



52C16SE8233 2.14967 HEPBURN LAKE

010

REPORT ON OPAP GRANTS  
OP91-261 AND OP91-263

GITCHEE GUMEE GOLD  
CALM LAKE PROPERTY  
NTS 52-C-16  
FLANDERS, NW ONTARIO

2.14967

NOVEMBER, 1991

RECEIVED

APR 02 1993

MINING LANDS BRANCH

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2.635



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2.0 DAILY LOGS

## 1.0 SUMMARY AND CONCLUSIONS:

The Calm Lake property, located approximately 40 kilometres west of Alikokan, Ontario underwent a fall program consisting of prospecting, trenching, channel sampling and detail trench mapping.

Previous work conducted by the authors', located a gold showing 200 Metres southwest of Indiaonta Lake at location now designated the Main and West Showings. These showings consist of two parallel narrow 0.5-1M. wide quartz vein/shear zone systems with pyrite-chalcopyrite mineralization within mafic metavolcanic tuffs and flows approximately 25 Metres apart. These systems contain anomalous and ore grade Au and Cu intersections over significant widths from grab and channel sampling up to 3.276 oz/ton Au and 2.41% Cu.

The 1991 fall program is a follow-up of the authors' 1988-1989 programs which consisted of linecutting, geophysics and geological mapping surveys.

The program was successful in locating two new gold-bearing quartz vein-shear zone systems designated the Glider and Boulder Showings from prospecting and extending the strike length of the Main Showing from the trenching program.

The authors' believe that these quartz vein/shear zone systems if located within highly deformed mafic to felsic pyroclastics ( deformation zones ) have the potential to host major gold deposits. The Glider Showing discovered at the end of the program appears to have this potential, due to the significant width of the shear zone (deformation zone) and was subsequently staked by the author. The

zone is located within intercalated sheared mafic to felsic tuffs and porphyries with abundant quartz-carbonate stringers and containing disseminated pyrite throughout. The gold mineralization appears to be associated with the sulphides, with the highest values being obtained from the quartz veining of up to 0.341 oz/ton, but highly anomalous Au values were obtained from the sheared mafic and felsic tuffs.

The type of exploration programs conducted since 1988 by the authors' should be continued to fully evaluate the potential of the new gold discoveries, especially on the Glider Showing on the newly staked Gitchee Gumee - Calm Lake West Property located approximately 1.5 kilometres to the southwest of the Calm Lake Property.

A total of \$ 11,500.00 was spent on the 1991 program.

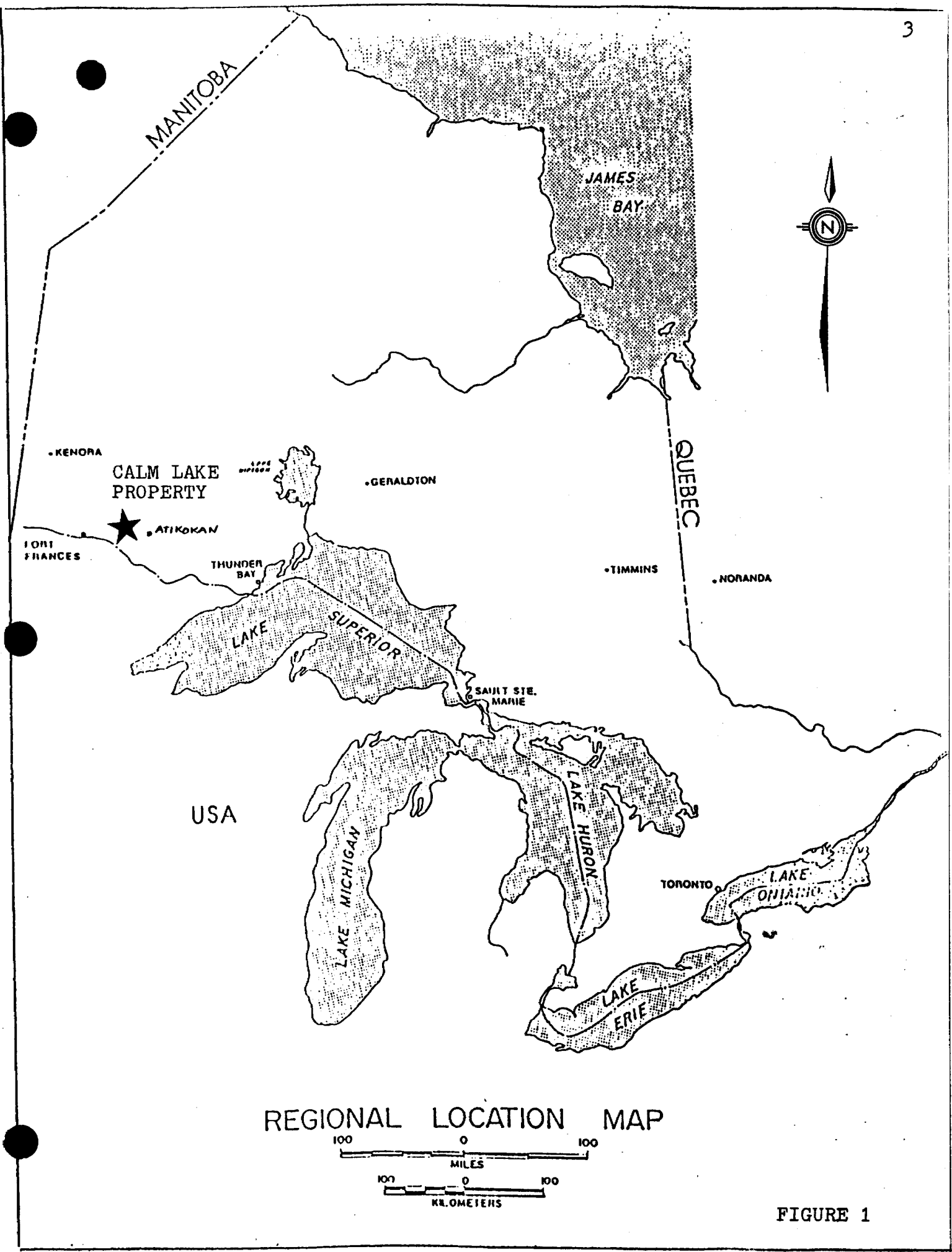
## 2.0 LOCATION

The property is located approximately 40 kilometres west of Atikokan, Ontario and 3 kilometres north of Flanders, a former railway station along the C.P.R.

Access to the property from Atikokan is via Highway 11 and north by an all weather road from Flanders to a point 800 metres east of the claim boundary. From this point, a brief hike west along a wide draw brings you to the property.(Figures 1-3)

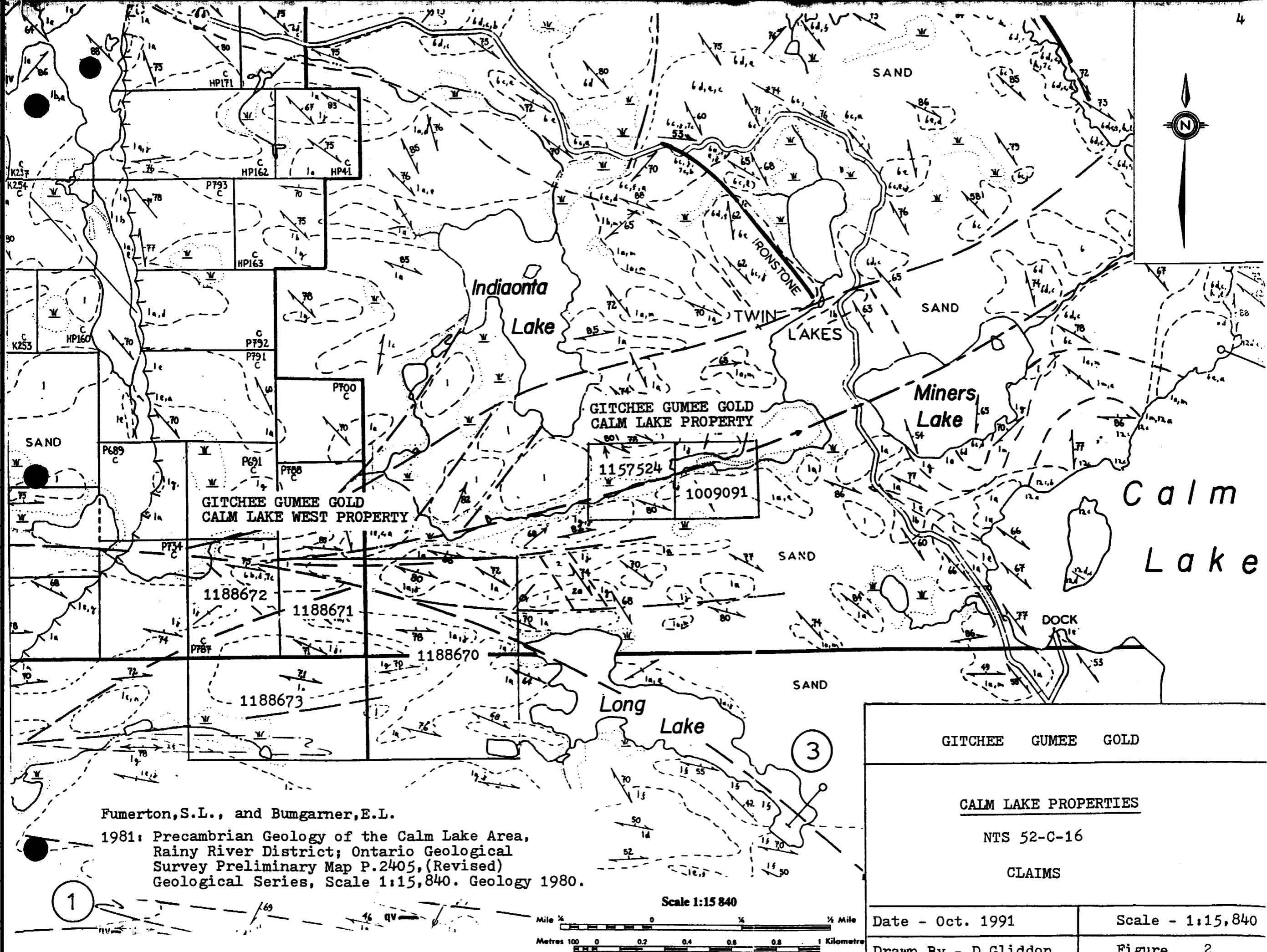
## 3.0 PROPERTY DESCRIPTION

The property consists of two (2) unpatented mining claims



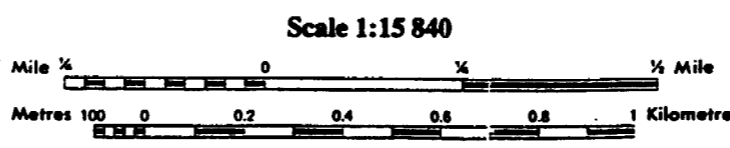
REGIONAL LOCATION MAP

FIGURE 1



Fumerton, S.L., and Bumgarner, E.L.  
 1981: Precambrian Geology of the Calm Lake Area,  
 Rainy River District; Ontario Geological  
 Survey Preliminary Map P.2405, (Revised)  
 Geological Series, Scale 1:15,840. Geology 1980.

GITCHEE GUMEE GOLD	
<u>CALM LAKE PROPERTIES</u>	
NTS 52-C-16	
CLAIMS	
Date - Oct. 1991	Scale - 1:15,840
Drawn By - D.Gliddon	Figure 2



1

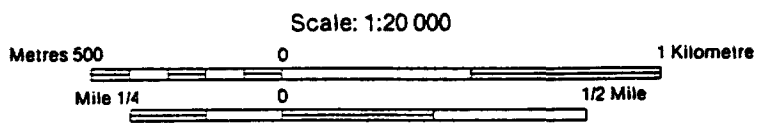


GITCHEE GUMEE GOLD  
CALM LAKE PROPERTY

GITCHEE GUMEE GOLD  
CALM LAKE WEST PROPERTY

RAY BERNATCHEZ  
LONG LAKE PROPERTY

O.G.S. Geophysical Series  
Map 80509  
Atikokan-Mine Centre Area  
Western Part



GITCHEE GUMEE GOLD

CALM LAKE PROPERTIES

NTS 52-C-16

Date - Oct. 1991

Scale - 1:20,000

Drawn By - D. Gliddon

Figure 3



1009091 and 1157524, and were recorded on March 9, 1988 and March 1, 1991 respectively. The claims are located on the Hepburn Lake claim sheet G-532 in the Thunder Bay Mining Division. (Figure 2)

#### 4.0 HISTORY

Prior to 1985, the only information in the area of the claims is from a brief paragraph in the 1912 Canadian Mining Journal (Vol. 33) which stated: "...by the Calm Lake Gold Mining Company. This company has a shaft down 85 feet. At a depth of 75 feet this shaft cuts a system of veins. At this point a crosscut of 50 feet has been made to intersect the veins and make them workable. A vein known as "Number 2" was also cut through and was found to be 50 feet wide. It showed some free gold, but not entirely a free quartz. A vein dubbed "Number 3" is also expected to be cut through soon. At the surface it is wide and shows up well. Camps were built on the ground owned by this company last summer. A steam hoisting plant is also in operation and everything is in good shape for extensive exploration and developing this summer."

In 1985, Greg Laws staked a group of claims covering the property described as the Calm Lake Occurrence in the O.G.S. Open File Report 5539 "Property Visits and Reports of the Atikokan Economic Geologist 1979-1983. (p.132) He sampled several old pits located on the present claims covering two parallel quartz vein/shear zones and obtained gold values up to 0.59 oz/ton Au, but no further work was conducted and the claims were allowed to lapse.

In 1987, the Calm Lake Occurrence was staked by the present

owners consisting of one claim and subsequently addition claims were staked over the past four years. Between 1987 and 1988 Gitchee Gumee Gold established a grid over two claims covering the old pits and conducted geological mapping, VLF-EM, magnetometer and EM surveys. Gold assays up to 2.7 oz./ton Au were obtained from the resampling of the old pits.

The area was mapped by S.L. Fumerton, E.L. Bumarnier and assistants from the O.G.S. in 1980 and released in 1985 as "Geology of the Calm Lake Area" Report 226. The O.G.S. also conducted a combined EM-Mag airborne survey over the area in 1980.

#### 5.0 GEOLOGY

The claim group is located within the Wabigoon Subprovince near the boundary between the Wabigoon and the Quetico Subprovinces. The main part of the Wabigoon Subprovince is composed of a complex assemblage of mafic to felsic metavolcanics which are intercalated with sandstone and iron-rich sediments. A major northwest trending lineament is located through the property and connects with the Turtle River Fault to the west.

The property is underlain for the most part, by mafic volcanic flows and tuffs with thin interbedded felsic pyroclastic units. The pyroclastics are divided on the basis of fragment size: larger than 64 mm a tuff breccia unit, 2-64 mm for a lapilli tuff and < 2 mm for a tuff. The fragments are subrounded to angular and are typically intermediate to felsic in composition with the larger felsic fragments being commonly vesicular. The groundmass of these

## PRECAMBRIAN

## EARLY PRECAMBRIAN (ARCHEAN)

## DIORITE TO TONALITE SUITE ("NIVEN CREEK &amp; MIRANDA CREEK STOCKS")

12

- 12 Unsubdivided
- 12a Biotite/hornblende granodiorite to tonalite
- 12b Hornblende tonalite
- 12c Hornblende/biotite quartz diorite
- 12d Diorite

## INTRUSIVE CONTACT

## METAVOLCANICS AND METASEDIMENTS

METASEDIMENTS<sup>b</sup>

## Chemical Metasediments

7

- 7a Chert
- 7b Iron silicate
- 7c Magnetite ironstone
- 7d Hematite ironstone

## Medium-Grade Clastic Metasediments

6

- 6 Unsubdivided
- 6a Conglomerate
- 6b Arenite
- 6c Wacke
- 6d Biotite gneiss
- 6e Hornblende gneiss<sup>c</sup>
- 6f Metalexite
- 6g Muscovite bearing
- 6h Actinolite bearing<sup>c</sup>
- 6j Chloritic
- 6k Garnetiferous
- 6l Hornblende porphyroblasts<sup>c</sup>
- 6m Quartz, feldspar and muscovite nodules

METAVOLCANICS<sup>b</sup>

## Felsic Metavolcanics

2

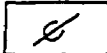
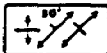


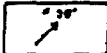

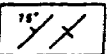
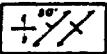

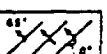
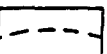
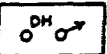
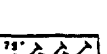

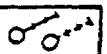
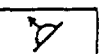

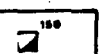
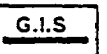
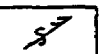

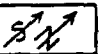

- 2 Unsubdivided
- 2a Unsubdivided flows
- 2b Porphyritic flows (quartz phenocrysts)
- 2c Porphyritic flows (feldspar phenocrysts)
- 2d Tuff
- 2e Lapilli-tuff
- 2f Sericite phyllite
- 2g Garnetiferous

## Mafic and Intermediate Metavolcanics

1

- 1 Unsubdivided
- 1a Unsubdivided flows<sup>c</sup>
- 1b Pillowed flows
- 1c Porphyritic flows (feldspar, phenocrysts)<sup>d</sup>
- 1d Coarse- and medium-grained flows<sup>d</sup>
- 1e Tuff
- 1f Lapilli-tuff
- 1g Tuff-breccia
- 1h Heterolithic debris flow
- 1j Chlorite phyllite, chlorite schist
- 1k Amphibolite<sup>c,d</sup>
- 1m Hornblende/biotite granoblastic to massive to gneissic rocks
- 1n Hornblende porphyroblasts
- 1p Garnetiferous
- 1q Carbonatized
- 1s Feldspar porphyroblasts
- 1i Silicified

## SYMBOLS

	Glacial striae		Schistosity; (horizontal, inclined, vertical)		Anticline, syncline, upright fold
	Area of numerous bedrock outcrops		Lineation with plunge		Fault; assumed
	Bedding, top unknown; (inclined, vertical)		Foliation; (horizontal, inclined, vertical)		Lineament
	Bedding, top (arrow) from grain gradation; (inclined, vertical, overturned)		Geological boundary, position interpreted		Diamond drillhole; (vertical, inclined)
	Bedding, top (arrow) from cross bedding; (inclined, vertical, overturned)		Minor shear zone		Diamond drillhole; (projected vertically, projected up dip)
	Lava flow; top in direction of arrow		Crenulation fold axis		Shaft: depth in feet
	Geophysically interpreted ironstone		S-shaped crenulation-fold axis, with plunge		Concentration of As (ppm) in lake bottom sediments (all plotted points are higher than the 95% percentile)
			S-shaped-fold axis, Z-shaped-fold axis, with plunge		Mineral or metal occurrence

fragments is generally fine grained and mafic.

Sulphide mineralization (pyrite, chalcopyrite) is found in northwest/southeast trending shear zones which splay off of the northeast trending lineament. Minor disseminated pyrite mineralization has been observed within the mafic tuffs.

#### 6.0 STRUCTURAL GEOLOGY

The major structure in the Calm Lake area is the Little Turtle Fault system which is a east-trending wrench fault that splits into a number of east-trending splay faults at the Seine River. These faults are typified by intense schistosity along the fault planes, have steep dips and by the extreme elongation of any primary textures in the adjacent rocks.(Fumerton, 1982)

One such splay fault bisects the property and is represented by a narrow valley.

Large folds extend for considerable distances north and west of the property, but only minor folds and kink folds were observed on the property, and appear to predate the faulting in the area.

#### 7.0 PROSPECTING PROGRAM

A total of 11 man days from October 18th to October 26th, 1991 was spent prospecting on the claims and the surrounding area. The prospecting was initiated to locate the shaft described by Calm Lake Gold Mining Company in 1912 and to locate any new mineralized quartz veins/shear zones. Besides prospecting the two claims thoroughly, the northeast trending lineament was prospecting on

both sides to the east and west of the property.(Figure 4)

The prospecting located two new gold-bearing quartz vein/shear zone systems, now designated the Boulder and Glider Showings.

The Boulder Showing is located off the claim group, approximately 200M. northeast of the #1 Post of 1009091 along the shore of the small lake (Figure 5). Several two cubic metre size quartz boulders was found and this area was subsequently trenched during the program (TRENCH #5) and revealed a 50cm. wide quartz vein within a 1.5M wide shear zone of mafic metavolcanic tuff. Initial grab samples from the quartz vein/shear zone assayed up to 0.061 oz/ton Au.

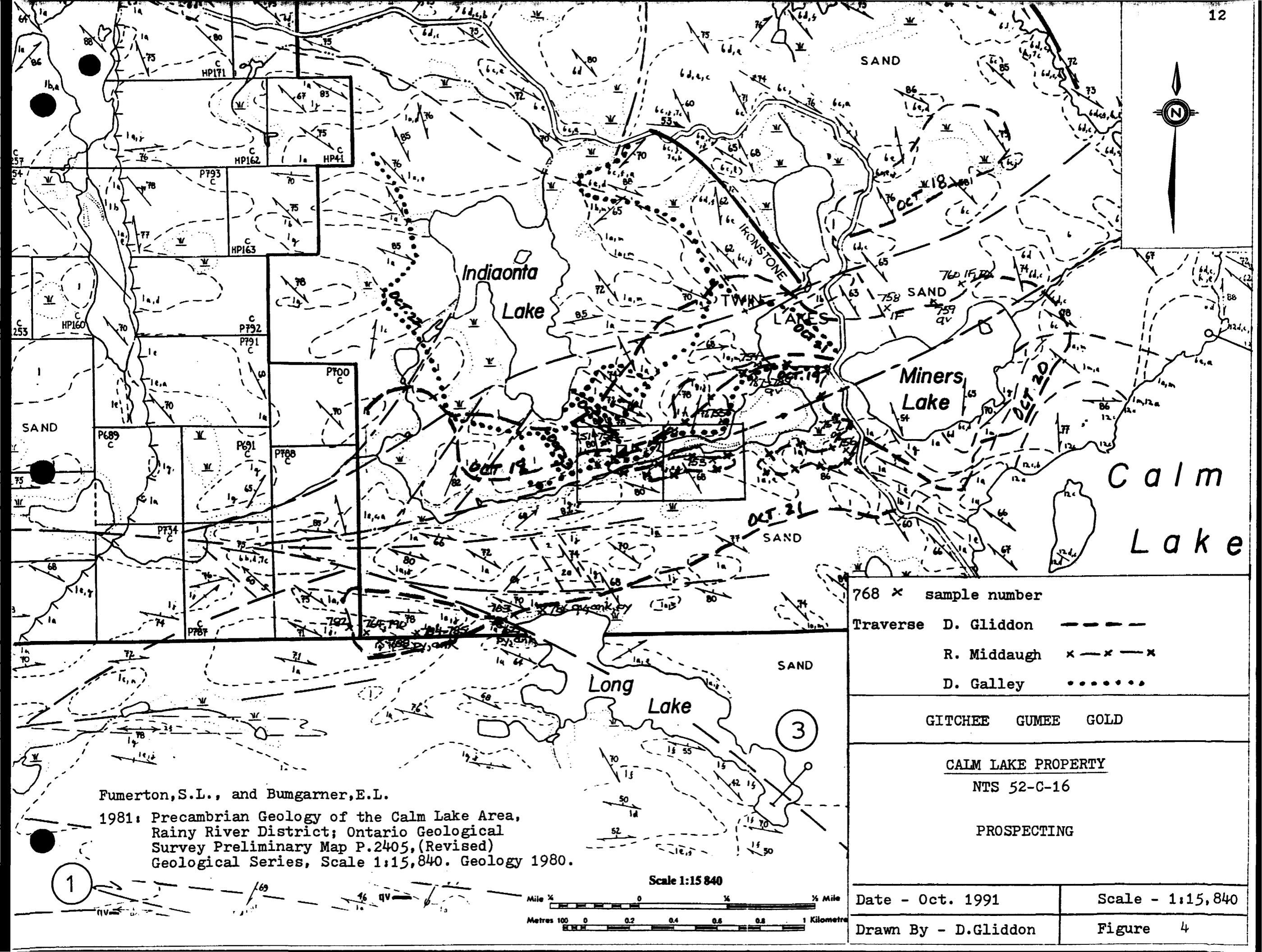
The Glider Showing is located 1.5KM. southwest of the claim group and approximately 730M. due west of the northwest corner of Long Lake. The limited prospecting revealed a wide shear zone system (deformation zone) of highly deformed mafic to felsic pyroclastics with disseminated pyrite, sericite-ankerite-chlorite alteration and numerous quartz-carbonate veining. Initial grab samples from the quartz vein/shear zone system assayed up to 0.341 oz/ton Au.

The Glider Showing was subsequently staked by the authors' and consists of four claim groups covering 128ha.(see Figure 2)

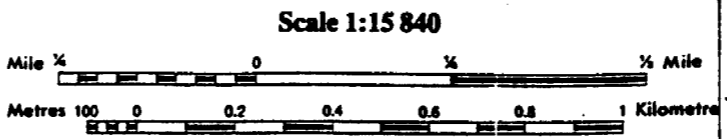
A total of 23 grab samples were collected from the prospecting program and assayed for Au.

#### 8.0 MECHANICAL TRENCHING PROGRAM

A total of five areas were trenched by Mark Maki Exploration



Fumerton, S.L., and Bumgarner, E.L.  
 1981: Precambrian Geology of the Calm Lake Area,  
 Rainy River District; Ontario Geological  
 Survey Preliminary Map P.2405, (Revised)  
 Geological Series, Scale 1:15,840. Geology 1980.



768 x sample number	
Traverse D. Gliddon	-----
R. Middaugh	x - x - x
D. Galley	.....
GITCHEE GUMEE GOLD	
CALM LAKE PROPERTY	
NTS 52-C-16	
PROSPECTING	
Date - Oct. 1991	Scale - 1:15,840
Drawn By - D.Gliddon	Figure 4

Services with a skidder/backhoe to remove the overburden and to expose the extensions of quartz vein/shear zones. Trenches #1 to #4 concentrated on extending the Main and West quartz vein/shear zones systems from the old pits located during the 1988 geological mapping program on the claim group, straddling LINE 1+00 W, between 0+50N and 1+50N. Trench #5 was conducted to locate the possible source of the several two cubic metre size mineralized quartz boulders found during the prospecting program.

These trenches were subsequently washed with a wajax water pump to remove loose overburden and the Main Showing quartz vein/shear zone in Trenches #1 and #2 were channel sampled.(Figures 5-6)

Of note, the depth of the overburden encountered during the trenching was deeper than expected and difficulties arose in removing the 2M. thick sand cover with the skidder/backhoe, thereby reducing the initial programs proposed trench sizes.

#### 8.1 Trench #1

This trench which measures approximately 22M by 5M covers the "Main" shear zone and associated quartz vein. The quartz vein which strikes northwest and dips steeply to the east, pinches and swells to a maximum of 1.0M and has sharp contacts with the host volcanic rocks which other than silicification exhibit no chemical alteration. Five channel locations were sampled over the exposed length of the vein and divided into 14 samples based on rock type ie. quartz vein material vs volcanic wall rock.(Figure 7)



### 8.2 Trench #2

This 4M by 10M trench located 35M southeast of the Trench #1 and also covers the "Main" quartz vein system. Two channel samples were taken from the quartz vein structure which exhibited two separate veins at this location.(Figure 8)

### 8.3 Trenches #3 & #4

These trenches were dug in an attempt to locate the northern extensions of the "Main" and "West" zones respectively. Due to relatively deep overburden, very little outcrop was exposed in trench #3 and no quartz vein system was seen. Although trench #4 exposed a fair amount of outcrop, no northern extension of the "West" zone was located.

### 8.4 Trench #5

This trench which is located approximately 200M northeast of the #1 post of claim# TB 1009091, revealed a 0.5M wide quartz vein associated with a shear zone within volcanic host rocks. The quartz vein which is folded at this location has an overall west northwest trend. Three grab samples were taken from this trench.

## 9.0 CHANNEL SAMPLING

A total of 16 channel samples were collected totalling 7 Metres in length. These channels were cut with a Stihl cutoff saw equipped with a diamond blade.

The "Main" quartz vein/shear zone system was the best exposed from the trenching program and was the only showing channel sampled. The results indicated that the gold mineralization is

restricted to the quartz vein/shear zone system, with no significant values in the mafic metavolcanic host. At present, the Main Showing has a 150M. strike length, averaging approximately 0.5M wide and is open to the north. The best results from the channel sampling assayed 0.458 oz/ton over 30cm. and 0.132oz/ton over 95cm.(Figure 7)

A total of 40 grab and channel samples were collected from the program and were assayed by Accurassay Laboratories in Thunder Bay. These samples were assayed for Au using the fire assay method and 2 of these samples were also run for Cu.

After the analysis results, a total of 7 samples were re-run using the cyanide-leach method to see if the high Au values (>0.100) could be increased. The results from the cyanide-leach method compared to the fire assay method are tabled as follows:

<u>Sample No.</u>	<u>Fire Assay (oz/ton)</u>	<u>Cyanide Leach (oz/ton)</u>
213751	0.420	0.390
213752	0.887	3.276
213766	0.285	0.357
213777	0.458	0.710
213778	0.132	0.096
213779	0.503	0.765
213782	0.143	0.341

## 10.0 SAMPLE DESCRIPTIONS

Sample No.	Location	Type	Description	Assay Results (oz./ton Au)
213751	Cliff Showing	Grab	20 cm. wide quartz vein with cpy-py	0.420
213752	30M. west of Cliff Showing	Grab	rediscovered old pit - quartz vein with cpy-py	0.887
213753	south side of small lake and 200M. east of creek	Grab	quartz vein material with py	0.005
213754	75M. north of small lake and 50M. west of creek	Grab	mafic flow with diss. py	0.004
213755	10M. SW of WP#1 of 091	Grab	quartz boulder with diss. py	0.001
213756	southwest of Miners Lake on on west side of access road	Grab	20 cm. wide quartz vein with cpy	0.003
213757	same as #213756	Grab	oxide facies iron formation with py, mag	<0.001
213758	north side of Miners Lake on old logging road	Grab	oxide facies iron formation band 30 cm. wide with minor py, mag in wacke	<0.001
213759	100M. east of #213758 on old road	Grab	15 cm. wide qv with py bearing 030 crosscutting wacke	<0.001
213760	50M. east of #213759 on old road	Grab	oxide facies iron formation with py, po, mag in wacke	<0.001
213761	100M. east and 10M. south of old logging road from trench road	Grab	felsic intrusive sill with diss. py	<0.001
213762	100M. west of the northwest corner of Long Lake	Grab	sheared intermediate to felsic crystal tuff with diss. py and carb. alteration	<0.001
213763	50M. west of the northwest corner of Long Lake	Grab	sheared mafic tuff with quartz-ank. veining and and minor py	<0.001
213764	approx. 730M. west of northwest corner of Long Lake	Grab	quartz vein material from rubble pile of old pit	0.006
213765	Trench #1 (see Figure 7 )	Channel	#1 East (30 cm.)	0.001
213766	Trench #1 (see Figure 7 )	Channel	#1 Centre (20 cm.)	0.285
213767	Trench #1 (see Figure 7 )	Channel	#1 West (30 cm.)	0.003
213768	Trench #1 (see Figure 7 )	Channel	#2 East (20 cm.)	0.002
213769	Trench #1 (see Figure 7 )	Channel	#2 Centre (40 cm.)	0.026

213770	Trench #1 (see Figure 7 )	Channel	#2 West (25 cm.)	<0.001
213771	Trench #1 (see Figure 7 )	Channel	#3 East (15 cm.)	<0.001
213772	Trench #1 (see Figure 7 )	Channel	#3 Centre (30 cm.)	0.031
213773	Trench #1 (see Figure 7 )	Channel	#3 West (110 cm.)	0.006
213774	Trench #1 (see Figure 7 )	Channel	#4 East (30 cm.)	<0.001
213775	Trench #1 (see Figure 7 )	Channel	#4 Centre (50 cm.)	0.056
213776	Trench #1 (see Figure 7 )	Channel	#4 West (30 cm.)	0.081
213777	Trench #1 (see Figure 7 )	Channel	#4 West south 20cm. overlap 15 cm. (30cm.)	0.458
213778	Trench #1 (see Figure 7 )	Channel	#5 (95 cm.)	0.132
213779	Trench #1 (see Figure 7 )	Chip	#5 south 1.8M. Black rotted material	0.503
213780	Trench #2 (see Figure 8 )	Channel	#6 East (75 cm.)	0.003
213781	Trench #2 (see Figure 8 )	Channel	#6 20cm. West of #213780 (60 cm.)	0.001
213782	75-100M. west of #213764	Grab	quartz-carb vein with diss. py	0.143
213783	same as #213782	Grab	sheared felsic blue-quartz eye porphyritic tuff with diss. py and ank. alteration (footwall)	0.011
213784	10M. north of # 213764	Grab	sheared sericite schist with diss. py and minor carb. alteration	<0.001
213785	150M. east of #213764	Grab	sericite-quartz-py schist	0.002
213786	northwest corner of Long Lake	Grab	quartz-ankerite vein with diss. py in sheared mafic tuff	<0.001
213787	north shore of small lake from boulder showing trench	Grab	60cm. quartz vein with diss. py in sheared mafic tuff	0.061
213788	same as #213787	Grab	sheared mafic tuff with diss. py	0.022
213789	same as #213787	Grab	sheared mafic tuff with diss. py and quartz boudins	0.013
213790	same as #213764 from ledge face in old pit	Grab	quartz vein with fine grained diss. py stringers	0.016

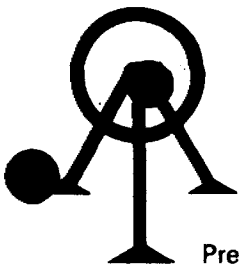
## II. RECOMMENDATIONS

The Calm Lake property has been extensively prospected and the results indicate that the gold mineralization is restricted to the Main and West Showings. During the 1991 trenching program, the overburden was deeper than expected and difficulties arose from the type of equipment employed in removing the overburden. Therefore, the proposed trenching of the 1991 program was not fully obtained and further trenching is recommended using bigger equipment. A single phase program of work is put forth for the 1992 field season and briefly includes the following:

(1) A continued trenching program to trace the Main and West Showings to the north using an excavator, channel sampling and detailed mapping at 1cm.=10M. of the trenches.

(2) The field season should mainly focus on the new gold discovery to the southwest of the Calm Lake property on the now designated Calm Lake-West property which the author believes has a greater potential to host a major gold deposit with a comprehensive exploration program of linecutting, geophysics, prospecting and geological mapping.

APPENDICES



# ACCURASSAY LABORATORIES

A DIVISION OF BARRINGER LABORATORIES LIMITED, REXDALE, ONTARIO

BOX 426

KIRKLAND LAKE, ONTARIO, CANADA P2N 3J1

TEL.: (705) 567-3361

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

48151

## Certificate of Analysis

Page: 1

Dave Gliddon  
603-199 Academy Drive  
THUNDER BAY, ON  
P7B 5W2

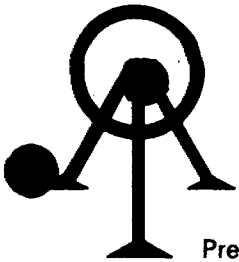
November 18

91

Work Order # : T910874  
Project :

SAMPLE NUMBERS Accurassay	Customer	Gold ppb	Gold Oz/T	
554055	213751	14433	0.420	
554056	213752	30495	0.887	
554057	213753	170	0.005	
554058	213754	143	0.004	
554059	213755	23	0.001	
554060	213756	95	0.003	
554061	213757	<5	<0.001	
554062	213758	<5	<0.001	
554063	213759	8	<0.001	
554064	213760	<5	<0.001	
554064	213760	<5	<0.001	Check
554065	213761	<5	<0.001	
554066	213762	6	<0.001	
554067	213763	18	0.001	
554068	213764	222	0.006	
554069	213765	17	0.001	
554070	213766	9802	0.285	
554071	213767	91	0.003	
554072	213768	58	0.002	
554073	213769	910	0.026	
554073	213769	762	0.022	Check
554074	213770	14	<0.001	
554075	213771	<5	<0.001	
554076	213772	1076	0.031	
554077	213773	218	0.006	
554078	213774	<5	<0.001	
554079	213775	1931	0.056	
554080	213776	2782	0.081	
554081	213777	15733	0.458	
554082	213778	4545	0.132	
554082	213778	3327	0.097	Check

Per: 



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48152

## Certificate of Analysis

Page: 2

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603-199 Academy Drive  
THUNDER BAY, ON  
P7B 5W2

November 18

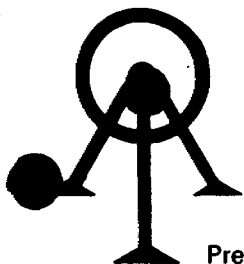
91

Work Order # : T910874  
Project :

SAMPLE NUMBERS Accurassay	CUSTOMER	Gold ppb	Gold Oz/T	
554083	213779	17277	0.503	
554084	213780	106	0.003	
554085	213781	38	0.001	
554086	213782	4911	0.143	
554087	213783	374	0.011	
554088	213784	10	<0.001	
554089	213785	78	0.002	
554090	213786	5	<0.001	
554091	213787	2079	0.061	
554091	213787	1931	0.056	Check
554092	213788	750	0.022	
554093	213789	350	0.010	
554093	213789	459	0.013	Check

Per: Blaine Velt





# ACCURASSAY LABORATORIES

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BOX 426

KIRKLAND LAKE, ONTARIO, CANADA P2N 3J1

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48155

## Certificate of Analysis

Page #1

Dave Gliddon  
603-199 Academy Drive  
THUNDER BAY, ON  
P7B 5W2

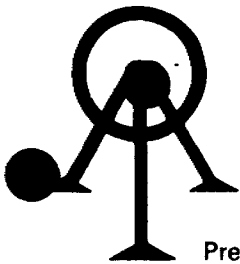
October 31, 1991

Work Order: T910874  
Project:

Results are as follows:

SAMPLE NUMBER		Copper ppm
Accurassay	Customer	
554055	213751	>10,000
554060	213756	1712

Per: *B. V. V.*



# ACCURASSAY LABORATORIES

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48153

## Certificate of Analysis

Dave Gliddon  
603-199 Academy Drive  
THUNDER BAY, ON  
P7B 5W2

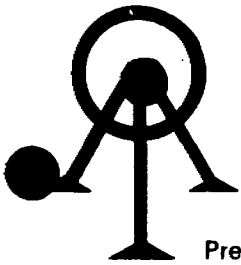
Page #1

November 08, 1991

WORK ORDER: T910874

SAMPLE NUMBERS	WEIGHT	GOLD	RESIDUE	TOTAL ASSAY	PERCENT	
ACCURASSY CUSTOMER	PULP (g)	Oz/T	Oz/T	Oz/T	RECOVERY	
554083	213779	820.0 g	0.713	0.0518	0.765	93

Per: Blaine Vuth



# ACCURASSAY LABORATORIES

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TEL.: (705) 567-3361

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

48154

Dave Gliddon  
603-199 Academy Drive  
THUNDER BAY, ON  
P7B 5W2

## Certificate of Analysis

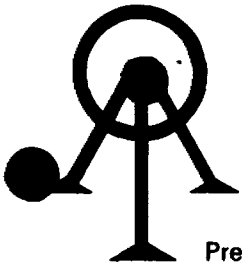
Page #1

November 14, 1991

WORK ORDER: T910874A

SAMPLE NUMBERS ACCURASSY CUSTOMER	WEIGHT PULP (g)	GOLD Oz/T	RESIDUE Oz/T	TOTAL ASSAY Oz/T	PERCENT RECOVERY	
554055	213751	163.0 g	0.384	0.0062	0.390	98
554056	213752	299.0 g	3.255	0.0218	3.276	99
554070	213766	513.0 g	0.355	0.0025	0.357	99
554081	213777	560.0 g	0.703	0.0067	0.710	99
554082	213778	1035.0 g	0.094	0.0025	0.096	97
554086	213782	1344.0 g	0.302	0.0390	0.341	89

Per: Blaine V. H.



# ACCURASSAY LABORATORIES

A DIVISION OF BARRINGER LABORATORIES LIMITED, REXDALE, ONTARIO

BOX 426

KIRKLAND LAKE, ONTARIO, CANADA P2N 3J1

TEL.: (705) 567-3361

President: Dr. GEORGE DUNCAN, M.Sc., Ph. D., C. Chem (Ont.), C. Chem (U.K.), M.C.I.C., M.R.S.C., A.R.C.S.T.

48062

## Certificate of Analysis

Page: 1

Dave Gliddon  
603-199 Academy Drive  
THUNDER BAY, ON  
P7B 5W2

November 7

91

Work Order # : T910898  
Project :

SAMPLE NUMBERS		Gold	Gold	
Accurassay	Customer	ppb	Oz/T	
554460	213790	564	0.016	
554460	213790	383	0.011	Check

Per: Blaine Vey

*Rates: Prospecting #150.00/day  
Non Prospecting #25.00/hr - 10 hrs/day*

DAILY LOG: O. GLIDDON

<u>TYPE</u>	<u>DATE</u>	<u>WORK PERFORMED</u>
Prospecting	Oct. 18	Travel to Flanders and prospected along old logging road northeast of claims.
Prospecting	Oct. 19	Prospected along north side of lineament from road to west of claims.
Prospecting	Oct. 20	Prospected around Miners Lake ( 3 samples taken )
Prospecting	Oct. 21	Prospected south of lineament along new logging road as far as Long Lake. ( 2 samples taken )
Prospecting	Oct. 22	Prospected west of Long Lake ( 1 sample taken )
Trenching	Oct. 23	Supervised backhoe and cleaned out trenches.
Trenching	Oct. 24	Supervised backhoe and continued to clean out trenches.
Prospecting	Oct. 25	Prospected west of Long Lake ( 6 samples taken )
Trenching	Oct. 26	Wajaxing and sampling of trench # 5 and demobilization of equipment from property.
Report	Nov. 12	Writing technical report
Report	Nov. 13	Writing technical report
Report	Nov. 14	Drafting maps
Report	Nov. 15	Drafting maps on AutoCAD
Report	Dec. 29	Finished technical report

*Rates: Prospecting \$ 150.00 /day  
Non Prospecting 25.00/hr - 10 hrs/day  
plus GST*

DAILY LOG:      DAVID GALLEY

<u>TYPE</u>	<u>DATE</u>	<u>WORK PERFORMED</u>
Prospecting	Oct. 18	Travelled to Flanders and prospected along access road
Prospecting	Oct. 19	Prospected from access road to Main showing and flagged route for backhoe/skidder from old logging road to showing ( 2 samples taken )
Prospecting/ Cutting	Oct. 20	Cut and cleared new access to showing removing large trees, prospecting along route ( 1 sample taken )
Site Preparation/ Prospecting	Oct. 21	Cutting trees and logs around trench sites, prospecting to access road south of Indianota Lake
Trenching/ Prospecting	Oct. 22	Supervised trenching and prospected south and west of Indianota Lake
Trenching/ Prospecting	Oct. 23	Supervised trenching and prospected west of Main showing
Trenching	Oct. 24	Wajaxing trench
Trenching/ Channel Sampling	Oct. 25	Wajaxing and channel sampling trench
Trenching/ Demobilization	Oct. 26	Wajaxing and demobilization of equipment

Notes: Prospecting \$150.00/day  
Non Prospecting \$25.00/hr - 10 hrs/day

DAILY LOG: RICHARD MIDDGAUGH

TYPE	DATE	WORK PERFORMED
Mobilization	Oct. 18	Mobilization of equipment and travel to Indianota Lodge
Prospecting	Oct. 19	Flagged out route for skidder from access road to property
Prospecting	Oct. 20	Prospected south of small lake on west side of access road ( 3 samples taken )
Mobilization	Oct. 21	Travelled to Atikokan for supplies and mobilized equipment to trench area ( 2 samples taken )
Mobilization	Oct. 22	Skidder arrives and walked it in to trench area and drove to Thunder Bay to pick up quadrunner, pump, etc.
Wajaxing	Oct. 24	Drove back to property and wajaxed Main Showing
Mapping/Channeling	Oct. 25	Geological mapping, cutting channels and collecting samples
Mapping/Channeling	Oct. 26	Finished mapping, cutting channels and collecting samples
Report	Dec. 30	Writing technical report
Report	Dec. 31	Drafting trench maps



Ontario



52C16SE8233 2.14967 HEPBURN LAKE

900

Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines

Geoscience Approvals Section  
Mining Lands Branch  
Willet Green Miller Centre  
933 Ramsey Lake Road  
6th Floor  
Sudbury, Ontario  
P3E 6B5

Telephone: (705) 670-5853  
Fax: (705) 670-5863

Our File: 2.14967  
Transaction #: W9340.83

**REVISED**

June 15, 1993

Mining Recorder  
Ministry of Northern Development  
and Mines  
435 James Street South  
Suite B003  
Thunder Bay, Ontario  
P7E 6E3

Dear Sir:

**RE: APPROVAL OF ASSESSMENT WORK SUBMITTED FOR PROSPECTING ON MINING CLAIMS TB 1157524 IN THE HEPBURN LAKE AREA.**

A Notice of Deficiency was not issued on this Report of Work prior to the 90 day deemed approval date and as outlined in subsection 6(5) of the Mining Act Regulations this Report of Work is deemed approved as of MAY 25, 1993. The Assessment credits are as listed on the original submission.

Please indicate this approval on the claim record sheets.

If you require further information please contact Clive Stephenson at (705) 670-5856.

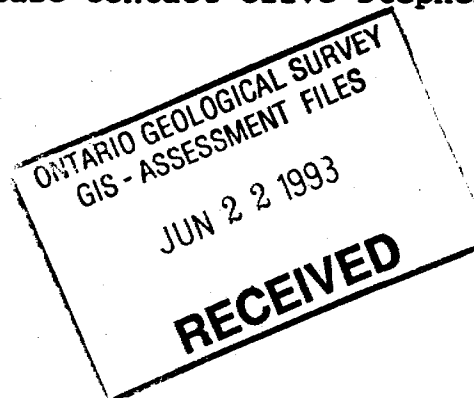
Yours sincerely,

Ron C. Gashinski  
Senior Manager, Mining Lands Branch  
Mines and Minerals Division

*CDS*  
CDS/jl

Enclosures:

cc: Assessment Files Office  
Toronto, Ontario



Resident Geologist  
Thunder Bay, Ontario





Ministry of  
Northern Development  
and Mines

Ministère du  
Développement du Nord  
et des Mines

~~Geoscience Approvals Section~~  
Mining Lands Branch  
Willet Green Miller Centre  
933 Ramsey Lake Road  
6th Floor  
Sudbury, Ontario  
P3E 6B5

Telephone: (705) 670-5853  
Fax: (705) 670-5863

Our File: 2.14967  
Transaction #: W9340.83

June 15, 1993

Mining Recorder  
Ministry of Northern Development  
and Mines  
435 James Street South  
Suite B003  
Thunder Bay, Ontario  
P7E 6E3

Dear Sir:

**RE: APPROVAL OF ASSESSMENT WORK SUBMITTED FOR PROSPECTING ON MINING  
CLAIMS TB 1157524 IN THE HEPBURN LAKE AREA.**

---

Please find enclosed a revised approval letter for the above reports  
of work. The approval date on the original approval letter was  
incorrect. The approval date should have been May 25, 1993.

If you have any questions please contact Clive Stephenson at  
(705) 670-5856.

Yours sincerely,

Ron C. Gashinski  
Senior Manager, Mining Lands Branch  
Mines and Minerals Division

*CDS*  
CDS/jl

Enclosures:

cc: Assessment Files Office  
Toronto, Ontario

Resident Geologist  
Thunder Bay, Ontario



Report of Work Conducted After Recording Claim

Mining Act

Transaction Number

W9340-83

MINING LANDS

2.14967

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used for correspondence. Questions about this collection should be directed to the Provincial Manager, Mining Lands, Ministry of Northern Development and Mines, Fourth Floor, 159 Cedar Street, Sudbury, Ontario, P3E 6A5, telephone (705) 670-7264.

- Instructions:
- Please type or print and submit in duplicate.
  - Refer to the Mining Act and Regulations for requirements of filing assessment work or consult the Mining Recorder.
  - A separate copy of this form must be completed for each Work Group.
  - Technical reports and maps must accompany this form in duplicate.
  - A sketch, showing the claims the work is assigned to, must accompany this form.

Recorded Holder(s) <b>RICHARD D. MIDDALGH</b>	Client No. <b>170369</b>
Address <b>736 ALICE AVE RR#14 THUNDER BAY ONT</b>	Telephone No. <b>767-4842</b>
Mining Division <b>THUNDER BAY</b>	Township/Area <b>HEPBURN LAKE AREA</b>
	M or G Plan No. <b>G-532</b>
Date Work Performed From: <b>OCT 18/91</b>	To: <b>DEC 29/91</b>

RECEIVED

Work Performed (Check One Work Group Only)

Work Group	Type
Geotechnical Survey	APR 11 1992
Physical Work, Including Drilling	MINING LANDS BRANCH
Rehabilitation	
Other Authorized Work	<b>PROSPECTING</b>
Assays	
Assignment from Reserve	

Total Assessment Work Claimed on the Attached Statement of Costs \$ 1980

Note: The Minister may reject for assessment work credit all or part of the assessment work submitted if the recorded holder cannot verify expenditures claimed in the statement of costs within 30 days of a request for verification.

Persons and Survey Company Who Performed the Work (Give Name and Address of Author of Report)

Name	Address
<b>RD MIDDALGH</b>	<b>736 ALICE AVE RR#14 THUNDER BAY ONT</b>
<b>DJ. GLIDDEN</b>	<b>603-199 ACADEMY DRIVE THUNDER BAY ONT</b>
<b>D. GALLEY</b>	<b>214 DENNIS ST THUNDER BAY ONT</b>

(attach a schedule if necessary)

Certification of Beneficial Interest \* See Note No. 1 on reverse side

I certify that at the time the work was performed, the claims covered in this work report were recorded in the current holder's name or held under a beneficial interest by the current recorded holder.

Date: **Feb 22/93** Recorded Holder or Agent (Signature): *[Signature]*

Certification of Work Report

I certify that I have a personal knowledge of the facts set forth in this Work report, having performed the work or witnessed same during and/or after its completion and annexed report is true.

Name and Address of Person Certifying: **R.D. MIDDALGH RR#14 736 ALICE AVE Thunder Bay ONT**

Telephone No: **767-4842** Date: **FEB 22 1993** Certified By (Signature): *[Signature]*

For Office Use Only

Total Value of Recorded: **1980** Date Recorded: **Feb 23/93** Mining Recorder: *[Signature]* Date Approved: **Feb 25/93**

THUNDER BAY RECEIVED  
FEB 2 1993  
7:39 AM





Statement of Costs for Assessment Credit

État des coûts aux fins du crédit d'évaluation

Mining Act/Loi sur les mines

Personal information collected on this form is obtained under the authority of the Mining Act. This information will be used to maintain a record and ongoing status of the mining claim(s). Questions about this collection should be directed to the Provincial Manager, Minings Lands, Ministry of Northern Development and Mines, 4th Floor, 159 Cedar Street, Sudbury, Ontario P3E 6A5, telephone (705) 670-7264.

Les renseignements personnels contenus dans la présente formule sont recueillis en vertu de la Loi sur les mines et serviront à tenir à jour un registre des concessions minières. Adresser toute question sur la collecte de ces renseignements au chef provincial des terrains miniers, ministère du Développement du Nord et des Mines, 159, rue Cedar, 4<sup>e</sup> étage, Sudbury (Ontario) P3E 6A5, téléphone (705) 670-7264.

1. Direct Costs/Coûts directs

Type	Description	Amount Montant	Totals Total global
Wages Salaires	Labour Main-d'oeuvre		
	Field Supervision Supervision sur le terrain		
Contractor's and Consultant's Fees Droits de l'entrepreneur et de l'expert-conseil	Type		
	PROSPECTOR 11 days x 150 (3 MEN)	1650	1650
Supplies Used Fournitures utilisées	Type		
Equipment Rental Location de matériel	Type		
RECEIVED APR 02 1993 MINING LANDS BRANCH			
Total Direct Costs Total des coûts directs			1650

2. Indirect Costs/Coûts indirects

Note: When claiming Rehabilitation work indirect costs are not allowable as assessment work. Pour le remboursement des travaux de réhabilitation, les coûts indirects ne sont pas admissibles en tant que travaux d'évaluation.

Type	Description	Amount Montant	Totals Total global
Transportation Transport	Type		
	TRUCK	198	198
Food and Lodging Nourriture et hébergement			230
			369
Mobilization and Demobilization Mobilisation et démoblisation			
Sub Total of Indirect Costs Total partiel des coûts indirects			330
Amount Allowable (not greater than 20% of Direct Costs) Montant admissible (n'excedant pas 20 % des coûts directs)			567
Total Value of Assessment Credit (Total of Direct and Allowable indirect costs) Valeur totale du crédit d'évaluation (Total des coûts directs et indirects admissibles)			1980
			2247

Note: The recorded holder will be required to verify expenditures claimed in this statement of costs within 30 days of a request for verification. If verification is not made, the Minister may reject for assessment work all or part of the assessment work submitted.

Note: Le titulaire enregistré sera tenu de vérifier les dépenses demandées dans le présent état des coûts dans les 30 jours suivant une demande à cet effet. Si la vérification n'est pas effectuée, le ministre peut rejeter tout ou une partie des travaux d'évaluation présentés.

Claiming Discounts

Work filed within two years of completion is claimed at 100% of the above Total Value of Assessment Credit.

Work filed three, four or five years after completion is claimed at 50% of the above Total Value of Assessment Credit. See calculations below:

Total Value of Assessment Credit	Total Assessment Claimed
	x 0.50 =

Remises pour dépôt

1. Les travaux déposés dans les deux ans suivant leur achèvement sont remboursés à 100 % de la valeur totale susmentionnée du crédit d'évaluation.

2. Les travaux déposés trois, quatre ou cinq ans après leur achèvement sont remboursés à 50 % de la valeur totale du crédit d'évaluation susmentionné. Voir les calculs ci-dessous.

Valeur totale du crédit d'évaluation	Évaluation totale partiel des
	x 0.50 =

Certification Verifying Statement of Costs

I hereby certify that the amounts shown are true and correct as to the assessment costs incurred while conducting assessment work on the lands shown on the accompanying Report on Work form.

As RECORDED HOLDER, I am authorized to make this certification.

Signature

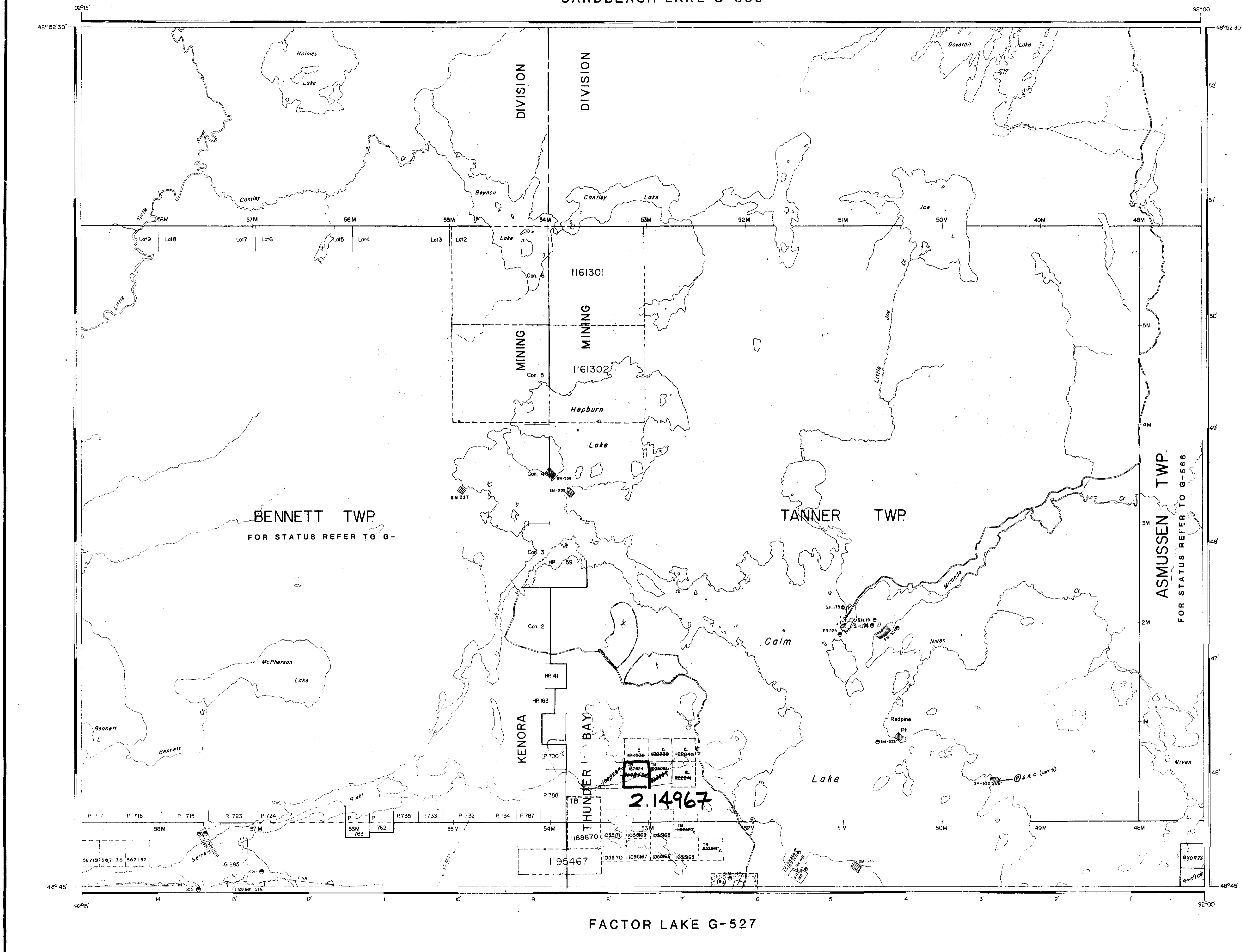
Attestation de l'état des coûts

J'atteste par la présente que les montants indiqués sont vrais et exacts en ce qui concerne les dépenses ont été engagées pour effectuer des travaux d'évaluation sur les terrains indiqués dans le rapport susmentionné.

Et en tant que RECORDED HOLDER, je suis autorisé à faire cette attestation.

Signature

SANDBEACH LAKE G-556



NOTES

AREAS WITHDRAWN FROM DISPOSITION

Description	Order No.	Date	Disposition	File
SEC 43, 44, 45	W21/60 NCR	30/6/80	S.R.O.	163472

PROPOSED FORESTRY ACTIVITIES FOR 1983/80.

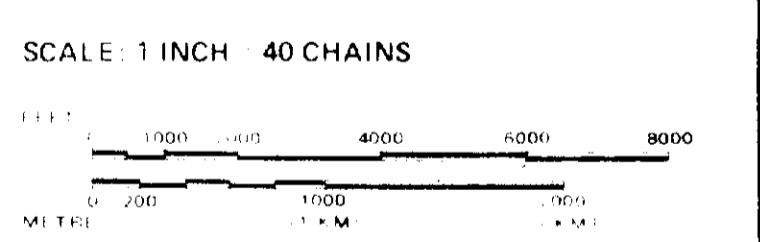
Flooding Rights in connection with water power sites at Sturgeon Falls & Calm Lake to an elev. of 1173' & 1255' L.O. 6626 File 16799

LEGEND

HIGHWAY AND ROUTE No.	
OTHER ROADS	
TRAILS	
SURVEYED LINES	
TOWNSHIP BASE LINES, ETC.	
LOTS, MINING CLAIMS, PARCELS, ETC.	
UNSURVEYED LINES	
LOT LINES	
PARCEL BOUNDARY	
MINING CLAIMS ETC.	
RAILWAY AND RIGHT OF WAY	
UTILITY LINES	
NON-PERENNIAL STREAM	
FLOODING OR FLOODING RISK	
SUBDIVISION OR COMPOSITION RESERVATIONS	
ORIGINAL SHORFLINE	
MARSH OR MUSKEG	
MINES	
TRAVERSE MONUMENT	

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	
SURFACE RIGHTS ONLY	
MINING RIGHTS ONLY	
LEASE, SURFACE & MINING RIGHTS	
SURFACE RIGHTS ONLY	
MINING RIGHTS ONLY	
LICENCE OF OCCUPATION	
ORDER IN COUNCIL	
RESERVATION	
CANCELLED	
SAND & GRAVEL	
LAND USE PERMITS FOR COMMERCIAL TOURISM/OUTPOST CAMPS	

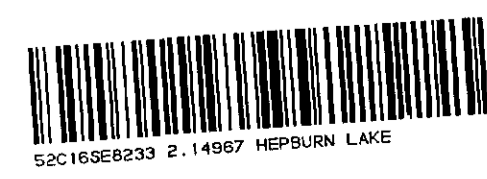


AREA  
**HEPBURN LAKE**  
 M.N.R. ADMINISTRATIVE DISTRICT  
**ATIKOKAN**  
 MINING DIVISION  
**THUNDER BAY/KENORA**  
 LAND TITLES / REGISTRY DIVISION  
**RAINY RIVER**

Ministry of Natural Resources  
 Land Management Branch  
 Ontario  
 Date: *Feb. 6, 1986*  
 Number: **G-532**

DECEMBER 1981

2.14967



2+00 N  
1+50 N  
1+00 N  
0+50 N  
0+00  
0+50 S  
1+00 S  
1+50 S  
2+00 S  
2+50 S

see Figure 6

TB 1157524

TB 1009091

BOULDER SHOWING  
Trench #5  
20M X 5M

LAKE

Trench

2.14967

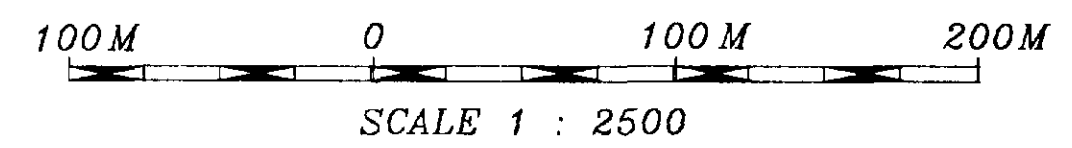
*David J. Gliddon*

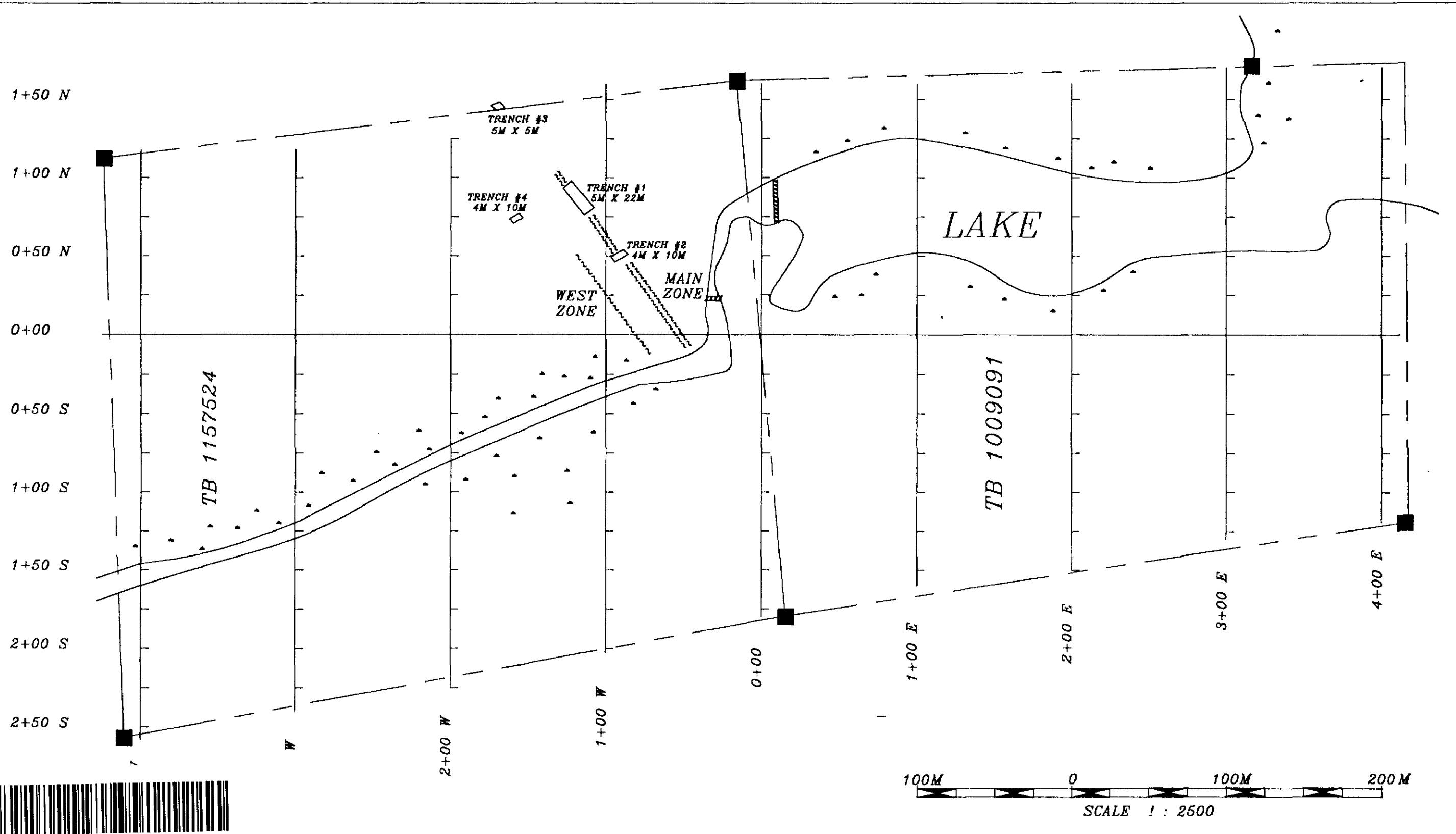
GITCHEE GUMEE GOLD


Calm Lake Property  
NTS 52-C-16



TRENCH LOCATIONS

Date: November, 1991    Scale 1 : 2500  
Drawn By: D. Gliddon    Figure 5





  
 2.14967

 TRENCH  
 Shear

*David J. Glendon*

**GITCHEE GUMEE GOLD**

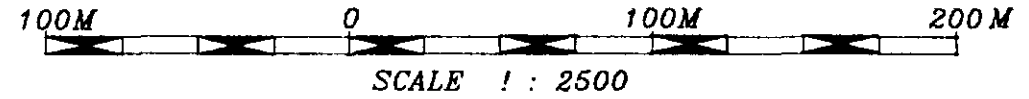
Calm Lake Property  
62-C-16

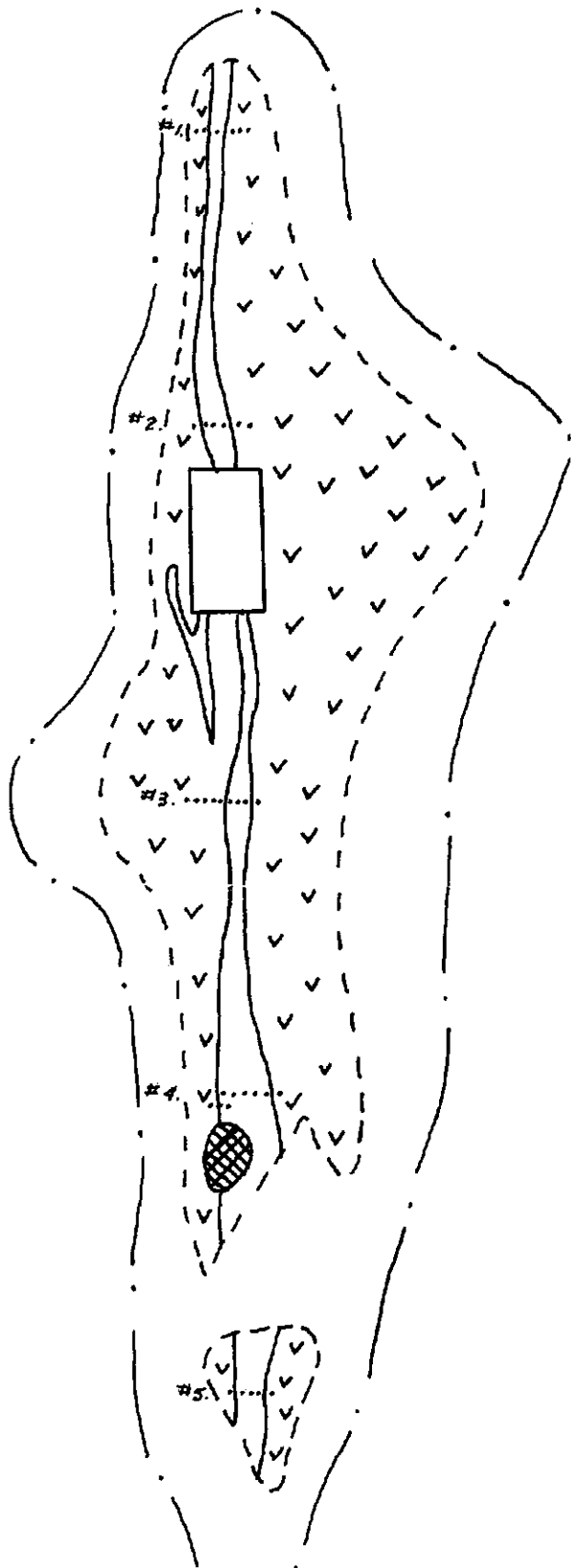
**TRENCH LOCATIONS**

Date: November 1991	Scale: 1 : 2500
Drawn By: D. Glendon	Figure: 6



52C16SE8233 2.14967 HEPBURN LAKE





2.14967

**LEGEND**

Volcanic Rocks

Quartz Vein

Black Material

Contact

Edge of Trench

Edge of Exposed Rock

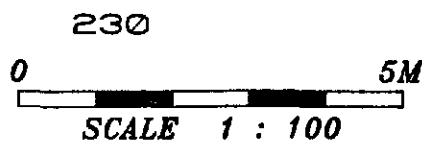
Old Pit

Channel Cut

*R. Middaugh*



52C16SE8233 2.14967 HEPBURN LAKE



**GITCHEE GUMEE GOLD**

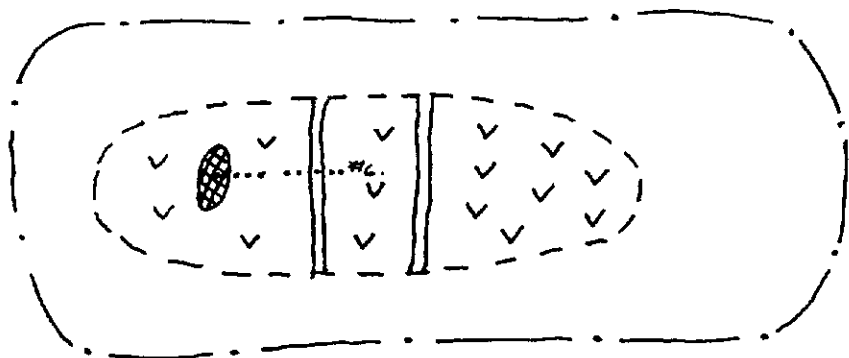
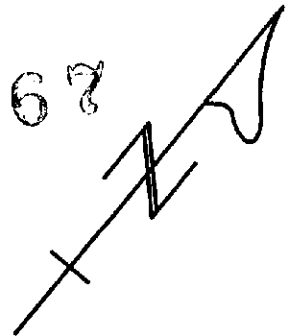
Calm Lake Property  
52-C-16

TRENCH #1


Date: November 1981 Scale: 1 : 100  
Drawn By: R.Middaugh Figure: 7




2.14967



**LEGEND**

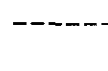
 Volcanic Rocks

 Quartz Vein

 Black Material

 Contact

 Edge of Trench

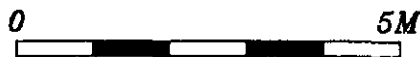
 Edge of Exposed Rock

 Channel Cut



52C16SE8233 2.14967 HEPBURN LAKE

240



SCALE 1 : 100

**GITCHEE GUMEE GOLD**

Calm Lake Property

52-C-16

TRENCH #2

Date: November 1991

Scale: 1 : 100

Drawn By: R. Middaugh

Figure: 8