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GEOLOGICAL REPORT
ON THE
SAD MINERAL CLAIM
Hastings Arm
Skeena Mining Division
British Columbia

NTS: 103P/12W
55°37'N 129°50'W

OWNER: LORNE B. WARREN

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

DATE: MAY 15, 1995

FILMED

GEOLOGICAL BRANCH
ASSESSMENT REPORT

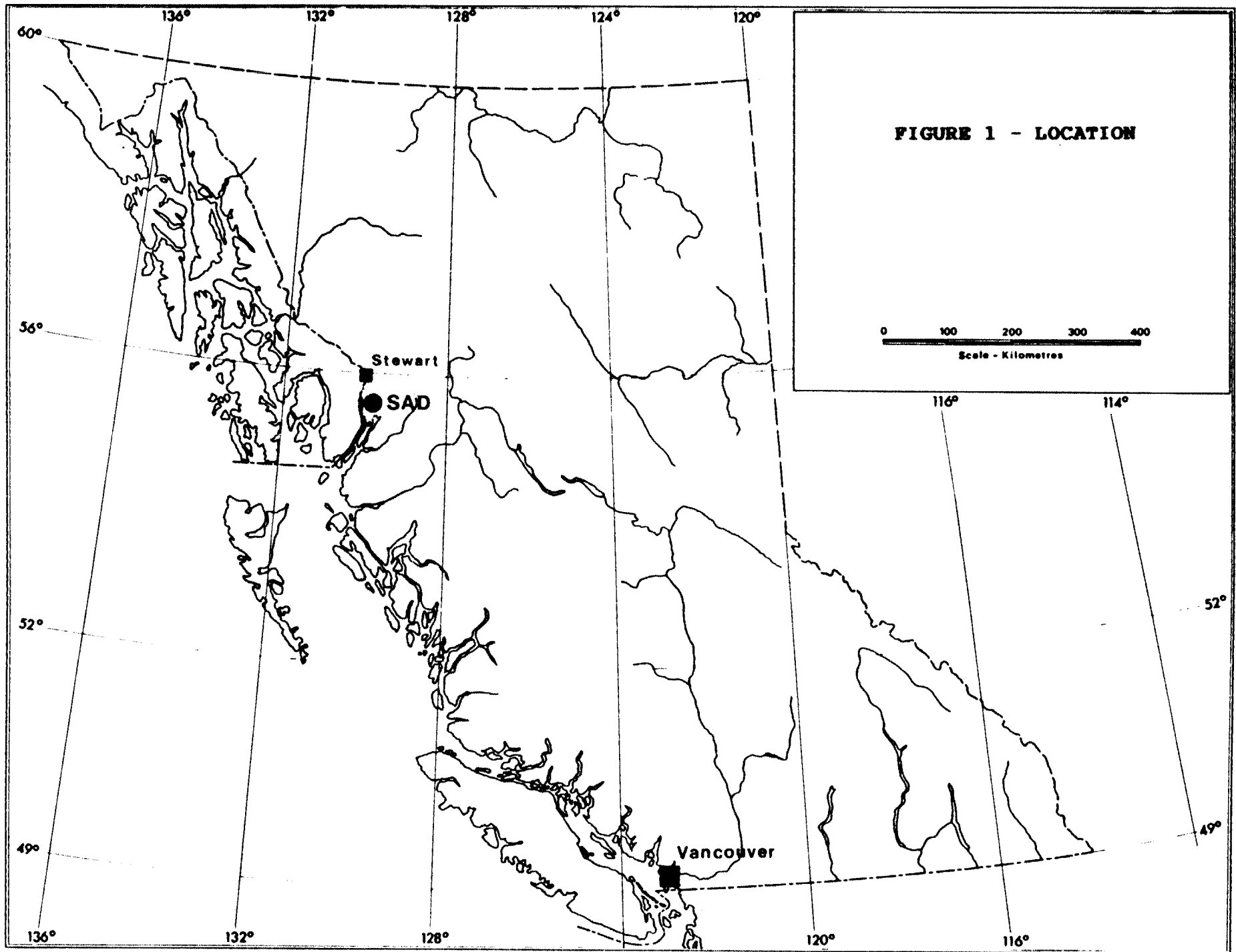
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INTRODUCTION

Location and Access

The SAD property is situated immediately west of the head of Hastings Arm 40 km south-southeast of Stewart in northwestern British Columbia (Figure 1). The geographic centre of the mineral claim is at latitude 55°37' North and longitude 129°50' West in NTS map-area 103P/12W (Figure 2).

Access to the area of the old workings on the claims is by helicopter from Stewart. The lower reaches of the claim are accessible by boat from the end of road at Kitsault on Alice Arm, some 40 km southeast of the property.

Mineral Property

The SAD property consists of one 4-post mineral claim 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>
SAD	20	323603	February 17, 1994

History

Initial exploratory work in the area now covered by the SAD mineral claim followed the discovery in 1926 of the Saddle showing (Figure 3), a pyrite-galena bearing quartz vein containing gold and silver values. The following year, Silver Crest Mines Ltd. undertook hand trenching and the

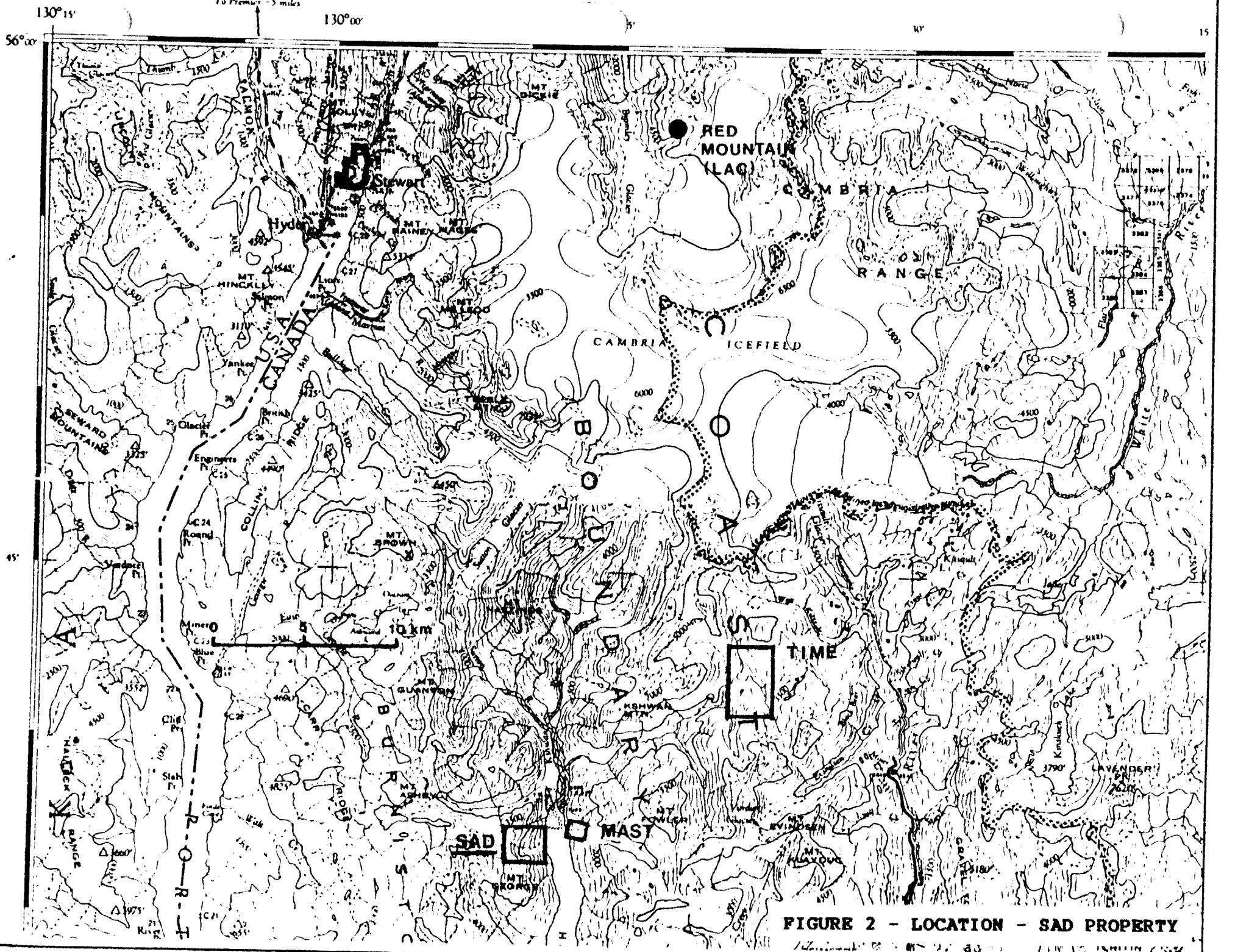


FIGURE 2 - LOCATION - SAD PROPERTY

sinking of three shallow shafts (14, 11.6 and 2.5 metres deep) from which 9 metres of drifting was completed. Work in 1929 included the construction of a 3 km aerial tramway (8 steel towers) between the tide flats at the head of Hastings Arm and the principal workings at an elevation of 1250 metres. An adit was driven some 50 metres and 3 tonnes of ore yielding 1436 kg lead, 44 kg copper and 2613 g silver were shipped. The adit was driven an additional 140 metres in 1930.

The Elkhorn gold showing, east of the Saddle (Figure 3), was discovered in 1929 and work through 1934 consisted of a number of hand trenches and open cuts.

Only limited work has been undertaken in the area of the present claim since the 1930's. Some investigative work was undertaken by Mayfair Moly Mines Ltd. in 1967. Nor Con Exploration Ltd. conducted a reconnaissance of the Saddle showings and environs in 1982 (Cavanagh,1983a) and completed detailed surface channel sampling of the two principal vein structures in 1983 (Cavanagh,1983b). The property was subsequently acquired by Winspear Resources Ltd. and a 1987 program included 145 line km of airborne VLF-EM and magnetometer surveys, construction of 11 km of flagged grid, a surface VLF-EM survey and the collection and analyses of 69 rocks and 342 soil samples (Di Spirito,1987).

Present Status

The SAD mineral claim was located by Lorne B. Warren February 17, 1994. Investigative work by the writer on September 24, 1994 included the determination of accurate locations of the surface trenches, shafts and adit portal using a Global Positioning system (GPS), an assessment of the property geological setting and the structure of the two main vein systems, a preliminary survey of the underground workings and the collection of 5 rock samples for subsequent analyses.

GEOLOGY AND MINERALIZATION

Physical Setting

The SAD mineral claim includes a steep east-facing, forested slope and alpine terrain immediately west of the head of Hastings Arm. Elevations range from sea level to more than 1300 metres above sea level (Figures 3 and 4). Locally steep slopes occur adjacent to deeply incised drainages in the central and northern claim area (Figure 4).

The eastern and topographically lower area of the claim is typical of near sea level conditions on the north coast, featuring heavy timber and locally dense undergrowth. Tree cover extends to between 750 and 900 metres above sea level, above which gentler topography prevails. The area of the old

workings is in open, alpine terrain.

Regional Geological Setting

The SAD mineral claim, situated near the eastern margin of the Coast Plutonic Complex, covers the northern half of roof pendant of metasedimentary and metavolcanic rocks which is enclosed by Coast granitic rocks.

The property is midway between 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 40 km north of the SAD claim, 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 SAD mineral claim is principally underlain by metasedimentary and metavolcanic rocks of late Triassic-early Jurassic age which strike northeasterly to northwesterly and dip moderately west. These are part of a 4 x 3.5 km roof pendant within Coast Plutonic Complex granitic rocks. The northern contact of the roof pendant is well exposed in the northwestern claim area a short distance north of the principal mineral showings (Figures 3 and 4).

Granodiorites in the contact area are medium-grained and migmatite zones are developed within highly contorted layered rocks marginal to the contact. Numerous aplitic sills cut both the granodiorites and the metasedimentary - metavolcanic rocks which contain abundant disseminated pyrite. Other granitic dykes were noted cutting the layered sequence including a 10 metres wide diorite dyke southwest of the showings area which is displaced some 30 metres on the north side of a northeast trending fault.

The principal mineral showings (Saddle occurrence) in the northwestern claim area (Figure 4) are associated with parallel quartz veins and stringers which trend northwesterly and dip moderately to steeply west and are crudely conformable to layering within the metavolcanic - metasedimentary sequence. Narrow, 0.1 to 0.3 metre wide

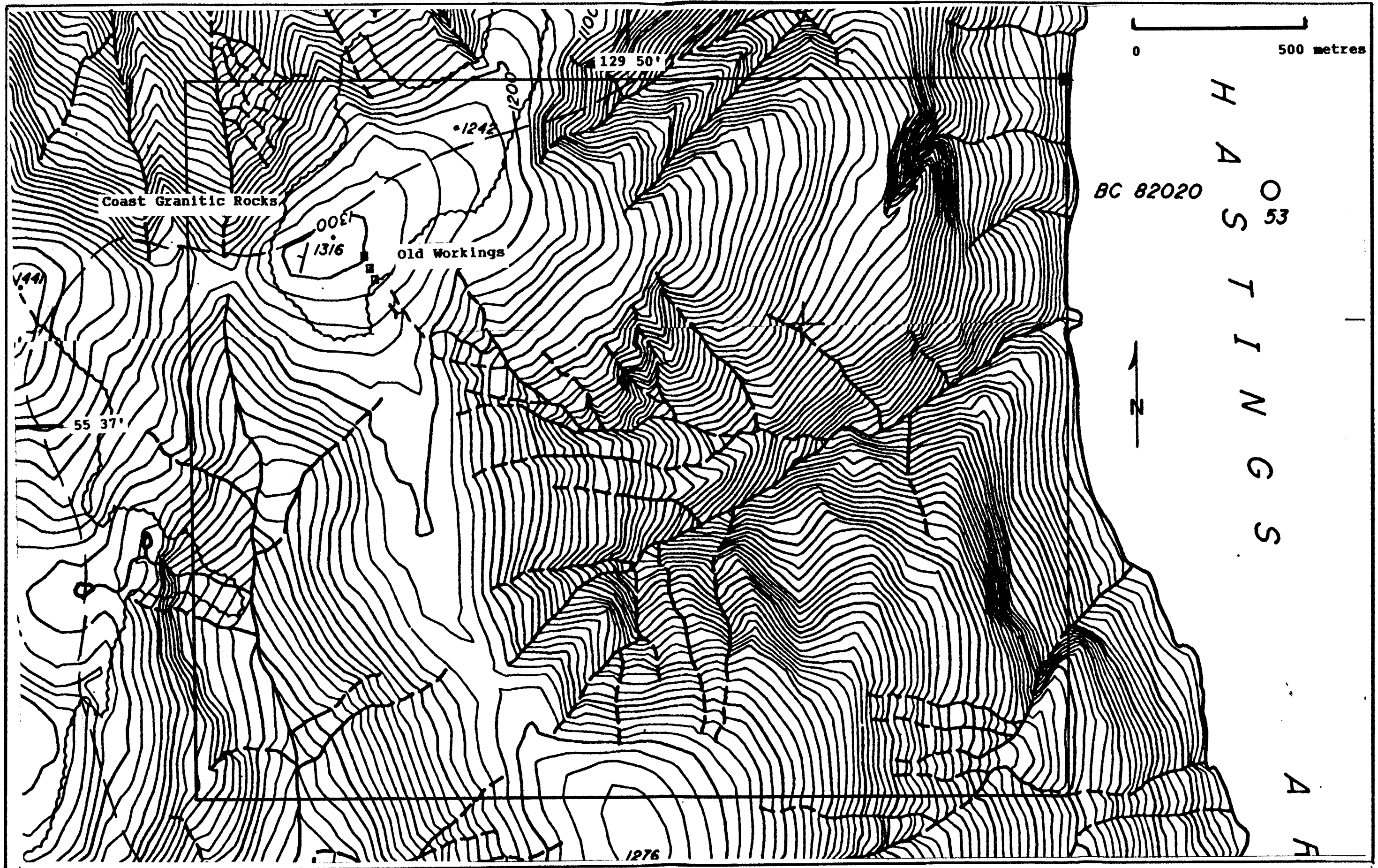


FIGURE 4 - SAD PROPERTY - LOCATION OF OLD WORKINGS

post-mineral basic dykes, which strike northeasterly and dip steeply north, are offset by the northwest structures hosting the mineralized quartz veins.

Previous work included several open cuts and three shallow, inclined shafts on two parallel quartz veins 10 to 20 metres apart (Figure 5). Most of this work was directed to the easternmost structure which is between 1 and 1.5 metres wide and is exposed over a strike length of about 100 metres.

The vein is well exposed in open cuts and at the collars of the three shafts and best mineralization, consisting of lenses of massive galena, sphalerite, pyrite and chalcopyrite, is developed over 0.3 to 0.6 metre widths and lengths of between 2 and 3 metres along the hangingwall of the vein.

Descriptions of the three shafts are contained in the 1927 Minister of Mines Annual Report. The northernmost shaft (Figure 5) was sunk to a depth of about 11.6 metres and 5 metres of drifting followed the vein which included a 0.5 metre wide lens of massive sulphides along the hangingwall. This material is evident in a dump adjacent to the shaft. The southern shaft was only 2.4 metres deep but a good description of the nature of the mineralization in a vertical sense is given for the middle shaft which is 14 metres deep

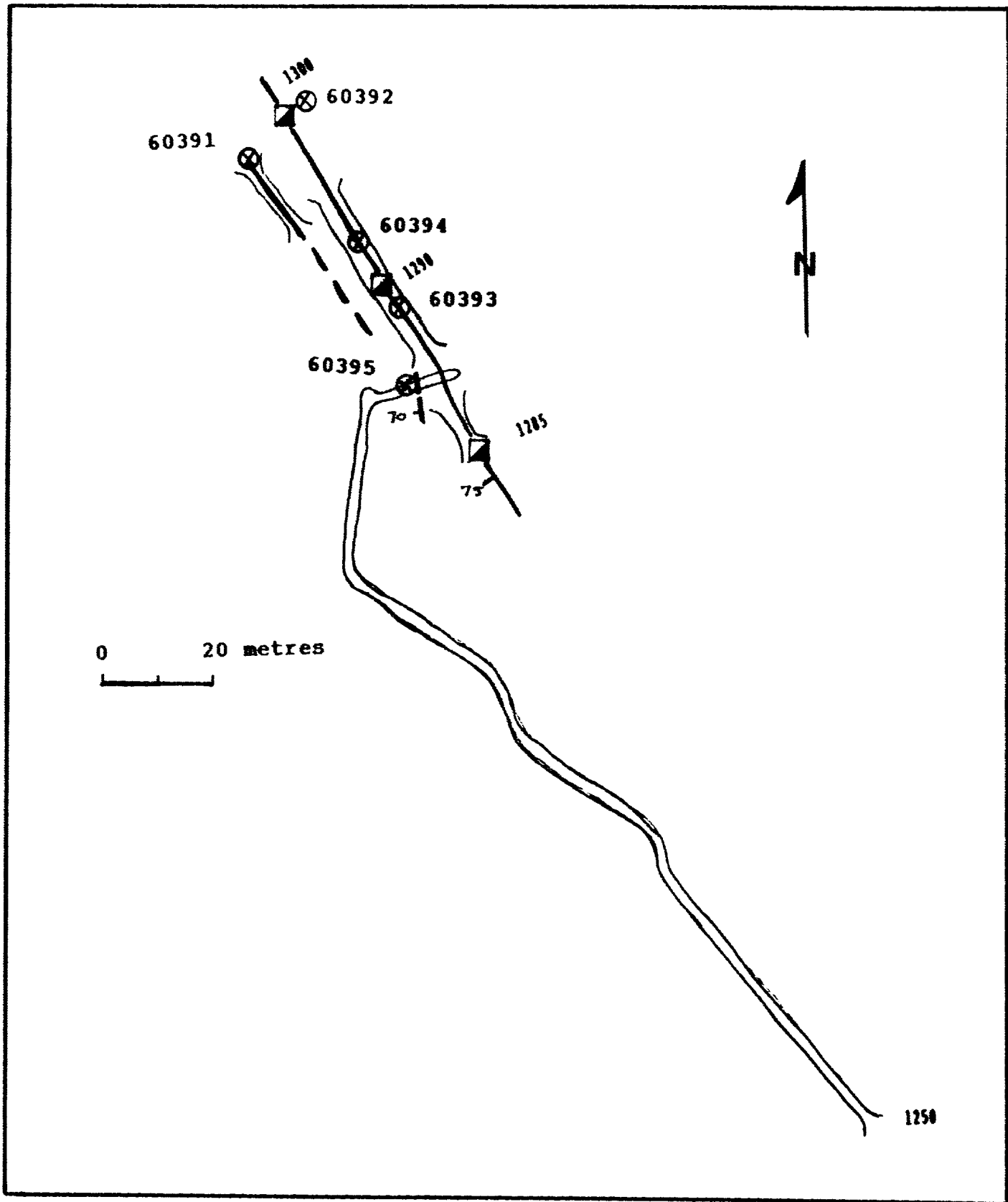


FIGURE 5 - SAD PROPERTY - SAMPLE LOCATIONS

and includes a 3.7 metres drift. A 0.30 to 0.40 metre wide lens of massive sulphides on the vein hangingwall extends to a depth of 5.5 metres and is followed by a lower tenor of mineralization to 10 metres from which point massive sulphides persist to the bottom of the shaft.

Best mineralization seen in the westernmost vein structure (Figure 5) occurs along the open cut near its known northern limits. The structure, which includes sheared country rocks and quartz veining, is up to 1.5 metres wide and contains lenses of massive galena, sphalerite, pyrite and chalcopyrite.

Detailed channel sampling of the two principal structures was undertaken in 1983. Best precious metals values, obtained from massive sulphide lenses, included 9.8 g/t gold, 730.3 g/t silver over 35 cm; 241.8 g/t gold, 630.8 g/t silver over 18 cm; 36.1 g/t gold, 75.1 g/t silver over 13 cm and 21.8 g/t gold, 197.1 g/t silver over 65 cm (Cavanagh, 1983).

Subsequent sampling (Di Spirito, 1987), involving mainly the collection of character or grab samples, yielded lower gold and silver values, the best being two samples from between the middle and southern shafts which returned 15.29 g/t gold and 236.6 g/t silver and 8.74 g/t gold and 44.5 g/t silver.

The initial 12 metres of the 190 metres long adit, collared south of, and below, the surface workings, was reportedly (Minister of Mines Annual Report, 1929) driven along a 0.3 to 1.2 metres wide quartz vein containing 2.5 - 5 cm of massive galena along its footwall. Beyond this point, little quartz veining and/or mineralization was encountered with the exception of a 0.60 metre wide, weakly mineralized vein some 10 metres from the adit face.

Sampling of the adit back at 10 to 20 metres intervals (Di Spirito, 1987) yielded low results, the best being 0.62 g/t gold and 324.3 g/t silver over a 1 metre width some 50 metres from the portal.

The relationship between veins reported in the adit and those on surface is unclear from earlier reports due to the fact that information regarding the precise location of the adit relative to the surface workings was not provided.

The Elkhorn showing, believed to be within the boundaries of the present SAD claim, has been described as being situated about midway between the Saddle showings and tidewater at an elevation of approximately 1050 metres. The location shown on Figure 3 corresponds to that shown on the Minfile map (103P013) for this area and is by no means precise. A search of the assumed area of the showing was made by helicopter in 1994 with no success.

Past descriptions (Minister of Mines Annual Report, 1929) of the Elkhorn showing refer to a silicified, 1 metre wide zone containing epidote, garnet, pyrite, pyrrhotite, galena and sphalerite and locally, "some spectacularly finely divided gold." A sample of sulphide mineralization containing no free gold, collected from this apparent skarn zone, returned 5.5 g/t gold and 17.1 g/t silver. Two other zones were reported as being between 15 and 30 metres higher in elevation. The Minister of Mines Annual Report for 1934 describes trenches and open cuts over an apparent strike length of 180 metres.

1994 PROGRAM RESULTS

The 1994 program on the SAD mineral claim included the determination of precise locations for the three shafts and the adit portal by utilising a global positioning system (GPS) instrument. Locations, accompanied by point elevations above sea level, are shown on Figure 5.

The three shafts are equidistant apart (35 metres) along the eastern vein system; the adit portal is 145 metres south-southwest of southernmost shaft and 35 metres vertically below it.

A preliminary survey of the adit was undertaken by Brunton compass and topofill chain and its configuration, as

illustrated on Figure 5, suggests it was initially driven on the easternmost vein but then swung too far west before intersecting it again by way of cross-cutting toward the eventual face.

Several confirmatory samples, collected from the two main veins, 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. Four of the samples were subsequently assayed to more accurately determine silver, lead and zinc concentrations.

Sample locations are shown on Figure 5 and complete analytical results are contained in Appendix I. Significant results are as follows:

<u>Sample No.</u>	<u>Au(ppb)</u>	<u>Ag(g/t)</u>	<u>Cu(ppm)</u>	<u>Pb(%)</u>	<u>Zn(%)</u>
<i>Western Vein</i>					
60391 (grab)	2665	1022.0	>10000	57.20	9.46
<i>Eastern Vein</i>					
60392 (grab)	229	694.0	>10000	35.80	6.79
60393 (0.3m)	3440	178.5	6473	1.19	17.60
60394 (0.4m)	73	64.3	1857	1.82	3.14
		(ppm)		(ppm)	(ppm)
60395 (0.7m) (adit)	25	2.5	79	377	4159

CONCLUSIONS AND RECOMMENDATIONS

Previous work in the area of the present SAD claim indicated the presence of locally significant concentrations

of lead, zinc and copper with locally good gold and silver grades. The 1994 program confirmed the results of earlier work and determined more accurate locations for the old workings.

A preliminary survey of the adit suggests that the vein intersected near the face is probably the down dip extension of the eastern vein structure. The lack of appreciable values in the one sample collected at this location is not considered to be particularly significant in view of the apparent lens-like nature of the massive sulphides which contain the better precious and base metal grades within the quartz vein structure. A better understanding of the geometry and predictability of these high grade shoots will be required to adequately assess the potential of this zone.

Additional exploratory work is warranted for the SAD claim. A concerted effort should be made to identify strike extensions to the known Saddle vein system which is apparently offset on the north and south by northeast trending fault zones. A 30 to 50 metre offset of a northwesterly trending granitic dyke, noted along the southern fault zone, may provide a clue to a possible vein extension south of the adit.

Additional prospecting and sampling should also include a diligent search to locate the Elkhorn showing.

COST STATEMENT**Wages**

- September 24 -

N.C. Carter - 0.5 day @ \$400 \$200.00

Transportation

Vehicle rental - 1 day \$75.00

Helicopter - 1.0 hour \$810.00

Airfare - Victoria-Smithers (split) \$177.50

Accommodation, Meals

September 24 \$38.96

Analytical Costs5 rock samples - 31 element ICP + gold
and subsequent assays for 4 samples \$202.51**Report Preparation**

N.C. Carter - 2 days @ \$400 \$800.00

TOTAL EXPENDITURES \$2,303.97

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.
- Cavanagh, Regis(1983a): Reconnaissance Project of the Saddle Claim Group, Skeena Mining Division, BCMEMPR Assessment Report 11076
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- Di Spirito, Frank(1987): Geological, Geochemical and Geophysical Report on the Saddle-Shakti Property, Skeena Mining Division, BCMEMPR Assessment Report 16299
- Minister of Mines, B.C. Annual Reports - 1926, p.77
- 1927, p.68
- 1929, p. 80,82
- 1930, p. 83
- 1934, p. B14

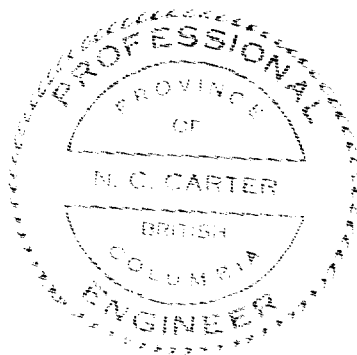
AUTHOR'S QUALIFICATIONS

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 geological comments contained in the foregoing report are based on my personal observations made while conducting the described work program on the SAD mineral claim September 24,1994.



N.C. Carter, Ph.D. P.Eng.



Victoria, B.C.
May 15, 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-RJ1
 DATE: 94/10/06
 * rock * (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
60381	.1	.69	332	1	74	2.9	9	2.22	.1	27	18	12.01	.15	19	1.10	1105	6	.02	59	1100	24	55	643	1	.01	62.0	45	1	1	4	40	1
60382	.1	.34	458	3	65	2.3	8	.55	.1	7	21	9.20	.26	6	.29	235	77	.04	63	1080	34	22	158	3	.01	22.6	125	1	2	6	125	11
60383	.1	.66	1	1	94	1.6	7	2.39	.1	9	26	4.28	.15	18	1.09	1110	3	.03	19	1840	35	20	390	1	.01	104.7	61	2	1	5	35	1
60384	.1	.31	932	1	70	1.4	7	2.82	.1	16	17	3.14	.28	3	.52	3051	3	.02	18	1620	50	38	553	2	.01	19.8	68	1	1	3	22	7
60385	.1	.87	1	1	197	1.9	8	1.82	.1	11	21	4.68	.52	19	1.14	887	4	.02	20	1830	34	26	295	2	.01	75.7	75	3	1	4	18	6
60386	.1	.09	674	1	54	.8	7	9.66	.1	3	7	2.22	.09	1	.11	3051	21	.01	18	250	223	137	578	1	.01	9.3	1019	1	1	5	91	6
60387	.6	1.14	1	18	91	2.6	9	1.06	.1	13	76	6.56	.52	27	1.26	601	5	.02	124	5420	62	29	578	5	.01	61.1	137	4	1	7	82	13
60388	.1	.54	648	1	54	3.1	10	3.35	.1	20	56	>15.00	.08	17	.96	1457	1	.02	61	700	46	60	837	1	.01	57.6	44	1	1	3	38	10
60389	22.8	.28	8957	1	63	1.1	17	.29	>100.0	3	26	3.41	.41	1	.07	54	2	.01	11	1650	1120	42	52	5	.01	10.3	157	1	1	5	91	274
60390	37.1	.23	283	1	47	.9	12	.09	.1	15	777	3.22	.25	3	.28	285	5	.01	14	290	8905	40	10	4	.01	15.4	1582	1	1	7	137	995
60391	>200.0	.08	462	33	7	.9	151	.02	>100.0	34	>10000	2.94	.03	2	.06	165	18	.01	21	450	>10000	610	38	3	.01	5.7	>10000	1	2	148	30	2665
60392	>200.0	.11	458	3	6	.8	203	.03	>100.0	20	>10000	2.40	.03	2	.10	133	21	.01	14	470	>10000	363	33	4	.01	11.9	>10000	3	2	83	67	229
60393	182.1	.43	288	79	15	1.6	47	.03	>100.0	37	6473	4.64	.10	14	.46	669	26	.01	27	570	>10000	66	57	3	.01	34.4	>10000	1	3	304	132	3440
60394	53.9	.57	94	1	4	1.9	16	.04	>100.0	26	1857	6.15	.01	10	.71	947	8	.01	24	190	>10000	44	24	2	.01	36.0	>10000	1	3	3	105	73
60395	2.5	.20	52	1	14	.3	4	1.06	69.1	4	79	1.02	.10	4	.19	893	8	.01	11	170	377	7	8	1	.01	14.2	4159	1	1	11	234	25
60396	3.6	.47	154	1	62	1.3	10	.22	.1	6	89	3.13	.11	13	1.24	233	5	.03	53	410	193	15	34	3	.09	79.0	299	9	1	12	189	71
60397	6.4	.81	1	1	47	1.4	5	.24	.1	5	76	2.51	.17	30	1.78	436	6	.02	28	860	457	25	39	3	.01	69.7	239	8	1	8	101	394
60398	47.8	.41	25	1	68	.8	7	.55	.1	7	216	1.90	.10	12	.83	470	6	.02	65	640	437	112	60	2	.03	88.3	499	4	1	12	197	35
60399	3.4	.67	1	1	103	.9	16	.60	.1	9	90	3.80	.11	14	1.10	238	5	.10	33	810	98	18	66	1	.19	85.8	97	6	1	9	117	19
60400	1.2	.87	1	1	247	1.7	6	1.35	.1	8	81	3.37	.24	22	1.51	818	5	.01	57	550	104	26	115	3	.01	47.3	378	7	1	6	61	4

* SAD PROPERTY - ROCK SAMPLES



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FAX (604) 847-3005

Assay Certificate

4S-0283-RA1

Company: **N C CARTER**
Project: **BAND MAST SAD TIME**
Attn: **N.C. Carter**

Date: **OCT-24-94**

Copy 1. N.C.Carter, Victoria, B.C.

We hereby certify the following Assay of 4 pulp samples submitted OCT-21-94 by N.C. Carter.

Sample Number	Ag g/tonne	Ag oz/ton	Pb %	Zn %
60391	1022.0	29.81	57.20	9.46
60392	694.0	20.24	35.80	6.79
60393	178.5	5.21	1.19	17.60
60394	64.3	1.88	1.82	3.14

Certified by _____

MIN-EN LABORATORIES