

NORTHWEST TERRITORIES WATER BOARD

ONSHORE OIL AND GAS EXPLORATION DRILLING QUESTIONNAIRE

FOR

WATER LICENCE APPLICATIONS

**Prepared by:
Department of Indian Affairs and Northern Development
Water Resources Division
August 1999
Version 5.07**

Introduction

The purpose of this questionnaire is to solicit supplemental information from an applicant to support their application for a water licence (or renewal). It is anticipated that the completion of this questionnaire will reduce delays arising from the Northwest Territories Water Board having to solicit additional information after an application has already been submitted. This information will also be useful during the environmental assessment and screening of your application, which must be undertaken prior to development and approval of a water licence.

The applicant should complete the questionnaire to the best of his/her ability, recognizing that some questions may not be relevant to the project under consideration. For questions that do not relate to his/her operation, the applicant is requested to indicate "N/A" (Not Applicable).

If any questions arise while completing the questionnaire, the applicant may wish to contact the Northwest Territories Water Board at (867) 669-2772. If your question is that of a technical nature please contact the Regulatory Approvals Section of the Water Resources Division, Department of Indian Affairs and Northern Development (INAC), at (867) 669-2651.

Chairman,
Northwest Territories Water Board

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If space is insufficient for any of the responses on this questionnaire, use the back of the sheet or attachments.

List attachments in Appendix 1.

Print or type your responses.

SECTION 1:**PRELIMINARY SITE ASSESSMENT****DATE:** September 2001**1.1 APPLICANT****COMPANY NAME:** Petro-Canada**ADDRESS:** 150-6th Avenue SW
Calgary AB
T2P 3E3**PROPERTY NAME/EXPLORATION LIC. #:** EL 395, EL 405**CLOSEST COMMUNITY:** Inuvik and Aklavik**LATITUDE/LONGITUDE OF WELL CENTRE (Degrees, minutes, seconds):**

The potential wellsites to be selected from and associated access routes are indicated in Figure 2, with the one or two well locations to be drilled, as determined in September or October following interpretation of seismic data. The latitude and longitude of the nine proposed wellsites are:

WELL REFERENCE	STATUS	LOCATION
<i>Kirk Preliminary Wellsite Locations</i>		
J - 48	New	69°07'30" N - 135°25'58" W
C - 59	New	69°08'13" N - 135°29'01" W
B - 09	New	69°08'08" N - 135°30'57" W
K - 09	New	69°08'39" N - 135°16'52" W
M - 49	New	69°08'52" N - 135°26'54" W
<i>Napartok Preliminary Wellsite Locations</i>		
N - 03	New	68°32'59" N - 134°31'24" W
A - 56	New	68°35'08" N - 134°28'01" W
P - 29	New	68°28'19" N - 134°36'24" W
B - 12	New	68°31'01" N - 134°33'33" W

1.2 PRIMARY COMPANY CONTACT:**NAME:** Don Thompson**TITLE:** Logistics Superintendent, Drilling, Petro-Canada**CONTACT NUMBER:** 403-296-6799**ALTERNATE CONTACT NUMBERS:** 403-860-9186 Cell
dthompso@petrocanada.ca Email**1.3 FIELD CONTACT:****NAME (if known):** _____

TITLE (If known): _____

CONTACT NUMBER: _____

1.4 INDICATE THE STATUS OF THIS APPLICATION:

NEW APPLICATION



RENEWAL



IF RENEWAL, INCLUDE LICENCE NUMBER: _____

1.5 SITE HISTORY

INDICATE IF THIS SITE CONTAINS ANY KNOWN:

FORMER WELL SITES

No

WASTE DUMPS

No

FUEL AND CHEMICAL STORAGE AREAS

No

SUMP AREAS

No

WASTE WATER DISCHARGE LOCTIONS

No

DESCRIBE SITES AND REFERENCE THEM ON THE MAP IN QUESTION 1.6

1.6 ATTACH MAPS DRAWN TO SCALE SHOWING LOCATIONS OF EXISTING AND PROPOSED:

CAMP FACILITIES,	Refer to Section 4.4 of the project description
WELL SITE(S),	Refer to attached map in project description
SUMPS,	Refer to Section 4.3.6 of the project description
WATER SOURCES,	Refer to attached map in project description
FUEL AND CHEMICAL STORAGE FACILITIES,	Refer to Figure 2 in the project description and Section 4.4.4
DRILLING MUD STORAGE FACILITIES,	Refer to Section 4.3.6 in the project description and attached map
DRAINAGE CONTROLS,	N/A
TRANSPORATION ROUTES (SEASONAL AND ALL WEATHER)*,	Refer to attached map in project description
ELEVATION CONTOURS,	Refer to Figure 2 in the project description
LOCATIONS OF WATERBODIES	Refer to attached map in project description
DRAINAGE PATTERNS FOR WELL AND CAMP SITES.	N/A

- 1.7 DESCRIBE THE PROPOSED OR CURRENT METHOD OF FRESHWATER WITHDRAWAL, THE TYPE AND OPERATING CAPACITY OF THE PUMPS USED AND THE INTAKE SCREEN SIZE.**

Refer to Section 4.3.4 of the attached project description.

- 1.8 ESTIMATE MAXIMUM DRAW DOWN AND RECHARGE CAPABILITY OF THE RIVER OR LAKE FROM WHICH FRESH WATER WILL BE DRAWN. QUOTE DRAW DOWN IN CENTIMETRES, OR, STATE PERCENTAGE OF FLOW WITHDRAWN.**

Drawdown from lakes will be minimized through the selection of lakes of appropriate size and by drawing from channels of the Mackenzie River.

- 1.9 INDICATE IF PERMAFROST IS EXPECTED TO BE ENCOUNTERED UNDER:**

CAMP FACILITIES	<u>Yes</u>
WELL SITE	<u>Yes</u>
ACCESS ROUTES	<u>Yes</u>
SUMPS	<u>Yes</u>
OTHER	<u> </u>

- 1.10 INDICATE ANY POTENTIAL FOR ENCOUNTERING ARTESIAN AQUIFERS OR LOST CIRCULATION WITHIN THE SURFACE HOLE (TO CASING DEPTH)**

N/A

- 1.11 ATTACH A DESCRIPTION OF THE SURFICIAL GEOLOGIC AND HYDRO-GEOLOGIC CONDITIONS IN THE IMMEDIATE VICINITY OF THE WELLSITE**

N/A

SECTION 2:

WATER USE AND WASTE DISPOSAL

- 2.1 OUTLINE ALL WATER USAGE IN THE DRILL PROGRAM, CAMP FACILITIES, AND ROAD CONSTRUCTION. INDICATE THE SOURCE AND VOLUME OF WATER FOR EACH USE.

	Source	Use	Average Volume (m ³ /day)
1.	<u>Channels of the Mackenzie River</u>	<u>Wellsite and Access Construction</u>	<u>400 m³/day</u>
2.	<u>Large nearby lake</u>	<u>Drilling mud</u>	<u>Between 50 - 200 m³/day</u>
3.	<u>Large nearby lake</u>	<u>Camp</u>	<u><50 m³/day</u>
4.	<u></u>	<u></u>	<u></u>
			TOTAL: <u>500 - 700 m³/day</u>

- 2.2 WILL DRILLING WASTES CONTAIN DETRIMENTAL SUBSTANCES INCLUDING, BUT NOT LIMITED TO, OIL BASED OR INVERT MUDS AND HIGH SALINITY FLUIDS?

YES X NO

IF YES, INDICATE SUBSTANCES:

KCL, drilling mud system: Potassium chloride, bentonite and XC polymer

- 2.3 INDICATE THE TOTAL ESTIMATED VOLUME OF DRILLING WASTES

N/A

Approximately 1250 m³

CUBIC METRES

- 2.4 INDICATE METHODS FOR DISPOSAL OF DRILLING WASTES.

X SUMP
X DOWN HOLE (REQUIRES NEB APPROVAL)
 ON-SITE TREATMENT (PROVIDE PLAN)
 OFF-SITE (GIVE LOCATION AND METHOD OF DISPOSAL)

*Please refer to Section 4.3.6 for a detail description of drilling waste disposal.

- 2.5 IF A SUMP IS BEING USED, ATTACH THE FOLLOWING INFORMATION

SCALE DRAWINGS AND DESIGN OF SUMPS,
CAPACITY IN CUBIC METRES,
BERM EROSION PROTECTION,
SOIL PERMEABILITY AND TYPE
RECYCLING/RECLAIMING WATERS,
SURFACE DRAINAGE CONTROLS,

ABANDONMENT PROCEDURES.

* Please refer to the attached project description. Site specific details have yet to be determined.

2.6 WILL A CAMP BE PROVIDED?

YES x

NO ☐

2.7 IF YES, THEN INDICATE THE CAPACITY AND THE EXPECTED MAXIMUM NUMBER OF PERSONS THAT WILL BE ACCOMMODATED.

CAPACITY 60 PERSONS

MAXIMUM ACCOMMODATED 60 PERSONS

SECTION 3:

CONTINGENCY, ABANDONMENT AND RESTORATION PLANNING

- 3.1 ATTACH THE PROPOSED OR EXISTING CONTINGENCY PLAN WHICH DESCRIBES COURSE OF ACTION, MITIGATIVE MEASURES AND EQUIPMENT AVAILABLE FOR USE IN THE EVENT OF SYSTEM FAILURES AND SPILLS OF HAZARDOUS MATERIALS (IN COMPLIANCE WITH NWT WATER BOARD GUIDELINES FOR CONTINGENCY PLANNING, 1987).**
Please refer to Appendix B in the attached project description.
- 3.2 ATTACH AN INVENTORY OF HAZARDOUS MATERIALS ON THE PROPERTY (AS DEFINED UNDER TRANSPORTATION OF DANGEROUS GOOD REGULATIONS).**
Please refer to Section 4.0 of the project description.
- 3.3 ATTACH AN OUTLINE OF PLANNED ABANDONMENT AND RESTORATION PROCEDURES.** Please refer to Sections 4.0 and 14.0 of the project description.

SECTION 4:**ENVIRONMENTAL ASSESSMENT AND SCREENING**

Your application and other project details, such as this questionnaire, will be sent out for review by local aboriginal and public groups as well as territorial and federal government agencies. Their comments regarding the significance of project impacts are considered before a decision is made to allow the project to proceed. Because formal assessment and screening of water licences was only initiated in about 1989, applicants will find that this process may be required even if the project has been built and in operation for several years. However, if your project has been previously screened a further assessment may not be required, or a more limited process may be used. This will depend on individual circumstances, including the stage of the project. Some projects may need a higher level of review or submission of more information before being screened.

- 4.1 HAS THIS PROJECT EVER UNDERGONE AN INITIAL ENVIRONMENTAL ASSESSMENT, INCLUDING PREVIOUS OWNERS?**

YES X NO ☐

IF YES, BY WHOM / WHEN:

Prepared by Inuvialuit Environmental & Geotechnical Inc. and submitted to the Inuvialuit Environmental Impact Screening Committee September 2001

- 4.2 HAS BASELINE DATA BEEN COLLECTED FOR THE MAIN WATER BODIES IN THE AREA?**

YES ☒ NO

IF YES, ATTACH DATA.

Please refer to attached project description.

- 4.3 HAS BASELINE DATA BEEN COLLECTED AND EVALUATED WITH RESPECT TO THE BIOPHYSICAL COMPONENTS OF THE ENVIRONMENT POTENTIALLY AFFECTED BY THE PROJECT (WILDLIFE, SOILS, AIR QUALITY)?**

YES X NO ☐

IF YES, ATTACH DATA.

Please refer to attached project description.

- 4.4 ATTACH A DESCRIPTION OF ALL PROPOSED AND EXISTING ENVIRONMENTAL MONITORING PROGRAMS.**

N/A

- 4.5 HAS A COMMUNITY CONSULTATION PROGRAM BEEN INITIATED?**

YES X NO ☐

IF YES, PROVIDE DETAILS OF THE PROGRAM. Please refer to attached project description.