

Water Resources Questionnaire; March 30, 2001

Section 1.1

The applicant is:

Japex Canada Limited,
#2100, 101-6th Avenue SW.
Calgary, AB, Canada, T2P 3P4

The Property Name is Mallik L-38

The Closest Community is Tuktoyaktuk, NWT

The Latitude and Longitude are N69° 27' 41"; W134° 39' 30"

Section 1.2

The Primary Company Contact is

Ed Fercho, President, Canadian Petroleum Engineering Inc.
Work (403) 263-0752; home (403) 938-5580; cell (403) 860-6318
Doug Bradley, Vice-president, Canadian Petroleum Engineering Inc.
Work (403) 263-0752; home (403) 271-4306; cell (403) 560-5425

Section 1.3

The Field Contact is unknown as yet.

Section 1.4

This is a renewal of an application for a 1998 program (see attached #N3L1-1702, notice of closure)

Section 1.5

This is the site of two previous wells: Mallik L-38 (Imperial Oil, 1972) and Mallik 2L-38 (Japex et al, 1998). The only visible signs of previous activities at the site are wellhead markers and restored sump sites.

Section 1.6

Please refer to attached project description for details of proposed facilities. Maps on pages 11 to 13. No crossings over water courses greater than 5 m at ordinary high water mark.

Section 1.7

Water will be drawn from the unnamed channel immediately to the east of the site as indicated on the map on Page 12 of the attached Project Description. Water will be pumped with a water truck, at a rate of no more than 100 m³ per day. The truck will use a hose, which is approximately 3" in diameter. The intake port will be fitted with an end of pipe fish screen which meets DFO 1995 guidelines.

Section 1.8

With a draw rate of no more than 100 m³ per day, the maximum draw down of the water source will be negligible.

Section 1.9

Permafrost will be encountered beneath the camp facilities, well site, access routes and sumps. The camp will be elevated to prevent heat transfer to the permafrost. The rig will be mounted on matting and sit on an ice pad to prevent damage to the permafrost. Access routes will follow ice roads and have minimal land crossings (see page 5 and 20 of the attached Project Description).

Section 1.10

The site has been drilled on two previous occasions and the geology is well documented. No artesian aquifers have been encountered within the section drilled.

Section 1.11

For a description of the surficial geologic and hydrologic conditions, please refer to the attached Project Description on pages 15 and 16.

Section 2.1

Water usage for the drill program and camp facilities combined will average approximately 60 m³ per day and will not exceed 100 m³ per day. Water for these purposes will be drawn from the unnamed channel to the east of the drilling location (see map on p. 12 of the attached Project Description). Water will be drawn from undetermined locations on the Harry Channel if it is required to build up the ice road (see map on page 11 of attached Project Description).

Section 2.2

Drilling fluids will only contain approved additives. A list of drilling fluid additives has already been provided to the NEB for review. A list of proposed additives is attached.

Section 2.3

The volume of drilling wastes is estimated to be 600 m³.

Section 2.4

The same drilling mud will be recycled for all three wells. Drilling wastes will be disposed of in the sump. Produced water from the hydrate tests will be re-injected back into the formation.

Section 2.5

The drilling sump will be rectangular or square in plan with dimensions of approximately 30 m X 30 m and with a 3-m depth. Drilling fluids will be kept at least 1 m below the top at all times. The sump will have a nominal capacity of approximately 1800m³ plus a 50% contingency. The cuttings left in the sump at

the end of drilling will account for less than 1 m of its depth. The back-filling of the sump with the original excavated material will result in the soil surface on the back filled sump being approximately 1m above the original ground level.

Sections 2.6 and 2.7

A conventional 60-man camp will be part of the operation.

Section 3.1

Please refer to the Appendix of the attached Project Description for details on emergency response planning, mitigative measures and equipment available.

Section 3.2

There will be no requirement for hazardous materials to be kept on the lease.

Section 3.3

For the abandonment and restoration procedures, please refer to the attached Project Description on pages 5, 8 and 22.

Section 4.1

The Mallik 3L-38 project has been submitted to the EISC for screening in April, 2000. The Mallik 2L-38 project was screened by the EISC in 1997

Section 4.2

Baseline water data have not been collected for the project.

Section 4.3

Baseline biophysical data have not been collected for the project.

Section 4.4

Environmental monitoring will consist of daily inspections of the camp, and rig environs in order to ensure that any litter or spilled materials are cleaned up immediately. Although no deleterious materials will be added to the drilling fluids, the sump will be tested to confirm that no such materials are contained within it before it is backfilled at the end of the project. A bear monitor will be on site at all times during operations.

Section 4.5

Meeting with Hunters and Trappers held on April 10, 2000.

Section 5.0

Attachments:

- Mallik 3L-38: The project description: "Mackenzie Delta Gas Hydrate Research and Development Project, March 2000".
- Mallik 2L-38: Letter of August 18, 1998 from Canadian Petroleum Engineering to the NWT Water Board, summarizing the concluded operations relevant to the water permit stipulations.

- Mallik 2L-38: Letter of September 2, 1998, from the NWT Water Board to Canadian Petroleum Engineering, acknowledging closure of the water license and compliance with water permit stipulations.
- List of proposed drilling fluid additives.