



52110SW0001 63.5419 LINKLATER LAKE

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REPORT ON THE  
PRELIMINARY SAMPLING PROGRAM  
KELLAR ISLAND PROSPECT  
CARIBOU LAKE PROPERTY  
THUNDER BAY DISTRICT  
NORTHWESTERN ONTARIO  
N.T.S.: 52I/10

PREPARED FOR  
DORCHESTER RESOURCES INC.

DERRY, MICHENER, BOOTH & WAHL

Ian D. Trinder, B.Sc.

Toronto, Ontario  
February 10, 1989

Ref.: 89-15

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**SUMMARY**

Dorchester Resources Inc. holds 100% interest in a group of claims in the northeast Caribou Lake region of northwestern Ontario, approximately 230 km north of Thunder Bay, Ontario. The claim block, consisting of 55 contiguous claims totalling approximately 890 hectares, is known as the Caribou Lake property.

At the request of Dorchester Resources Inc., Derry, Michener, Booth & Wahl (DMBW) has completed a preliminary geochemical sampling program at the Kellar Showing and immediate vicinity on the Caribou Lake property.

The sampling program is a part of the first phase of a two-phase exploration program recommended by DMBW in a qualifying report dated November 25, 1987 (Our Ref. 87-105). The Phase 1 program comprises an airborne geophysics survey completed in February 1988 and ground geophysics, geological mapping and trenching to be conducted in the summers of 1988 and 1989.

The preliminary grab sampling has confirmed the anomalous gold content in the northeasterly striking quartz veins at the Kellar Island prospect. Therefore, quartz veins and associated alteration zones at Caribou Lake, particularly northeasterly trending ones, are potential hosts for gold deposits and should be prospected in detail on the property.

The slightly anomalous gold value from the iron formation on a small island southwest of Kellar Island indicates that iron formation in the Caribou Lake area may be a potential host for gold and should also be prospected in detail.

DMBW, therefore, recommends that the Phase 1 exploration program continue as detailed in the qualifying report dated November 25, 1987 (Our Ref. 87-105) with particular attention paid to quartz veining and iron formations during geological mapping and prospecting.

## INTRODUCTION

At the request of Dorchester Resources Inc., Derry, Michener, Booth & Wahl (DMBW) has completed a preliminary geochemical sampling program at the Kellar Showing and immediate vicinity on the Caribou Lake property in northwestern Ontario.

The sampling program is a part of the first phase of a two-phase exploration program recommended by DMBW in a qualifying report dated November 25, 1987 (Our Ref. 87-105). The Phase 1 program comprises an airborne geophysics survey completed in February 1988 and ground geophysics, geological mapping and trenching to be conducted in the summers of 1988 and 1989.

## PROPERTY LOCATION, ACCESS AND DESCRIPTION

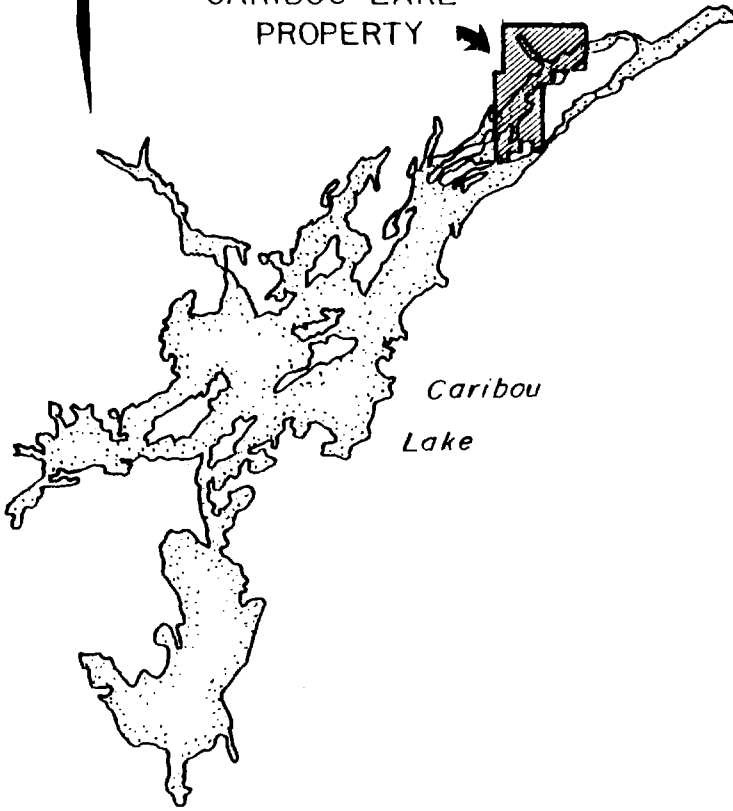
The Caribou Lake property is located at the north end of Caribou Lake, some 25 km north of Armstrong, Ontario (Figure 1). Thunder Bay, Ontario, is a further 200 km south.

The property is accessible via boat from the south shore of Caribou Lake, approximately 20 km to the south. Alternatively, fixed-wing flights may be chartered from either Armstrong or Nakina (160 km east of Armstrong).

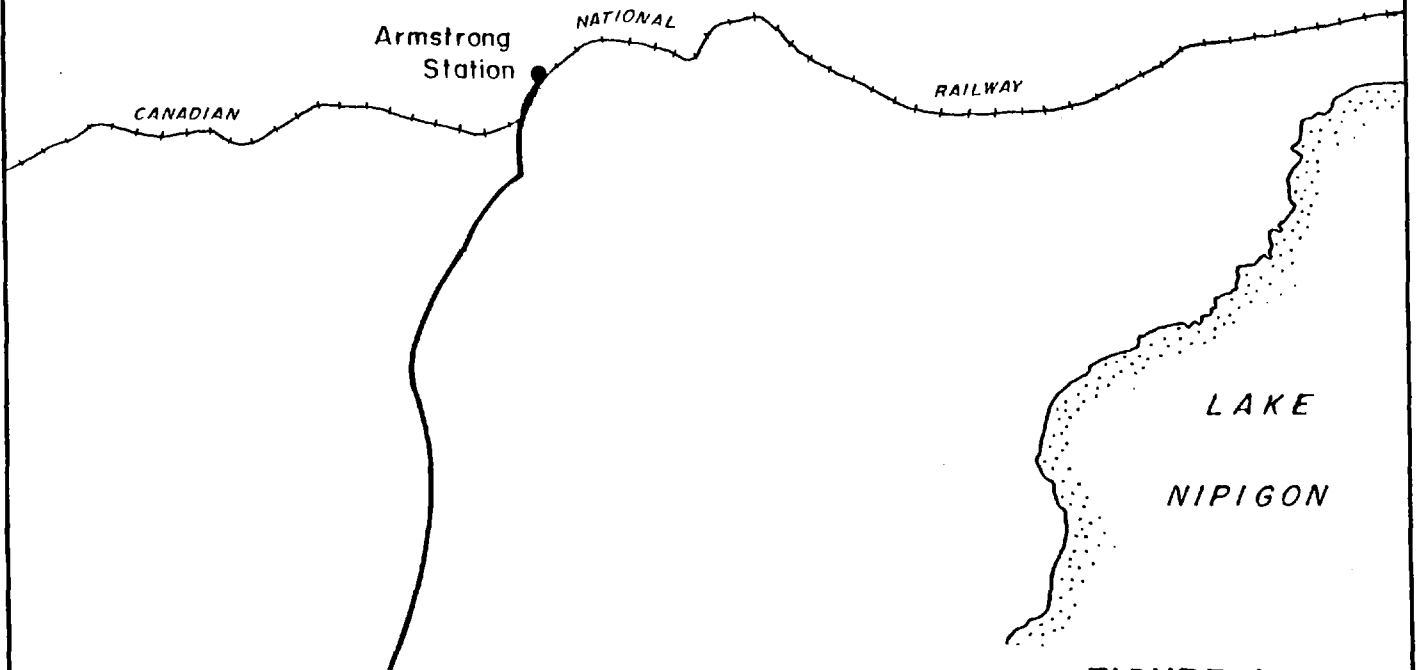
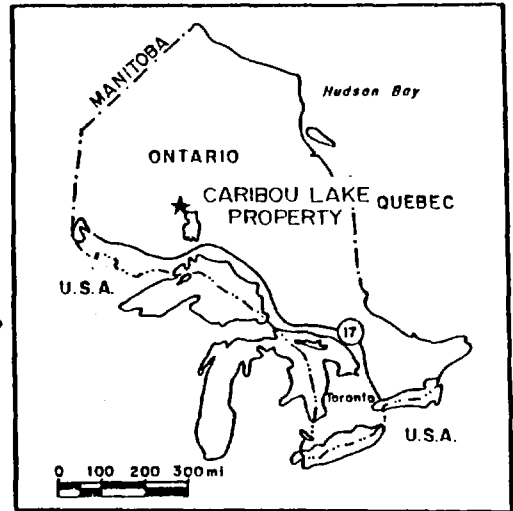
The property comprises 55 contiguous unpatented claims as shown in Figure 2 and listed on the following page.



CARIBOU LAKE  
PROPERTY

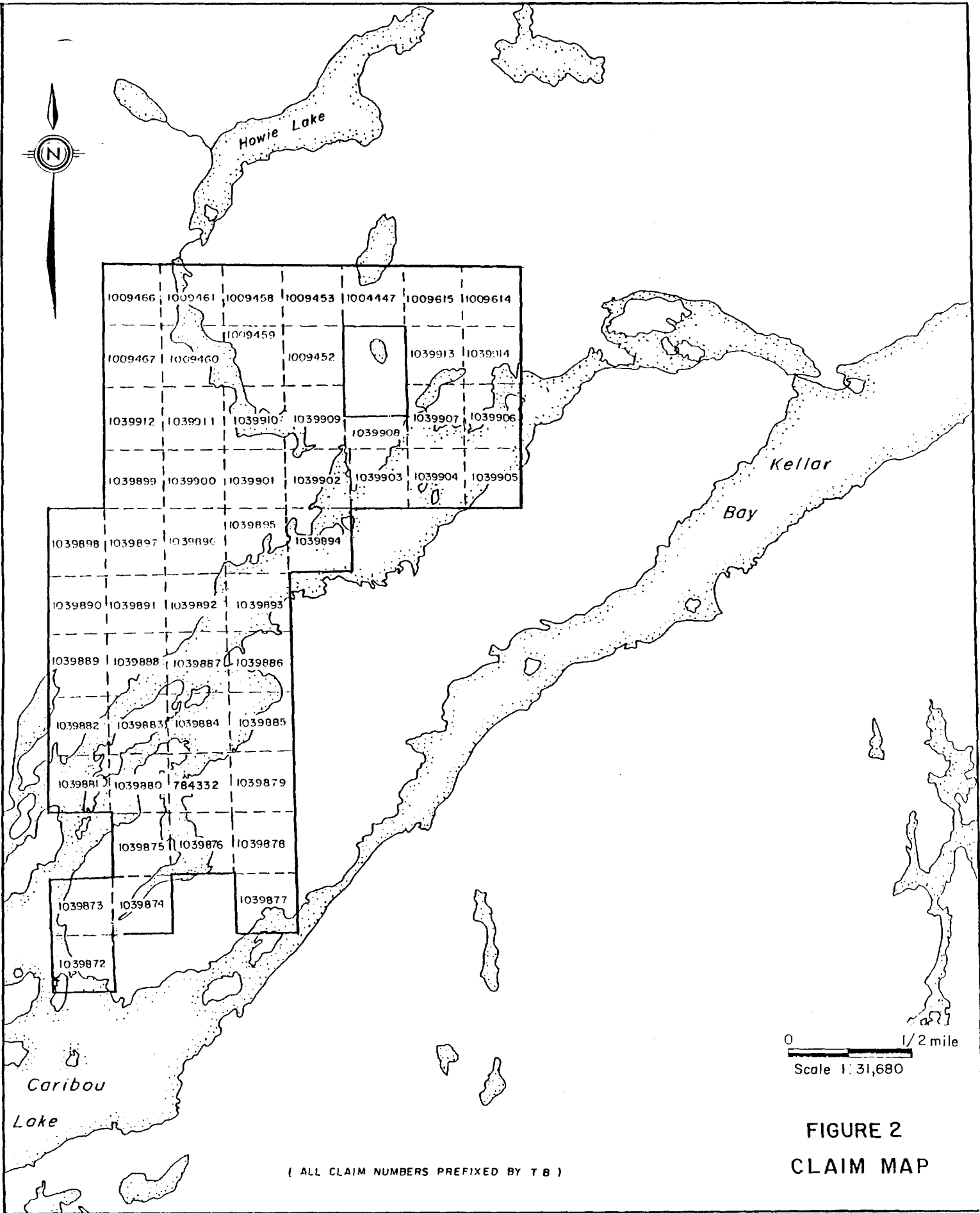


*Caribou  
Lake*



0 1 2 4 6 8 10 miles

**FIGURE 1  
LOCATION MAP**



0 1/2 mile  
Scale 1:31,680

FIGURE 2  
CLAIM MAP

( ALL CLAIM NUMBERS PREFIXED BY TB )

<u>Claim No.</u>	<u>No. of Claims</u>
TB784332	1
TB1004447	1
TB1009452-1009453 incl.	2
TB1009458-1009461 incl.	4
TB1009466-1009467 incl.	2
TB1009614-1009615 incl.	2
TB1039872-1039914 incl.	<u>43</u>
TOTAL	<u>55</u>

DMBW has not examined title to the claims nor substantiated their physical boundaries and, accordingly, expresses no opinion as to the validity of title and property description.

The Caribou Lake property has a generally moderate relief of about 20 m to 30 m. The highest point, about 440 m above sea level (ASL), is in the northern end of the property, south of Howie Lake. Caribou Lake is the lowest point at 360 m ASL. Substantial swamp cover exists in the northwestern and western portions of the property but in other areas outcrop exposure is fair to good.

#### KELLAR ISLAND PROSPECT - EXPLORATION HISTORY

The following account of the exploration history at the Kellar Island prospect was obtained through research of the assessment files at the Ontario Geological Survey Assessment office in Toronto, and Resident Geologist's office in Thunder Bay and from government geological reports as noted.

The first documented mineral exploration work carried out within the present property area was performed in the late 1930's on a 11 claim property at the southwest end of Kellar Island. The work, at what is now known as the Kellar Island Prospect, consisted of stripping, prospecting and sampling of a disseminated sulphide-bearing quartz vein over a strike length of several hundred feet (Gussow, 1942). Low gold and copper values were reportedly obtained but no details are given by Gussow (1942).

In 1956, Central Manitoba Mines Ltd. performed an exploration program on the Kellar Island Prospect consisting of ground VLF-electromagnetic (VLF-EM) and magnetic surveys, trenching and 4 diamond drill holes totalling 260 m which tested the quartz vein zone. Assay results were only reported in one of the drill holes with values not exceeding 0.05% Cu and trace Au.

Two grab samples collected by an Ontario Geological Survey Geologist in 1980 returned 0.01 oz. Au/ton, 0.23 and 0.33 oz. Ag/ton and 0.42% and 3.35% Cu.

In 1981, Esso Minerals carried out a program consisting of line chaining, mapping and sampling on a 16 claim group covering the Kellar Island Prospect. Forty-nine (49) rock chip and grab samples were taken from the trenches originally put in by Central Manitoba Mines Ltd. Twelve (12) of the samples returned values of 0.02 oz. Au/ton or greater as tabulated below (see Figure 3).

<u>Sample No.</u>	<u>Gold (Oz./Ton)</u>	<u>Silver (Oz./ton)</u>	<u>Copper (%)</u>
7866	0.02	0.24	0.81
7870	0.04	0.20	1.16
7872	0.15	0.34	1.10
7873	0.02	0.04	0.24
7874	0.03	0.22	0.61
7876	0.02	0.09	0.87
7880	0.04	0.43	2.22
7885	0.03	0.92	1.27
7888	0.02	0.11	0.53
7890	0.12	0.15	0.24
7891	0.09	0.15	0.21
7892	0.03	0.10	0.50

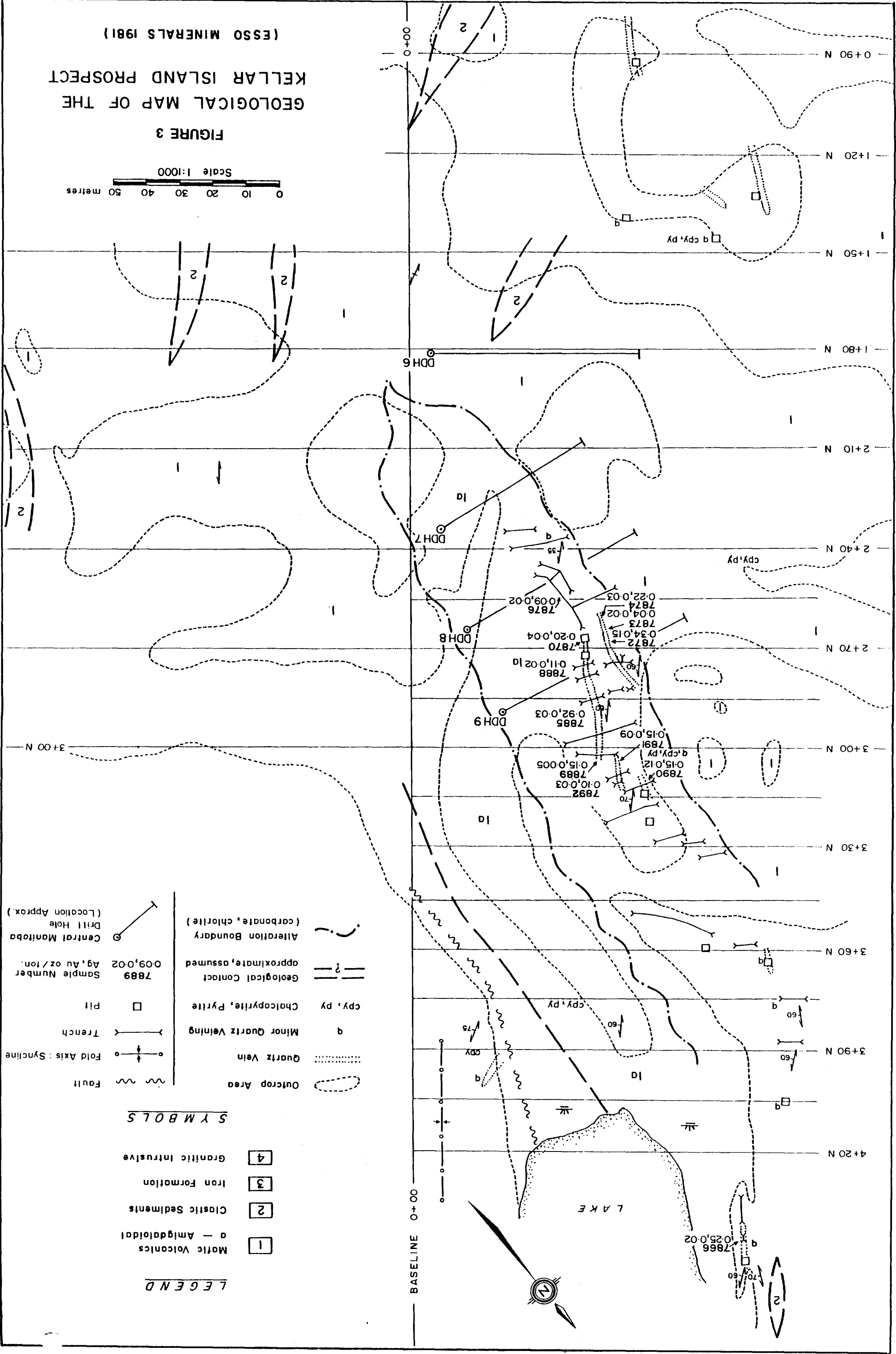
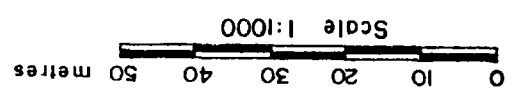
Esso recommended that the two claims, which contained the gold-bearing veins (current claim numbers TB1039872 and TB1039874), be maintained in good standing and the remaining 14 claims be allowed to lapse.



(ESSO MINERALS 1981)

# GEOLOGICAL MAP OF THE KELLAR ISLAND PROSPECT

FIGURE 3



- LEGEND**
- 1 Mafic Volcanics
  - a - Amigdaloidal
  - 2 Clastic Sediments
  - 3 Iron Formation
  - 4 Granitic Intrusive
- SYMBOLS**
- Wavy line: Fault
  - Line with dots: Fold Axis: Syncline
  - Line with inward arrows: Trench
  - Square: PII
  - Circle: Drill Hole (Location Approx.)
  - Circle with dot: Central Mantoba Drill Hole
  - Dashed outline: Outcrop Area
  - Dotted line: Quartz Vein
  - Line with 'q': Minor Quartz Veining
  - Line with 'cpy, py': Chalcopyrite, Pyrite
  - Line with '?': Geological Contact (approximate, assumed)
  - Line with 'carbonate, chlorite': Alteration Boundary

- Wavy line: Fault
- Line with dots: Fold Axis: Syncline
- Line with inward arrows: Trench
- Square: PII
- Circle: Drill Hole (Location Approx.)
- Circle with dot: Central Mantoba Drill Hole

BP-Selco conducted magnetic and VLF-EM surveys in January and February of 1985 in the area surrounding the Kellar Island Showing.

### PRESENT WORK

Four separate exploration programs, including trenching and drilling, have explored the Kellar Island Showing and the immediate area. Therefore, the potential of locating an economically significant precious metal deposit at the prospect is not high. Nevertheless, the prospect indicates that at least locally the northeast trending quartz-carbonate veins and associated alteration zones do contain gold and silver. DMBW therefore undertook a preliminary sampling and prospecting program at the Kellar Island Prospect not only to confirm previous exploration results but also to gain a better understanding of the style of mineralization such that exploration for similar structures could be effectively carried out elsewhere on the Caribou Lake property.

David Owens and Steve Ash, DMBW contract geologists, completed a total of four (4) work days locating and sampling the historic trenches at the Kellar Island Prospect on June 27th and July 8th, 1988.

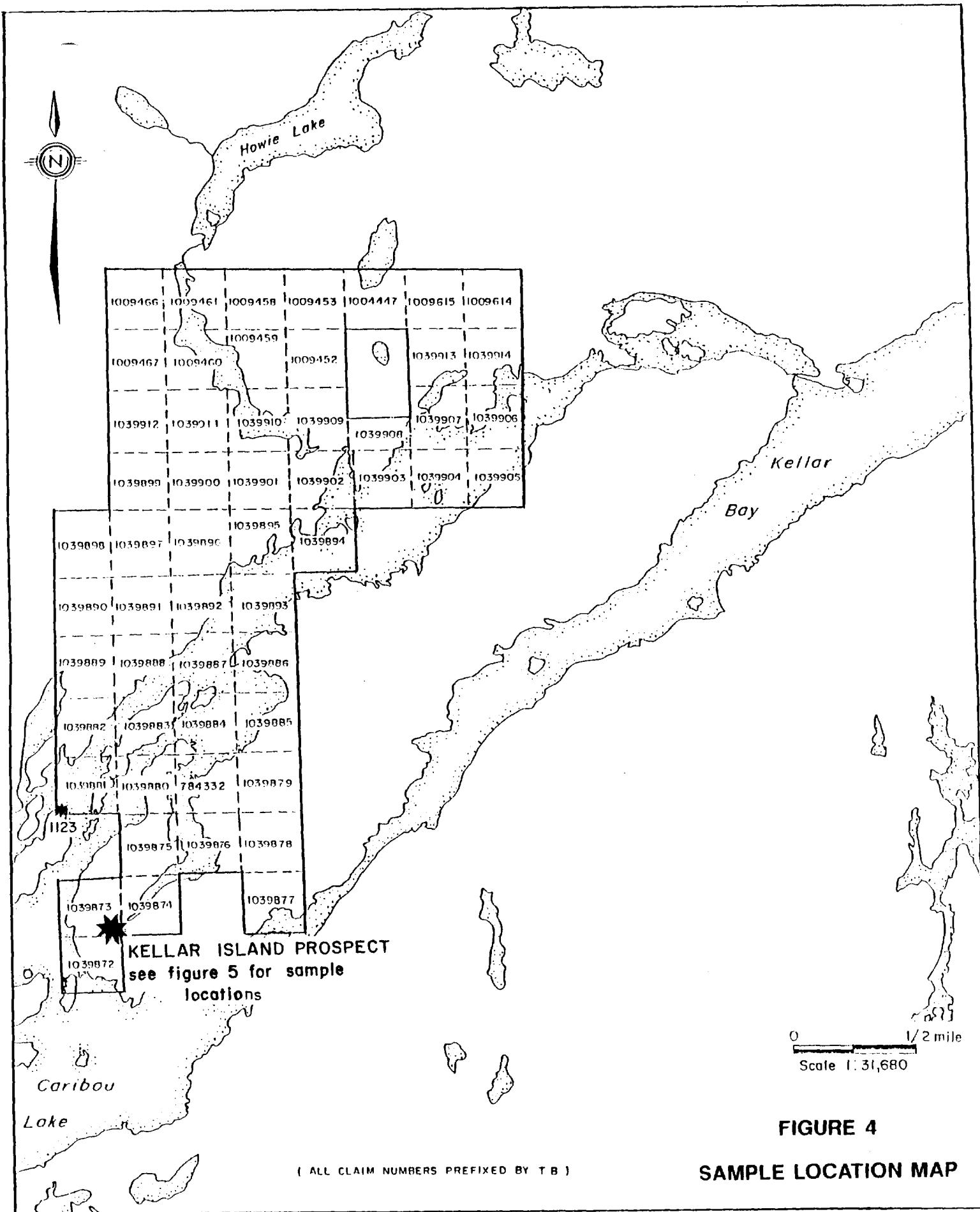
### Preliminary Sampling Results

The Kellar Island prospect consists of two main quartz  $\pm$  calcite veins that generally strike from  $040^{\circ}$  to  $050^{\circ}$  and dip moderately to steeply to the southeast. Ferguson (1981) suggests that the quartz veins were probably emplaced in association with the Caribou Lake Fault. The veins typically vary in width from 0.5 m to 15 m and are locally mineralized with patches, blebs and fracture-fillings of pyrite and lesser chalcopyrite. Total sulphide content is generally less than 10% but locally is up to 20%.

The main veins are hosted by a strongly chloritized and weakly to strongly carbonatized alteration zone 30 m to 40 m in width. The alteration zone and associated quartz veins cut the predominant foliation direction at a low angle.

The results of 19 grab samples collected from the Kellar Island Prospect trenches and rocks in the immediate area are tabulated below and detailed in Appendix A (see Figures 4 and 5).

<u>Sample No.</u>	<u>Location</u>	<u>Rock Type</u>	<u>Au (ppb)</u>	<u>Ag (ppm)</u>
1211	Kellar Is. Trenches	Basalt	5	2.5
1212	Kellar Is. Trenches	Qtz-Carb Vein	102	1.4
1219	Kellar Is. Trenches	Qtz vein	49	0.8
1220	Kellar Is. Trenches	Basalt Host	9	0.6
1221	Kellar Is. Trenches	Basalt Host	57	0.1
1222	Kellar Is. Trenches	Basalt Host	20	0.1
1223	Kellar Is. Trenches	Qtz Vein	243	1.6
1224	Kellar Is. Trenches	Qtz Vein	307	1.7
1225	Kellar Is. Trenches	Basalt Host	348	4.1
1226	Kellar Is. Trenches	Qtz Vein	837	14.8
1227	Kellar Is. Trenches	Basalt Host	524	5.4
1228	Kellar Is. Trenches	Qtz Vein	91	1.5
1229	Kellar Is. Trenches	Basalt Host	101	0.2
1230	Kellar Is. Trenches	Qtz Vein	611	9.7
1231	Kellar Is. Trenches	Basalt Host	102	0.9
1232	Kellar Is. Trenches	Qtz Vein	11	0.1
1233	Kellar Is. Trenches	Qtz-Carb Vein	237	1.5
1234	Kellar Is. Trenches	Basalt Host	191	1.9
1123	Is. SW of Kellar	Fe Formation	52	0.2



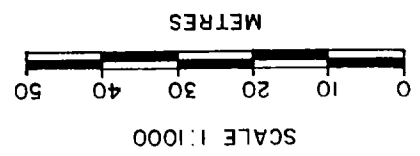
**FIGURE 4**

**SAMPLE LOCATION MAP**

1988 PRELIMINARY GRAB SAMPLE LOCATIONS

CARIBQU LAKE PROPERTY  
Kellar Island Prospect

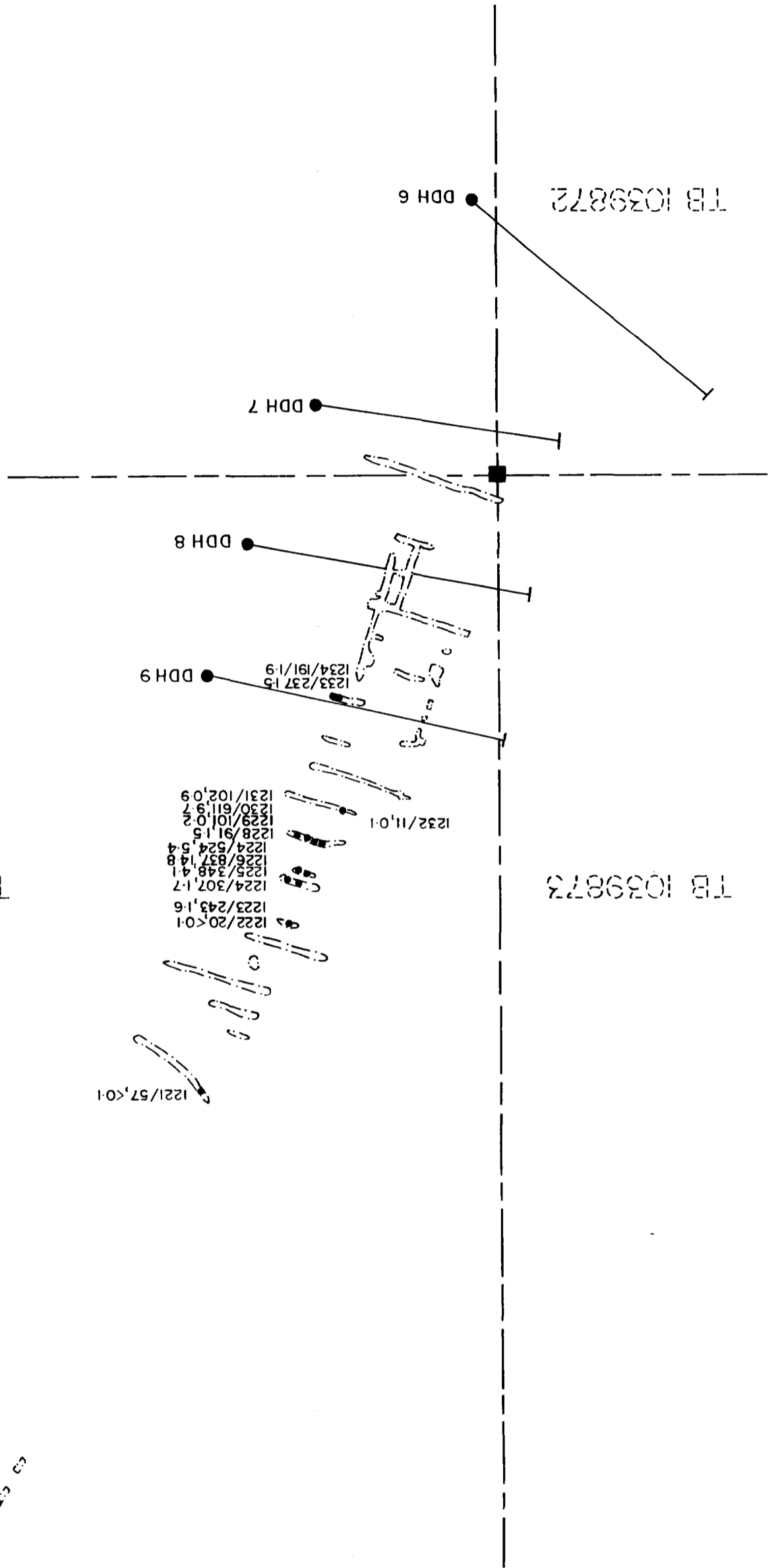
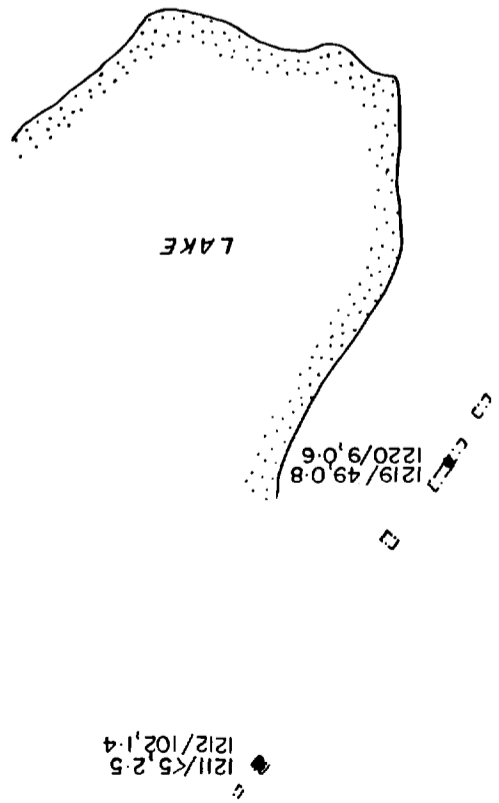
FIGURE 5



**LEGEND**

- 1956 Diamond Drill Hole
- ▭ 1956 Trench
- 1211/49,0.2 Grab sample No./Au ppb, Ag ppm

Trench & Diamond Drill Hole locations are approximate



CONCLUSIONS AND RECOMMENDATIONS

Preliminary grab sampling has confirmed the anomalous gold content in the northeasterly striking quartz veins at the Kellar Island Prospect. Therefore, quartz veins and associated alteration zones at Caribou Lake, particularly northeasterly trending ones, are potential hosts for gold deposits and should be prospected in detail on the property.

The slightly anomalous gold value from the iron formation on a small island on the southwest side of Kellar Island indicates that iron formation in the Caribou Lake area may be a potential host for gold and should also be prospected in detail.

DMBW, therefore, recommends that the Phase 1 exploration program continue as detailed in the qualifying report dated November 25, 1987 (Our Ref. 87-105) with particular attention paid to gold-bearing potential of quartz veining and iron formations during geological mapping and prospecting.

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- Sutcliffe, R.H.; Bivi, Anna and Kavanagh, G.W.L.  
1981: Precambrian Geology of the Fletcher Lake Area, East Sheet,  
Thunder Bay District; Ontario Geological Survey Preliminary Map  
P2410, Geological Series, Scale 1:15,840 or 1 inch to 1/4 mile,  
Geology 1980.

CERTIFICATE OF QUALIFICATION

I, Ian D. Trinder, of Apt. 2025, 30 Denton Avenue, Scarborough, Ontario do hereby certify that:-

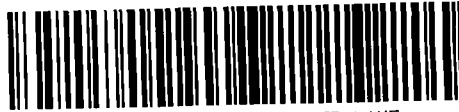
1. I am an exploration geologist employed with Derry, Michener, Booth & Wahl, Consulting Geologists and Engineers of Toronto.
2. I graduated from the University of Manitoba in 1983 with a degree of Bachelor of Science, Honours Geology.
3. I have not received, nor do I expect to receive, any interest, directly or indirectly, in the properties or securities of Dorchester Resources Inc.
4. The statements contained in this report and the conclusions and recommendations made are based upon my review of all data available. I have visited the property.
5. I hereby consent to the use of this report in a Statement of Material Facts of the Company for the preparation of a prospectus for submission to the Ontario Securities Commission and other regulatory authorities.



Ian D. Trinder, B.Sc.

Toronto, Ontario  
February 10, 1989





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THIS SUBMITTAL CONSISTED OF VARIOUS REPORTS, SOME OF WHICH HAVE BEEN CULLED FROM THIS FILE. THE CULLED MATERIAL HAD BEEN PREVIOUSLY SUBMITTED UNDER THE FOLLOWING RECORD SERIES (THE DOCUMENTS CAN BE VIEWED IN THESE SERIES):

Appendix A - Geochemical Results

Dorchester Resources Inc.

F. D. Trinder

Aug 4 to Aug 12, 1988

Above information found in File 2.12240