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**REPORT ON  
TRENCHING  
FORTUNE LAKE PROPERTY  
DAVIS TOWNSHIP  
SUDBURY MINING DIVISION  
ONTARIO  
FOR  
GOLDEN HEMLOCK RESOURCES LTD.**

**George Cavey  
Larry LeBel  
December 5, 1986**

**OREQUEST**



## SUMMARY

Backhoe trenching was carried out on the Golden Hemlock Resources Ltd., Fortune Lake property located in Davis Township, Sudbury Mining Division, Ontario.

Four trenches were excavated. A layer of hard pan in the overburden slowed the progress of the backhoe and prevented the excavation of additional trenches and the overall objective of the trenching to determine the extent and grade of the gold bearing quartz veins on the property was not fully realized.

The quartz veins exposed by the trenching varied in width from a few cm to 30 cm. The grade of the veins varies up to 4.953 oz/t Au confirming previously reported grades. Six veins in a width of 7 metres were exposed in one trench (trench 2). The veins have a cumulative thickness of 53 cm and weighted average grade of 1.726 oz/t Au. The grade of the 7 metre interval in which the veins occur is 0.131 oz/t Au.

The results of the trenching are sufficiently encouraging that the program should be continued, but because of the difficulties encountered in trenching, the next stage of work should be a preliminary diamond drilling program. Estimated costs for the Phase III drill program are \$76,000.

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## INTRODUCTION

This report presents the results of backhoe trenching done on the Fortune Lake property of Golden Hemlock Resources Ltd.

The purpose of the trenching was to determine the extent and grade, in two dimensions, of the auriferous quartz vein system on the property.

The trenching was done under the direction of OreQuest Consultants Ltd. in the fall of 1986 using a backhoe from Northland Explorations of Timmins, Ontario. Blasting and sampling of the trenches were completed by OreQuest's personnel.

The objectives of the trenching were not fully realized because in many places a layer of hard pan in the overburden could not be excavated. The possibility of acquiring a larger backhoe was investigated, but none was available in the Sudbury area at the time.

## PROPERTY DESCRIPTION

### Location and Access

The Fortune Lake property is located in Davis Township (NTS map 41I/9), Sudbury Mining Division, Ontario approximately 24 miles northeast of the city of Sudbury at latitude 46°41'N and longitude 80°34'W (Figure 1).

Access to the property is gained from the Trans Canada Highway (Highway #17) by following Highway #535 north from the village of Hagar. This section of

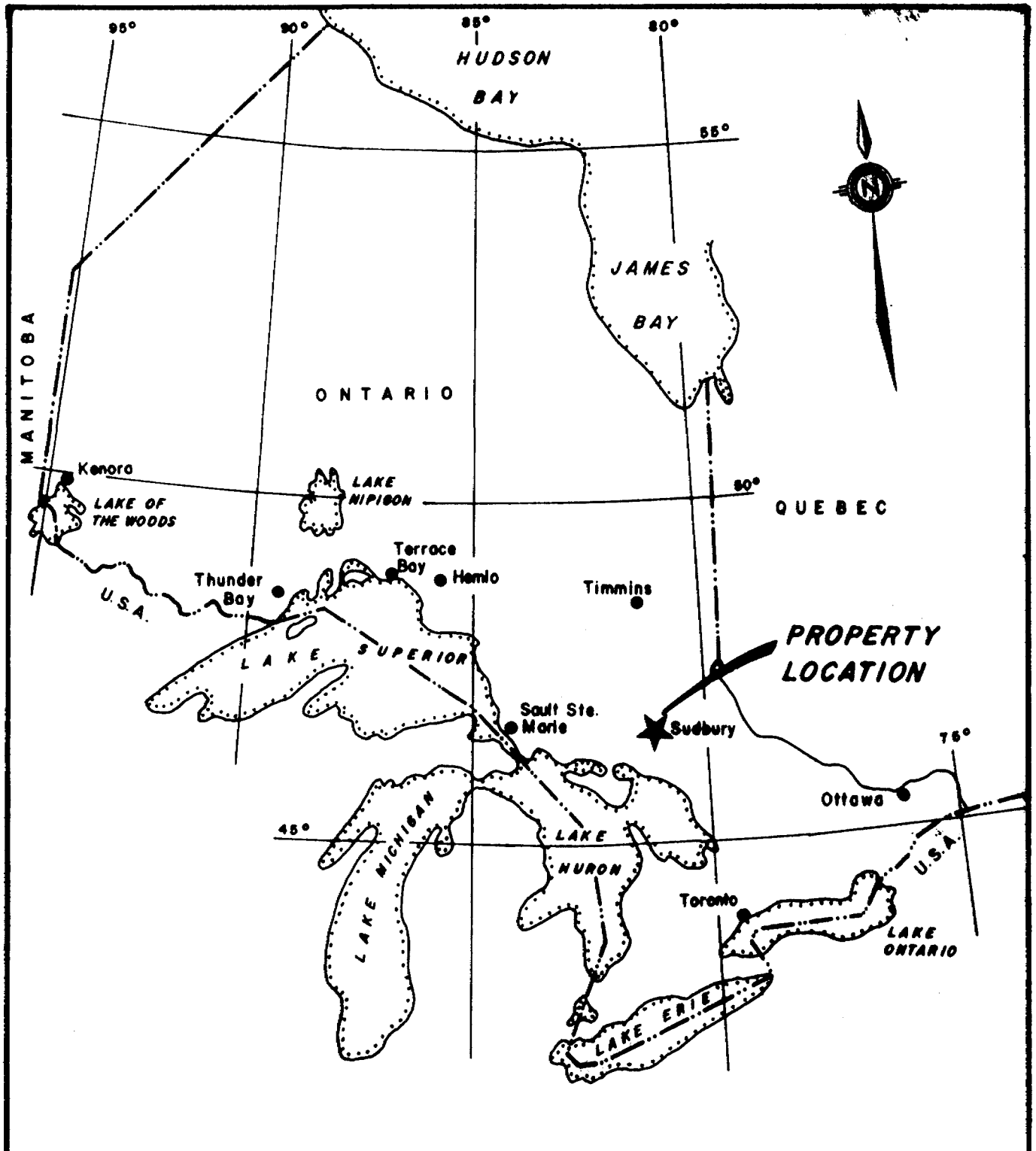


FIG. 1

**GOLDEN HEMLOCK RESOURCES LTD.  
 FORTUNE LAKE PROPERTY  
 REGIONAL LOCATION MAP**

DAVIS TOWNSHIP  
 SUDBURY MINING DIVISION, ONTARIO

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highway #535 is a gravel road which officially ends at Riviere Veuve about six miles north of Hagar, but continues as an unimproved gravel road to the CNR rail line at Washagami about 14 miles north of Hagar. From this point it continues as a good gravel bush road toward the northwest. The property is reached by two left branching roads, the first of which is located some 4 miles beyond the CNR rail line and the second of which is located a further 3 miles (Figure 2). Both of these turns are marked by signs to an Ontario Ministry of Natural Resources, Fuel Wood lot.

#### Claim Status

The property is under option by Golden Hemlock Explorations Ltd. from Pelangio- Larder Mines Ltd. By fulfilling certain obligations Golden Hemlock has the right to earn a 50% working interest in the property.

The Fortune Lake property consists of seven, unpatented mining claims located in Davis Township, Sudbury Mining Division, Ontario (Figure 3). Status of the claims is as follows:

Claim Numbers	Number of Claims	Date Recorded	Expiry Date
S 714888	1	September 5, 1984	September 5, 1986
S 714891	1	September 5, 1984	September 5, 1986
S 717190	1	April 19, 1984	April 19, 1986
S 721328	1	September 5, 1984	September 5, 1986
S 722710 and 711	2	September 5, 1984	September 5, 1986
S 830718	$\frac{1}{7}$	October 31, 1984	October 31, 1986

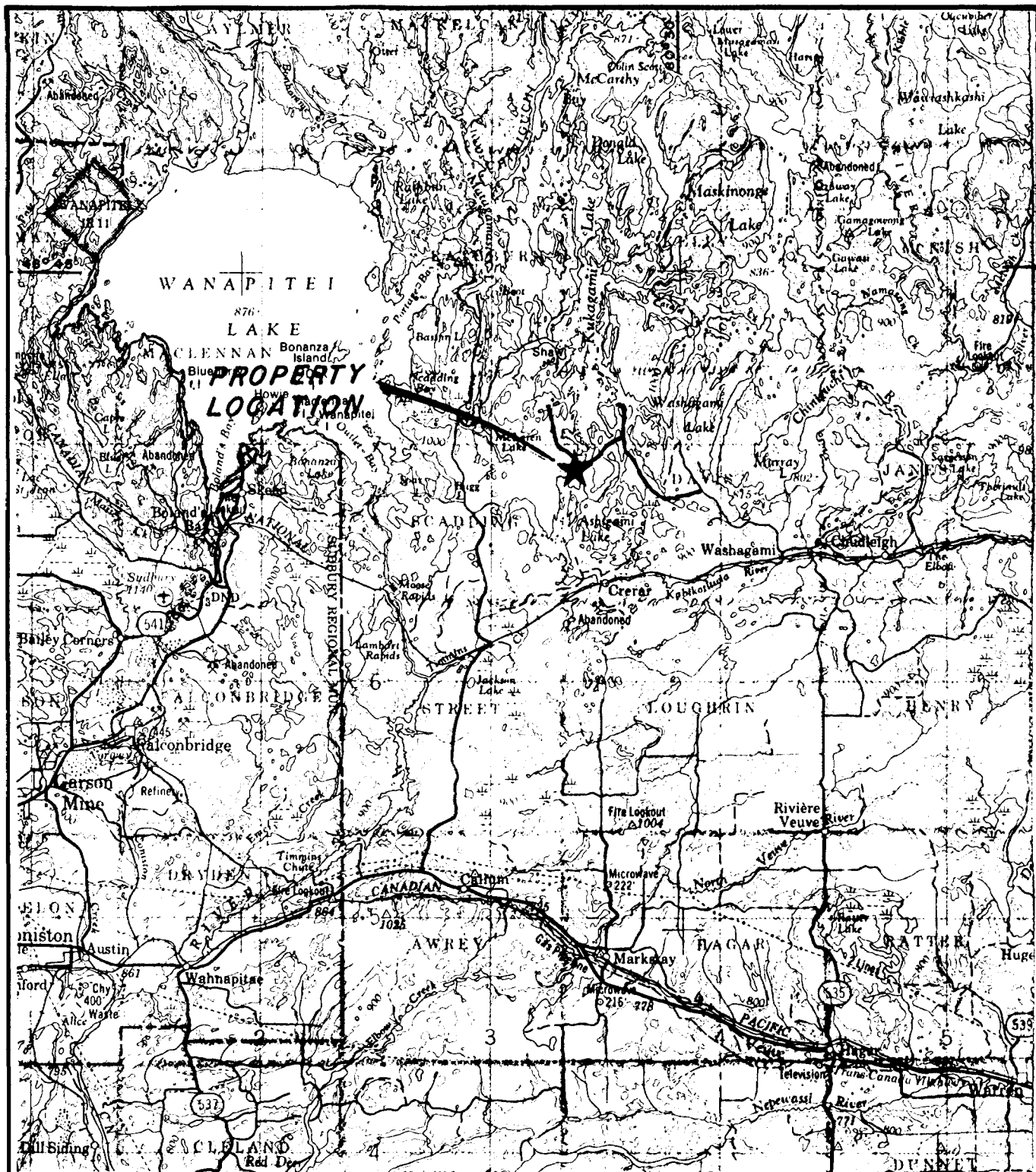
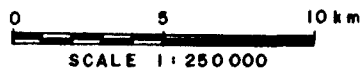


FIG. 2

**GOLDEN HEMLOCK RESOURCES LTD.  
 FORTUNE LAKE PROPERTY  
 LOCAL LOCATION MAP**

DAVIS TOWNSHIP  
 SUDBURY MINING DIVISION, ONTARIO



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Claim S 717190 holds the land under Fortune Lake and claim S 830718 holds mining rights only. One hundred days of assessment work has been applied to all the claims except S 717190. Their new expiry date will be 1988 and the claims will have accumulated the maximum assessment work possible prior to applying for a mining lease.

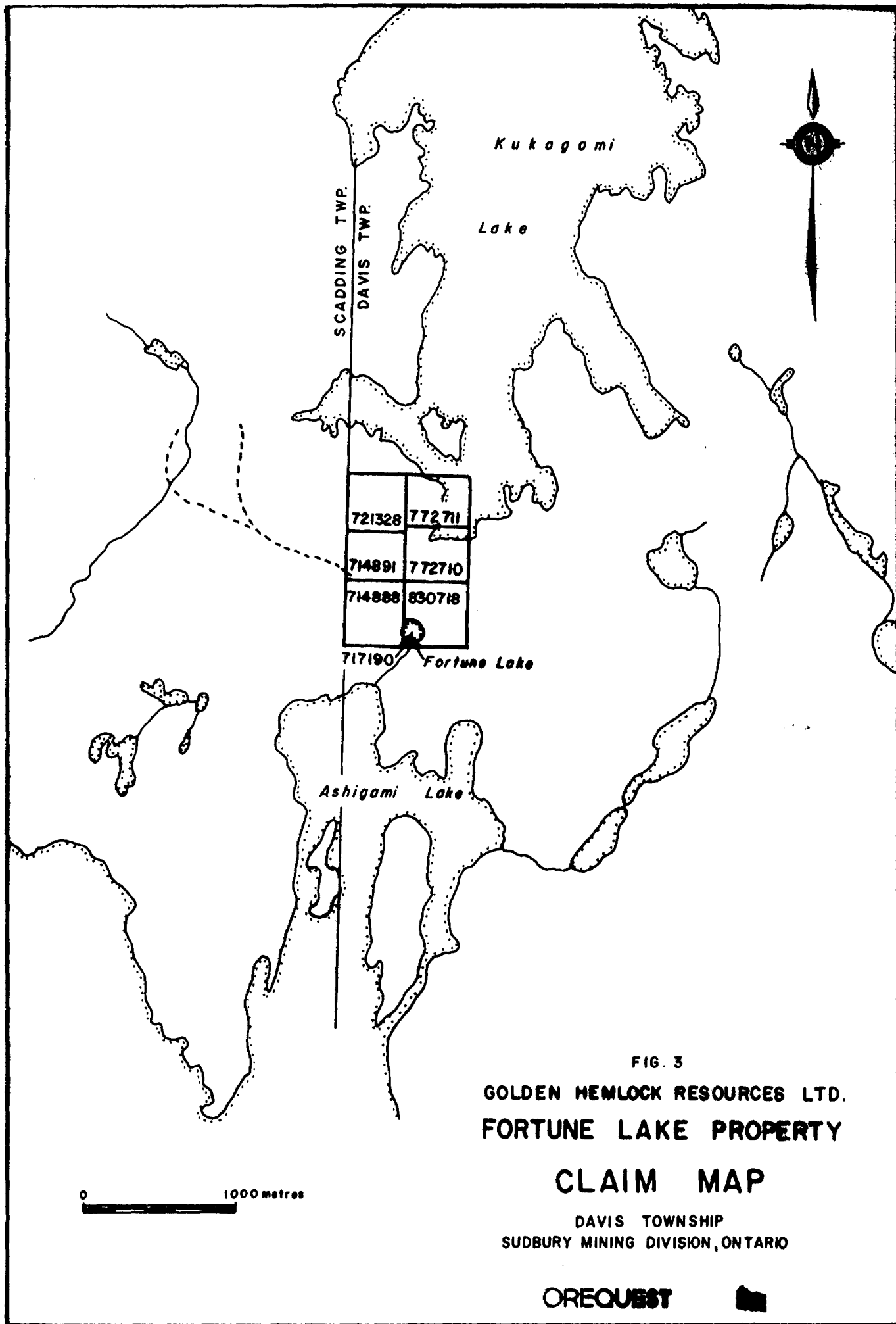
A title search shows that the registered owner of claim S 717190 is B. Asbury not Pelangio-Larder Mines Ltd. The work described herein does not qualify for assessment credits because it was not done on the claim. If the claim is transferred to Pelangio-Larder some form of assessment work would then have to be done. The claim is currently under extension to January 30, 1987 by which time 24 days are required. An additional 40 days is required by April 19, 1987 to meet the assessment work requirements.

#### Physiography and Vegetation

The area is typical of the Canadian Shield Physiographic Belt with low rolling hills separated by marshes, slowly moving creeks and lakes. Elevations on the property vary by about 125 feet.

Overburden cover consisting of coarse glacial till is extensive in the area, but is relatively thin. Bedrock forms rounded, glacially smoothed outcrops and is limited in exposure to less than 5%.

Vegetation on the property consists of secondary white birch, balsam fir, black spruce and poplar. Undergrowth which can be very dense, particularly



around Fortune Lake, consists mainly of alder.

Water is readily available in the area from Fortune Lake and Kukagami Lake to the north and Ashigami Lake to the south.

#### REGIONAL GEOLOGY and MINERALIZATION

The area is underlain by Precambrian sedimentary rocks of the Huronian Supergroup intruded by Nipissing intrusions (Dressler, 1982 and Thomson and Card, 1963).

The Huronian Supergroup covers a large area of central Ontario. It is sub-divided into four groups; the Elliot Lake Group, the Hough Lake Group, the Quirke Lake Group and the Cobalt Group on the basis of cycles of sedimentation.

The youngest of these groups, the Cobalt Group, underlies the general area. The Cobalt group is further sub-divided into four formations, but only the lowest formation, the Gowganda Formation is present in Davis Township.

The Gowganda Formation is the basal formation of the Cobalt Group. It is composed of an heterogeneous sequence of conglomerate, sandstone-arkose and impure quartzite to wacke.

The Nipissing intrusions are gabbro, granodiorite granitic, dike rocks, quartz-plagioclase porphyry and pegmatites. Gabbro sills are the predominate type in the Davis Township area. Some of the more significant mineral occurrences in Davis Township are spatially and probably genetically related to

these sills.

Several significant occurrences and deposits occur in the area.

Surface and underground development done in 1959 on the Norstar property (Thomson and Card, 1963 - occurrence 1), located 2.5 miles southeast of the Fortune Lake property outlined some 275,000 tons grading 0.41 oz/ton Au and 1.5% Cu. The mineralization consists of pyrite, chalcopyrite and arsenopyrite in a breccia zone within wackes and a gabbro sill in which fragments are cemented with quartz-carbonate alteration. This property, renamed the Groundstar property, is currently being developed by Orofino, one of the Northgate Group of companies, with a spiral decline. At the end of October 1985 the decline had advanced by about 100 feet from the surface.

Guiding Resources Ltd. holds a 26 claim property, located about 1 mile east of the Fortune Lake property, which is held under option by McIan Exploration Ltd. (Northern Miner, 1985). The property encompasses previously known showings (Thomson and Card 1963, occurrences 7 and 8). Trenching on this property has outlined a system of gold-bearing quartz stringers, carrying gold values up to 3.0 oz/ton, in the same northwest trending gabbro sill that hosts the Groundstar property. Trenching and drilling activity was underway at the time of the work described herein.

The most significant gold deposit developed to date in the general area is the Westfield Minerals, Scadding Township mine, located just west of the Fortune Lake property. Ore reserves, estimated at 250,000 tons grading 0.234 oz/ton in

three zones, occur in breccia pipes in the Serpent Formation-quartzites: A mill was erected on the property, but production was short lived presumably because of insufficient ore reserves and/or grade.

At Wolfe Lake, in Machelcan and Rathburn Townships north of the Fortune lake property, Flag Resources Ltd. has encountered gold grading from 0.06 oz/ton to 0.736 oz/ton over significant widths in pyritiferous breccia zones in Lorrain Formation quartzite. This property is currently under option to Hecla Mining Corp.

#### HISTORY and PREVIOUS WORK

Judging by the large number of claim posts, the Fortune Lake property has received a great deal of attention in the past.

The earliest recorded work occurred in 1897 when the property was known as the MacKenzie Mine (Darke, 1985). Work included the excavation of two shafts, one 35 feet and the other 100 feet. In 1934, the property was acquired by Mc-Aver Gold Mines (Darke, 1985). The main shaft was dewatered and 30 feet of drifting at the 50 foot level was carried out. A 45-ton sample was extracted and processed in a mill erected on the site. Remnants of the mill and other buildings are still present on the property. Gold grades of up to 8.1 oz/ton were allegedly obtained and the zone was traced for a length of 1,300 feet by surface trenching.

In 1985, the property was examined and sampled by Kenneth M. Darke Consultants Ltd. on behalf of Pelangio-Larder Mines Ltd. (Darke, 1985).

Selected samples of quartz vein material taken returned gold grades from 0.005 oz/ton to 28.41 oz/ton to corroborate the high grades reported in 1935. At this time, two old diamond drill holes were found on the property. No records of these holes and/or the results obtained appear to exist. The holes are located at distances of 100 feet and 200 feet from one of the old shafts. Assuming a dip of 45°, the holes would have tested the vein system at depths of approximately 100 feet and 200 feet, respectively.

Also in 1985, a very low frequency electromagnetic (VLF-EM) geophysical survey was conducted on the property on behalf of Pelangio-Larder Mines Ltd. (Hutteri, 1985). The VLF-EM survey detected a number of weak conductors all of which were attributed to overburden and/or topography. One of the conductors, however, correlates with a resistivity low detected by the I.P. survey done in 1985.

A magnetic survey, conducted in the immediate vicinity of two shafts on the property in 1984 (Darke, 1985), detected several linear low amplitude highs the causes of which are unknown at this time. Gabbro sills may explain these magnetic anomalies, however, according to Campbell (1985), the Nipissing intrusions are not particularly magnetic.

The property was mapped and sampled and an induced polarization survey was done in 1985 (Cavey and LeBel, 1985). The sampling confirmed previous high grades from the property, but added little new information. The induced polarization survey detected a combined resistivity high and induced polarization anomaly which more or less coincident with the inferred position of

the quartz vein system.

#### EXPLORATION PROCEDURES

Trenching was done with a backhoe mounted on a Bombardier muskeg tractor belonging to Northland Explorations of Timmins.

Samples were acquired using a portable rock drill and blasting. Two types of samples were taken, namely, systematic chip samples and selected grab samples of the quartz veins. The chip samples were designed to determine if gold mineralization invaded the host greywackes between the quartz veins.

Samples were analyzed at Vangeochem Laboratory in Vancouver using fire assay preparation with an atomic absorption finish. Selected samples were re-analyzed using a fire assay finish.

#### RESULTS and DISCUSSION

The locations of the trenches are shown on Figure 4.

Attempts to trench at 1+50E, 1+00N; 14+00W, 5+00N and 15+00W, 5+00N were unsuccessful because of hard pan and/or boulders.

##### Trench 1 (Figure 5)

Trench 1 extends from 0+00 to 1+00N on line 2+00W for a length of 29 metres. The only significant assay obtained is 1.028 oz/ton from a 12 cm-25 cm wide vein at the north end of the trench. Two, 1 metre channel samples incorporating the vein returned 0.023 oz/ton and 0.448 oz/ton.

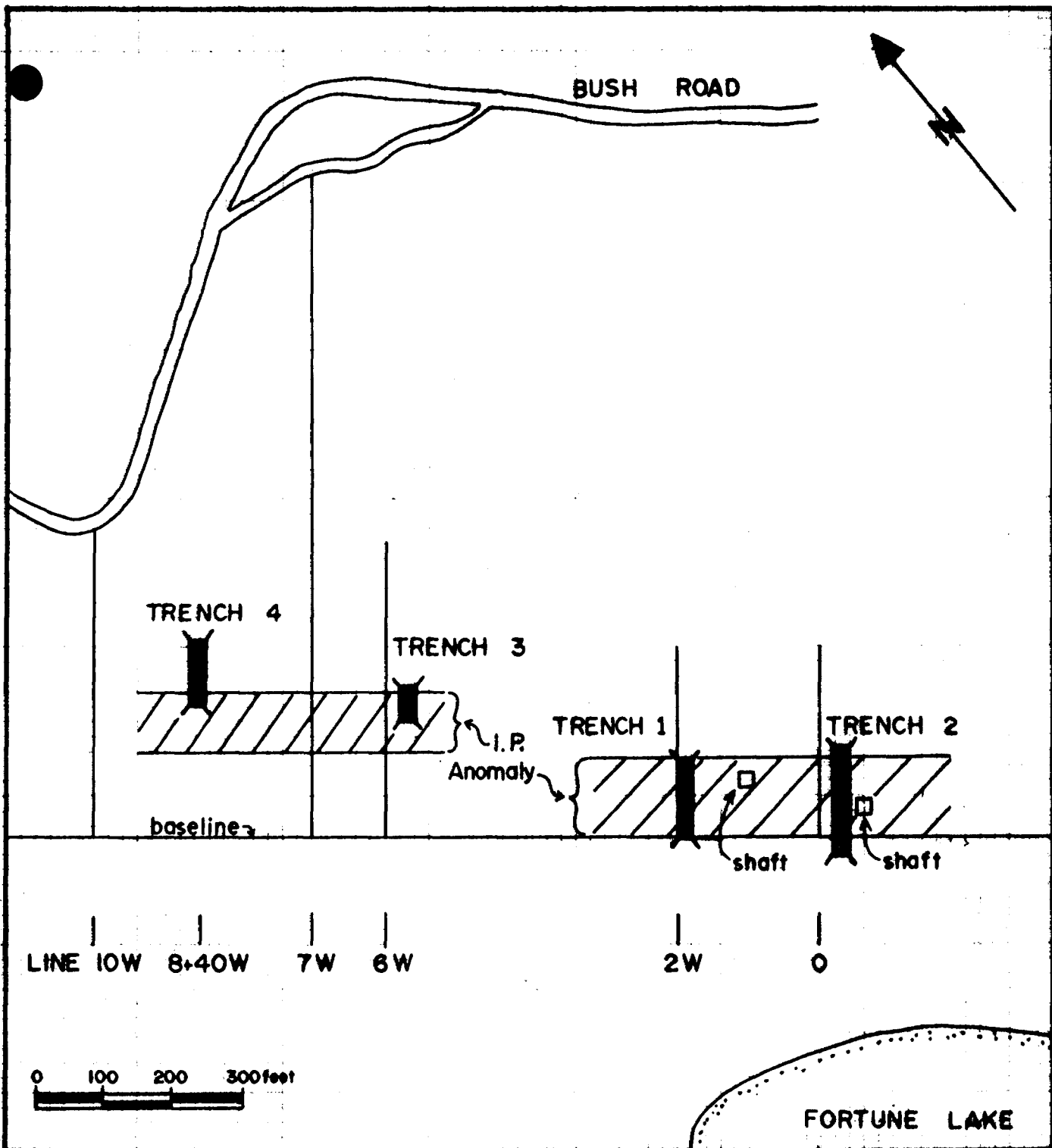


FIGURE 4

TRENCH LOCATION MAP

GOLDEN HEMLOCK RESOURCES LTD.

SUDBURY

ONTARIO

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A 30 cm wide vein between 24 metre and 25 metre returned no gold even though visible gold was noted in the vein. Overall in trench 1 cumulative width of all the quartz veins is approximately 0.75 metres, but only two of the veins, as noted above, contain gold mineralization.

The veins are hosted by greywackes. Alteration consisting of silica and pyrite (gossan) may pervade the greywackes up to a metre or so from the veins. None of the chip samples of the greywacke were anomalous in gold.

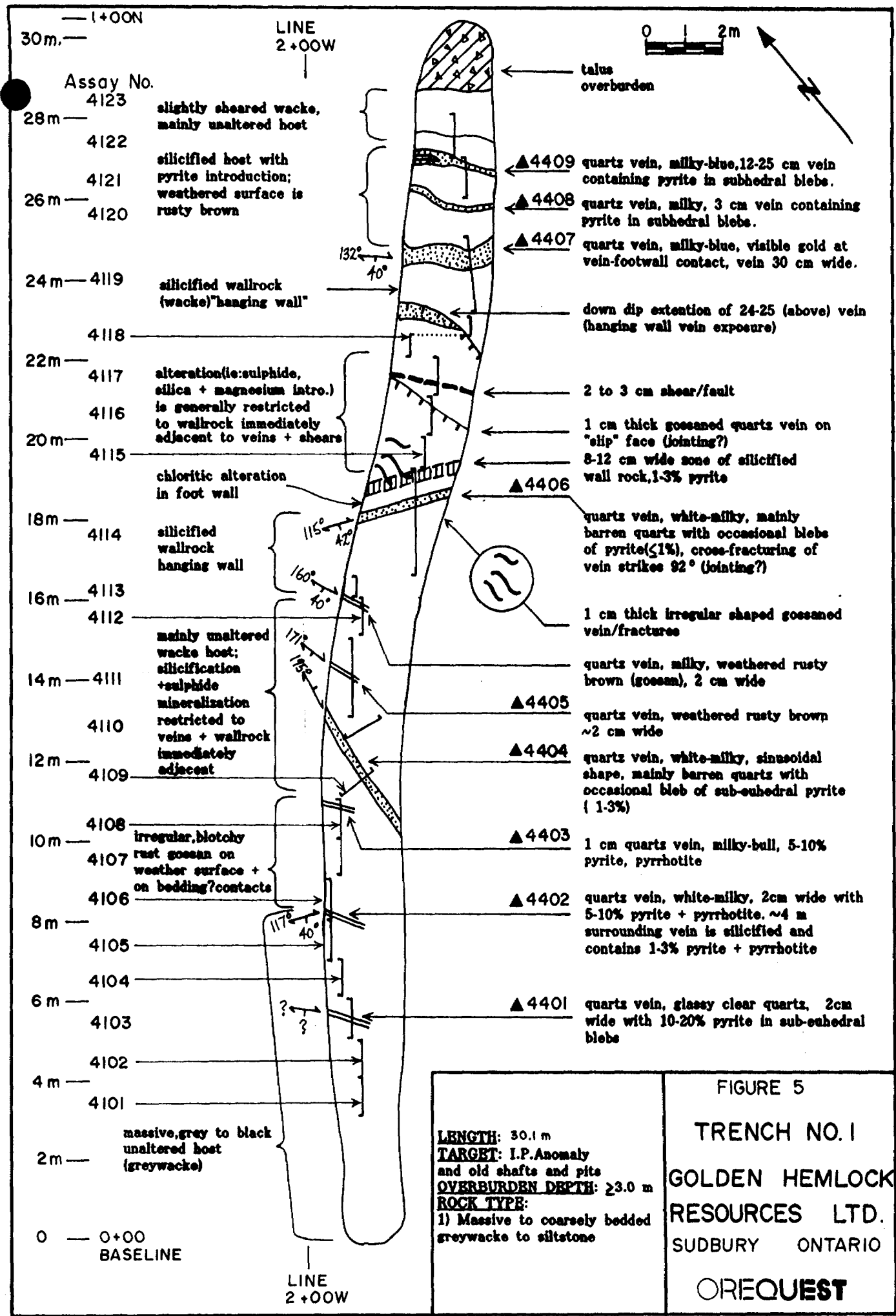
#### Trench 2 (Figure 6)

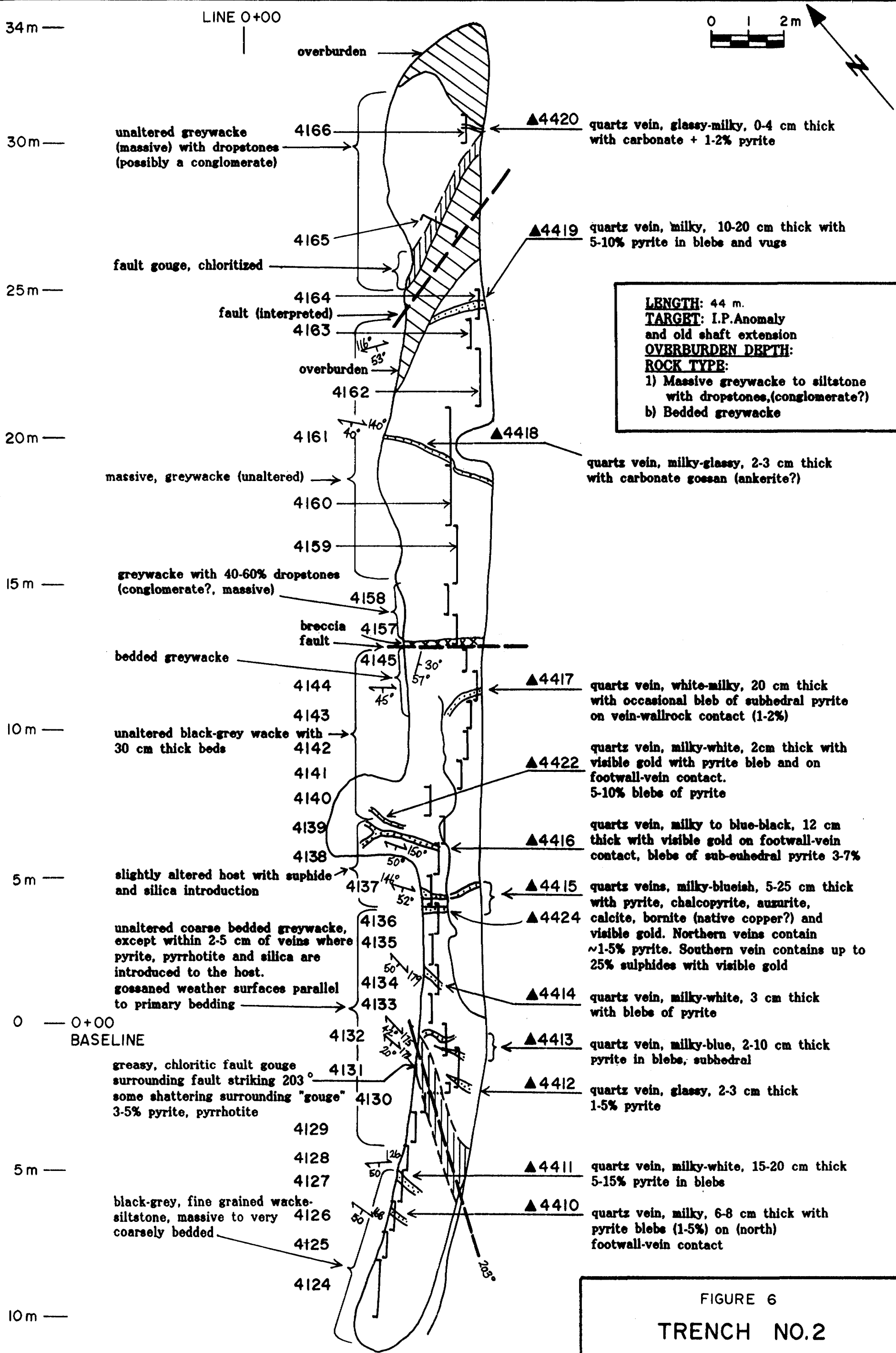
Trench 2 extends from 0+33S to 1+12N on line 0+00. The targets of trench are quartz veins and an IP anomaly.

Six grab samples of quartz veins between about 1 metre S and 7 metres N returned gold assays varying between 0.108 oz/ton to 4.953 oz/ton. A 1 metre chip sample from 3 metres N to 4 metres N which encompassed one of the gold bearing quartz veins returned 0.816 oz/ton.

Only one other sample from trench 2 returned gold values. This sample (4419) was obtained from a 10-12 cm wide vein at about 24 metres N and returned 0.293 oz/ton.

It is evident that the 7 metre section containing the six gold bearing quartz veins mentioned above is the main vein system. The cumulative thickness of the veins in this interval is 53 cm. The average grade of the veins is over





this interval is 1.726 oz/ton. The average grade of the 7 metre interval in which the veins occur is 0.131 oz/ton.

Host of the veins in trench 2 is massive to thick bedded greywacke. The greywackes are fresh except in the vicinity of some of the veins where minor sulphide and silica introduction occurs.

#### Trench 3 (Figure 7)

Trench 3 tested an IP anomaly on line 6+00W between 1+51N and 1+98N. No quartz veins were found and none of the chip samples contained appreciable amounts of gold.

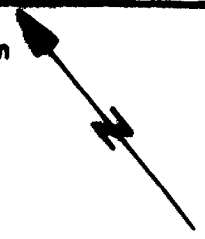
Lithologies in trench 3 consist of very fine grained, massive siltstone to greywacke with sections of 1%-3% pyrite and pink to reddish gossan on fracture (or joint) surfaces.

#### Trench 4 (Figure 8)

Trench 4 extends from 1+70N to 2+65N on line 8+40W. It tested an IP anomaly on the south and possible quartz veins on the north as indicated by old pits and trenches.

The only veining exposed consists of a 10 cm - 12 cm wide zone of sheet veining between 16 metres N and 17 metres N in the trench. A grab sample of the veins and a 1 metre chip sample across the veins were devoid of Au mineralization.

LINE  
6+00W



16 m. — 2+00N

— 1+98 N

Assay No.

14 m — 4156

4155

12 m — 4154

4153

10 m — 4152

4151

8 m — 4150

4149

6 m — 4148

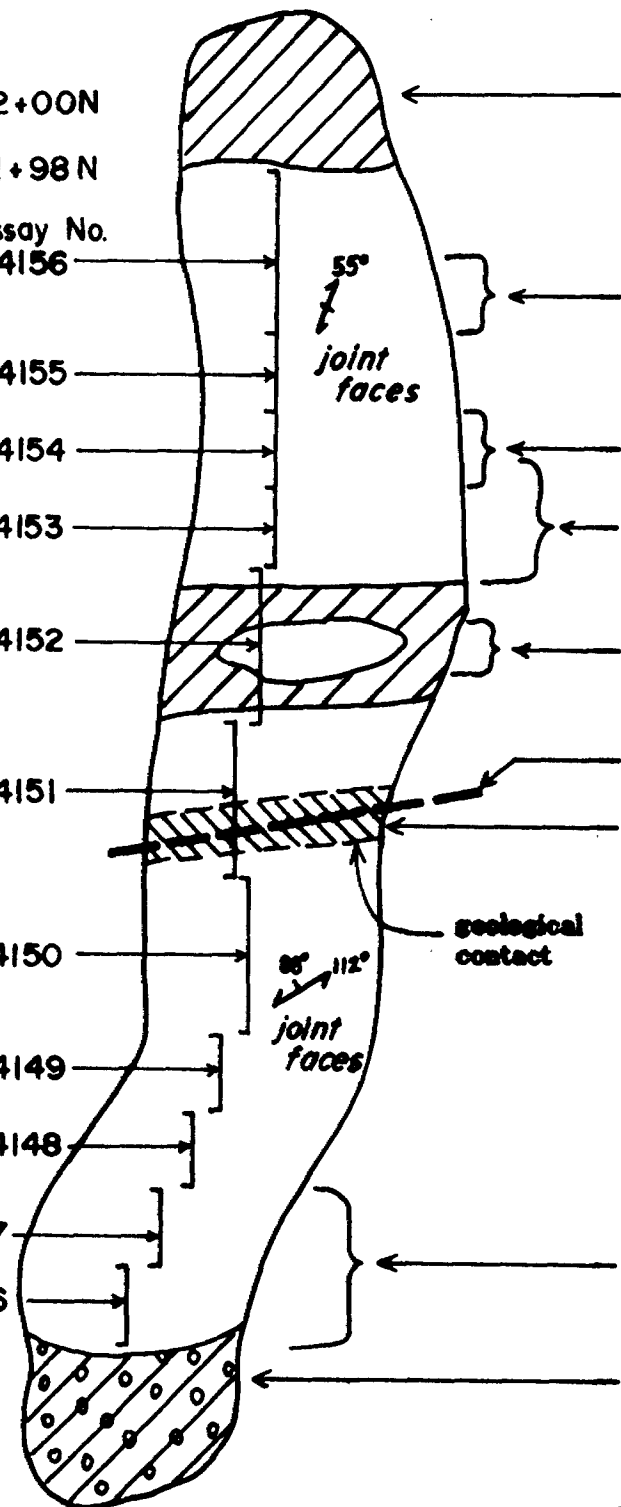
4147

4 m — 4146

2 m — 4146

0 — 1+50N

LINE  
6+00W



overburden

0.5 cm, 1 to 3%  
cubedral pyrite  
+microfracturing

0.5 cm, 1 to 2%  
cubedral pyrite

pink-reddish  
surface gossens  
+microfracturing

1 to 3% cubedral  
pyrite

fault / shear

clay (chlorite?)  
alteration  
(0.5 meter wide)

geological  
contact

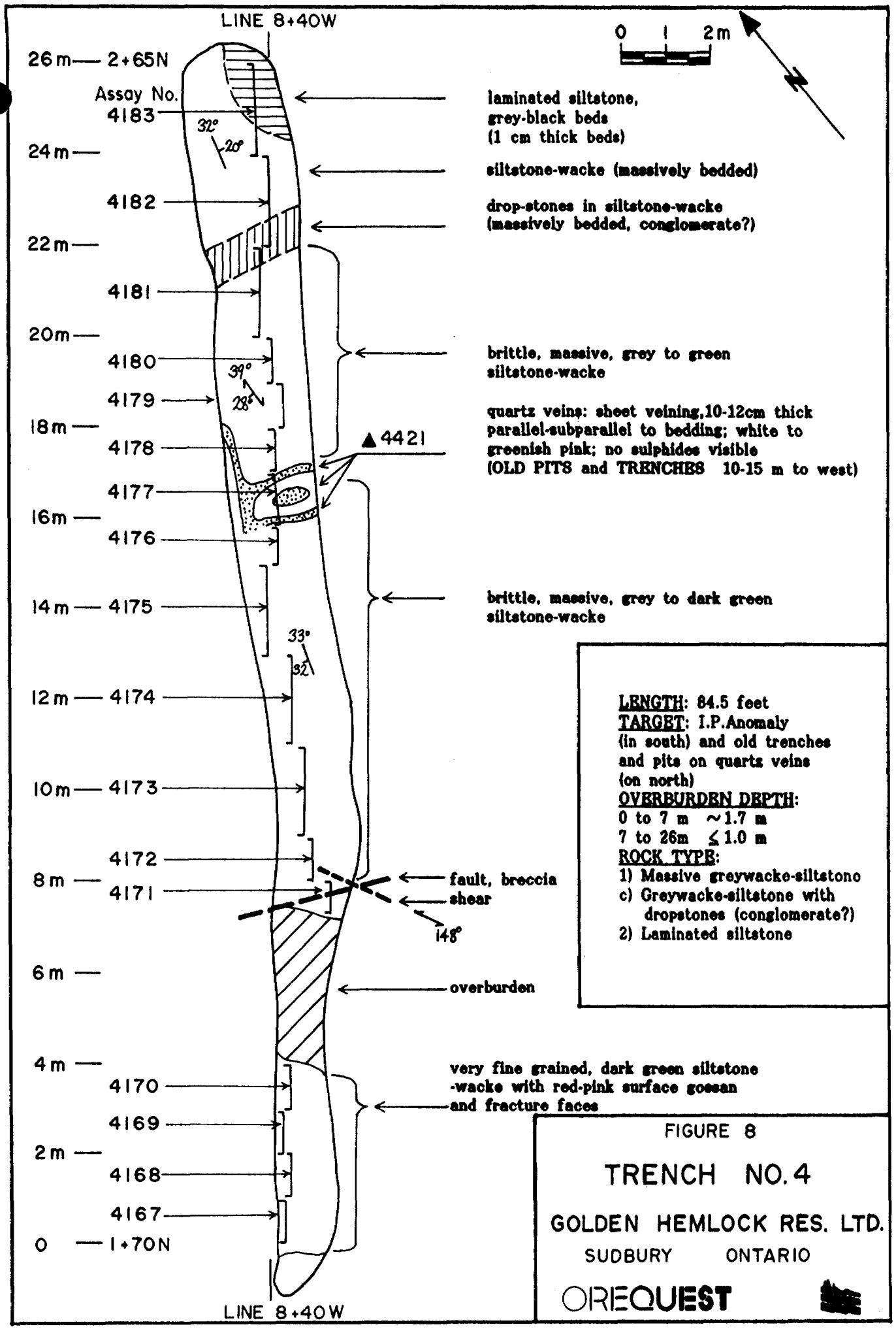
very fine grained greenish-black  
siltstone chert with pink to  
reddish surface gossens

overburden + water

very fine  
grained  
greenish  
black  
siltstone  
chert

LENGTH: 47 feet  
TARGET: I.P. Anomaly  
OVERBURDEN DEPTH:  $\leq 1.0$  m  
ROCK TYPE:  
1) Massive; siltstone to wacke  
(very fine grained)

FIGURE 7  
TRENCH NO.3  
GOLDEN HEMLOCK RES.LTD  
SUDBURY ONTARIO  
OREQUEST



None of the other 1 metre chip samples from the trench returned any gold.

Lithologies exposed by trench 4 consist of massive and laminated greywacke/siltstone. A 1 metre section at 22 metres N contained enough drop stones to give the appearance of a conglomerate.

#### CONCLUSIONS

Backhoe trenching exposed gold bearing quartz veins in 2 of 4 trenches.

The veins vary in width from a few cm to 30 cm. Grab samples from the veins returned up to 4.953 oz/t Au.

The highest density of veins occurs in trench 2 where 6 veins in a width of 7 metres are exposed. The weighted average grade of the veins is 1.726 oz/ton Au and the 7 metre interval in which the veins occur grades 0.131 oz/ton Au.

No gold was found in the greywacke which hosts the veins.

The vein density appears to diminish toward the west from the vicinity of the 2 shafts on the property.

The main objective of the trenching program to determine the grade and extent of the vein system in two dimensions was not achieved because of a layer of hard pan, which was difficult to excavate, slowed the progress of the backhoe and prevented the excavation of additional trenches.

## RECOMMENDATIONS

The unexpected layer of hard pan encountered in the trenching program limited the success. Nonetheless, the results indicated a auriferous quartz stockwork system over a 7 metre width that requires further testing. Due to the problems in the trenching, the next stage of work is recommended to be a preliminary diamond drilling program to test the lateral extension of the vein system. This program is expected to cost \$76,000. Based on successful completion of Phase III, a further \$163,000, Phase IV program would be recommended that would include further drilling.



BUDGET ESTIMATE

PHASE III - Preliminary Diamond Drilling

Mobilization and Demobilization	\$ 5,000
Diamond Drilling - 500 metres @ \$90/metre	45,000
Geologist - 15 days @ \$250/day	3,750
Technician - 15 days @ \$150/day	2,250
Vehicle - 15 days @ \$75/day	1,125
Camp Costs - 45 man days @ \$60/man day	2,700
Equipment	1,000
Assays - 100 samples @ \$20/sample	2,000
Supervision and Report	6,300
Contingencies @ 10%	<u>6,875</u>
TOTAL OF PHASE III	<u>\$ 76,000</u>

PHASE IV - Diamond Drilling

Mobilization and Demobilization	\$ 5,000
Diamond Drilling 1,200 metres @ \$80/metre	96,000
Geologist - 36 days @ \$250/day	9,000
Technician - 36 days @ \$150/day	5,400
Vehicle - 36 days @ \$75/day	2,700
Camp Costs - 110 man days @ \$60/man day	6,600
Equipment	5,000
Assays - 250 samples @ \$20/sample	5,000
Supervision and Report	13,500
Contingencies @ 10%	<u>14,800</u>
TOTAL OF PHASE IV	<u>\$ 163,000</u>

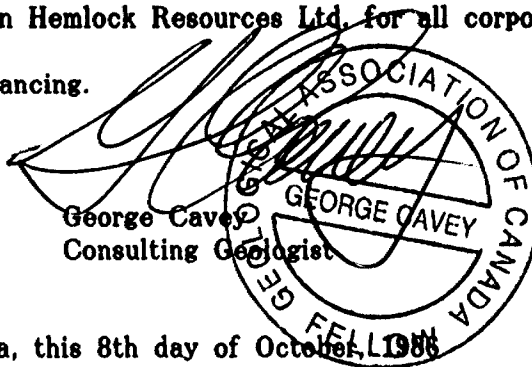
TOTAL COST OF EXPLORATION PROGRAM \$ 239,000

CERTIFICATE of QUALIFICATIONS

I, George Cavey, of 6891 Wiltshire Street, Vancouver, British Columbia hereby certify:

1. I am a graduate of the University of British Columbia (1976) and hold a BSc. degree in geology.
2. I am presently employed as a consulting geologist with OreQuest Consultants Ltd. of 404-595 Howe Street, Vancouver, British Columbia.
3. I have been employed in my profession by various mining companies for the past ten years.
4. I am a Fellow of the Geological Association of Canada.
5. I am a member of the Canadian Institute of Mining and Metallurgy.
6. The information contained in this report is based work done on the property by OreQuest Consultants Ltd. in 1986.
7. Neither OreQuest Consultants Ltd. nor myself have direct or indirect interest in the property nor in the securities of Golden Hemlock Resources Ltd..
8. This report may be used by Golden Hemlock Resources Ltd. for all corporate purposes including any public financing.

George Cavey  
Consulting Geologist



DATED at Vancouver, British Columbia, this 8th day of October, 1986

CERTIFICATE of QUALIFICATIONS

I, J. L. LeBel, of 436 W. 6th Street, North Vancouver, British Columbia  
hereby certify:

1. I am a graduate of the Queens University (1971) and the University of Manitoba (1973) and hold a BSc. degree in geological engineering and a MSc. degree in geophysics.
2. I am a Professional Engineer registered with the Association of Professional Engineers of British Columbia, Vancouver, British Columbia.
3. I have been employed in my profession as a geophysicist with various companies since 1972.
4. The information contained in this report is based on a property examination conducted by OreQuest Consultants Ltd. in 1986.
5. I own no direct, indirect or expect to receive or contingent interests in the subject property or shares or securities of Golden Hemlock Resources Ltd..
6. This report may be used by Golden Hemlock Resources Ltd. for all corporate purposes including any public financing.

J.L. LeBel, P.Eng.

DATED at Vancouver, British Columbia, this 5th day of December, 1986..

## REFERENCES

**CAMPBELL, R.**

1985: Personal Communication; Ministry of Northern Affairs and Mines, Sudbury, Ontario.

**CAVEY, G. and LEBEL, J.L.**

1985: Report on Geological and Geophysical Surveys on the Fortune Lake Property, Davis Township, Sudbury Mining Division, Ontario for Golden Hemlock Resources Ltd., OreQuest Consultants Ltd.

**DARKE, K.M.**

1985: Preliminary Exploration Report on the Fortune Lake Gold Property, Davis Township, Ontario, Sudbury Mining Division, District of Sudbury for Pelangio Larder Mines Ltd., Kenneth M. Darke Consultants Ltd.

**DRESSLER, B.O.**

1982: Geology of the Wanapeti Lake Area, District of Thunder Bay, OGS Report No. 213, Maps No. 2450 and 2451.

**HUTTERI, H.P.**

1985: Electromagnetic VLF Survey Report on the Fortune Lake Gold Property, Sudbury Mining Division, District of Sudbury for Pelanjio-Larder Mines Ltd.

**NORTHERN MINER**

1985: July 11, 1985, Maclan plans \$125,000 drill program, Volume 71, No. 18, p.19.

**THOMSON, J.E. and CARD, K.D.**

1963: Kelly and Davis Townships, ODM, Geological Report 15, Map No. 2037.

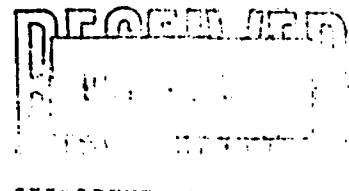
**APPENDIX I**  
**ANALYTICAL RESULTS**



# VANGEOCHEM LAB LIMITED

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VANCOUVER, B.C. V5L 1L6  
(604) 251-5658



## ASSAY ANALYTICAL REPORT

CLIENT: OREQUEST CONSULTANTS LIMITED  
ADDRESS: 404 - 595 Howe Street  
: Vancouver, B.C.  
: V6C 2T5

DATE: Oct 1 1986

REPORT#: 860480AB  
JOB#: 860480

PROJECT#: GHSUD  
SAMPLES ARRIVED: Sept 30 1986  
REPORT COMPLETED: Oct 1 1986  
ANALYSED FOR: Au

INVOICE#: 860480NB  
TOTAL SAMPLES: 10  
REJECTS/PULPS: 90 DAYS/1 YR  
SAMPLE TYPE: 10 PULPS

SAMPLES FROM: FILE - 860480  
COPY SENT TO: OREQUEST CONSULTANTS LIMITED

PREPARED FOR: MR. GEORGE CAVEY

ANALYSED BY: David Chiu

SIGNED: \_\_\_\_\_

Registered Provincial Assayer

GENERAL REMARK: None



# VANGEOCHEM LAB LIMITED

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REPORT NUMBER: 860480RB

JOB NUMBER: 860480

OREQUEST CONSULTANTS LIMITED

PAGE 1 OF 1

SAMPLE #	Au oz/st
4122	.467
4136	.876
4409	1.028
4413	1.722
4414	.108
4415	1.212
4416	.394
4419	.293
4422	4.953
4424	3.202

### DETECTION LIMIT

1 Troy oz/short ton = 34.28 ppm

.005

1 ppm = 0.0001%

ppm = parts per million

(< = less than

signed: \_\_\_\_\_

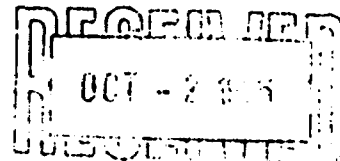


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VANCOUVER, B.C. V5L 1L6  
(604) 251-6656

*over  
Humboldt  
Sudbury*



## ----- GEOCHEMICAL ANALYTICAL REPORT -----

CLIENT: OREQUEST CONSULTANTS LIMITED  
ADDRESS: 404 - 595 Howe Street  
          : Vancouver, B.C.  
          : V6C 2T5

DATE: Sept 29 1986

REPORT#: 860480GA  
JOB#: 860480

PROJECT#: GHSUD  
SAMPLES ARRIVED: Sept 23 1986  
REPORT COMPLETED: Sept 29 1986  
ANALYSED FOR: Pt Au (FA/AAS) ICP

INVOICE#: 860480NA  
TOTAL SAMPLES: 106  
SAMPLE TYPE: 106 ROCKS  
REJECTS: SAVED

SAMPLES FROM: B. BARNES  
COPY SENT TO: B. BARNES

PREPARED FOR: MR. GEORGE CAVEY

ANALYSED BY: VGC Staff

SIGNED: \_\_\_\_\_

GENERAL REMARK: None





# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 8604886A

JOB NUMBER: 860480

OREQUEST CONSULTANTS LIMITED

PAGE 1 OF 3

SAMPLE #	Pt	Au
	DOM	pob
4101	--	10
4102	--	10
4103	--	545
4104	--	15
4105	--	nd
4106	--	5
4107	--	80
4108	--	35
4109	--	550
4110	--	nd
4111	--	nd
4112	--	40
4113	--	50
4114	--	15
4115	--	20
4116	--	55
4117	--	nd
4118	--	40
4119	--	5
4120	--	45
4121	--	790
4122	--	15360
4123	--	650
4124	--	10
4125	--	nd
4126	--	10
4127	--	nd
4128	--	nd
4129	--	100
4130	--	340
4131	--	5
4132	--	100
4133	--	5
4134	--	540
4135	--	10
4136	nd	30050
4137	nd	685
4138	nd	100
4139	--	70

DETECTION LIMIT

0.05 5

nd = none detected

-- = not analysed

is = insufficient sample



# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 888-6211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-6856

REPORT NUMBER: 8604806A

JOB NUMBER: 860480

OREQUEST CONSULTANTS LIMITED

PAGE 2 OF 3

SAMPLE #	Pt	Au
4140	---	50
4141	---	5
4142	---	15
4143	---	240
4144	---	410
4145	---	220
4146	---	nd
4147	---	nd
4148	---	80
4149	---	nd
4150	---	nd
4151	---	nd
4152	---	nd
4153	---	nd
4154	---	nd
4155	---	nd
4156	---	nd
4157	---	100
4158	---	nd
4159	---	nd
4160	---	nd
4161	---	nd
4162	---	nd
4163	---	nd
4164	---	25
4165	---	30
4166	---	nd
4167	---	nd
4168	---	nd
4169	---	20
4170	---	100
4171	---	nd
4172	---	50
4173	---	nd
4174	---	nd
4175	---	nd
4176	---	nd
4177	---	nd
4178	---	nd

DETECTION LIMIT

0.05 5

nd = none detected

--- = not analysed

is = insufficient sample



# VANGEOCHEM LAB LIMITED

MAIN OFFICE  
1521 PEMBERTON AVE.  
NORTH VANCOUVER, B.C. V7P 2S3  
(604) 986-5211 TELEX: 04-352578

BRANCH OFFICE  
1630 PANDORA ST.  
VANCOUVER, B.C. V5L 1L6  
(604) 251-5656

REPORT NUMBER: 860480GA

JOB NUMBER: 860480

ORQUEST CONSULTANTS LIMITED

PAGE 3 OF 3

SAMPLE #	Pt	Au
	ppm	ppb
4179	--	nd
4180	--	20
4181	--	10
4182	--	nd
4183	--	nd
4401	--	370
4402	--	65
4403	--	5
4404	--	10
4405	--	400
4406	--	10
4407	--	nd
4408	--	15
4409	--	35450
4410	--	10
4411	--	nd
4412	--	00
4413	--	60650
4414	--	4000
4415	--	42410
4416	--	13090
4417	--	40
4418	--	35
4419	--	10050
4420	--	30
4421	--	nd
4422	--	160150
4424	--	100730

DETECTION LIMIT

0.05 5

nd = none detected

-- = not analysed

is = insufficient sample

VANGEOCHEM LAB LIMITED

MAIN OFFICE: 1521 PEMBERTON AVE. N.VANCOUVER B.C. V7P 2G3 PH:(604)986-5211 TELEX:04-352578
BRANCH OFFICE: 1630 PANDORA ST. VANCOUVER B.C. V5L 1L6 PH:(604)251-5656

ICAP GEOCHEMICAL ANALYSIS

A .5 GRAM SAMPLE IS DIGESTED WITH 5 ML OF 3:1:2 HCL TO HNO3 TO H2O AT 95 DEG. C FOR 90 MINUTES AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR SN,MN,FE,CA,P,CR,MO,BA,PO,AL,NA,K,U,PT AND BR. AU AND PD DETECTION IS 3 PPM.
IS= INSUFFICIENT SAMPLE, ND= NOT DETECTED, --= NOT ANALYZED

COMPANY: OREQUEST CONSULTANTS
ATTENTION:
PROJECT: GHSUD

REPORT#: B604BOPA
JOB#: B604BO
INVOICE#: B604BONA

DATE RECEIVED: 86/09/23
DATE COMPLETED: 86/09/29
COPY SENT TO:

ANALYST W. Peers

PAGE 1 OF 3

Table with columns: SAMPLE NAME, AG, AL, AS, AU, BA, BI, CA, CD, CO, CR, CU, FE, K, MG, MN, MO, NA, NI, P, PB, PD, PT, SB, SA, SR, U, V, Zn. It contains a large list of sample numbers (e.g., 4101, 4102, 4103, etc.) and their corresponding concentrations in PPM for various elements.

DETECTORS LIST

SAMPLE NAME	AG PPH	AL I	AS PPH	AU PPH	BA PPH	BI PPH	CA I	CO PPH	CR PPH	CU PPH	FE I	K I	MG I	NH PPH	NO PPH	NA I	NI PPH	P I	PB PPH	PD PPH	PT PPH	SB PPH	SN PPH	SR PPH	U PPH	M PPH	ZN PPH	
4140	.1	2.29	20	ND	75	ND	.45	.1	19	70	14	4.17	.17	1.11	217	1	.01	59	.08	4	ND	ND	ND	NC	16	ND	ND	43
4141	.1	2.33	20	ND	74	ND	.40	.1	21	63	14	4.45	.19	1.06	257	1	.01	60	.08	6	ND	ND	ND	NC	15	ND	ND	62
4142	.1	2.00	27	ND	72	ND	.36	.1	22	73	81	3.95	.17	.91	315	2	.01	51	.07	8	ND	ND	ND	NC	16	ND	ND	49
4143	.1	2.12	3	ND	64	ND	.24	.1	18	56	62	4.34	.16	1.02	211	1	.01	35	.07	15	ND	ND	ND	NC	12	ND	NC	44
4144	.1	1.61	5	ND	60	ND	.10	.1	17	97	77	3.52	.13	.75	150	2	.01	41	.05	27	ND	ND	4	ND	7	ND	ND	55
4145	.1	2.16	4	ND	75	ND	.13	.3	14	48	57	4.19	.15	1.06	326	2	.01	42	.06	18	ND	ND	ND	NC	7	ND	ND	136
4146	.3	2.72	ND	ND	27	ND	.44	.1	20	106	21	4.06	.11	1.98	640	ND	.01	72	.05	5	ND	ND	ND	NC	55	ND	ND	71
4147	.5	2.40	ND	ND	28	5	.48	.1	20	111	31	3.95	.10	1.70	580	1	.01	63	.04	7	ND	ND	ND	NC	58	ND	NC	63
4148	.5	2.66	ND	ND	23	4	.60	.1	25	130	49	4.00	.13	1.92	675	1	.01	69	.06	5	ND	ND	ND	NC	56	ND	ND	78
4149	.5	2.63	ND	ND	27	5	.60	.2	26	93	42	3.94	.13	1.89	661	1	.01	69	.05	5	ND	ND	ND	NC	49	ND	ND	70
4150	.5	2.63	ND	ND	22	3	.72	.1	20	106	62	3.87	.13	1.92	674	1	.01	69	.05	8	ND	ND	ND	NC	54	ND	ND	69
4151	.5	2.62	ND	ND	22	6	.55	.1	20	102	51	3.90	.12	1.97	648	1	.01	68	.05	5	ND	ND	ND	NC	47	ND	ND	69
4152	.4	3.35	ND	ND	39	ND	.40	.2	19	97	22	4.84	.15	2.58	800	ND	.01	86	.07	4	ND	ND	ND	NC	23	ND	ND	87
4153	.4	3.59	ND	ND	38	3	.48	.1	21	97	17	5.17	.16	2.56	835	ND	.01	87	.08	3	ND	ND	ND	NC	46	ND	ND	87
4154	.4	3.72	ND	ND	26	ND	.60	.1	29	112	60	5.80	.16	2.54	937	ND	.01	92	.08	4	ND	ND	ND	NC	65	ND	ND	96
4155	.4	3.58	ND	ND	33	ND	.76	.4	27	104	52	5.40	.17	2.33	882	ND	.01	88	.12	8	ND	ND	ND	NC	85	ND	5	89
4156	.4	3.47	ND	ND	30	3	.68	.1	28	104	63	5.41	.17	2.33	886	ND	.01	88	.07	5	ND	ND	ND	NC	70	ND	3	90
4157	.3	1.20	19	ND	52	ND	.39	.2	10	36	24	2.45	.14	.70	350	2	.01	32	.03	16	ND	ND	5	ND	15	ND	ND	34
4158	.3	1.16	20	ND	34	ND	.56	.4	13	54	36	2.47	.13	.85	350	2	.01	34	.03	13	ND	ND	5	ND	27	ND	ND	28
4159	.2	1.56	19	ND	46	ND	1.11	.3	18	64	51	3.54	.17	1.28	587	2	.01	61	.05	12	ND	ND	ND	NC	44	ND	ND	40
4160	.3	1.56	25	ND	59	ND	1.22	.6	18	39	38	3.45	.19	1.28	592	2	.01	66	.05	20	ND	ND	3	ND	49	3	ND	73
4161	.3	1.76	23	ND	51	ND	.91	.3	16	75	40	3.52	.17	1.29	516	2	.01	59	.06	14	ND	ND	ND	NC	37	ND	ND	77
4162	.3	1.63	25	ND	45	ND	1.22	.6	19	46	48	3.59	.17	1.36	602	2	.01	58	.05	26	ND	ND	3	ND	49	ND	NC	121
4163	.2	1.68	20	ND	47	ND	1.23	.6	17	49	27	3.62	.17	1.38	574	2	.01	58	.05	22	ND	ND	ND	NC	51	ND	ND	97
4164	.1	1.67	11	ND	52	ND	1.25	.3	15	38	36	3.64	.17	1.33	575	2	.01	52	.05	13	ND	ND	ND	NC	56	ND	ND	52
4165	.2	1.95	19	ND	50	ND	.89	.2	20	65	21	4.32	.19	1.12	645	2	.01	59	.06	13	ND	ND	ND	NC	32	ND	ND	39
4166	.1	2.34	8	ND	58	ND	.70	.3	17	63	17	4.50	.19	1.37	473	1	.01	64	.07	8	ND	ND	ND	NC	31	ND	ND	50
4167	.3	3.59	ND	ND	34	ND	.34	.2	21	122	19	5.35	.15	2.66	775	ND	.01	100	.08	9	ND	ND	ND	NC	21	ND	NC	59
4168	.1	3.27	ND	ND	38	ND	.17	.4	19	99	15	4.99	.15	2.52	718	ND	.01	95	.07	8	ND	ND	ND	NC	8	ND	NC	60
4169	.1	2.84	ND	ND	25	3	.26	.5	19	118	23	4.30	.12	2.15	613	ND	.01	94	.06	7	ND	ND	ND	NC	18	ND	ND	46
4170	.1	4.05	ND	ND	26	ND	.17	.1	24	134	24	6.01	.13	3.15	862	ND	.01	114	.06	3	ND	ND	ND	NC	9	ND	4	70
4171	.2	3.50	ND	ND	47	3	.48	.1	23	75	21	4.76	.16	2.37	675	ND	.01	78	.06	4	ND	ND	ND	NC	63	ND	ND	64
4172	.1	3.45	ND	ND	42	ND	.44	.2	22	84	31	4.80	.14	2.37	714	ND	.01	77	.05	5	ND	ND	ND	NC	57	ND	ND	67
4173	.3	3.47	ND	ND	45	3	.52	.1	25	87	55	4.91	.17	2.37	724	ND	.01	80	.06	7	ND	ND	ND	NC	63	ND	ND	67
4174	.3	3.16	ND	ND	35	ND	.34	.1	26	75	52	4.92	.15	2.27	771	ND	.01	77	.06	8	ND	ND	ND	NC	15	ND	ND	74
4175	.3	3.30	ND	ND	41	ND	.38	.1	23	81	38	4.92	.15	2.33	732	ND	.01	79	.06	7	ND	ND	ND	NC	26	ND	ND	76
4176	.5	3.02	ND	ND	45	ND	.58	.1	24	75	45	4.47	.17	2.04	648	ND	.01	70	.06	9	ND	ND	ND	NC	46	ND	ND	71
4177	.1	2.16	ND	ND	29	ND	.46	.4	15	41	15	3.67	.13	1.47	567	1	.01	48	.04	9	ND	ND	ND	NC	14	ND	ND	57
4178	.5	2.87	ND	ND	33	ND	.34	.1	22	71	53	4.73	.14	1.95	660	ND	.01	72	.06	11	ND	ND	ND	NC	17	ND	ND	64
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1

SAMPLE NAME	AG PPH	AL I	AS PPH	AU PPH	BA PPH	BI PPH	CA I	CO PPH	CO PPH	CR PPH	CU PPH	FE I	K I	MG I	MN PPH	MO PPH	NA I	NI PPH	P I	PB PPH	PD PPH	PT PPH	SB PPH	SN PPH	SR PPH	U PPH	M PPH	ZN PPH
4179	.2	2.42	ND	ND	37	ND	.44	.1	20	74	47	3.95	.11	1.61	568	ND	.01	56	.06	7	ND	ND	ND	ND	26	ND	ND	58
4180	.2	2.75	ND	ND	50	ND	.45	.1	22	71	55	4.19	.15	1.82	586	ND	.01	65	.06	6	ND	ND	ND	ND	39	ND	ND	63
4181	.2	2.87	ND	ND	29	6	.83	.1	25	117	59	4.24	.15	2.25	681	ND	.01	79	.05	4	ND	ND	ND	ND	46	ND	4	75
4182	.4	2.52	ND	ND	46	5	.48	.1	20	69	48	3.74	.15	1.72	538	ND	.01	61	.05	6	ND	ND	ND	ND	46	ND	3	71
4183	.5	3.11	ND	ND	44	5	.53	.1	25	78	75	4.67	.17	2.09	698	ND	.01	76	.06	11	ND	ND	ND	ND	44	ND	5	83
4401	1.3	1.77	ND	22	78	ND	.40	.1	19	38	87	3.54	.17	.81	384	1	.01	47	.08	13	ND	ND	ND	ND	22	3	ND	27
4402	.2	.71	6	ND	64	ND	1.72	.1	21	77	140	2.87	.17	.88	796	1	.01	64	.05	49	ND	ND	ND	ND	90	10	ND	13
4403	.1	2.08	ND	ND	135	ND	.52	.1	14	57	68	3.41	.20	.86	363	ND	.01	66	.06	16	ND	ND	ND	ND	25	5	ND	27
4404	.1	.10	18	ND	16	ND	.03	.2	5	33	17	.91	.05	.06	179	2	.01	11	.01	14	ND	ND	3	1	10	ND	ND	9
4405	.1	.51	4	ND	76	ND	.19	.1	7	64	63	3.90	.16	.13	1723	2	.01	32	.04	11	ND	ND	ND	ND	12	6	ND	14
4406	.1	.01	15	ND	8	ND	.01	.1	4	134	13	.63	.03	.01	114	2	.01	11	.01	15	ND	ND	3	1	10	ND	ND	8
4407	.1	.01	15	ND	6	ND	.01	.3	ND	53	11	.58	.02	.01	70	2	.01	8	.01	14	ND	ND	3	ND	11	ND	ND	8
4408	.1	.24	15	ND	9	ND	.05	.2	2	91	103	.98	.05	.13	83	3	.01	8	.01	22	ND	ND	4	ND	10	ND	ND	53
4409	6.5	.81	10	85	49	ND	.17	.5	33	91	497	3.27	.12	.34	157	2	.01	62	.05	74	ND	ND	4	ND	9	5	ND	297
4410	.2	.16	16	ND	11	ND	.03	.1	11	245	34	1.04	.05	.08	102	2	.01	23	.01	14	ND	ND	4	ND	5	ND	ND	13
4411	.1	.32	10	ND	25	ND	.03	.1	31	42	256	5.05	.11	.06	64	2	.01	199	.01	28	ND	ND	4	ND	7	3	ND	10
4412	.1	.63	18	ND	31	ND	.14	.2	9	67	26	1.76	.08	.35	196	3	.01	23	.01	13	ND	ND	3	ND	6	4	ND	30
4413	10.1	.25	17	117	22	ND	.41	.1	18	124	81	1.64	.08	.29	189	2	.01	44	.05	17	ND	ND	4	ND	11	ND	ND	12
4414	.2	.10	7	ND	14	ND	.03	.1	3	222	108	5.10	.08	.04	65	2	.01	16	.02	17	ND	ND	4	ND	8	ND	ND	2
4415	1.2	.40	4	14	21	ND	.40	.1	134	34	1060	5.62	.13	.26	186	1	.01	130	.02	19	ND	ND	3	ND	13	ND	ND	4
4416	.4	.01	15	5	7	ND	.04	.1	42	146	122	1.67	.03	.02	76	3	.01	37	.01	13	ND	ND	4	ND	4	ND	ND	4
4417	.1	.01	12	ND	6	ND	.39	.1	1	102	12	.93	.04	.06	302	4	.01	7	.01	16	ND	ND	ND	ND	49	ND	ND	6
4418	.5	.71	33	ND	46	ND	2.33	.8	16	139	120	2.92	.15	.79	1013	3	.01	45	.03	154	ND	ND	ND	ND	65	3	ND	139
4419	.1	.10	15	ND	13	ND	.05	.1	29	38	249	2.13	.05	.05	80	2	.01	61	.01	27	ND	ND	4	ND	10	ND	ND	21
4420	.1	.56	24	ND	35	ND	1.53	.3	12	107	68	1.70	.13	1.06	485	2	.01	50	.04	10	ND	ND	ND	ND	26	4	ND	22
4421	.1	1.22	5	ND	18	ND	.25	.1	14	77	66	2.54	.07	.86	454	2	.01	41	.07	8	ND	ND	3	ND	12	ND	ND	36
4422	19.1	1.13	6	244	91	ND	.56	.1	24	69	108	2.95	.15	.58	339	2	.01	72	.08	9	ND	ND	3	ND	21	3	ND	12
4424	5.1	1.38	ND	59	17	ND	.86	.1	107	38	666	10.03	.24	.81	347	ND	.01	241	.05	24	ND	ND	ND	ND	21	ND	ND	13
DETECTION LIMIT	.1	.01	3	3	1	3	.01	.1	1	1	1	.01	.01	.01	1	1	.01	1	.01	2	3	5	2	2	1	5	3	1