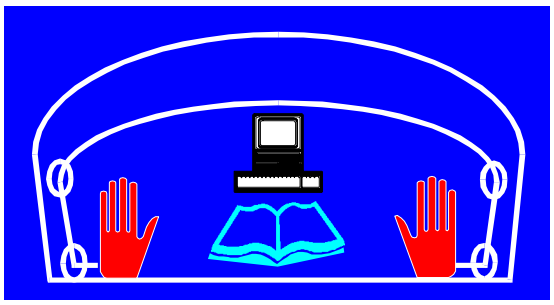

A Tourism And Parks Analysis Of The White Lake Access Road Proposal - Draft

Type of Study: Plans/strategies
Date of Report: 1989
Author: Gordon G. Stewart
Catalogue Number: 11-33-28

A TOURISM AND PARKS ANALYSIS OF

THE WHITEHILLS LAKE ACCESS ROAD PROPOSAL

by

Gordon G. Stewart
Program Research Assistant
Tourism and Parks
Economic Development and Tourism
Yellowknife, NWT

September 6, 1989

A. INTRODUCTION

Whitehills Lake is located approximately 25 km north of the Keewatin hamlet of Baker Lake, **Figure 1.** The Whitehills Lake environs are a traditional hunting and fishing area utilized, on a Year round basis, by the **local** residents.

For some time now, the hamlet has been lobbying the Territorial government for an **access** road to the lake. The residents see the road benefiting their community by: providing better access to their hinterland for hunting and fishing; providing opportunities for tourism development to improve the local economy; and, to provide an **access** to an **alternate source** of potable water.

The Minister for the departments of Municipal and Community Affairs, Transportation, and Economic Development and Tourism, the Honorable Gordon Wray, has expressed an interest in supporting the development of the Whitehills Lake access road (Appendix 1). Considering the multi-use rationales for the road, the Minister has suggested that capital for the design and construction of the road be shared equally between the three departments. Appendix 2 outlines initial cost estimates for three proposed routes, and recommends one of the routes.

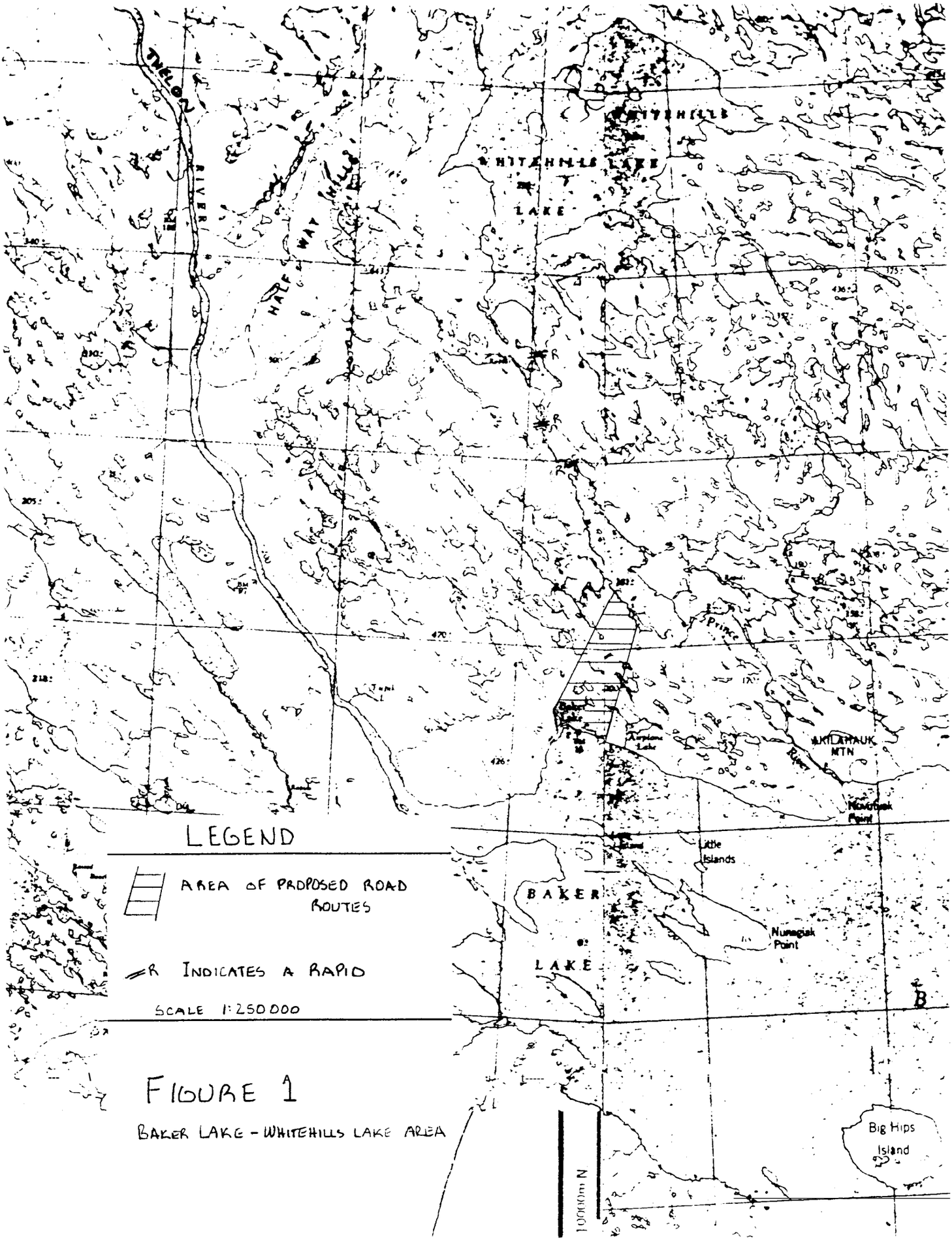

FIGURE 1

BAKER LAKE - WHITEHILLS LAKE AREA

This report briefly describes the physiography of the **Baker Lake - Whitehills** Lake area; the tourism resources offered: and, the routing of the proposed Whitehills Lake access road. Within this frame work, the report goes on to discuss the potential tourism and parks benefits that establishing the road may provide. It also assess the need for establishing parks and other facilities along the road corridor. Finally, the report draws several conclusions from the information presented **and** makes a recommendation concerning the departments share of funding.

B. BAKER LAKE - WHITEHILLS LAKE AREA PHYSIOGRAPHY

1. Ecological Summary

The Baker Lake - Whitehills Lake area lies within **a** distinct natural region refered toas the central tundra[1]. Prominent natural features characterize the region, and can be used as a descriptive overview of the area[2]:

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[1] **National** Parks System Planning Manual, National and Historic Parks Branch, Parks Canada, 1971.

[2] Land Use Information Series, map sheet 66A Schultz Lake, Lands Directorate, Department of Environment, 1980.

Topography: *As part of the interior plain, the area is comprised of shallow moraine, boulder fields and some rocky prominences; northwesterly trending esker complexes are common. General relief tends to be low (15 to 20 m) and gently sloping. The Half Way Hills lie northwest of the community, between Whitehills Lake and the Thelon River. Elevations of these hills are the highest in the area, averaging around 200m.*

Vegetation: *Sparse and discontinuous lichen complex is associated with the boulder fields and rocky prominences: a mixed lichen low shrub complex provides some cover on the moraine; sedges and mosses occupy wet hallows, while dark lichens cover most eskers.*

Water: *Rivers and streams flow southerly into the Thelon River and Baker Lake, river channels are broad and irregular with many rapids. Lakes occupy up to 50% of the surface area, and vary in size, shape and drainage pattern depending on the topography.*

Wildlife./Fisheries: *Barren ground grizzly bear, muskox, foxes, waterfowl and raptors are the most significant species in the area. Important year round range is provided for grizzly bear and muskox, while caribou use the area as spring, summer and autumn range. Nesting habitat is provided for raptors, particularily in the Half Way Hills area. The rivers and numerous lakes in the area provide important habitat for waterfowl, particularity during spring and*

autumn migrations.

Arctic char, arctic grayling, arctic cisco, lake trout, whitefish northern pike and suckers are the major fish species abundant throughout the area. Arctic char are harvested from Baker Lake and some of the surrounding tributaries. Whitehills Lake is currently assessed at a commercial fishing capacity, for whitefish and lake trout, of 1,400 Kg (round weight). However, the lake is not currently utilized by local fisherman either for domestic or commercial purposes.

Climate: Perhaps one of the greatest limiting factors in the arctic environment is the climate. Figure 2 presents a monthly temperature and precipitation average, based on data collected over 30 years. A mean annual temperature of around -12°c[3] and only 89 frost free days per year[4], indicate a rather harsh environment.

2. Demographic Summary

[3] Canadian Climate Normals, Temperature and Precipitation 1951 - 1980. Atmospheric Environment Service, Environment Canada, 1982.

[4] Canadian Climate Normals, Volume 9, 1951-1980. Atmospheric Environment Service, Environment Canada, 1984.

FIGURE 2

NORTHWEST TERRITORIES/TERRITOIRES DU NORD-OUEST

	JAN JAN	FEB FÉV	MAR MAR	APR AVR	MAY MAI	JUN JUIN	JUL JUIL	AUG AOÛT	SEP SEPT	OCT OCT	NOV NOV	DEC DÉC	YEAR ANNÉE	CODE CODE
BAKER LAKE														
64° 18'N 96° 0'W 12 m														
Daily Maximum Temperature	-29.5	-29.2	-23.7	-12.5	-2.6	7.9	16.0	13.0	5.3	-4.4	-16.4	-24.7	-4.3	1
Daily Minimum Temperature	-36.4	-36.0	-32.0	-22.1	-10.2	0.2	6.0	5.5	-0.7	-11.0	-24.0	-31.6	-160	1
Daily Temperature	-33.0	-32.6	-27.9	-17.3	-6.4	4.1	11.0	9.7	2.3	-7.7	-20.3	-3s.2	-12.2	1
Standard Deviation, Daily Temperature	3.0	3.6	3.1	2.9	2.9	2.1	1.5	1.7	1.7	3.0	2.2	3.4	1.0	1
Extreme Maximum Temperature	-8.2	-7.8	-1,1	5.0	11.7	23.3	30.6	27.8	21.1	9.4	2.2	-1.7	33.6	
Years of Record	33	33	35	34	33	34	33	33	35	34	34	35		
Extreme Minimum Temperature	-60.6	-50.0	-60.0	-41.1	-27.6	-13,9	-1,7	-3.4	-14,4	-30.6	-40.6	-45.6	-50.6	
Years of Record	31	32	33	33	32	33	33	32	32	31	32	33		
Rainfall	0.0	0.0	0.0	0.4	5.9	18.1	36.1	36.9	31.4	7.5	T	T	136.3	1
Snowfall	8.0	5.4	8.3	13.8	6.3	2.8	0.0	0.4	5.9	23.2	17.4	8.7	1000	1
Total Precipitation	7.7	4S	7A	13.8	12.0	20.6	36.1	37.3	37.0	30.6	16.5	8.2	234.6	1
Standard Deviation, Total Precipitation	6.0	4.0	5.0	10.1	9.9	14.0	21.3	21.4	222	16.7	14.6	6.4	50.9	1
Greatest Rainfall in 24 hours	0.0	T	0.0	8.0	22.4	17.5	52.1	4s.5	35.3	27.9	0.3	0.3	52.1	
Years of Record	30	31	32	33	33	33	33	33	32	31	31	32		
Greatest Snowfall in 24 hours	10.2	9.9	8.1	16.1	8.6	12.6	T	5.0	8.9	20.8	30.3	7.4	30.3	
Years of Record	30	31	32	33	33	33	33	33	32	31	31	32		
Greatest Precipitation in 24 hours	9.7	7.4	7.1	17.5	25.2	17.5	52.1	45.5	35.3	32.0	30.3	7.4	52.1	
Years of Record	30	31	32	33	33	33	33	33	32	3!	31	32		
Days with Rain	0	0	0	·	1	6	9	10	8	3	·	·	37	1
Days with Snow	7	6	8	9	6	2	0	·	5	12	10	8	73	1
Days with Precipitation	7	6	7	9	7	7	9	10	12	14	10	6	106	1

Units and Symbols

temperature	°C	•	amounts less than 0.5 except zero.
rainfall	mm	T	a trace amount, i.e. less than 0.1 mm of liquid precipitation or less than 0,1 cm of snowfall frozen precipitation
snowfall	cm	M	missing
total precipitation	mm		

Code

1 complete 30years

The Hamlet of Baker Lake is located in the Keewatin Region on the north-west shore of Baker Lake, at approximately 64°18' N and 96° 03' W, (Figure 1). The population of Baker Lake is 1009 (1986 census), which represents approximately 20% of the Keewatin Region population. The Hamlet of Baker Lake has the dual distinction of being the nearest community to the geographic centre of Canada, and the only inland inuit community in the N.W.T. Although, it is located on a navigable water way that stretches almost 300 km to Hudson Bay.

C. TOURISM RESOURCES

One approach to promoting tourism in isolated communities like Baker Lake, relies on a community based tourism strategy that emphasises the development and marketing of the tourism industry and its travel products'. The success of this strategy relies on a number of factors, such as the initiative of local tourism operators; the existance of marketable natural and cultural attractions within a reasonable travel distance of the community: and, the ability of the community to provide sufficient facilities

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'Anonymous, 1983. Community Based Tourism: a strategy for the northwest territories tourism industry. Prepared for the Department of Economic Development and Tourism, Yellowknife, NWT.

and services which cater to visiting tourists.

Baker Lakes inland location, and the proximity of the community to the confluence of a number of major river systems that drain the central tundra, make it ideally situated for providing access to a variety of marketable tourism attractions. A report prepared for the Keewatin Chamber of Commerce identifies accessible tourism resources that are available from Baker Lake, and indicates that for an operating season running between May and August, there are 32 attractions to choose from that are between 5 minutes and 18 hours one way travel time from the community'. These attractions consist of fishing, hiking and sightseeing activities, as well as visiting cultural and historic sites. Access is primarily by boat during open water season, although snowmobile and dog team trips are offered in the spring. Flightseeing trips to view muskox and other wildlife in the area and into the Thelon Game Sanctuary are also available. There are two licenced outfitters operating from Baker Lake and two licenced lodges are accessed through Baker Lake.

There are facilities and services available in the community which cater to travelers, such as an airport with scheduled and charter flights, and local cooperatives and retail merchants selling all manner of merchandise and souvenirs. Accommodation is offered with

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'Anonymous, no date. Keewatin Destination Zone Tourism Development and Marketing Strategy Parts I & II. Prepared for the Keewatin Chamber of Commerce, by Marshall, Macklin, Monaghan.

about 60 beds between two hotels, and a community run campground located between the hamlet and the airport. For transportation, most families in the community have access to all terrain vehicals (ATV's) and snowmobiles. There are ATV's, snowmobiles and four wheel drive vehicals for rent: as well as a taxi and a tour bus service available in Baker Lake'.

D. PROPOSED WHITEHILLS LAKE ACCESS ROAD

There are three proposed routes for the Whitehills Lake access road, Figure 3 (Refer to Appendix 2 for details of these routes.). All three routes follow in the general direction of an existing trail which provides ATV access in the summer and snowmobile access in the winter. However, the termination point of the trail, and of the proposed road, is not at Whitehills Lake but at a widening of the Prince River, which flows out of the lake. This point is located approximately 16 km downstream of Whitehills Lake, and there are three sets of rapids (of unknown height) between the lake and this point, accounting for an elevation difference of about 18.5 meters.

'David Murray, Heritage River Planner, Tourism and Parks, Economic Development and Tourism, Baker Lake, NWT - Personal communication.

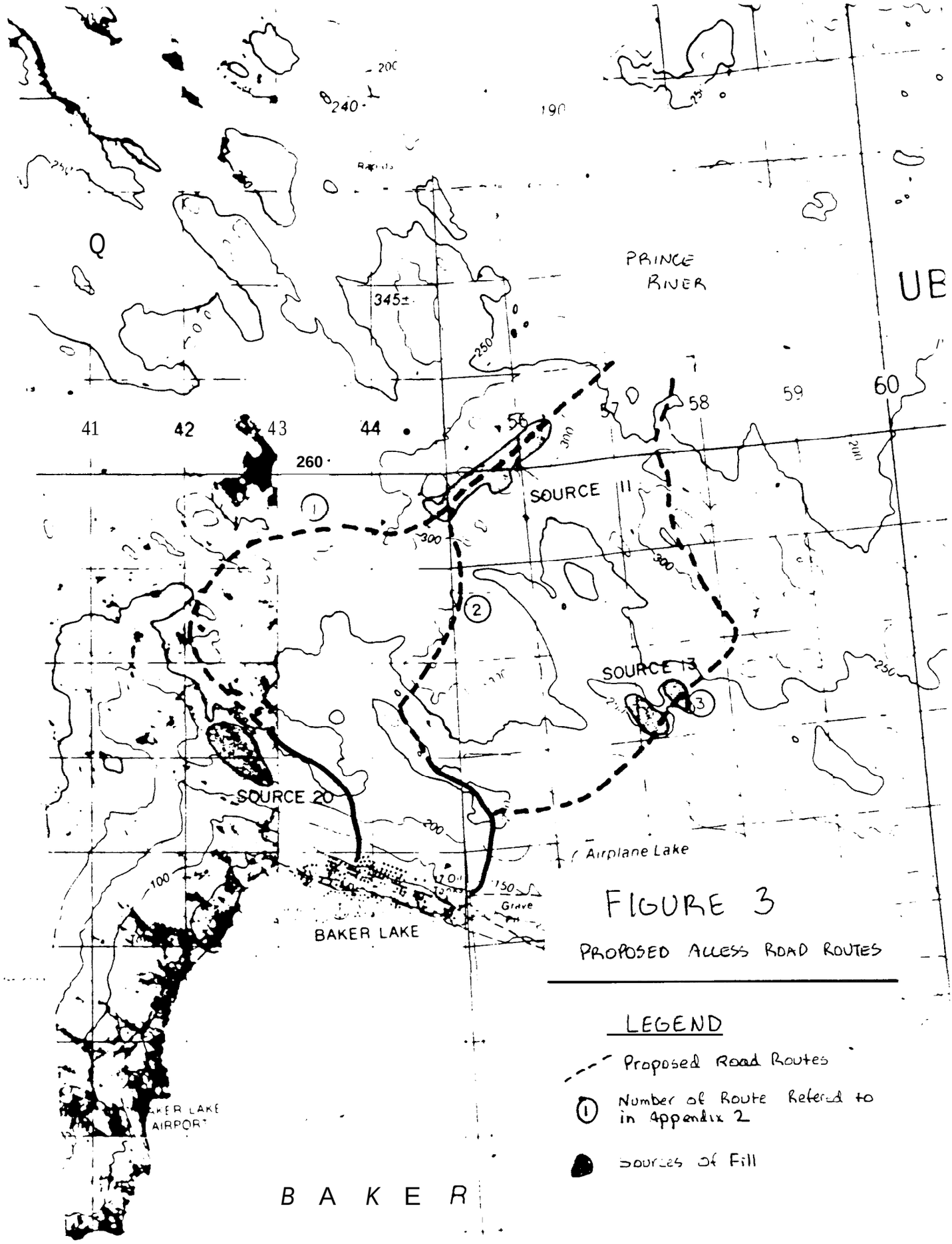


FIGURE 3

PROPOSED ACCESS ROAD ROUTES

E. DISCUSSION

The tourism products offered from Baker Lake take advantage of the many natural and cultural attractions available in the area. There is also a great deal of potential for developing hitherto unaccessed tourism resources, and further developing existing resources. For example, the inland location of the community allows easier and cheaper access to many of the diverse natural attractions the Keewatin region has to offer, such as: the Thelon Game Sanctuary, an area of unique features supporting a wide variety of wildlife; the Thelon and Kazan Rivers, which have recently been nominated as heritage rivers: and, a number of other rivers popular as canoeing destinations.

From the physiographic description of the Whitehills Lake - Baker Lake area, there are a number of potential development opportunities which would enhance the tourism resources offered. For example: Whitehills Lake is being evaluated for a fishing lodge capacity, which if developed and if accessible by road from Baker Lake, would mean that access, at least from the community, would not be weather dependant, it would also likely be a locally owned and operated lodge, meaning direct economic gains for the

community: the Halfway Hills could be developed as a hiking destination giving spectacular views of the surrounding area; the development of sport caribou hunting in the area; and, bird and wildlife viewing throughout the area.

From a parks perspective, it may be beneficial to develop a park which would take advantage of these natural attractions in the area. Park development would enhance the tourism potential by providing such things as hiking, camping, observation and interpretive facilities. Establishing a park and developing facilities along the proposed **road** *corridor would depend upon the quality of potential development sites, their location and distance from the road corridor and the community. In this case, developing end of road facilities, such as parking and picnic areas and a boat launch, would likely occur because the road would be approximately eight kilometers in length and developing intermediate sites would not be worthwhile.*

Developing tourism and parks resources, whether by the government or the **private** *sector, takes time, money and entrepreneurial initiative. This paper has described the existing tourism market in Baker Lake, it has also identified a number of potential tourism resources in the* area *that could be developed. All of these resources have been or can be developed without the need to develop* a *road, particularly* **a** *road that goes to an area already accessed by the majority of Baker Lake residents. As well, the tourism and*

parks development potential along the proposed road corridor is minimal. The cost of road and facility development would not likely be justified by an increase in tourism use, and resulting economic returns would be low.

There is a highway development plan proposed for the Keewatin that would link many of the communities (including Baker Lake) by a highway system with the south'. Although in the early planning stages at this time, if the highway were to be developed, then this Whitehills Lake access road would be more viable from a tourism and parks perspective.

F. CONCLUSIONS

1. The proposed road route provides access to a widening in the Prince River and not to Whitehills Lake, which is farther upriver and at a higher elevation (by -18.5 m) requiring the crossing of three rapids of unknown height. This area is already accessible, by an established year round trail, to most of the residents of the community.

'Stewart, Gordon G., 1989. "Roads to Rankin" Keewatin Highway Development a Tourism and Parks Perspective. Tourism and Parks, Department of Economic Development and Tourism, Yellowknife, NWT. Internal report, 27 pages plus appendices.

2. Developing this road would benifit the community by providing perhaps easier year round access to the area for the residents, and providing access to another source of potable water for the hamlet. However, it would only provide minimal tourism benefits.

3. There are a number of potential tourism and parks developments that have been identified which could increase tourism to the area, but would not likely add a significant amount of money to the economy. These potential developments could all occur without the road being developed.

4. Proposed Keewatin highway development would likely benefit this proposal by providing another area to be accessed by the rubber-tire traveller.

G. RECOMMENDATION

Based on the findings of this analysis, it is recommended that the department not contribute funding toward the cost of road construction. The department is not in the business of building roads, but rather in stimulating local economies and further

developing tourism markets, which may include providing tourism and parks facilities. If it is inevitable that the department contribute funds, then there are two possible options to consider:

1. If funding has to go towards road construction, then the department should only develop the absolute minimum of facilities, preferably at end of road.

2. The department should try and opt-out of providing funding for road construction, with the promise to invest an amount equal to our share over the next two or three years in a park development, or some other tourism development, in the area.

APPENDIX 1

Ministerial Support for Whitehills Lake Access Road.

Northwest Territories Municipal and Community Affairs

JUN 221989

Deputy Mini ster,
Department of Transportation.

Deputy Minister,
Department of Economic Development and Tourism,

Organizing for the Development of
Whitehills Lake Access Road Baker Lake. N.W.T.

As you are aware, the Hamlet of Baker Lake have been strong proponents of a road to Whitehills Lake for *some* time. They see it benefiting the community by providing better access to their hinterland for hunting and fishing purposes, by providing opportunities for tourism development thus improving the local economy, and by providing access to an alternate source of potable water for use by their community.

Our Minister supports the community's reasons for the road.

At a meeting in my office on June 12th, my staff and I discussed with the Minister the need for, and implications of, abandoning Baker Lake as the long term water source and utilizing Whitehills Lake as desired by the community. It was noted that the anticipated costs to build and maintain the infrastructure to provide the water from Whitehills Lake are extremely high. So is the risk of an interruption in service.

The Minister's conclusion was that the current study of Whitehills Lake as an alternate source of potable water should continue, however, the development of the road to Whitehills Lake should proceed as a separate project from the development of the community's long term water source. Because of the other uses of the road, capital for it's design and construction should be shared equally between the Department's of Municipal and Community Affairs, Transportation, and Economic Development and Tourism.

.../2

The main purpose of this letter is to outline, for discussion purposes, an implementation plan for the development of the road.

Last June, staff of the then Department of Public Works and Highways Community Programs' group carried out a helicopter reconnaissance survey of possible routes to Whitehills Lake from the community, they identified three. A copy of their letter report and recommendation of Alternate 2 is attached. Alternate 2, requiring 5,400 m of new road, is estimated at $1,000,000.

Concerning the schedule, our Minister desires to see design begin immediately with the intent to begin construction in 1990/91. I propose that the Department of Transportation assume the Project Management responsibilities for this project, and that the other two departments designate an individual to represent them throughout the engineering and construction stages of the road. Until our Regional Program Planning Engineer's position is filled in Rankin Inlet, our designate for the Whitehill's Lake road project is Alan Shevkenek (7135).

Our capital programs for FY 90/91, presently being developed, will require the addition of this new project. It is likely that the road's construction will take at least two years, if not more. I would like to suggest that Transportation staff provide a recommended construction schedule and associated budget in time for our three departments to incorporate into our 90/91 Capital immediately after the FMB sets the 90/91 Capital targets during the first week in July.

The nature and timing of this new project requires that a start be made soon. I would appreciate hearing from you right away so that we can verify a common understanding and approach, and then instruct our respective staff to begin working out the details. One of the first details will be to establish a budget for this year so that design can begin without undue delay.

Once the details of our agreement are known, I propose that it be covered in a Memorandum of Understanding.

A. A. Menard,
Deputy Minister.

Attachment

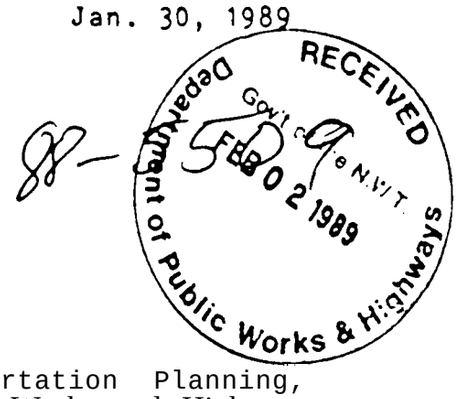
Cc. Minister,
Municipal and Community Affairs.

APPENDIX 2

Whitehills Lake Access Road Proposals

88-9510-603-07

Jan. 30, 1989



Bernie Cassidy
Project Manager
Transportation Engineering
Division
D.P.W. & H.

WHITEHILLS LAKE ACCESS ROAD:

In June 1988 John Bunge, Director Transportation Planning, requested that the Department of Public Works and Highways Community Programs, carry out a reconaisance survey for a proposed route from the community of Baker Lake to Whitehills Lake (Prince River).

On September 20, 1988 Gerrard Kennelly (DPW&H), Mike Elgie (DPW&H) and William Tapatai (Baker Lake) travelled the proposed route. From the reconnaissance trip three possible routes were selected. Possible borrow sources were identified from a previous granular report and a Class D construction estimate ,attached, was prepared.

It is our recommendation that Alternate 2 be the preferred route, based on the following:

provides the shortest feasable route
requires the least amount of embankment material.
construction on poorly drained low areas is kept to a minimum.
provides the easiest access to Borrow Source 11, approx 1,300 metres of road is constructed within source 11, this section of road will require little construction and will help reduce the overall cost.

The one drawback of this routing is that the start of the new road will be constructed along the east boundary of the new solid waste site at Finger Lake.

Since no funding was provided for this project, no detailed survey or site investigation was completed. Prior to finalizing the routing, construction estimate and road design, money should be identified in order to carry out a detailed survey and to test and prove the required borrow sources.

Miles Harris
Project Officer
D.P.W. & H.
Engineering Div.

White Hills Lake Access Road
cost Estimate

Proj. No. 88-951 O-6O3-D
Prepared by: Mike Elgie
Nov. 17, 1988

Summary

The following cost estimate has been produced for the proposed White Hills Lake Access Road. Three routes are forwarded for consideration. The estimates should be considered Class "D", with an included 10% engineering cost, Estimated cost for Alternate 1 is $1,395,295.00, Alternate 2 $965,853.00 and Alternate 3 $1,158,379.75.

Description

Alternate 1 includes 7,300 m. new road, with rehabilitation Of an existing 1,500 m. road, Alternate 2 has 5,400 m. new road and Alternate 3 is 6,500 ●. of new road, Alternates 1 and 2 are routed through Source 11, with Alternate 3 going through Source 13.

Prices

Prices used in the estimate for load, haul and place, plus installation of culverts and geo grid are based on traditional costs. Culvert and geo grid supply and delivery were derived from actual 1988 costs. Surfacing prices are based on screened gravel, which currently does not exist in the community.

Parameters

The following criteria was used to arrive at estimated requirements; 4.0 m. wide road top, 10.0 m. wide turn outs at 500 m. intervals, 2 to 1 side slopes, 1.0 m. average fill, .10 m. depth surfacing gravel, culverts and geo grid as required.

Estimate

Alternate 1

Fill material 50,250 cubic meters @ $15.00 per cubic meters. cost $753 ,750*00*

Culvert 2,190 meters @ $177.95 Per meter.
Cost $389,710.50.

Surfacing gravel 3,790 cubic meters @ $25.00 per cubic meter. cost $94,750.00.

Geo grid 8,000 square meters @ $3.78 per square ❑ eter.
Cost $30,240.00.

Engineering cost @ 10% = $126,845.00.

Total estimated cost Alternate 1 $1,395 ,29 5.50.

Alternate 2

Fill material 34,380 cubic meters @ $15.00 per cubic meter. cost $515,700,00.

Culvert 1,620 meters @ $177.95 per meter.
Cost $288,279.00s

Surfacing gravel 2,358 cubic meters @ $25.00 per cubic meter.
Cost $58,950.00.

Geo grid 4,000 square meters @$3.78 per square meter.
cost $15, 120.00.

Engineering cost @10% = $87,804.00.

Total estimated cost Alternate 2 $965,853.00.

Alternate 3

Fill material 41,340 cubic meters @ $15.00 per cubic meter.
Cost $620,100.00.

Culvert 1,950 meters @ $177.95 per meter.
Cost $347 ,002.50.

Surfacing gravel 2,834 cubic meters @ $25.00 per cubic meter.
Cost $70,850.00.

Geo grid 4,000 square meters @ $3.78 per square meter.
Cost $15,120.00.

Engineering cost @10% = $105,307.25.

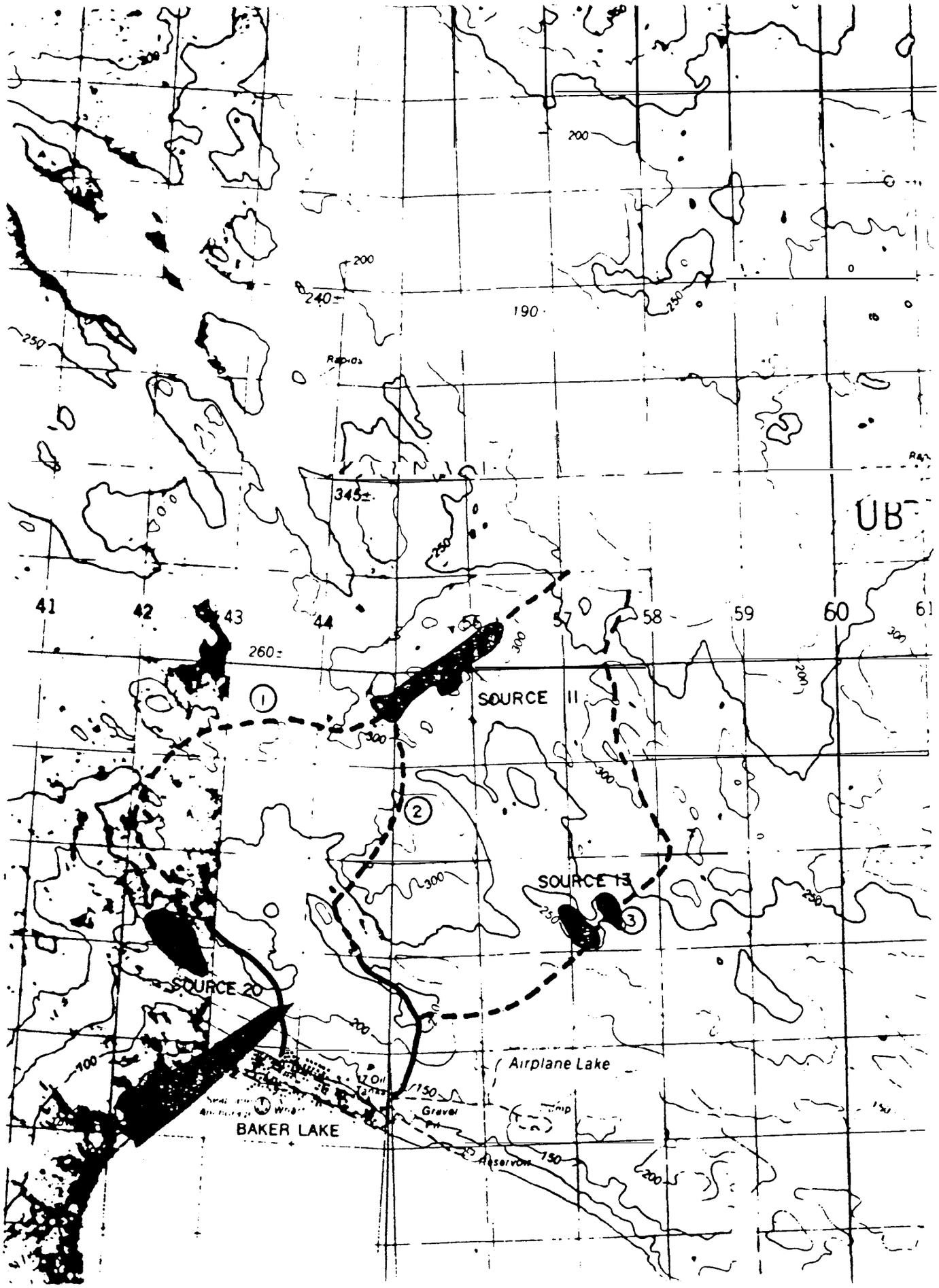
Total estimated cost Alternate 3 $1,158,379.75.

Recommendations

Ground proving of' Sources 11 and 13 will be required. Information on the two sources, gathered from the Community Granular Reports, indicates Source 11 could yield required quantities, while Source 13 is not anticipated to be adequate.

Land Use Permit applications should be submitted prior to any field survey or ground proving. All the alternates are within Municipal boundaries.

Field reconnaissance and survey will be required once a route has been selected. To date neither has been attempted.


SOURCE 11
SOURCE 13
SOURCE 20
Airplane Lake
BAKER LAKE
Gravel Pit
Reservoir
345±
260±
240±
190
41
42
43
44
58
59
60
1
2
3