

85-842

14049

GEOLOGY AND GEOCHEMISTRY
OF THE
ARCHIMEDES 1 FRACTION
ARCHIMEDES 2 FRACTION

Cariboo Mining Division
British Columbia
NTS 93A/7E

Latitude 52° 18.5' Longitude 120° 36'

HOMESTAKE MINERAL DEVELOPMENT COMPANY
VANCOUVER, B.C.

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

14,049
K.L. Harrap

October 1985

TABLE OF CONTENTS

	PAGE
1.0 INTRODUCTION.....	1
1.1 Location and Access.....	1
1.2 Physiography and Vegetation.....	1
1.3 Claims Schedule: Archimedes 1 Fraction and Archimedes 2 Fraction.....	1
2.0 REGIONAL GEOLOGY.....	2
3.0 PROPERTY GEOLOGY.....	3
3.1 General.....	3
3.2 Lithological Units.....	3
3.3 Mineralization.....	5
4.0 GEOCHEMISTRY.....	5
4.1 Sampling Procedures.....	5
4.2 Geochemical Results.....	6
5.0 CONCLUSIONS AND RECOMMENDATIONS.....	7
6.0 REFERENCES.....	9
APPENDIX A	Statement of Expenditures
APPENDIX B	Analytical Procedures
APPENDIX C	Sample Descriptions
APPENDIX D	Geochemical Results
APPENDIX E	Statement of Qualifications

List of Figures and Plates

		PAGE
Figure 1	Location Map.....	1a
Figure 2	Claim sketch Scale 1:50,000.....	2a
Plate 1	Sample Location Scale 1:10,000..... Map & Geology	(attached)
Plate 2	Gold Geochemistry Scale 1:10,000..... Map	(attached)

1.0 INTRODUCTION

1.1 Location and Access

The Archimedes 1 and the Archimedes 2 Fractions are located in east-central British Columbia, along the MacKay River Valley in the Cariboo Mining Division (NTS 93A/7E) (See Figures 1 and 2). The claims are situated about 110 km east-northeast of Williams Lake, and are accessible via good gravel road from Horsefly or 100 Mile House.

1.2 Physiography and Vegetation

The two Archimedes Fractions lie along the south-west side of the MacKay River, a northwesterly flowing tributary of the Horsefly River. Elevation of the claim area ranges from 1370 meters to 1750 meters. Relief is moderate to steep with local precipitous bluffs, particularly at higher elevations.

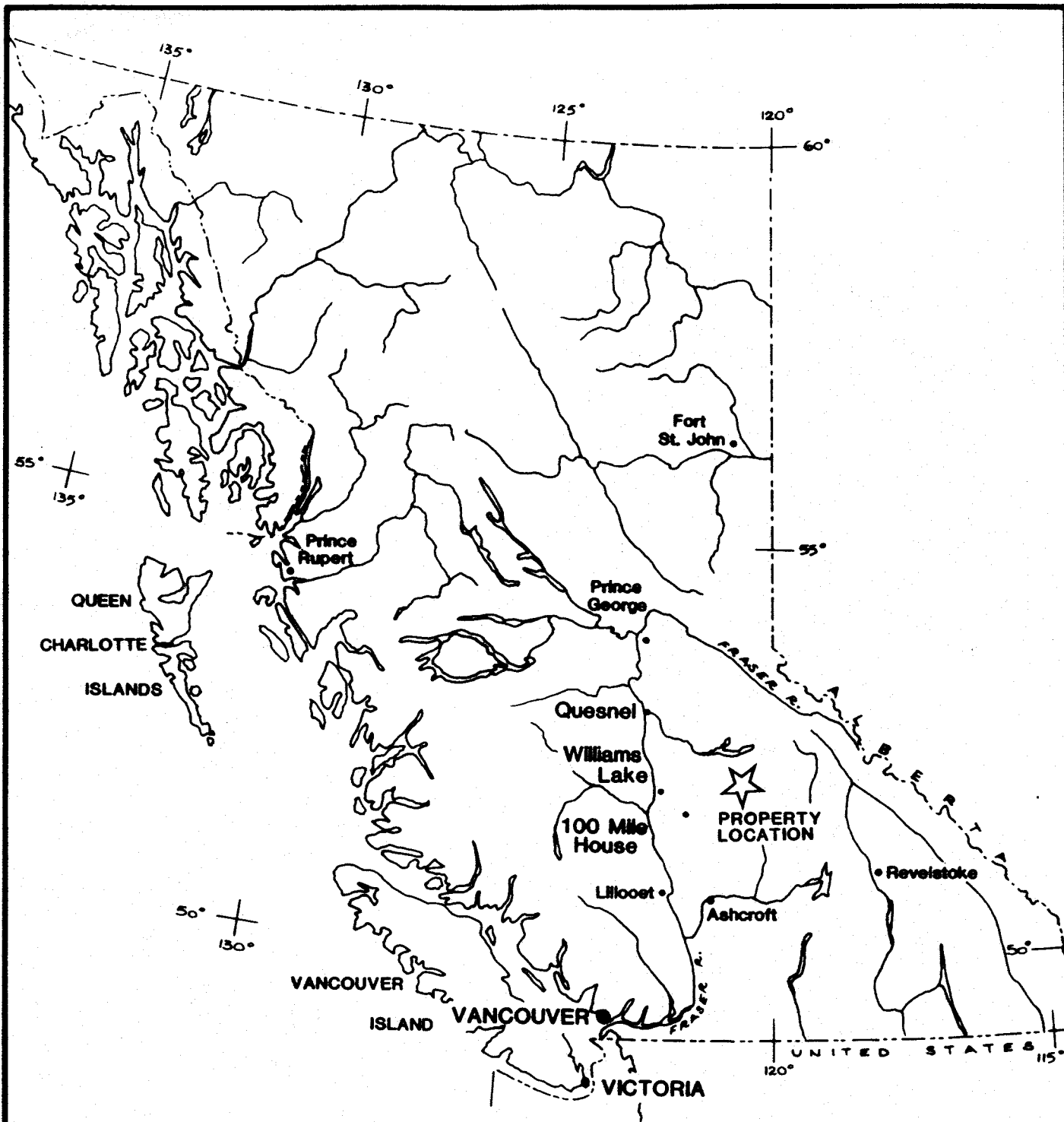
Vegetation generally consists of good commercial stands of spruce, balsam, fir, and cedar with moderate underbrush.

1.3 Claims Schedule: Archimedes 1 Fraction and Archimedes 2 Fraction

This report deals with those claims listed below and as outlined on the attached claims sketch (Figure 2):

<u>Claim Name</u>	<u>Units</u>	<u>Record Number</u>	<u>Recording Date</u>
Archimedes 1 Fraction	1	5477(11)	22 Nov. 1983
Archimedes 2 Fraction	1	5429(11)	22 Nov. 1983
Total	2		

Homestake Mineral Development Company holds these claims under an option agreement with J.M.T. Services Corp.



.....

**HOMESTAKE
MINERAL DEVELOPMENT COMPANY**

**ARCHIMEDES 1 FRACTION
AND ARCHIMEDES 2 FRACTION
GENERAL LOCATION MAP**

CENTRAL BRITISH COLUMBIA

DRAWN	DATE	FILE CODE	FIGURE 1
	NOV 1985	93A/7	
Revised _____			



2.0 REGIONAL GEOLOGY

The Archimedes 1 and 2 Fractions are surrounded by Eureka Resources' Frasergold property at the boundary between two of the major geologic and physiographic subdivisions of the Canadian Cordillera. This boundary marks the eastern edge of the Quesnel Trough Structural Terrane.

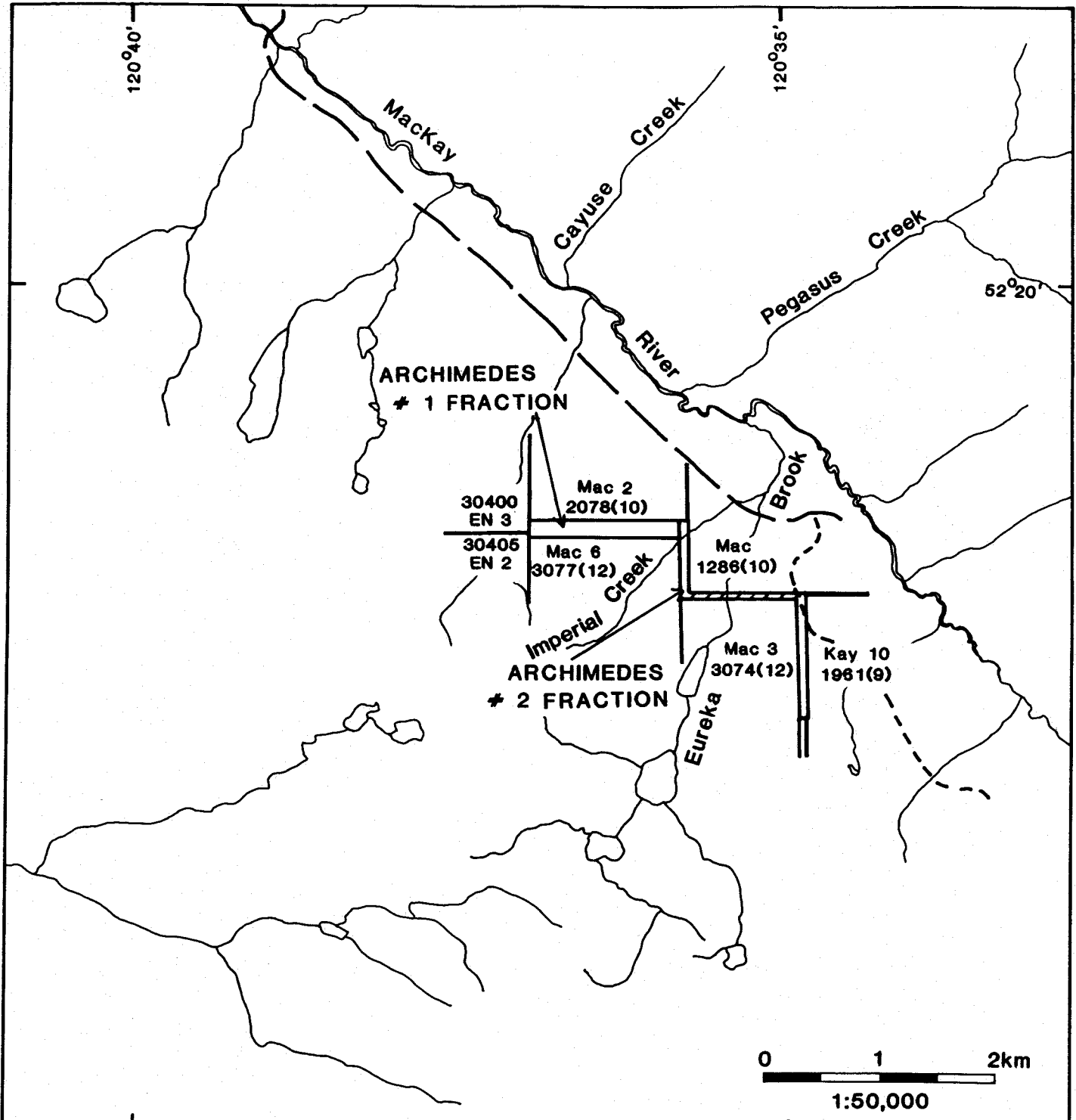
The Intermontane Belt is a composite of several allochthonous terranes, which was accreted to North America in Jurassic time. Its eastern edge was abducted onto the Omineca crystalline belt.

The Intermontane belt contains Upper Paleozoic to Upper Tertiary marine and non-marine volcanic and sedimentary rock. In the Quesnel trough it consists of Upper Paleozoic and Lower Triassic volcanics, volcanoclastics and carbonates, and Upper Triassic to Lower Jurassic volcanics, clastics, and argillites.





The Omineca belt is underlain by rocks of Hadyrnian to Paleozoic age. These high grade metamorphic rocks consist of sandstone, grit, conglomerate, phyllite, schist, amphibole, marble, and gneiss and have been designated Kaza Group. Evidence of mylonization is found in these rocks, which tends to increase westwardly to the margin of the Antler Formation of the Intermontane Belt.

The Antler Formation, which is correlatable with parts of the Slide Mountain Group, is of Mississippian age and may also be locally mylonized. It is most commonly gray to green, fine to medium grained greenstone. The more uncommon varieties include coarse-grained meta-gabbro, variably altered ultramafic rocks and serpentine breccias. It has been speculated that the Antler Formation is part of a layer of oceanic crust.

Overlying the Antler Formation, and also thrust over the western

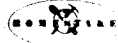


LEGEND

-  Claim Boundary
-  Logging Road
-  Cat Track
-  There is presently some question regarding the ownership of this area



HOMESTAKE
MINERAL DEVELOPMENT COMPANY



**ARCHIMEDES 1FR
and
ARCHIMEDES 2FR
CLAIM SKETCH**

DRAWN <i>Mh.</i>	DATE 23 Oct. 85	FILE CODE 93A/7	FIGURE 2
Revised _____			

margin of the North American craton, is the Early Jurassic to Upper Triassic island arc sequence. These rocks are only weakly deformed and include a thick phyllite-greenschist sequence which grades upward into alkalic augite porphyry flows, tuffs, and breccias. The dominant lithology within this sequence is black phyllite. Takla Group rocks overlie the phyllite, and include mainly volcanoclastic and volcanic rock of basaltic to andesitic composition, and lesser amounts of sandstone, conglomerate, shale, and limestone.

3.0 PROPERTY GEOLOGY

3.1 General

The Archimedes Fractions are situated along the north limb of a major northwest-trending, overturned syncline; the Crooked Lake Syncline. The axis of this projects parallel to the MacKay River and McKusky Creek/Crooked Lake Valleys.

3.2 Lithologic Units

Proterozoic - Lower Paleozoic Kaza Group (Snowshoe Formation)

The Proterozoic to Paleozoic Kaza Group forms the base of the Crooked Lake Syncline. Where exposed, this unit consists of sharp-banded paragneiss, leucocratic feldspar-augen gneiss, schist and sub-mylonite in the upper greenschist facies of metamorphism. The contact between the Snowshoe Formation and the Slide Mountain Group is sharp and represents a major structural discontinuity.

Mississippian Slide Mountain Group (Antler Formation)

North of the edge of the Archimedes Fractions, andesitic to basaltic metavolcanics of the Slide Mountain Group are found. This unit

consists of a sequence of foliated greenstones and chloritic schists which have been strongly deformed and subjected to middle to upper greenschist facies metamorphism. It serves as a useful marker horizon.

Upper Triassic Black Phyllite

The primary unit on the property is an Upper Triassic dark grey to black sequence of metasediments and metavolcanics. The principal horizon of interest is a phyllite which displays a steeply-dipping, penetrative crenulation foliation which is axial planar to small scale, gently plunging, isoclinal folds. The phyllite contains abundant veins, veinlets, and lenses of milky white quartz which may be a result of regional metamorphism. The unit locally contains limonite-stained knots, possibly porphyroblasts. This unit was sampled at several locations, but did not return favourable results.

Above the phyllitic unit, an interbedded transition zone of phyllite, chlorite schist, and greenschist was seen in outcrop in the southern portions of the Archimedes 2 Fraction. This unit was noted to contain disseminated pyrite.

Upper Triassic - Lower Jurassic Rocks

Overlying the transition zone, and within the core of the Crooked Lake Syncline, greenstone, augite-porphyry breccia and tuff occur. (Campbell, 1979). This unit was not seen in outcrop, but extends along the southern edge of the Frasergold claim area. As well, a mafic sill unit of coarse grained quartz-poor mafic intrusives crops out on the Frasergold properties and is inferred to be coeval with the overlying basic alkaline volcanic sequence.

3.3 Mineralization

Belik (1981) reported that gold, silver, and base metals occur in a variety of geological environments on the Frasergold property, including:

1. gold within Upper Triassic black phyllite
2. gold and silver within synmetamorphic quartz veins.
3. disseminated copper mineralization within the sheared marginal phase of the mafic sill unit.
4. porphyry-style copper mineralization within late-differentiate, alkaline granitic rocks.
5. copper within late-stage quartz veins.

Homestake's purpose was to evaluate gold mineralization within the Upper Triassic black phyllites and associated quartz veins. Although pyrite, and possibly very minor amounts of galena, were found within phyllites, surface soil and rock sampling did not outline any significant gold mineralization.

4.0 GEOCHEMISTRY

4.1 Sampling Procedures

Soil samples were collected on reconnaissance traverses with sampling intervals of 100 meters. All soil stations and reconnaissance traverses were located with compass and hip chains. Each sample site was identified with flagging and the appropriate sample number. Samples of the B Horizon of the soil profile were collected from depths of 15 to 40 cm. The 500 to 750 gm sample was described as to colour, size fraction, and organic content prior to being placed in a Kraft paper bag. All samples were dried prior to shipment to the analytical laboratory.

Rock samples were collected as composite grab samples. Outcrop distribution was not sufficient to obtain representative data by rock sampling alone. Grab samples were chosen based on the geologists' perception of mineralization potential. Sample descriptions for rocks are provided in Appendix A.

Stream sediments were collected during soil reconnaissance traverses. All samples were collected from the centre of the stream. Field data including the width, depth and flow rate of the stream, and the colour, composition, and organic content of the sample were recorded at each sample site. Sample weight ranged from 300 to 500 gm. Samples were stored in Kraft paper bags, and were dried prior to shipment to the laboratory.

Each sample was assigned a nine digit code:

CC-99-3-4624

The first four digits refer to the Archimedes 1 and 2 Fractions.

The fifth digit classifies the type of sample as follows:

1= silt sample

2= soil sample

3= rock sample

The final four digits uniquely specify the sample. For example, in CC-99-3-7304, "CC-99" refer to either of the Archimedes Fractions, "3" classifies the sample as a soil sample and "4624" names the specific sample. On most maps, the initial four digits are omitted.

4.2 Geochemical Results

A total of 32 rock, soil, and silt samples were collected on the Archimedes Fractions. The analytical results for gold were plotted on a

"Gold Geochemistry" map at a scale of 1:10,000.

The objective of the sampling was to determine the potential for gold mineralization within the black phyllite unit on the Archimedes Fractions.

Gold values range up to a high of 120 ppb Au in one soil sample at the western end of the claims. Overall, the analytical results from traverses are not favourable. Sample results from the Archimedes Fractions are not as promising as those reported for the surrounding Frasergold property.

Within the Frasergold property, gold mineralization seems to be spacially associated with quartz veins and veinlets which are concordant with foliation and layering. Lithogeochemical and soil sampling on the Archimedes Fractions did not seem to reflect this whatsoever.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Four man-days were spent mapping and sampling the Archimedes 1 Fraction and Archimedes 2 Fraction, with four additional man-days spent compiling, interpreting and reporting on the results. Four rock, twenty-six soil, and two silt samples were analyzed for 30 element ICP. Atomic Absorption and Fire Assay methods were employed for gold and mercury analysis.

The Archimedes 1 and 2 Fractions, which consists of 2 claim units, are primarily underlain by Upper Triassic phyllite with areas of quartz veining, and limonite-stained knots or porphyroblasts. Mineralization consists of disseminated pyrite within this unit, and pyrite and minor galena within quartz veins and pods.

From work completed and geochemical results, the potential for significant gold mineralization is extremely limited. No further work can be recommended on the claims at this time.

6.0 REFERENCES

- Belik, G.D., 1981 Geological And Geochemical Report on the
Frasergold property, Cariboo Mining Division,
British Columbia, A.R. 9751.
- Campbell, K.V., 1971 Metamorphic Petrology and Structural Geology of
the Crooked Lake Area, Cariboo Mountains,
University of Washington.
- Campbell, R.B., 1978 Geology of the Quesnel Lake Map Area, B.C.
1:125,000 G.S.C. Open File 974.
- Campbell, R.B., 1963 Quesnel Map Sheet 1" to 4 miles; G.S.C. Map
1-1963.

APPENDIX A

STATEMENT OF EXPENDITURES

LABOUR (field 1985)

P. Ronning:	2 days @ \$130/day	\$260.00
K. Harrap:	2 days @ \$94/day	\$188.00

LABOUR (office 1985)

K. Harrap:	4 days @ \$118/day	\$472.00
Drafting & Typing		(McNair) \$150.00
		(Typing) \$75.00

TRANSPORTATION

Truck:	One truck	
	2 days @ \$50/day	\$100.00
	Fuel & Maintenance	\$40.00

TRAVEL

Travel Expenses, Groceries, Accommodation, Meals		
	4 man days @ \$50/day	\$200.00

MATERIALS AND SUPPLIES

Flagging, Topo fil, Kraft Bags, etc.		\$100.00
--------------------------------------	--	----------

ANALYTICAL

4 Rock sample prep	@\$2.75	\$11.00
26 Soil sample prep	@\$0.60	\$15.60
2 Silt sample prep	@\$0.60	\$1.20
32 30 Element ICP	@\$6.00	\$192.00
32 Geochem Au by FA+AA	@\$5.50	\$176.00
32 Geochem Hg by FA+AA	@\$3.00	\$96.00

TOTAL GEOCHEMISTRY \$491.80

GRAND TOTAL \$2,076.80

APPENDIX B
ANALYTICAL PROCEDURES

ANALYTICAL PROCEDURES

All analyses were completed by Acme Analytical laboratories in Vancouver, B.C.

All rock, soil and silt samples were analysed utilizing 30 element Inductively Coupled Argon Plasma (ICP) techniques and geochemical fire assay plus atomic absorption (FA+AA) analytical procedure for gold and mercury.

All samples were prepared to a 80 mesh size fraction. Half gram samples were digested with 3 ml of dilute regia at 95°C for one hour, then diluted to 10 ml with water. Thirty elements were then analysed by ICP (Appendix E). This technique enables only a partial leach for 20 of the 30 elements analysed.

Gold analyses required 10 gram samples that were subjected to a fire assay preconcentration techniques to produce a lead button. The button was then digested with hot aqua regia. The quantity of gold was then determined from the solution by graphite furnace Atomic Absorption technique.

For mercury analysis, 0.5 grams of pulp sample was digested in aqua regia and diluted with 20% HCL. Mercury in the solution was determined by cold vapor Atomic Absorption. A small portion of the extract was added to a stannous chloride/hydrochloric acid solution. The reduced mercury was swept out of the solution and passed into a mercury cell where it was measured by Atomic Absorption.

APPENDIX C

SAMPLE DESCRIPTIONS

(All samples prefixed by the number CC-99-4)

<u>Sample Number</u>	<u>Type</u>	<u>Rock Description</u>
4620	Float sample:	quartz vein material within ultramafic pyroxenite altered to chloritic material. Limonite coats fractures, and is disseminated up to 10% within rock.
4706	Grab in outcrop:	4 cm wide quartz vein found parallel to foliation in black argillite/phyllite. Pyrite up to 2% disseminated in phyllite; very minor galena in vein.
4707	Grab in outcrop:	black Upper Triassic argillite, limonite stained but no porphyroblasts/knots. Foliation: $130^{\circ}/83^{\circ}$ SW. No alteration.
4708	Grab in outcrop:	light to medium green-grey, buff weathering, coarse grained greenstone/phyllite. (Transition Zone?) Disseminated pyrite within rock, now weathered and mainly voids. Foliation: $124^{\circ}/68^{\circ}$ SW.

APPENDIX D
GEOCHEMICAL RESULTS

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, SM, Y, ND AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
 - SAMPLE TYPE: P1-SOILS/SILTS P2-ROCKS AU11 ANALYSIS BY FA-AA FROM 10 GRAM SAMPLE. MG ANALYSIS BY FLAMELESS AA.

DATE RECEIVED: JUNE 27 1985

DATE REPORT MAILED: July 3/85

ASSAYER: V. Saundry

DEAN TOYE OR TOM SAUNDRY, CERTIFIED B.C. ASSAYER

HOMESTAKE MINERAL PROJECT - BR-5710 FILE # 85-1137

PAGE 1

SAMPLED	No PPH	Cu PPH	Pb PPH	Zn PPH	Ag PPH	Mn PPH	Co PPH	Ni PPH	Fe %	As PPH	U PPH	Au PPH	Th PPH	Sr PPH	Cd PPH	Sb PPH	Bi PPH	V PPH	Ca %	P %	La PPH	Cr PPH	Hg %	Ba PPH	Ti %	B PPH	Al %	Na %	K %	W PPH	Au11 PPH	Hg PPH
CC-99-3-4608	2	46	14	66	.3	24	13	398	5.66	9	5	ND	2	45	1	2	2	87	.49	.10	6	57	.69	81	.20	2	1.26	.01	.05	1	6	30
CC-99-3-4609	2	91	2	53	1.2	26	18	833	4.89	2	5	ND	1	34	1	2	2	96	.34	.15	6	75	.64	65	.15	4	1.13	.01	.04	1	7	43
CC-99-3-4610	4	66	11	94	1.0	42	19	673	5.93	6	5	ND	2	32	1	2	2	84	.46	.14	10	60	.99	85	.11	2	1.42	.01	.07	1	18	40
CC-99-3-4612	2	131	2	70	.5	27	22	1099	3.87	11	5	ND	1	34	1	2	2	60	.80	.15	6	61	.60	112	.05	2	1.34	.01	.04	1	4	66
CC-99-3-4613	3	68	2	53	.5	27	14	493	4.06	14	5	ND	1	37	1	2	2	70	.36	.08	7	62	.76	49	.16	2	1.40	.01	.05	1	9	70
CC-99-3-4614	2	50	3	61	.3	34	15	420	5.09	11	5	ND	1	41	1	2	3	90	.60	.08	5	71	.85	106	.22	5	1.42	.01	.04	1	18	46
CC-99-3-4616	3	77	11	63	.7	23	16	1009	4.22	16	5	ND	1	33	1	2	2	73	.67	.13	8	41	.41	131	.08	4	.99	.01	.05	1	60	50
CC-99-3-4617	2	31	2	46	.4	19	13	401	4.88	9	5	ND	1	36	1	2	2	101	.38	.22	2	47	.73	47	.13	3	1.06	.01	.04	1	8	26
CC-99-3-4618	1	113	2	96	.4	48	29	598	6.71	63	5	ND	1	27	1	2	3	134	.66	.08	3	94	1.47	52	.15	4	1.66	.01	.03	1	2	60
CC-99-3-4619	2	37	3	38	.9	16	11	234	4.73	4	5	ND	1	20	1	2	4	151	.28	.06	2	77	.53	46	.39	3	.81	.01	.02	1	48	30
CC-99-3-4621	1	22	2	50	.2	13	14	433	3.36	2	5	ND	1	47	1	2	2	92	.34	.05	2	58	.87	55	.22	5	.98	.01	.02	1	5	40
CC-99-3-4622	2	89	7	80	.3	24	34	2062	3.07	2	5	ND	1	26	1	2	2	42	.41	.10	3	99	1.17	37	.08	3	1.51	.01	.02	1	28	30
CC-99-3-4623	1	33	2	45	.1	40	15	761	1.36	2	5	ND	1	6	1	2	2	14	.29	.04	2	125	1.17	15	.04	2	.90	.01	.01	1	16	50
CC-99-3-4624	1	51	10	32	.5	36	20	402	5.22	4	5	ND	1	14	1	2	2	91	.22	.09	2	177	1.11	25	.26	2	1.02	.01	.02	1	16	10
CC-99-3-4625	2	35	66	46	.3	26	17	516	4.05	5	5	ND	1	17	1	2	5	100	.21	.09	2	113	.59	29	.25	2	.68	.01	.02	1	120	40
CC-99-3-4626	1	395	2	62	.4	20	33	1767	4.28	2	5	ND	1	54	1	2	2	94	.82	.16	3	67	1.48	173	.15	5	1.65	.02	.05	1	7	70
CC-99-3-4701	3	90	10	69	1.5	22	21	2692	3.95	5	5	ND	1	22	1	2	2	57	.23	.14	9	32	.42	145	.09	5	1.17	.01	.06	1	4	120
CC-99-3-4702	2	15	9	29	.5	8	6	172	1.63	5	5	ND	1	34	1	2	2	48	.16	.04	14	16	.12	32	.10	4	.48	.01	.03	1	4	26
CC-99-3-4703	5	33	22	115	1.3	22	13	3414	3.78	21	5	ND	1	11	1	2	2	36	.09	.15	24	13	.13	114	.02	2	.60	.01	.05	1	6	90
CC-99-3-4704	20	63	23	167	2.3	61	10	829	4.07	280	5	ND	2	10	1	2	2	26	.11	.11	17	10	.06	126	.01	2	.57	.01	.04	1	10	46
CC-99-3-4705	4	37	16	87	1.3	32	9	457	4.74	29	5	ND	1	8	1	2	2	24	.09	.21	14	24	.44	29	.01	2	1.04	.01	.03	1	7	110
CC-99-3-4709	6	58	17	93	4.6	28	13	3774	3.12	15	5	ND	1	41	2	2	2	20	.83	.34	12	19	.24	58	.02	4	1.49	.01	.04	1	2	143
CC-99-3-4710	5	35	15	85	.4	24	9	701	3.41	18	5	ND	1	8	1	2	2	28	.09	.13	17	16	.21	61	.01	4	.66	.01	.05	1	6	60
CC-99-3-4711	4	66	13	114	1.0	44	16	724	4.50	15	5	ND	2	28	1	2	2	54	.41	.10	14	52	.93	78	.07	6	1.56	.01	.04	1	7	60
CC-99-3-4712	6	41	24	128	.6	36	14	447	5.17	28	5	ND	1	15	1	2	2	37	.19	.16	17	26	.35	70	.02	2	1.29	.01	.06	1	4	150
CC-99-3-4713	5	56	19	100	1.2	37	16	1095	4.07	23	5	ND	3	11	1	2	2	27	.11	.18	18	32	.53	94	.01	4	1.62	.01	.05	1	7	60
CC-99-1-4611	2	84	6	94	.4	32	15	750	2.91	18	5	ND	1	36	1	2	2	46	1.08	.14	3	51	.71	117	.05	7	1.22	.01	.05	1	1	60
CC-99-1-4615	1	94	7	72	.3	25	17	811	4.08	5	5	ND	1	36	1	2	2	85	1.00	.15	3	55	.92	109	.07	3	1.39	.01	.05	1	3	80
STD C/FA-AU	29	61	40	138	7.1	67	28	1177	3.95	39	19	7	36	52	17	15	20	56	.48	.18	39	55	.86	187	.06	40	1.72	.06	.12	11	50	1430

HOMESTAKE MINERAL PROJECT - BR-5710 FILE # 85-1137

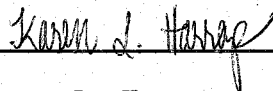
SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Hg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	M PPM	Au11 PPM	Hg PPM
CC-99-4-4620	1	10	3	19	.1	40	3	237	.97	15	5	ND	1	2	1	2	2	6	.04	.01	2	12	.14	17	.01	2	.12	.01	.01	1	1	20
CC-99-4-4706	2	11	6	22	.2	14	2	315	.69	7	5	ND	1	3	1	2	2	2	.03	.02	2	3	.01	50	.01	3	.08	.01	.04	1	1	5
CC-99-4-4707	5	89	13	181	.6	77	10	1190	3.74	40	5	ND	6	5	1	2	2	5	.01	.06	17	9	.03	208	.01	2	.35	.01	.13	1	8	20
CC-99-4-4708	1	22	14	75	.1	185	31	3050	5.75	101	10	ND	1	97	1	2	2	78	5.73	.09	7	159	3.25	70	.01	3	2.22	.01	.22	1	2	20
STD C/FA AU	21	60	42	133	6.9	73	29	1222	3.97	41	18	8	41	49	17	15	22	60	.48	.16	40	57	.88	185	.07	41	1.71	.07	.13	12	50	1200

APPENDIX E
STATEMENT OF QUALIFICATIONS

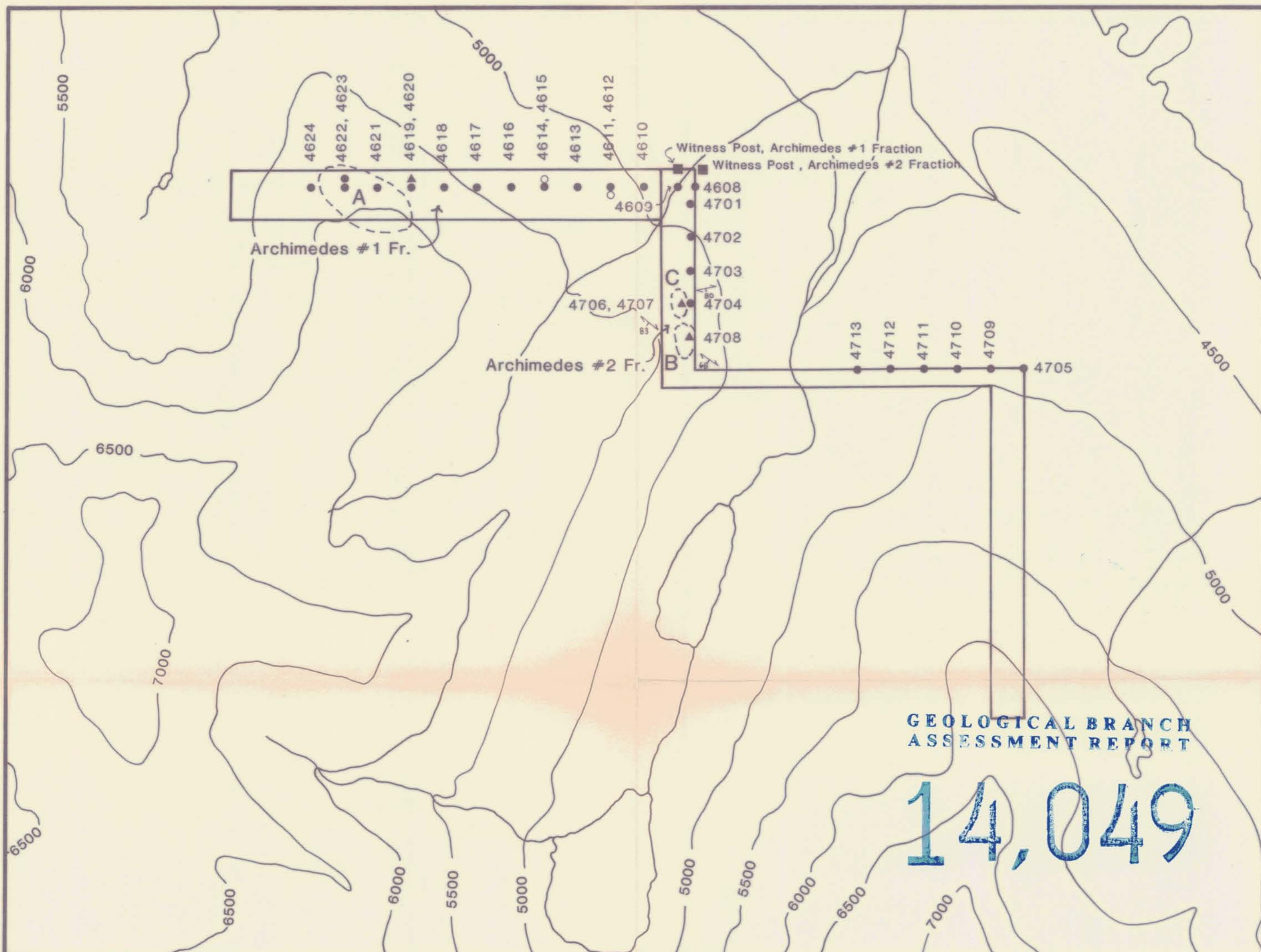
STATEMENT OF QUALIFICATIONS

I, Karen Louise Harrap, of 11 - 130 East 17th Street, North Vancouver, B.C., hereby certify that:

1. I am a graduate of Queen's University at Kingston, with a B.Sc. Honours (Geological Sciences) (1983). I am also a graduate from B.C.I.T. (Mining Engineering, 1984).
2. I have worked in the field of mineral exploration since 1981.
3. I am a geologist employed by Homestake Mineral Development Company, 640 - 1380 Burrard Street, Vancouver, B.C., involved in property and reconnaissance examinations.
4. The work in this report was done by myself.



Karen L. Harrap



GEOLOGICAL BRANCH
ASSESSMENT REPORT

LEGEND

SYMBOLS

- Area of Outcrop
- Soil Sample Site (CC-99-3-XXXX)
- Stream Sediment Sample Site
- ▲ Rock Chip Sample Site
- ↖ Foliation

LITHOLOGIC UNITS

- A coarsely crystalline Pyroxenite
- B Upper Triassic Transition Zone: Phyllite/Greenstone
- C Upper Triassic Black Phyllite ± quartz veins (cross cutting and parallel to foliation)



0 250 500 750 1000metres.

HOMESTAKE



MINERAL DEVELOPMENT COMPANY

ARCHIMEDES #1 FRACTION
and
ARCHIMEDES #2 FRACTION

SAMPLE LOCATIONS
& GEOLOGY

DRAWN
MS

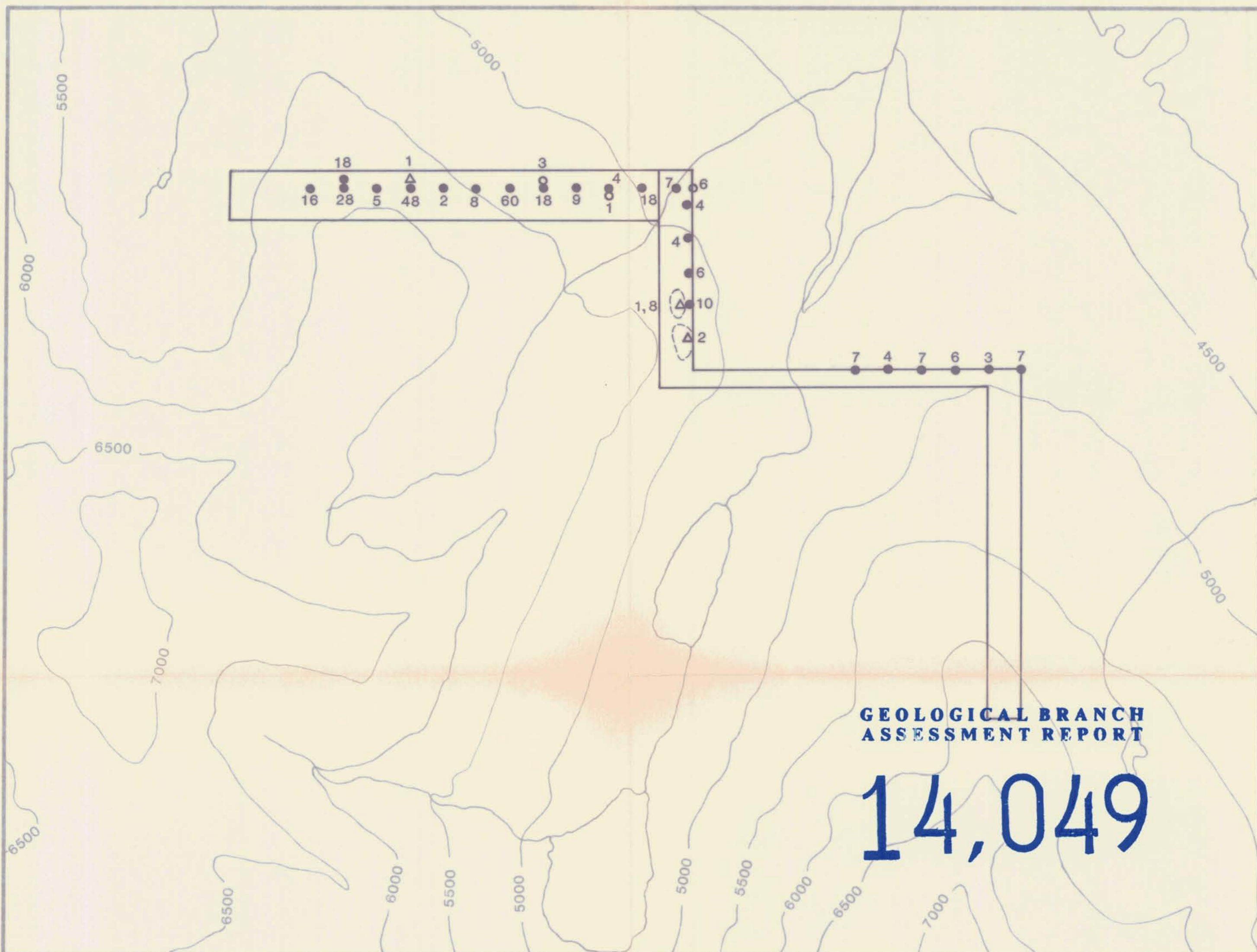
DATE
10/85

FILE CODE

93A/07

PLATE 1

REVISED _____



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

14,049



LEGEND

- Soil Sample
- Stream Sediment Sample
- △ Rock Chip Sample

0 250 500 750 1000metres.

HOMESTAKE



MINERAL DEVELOPMENT COMPANY

ARCHIMEDES #1 FRACTION
and
ARCHIMEDES #2 FRACTION

GOLD GEOCHEMISTRY
(ppb)

DRAWN
KMc

DATE
10/85

FILE CODE

93A/07

PLATE 2

REVISED