

be required to operate and maintain the Northwest Territories portion of the line. The period of wage employment, however, would be of limited duration and would be mostly in unskilled trades. The construction phase would afford ample opportunity for northern businesses in the areas of transportation, camp maintenance and service, and secondary service industry, but the benefits would not endure as long as those associated with a tanker system. This area has already experienced the boom-bust effect of potential development and there is the possibility that pipeline construction could seriously distort the small business sector of the Northwest Territories and cause other social disruption particularly in the period following construction. While there may be some spin-off benefits in the service sector, the pipeline will not contribute to any diversification of the regional economy and hence a more stable source of income to the Northwest Territories.

Pipelines are generally considered an impetus to further exploration activity since they provide a means of transportation for any subsequently established reserves. In the Northwest Territories, most of the oil finds have been concentrated offshore and thus overland transportation would not be as attractive as an offshore transportation system until more reserves were proven onshore.

## 2. Tankers

### 2.1 Icebreaking Tankers

*Certainly the first method that will be used to bring out the resources from the offshore islands will, I think, be icebreaking ships. We can design them; we can build the icebreakers to protect them and help them get out.*  
(Mr. E.H. Dudgeon, National Research Council, Issue 23:37, 4-5-1982)

If tankers were the transportation mode chosen, ships would deliver oil (or gas) year-round, either via an eastern route through Prince of Wales Strait, Viscount Melville Sound and Parry Channel into the north Atlantic or by a western route through the Chukchi and Bering Seas into the north Pacific. The Beaufort Sea operators tend to favour an eastern route through the Northwest Passage and are concentrating many of their impact studies along this route. Their prime corridor would lead from an offshore loading terminal, likely initially at the Tarsiut site, along a route within the transition ice zone to Amundsen Gulf and onward through the Northwest Passage (Figure 9).

The tankers used to transport oil through the arctic seas will be Class 10 vessels (Figure 10), each with an oil-carrying capacity of approximately 200,000 tonnes (approximately 1.5 million barrels). Initially in 1987, there would be one tanker but the EIS reports that 16 tankers may be needed to service offshore Beaufort oil fields by the year 2000 to make the 30-day round-trip to Eastern Canada at the intermediate level of production. In that case, tankers would be loaded every second day from their offshore loading terminal.

Each tanker would be 390 metres long, 52 metres wide and have a draught of 18 to 20 metres. The design of these tankers is not yet final. These ships will be powered by two independent propulsion systems capable of generating up to 112 megawatts (150,000 horsepower). The propulsion system is being designed to withstand rapid changes in power requirements. The ability to obtain reverse propellor thrust with a minimum of delay reduces