

649

*WILDLIFE*

*PROJECTS*

*1988*

**Yukon**

Renewable Resources

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**YUKON WILDLIFE  
MANAGEMENT PROJECTS**

**1988**

**Government of Yukon  
Department of Renewable Resources  
Box 2703  
Whitehorse, Yukon  
Y1A 2C6**

**Hon. Art Webster  
Minister**

YUKON WILDLIFE MANAGEMENT PROJECTS

These summary sheets are designed to give persons within the Government of Yukon and others with a direct interest in wildlife management in Yukon, an overview of where effort is being directed by staff of the Department of Renewable Resources in the 1988-89 fiscal year. The problems being addressed, methods applied, and areas of the Yukon where work is being conducted are emphasized. All wildlife projects will result in written reports upon completion and most produce interim reports annually.

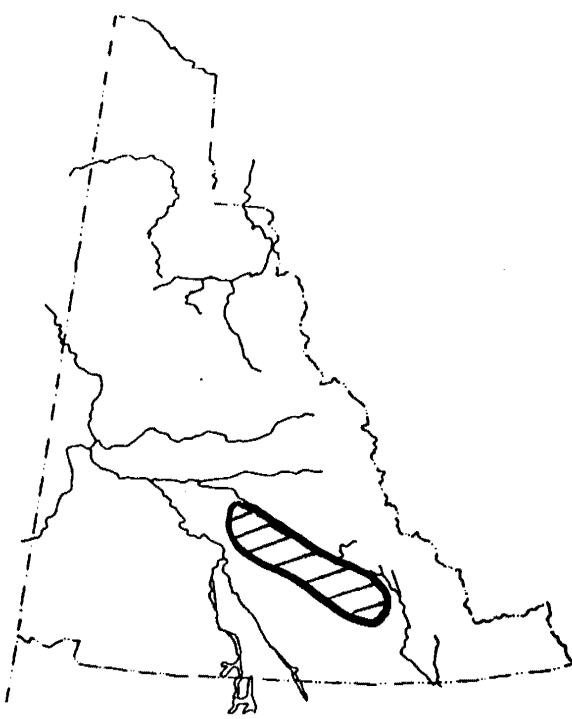
The projects fall into broader areas of concern as follows:

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## SHEEP AND GOAT MANAGEMENT

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**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Pelly Mountain Sheep Study</b>	
<b>Project Leader(s): N. Barichello</b>	<b>Assistance: J. Carey R. Sumanik V. Loewen</b>
<b>Date Initiated: 1988</b>	<b>Duration:</b>
<b>Location: Pelly Mountains, East</b>	<b>District: Ross River</b>
	<b>GMZ: 8 &amp; 10</b>
<b>Dates of Field Work: June/July</b>	
<b>Operational Budget (YTG):</b>	<b>Cooperators:</b>
	<b>Reason for Project:</b> <ol style="list-style-type: none"><li>1. Determine current status of sheep.</li><li>2. Determine sheep seasonal distribution patterns, particularly in reference to mining activity in the area.</li><li>3. Examine the effect on sheep demography of wolf reduction.</li></ol>
	<b>Cooperating Agencies:</b>

Progress to Date (Summary of Results): N/A

Current Year Objectives, Plans:

June/July - Helicopter surveys to determine number, age/sex composition, group size, distribution.

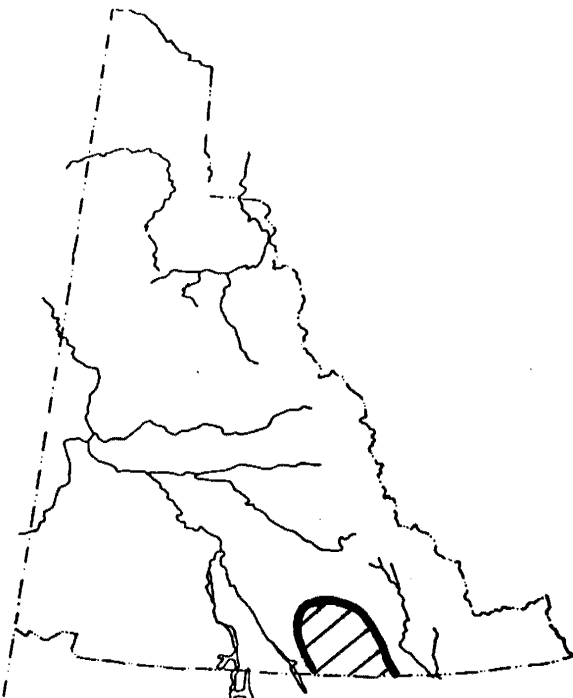
March - Helicopter surveys as above.

Publications, Reports:

Current Year Report Due:

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Mountain Goat Inventory</b>	
<b>Project Leader(s): N. Barichello</b>	<b>Assistance: J. Carey R. Sumanik V. Loewen</b>
<b>Date Initiated:</b>	<b>Duration:</b>
<b>Location: Cassiar Mountains</b>	<b>District: Watson Lake, Whitehorse</b>
	<b>GMZ: 10</b>
<b>Dates of Field Work: July 1988</b>	
<b>Operational Budget (YTG):</b>	<b>Cooperators:</b>
	<b>Reason for Project:</b> Ongoing inventory of mountain goats.
	<b>Cooperating Agencies:</b>

**Progress to Date (Summary of Results):**

Completed current inventory of GMZ 7 and 9.

**Current Year Objectives, Plans:**

Helicopter inventory of selected areas in GMZ 10 (Cassiar Mountains).

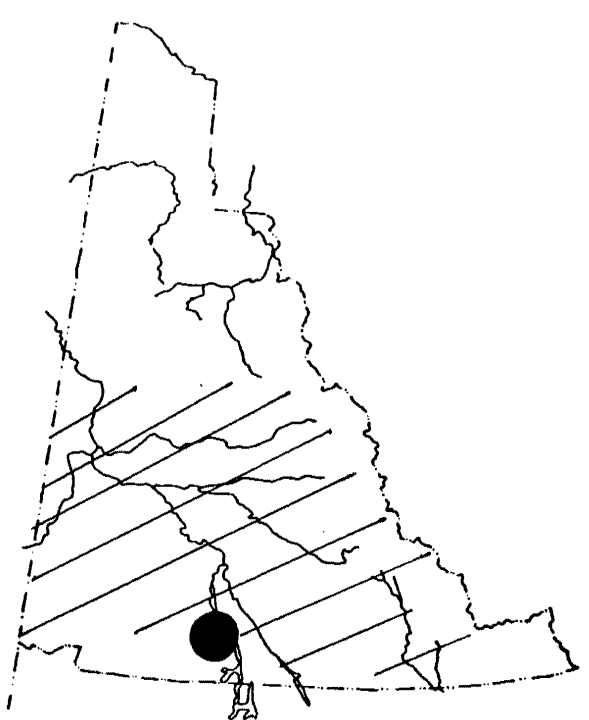
**Publications, Reports:**

Status and Management of Mountain Goats in the Yukon

Current Year Report Due:

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Lumpy Jaw in Thinhorn Sheep</b>	
<b>Project Leader(s): N. Barichello</b>	<b>Assistance: J. Carey M. Hoefs H. Hoefs</b>
<b>Date Initiated: 1981</b>	<b>Duration:</b>
<b>Location: Yukon</b>	<b>District:</b>
<b>Dates of Field Work:</b>	<b>GMZ: 2,4,5,7,8,10</b>
<b>Operational Budget (YTG):</b>	<b>Cooperators:</b>
	<b>Reason for Project:</b>  To provide a detailed assessment of Lumpy Jaw in thinhorn rams.
	<b>Cooperating Agencies:</b>

**Progress to Date (Summary of Results):**

**Report in progress.**

**Current Year Objectives, Plans: N/A**

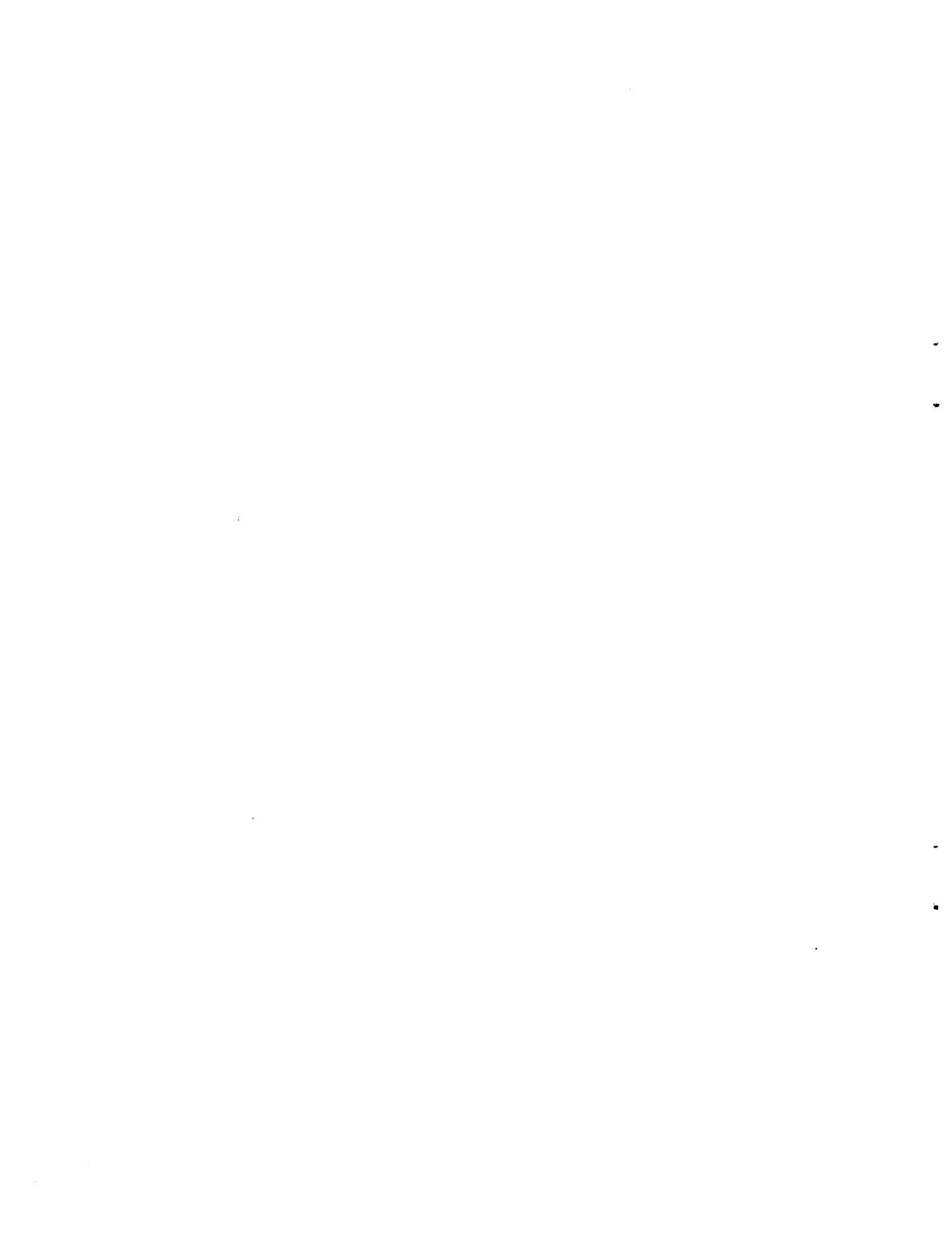
**Publications, Reports: In progress.**

**Current Year Report Due:**

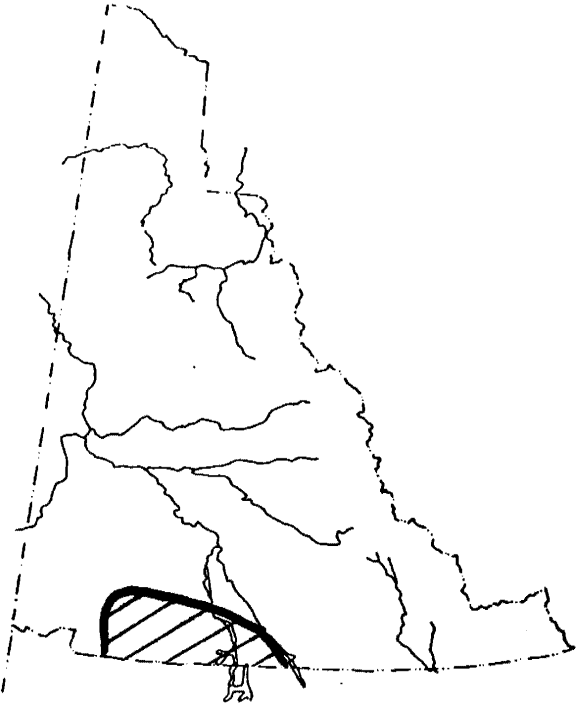
**Final Report Due:**

**MOOSE MANAGEMENT**

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**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Moose Recovery Plan - GMZ 7 &amp; 9</b>	
<b>Project Leader(s): D. Larsen</b>	<b>Assistance:</b>
<b>Date Initiated: 1983</b>	<b>Duration: Unknown</b>
<b>Location: Southwest Yukon</b>	<b>District: Whitehorse</b>
	<b>GMZ: 7 &amp; 9</b>
<b>Dates of Field Work: NIL</b>	
<b>Operational Budget (YTG): NIL</b>	<b>Cooperators: NIL</b>
	<b>Reason for Project:</b> Moose in this area have either declined or stabilized at low densities with low calf survival rates. A management program initiated in 1983 to enhance moose was only partially carried out. That program called for the reduction of grizzly bear numbers (50%), wolf numbers (70%), and human harvest. After receiving new direction and management objectives in 1987, we have prepared a revised management program. That program is currently under review. If accepted, the first phase of the program, severe reduction of both native and non native hunting will be implemented.
	<b>Cooperating Agencies:</b>

(Doug1)

**Progress to Date (Summary of Results):**

Moose numbers in the Rose Lake area remain at low levels despite moderate wolf reduction and minimal grizzly bear reduction between 1983 and 1987. Moose in the remainder of GMZ 7 and 9 have not been surveyed since 1983 or 1984, and therefore their status is unknown.

**Current Year Objectives, Plans:**

Obtain approval to implement the GMZ 7 and 9 recovery program and implement phase one of that program.

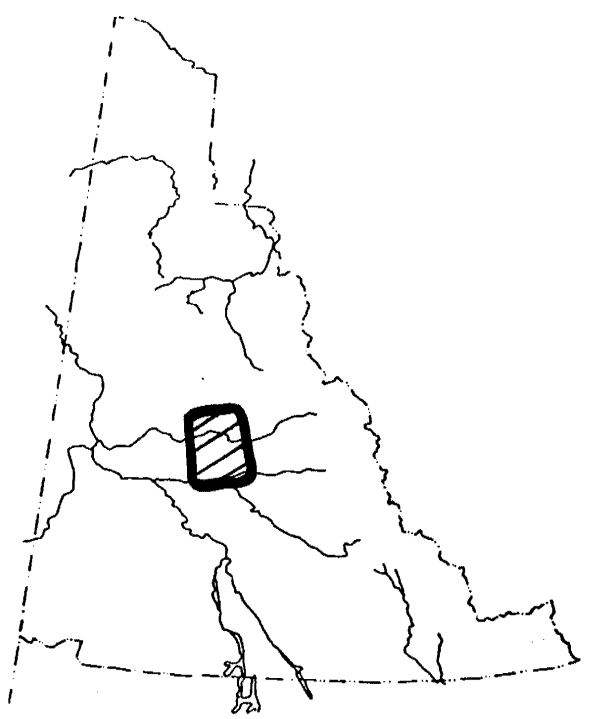
**Publications, Reports:**

1. Larsen, D.G., D.A. Gauthier and R. L. Markel. 1987. Causes and rates of moose mortality in the southwest Yukon.
2. Larsen, D.G. and D.A. Gauthier. 1986. Effects of capturing pregnant cow moose and calf moose on calf survivorship.
3. Gauthier, D.A. and D.G. Larsen. 1986. Identification of predators at moose calf mortality sites.
4. Larsen, D.G. and R.L. Markel. An estimate of grizzly bear abundance in the southwest Yukon. (in prep.)
5. Larsen, D.G. et al. Factors limiting moose in the southwest Yukon. (in prep.)
6. Glover, G. and D.G. Larsen. 1988. Immobilizing moose with combinations of Carfentanil, Fentanyl and Xylazine in the southern Yukon, 1983.
7. Annual Survey Reports, 1981-1986.

**Current Year Report Due:**

**Final Report Due:**

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Mayo/Pelly Moose Survey</b>	
<b>Project Leader(s): D. Larsen</b>	<b>Assistance:</b>
<b>Date Initiated: New</b>	<b>Duration: 6 months</b>
<b>Location: Mayo/Pelly area</b>	<b>District:</b>
	<b>GMZ: 2, 3 and 4</b>
<b>Dates of Field Work: November - December</b>	
<b>Operational Budget (YTG):</b>	<b>Cooperators:</b>
	<b>Reason for Project:</b>  Document moose distribution, density and composition in the Mayo-Pelly area. The survey will be conducted in an area which has received considerable hunting pressure in recent years.
	<b>Cooperating Agencies:</b>

**Progress to Date (Summary of Results):**

N/A

**Current Year Objectives, Plans:**

Document moose distribution, density and composition in the Mayo-Pelly area.

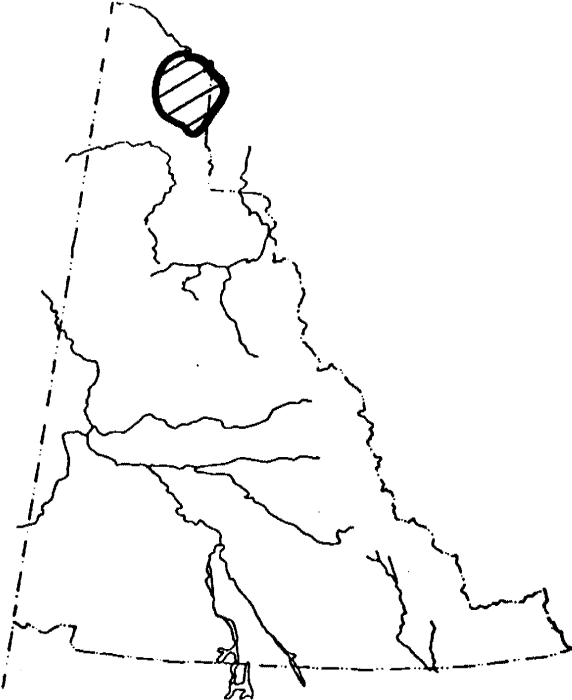
**Publications, Reports:**

N/A

Current Year Report Due: May 1989

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Abundance, sex/age composition and seasonal distribution of moose in the northern Richardson Mountains.</b>	
<b>Project Leader(s):</b> Cor Smits	<b>Assistance:</b> Various YTG & NWT staff during monitoring flights
<b>Date Initiated:</b> March 1987	<b>Duration:</b> 2-1/2 years
<b>Location:</b> Northern Richardson Mtn's. and adjacent coastal plain	<b>District:</b> DAWSON <b>GMZ:</b> 1
<b>Dates of Field Work:</b> One trip (2-3 days) per month during period of study.	
<b>Operational Budget (YTG):</b> Nil	<b>Cooperators:</b> 144.0 (Inuvialuit Final Agreement)
	<b>Reason for Project:</b> <p>Moose of the Yukon North Slope are a vulnerable resource due to their migratory behaviour and their dependence on dispersed habitat patches. The information to be collected should provide the basis to develop a management plan consistent with the provisions of the Western Arctic Claim (IFA).</p>
	<b>Cooperating Agencies:</b> -Federal Treasury Board (through IFA Wildlife Management Programme)

**Progress to Date (Summary of Results):**

A winter census has been completed during March 1987 and April 1988; a fall sex/age composition count took place in October 1987 followed by radio-collaring of 20 moose. Since October 1987 aerial monitoring of radioed moose has taken place about once a month.

**Current Year Objectives, Plans:**

- To aeriually monitor radioed moose once a month
- To radio-collar an additional 5 moose on the Yukon Coastal Plain, June 1988
- To perform a sex/age composition survey, October 1988

**Publications, Reports:**

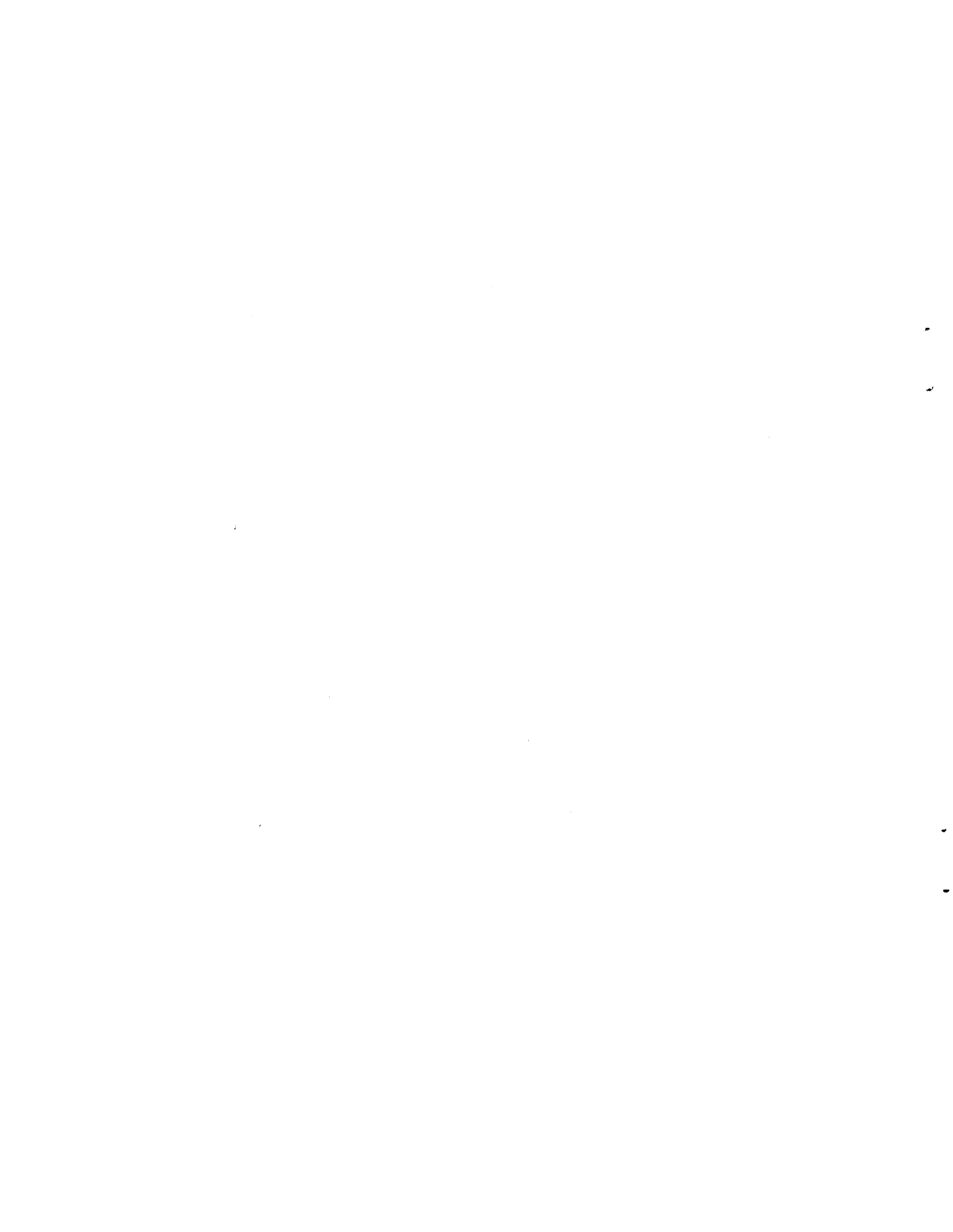
Smits, C.M.M. 1988. Abundance, sex/age composition and seasonal distribution of moose in the northern Richardson Mountains. Dept. of Renewable Resources, Whitehorse.

Current Year Report Due: June 1988

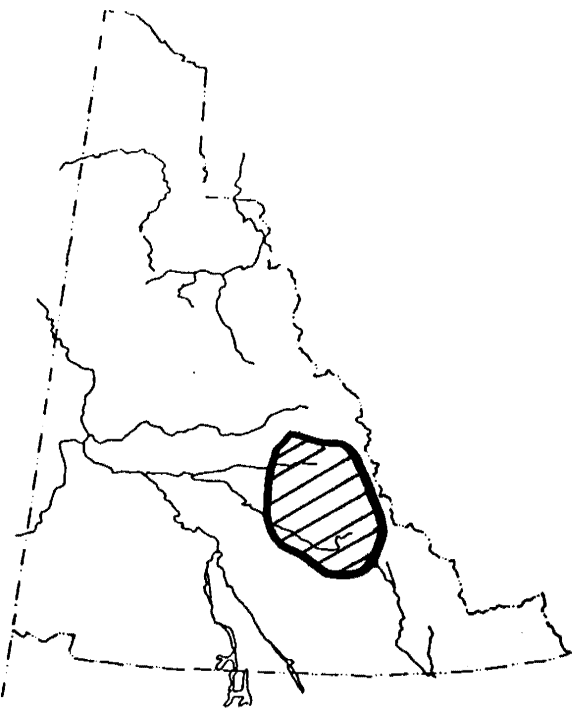
Final Report Due: Winter 1989/90

CARIBOU MANAGEMENT

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**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Finalayson Caribou Herd Management</b>	
<b>Project Leader(s): R. Farnell</b>	<b>Assistance: J. McDonald</b>
<b>Date Initiated: March 1982</b>	<b>Duration: Ongoing</b>
<b>Location: East-Central Yukon</b>	<b>District: Ross River</b>
	<b>GMZ: 10 and 11</b>
<b>Dates of Field Work: October 1988 Feb. - March 1989</b>	
<b>Operational Budget (YTG): \$56,000.00 Cooperators: N/A</b>	
	<b>Reason for Project:</b>  In 1982 the status of the Finlayson Herd of 2000-2500 caribou was that of a declining population with poor calf survival to 6 months of age, a high natural mortality rate and an annual hunter harvest exceeding 10% of the herd. A management project was initiated to stabilize and increase the herd to 5000. A bull only season was introduced, native subsistence hunters cooperated to reduce the winter harvest and a wolf reduction through aerial hunting was carried out. This project will monitor the effects of these management strategies on the Finlayson Caribou Herd.
	<b>Cooperating Agencies:</b>

**Progress to Date (Summary of Results):**

Wolves have been maintained at 15% of their pre-reduction level since 1984. For this same period the harvest of caribou has been reduced by 75%. Recruitment of calves has increased dramatically and adult natural mortality has decreased significantly. A population growth rate of 10-12% annually has been predicted and the herd could conceivably number 5000 caribou by 1990.

**Current Year Objectives, Plans:**

1. Composition counts for calf percentages in October 1988.
2. Wolf reduction during winter 1988-89.
3. Range condition data collection in March 1989.

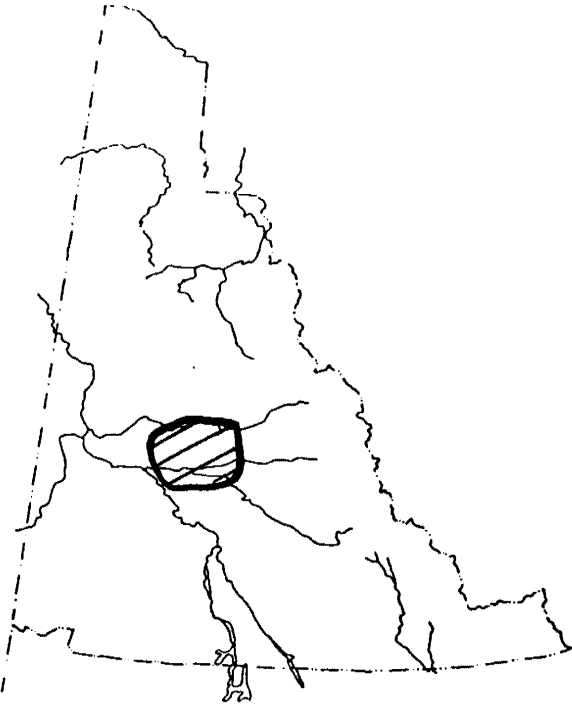
**Publications, Reports:**

The Demography of Yukon's Finlayson Caribou Herd, 1982 to 1987.

Current Year Report Due: N/A

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Woodland Caribou Inventory of GMZ4</b>	
<b>Project Leader(s): R. Farnell</b>	<b>Assistance: J. McDonald</b>
<b>Date Initiated: 1988</b>	<b>Duration: 1992</b>
<b>Location: Central Yukon</b>	<b>District: Mayo</b>
	<b>GMZ: 4</b>
<b>Dates of Field Work: June to March annually</b>	
<b>Operational Budget (YTG): \$46,000.00 Cooperators: N/A</b>	
	<b>Reason for Project:</b>  Without inventory caribou cannot be managed for hunting. Information is needed to determine range locations for specific herds, population size and trend. Only then can sustained yield harvest limits be set. For the present, no information exists for caribou in the Central Yukon. To provide sound management of these herds, a three-year inventory program will begin in 1988.
	<b>Cooperating Agencies: N/A</b>

**Progress to Date (Summary of Results):**

Equipment and contracts are being organized to begin field operations in January, 1989.

**Current Year Objectives, Plans:**

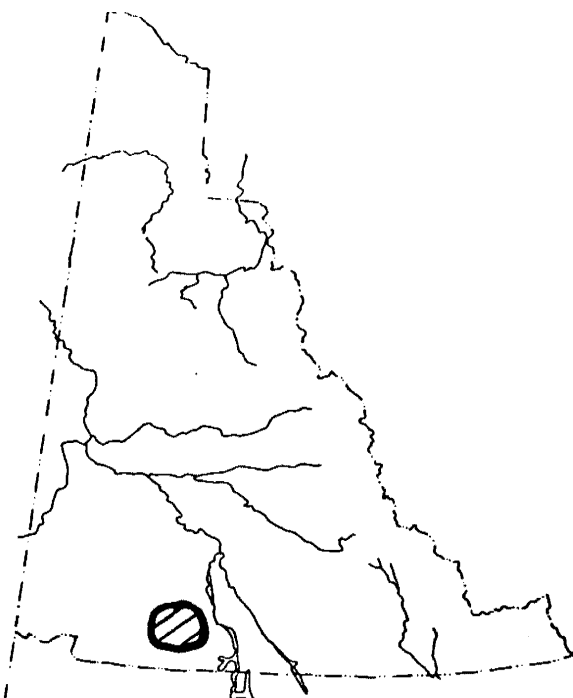
1. Survey all of GMZ4 by fixed wing aircraft to locate all woodland caribou winter ranges.
2. Return to winter ranges by helicopter to capture and radio-collar 30 caribou.

**Publications, Reports:** N/A

**Current Year Report Due:**

**Final Report Due:**

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Ibex Herd Monitoring Project</b>	
<b>Project Leader(s): R. Farnell</b>	<b>Assistance: J. McDonald</b>
<b>Date Initiated: 1982</b>	<b>Duration: Ongoing</b>
<b>Location: Southwest of Whitehorse</b>	<b>District: Whitehorse</b>
	<b>GMZ: 7</b>
<b>Dates of Field Work: October 1988</b>	
<b>Operational Budget (YTG): \$3,000.00 Cooperators: N/A</b>	
	<b>Reason for Project:</b>  The Ibex herd is used as the representative population for all the caribou herds in the Whitehorse-Carcross area. A composition count is conducted every fall, during the breeding season, to track population trends and status under the present management scheme. These herds are presently managed by permit authorization hunts.
	<b>Cooperating Agencies: N/A</b>

**Progress to Date (Summary of Results):**

The status of the Ibex herd has remained constantly stable over the last six years. Population growth was expected because the recruitment of calves exceeded natural mortality. But this did not happen, and it is speculated that native hunting and poaching pressure may be sufficient to crop the growth increment. Hence, the herd does not increase in size. Efforts are being made to rectify this problem.

**Current Year Objectives, Plans:**

Census and composition count of the Ibex herd during the fall breeding season (October) 1988.

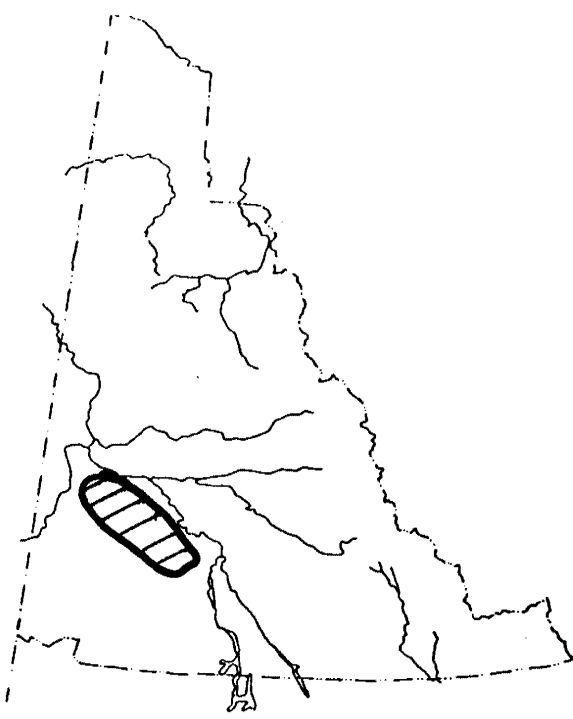
**Publications, Reports:**

Zone 7 and 9 Management Plan.

Current Year Report Due: N/A

Final Report Due: N/A

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Inventory of Caribou in the Dawson Range</b>	
<b>Project Leader(s): J. McDonald</b>	<b>Assistance: R. Farnell</b>
<b>Date Initiated: Winter 1986</b>	<b>Duration: Winter 1989</b>
<b>Location: Dawson Range west of Carmacks</b>	<b>District: Carmacks</b>
	<b>GMZ: 5</b>
<b>Dates of Field Work: June, July, October, December and March 1988-89.</b>	
<b>Operational Budget (YTG): 0</b>	<b>Cooperators: \$59,000.00</b>
	<b>Reason for Project:</b>  To inventory the Klaza caribou herd in anticipation of increased hunting pressure from the newly constructed Casino Road. The information from this study is essential to adequately base management decisions.
	<b>Cooperating Agencies:</b>  Northern Roads to Resources

**Progress to Date (Summary of Results):**

Radio-collaring and tracking caribou has demonstrated that the home range area of the Klaza herd is confined exclusively to the Dawson Range. They are not associated with the Aishihik herd farther south. Surveys can account for roughly 400 caribou and the recruitment of calves is low. Preliminary data indicate that the Klaza herd would be vulnerable to a population decline if a conservative hunting management strategy is not put in place.

**Current Year Objectives, Plans:**

1. Calving relocation survey in June.
2. Post-calving relocation survey in July.
3. Rut relocation survey and composition count in October.
4. Early winter relocation survey in December.
5. Late winter relocation survey in March.
6. Population estimate survey using the stratified random quadrat sampling technique in March.

**Publications, Reports:**

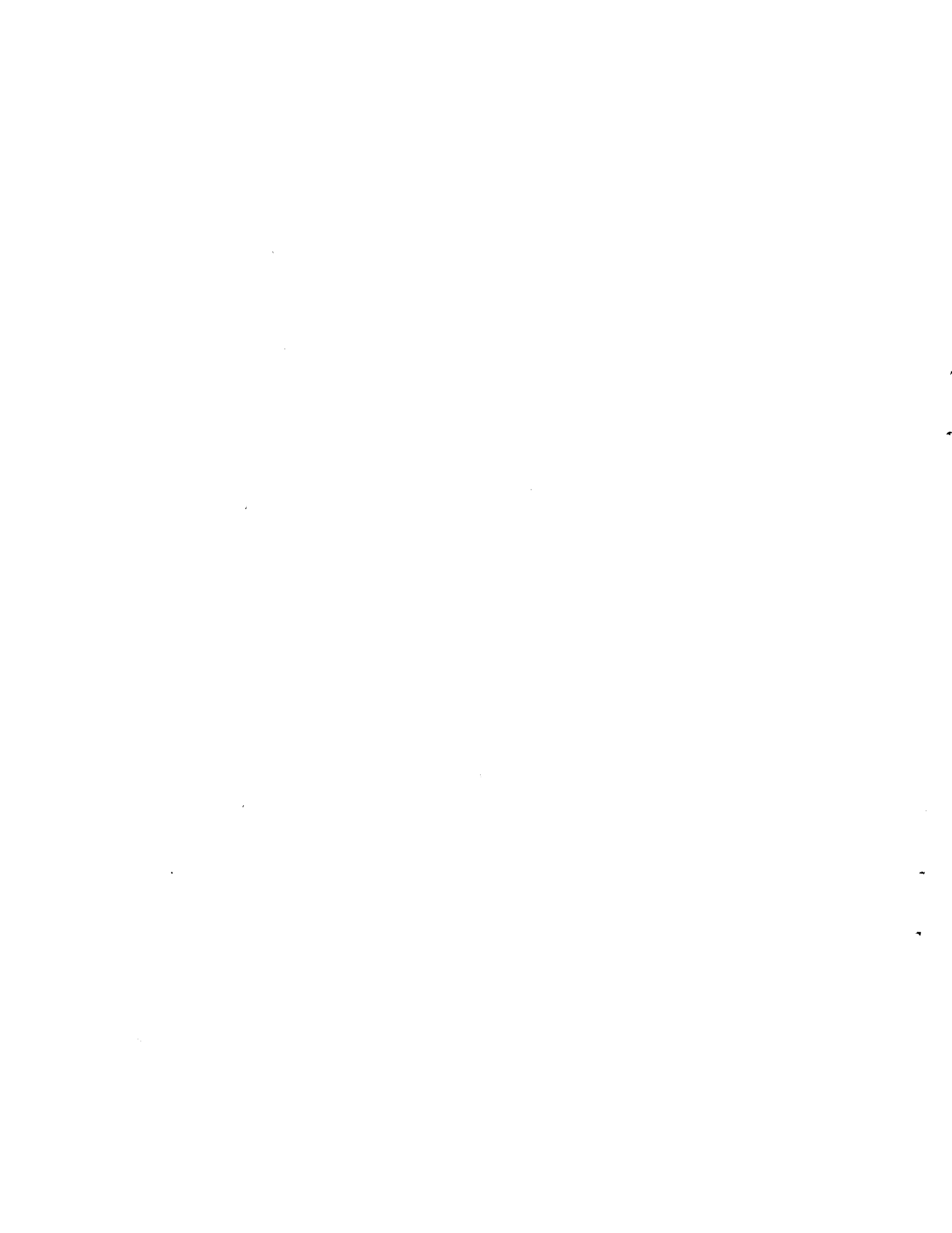
Four file reports on Survey Results.

Current Year Report Due: N/A

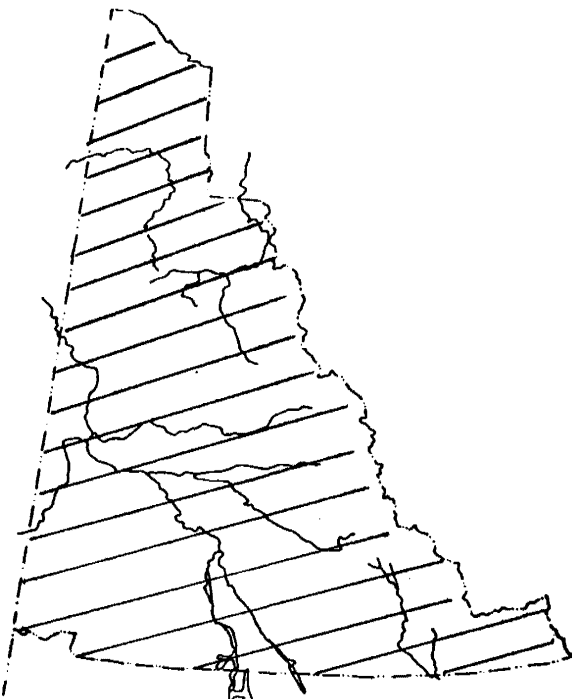
Final Report Due: 1990

BEAR MANAGEMENT

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**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Reducing Bear Problems in the Exploration and Placer Industry</b>	
<b>Project Leader(s): B. L. Smith</b>	<b>Assistance: L. Henderson L. Mychasiw J. Schick C.O.'s</b>
<b>Date Initiated: April 1988</b>	<b>Duration: To March 1990</b>
<b>Location: Yukon-wide</b>	<b>District:</b>
	<b>GMZ:</b>
<b>Dates of Field Work: 2 - 3 weeks in July and August.</b>	
<b>Operational Budget (YTG):</b>	<b>Cooperators:</b>
	<b>Reason for Project:</b> <p>Although attitudes are improving, bears are frequently attracted to, and killed at, mining camps. Many of these kills are not reported. Since there are 240+ camps each summer, the potential is great that kills in some areas, added to those by hunters, are excessive. Improvement in garbage handling and disposal will significantly reduce these kills, and problems at these camps. This educational project seeks to inform miners of bear susceptibility to garbage and excessive mortality, and to promote garbage incineration.</p>
	<b>Cooperating Agencies:</b>

(Barney1)

Progress to Date (Summary of Results):

- The booklet "A Field Guide to Yukon Bears for the Exploration and Placer Industries" has been completely revised and is being printed for distribution to mining camps by Conservation Officers.
- Inexpensive incinerators are being fabricated for testing.
- A handout promoting incinerators for small camps is being prepared for wide distribution in the Yukon.
- A display has been prepared for exhibit at the Gold Show and elsewhere. This display promotes communication and proper camp design.

Current Year Objectives, Plans:

- To become familiar with the problem through interviews with miners.
- To provide educational materials and courses on bear safety, on request.
- To encourage frequent visits to camps by Conservation Officers.
- To test inexpensive, home-built incinerators.
- To determine how extensive unreported bear problems are in several intensively mined areas.
- To work closely with camp cooks to develop practical food storage and garbage handling systems.

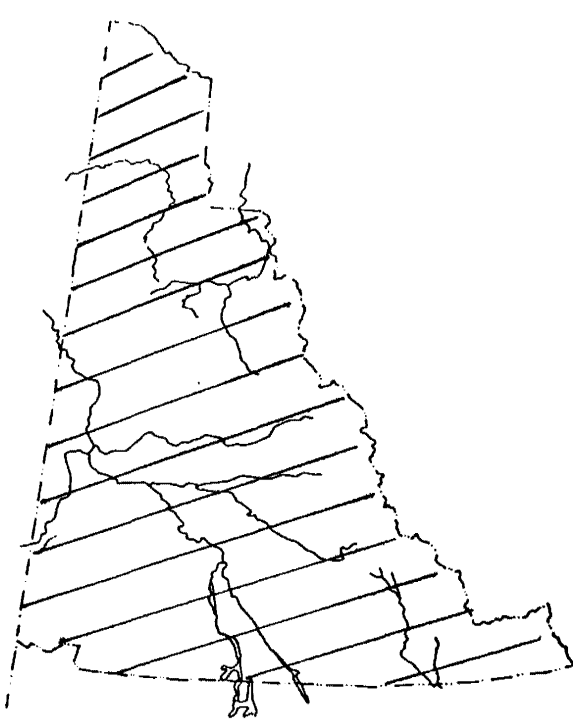
Publications, Reports:

An internal report will be prepared, summarizing the findings of this work. It is very difficult to evaluate the success of this program in quantitative terms.

Current Year Report Due: 31 March, 1989

Final Report Due:

**WILDLIFE PROGRAM**  
Yukon Department of Renewable Resources

<b>Title: Bear Population Management</b>	
<b>Project Leader(s): B. L. Smith</b>	<b>Assistance: G. MacHutchon</b>
<b>Date Initiated: Ongoing</b>	<b>Duration: 2-year project</b>
<b>Location: Yukon-wide</b>	<b>District:</b>
<b>Dates of Field Work:</b>	<b>GMZ:</b>
<b>Operational Budget (YTG):</b>	<b>Cooperators:</b>
	<b>Project Description:</b> Management plans are being developed for black and grizzly bears, on a management unit basis. These management units are largely outfitting areas and similar sized units elsewhere with a common legislative mandate. The harvest data analyses are extensive and estimates of crippling rates and unreported control and poaching losses are being made in an effort to quantify total mortality, and thus evaluate population status. These management plans and analyses will chart the direction of bear management and research activities over the next decade.
	<b>Cooperating Agencies:</b>

**Progress to Date (Summary of Results):**

- The black bear management plan and synthesis of available data was completed to Draft 1 stage in March 1987. This is being reviewed.
- The grizzly bear work is more extensive and has been divided into component analyses and reports. This work can begin now that files have been completed.

**Current Year Objectives, Plans:**

- **Black Bear:** The drafts will be reviewed and completed by December 31, 1988.
- **Grizzly Bear:** Analyses will permit preparation of reports as follows:
  - a) Abundance and uncertainty in grizzly bears in 22 Yukon ecoregions.
  - b) Preliminary estimates of crippling losses in Yukon grizzly bears.
  - c) Preliminary estimates of unreported control kills in Yukon grizzly bears.
  - d) Vulnerability to harvest in central Yukon grizzly bears.
  - e) Harvest trends in 31 Yukon bear management areas.
  - f) Grizzly bear management and research in the 1990's.

**Publications, Reports:**

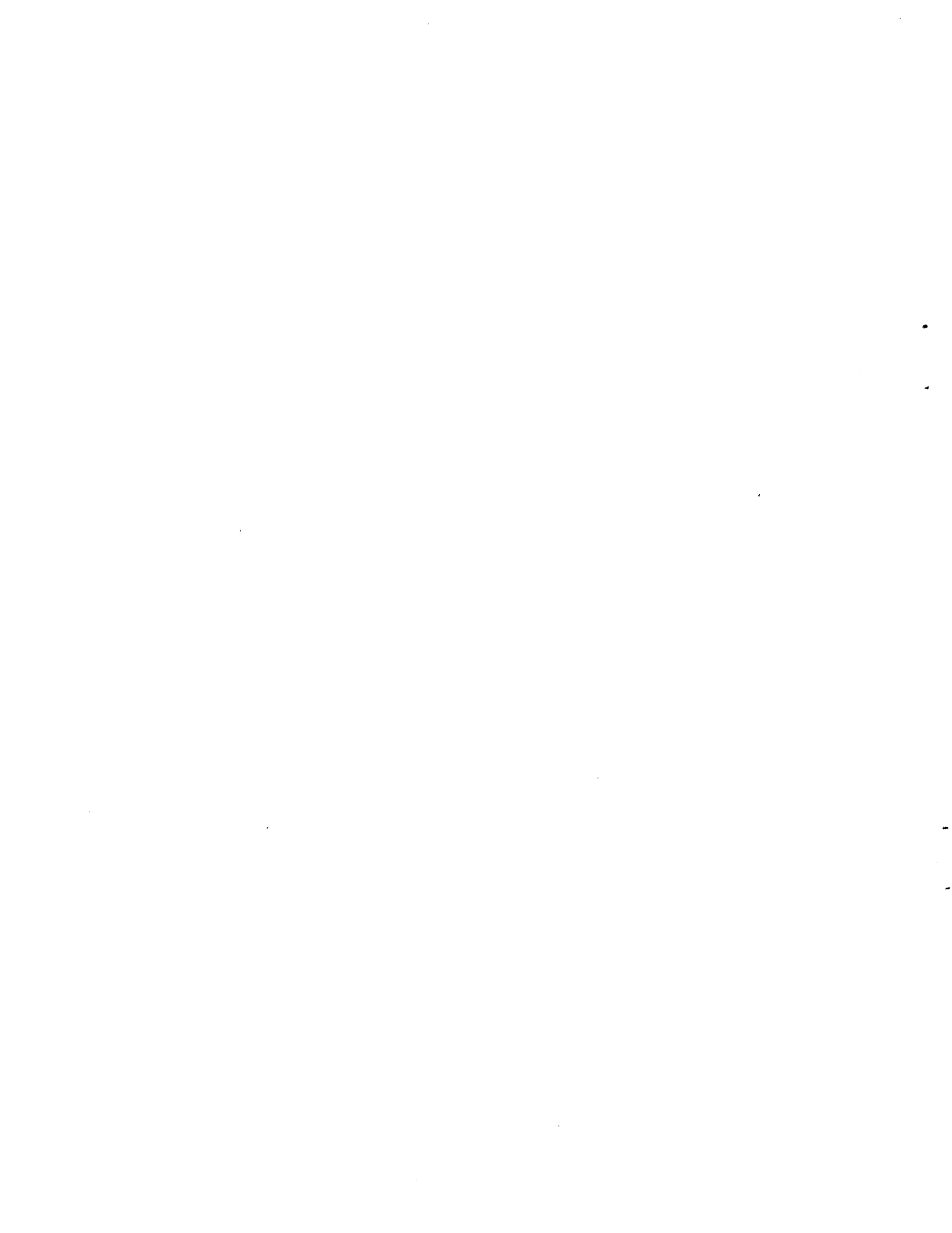
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**Current Year Report Due:** N/A

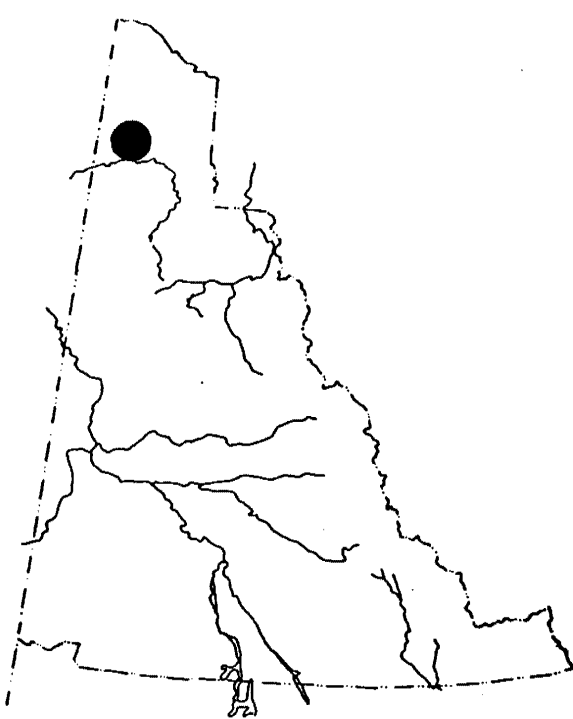
**Final Reports will be completed as time permits.**

FURBEARER MANAGEMENT

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**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Muskrat Harvest and Management - Old Crow Flats</b>	
<b>Project Leader(s):</b> Brian Slough; Harvey Jessup; Dr. Stan Boutin & Mark Simpson (Univ. of Alberta)	<b>Assistance:</b> Kenneth Charlie, Frank Charlie, William Josie, Peter Josie
<b>Date Initiated:</b> April 1984	<b>Duration:</b> Completion - Summer, 1988
<b>Location:</b> Old Crow Flats	<b>District:</b> Old Crow
	<b>GMZ:</b> 1
<b>Dates of Field Work:</b> May 1984 - October 1986	
<b>Operational Budget (YTG):</b> \$55,000 (3 years)	<b>Cooperators:</b> \$89,000 (3 years)
	<b>Reason for Project:</b>  The Old Crow muskrat harvest represents 75% of the total Yukon muskrat harvest, and is valued at up to \$87,000 annually. It is a significant source of income, as well as a cultural event for the community of Old Crow. The muskrat population and harvest potential of the Old Crow Flats were unknown. An indexing technique of the northwestern muskrat, counting muskrat push-ups, was tested.
	<b>Cooperating Agencies:</b> - Yukon Trappers Assoc. (Special ARDA grant); - Polar Continental Shelf Proj.; - University of Alberta (Nat. Scientific and Engineering Research Council Grant).

(BrianS1)

Progress to Date (Summary of Results):

Aerial counts of muskrat pushups are not good indicators of population density, as was previously thought. Ground counts, using live-trapping, are necessary. Muskrat densities averaged about 3/ha in the spring to 6/ha in the fall. The reproductive capacity of the northern muskrat is low and does not increase to compensate for increased trapper harvest. Trapped areas are repopulated mainly by immigration from untrapped areas, which must be interspersed with harvested areas. Muskrat pelt primeness was assessed from pelts harvested between September and June. Pelts from the Old Crow Flats are most prime, and hence most valuable, when taken during late winter/early spring (March, April & May). A fall harvest is not recommended. Trapping in June and shooting at any time are also not recommended. Trappers are encouraged to take advantage of the trap exchange program and trade their leg-hold traps for quick-kill devices.

Current Year Objectives, Plans:

Complete final report: "Muskrat Harvest and Management on Old Crow Flats", by M. R. Simpson, B. G. Slough, S. Boutin, and R. H. Jessup.

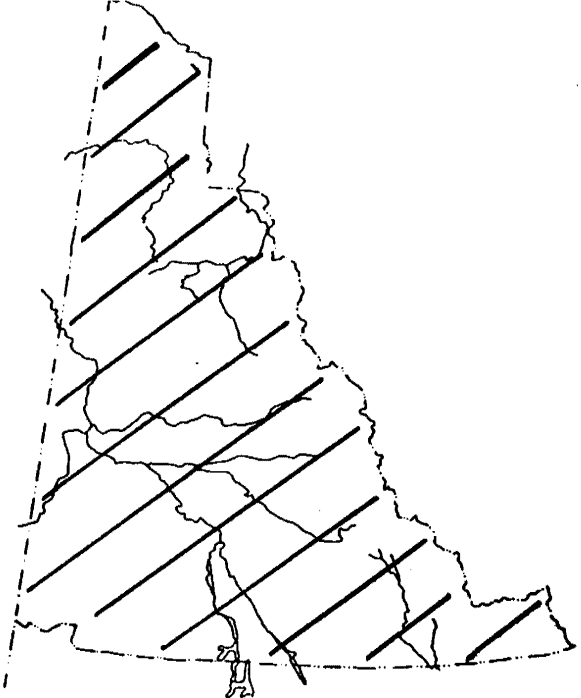
Publications, Reports:

Simpson, M. Variations in Muskrat Life History: A Comparison of Northern and Southern Populations. Master of Science Thesis, University of Alberta, Edmonton. September, 1987. 97 pages.

Current Year Report Due:

Final Report Due: Summer 1988

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Trapper Questionnaire</b>	
<b>Project Leader(s): Brian Slough</b>	<b>Assistance:</b>
<b>Date Initiated: 1978</b>	<b>Duration: Ongoing</b>
<b>Location: Yukon-wide</b>	<b>District:</b>
<b>Dates of Field Work: N/A</b>	<b>GMZ:</b>
<b>Operational Budget (YTG): \$500.00</b>	<b>Cooperators: N/A</b>
	<b>Reason for Project:</b> <p>The status of furbearer populations must be known in order to make management decisions which ensure conservation and a sustainable harvest. A questionnaire has the advantages of obtaining area-specific (trap-line) data from qualified observers (trappers), at a low cost.</p>
	<b>Cooperating Agencies: N/A</b>

(BrianS2)

**Progress to Date (Summary of Results):**

In 1987, 318 of 716 trappers (44%) responded to the questionnaire. All furbearer populations were adequate; however, ermine and marten both showed declines (over 1986 levels), indicating lower mouse and vole populations. Two important furbearer prey groups, grouse and snowshoe hare, both showed increases as their populations begin to recover from the recent cyclic low.

**Current Year Objectives, Plans:**

Standard questions on furbearer population levels and population changes are being asked in 1988. In another project in which we are attempting to identify high capability furbearer habitats, questions are being asked on snowshoe hare habitat types and changes in habitat use that may occur over the 10 year "rabbit" cycle.

**Publications, Reports:**

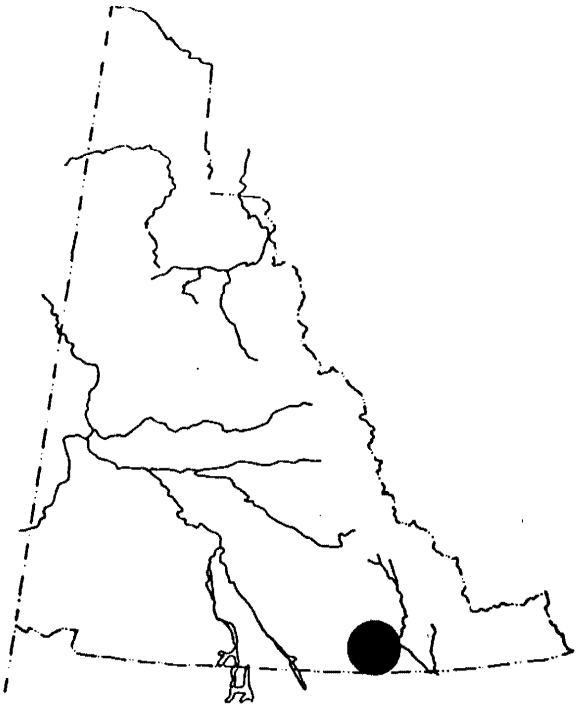
Results are given in the Annual Report of the furbearer management program. The latest report is:

1986/87 Annual Progress Report - Furbearer Management Program. By B. G. Slough and R.M.P. Ward. September, 1987. Department of Renewable Resources, Fish and Wildlife Branch, Whitehorse. 59 pages.

Current Year Report Due: September, 1988

Final Report Due: N/A

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: The Effects of Changes in Vegetation Cover on Furbearer Populations and Trapping Activities in the Liard Valley</b>	
<b>Project Leader(s):</b> Brian Slough Don Barz (Northern Land Use Planning, DIAND)	<b>Assistance:</b> Glen Stockman (Upper Liard)
<b>Date Initiated:</b> October 1987	<b>Duration:</b> Completed April 1988
<b>Location:</b> Upper Liard - Rancheria	<b>District:</b> Watson Lake
	<b>GMZ:</b> 10-32
<b>Dates of Field Work:</b> October 1987 - March 1988	
<b>Operational Budget (YTG):</b> N/A	<b>Cooperators:</b> \$9,500.00
	<b>Reason for Project:</b>  The Liard Valley near Watson Lake has some of the highest resource development potential in the Yukon, supporting hunting, trapping, logging, and (potentially) agricultural and other activities. The effect of these activities on the habitat of furbearers is not fully understood, but this information is needed for resource analysis and land use planning purposes.
	<b>Cooperating Agencies:</b>  Northern Land Use Planning, Yukon Region (DIAND).

(BrianS3)

**Progress to Date (Summary of Results):**

The Liard area supports an abundance and diversity of furbearers, and a valuable trapping economy, particularly for marten and beaver. The density of active beaver colonies is the highest recorded in the Yukon, and appears not to be impacted by logging. Marten, however, are dependent on mature pine and white spruce stands, the latter of which are being logged at a rate which will see their extinction within a couple of decades. Since alluvial white spruce is also the best marten habitat in the area, forest management improvements were recommended to minimize the effects of logging on marten and to regenerate white spruce as quickly as possible on logged areas.

**Current Year Objectives, Plans: N/A**

**Publications, Reports:**

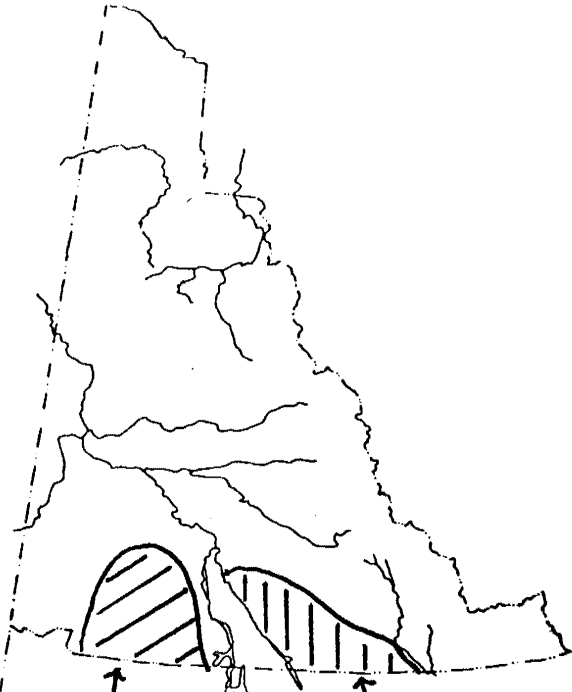
Slough, B. The Effects of Changes in Vegetation Cover on Furbearer Populations and Trapping Activities in the Liard Vally. March, 1988. Yukon Department of Renewable Resources, Fish and Wildlife Branch, Whitehorse. 16 pages.

(Also presented in the Annual Furbearer Management Progress Report, September, 1988.)

**Current Year Report Due: September 1988**

**Final Report Due: N/A**

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Marten Transplant</b>	
<b>Project Leader(s):</b> Brian Slough	<b>Assistance:</b> Numerous trappers, Conservation Officers, and Wildlife Mgmt. Staff
<b>Date Initiated:</b> February 1984	<b>Duration:</b> Completed January 1987
<b>Location:</b> Southwestern Yukon	<b>District:</b> Haines Junction, Whitehorse, Watson Lake
<b>Dates of Field Work:</b> Completed January 1987.	
<b>Operational Budget (YTG):</b> \$50,000.00 <b>Cooperators:</b> N/A (4 years)	
	<b>Reason for Project:</b>  The marten population is scarce in the Coast Mountain region of the southwest Yukon; however, marten habitat (e.g. cover and food) is apparently present. The main reason for their scarcity is that marten are unable to colonize across a barrier of unsuitable habitat which surrounds the Coast Mountains. The marten population was "seeded" by transplanting individuals from the Teslin-Watson Lake area.
	<b>Cooperating Agencies:</b> N/A

(BrianS4)

**Progress to Date (Summary of Results):**

Over 170 marten, including 67 females, were released between Carcross, Braeburn, and Haines Junction. Most were purchased from cooperating trappers. All were eartagged, and a number were radio-tagged, giving us information on survival and movements. Survival was high and animals moved an average of 6 miles from release sites before settling down. Marten trapping is closed in the area, however, accidental captures are a barometer of the marten population. An increase in marten was noted in 1985/86 south of Whitehorse, and in 1987/88 just to the north of the city. Some trappers west of Whitehorse have also reported increases in marten track sightings. Several years may be required before the success of the transplant will be known.

**Current Year Objectives, Plans:** N/A

**Publications, Reports:**

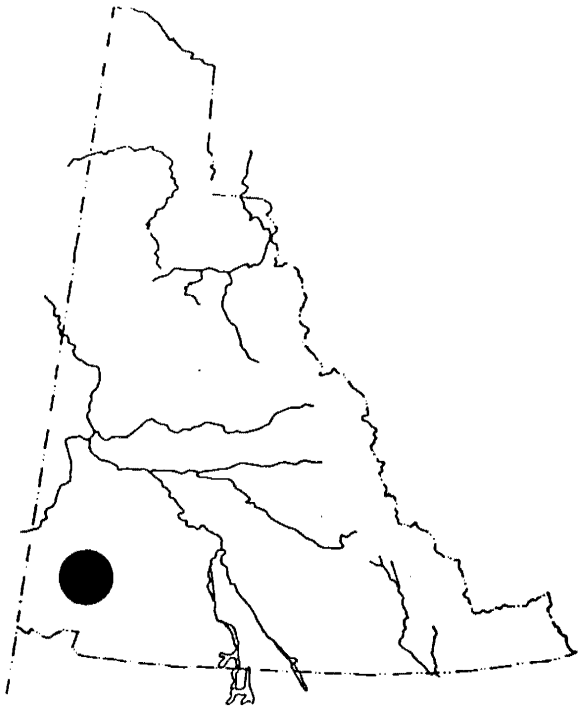
Results are given in the Annual Report of the Furbearer Management Program. The latest Report is:

Slough, B. and R. M. P. Ward. 1986/87 Annual Report - Furbearer Management Program. September 1987. Department of Renewable Resources, Fish and Wildlife Branch, Whitehorse. 59 pages.

**Current Year Report Due:** September 1988

**Final Report Due:** N/A

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Wolverine Ecology and Behaviour</b>	
Project Leader(s): Brian Slough, Assistance: Dr. Alton Harestad & Vivian Banci (SFU)	
Date Initiated: 1982	Duration: Completed 1987
Location: Kluane Game Sanctuary, between Duke and Donjek Rivers	District: Haines Junction GMZ: 6
Dates of Field Work: Completed April 1985	
Operational Budget (YTG): \$37,000 (4 years)	Cooperators: \$53,000 (4 years)
	<b>Reason for Project:</b> <p>The wolverine is rare throughout its range in Canada. The Yukon contains a significant remnant of the original wolverine habitat once found in Canada. One quarter to one third of all wolverine harvested in Canada are from Yukon. Very little is known of the ecology and behaviour of the wolverine in Yukon. This information is basic to the development of a comprehensive management plan for the species which includes conservation of the species as well as a sustainable harvest by local trappers.</p>
	<b>Cooperating Agencies:</b> <ul style="list-style-type: none"><li>- Simon Fraser University (National Scientific and Engineering Research Council of Canada)</li><li>- World Wildlife Fund</li><li>- DIAND</li></ul>

**Progress to Date (Summary of Results):**

Information was obtained from 461 carcasses purchased from trappers and from field studies of 10 radio-collared wolverine in the Burwash area (Kluane Game Sanctuary).

The Yukon has a healthy population of 4000-5000+ wolverine. No particular habitat type is better than another, although a diverse prey base, particularly in ungulates, is critical. The population fluctuates naturally, as food supplies fluctuate and affect the reproductive success of the females. The wolverine's large home range and movements make it vulnerable to trapping. However, the registered trapline system inherently regulates trapping effort, which is light for the species.

**Current Year Objectives, Plans:** N/A

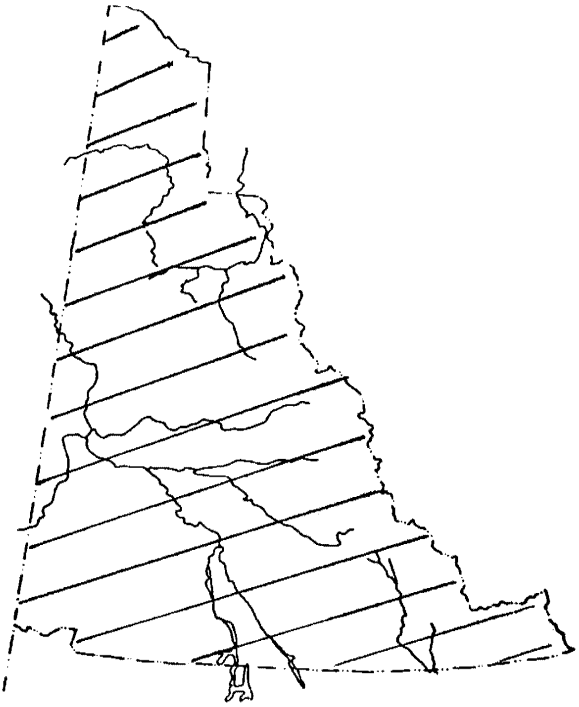
**Publications, Reports:**

Ecology and Behaviour of Wolverine in Yukon. December 1987. By Vivian Banci. Master of Science Thesis, Simon Fraser University, Burnaby, BC. 178 pages.

**Current Year Report Due:** N/A

**Final Report Due:** N/A

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Yukon Trapline Management Series</b>	
<b>Project Leader(s):</b> Brian Slough <b>Assistance:</b> Harvey Jessup Jack Schick (Information/Education Officer)	
<b>Date Initiated:</b> 1986	<b>Duration:</b> Ongoing
<b>Location:</b> N/A	<b>District:</b>  <b>GMZ:</b>
<b>Dates of Field Work:</b> N/A	
<b>Operational Budget (YTG):</b> \$3,000/ publication <b>Cooperators:</b> N/A	
	<b>Reason for Project:</b>  The trapper, operating in a registered trapline system, is the primary furbearer manager. Biologists and other professional furbearer managers conduct biological studies and population surveys which produce information that is both of interest to the trapper and of value to his/her personal furbearer harvest and management efforts. This information is being assimilated and written in a brochure series on the trapline management of the important furbearer species.
	<b>Cooperating Agencies:</b> N/A

(BrianS6)

**Progress to Date (Summary of Results):**

Two brochures have been produced and are available at the Fish and Wildlife Branch:

1. Managing Your Marten Trapline.
2. Managing your Lynx Trapline.

**Current Year Objectives, Plans:**

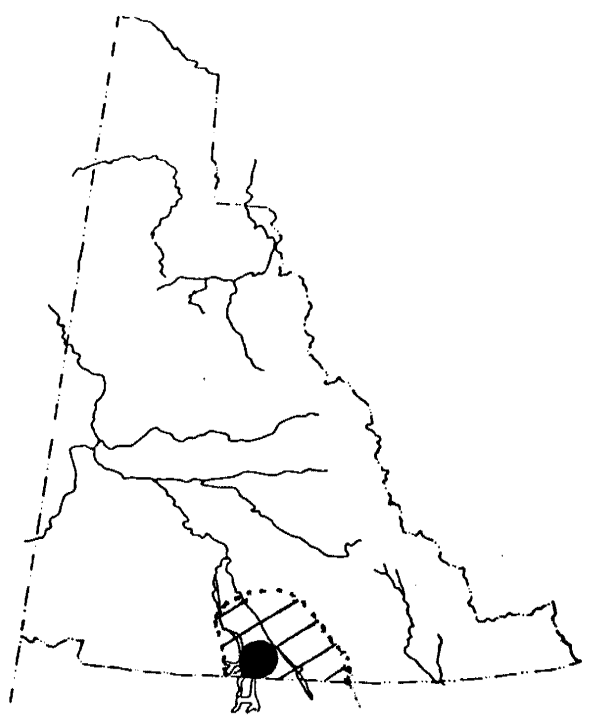
Two more brochures are in the works, including one on wolverine, and another on muskrat (with particular reference to the Old Crow Flats).

**Publications, Reports: See above.**

**Current Year Report Due:**

**Final Report Due:**

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Lynx Harvest Study</b>	
<b>Project Leader(s):</b> Brian Slough Richard Ward	<b>Assistance:</b>
<b>Date Initiated:</b> November 1986	<b>Duration:</b> Ongoing
<b>Location:</b> Teslin Burn	<b>District:</b> Whitehorse/Teslin
	<b>GMZ:</b> 9
<b>Dates of Field Work:</b> November 1988 - March 1989	
<b>Operational Budget (YTG):</b> \$40,000	<b>Cooperators:</b> N/A
	<b>Reason for Project:</b> Lynx is the most important economic furbearer in the Yukon. Its population follows a 10-year cycle of abundance as it tracks its major prey, the snowshoe hare. The last peak was 1981/82 and the population is gradually building to another peak near 1991. Fur prices and trapping effort remain relatively high during population lows, leading to fears of overtrapping, especially in the western provinces. Previous biological studies have shown a very high lynx death rate in trapped areas. It appears that untrapped areas (refugia) are key to the survival of lynx populations. We are studying lynx in a refugium to see how lynx populations are maintained and how they should be managed.
	<b>Cooperating Agencies:</b> N/A

**Progress to Date (Summary of Results):**

**Field Studies:** 12 lynx are presently radio-collared. The resident study area (120 square miles) population increased from an estimated 8 (1986/87) to 12 (1987/88), despite 2 of the 1986/87 animals leaving the area. The immigrants were older animals and resident kitten survival was low in 1987.

**Pelt Measurements:** Overall kitten survival was up in the Yukon, as kittens made up about 25% of the harvest in 1987/88, up from 9% the previous year.

**Current Year Objectives, Plans:**

1. Aerial telemetry flights every 2 weeks, with intensive daily flights (for 1 week) every 3 months.
2. Monitor snowshoe hare abundance ("turd transects") and kitten production in June 1988.
3. Live-trapping, track transects, predation and habitat studies November 1988 - March 1989.
4. Lynx carcass collection from southern Yukon and pelt measurements from all Yukon November 1988 - February 1989.

**Publications, Reports:**

Results are given within Annual Report of the Furbearer Management Program. The latest report is:

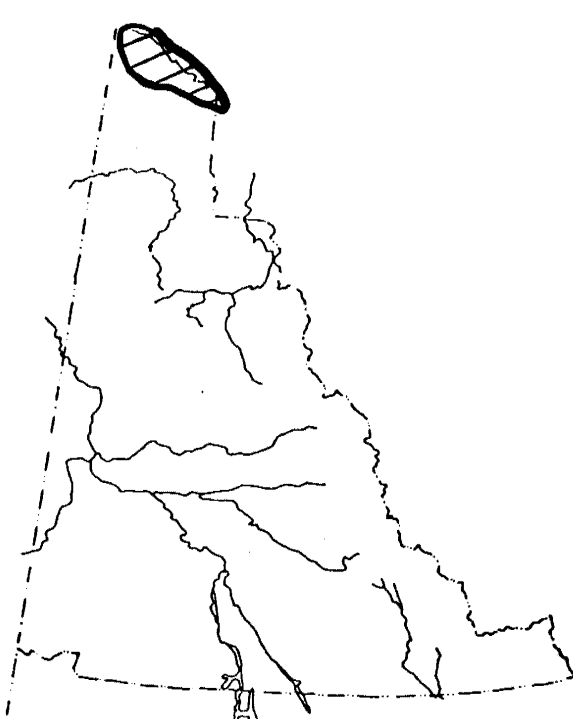
Slough, B. G. and R.M.P. Ward. 1986/87 Annual Progress Report - Furbearer Management Program. September 1987. Dept. of Ren. Res., Fish and Wildlife Branch, Whitehorse. 59 pages.

Current Year Report Due: September 1988

Final Report Due: N/A

**WILDLIFE PROJECT**

Yukon Department of Renewable Resources

<b>Title:</b> Den distribution, harvest and management of arctic fox in northern Yukon Territory.	
<b>Project Leader(s):</b> Cor Smits, Brian Slough	<b>Assistance:</b> on aerial surveys only
<b>Date Initiated:</b> 1986	<b>Duration:</b> 4 years
<b>Location:</b> Yukon Coastal Plain and Herschel Island	<b>District:</b> Dawson City
	<b>GMZ:</b> 1
<b>Dates of Field Work:</b> July, 1986-1989	
<b>Operational Budget (YTG):</b> 6.5	<b>Cooperators:</b> 55.0 (Inuvialuit Final Agreement)
	<b>Reason for Project:</b>  Arctic fox populations, habitat utilization and fur harvest level are largely unknown in Yukon. This information is needed for land use decisions (impact assessments) and arctic fox management on the North Slope.
	<b>Cooperating Agencies:</b>  -Federal Treasury Board (through IFA Wildlife Management Programme) -Polar Continental Shelf Project

**Progress to Date (Summary of Results):**

During aerial surveys of most of the coastal plain and Herschel Island, a total of 92 breeding dens of arctic fox have been located. The surveying technique has been developed to produce estimates of den abundance with a high level of precision. Information on occupancy levels of dens by arctic foxes has also been collected.

**Current Year Objectives, Plans:**

To obtain further information on den occupancy in order to determine population productivity levels during the course of a full population cycle (usually 3-4 years).

**Publications, Reports:**

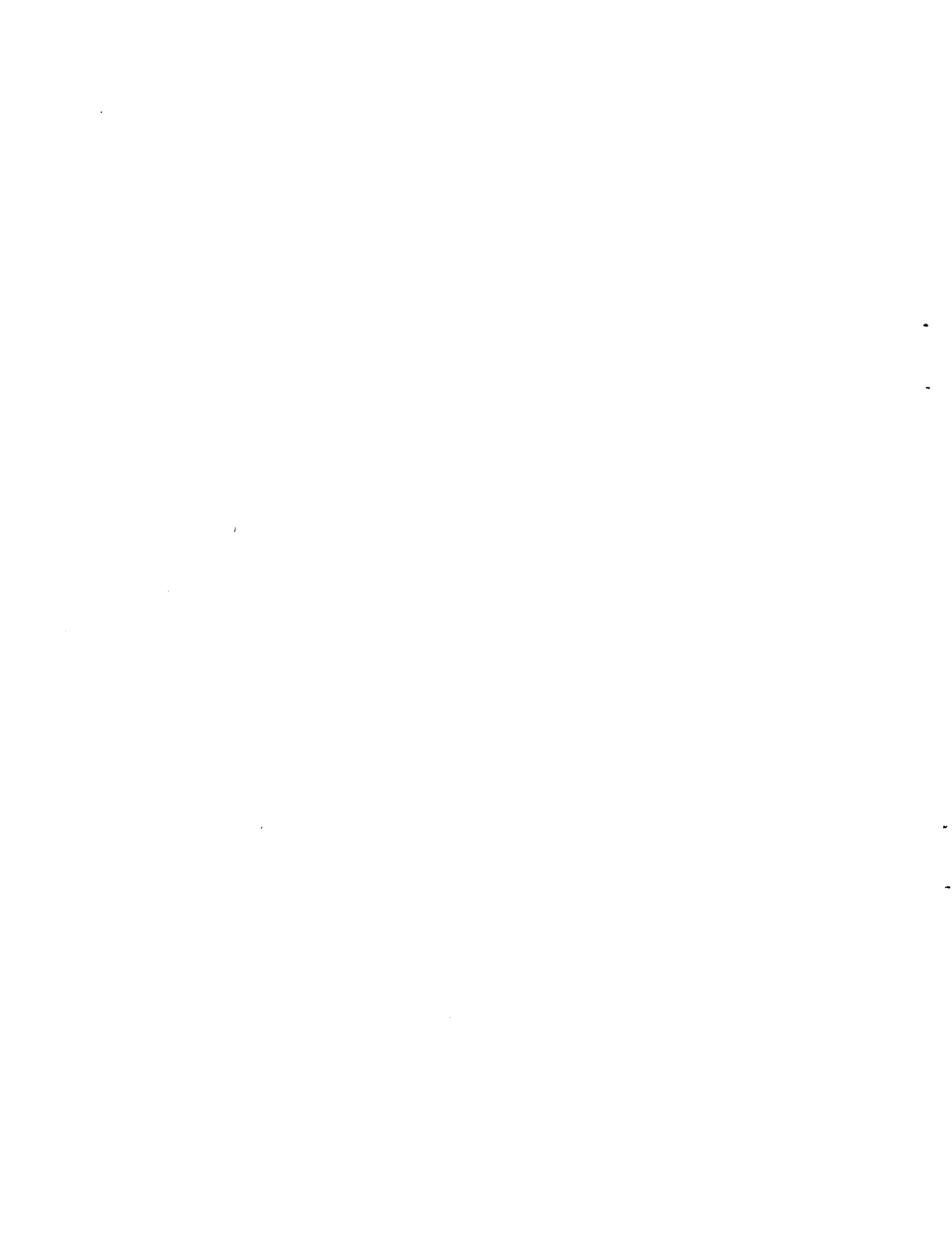
Smits, C.M.M. and B.G. Slough. 1987. Abundance, distribution and occupancy of arctic fox (*Alopex lagopus*) dens in northern Yukon Territory. Dept. of Renewable Resources. Whitehorse

Current Year Report Due: September 1988

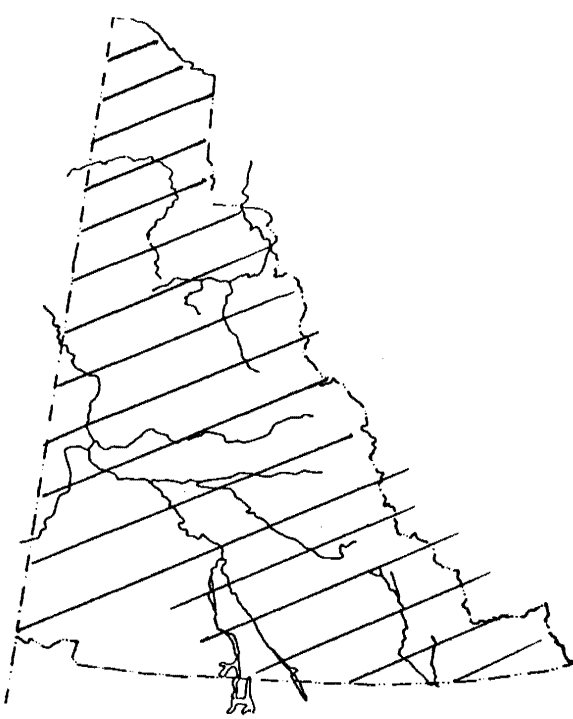
Final Report Due: Winter 1989/90

WOLF MANAGEMENT

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**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: WOLF VALUE ENHANCEMENT</b>	
<b>Project Leader(s):</b> R. Hayes A. Baer	<b>Assistance:</b> H. Jessup
<b>Date Initiated:</b> 1987	<b>Duration:</b> Ongoing
<b>Location:</b> Yukon-wide	<b>District:</b>
<b>Dates of Field Work:</b> N/A	<b>GMZ:</b>
<b>Operational Budget (YTG):</b> 8.0	<b>Cooperators:</b>
	<b>Reason for Project:</b>  Wolf harvest is well below sustained yield. Harvest enhancement will focus on increasing wolf harvest, especially in intensive management areas.  Increased non-consumptive use of wolves will focus on teacher and student education.
	<b>Cooperating Agencies:</b>

**Progress to Date (Summary of Results):**

Staff attended 5 trapper workshops - 1987-88, and Project Wild Workshop - March 1988. Annual participation in Outdoor Education Course (U.B.C.) by attending a wolf den with student teachers and engaging in wolf howling and management debates on river trip (3 years).

**Current Year Objectives, Plans:**

Same as above.

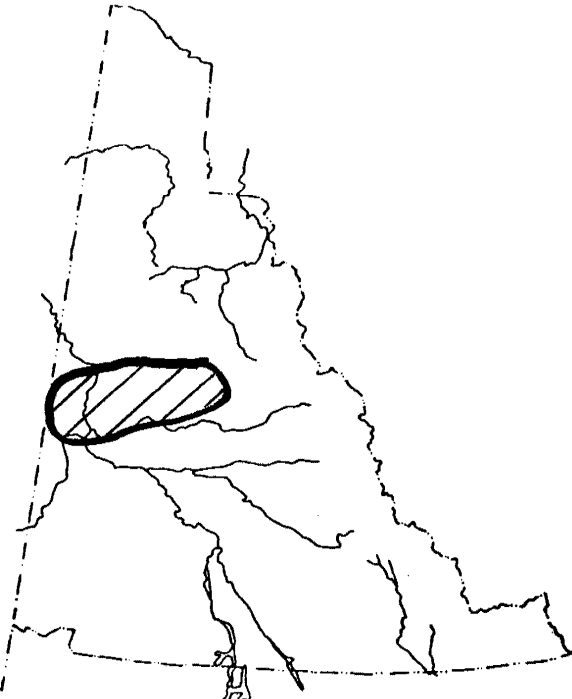
As special value enhancement project will be a financial contribution to IUCN wolf specialist group meeting held in Fairbanks, Alaska, August 1988.

**Publications, Reports:**

Current Year Report Due:

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: GMZ 4 &amp; 5 WOLF INVENTORY</b>	
<b>Project Leader(s):</b> R. Hayes A. Baer	<b>Assistance:</b> K. Bowers
<b>Date Initiated:</b> 1987	<b>Duration:</b> 3 years
<b>Location:</b> Mayo, Beaver Creek	<b>District:</b> Mayo, Haines Jct.
	<b>GMZ:</b> GMZ 4 & 5
<b>Dates of Field Work:</b> February 1989	
<b>Operational Budget (YTG):</b> 19.0	<b>Cooperators:</b>
	<b>Reason for Project:</b>  As part of ongoing wolf inventory programs, a 3 year study in GMZ 4 and 5 will provide wolf data to incorporate into wildlife management plans for the area; especially related moose and caribou management.  Inventory will provide a valuable data base to ongoing collection of Yukon-wide wolf distribution and density information.
	<b>Cooperating Agencies:</b>

**Progress to Date (Summary of Results):**

A 14,000 square km. area was surveyed in 1988, including the western portion of GMZ 4 from Pelly Crossing to McQuesten River to Mayo. A 7,500 sq. km. area was surveyed in GMZ 5 (Nisling - Big Ck.).

- Wolf density was relatively high (12-14 wolves/1000 sq. km) in the Mayo area, and extremely low in the Big Ck. area in GMZ 5 (3 wolves/1000 sq. km).

**Current Year Objectives, Plans:**

- Census a 15,000 sq. km. area between Earn Lake and Kathleen Lakes and a 5,000 sq. km. area between Beaver Creek and the Klotassin River.

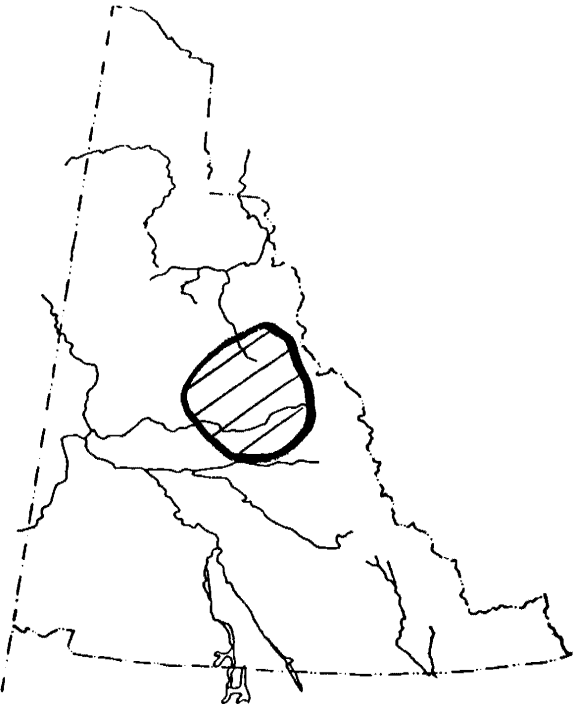
**Publications, Reports:**

- A. Baer and R. Hayes, 1987. The Nisling Wolf Survey Area. Wolf inventory report (1985-87). Yukon Fish and Wildlife Branch report.

**Current Year Report Due:**

**Final Report Due:**

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: WOLF POPULATION STUDIES IN THE FINLAYSON MANAGEMENT AREA</b>	
<b>Project Leader(s):</b> R. Hayes R. Farnell	<b>Assistance:</b> A. Baer
<b>Date Initiated:</b> March 1983	<b>Duration:</b> 7 years
<b>Location:</b> Finlayson Caribou Herd Management Area	<b>District:</b> Ross River <b>GMZ:</b> 11
<b>Dates of Field Work:</b> March 1-15, 1986	
<b>Operational Budget (YTG):</b> 10.0 T	<b>Cooperators:</b>
	<b>Reason for Project:</b> <ol style="list-style-type: none"><li>1) To document and monitor the effects of a &gt;75% wolf reduction on the resident wolf population.</li><li>2) To study the repopulation mechanism that allows wolf populations to recover from overharvest.</li><li>3) To assess the effectiveness of intensive annual wolf reduction as a method for reducing annual populations.</li></ol>
	<b>Cooperating Agencies:</b>

**Progress to Date (Summary of Results):**

The annual removed portions of the Finlayson wolf populations have been necropsied and studied since 1983. Removed portions were 50% in 1983, 75% in 1984 and 80-90% from 1985-88. Population variables including age, sex, productivity, distribution and composition have been annually monitored to document possible trends in wolf population recovery.

**Current Year Objectives, Plans:**

Wolf surveys will be carried out in a 24,000 km<sup>2</sup> portion of the study area to document distribution and composition of remaining wolves in the area, prior to the last year of wolf control (1989).

**Publications, Reports:**

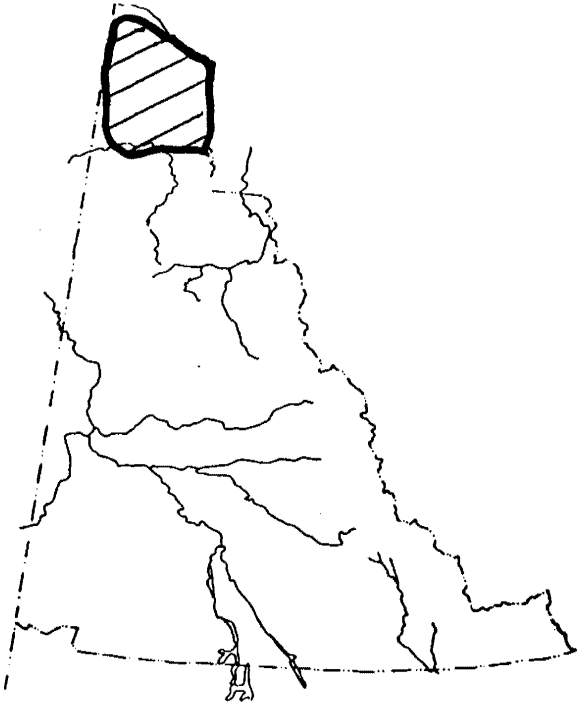
Hayes and Farnell 1985. 1983 Wolf Management Annual Report.  
Part 2. Finlayson Caribou Management Area.

Hayes and Farnell 1986. 1984 Wolf Management Annual Report.  
Part 2. Finlayson Caribou Management Area.

**Current Year Report Due:**

**Final Report Due:**

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: NORTHERN YUKON WOLF POPULATION STUDY</b>	
<b>Project Leader(s):</b> B. Hayes A. Baer	<b>Assistance:</b> S. Benjamin K. Bowers
<b>Date Initiated:</b> 1987	<b>Duration:</b> 4 years
<b>Location:</b> Northern Yukon	<b>District:</b>
	<b>GMZ:</b> 1
<b>Dates of Field Work:</b> Year-round.	
<b>Operational Budget (YTG):</b> 19.5 (Salaries)	<b>Cooperators:</b> \$44,000.00 (Inuvialuit Final Agreement)
	<b>Reason for Project:</b>  An understanding of the ecological factors that limit wolf distribution in the Northern Yukon will contribute to a comprehensive management plan for these valuable northern furbearers.  The sustained yield principle requires that wildlife managers understand the effects of natural predation on ungulates; especially wolf predation.
	<b>Cooperating Agencies:</b>  Inuvialuit Final Agreement

**Progress to Date (Summary of Results):**

- 40,000 sq. km. area surveyed in 1987 - 3.07 wolves/1000 sq. km density
- 38 wolves collared in 17 packs
- mortality rate in 1987 was 19.2%
- 17 den sites known in area

**Current Year Objectives, Plans:**

- monthly monitoring of wolf pack movements
- den site studies in August
- scat analyses will continue to determine summer denning food habits.

**Publications, Reports:**

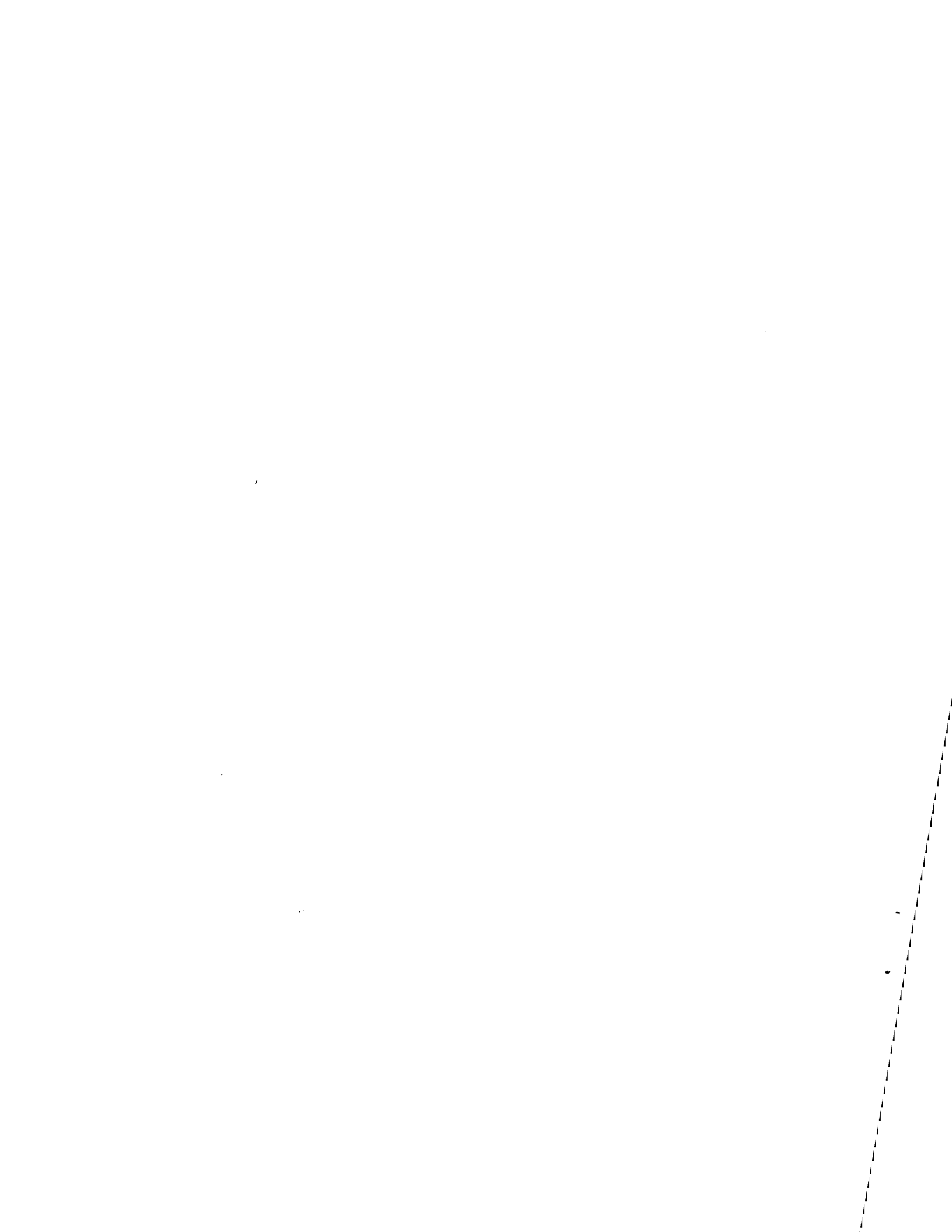
- R. Hayes and N. Barichello. Wolf, moose, muskoxen and grizzly bear observations of the Yukon North Slope, June 1986. Yukon Fish & Wildlife Branch. Report.
- R. Hayes et. al. 1988. The northern Yukon wolf population study. Yukon Fish & Wildlife Branch. Report.

Current Year Report Due: August

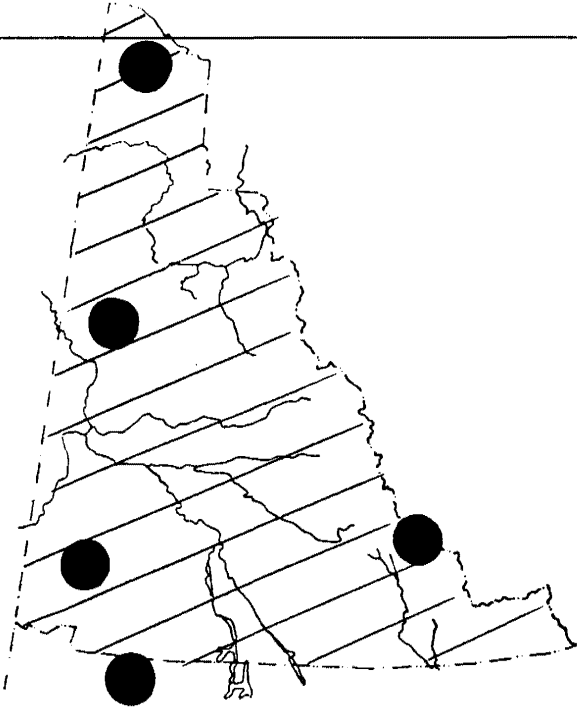
Final Report Due: 1990

GAME BIRD MANAGEMENT

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**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Upland Game Bird Annual Census and Harvest Analysis</b>	
<b>Project Leader(s): D. Mossop</b>	<b>Assistance: District C.O.'s</b>
<b>Date Initiated: 1973</b>	<b>Duration: Ongoing</b>
<b>Location: Chilkat Pass,</b>	<b>District: Haines Jct., Watson Lake, Dawson, North Coast</b>
<b>Dates of Field Work: April 25 - May 12</b>	<b>GMZ: 6, 10, 2, 1</b>
<b>Operational Budget (YTG): \$1.5 M</b>	<b>Cooperators: Nil</b>
	<b>Reason for Project:</b> Upland game birds provide a major source of hunter recreational opportunity. Trends and density from representative populations are required to monitor the effectiveness of present policies, as well as to supply input to management of species dependent on grouse as a food base. There is evidence that the sharp-tailed grouse, a highly attractive but vulnerable game bird, has been declining.
	<b>Cooperating Agencies:</b>

**Progress to Date (Summary of Results):**

Yukon ptarmigan populations have demonstrated strong cyclic trends, with populations from various locations basically in synchrony. Populations in the south fluctuate less abruptly than those in the far north. Grouse numbers in 1988 should generally be higher than in the past few years. Next peak abundance is expected in 1989/90. Sharp-tailed grouse show signs of recovering along with other grouse, although numbers were exceptionally low in the last few years. Hunter harvest remains relatively low but shows signs of increasing. In 1986, 9,275 grouse were taken - up from 4,400 in 1983.

**Current Year Objectives, Plans:**

1. To measure the density of 4 reference populations of willow ptarmigan.
2. To monitor age composition of wintering willow ptarmigan, and age structure of all grouse in hunter harvest.
3. To monitor sharp-tailed grouse attendance at two dancing grounds in the Donjek River population.
4. To summarize harvest data 1978-1984.

Three ptarmigan counts will be carried out by total ground search using becking calls and a pointing dog. A 2 km<sup>2</sup> area will be searched in the Chilkat Pass; the N. Fork Pass on the Dempster Hwy. and the Cantung Highway in the MacKenzie Mountains. A fourth count will be done by helicopter transect on the N. Slope. A late winter sample of willow ptarmigan will be taken from the Ogilvie population to determine age structure of the population.

Two sharp-tailed grouse leks equipped with permanent observation blinds will be visited and attending males counted. Incidental observations of movements and habitat use will be made.

Depending on availability from the YTG computerized data file, a collation of harvest data will be made and reported by game management subzone. Collection of wings from hunter killed grouse will be carried out through field contact by conservation officers.

**Publications, Reports:**

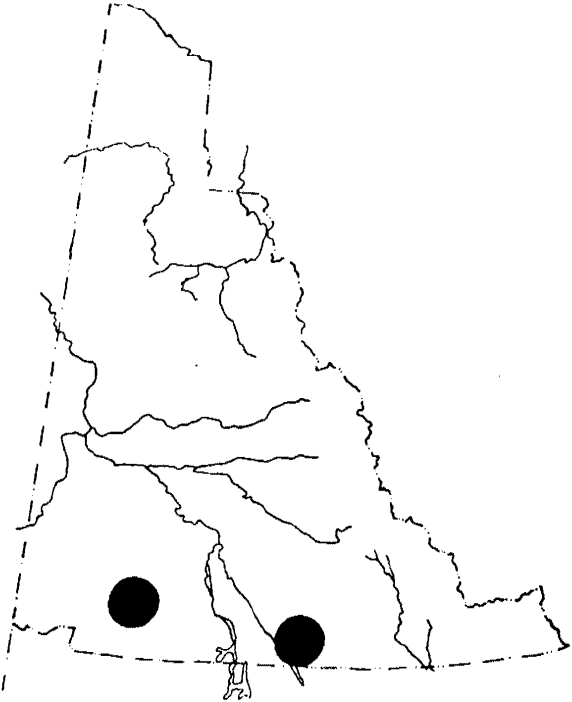
1982-83 Resident Hunter Questionnaire Analysis - Game Birds.

**Current Year Report Due:**

**Final Report Due:**

**WILDLIFE PROJECT**

Yukon Department of Renewable Resources

<b>Title: Wetland Assessment and Development of Yukon Waterfowl Management Plan</b>	
<b>Project Leader(s):</b> D. Mossop B. Hawkings	<b>Assistance:</b> D. Drummond K. Bowers V. Loewen J. Staniforth
<b>Date Initiated:</b> 1974	<b>Duration:</b> Ongoing
<b>Location:</b> Kloo Lake Wetland, Nisutlin Delta	<b>District:</b> Haines Junction, Teslin <b>GMZ:</b> 4, 10, 11
<b>Dates of Field Work:</b> May 30, June 25-30, Aug. 5-7, Sept. 1 - Oct. 15	
<b>Bird Program</b>	
<b>Operational Budget (YTG):</b> \$10.5 M Waterfowl Program \$ 3.0 M	<b>Cooperators:</b> \$8-15 M
	<b>Reason for Project:</b>  Project is a cooperative effort of the Yukon Waterfowl Technical Committee (CWS/YTG Renewable Resources) with Ducks Unlimited Canada to address data needs and management requirements for waterfowl in Yukon. Initial inventory of wetlands is followed up by basic analysis of bird use, habitat use and identification of critical components of the systems which may be capable of management effort.
	<b>Cooperating Agencies:</b> - Canadian Wildlife Service; - Ducks Unlimited (Canada); - Champagne/Aishihik Band.

**Progress to Date (Summary of Results):**

Initial inventory of wetlands important to waterfowl in Yukon has identified 40 key areas. A first (1983) waterfowl management plan for Yukon has been prepared. It is in the process of being updated for release in 1988. In 1984 a wetland management agreement was signed between Ducks Unlimited (Can.) and YTG committing \$2.2 million of DU funding to Yukon wetland management. Several wetlands (Old Crow Flats, Nusutlin Delta, Sheldon Lakes, Nordenskjiold Valley and the Needlerock wetlands) have been covered in this analysis to date. Initial surveys of the Kloo Lake wetland have shown a relatively concentrated use of waterfowl.

**Current Year Objectives, Plans:**

1. To continue support of extensive wetland inventory (Habitat section load).
2. To determine waterfowl use by areas, concentrating on sites detailed in DU agreement, and those which are candidates for inclusion.
3. Cooperate in establishment of DU program in Yukon as required.
4. Redraft Yukon waterfowl management plan.

Concentration of field effort will be on the Kloo lake wetland, the upper Tintina Trench and Nisutlin Delta. The Kloo Lake project is a cooperative 3-agency effort to assess waterfowl use throughout the open water season. The other two are primarily fall staging studies with the Nisutlin effort concentrating on the use of the area by Canada geese.

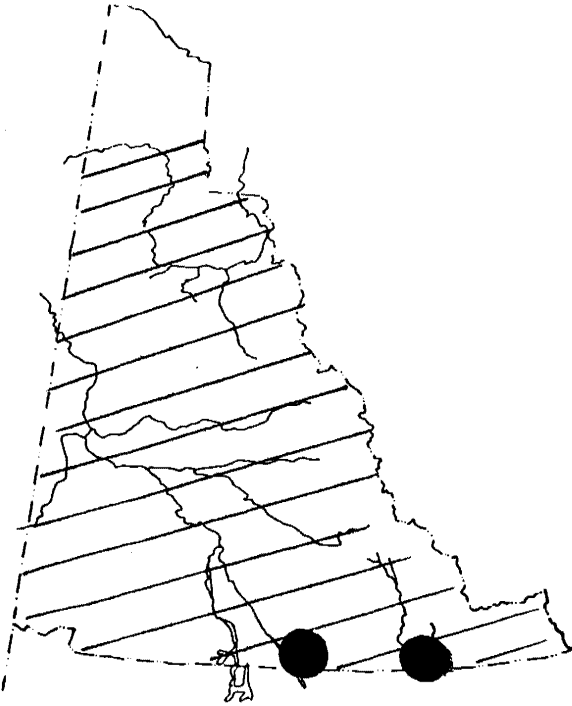
**Publications, Reports:**

- Mossop, D. and T. Coleman. 1984. Factors Affecting the Fall Staging of Waterfowl at the Nisutlin Delta, Yukon. Yukon Dept. of Ren. Res. A Yukon River Basin Project report.
- Mossop, D. 1986. Needlerock Creek Study: an Analysis of Use by Waterbirds and other bird species. In Yukon Waterfowl Working Group Report (Draft).
- Yukon/Ducks Unlimited Canada 1984. Yukon 10-year Wetlands Agreement.
- Hawkings, B. 1986. Needlerock Creek Study: vegetation analysis and preliminary wetland classification. In Yukon Waterfowl Working Group Report (Draft).

Current Year Report Due: December 1988

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Waterfowl Species Management Research and Planning - Canada Goose and White-fronted Goose</b>	
<b>Project Leader(s): D. Mossop</b>	<b>Assistance: J. Russell</b>
<b>Date Initiated: 1981</b>	<b>Duration: Ongoing</b>
<b>Location: Nisutlin Delta, Eagle Plains, Watson Lake</b>	<b>District: Dawson, Old Crow, Watson Lake</b> <b>GMZ: 1, 10, 11</b>
<b>Dates of Field Work: Aug. 15 - Sept. 10</b>	
<b>Operational Budget (YTG): \$4.5 M</b>	<b>Cooperators:</b>
	<b>Reason for Project:</b> <p>Project addresses unknowns about the relatively poorly understood "small" Canada geese and white-fronted geese that nest in or cross the Yukon annually. Priority for these species is identified in the North American Waterfowl plan "Arctic Goose Joint Venture". Both species are subject to plans at the flyway level but Yukon contributions are at best based on poor data. Both species are thought to be in decline throughout the Pacific Flyway.</p>
	<b>Cooperating Agencies:</b> <ul style="list-style-type: none"><li>- Ducks Unlimited Canada;</li><li>- Arctic Goose Joint Venture, members.</li></ul>

**Progress to Date (Summary of Results):**

Very few Yukon geese have been banded giving only a preliminary idea of wintering flyways which suggests Canadas, at least, are faithful to the Pacific flyway. Staging ecology of geese at Nisutlin is fairly well known, and incidental observations of white-fronted goose movements, plus breeding activity, are accumulating. Nesting ecology of Canadas likewise is supported only by incidental observation. Taxonomic measurements suggest at least three races of Canada geese in the Yukon.

**Current Year Objectives, Plans:**

It is hoped to begin a more organized, concerted effort to understand Yukon geese.

1. Nesting ecology will be investigated, and spring surveys of representative river systems.
2. Inventory of moulting and staging areas will be continued through gathering of local knowledge and air survey.
3. Productivity surveys of representative rivers will be conducted by boat.
4. Banding effort will be emphasized both for local breeding birds, as well as fall staging birds.
5. Sex, age, and taxonomic measurements will be taken from all birds handled.

A series of management strategies based on the data collected will be built over the period of this study, which is viewed as a low-intensity, 5-year project.

**Publications, Reports:**

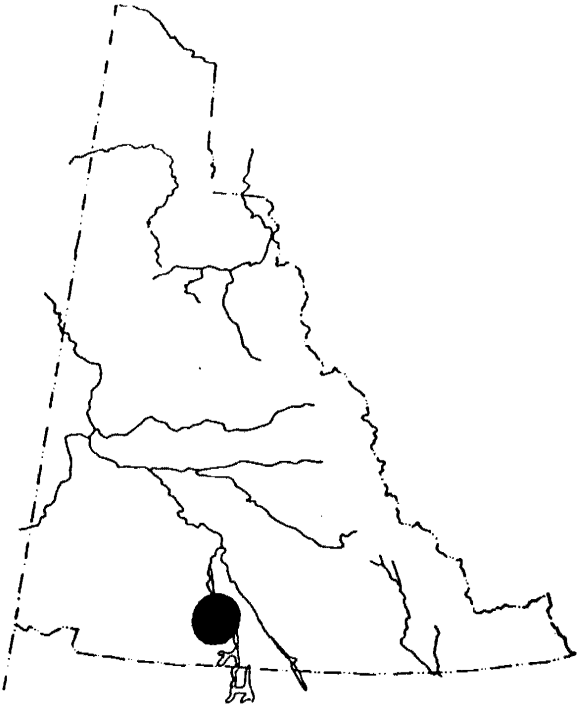
Mossop, D. and T. Coleman. 1984. Factors Affecting the Fall Staging of Waterfowl at the Nisutlin Delta, Yukon. Dept. of Ren. Res., YTG. A Yukon River Basin Project Report.

Current Year Report Due: December 1988

Final Report Due:

**WILDLIFE PROJECT**

Yukon Department of Renewable Resources

<b>Title: DUCKS UNLIMITED/Y.T.G. COOPERATIVE DEVELOPMENT OF LEWES MARSH (BLACK MIKE SEGMENT)</b>	
<b>Project Leader(s):</b> D. Mossop L. Mychasiw	<b>Assistance:</b>
<b>Date Initiated:</b> Summer 1988	<b>Duration:</b> 2-3 years
<b>Location:</b> Lewes Wetland, Marsh Lake	<b>District:</b> Whitehorse <b>GMZ:</b> 9
<b>Dates of Field Work:</b> Open water period Construction: Late winter	
<b>Operational Budget (YTG):</b> 2.5k	<b>Cooperators:</b> 375k (over 2 years)
	<b>Reason for Project:</b>  Water level management is required to rehabilitate Lewes Marsh currently flooded due to water storage in system. Project is designed to provide recreational opportunity, increase waterfowl breeding habitat, provide non-consumptive wildlife viewing and flood control.
	<b>Cooperating Agencies:</b>  Ducks Unlimited (Canada)

**Progress to Date (Summary of Results):**

A conceptual proposal has been developed, initial biological reconnaissance and initial engineering surveys completed.

**Current Year Objectives, Plans:**

Pursuant to the YTG/DU wetland agreement, a management plan for the area will be detailed and agreed to by both parties.

A subsidiary agreement will be signed, public hearings provided and adjustments made to final design.

All licences and permits will be obtained and initial construction will be commenced in late winter.

**Publications, Reports:**

Current Year Report Due: April, 1989

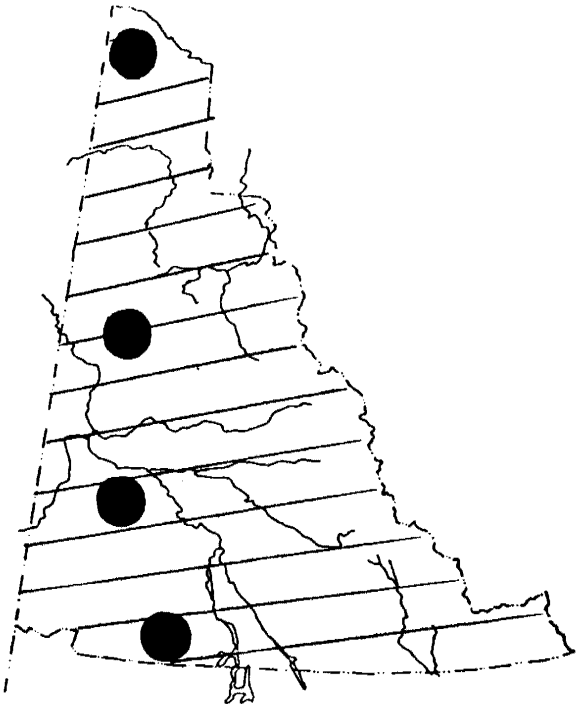
Final Report Due:

NON-GAME MANAGEMENT

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**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Gyrfalcon Management - Harvest, Captive Breeding, Population Research, Protective Surveillance</b>	
<b>Project Leader(s):</b> D. Mossop N. Barichello	<b>Assistance:</b> K. Gustafson S. Benjamin
<b>Date Initiated:</b> 1981	<b>Duration:</b> Ongoing
<b>Location:</b> N. Slope - Ogilvie Mtns.; Southern Lakes	<b>District:</b> Old Crow, Dawson, Whitehorse <b>GMZ:</b> 1, 7, 2
<b>Dates of Field Work:</b> May 3, June 10 - 15	
<b>Operational Budget (YTG):</b> \$4.0 M	<b>Cooperators:</b> \$3.0 M
	<b>Reason for Project:</b> <p>Gyrfalcons are a vulnerable northern species with an extremely high market value. Pressures on their populations from a variety of sources must be addressed in management planning. This project addresses a variety of aspects and is translating information gained into functioning management practices including harvest, private breeding, population research and realistic enforcement protection.</p>
	<b>Cooperating Agencies:</b> Polar Continental Shelf

**Progress to Date (Summary of Results):**

Background research into management criteria and options is well advanced in the areas of (a) harvest from the wild, and (b) private captive production. Yukon is currently acting on this information to develop long-term policy. Population research has advanced adequately in the area of inventory and basic research into productivity parameters is currently being written for publication.

**Current Year Objectives, Plans:**

1. Monitor and assist in the private captive production of gyrfalcons for market values.
2. To produce published accounts of research conducted by UBC researcher in Ogilvie Mountain study (N. Barichello).
3. To continue surveillance of nest sites as required to document productivity and curtail illegal activity.

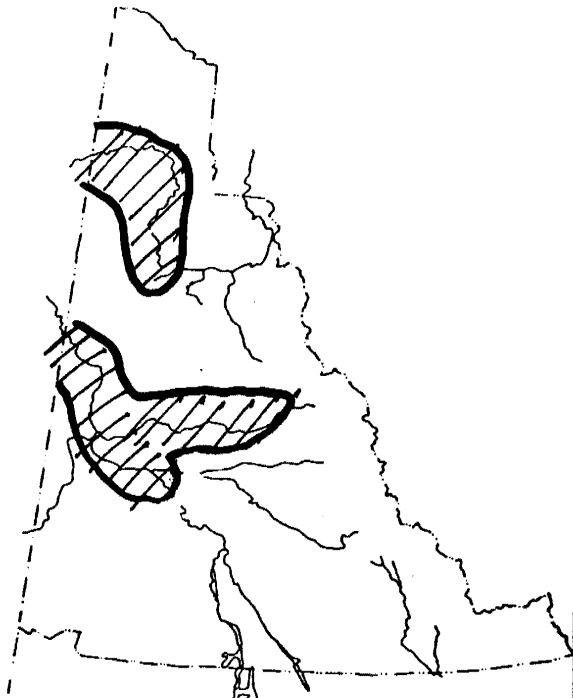
**Publications, Reports:**

Annual Reports, 1981-1986.

Current Year Report Due: December 31, 1988

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Peregrine Falcon Recovery Project</b>	
<b>Project Leader(s):</b> D. Mossop	<b>Assistance:</b> B. Tokarek
<b>Date Initiated:</b> 1978	<b>Duration:</b> Ongoing
<b>Location:</b> Yukon River Valley, Yukon North Slope	<b>District:</b> Dawson/Old Crow <b>GMZ:</b> 1, 2, 3
<b>Dates of Field Work:</b> June 1 - Aug. 10	
<b>Operational Budget (YTG):</b> \$4.0 M	<b>Cooperators:</b> \$15.0 M
	<b>Reason for Project:</b> The peregrine falcon is an endangered species in Canada. It disappeared from most of its former range in the 1960's. A small remnant population remained in Yukon. Since 1978 the population of the Yukon River (the interior race of peregrine) has been closely monitored and productivity has been supplemented with captive bred young. The population has now recovered and continues to expand into vacated habitat. On the Arctic coast recovery has not occurred; captive breeding efforts continue at Whitehorse (the Arctic race of peregrine) to effect reintroduction. This project provides population monitoring, surveillance and Yukon's field contribution to the Canadian Peregrine Recovery Team.
	<b>Cooperating Agencies:</b> - Members of Canadian Peregrine Recovery Team - Polar Continental Shelf

**Progress to Date (Summary of Results):**

The Yukon River population has now recovered in sections of the system to pre-decline levels. In excess of 40 young are being produced annually. This project has documented the recovery in detail, providing some of the better North American data on understanding the reasons for the decline. Band returns are beginning to reveal migrational patterns, a vital link in the birds' total ecology. The Arctic peregrine has meanwhile disappeared from the Yukon completely. Thirty young have been cross-fostered by gyrfalcons successfully. Their return as breeders is anticipated in the next few years.

**Current Year Objectives, Plans:**

1. To carry out low-intensity monitoring of breeding numbers, productivity and human activity in the Yukon River.
2. To continue gathering information on the prey base used by Yukon peregrine populations.
3. To monitor productivity in a sample of the Peel River peregrine population and band all young known to be produced in 1985.
4. To monitor former nesting territories of tundra peregrine on Yukon North slope to determine occupancy by colonizing breeders, identify any marked birds.

**Publications, Reports:**

Annual Reports since 1978.

1980 H.A. Peregrine Falcon Survey (Yukon Section).

Mossop, D., R. Campeau and T. Hayes. 1983. Peregrine Falcon Recovery Project. YTG Report. Dept. of Ren. Res.

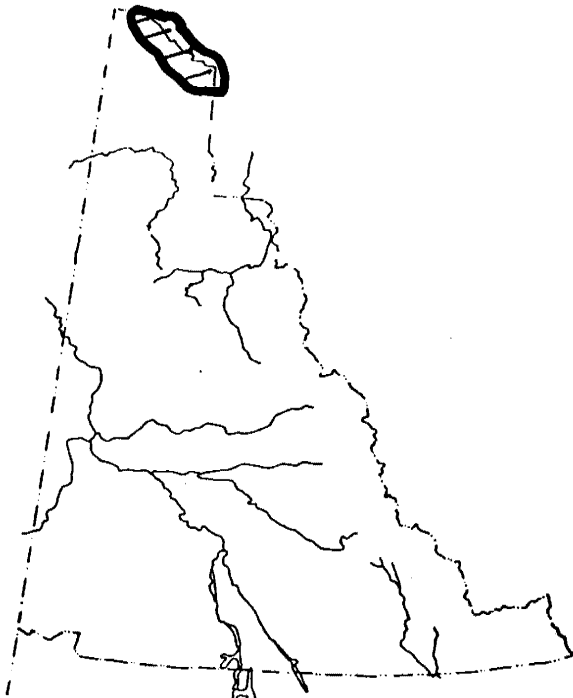
Mossop, D, and T. Munson. 1984. Peregrine Falcon Recovery Project. Yukon Dept. Ren. Res., Whitehorse.

Mossop, D. 1986. Peregrine Falcon Recovery Project, 1986. Dept. Ren. Res., Yukon.

Current Year Report Due: December 1988

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Inventory and management Plans for Non-game Bird Communities of Herschel Island and Yukon's North Slope</b>	
<b>Project Leader(s):</b> D. Talarico D. Mossop	<b>Assistance:</b>
<b>Date Initiated:</b> 1985	<b>Duration:</b> 4 years
<b>Location:</b> Herschel Island	<b>District:</b> Old Crow
	<b>GMZ:</b> 1
<b>Dates of Field Work:</b> June 15 - Aug. 31 (approx.)	
<b>Operational Budget (YTG):</b> \$3.0 M	<b>Cooperators:</b> \$10.0 M
	<b>Reason for Project:</b> In support of planning for the establishment of a Yukon Territorial Park on Herschel Island, the bird fauna must be taken into account. Inventory of species occurring and an initial analysis of their habitat use is necessary for the planning exercise along with the identification and mitigation of potential conflicts with the use of the area as a park. Additionally, non-consumptive wildlife opportunity on the Yukon's North Slope in general can play a very important role in future development of the area. Planning for this use is necessary to insure wise policy development and protection of the resource.
	<b>Cooperating Agencies:</b> - IFA North Slope Wildlife Advisory Council - Yukon Parks Branch

Progress to Date (Summary of Results):

The 1987 bird inventory on Herschel Island resulted in the identification of 72 bird species, of which 26 were breeding on Herschel Island. Significant avian phenomenon with interpretive potential for visitors were identified and four areas where further work and mitigation management will be required were identified.

Mainland systems are less well known, although pilot natural history trips are successful and a considerable data base of non-game birds is being produced from data gathered from "wilderness opportunity" tourists in the area.

Current Year Objectives, Plans:

Continued low-level field work on Herschel Island will concentrate on (a) the black guillemot colony at the townsite (b) nesting rough-legged hawks (c) the staging and moulting of sea ducks, and (d) the nesting ecology of snowy owls.

Field effort will briefly continue:

1. Bird inventory.
2. Experiment with artificial guillemot nesting structures.
3. Monitor rough-legged hawk and snowy owl nesting success in relation to human disturbance.

It is also proposed to expand into a North Slope focus of wildlife interpretation as a local opportunity for enterprise. Data bases available will be researched and new attractive themes will be identified. Some field testing of techniques will be required.

Publications, Reports:

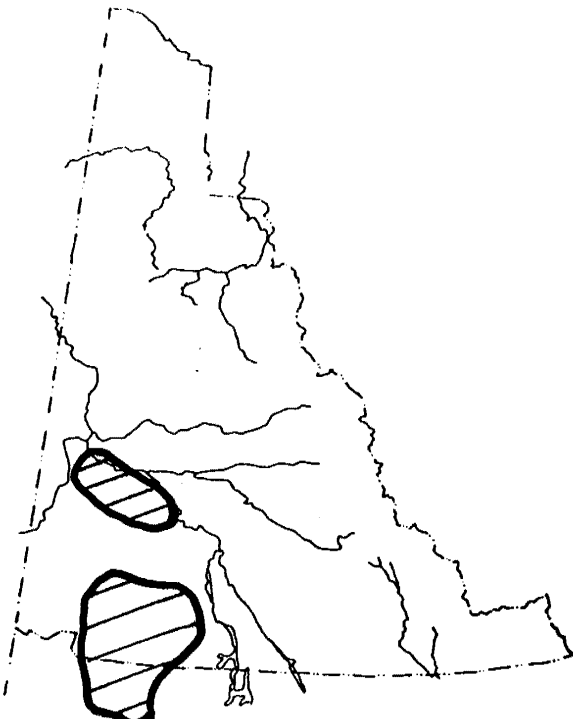
Hawkings, J. and D. Mossop. 1984. An Avifaunal Survey of Herschel Island, 25 June - 17 July, 1984. Interim report. Dept. of Ren. Res., Yukon.

Talarico, D. and D. Mossop. 1986. A 3-year Summary of Avifauna Research on Herschel Island. An Interim Report for use in Park Management and Interpretive Programs. YTG, Dept. of Ren. Res. Report, 1986.

Current Year Report Due: December 1988

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Non-game Bird Inventory</b>	
<b>Project Leader(s): D. Mossop</b>	<b>Assistance: K. Gustafson</b>
<b>Date Initiated: 1974</b>	<b>Duration: Ongoing</b>
<b>Location: Whitehorse (Coast Mtns.), Carmacks (Dawson Range)</b>	<b>District: Whitehorse, Carmacks</b> <b>GMZ: 5, 7</b>
<b>Dates of Field Work: June 1 - 10</b>	
<b>Operational Budget (YTG): \$5.0 M</b>	<b>Cooperators: \$15.0 M</b>
	<b>Reason for Project:</b>  In support of species management planning and land use decisions, an accurate inventory of valuable birds, notably species of raptors - the gyrfalcon, peregrine falcon, golden eagle, bald eagle, and osprey are essential. Extensive inventory is now available to large sections of the territory, and as new areas are scheduled for planning and development the inventory is augmented as required. The Yukon is cooperating with the BC government to survey border areas in 1988, and resource developments in the Dawson Range make surveys there necessary.
	<b>Cooperating Agencies:</b> - Government of BC; - Roads to Resources Program.

**Progress to Date (Summary of Results):**

Inventory has occurred in representative ecoregions throughout the territory, giving a good picture of distribution and abundance of the important species. Gyrfalcon abundance varies from a high of 1 pair/170 km<sup>2</sup> to 1 pair/1500 km<sup>2</sup>, depending on ecoregion. Golden eagles are by far the most abundant raptor surveyed, and Yukon's peregrine falcon populations are now among the best known anywhere.

**Current Year Objectives, Plans:**

Two areas are slated for new surveys:

- a. the border areas and south into BC, on a program to cover the Haines triangle;
- b. the areas of the Dawson range affected by development of the Big Creek Road.

**Publications, Reports:**

Annual Reports, 1975-1984.

Mossop, D., K. Guenter and R. Hayes. 1984. Raptor Inventory and Management Planning (North Slope) - Dept. Ren. Res. Publication, YTG.

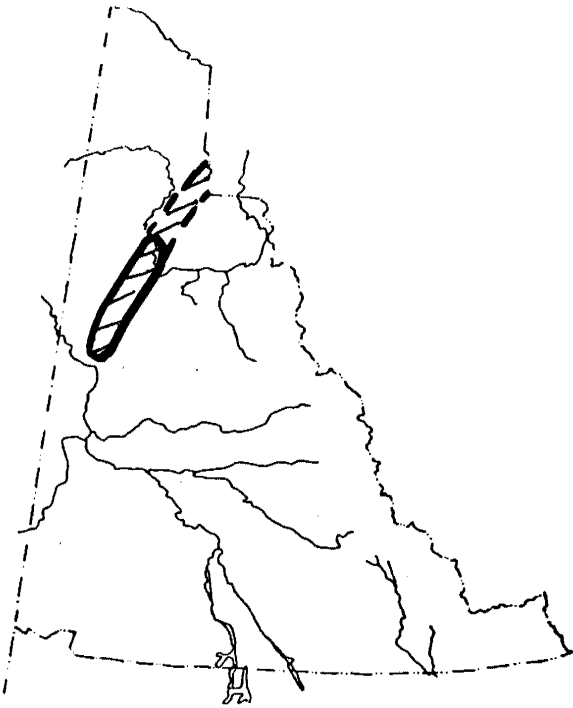
Hayes, R. and D. Mossop. 1982. Bird of Prey Inventory Project, 1982, Southern Lakes Area. Dept. Ren. Res. Publication, YTG.

Mossop, D. 1987. Bird of Prey Inventory - Kusawa Lake Area (In prep.).

Current Year Report Due: December 1988

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Dempster Corridor Wildlife Interpretive Project</b>	
<b>Project Leader(s):</b> D. Talorico D. Mossop	<b>Assistance:</b> - Contract Naturalist (2) - B. Tokarek - T. Grabowski
<b>Date Initiated:</b> 1983	<b>Duration:</b> Ongoing
<b>Location:</b> Dempster Highway, Km 60-240	<b>District:</b> Dawson <b>GMZ:</b> 2 - 1
<b>Dates of Field Work:</b> June 10 - Aug. 31	
<b>Operational Budget (YTG):</b> \$8.0 M	<b>Cooperators:</b> N/A
	<b>Reason for Project:</b> <p>The Dempster corridor has been completely surveyed for nesting birds of prey. An inordinate density of rare birds was identified. These birds have a very high value as interpretive opportunities for tourists. The birds are likely to disappear from the corridor unless specialized management is in place to protect them and their habitat.</p> <p>A natural history interpretive program has developed in the area over the years of this work. The project is designed to provide non-game wildlife content for that effort.</p>
	<b>Cooperating Agencies:</b>  Yukon Department of Tourism

**Progress to Date (Summary of Results):**

Two years of initial interpretation and questionnaire approach to visitor anticipation have been completed. 90-100% of visitors express interest in seeing wildlife. Most visitors require some sort of assistance in seeing and understanding wildlife and ecological phenomenon. Experiments with conducted hikes have been very successful. Large mammals have proved the largest attraction to the average visitor and interests have ranged widely from insects to plants.

**Current Year Objectives, Plans:**

1. To continue pilot interpretive project in the corridor.
2. To continue specialized management to enhance and stabilize viewing opportunity particularly of rarer birds of prey.
3. To provide protective surveillance for nesting raptors.
4. To design interpretive material, displays, signs.

A casual technician will be assigned to cover the project throughout the summer months to carry out continuous field coverage. In 1983/84 focus was on assessing public interest and potential. In the current year, a questionnaire will continue to interview tourists about anticipation. Experimental nesting structures will be deployed for small owls and great gray owls. One gyrfalcon eyrie will be improved. Constant surveillance of human activity will be carried out near all vulnerable nesting sites.

An interpretive center will be designed to house seasonal interpretive staff in the corridor. It will serve as a focus for visitors to obtain material and to meet with interpretive personnel. Displays will be designed and format for signs and interpretive trails will be developed. The program will begin to expand to cover all aspects of wildlife viewing opportunity.

**Publications, Reports:**

Mossop, D. and R. Hayes. 1978. Birds of Prey and the Dempster Transportation Corridor. YTG Report.

Guenter, K. and D. Mossop. 1983. Interpretive Potential of Wildlife in the Dempster Highway Development Area.

Pangman, J. and D. Mossop. 1984. Interpretive Potential of Wildlife in the Dempster Corridor. Yukon Dept. of Renewable Resources Report.

McEwen, C. and J. Majiski. 1987. Dempster Interpretive Centre/Raptor Research Project, 1987. Yukon Dept. Ren. Res. Report.

Current Year Report Due: December 31, 1988

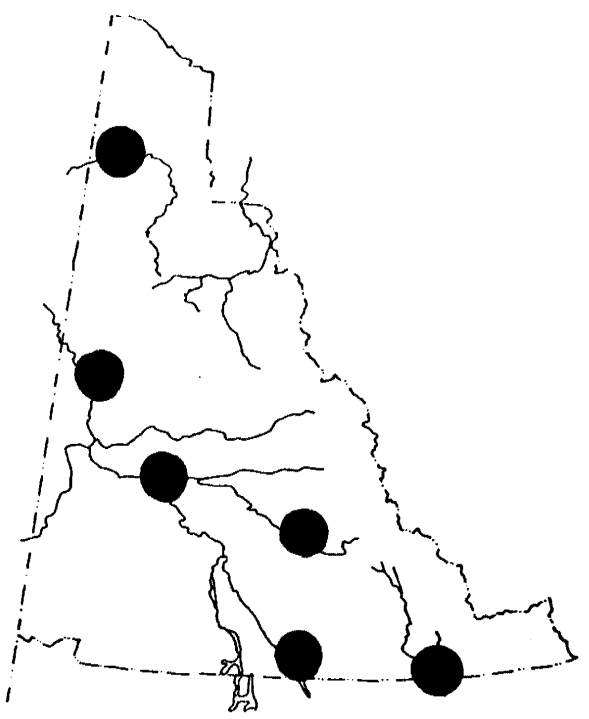
Final Report Due: N/A

SPECIAL STUDIES

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**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Yukon Indian Harvest Survey</b>	
<b>Project Leader(s):</b> Ray Quock Kent Jingfors	<b>Assistance:</b>
<b>Date Initiated:</b> Spring 1987	<b>Duration:</b> Ongoing
<b>Location:</b> Yukon-wide (initially incl. 6 communities)	<b>District:</b> <b>GMZ:</b>
<b>Dates of Field Work:</b> Hunter interviews in 1) mid summer (June/July) 2) mid winter (Dec./Jan.)	
<b>Operational Budget (YTG):</b> \$62.7K (88/89)	<b>Cooperators:</b>
	<b>Reason for Project:</b>  To establish a workable methodology for the collection, analysis and interpretation of Indian harvest information. The program is designed to provide data on harvest characteristics of selected big game species while allowing Indian hunters a more active role in cooperative wildlife management programs.
	<b>Cooperating Agencies:</b>

**Progress to Date (Summary of Results):**

During the first year of the survey (1987), six communities were included in the study: Teslin, Watson Lake, Ross River, Pelly Crossing, Dawson and Old Crow. Native fieldworkers contacted a total of 415 Indian households and interviewed 467 hunters which represented 96% of all known hunters. Only 6 households refused to be interviewed and cooperation has been better than first expected. Aside from actual harvest, information on meat consumption and demand as well as perceptions of game abundance and current hunting practices were collected.

**Current Year Objectives, Plans:**

- 1) The spring harvest in Old Crow will be documented in May/June. Harvest information from the other 5 communities will be collected in December 1988.
- 2) Attempts will be made in 1988 to include other Yukon communities that are interested in participating in the harvest survey.
- 3) A first annual progress report will be distributed to the communities for their comments.

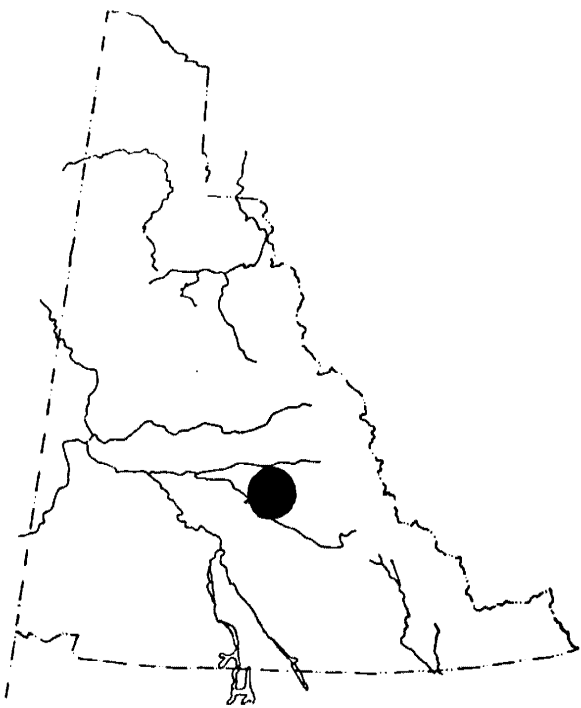
**Publications, Reports:**

Quock, R. and K. Jingfors. 1988. Yukon Indian Harvest Survey - Progress Report 1987. (In preparation).

Current Year Report Due: 1 August 1988

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: MT. MYE FANNIN SHEEP MITIGATION PROJECT</b>	
<b>Project Leader(s):</b> M. Hoefs (YTG) J. Eamer (Curragh Resources)	<b>Assistance:</b> Foundation for North American Wild Sheep
<b>Date Initiated:</b> Winter 1987/88	<b>Duration:</b> 2 to 3 years
<b>Location:</b> Vangorda Plateau	<b>District:</b> Ross River
	<b>GMZ:</b> 4-46;4-47
<b>Dates of Field Work:</b> Year-round; with emphasis on the spring and fall migration periods.	
<b>Operational Budget (YTG):</b> NONE	<b>Cooperators:</b> FNAWS 15,000 Curragh 36,000
	<b>Reason for Project:</b>  The expansion of the Curragh Mining operation on the Vangorda Plateau, with two proposed open-pit mines will destroy migration routes of a fannin sheep population between summer and winter ranges.  The project is meant to develop mitigative measures.
	<b>Cooperating Agencies:</b> Y.T.G. (Wildlife); Curragh Resources; Foundation for North American Wild Sheep

**Progress to Date (Summary of Results):**

An initial impact assessment of the proposed development was done in 1980/81; and a re-assessment in 1987.

**Current Year Objectives, Plans:**

Document migration periods and migration routes, lambing areas and lambing periods. Equip a number of sheep with radio collars to assess seasonal range use patterns. Create a new migration corridor around the development area and persuade sheep to use the new route by means of baiting.

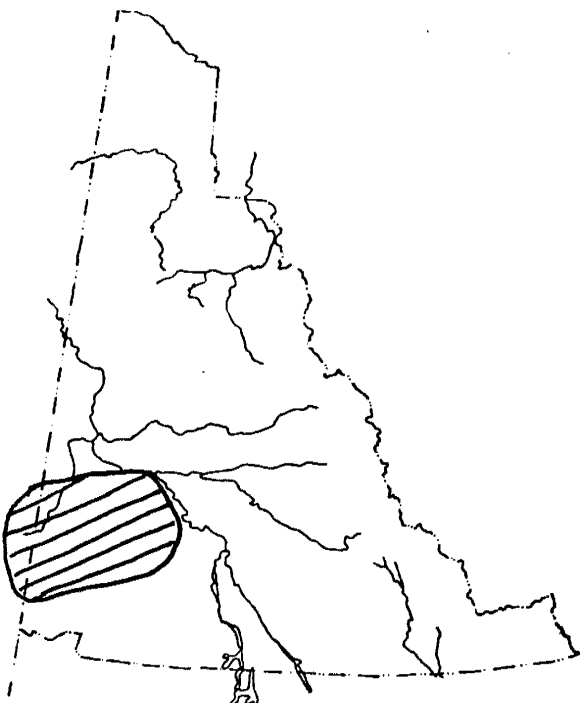
**Publications, Reports:**

Annual progress report will be compiled at the end of each winter (1988/89, 1989/90 and 1990/91).

Current Year Report Due: June 30, 1988

Final Report Due: June 30, 1991

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: BISON PROJECT</b>	
<b>Project Leader(s):</b> M. Hoefs P. Merchant C. Kennedy	<b>Assistance:</b> C.W.S. and E.D.A.
<b>Date Initiated:</b> 1980	<b>Duration:</b> ongoing
<b>Location:</b> Nisling River Watershed	<b>District:</b> Haines Junction and Whitehorse <b>GMZ:</b> 5-42, 5-30, 5-25
<b>Dates of Field Work:</b> Vegetation work in August. Periodic relocating of released bison year-round.	
<b>Operational Budget (YTG):</b> \$33,500.00 <b>Cooperators:</b> C.W.S. \$15,000	
	<b>Reason for Project:</b>  To establish a free-roaming herd of Wood Bison with a size of over 200 animals in the Nisling River Watershed. Wood Bison are declared "threatened" in Canada.
	<b>Cooperating Agencies:</b>  Y.T.G. (Fish & Wildlife Branch) C.W.S. (Dept. of Environment)

**Progress to Date (Summary of Results):**

A 5.6 sq. km. mile enclosure was completed in 1985 and 34 wood bison were transported to it from Elk Island National Park in March 1986. In March 1988, 22 bison were released into the wild; and 21 were retained in the enclosure for future releases. Concurrently, vegetation work is being conducted to assess the impact of bison on the range and to estimate carrying capacity of the Nisling River Valley.

**Current Year Objectives, Plans:**

Periodically monitor the location of released bison, 19 of which are equipped with radio collars. If these bison remain in the general area of the Nisling River Watershed, additional releases are planned for late winter 1988/89. Vegetation work will continue to determine productivity of the range, forage use by bison and carrying capacity of the Nisling River Valley.

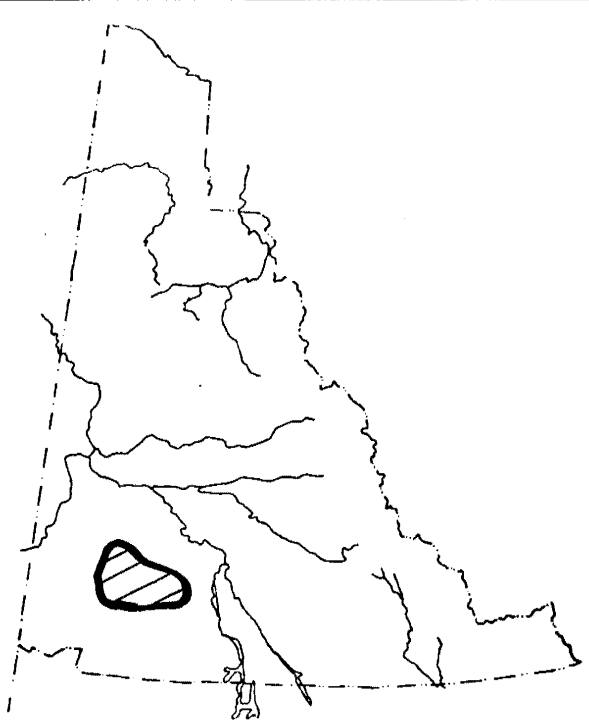
**Publications, Reports:**

A 5-year Wood Bison Management Plan is currently being drafted and should be completed by Nov. 1988.

**Current Year Report Due: Summer 1988**

**Final Report Due: This is an ongoing project of at least 5 years duration. Final report by 1993.**

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: ASSESSMENT OF POPULATION STATUS AND OF THE NUTRITIONAL SIGNIFICANCE OF WINTER AND SPRING RANGE OF WAPITI IN YUKON.</b>	
<b>Project Leader(s):</b> Manfred Hoefs Robert Florkiewicz	<b>Assistance:</b>
<b>Date Initiated:</b> June 1987	<b>Duration:</b> Two Years
<b>Location:</b> Stoney Cree/Takhini River Valley; Hutshi Lake/Nordenskiold River Valley	<b>District:</b> Whitehorse <b>GMZ:</b> 5-49, 7-13, 7-15, 5-48, 5-45
<b>Dates of Field Work:</b> February-July 1988 January-July 1989	
<b>Operational Budget (YTG):</b> 4k	<b>Cooperators:</b> Yukon EDA 9.0k Yukon Fish & Game Assoc. 1.0k
	<b>Reason for Project:</b>  Population status of Wapiti in Yukon presently unknown but presumed, from emperical data, to be stagnant.  Investigations aim at producing up-to-date information base on status and condition of Wapiti and their habitat within the Yukon. This information will provide the basis for development of a species management plan for elk in the Yukon.
	<b>Cooperating Agencies:</b> Canada/Yukon E.D.A.; Yukon Fish & Game Assoc.; Boreal Institute for Northern Studies (#55-51076); University of Alberta

**Progress to Date (Summary of Results):**

Six Wapiti (5 females, 1 male) have been radio-collared from the Hutshi herd and have been monitored on a bi-weekly basis during early 1988 season.

Three mature females were radio-collared in the Stoney Creek Study Area and have been monitored intensively on a daily basis through late winter and early spring 1988. Simultaneous collections of forage during the spring green-up period were made for analysis during winter 1988.

**Current Year Objectives, Plans:**

To determine the degree of use and reliance of Wapiti to specific habitat sections through analysis of relocation data from collared females.

To determine the success of calving during this year, monitor habitat use, and identify potential mortality factors which may influence growth of the respective herds.

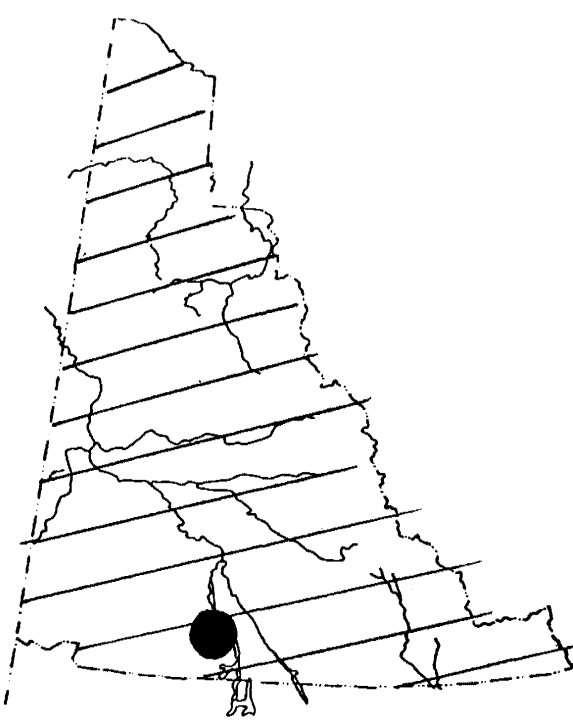
To evaluate range quality through seral collections of major Wapiti forage species for subsequent biomass determination and nutritional analyses.

**Publications, Reports:**

Current Year Report Due: August 1988

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: Laboratory Services</b>	
<b>Project Leader(s): Philip Merchant</b>	<b>Assistance: 4-6 month auxillary and student technical support</b>
<b>Date Initiated: Ongoing</b>	<b>Duration: Year-round</b>
<b>Location: Laboratory 10 Burns Road Whitehorse, YT</b>	<b>District:</b> <b>GMZ: N/A</b>
<b>Dates of Field Work: N/A</b>	
<b>Operational Budget (YTG): \$6 K</b>	<b>Cooperators: Student salaries</b>
	<b>Reason for Project:</b>  A central organized laboratory is required for the collection of information from hunter kills, for conducting laboratory analysis of specimens and providing technical assistance with examination of specimens for enforcement purposes.
	<b>Cooperating Agencies:</b>  Dept. of Education, YTG.

**Progress to Date (Summary of Results):**

Analysis and results are reported by projects receiving assistance and support.

**Current Year Objectives, Plans:**

- a. Age analysis of about 200 lynx (trapper killed).
- b. Age analysis of about 120 wolves.
- c. Collect and compile biological information through hunter submission programs.
- d. Process biological specimens collected through the hunter submission program.
- e. General laboratory maintenance, equipment upkeep and stocking.
- f. Assistance to specific projects identified by supervisor of Habitat and Research.

**Publications, Reports:** N/A

**Current Year Report Due:**

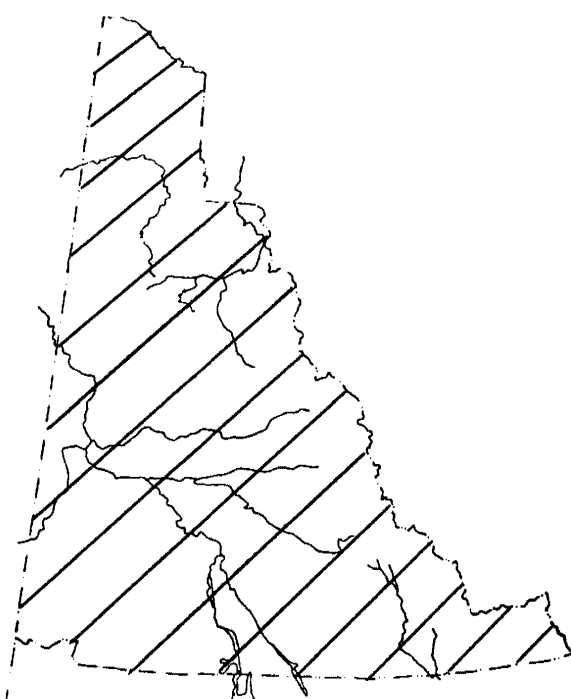
**Final Report Due:**

HABITAT MANAGEMENT

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McArthur Mtns/Ethel Lk. Habitat Survey and Mapping.....	88
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**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: WILDLIFE/HABITAT PROTECTION MEASURES</b>	
<b>Project Leader(s):</b> Len Mychasiw	<b>Assistance:</b> Andrew Thompson (Ferguson-Gifford...)
<b>Date Initiated:</b> 1987	<b>Duration:</b> 2 years
<b>Location:</b> Yukon-wide	<b>District:</b>
<b>Dates of Field Work:</b> N/A	<b>GMZ:</b>
<b>Operational Budget (YTG):</b> \$	<b>Cooperators:</b> \$
	<b>Reason for Project:</b> <p>The department's ability to respond to development proposals which have an impact upon wildlife and wildlife habitat has been hampered by a lack of explicit policies on the subject and uncertainty about the Territorial Government's legal authority to implement protective measures. This project determines the legal basis for designating habitat protection areas, and provides the necessary policy and legislative framework.</p>
	<b>Cooperating Agencies:</b> <p>Wildlife Habitat Canada</p>

**Progress to Date (Summary of Results):**

A legal analysis has been completed by Andrew Thompson. This analysis concludes that Territorial legislation can regulate land use activities, provided that it does not lead to operational conflicts with Federal legislation. A habitat protection policy based on the above principle has been submitted for Cabinet approval. The revised Wildlife Act will enable the department to make regulations with respect to habitat protection. The impacts of backcountry roads were examined and recommendations were presented for dealing with them. A new access management policy was written and submitted for approval.

**Current Year Objectives, Plans:**

Proceed with the designation of one protected habitat area in the Takhini River Valley.

Bring in new regulations addressing access management problems.

**Publications, Reports:**

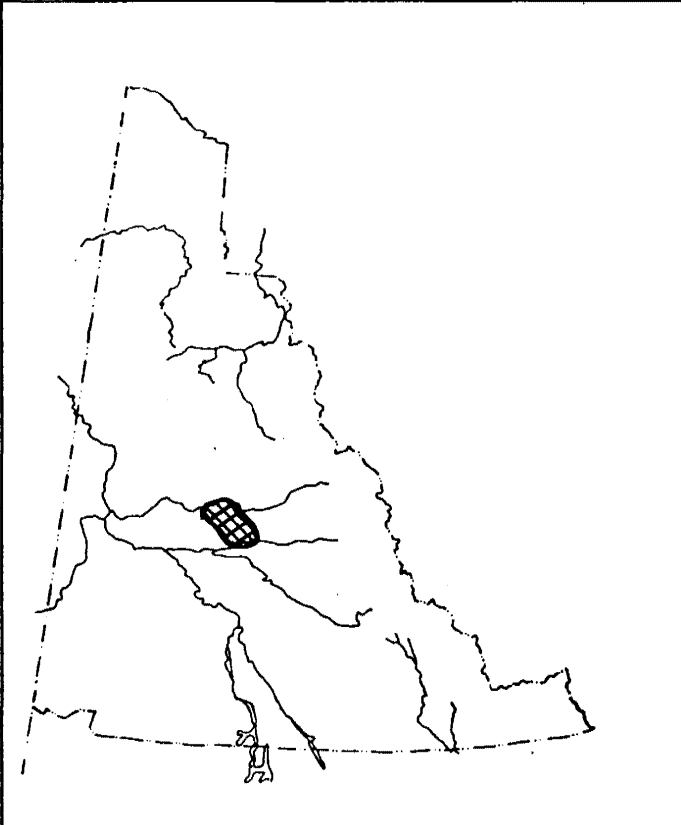
Thompson, A.R. and H.I. Rueggeberg. 1988. Wildlife Habitat Protection in Yukon. 71 pp. and appendices.

Mychasiw, L. and M. Hoefs. 1988. Access-related impacts of back-country roads to wildlife and management approaches to mitigate them. 35 pp. and appendices.

**Current Year Report Due:**

**Final Report Due:**

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: MCARTHUR MOUNTAINS/ETHEL LAKE HABITAT SURVEY AND MAPPING PROJECT</b>	
<b>Project Leader(s): C.E. Kennedy</b>	<b>Assistance:</b>
<b>Date Initiated: May 1987</b>	<b>Duration: December 1988</b>
<b>Location: An area of 4300 km<sup>2</sup> situated in the central Yukon including Ethel Lake and the McArthur Wildlife Sanctuary.</b>	<b>District: Mayo</b>
<b>Dates of Field Work: June - September 1987</b>	<b>GMZ: 4</b>
<b>Operational Budget (YTG):</b>	<b>Wildlife Habitat Canada Cooperators: Mayo Indian Band Selkirk Indian Band</b>
	<b>Reason for Project:</b>  This habitat survey is part of a joint wildlife management plan proposed for the region. The goal of the habitat component is the identification and description of wildlife habitat and the development and implementation of protective measures for such.
	<b>Cooperating Agencies:</b>  Wildlife Habitat Canada

(Kennedy1)

Progress to Date (Summary of Results):

Vegetation and wildlife data collected at 563 ground sampling sites has been analyzed. A comprehensive report describing vegetation communities, wildlife use, geology, glaciology and the McArthur Hotsprings is in its final draft. Vegetation mapping at a scale of 1:100,000 has been conducted with the aid of Landsat satellite imagery and is nearing completion.

Current Year Objectives, Plans:

Overlay maps indicting habitat value for sheep, moose, and caribou will be produced following completion of vegetation maps and in consultation with wildlife management biologists.

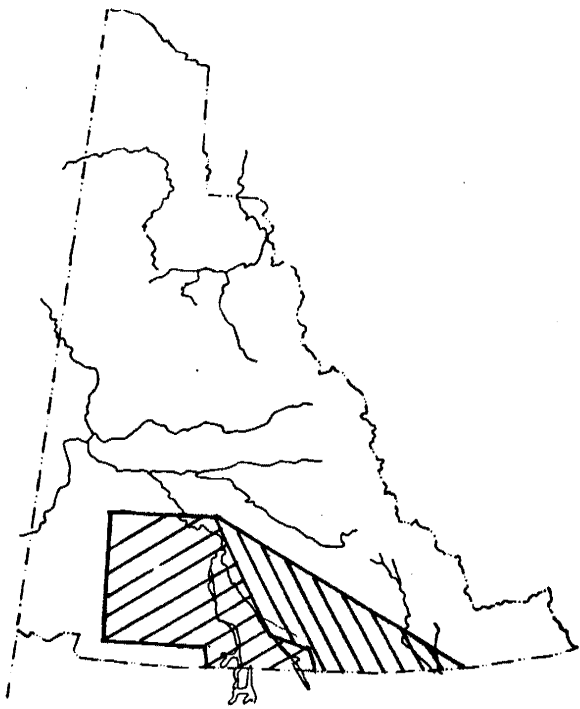
Publications, Reports:

Kennedy, C.E. 1988. (Draft) Habitat Survey of the McArthur Mountains/  
Ethel Lake Area.

Current Year Report Due:

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

Title: RECLAMATION/REVEGETATION MANUAL FOR THE YUKON	
Project Leader(s): C.E. Kennedy	Assistance:
Date Initiated: February 1987	Duration: Ongoing
Location Southwestern and to date: southcentral Yukon	District: GMZ:
Dates of Field Work: N/A	
Operational Budget (YTG): \$15,000 1987 - 1989	Cooperators: N/A
	Reason for Project:  Through the land use review process, the Department attempts to promote the maintenance and restoration of the integrity of wildlife habitat. This manual will assist the territorial and federal government agencies and the private sector in achieving these objectives, and encouraging the use of native species for revegetation where feasible.
	Cooperating Agencies: N/A

(Kennedy2)

Progress to Date (Summary of Results):

The manual is being written in components that are representative of broad geographical areas of the Yukon: Region 1 - Dry southwestern Yukon; Region 2 - southcentral Yukon. In addition, an overall description of reclamation and revegetation techniques pertinent to the Yukon has been completed.

Current Year Objectives, Plans:

A third component will be completed by March 1989.

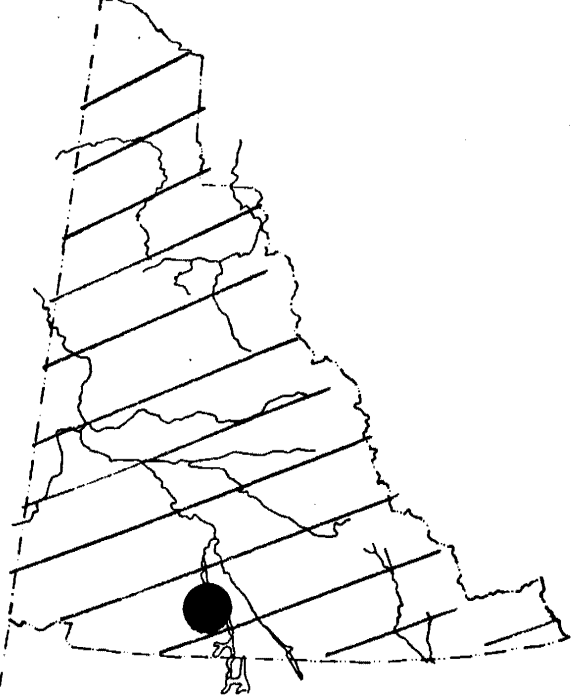
Publications, Reports:

Vaartnou, M. and Assoc. 1987-1988. "Guidelines for Reclamation/Revegetation in the Yukon". 115 pp and appendices.

Current Year Report Due: March 1989 (Third component of manual)

Final Report Due:

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: HERBARIUM FACILITY - VASCULAR AND NON-VASCULAR FLORA OF THE YUKON</b>	
<b>Project Leader(s):</b> C.E. Kennedy	<b>Assistance:</b>
<b>Date Initiated:</b>	<b>Duration:</b> Ongoing
<b>Location:</b> Whitehorse	<b>District:</b>
<b>Dates of Field Work:</b> N/A	<b>GMZ:</b>
<b>Operational Budget (YTG):</b>	<b>Cooperators:</b>
	<b>Reason for Project:</b> A representative collection of Yukon plant species (vascular plants, mosses, liverworts and lichens) is required for reference by departmental biologists and scientists from other government agencies and institutions, inside and outside the Yukon.
	<b>Cooperating Agencies:</b>

(Kennedy3)

Progress to Date (Summary of Results):

There are presently 1400 mounted sheets of vascular plant specimens stored in four archival herbarium cabinets, and over 300 non-vascular plant specimens (i.e. mosses, lichens, liverworts); identification of these specimens has been verified by expert authorities. Collection information is catalogued on the YTG mainframe computer.

Current Year Objectives, Plans:

A continuing effort will be made to catalogue and mount the backlog of plant specimens collected by departmental biologists from throughout the Yukon over the past 20 years, as well as during the 1988 field season. Preparation of a checklist of vascular plants of Yukon, as well as an annotated species list of the complete flora of the Yukon are ongoing projects this year.

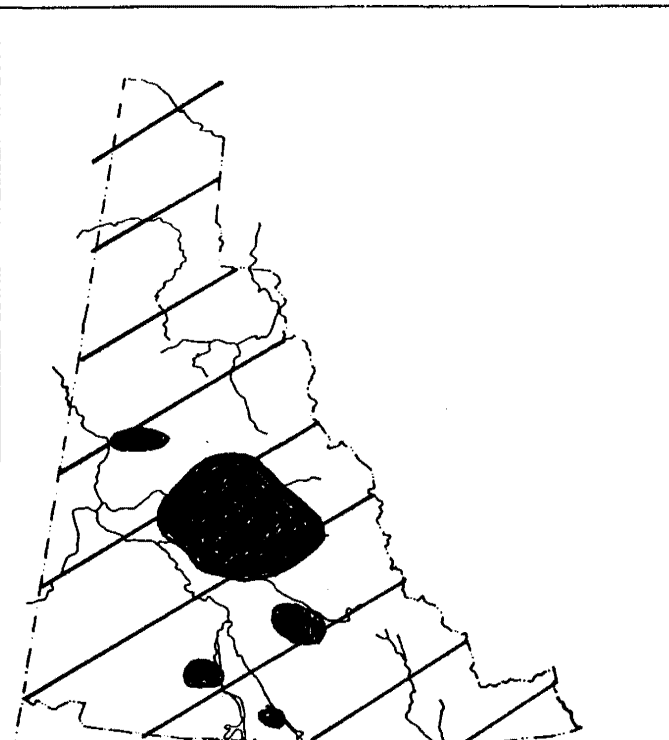
Publications, Reports:

Current Year Report Due:

Final Report Due:

**WILDLIFE PROJECT**

Yukon Department of Renewable Resources

<b>Title: KEY WILDLIFE HABITAT INVENTORY</b>	
<b>Project Leader(s):</b> Beth Hawkings Ron Sumanik Val Loewen	<b>Assistance:</b> Cathy McEwen Jennifer Staniforth Wildlife Bios. & Techs.
<b>Date Initiated:</b> January 1988	<b>Duration:</b> Initially 2.3 yrs
<b>Location:</b> Literature review - Yukon Field work - various areas (see map).	<b>District:</b> All <b>GMZ:</b> All
<b>Dates of Field Work:</b> Wetland - May-September Upland - various, especially Feb.-March	
<b>Operational Budget (YTG):</b> \$24,900 current year plus 2 staff	<b>Cooperators:</b> \$55,000 current year plus two staff
 <p>Literature review &amp; cataloguing /// Field work 1988/89 ●</p>	<b>Reason for Project:</b> "Habitat" is central to the well-being of wildlife resources. A catalogue of key (or important) wildlife habitats is essential to bring about wildlife and habitat management goals, to provide input into land use planning programs, and to more effectively address land use and land disposition applications. Much wildlife and habitat work has been carried out in the Yukon but, to date, no attempt has been made to catalog the information in a single location. The main product of this project will be an updatable data base of key wetland and upland habitats in the Yukon. (Storage/retrieval and map system).
	<b>Cooperating Agencies:</b> Wildlife Habitat Canada (Canadian Wildlife Service) (Ducks Unlimited Canada)

(Beth1)

Progress to Date (Summary of Results):

The inventory staff were hired in January 1988. Species workshops were held with the wildlife biologists and work plans were developed for the upland and wetland components of the inventory. The work plans include the definition of key habitat for each species and the methods, scheduling and budget for 1988/89 data collection and cataloguing. A draft format has been developed for the key area database and data collection and cataloguing are well underway. Data collection methods include collection of; 1) "existing" data through literature review; 2) "new" data, through field work and interviews of people knowledgeable of wildlife distributions.

Current Year Objectives, Plans:

- to finalize the data base format (i.e. storage/retrieval and map system)
- to develop a data base manual/report
- to collect and catalogue "existing" data on key upland and wetland habitats
- to collect "new" data through aerial & ground field work in selected study areas, in cooperation with the wildlife population programs  
    examples: Mayo area - wetland assessment for waterfowl & furbearer habitat
  - raptor survey
  - late winter moose survey
- Haines Junction area (Kloo Lake) - wetland assessment
- Dawson, Whitehorse areas - hare habitat assessment
- Pelly Range - late winter sheep survey
- Various areas - assistance on sheep and caribou surveys

Many of these cooperative field projects have been described in other sections of this document.

- to conduct information sessions on the program for Fish and Wildlife Branch, other Branches and other agencies.

Publications, Reports:

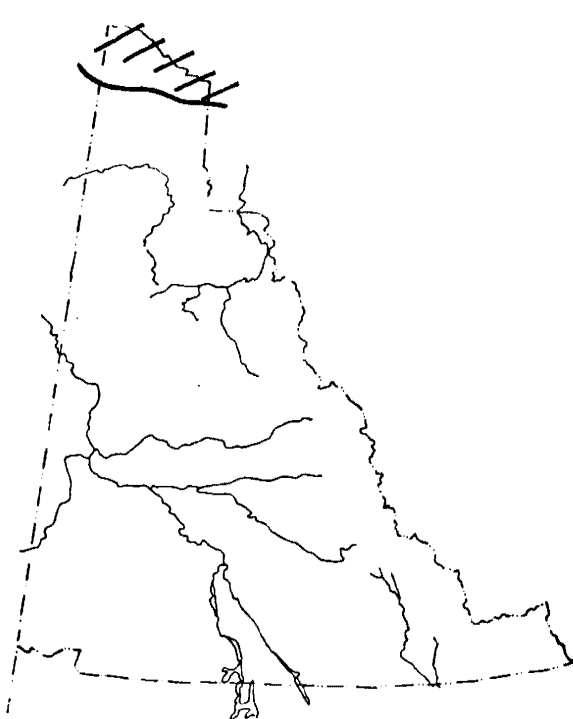
Hawkings, B. and L. Mychasiw. 1988. Identification and protection of key habitat in the Yukon. Progress Report: October 1988. Prepared for Wildlife Habitat Canada. 5p.

Current Year Report Due: March 31, 1989

Final Report Due: March 31, 1990

**WILDLIFE PROJECT**

Yukon Department of Renewable Resources

<b>Title: VEGETATION MAPPING - YUKON COASTAL PLAIN</b>	
<b>Project Leader(s):</b> Beth Hawkings Jim Hawkings (CWS)	<b>Assistance:</b> Catherine Kennedy Consultant (still to be decided)
<b>Date Initiated:</b> September 1988	<b>Duration:</b> 2 years
<b>Location:</b> Yukon Coastal Plain	<b>District:</b> Old Crow
	<b>GMZ:</b> 1
<b>Dates of Field Work:</b> July 1989	
<b>Operational Budget (YTG):</b>	<b>Cooperators:</b> \$19,000 current year (Inuvialuit Final Agree.)
	<b>Reason for Project:</b>  The coastal plain of the northern Yukon and northwestern Alaska is currently the focus of considerable attention, especially for petroleum exploration and development. The Yukon coastal plain is home to significant populations of wildlife and in order to effectively manage these species, it is necessary to protect the land on which they ultimately depend. To do this, we need to know distribution of <u>habitats</u> (or cover types) on the coastal plain and relate this to the distribution of <u>animals</u> (as determined by other wildlife studies).
	<b>Cooperating Agencies:</b> Federal Treasury Board (through IFA Wildlife Management Program) Canadian Wildlife Service

(Beth2)

**Progress to Date (Summary of Results):** This project is the follow-up to a successful 1987 pilot project which investigated the potential of Landsat TM Satellite imagery to delineate vegetation and land cover in the Phillips Bay area. The vegetation data collected in Summer 1986 on the Yukon Coastal Plain (for a NOGAP funded project) has been entered into the Government of Yukon mainframe computer for statistical analysis of vegetation types. The project leaders met to determine the Terms of Reference for a contract to conduct the digital analysis of the satellite imagery and to produce the vegetation map and report products.

**Current Year Objectives, Plans:**

**Project Leaders:**

- to edit and analyze the vegetation data
- to finalize the terms of reference for the remote sensing contract and to tender the contract
- to assist the Contractor in various technical aspects of the project.

**Contractor:**

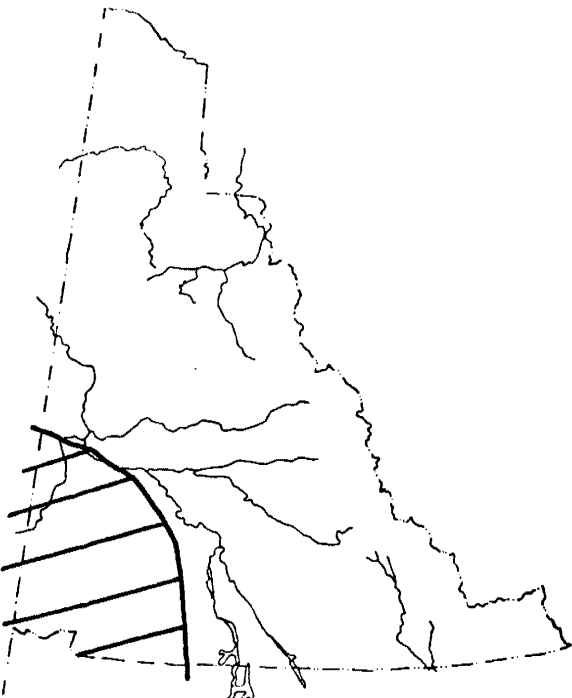
- to conduct the digital analysis of the Thematic Mapper Satellite data (unsupervised classification)
- to determine which computer-generated cover types are biologically meaningful and to revise the analysis
- to produce draft vegetation/land cover maps at 1:100,000 scale for the Yukon Coastal Plain from the N.W.T. border to Komakuk Beach
- to produce a report which describes the methods used to produce the map and provides interpretations of the cover types on the map.

**Publications, Reports:**

**Current Year Report Due: March 31, 1989**

**Final Report Due:**

**WILDLIFE PROJECT**  
Yukon Department of Renewable Resources

<b>Title: FISH &amp; WILDLIFE BRANCH INPUT TO YUKON LAND USE PLANNING</b>	
<b>Project Leader(s):</b> Beth Hawkings	<b>Assistance:</b> entire Branch
<b>Date Initiated:</b> April 1988	<b>Duration:</b> ongoing
<b>Location:</b> Greater Kluane Planning Area	<b>District:</b> Haines Junction <b>GMZ:</b> parts of 5,6 & 7
<b>Dates of Field Work:</b> undetermined	
<b>Operational Budget (YTG):</b> \$1,500 and <b>Cooperators:</b> Undetermined 1 staff (from Regional Planning Program)	
	<b>Reason for Project:</b> <p>The Greater Kluane Land Use Plan is the first plan being prepared pursuant to the Yukon Land Use Planning Agreement, endorsed in October 1987 by the Governments of Yukon and Canada, and the Council for Yukon Indians. The final plan will be a written document and maps setting out guidelines and direction for future land and resource use for a projected period of 10 years. The Fish &amp; Wildlife Branch is responsible for compiling existing data on wildlife harvest, habitat and populations and filling some wildlife data gaps.</p>
	<b>Cooperating Agencies:</b> Federal Government Council for Yukon Indians

**Progress to Date (Summary of Results):**

A contract biologist was hired to interview the wildlife and habitat biologists and to compile a list of existing wildlife, wildlife habitat and wildlife harvest data, a list of wildlife issues and a list of preliminary wildlife data gaps. The contract biologist also began to compile the existing wildlife data listed. Various staff attended the first Kluane public meetings held in Haines Junction and Whitehorse. A workshop was held with the biologists to discuss an agreement for funding from the Regional Planning Section to compile the wildlife data and to prepare a Fish and Wildlife Branch Sector report. Recruitment is underway to hire a term biologist to carry out this work.

**Current Year Objectives, Plans:**

- to complete recruitment of term biologist
- to compile wildlife, wildlife habitat and wildlife harvest data for the Greater Kluane planning area
- to prepare a Fish and Wildlife Branch Sector Report for the Greater Kluane planning area
- to attend various Kluane public meetings, open houses and planning workshops
- to review the wildlife issues with the Regional Planning Commission and to prepare proposals to fill issue-oriented wildlife data gaps
- to fill wildlife data gaps, pursuant to funding
- possibly to begin work on the second planning region.

**Publications, Reports:**

Waterreus, M. 1988. Wildlife references for Kluane Regional Plan. Y.T.G. Renewable Resources unpublished bibliography. 22p.

**Current Year Report Due: March 31, 1989**

**Final Report Due:**