



## Niglintgak Gas Field Development

Discovered by Shell Canada Limited in 1973, Niglintgak is estimated to contain about one trillion cubic feet of natural gas, or enough to heat all the gas-heated homes in Canada for one year.

The Niglintgak natural gas field is located in the Mackenzie Delta approximately 120 kilometres northwest of Inuvik and 90 kilometres west of Tuktoyaktuk. The reservoir is about 700 metres to one kilometre below the surface and is located within the Kendall Island Bird Sanctuary.

Niglintgak is 100% held by Shell Canada Limited.

### HOW WILL THE NIGLINTGAK NATURAL GAS FIELD BE DEVELOPED?

Shell Canada Limited is committed to the principles of sustainable development, which means integrating economic, environmental and social considerations into all of its business activities. Shell will incorporate these principles to design and develop the Niglintgak gas field in a manner that:

- optimizes economics;
- reduces the environmental impacts and takes into account traditional uses for the land; and
- develops the field in a socially responsible way that provides benefits to northern communities.

The Niglintgak natural gas field development will be designed and constructed to reduce and manage environmental impacts and to ensure safety.

### WHAT PRODUCTION FACILITIES WILL BE BUILT AT THE NIGLINTGAK NATURAL GAS FIELD?

Since the reservoir containing the natural gas is shallow and has compartments, more than one drilling location will be needed to maximize gas recovery. To create as little disturbance as possible to the land, the six to twelve wells needed to produce the gas will be drilled in the winter from three surface locations close to the existing exploration well locations. They are referred to as the North, Central and South Well Pads (see illustration on page 2). The pads will be elevated steel platforms built to preserve the permafrost and protect the production equipment from flooding. To minimize the environmental footprint, the well pads will also be used for facilities required to produce the gas.

In addition to the three well pads there will be approximately 10 km of above-ground flow lines and a central gas conditioning facility (GCF) that would be located on a barge in the flood plain of the Little Kumak Channel.

The GCF will have:

- equipment to separate water from the natural gas, to compress the gas, and to cool the gas before entering the Mackenzie Gas Project (MGP) gathering system
- equipment to generate electricity (Electrical generation will be done onsite using a gas-fired generator and diesel backup)
- an emergency flare system for safety reasons
- a dock for summer barge access

The GCF will be prebuilt then shipped directly to Niglintgak via Point Barrow, Alaska, and through the Beaufort Sea. The GCF would then be placed on the east side of the Little Kumak Channel in the seasonal flood plain.

A helipad for year-round access, accommodation, and maintenance space will be located on land adjacent to the GCF.

A well will be drilled into a rock formation about 1500 metres below surface at the South Well Pad to dispose of the water removed from the natural gas.

### WHEN WILL DRILLING AND CONSTRUCTION BEGIN AT THE NIGLINTGAK NATURAL GAS FIELD?

Subject to regulatory approval, construction and drilling could begin as early as the winter of 2007/08. Drilling is expected to take three winters. Production of natural gas is expected to begin in 2011.

### HOW WILL THE NIGLINTGAK NATURAL GAS FIELD BE OPERATED?

Control systems to monitor and operate the Niglintgak facility and wells will be located at the Niglintgak field as well as in the Inuvik area. Each system will be capable of monitoring wells and facilities automatically, displaying alarm messages and capable of safely shutting down the facility. Initially, it is expected that the Niglintgak gas field will be operated locally, with operations and maintenance staff located at the facility on a 24-hour basis.

Over time, as experience with the operation develops, the Niglintgak gas field could be monitored and controlled from Inuvik, with only scheduled periodic on-site maintenance and operations support required. Periodic well maintenance will require using service rigs or wireline services. The estimated operational life of the Niglintgak field is about 25 years. Abandonment and reclamation plans will be developed for the facilities.

### HOW WILL SHELL CANADA LIMITED CONTINUE TO KEEP THE COMMUNITY INVOLVED?

Shell Canada recognizes and respects the desire of northerners to have an opportunity to participate in and benefit from the development of the Niglintgak natural gas field.

The Niglintgak gas field is expected to create employment opportunities during construction, drilling, and completions with current estimates of 739 jobs (or 365 person years) over four winter seasons. Positions in facility maintenance, well servicing, and operations will also be required over the life of the project.

Shell Canada is committed to working with the Government of the Northwest Territories, Aboriginal and other stakeholders to finalize benefit agreements that will encourage employment, training, and business opportunities for Northerners. This includes:

- Identifying employment and business opportunities

- Working with schools and technical training programs to help people understand the education needed to position them for work and career opportunities
- Using the Mackenzie Gas Project endorsed Human Resources Database

To date, Shell Canada Limited and the MGP have supported the Aboriginal Skills and Employment Program – Aboriginal Futures with aims of furthering the employment and training opportunities for Northerners interested in becoming involved with the MGP.

Shell will continue to engage with communities to incorporate their input into project planning and design. This includes continued consultation with Hunters and Trappers, Elders, Community Corporation Committees, and the general public.

#### Contact:

Kim Johnson  
Niglintgak Development  
Shell Canada Limited  
400 – 4th Avenue S.W.  
P.O. Box 100, Station M  
Calgary, Alberta T2P 2H5  
Tel: (403) 691-3439  
Fax: (403) 691-2444  
Email: kim.johnson@shell.com

[www.shell.ca](http://www.shell.ca)



Inuvik Regional Office  
Bag Service 14  
151 Mackenzie Road  
Inuvik, NT X0E 0T0  
Telephone: (867) 678-6104  
Fax: (867) 678-6107

Norman Wells Regional Office  
PO Box 146  
#1 Town Square  
Norman Wells, NT X0E 0V0  
Telephone: (867) 587-3130  
Fax: (867) 587-4109

Fort Simpson Regional Office  
PO Box 530  
9925 - 102 Avenue  
Fort Simpson, NT X0E 0N0  
Telephone: (867) 695-2624  
Fax: (867) 695-2651

Calgary Office  
Consultation and  
Community Affairs  
PO Box 2480, Station M  
Calgary, Alberta, Canada  
T2P 3M9

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