87-345-15887

GEOLOGICAL AND GEOCHEMICAL REPORT

ON THE

FLIGHT PROPERTY
(Flight 1-5)

VICTORIA MINING DIVISION
92C/16W & 92F/1W

Latitude 48° 59' 45"N
Longitude 124° 24' 10"W

Owned and Operated

by

UTAH MINES LTD.

Paul S. Cowley
Roger S. Ord
Utah Mines Ltd.

Vancouver, BC
June, 1987

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SUMMARY

The Flight Property lies nine kilometers northeast of the western tip of Cowichan Lake, Vancouver Island, BC. The property consists of 76 units in 5 contiguous mineral claims, staked by Utah Mines Ltd. in February, 1985 and August, 1986.

The property overlies Sicker Group rocks which are favorable for polymetallic volcanogenic massive sulphides of the Westmin type. An extensive jasper +/- magnetite body was located locally at the Myra-Nitinat contact. A 10 centimeter conformable massive pyrrhotite band occurs in the Nitinat. In addition, two zones of geochemically anomalous Zn-Cu-Ag-Au and Cu +/- Ag-Au are found in Myra stratigraphy. Several geophysical traverses failed to locate any conductive or magnetic trends directly associated with observed mineralization in float material. The 1986 exploration program provides a preliminary data base with mild encouragement for further exploration.

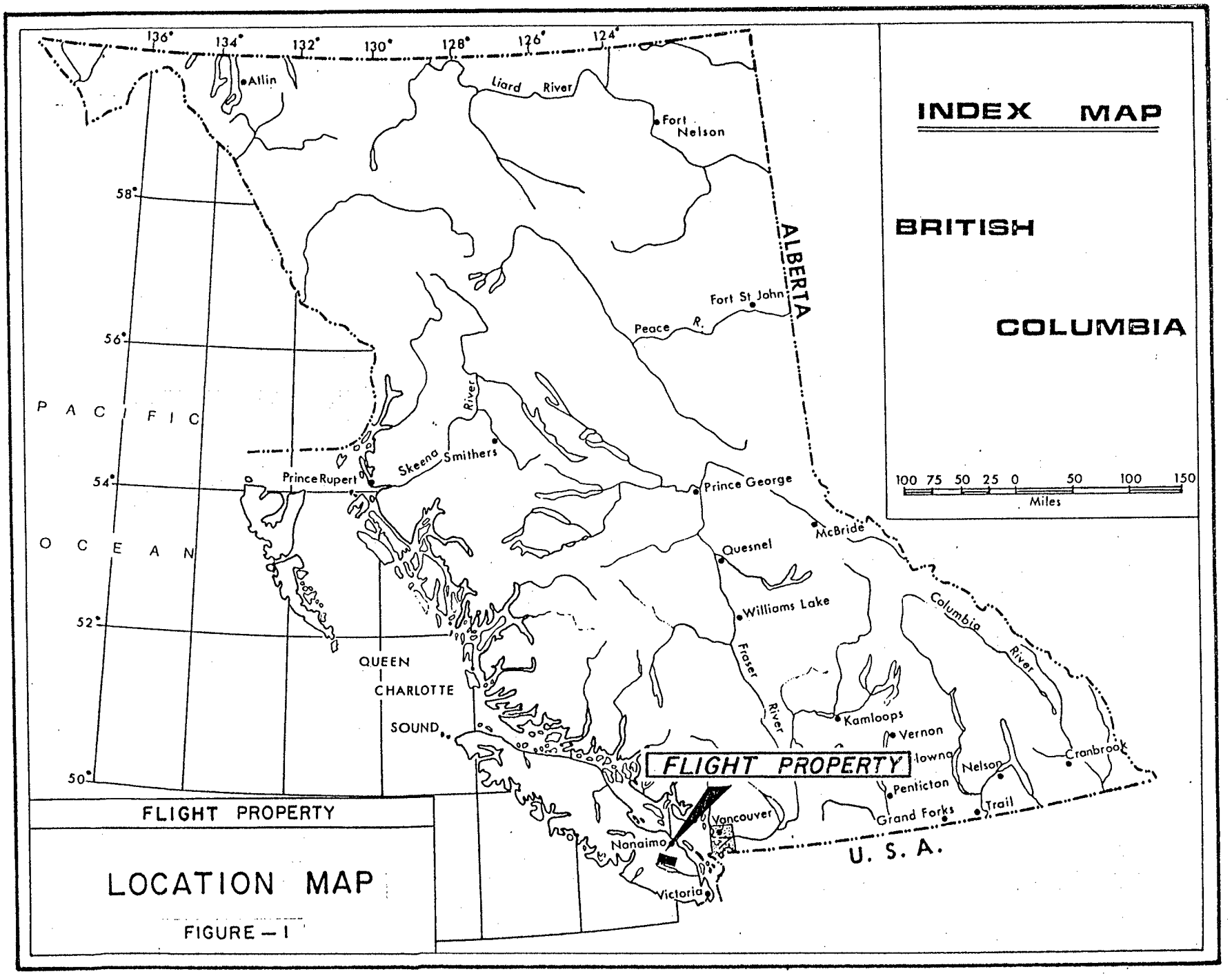
INTRODUCTION

The objective of the 1986 Flight Property exploration program was to continue limited precursory geological, geophysical and geochemical inspection of evaluation for massive sulphide potential. Mapping consisting of 9 field days. Concurrent sampling provided 1 soil, 18 silt and 48 rock sample analyses over the entire property (Flight 1-5). The exploration crew consisted of geologist P. Cowley and assistant B. Nachtigal. The geophysical inspection consisted of 2 field days during which time 4 traverses totalling 1.55 line km were surveyed collecting total field magnetic, VLF-EM, and EM-4 data. The object of this exercise was to locate any conductive and/or magnetic horizons that may be associated with pyrrhotitic float material. The reconnaissance crew consisted of T. Connors and C. Zaremba under the supervision of geophysicist R. Ord.

LOCATION AND ACCESS

The Flight Property, within the Victoria Mining Division is located on the 1:50,000 scale Cowichan Lake and Nanaimo Lakes, Map sheets 92C/16W and 92F/1W. The property centered on 48° 59′ 45"N and 124° 24′ 10 W, lies 9 kilometers northeast of the western tip of Cowichan Lake, in the area locally known as North Shaw Creek (see Figure 1).

Two approaches provide limited road access. The western portion of the property is accessed via 14 kilometers of logging road west of Youbou, the termination of Highway 18, then 8 kilometers north along the Shaw Creek logging road. An alternate route accesses the northeast portion of the property via the Nanaimo Lakes road to Green Creek then 9 kilometers southwest along maintained logging roads.


INDEX MAP
BRITISH COLUMBIA
100 75 50 25 0 50 100 150
Miles
136° 134° 132° 130° 128° 126° 124°
58° 56° 54° 52° 50°
Allin
Liard River
Fort Nelson
ALBERTA
Fort St John
Peace R.
PACIFIC OCEAN
Skeena River
Smithers
Prince Rupert
Prince George
McBride
Quesnel
Williams Lake
Columbia River
Fraser River
QUEEN CHARLOTTE SOUND
Kamloops
Vernon
Cranbrook
FLIGHT PROPERTY
Nelson
Penticton
Trail
Grand Forks
Vancouver
Nanaimo
Victoria
U. S. A.
FLIGHT PROPERTY
LOCATION MAP
FIGURE – 1

PHYSIOGRAPHY

The property lies within the eastern mountainous region of Vancouver Island. The steep, northwest trending mountainous terrain is deeply cut by the north arm of Shaw Creek which drains the property. Elevations range from 340 meters in Shaw Creek to 1325 meters. Several recent landslides are apparent on the property.

Heavy Douglas fir, hemlock and red cedar forests cover the landscape. Approximately 30% of the property has experienced recent logging where slope permitted, providing the limited access and exposure.

CLAIMS

The Flight Property is composed of 76 units in 5 contiguous mineral claims (see Figure 2). The property boundaries are shared with several competitors. The property is owned and operated by Utah Mines Ltd. Table 1 below details the Flight claim status.

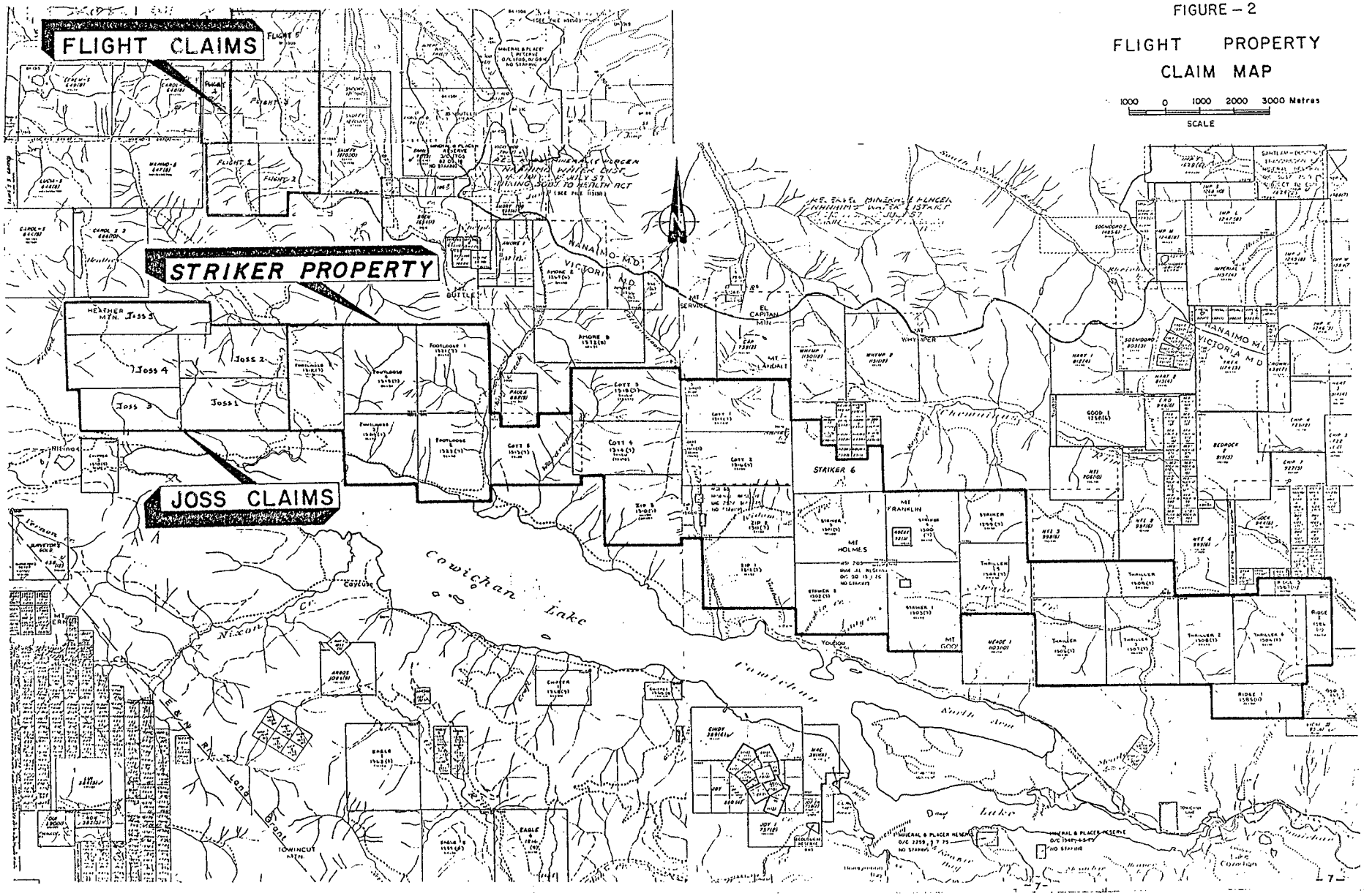
Table 1: Flight Property Claim Data
Victoria Mining District
N.T.S. 92C/16W & 92F/1W

Name	Units	Record Date	Record No.	Year of Expiry
Flight 1	12	March 15, 1985	1463	1988
Flight 2	16	March 15, 1985	1464	1988
Flight 3	20	March 15, 1985	1465	1988
Flight 4	8	September 8, 1986	1754	1989
Flight 5	20	September 8, 1986	1755	1989

FIGURE – 2

FLIGHT PROPERTY

CLAIM MAP



HISTORY

Two prominent geologists, Clap (1912-1917) and Bancroft (1913), contributed to the first regional geological work on southern Vancouver Island. Clap initially recognized and named the Sicker, Vancouver and Nanaimo Groups. Fyles (1949, 1955) performed detailed geological work within the Cowichan Lake map sheet. Fyles reported a laterally extensive 200 meters thick cherty tuff marker bed with isolated pods of rhodonite ($MnSiO_3$) within Sicker sediments. Muller (1980) in his Sicker Group regional investigation further divided the group into the Nitinat and Myra Formations and an informal "sediment - sill" unit which underlie the previously named uppermost Buttle Lake Formation.

The area has been prospected for possible Sicker Group hosted Westmin and Twin "J" type polymetallic massive sulphide deposits throughout the century. Local geological reports are available from various molybdenum, copper and gold prospects both past and present.

REGIONAL GEOLOGY

Three northwest trending structural uplifts on southern Vancouver Island expose the late Paleozoic through Mesozoic sequence of volcanic, sedimentary and granitic rocks. Of the Buttle Lake, Nanoose and Cowichan-Horne Lake uplifts, the latter embraces the property.

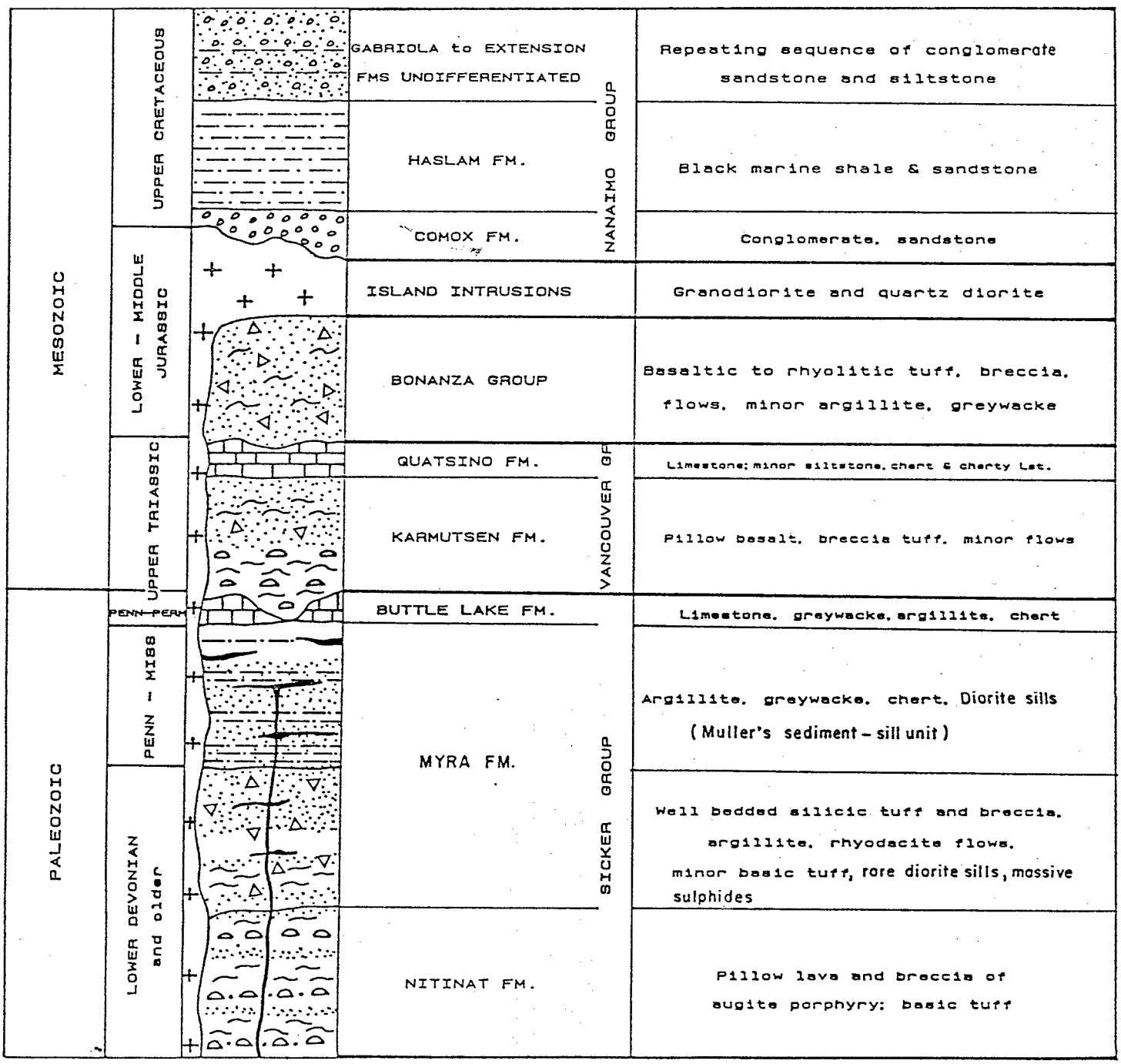
The oldest rocks within the Cowichan-Horne Lake uplift are the Silurian to Permian Sicker Group. The Sicker Group is subdivided into four units: the Nitinat and the Myra Formations, the informally named "sediment-sill" unit and the uppermost Buttle Lake Formation (see Table II). The Sicker island arc terrane comprises massive submarine basic, intermediate and rhyodacitic flows and pyroclastics overlain by shallow water sediments. The package has experienced regional greenstone metamorphism which may disguise or obliterate textures.

The upper Triassic Vancouver Group unconformably overlies the Sicker Group. The Karmutsen and Quatsino Formations comprising the Vancouver Group are massive submarine dark grey fine-grained to aphanitic basaltic flows overlain by massive grey argillaceous limestones and minor sediments.

The lower Jurassic Bonanza Group unconformably overlying the Vancouver Group is composed of an island arc sequence of massive basaltic to rhyolitic tuff, breccia and flows with minor argillite.

TABLE II

TABLE OF FORMATIONS



The regionally extensive lower to middle Jurassic Island granodiorite intrudes the lower sequence.

The Cretaceous Nanaimo Group unconformably overlies older units as a series of five tranagressive - regressive terrigenous sedimentary cycles.

Deformation is confined to two periods. A pre-Triassic episode has severely folded the Sicker Group. A second Cretaceous episode has folded and faulted the Nanaimo and older units. The northwest orientation of the Cowichan-Horne Lake uplift is reflected in the rock fabric and structure. The regionally extensive north-west trending Cowichan Lake fault which forms the southern extent of the Cowichan-Horne Lake uplift has been interpreted by 1984 lithoprobe work as an active structure dipping north at 65°.

PROPERTY GEOLOGY

The entire property is underlain by Sicker Group rocks of the Nitinat and Myra Formations. Their lithologies are somewhat variable from their type sections as can be expected in this depositional environment, especially in the Myra Formation.

Nitinat Formation

On the property, the Nitinat Formation comprises dark green massive basaltic to andesitic agglomerate, volcanic breccia, minor flows and rare thin bedded tuff. No sharp contacts are apparent between the massive units. This may be the result of the greenstone facies metamorphism obliterating or obscuring original textures, particularly in the fine-grained matrix. The agglomerate consist of 10-60% irregular to vaguely subrounded clasts of bombs six to 30 centimeters in diameter of locally vesicular coarse-grained hornblende porphyry. The groundmass within these bombs is very fine-grained recrystalized hornblende-feldspar material. The groundmass hosting these bombs resembles the matrix within the clasts in colour and composition but generally a vague clastic character can be observed. This feature results in poorly detectable boundaries to the bombs, seen frequently as clusters of vescicles and coarse-grained hornblende porphyroblasts. When the matrix is undetectably clastic and contain varying amounts (10-80%) of very fine-grained strongly epidotized angular rock 1-10 cm in diameter, the term volcanic breccia is applied. These rocks may pass into massive ill-defined locally vesicular

medium to coarse-grained hornblende porphyry flows. Locally, thin fine-grained andesitic lithic tuff beds are present forming the only attitude-measurable strata in the Nitinat Formation.

The above description conforms with the type lithology for the Nitinat. However, the formation takes a strongly clastic character in the northwest corner of the property. Locally a 50 meter section immediately underlying the Nitinat-Myra contact comprises alternating medium to massive bedded basaltic to andesitic agglomerate to medium-grained lithic tuff. The beds are distinct by grain-size sorting, lacking internal grading and form abrupt contacts with overlying beds by different clast size. The units are strongly chloritized, dark to medium olive green, highly weathered, poorly cemented and porous. The grains consist of volcanic rock fragments of plagioclase-hornblende porphyry or hornblende porphyry, subhedral hornblende crystals and minor subhedral plagioclase crystals. At the contact the plagioclase crystals have a moderate selective alteration of sericite-kaolinite-chlorite.

In the northern part of the claim group, a noteworthy succession is present which represents local variation to the upper portion of the Nitinat Formation. A 10-15 metre thick vertically dipping jasper body lies on basaltic Nitinat. The jasper is locally broken with minor infillings and films of magnetite. The jasper is overlain, possibly unconformably by Myra epiclastic sandstones and siltstones. The jasper unit is traceable for 250 meters. Laterally the massive jasper is succeeded by lenses, blocks or wedges of jasper +/- pyrite overlain by fine-grained chloritic tuff,

laminated cherty tuff and finally by +/- hematitic altered lapilli tuff. The altered lapilli tuff contains mafic clasts and occasional felsic clasts strongly altered to clay and sericite to 5 centimetres in diameter.

Myra Formation

The Nitinat-Myra contact exposed in one locality on the property indicates on unconformable relationship with approximately 20° tilt. The typical fine-grained bedded tuff to lapilli and bedded cherty tuff typical of the lower and middle Myra are confined to an extremely thin unit (4 meters) on the property. This section consists of two beds of fine to medium-grained locally lapilli lithic tuff interbedded with medium green very fine-grained cherty tuff. Associated with the second tuff bed are several one centimeter graphitic partings with intervening quartz veining carrying pyrite and trace chalcopyrite overlain by light to medium grey very fine-grained silicic rock with 1% pyrite. Also associated with this section is a 30 centimeter bedding shear zone of chlorite, kaolinite, sericite, pyrite, and trace chalcopyrite and malachite. This sequence although thin is an interesting massive sulphide hunting ground especially due to the distinct volcanic evolutionary break, silicic rock, modest mineralization and graphitic material.

This unit is rapidly succeeded by a thick package of alternating massive tuff and thin bedded siltstone and cherty tuff. The remainder of the Myra on the property consists of this sequence. The massive tuff beds 1-4

meters thick are medium grey to medium grey-green and consist of 95-99% subrounded to subangular clasts of volcanic rock fragments notably of plagioclase porphyry, subhedral to broken plagioclase crystals, minor subrounded quartz grains. The plagioclase crystals exhibit minor sericite-epidote-chlorite alteration. Near the base of the Myra, hornblende crystals are present in abundance. The clasts exhibit minor sorting with a negligible content of chloritic matrix. Pyrite distribution is typically trace but may approach 3% in isolated beds. Rarely, the beds show coarse, crude, horizontal laminations. Grain-size is predominantly fine-grained but may reach coarse grained with minor pebbles of cherty tuff to three centimeters. Grading within these beds was rarely observed. One locality of plant debris was noted.

Interbedded with massive tuff beds are thin bedded and laminated dark grey siltstone and medium to dark green cherty ash tuff. In thin-section, the siltstones consist of subangular to subrounded plagioclase crystals in a silicic-detrital clay matrix. The cherty tuff beds consist of minor amounts of plagioclase crystals and rare quartz spheroids which could represent radiolaria tests in a silicic matrix.

The sorting and rounding within these massive units and associated cherty tuff beds indicate a turbidity-type massive sandstone facies defined by Walker (1984) as "thick sandstones with thin (or absent) interbedded shales" rarely coarsely laminated. The absence of plant rootless or abundant plant debris, mud cracks and other indicators of fluvial plain environment supports this hypothesis. This environment does not lend

itself to massive sulphide deposition due to the higher energy of deposition and lack of evidence for proximity to a volcanic source. However, Fyles documents a rhodonite occurrence in the SW corner of the property in Myra rocks necessitating further work to note its relationships.

Only in the western part of the property are extensive cherty tuff beds present. Associated with this succession is a thin laminated rhodonite +/- jasper bed.

Structure

The northern part of the property appears to have only minor faulting detected only by deeply incised photo lineaments. The central part of the property is severely cut by NE and WNW structures defined by shears and photo lineaments and supported by lithologic change. Despite the degree of faulting, bedding altitudes remain consistent with a NW dip 10^{o}-45^{o} across the property. Only rare localized fold kinks were observed. Significant shear zones were geochemically analyzed for any major rock oxide depletion or enrichment or metal leackage.

ROCK AND SOIL GEOCHEMISTRY

Sampling

A total of 18 silts were collected. Where possible, sampling was done from intra-stream bars to avoid creek bank contamination. Silting was initiated in August and September 1985.

Only 1 soil sample and 48 rock samples were collected during road mapping of the Nitinat and Myra lithologies. A poorly developed "B" horizon was sampled in all cases.

Preparation and Analysis

All samples were sent to Acme Analytical Laboratories Ltd., Vancouver, BC. Rock samples were pulverized and sieved to -80 mesh. Two approaches of rock analyses were used: 30 element ICP and Au or 30 element ICP with Au and whole rock geochemistry. For multi element inductively coupled Argon plasma (ICP), the -80 mesh pulp was digested in aqua regia prior to the analyses. The suite of 30 elements comprised Mo, Cu, Pb, Zn, Ag, Ni, Co, Mn, Fe, As, U, Th, Sr, Cd, Sb, Bi, Va, Ca, P, La, Cr, Mg, Ba, Ti, B, Al, Na, K and W.

Au pulps were ignited four hours at 600° C, digested with hot dilute aqua regia, extracted with Methyl Isobutyl Ketone and analyzed by atomic absorption to a 1 ppb detection limit. Whole rock geochemical assay, when

performed fused the -80 mesh pulp with lithium metaborate then dissolved in 5% HND^3. The results yielded 11 major mineral oxided components, SiO_2, Al_2O^3, CuO, MgO, Na_2O, K_2O, MnO, TiO_2, P_2O_5 and Cr_2O_3 accompanied by a loss on ignition and total Ba.

Silts and soils were sieved to a -80 mesh and subsequently analyzed by ICP. the geochemical data are found in Appendix A.

Geochem Results

In the central part of map 2, a series of metal anomalous samples are concentrated in one area. Conformable pyrrhotite mineralization 10 cm wide (86LCTX-12, 12A, 12B) yielded anomalous Mo to 45 ppm, Cu to 169 ppm, Pb to 95 ppm, Zn to 198 ppm and Ag to 1.6 ppm. Float samples of this pyrrhotite mineralized (86LCTX-31, 31A) returned comparable results. Foliated chloritic rock associated with this outcrop (86LCWS-17 and 18) returned anomalous Zn to 749 ppm. An outcrop (86LCTS-7) proximal to this pyrrhotite mineralization yielded anomalous Mo (23 ppm), Zn (185 ppm), Cu (131 ppm), Pb (45 ppm), Au (22 ppb).

The jasper +/- magnetite body was only anomalous in two samples (86LCWM-2, 27) in Mo to 9 ppm and Zn to 158 ppm. A float sample (86LCWC-3) of chert with disseminated pyrite proximal to this jasper body returned 203 ppm Zn. A foliated chloritic rock with 5% pyrite (86LCWG-21) near the jasper zone yielded 130 ppm Cu and 286 ppm Zn.

Two silts collected from a creek draining this area yielded anomalous Zn to 237 ppm (86LNL-207, 208).

On map 1 a rhodonite site (86LCWR-50) yielded anomalous Mo to 7 ppm. Four silts from a creek draining this are provided anomalous values in Zn to 230 ppm and Au to 44 ppb (86 SNLN-76, 77, 78 and 86CLC-2).

Geophysical Reconnaissance Survey

Survey Description

The reconnaissance geophysical survey conducted on the Flight claims consists of four traverses (three on roads, one over broken ground) totalling 1.55 line-kms. These traverses occurred on Oct.14 and 15, 1986. The objective of this survey was to:

1. delineate possible conductive horizons associated with a pyrrhotite boulders.
2. determine the strike continuity and direction of any pyrrhotite horizon.
3. locate major structures affecting the area.

The lines and 25m station intervals were controlled using compass and hip-chain. The information consists of Total Field Magnetics, VLF-EM, and EM-4 data.

These surveys were performed using a Scintrex IGS (Integrated Geophysical System) which enables both total field magnetic readings and VLF-EM readings to be recorded on one traverse pass. The system is comprised of two units; one acts as a base station which monitors the diurnal drift of the earth's magnetic field every two seconds, the other acts as a field unit which records the total magnetic field and the VLF-EM (Inphase, and Quadurature components) measurements. The two units are then coupled at day's end and the field unit's magnetic data are internally compared to the base station's data. The field unit's data are corrected to a 56000 gamma datum. The data are repeatable to ±5 gammas.

The VLF-EM data (24.8 KHz; Seattle transmitter) and the magnetic data were both collected at 25m intervals. The orientation of the surveyor to the Seattle station causes a VLF-EM anomaly to express itself with the positive inphase lobe always south of the negative lobe regardless of the line traverse direction.

This Magnetic/VLF-EM equipment is company owned.

The EM-4 is a cableless, frequency domain Slingram type, electromagnetic system which records the ratio-ed amplitude responses of two simultaneous transmitted frequencies. The survey is comprised of a receiver (the Scintrex EM-4) and a transmitter (Scintrex model TM-2). In this survey the receiver-transmitter separation is 100m and the frequency ratio is 3037Hz/112Hz. Fluctuations in coil separation are compensated for by the ratio-ing of the amplitude responses. The EM-4's accuracy is stated by reputed to be at least ±0.2 %, however, the observed noise in this survey is approximately ±1.0%.

The EM-4 upgrade to the IGS system was rented from Scintrex at $31.50/day. The TM-2 transmitter was rented from Esso Minerals for $50/day. Total geophysical equipment rental cost for two days operation were $163.00.

Geophysical Results

The results are posted and profiled in figures 3a,b,c (magnetics, VLF and EM-4, respectively). Their plan location is shown in figure 4 (UTM reference: Map 2).

Geophysical Discussion

The magnetic data show no direct anomaly correlations to the pyrrhotite boulder area, however, there are several magnetic anomalies in the survey area. These anomalies indicate several lithological trends. The anomalies and suspected trends are plotted in figure 3a, and 4. The northern east-west magnetic trend appears to strike into the prryhotite boulder zone, however, there is no significant response over the boulder zone itself. The southern magnetic trend possibly follows another pyrrhotite horizon other than the horizon this survey was to locate near the pyrrhotite boulders.

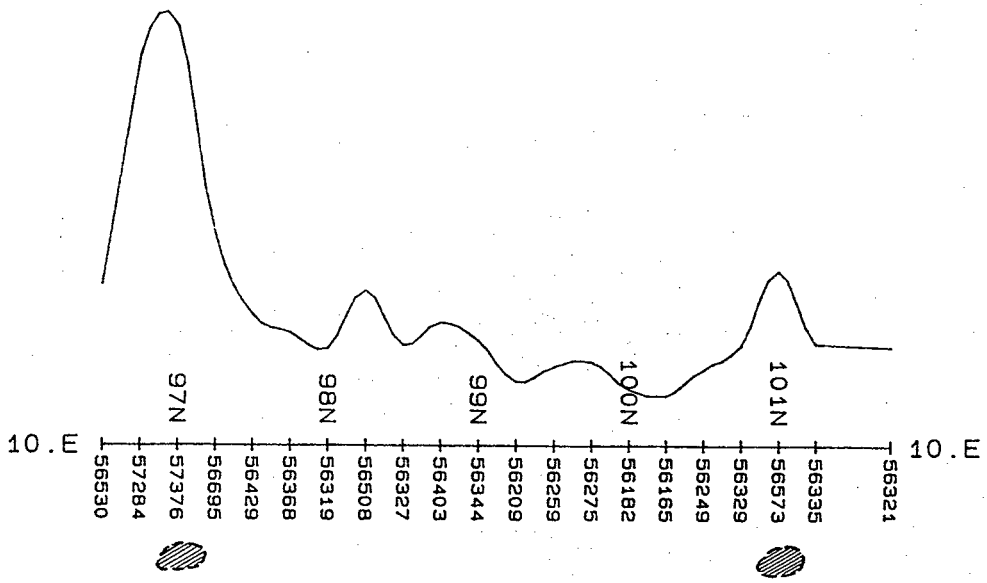
The VLF responses shown in figure 3b and 4 show no direct pyrrhotite boulder correlation. However, there are two VLF responses with an associated east-west trend located north of mineralized boulders. The southern VLF response appears to coordinate with the southern magnetic trend.

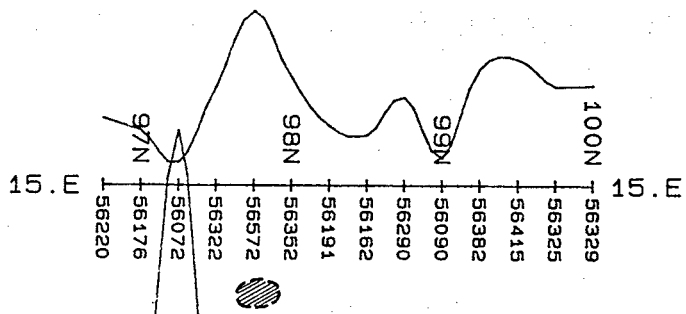
The EM4 data (figure 3c) indicates nothing interpretable. The fine scale (1%/cm) at which the data is plotted causes the noise level to be accentuated.

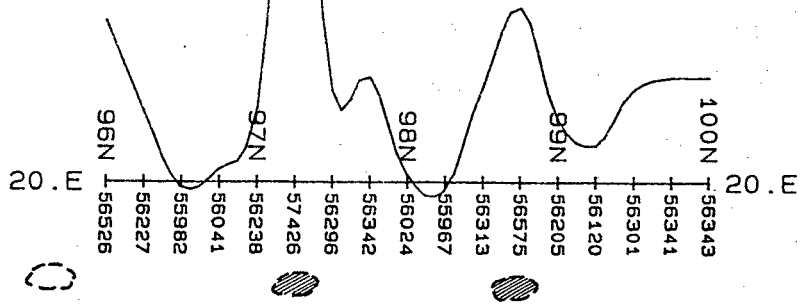
Conclusions

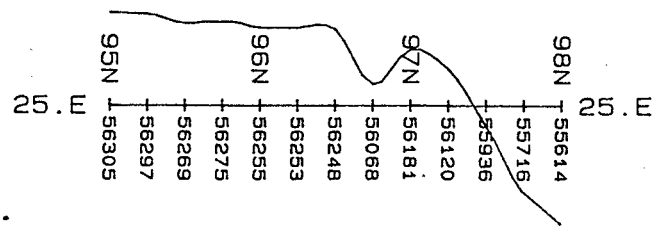
1. There are no interpretable conductive or magnetic horizons directly associated with the prryhotite boulders.

2. There is at least one , and possibly two, east-west trending structures and/or lithologies indicated by the VLF-EM and total field magnetics.









LEGEND

Vertical Scale = 250 Gammas /cm.

Subtracted Background = 56000

Magnetic Anomaly

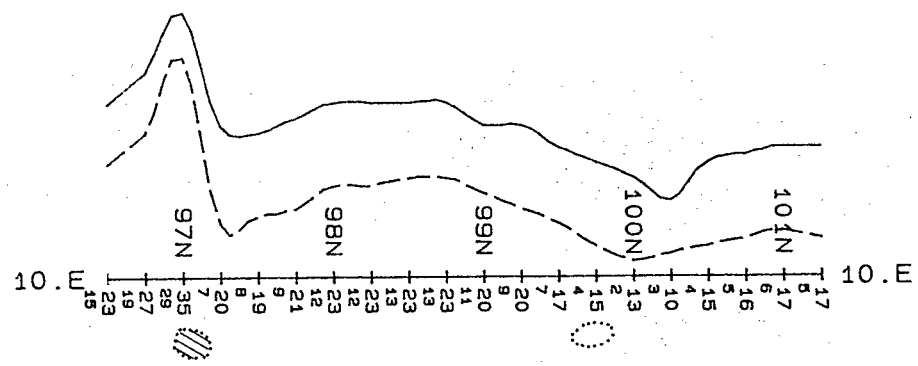
Possible Anomaly

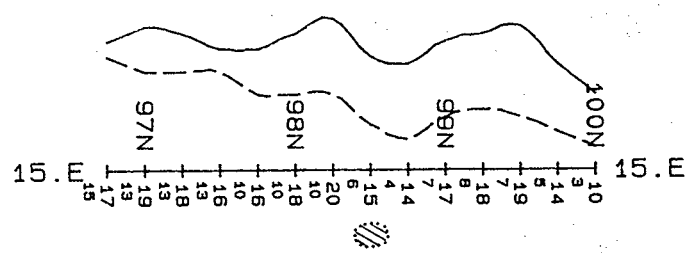
FIGURE – 3A

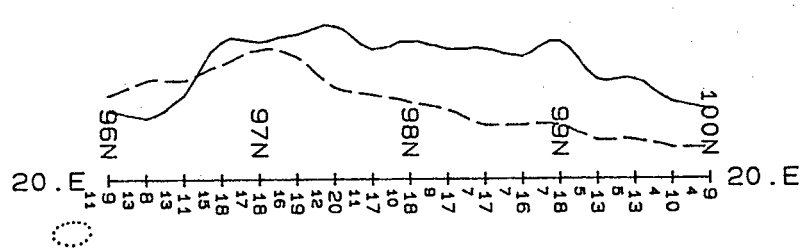
TOTAL FIELD MAGNETIC TRAVERSES

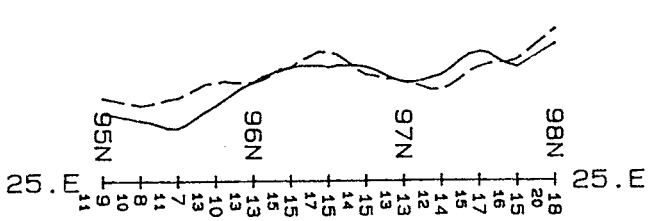
0 100 M.

SCALE – 1:5000









LEGEND

Vertical Scale – 10%/cm.

Transmitter = 24.8 KHz (Seattle)

VLF Response

Possible Response

FIGURE – 3B

VLF - EM TRAVERSES

0 100 M.

SCALE – 1:5000

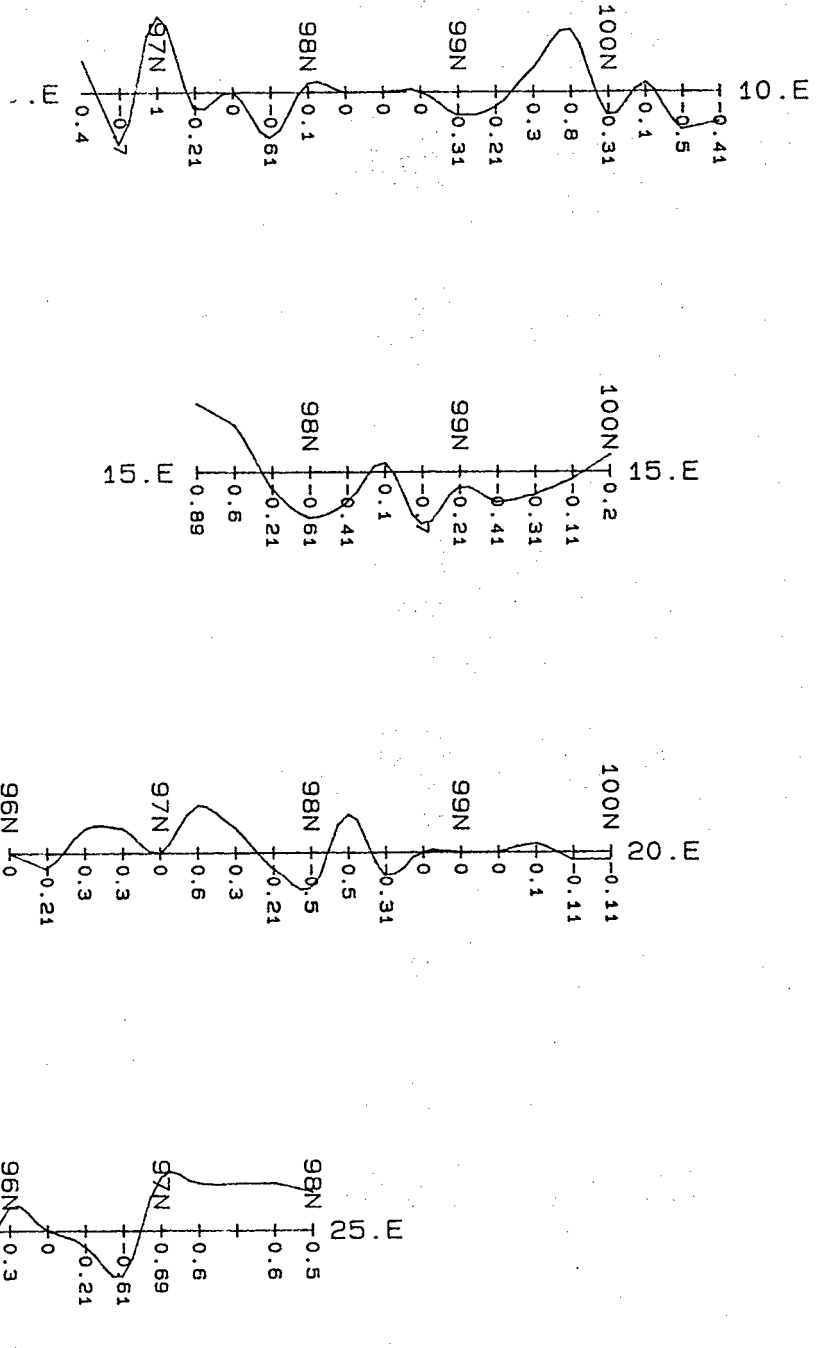


FIGURE – 3C

EM – 4 TRAVERSES

0 100 M.
SCALE – 1:5000

Vertical Scale – 1% / cm.

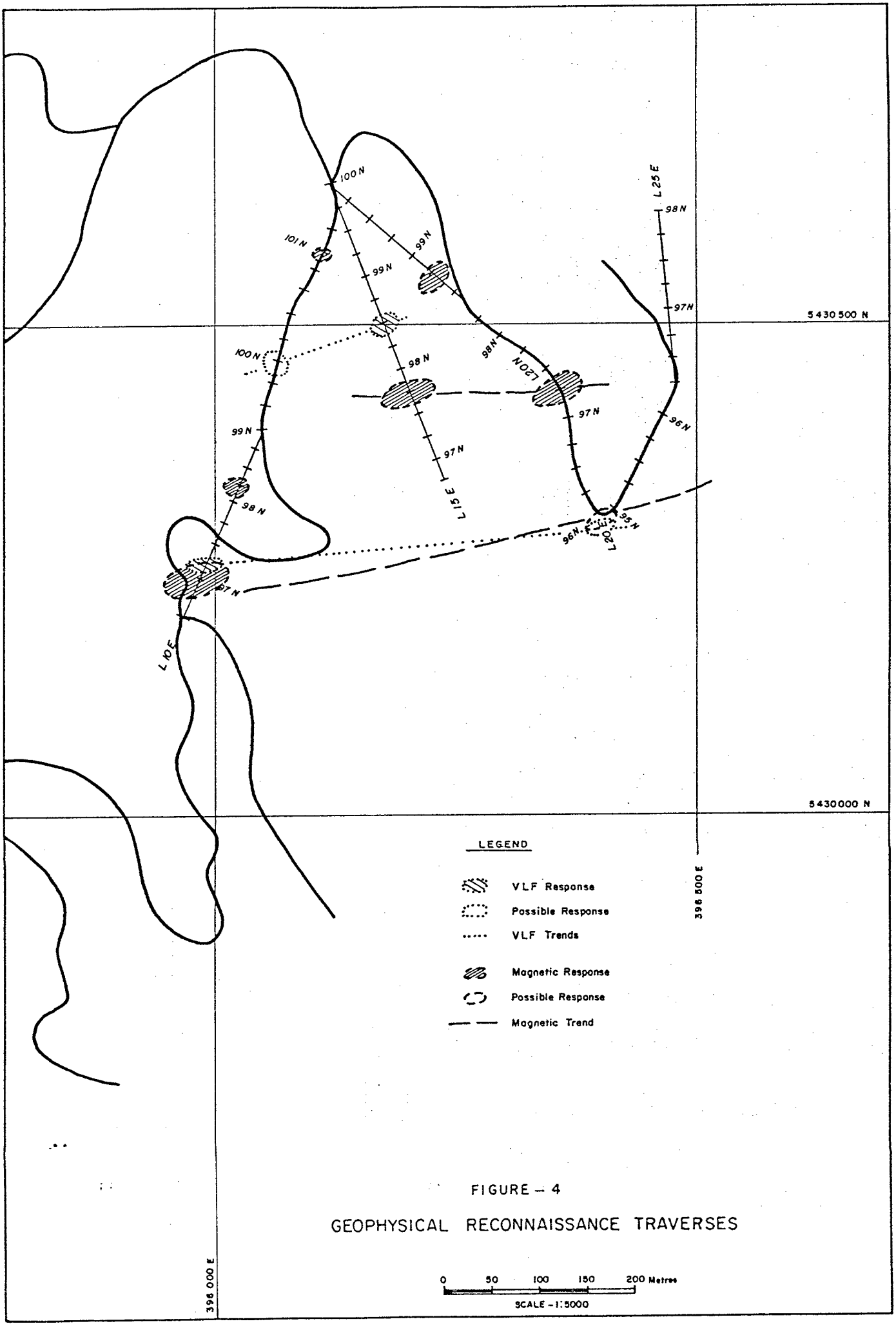


FIGURE – 4

GEOPHYSICAL RECONNAISSANCE TRAVERSES

CONCLUSIONS

1. The Sicker Group's Myra Formation is a favorable host for volcanogenic massive sulphides as witnessed by Westmin's Buttle Lake mine and the past producer Twin "J".
2. Myra stratigraphy was identified on the property. The majority of the Myra shows sedimentary features and may represent turbidity-related deposition thus discouraging the massive sulphide potential. However, Myra stratigraphy proximal to the Nitinat-Myra contact, although thin, is encouraging massive sulphide hunting ground due especially to the volcanic evolutionary break, minor alteration and mild mineralization and geochemical anomalies. A massive jasper +/- magnetite body is associated with this contact.
3. Conformable massive pyrrhotite mineralization was located in the northern part of the property.
4. There are no conductive and/or magnetic horizons directly associated with mineralized float material found on the property.

RECOMMENDATIONS

At least two more weeks of detailed mapping with concurrent geochem sampling are required to adequately cover and evaluate the property. Particular interest should be paid to the Nitinat-Myra contact which appears to have the only potential for massive sulphides.

The thick jasper +/- magnetite body associated with the contact in the northern part of the property is of particular interest. Proximal to this jasper body is conformable massive pyrrhotite mineralization. Further prospecting should be done in this area to follow the pyrrhotite mineralization and jasper body. Should the area continue to be of interest after prospecting, a soil-geophysical-mapping grid would be appropriate to determine extents and potential for massive sulphide mineralization.

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APPENDIX A

GEOCHEMICAL DATA

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
86-LCTX-1	3	406	7	37	.5	56	35	339	4.90	11	5	ND	2	34	1	4	2	67	1.22	.117	4	87	1.84	18	.31	7	1.96	.11	.07	1	4
86-LCTS-7	23	131	45	185	.3	44	16	949	19.47	127	5	ND	3	5	1	20	2	68	.04	.135	2	16	.19	102	.01	2	1.27	.04	.09	1	22
86-LCTM-8	1	102	11	85	.2	32	20	1420	11.78	18	5	ND	4	58	1	2	2	245	1.88	.165	18	13	1.50	63	.12	2	1.71	.07	.15	1	1
86-LCTQ-9	1	20	3	17	.2	5	3	3169	1.09	6	12	ND	2	139	1	2	2	28	11.32	.076	5	6	.28	40	.12	15	.50	.08	.06	1	1
86-LCTX-12	28	58	40	79	.9	153	203	774	19.13	26	5	ND	3	5	1	13	2	72	.51	.049	4	6	2.00	36	.09	2	3.01	.05	.06	1	4
86-LCTX-12A	39	165	95	198	1.4	199	495	368	20.22	150	5	ND	3	8	34	15	2	71	.66	.221	2	10	.59	34	.04	2	1.04	.05	.14	1	14
86-LCTX-12B	45	169	67	109	1.6	332	212	582	27.04	128	5	ND	3	6	3	38	2	39	.44	.126	2	7	.67	22	.02	2	1.08	.06	.08	1	14

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

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN,FE,CA,P,CR,MG,BA,TI,B,AL,NA,K,W,SI,ZR,CE,SN,Y,NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: P1-2 ROCKS P3-7 SOILS AU* ANALYSIS BY AA FROM 10 GRAM SAMPLE.

DATE RECEIVED: AUG 21 1986 DATE REPORT MAILED: Aug 25/86 ASSAYER. D. Toye ..DEAN TOYE. CERTIFIED B.C. ASSAYER.

UTAH MINES PROJECT - 2164 FILE # 86-2175 PAGE 1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
86-LCWM-2	7	24	17	158	.1	48	16	1160	21.14	27	5	ND	3	12	1	13	2	240	.23	.056	6	9	.90	31	.05	2	.71	.05	.10	1	3
86-LCWC-3	5	126	11	203	.5	66	12	516	16.05	99	5	ND	2	3	1	2	2	191	.08	.029	10	65	.63	19	.02	2	1.56	.04	.01	1	10
86-LCWJ-4	3	75	10	34	.2	40	18	512	16.69	26	5	ND	4	16	1	2	2	115	.91	.080	10	7	.35	5	.04	2	.62	.05	.02	1	14
86-LCWA-6	24	32	17	52	.6	15	2	305	2.65	27	5	ND	2	3	1	3	2	22	.07	.060	6	8	.38	133	.01	9	.63	.02	.18	1	12
86-LCWT-13	2	48	16	97	.1	28	31	1140	7.45	12	5	ND	2	19	1	2	2	47	1.12	.093	6	18	2.20	87	.11	10	2.88	.07	.21	1	4
86-LCWT-14	1	13	6	92	.1	22	16	817	6.58	2	5	ND	1	12	1	2	2	50	.55	.116	7	12	1.59	322	.13	11	1.98	.06	.27	1	5
86-LCWS-15	1	30	10	86	.1	22	12	1025	10.47	12	5	ND	2	4	1	2	2	53	.24	.057	7	12	2.26	119	.11	2	3.86	.04	.15	1	1
86-LCWC-16	5	18	3	50	.2	26	15	472	6.90	8	5	ND	2	3	1	2	2	144	.40	.037	9	10	.85	27	.03	10	1.39	.03	.02	1	1
86-LCWS-17	5	32	18	334	.3	51	11	1087	19.43	175	5	ND	4	4	1	2	2	306	.21	.084	17	25	3.04	5	.03	2	5.66	.05	.01	1	3
86-LCWS-18	1	27	11	749	.9	38	3	554	6.79	76	5	ND	2	9	15	2	2	1003	2.31	.021	8	24	.64	22	.02	10	1.34	.05	.01	1	9
86-LCWS-19	4	69	13	203	.3	54	24	1256	9.01	56	5	ND	4	4	1	2	2	63	.21	.092	6	5	1.34	106	.07	6	2.51	.04	.16	1	1

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

WHOLE ROCK ICP ANALYSIS

A .1000 GRAM SAMPLE IS FUSED WITH .60 GRAM OF LIBO2 AND IS DISSOLVED IN 50 MLS 5% HNO3.
- SAMPLE TYPE: ROCK CHIPS

DATE RECEIVED: AUG 21 1986 DATE REPORT MAILED: Aug 25/86 ASSAYER. D. Toye. DEAN TOYE. CERTIFIED B.C. ASSAYER.

UTAH MINES PROJECT - 2164 FILE # 86-2175

SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba PPM	Y PPM	Zr PPM	Loi %	Sum
86-LCWM-2	61.98	1.97	31.92	1.77	.44	.15	.30	.10	.18	.14	.01	49	8	31	.8	99.77
86-LCWC-3	68.00	3.60	22.51	1.22	.16	.05	.10	.12	.09	.06	.01	160	9	18	3.8	99.75
86-LCWJ-4	66.66	1.56	26.65	.71	1.53	.05	.10	.25	.24	.06	.01	15	11	58	1.9	99.73
86-LCWA-6	75.87	10.25	3.88	1.48	.12	.25	3.05	.44	.14	.04	.01	2449	24	141	3.6	99.62
86-LCWT-13	54.09	16.22	12.59	4.22	2.40	1.10	2.85	.66	.25	.14	.01	2484	14	74	4.7	99.72
86-LCWT-14	50.84	19.98	11.89	3.50	1.33	1.45	4.95	.78	.29	.09	.01	4020	9	111	3.9	99.80
86-LCWS-15	52.60	16.96	15.97	4.18	.85	.15	2.80	.88	.17	.12	.01	2017	23	133	4.7	99.80
86-LCWC-16	79.89	3.54	10.34	1.62	.65	.05	.20	.09	.11	.05	.01	92	11	56	3.2	99.78
86-LCWS-17	44.43	13.69	29.25	5.31	.40	.05	.10	.63	.27	.16	.01	24	25	106	5.4	99.72
86-LCWS-18	77.00	3.25	10.16	1.23	3.30	.05	.20	.12	.06	.06	.01	76	11	5	4.0	99.46
86-LCWS-19	50.26	20.24	13.53	2.81	.76	.15	4.70	.86	.25	.15	.01	2713	30	178	5.5	99.77

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

WHOLE ROCK ICP ANALYSIS

A .1000 GRAM SAMPLE IS FUSED WITH .60 GRAM OF LIBO2 AND IS DISSOLVED IN 50 MLS 5% HNO3.
- SAMPLE TYPE: ROCK CHIPS

DATE RECEIVED: AUG 27 1986 DATE REPORT MAILED: Sept 6/86 ASSAYER. D. Toye ..DEAN TOYE. CERTIFIED B.C. ASSAYER.

UTAH MINES PROJECT - 2164 FILE # 86-2273 PAGE 1B

SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba PPM	Y PPM	Zr PPM	Loi %	Sum
86SCWCT-393	61.38	13.56	8.06	6.21	1.49	3.40	.20	.76	.27	.12	.01	324	22	63	4.1	99.63
86LCWG-21	53.79	16.70	7.67	3.49	6.93	1.50	3.75	.82	.38	.10	.01	1346	24	88	4.4	99.81
86LCWI-25	62.33	16.91	5.56	2.00	5.26	4.55	.50	.43	.20	.13	.01	137	21	120	1.9	99.82
86LCWM-27	47.65	5.62	38.48	2.66	1.61	.40	.45	.21	.22	.20	.01	204	10	59	2.3	99.86
86LCWD-35	57.20	16.78	8.28	3.29	4.47	4.15	.85	.78	.20	.11	.01	349	25	83	3.6	99.80
STD SO-4	67.60	10.31	3.49	1.03	1.66	1.35	2.00	.55	.23	.07	.01	784	30	329	11.4	99.89

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

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN,FE,CA,P,CR,MG,BA,TI,B,AL,NA,K,W,SI,ZR,CE,SN,Y,NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: P1-ROCKS P2-11 SOILS AU* ANALYSIS BY AA FROM 10 GRAM SAMPLE.
SIGTS - -20 MESH & PULVERIZED

DATE RECEIVED: AUG 27 1986 DATE REPORT MAILED: Sept 6/86 ASSAYER. D. Toye. DEAN TOYE. CERTIFIED B.C. ASSAYER.

UTAH MINES PROJECT - 2164 FILE # 86-2273 PAGE 1A

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
86LCTQ-26	1	78	2	12	.2	3	6	433	.96	2	5	ND	1	2	1	2	2	4	.01	.004	2	4	.18	10	.01	5	.30	.01	.02	1	4
86LCTQ-29	1	23	4	2	.1	4	2	148	.42	2	5	ND	1	7	1	2	2	4	.08	.010	2	6	.07	3	.01	43	.14	.01	.01	1	1
86LCWG-21	1	130	6	286	.1	26	24	708	3.64	4	5	ND	1	37	1	2	2	75	2.74	.139	5	35	1.80	81	.23	5	2.21	.04	.63	1	1
86LCWI-25	1	27	6	71	.1	7	11	833	2.91	2	5	ND	2	53	1	2	2	27	.71	.086	5	8	1.16	10	.11	6	1.68	.05	.05	1	1
86LCWM-27	9	39	33	93	.1	28	20	1430	22.02	20	5	ND	2	17	1	2	16	142	.82	.068	2	12	1.25	23	.06	2	1.47	.01	.10	1	1
86LCWD-35	3	42	8	81	.2	12	16	929	5.34	3	5	ND	1	29	1	2	2	66	1.61	.072	5	23	1.77	23	.18	5	1.81	.09	.06	1	1
STD C/AU 0.5	21	61	41	137	7.1	69	30	1100	3.91	43	22	7	31	47	17	16	18	62	.48	.105	35	58	.88	175	.08	33	1.73	.06	.13	12	500

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
86-LCTX-31	23	286	156	164	.8	333	187	871	18.99	88	5	ND	3	5	2	4	2	48	.27	.088	2	7	1.08	17	.07	2	1.22	.06	.07	1	7
86-LCTX-31A	30	300	73	191	.7	409	145	967	20.45	38	5	ND	3	4	3	2	2	52	.23	.077	2	5	1.35	13	.06	2	1.28	.06	.05	1	18

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
86-SRWAT-44	1	46	2	85	.2	9	13	843	4.04	6	5	ND	1	59	1	2	4	88	1.70	.066	2	27	1.83	88	.20	4	2.06	.04	.05	1	1
86-SRWAT-51	1	58	7	42	.2	27	13	474	2.68	5	5	ND	1	134	1	2	2	84	1.11	.079	3	41	1.52	115	.18	4	1.58	.06	.11	1	1
86-LCWT-53	1	10	10	56	.1	20	11	269	4.18	2	5	ND	1	25	1	2	2	52	.59	.096	4	13	.86	96	.20	5	1.18	.06	.24	1	1

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

WHOLE ROCK ICP ANALYSIS

T-Disc
Oct 13/86

A .1000 GRAM SAMPLE IS FUSED WITH .60 GRAM OF LIBO2 AND IS DISSOLVED IN 50 MLS 5% HNO3.
- SAMPLE TYPE: ROCK CHIPS

DATE RECEIVED: SEPT 13 1986 DATE REPORT MAILED: Oct 6/86 ASSAYER D. Toye ...DEAN TOYE. CERTIFIED B.C. ASSAYER.

UTAH MINES PROJECT - 2164 FILE # 86-2813B

SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba PPM	Y PPM	Zr PPM	Loi %	Sum
86-SRWAT-44	54.91	17.55	7.73	3.57	6.03	3.90	1.25	.77	.18	.14	.01	1123	27	26	3.8	100.06
86-SRWAT-51	55.24	16.94	7.88	4.29	7.12	2.80	1.85	.81	.22	.15	.01	1299	25	33	2.5	100.07
86-LCWT-53	59.65	17.72	7.70	2.15	1.90	3.30	3.30	.79	.25	.04	.01	1126	20	55	3.0	100.04

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	In PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au† PPB
86-LCWJ-42	2	15	12	52	.2	62	16	3861	13.12	13	5	ND	1	4	1	2	2	147	.09	.035	2	3	.11	10	.01	3	.17	.01	.01	1	2
86-LCWJ-44	1	9	5	47	.1	53	12	884	10.47	10	5	ND	1	2	1	2	2	114	.05	.026	2	4	.10	5	.01	3	.13	.01	.01	3	6
86-LCWJ-47	3	28	16	58	.2	47	21	4419	19.46	16	6	ND	1	7	1	4	2	162	.31	.031	2	9	.20	10	.01	6	.18	.01	.02	3	5
86-LCWJ-49	2	4	8	14	.1	17	8	189	11.71	8	5	ND	1	2	1	2	2	86	.04	.019	2	8	.07	5	.01	2	.06	.01	.01	2	2
86-LCWT-53	4	46	2	81	.3	14	14	1140	5.27	7	5	ND	1	13	1	2	2	86	.55	.078	3	26	1.95	26	.19	4	2.27	.04	.05	1	6
86-LCWT-54	6	63	6	67	.1	10	16	1028	4.78	3	5	ND	1	5	1	2	2	36	.29	.085	4	13	1.42	38	.12	7	1.96	.02	.10	1	5
STD C/AU-R	21	57	39	133	6.8	66	30	1002	3.92	42	20	8	32	47	17	16	19	61	.48	.102	35	59	.88	173	.08	36	1.72	.06	.13	13	500

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

WHOLE ROCK ICP ANALYSIS

A .1000 GRAM SAMPLE IS FUSED WITH .60 GRAM OF LIBO2 AND IS DISSOLVED IN 30 MLS 5% HNO3.
- SAMPLE TYPE: ROCK CHIPS

DATE RECEIVED: OCT 14 1986 DATE REPORT MAILED: Oct 21/86 ASSAYER. D. Toye. DEAN TOYE. CERTIFIED B.C. ASSAYER.

UTAH MINES PROJECT - 2164 FILE # 86-3179 PAGE 2B

SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba PPM	Y PPM	Zr PPM	Loi %	Sum
86-LCWJ-42	78.42	.49	19.32	.15	.16	.05	.10	.05	.11	.50	.01	18	5	5	.5	99.86
86-LCWJ-44	82.17	.40	16.10	.15	.10	.05	.10	.03	.08	.11	.01	12	5	25	.5	99.81
86-LCWJ-47	66.70	.50	29.99	.33	.50	.05	.05	.04	.12	.65	.01	15	5	19	1.1	100.05
86-LCWJ-49	80.81	.20	17.87	.08	.06	.05	.15	.01	.06	.02	.01	5	5	15	.5	99.82
86-LCWT-53	59.69	16.67	7.87	3.42	2.04	3.85	1.20	.79	.21	.15	.01	412	26	129	3.6	99.60
86-LCWT-54	62.06	16.66	7.03	2.69	.96	1.60	3.00	.80	.21	.13	.01	933	27	151	4.5	99.85
STD SO-4	67.94	10.24	3.36	.93	1.58	1.40	2.05	.54	.20	.06	.01	613	27	305	11.5	99.97

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
86-LCWR-50	7	77	6	12	.1	14	5	65829	.26	2	5	ND	1	85	1	2	2	39	.24	.010	3	1	.08	2535	.01	22	.08	.03	.01	2	1
86-LCWT-52	1	55	5	45	.2	5	13	814	3.75	2	5	ND	2	101	1	2	2	30	4.54	.178	22	1	.61	76	.01	6	.70	.08	.30	1	1

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

WHOLE ROCK ICP ANALYSIS

T. Disc
Oct 16/86

A .1000 GRAM SAMPLE IS FUSED WITH .60 GRAM OF LIBO2 AND IS DISSOLVED IN 50 MLS 5% HNO3.
- SAMPLE TYPE: ROCK CHIPS

DATE RECEIVED: SEPT 6 1986 DATE REPORT MAILED: Sept 13/86 ASSAYER D. Toye. DEAN TOYE. CERTIFIED B.C. ASSAYER.

UTAH MINES PROJECT - 2164 FILE # 86-2508 PAGE 4B

SAMPLE#	SiO2 %	Al2O3 %	Fe2O3 %	MgO %	CaO %	Na2O %	K2O %	TiO2 %	P2O5 %	MnO %	Cr2O3 %	Ba PPM	Y PPM	Zr PPM	Loi %	Sum
86-LCWR-50	81.96	.34	.28	.19	1.75	.05	.05	.02	.02	13.51	.01	5749	12	18	.6	99.90
86-LCWT-52	51.40	16.22	7.28	1.81	6.47	3.95	3.35	.66	.46	.03	.01	390	25	114	8.1	99.83

UTAH MINES PROJECT - 2164 FILE # 86-3179 PAGE 2

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
✓86-LCT5-55	1	27	10	72	.1	9	8	1185	4.88	6	5	ND	1	8	1	2	2	126	.38	.119	6	33	1.98	21	.26	2	3.20	.03	.05	1	1
86-LCT8-56	2	16	17	27	.1	5	8	1631	2.04	11	5	ND	1	3	1	2	2	36	.10	.033	3	10	.49	18	.06	3	1.14	.01	.04	1	2
✓86-LCT1-57	2	97	16	95	.1	4	20	675	12.99	98	5	ND	1	58	1	2	2	31	1.86	.155	8	7	.56	25	.16	2	1.10	.05	.24	1	11

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

GEOCHEMICAL ICP ANALYSIS

.500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN.FE.CA.P.CR.MG.BA.TI.B.AL.NA.K.W.SI.ZR.CE.SN.Y.NB AND TA. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: SILTS -80MESH AU# ANALYSIS BY AA FROM 10 GRAM SAMPLE.
P3-4 ROCKS

DATE RECEIVED: SEPT 6 1986 DATE REPORT MAILED: Sept 13/86 ASSAYER. D Toye ..DEAN TOYE. CERTIFIED B.C. ASSAYER.

UTAH MINES PROJECT - 2164 FILE # 86-2508 PAGE 1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
86-LCL-1	1	62	5	85	.1	32	16	794	4.02	2	5	ND	2	51	1	2	3	101	.71	.106	5	69	1.99	66	.28	6	2.08	.06	.15	1	1
86-LCL-2	1	88	8	118	.1	41	20	1153	4.68	2	5	ND	2	55	1	2	2	110	.91	.134	8	104	3.10	77	.24	3	2.65	.06	.20	1	44
86-LCL-3	1	46	3	80	.1	32	15	758	3.61	2	5	ND	1	64	1	2	2	99	.83	.061	5	65	1.98	95	.25	2	2.28	.06	.10	1	2
86-LCL-4	1	40	2	66	.2	32	15	844	3.62	2	5	ND	2	83	1	2	2	108	1.14	.054	3	58	1.50	45	.28	6	2.05	.07	.08	1	6
86-LNL-206	1	51	8	98	.1	30	12	661	4.20	4	5	ND	2	60	1	2	2	105	.80	.063	3	41	1.33	60	.28	3	2.40	.07	.11	1	5
86-LNL-207	1	47	13	224	.1	21	17	1294	4.21	7	5	ND	1	52	1	8	2	109	1.03	.052	4	32	1.00	66	.20	5	2.94	.06	.08	1	1
86-LNL-208	1	55	10	237	.1	23	15	1163	4.86	5	5	ND	2	54	1	2	2	114	1.18	.063	2	37	1.47	46	.29	4	2.95	.07	.09	1	3
86-LNL-209	1	60	5	95	.1	23	13	991	4.66	2	5	ND	1	51	1	2	2	116	1.11	.063	2	30	1.56	31	.33	5	2.68	.08	.07	1	1
86-LNL-210	1	50	6	99	.2	16	10	1051	4.69	2	5	ND	2	61	1	2	2	98	1.66	.072	3	26	1.54	22	.34	8	2.99	.07	.08	1	1
86-LNL-211	1	49	6	87	.1	21	14	1023	4.40	2	5	ND	1	47	1	2	2	108	.99	.059	2	31	1.47	31	.31	5	2.60	.08	.06	1	1
86-LNL-212	1	55	6	88	.1	26	14	953	4.50	2	5	ND	2	49	1	5	2	109	.99	.068	3	33	1.59	39	.32	7	2.65	.08	.07	1	2
86-LNL-213	1	91	2	60	.1	44	16	799	3.25	2	5	ND	1	54	1	2	2	96	.72	.071	3	83	1.74	37	.24	2	2.79	.06	.09	1	1
86-LNL-214	1	63	5	87	.1	31	15	730	3.50	4	5	ND	2	44	1	2	2	86	.73	.070	3	51	1.45	28	.23	4	2.30	.07	.09	1	1
86-LNL-215	1	50	5	89	.1	22	12	831	4.55	2	5	ND	2	54	1	2	2	106	.96	.081	3	34	1.59	34	.32	5	2.50	.07	.09	1	2
86-LCS-1	1	25	15	45	.2	14	40	2474	5.94	3	5	ND	1	46	1	2	4	64	1.93	.084	2	25	.43	65	.10	7	1.28	.07	.05	1	1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
86-SNLN-74	1	119	11	116	.3	50	25	1451	4.65	2	5	ND	2	37	1	2	3	117	.92	.144	8	150	3.84	80	.27	4	3.01	.05	.18	1	12
86-SNLN-75	1	84	8	81	.3	47	23	1603	4.24	2	5	ND	1	26	1	5	2	106	.96	.118	9	173	3.23	70	.28	5	3.04	.05	.23	1	1
86-SNLN-76	3	96	13	230	.3	73	24	1262	4.88	11	5	ND	3	37	1	3	2	90	.89	.155	9	127	3.14	72	.25	5	2.48	.05	.20	1	9
86-SNLN-77	2	95	10	211	.2	64	25	1319	4.66	8	5	ND	2	37	1	7	2	94	.83	.146	8	140	3.18	77	.26	7	2.54	.05	.18	1	14
86-SNLN-78	1	95	9	134	.3	49	22	1083	4.65	6	5	ND	3	51	1	2	2	100	.83	.140	7	110	2.67	70	.27	3	2.38	.05	.14	1	8
86-SNSK-1	1	71	9	67	.4	22	15	607	6.71	2	5	ND	2	30	1	2	16	174	.23	.355	7	73	2.25	27	.29	3	3.97	.05	.12	22	1
STD C/AU-0.5	21	61	41	140	7.2	72	29	1131	3.97	41	19	7	37	50	18	16	20	70	.48	.107	38	62	.88	188	.09	39	1.72	.09	.14	13	500

Appendix B

Cost Statement

On Property Costs

1)	Salaries:		
	P. Cowley 9August 14-26)	7 days @ $177/day	$1,339.00
	R. Ord	1 day @ $140/day	
	Temporary:		
	B. Nachtigal (August 14-26)	3 days @ $55/day	165.00
	C. Zuremba	2 days @ $65/day	130.00
	T. Connor	2 days @ $70/day	140.00
2)	Labs:		
	Acme Analytical Laboratories Ltd.		858.15
	(38 rocks, 2 soils, and 18 silts)		
3)	Transportation Costs:		
	Red Hawk Rentals 91 truck @ $975/month X 0.3 month)		292.50
	Fuel		92.00
4)	Room and Board		405.00
	$27/day/man X man-days		
	Telephone		84.00
5)	Maps and Field supplies		142.67
6)	Equipment Rental		244.50
	$81.50/day X 3 days		

Off Property Costs

1)	Salaries: drafting of topo maps		1,008.00
	Tom Drews 8 days @$126/day		
	Report writing		1,062.00
	P. Cowley 6 days @ $177/day		
	R. Ord 4 days @ $190/day		560.00
		TOTAL	$6,562.82

APPENDIX C

Statement of Qualifications

I, Paul Stuart Cowley, of 1720 Cypress Street, Vancouver, British Columbia, do hereby certify that:

I am a graduate of the University of British Columbia, with a Bachelor of Science Degree in Geology, 1979.

I was employed as a temporary Geological Assistant during the 1977 and 1978 filed seasons by Denison Mines and B.C. MEMPR.

Since graduation, I have been engaged in coal exploration in B.C., Alberta and NWT, and mineral exploration in Chile and B.C. for Utah Mines Ltd.

I am a fellow of the Geological Association of Canada.

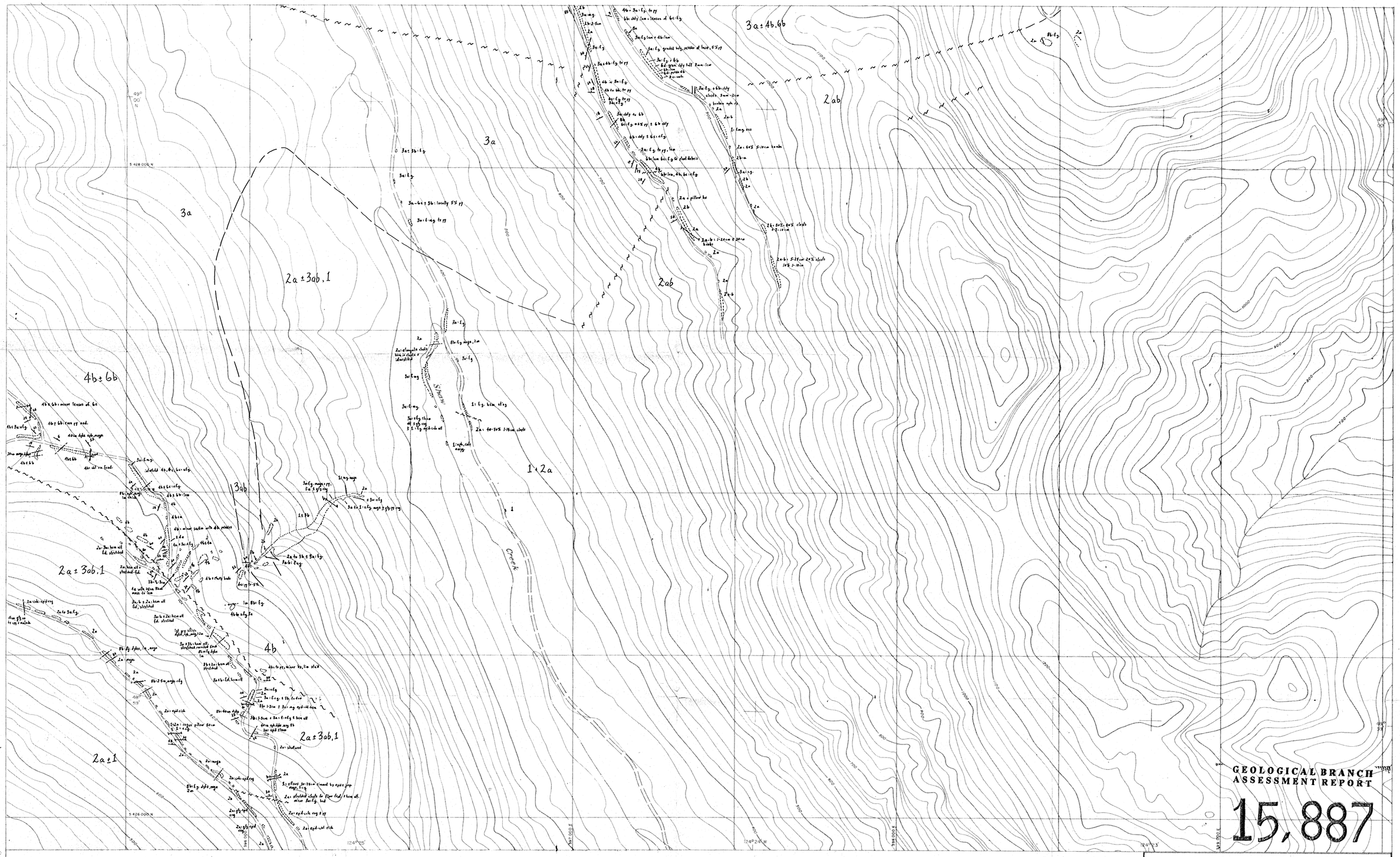
Paul S. Cowley
Geologist

Vancouver, BC

STATEMENT OF QUALIFICATIONS

Name:	Ord, Roger S.
Profession:	Geophysicist
Education:	BaSc, Geological Engineering/Geophysics option University of British Columbia
Proffessional Associations:	Society of Exploration Geophysicists The Association of Professional Engineers (EIT) British Columbia Geophysical Society
Experience:	Four seasons pregraduate experience in geophysics with Utah Mines Ltd. in Northern Ontario, Newfoundland, British Columbia and Maine, USA. Three year's experience as a geophysicist with Utah Mines Ltd. (West Coast Div.).

Roger S. Ord
Staff Geophysicist
Utah Mines Ltd.



LEGEND

CRETACEOUS — NANAIMO GROUP

11	Conglomerate, Sandstone, Shale

JURASSIC — ISLAND INTRUSIONS

10	Granodiorite — Quartz Diorite
9	Porphyritic Dykes

SILURIAN–PERMIAN — SICKER GROUP

8a–b	Gabbro–Diorite Sills
7	Limestone — crinoidal
6a–d	a — Argillite, b — Siltstone, c — Sandstone, d — Conglomerate
4e	Locally Maroon Cherty Ash Tuff ± Rhodonite/Jasper/ Conglomerate
4a–d	a — Chert, b — Cherty Ash tuff, c — Cherty Argillite, d — Black Chert
3a–b / 3c	a — Andesitic Lithic Tuff, b — Minor Lapilli; c — Locally Felsic Crystal Tuff
2a–b	a — Basaltic Agglomerates and b — Volcanic Breccia
1	Basaltic Flows

GEOLOGICAL SYMBOLS

- Geologic contact
- Fault
- Anticline
- Syncline
- Joints (inclined, vertical) — 27
- Bedding (inclined, vertical) — 75
- Foliation (inclined, vertical)
- Shearing (inclined, vertical)
- Outcrop

TOPOGRAPHICAL SYMBOLS

- Road
- Creek
- Contours (V.I. = 20m) — 700
- Swamp

INDEX

APPROXIMATE MEAN DECLINATION 1980
Annual change decreasing 3.8'

Topography from 1:50,000 Series — 1980

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,887

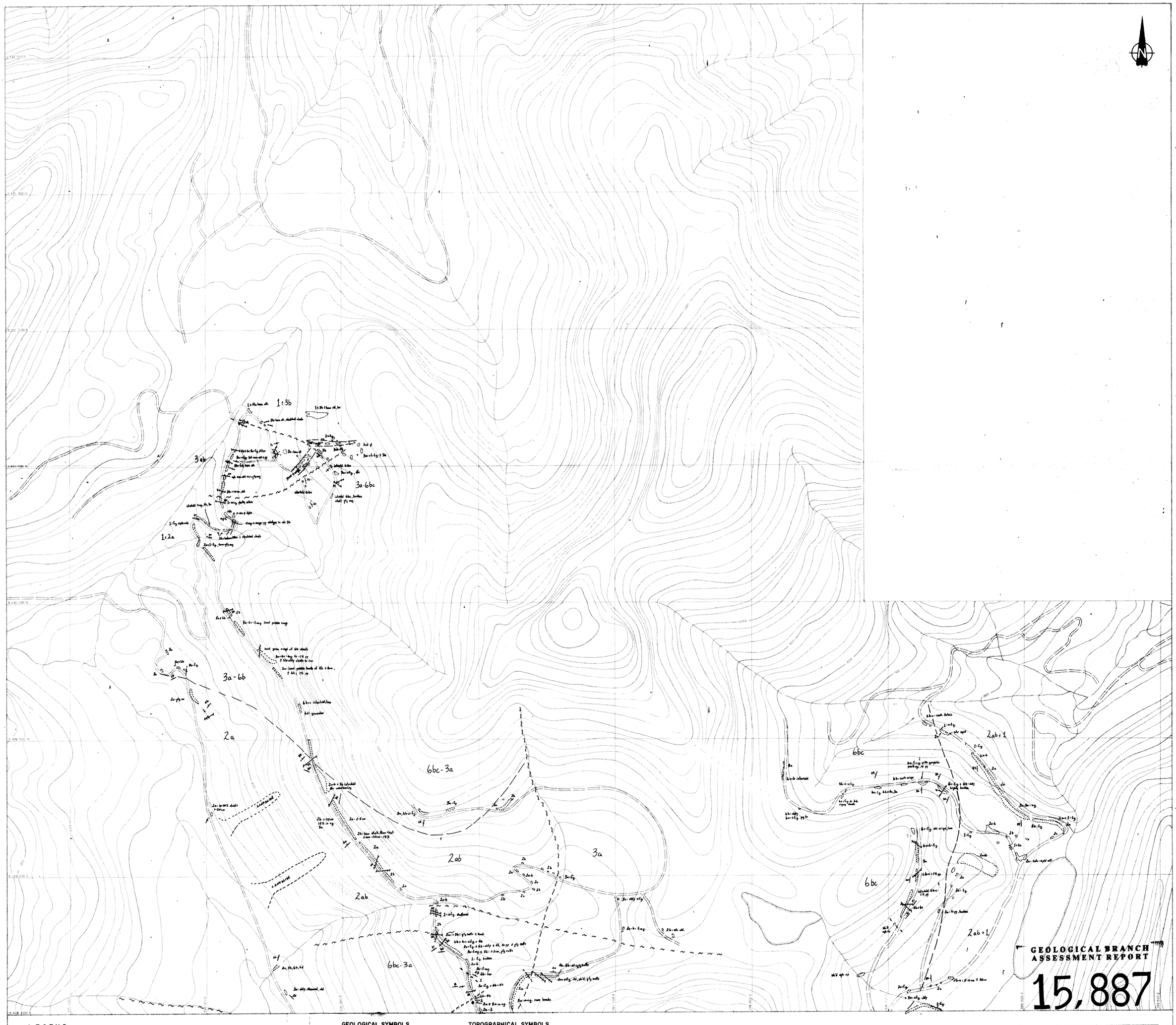
UTAH MINES LTD.
EXPLORATION DEPARTMENT
VANCOUVER, BRITISH COLUMBIA

FLIGHT PROPERTY

GEOLOGY

SCALE 1:5000
METRES 100 0 100 200 300 400 METRES

NTS Ref. : 92 C/16 & 92 F/1	REVISIONS
Work by : Paul Cowley	Work by :
Drawn by : Paul Cowley	Drawn by :
Date : May 1987	Date :
SHEET 1 of 2	MAP – 1



LEGEND

CRETACEOUS — NANAIMO GROUP

11	Conglomerate, Sandstone, Shale

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10	Granodiorite — Quartz Diorite
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SILURIAN-PERMIAN — SICKER GROUP

8a-b	Gabbro-Diorite Sills
7	Limestone — crinoidal
6a-d	*a* — Argillite, *b* — Siltstone, *c* — Sandstone, *d* — Conglomerate
4a	Locally Maroon Cherty Ash Tuff ± Rhodonite/Jasper/ Conglomerate
4a-d	*a* — Chert, *b* — Cherty Ash tuff, *c* — Cherty Argillite, *d* — Black Chert
3a-b / 3c	*a* — Andesitic Lithic Tuff, *b* — Minor Lapilli; *c* — Locally Felsic Crystal Tuff
2a-b	*a* — Basaltic Agglomerates and *b* — Volcanic Breccia
1	Basaltic Flows

GEOLOGICAL SYMBOLS

- Geologic contact
- Fault
- Anticline
- Syncline
- Joints (inclined, vertical)
- Bedding (inclined, vertical)
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INDEX

UTAH MINES LTD.
EXPLORATION DEPARTMENT
Vancouver British Columbia

FLIGHT PROPERTY

GEOLOGY

0 100 200 Metres
Scale 1:2500

Work by P Cowley	Date May 1967	NTS Ref 92/F-1
Drawn by P Cowley	Revised	MAP — 2

SHEET 2 of 2 SCALE IN

△ 86 LCWR-50 Rock Sample & Number

⊡ 86 SCS – 111 Soil Sample & Number

⊙ 86 SNL-74 Silt Sample & Number

112 | 102 | 20
0.4 | 30 |

Cu (ppm) | Zn (ppm) | Au (ppb)
Ag (ppm) | Pb (ppm) |

INDEX

APPROXIMATE MEAN DECLINATION 1980
Annual change decreasing 3.8'

Topography from 1:50,000 Series – 1980

UTAH MINES LTD.

EXPLORATION DEPARTMENT
VANCOUVER, BRITISH COLUMBIA

FLIGHT PROPERTY

GEOCHEMISTRY
ROCK, SOIL & SILT

SCALE 1:5000

NTS Ref.	92 C/16 & 92 F/1	REVISIONS	
Work by	P. Cowley	Work by	
Drawn by	T. Drews	Drawn by	
Date	June-1987	Date	

SHEET 1 of 2 — MAP - 1A

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,887

△ 86LCWX – 1 Rock Sample & Number

□ 86SCS – 111 Soil Sample & Number

○ 86LNL – 215 Silt Sample & Number

112 | 1102 | 20
0.4 | 30 | 1

Cu (ppm) | Zn (ppm) | Au (ppb)
Ag (ppm) | Pb (ppm)

INDEX

GEOLOGICAL BRANCH
ASSESSMENT REPORT

15,887

UTAH MINES LTD.
EXPLORATION DEPARTMENT
Vancouver British Columbia

FLIGHT PROPERTY

GEOCHEMISTRY
ROCK, SOIL & SILT

100 0 100 200 Metres
SCALE 1:5000

Work by P. Cowley	Date June 1987	NTS Ref 82F/12
Drawn by T. Drews	Revised	

SHEET 2 of 2 SCALE IN MAP - 2A