

1777

**PROJECT DESCRIPTION
FOR THE PROPOSED PETRO-CANADA KURK/NAPARTOK
WINTER 2001/2002 DRILLING PROGRAM**



Prepared for:

**Petro-Canada
Calgary, Alberta**

Prepared by:



Calgary, Alberta and Inuvik, Northwest Territories

**August 2001
Project #5077-01**

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FOR THE PROPOSED
PETRO-CANADA KURK/NAPARTOK
WINTER 2001/2002 DRILLING PROGRAM**

Submitted by:

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EXECUTIVE SUMMARY

Petro-Canada is applying to construct lease access roads and one or two wellsite site lease ice pads for the purposes of drilling a winter well in the Mackenzie Delta region of the Northwest Territories. Of nine (9) potential well locations, one or two drilling locations will be selected and finalized in September or October following the interpretation of last year's seismic information (Figure 2). The winter well location(s) will have a 150 m x 150 m rig pad, with an attached 100 m x 80 m camp pad, a 60 m x 50 m fuel storage pad, a 50 m x 80 m sump area, and a detached 30 m x 30 m helipad (Drawing 1).

Petro-Canada's Kurk/Napartok Winter 2001/2002 drilling program is located on Crown lands. The five (5) potential Kurk sites are located within EL 395, approximately 105 km northwest of Inuvik. The four (4) potential Napartok sites are located within EL 395 or 405, approximately 39 km northwest of Inuvik.

Inuvialuit Environmental & Geotechnical Inc. (IEG) has been commissioned by Petro-Canada to prepare this Project Description for the proposed Kurk/Napartok Winter 2001/2002 Drilling Program. This Project Description has been prepared to meet the requirements of Indian and Northern Affairs Canada (INAC), and fulfill the operating guidelines and procedures of the Environmental Impact Screening Committee (EISC).

The winter drilling program has been developed with the consideration of minimizing impacts on the environment and land users. Potential environmental impacts resulting from the construction of the well sites and access roads may include: damage to permafrost; minor drawdown of water bodies; temporary alteration of vegetation and thus wildlife habitat; and increased access to areas commonly used for traditional harvesting or hunting by virtue of new road creation.

Protection measures designed to mitigate the potential environmental impacts are presented in the Project Description and in Table 15. Petro-Canada and their drilling contractor, Akita-Equitak and other contracted field services, are committed to following these measures in order to minimize the risk of potential environmental impacts and disturbance of culturally and historically significant areas.

TABLE OF CONTENTS

	<u>Page</u>
EXECUTIVE SUMMARY	i
1.0 CONTACT NAMES AND ADDRESSES.....	1
2.0 REGULATORY APPROVALS	2
3.0 TITLE	3
4.0 DEVELOPMENT SUMMARY.....	5
4.1 Project Scope	5
4.2 Field Reconnaissance.....	7
4.2.1 Kurk Drilling Locations	7
4.2.2 Napartok Drilling Locations.....	9
4.3 Drilling Program Description	12
4.3.1 Access Route and Well Siting Selection Criteria.....	12
4.3.2 Access Route and Wellsite Construction	12
4.3.3 Airstrip	13
4.3.4 Water Requirements	13
4.3.5 Drilling and Mud Program	16
4.3.6 Drilling Waste Disposal	17
4.4 Operating Phase	17
4.4.1 Base Camps	17
4.4.2 Solid Waste Management.....	17
4.4.3 Wastewater Treatment	17
4.4.4 Fuel Storage	18
4.4.5 Other Materials Storage	18
4.4.6 Testing and Flaring	18
4.4.7 Personnel Required*	19
4.4.8 Equipment Required	19
4.4.9 Clean-up	19
5.0 ALTERNATIVES AND CONTINGENCIES	20
6.0 CUMULATIVE EFFECTS	20
6.1 Past, Current, and Imminent Activities.....	20
6.2 Valued Ecosystem Components.....	24
6.3 Additive and Synergistic Effects.....	24
7.0 LOCATION	26
8.0 TRADITIONAL AND OTHER LAND USES.....	27
9.0 DEVELOPMENT TIMETABLE.....	30
10.0 NEW TECHNOLOGY	30
11.0 ENVIRONMENTAL OVERVIEW	30
11.1 Methods.....	30
11.2 Physiography and Bedrock Geology	31

11.3	Soils	32
11.4	Permafrost	33
11.5	Hydrology.....	34
11.6	Climate.....	37
11.7	Vegetation	38
11.8	Wildlife	41
11.8.1	Mammals	41
11.8.2	Birds.....	49
11.8.3	Fish	53
11.9	Cultural and Historic Resources.....	56
11.9.1	Methods.....	56
11.9.2	Known Archaeological and Cultural Resources	56
11.9.3	2001 Field Season: Update on Archaeological and Cultural Resources	56
11.9.4	Summary	56
12.0	PROPOSED MITIGATION AND ANTICIPATED ENVIRONMENTAL IMPACTS	57
12.1	Methods.....	57
12.2	Implementation of Mitigation Measures	57
12.2.1	Communication, Responsibility, and Environmental Monitoring	58
12.2.2	Role of the Environmental Monitor/Wildlife Monitor	58
12.2.3	Identification of Workspace Boundaries and Areas of Environmental Concern	59
12.3	Potential Impacts and Mitigation	59
12.3.1	Permafrost and Soils	59
12.3.2	Aquatic Resources.....	60
12.3.3	Access	60
12.3.4	Vegetation	60
12.3.5	Wildlife	62
12.3.6	Cultural Resources.....	63
13.0	EMERGENCY RESPONSE PLANS	74
14.0	CLEANUP, RECLAMATION, DISPOSAL, AND/OR DECOMMISSIONING PLAN.....	74
15.0	OTHER ENVIRONMENTAL ASSESSMENT	74
16.0	COMMUNITY CONSULTATION	74
17.0	PERSONAL COMMUNICATIONS.....	78
18.0	REFERENCES	79

LIST OF APPENDICES

Appendix A	List Of Chemical Compounds	A
Appendix B	Emergency Response Plan Oil Pollution Emergency Plan	B
Appendix C	Eco Tech Wastewater Treatment Equipment Information Request Response.....	C

LIST OF FIGURES

Figure 1	Regional Location Of Proposed Petro-Canadakurk/Napartok Winter 2001/2002 Drilling Program.....	4
Figure 2	Proposed Well Site Locations: Petro-Canada Kurk/Napartok Winter 2001/2002 Drilling Program.....	6
Figure 3	Cumulative Effects Of Oil And Gas Activities In The Vicinity Of The Project Area	22
Figure 4	Special Management Areas Within Or Near The Vicinity Of The Project Area	29

LIST OF TABLES

Table 1	Approvals Required.....	3
Table 2	Proposed Wellsite Locations	5
Table 3	Proposed Access Route Lengths	12
Table 4	Drilling And Camp Water Requirements	14
Table 5	Other Current And Imminent Land Use Activities Within The Project Vicinity.....	23
Table 6	Location Of Proposed Kurk-Napartok Drilling Sites	26
Table 7	Special Management Areas Within Or Near The Project Area*	27
Table 8	Seasons For Permitted Hunting And Harvesting.....	28
Table 9	Development Schedule.....	30
Table 10	Vegetative Species Of Significance Found In The Vicinity Of The Proposed Project.....	40
Table 11	Mammals Of Significance Found In The Vicinity Of The Proposed Program	41
Table 12	Bird Species Of Significance Found In The Vicinity Of The Proposed Program	49
Table 13	Fish Species Of Significance Found In The Vicinity Of The Proposed Program	53
Table 14	Significance Criteria.....	63
Table 15	Potential Environmental And Socio-Economic Impacts, Mitigation And Residual Impacts	65
Table 16	Community Consultation Meetings.....	75
Table 17	Community Consultation Issues And Responses	75

LIST OF PLATES

Plate 1:	South of wellsite B09	7
Plate 2:	Site C-59 aerial photo.....	8
Plate 3:	Wellsite M49 – aerial photo.....	8
Plate 4:	Aerial photo of wellsite K09	9
Plate 5:	Wellsite B12 – aerial photograph of the site.....	10
Plate 6:	Wellsite N03 – aerial photograph of the site.....	10
Plate 7:	Wellsite A56 – aerial photograph of the site.....	11
Plate 8:	East of wellsite F29	11

1:50,000 Scale Drawings..... Map Pocket

1.0 CONTACT NAMES AND ADDRESSES

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2.0 REGULATORY APPROVALS

Petro-Canada is applying to construct lease access roads and one or two wellsites lease ice pads for the purposes of drilling a winter well in the Mackenzie Delta region of the Northwest Territories. Of the 9 potential well locations indicated in Figure 1, one or two drilling locations will be selected and finalized in September or October following the interpretation of last years seismic information. All potential wellsites locations are located on Crown lands, and therefore fall under Federal and Territorial environmental regulatory jurisdiction. The primary agencies that have jurisdiction over the project include Indian and Northern Affairs Canada (INAC) and the National Energy Board (NEB).

Other agencies that have regulatory interest in the approvals process include: Fisheries and Oceans Canada (DFO) with reference to potential effects on fish habitat; the Government of the Northwest Territories (GNWT) Resources, Wildlife and Economic Development (RWED) regarding wildlife and associated habitat; the Prince of Wales Northern Heritage Centre (PWNHC) for an archaeological and historical resources review; and Environment Canada (EC) in regard to pollution prevention.

The Environmental Impact Screening Committee (EISC) is an advisory council responsible for screening all proposed projects on Crown Land. When a screening occurs, the EISC's responsibilities are set out in clause 11(13) of the Inuvialuit Final Agreement (IFA), which reads:

11(13). On receipt of a project description, the Screening Committee shall expeditiously determine if the proposed development could have a significant negative environmental impact and shall indicate in writing to the government authority competent to authorize the development that, in its view:

- (a) the development will have no such significant negative impact and may proceed without environmental impact assessment and review under this Agreement;
- (b) the development could have significant negative impact and is subject to assessment and review under this Agreement; or
- (c) the development proposal has deficiencies of a nature that warrant a termination of its consideration and the submission of another project description.

Should the EISC determine that the project may have a significant negative impact, the Project Description will be referred to the Environmental Impact Review Board (EIRB) or other equivalent environmental review process for a public assessment and review pursuant to clause 11(24).

The NEB is the governmental authority competent to authorize the development within the meaning of the IFA. The NEB is also required to conduct an environmental screening of the project pursuant to the *Canadian Environmental Assessment Act* (CEAA), and to consider environmental impacts under its

jurisdiction to approve the development under the *Canadian Oil and Gas Operation Act* (COGOA) and applicable regulations.

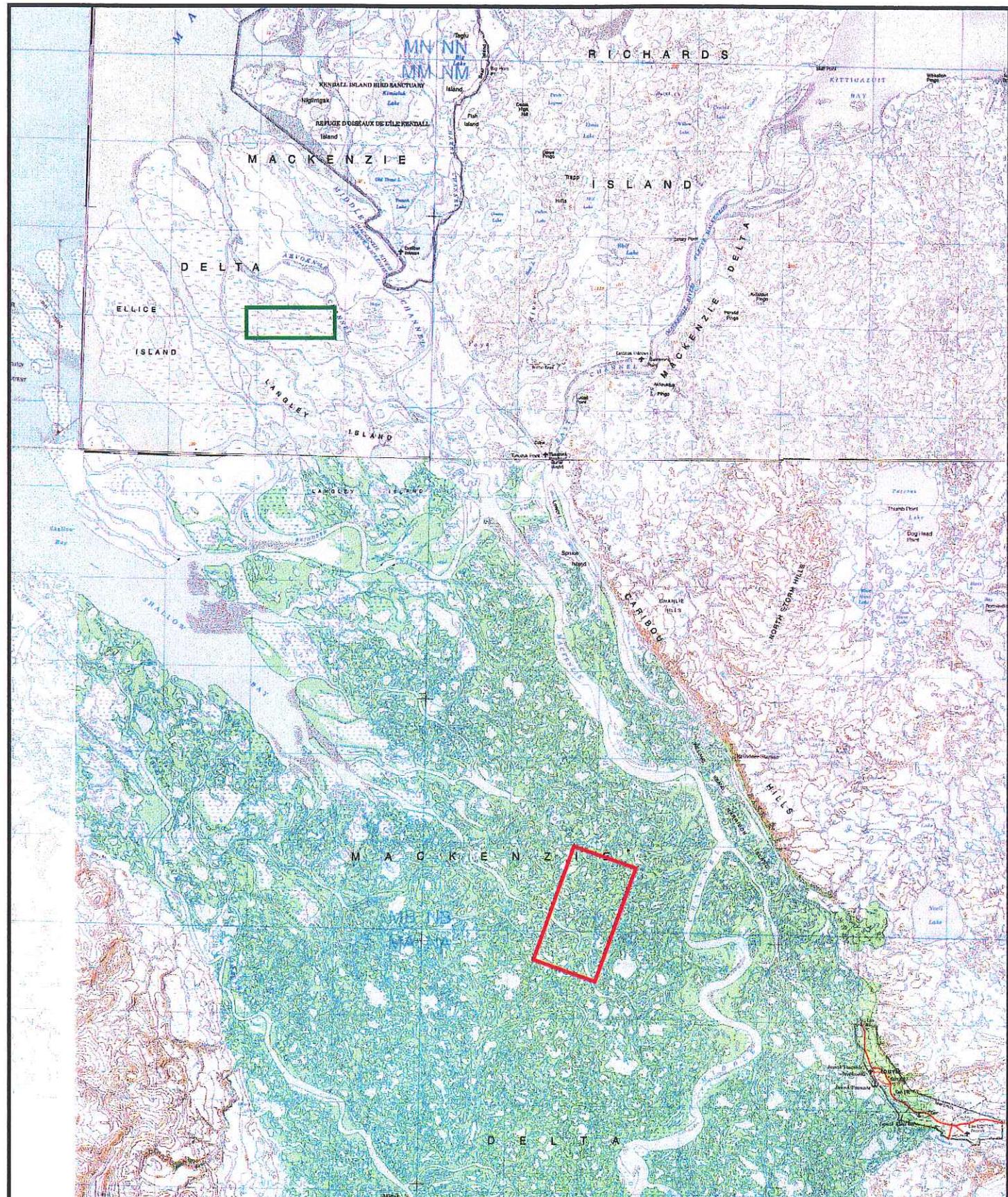
Approvals required for this project are summarized in Table 1. Petro-Canada will contact the agencies listed as appropriate, and will satisfy any requirements they may have in their respective areas of jurisdiction.

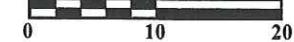
TABLE 1
APPROVALS REQUIRED

Agency	Approval Required/ <i>Governing Legislation</i>	Status
Linda Graf Secretary Environmental Impact Screening Committee P.O. Box 2120 Inuvik, NT X0E 0T0	Approval on Project Description (if referred to Screening by the ILA) <i>Inuvialuit Final Agreement</i>	Submitted by August 27, 2001
Rudy Cockney District Manager, Northern Mackenzie District Indian and Northern Affairs Canada P.O. Box 2100 Inuvik, NT X0E 0T0	Land Use Permit <i>Territorial Lands Act</i> <i>Territorial Land Use Regulations</i>	Submitted by August 27, 2001
Rudy Bergman Data Coordinator National Energy Board 444 – 7 th Avenue SW Calgary, AB T2P 0X8	Authorization to Drill a Well <i>Canadian Oil and Gas Operations Act</i>	To be submitted within 21 days of well spud
Gordon Wray Chairman Northwest Territories Water Board 4920 – 52 nd Street P.O. Box 1500 Yellowknife, NT X1A 2R3	Class B Water Licence <i>NWT Waters Act</i> <i>NWT Waters Regulations</i>	Submitted by August 27, 2001

3.0 TITLE

Petro-Canada Kurk/Napartok Winter 2001/2002 Drilling Program.



 Inuvialuit Environmental & Geotechnical Inc.	Proposed Petro-Canada Kurk and Napartok Drilling Programs	LEGEND		5077-01 August 2001 Figure 1
	Scale  Sources: Topographic Map of Mackenzie Delta, 107C and Aklavik 107B; TCCP 2000			

4.0 DEVELOPMENT SUMMARY

4.1 Project Scope

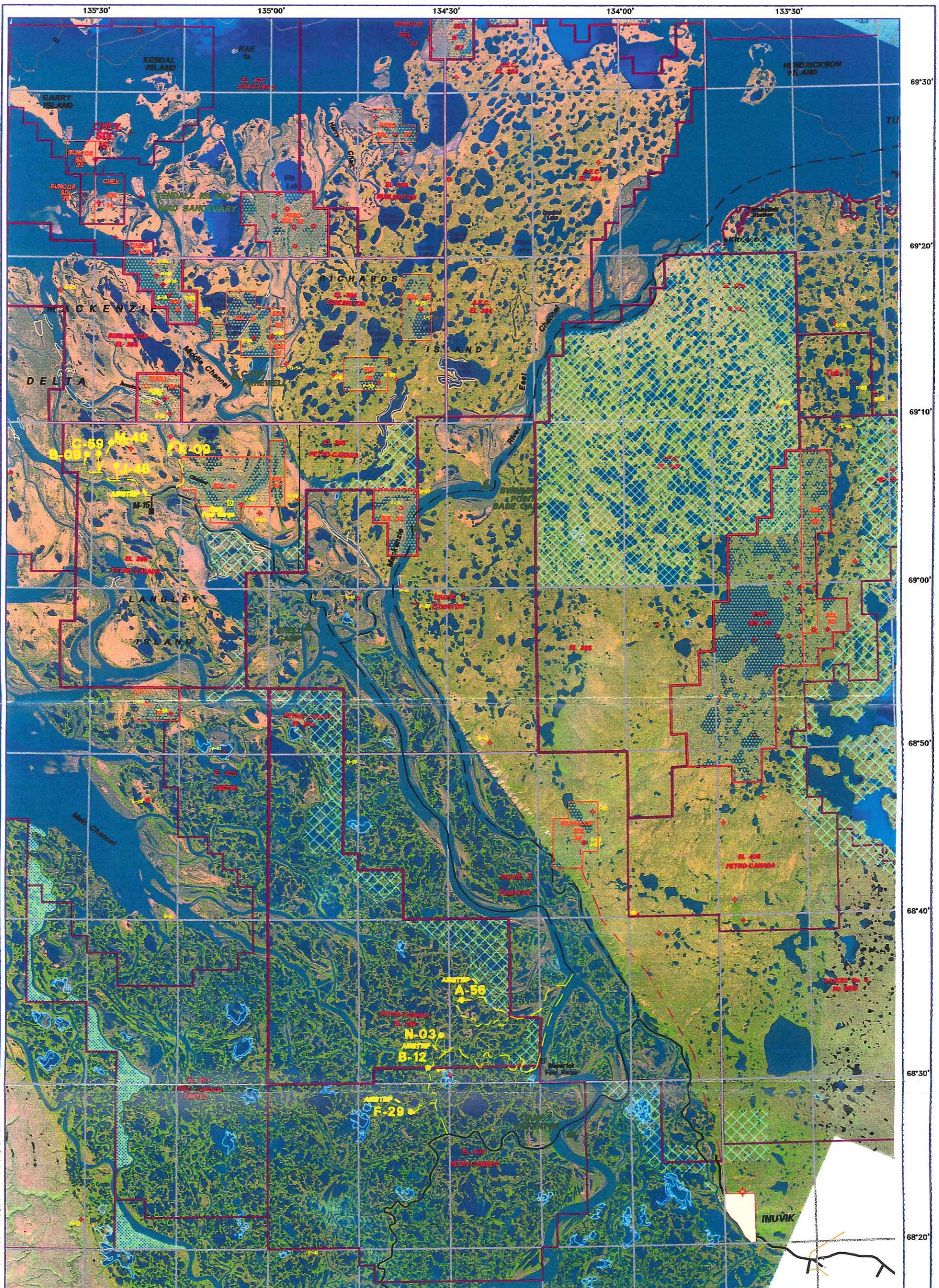
Through learnings from Petro-Canada's successful drilling program last year at the M-15 well, this year's drilling program will utilize both the data and processes experienced last year. The Petro-Canada Kurk/Napartok Winter 2001/2002 drilling program entails the drilling of one new well selected from one of four (4) potential locations within the Napartok area (Table 2; Figure 2), and potentially a short-duration winter well in the Kurk area, of which one site will be selected from 5 potential sites. If drilled, the shallow winter Kurk well would likely be the first one drilled. The wellsite(s) to be drilled will be finalized in September or October when interpretation of last year's seismic data is complete. The final wellsite location may differ from the conceptual locations identified, but will be located within a 1000 m radius of the locations identified in Figure 2 and Table 2, provided the land is of the same topography. For the purposes of this environmental assessment, this 1000 m buffer has been included within the region referred to as the proposed project location.

TABLE 2
PROPOSED WELLSITE LOCATIONS

WELL REFERENCE	STATUS	LOCATION
<i>Kurk 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
F - 29	New	68°28'19" N – 134°36'24" W
B - 12	New	68°31'01" N – 134°33'33" W

Access roads for the drilling program(s) will be from the channels of the Mackenzie River with a road width of 15 m. The surface of the access road and winter drilling lease(s) will be prepared together using the same equipment and procedures. Once the ground surface is frozen and has enough snow, a tracked machine will pull a rubber-tired drag over the surface, and then the area will be flooded with water.

Akita-Equator will be the drilling contractor and Akita-Equator Rig #60 used for drilling operations on the program. The winter well location(s) will have a 150 m x 150 m rig pad, with an attached 100 m x 80 m camp pad, a 60 m x 50 m fuel storage pad, a 50 m x 80 m sump area, and a detached 30 m x 30 m helipad.



SIGNIFICANT DISCOVERY LICENCE SHOWN THUS _____
INUVALUIT SURFACE AND SUB-SURFACE OWNERS _____
INUVALUIT SURFACE OWNERS _____

EXPLORATION LEASE (EL) BOUNDARY _____

WELLSITE SYMBOLS SHOWN _____

PROPOSED ACCESS SHOWN _____

PROPOSED AIRSTRIPS SHOWN _____

PROPOSED 2001-2002 LOCATIONS _____

PROPOSED FUEL BARGE LOCATIONS _____

REV : DATE AUGUST 3/01



INUKSHUK
Geometrics Inc.

PETRO-CANADA
FIGURE 2
KURK/NAPARTOK WINTER 2001/2002 DRILLING PROGRAM
PROPOSED WELLSITE LOCATIONS

BEAUFORT SEA - MACKENZIE DELTA

MACKENZIE DELTA, N.W.T.

5.0 20 0 20 6.0 12.0 Km

SCALE 1 : 400 000

DRAWN : B.T. DATE : AUG. 21, 2001 JOB NO.: 12215MAP1
PC-2001-2002-COMP-11x17W REV NO: 6

4.2 Field Reconnaissance

On August 3, 2001 IEG conducted site reconnaissance of Petro-Canada's proposed drill locations. Drill locations were assessed aerially with touchdowns as necessary to examine features of interest.

4.2.1 *Kurk Drilling Locations*

- B09** The site is located on flat, featureless terrain, covered with alder and dwarf birch. A water body is located 1.46 km north of the proposed site.
- C59** The site is flat and featureless, and covered lightly with shrubs (approximately 1 m in height) with a wet surface. Small waterbodies surround the site.
- M49** The site is flat and featureless with waterbodies surrounding the site. The site is covered with willows and shrubs. Water can be found within 700 m of the site.
- J48** There is a waterbody off the southwest corner of the site. The site is located on flat and featureless terrain. Another waterbody can be found 300 m N-NW form the proposed location.
- K09** The site is located on flat muskeg with willows and alder. There are numerous game trails in and around the area. Water can be found 530 m south of the proposed wellsite location.



Plate 1: South of wellsite B09.

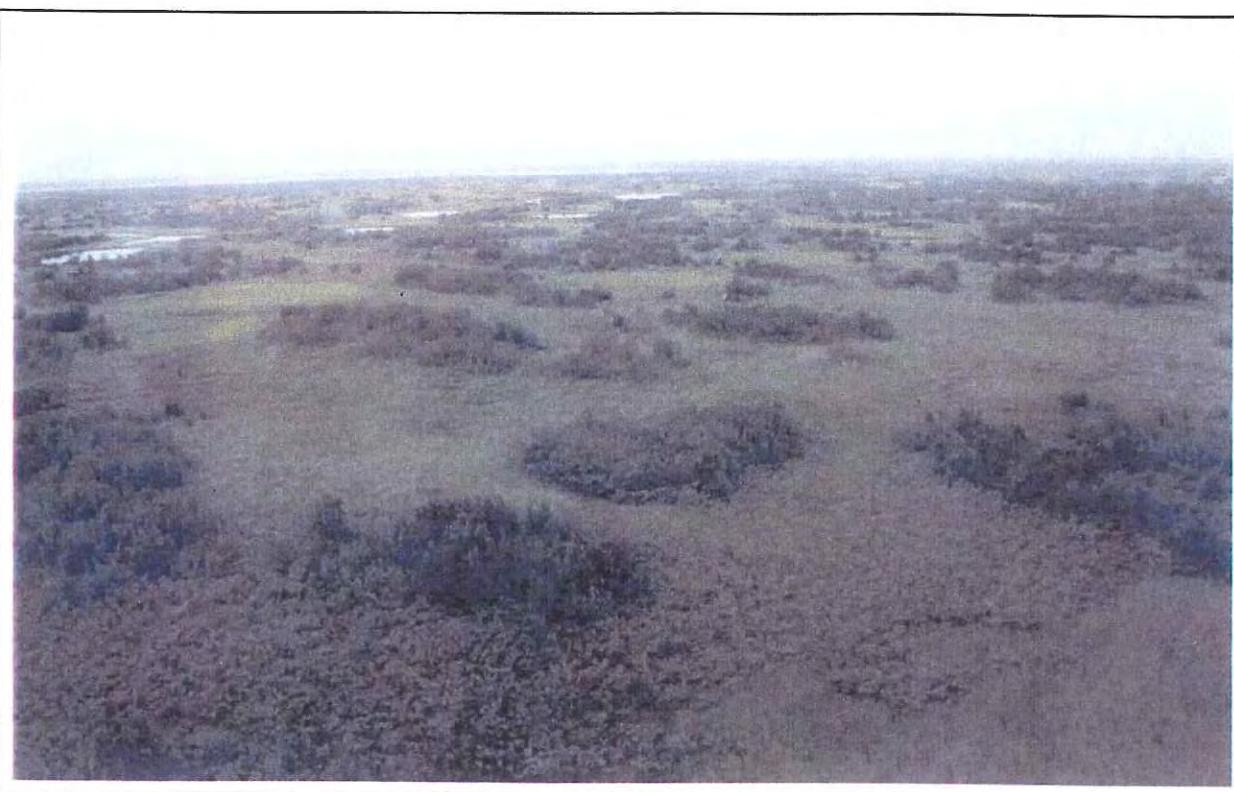


Plate 2: Site C-59 aerial photo.



Plate 3: Wellsite M49 – aerial photo.



Plate 4: Aerial photo of wellsite K09.

4.2.2 *Napartok Drilling Locations*

- B12** The site is surrounded by water, as the land to water ratio in the area approximately 2 to 3. Spruce and shrub are located to the north and south of the site. The main channel of the Mackenzie River is 600m west of the wellsite.
- N03** The site is adjacent to water and is surrounded by dead spruce stands. The land to water ratio is approximately 4 to 1. Large water bodies are found within 100m of the well center. Spruce and shrub removal will be required in the area.
- A56** Lakes and channels cover the majority of the site. High ground adjacent to the site supports sparse stands of spruce and shrubs, however, these areas would not support a 150m x 150m wellsite.
- F29** The site is 120m directly south of a tributary channel, adjoining the Napoiak channel, and is covered with bush and shrub. Spruce are adjacent, and an open shot hole is located west of the proposed site. Evidence of moose activity in the form of tracks has been recently observed on the channel shoreline north of the site.

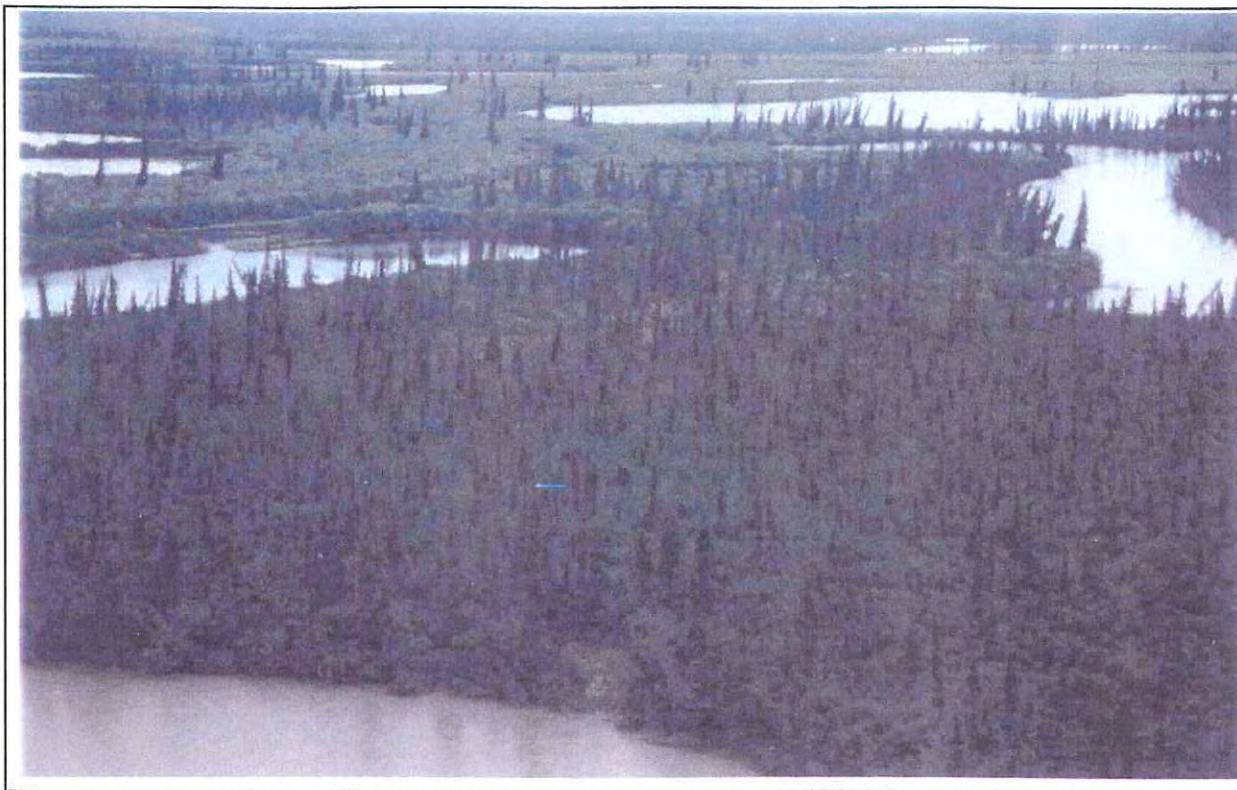


Plate 5: Wellsite B12 – aerial photograph of the site.



Plate 6: Wellsite N03 – aerial photograph of the site.



Plate 7: Wellsite A56 – aerial photograph of the site.



Plate 8: East of wellsite F29.