strongly Agree: 4

Neither Agree nor Disagree: 3

No Answer: 5

L. The sessions allowed sufficient time for other participants to state their views.

Agree: 26

Strongly Agree: 4

Neither Agree nor Disagree: 2

No Answer: 8

Comments:

- I found this section to be weak and a bit pointless. The speakers didn't do anything new and I didn't find it useful for them to bring up the important point to them

In reference to the conference as a whole

M. The conference provided me with new information and ideas that will be useful in my work.

Disagree: 2

Agree: 23

Strongly Agree: 5

Neither Agree nor Disagree: 7

No Answer: 3

N. The conference allowed me to establish new relationships that will be useful in my work.

Disagree: 1

Agree: 21

Strongly Agree: 3

Neither Agree nor Disagree: 12

No Answer: 3

O. The conference allowed sufficient time for discussion and networking.

Agree: 28

Strongly Agree: 6

Neither Agree nor Disagree: 3

No Answer: 3

Comments:

- I would have liked to see a greater diversity of people involved. Someone made the comment that most people are already familiar with each other. Would learn more if you could draw on wider views, people you don't know, and their views
- Conference was well organized and what I really liked was the fact that Rob kept everyone on time. Consequently everyone paid attention, there was no rambling. Good job.
- NL should emulate Norway
- Good forum for discussion among industry, education, regulators, government, and economic boards
- Excellent. Need to continue and build on this. Follow up conference definitely needed.

P. How did you find out about the conference?

- Co-worker
- Supervisor
- E-mail: 10
- NOIA e-mail
- NOIA bulletin
- NLREDA e-mail
- At the community prosperity forum
- Informed by the organizers
- Past participation
- Colleague: 3
- Mailed Letter: 3
- On the committee
- Mark Shrimpton
- Arthur Leung
- Website: 2
- Networking, REDB, MUN website
- NOIA website
- Word of mouth
- PRAC R&D conference handout material: 2

Q. What other information would you like to see in regards to the conference topic?

- I would like to see follow up on the report
- Keep the momentum. We need to do many more sessions in other parts of the province
- Existing examples of small start up industries that support the oil and gas industry
- Better representation from major oil companies
- Need access to the summary reports
- Frank discussions about the impact of publicization of industry
- Follow up report should include an action plan
- Downstream development activities
- Panel of major player (e.g., Husky, Mobil...) to outline what they are doing, how much they are currently investing, what it will take from us for them to increase their activity, what their future plans are, what their expectations are...
- Discussions were beneficial and much detail
- More detail on benefits for country, province, and regions

- R. Did you receive adequate information prior to the start of the conference?
Yes: 35
No: 3
No answer: 2
- S. Were you pleased with the food service provided by the Delta Hotel and Conference Centre?
- Excellent service: 2
 - Yes: 26
 - Adequate: 2
 - Would be nice to have fruit at refreshment break but overall satisfied
 - Very. Lots of vegetarian options
 - Food was excellent
 - Not enough break food but buffet was good
- T. How would you rate your overall experience at the Delta Hotel and Conference Centre?
- Excellent/very good: 15
 - Good: 11
 - Fine/average: 4
 - As always, a first class hotel
 - Shabby stage panels show up a lot with floodlights on them, excellent power point screen, dirty table clothes in the lobby where drinks and coffee were
 - Good facility and service
 - Excellent learning and networking opportunity
- U. Other comments?
- Rob and team great job and well coordinated
 - Need to do this on a regular, on-going basis
 - Perhaps should conclude around 3pm. This would give you some time to do your day job
 - We need to ensure follow up so everything discussed doesn't get lost. There were plenty of good discussions. It would be a shame if that's all that comes out of this
 - Very good discussion. Important to raise the topic of oil and gas. Benefits to the province are more than the impact on GDP
 - There was still fear among participants regarding giving benefits on certain issues.
 - Very good conference. The timing was appropriate and we know that we must move further to develop a more aggressive strategy to maximize the benefits of oil and gas in NL
 - Excellent conference. Very topical/enjoyable

- Good cross section of industry stakeholders. Reports need to be produced and used. If we need to have a follow up in 6 months down the road we need to do that. The presentations were rich and should be left to gather dust.

THE LESLIE HARRIS CENTRE OF REGIONAL POLICY AND DEVELOPMENT

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THE HARRIS CENTRE Memorial University

