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environmental consultants and engineers

November 15, 1994

Mr. Bill Napier
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Dear Mr. Napier:

RE: Environmental Pilot Survey - Goose Lake, NWT.

The following is a final report containing data and observations from the above project. This report compiles and appends the two draft reports submitted previously by *Bion Research Inc.* and *Hubert and Associates Ltd.*

The information contained in this report is primarily qualitative and presented for planning and design purposes, as requested. This includes results of the bathymetric survey which calculates the total volume of Goose Lake at 9.3 x 10^6 m^3 and provides preliminary information on physical water quality, hydrology, fisheries, wildlife and Inuit land use.

We trust you will find this report satisfactory. Please call either myself at (604) 322-9200 or Ben Hubert at (403) 873-3297 if you have any questions regarding this report.

Yours sincerely,
BION RESEARCH INC.

Marke L. Wong, R.P.Bio.
Biologist

ACKNOWLEDGMENTS

It is a pleasure to acknowledge individuals who assisted in the execution of this assignment.

Bill Napier of Homestake Canada provided direction and guidance as the project authority. The Homestake personnel at the Goose Lake camp provided invaluable field support. *Jane Howe* provided a base map of the area far superior to the one used for planning purposes. *Percy Pacor* was generous with his time in providing background information on the general area. *James Graham* ensured flawless logistic help. *Cynthia Brown* is a tremendous cook. It was a pleasure to work in a clean and efficiently run field camp.

Dave Armstrong of Bathhurst Services provided much appreciated logistical coordination. *Paul Squires* at the Yellowknife office of Department of Environment Inland Waters Directorate provided unpublished runoff data. *Dennis Malchuk* of AES Yellowknife provided precipitation data for Contwoyto Lake / Lupin Mine.

Ben Hubert of Hubert and Associates Ltd. prepared the sections on hydrology, wildlife and land use. He conducted the sounding transects, prepared the bathymetric contour map. *Marke Wong* of Bion Research Inc. prepared the sections on bathymetry, water quality, and fisheries. He acted as skipper for the bathymetric survey and compiled the final report.

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1.0 Introduction

Goose Lake is located at 65:33N and 106:26W in the Northeast quarter of the Northwest Territories near the southwesterly height of land in the Ellice River watershed (Figure 1). Homestake Canada Inc. (Homestake) is currently conducting exploration operations in this area. As a component of these activities Homestake initiated a preliminary environmental study to collect information to assist in the planning and design stage of mine development

Bion Research Inc. and Hubert and Associates Ltd. were retained by Homestake Canada to collect and compile qualitative environmental information on Goose Lake and it's watershed. This work included the following objectives:

1) Conduct a bathymetric survey on Goose lake to estimate volume for design considerations in potential tailings disposal.

2) Conduct flow monitoring and physical water quality at seven previously established stations.

3) Conduct a hydrocast at the deepest part of the lake to assess lake stratification.

4) Compile preliminary data on environmental, fisheries, wildlife resources and Inuit land use.

2.0 Methods and Materials

2.1 BATHYMETRIC SURVEY

A bathymetric survey was conducted on Goose Lake using a Raytheon 719 strip chart depth recorder. Lateral positioning was based on a combination of mapping transects and deadreckoning along each transect. Each transect point was designated a letter value. Intervals were marked on the trace chart with the fix marker switch. The unit was calibrated prior to each set of transects.

Lake volume was estimated by producing a contour map at 2 m intervals using the sounding data on a 1:20,000 scale chart provided by geological staff at the Goose Lake site. The volume of each 2 m contour was calculated by estimating surface area by grid calculation, and multiplying each contour by its mean relative depth (i.e. every odd depth interval; 1,3,5,7...). Total volume was calculated by the summation of each two meter interval. Total surface area of the lake was also calculated by relative weight fraction (i.e. mylar cutout) confirming grid calculations.

2.2 WATER QUALITY

Seven pre-designated monitoring stations were sampled where possible for stream flow and physical water quality (i.e. D.O., Temp., pH and TDS). Biophysical observations where made at each site regarding general substrate, water depth and wetted width. Dissolved oxygen and temperature was measured using a YSI Model 51B D.O. Meter. TDS and pH were measured with Oakton TDSTestr and pHTestr respectively. Flow was estimated using the floating chip method. A hydrocast was conducted at the deepest point of the lake to monitoring for stratification using a Van Doran water bottle.

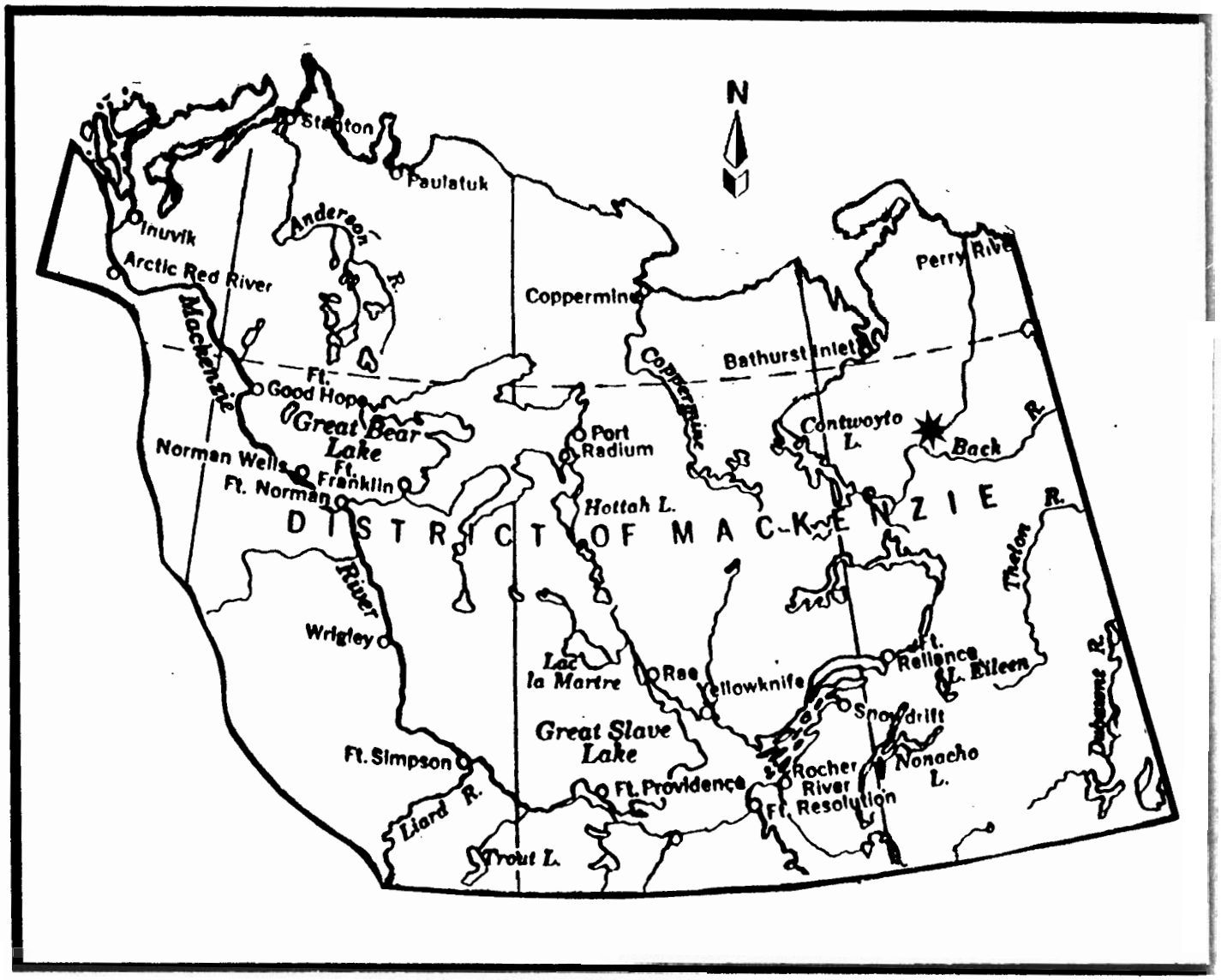


Figure 1: Goose Lake is located in the Northeast quarter of the Mackenzie District of the Northwest Territories, as indicated by the star.

2.3 HYDROLOGY

Precipitation data for Goose Lake was obtained from the nearest AES station at Contwoyto Lake/Lupin Mine with a combined period of record from 1956 to the present. Data from archival sources is up-to-date as of December 1992 for a 36 year record. The data for 1956 to 1981 is aggregated while that from 1982 to the present, collected at Lupin, was provided as monthly totals. In addition general levels for mainland tundra were obtained from the National Atlas of Canada. Total annual precipitation at Lupin and runoff from the Back River drainage measured below Beechey Lake was compared.

The Goose Lake watershed was delineated on 1:50,000 map sheets to determine its geographic boundaries. Its area was determined by applying a grid to the delineated watershed and adding the areas of the individual cells of the grid occupied by the watershed.

Runoff within the Goose Lake watershed is extrapolated from data recorded on the adjacent Back River watershed. The data for the Back River watershed includes Contwoyto Lake which is a "height of land" water body drained by both the Back and Burnside Rivers. The discharge data assumes that the runoff into the lake from the adjacent countryside is split equally to each of these rivers. It is nevertheless known that the flow into the Burnside is greater than the Back (Inland Waters staff, personal communications). This would inflate the runoff/km^2 for the Back River discharge data. To amplify our understanding of runoff from small tundra drainage basins, runoff profiles for the Gordon River are also presented.

2.4 FISH, WILDLIFE AND ENVIRONMENTAL MONITORING

Data logs and monitoring equipment were provided to Homestake field staff for the purpose of gathering preliminary data on fisheries and wildlife resources as well as environmental parameters. Homestake staff were requested to record select environmental parameters, fish catches and wildlife sightings sample logs are contained in Appendix I.

2.5 LAND USE

Notes on historic land use by the Inuit of this general area were compiled from the Nunavut Atlas (Riewe, 1992) as well as interviewing Jessie, an elder at Bathurst Inlet. The relevant contents of the "Nunavut Atlas" is provided verbatim in section 6.0. The geographical units described are outlined on the attached 1:1,000,000 map of the region (Figure 17).

3.0 Results

3.1 LAKE BATHYMETRY

Total lake volume was calculated at 9.27 x 10^6 m^3. Figure 2a and 2b show contours of lake bathymetry. Deepest point observed was 27m located at the head of Goose Neck Arm. Table 1 gives a summary of calculated surface area and volumes. Table 2a and 2b gives surface areas and volumes for each depth interval for the main basin and Goose Neck Arm respectively.

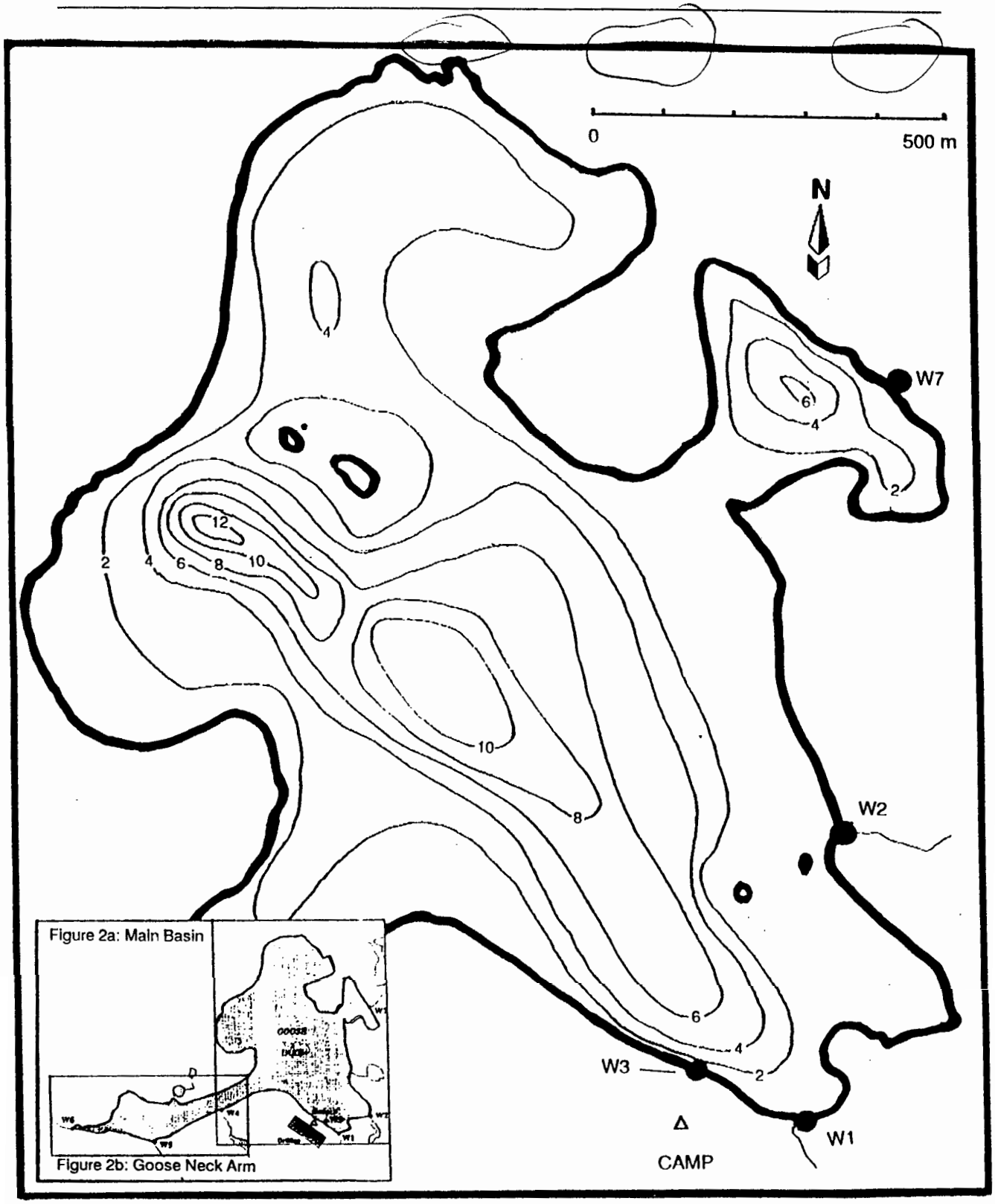


Figure 2a: Goose Lake main basin; contours are given in 2 m intervals. Water quality stations are prefaced as "W" and located by black dot. Inset shows relative location of main basin and Goose Neck Arm arm (Figure 1b).

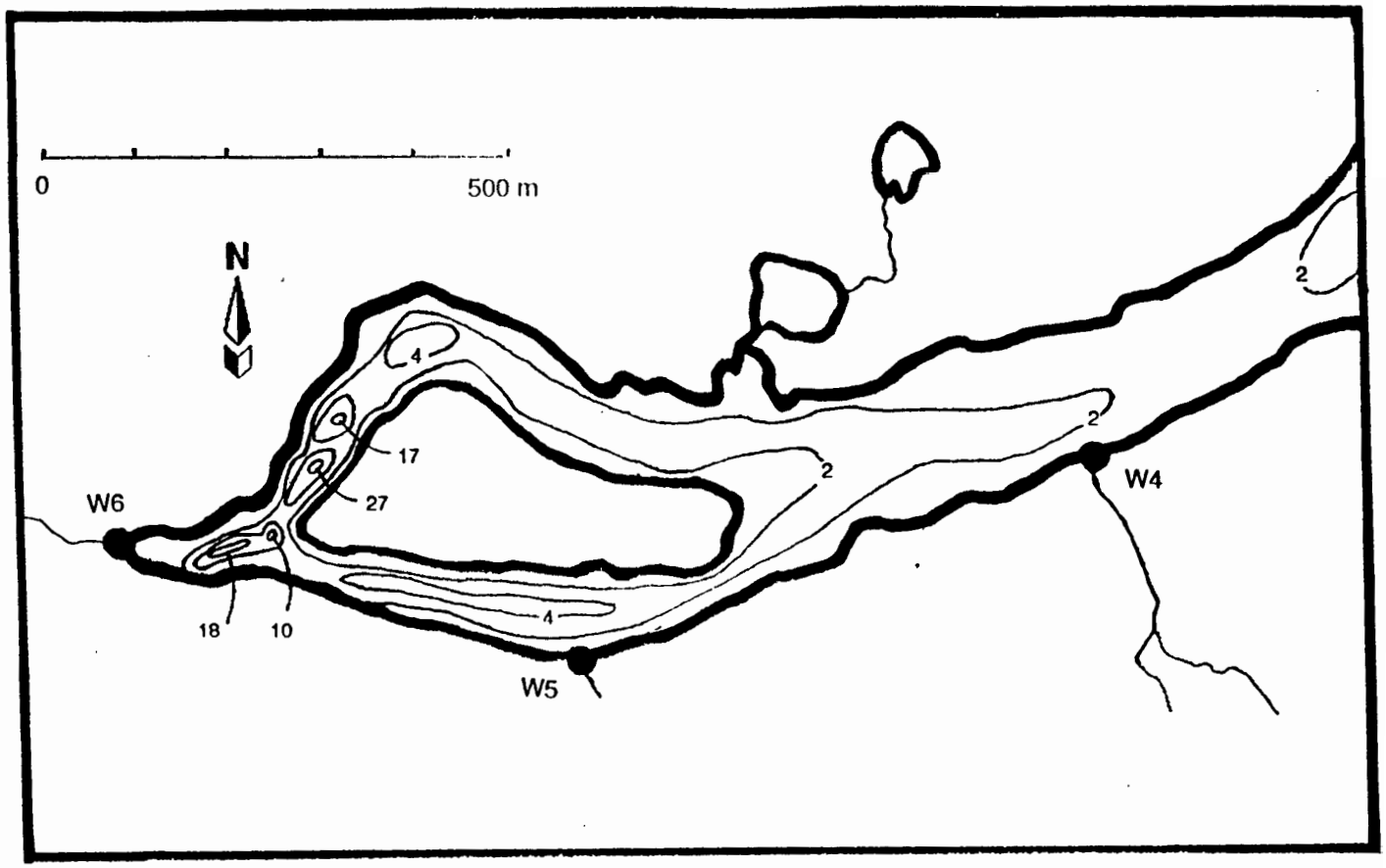


Figure 2b: Goose Neck Arm; contours are given in 2 m intervals. Water quality stations are prefaced as "W" and located by black dot. Deep points of lake at head of inlet are represented by maximum depth observed. Inset on Figure 2a shows relative position to main basin.

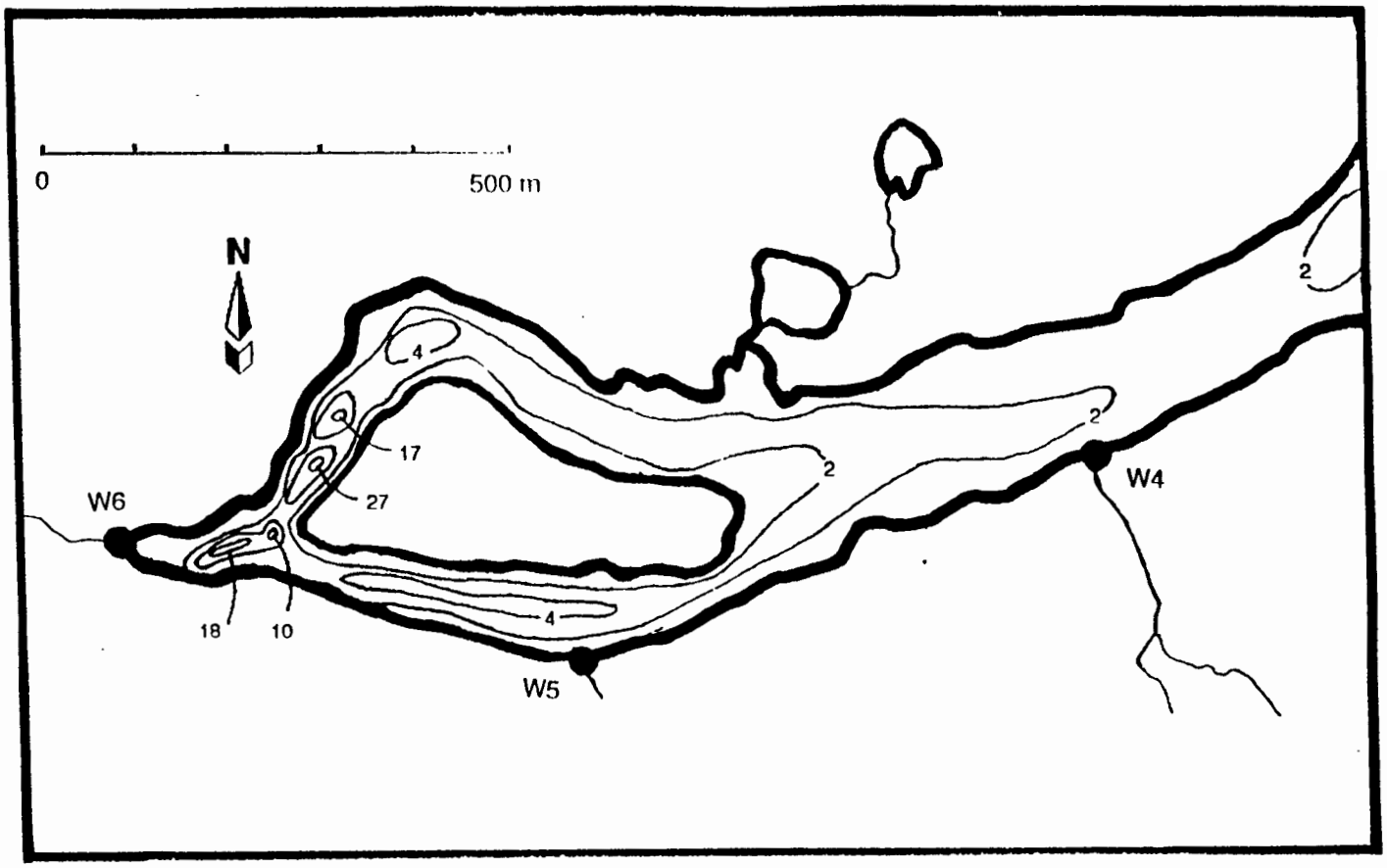


Figure 2b: Goose Neck Arm; contours are given in 2 m intervals. Water quality stations are prefaced as "W" and located by black dot. Deep points of lake at head of inlet are represented by maximum depth observed. Inset on Figure 2a shows relative position to main basin.

Goose Lake is comprised of two distinct components - the body and the neck. The body is bordered by a gently rolling countryside and shoreline whereas the head of the neck has precipitous cliffs of shattered granite forming the shoreline. Figure 3 shows bathymetric transects used to calculate lake volume.

Table 1: Summary of Goose Lake Surface Area and Volume Estimates.

Lake Component	Surface Area (m2)	Area (%)	Volume (m2)	Volume (%)
Main Basin	2,616,768	86.0	8,366,400	90.2
Gooseneck Arm	425,376	14.0	912,172	9.8
Total	3,042,144	100.0	9,27,573	100.0

Table 2: Surface Area and Volumes by Depth Interval

Component	Depth Interval (<m)	Surface Area (m2)	Volume (m3)	Volume (%)
Main Basin	>0 - <2	1,157,184	1,157,184	12.5
	>2 - <4	741,888	2,225,664	24.0
	>4 - <6	302,400	1,512,000	16.3
	>6 - <8	237,888	1,665,216	17.9
	>8 - <10	76,608	689,472	7.4
	>10 - <12	96,768	1,064,448	11.5
	>12 - <14	4,032	52,416	0.6
Subtotal Basin		2,616,768	8,336,400	90.2
Goose Neck Arm	>0 - <2	217,728	217,728	2.3
	>2 - <4	203,148	609,444	6.6
	10	500*	5000	0.1
	17	1000*	17000	0.2
	18	2000*	36000	0.4
	27	1000*	27000	0.3
Subtotal Arm		425,376	912,172	9.8
Total Lake		3,042,144	9,278,572	100

* Indicates visual estimate.

3.2 WATER QUALITY

3.2.1 Monitoring Stations W1-W7

Surface water quality data and biophysical observations from stations W1-W7 are summarized in table 3 below. Stations W3 and W4 were found to be dry. No flow was present at station W2, so measurements were taken up stream above the small pond to minimize the effects of lake water intrusion. Station W6 was sampled, however the stream drainage was diffuse through a boulder field and a meaningful substrate description was not possible. pH was significantly higher (7.0) than reported previously (5.31 - 6.21) (Norelco Dames and Moore, 1993). Figures 4 - 13 show sampling sites and some observations.

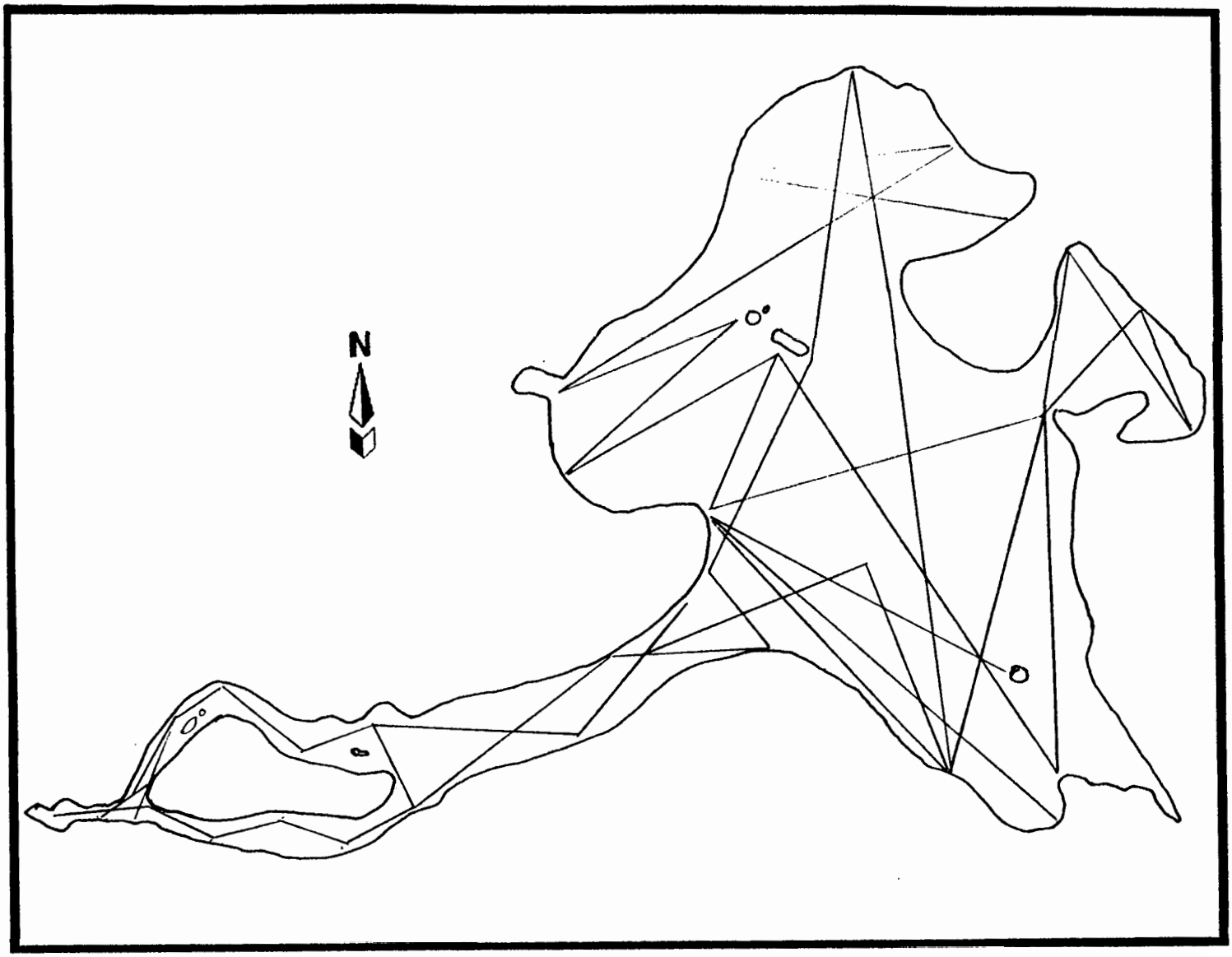


Figure 3: Transect map of bathymetric survey, for Goose Lake.

Figure 4: Water quality station W1, immediately east of camp.

Figure 5: Water Quality Station W2, facing SE.

Figure 6: Water Quality Station W3, float plane dock.

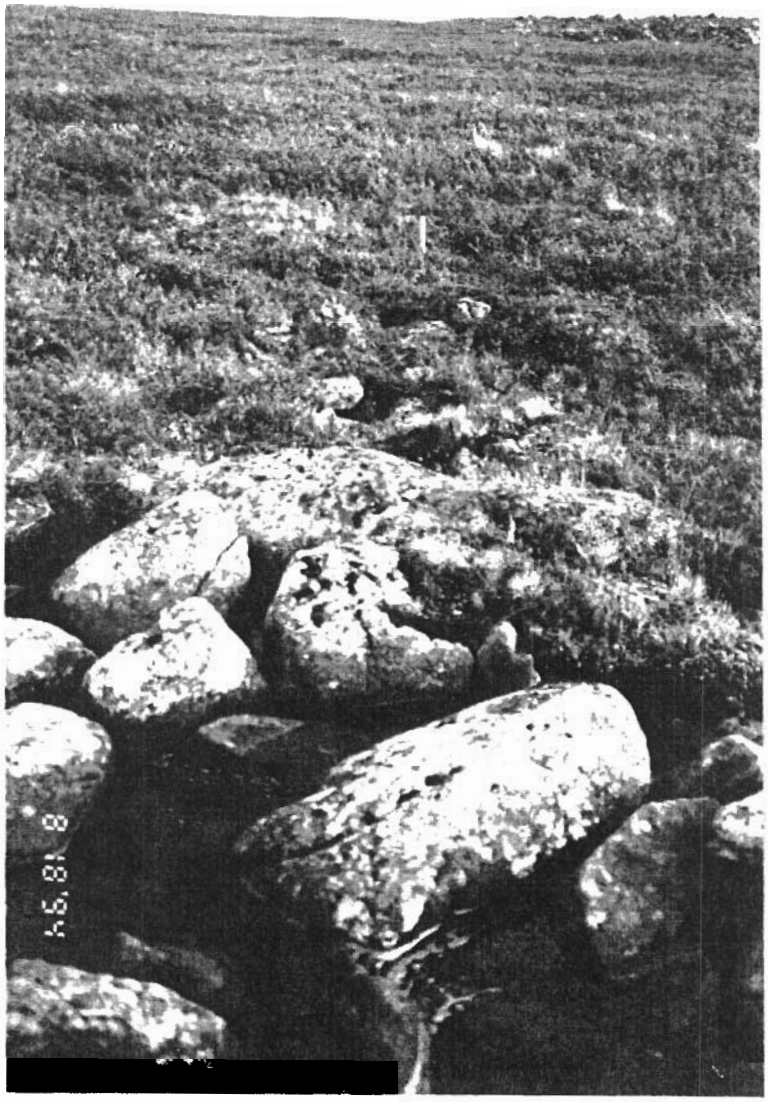


Figure 7: Water quality station W4, 1.2 km west of camp, stream was dry and not sampled.

Figure 8: Water quality station W5, 2.2 km west of camp, stream was dry and not sampled.

Figure 9: Water quality station W6, head of Goose Neck Arm. Stream appears to drain in a diffuse pattern from the left of the picture into the lake (center).

Figure 10: Water quality station W7, looking west towards Goose lake.

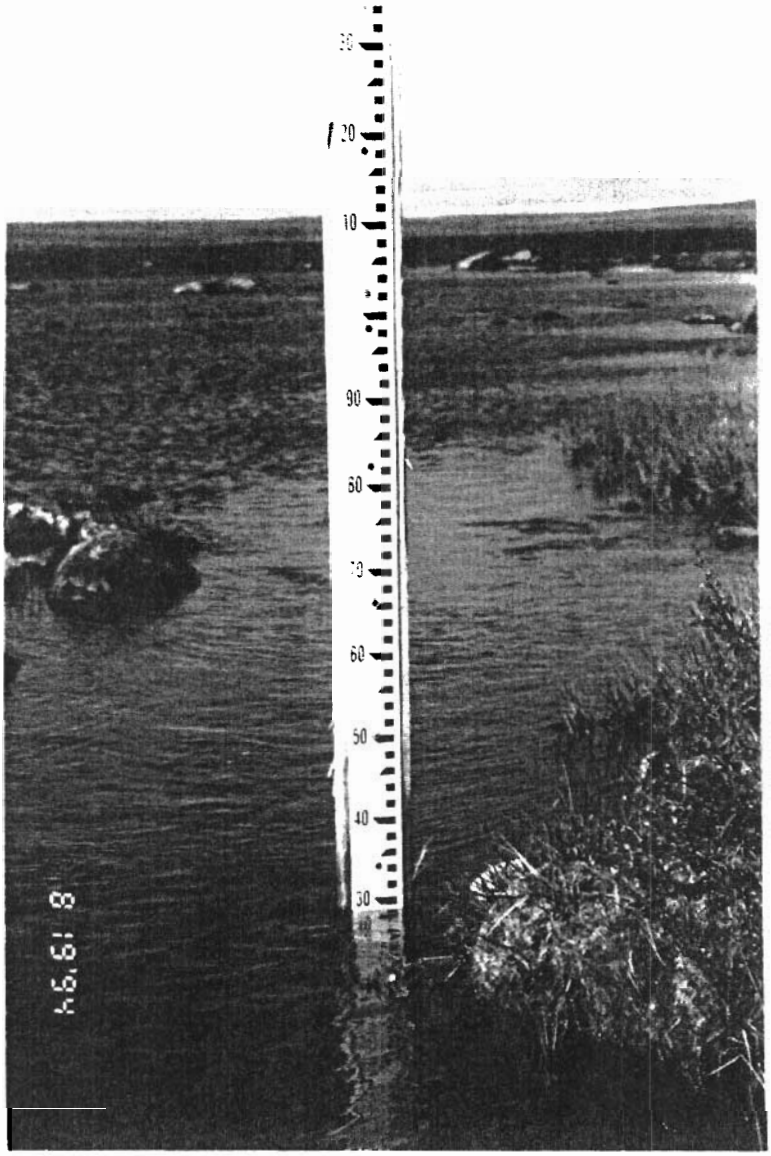


Figure 11: Staff gauge at station W7.

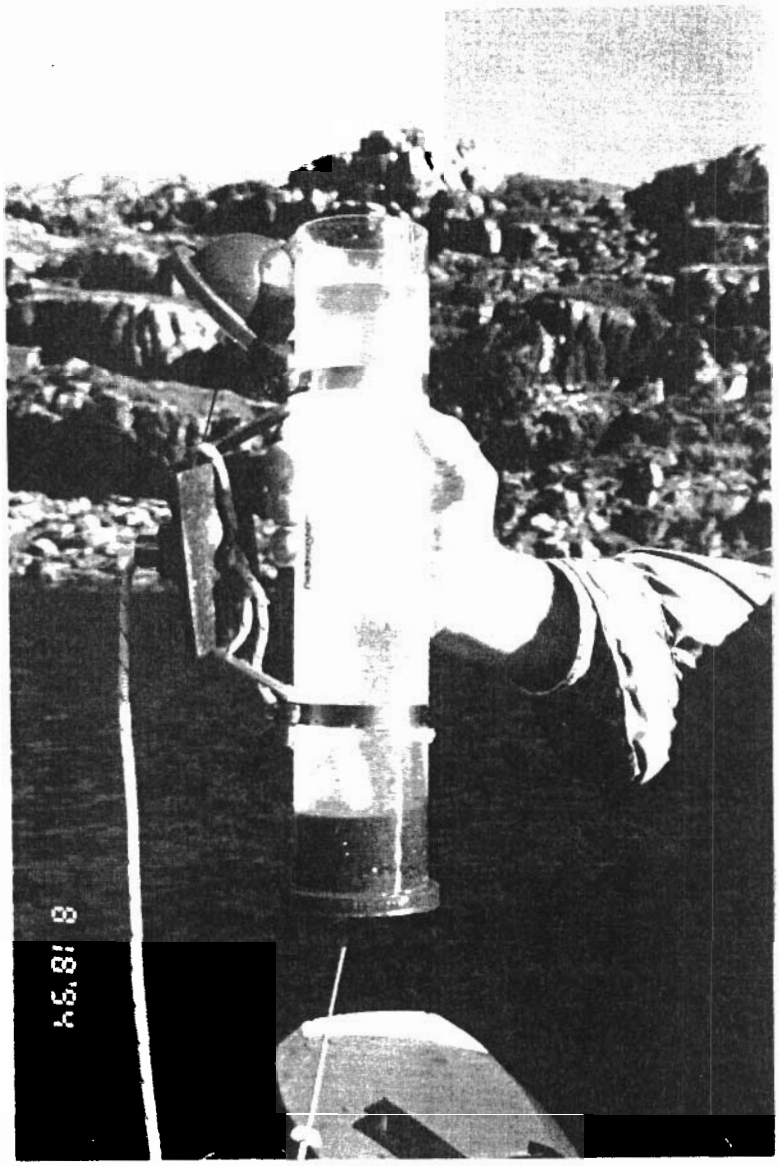


Figure 12: Van Doran bottle sample from 27 m at head of Goose Neck Arm, showing epibenthic algae collected when bottle made bottom contact.

Table 3: Water Quality Stations (W1 -W7).

Station	Date	Time	D.O (mg/L)	Temp (C)	pH	TDS (ppm)	Velocity (x = m/s)	Depth (x = cm)	Wet Width (x = m)	Substrate, Weather Comments
W1	16/08/94	1322	8.6	17	7	20	0.2	15	4	Stream east of camp, 20 m u/s of mouth, abundant periphyton growth. Substrate 50/50 cobble boulder. Weather; scattered clouds, wind 15-20 knots NW.
W2	16/08/94	1530	9.8	17	7	20	0.0	35	3-6	No flow at Ck. mouth, sampling conducted 50 u/s of small pond, 20-30 juvenile fish observed. Substrate; 70% fines, 30% boulder/cobble. Weather; scattered clouds, wind 15-20 NW.
W3	16/08/94	0900	10.4	13	7	50	0.0	ND	NA	Sampled off float plane dock. Weather; high overcast, light winds 10-15 knots NW.
W4	18/08/94	1700	ND	ND	ND	ND	ND	ND	ND	Dry stream bed, 1.2 km west of camp. Weather; scattered clouds, wind 20-25 knots NW.
W5	18/08/94	1640	ND	ND	ND	ND	ND	ND	ND	Dry stream bed 2.2 km west of camp. Weather; scattered clouds, wind 20-25 knots NW.
W6	18/08/94	1430	9.1	12	7	20	ND	ND	ND	Stream at head of Goose Neck Arm trickling through boulder field, not possible to estimate flow. Substrate 100% boulder. Weather scattered clouds, wind 20-25 knots NW.
W7	19/08/94	1000	10	13	7	101	0.3	30	20	Head of inflow to Propeller Lk. at staff gauge. Abundant periphyton growth, numerous invertebrates observed including mayfly nymphs (Ephemeroptera). Substrate 50/50 cobble boulder. Weather; scattered clouds, strong winds 30 -35 knots NW.

ND = no data.
NA = not applicable
NW = North West
W7, depth measured at staff gauge

3.2.1 Lake Water Quality

Physical water quality parameters were taken at intervals at the deepest area sounded in Goose Lake. This area was located at the head of the West Arm (Goose Neck) in between "Goose Neck Island" and shore and was sounded at 27m. The physical water quality profile indicates the lake is well mixed. The lower D.O. level measured at 27m is attributed to the presence of epibenthic algae collected in the sampling bottle, which was disturbed when it contacted the bottom (Figure 12). Temperature change with depth is attributed to surface warming. This station in addition to being the deepest point in the lake was also the most protected by prevailing winds with low local inflow providing an ideal point to test for stratification of the water column. Water quality measurements were as follows:

Table 4: Water Quality Profile in Goose Neck Arm, 18/08/94.

Depth (m)	D.O. (mg/L)	Temp. (°C)	pH	TDS (ppm)	Comments
0	10.0	14	7.1	040	
10	10.0	12	7.1	010	
18	10.0	8	7.1	101	
27	9.1	7	7.1	020	epibenthic algae in sample

A second station located in the main basin was planned for sampling on the 19th of August, however high winds (>35 knots) prevented the use of the zodiac on the lake.

3.3 HYDROLOGY

3.3.1 Precipitation

The National Atlas of Canada shows that the majority of the mainland tundra receives between 100 - 200 mm precipitation between April and September and 100 mm or less between October to March. Averages based on a 36 year period of record show annual precipitation as snow to be 123.2 mm and 136.0 mm as rain. Maximum daily precipitation was mixed rain and snow on September 28, 1978 when 48.8 mm fell. The maximum monthly in the data set is 100.8 mm for August 1986. Figure 13 shows the 1982 - 1992 monthly average, wettest year (1983) and driest year (1989) precipitation profiles generated from the AES data set for Lupin. A direct correlation between total annual precipitation at Lupin and runoff from the Back River drainage measured below Beechey Lake does not show when comparing annual profiles.

3.3.2 Watershed and Runoff

a) Watershed

The Goose Lake watershed has an area of 92.85 km^2. The lake proper is 3.0 km^2 or 3.3% of the drainage basin area. The geographical outline of the watershed is shown in Figure 14 at a scale of 1:250,000. The elevations in this watershed range from 278 m asl to 360+ m to the northwest at its border with the Western River watershed and 340+ m to the west and south at the height of land with the Back River watershed. Location and elevations are taken from 1:50,000 topographic mapsheets 76G/9 & 10.

b) Runoff

The National Atlas of Canada indicates that annual runoff for the this area of the mainland tundra to be around 100 mm. The profile for the Gordon River will approximate that of Goose Lake more closely in that small watersheds lack the lake storage required to ensure measurable winter flows. This is compounded in dry years when the streams may dry up (as was observed at Goose Lake in August 1994) during late summer. This observation notwithstanding, the National Atlas of Canada indicates that maximum precipitation in this region occurs in late summer. This is supported by the precipitation profile shown in the data for Lupin (Figure 13). Figures 15 and 16 show the runoff profiles (maximum, minimum and mean) for the Back and Gordon River gauging stations respectively.

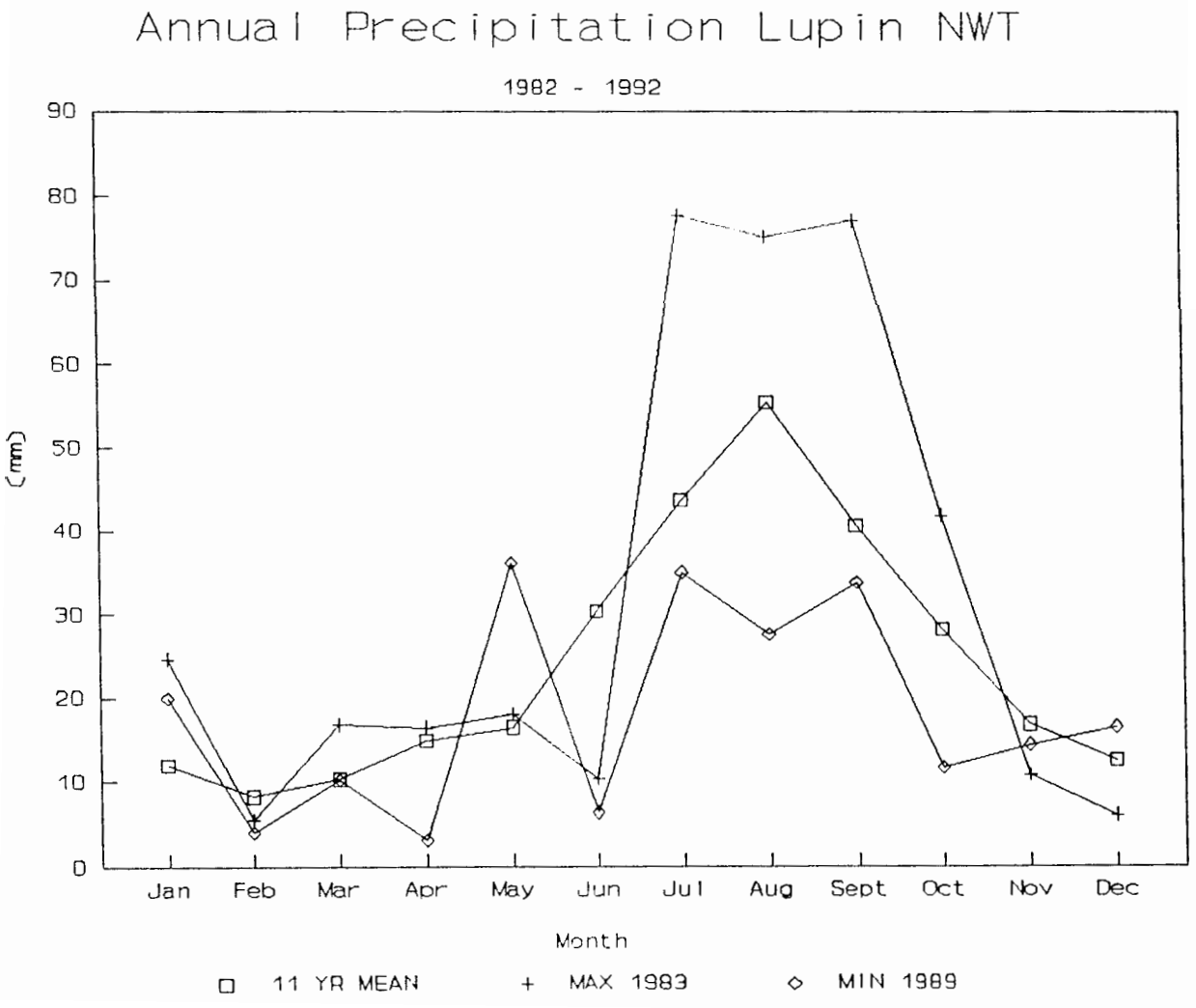


Figure 13: Annual precipitation for Lupin AES Station, NWT (1978-1993).

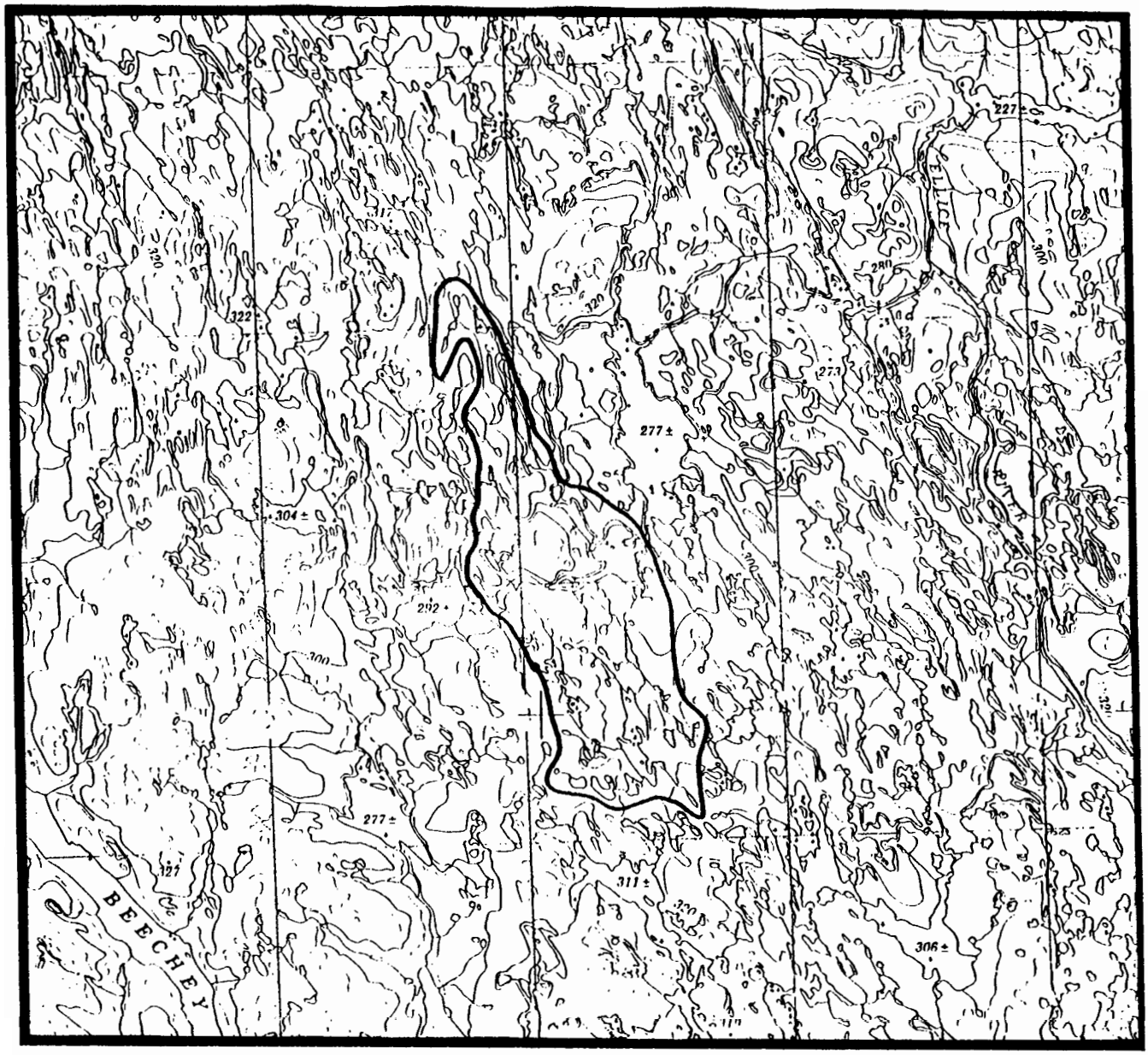


Figure 14: Approximate outline of Goose Lake watershed (scale 1:250,000).

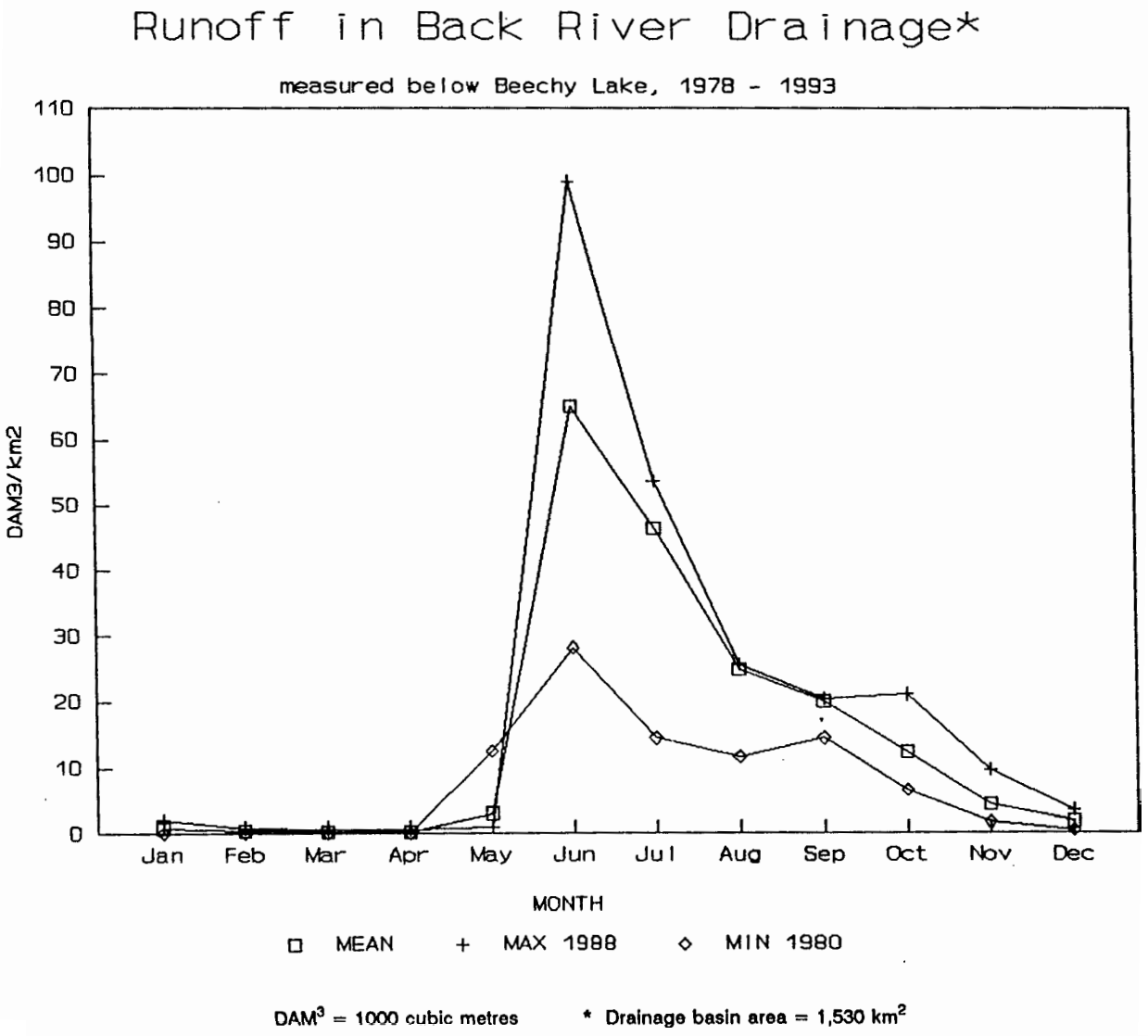


Figure 15: Back River Drainage Runoff (1978-1993).

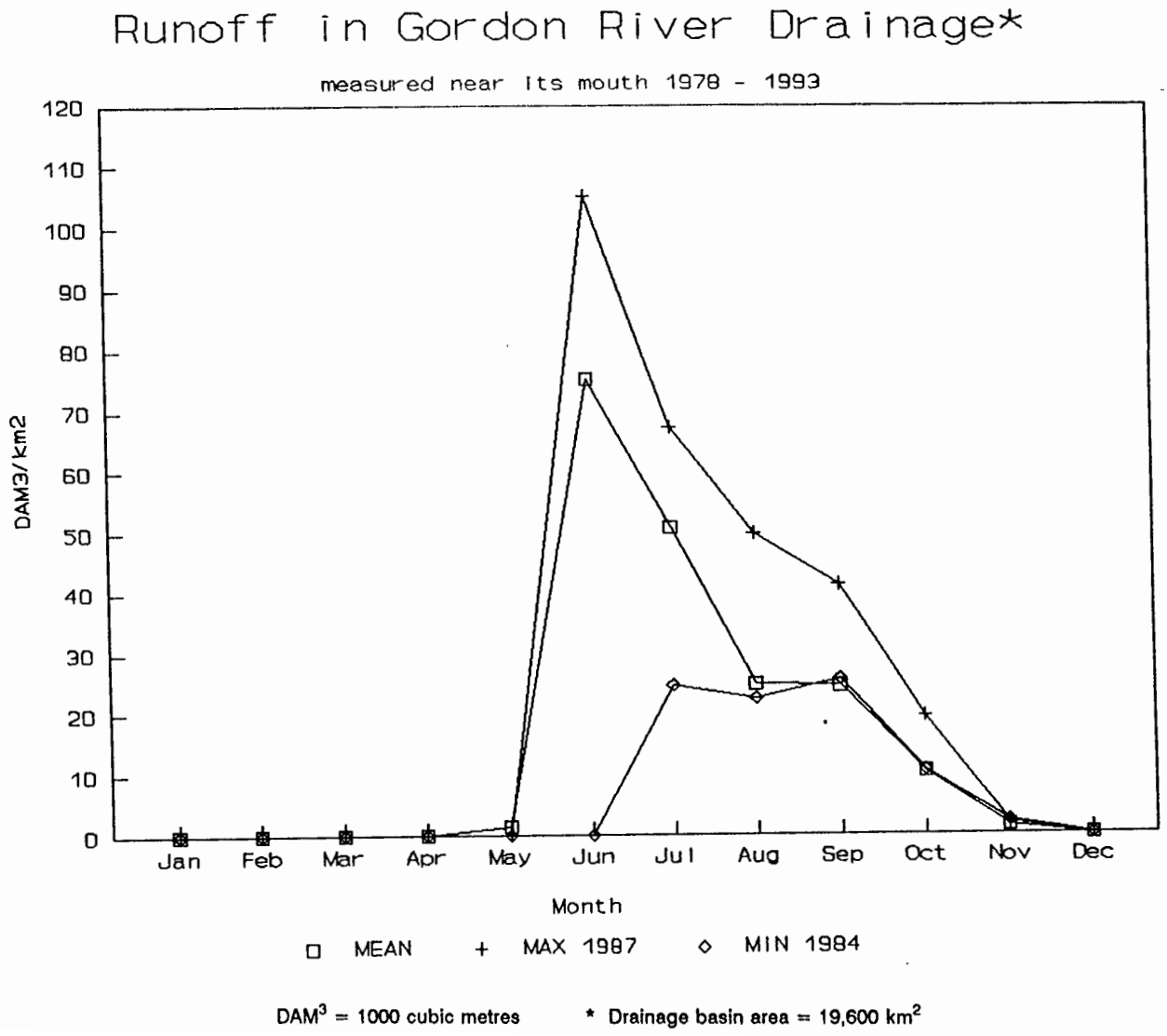


Figure 16: Gordon River Drainage Runoff (1978-1993).

Table 5 is an extrapolation of these data to the Goose Lake watershed based on the profile of Gordon River and the runoff volumes for the Back River. The rationale is, that the period of no measurable flow will be similar to Gordon River but the runoff volume is based on a region that receives similar precipitation to the Back River basin. No adjustment is made for the Contwoyto Lake conundrum.

Table 5: Month by Month runoff volumes for the Goose Lake Watershed.

Month	Gordon R. DAM^3/km^2	Back R. DAM^3/km^2 (historic range)	Back R. DAM^3/km^2	Goose Lake DAM^3/km^2	Goose Lake DAM^3 Total
Jan	0.0	0.7	ND	0.0	0
Feb	0.0	0.3	ND	0.0	0
Mar	0.0	0.2	ND	0.0	0
Apr	0.0	0.2	ND	0.0	0
May	1.3	3.0	ND	3.0	279
Jun	75.3	65.0	0 - 13	65.0	6,035
Jul	50.9	46.3	12 - 157	45.0	4,178
Aug	24.9	24.9	14 - 59	25.0	2,321
Sep	24.5	20.0	12 - 34	20.0	1,857
Oct	10.4	12.3	12 -33	12.0	1,114
Nov	1.3	4.4	4 -21	1.0	93
Dec	0.0	1.8	<1 - 10	0.0	0
Total mean annual runoff (estimated DAM^3)					15,877

c) 1994 Hydrological Data

Field observations in August indicated very low water levels and dry stream beds at Goose Lake. Comparing preliminary and unverified 1994 year-to-date runoff records for Gordon River and Back River indicates the following:

a) The 1994 runoff for the Gordon River basin may set a new record low.

b) The 1994 year to date runoff for the Back River is within the historic range.

d) Runoff from the Goose Lake Watershed

Table 3 provides estimates on mean runoff volumes predicted on the basis of the Gordon River profile and the Back River runoff rates. The gauging station on the Back River is just below Beechey Lake, some 45 km SSE of Goose Lake and the station for the Gordon River is 145 km NNW. Figure 17 shows the relative locations and outlines of these basins. The National Atlas of Canada shows both stations to be within the same regions for precipitation and runoff.

3.4 FISHERIES AND WILDLIFE

3.4.1 Fisheries

A total of six fish were caught and recorded by Homestake field staff; five lake trout (*Salvelinus namaycush*) (mean length = 51.6 cm, mean weight = 1.5 kg) and one Arctic Grayling (*Thymallus arcticus*) (length = 35 cm, weight = 0.5 kg). Scales were collected and aged by annulus counts, Table 5 summaries fish scale data. Copies of the raw data logs are presented in the Appendix.

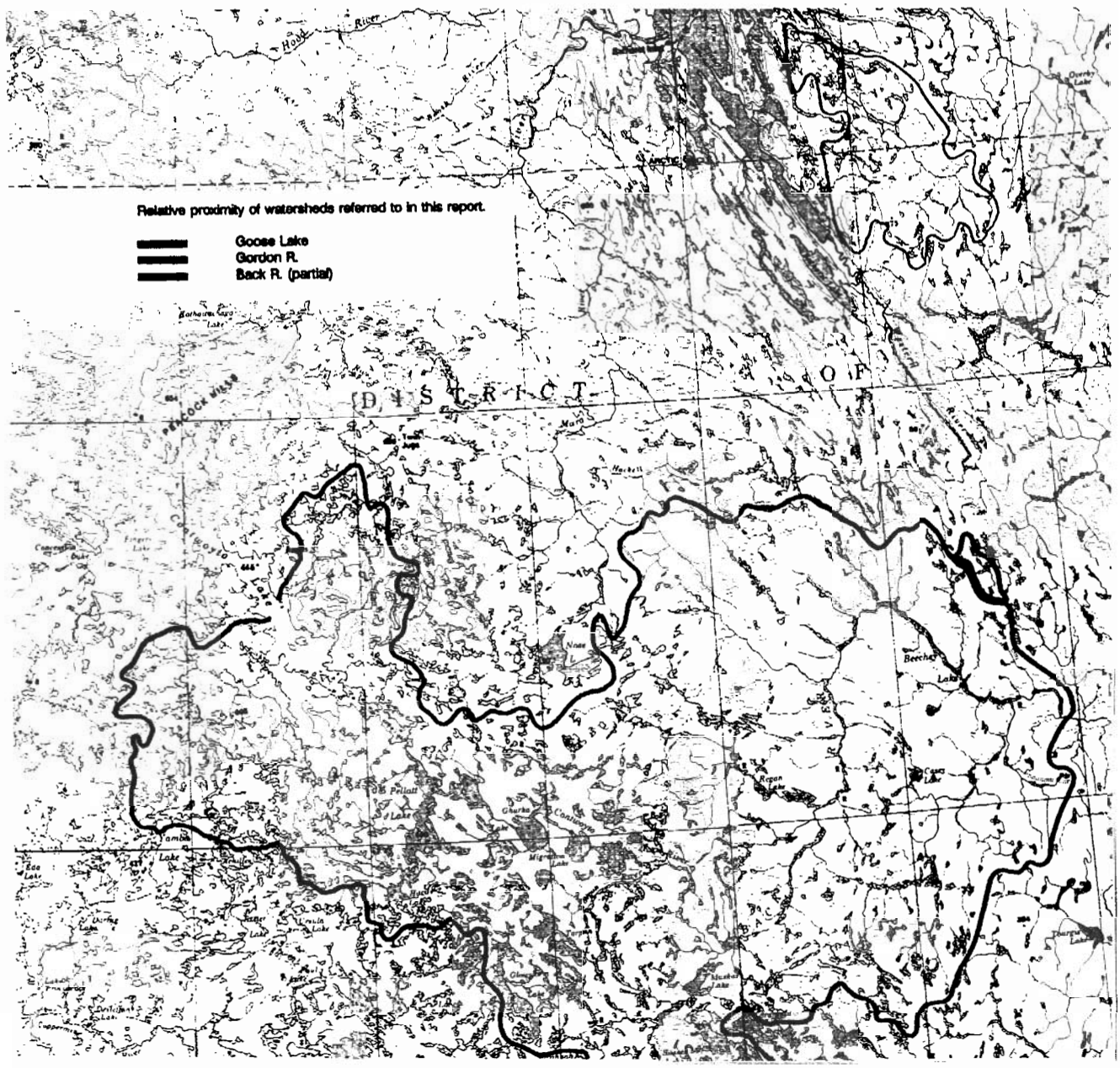


Figure 17: Relative locations and outlines of these basins. The gauging station on the Back River is just below Beechey Lake, some 45 km SSE of Goose Lake and the station for the Gordon River is 145 km NNW.

Table 6: Fish Catch Record

Date	Species	Length (cm)	Weight (kg)	Mean Age (est.)	No. Scales Sampled (n)	Comments
27/05/94	ND	21	2.0	17	4	species unknown
27/06/94	Lake Trout	46	1.1	26	14	
28/06/94	Lake Trout	50	2.0	46	3	
28/06/94	Arctic Grayling	35	0.5	31	6	
ND	ND	ND	ND	81	5	No label

Data on angler effort was not collected therefore catch per unit effort estimates are not possible. No data on physical water quality and weather observations were recovered as per environmental monitoring logs (Appendix).

3.4.2 Wildlife

Wildlife observation forms, field guides to aid in identification and a species list for possible birds and mammals of the general area were prepared for the camp and provided within days of opening the camp in mid-June. The first of 25 observation records was entered June 15, 1994.

Arctic Ground Squirrel: Present in camp but not common, and not common in the outcrops in the surrounding countryside.

Arctic Tern: A pair was observed over Goose Lake.

Canada Goose: Observed in June and again in August. August observation was of non breeding birds with no .evidence of goslings of the year in the flock.

Caribou: Caribou appear as the first observation recorded on June 15 and seem to be common throughout the summer period in relatively low densities. There does not seem to be a heavy network of caribou trails in the area suggesting that this is not an area that receives heavy usage or high density migration during the snow free period.

Herring Gull: The small islands in the lake seem to be the site of nests as these were defended by adult birds.

Lapland Longspur: The only small song bird observed during mid August.

Muskox: Herds of muskox are recorded for June, July and August.

Parasitic Jaeger: Two were observed cruising over the countryside.

Rough-legged Hawk: Observed on the large island in the neck of Goose Lake. A nest was reported here by Cynthia Brown.

Wolf: Observed in June and August

Wolverine: A wolverine head was collected in June at a nearby work site and was observed at the Goose Lake camp.

3.5 PRELIMINARY NOTES ON HISTORIC INUIT LAND USE

Efforts at assembling data on historic land use by the Inuit of this general area included interviewing Jessie, an elder at Bathurst Inlet, and reviewing the Nunavut Atlas (Riewe, 1992). Jessie is believed to have been born at Beechey Lake but left that area when she was a young girl. She does not seem to relate to maps of the general area. The relevant contents of the "Nunavut Atlas" is provided verbatim below. The geographical units described are outlined on the attached 1:1,000,000 map of the region.

The "Nunavut Atlas" does not include Bathurst Inlet as a community per se. It indicated the lands in the upper end of the Ellice River drainage as the hunting territory of Umingmaktok (Bay Chimo) and the margin of the Cambridge Bay territory. Our effort did not include interviews in these two communities.

10BI Bathurst Inlet Inuit based at Beechey Lake occasionally visit this area during the winter to trap Arctic fox or to hunt barren-ground caribou. Regular use of this area has decreased in recent years as a result of centralization.

13BI This corridor of regular use which extends south from Bathurst Inlet, is used primarily for hunting caribou in fall and winter. Inuit travelling between the inlet and Beechey Lake hunt throughout the area. Arctic fox are trapped occasionally. Muskox and wolves are common in the northern sections of the area.

14BI Bathurst Inlet Inuit, generally those based at the mouth of the Burnside River, sometimes travel to this area in the fall to hunt rutting barren-ground caribou and in the winter to trap arctic fox, this area was used more extensively in the past.

15BI The Beechey Lake area was intensively used in the past. No families now reside in the area year round, but Inuit based at Bathurst Inlet visit the area regularly. Activities in the area include trapping Arctic fox in winter and hunting barren-ground caribou that migrate south across Beechey Lake in the fall. Wolves, wolverine, grizzly bear and muskox are also hunted when they are encountered. A number of traditional campsites are located on Beechey Lake close to fishing sites.

4.0 References

Norelco, Dames and Moore. 1993. *Homestake Mineral Development Company Goose Lake Project - 1993 Water Quality Results*. (faxed excerpt, page 4 plus table).

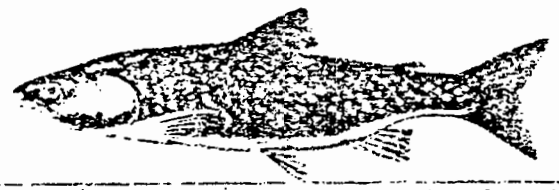
Department of Energy Mines and Resources. 1974. *The National Atlas of Canada*. Ottawa. 266 pp.

Riewe, R. ed. 1992. *Nunavut Atlas*. Canadian Circumpolar Institute, Edmonton. 260pp.

APPENDIX I

Environmental Monitoring Logs
Fisheries Logs

Fisheries Resource Pilot Survey, Goose Lake, NWT



	Date (yy/mm/dd)	Name	Start (int)	Finish (int)	No. of Rods	Gear Type	Species (code)	Length (cm)	Weight (kg)	Scales (Y/N)	Released (Y/N)	Location (Descriptive)/Comments
A	94/6/27	Cyrill	10.30	11:00pm	1	[illegible]	[illegible]	56	2.51 ~~2.60~~	No ~~Yes~~	Y	Goose Lake, End of the Dock
B	"	"	"	"	"	"	"	53	2.05	Y	Y	" "
C	"	"	"	"	"	"	"	46	1.14	Y	~~N~~ Y	" "
D	94/07/23	Al	11:00	12:00	1	"	"	53	1.75	Y	Y	" "

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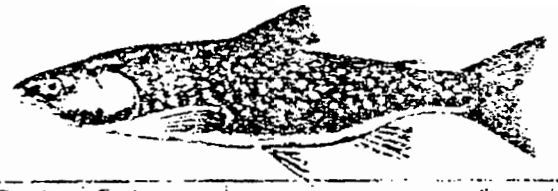

ARCTIC GEAR

Date (yy/mm/dd)	Name	Start (int)	Finish (int)	No. of Rods	Gear Type	Species (code)	Length (cm)	Weight (kg)	Scales (Y/N)	Released (Y/N)	Location (Descriptive)/Comments
14/06/28	HK	7:45	8:05	1	Casting rod	Lake Trout	50 cm	2 kg	Y	Y	Goose Lake (End of Dock)
"	"	"	"	"	"	Arctic Grayling	35 cm	.5 kg	Y	Y	Goose Lake "

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Environmental Monitoring Log, Goose lake, NWT

Date (yy/mm/dd)	Time (int)	Air Temp. (C)		Baro. Press. in Hg	Temp. water (C)	Conductivity (mS)	pH	Weather (cloud cover, wind, precip. etc.) & Comments	Initials
		Max	Min						

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Fisheries Resource Pilot Survey, Goose Lake, NWT

Date (yy/mm/dd)	Name	Start (int)	Finish (int)	No. of Rods	Gear Type	Species (code)	Length (cm)	Weight (kg)	Scales (Y/N)	Released (Y/N)	Location (Descriptive)/Comments

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