

GEOLOGICAL SURVEY BRANCH
ASSESSMENT REPORTS

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GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

TIME 1 and 2 MINERAL CLAIMS

**Upper Kitsault River Area
Skeena Mining Division
British Columbia**

**NTS: 103P/12E
55°42'N 129°38.6'W**

OWNER: LORNE B. WARREN

AUTHOR: N.C. CARTER, Ph.D. P.Eng.

DATE: JUNE 25, 1995

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

23,992

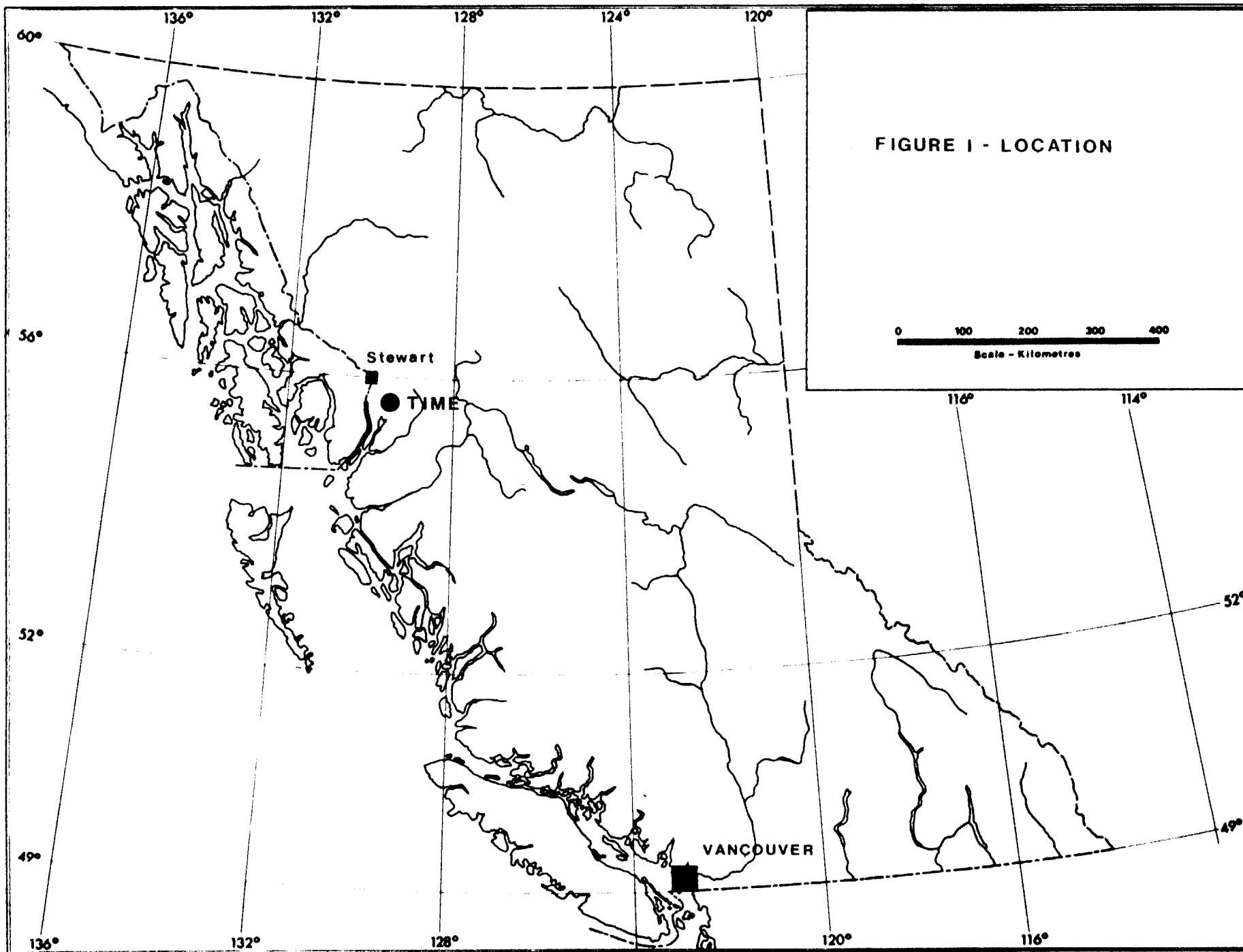
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INTRODUCTION

Location and Access

The TIME property is situated 35 km southeast of Stewart in northwestern British Columbia (Figure 1). The geographic centre of the two contiguous mineral claims comprising the property is at latitude 55°42' North and longitude 129°38.6' West in NTS map-area 103P/12E. The mineral claims, which cover the headwaters of a drainage system tributary to Kshwan River which flows into the head of Hastings Arm, are 8 km west of the formerly producing Dolly Varden and Torbrit silver mines in the upper Kitsault River region north of Alice Arm (Figure 2).

Access to the mineral claims is by helicopter from Stewart. A 15km trail from the head of Hastings Arm, used to access the area in the 1920's, is largely overgrown.

Mineral Property

The TIME property consists of two contiguous 4-post mineral claims registered in the name of Lorne B. Warren (Figure 3). Details of the mineral claim are as follows:

<u>Claim Name</u>	<u>Units</u>	<u>Record Number</u>	<u>Date of Record</u>
TIME 1	20	324216	March 27, 1994
TIME 2	20	324217	March 27, 1994

130° 15'

To Premier - 5 miles

130° 00'

45'

10'

15

56° 00'

45'

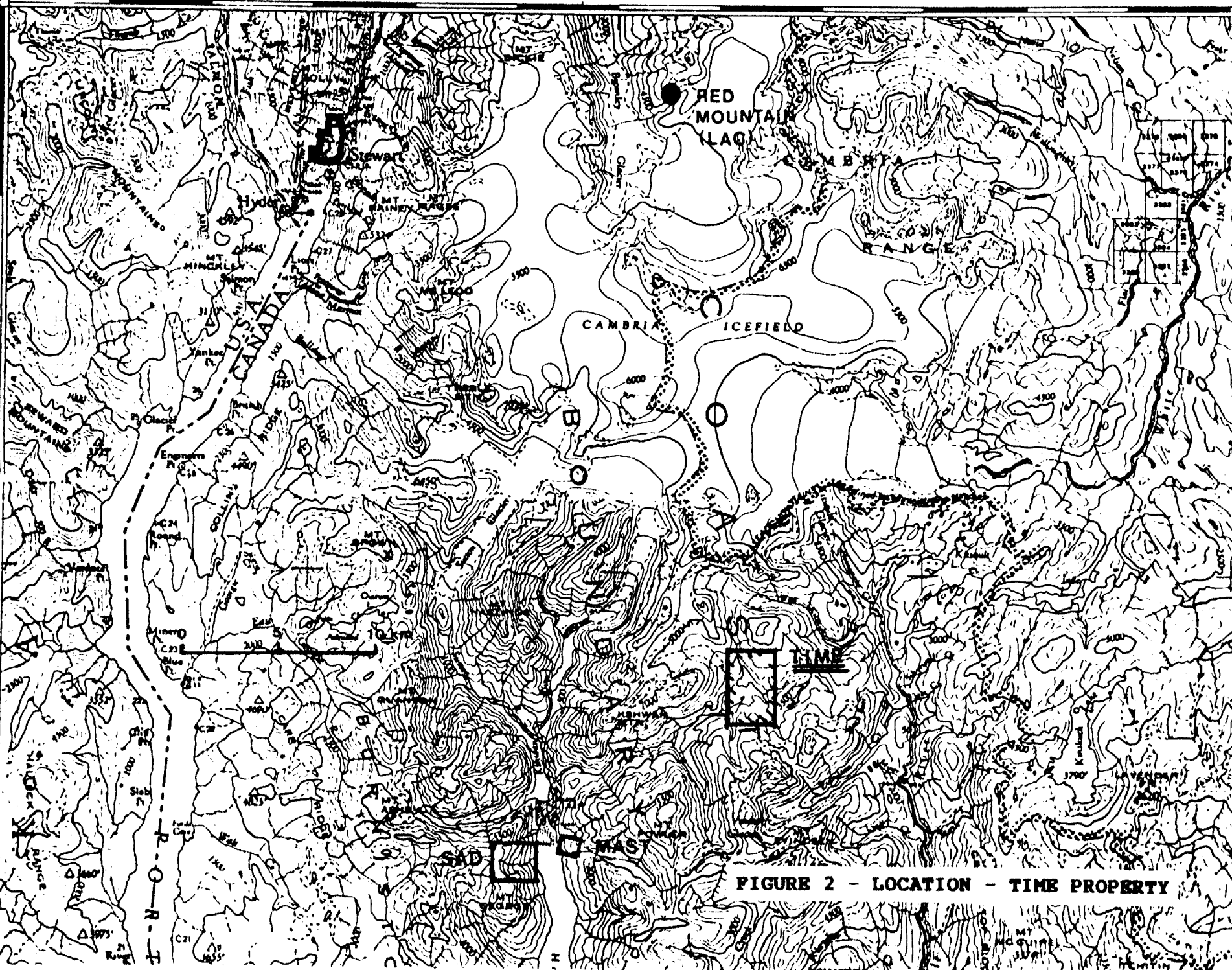


FIGURE 2 - LOCATION - TIME PROPERTY

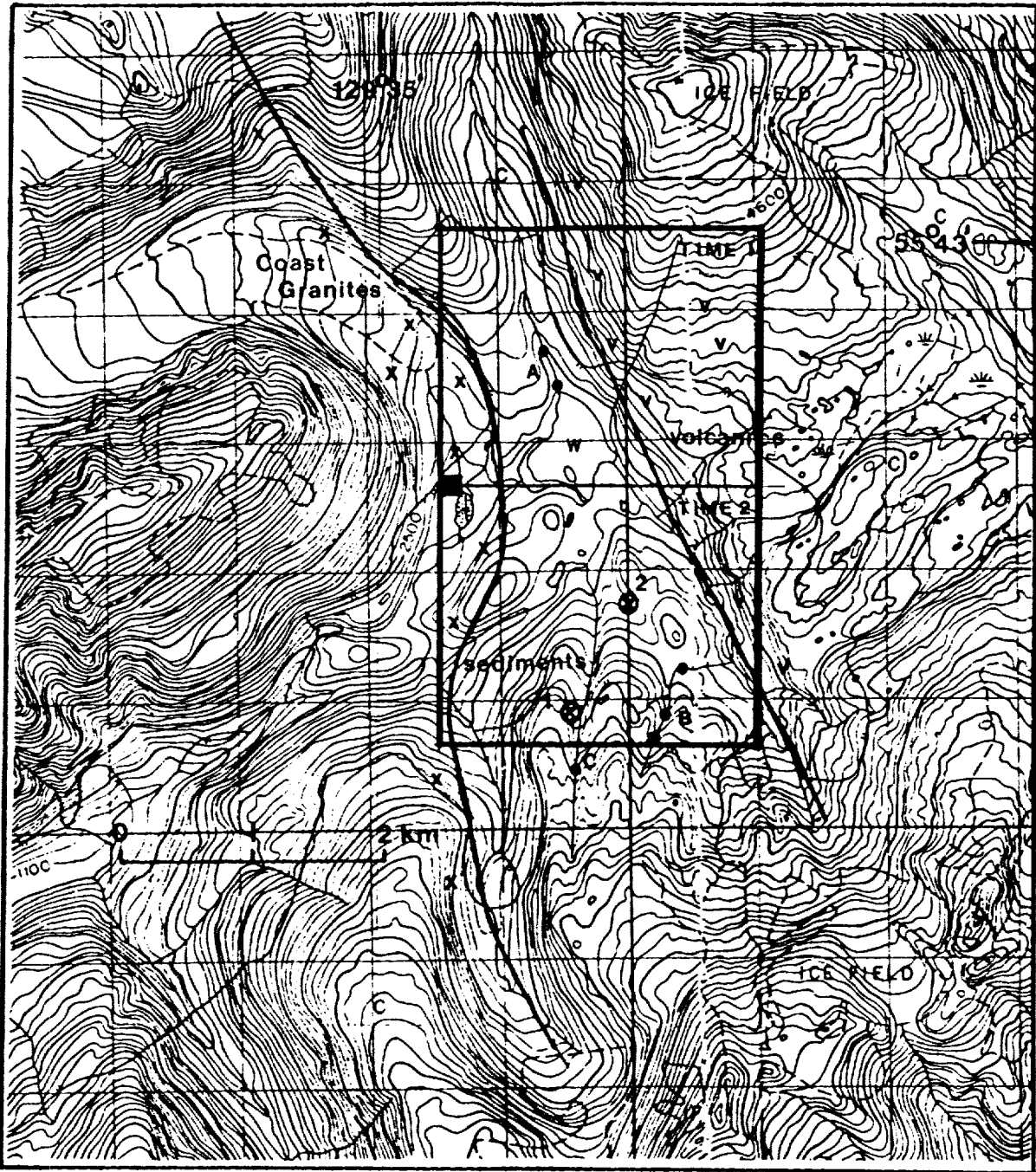


FIGURE 3 - TIME MINERAL CLAIMS

History

Initial prospecting in the area now covered by the TIME mineral claims, undertaken prior to 1922, resulted in the discovery of the Carpenter (Minfile 103P109) and Vimy Ridge (103P108) polymetallic vein occurrences. There are no records of subsequent work in this difficult-to-access area until the mid-1960's when a Newmont helicopter-supported stream sediment geochemical survey identified anomalous molybdenum and other base metals values in several of the drainages now covered by the TIME claims. Limited follow-up work was undertaken at this time.

Claims were relocated in 1981 on the basis of anomalous base metal and indicator element values in stream sediments which had been identified by a 1979 Provincial Government regional geochemical survey. Exploratory work between 1981 and 1991 included several stream sediment and soil geochemical surveys, prospecting and bedrock sampling and a three-hole (215 metres) diamond drilling program.

Present Status

The TIME 1 and 2 mineral claims were located by Lorne B. Warren in late March of 1994. Subsequent work included an attempt to access the property during inclement weather conditions September 22. A reconnaissance of the geological setting of the property, location of and sampling of one

documented mineral showing, brief examination of 1985 drill cores, and the collection of 9 stream sediment and five rock samples were undertaken by the writer with the assistance of Lorne B. Warren and Chris Warren on September 24.

GEOLOGY AND MINERALIZATION

Physical Setting

The TIME mineral claims cover moderately rugged terrain typical of the Coast Mountains. Elevations range from about 700 metres (2,300 ft.) above sea level near the common Legal Corner Post to more than 1400 metres (4,600 ft.) in the northeastern property area (Figures 3 and 4). Tree line extends to elevations of about 1000 metres above which is fairly open, sub-alpine terrain. The lower reaches of the property feature mature stands of timber with locally dense undergrowth.

Bedrock is well exposed in numerous drainages and along some of the steeper slopes throughout the area of the claims.

Regional Geological Setting

The TIME mineral claims are situated within Stikine terrane immediately adjacent to the eastern margin of the Coast Plutonic Complex. Stikine terrane in this area includes subaerial and submarine volcanic and sedimentary sequences of the Lower and Middle Jurassic Hazelton Group.

The property is centrally located within the Stewart and Anyox-Alice Arm mineral districts. Major past producing mines of the region include the Premier and Big Missouri gold-silver deposits, Dolly Varden and Torbrit silver deposits, Anyox and Granduc massive sulphide deposits and the Kitsault porphyry molybdenum deposit south of Alice Arm.

The Red Mountain gold property, now owned by Barrick Gold Corp. and situated 30 km north of the TIME claims (Figure 2), includes at least four en-echelon northwest trending zones of semi-massive sulphides. These are hosted by Hazelton Group felsic and pyritic volcanic rocks marginal to the middle Jurassic Goldslide granodiorite pluton which was investigated for molybdenum mineralization in the 1960's.

Published reserves for the Red Mountain gold deposits total 2.5 million tonnes grading 12.69 g/t (0.37 oz/ton) gold. A resource of between 2 and 3 million ounces gold has been estimated for the Red Mountain property.

Property Geology and Mineralization

The TIME mineral claims include a northwesterly trending sequence of Jurassic (Hazelton Group) fragmental volcanic rocks and clastic sediments which is in contact with granitic rocks of the Coast Plutonic Complex in the western property area (Figures 3 and 4).

Much of the central property area is underlain by highly

contorted argillaceous siltstones and greywackes. Structurally overlying these are green and purple volcanic breccias in the northeastern claims area and augite porphyry flows in the southeastern property area (Figure 4).

The layered sequences are cut by numerous, several metres wide diorite porphyry dykes which trend northeast and northwest and by northeast-striking, narrow lamprophyre dykes.

The sedimentary rocks contain locally abundant disseminated pyrite and the numerous gossans developed in these undoubtedly attracted initial prospecting interest. The Carpenter showing, believed to be within the boundaries of the present claims, has been described (Minister of Mines Annual Report, 1922) as consisting of quartz breccia zones containing pyrite, galena, sphalerite, chalcopyrite and some visible gold in at least two showings areas. One of these may be a zone found by more recent work in 1983 (Caulfield, 1984; area "1" on Figure 3) which was described as a 2 metre wide shear zone exposed in a small northeasterly flowing creek over a distance of 50 metres. Within the shear are northerly-striking, steeply dipping quartz stringers, up to 30 cm wide and containing pyrite and blue-grey metallic minerals. Initial sampling of this zone (Caulfield, 1984) returned values of 1.5 g/t gold and 35 g/t silver. A grab

sample of nearby quartz float assayed 45.6 g/t gold and 3160 g/t silver. Three short (62.2 - 76.5 metres) inclined NQ diamond drill holes, drilled in a southeasterly direction to test this zone, intersected greywacke containing finely disseminated pyrite but apparently no quartz veins or significant values (Cremonese,1986).

Limited prospecting programs in the 1980's also resulted in the discovery of a quartz-sulphide float boulder (area "2" - Figure 3) which returned assays of 1.8% lead, 3.3% zinc, 1.3% arsenic, 850 g/t silver and 3.2 g/t gold (Caulfield,1984).

Stream sediment sampling in the 1980's (Groves,1982; Cremonese,1983) confirmed original Government results (which did not include analyses for gold) and indicated at least three different geochemical "domains". These include area "A" in the northern property area (Figure 3) where stream sediments yielded highly anomalous arsenic values and up to 3.5 ppm silver and 60 ppb gold. Area "B" (Figure 3) returned higher base metal values including up to 270 ppm copper, 170 ppm lead, 1500 ppm zinc, 4.7 ppm silver, 130 ppm barium and between 15 and 75 ppb gold. Stream sediments in "C" drainage returned slightly lower base metal values (186 ppm copper, 60 ppm lead, 1300 ppm zinc) and up to 4.1 ppm silver and 40 ppb gold. Samples from drainages in the eastern property area

yielded enhance base metal plus strongly anomalous barium values.

Subsequent rock and soil geochemistry (Cremonese,1990,1992) yielded some encouraging values in the vicinity of showing area "1" and marginal to the drainage in area "C" (Figure 3). A rock sampling program conducted in January of 1991 (Wilson,1991) returned only marginal values since much of the prospective area of the claims was under snow cover.

1994 PROGRAM RESULTS

The 1994 program on the TIME mineral claims included the collection and subsequent analyses of 9 stream sediment and 5 rock samples for subsequent analyses. Sites selected for stream sediment sampling were designed to confirm and expand upon previous survey results. Four of the five rock samples were collected nearby stream sediment sample sites and ARE character samples. One chip sample, from the main showing area (sample 60397 - Figure 4), was collected from a 0.5 metre width of the zone exposed in a small creek.

Sample locations, determined by a Global Positioning System (GPS) instrument mounted in the helicopter used for access, are shown on Figure 4. Samples collected were analyzed by Min-En Laboratories for 31 elements by

inductively coupled argon plasma (ICP) techniques and for gold by fire geochemistry with an atomic absorption (AA) finish. Complete analytical results are contained in Appendix I. Significant results are as follows:

Stream Sediment Samples

<u>Sample No.</u>	<u>Au(ppb)</u>	<u>Ag(g/t)</u>	<u>Cu(ppm)</u>	<u>Pb(%)</u>	<u>Zn(%)</u>
TIME 94-1	66	1.5	256	95	790
TIME 94-2	39	2.0	144	60	606
TIME 94-3	47	0.6	111	37	152
TIME 94-4	11	0.8	107	32	253
TIME 94-5	22	1.3	109	32	232
TIME 94-6	152	2.9	105	124	319
TIME 94-7	22	0.1	58	107	686
TIME 94-8	14	0.7	75	30	121
TIME 94-9	57	1.0	97	32	147

Rock Samples

<u>Sample No.</u>	<u>Location</u>	<u>Au(ppb)</u>	<u>Ag(ppm)</u>	<u>Cu(ppm)</u>	<u>Pb(ppm)</u>	<u>Zn(ppm)</u>
60396	TIME 94-1	71	3.6	89	193	299
60397	Showing	394	6.4	76	457	239
60398	TIME 94-2	35	47.8	216	437	499
60399	TIME 94-3	19	3.4	90	98	97
60400	TIME 94-9	4	1.2	81	104	378

Stream sediment samples have the same general level of values for most elements as determined by earlier surveys. A comparison with recently re-released Provincial Government regional geochemical survey data for NTS map-area 103P indicates that several of the 1994 samples are above 98th percentile values (strongly anomalous) for one or more elements. 98th percentile values determined by this survey include gold (75 ppb), silver (1.0 ppm), copper (110 ppm),

lead (44 ppm) and zinc (295 ppm).

CONCLUSIONS AND RECOMMENDATIONS

1994 stream sediment and rock sampling of the TIME property generally confirmed earlier results and identified several areas for additional investigative work.

One chip sample from the so called main showing area yielded low gold and silver values; a cursory examination of drill cores recovered from three short inclined holes drilled in 1985 indicated few intersections of quartz veining. This is perhaps not surprising since it appears that these holes were drilled parallel to the strike of the zone.

In the write's opinion, the location of the original Carpenter showing remains to be determined. It may well lie in the drainage sampled by stream sediment TIME 94-6 which returned strongly anomalous gold (152 ppb) and silver (2.9 ppm) values.

Other areas warranting detailed prospecting and sampling include the eastern claims area where the polymetallic nature of stream sediment sample results suggests potential for volcanogenic massive sulphide mineralization.

COST STATEMENTWages

- September 22, 23

N.C Carter - 1 day @ \$400	\$400.00
Lorne B. Warren - 1 day @ \$250	\$250.00
Chris Warren - 1 day @ \$125	<u>\$125.00</u>
	\$775.00

Transportation

Vehicle rental - 1 day	\$75.00
Helicopter - 2.25 hours	\$1,822.50
Airfare - Victoria-Smithers (split)	<u>\$177.50</u>
	\$2,075.00

Accommodation, Meals

September 22	\$116.90
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Analytical Costs

5 rock samples @ \$19.53	\$97.65
9 stream sediment samples @ \$16.85	<u>\$151.65</u>
	\$249.30

Report Preparation

N.C. Carter - 2.25 days @ \$400	\$900.00
Word processing, duplicating	<u>\$100.00</u>
	\$1,000.00

TOTAL EXPENDITURES	\$4,216.20
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REFERENCES

- Carter, N.C. and Grove, E.W.(1972): Geological Compilation of the Stewart, Anyox, Alice Arm and Terrace Areas, B.C. Ministry of Energy Mines and Petroleum Resources Preliminary Map No. 8.
- Caulfield, D.A.(1984): Geological Report - Hanna 1 and 2 Claims, Skeena Mining Division, B.C. BCMEMPR Assessment Report 12122
- Cremonese, D.(1983): Geochemistry and Prospecting, Hanna 1 and 2 Claims, Skeena Mining Division BCMEMPR Assessment Report 11081
- (1986): Diamond Drilling - Susanne 3 Mineral Claim, Skeena Mining Division BCMEMPR Assessment Report 15602
- (1990): Rock and Soil Geochemistry - Anna South BCMEMPR Assessment Report 19994
- (1992): Rock and Soil Geochemistry, Anna Claims, Skeena Mining Division, BCMEMPR Assessment Report 22314
- Minister of Mines, B.C. Annual Report 1922, p.51
- Wilson, Gordon(1991): Rock Geochemical Work, Anna 1 - 4 Claims, Skeena Mining Division, BCMEMPR Assessment Report 21312

STATEMENT OF QUALIFICATIONS**Lorne B. Warren**

- 1963 - Geological Assistant - Mastodon Highland Bell Mines Ltd. - Dome Mtn. Area - Smithers
- 1964 - Geological Assistant - Phelps Dodge Corp. - Stikine
- 1965 - Prospector and geological assistant - Native Mines Ltd. - Bridge River area
- 1966-1971 - Field technician and line cutter-pro prospector - Manex Mining Ltd. - Smithers area
- 1971-1979 - Field supervisor - Granby Mining Corp. - Smithers
- 1979 - Present - President of CJL Enterprises Ltd., Kengold Mines Ltd. and Angel Jade Mine Ltd. - prospecting and contract mining services

Chris Warren

- 1990 - completed Smithers Bush Skills course; geological assistant at Duckling Creek
- 1991 - assisted in Bush Skills course; line cutting at Johanson Lake
- 1992 - Contract claim staking
- 1993 - Loader operator at placer operation, contract claim staking
- 1994 - Placer testing, Manson Creek area, magnetometer surveys, prospector's assistant

AUTHOR'S QUALIFICATIONS

I, NICHOLAS C. CARTER, of 1410 Wende Road, Victoria, British Columbia, do hereby certify that:

1. I am a Consulting Geologist, registered with the Association of Professional Engineers and Geoscientists of British Columbia since 1966.
2. I am a graduate of the University of New Brunswick with B.Sc.(1960), Michigan Technological University with M.S.(1962) and the University of British Columbia with Ph.D.(1974).
3. I have practised my profession in eastern and western Canada and in parts of the United States for more than 25 years.
4. The foregoing report on the TIME mineral claims is based on the results of geochemical sampling work done under my supervision September 22 and 23,1994 and on my personal geological observations.



N.C. Carter, Ph.D. P.Eng.
Victoria, B.C.
June 25, 1995

APPENDIX I
Analytical Results

COMP: N C CARTER
 PROJ: BAND MAST SAD TIME
 ATTN: N.C. Carter

MIN-EN LABS — ICP REPORT
 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
 TEL:(604)980-5814 FAX:(604)980-9621

FILE NO: 4S-0283-LJ1
 DATE: 94/10/06
 * silt * (ACT:F31)

SAMPLE NUMBER	AG PPM	AL %	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA %	CD PPM	CO PPM	CU PPM	FE %	K %	LI PPM	MG %	MN PPM	MO PPM	NA %	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	TI %	V PPM	ZN PPM	GA PPM	SN PPM	W PPM	CR PPM	Au-Fire PPB
BAND 94-5	.2	.47	1	1	46	.9	5	.88	.1	7	25	2.77	.05	22	.85	534	1	.01	39	870	21	7	106	1	.06	49.3	56	1	1	3	24	3
BAND 94-6	.3	.56	1	1	59	1.0	7	.89	.1	8	29	3.32	.07	25	.98	668	2	.01	42	950	18	9	107	2	.07	63.5	67	3	1	4	28	3
BAND 94-7	.3	.53	1	1	66	1.1	6	.82	.1	8	30	3.20	.06	24	.94	676	1	.01	41	880	20	9	98	2	.06	59.8	63	3	1	4	27	4
BAND 94-8	.1	.85	1	1	74	1.4	5	.22	.1	11	48	3.54	.10	29	.64	1150	3	.01	49	1380	42	13	62	1	.03	45.8	101	1	1	4	27	6
BAND 94-9	.1	.91	1	1	87	1.9	6	.36	.1	18	66	4.60	.08	37	1.27	2661	4	.01	139	1210	39	14	105	1	.01	39.4	172	1	2	5	49	17
BAND 94-10	1.1	.84	1	1	119	1.5	14	.70	.1	14	68	5.81	.14	31	1.57	1046	17	.01	33	2470	55	13	128	3	.13	159.1	151	1	1	10	45	35
TIME 94-1	1.5	.92	1	1	101	2.1	8	.40	.1	19	256	6.36	.04	25	1.65	2879	24	.01	163	1810	95	29	66	1	.03	188.1	790	1	2	8	61	66
TIME 94-2	2.0	.74	1	1	87	2.0	7	.40	.1	12	144	4.96	.04	25	1.68	1488	19	.01	113	1340	60	23	56	1	.04	188.3	606	1	2	8	59	39
TIME 94-3	.6	.78	1	1	224	1.5	7	.63	.1	14	111	5.15	.08	25	1.53	959	4	.01	53	1630	37	16	82	1	.05	103.0	152	1	1	5	32	47
TIME 94-4	.8	.77	1	1	152	1.2	7	.55	.1	9	107	3.73	.27	22	1.10	869	8	.05	55	1100	32	14	72	1	.06	112.1	253	1	1	5	32	11
TIME 94-5	1.3	.79	1	1	144	1.4	7	.62	.1	9	109	4.18	.23	23	1.35	735	9	.04	59	1140	32	14	78	1	.06	124.0	232	2	1	6	37	22
TIME 94-6	2.9	.69	1	1	60	1.6	8	1.91	.1	12	105	5.36	.09	20	1.49	708	4	.01	64	1420	124	20	112	1	.07	84.0	319	1	1	5	27	152
TIME 94-7	.1	1.36	1	1	225	1.9	11	.78	.1	22	58	4.42	.07	23	.72	8496	12	.01	85	1570	107	23	111	1	.04	58.0	686	1	1	6	23	22
TIME 94-8	.7	.79	1	1	104	1.4	7	1.00	.1	11	75	4.13	.08	26	1.71	852	4	.01	44	1430	30	15	96	1	.05	107.4	121	3	1	5	29	14
TIME 94-9	1.0	.73	1	1	77	1.6	5	1.07	.1	12	97	4.52	.06	24	1.63	740	3	.01	48	1380	32	14	102	1	.05	101.0	147	1	1	4	28	57

TIME PROPERTY - STREAM SEDIMENT SAMPLES

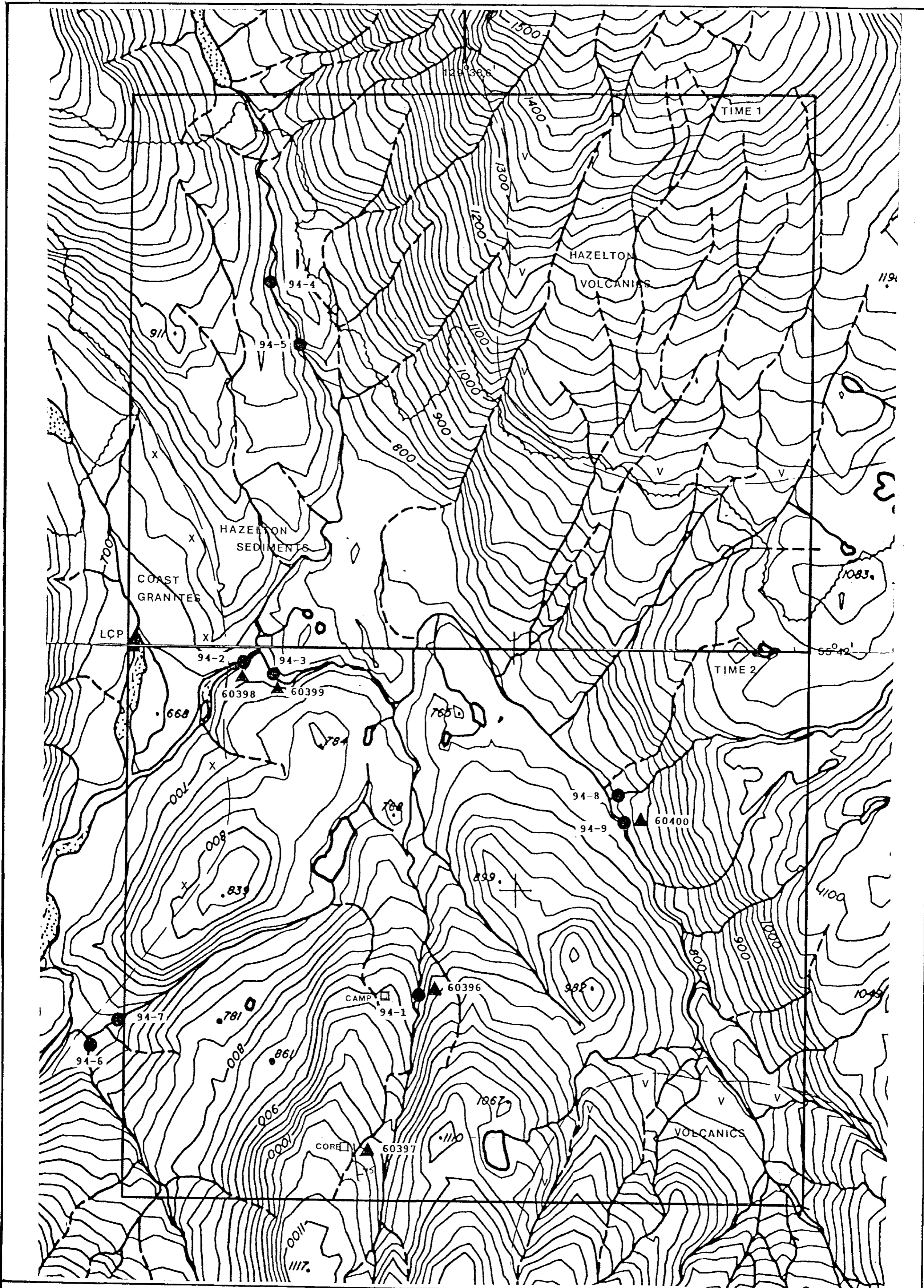


FIGURE 4 - TIME PROPERTY
GEOLOGY and SAMPLE LOCATIONS

- Stream Sediment Sample
- ▲ Rock Sample
- - - Quartz-Sulphide Vein

0 500 m.

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