SHELL CANADA OIL SANDS EXPANSION:
Jackpine Mine Expansion & Pierre River Mine
Public Disclosure
January 2007
This Public Disclosure document describes in general terms, Shell Canada's current mine expansion opportunities. Shell Canada is committed to working with stakeholders in Athabasca area communities to ensure that mine development is responsibly and professionally conducted, and benefit the local communities, as well as Albertans and the Canadian economy through employment, contracting, and service and supply opportunities.

Shell Canada's Oil Sands business is held by a wholly owned partnership, Shell Canada Energy, which holds a 60 per cent interest in the Athabasca Oil Sands Project (AOSP), a joint venture that consists of the Muskeg River Mine located north of Fort McMurray in northern Alberta, and the Scotford Upgrader near Edmonton, Alberta. Shell Canada Energy also has in situ bitumen operations at Peace River and Hilda Lake in Alberta.

Cautionary Note

This document contains “forward-looking statements” based upon management’s assessment of the Company's future plans and operations. These forward-looking statements include references to anticipated growth, growth strategy and long-term profitability, future capital and other expenditures, the Company’s plans for growth, development, construction and expansion, the viability and benefits of planned and future expansion projects, upgrading capacity, construction of infrastructure, resources and reserves estimates, future production of resources and reserves and project schedules and execution.

Readers are cautioned not to place undue reliance on forward-looking statements. Although the Company believes that the expectations represented by such forward-looking statements are reasonable based on the information available to it on the date of this document, there can be no assurance that such expectations will prove to be correct.

Forward-looking statements involve numerous assumptions, known and unknown risks, and uncertainties that may cause the Company's actual performance or results to differ materially from any estimates or projections of future performance or results expressed or implied by such forward-looking statements. These assumptions, risks and uncertainties include, but are not limited to: demand for oil, gas and related products, disruptions in supply, fluctuations in oil and gas prices, industry operating conditions, operating costs, stakeholder engagement, receipt of regulatory approvals, project startup, schedules and execution, market competition, operational reliability, labour availability, shortages of materials and equipment, the uncertainties involving the geology of oil and gas deposits and reserves estimates, including the assumption that the quantities estimated can be found and profitably produced in the future, general economic conditions, the fulfillment of the Company’s sustainable development criteria, changes in law or government policy, and other factors, many of which are beyond the control of the Company.

The forward-looking statements contained in this document are made as of the date of this document and the Company does not undertake any obligation to update publicly or revise any of the forward-looking statements contained in this document, whether as a result of new information, future events or otherwise, except as required by law. The forward-looking statements contained in this document are expressly qualified by this cautionary note.
SUMMARY

Shell Canada is evaluating the next stages of development for Shell Canada’s substantial oil sands resources in the Athabasca area. Chevron Canada Limited and Western Oil Sands L.P. are participating with Shell Canada in this evaluation.

Initial plans outlined in this document are based on preliminary scoping studies and public consultation. Additional work is already underway, including consultation, local and regional environmental and socio-economic impact assessments, market assessment, detailed planning, technology development, preliminary engineering design and business analysis.

Shell Canada’s plan to grow minable bitumen production to approximately 770,000 barrels per day (bbl/d) includes the approved Muskeg River Mine at 270,000 bbl/d and the approved Jackpine Mine at 200,000 bbl/d, as well as the following additional developments:

Jackpine Mine Expansion – In 2004 Shell Canada received regulatory approval for Jackpine Mine development that included a 200,000 bbl/d mining and extraction facility on the east side of Lease 13. The Jackpine Mine Expansion is a proposed expansion of Jackpine Mine to 300,000 barrels a day. The proposed expansion would include development activities on Lease 88, 89, 15, 631 and 632. Subject to conclusion of satisfactory commercial arrangements, this proposed expansion may potentially include lease exchange areas acquired from other companies as well as adjacent Fort McKay First Nation lands.

Pierre River Mine – a proposed expansion of the production base by 200,000 bbl/d. The expansion includes mining and bitumen processing extended to the west side of the Athabasca River, initially on Leases 9 and 17 and progressing to Leases 309, 310, 351, and 352.

The timing of these developments is dependent on market conditions, key economic indicators, the ability to meet our sustainable development criteria and the outcome of the regulatory process.

This Public Disclosure document initiates the regulatory process for expansions of the Jackpine Mine and the Pierre River Mine. A submission will be made to the regulators in late 2007.

Shell Canada invites public input as we continue the planning of these developments. Important contact information appears on the final page of this document.
Shell Canada’s current oil sands mining developments use large-scale truck and shovel mining techniques.

The Caterpillar 797B heavy-hauler can hold up to 400 tons of oil sands ore.
PROJECT OVERVIEW

In April 2005 Shell Canada outlined plans to expand mineable bitumen production capacity in a series of phases or “building blocks,” each sized at approximately 100,000 barrels a day.

In addition to the previously approved Jackpine Mine and Muskeg River Mine Expansion, Shell Canada is proposing additional expansions. Shell Canada’s preliminary plans include:

Jackpine Mine Expansion – In 2004 Shell Canada received regulatory approval for Jackpine Mine development that included a 200,000 bbl/d mining and extraction facility on the east side of Lease 13. The Jackpine Mine Expansion is a proposed expansion of Jackpine Mine to 300,000 barrels a day. The proposed expansion would include development activities on Lease 88, 89, 15, 631 and 632. Subject to conclusion of satisfactory commercial arrangements, this proposed expansion may potentially include lease exchange areas acquired from other companies as well as adjacent Fort McKay First Nation lands.

Pierre River Mine – a proposed expansion of the production base by 200,000 bbl/d. The expansion includes mining and bitumen processing extended to the west side of the Athabasca River, initially on Leases 9 and 17 and progressing to Leases 309, 310, 351, and 352 as well as possible lease exchange areas acquired from other companies.

Bitumen produced can be transported via pipeline from the Athabasca area to the Edmonton area and/or to Canadian or potentially U.S. markets. Shell Canada is currently evaluating additional upgrading capacity and AOSP diluent recovery in the Scotford area as well as other upgrading and heavy oil refining options.

RESOURCE SUMMARY

Shell Canada’s area leases can support substantial bitumen production for many years. The current assessment of bitumen in place to support the proposed expansion is approximately 5 billion barrels. This brings the total assessment of bitumen in place for Shell Canada’s approved and proposed minable developments to approximately 10 billion barrels.

Exploration drilling on Shell Canada’s leases, and in particular the more recently acquired leases, is ongoing and may increase this resource assessment.
In 2004, Shell Canada received regulatory approval for Jackpine Mine development that included a 200,000 bbl/d mining and extraction facility on the east side of Lease 13.

The Jackpine Mine Expansion is a proposed 100,000 barrel-a-day expansion, increasing total bitumen production from the Jackpine Mine to 300,000 barrels a day.

MINING OPERATIONS

The Jackpine Mine Expansion will follow current oil sands development practices. The mine area will be cleared and drained, the muskeg and topsoil stockpiled, and the overburden removed before oil sands mining begins. Mining areas will be cleared in a staged manner to minimize the environmental disturbance. To conserve wetland areas, setbacks from McClelland Lake and surrounding area fens will be incorporated into the mine plan. Stream diversions (e.g. Muskeg River) are also being considered.

Conventional large-scale truck and shovel mining will be used. Ore crushers, storage and conveyor equipment is also planned. Mining operations for the Jackpine Mine will begin on Lease 13, and then progress north to Leases 88, 89, and possibly Leases 15, 631, and 632. Subject to conclusion of satisfactory commercial arrangements, this proposed expansion may potentially include lease exchange areas acquired from other companies as well as adjacent Fort McKay First Nation lands.

BITUMEN PROCESSING

The Jackpine Mine Expansion will increase bitumen-processing capacity at the Jackpine Mine extraction plant by 100,000 bbl/d. The bitumen extraction process will be similar in design to that proposed for the approved Jackpine Mine.

The process begins with ore crushing and sizing during which the oil sand is mixed with warm water to form a slurry suitable for pipeline transportation to the primary extraction facility. Conditioning of the oil sands occurs in the pipeline where lumps of oil sand are further reduced and bitumen starts to separate from the sand.

The primary extraction process uses the “warm water” process to separate the majority of the coarse and fine sand from the oil sand and produce a bitumen froth. The bitumen froth containing bitumen, fine clays and water is then processed.
using the high temperature froth treatment process to produce a clean bitumen product. Shell Canada’s high temperature froth treatment process has been developed from the successful application of the counter-current paraffinic froth treatment process used at the Muskeg River Mine. These processes remove the remaining fine sand and clay materials. Heavy hydrocarbons, called asphaltenes, and water are also removed.

Both coarse and fine tailings recovered from the process are initially disposed into an external tailings pond and later into the mined pits. The proposed in-pit tailings management system allows for early recovery of water and the formation of a stable land surface suitable for eventual reclamation and re-vegetation.

Water for use in bitumen processing is obtained from the Athabasca River as well as some subsurface aquifers. The process water is managed in a closed loop system that allows for the recovery of water from both the external tailings pond and the in-pit tailings. Water recycling within the process minimizes the amount of water required from external sources.

The expanded 300,000 bbl/d Jackpine Mine will require an additional external tailings facility that will be located on Lease 88. The additional tailings facility will be equipped with reclaim water systems that will send reclaimed water back to the Jackpine Mine extraction plant.

**Utilities and Infrastructure**

Shell Canada is evaluating options for energy supply, including packaged boilers, natural gas cogeneration, as well as the use of asphaltenes as a fuel.

Water requirements for the Jackpine Mine Expansion are being assessed. Additional water pumps and a large diameter water line from the Muskeg River Mine Athabasca River intake will be necessary.

Future development will leverage off the existing infrastructure. The Jackpine Mine Expansion may require upgrades to existing infrastructure such as roads, power, communication systems, non-process buildings and tank farm equipment.
PROCESS DIAGRAM

Mining shovels dig oil sand ore and load it into large trucks.

Trucks take oil sand to crushers where it is broken down in size.

The sand and water (tailings) are pumped to the tailings dam where the water is recycled.

The primary separation cell separates the bitumen, sand and water.

The conditioning pipeline further mixes oil sand and water and transports mixture to the primary separation cell.

To Corridor Pipeline

Froth treatment is the bitumen clean-up process where bitumen is washed with a hydrocarbon solvent.
The proposed Pierre River Mine consists of a 200,000 bbl/d mining and bitumen processing facility, with initial facilities and infrastructure on Shell Canada’s Leases 9 and 17 located on the west side of the Athabasca River. Additional mining and extraction activities are also being considered on Leases 309, 310, 351 and 352.

MINING OPERATIONS

Development of the Pierre River Mine will follow current oil sands development practices. The mine area will be cleared and drained, the muskeg stockpiled, and the overburden removed before oil sands mining begins. Mining areas will be cleared in a staged manner to minimize the environmental disturbance. Setbacks from the Athabasca River and stream diversions will be incorporated into the mine plan.

Conventional large-scale truck and shovel mining will be used at Pierre River Mine. Ore crushers, storage and conveyor equipment are also planned.

BITUMEN PROCESSING

The proposed Pierre River Mine bitumen extraction process will be similar in design to that proposed for the approved Jackpine Mine. The process begins with ore crushing and sizing during which the oil sand is mixed with warm water to form a slurry suitable for pipeline transportation to the primary extraction facility. Conditioning of the oil sands occurs in the pipeline where lumps of oil sand are further reduced and bitumen starts to separate from the sand.

The primary extraction process uses the “warm water” process to separate the majority of the coarse and fine sand from the oil sand and produce a bitumen froth. The bitumen froth containing bitumen, fine clays and water is then processed using the high temperature froth treatment process to produce a clean bitumen product. Shell Canada’s high temperature froth treatment process has been developed from the successful application of the counter-current paraffinic froth treatment process.
PIERRE RIVER MINE (con’t)

process used at the Muskeg River Mine. These processes remove the remaining fine sand and clay materials. Heavy hydrocarbons, called asphaltenes, and water are also removed.

Both coarse and fine tailings recovered from the process are initially disposed into an external tailings pond and later into the mined pits. The proposed in-pit tailings management system allows for early recovery of water and the formation of a stable land surface suitable for eventual reclamation and re-vegetation.

Water for use in bitumen processing is obtained from the Athabasca River as well as some subsurface aquifers. The process water is managed in a closed loop system that allows for the recovery of water from both the external tailings pond and the in-pit tailings. Recycle of water within the process minimizes the amount of water required from external sources.

The 200,000 bbl/d Pierre River Mine will require an additional external tailings facility. The additional tailings facility will be equipped with reclaim water systems that will send reclaimed water back to the Pierre River Mine extraction plant.

UTILITIES AND INFRASTRUCTURE

Shell Canada is evaluating options for energy, including packaged boilers, natural gas cogeneration, as well as the use of asphaltenes as a fuel. As well, the Pierre River Mine will require a water license and a new intake on the Athabasca River.

Building on existing area infrastructure, the Pierre River Mine will have non-process buildings, utility corridors, tank farm equipment, waste disposal facilities, as well as bitumen and diluent pipelines that connect the Pierre River Mine to the Muskeg River Mine base.

A bridge across the Athabasca River will also be required to provide access from Highway 63.
REGULATORY REVIEW PROCESS

The regulatory review process for the Jackpine Mine Expansion and the Pierre River Mine begins with this Public Disclosure document. Applications for project approvals pursuant to the Oils Conservation Act, the Water Act and the Environmental Protection and Enhancement Act will be submitted to the Alberta Energy and Utilities Board and Alberta Environment. Approvals required under federal legislation will be applied for as required.

Next Alberta Environment will ask the public to comment on a Draft Terms of Reference (TOR) for the Environmental Impact Assessment (EIA) for this project. Once finalized, the TOR will identify for the community, for stakeholders and for Shell Canada, the information required by regulatory agencies to assess the environmental aspects of the project.

Shell Canada is working to prepare regulatory submissions for this project, and public consultations will be ongoing through 2007 and 2008. Shell Canada, the Alberta Energy and Utilities Board, and Alberta Environment will continue to seek public input at various stages throughout the regulatory review process.

The schedule below outlines the major stages and timelines for development, including project evaluation and regulatory approvals.

The final timing of these expansions is dependant on market conditions, key economic indicators, the ability to meet our sustainable development criteria and the outcome of the regulatory process.

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The timeline for future project phases will depend on a variety of regulatory, project and market factors.
Shell Canada is committed to sustainable development as an integral part of resource development. Social, environmental responsibility and economics will be key considerations in the design, construction, and operation of each proposed project. Shell Canada will work hard to ensure that these projects balance social and environmental responsibility with profitability.

As the first oil sands operation to receive ISO 14001 registration (an internationally recognized standard) for our environmental management practices, Shell Canada will build on the expertise of its existing oil sands operations and implement new technologies to enhance its environmental performance.

Shell Canada continues to look for new ways to improve energy efficiency and the environmental performance of operations, while continuing to evaluate design options for the proposed expansions. Issues being considered include protecting surface and groundwater, minimizing impacts to air, vegetation, wildlife and aquatic resources, and optimization of the oil sands resource.

Our commitment to sustainable development includes the utilization of technologies designed to maximize energy efficiency, enable water re-use and optimize land disturbance. Operationally, environmental sustainability means that operations are carried out in a way that focuses on environmental performance. This includes the use of on-site cogeneration – a highly efficient energy system that produces both electricity and steam from a single source.

We will incorporate extensive community involvement into reclamation and land use planning. The phased reclamation plan will optimize the time required to reclaim and restore an excavated mine into a stable landscape.

Inherent in our approach to environmental management is to comply with legislated requirements and to respond to the expectations of regional communities, the government and the public.

The Environmental Impact Assessment (EIA) for the Jackpine Mine Expansion and the Pierre River Mine will build on the extensive environmental baseline information gathered as part of the previously approved Muskeg River Mine, the Muskeg River Mine Expansion and Jackpine Mine regulatory and research processes.
ENVIRONMENT (cont’d)

RECLAMATION

Shell Canada’s goal is to reclaim lands with self-sustaining ecosystems that are comparable to or better than what was there before our development.

We do not wait for mining to finish before we begin reclaiming the land; we do it in phases.

INCORPORATING TRADITIONAL ENVIRONMENTAL KNOWLEDGE (TEK)

To minimize the project’s impact on traditional land use and culture, Shell Canada will work with the community of Fort McKay and other stakeholders to incorporate TEK into mine planning activities, such as reclamation and end land use.

CUMULATIVE EFFECTS

In addition to planning its own environmental and development activities, it is important Shell Canada understands the cumulative effects of oil sands mining in the Fort McMurray region and works together with the other stakeholders to ensure proper management of oil sands areas and resources. That is why Shell Canada participates in the Reclamation Working Group and the Cumulative Environment Management Association (CEMA).

The Reclamation Working Group provides recommendations on how to reclaim areas disturbed by development in the region. As well, the group establishes guidelines on best management practices for reclaiming pit lakes, wetlands, re-constructing soils and re-establishing vegetation and wildlife habitat.

Currently, the group is working on reclamation certification of reclaimed landscapes to ensure that they will meet regulatory requirements, satisfy the needs and values of stakeholders and be environmentally sustainable.

MANAGING GREENHOUSE GAS (GHG) EMISSIONS

Overall, an increase in production will mean an increase in greenhouse gas emissions. Shell Canada is committed to managing GHG emissions associated with expansion.
ECONOMIC BENEFITS

Based on previous developments, Shell Canada estimates that roughly 80 per cent of all money spent on goods and services for the mine development will be spent in Canada.

Each project phase is expected to employ 3,000 to 4,000 construction workers at the peak of construction, and will add many highly skilled full-time permanent positions.
STAKEHOLDER ENGAGEMENT

Community Consultation

Shell Canada remains committed to working with neighbours and community organizations to provide appropriate information about our projects, including technology, environmental performance, as well as potential impacts, benefits and opportunities.

Throughout this ongoing consultation program, our focus will be to identify and resolve concerns and issues. Shell Canada will continue to involve our neighbours in decisions that affect them, with the objective of finding solutions that all parties view as positive and sustainable over the long term.

Consultation Principles:

Shared process: design consultation programs based on public input, taking into consideration local knowledge in areas where Shell Canada operates or plans to operate.

Respect: respect individual values and act as a good neighbour. Consultation recognizes the legitimacy of peoples’ concerns and the valuable input they can provide.

Timeliness: start consultation early. Provide social and environmental information along with resources to ensure that the public and regulators are informed when participating in the consultation process.

Communications: consult closely with communities and interested parties affected by the project and regulatory process. Gather and listen to feedback and work with people to resolve any concerns that might be identified.

Relationships: establish and maintain long-term relationships with key stakeholders through interaction, working teams and general involvement in the project.

Responsiveness: adapt plans based on stakeholder input and provide feedback on how input has affected plans and decisions.

Accountability: trust that representatives of interest groups are accountable to the organizations they represent.

Meetings, community newsletters, a regularly updated website (shell.ca) and a toll-free phone line support Shell Canada’s communication and consultation efforts.

A socio-economic impact assessment will be prepared as part of the Jackpine Mine Expansion and the Pierre River Mine Environmental Impact Assessment. Input will be gathered in consultation with communities, individuals and groups including:

- Aboriginal communities, both First Nations and Métis
- Neighbours and regional residents
- Special interest groups who represent the broader public interest
- Government (Municipal, Provincial, Federal)
- Employees, contractors and business associates
- Customers and suppliers
CONTACT INFORMATION

For further information about this Public Disclosure document please call, toll free 1-800-250-4355, or the following:

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