

85-862 -
14579

GEOPHYSICAL AND GEOCHEMICAL REPORT

On The

GOLD SUPPLEMENTAL CLAIM GROUP

10/86

Omineca Mining Division

93N/7W

55° 17' 39" N Latitude

124° 46' 56" E Longitude

Owners: J. Duane Poliquin, Surrey, B.C.
Eric A. Shaede, Sicamous, B.C.

Operator: HAWK MOUNTAIN RESOURCES
Surrey, B. C.

FILMED

Report prepared by

D. Dylan Watt, B.Sc.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

Submitted November 30, 1985

14,579

10/86

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INTRODUCTION

In July of 1985, a program of geophysical and geochemical surveys was carried out on the GOLD claim supplement group by Hawk Mountain Resources for the owners, J. Duane Poliquin of Surrey, B.C., and Eric A. Shaede of Sicamous, B.C. The purpose of the surveys was to test the area for extensions of a mineralized zone exposed by old workings which contain significant precious metal values, and to locate possible new zones that were undetected by the original development. A total of 14.5 line km of grid lines were surveyed by VLF-EM and magnetometer and 93 soil and stream sediment samples were taken to test the resulting geophysical anomalies.

PROPERTY

The GOLD claim supplemental group is located in the south east quadrant of NTS mineral claim sheet 93N/7W (see figure 1). The claim group is comprised of the following contiguous claims.

GOLD 1-4	5975-8 (11)	4 units
RACHEL 1	7140 (7)	12 units
RACHEL 2	7141 (7)	12 units
NOV	6817 (11)	<u>16</u> units
	Total	<u>44</u> units

The GOLD 1-4 two post claims, owned by Eric A. Shaede of Sicamous, B.C., cover the area of previous development known as the "Klawli" showing. These claims are surrounded by the NOV claims, owned by J. Duane Poliquin of Surrey, B.C. The RACHEL 1 and 2 claims are also owned by Mr. Poliquin.

LOCATION AND ACCESS

The GOLD claims are located at the south end of the Omineca Mountain chain approximately 100 km north of Fort St. James (see figure 1). The property is centered at $55^{\circ} 17'$ N latitude and $124^{\circ} 46'$ W longitude on the south bank of an unnamed tributary creek flowing into the lower Klawli River at a point approximately 4 km below its outlet from Klawli Lake (see figure 2). Access to the property is made primarily by helicopter from Fort St. James, although the town of Manson Creek is within 40 km to the north.

TOPOGRAPHY

The GOLD claims are situated at an elevation of 1000 m on the banks of a small creek. The elevation in the area rises to a 1900 m peak at the headwaters of the creek, beyond the eastern boundary of the claim group. To the west, the topography rises slowly out of the main valley of the Klawli River.

The property is poorly drained with many swamps and bogs scattered over the predominantly glacial-alluvial overburden. The "showing creek" flows in a northwesterly direction from its source for over four kilometers, but makes an abrupt turn to the southwest at the showing before it meets the Klawli River. Except for the workings and rare outcrops at the creek's edge, no bedrock is exposed in the area.

Vegetation on the claims is comprised mainly of immature stands of spruce and pine with moderate to heavy underbrush.

GEOLOGY

The regional geology of this part of the province is dominated by sedimentary and volcanic rocks of the Jurassic Takla Group which are intruded by the Jurassic-Cretaceous Omineca Group plutonic complex. The exposed mineralization itself appears to be in a complex shear zone, about 2 metres wide striking northeast in Takla andesites. This zone has been filled with a mineralized quartz carbonate vein system and altered to a talcose "schist". Pyrite, chalcopyrite, and galena are the major metallic/sulphide minerals present and occur as blebs, veinlets, and fracture fillings in the altered hostrock.

EXPLORATION HISTORY

The GOLD property covers a copper-gold showing known alternately as Kohse Copper or Klawli Copper. This showing was located in the early 1920's and optioned to Consolidated Mining and Smelting Company of Canada, who did some minor trenching and sank two shafts. Since that time various companies and individuals have held the property with little or no further development.

Reconnaissance prospecting by Hawk Mountain Resources in 1984 confirmed the presence of anomalous gold values at the showing. Assays up to 0.48 oz/ton with associated silver values of up to 29.22 oz/ton were collected from the old workings and dumps (see figure 3). The relatively small size of the prospect prompted further exploration to further delineate the known mineralization as well as locate possible related structures and systems. A reconnaissance VLF-EM survey indicated an anomalous zone roughly

parallel to the strike of the exposed mineralization, which prompted a more detailed program of geophysical surveys combined with soil and stream geochemical surveys.

SURVEY PROCEDURES

The geophysical portion of the survey included both VLF-EM and magnetometer surveys. A 14.5 line km grid was established using compass and hipchain methods for control. The baseline used pickets for every 50 m station over an 1800 m length with traverse lines every 200 m varying in length from 450 m to 1900 m. A Phoenix VLF-2 model was used to receive signals from the Annapolis Md. transmitter station. The magnetometer data was taken using a flux gate magnetometer.

Standard procedures were used for collection and preparation of the soil and stream sediment samples. These included collection of 72 samples of B-horizon soils at 25 m intervals (where possible) over the VLF anomalies and collection of 21 stream sediment samples at varied spacings along the creek adjacent to the showing. Samples were screened to -80 mesh and analyzed for Cu, Ag, As, and Sb by acid extraction/ICP methods.

RESULTS

(a) Geophysical Survey

Of the two geophysical methods used, the VLF-EM data seems to be the most meaningful (see figure 4). The survey data indicates that two anomalous zones are present crossing the grid system. In

addition there are several "one line" anomalies. The largest anomaly crosses the grid from 800 W to 1000 E, 50 to 250 m south of the baseline. The second anomaly extends from a point 500 m south of the baseline on the 200 E line, bearing N 60 E, to intersect the first anomaly at or near the 1000 E line. Irregularly spaced anomalies also occur, north of the baseline, on the 400 E, 600 E, 800 E, and 800 W lines. The magnetometer data was found to be highly variable and did not appear to have any relation to the VLF results.

(b) Geochemical Survey

The soil geochemistry results over the VLF anomalies showed little or no associated high metal values (see figure 5). This was primarily due to the extremely poor and variable quality of the soil in the area, being, for the most part, organically derived, or glacial in origin.

Cu values ranged from 20 to 360 ppm with only 3 samples containing greater than 200 ppm. Ag values ranged from .1 to .6 ppm, of which 7 samples contained more than .2 ppm. As in the soils ranged from 2 to 16 ppm with 2 samples showing 9 ppm or greater. Finally, Sb values ranged from 2 to 8 ppm with only 3 samples over the 2 ppm background. Stream sediment samples also failed to show any outstanding anomalies in Cu, Ag, As, or Sb, the results all falling within background levels. A very slight increase in Cu (37 to 59 ppm) values in the stream sediments collected above and below the intersection of the largest VLF anomaly in the stream was observed.

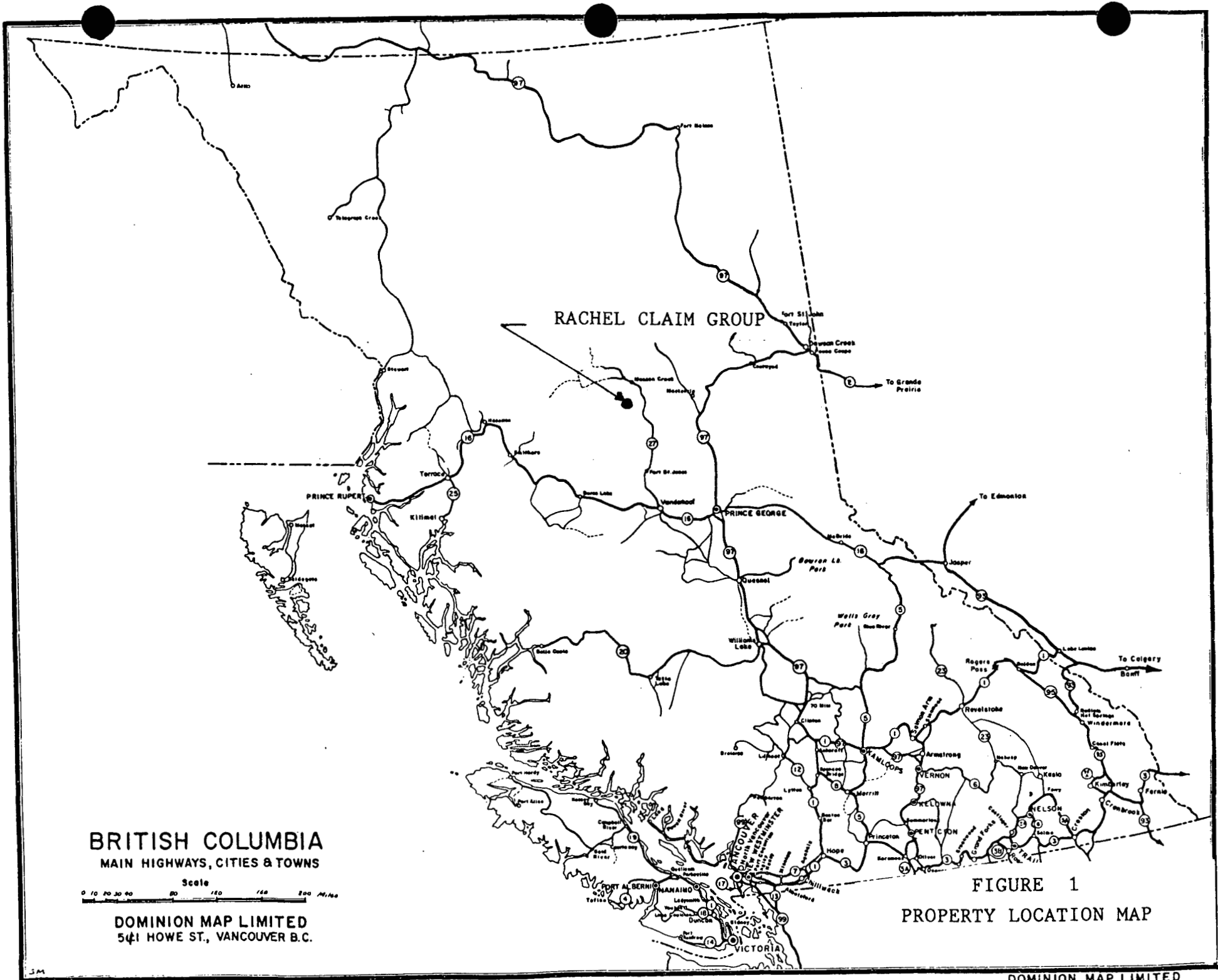
CONCLUSIONS

The geochemical and geophysical surveys carried out on the GOLD claim group during July of 1985 indicate two areas of interest which warrant further investigation. The first of these is the exposed mineralization in the Klawli showing itself. The grade of precious metal values obtained from samples in and around these workings warrants further exposure and delineation of the mineralized zone. The VLF anomalies to the south of the original showing which appear to parallel the exposed trend of mineralization should also be investigated more closely.

REFERENCES

J. E. Armstrong, G.S.C. Mem #252 pp. 184-85, 1949.

B.C. Department of Mines, G.E.M., p. 201, 1971.



Metres 1000 500 0 1000
 Kilometres 1 0.5 0 0.5 1
 AMER 0014

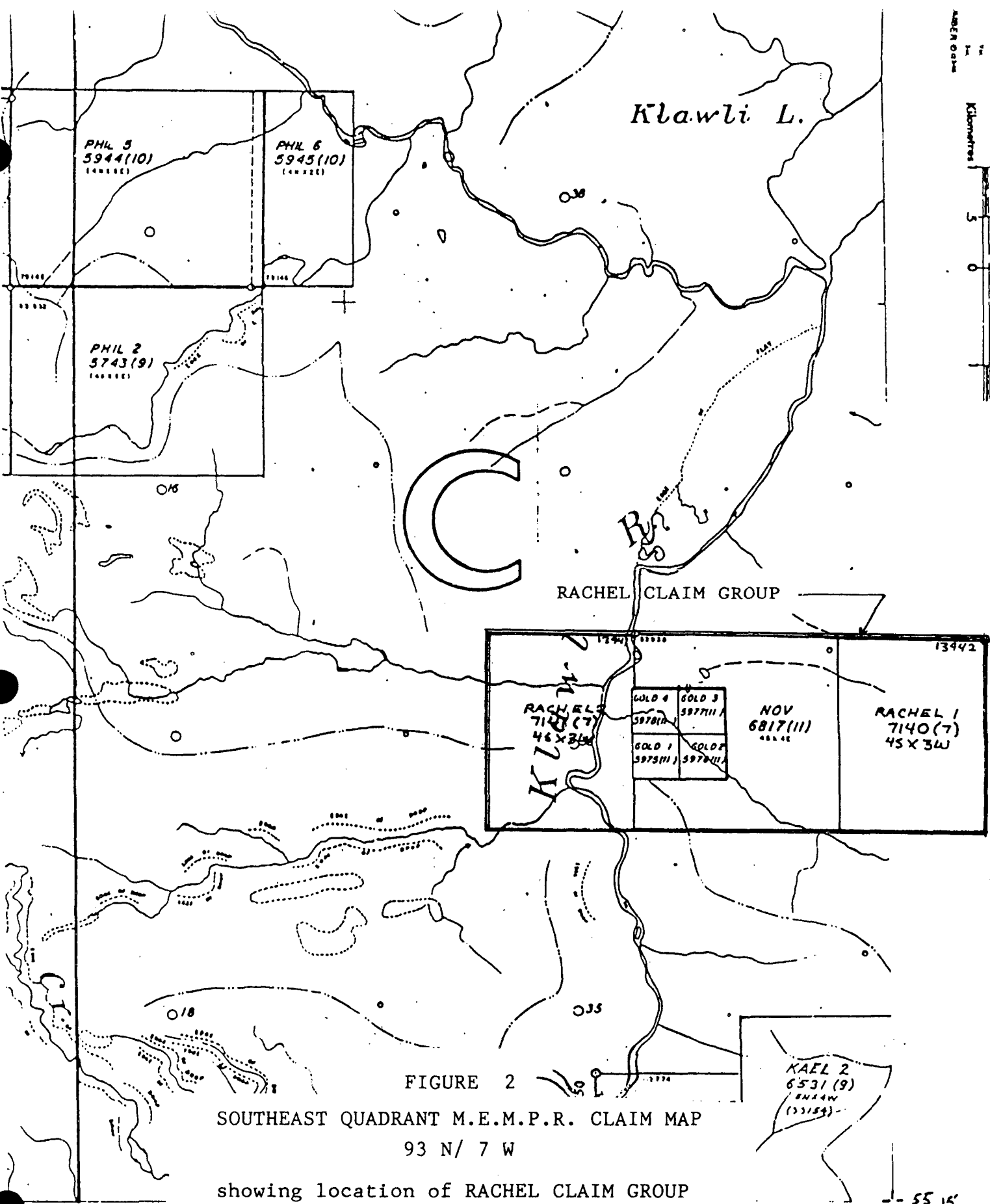


FIGURE 2
 SOUTHEAST QUADRANT M.E.M.P.R. CLAIM MAP
 93 N/ 7 W
 showing location of RACHEL CLAIM GROUP

OUTH SEE MAP 93 N

ES AND PETR

1000 500 0 1000 m.
 1: 50,000

o the location
 (00141 01)

55 15'
 124 45'

ACME ANALYTICAL LABORATORIES LTD.
 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6
 PHONE 253-3158 DATA LINE 251-1011

DATE RECEIVED: JULY 10 1985

DATE REPORT MAILED: *July 17/85*

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
 THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: SOIL/SILT *PAGE 7 - ROCK*

ASSAYER: *T. Saundry* DEAN TOYE OR TOM SAUNDRY. CERTIFIED B.C. ASSAYER

HAWK MOUNTAIN RESOURCES

FILE # 85-1321

PAGE

SAMPLE#	Cu PPM	Ag PPM	As PPM	Sb PPM
KW 8W 00	42	.1	3	2
KW 8W 050S	30	.1	3	8
KW 8W 100S	45	.1	4	2
KW 8W 150S SD	38	.1	4	2
KW 6W 00	37	.1	2	2
KW 6W 050S	21	.1	2	2
KW 6W 100S	38	.1	2	2
KW 6W 150S	26	.1	6	2
KW 4W 670N	61	.1	5	2
KW 4W 00	23	.1	6	2
KW 4W 050S CRK	63	.1	6	2
KW 4W 060S	50	.2	6	2
KW 4W 070S	43	.1	2	2
KW 4W 100S	57	.1	2	2
KW 4W 150S	45	.1	2	2
KW 4W 470S	289	.6	2	2
KW 2W 880N	76	.1	2	2
KW 2W 330N	33	.1	5	2
KW 2W 00	34	.1	4	2
KW 2W 050S	26	.1	2	2
KW 2W 100S	51	.1	2	2
KW 2W 200S	21	.1	2	2
KW 00 450N	99	.3	2	2
KW 00 00	37	.1	2	2
KW 00 050S	22	.1	2	2
KW 00 125S	20	.1	2	2
KW 2E 00	30	.1	2	2
KW 2E 050S	20	.1	2	2
KW 2E 100S	29	.1	2	2
KW 2E 150S	29	.1	2	2
KW 2E 200S	25	.1	2	2
KW 2E 200SA	15	.1	2	2
KW 2E 250S	20	.1	2	2
KW 2E 600S	42	.1	2	2
KW 2E 625S	29	.1	2	2
KW 375 240S	19	.1	2	2
STD C	61	6.9	39	16

SAMPLE#	Cu PPM	Ag PPM	As PPM	Sb PPM
KW 4E 1000N	89	.4	7	2
KW 4E 110N	38	.1	2	2
KW 4E 00	22	.1	2	2
KW 4E 040S	26	.1	2	2
KW 4E 075S	24	.1	2	2
KW 4E 175S	43	.1	8	2
KW 4E 250S	27	.1	3	3
KW 4E 300S	20	.1	2	3
KW 4E 525S	25	.1	2	2
KW 6E 025N	51	.2	7	2
KW 6E 050	61	.1	3	2
KW 6E 590S SD	67	.4	4	2
KW 6E 750S SD	103	.1	6	2
KW 6E 830S SD	363	.1	16	2
KW 775E 175S	73	.1	2	2
KW 8E 380N SD	207	.4	8	4
KW 8E 340N	46	.1	2	2
KW 8E 050S	41	.1	8	2
KW 8E 080S	35	.1	2	2
KW 8E 150S	37	.2	6	2
KW 8E 200S	60	.1	3	2
KW 8E 250S	74	.1	2	2
KW 8E 300S	25	.1	6	2
KW 8E 350S	40	.1	2	2
KW 810E 010N	32	.1	3	2
KW 980E 00	40	.2	2	2
KW 10E 070N	54	.1	4	2
KW 10E 050S	25	.1	2	2
KW 10E 100S	38	.1	2	2
KW 10E 150S	34	.1	6	2
KW 10E 200S	25	.2	2	2
KW 10E 250S	16	.1	2	2
KW 10E 300S	61	.1	9	2
KW 10E 350S	117	.6	6	2
KW 10E 400S	54	.1	6	2
KW 10E 480S SD	29	.3	2	2
STD C	60	7.1	40	17

SAMPLE#	Cu PPM	Ag PPM	As PPM	Sb PPM
KW 10E 600S SO	31	.2	6	2
KW CRK 300E	24	.1	7	2
KW CRK 810E	39	.1	3	2
KW CRK 1025E	60	.2	4	2
KW CRK 1300E	42	.2	6	2
KW CRK 100N	49	.1	5	2
KW CRK-CL-50	52	.2	8	2
KW CRK-CL-350	52	.2	5	2
KW CRK-CL-700	52	.1	5	2
KW CRK-CL-800	69	.3	2	2
KW CRK-CL-950	84	.1	3	2
KW CRK-CL-1000	51	.1	4	2
KW 3	54	.1	6	2
KW 4	42	.1	3	2
KW 5	38	.1	4	2
KW 6	59	.2	6	2
KW 7	37	.1	5	2
KW 8	64	.1	6	2
KW WESTBANK	31	.1	2	3
75S 00E	18	.1	2	2
NO NUMBER	62	.3	13	2
RE-RUN	48	.1	5	2
STD C	57	7.3	40	16

STATEMENT OF COSTS

GEOPHYSICAL & GEOCHEMICAL SURVEYS
GOLD SUPPLEMENTAL CLAIM GROUP

June 27 to July 7, 1985

GEOLOGISTS

B.Y.K. & D.D.W. - field work 11 days @ \$200/day	\$ 2,200.00
D.D.W. - report writing & preparation 5 days @ \$80/day	400.00

LIVING EXPENSES

B.Y.K. & D.D.W. - meals 11 days @ \$20/day	220.00
4 days @ \$40/day	160.00
Motel - 4 nights @ \$60/night	240.00

TRANSPORTATION

Helicopter - Ft. St. James to property & return 3 hours @ \$460/hr.	1,380.00
Company vehicle - Vancouver to Ft. St. James & return 2240 km @ \$.10/km	224.00

ASSAY COSTS

93 samples analyzed for Cu, Ag, As, Sb @ \$5.60/sample	520.80
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EQUIPMENT & SUPPLIES

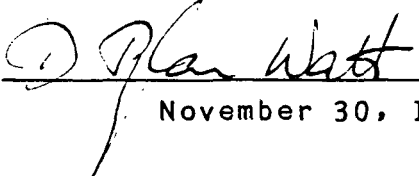
Fluxgate magnetometer - rental & shipping	800.00
Miscellaneous: (flagging tape, pickets, sample bags)	<u>100.00</u>

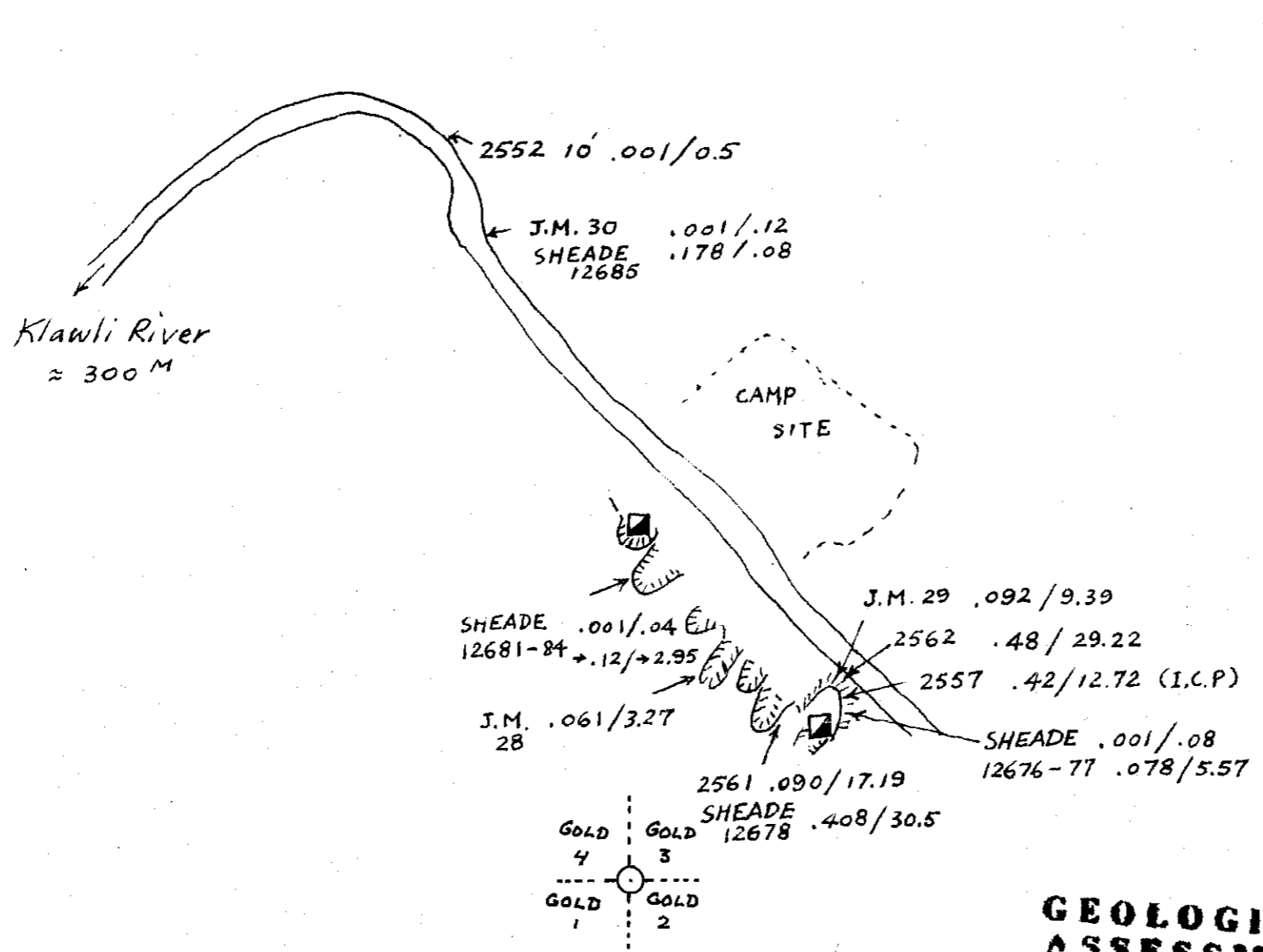
TOTAL	<u>\$6,244.80</u>
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AUTHOR'S QUALIFICATIONS

I, DAVID DYLAN WATT, of Vancouver, B.C., do hereby certify that:

- 1) I am a geologist, residing at #309 - 1996 Trutch Street, Vancouver, British Columbia.
- 2) I am a graduate of the University of British Columbia, holding a Bachelor's Degree in Science (1984) in the field of Geology, and I have been employed in mining exploration in Canada and the U.S. continually since my graduation.
- 3) I have collected, or aided in the collection of, all data and observations recorded in this report.
- 4) I have no interest in the property described herein.


November 30, 1985



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FIG-3

Hawk Mountain Resources Ltd.
Nov. Claims

**SAMPLE LOCATION AND
ASSAY MAP**



Scale 1 CM = ≈ 20 M

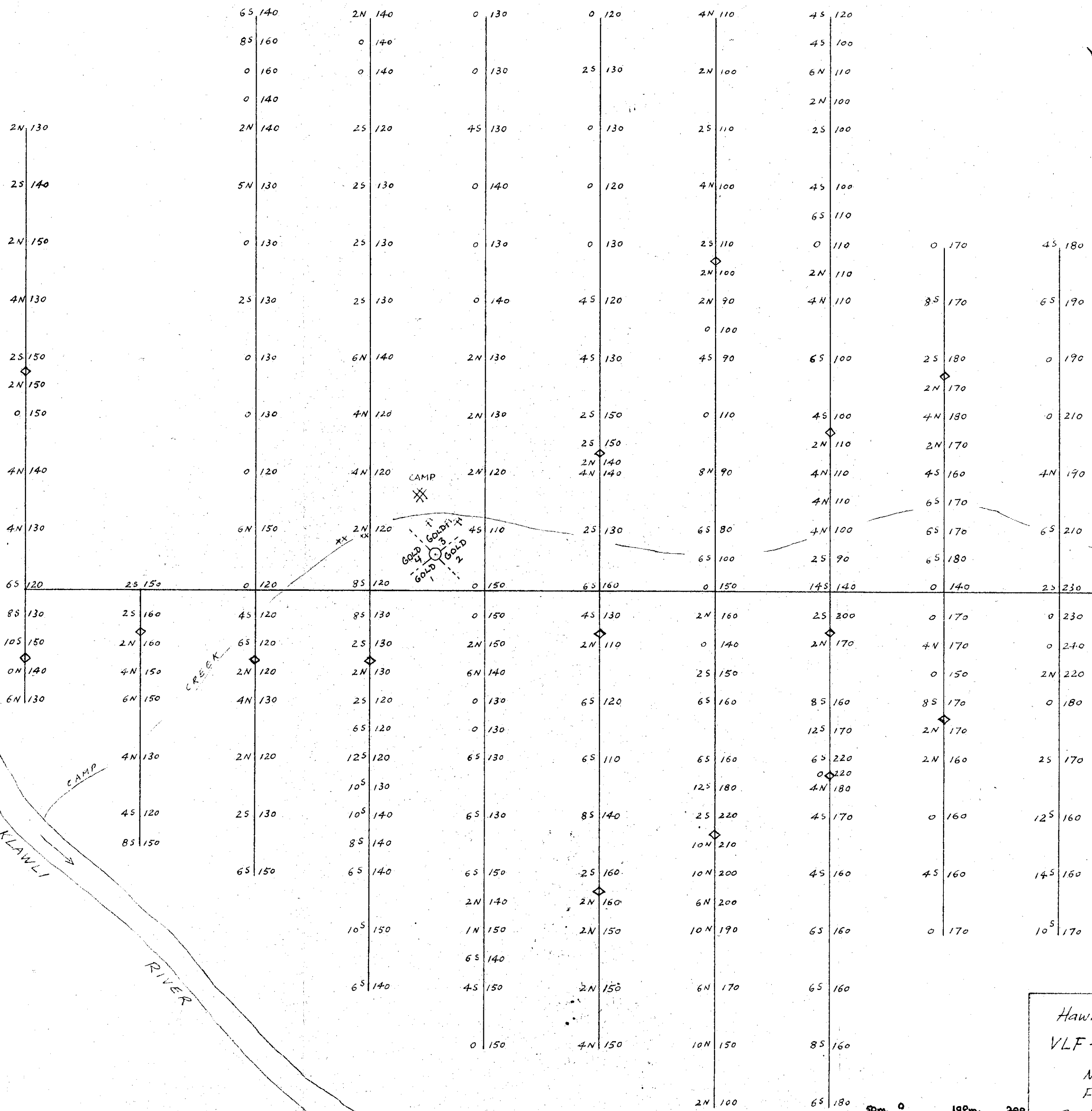
Explanation

SAMPLE NO & SAMPLER	WIDTH (if not grab)	OZ/T Au	OZ/T Ag
------------------------	------------------------	------------	------------

Date July 24 1985

Drawn by D.D.W.

800W 600W 400W 200W 00 200E 400E 600E 800E 1,000E



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◇ point of cross over

FIG-4

Hawk Mtn. Resources Ltd.
VLF-EM SURVEY PLAN
 Nov claims near
 Ft. St. James, B.C.
 Scale 1:5,000 (1 cm = 50 m)
 Date July 16 1985
 Drwn by B.Y.K.

50m 0 100m 200m
 ○ Claim post

800W 600W 400W 200W 00 200E 400E 600E 800E 1000E



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FIG-5

HAWK MOUNTAIN RESOURCES LTD.
MAGNETOMETER / GEOCHEMISTRY SURVEYS
RACHEL CLAIM GROUP
Scale 1:5000
Drawn by DDW
Date 16/7/85

- EXPLANATION**
- ☐ ● Cu in soils / silts > 100 ppm.
 - ☐ ○ Ag in soils / silts > 3 ppm
 - ☐ ○ As in soils / silts > 10 ppm
 - ☐ ○ Sb in soils / silts > 3 ppm
 - 8028 gammas (less 50000)