

PIPELINE TRANSPORT SYSTEMS

APPLICATION FOR APPROVAL OF
THE DEVELOPMENT PLAN FOR
TAGLU FIELD
PROJECT DESCRIPTION

GATHERING SYSTEM

7.1.1 SCOPE

The gathering system proposed by the proponents of the Mackenzie Gas Project will be designed, at a minimum, to accommodate the quantity of natural gas and NGLs from the three anchor fields in the Mackenzie Delta.

The proposed gathering system includes:

- gathering pipelines (see Figure 7-1) to collect the natural gas and associated NGLs and transport them to a facility located near Inuvik
- a gas processing facility near Inuvik (the Inuvik area facility) to recover NGLs from the gas stream
- a pipeline to transport NGLs south from the Inuvik area facility to Norman Wells, where it will tie into the existing Enbridge pipeline

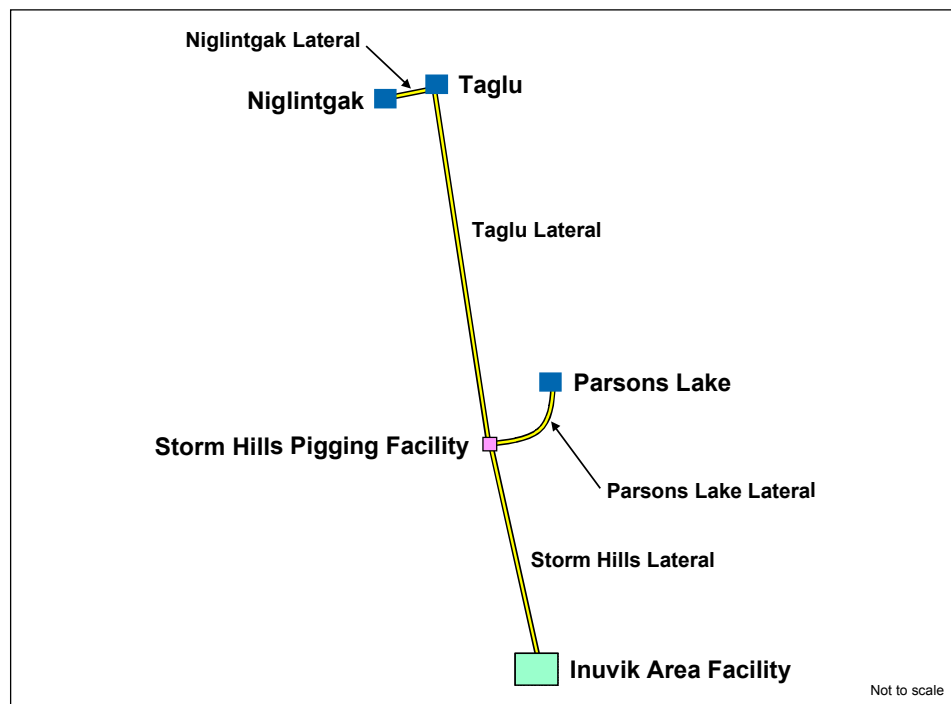


Figure 7-1: Gathering Pipelines

7.1.2 GATHERING SYSTEM COMPONENTS

7.1.2.1 Gathering Pipelines

The gathering pipelines comprise four laterals located in the Mackenzie Delta, and will connect the anchor fields at Taglu, Parsons Lake and Niglintgak to the Inuvik area facility. Each lateral will be designed for two-phase flow to carry dehydrated natural gas and NGLs, and will include:

- the Niglintgak lateral, which extends about 16 km from the outlet of the Niglintgak gas conditioning facility to the Taglu gas conditioning facility
- the Taglu lateral, which extends about 81 km from the outlet of the Taglu gas conditioning facility to the Storm Hills pigging facility
- the Parsons Lake lateral, which extends about 27 km from the outlet of the Parsons Lake gas conditioning facility to the Storm Hills pigging facility
- the Storm Hills lateral, which extends about 52 km from the Storm Hills pigging facility to the Inuvik area facility

Receipt meter stations for the gathering pipelines will be located at the discharge of each anchor field gas conditioning facility. Gas and NGLs will be metered separately, using allocation meters designed to the same standards as custody transfer meters.

7.1.2.2 Inuvik Area Facility

The Inuvik area facility will be located about 20 km east of Inuvik. The facility is designed to process natural gas to remove NGLs and to meet the inlet specifications of the gas and NGL pipelines. The facility includes compressors to deliver gas to the Mackenzie Valley pipeline and pumps to deliver NGLs to the NGL pipeline.

7.1.2.3 NGL Pipeline

A 476 km NGL pipeline will deliver natural gas liquids from the Inuvik area facility to the Enbridge pipeline at Norman Wells. The NGL pipeline will share a common right-of-way with the gas pipeline on the east side of the Mackenzie River for about 475 km. The NGL pipeline will continue for about 1 km in a separate right-of-way to an interconnection with the Enbridge pipeline.

7.1.3 EXPANSION CAPABILITY

The gathering system can be expanded, if necessary, by installing additional compressors and pump stations, and by adding laterals and pigging facilities. Separate regulatory applications would be filed for expansions to the gathering system.

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MACKENZIE VALLEY PIPELINE

7.2.1 SCOPE

The Mackenzie Valley pipeline component of the Mackenzie Gas Project will deliver about 34 Mm³/d (1.2 Bcf/d) of sales gas to Alberta from the outlet of the Inuvik area facility. Gas is expected to be delivered to Alberta before 2010.

7.2.2 GAS PIPELINE COMPONENTS

The gas pipeline will likely consist of:

- about 1,220 km of NPS 30 pipe, with a maximum operating pressure of 18 MPa
- four intermediate compressor stations
- a heater station
- a custody transfer meter station at the Inuvik area facility
- a pig receiver and block valve immediately south of the Northwest Territories–Alberta boundary

The Mackenzie Valley pipeline will terminate at the pig receiver and block valve in Alberta. There, NOVA Gas Transmission Ltd. (NGTL) will own, construct and manage an interconnect facility and a pipeline extension referred to as the Northwest Mainline (Dickins Lake Section). The pig receiver and block valve will be located within the pipeline right-of-way adjacent to the NGTL interconnection.

7.2.3 FACILITIES

The sales quality natural gas will be compressed at the Inuvik area facility before it enters the Mackenzie Valley pipeline system.

Four compressor stations will be located at about 225 km intervals along the pipeline near:

- Little Chicago

7.2.3 FACILITIES (cont'd)

- Norman Wells
- Blackwater River
- Trail River

Other facilities might include a heater station, to be located near the Trout Lake winter road, about 100 km north of the Northwest Territories–Alberta boundary.