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***Pre-feasibility Of The Ram Plateau  
Northwest As A Territorial Park  
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Peter

**PRE-FEASIBILITY STUDY  
OF THE  
RAM PLATEAU/NORTH  
NAHANNI RIVER  
NORTH WEST TERRITORIES  
AS A  
TERRITORIAL PARK**

**Prepared for:**

**The Government of the North West Territories  
Department of Economic Development & Tourism**

**Prepared by:**

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**Date: May 1988**

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Cover: North Nahanni River Canyons:  
Pat and Rosemarie Keough. (1987)

## PROJECT SUMMARY

The purpose of this report is to provide an assessment of the Ram Plateau and its **regional** setting for the establishment of a Territorial Park. A key feature of this park **would** be the possible development of a tourist/outfitting facility. The report is divided into two parts - Part A assesses the region and its features with respect to its unique **landforms** and features, while Part B specifically addresses the issues of establishing tourist related facilities in the area.

In assessing the region, we utilized all available documentation on the area as well as interviewing Pat and Rose marie Keough (photographers! authors), Derek Ford (**Karst** topography specialist) and Alex **Zellermeyere** (Canadian Parks Service, Winnipeg). Each of these individuals has personally spent time hiking and exploring the region so his/her impressions were considered important in this assessment.

Our findings indicate that the entire study region is unique; it exhibits a composite of geological formations and ongoing processes which one typically finds in the U.S. southwest, the Rocky Mountains and the Arctic, all within hiking distance of one another. (Figure 2.2)

The Ram Plateau and **Sundog** Basin (or North **Karst** Belt) are especially unique. The Ram exhibits spectacular scenery comparable to the Grand Canyon in scale, yet is considered easy hiking; while in the **Sundog** Basin one finds a concentration of **Karst** geological features not found elsewhere in North America, outside of the tropics (e.g. the Yucatan). Features include sink holes, several caves, a number of dry valleys and lakes which can dramatically flood. The **Karst** features are considered of national significance, with many individual features of world significance.

Most of the area, in addition to having world class geological features, is visually distinctive, hence very appealing to the adventure **traveller** and tourist. Our assessment indicates that this region is of World Heritage Significance and should be managed wisely. **As a strategy** for promoting the region, as well as preserving its inherent qualities, we are recommending that the Ram Plateau and **Sundog** Basin be set aside as a Territorial Park and that World Heritage Designation be sought for the area.

With this designation, the region will receive extensive publicity and exposure to the international tourist market, while ensuring the resources will be protected through Territorial Government control.

With respect to potential for developing a quality destination tourist facility we feel that, while the resource is there, further site-specific study is required to assess the specific tourist facility location sites identified in this report. Each potential site will have to be reviewed with respect to access, its relationship to the site features associated with the region and how it can become linked to the unique visual, interpretive and recreational possibilities of the Ram Plateau.

## PHOTOGRAPH SOURCES

With the exception of four photographs from the "Karstlands of South Nahanni Region", Parks Canada, [1 976] by George Brook and Derek Ford, all of the remaining photographs in this document are from the private collection of Pat and Rose marie Keough and are not to be reproduced without the written approval of the Keoughs.



## PROJECT METHODOLOGY

The information in this report is based on the information supplied by individuals who have travelled and studied the region. Personal interviews, background research of available documents, as well as the viewing of photographs by the consultants are the primary sources of information.

Although a flyover of the region was undertaken by the study team, no field work was conducted during the study process, therefore, some of the information as to the regional and site specific resources will require further detailed field investigation to accurately assess and locate many of the features identified in this report.

We would like to thank the following individuals who have visited the area and have gratefully supplied information and opinions with respect to the region:

- Derek Ford, McMaster University
- Pat and Rosemarie **Keough**, Arnprior, Ontario
- Alex Zellermeyere, Canadian Parks Service, Winnipeg



**PART A**  
**REGION AND ITS FEATURES**

## PART A - THE REGION AND ITS FEATURES

### 1.0 STUDY REGION

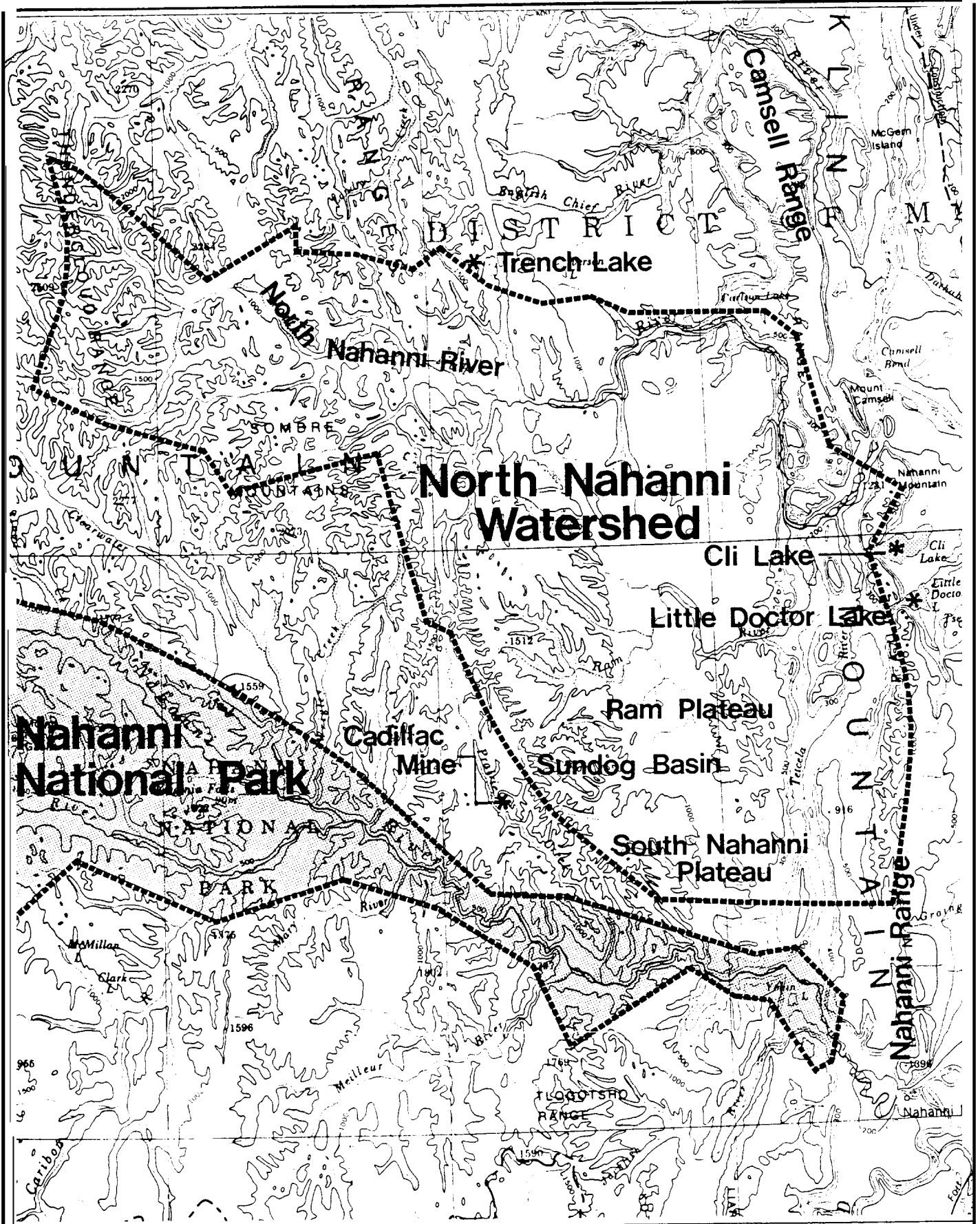
Although the focus of our investigation is the Ram Plateau area, it is necessary first to review the resources of the North **Nahanni** Region.

The **Keoughs** and Dr. Derek Ford had both studied the North **Nahanni** watershed, therefore, this preliminary regional assessment reviews an area of approximately 3,000 square miles in size. (Department of Energy, Mines and Resources - 1:250,000 mapping: Sibbeston Lake [95 K], Virginia Falls [95 K], Root River [95 K], **Camsell** Bend [95 K].) It is forwarded to present a broad environmental context for the study focus area and also to identify some of the unique regional features in the North **Nahanni** Region.

The regional study area includes all of the North **Nahanni** watershed. Starting from a point on the Tundra Ridge immediately north of **Nahanni** National Park (the First Canyon), the study area follows the ridge northwest to encircle the Sombre Mountains, the southern portion of the North **Nahanni** Plateau, then follows the northern limits of the North **Nahanni** watershed, due east toward the **Camsell** Range. From the **Camsell** Range, the study area follows the **Camsell** due south to the second gap in **Nahanni** Range, where it reconnects with the Tundra Ridge (Figure 1.1 Study Region and Features).

In discussions with the **Keoughs**, they felt, along with Derek Ford, that this whole region should be conserved - perhaps as a territorial park. Their reasoning is as follows:

1. The study area, through including the total watershed of **the** North **Nahanni** River, is in fact a very logical way to define a potential park boundary from both an ecological integrity and a visual quality perspective.
2. The study area allows for expansion of **Nahanni** National Park as it does not include any of the South **Nahanni** watershed.
3. The region excludes the Cadillac Mine site and appears to be limited with respect to potential mining resources. (Note: In discussions with Canadian Parks Service officials, it is the consultants' understanding that in fact the Federal Government



# Study Region and Features

1:500,000



Fig 1.1

will conduct a Mineral and Energy Resource Assessment [M. E. R. A.] for the area north of the park. This work is scheduled to be conducted this summer.)

## 1.1 Regional Features

While the entire region is considered to be visually outstanding, some of the interesting features discussed with individuals include the following:

- 1.1.1 The Ram Plateau and Sundog Basin are considered the most unique and are discussed at length in Chapter 2.
- 1.1.2 The North **Nahanni** River is considered by many to be also of national significance. Its canyons are spectacular (2,000 feet in places), the river course is tortuous and the river itself is exceedingly fast and wild. This river also has many broad and tranquil portions. Its water-based recreational potential should be determined but the initial impressions of the **Keoughs** indicate that portions of it are too dangerous for canoeing or kayaking. Hiking, however, along the river edges is considered by the **Keoughs** to be spectacular.
- 1.1.3 The North and South **Nahanni** Plateaus are also considered very attractive and unique. Some of the blind canyons of the South **Nahanni** Plateau are especially attractive. Caves are also to be found along these plateau edges.
- 1.1.4 Trench Lake was also identified as a unique resource. This lake exhibits a landslide which was caused by an earthquake measuring 7.8 on the Richter scale. Since the epicentre of the quake was at Trench Lake, this contributes to its significance.
- 1.1.5 Both the **Camsell** and **Nahanni** Ranges are considered of interest, for they provide unique views both of the MacKenzie Mountains and the MacKenzie River.
- 1.1.6 Little Doctor Lake, which is an inland fjord, is also of interest for its scenic as well as recreational potential. A warm spring is located just south of the tourist camp area. The lake may have four season recreational potential. (Photograph 2)
- 1.1.7 Most of this region has remained **unglaciated** during the last (Wisconsin) glacial advance hence there are reputed to be a variety of plants and insects which are

unique to this sub arctic region and one not found elsewhere in the Northwest Territories.

## 1.2 Earth Science Overview

### 1.2.1 **Physiographic** Features

The principal **physiographic** features of the study region are as follows:

- **Camsell** and **Nahanni** Ranges (two ranges of the Franklin Mountains)
- MacKenzie Plain (between the Franklin and MacKenzie Mountains)
- MacKenzie Mountains.

#### **Camsell** and **Nahanni** Ranges

These are the most eastern and southern ranges of the Franklin Mountains. Both ranges are proportionally long and narrow (10 miles wide, 80 miles long) and attain elevations of 5,000 feet. The bedrock geology associated with these ranges is sedimentary rock from the upper and middle Devonian Formation and typically include shales, limestone and **dolomites**.

#### MacKenzie Plain

Located between the **Camsell** and **Nahanni** Ranges and the South **Nahanni** Plateau is the MacKenzie Plain. This rolling plain varies in altitude from 1,000 -2,500 feet. The Ram Plateau and **Sundog** Basin are located in this plain.

Bedrock is comprised of shales and limestone. The Ram Plateau is made up of **Nahanni** limestone, ranging from 300- **800** feet in thickness, while the **Sundog** Basin is typically comprised of shale. The **Karstlandforms** of this basin are, however, formed in **Nahanni** limestone.

#### MacKenzie Mountains

Of importance to this document is the South **Nahanni** Plateau. Like the Ram Plateau it is comprised of **Nahanni** Limestone from the middle Devonian period and exhibits many of the **Karst** features associated with the Ram.

## L2.2 Glaciation

A characteristic of this region which contributes to the unique geological formations is the fact that it remained **unglaciated** during the last (Wisconsin) glacial advance. This results in **landform** features which are more accentuated and angular in form. There are also endemic plants and insects associated with this region which are not found elsewhere in Canada which are believed to have come from Asia by way of the former Bering Strait land bridge.

## 1.3 Life Science Overview

### 1.3.1 Vegetation

In discussions with the **Keoughs** and supplemented with the work of Ford and Brook (1976), we found the region below the tree line generally covered in dense coniferous forest cover. Below the treeline (3,500 foot elevation) where there is glacial overburden present, the predominant species are spruce and **jackpine**. In some areas dwarf birch and trembling aspen also predominate. Much of the area in the study region is above the tree line.

**In** areas of heavy concentrations of limestone, the dense tree cover can be replaced with zones more open in nature. Some areas are covered in grass or reindeer moss. The **poljes** located in the **Karst** belt are subject to periodic flooding **which** allows for only grass growth and eliminates other vegetation from encroaching.

Much of the plateaus are barren, with extensive areas of tundra and few patches of **Krummholz** (stunted conifers) being present. In discussions with George Scotter, he noted that in the **Karst** region alone they discovered over 700 previously undocumented plants and he felt the region to be both unique and diverse with respect to flora.

### 1.3.2 Wildlife

According to the **Keoughs'** observations, the following animals are typically found in the focus area: Black bear, Grizzly bear, Woodland caribou, Moose, Dan sheep, Hoary marmots, American pika and Arctic ground squirrels. The **Keoughs** stressed that this area is prime grizzly habitat and that future visitors

to the area should be aware of bear avoidance techniques and, if necessary, accompanied by guides in order to ensure their safety.

In discussions with Paul Grey, he stated the region was both good goat and sheep habitat and boasted a wide range of animal resources as noted above which are representative of the MacKenzie region.

Unique to the region is the presence of Trumpeter Swans. This flock apparently belongs to the Grand Prairie, Alberta, flock. Trumpeter Swans are considered rare species.

## 2.0 FOCUS AREA: THE RAM PLATEAU AND **SUNDOG** BASIN

### 2.1 Ram Plateau

The Ram Plateau is comprised of a flat plateau intersected with deep canyons (Figure 2.1 - Ram Plateau and **Sundog** Basin). Elevations along the dome of the plateau average in the 3,500 to 4,000 range. Many of these canyons are two to three thousand feet in depth and are visually spectacular. Hoodoo type rock formations are found along many canyon walls.

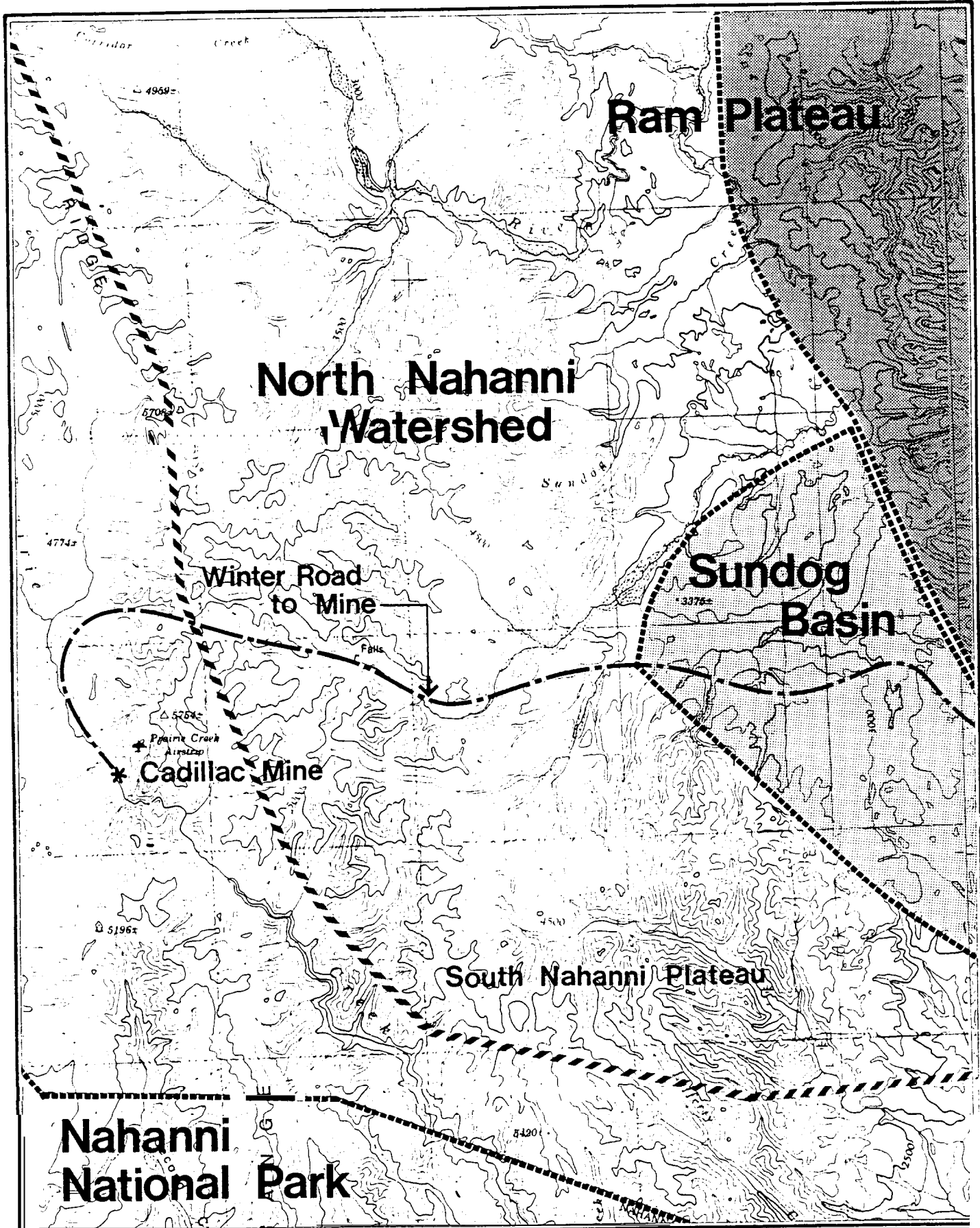
The flatness of the plateau and the fact that it is barren allows for easy walking and provides the visitor with many viewing opportunities down the different canyons. On the limestone plateau itself there is a wide variety of intricate Karst features, fossils and glacial **erratics**.

According to the Keoughs, these canyons are just as spectacular as the first, second and third canyons in **Nahanni** National Park but are far more accessible to hikers than **Nahanni's** gorges. Apparently it is only from the **Tlogotsho** Plateau that views can be gained of these canyons in **Nahanni** and hiking in the National Park is far more treacherous than the Ram.

It is important to note that since this area was **unglaciaded** during the last (Wisconsin) glaciation period, many of the bedrock features associated with the Ram are far more pronounced and rugged than would appear in other parts of Canada. In fact, many comparisons can be drawn with the **landforms** associated with the southwestern portion of the United States (e.g. Bryce Canyon, Zion National Park, etc.) Also of note are the scree slopes associated with canyon formation.

Conclusion: The Ram is significant for its recreational (hiking, viewing) potential as well as its unique quality of being, a **landform** which has the appearance of being located further south, such as the landscapes associated with the southwestern United States, but is in fact, located in a sub-arctic environment. Given this recreational potential the feasibility of developing tourism facilities should be considered to provide Canadian and international tourist access to this spectacular **area**. Such facilities and service would also benefit the local tourism economy.





Ram Plateau and Sundog Basin

1:250,000



Fig 2.1

## 2.2 **Sundog** Basin

This basin is located between the Ram and South **Nahanni** Plateau and in Canadian Parks Service.

Background Documentation is referred to as the North **Karst** Belt (Ford, 1971).

This area, since the initial work of Dr. Ford in the early 1970s, has been of extreme interest to Canadian Parks Service and has been recommended to be incorporated into **Nahanni** National Park in a number of different boundary studies (Downie, 1984). The unique **Karst** geology along with the area's exceptional interpretive, recreation and scenic qualities all contribute to making this an exceptional resource.

The following discusses the significant features of the **Sundog** Basin. Some of the **Karst** features located on the Ram and South **Nahanni** Plateau are also described as part of this land form as they are so closely associated with **Sundog** Basin. (Figure 2.2.)

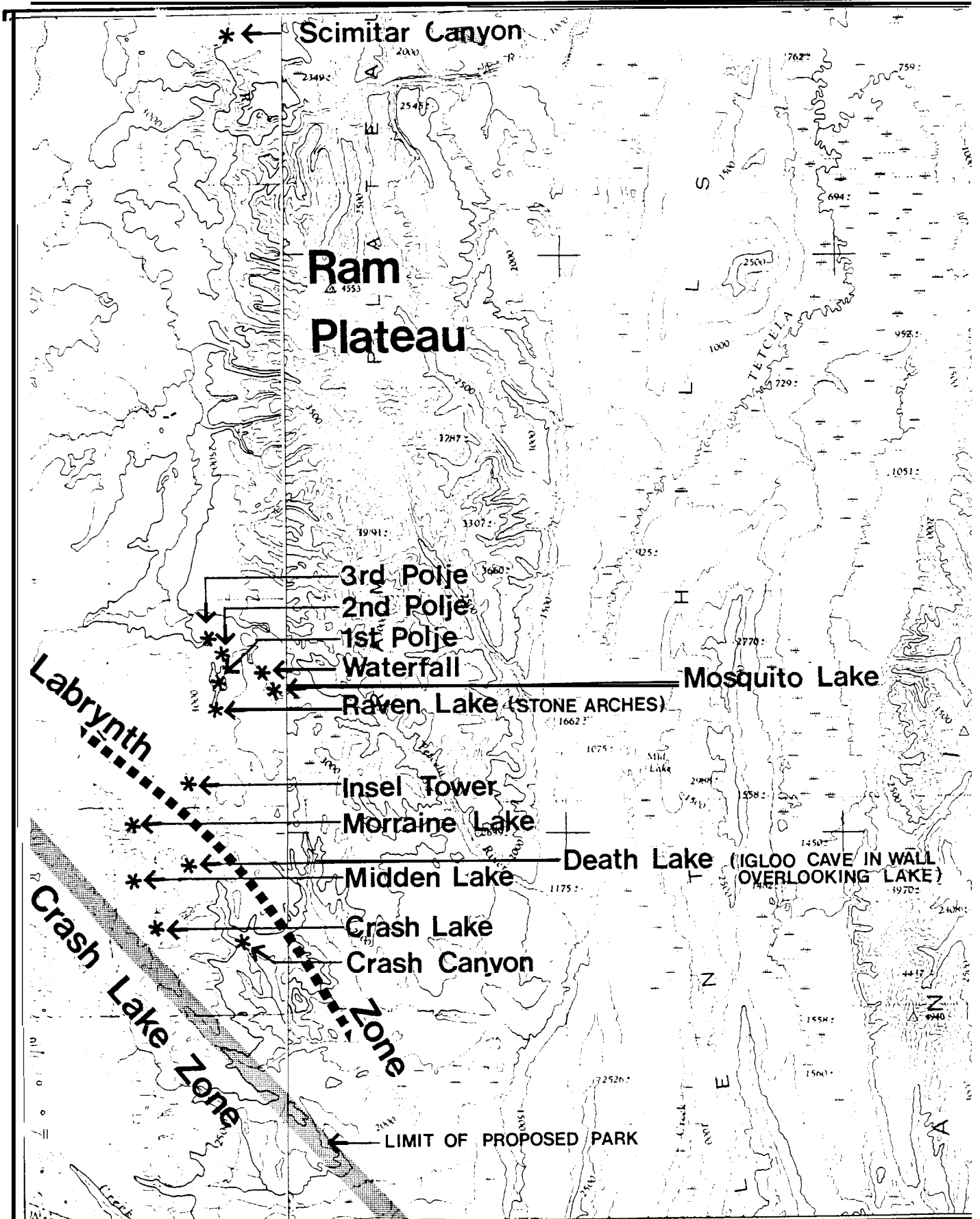
### 2.2.1 **Karst Landforms**

Prior to describing the **significant** individual "features of this basin, this section provides an overview of the features associated with **Karstlandforms** in this area.

The North **Karst** Belt is comprised of **Nahanni** limestone, which stretches in a northeastward direction from the first canyon in **Nahanni** National Park to a point 30 miles in the **Sundog** Basin. This assemblage of **Karst** features is reputed to be the most concentrated and unique range of **Karst** features in a northern environment in the world. Unique features in this **Karst** Belt include the following - the smallest to the largest features are described accordingly:

Limestone Pavements - There are a number of different types of bare pavement patterns found here and on the Ram Plateau. Note that many fossils are evident in many of these pavements. Associated with these pavements are grikes or solutional grooves.

Sinkholes - These are deep circular shafts formed in limestone. There is a spectacular concentration of these sinkholes located in the Labrynth zone of the basin. This concentration is rarely seen outside of the tropics (Ford, 1971). Variants on sinkholes include pond dolines which permanently hold water and



Sundog Basin - Significant Features



Fig 221

1:250,000

**cenotes** which are large sinkholes with characteristic steep, vertical walls which descend to a basal pond. (Photograph 10)

Caves - There are a number of caves, many of which exhibit unique ice formations. Very little exploration of these caves has been undertaken. (Photograph 4)

Dry Valleys - Broad irregular rock basins are scattered throughout the basin. The edges of the **valley** exhibit sharp erosional features called **turmkarst towers** which are residual erosional features. These are rarely seen outside of the tropics.

**Polje** - This is the largest landscape feature associated with **Karst landforms**. **Poljes** are large, enclosed basins up to 40 miles in length and typically exhibit very flat valley **floors**. These have been known to periodically fill up with water. Found within some of these **poljes** are **mogotes** which are residual limestone towers.

### 2.2.2 Significant Features

While the variety of rock pavements, sinkholes and caves is found throughout the region, the largest and most unique features are located in a relatively small area. This **small** area again can be divided into two zones, the **Labrynth** or northern zone and the Crash Lake or southern zone. (Note: This subdivision of **landforms** and description of features is largely from the interview conducted with the **Keoughs**.) The **labrynth** exhibits the most significant amount of **Karst** features while the Crash Lake zone is **located** on the northern fringes of the South Nahanni Plateau and exhibits a number of canyons and lakes.

**Labrynth Zone** - This is the area of the most significant concentration of **Karst** topography. Most of the significant features are so concentrated that they can potentially be visited in a day of sightseeing. Features include:

- 1) First **Polje**, Second **Polje** and Third **Polje** 3- These closed depressions are all within easy hiking distance of one another. The steep valley sides with high cliff typically drop off onto green grass floors ("like a golf

**course"** according to the **Keoughs**). These fields are **colourful** year round and turn gold in the fall creating a spectacular scene. (Photograph 8)

- 2) Raven Lake - Was considered to be visually spectacular by the Keoughs. This lake has been known to rise over 160 feet in one day (due to ground water changes and discontinuous perma frost affects). A constantly changing visual and scientific feature. (Photograph 7)
- 3) Raven Lake Arches - There are over 50 limestone arches in this area and this can be compared to many arches and landscapes of the U.S. Southwest. (Photograph 9)
- 4) **Cenote Cols** - There are over 23 **cenotes** in **cenote col**. Some contain water, while others are dry. This is due to the effects of discontinuous permafrost. Frost changes account for the continually changing **hydrogeologic** profiles in these **cenotes**. (Photograph 10)
- 5) Snakes and Ladders - The **Keoughs** also reported a unique fun experience called "snakes and ladders". Similar to game, hikers climb up steep ridges and then can go into caves, which in turn lead the visitor up or down to another system of ridges. The affect is a horizontal and vertical maze.

#### Crash Lake Zone (Southern Zone)

- 1) Death Lake - is reported as outstanding visual resource as a unique and potentially memorable "**post card scene**" as is the view of Lake Louise to the Canadian public. In addition to outstanding scenery, the lake has unique palisades, caves and canyons associated with it, of which Igloo Cave may be the most unique. Death Lake is surrounded by a very flat **tableland**. (Note that the name of the lake is an indication of how inaccessible it is *to* float planes.) (Photographs 1,3 and 4)
- 2) Canyons - There are a number of dramatic canyons (Crash Canyon, Canal Canyon) along the easterly face of the South **Nahanni** Plateau which are also quite dramatic and easily accessible. (Photograph 6) Caves and several palisades are also associated with this area. The **Keoughs** stated that this is prime Dan Sheep habitat.

Conclusion: The **Karst landforms** which have developed in this region are truly unique. According to Ford (1976) ' . . . as an assemblage of **landforms** there is

nothing like it in the World. This can be said of very few Canadian natural landscapes of any kind.”

Based on conversations with many individuals, a flyover of the area and impressions from photographs, the above statement is considered an accurate assessment of this region’s resources. This suggests that the focus area should be designated as an international resource and be marketed as such.

The following outlines a method of both gaining advertisement and exposure for the region while protecting the resource.

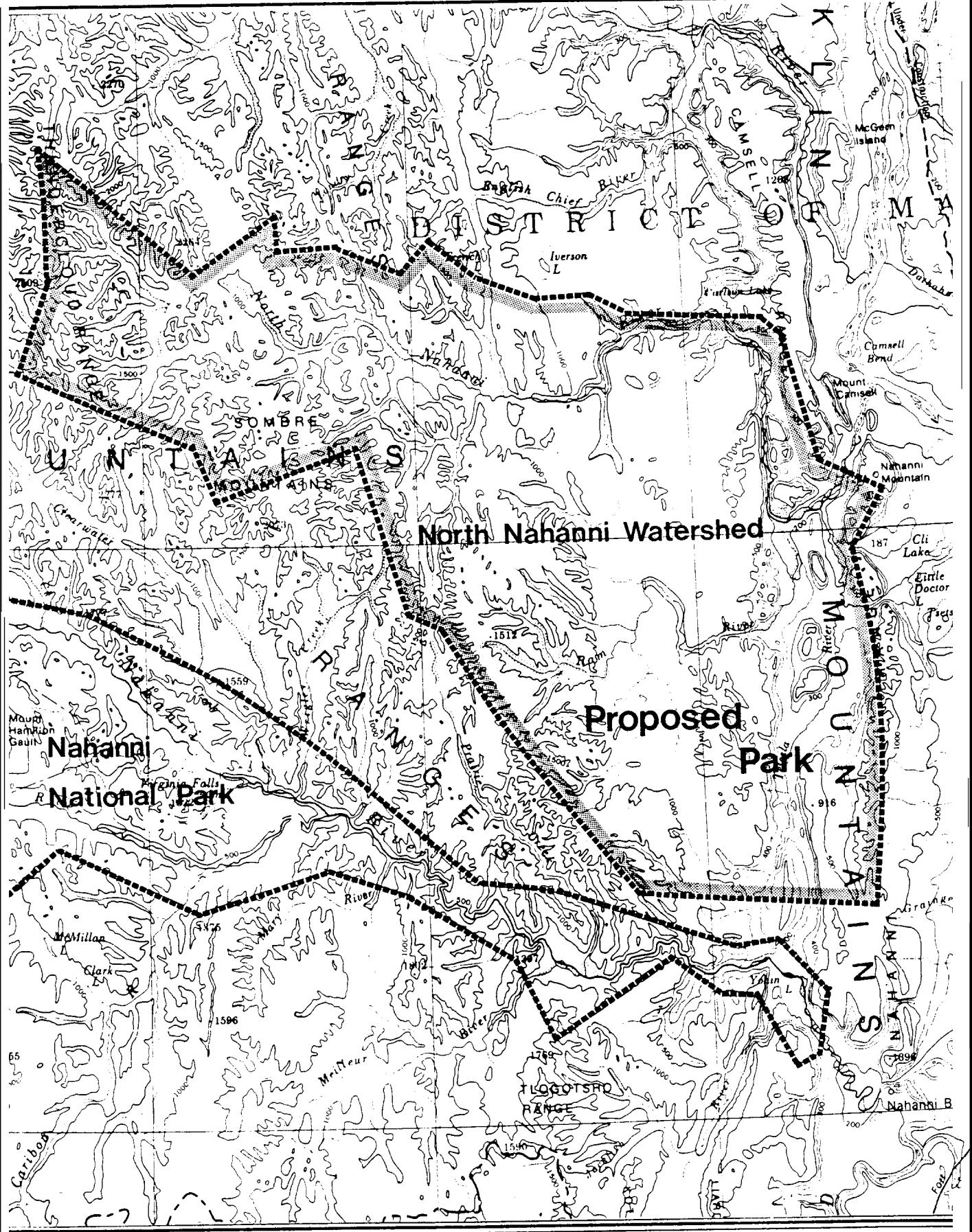
### 2.3 A New Territorial Park with World Heritage Designation

If this area were to be designated as a World Heritage Site, it would receive a great deal of publicity and could be packaged as part of the **Nahanni** National Park experience. While this designation would boost tourism, it would also ensure that the inherent resources of the region would be protected. Figure 2.3 - Proposed Territorial **Park** outlines the region which should be set aside as Natural Environment Recreation Park, With exposure of this region to the general public, protection of inherent wilderness resource features is also important. Therefore, while promoting tourism to the region, certain management principals can be foLlowed to ensure the integrity of the resource. This designation will ensure stronger management and operational controls in the park. The following section explains how a World Heritage designation for a future Government of Northwest Territories Park would achieve this.

UNESCO has published operational guidelines for the protection of World Cultural and Natural Heritage Areas (January 1984) and under Article 2, which is concerned with Natural Heritage, the following criteria must be met before an area can be designated as a World Heritage Site:

**Natural features consisting** of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;

geological and **physiographical** formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;



# Proposed Territorial Park

1:500,000



Fig 2.3

natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.

Selected UNESCO World Heritage Sites in Canada and the United States include the following:

- Nahanni National Park
- Canadian Rocky Mountain Parks (B. C., Alberta)
- Dinosaur Provincial Park (Alberta)
- **Bryce** Canyon (Utah)
- Grand Canyon (Colorado)
- Yellowstone National Park (Montana)

Each of the above parks has been visited by the consultant and, based on discussions with others and on visual impressions of the region, this area certainly warrants World Heritage Status.

Concurrent with this status is a number of obligations and operational criteria which would have to be met in order for this region to receive this status as a property of outstanding universal value. Criteria include the provision of buffers:

Whenever necessary for the proper conservation of a cultural or natural property nominated, an adequate "buffer zone" around a property should be foreseen and should be afforded the necessary protection. A buffer zone can be defined as an area surrounding the property which has an essential influence on the physical state of the property and/or **on** the way in which the property is perceived; the area constituting the buffer zone should be determined in each case through technical studies. Details on the size and characteristics of a buffer zone, as well as a map indicating its precise boundaries, should be provided in the nomination file relating to the property in question. (Principle No. 14, General Principles, Establishment of World Heritage List, UNESCO World Heritage Briefing Book.)

UNESCO recommends that a buffer zone is fundamental to the establishment of a Heritage site. They also recommend that these areas meet the specifications of the United Nations' List of National Parks and Equivalent Reserves (IUCN 1973) and that the establishment of a national park is encouraged in order to establish these World Heritage Sites (p. 14).

National Park status, however, is not required 'as many World Heritage Sites are under provincial jurisdiction (e.g. Dinosaur Provincial Park). Therefore, providing that the



following two requirements are met, the **Sundog** Basin and Ram Plateau can be protected under the Territorial Parks Legislation. The criteria are as follows:

- 1) The integrity of the essential characteristics of many ecosystems cannot be safeguarded unless the protected areas are large and varied; and
- 2) Successful stewardship will also depend on adequate control of the use of land and water in surrounding areas.

(Source: MAB Report Series No. 22)

Therefore, as a strategy for promoting the region for tourism and enjoyment of visitors to the Northwest Territories while protecting the unique geological, visual and interpretive experiences in this region, the following strategy is proposed:

1. That a Territorial Park be established. This park will have the unique **Karst landforms** associated with the **Sundog** Basin as its primary focus but it will be large enough to provide buffers for the **Karst** features area, while including the Ram Plateau and the South **Nahanni** Plateau as part of the territorial park. This park, therefore, **should** include the region shown in Figure 2.3 - Proposed Territorial Park.
2. The classification proposed for the park is Natural Environment Recreation Park. This will ensure that the wilderness experience and the wildlife habitat in the region are retained but will permit visitors from other parts of Canada and the World to visit this area. This experience could be a destination by itself or as part of a **Nahanni** National Park wild river experience. The National Park could be marked as a wild river experience while the **Nahanni** Territorial Park could be marketed as a wild wilderness landscape experience. Over time it is probable that **Nahanni** National Park may become less of a wilderness experience and the proposed Territorial Park will be marketed as the true MacKenzie Mountain wilderness experience.
3. After extensive field investigation and research is conducted, confirming the regions uniqueness, an application should be made to UNESCO proposing that the Ram Plateau and **Sundog** Basin (North **Karst** Belt) be established as a World Heritage Site.

A Territorial Park rather than a National Park designation will **permit** access to the region's features and permit visitor accommodation within the park boundaries.

### 2.3.1 Park Boundaries

Although it is not the primary purpose of this study to determine a park boundary for a Territorial Park, a boundary is being suggested *in* order to ensure the resources associated with this area can be conserved. Further study by wildlife biologists and park planners will be required to ensure this preliminary recommendation for a boundary is appropriate or make the needed adjustments.

In accordance with the zoning principles forwarded by **M.A.B.** (Report No. 22, 1974) a World Heritage Reserve (or Biosphere) should include core and buffer zones. In the *core* zone no development is permitted, while in the buffer zone use by the public is permitted according to the carrying capacity for any given tract of land. We suggest that the core for the Territorial Park be the Labryinth Zone of the Sundog Basin and that the buffer zone for this region be the rest of the territorial park. The suggested park size would be approximately 3,000 square miles in size.

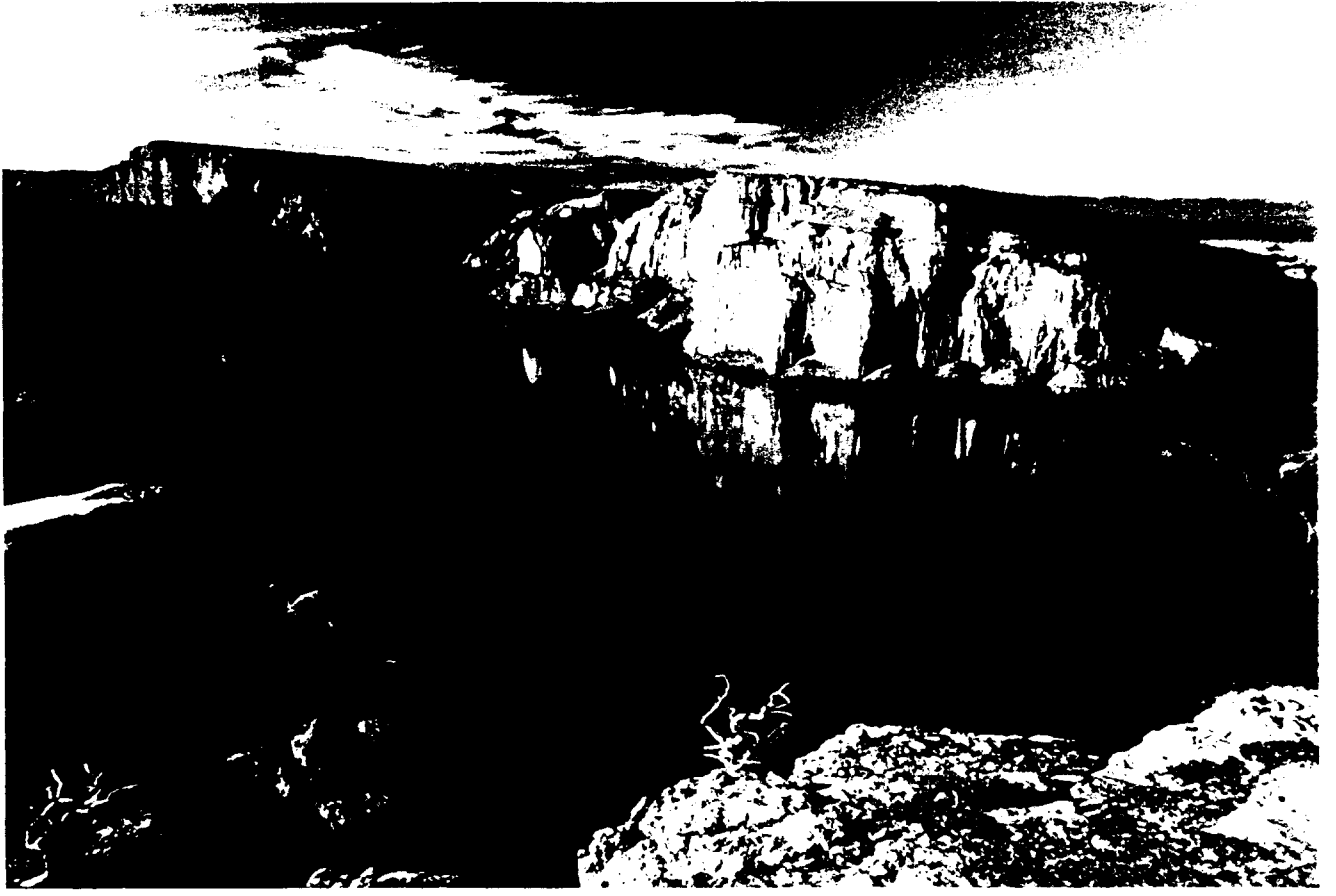
The recommended park boundary (Figure 2.3 - Proposed Territorial Park) is to include the entire North Nahanni watershed. This is an ecologically sensitive boundary and its size of 3,000 square miles creates a park which would qualify it as one of the largest in the Territories. This park boundary will encompass most of the unique geological, visual and interpretive resources of the region.

Part B of this report specifically addresses how the region can be sensitively developed through the construction of a trail network and tourist facilities.

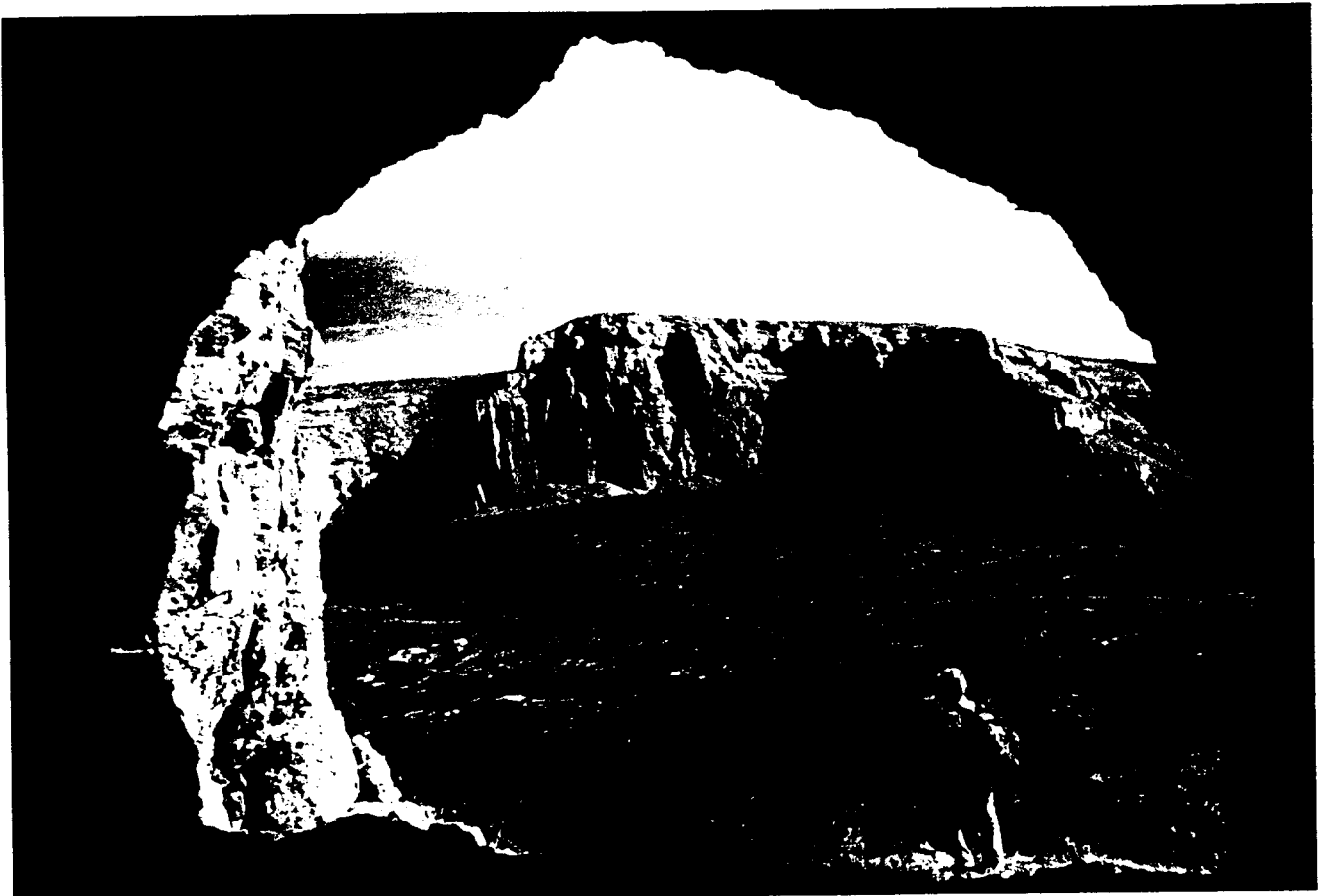


1. Camp site in Death Canyon. Igloo Cave is located at top of scree line in butte.





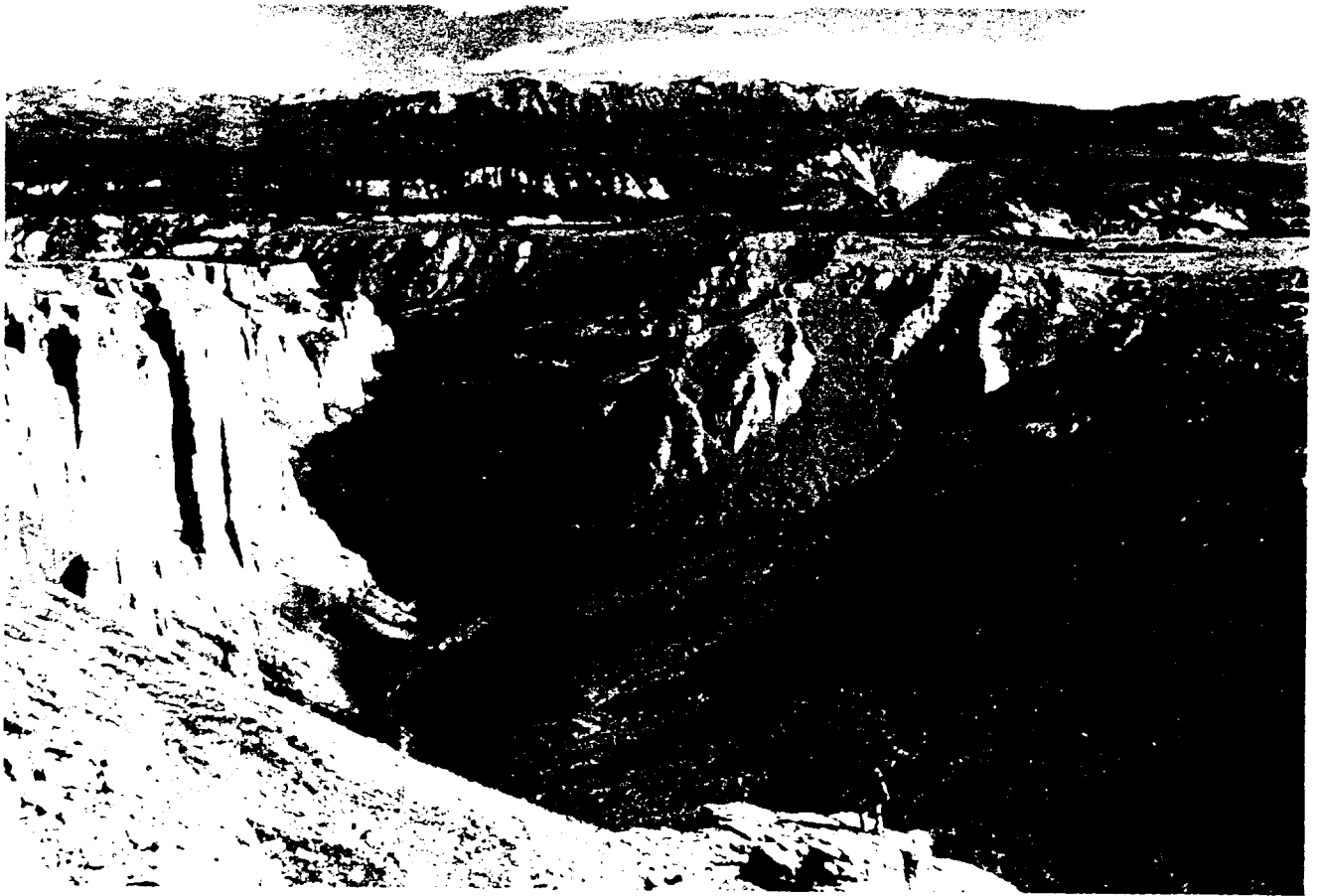
3. Looking Northeast over Death Lake.



4. View from IglooCave (Death Canyon). Cave contains many spectacular ice sculptures.

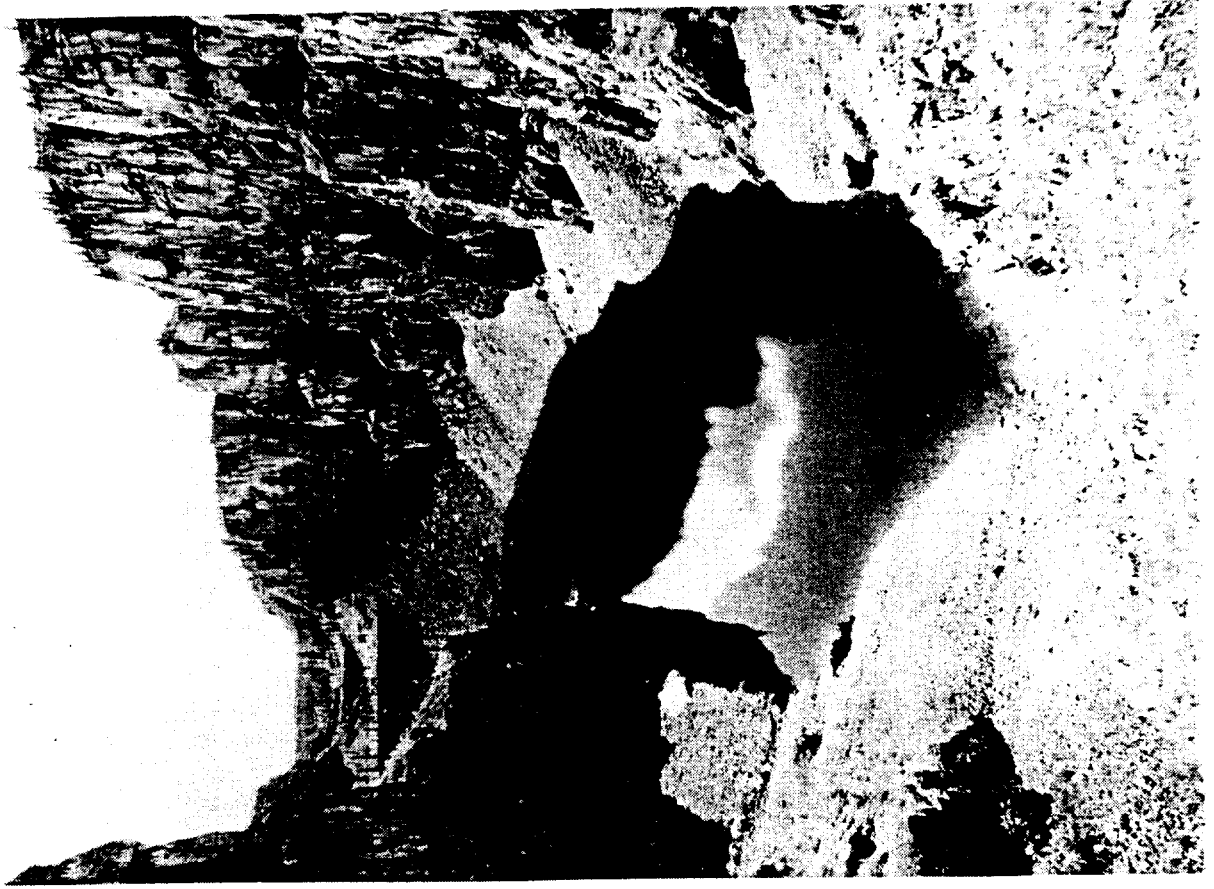


5. The vast canyons of the Ram Plateau.

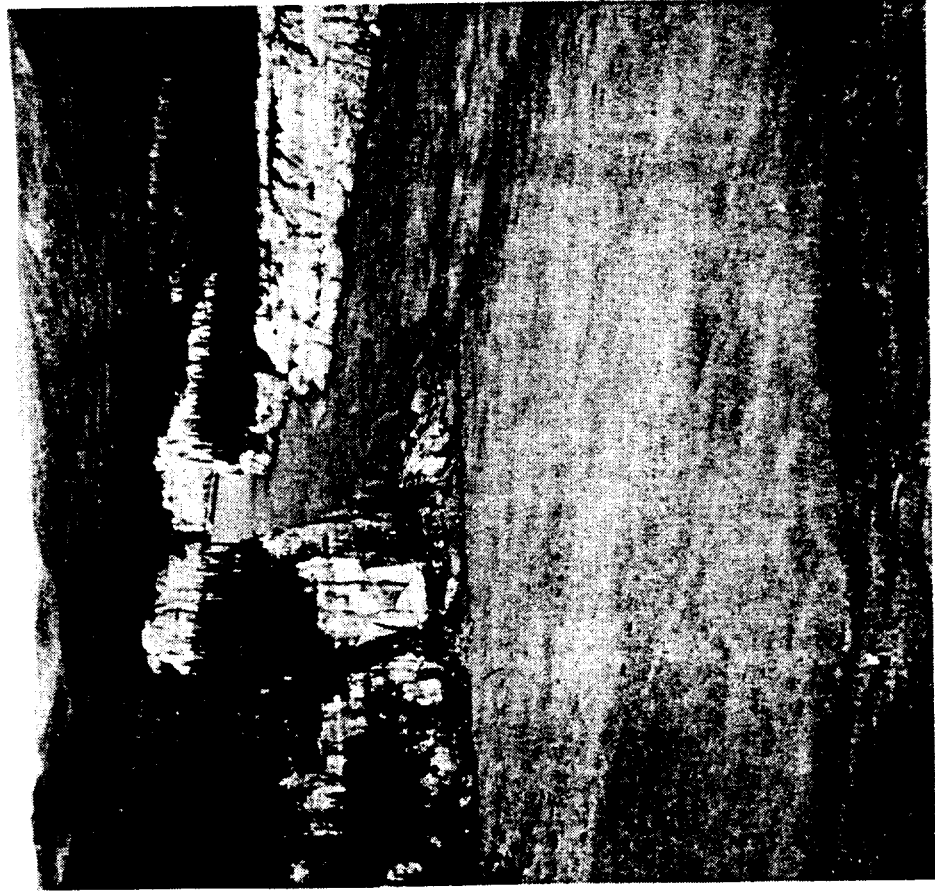


6. C rash Can\, on, SouthNahann i Plateau.

7. Raven Lake at low and high levels. (June vs. July). Shows 160' water elevation difference primarily due to underground hydraulics. (No streams flow into lake).



8. Third Polje - the largest of the poljes - these illustrations indicate the constant changing landscape phenomenon in the region. Note two figures in foreground.





11. Third Polje - summer condition - grass meadow.



9. Raven Lake arches.



10. RapelCenote - water filled basal floor.



**PART B**

**TOURIST FACILITY ASSESSMENT**

## PART B - TOURIST FACILITY ASSESSMENT

### 3.0 POTENTIAL FACILITY LOCATIONS AND **ACTIVITY** AREAS

#### 3.1 Introduction

As noted in the previous section, the number one priority for this region is that the resources of the area be wisely managed. As a Natural Environment Recreation Park of the Northwest Territories, the natural environment will be preserved for the "benefit, education and enjoyment of the **public**" (paragraph 4 [1] [c] - Territorial Parks Act). Under this park classification development is directed toward the preservation of the resource for public enjoyment of the natural environment of the park (paragraph 4 [2]). This will ensure that natural features will be protected and environmental degradation will not occur. Within this park type, however, tourist accommodation may be constructed with ministerial approval. In the following sections the study region will be discussed with respect to the feasibility of developing a tourist related accommodation. These facilities could range from a series of small cabins to a four season lodge. Detailed market analysis and assessment will be required in the future in order to determine the nature of the preferred development.

#### 3.2 Access to the Focus Area

The major reason why the unique features of the Ram and Sundog Basin have remained a secret for so long is the inaccessibility of the region. This area is isolated, with no permanent roads and has limited air access. The only road to the area services the Cadillac Mine site (Figure 2.1). It is a winter road and apparently is considered inoperable due to severe washouts. The road was cut to service the construction of the Cadillac Mine but seems not to have been used recently. The only permanent landing strip for the region is the Prairie Creek Airstrip and **it**, also, services the mine. The **Keoughs** report that access from the National Park is also very restricted. Dr. Ford, however, suggested that potentially the **Karst** region could be accessed from the park by way of horseback trails.

Therefore, access to the area is limited to helicopters, float planes or planes equipped with balloon tires, which are capable of landing in flat, open, cleared areas.

### 3.2.1 Helicopter & Airplane Access **Areas**

While there are many opportunities to access the region by helicopter from Fort Simpson (one hour flight duration) landing strips and lakes which are large enough to accommodate the larger Cessnas are more difficult to find. The following represents a list of lakes and landing strips which the Keoughs knew to be suitable for the landing of larger aircraft. They are listed in order of suitability, the amount of present usage and their relative proximity to the features of the study area:

- Little Doctor Lake (currently used by Ted Grant)
- North **Nahanni** River Bed
- Mosquito Lake
- Ram Plateau
- **Cli** Lake
- Ram River Bed

Note: There may be many other suitable landing areas and further contact with air charter services will provide a more comprehensive list.

### 3.2.2 River Access

One potential, method of gaining access to the region for tourists is by means of river scow, by way of the MacKenzie River, up the North **Nahanni** River. This would provide access as far as the Ram River and the North **Nahanni** Gorge.

## 3.3 Potential Tourist Facility Locations and Activity Area Analysis

As part of the terms of reference, the consultants have been requested to review potential sites for tourist facility construction. This is necessary at this pre-feasibility stage of the study for the following reasons:

- 1) Given that the resources of the region are of national and international quality, what is the best way to gain the widest exposure to appeal to the broadest market. Through developing tourist facilities (the type and extent to be determined by later studies), the region will appeal to a far broader group of Canadians than it presently does.

- 2) Tourist facility development will obviously increase economic development in this area which is presently lacking.

With respect to potential development sites, the isolated nature of the region, its limited **access** and the small geographic extent of the unique **landform** features restrict the number of suitable locations for tourist/outfitting camps. Another important consideration in the location of a facility is access to potable water. This factor is considered for each potential development area. The following is an overview of potential tourist facility locations with respect to air access. These sites are **analyzed** with respect to site opportunities and constraints.

3.3.1 Potential Tourist Facility Sites (refer to Figure 2.2)

Opportunities	Constraints
<p><b>Mosquito Lake/First Polje Area</b></p> <ul style="list-style-type: none"> <li>• <b>Lake large enough</b> for float planes</li> <li>• According to Dr. Ford there is an attractive bubbling spring area suitable for a lodge along the stream which drains the Mosquito Lake</li> <li>• Closest proximity to Raven Lake features and the First, Second and Third <b>poljes</b></li> </ul>	<ul style="list-style-type: none"> <li>• Low lying and not an attractive lake</li> <li>• Abundance of mosquitoes</li> </ul>
<p><b>Death Lake</b></p> <ul style="list-style-type: none"> <li>• Visually very distinctive and attractive</li> <li>• Close water landing location to <b>Sundog</b> Basin</li> <li>• Possible setting for a facility of international quality</li> </ul>	<ul style="list-style-type: none"> <li>• Larger planes (e.g. Cessnas) cannot land</li> </ul>
<p><b>Little Doctor Lake</b></p> <ul style="list-style-type: none"> <li>• <b>Extremely attractive inland fjord</b></li> <li>• <b>Easily accessible by float plane</b></li> <li>• <b>Good four season recreational potential</b> for boating, skating and ice boating</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Not within close proximity, to Karst area. 1-3 days hiking to Ram Plateau and the Sundog Basin is required</b></li> </ul>

Opportunities	Constraints
<p><b>Little Doctor Lake (Continued)</b></p> <ul style="list-style-type: none"> <li>▶ Existing lodging facilities exist and with expansion and aggressive marketing maybe a most suitable development area for year round tourist attraction</li> <li>▶ High recreation potential for cross country skiing and snowmobiling</li> <li>▶ Existing trail access into feature area</li> </ul>	
<p><b>Ram Plateau</b></p> <ul style="list-style-type: none"> <li>▶ Many locations suitable for airstrip</li> <li>▶ Many very scenic locations suitable for a facility</li> </ul>	<ul style="list-style-type: none"> <li>•</li> <li>• May be too exposed a location for lodge development</li> <li>• Facility may have to be located off plateau, below treeline</li> <li>• Access to water will have to be evaluated in further study as it appears to be lacking</li> </ul>
<p><b>Ram River Channel</b></p> <ul style="list-style-type: none"> <li>▶ There are a number of potential locations for a landing strip and lodge location</li> <li>▶ Close proximity to both Ram Plateau and Sundog Basin</li> </ul>	<ul style="list-style-type: none"> <li>• Possibly requires development</li> <li>• Requires hiking through lowland to Basin and Plateau</li> </ul>
<p><b>North Nahanni River</b></p> <ul style="list-style-type: none"> <li>▶ Many suitable locations for landing strips and facility location</li> <li>▶ Attractive area and close to gorge area of North Nahanni River</li> </ul>	<ul style="list-style-type: none"> <li>• While ideal for North Nahanni region, too remote from Ram Plateau and Sundog Basin</li> </ul>
<p><b>Prairie Creek Airstrip</b></p> <ul style="list-style-type: none"> <li>▶ Existing airstrip</li> <li>▶ Relatively close proximity to Sundog Basin and Ram Plateau</li> </ul>	<ul style="list-style-type: none"> <li>• If mine is reactivated, visitor use will be restricted</li> <li>• Existing mining operation is in serious need of visual upgrading, therefore provides poor first impression of region.</li> <li>• Facility would have to be located some distance from airstrip in focus area</li> </ul>

### 3.3.2 Preferred Tourist Facility Locations

Based on our research and assessment of the region's resources and access, the following four locations should be considered for development. Each site will require further detailed field assessment as to its suitability as a tourist facility/outfitting camp. Since **these** sites are mostly located within the boundaries of the proposed park they would be built by the government and leased to private operators. This arrangement and government control will ensure they are operated properly, protected, and that the unique resources of the region are being interpreted correctly.

1. Mosquito Lake **Springs** and Waterfall

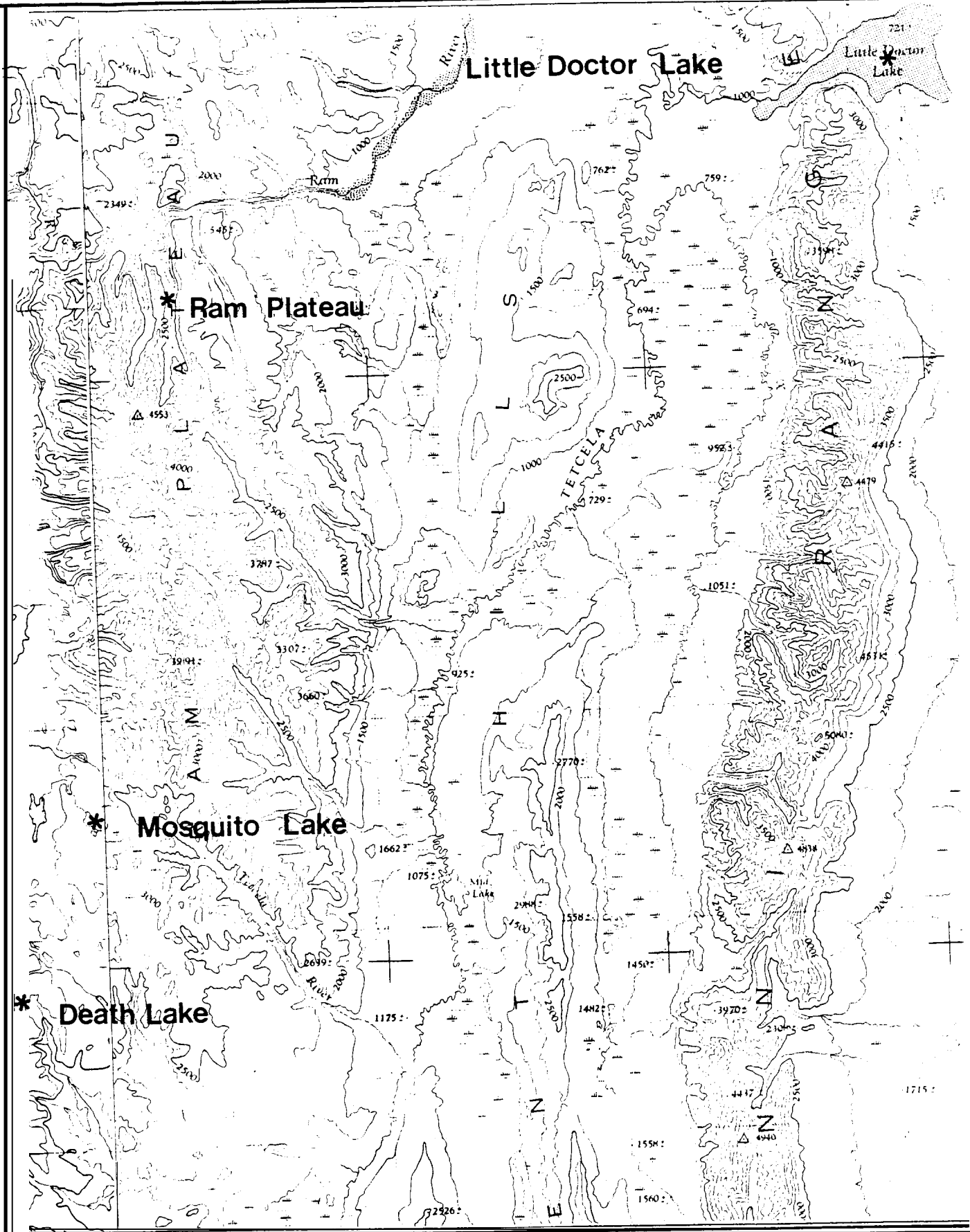
Mosquito Lake is the most suitable lake for landing an aircraft in the immediate Sundog Basin. Tourist accommodation located along the stream draining the lake has been suggested as a potential development site. Bubbling springs and a waterfall add to this location's appeal and its proximity to the **poljes** and Raven Lake is its principal attribute. A facility located at Raven Lake or the **poljes** should also be investigated.

2. Ram Plateau

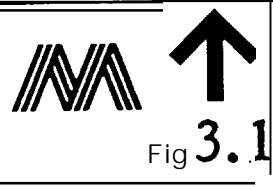
Most of the northern valleys of the Ram Plateau are considered spectacular according to the Keoughs. These spectacular settings are located in an area which is very easy hiking terrain and there are many views afforded from the top of the plateau. This area for a tourist facility would appeal to the less "adventurous **hiker**" who may just want to remain in an easy walking area, yet one with spectacular scenery. In many ways the plateau is analogous to the western rim of the Grand Canyon where there is easy walking terrain yet spectacular views down into the surrounding gorges.

Access also appears to be very suitable, as planes can land on the plateau or on the gravel beds of the Ram River located northeast of the plateau.

Boat access from the MacKenzie River is also possible to service this area.



Preferred Tourist Facility Locations



1:250,000

Fig 3.1

Note: Hiking to the **Sundog** Basin would also be relatively easy as the Ram Plateau is easily traversed and the basin% many attractive features are within a 5-mile walking distance from the southern edge of the Plateau.

3. Death Lake

While this location for a facility is somewhat more difficult in gaining access to, it appears to be one of the "**crown jewels**" of the lakes and mountainous settings in the study area. Therefore it warrants serious consideration as a candidate site. A landing strip developed adjacent to it or on the flat terrain of the **Nahanni** Plateau should be assessed. This lake is also in close proximity to the **Karst** Belt (within 2 miles) and the Ram Plateau (within 5 miles).

4. Little Doctor Lake

This site should be considered, for in addition to being an extremely attractive and unique lake (inland fjord) it appears to have the most potential as a year round tourist facility. The lake itself can be used for recreational boating and fishing in the summer or ice boating, skating, **skidooing** and cross-country skiing in winter.

The existing tourist camp operated by Ted Grant, which is outside of the proposed park boundary, with expansion may be considered as a candidate site for a more permanent, year round season establishment, providing present management is interested in such an undertaking. If not it has been suggested that the attractive gravel beach area at the **lake's** western terminus is a very suitable development site. This site is also within the proposed park boundary. There is easy access into the lake and the Ram Plateau is within a day% hike of the lake. Access to the spectacular North **Nahanni** River gorges and the **Camsell** and **Nahanni** Ranges is also possible from this location. Tourist accommodation located here probably would require the establishment of outpost camps on the Ram

Plateau and in the **Sundog** Basin and possibly the North **Nahanni** River Gorge. A second facility, located in any of the locations previously



described may be considered as a complimentary development to this year round tourist facility. Visitors could stay at one facility, camp at a base camp on the Ram Plateau, then arrive at a second facility located in the Sundog Basin.

### 3.3.3 Activity Areas

Because of the geographic distances, there are really two possible activity areas or zones.

The North Nahanni River and Plateau is spectacular hiking with many viewing opportunities into awesome canyons. This region is a far distance from the study focus area, therefore, may require special helicopter or airplane charter service to connect the two regions if people were not prepared to hike the distance.

As part of the future park concept and management plan this area should also be investigated as a potential location for a tourist facility which would be complementary to the Ram **Plateau/Sundog** Basin area.

This area has the advantage of being accessible by water, therefore allowing travel during periods of bad weather. This mode of travel is also far less expensive than air travel. The fact that tourists could use the Mackenzie River to access the region also appeals to its marketability.

The Ram Plateau/Sundog Basin is the primary focus area and most hiking or horseback trails would typically follow the route connecting Little Doctor Lake, along the Ram Plateau into the **Karstlandform** area.

## 4.0 TOUR MARKET OVERVIEW - COMPARATIVE TOURIST FACILITY ESTABLISHMENTS

### 4.1 Introduction

As part of this study the consultant felt it necessary to determine whether there were year round tourist facility establishments in the north or world-wide which could be used as a model for potential tourist facilities for the study area. The results of our investigation are somewhat inconclusive for, while there are many northern facilities, few are really considered as year round tourist resorts. Examples in more southerly climates are difficult to compare to an arctic environment.

To summarize our findings, it appears that most facilities/resorts are established as part of a tour package and you will note that the majority of packages are to Canadian destinations. Greenland and Iceland are behind Canada with respect to tourist accommodation. Iceland, however, with its thermal springs appears to have the greatest potential as a destination for a four season resort. The following outlines our investigation into tours and accommodation in isolated regions.

### 4.2 **Tours**

Several organized package tours from Canada and the U.S. are offered to the Arctic, Iceland and Greenland. These tours can range from three days to a number of weeks in duration and are offered year round. Most tours place emphasis on exploration of the natural habitat through camping or hiking excursions, while some make visits to local native communities and historic sites. Depending on the tour package, meals, guides and supplies may be included. Tour itineraries usually begin at a specific hotel or facility with day trips made from the hotel or longer excursions beginning and ending at the same hotel. The following list summarizes some of the organizations and the tour packages they offer.

4.2.1 Air Canada (1988)

Consumer Expeditions - June, July, August Price Per Person

<b>Ellesmere</b> Island	Exploratory Trek	\$3,300
	Lake Hazen to <b>Tanquary</b> Fjord	3,300
	Arctic Dreams	3,500
<b>Baffin</b> Island	Land of the Narwhal	2,700
	Arctic Ice Edge	3,500
	<b>Auyuittuq</b>	1,250
	North Pole	6,500

4.2.2 Canada North Outfitting Inc. - July, August

Price Per Person

<b>Ellesmere</b> Island Cruise	\$3,665
Tengait Arctic Char Camp (from Ottawa)	3,150
<b>Milne</b> Inlet, <b>Baffin</b> Island (from Ottawa)	2,945
High Arctic Fishing Adventure (from Montreal)	7,565
North Pole Expedition	9,175

4.2.3 **Goliger's** Tours Ltd.

Price Per Person

<b>Baffin</b> Island	\$3,000
Greenland	3,000
Iceland	3,000
Top of the World (all three)	5,000

4.2.4 Canadian Nature Tours (1982)

Price Per Person

Greenland	\$1,750
Pangnirtung	1,250
Repulse Bay	2,150
Pond Inlet	2,150

4.2.5 Mountain Travel (California)

		<u>Price Per Person</u>
Exploring Iceland (1986)	(Land cost)	\$1,400-1,600

4.2.6 **Icelandair**

		<u>Price Per Person</u>
Several Tours from Reykyavic		\$469-1,450
Greenland		900

4.2.7 Special **Intrestours** (Washington)

		<u>Price Per Person</u>
Baffin Island Photography Odyssey		\$2,650

Several organizations will also organize tours and excursions on request, depending on the specific interest of the customer. For example, **Sobek** Expeditions Inc. put together personal interest travel programs to the north. They recently put together a five-day trip to learn how to dogsled in the Great Slave Lake area. Leaving from Yellowknife, the trip included accommodations, meals and guides. Such tours could range between \$850 and \$1,225 (U. S.) per person. This type of tour may be suitable for the Nahanni and Ram Plateau area.

4.3 Facilities

There are several wilderness facilities in the north catering to fishing, hunting, hiking and photography enthusiasts. Most find themselves located in the southern regions of the Northwest Territories. There are those high wilderness facilities, however, located north of the Arctic Circle. They are summarized in Figure 4.1.

4.4 **Karst** Landscape Tours - The Yucatan Peninsula

As noted in Section A of this report, the Yucatan Peninsula has the highest agglomeration of **Karst topography** in the world. The similarities between this area and that of the Ram Plateau area allow for the comparison of the destinations and the types of accommodation and activity associated with them. The number of tours and resorts in the Yucatan area is too numerous and will not be summarized here. However, for the

ACCOMMODATION

Name, Location	No. Accom.	Type	Activities	Services	Access From	Cost Per Person *
Minguto Outpost Lodge Baffin Island	12	Lodge	W, E, H, F	C, G		N/A
Colville Lake Lodge	12	Lodge, Cabins	F, C, K	G, F	Ft. Good Hope	\$930/week
Eskimo Lake Lodge 65 m. N. of Tuktoyaktuk	16	8 Dorms	F, W	D, G	Tuktoyaktuk	N/A
Griseiford Lodge Baffin Island	18	9 Rooms	F	B, C		\$125 per day
Lake Hazen Lodge 65 m. N. of Deception Bay	15	Lodge	F, A, XC	G, F		\$160 per day
Sitidgl Lake Lodge	6	Tent, Cabins	F	F, B, D	Inuvik	\$175 per day
Chantrey Inlet Lodge	18		W, H, E, C	F, G, B	Yellowknife	
			F, W	F, G, B	Fort Frances	

Activities:

- C = Canoeing
- W = Wildlife Observation
- E = Exploration
- H = Historic Sites
- F = Fishing
- K = Camping
- A = Alpine Skilling
- XC = Cross country skilling

Services:

- C = Cooking facilities
- G = Guides
- F = Food included
- D = Dining room
- B = Bath

\* Prices may vary

**Accommodation**

purpose of this discussion, the common elements for these destinations and potential destinations in the north will be highlighted.

- Return tour packages to specific destinations in Yucatan, e.g. Cancun, Merida, **Villahermosa**.
- Hotel and resort type accommodations with meals included.
- Transfers and sightseeing tours to local and regional historic Aztec sites, hiking expeditions, etc. with the resort being "**home base**".
- English speaking guides and escorts.

History, culture and beaches have made Yucatan an idyllic resort destination. The similarities between the types of activity offered here and the services and packaging of these trips can be applied to the Ram Plateau, regardless of the temperature.

#### 4.5 Conclusion

As noted, other than the facilities that many officials of the Northwest Territories may already be aware of, there are very few high wilderness, high quality resorts which provide a suitable comparison for the Ram **Plateau** area. What is important, however, is that advertisement, marketing and packaging of the resource is critical in order for people first to become aware of the Ram Plateau and Sundog Basin and, secondly, wish to visit it. The following indicates some guidelines in this regard.

## 5.0 IMPLEMENTATION

### 5.1 Initial Marketing Direction and Community Involvement Process

In developing tourist facilities for the future Territorial Park, two critical issues must be addressed. The first is to gain community support for the undertaking. The second is to create a destination which is distinct from the **Nahanni** National Park experience but complimentary to it; therefore allowing the packages to be promoted jointly.

The first, and perhaps most critical, aspect of this development is to gain community support and enthusiasm for the project, from residents in **Nahanni** Butte, Fort **Laird** and Fort Simpson.

The development of this region must be perceived by the local people as part of their initiative and for their use and enjoyment as well. This is unlike the present local perception of the National Park, where local initiatives and activities in the Park are perceived as unwelcome. Therefore, opportunities to involve local citizens in site selection and detailed field investigation is important. Jobs and business opportunities created for local citizens (outfitting, guides, etc.) should be stressed to ensure their support. The development of the Ram Plateau Region over the longer term will be perceived as a focus for the community in which the people played a valuable part in helping to create a world-wide international destination which they feel welcome to visit and enjoy.

Concerning the second issue, with World Heritage Designation based on the region's Karst **landforms** and scenic quality the study area, will be very marketable. The Ram Plateau and Sundog Basin, as well as the regions in the study area which are more remote, will add to the "things to see and do while visiting the MacKenzie Mountains. The diversity in landscapes and settings should be contrasted with those of **Nahanni** National Park to ensure that they become areas which must be seen and explored. Their unique wilderness qualities versus the heavily travelled South **Nahanni** River corridor is another marketing strategy. The easy hiking conditions in the Ram Plateau versus the National Park should also be advertised. Finally, through the establishment of a facility or facilities, the region could be promoted in terms of its four season activities. Potentially all of the above factors will siphon off an increasingly greater number of visitors from the National Park.

## 5.2 Implementation Steps

**5.2.1** Through discussion with community leaders and interest groups establish community support and involvement in the formation of the park and tourist related activities and facilities.

**5.2.2** Develop park concept and management plan including facilities and activities appropriate to the park. Resolve park boundaries.

The consultant estimates that this work would cost approximately \$40,000.00.

**5.2.3** Steps towards gaining ministerial approval for the creation of a territorial park should be undertaken.

**5.2.4** Start capital development program and provide leases for outfitters and tourist facilities.

**5.2.5** Once a park has been established, application towards the creation of a World Heritage Site should be undertaken. This will provide the area with international exposure and publicity. It will also put the region on par with Nahanni National Park, which already has the World Heritage Designation. Therefore, the study region will potentially be on the list of "must things to see" while in the MacKenzie Mountain region.

**5.2.6** Once exposure to the area has been gained, more detailed work must be undertaken. The four candidate sites for the development of tourist accommodation should be evaluated and ranked with respect to the following criteria:

- Ease of access
- Proximity to Recreation and Interpretive Features
- **Visual** uniqueness and attractiveness
  - Factors considered:      Aesthetic Value
  - Landscape Type
  - Landscape Diversity
  - Scale
- Minimum disturbance to ecologically sensitive areas and wildlife habitat
- Locational aspects with respect to potential regional trail network



- Community support and acceptance for specific development sites
- Willingness of private sector to undertake development initiatives

5.2.7 A detailed feasibility study and concept plan should be prepared for the preferred development site. This study will provide a market and financial analysis for the undertaking. A site plan will also be required as well as a marketing and management plan.

For items 5.2.6 and 5.2.7 the consultant estimates this work would cost approximately \$50,000.00. Cost savings could be achieved if this and the park concept study were completed together in two phases by the same consultant.

5.2.8 Once the park and tourist accommodation has been established, continual marketing and promotion of the region will be required on an ongoing basis to ensure the success of the area as a tourist attraction in the future.

5.2.9 Once a facility site has been determined, routes, destinations and itineraries for guided trips, equipped by local outfitters, should be determined.

5.2.10 Continual marketing and promotion of the region will be required on an ongoing basis to ensure the success of the establishment or establishments in the future.

## CONTACT PERSONS

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