

BRITISH COLUMBIA
PROSPECTORS ASSISTANCE PROGRAM
MINISTRY OF ENERGY AND MINES
GEOLOGICAL SURVEY BRANCH

PROGRAM YEAR: 1994/95

REPORT #: PAP 94-3

NAME: R.H. MCMILLAN

Geological, Geophysical and Geochemical
Report
on the
Pike #1&2 Claims

Atlin Mining Division
British Columbia
NTS 104M/15E&W

Lat. 59 degrees 54 minutes North
Long. 134 degrees 44 minutes West

R. H. McMillan P.Geo.
4026 Locarno Lane
Victoria, B. C.

15 January 1995

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1 INTRODUCTION -- SYNOPSIS

The Pike Property was staked in 1994 to cover several strong copper and gold stream sediment anomalies draining back-arc volcanic strata of the Upper Triassic Stuhini Group in a geological environment believed permissive for the occurrence of Besshi-type copper-gold mineralization. Upper Triassic and Lower Jurassic back-arc volcanic strata elsewhere in British Columbia and adjacent Alaska are host to large volcanogenic massive sulphide deposits at Anyox, Granduc, Windy Craggy and Greens Creek - the accessible location of the Pike Property near a major highway and 60 kilometres from the tidewater port of Skagway is considered to be positive if a potentially economic deposit is discovered.

The 1994 work program has succeeded in confirming the presence of strongly anomalous gold and copper in stream silt samples. In bedrock, weak copper mineralization (this work) and highly anomalous gold (up to 590 ppb) in rock chip samples (Copeland, 1987) of interflow sedimentary "quartzite" have been documented within Stuhini Group mafic volcanic rocks.

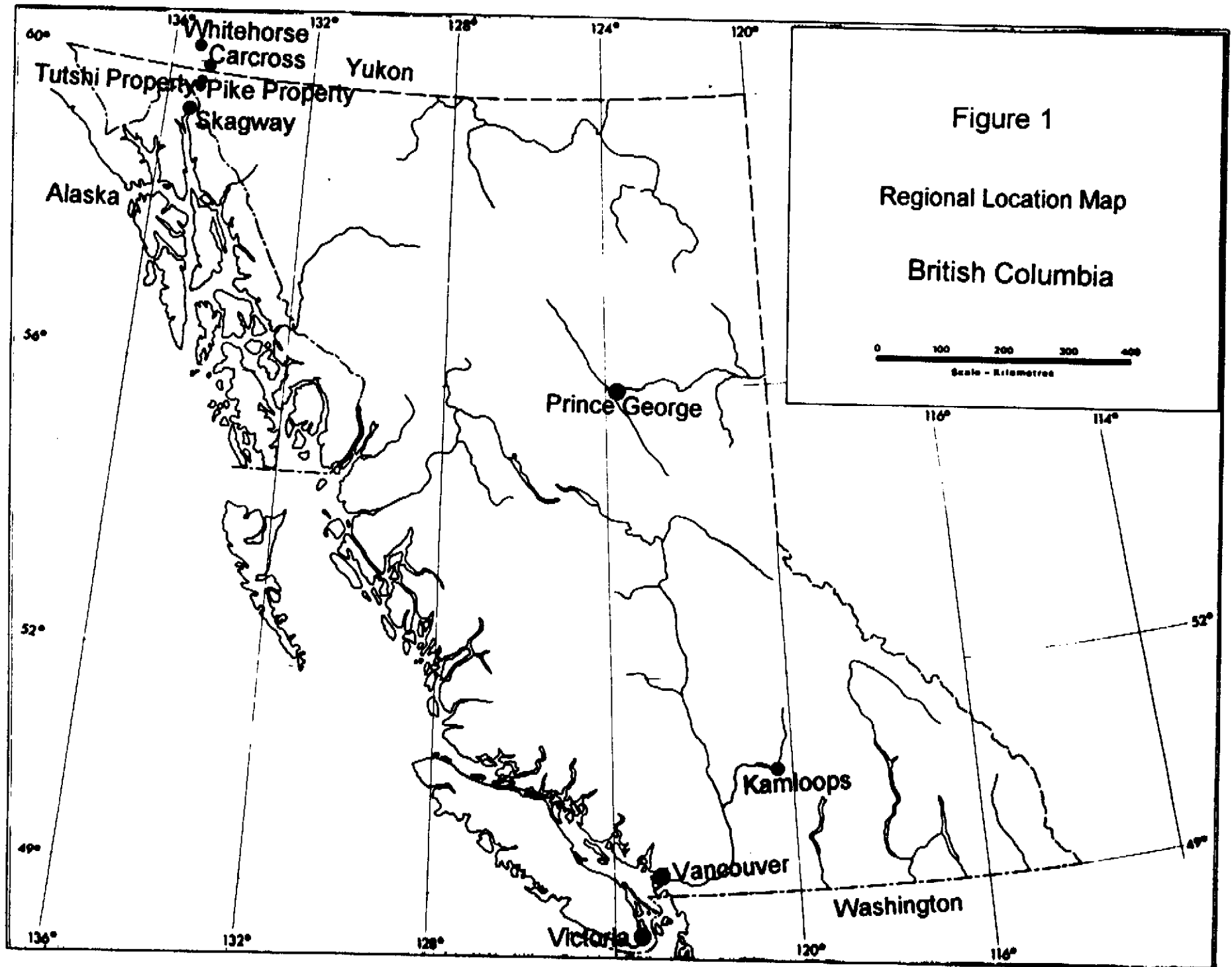
During the next phase of exploration, an airborne electromagnetic-magnetic-VLF-EM survey should be flown utilizing GPS and radar positioning devices. Following this, detailed geological mapping, prospecting and soil geochemical sampling should be carried out over potentially favourable areas such as volcanic interflow areas and areas of structural complexity prior to diamond drilling.

2 CLAIM STATUS

The property consists of two contiguous four-post mineral claims comprising eight and four units each. The claims information is listed in the following table:

<u>Claim Name</u>	<u>Tenure No.</u>	<u># Units</u>	<u>Date Staked</u>	<u>Expiry Date</u>
Pike #1	330201	8	1994-08-11	1995-08-11
Pike #2	330202	4	1994-08-11	1995-08-11

The claims were located by and are currently registered to Mr. R. Keefe of Francoise Lake B.C. The claims are beneficially owned by Mr. Keefe in partnership with the author R.H. McMillan.



3 LOCATION AND ACCESS

The Pike property is located on the east side of Tutshi Lake, opposite the Klondyke Highway which has been constructed on the west side of the Lake. The Venus Mine mill with a capacity of 150 tons per day, is 9 kilometres north of the property on the Klondyke Highway. The property is 70 kilometres northeast of the port of Skagway and 28 kilometres south of Carcross. The city of Whitehorse, located 80 kilometres north of the property, is the most convenient airport and source of supplies. Charter helicopters are available at Whitehorse and at Atlin, located 70 kilometres to the east. Convenient boat access can be gained from the Klondyke Highway.

4 TOPOGRAPHY AND VEGETATION

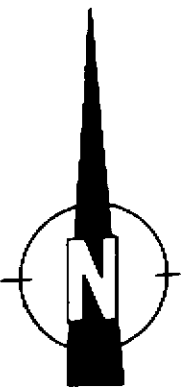
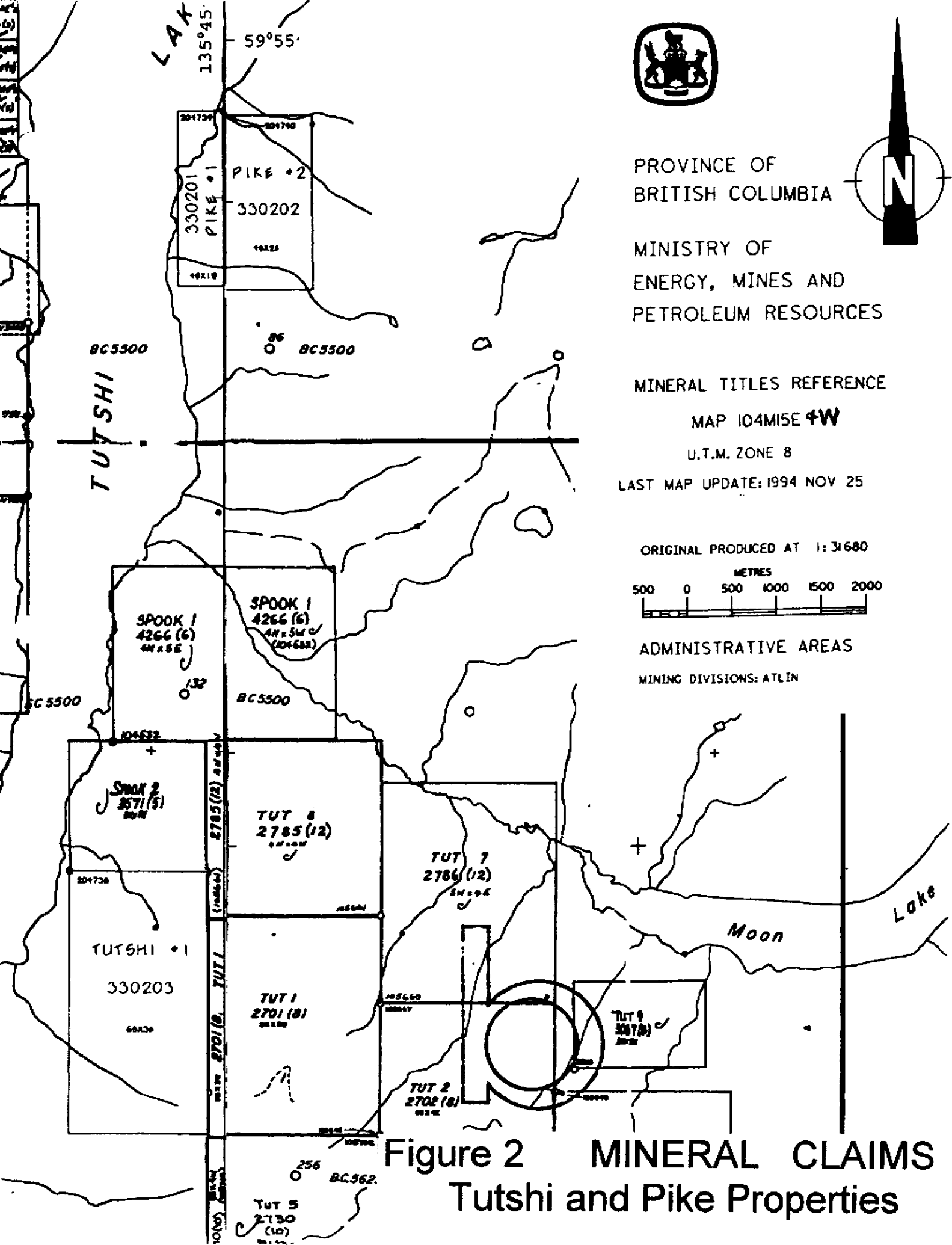
The property is located in the Tagish Highlands, east of the Coast Mountain Range. The Bennett-Tutshi-Tagish Lake intermontane systems occupy long, narrow north-trending valleys in the area. Elevations range from Tutshi Lake level of 707 metres to mountain peaks of 1800 metres. Lower elevations are forested with spruce, fir, pine and poplar. Alpine conditions prevail above 1200 metres. Creeks carry water year-round, although during dry periods the creeks seep underground 200 metres from the lake.

5 PAST EXPLORATION WORK

The earliest record of work on the Pike Property was by Dupont Exploration in 1981 who staked the Take claims to cover a copper geochemical anomaly in a stream sample reportedly taken from the southern portion of the Pike Claims (Copeland, 1987).

In 1986, the area of the current Pike claims was staked by H. Copeland of Whitehorse who (Copeland, 1987) completed a program of geological mapping, prospecting and geochemical sampling (12 rock and 1 stream silt) and defined several gold anomalies up to 590 ppb (sample # TLR-8) in rock chip samples of altered pyritiferous "quartzite" over a width of 125 metres.

As part of an integrated geoscientific survey, the Geological Survey Branch of the B.C. Ministry of Energy Mines and Petroleum Resources collected five silt sediment samples in 1988 (Rouse et al, 1988). Two samples taken from the property were strongly anomalous. The creek draining the north end of the property returned an analysis of 30 ppb Au (sample # 870001), and the creek at the south end of the property returned 227 ppm Zn and 97 ppm Cu (sample # 8730001). More recently, two silt samples were taken from the area draining the claims in the regional geochemical survey covering NTS 104 M (Jackaman, W. and Matysek, P.F., 1993).



PROVINCE OF
BRITISH COLUMBIA

MINISTRY OF
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PETROLEUM RESOURCES

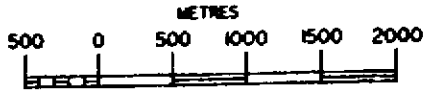
MINERAL TITLES REFERENCE

MAP 104M15E 4W

U.T.M. ZONE 8

LAST MAP UPDATE: 1994 NOV 25

ORIGINAL PRODUCED AT 1:31680



ADMINISTRATIVE AREAS

MINING DIVISIONS: ATLIN

**Figure 2 MINERAL CLAIMS
Tutshi and Pike Properties**

6 GEOLOGY

The Pike claims are located within the Whitehorse Trough east of the Coast Plutonic Complex. The main lithologies are Stikine Terrane volcanic arc rocks (Mihalynuk and Rose, 1988) of the Stuhini Group of Upper Triassic Age which include feldspar and pyroxene phyrlic lapilli tuffs, hornblende and pyroxene porphyry pyroclastics as well as wackes, argillites, conglomerates and limestone. The Stuhini Group has been called the Lewes River Group in the Yukon.

The Stuhini Group is succeeded by siltstones, arenaceous wackes, argillites and conglomerates of the Lower Jurassic Laberge Group (Inklin Formation), which is in turn overlain by a predominantly subaerial volcanic sequence of Middle to Upper Jurassic Age which includes lapilli tuffs, rhyolitic tuffs and feldspar porphyry flows (Mihalynuk and Rose, 1988).

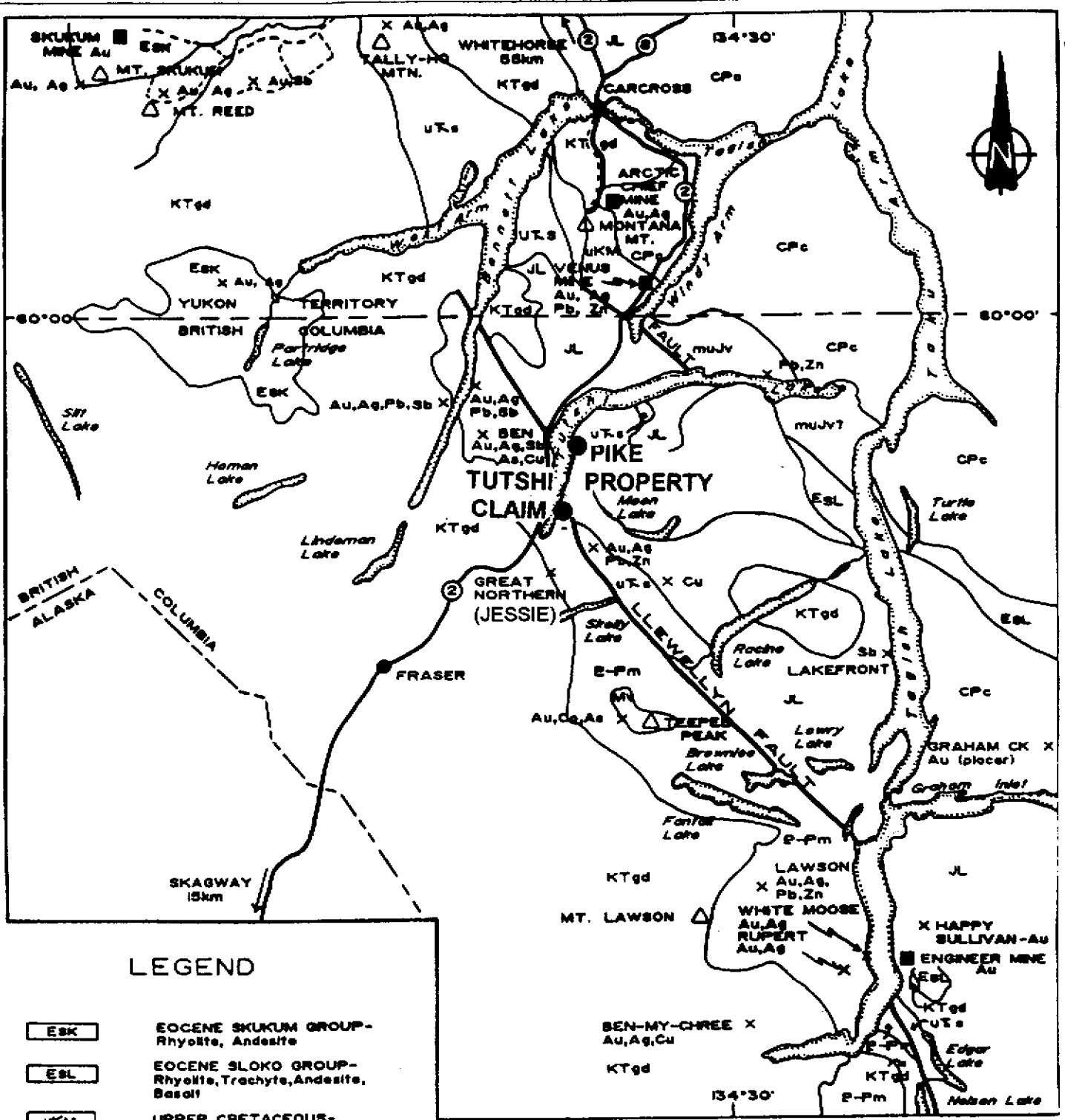
Batholiths, satellitic stocks and dykes of plutonic and hypabyssal rocks related to the Cretaceous and early Tertiary Coast Plutonic Complex intrude all of the above units. The main rock type is coarse grained hornblende biotite granite, although compositions range from granodiorite and quartz monzonite to alkali granite (Mihalynuk and Rose, 1988).

Structurally, the Llewlyn Fault is the dominant element in the area, and it marks the eastern limit of the Boundary Ranges Metamorphic Rocks which outcrop at the south end of Tutshi Lake. The fault is also the locus of a westward thinning of Laberge Group strata. This fault (Mihalynuk and Rose, 1988) has been a long-lived zone of structural weakness. Folding in the area is complex, particularly in the metamorphic rocks where isoclinal, coplanar folds could have been generated in several episodes. Jurassic and earlier volcanic and sedimentary rocks are also folded.

7 MINERALIZATION

MINFILE showing 104M 062 is located in the creek which cross-cuts the southern portion of the claims. The occurrence occurs in a prominent gossan caused by a pyritic "quartzite" interflow horizon within Upper Triassic Stuhini Group andesitic volcanics (Copeland, 1987). The unit is highly fractured and characterized by clay alteration and quartz stringers. Six grab and chip samples taken across 125 metres of the gossan returned gold values of 590, 71, 30, 55, 210, and 105 ppb Au.

In the northwestern corner of the property, fractured areas within Stuhini Group mafic volcanic rocks are malachite stained



LEGEND

- ESK EOCENE SKUKUM GROUP-
Rhyolite, Andesite
- ESL EOCENE SLOKO GROUP-
Rhyolite, Trachyte, Andesite,
Basalt
- UKM UPPER CRETACEOUS-
"Montana Mountain Volcanics"
- KTgd Mainly Cretaceous and Tertiary
granite and granodiorite
- Mv Undivided Mesozoic Volcanics
- JL JURASSIC LABERGE GROUP-
Sedimentary rocks
- muJv MIDDLE TO UPPER JURASSIC
VOLCANICS
- uTs UPPER TRIASSIC STUHNI GROUP-
(Lewes River in Yukon)
- CPc CARBONIFEROUS AND PERMIAN
CACHE CREEK GROUP
- E-PM PROTEROZOIC TO CAMBRIAN GROUP-
"Niuling Terrane Metamorphics"

SYMBOLS

- X Mineral Occurrence
- Past Producing Mine
- Road, Highway



Tutshi and Pike Properties

REGIONAL GEOLOGY

January, 1995

DRAWN BY: **RHM** Scale 1:500,000 **FIGURE 3**

Modified after Mihalynuk and Rose (1988) and Hart and Pelletier (1989)

over an area approximately 5 metres square. The chlorite-altered volcanic rocks contain up to 15% pyrite and minor chalcopyrite. Character samples taken by Ralph Keefe returned values of 2337 and 2348 ppm Cu (samples 44057 and 44058).

8 GEOCHEMISTRY

On August 10, 11 and 12, the author and Ralph Keefe collected 9 rock chip and 16 silt geochemical samples. The analytical results are presented in Appendix 3, the sample locations are shown on Figure 4, and information on the samples is tabulated below:

Table 1 - Rock Chip Samples

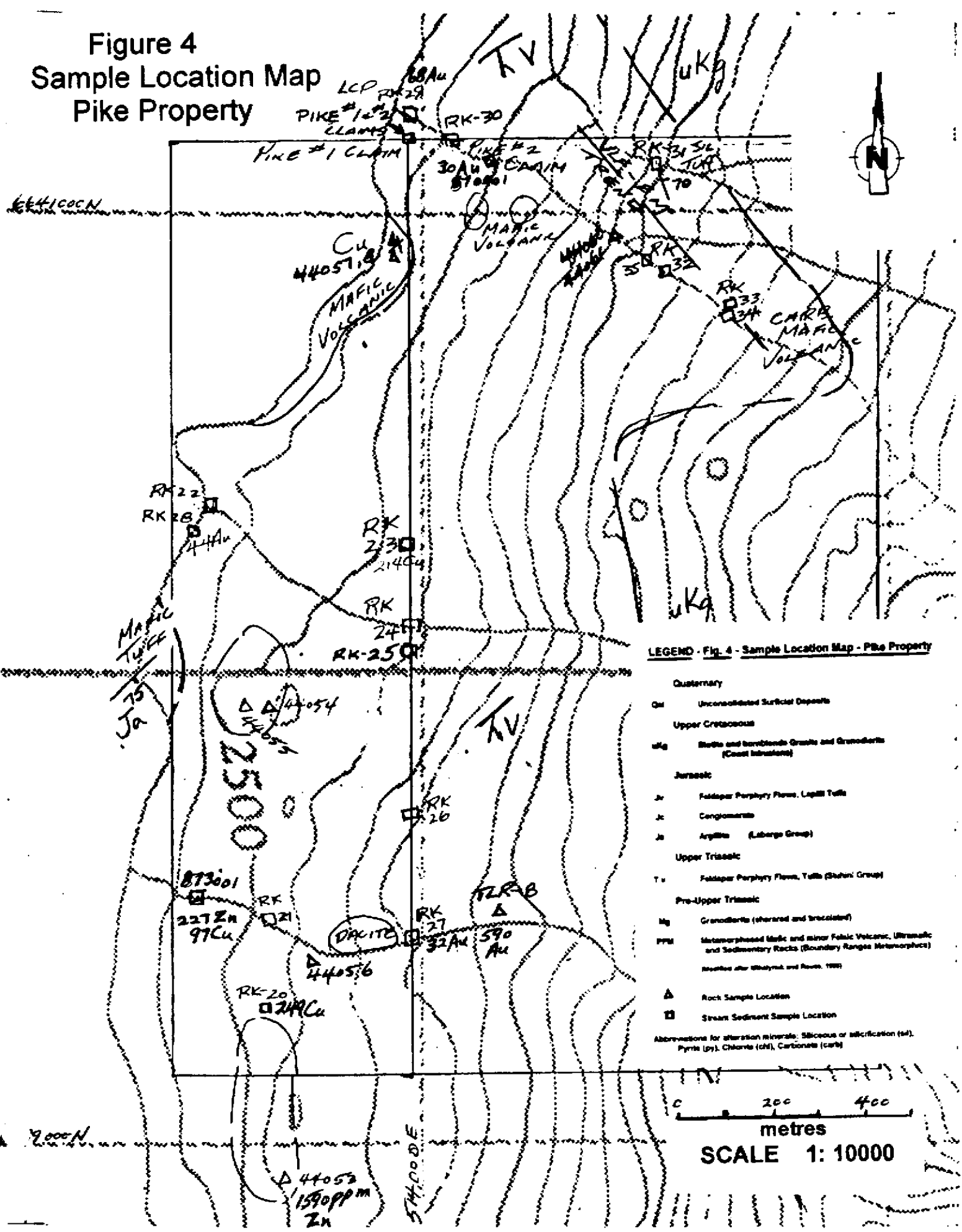
44053	grab sample, andesitic volcanic rock
44054	grab sample, andesitic volcanic rock
44055	grab sample, andesitic volcanic rock
44056	grab sample, "quartzite" boulder float
44057	grab sample, pyritic, malachite-stained mafic volcanic rock
44058	grab sample, pyritic mafic volcanic rock (no malachite)
44059	grab sample, gossanous tuffaceous rock, northern creek
44060	grab sample, gossanous mafic volcanic rock
44061	grab sample, gossanous mafic volcanic rock

Table 2 - Stream Silt Samples

RK-20	silt
RK-21	silt
RK-22	brown silt, 50 cm. creek
RK-23	grey-brown silt, 80 cm. creek
RK-24	brown silt, 30 cm. creek
RK-26	brown silt, 50 cm. creek
RK-27	brown silt, 2 m. creek
RK-28	brown silt, 50 cm. creek
RK-29	brown silt, alluvial fan
RK-30	brown silt, 12 m. braided stream
RK-31	brown silt, 1 m. creek
RK-32	brown silt, 1 m. creek
RK-33	brown silt, 20 cm. creek
RK-34	brown silt, 1 m. creek
RK-35	brown silt, 1 m. creek

The geochemical sampling results have confirmed the anomalous geochemical signature of the Pike Claims. Silt samples RK-20 and RK-23 returned values of 249 and 214 ppm Cu. Anomalous gold results of 32, 44 and 68 ppb Au were returned from silt samples RK-27, RK-28 and RK-29. A rock chip sample of altered andesite returned a value of 1590 ppm Zn.

Figure 4
Sample Location Map
Pike Property



LEGEND - Fig. 4 - Sample Location Map - Pike Property

- Quaternary
- Qd Unconsolidated Surficial Deposits
- Upper Cretaceous
- ukg Basals and hornblende Granite and Granodiorite (Coast Intrusions)
- Jurassic
- Jr Feldspar Porphyry Flows, Lepilli Tuffs
- Jc Conglomerate
- Ja Argillite (Lagerberg Group)
- Upper Triassic
- Tu Feldspar Porphyry Flows, Tuffs (Shuhai Group)
- Pre-Upper Triassic
- Mg Granodiorite (sheared and brecciated)
- PMI Metamorphosed Mafic and minor Felsic Volcanic, Ultramafic and Sedimentary Rocks (Boundary Ranges Metamorphose)
- modified after Whitham and Ross, 1980
- △ Rock Sample Location
- Stream Sediment Sample Location
- Abbreviations for alteration minerals: Siliceous or silicification (sd), Pyrite (py), Chlorite (chl), Carbonate (carb)



SCALE 1: 10000

9 GEOPHYSICS

Two lines of VLF-EM surveying were undertaken on the north boundary of the claims as an orientation survey. 600 metres was surveyed on the northernmost line which coincided with the northern claim boundary. A second subparallel line was surveyed 250 metres south for a length of 1150 metres. Because of the steep terrain, the eastern portion of the southern traverse line was the bottom of the creek canyon. Utilizing NLK (Seattle), in-phase and quadrature readings were taken facing northeast at 50 metre intervals on the lines. The results are presented in Figure 4. A strong conductor axis was outlined on each line - although the two conductor axes can be interpreted to define a continuous conductive zone, additional work is necessary to provide confirmation.

10 DISCUSSION

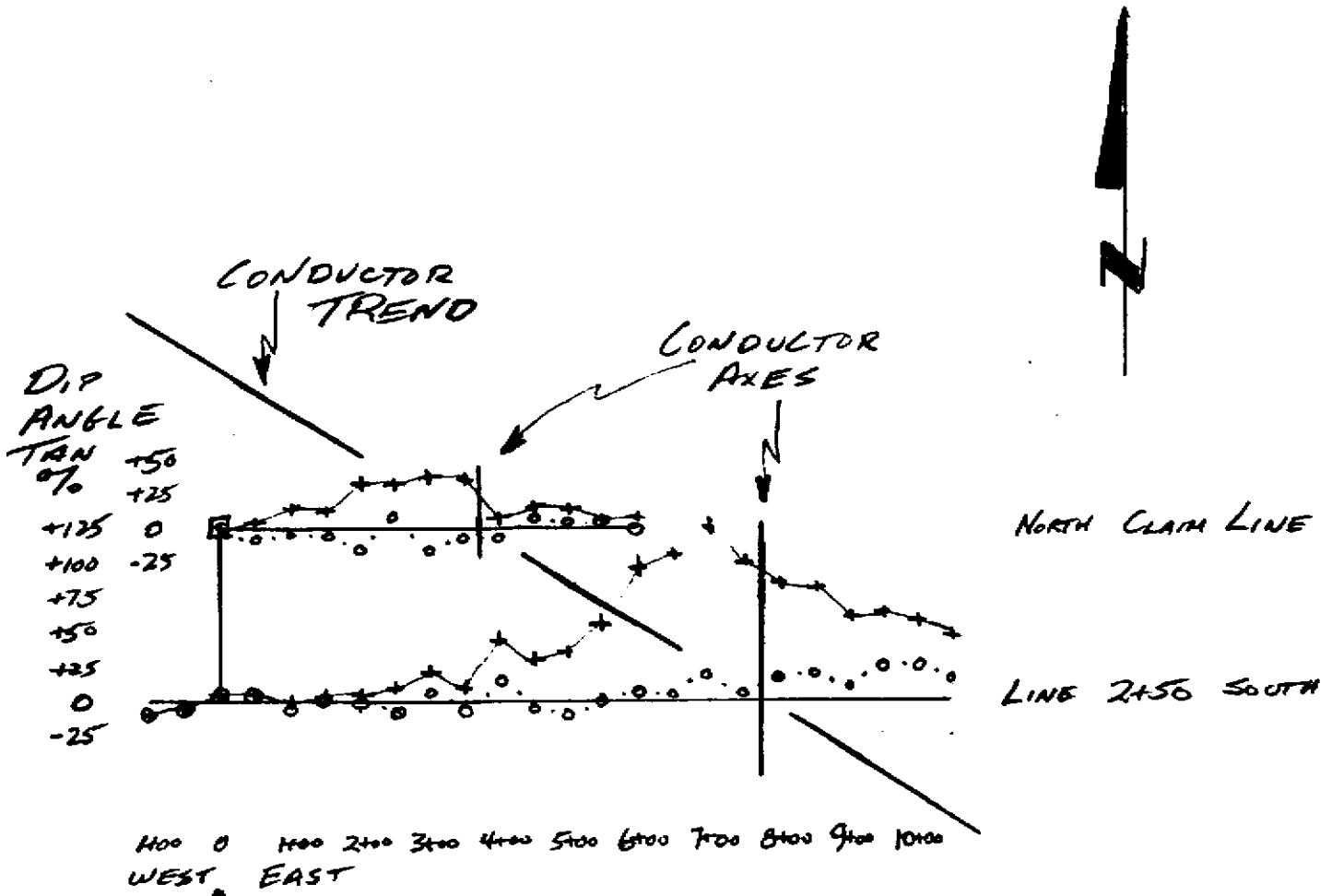
The 1994 sampling program has been successful in confirming the Pike Property as moderately to strongly anomalous in gold and copper. Of the stream sediment samples, two copper anomalies greater than 200 ppm (RK-20 at 249 ppm Cu and RK-23 at 214 ppm Cu) are in the high end of the +95 percentile concentration range of the recent regional stream sediment survey undertaken by the Government of British Columbia (Jackaman and Matysek, 1993). Likewise two others, RK-29 (68 ppb Au) and RK-28 (44 ppb Au) are also in the +95 percentile group of the gold analyses - another (RK-27 at 32 ppb) is close to the threshold.

Of the bedrock samples, the reconnaissance by Copeland (1987) outlined highly anomalous gold (up to 590 ppb) in rock chip samples of "quartzite" which could be metamorphosed interflow sedimentary rock within the Stuhini Group. Weak copper mineralization has been documented within Stuhini Group mafic volcanic rocks in the northwestern corner of the property (this study, samples 44057 and 44058).

Finally, reconnaissance VLF-EM surveying on two lines at the north side of the property has shown that this type of survey can be utilized effectively on the property.

11 RECOMMENDATIONS

- 1) An airborne electromagnetic-magnetic-VLF-EM survey should be flown over the property utilizing GPS and radar positioning devices.
- 2) Detailed geological mapping, prospecting and soil geochemical sampling should be carried out over potentially favourable areas such as volcanic interflow areas and areas of structural complexity prior to diamond drilling.



LCP - PIKE 1 + 2 CLAIMS



FIGURE 5

VLF-EM SURVEY PIKE PROPERTY

12 AUG 1994

R. Mc MILLAN
R. KEEFE

+ IN-PHASE
o QUADRATURE

SCALE 1:10,000

STATION NLK, SEATTLE WASHINGTON

18.6 KH

12 BIBLIOGRAPHY

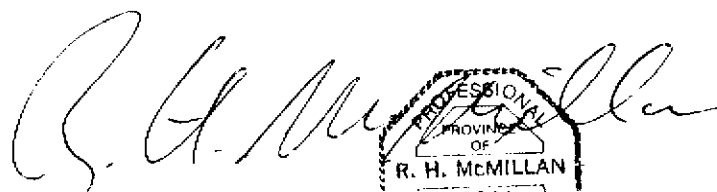
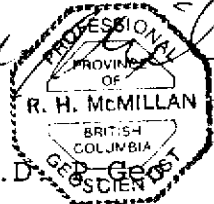
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APPENDIX I

CERTIFICATE

I, RONALD HUGH McMILLAN, of 4026 Locarno Lane, Victoria,
British Columbia (V8N 4A1), do hereby certify that:

1. I am a Consulting Geologist, registered with the Association of Professional Engineers and Geoscientists of British Columbia since 1992, and with the Association of Professional Engineers of Ontario since 1981.
2. I am a graduate of the University of British Columbia with B.Sc. (Hons. Geology, 1962), and the University of Western Ontario with M.Sc. and Ph.D. (1969 and 1972) in Mineral Deposits Geology.
3. I have practised my profession throughout Canada, as well as in other areas of the world continuously since 1962.
4. The foregoing report on the Pike Property is based on a review the literature cited in the bibliography, work on the property on August 10, 11 and 12 and the results presented in this report.
5. I am one of the partners with a beneficial interest in the claims in partnership with the registered owner, Ralph Keefe of Francoise Lake, B.C.


R. H. McMillan Ph.D. 

Victoria, B. C.
15 January 1995

APPENDIX III

ANALYTICAL RESULTS

COMP: MR RALPH KEEFE

PROJ:

ATTN: RALPH KEEFE / JIM OLIVER

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: 45-0266-RJ14

DATE: 04/09/2

* rock * (ACT:F31)

SAMPLE NUMBER	AG PPM	AL %	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA %	CO PPM	CO PPM	CU PPM	FE %	K %	LI PPM	MB %	NH PPM	NO PPM	NA %	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	Tl %	V PPM	ZN PPM	GA PPM	SE PPM	M PPM	CR PPM	Au-Fine PPM	
43998	165.4	.41	177	1	38	.8	2	.14	18.1	2	10	1.51	.17	18	.11	65	46	.01	5	510	28	18	25	10	.01	3.5	60	1	1	5	98	360	
43999	1.2	.28	7359	1	32	.6	2	.10	83.9	2	18	1.72	.22	2	.06	63	9	.01	7	350	51	22	17	7	.01	3.2	38	1	1	9	177	9	
44800	15.1	.07	1	1	21	3.2	44	2.21	>100.0	14	218	13.17	.02	1	.39	7821	48	.01	59	120	712	3	182	1	.01	3.9	>10000	1	1	1	81	7	
44051	3.8	.30	1	1	15	.4	2	.10	2.8	2	8	1.73	.08	4	.07	56	369	.01	8	300	15	11	15	6	.01	6.0	178	2	1	7	144	34	
44052	2.5	.09	113	1	20	.3	1	.05	4.3	1	10	.39	.14	1	.01	50	20	.01	1	60	58	3	6	2	.01	1.6	152	1	1	8	167	32	
44053	5.4	1.73	1	1	39	.9	16	1.90	23.9	8	36	1.99	.08	9	.24	282	11	.43	42	1800	1332	48	555	1	.15	116.2	1590	1	1	10	118	16	
44054	.8	.78	1	1	51	.5	9	.76	.4	5	30	1.59	.11	11	.50	288	5	.18	14	780	40	16	178	5	.09	26.0	120	4	1	6	77	1	
44055	1.1	1.04	1	1	47	.7	9	1.17	1.8	5	48	1.72	.12	6	.30	173	11	.23	14	880	87	23	264	3	.08	27.8	82	2	1	6	68	4	
44056	.2	.24	1	1	59	1.4	6	.70	.1	9	82	6.01	.27	1	.03	6	100	.01	26	1320	107	4	142	2	.01	3.4	9	1	1	4	72	63	
44057	5.9	1.44	1	1	91	.9	18	1.84	.9	21	2337	3.72	.11	25	1.25	596	484	.08	88	1310	83	35	337	1	.12	57.1	121	6	1	15	212	38	
44058	5.3	1.36	1	1	68	.7	21	1.74	.1	24	2348	3.90	.13	30	.98	467	180	.08	111	1360	75	33	357	1	.16	67.0	99	3	1	18	279	54	
44059	.2	.49	1	1	65	.3	7	3.80	.1	3	46	1.26	.15	2	.28	836	10	.06	13	520	20	11	95	1	.05	20.8	20	1	1	9	114	1	
44060	.1	1.69	1	1	82	2.4	7	.90	.1	13	37	4.07	.25	51	3.81	899	6	.03	54	1910	48	36	121	4	.01	184.4	96	1	1	9	163	1	
44061	.5	.42	1	1	249	.8	6	.20	.1	3	18	2.13	.38	4	.32	69	4	.01	9	1060	40	10	51	4	.01	9.8	11	3	1	5	88	2	
44062	.3	.08	1	1	21	.5	2	.29	.1	1	9	.78	.12	1	.02	145	3	.02	4	80	10	1	18	9	.02	4.5	28	1	1	6	135	1	
44063	.1	.15	1	1	12	.6	1	.09	.1	1	7	.65	.17	2	.01	121	2	.04	4	30	10	1	7	10	.01	1.0	28	1	1	10	207	1	
44064	.1	.25	1	1	37	1.0	2	.13	.1	1	16	.98	.20	1	.03	328	2	.03	6	160	31	5	14	13	.01	3.1	59	1	1	4	81	1	
44065	.4	.39	1	1	447	1.5	5	1.83	.4	7	32	2.87	.42	1	.63	581	3	.03	15	1500	55	11	226	2	.01	34.4	37	2	1	4	64	175	
44066	>200.0	.07	5089	1	200	.5	35	2.26	>100.0	3	7219	1.24	.11	1	.84	1078	31	.01	13	318	6679	1071	72	3	.01	7.6	5279	3	1	99	93	3520	
44067	186.3	.04	2785	1	249	.5	28	1.81	>100.0	1	3628	.81	.05	1	1.02	881	52	.01	11	110	4931	371	27	1	.01	7.0	4691	4	1	55	184	3900	
44068	>200.0	.07	1444	1	195	.3	24	2.20	>100.0	2	3858	1.01	.11	1	.19	985	48	.01	8	110	>10000	57	116	1	.01	4.2	3232	1	1	34	121	>18000	
44070	6.3	.16	680	1	220	.6	4	1.81	12.1	4	123	1.25	.14	3	1.15	621	7	.01	19	260	444	10	41	3	.01	16.2	296	6	1	10	145	305	
44071	.8	.31	1	1	130	1.2	6	2.85	14.2	12	286	3.17	.34	2	1.39	1595	69	.01	40	670	103	14	55	3	.01	36.4	603	1	1	42	75	86	
44072	.5	.16	1	1	75	.2	3	3.16	6.6	2	23	1.10	.24	1	.17	1225	23	.01	7	320	120	8	343	2	.01	5.9	177	1	1	24	52	32	
44073	.3	.01	132	1	6	.1	1	.25	.3	1	13	.21	.01	1	.18	67	2	.01	4	18	12	1	1	1	.01	1.7	17	1	1	16	191	1	
44074	>200.0	.07	993	1	30	.4	44	.83	>100.0	2	4788	.86	.07	1	.60	282	26	.01	12	120	3596	2337	18	2	.01	8.5	>10000	6	1	14	219	637	
44075	153.8	.07	919	1	17	.2	47	.35	>100.0	2	3892	1.13	.10	1	.19	186	14	.01	11	110	3898	1049	6	1	.01	6.9	3856	3	1	8	184	1835	
44076	39.6	.04	253	1	1330	.3	72	.96	14.1	2	92	.80	.85	1	.34	321	40	.01	9	40	1618	13	187	2	.01	6.0	460	4	1	9	174	65	
44077	5.0	.12	432	1	13	1.3	66	.48	2.6	154	>10000	8.54	.01	1	.58	114	3	.02	952	180	37	3	1	1	.01	26.6	79	1	2	3	15	142	
44078	1.3	.14	373	1	7	.6	7	2.34	2.1	10	825	1.57	.01	1	.97	236	2	.03	86	5860	27	6	17	1	.01	41.4	26	7	1	3	24	70	
44079	1.4	.11	4540	4	8	2.0	33	.35	59.3	327	8136	>15.00	.01	1	.40	42	1	.01	2390	190	9	1	4	1	.01	19.1	88	1	3	1	2	162	
44080	.1	.09	131	32	9	2.6	26	.46	.1	426	4408	>15.00	.01	1	.36	1	1	.01	3091	898	9	1	1	7	1	.01	15.3	25	1	5	1	1	32
44081	3.0	.58	1	1	60	1.0	24	1.81	2.0	16	421	4.53	.16	13	1.37	1294	14	.04	47	560	719	16	38	1	.19	189.2	143	1	1	17	66	36	

COMP: MR RALPH KEEFE
 PROJ:
 ATTN: RALPH KEEFE / JIM OLIVER

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: 45-0266-LJ1+2
 DATE: 04/09/21
 * 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	TN PPM	T %	V PPM	ZN PPM	GA PPM	SI PPM	W PPM	CR PPM	Au-Fire PPM
RK-1	1.3	.99	1	1	66	1.1	8	2.06	7.8	14	123	2.29	.08	10	.57	613	7	.03	42	1650	48	40	259	6	.04	37.6	187	5	1	4	25	19
RK-2	.8	.59	1	1	69	.9	8	1.26	5.0	6	66	2.48	.12	14	.51	549	4	.04	32	1050	28	20	294	6	.05	56.0	96	5	1	4	25	19
RK-3	2.0	.86	1	1	139	1.0	10	1.09	7.5	6	71	2.49	.25	25	1.03	537	5	.04	41	940	45	26	130	7	.89	57.4	138	7	1	6	58	5
RK-4	1.1	1.04	1	1	100	1.2	12	1.04	2.7	8	43	2.79	.28	21	.90	513	5	.07	34	1040	41	28	166	6	.08	65.3	112	8	1	6	39	15
RK-5	.9	1.35	1	1	106	1.4	11	1.61	5.0	10	63	3.21	.20	24	.87	817	9	.08	31	1490	44	36	212	3	.08	77.6	100	6	1	6	36	5
RK-6	.7	2.10	1	1	214	2.6	20	.92	5.4	20	111	7.43	.46	38	1.90	1029	21	.23	110	1630	60	52	406	7	.15	162.7	356	2	1	9	53	17
RK-7	.9	1.27	1	1	167	1.4	16	.85	1.2	18	51	3.63	.29	23	1.45	1006	6	.06	45	1260	49	34	139	7	.12	90.3	98	9	1	10	87	5
RK-8	1.0	1.23	1	1	143	1.5	13	.84	5.7	10	52	3.51	.24	28	1.19	671	6	.06	38	1140	53	33	169	8	.10	77.7	171	9	1	7	46	9
RK-9	.8	1.20	1	1	146	1.3	13	.83	8.1	10	56	3.30	.23	28	1.16	674	6	.06	43	1150	48	32	163	7	.09	70.5	216	7	1	6	42	9
RK-10	.9	.78	1	1	104	.9	10	.66	4.1	7	35	2.63	.16	17	.74	414	4	.06	30	830	30	22	128	9	.07	60.2	134	7	1	5	38	7
RK-11	1.1	1.75	1	1	167	1.7	16	1.00	3.9	15	88	5.19	.26	40	1.65	780	14	.10	71	1380	63	42	225	6	.13	115.5	234	5	1	9	63	13
RK-12	1.1	1.12	1	1	99	1.3	12	.85	5.2	10	60	3.60	.22	24	1.37	571	11	.07	50	1060	39	30	163	7	.10	88.3	145	8	1	7	57	4
RK-13	.9	1.18	1	1	106	1.0	11	1.06	6.4	8	61	3.07	.23	24	.99	647	7	.09	31	1200	48	33	182	5	.08	73.6	134	7	1	6	43	3
RK-14	1.4	.33	1	1	78	.5	4	2.51	2.1	2	31	.34	.05	3	.20	409	4	.02	6	1140	15	17	249	9	.01	14.8	49	11	1	2	21	1
RK-15	1.7	.15	95	1	62	.5	3	2.51	1.2	1	16	.21	.02	1	.12	142	12	.02	3	740	6	18	221	15	.01	31.1	52	17	1	2	20	3
RK-16	.5	1.99	1	1	225	2.1	18	.85	2.6	19	107	7.52	.46	34	1.63	1092	22	.21	113	1750	68	51	388	7	.12	159.0	351	1	2	9	49	11
RK-17	1.3	1.23	1	1	115	1.5	12	.84	9.2	11	58	3.56	.18	25	1.17	603	10	.06	59	1170	53	34	223	8	.07	81.7	276	9	1	7	38	10
RK-18	1.1	.61	1	1	83	.8	10	.70	1.2	4	18	2.70	.18	14	.42	316	2	.04	16	770	28	16	93	12	.08	57.9	53	6	1	4	25	1
RK-19	1.0	.51	1	1	89	.5	10	.57	.7	4	8	1.76	.15	9	.32	320	1	.05	8	780	19	13	73	13	.09	33.6	49	6	1	3	14	1
RK-20	2.0	.36	1	1	97	1.6	5	2.34	9.3	3	249	.89	.08	7	.25	673	4	.02	21	1390	34	13	409	4	.01	16.4	124	7	1	2	21	5
RK-21	.3	.67	1	1	255	1.4	8	.43	.8	8	75	3.10	.19	19	.79	874	14	.02	23	980	70	18	126	15	.02	39.5	87	8	1	4	24	17
RK-22	.9	.59	1	1	95	.8	8	.64	1.2	5	73	1.62	.11	17	.48	339	6	.04	17	730	28	14	131	7	.06	34.6	61	7	1	3	23	5
RK-23	1.0	.55	1	1	63	.9	8	.64	.3	8	214	1.47	.08	17	.39	235	6	.03	22	440	31	14	115	5	.06	33.6	47	6	1	3	19	8
RK-24	.3	.68	1	1	120	1.1	6	.60	1.4	6	44	2.32	.16	16	.54	658	29	.02	17	910	41	17	139	13	.02	37.6	64	7	1	4	28	7
RK-25	.1	.49	1	1	95	1.3	4	.87	2.3	5	73	1.74	.12	14	.48	725	30	.02	15	850	40	12	200	12	.02	30.2	53	4	1	3	25	3
RK-26	.6	.76	1	1	211	1.3	4	.80	2.2	4	30	1.65	.13	21	.46	437	8	.02	14	840	58	16	199	7	.04	34.6	101	4	1	4	28	4
RK-27	.1	.75	1	1	343	1.7	6	.48	.9	9	96	3.62	.22	19	.83	1052	21	.02	27	1120	82	16	152	20	.08	44.0	96	3	1	4	26	32
RK-28	.1	.56	1	1	114	.9	3	.79	1.7	4	41	1.83	.14	16	.48	526	17	.02	13	800	36	11	165	8	.08	30.6	54	1	1	3	21	44
RK-29	.1	.62	1	1	829	1.5	6	.60	2.3	7	24	2.79	.27	14	.72	784	7	.01	23	910	64	15	169	16	.02	41.9	96	4	1	4	21	68
RK-30	.1	.71	1	1	642	1.5	6	.81	2.4	8	32	2.68	.27	17	.91	874	9	.01	26	950	67	19	286	14	.02	36.6	105	6	1	4	24	8
RK-31	.1	.87	1	1	286	1.6	6	.68	.7	9	40	2.66	.25	22	.75	691	11	.02	29	870	50	23	187	15	.03	39.1	80	6	1	4	23	10
RK-32	.1	.67	1	1	789	1.5	5	.55	2.1	8	31	2.68	.25	16	.80	852	8	.01	25	930	63	16	168	13	.02	37.1	94	2	1	3	19	12
RK-33	1.4	.20	74	1	93	.3	5	>15.00	1.8	3	14	.82	.99	5	.33	203	3	.01	9	460	23	8	539	1	.01	11.3	32	8	1	2	11	7
RK-34	.1	.81	1	1	769	1.7	6	.58	1.5	9	40	3.00	.25	20	1.01	1044	10	.01	29	910	81	19	179	14	.02	39.2	109	1	1	3	22	24
RK-35	.2	.67	1	1	713	1.7	5	1.88	1.5	8	36	2.79	.20	17	.86	818	9	.01	27	910	69	19	203	13	.02	37.9	97	5	1	4	22	22
RK-36	.3	.54	1	1	72	.3	5	.47	.3	4	13	1.45	.10	13	.40	254	3	.03	13	620	20	12	78	7	.06	35.7	34	1	1	2	19	3
RK-37	.1	.64	1	1	129	.9	6	.58	.1	7	30	2.41	.17	16	1.06	398	4	.02	45	920	47	12	125	9	.07	55.4	52	1	1	7	19	4

Geological and Geochemical Report

on the

Tutshi #1 Claim

Atlin Mining Division

British Columbia

NTS 104M/15E&W

Lat. 59 degrees 49 minutes North
Long. 134 degrees 47 minutes West

R. H. McMillan P.Geo.
4026 Locarno Lane
Victoria, B. C.

15 January 1995

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1 INTRODUCTION -- SYNOPSIS

The Tutshi Property was staked in 1994 to cover several strong copper and gold stream sediment anomalies draining back-arc volcanic strata of the Upper Triassic Stuhini Group and Palaeozoic Boundary Ranges Metamorphics in a geological environment believed permissive for the occurrence of polymetallic VMS mineralization. Boundary Ranges Metamorphics, also close to the Llewellyn Fault, 125 km. to the southeast are host to the Tulsequah-Big Bull VMS district (Mihalynuk, personal communication 1994) a kuroko-style VMS district with reserves and past production of 9.5 million tonnes grading approximately 1.4% Cu, 1.23% Pb, 6.62% Zn, 2.5 g/t Au and 106 g/t Ag (Redfern Resources Ltd., 1994 and Hoy, 1991). Upper Triassic and Lower Jurassic back-arc volcanic strata elsewhere in British Columbia and adjacent Alaska are host to large volcanogenic massive sulphide deposits at Anyox, Granduc, Windy Craggy and Greens Creek - the accessible location of the Tutshi Property near a major highway and 60 kilometres from the tidewater port of Skagway is considered to be positive if a potentially economic deposit is discovered.

The 1994 work program has confirmed the presence of strongly anomalous copper and zinc in stream silt samples. Past geochemical sampling programs had returned silt sample analyses ranging up to 1860 ppb Au, 410 ppm Cu and 495 Zn. Although no bedrock source has been located as yet, the Jessie (Great Northern) showing (MINFILE # 104M027) is a possible source - the Jessie (Great Northern) showing, believed to be located in the south central portion of the Tutshi claim, has returned assays of several percent copper with significant gold and silver.

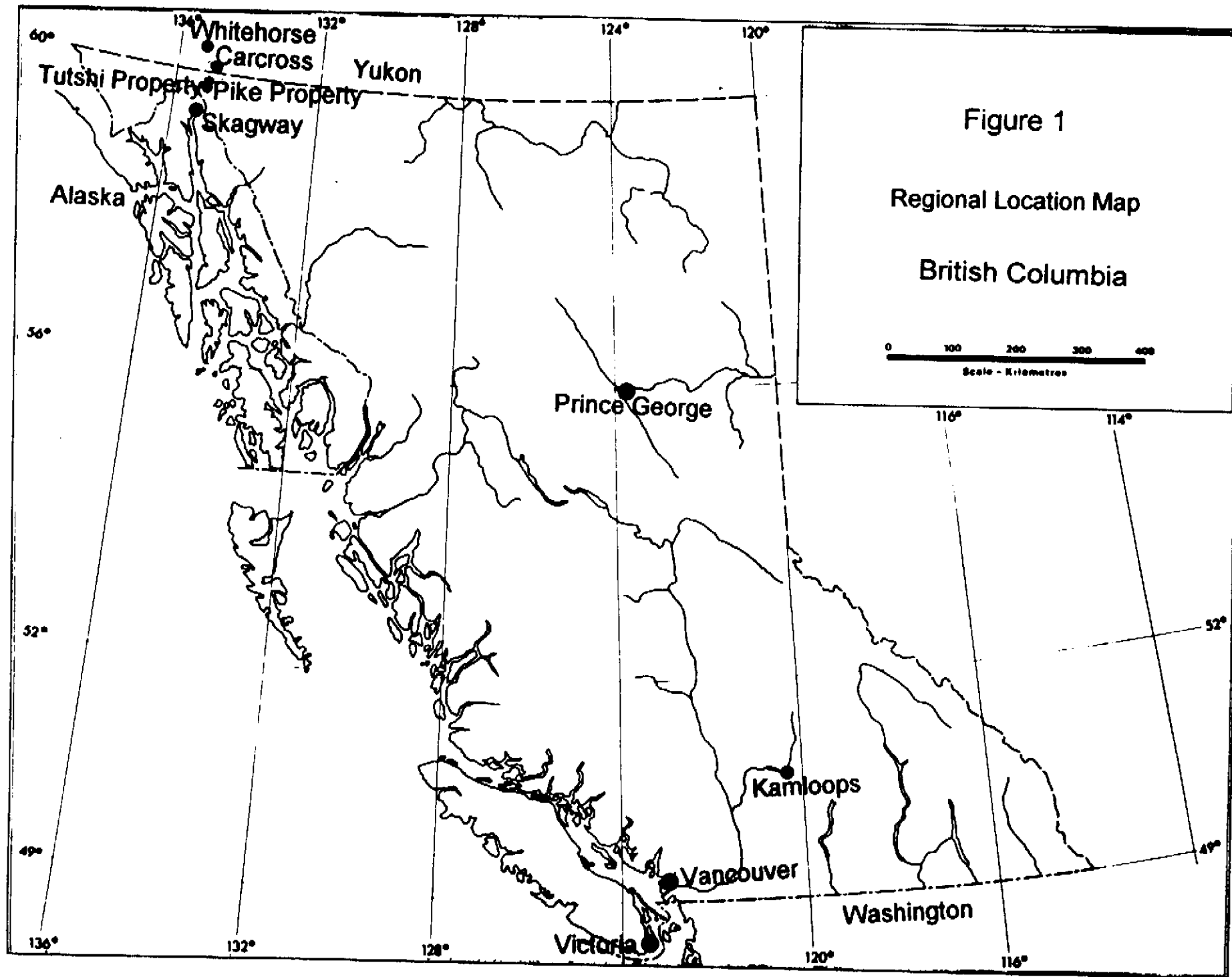
During the next phase of exploration, an airborne electromagnetic-magnetic-VLF-EM survey should be flown utilizing GPS and radar positioning devices. Following this, detailed geological mapping, prospecting and soil geochemical sampling should be carried out over potentially favourable areas such as volcanic interflow areas and areas of structural complexity prior to diamond drilling.

2 CLAIM STATUS

The property consists of one four-post mineral claim comprising eighteen units. The claim information is listed in the following table:

<u>Claim Name</u>	<u>Tenure No.</u>	<u># Units</u>	<u>Date Staked</u>	<u>Expiry Date</u>
Tutshi #1	330203	18	1994-08-09	1995-08-09

The claim was located by and are currently registered to Mr. R. Keefe of Francoise Lake B.C. The claims are beneficially owned by Mr. Keefe in partnership with the author R.H. McMillan.



3 LOCATION AND ACCESS

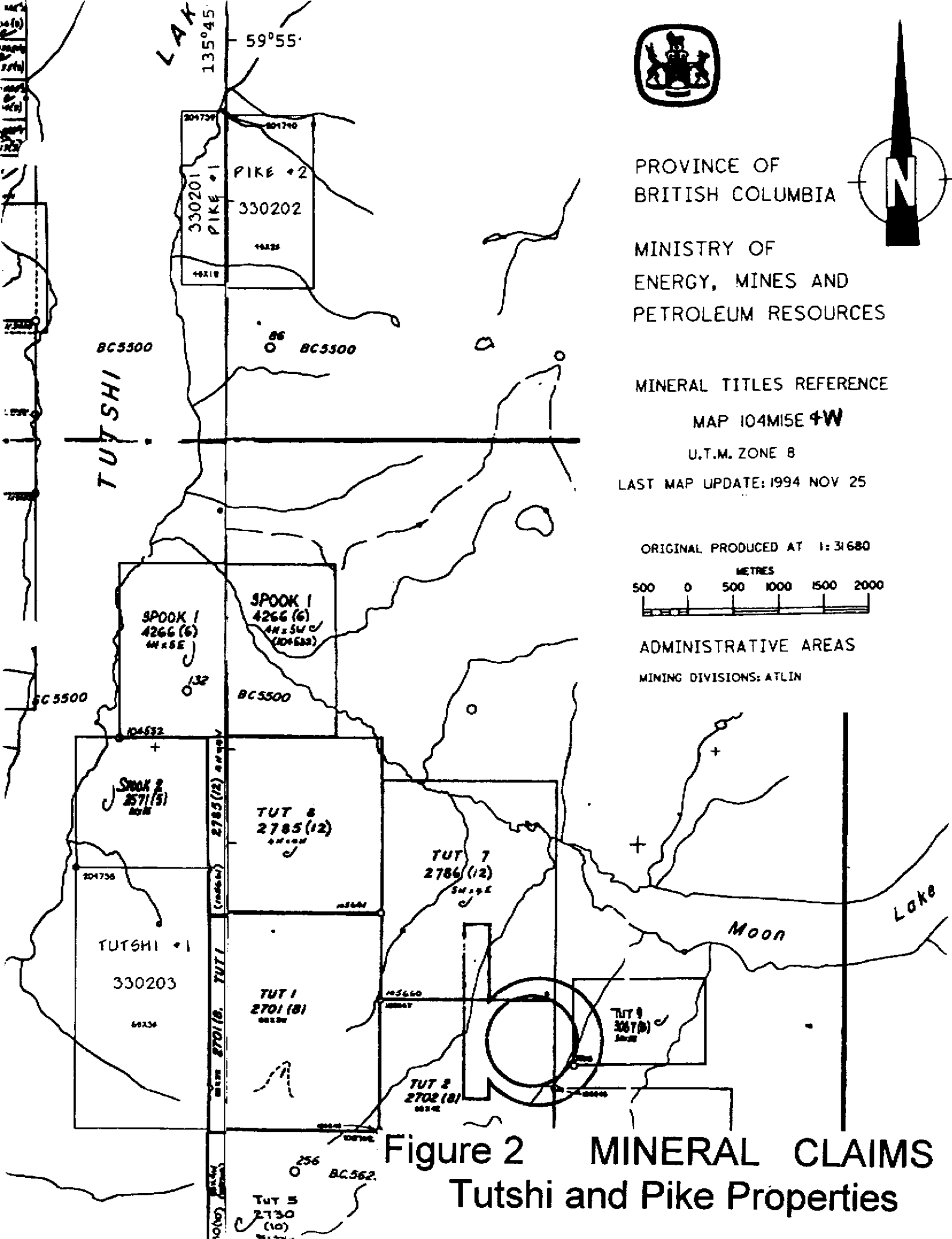
The Tutshi property is located on the east side of Tutshi Lake, opposite the Klondyke Highway which has been constructed on the west side of the Lake. The Venus Mine mill with a capacity of 150 tons per day, is 17 kilometres north of the property on the Klondyke Highway. The property is 60 kilometres northeast of the port of Skagway and 35 km. south of Carcross. The city of Whitehorse, located 90 kilometres north of the property, is the most convenient airport and source of supplies. Charter helicopters are available at Whitehorse and at Atlin, located 70 kilometres to the east. Convenient boat access can be gained from the Klondyke Highway.

4 TOPOGRAPHY AND VEGETATION

The property is located in the Tagish Highlands, east of the Coast Mountain Range. The Bennett-Tutshi-Tagish Lake intermontane systems occupy long, narrow north-trending valleys in the area. Elevations range from Tutshi Lake level of 707 metres to mountain peaks of 1800 metres. Lower elevations are forested with spruce, fir, pine and poplar. Alpine conditions prevail above 1200 metres. Creeks carry water year-round, although during dry periods some of the creeks seep underground 200 metres from the lake.

5 PAST EXPLORATION WORK

There is no record of and significant exploration in the area until the discovery of the Venus vein system near Tagish Lake 25 km. to the north in 1901 by J.M. Pooley. The Jessie Showing (MINFILE 104M 027) was originally staked as the Great Northern group by Joe Bussinger in 1906, and was visited by engineers representing the "Timmins interests" in 1929 (B.C. Report of the Minister of Mines, 1929, p. 120). Dupont of Canada Exploration staked the property in 1981 staked the Tuts claims to cover a copper geochemical anomaly in a stream samples taken from streams draining into Tutshi Lake from the Tutshi Claim (Neelands, J.L. and Holmgren L., 1982). Dupont completed a program of stream sediment and soil geochemical sampling and geological mapping, outlining some strong anomalies within the current Tutshi #1 claim. Stream silt samples analyses ranged up to 1860 ppb Au, 410 ppm Cu and 495 Zn, while soil sample results 250 ppm Cu and 1300 ppm Zn. Although more work was recommended (Neelands, J.L. and Holmgren L., 1982), the claims were allowed to lapse.



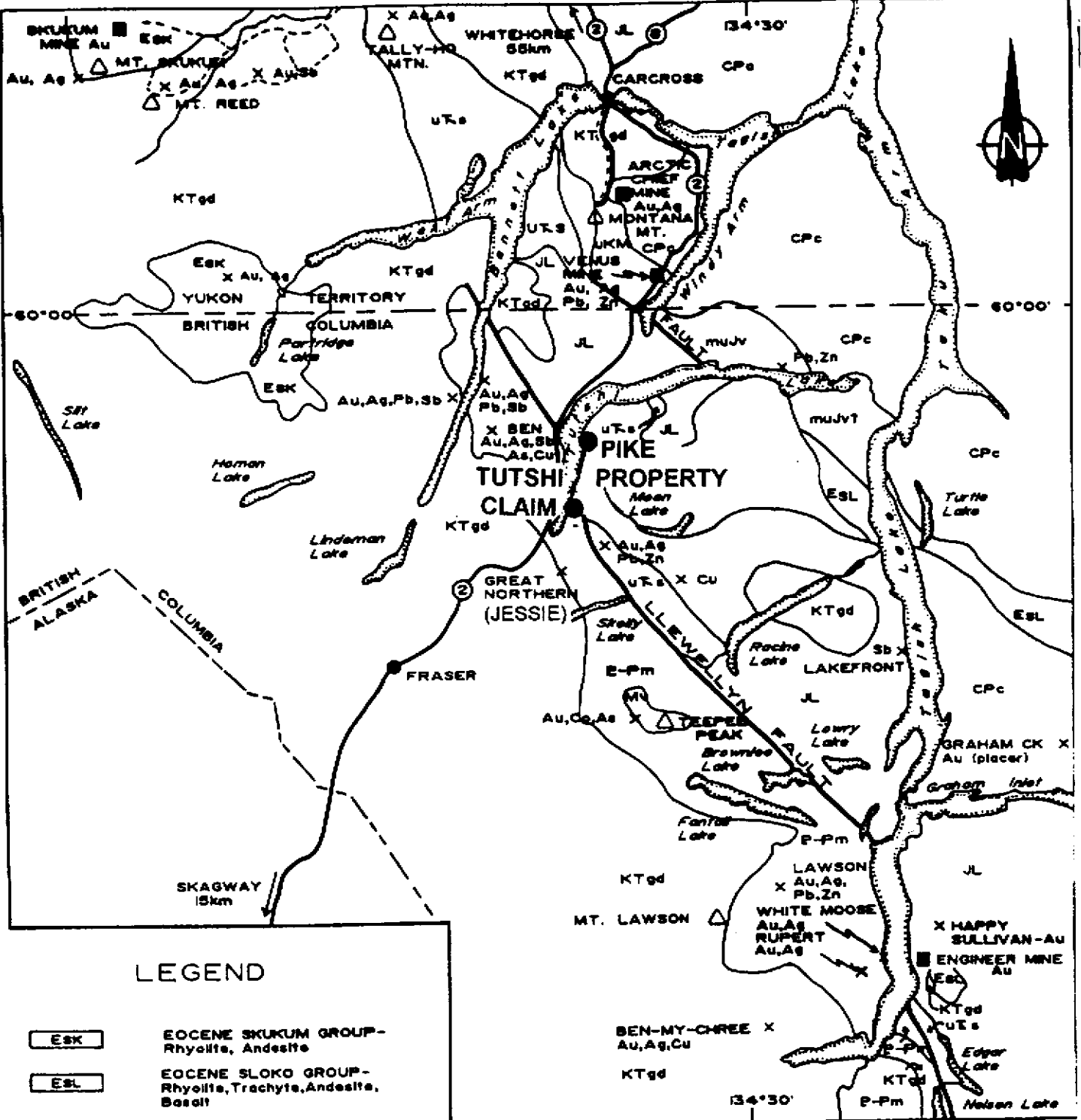
**Figure 2 MINERAL CLAIMS
 Tutshi and Pike Properties**

As part of an integrated geoscientific survey, the Geological Survey Branch of the B.C. Ministry of Energy Mines and Petroleum Resources collected two silt sediment samples from streams which drain the property in 1988 (Rouse et al, 1988). Both samples property were strongly anomalous. A creek draining the north end of the property returned an analysis of 38 ppb Au and 254 ppm Zn (sample # 873009), and a creek draining the south end of the property returned 271 ppm Zn and 95 ppm Cu (sample # 870016). More recently, two silt samples were taken from the area draining the claim in the regional geochemical survey covering NTS 104 M (Jackaman, W. and Matysek, P.F., 1993).

In 1985, Noranda staked the area northeast of the Tutshi #1 claim as part of their Moon Lake Project. Since then Noranda (Mackay and Reid, 1987; Duke, 1988; and Duke, 1989) have completed three diamond drill holes (420.3 metres) in the area south of Moon Lake, as well as an airborne electromagnetic-magnetic survey, ground geophysical surveys, soil and stream sediment surveys, geological mapping and prospecting. They have identified several massive sulphide and gold showings, large gossanous areas and areas of highly altered rock as well as strongly anomalous geochemical anomalies. Mackay and Reid (1987) report the presence of "massive sulphides" and a sample of float from the Nasty Cirque area assaying 44,000 ppb Au. Selected samples were found to assay up to 78 g/t Au and 617 g/t Ag, >1000 ppm As and 5% combined Pb-Zn. Mihalynuk (personal communication 1994) calls the main occurrence at Nasty Cirque the Jason showing and describes it as a "massive sulphide" with Pb-Zn mineralization. Although the drill assay results reported by Noranda in their assessment reports were lacklustre, Noranda retains much of their property position south of Moon Lake.

6 GEOLOGY OF THE TUTSHI LAKE AREA

Tutshi Lake and the Tutshi claim is located within the Whitehorse Trough at the western margin of the Intermontane Belt and east of the Coast Plutonic Complex. The main lithologies are Stikine Terrane volcanic arc rocks. The oldest rocks within the area are metamorphosed mafic and felsic volcanic rocks, ultramafic and sedimentary rocks which are now called the Boundary Ranges Metamorphic Complex (Mihalynuk and Rose, 1988), and known previously as the Yukon Group (Christie, 1957). These rocks have been variably metamorphosed up to upper greenschist grade, with deformation varying from locally nonexistent to more typically strong and pervasive (Mihalynuk and Rose, 1988). Northeast of the claims, along the Llewellyn Fault, there is a diverse assemblage of deformed and foliated pre-Upper Triassic intrusive bodies which range in composition from quartz diorite to leucogranite (Mihalynuk and Rose, 1988).



LEGEND

- ESK EOCENE SKUKUM GROUP-
Rhyolite, Andesite
- ESL EOCENE SLOKO GROUP-
Rhyolite, Trachyte, Andesite,
Basalt
- UKM UPPER CRETACEOUS-
"Montana Mountain Volcanics"
- KTgd Mainly Cretaceous and Tertiary
granite and granodiorite
- Mv Undivided Mesozoic Volcanics
- JL JURASSIC LABERGE GROUP-
Sedimentary rocks
- muJv MIDDLE TO UPPER JURASSIC
VOLCANICS
- UTs UPPER TRIASSIC STUHNI GROUP-
(Lewes River in Yukon)
- Cpc CARBONIFEROUS AND PERMIAN
CACHE CREEK GROUP
- E-PM PROTEROZOIC TO CAMBRIAN GROUP-
"Nisling Terrane Metamorphics"

SYMBOLS

- X Mineral Occurrence
- Past Producing Mine
- Road, Highway



Tutshi and Pike Properties

REGIONAL GEOLOGY

January, 1995

DRAWN BY: RHM Scale 1:500,000 FIGURE 3

Modified after Mihalynuk and Rose (1988) and Hart and Pelletier (1989)

These older rocks are succeeded by the predominantly volcanic Stuhini Group of Upper Triassic Age which include feldspar and pyroxene phyric lapilli tuffs, hornblende and pyroxene porphyry pyroclastics as well as wackes, argillites, conglomerates and limestone. The Stuhini Group has been called the Lewes River Group in the Yukon.

The Stuhini Group is succeeded by siltstones, arenaceous wackes, argillites and conglomerates of the Lower Jurassic Laberge Group (Inklin Formation), which is in turn overlain by a predominantly subaerial volcanic sequence of Middle to Upper Jurassic Age which includes lapilli tuffs, rhyolitic tuffs and feldspar porphyry flows.

Batholiths, satellitic stocks and dykes of plutonic and hypabyssal rocks related to the Cretaceous and early Tertiary Coast Plutonic Complex intrude all of the above units. The main rock type is coarse grained hornblende biotite granite, although compositions range from granodiorite and quartz monzonite to alkali granite.

Structurally, the Llewelyn Fault is the dominant element in the area, and it marks the eastern limit of the Boundary Ranges Metamorphic Rocks, and a westward thinning of Laberge Group strata. This fault (Mihalynuk and Rose, 1988) has been a long-lived zone of structural weakness. Folding in the area is complex, particularly in the metamorphic rocks where isoclinal, coplanar folds could have been generated in several episodes. Jurassic and earlier volcanic and sedimentary rocks are also folded.

7 MINERALIZATION

The Jessie (Great Northern) Showing (MINFILE # 104M027; B.C. Report of the Minister of Mines, 1929, page C120) is believed to be located in the southern portion of the Tutshi #1 claim, possibly in the vicinity of the Dupont soil geochemical anomalies. The 1929 Report states that "the owner describes the showing as a shear-zone 6 feet wide in an andesite formation with limestone and gabbro in places, occurring about half a mile from a granite-contact. The zone strikes north-east and dips 65° north. Mineralization consists mainly of chalcopryrite and pyrrhotite with some galena and a little zinc-blende. The average assay of ore-shoots in the zone is reported to be: Gold, 0.15 oz. to the ton; silver, 23.5 oz. to the ton; copper, 4.9 per cent." The report states that the property is accessible by trail from Log Cabin on the White Pass and Yukon Railway, which is 8.5 miles distant.

The 1929 B.C. Minister of Mines Report (page C121) reports a second showing called the "Big Thing" located north of the Jessie as being similar but lower in grade than the Jessie and with assays of up "to \$2 in gold and about 2 per cent copper". It is not known if this showing is the Nasty Cirque or Jason showing which is currently held by Noranda to the northeast of the Tutshi #1 claim.

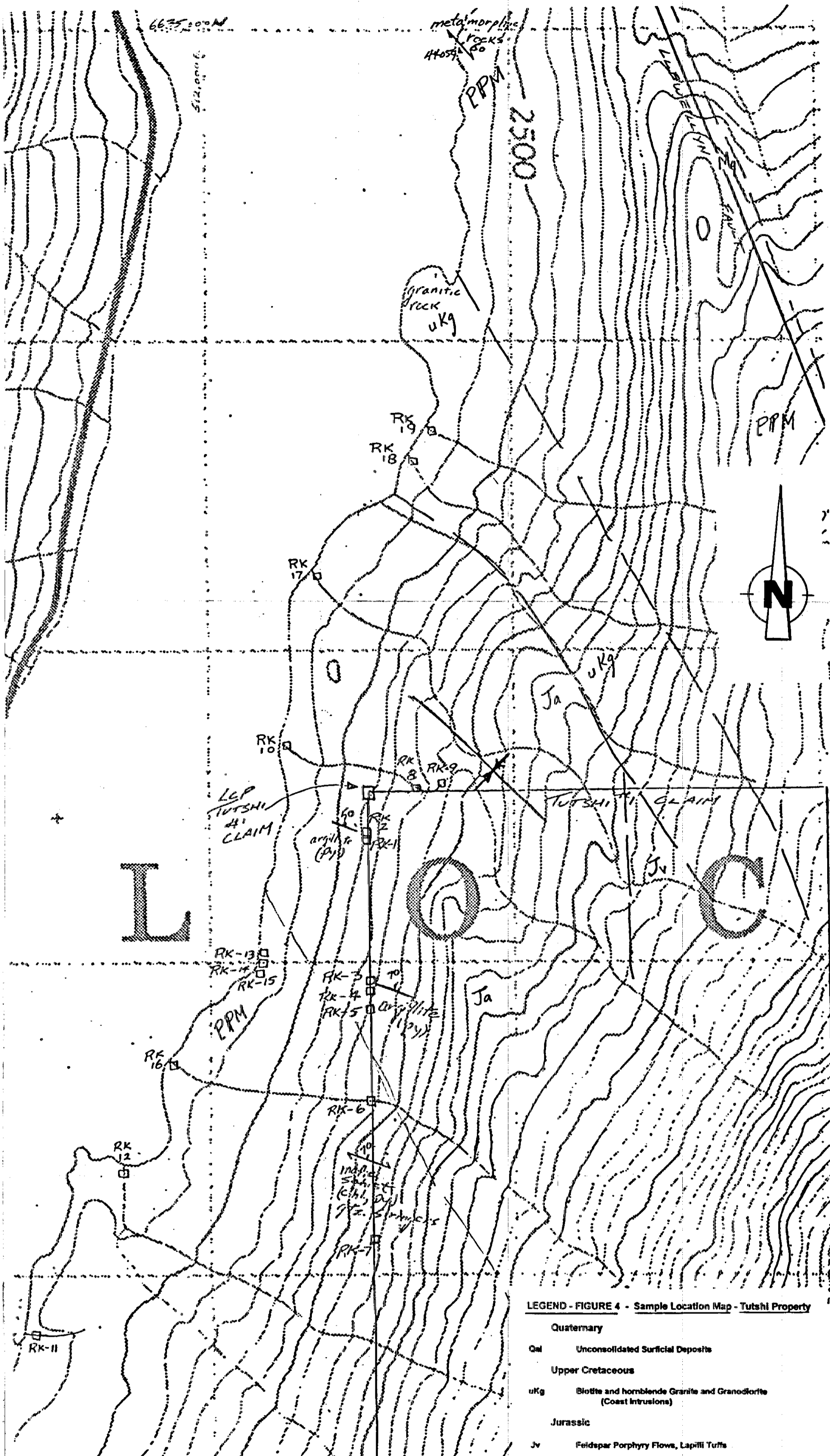


Figure 4 Sample Location Map Tutshi Property

LEGEND - FIGURE 4 - Sample Location Map - Tutshi Property

- Quaternary
- Qal Unconsolidated Surficial Deposits
- Upper Cretaceous
- uKg Biotite and hornblende Granite and Granodiorite (Coast Intrusions)
- Jurassic
- Jv Feldspar Porphyry Flows, Lapilli Tufts
- Jc Conglomerate
- Ja Argillite (Lalberge Group)
- Upper Triassic
- Tv Feldspar Porphyry Flows, Tufts (Stuhini Group)
- Pre-Upper Triassic
- Mg Granodiorite (sheared and brecciated)
- PPM Metamorphosed Mafic and minor Felsic Volcanic, Ultramafic and Sedimentary Rocks (Boundary Ranges Metamorphics)
- (Modified after Mihayluk and Rouse, 1984)
- ▲ Rock Sample Location
- Stream Sediment Sample Location
- Abbreviations for alteration minerals: Siliceous or silicification (sil), Pyrite (py), Chlorite (chl), Carbonate (carb)

0 200 400
metres
SCALE 1: 10,000

8 GEOCHEMISTRY

On August 8, 9 and 12, the author and Ralph Keefe collected 1 rock chip and 19 silt geochemical samples from the Tutshi #1 claim, as well as areas draining from and adjacent to the claim. The analytical results are presented in Appendix 3, the sample locations are shown on Figure 4, and information on the samples is tabulated below:

Table 1 - Rock Chip Sample

44059 grab sample, gossanous quartz feldspar mica schist with quartz lenses

Table 2 - Stream Silt Samples

RK-1	poor silt from dry gulley
RK-2	poor silt from dry gulley
RK-3	good silt, active 50 cm. creek
RK-4	good silt, 1 m. active creek
RK-5	poor silt, dry creek
RK-6	good silt, 1 m. active creek
RK-7	good brown silt, dry creek
RK-8	good silt, 1 m. active creek
RK-9	good silt, 1 m. active creek (same stream as RK-8)
RK-10	good silt, 1 m. active creek (same stream as RK-8,9)
RK-11	good black silt, 60 cm. active creek
RK-12	good silt, 1 m. active creek
RK-13	silt, 50 cm. active creek
RK-14	silt, 50 cm. active creek
RK-15	silt, 50 cm. active creek
RK-16	silt, dry stream channel
RK-17	silt, 1 m. active stream
RK-18	good silt, dry stream
RK-19	silt

The geochemical sampling results have confirmed the anomalous geochemical signature of the Tutshi #1 Claim. Silt samples RK-1, RK-6 and RK-16 returned values of 123, 111 and 107 ppm Cu. The three samples are also anomalous in silver (1.3, 0.7 and 0.5 ppm) and RK-6 is strongly anomalous in Zn (356 ppm).

10 DISCUSSION

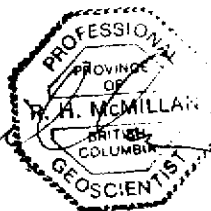
The 1994 program has been successful in confirming the Tutshi Property as moderately to strongly anomalous in copper and zinc. Of the stream sediment samples, three copper values (RK-1, RK-6 and RK-16) at >100 ppm Cu are in the +95 percentile concentration range of the recent regional stream sediment survey undertaken by the Government of British Columbia (Jackaman and Matysek, 1993). One of the silver analyses (RK-1 at 1.3 ppm) is in the +95 percentile group. Cobalt and lead results are also anomalous.

These highly anomalous geochemical results and the earlier Dupont silt and soil geochemical results, suggest the presence of mineralization in bedrock near the centre of the Tutshi #1 claim. The source could be the Jessie (Great Northern) occurrence where (MINFILE # 104M027; B.C. Report of the Minister of Mines, 1929, page C120) "the average assay of ore-shoots" within a shear-zone 1.8 metre (6 feet) in width was 4.9% Cu, 809 g/t Ag (23.6 oz./ton) and 5.15 g/t Au (0.15 oz./ton). Hostrocks in the area of the geochemical anomaly are Palaeozoic Boundary Ranges Metamorphics which include mafic and felsic volcanic rocks and related clastic and chemical sedimentary rocks. The author believes this package of rocks to have excellent potential for volcanogenic massive sulphide type mineralization and that this environment is grossly underexplored. The Tulseqah-Big Bull VMS district, 125 kilometres to the southeast, is hosted in similar rocks correlative with the Boundary Range Metamorphics - it is also close to the Llewellyn Fault which Mihalyuk (personal communication, 1994) believes to have been an important mineralizing structure. The kuroko-style deposits at Tulseqah-Big Bull contain reserves of 8.5 million tonnes grading 1.4% Cu, 1.23% Pb, 6.62% Zn, 2.5 g/t Au and 106 g/t Ag (Redfern Resources Ltd., 1994). Past production from the deposits totalled 933,609 tonnes grading 1.3% Cu, 6.06% Zn, 1.63% Pb, 113 g/t Ag and 3.14 g/t Au (Hoy, 1991), for a total resource of approximately 9.5 million tonnes.

11 RECOMMENDATIONS

- 1) An airborne electromagnetic-magnetic-VLF-EM survey should be flown over the property utilizing GPS and radar positioning devices.
- 2) Detailed geological mapping, prospecting and soil geochemical sampling should be carried out over potentially favourable areas such as volcanic interflow areas and areas of structural complexity prior to diamond drilling.

R. A. McMillan



A circular professional seal for R. A. McMillan, a Geoscientist in the Province of British Columbia. The seal contains the text: "PROFESSIONAL", "PROVINCE OF", "R. A. McMILLAN", "BRITISH COLUMBIA", and "GEOSCIENTIST".

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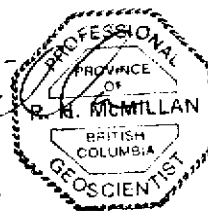
APPENDIX I**CERTIFICATE**

I, RONALD HUGH McMILLAN, of 4026 Locarno Lane, Victoria,
British Columbia (V8N 4A1), do hereby certify that:

1. I am a Consulting Geologist, registered with the Association of Professional Engineers and Geoscientists of British Columbia since 1992, and with the Association of Professional Engineers of Ontario since 1981.
2. I am a graduate of the University of British Columbia with B.Sc. (Hons. Geology, 1962), and the University of Western Ontario with M.Sc. and Ph.D. (1969 and 1972) in Mineral Deposits Geology.
3. I have practised my profession throughout Canada, as well as in other areas of the world continuously since 1962.
4. The foregoing report on the Tutshi Property is based on a review the literature cited in the bibliography, work on the property on August 10, 11 and 12 and the results presented in this report.
5. I am one of the partners with a beneficial interest in the claims in partnership with the registered owner, Ralph Keefe of Francoise Lake, B.C.

R. H. McMillan

R. H. McMillan Ph.D. P.Geo.



Victoria, B. C.
15 January 1995

APPENDIX III

ANALYTICAL RESULTS

COMP: MR RALPH KEEFE

PROJ:

ATTN: RALPH KEEFE / JIM OLIVER

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: 45-0266-R11*

DATE: 06/09/2

* rock * (ACT: F31)

SAMPLE NUMBER	AG PPM	AL %	AS PPM	B PPM	BA PPM	BE PPM	BI PPM	CA %	CO PPM	CD PPM	CJ PPM	FE %	K %	LI PPM	MG %	NH PPM	NO PPM	NA %	NI PPM	P PPM	PB PPM	SB PPM	SR PPM	TH PPM	TJ %	V PPM	ZN PPM	GA PPM	SM PPM	M PPM	CR PPM	Air-Fire PPM
43998	165.4	.41	177	1	38	.8	2	.14	10.1	2	10	1.51	.17	18	.11	65	46	.01	5	510	28	18	25	10	.01	3.5	60	1	1	5	98	360
43999	1.2	.28	7399	1	32	.6	2	.10	63.9	2	10	1.72	.22	2	.06	63	9	.01	7	350	51	22	17	7	.01	3.2	38	1	1	9	177	9
44000	15.1	.07	1	1	21	3.2	44	2.21	>100.0	14	218	13.17	.02	1	.39	7821	48	.01	59	120	712	3	182	1	.01	3.9	>10000	1	1	1	81	7
44051	3.8	.30	1	1	15	.4	2	.10	2.8	2	8	1.73	.08	4	.07	56	369	.01	8	300	15	11	15	6	.01	6.0	178	2	1	7	144	34
44052	2.5	.09	115	1	20	.3	1	.05	4.3	1	10	.39	.14	1	.01	50	20	.01	1	60	58	3	6	2	.01	1.6	152	1	1	8	167	32
44053	5.4	1.73	1	1	39	.9	16	1.90	23.9	8	36	1.99	.08	9	.24	282	11	.43	42	1800	1332	48	555	1	.15	116.2	1590	1	1	10	118	76
44054	.8	.78	1	1	51	.5	9	.76	.4	5	30	1.59	.11	11	.50	288	5	.18	14	780	40	16	178	5	.09	26.0	120	4	1	6	77	1
44055	1.1	1.04	1	1	47	.7	9	1.17	1.8	5	48	1.72	.12	6	.30	173	11	.23	14	800	87	23	264	3	.08	27.8	82	2	1	6	68	4
44056	.2	.24	1	1	59	1.4	6	.70	.1	9	62	6.01	.27	1	.03	6	100	.01	24	1320	107	4	142	2	.01	3.4	9	1	1	4	72	43
44057	5.9	1.44	1	1	91	.9	18	1.84	.9	21	2937	3.72	.11	25	1.25	596	404	.08	88	1310	83	35	337	1	.12	57.1	121	6	1	15	212	38
44058	5.3	1.36	1	1	68	.7	21	1.74	.1	24	2348	3.90	.13	30	.98	467	180	.08	111	1360	75	33	357	1	.16	67.0	99	3	1	18	279	54
44059	.2	.49	1	1	65	.3	7	3.00	.1	3	46	1.26	.15	2	.28	836	10	.06	13	520	20	11	95	1	.05	20.8	20	1	1	9	163	1
44060	.1	1.69	1	1	82	2.4	7	.90	.1	13	57	4.07	.25	51	3.81	899	6	.03	54	1910	48	36	121	4	.01	104.4	96	1	1	9	114	2
44061	.5	.42	1	1	249	.8	6	.20	.1	3	18	2.13	.38	4	.32	69	4	.01	9	1060	40	10	51	4	.01	9.8	11	3	1	5	88	4
44062	.3	.08	1	1	21	.5	2	.29	.1	1	9	.78	.12	1	.02	145	3	.02	4	60	10	1	10	9	.02	4.5	28	1	1	6	135	1
44063	.1	.15	1	1	12	.6	1	.09	.1	1	7	.65	.17	2	.01	121	2	.04	4	30	10	2	7	10	.01	1.0	28	1	1	10	207	1
44064	.1	.25	1	1	37	1.0	2	.13	.1	1	16	.98	.20	1	.03	328	2	.03	6	160	31	5	14	13	.01	3.1	59	1	1	4	81	1
44065	.4	.39	1	1	447	1.5	5	1.83	.4	7	32	2.87	.42	1	.63	581	3	.03	15	1500	55	11	226	2	.01	34.4	37	2	1	4	84	1
44066	>200.0	.07	5089	1	200	.5	35	2.26	>100.0	3	7219	1.24	.11	1	.84	1078	31	.01	13	318	6679	1071	72	3	.01	7.6	5279	3	1	99	93	3520
44067	186.3	.04	2785	1	249	.5	28	1.81	>100.0	1	3628	.81	.05	1	1.02	881	52	.01	11	110	4931	371	27	1	.01	7.0	4691	4	1	55	184	3900
44068	>200.0	.07	1444	1	195	.3	24	2.20	>100.0	2	3038	1.01	.11	1	.19	985	48	.01	8	110	>10000	57	116	1	.01	4.2	3232	1	1	34	121	>10000
44070	6.3	.16	680	1	220	.6	4	1.81	12.1	4	125	1.25	.14	3	1.15	621	7	.01	19	260	444	10	41	3	.01	16.2	296	6	1	10	145	305
44071	.8	.31	1	1	130	1.2	6	2.85	14.2	12	286	3.17	.34	2	1.39	1595	69	.01	40	670	183	14	55	3	.01	36.4	608	1	1	42	75	86
44072	.5	.16	1	1	75	.2	3	3.16	6.6	2	23	1.10	.24	1	.17	1225	23	.01	7	320	120	8	343	2	.01	5.9	177	1	1	24	52	32
44073	.3	.81	132	1	6	.1	1	.25	.3	1	13	.21	.01	1	.18	67	2	.01	4	18	12	1	1	1	.01	1.7	17	1	1	16	191	1
44074	>200.0	.07	995	1	30	.4	44	.83	>100.0	2	4702	.86	.07	1	.60	282	26	.01	12	120	3596	2537	18	2	.01	8.5	>10000	6	1	14	219	637
44075	153.8	.07	919	1	17	.2	47	.35	>100.0	2	3992	1.13	.10	1	.19	186	14	.01	11	110	3098	1049	6	1	.01	6.9	5056	3	1	8	184	1835
44076	39.6	.04	255	1	1330	.3	72	.96	14.1	2	52	.80	.85	1	.34	321	40	.81	9	40	1618	13	187	2	.01	6.0	460	4	1	9	174	65
44077	5.0	.12	432	1	13	1.3	66	.48	2.6	154	>10000	8.54	.01	1	.58	114	3	.02	952	180	37	3	1	1	.01	26.6	79	1	2	3	15	142
44078	1.3	.14	373	1	7	.6	7	2.34	2.1	10	925	1.57	.01	1	.97	236	2	.03	86	5660	27	6	17	1	.01	41.4	28	7	1	3	24	10
44079	1.4	.11	4540	4	8	2.0	33	.35	59.3	327	8156	>15.00	.01	1	.40	42	1	.01	2550	198	9	1	4	1	.01	19.1	86	1	3	1	2	162
44080	.1	.09	131	32	9	2.6	26	.46	.1	624	4488	>15.00	.01	1	.36	1	1	.01	3091	898	1	1	7	1	.01	15.3	25	1	5	1	1	32
44081	3.0	.58	1	1	60	1.0	24	1.81	2.0	16	421	4.53	.16	13	1.37	1294	14	.04	47	560	119	16	38	1	.19	189.2	143	1	1	17	66	36

COMP: MR RALPH KEEFE

PROJ:

ATTN: RALPH KEEFE / JIM OLIVER

MIN-EN LABS — ICP REPORT

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TEL: (604)980-5814 FAX: (604)980-9621

FILE NO: 45-0266-LJ1+2

DATE: 06/09/21

* 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	SE PPM	TN PPM	T %	V PPM	ZN PPM	GA PPM	SH PPM	M PPM	CR PPM	Au-Fire PPM
RK-1	1.3	.99	1	1	66	1.1	8	2.04	7.8	14	123	2.29	.08	10	.37	613	7	.03	42	1650	48	40	259	6	.04	37.6	187	5	1	4	25	19
RK-2	.8	.59	1	1	69	.9	8	1.26	5.0	6	66	2.48	.12	14	.51	549	4	.04	32	7050	28	20	204	6	.05	56.0	96	5	1	4	28	5
RK-3	2.0	.86	1	1	139	1.0	10	1.09	7.5	6	71	2.49	.25	25	1.03	537	5	.04	41	940	45	26	130	7	.89	57.4	138	7	1	6	58	15
RK-4	1.1	1.04	1	1	100	1.2	12	1.04	2.7	8	43	2.79	.28	21	.90	513	5	.07	34	1040	41	28	166	6	.08	65.3	112	8	1	6	39	5
RK-5	.9	1.35	1	1	106	1.4	11	1.61	5.0	10	63	3.21	.20	24	.87	817	9	.08	31	1490	44	36	212	3	.08	77.6	100	6	1	6	36	7
RK-6	.7	2.10	1	1	214	2.6	20	.92	5.4	20	111	7.43	.46	38	1.90	1029	21	.23	110	1630	60	52	406	7	.12	162.7	356	2	1	9	53	17
RK-7	.9	1.27	1	1	167	1.4	16	.85	1.2	18	51	3.63	.29	23	1.45	1006	6	.06	45	1260	49	34	139	7	.15	90.3	98	9	1	10	87	5
RK-8	1.0	1.23	1	1	143	1.5	13	.84	5.7	10	52	3.51	.24	28	1.19	671	6	.06	38	1140	53	33	169	8	.10	77.7	171	9	1	7	46	9
RK-9	.8	1.20	1	1	146	1.3	13	.83	8.1	10	56	3.30	.23	28	1.16	674	6	.06	43	1150	48	32	163	7	.09	70.5	216	7	1	6	42	7
RK-10	.9	.78	1	1	104	.9	10	.66	4.1	7	35	2.63	.16	17	.74	414	4	.06	30	830	30	22	128	9	.07	60.2	134	7	1	5	38	1
RK-11	1.1	1.75	1	1	167	1.7	16	1.00	3.9	15	88	5.19	.26	40	1.65	780	14	.10	71	1380	63	42	225	6	.13	115.5	234	5	1	9	63	13
RK-12	1.1	1.12	1	1	99	1.3	12	.85	5.2	10	60	3.60	.22	24	1.37	571	11	.07	50	1060	39	30	163	7	.10	88.3	145	8	1	7	57	4
RK-13	.9	1.18	1	1	106	1.0	11	1.06	6.4	8	61	3.07	.23	24	.99	647	7	.09	31	1200	48	33	182	5	.08	73.6	134	7	1	6	43	3
RK-14	1.4	.33	1	1	78	.5	4	2.51	2.1	2	31	.54	.05	3	.20	409	4	.02	6	1140	15	17	249	9	.01	14.8	49	11	1	2	21	1
RK-15	1.7	.15	95	1	62	.5	3	2.51	1.2	1	16	.21	.02	1	.12	142	12	.02	3	740	6	18	221	15	.01	31.1	52	17	1	2	20	3
RK-16	.5	1.99	1	1	225	2.1	18	.85	2.6	19	107	7.52	.46	34	1.63	1092	22	.21	113	1750	68	51	380	7	.12	159.0	351	1	2	9	49	11
RK-17	1.3	1.23	1	1	115	1.5	12	.84	9.2	11	58	3.56	.18	25	1.17	603	10	.06	59	1170	53	34	223	8	.07	81.7	276	9	1	7	38	10
RK-18	1.1	.61	1	1	83	.8	10	.70	1.2	4	18	2.70	.18	14	.42	316	2	.04	16	770	28	16	93	12	.08	57.9	53	6	1	4	25	1
RK-19	1.0	.51	1	1	89	.5	10	.57	.7	4	8	1.76	.15	9	.32	320	1	.05	8	780	19	13	73	13	.09	33.6	49	6	1	3	14	1
RK-20	2.0	.36	1	1	97	1.6	5	2.34	9.3	3	249	.89	.08	7	.25	673	4	.02	21	1390	34	13	409	4	.01	16.4	124	7	1	2	21	1
RK-21	.3	.67	1	1	255	1.4	8	.43	.8	8	75	3.10	.19	19	.79	874	14	.02	23	980	70	18	126	15	.02	39.5	87	8	1	4	24	17
RK-22	.9	.59	1	1	95	.8	8	.64	1.2	5	73	1.62	.11	17	.48	339	6	.04	17	730	28	14	131	7	.06	34.6	61	7	1	3	23	5
RK-23	1.0	.55	1	1	63	.9	8	.64	.3	8	214	1.47	.08	17	.39	235	6	.03	22	440	31	14	115	5	.06	33.6	47	6	1	3	19	8
RK-24	.3	.68	1	1	120	1.1	6	.60	1.4	6	44	2.32	.16	16	.54	658	29	.02	17	910	41	17	139	13	.02	37.6	64	7	1	4	28	7
RK-25	.1	.49	1	1	95	1.3	4	.87	2.3	5	73	1.74	.12	14	.48	725	30	.02	15	850	40	12	200	12	.02	30.2	53	4	1	3	25	3
RK-26	.6	.76	1	1	211	1.3	4	.80	2.2	4	30	1.65	.13	21	.46	437	8	.02	14	840	50	16	199	7	.04	34.6	101	4	1	4	28	4
RK-27	.1	.75	1	1	343	1.7	6	.48	.9	9	96	3.62	.22	19	.83	1052	21	.02	27	1120	82	16	152	20	.03	44.0	96	3	1	4	26	32
RK-28	.1	.56	1	1	114	.9	3	.79	1.7	4	41	1.83	.14	16	.48	526	17	.02	13	800	36	11	165	8	.03	30.6	54	1	1	3	21	44
RK-29	.1	.62	1	1	829	1.5	6	.60	2.3	7	24	2.79	.25	14	.72	784	7	.01	23	910	64	15	169	16	.02	41.9	96	4	1	4	21	68
RK-30	.1	.71	1	1	642	1.5	6	.81	2.4	8	32	2.68	.27	17	.91	874	9	.01	26	950	67	19	208	14	.02	36.6	105	6	1	4	24	8
RK-31	.1	.87	1	1	286	1.6	6	.68	.7	9	40	2.66	.25	22	.75	691	11	.02	29	870	50	23	187	15	.03	39.1	80	6	1	4	23	10
RK-32	.1	.67	1	1	789	1.5	5	.55	2.1	8	31	2.68	.25	16	.80	852	8	.01	25	930	63	16	168	13	.02	37.1	94	2	1	3	19	12
RK-33	1.4	.20	74	1	93	.3	5	15.00	1.8	3	14	.82	.09	5	.33	203	3	.01	9	460	23	8	539	1	.01	11.3	32	8	1	2	11	7
RK-34	.1	.81	1	1	769	1.7	6	.58	1.5	9	40	3.00	.25	20	1.01	1044	10	.01	29	910	81	19	179	14	.02	39.2	109	1	1	3	22	24
RK-35	.2	.67	1	1	713	1.7	5	1.88	1.5	8	36	2.79	.20	17	.86	818	9	.01	27	910	69	19	203	13	.02	37.9	97	5	1	4	22	22
RK-36	.3	.54	1	1	72	.3	5	.47	.3	4	13	1.45	.10	13	.40	254	3	.03	13	620	20	12	78	7	.06	35.7	34	1	1	2	19	3
RK-37	.1	.64	1	1	129	.9	6	.58	.1	7	38	2.41	.17	16	1.06	398	4	.02	45	920	47	12	125	9	.07	55.4	52	1	1	7	96	4