Geochemical, Geophysical, Geological & Prospecting Report on the

DV PROPERTY

Victor Gr	(30 units)	
Pix I	1064	1 claim
Pix II	1065	1 claim
Lynx	1022	8 units
Box	1063	20 units

δŧ

Dibble Group (24 units)

Last Chance Fraction & Beaver Fraction	864	l claim
First Extension of Last Chance & Foster	865	1 claim
Emerald	866	1 claim
Richmond Hill	875	1 claim
Ax	1023	20 units

Fort Steele Mining Division, B.C.

82 G 11W & 82 G 12E

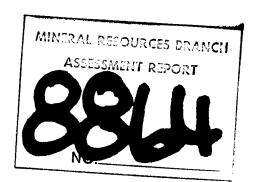
49°36' North Latitude 115°27' West Longitude

Owned & Operated by G.H. & L.E. Babcock

Vancouver & Trail, B.C.

bу

C. M. Armstrong, P.Eng. Consulting Engineer 4085 West 29th Avenue Vancouver, B.C. V6S 1V4 (604) 224-7678



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INTRODUCTION

In August 1980, at the request of Mr. G. H. Babcock, P.Eng., the writer examined current and historical data pertaining to the DV (Dibble-Victor) Property recently acquired and staked by Mr. Babcock and his associates; and, in a Memorandum report dated August 24, 1980, the writer briefly outlined a possible exploration program for the property.

Between September 19 and October 9, 1980, the writer conducted a modest field program on the property, involving prospecting, stream sediment sampling, rock geochemical sampling, underground sampling, and limited line cutting, soil sampling, and VLF-EM surveying.

The DV Property, shown on Figures 1 and 2, is in the Fort Steele Mining Division, southeastern B.C., 28 km easterly of Cranbrook, in the Hughes Range of mountains at the southern extremity of the Kootenay Ranges. The geographic location is approximately $49^{\circ}36'$ north latitude and $115^{\circ}27'$ west longitude.

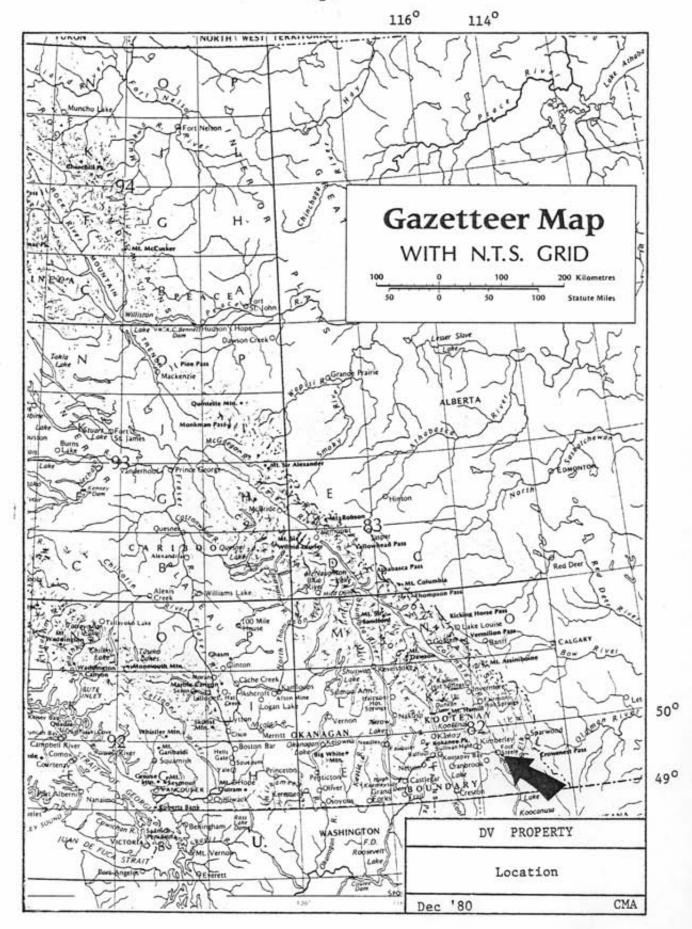
Road access to the Victor workings on the north side of the property consists of 17 km of paved highway from Cranbrook to the Maus Creek cut-off, 5 km of good gravel road to the end of the V. Pighin ranch, and 10 km of narrow "4x4" road to the Victor camp, a total of 32 km ($1 \frac{1}{4}$ hr.). Mr. Pighin permits access across his property to responsible parties, and it is important to inform him of the access schedule.

There is no road access to the Dibble workings on the southeast portion of the property. Hiking the rugged 3km between the Victor and Dibble areas takes 2 to 2½ hr. A well-used, but steep 6km packhorse trail extends up Sunken Creek (formerly Lost Creek). Exploration work in the Dibble area probably would be conducted to best advantage from a temporary "fly camp" serviced by Okanagan Helicopters stationed in Cranbrook.

Figure 2 shows the 5 contiguous claim groups totalling 54 units and claims which comprise the DV Property. The claims are in the Fort Steele mining division, map sheets 82G11W and 82G12E. The 6 reverted Crown Grants are recorded in the name of Lawrence E. Babcock of Trail, B.C., and the 50 located claims are recorded in the name of Gerald H. Babcock of Vancouver, B.C. The writer located the common legal corner post (LCP) of the Ax and Lynx claims, as well as the initial corner post (IP) of the Pix I and II claims, and verified that the claim lines were suitably blazed and flagged for a few hundred metres from these posts.

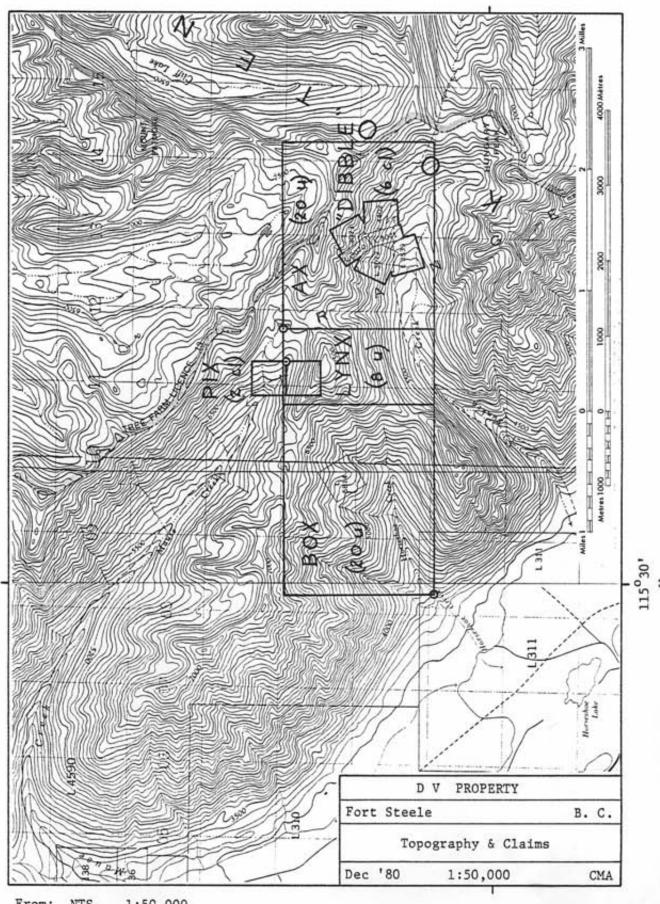
On January 15, 1981, the 54-unit DV Property was divided into 2 groupings, and the work conducted by the writer was applied to the pertinent claims, extending the expiry dates as shown on the following tabulation:

Group	Category	Claim Name	Units or Claims	Lot or Record Number	Record Date	Expiry Date
Victor	Located	Lynx	8 u	1022	Jul.30/80	Jul.30/85
	Mineral	Box	20 u	1063	Sep.15/80	Sep.15/84
Claims	Pix I	l cl	1064	Sep.15/80	Sep.15/88	
	Pix II	<u>l</u> cl	1065	Sep.15/80	Sep.15/89	



From: Atlas of B.C., Farley, 1979





From: NTS 1:50,000 82G12 Cranbrook 1976 82G11 Fernie 1973

Fig. 2

Group	Category	Claim Name	Units or Claims	Lot or Record Number	Record Date	Expiry Date
Dibble	Reverted Crown Grants	Last Chance Fraction & Beaver Fraction First Extension	1 cl	864	Jan.15/80	Jan.15/85
		of Last Chance & Foster	1 cl	865	Jan.15/80	Jan.15/86
		Emerald	1 cl	866	Jan.15/80	Jan.15/86
		Richmond Hill	1 cl	875	Feb. 4/80	Feb. 4/86
	Located Mineral Claim	Ax	20 u — 24	1023	Ju1.30/80	Jul.30/83

The first public record of the <u>Dibble</u> property on Lost Creek (now Sunken Creek), "a new mineral district", was in 1890. A highgrade sample yielded approximately 4.8 oz Au/T, 500 oz Ag/T, and 12% Cu. Other showings of "peacock ore of remarkably beautiful appearance" on the same creek were not located by the writer, and remain as prospecting targets for the 1981 field season. In 1895, four tons of handpicked ore were shipped to the smelter at Everett, Washington, returning 0.09 oz Au/T, 132 oz Ag/T, and 3% Cu. Work apparently was conducted annually until 1902, and it was in this period that the more than 400m of tunneling in 6 portals, plus numerous open cuts were completed. In 1969, Imperial Oil staked an additional 40 claims and conducted geological mapping and geochemical sampling on the property. In 1972, TVI Mining and Athabasca Columbia Resources of Calgary carried out additional rock and dump sampling (65 samples of which 23 were analysed for Cu and Ag), plus 5.4km of flagged line, and 4.8km of VLF-EM surveying.

The first mention of the Victor group, a Ag, Pb, Zn property at the headwaters of Maus Creek, was in 1904, and a major proportion of the existing tunneling was completed in the following few years. In the period 1919 to 1921, a 50tpd mill was erected, and a 7-ton "mixed car-load of ore and concentrates was shipped in the fall" of 1921. No additional tunneling has been driven since that time: 3 adit drifts at about 32-m vertical intervals, aggregating more than 400m, follow a very steep dipping quartz vein normal to a precipitous mountain slope. In 1951, R. Sostad of Vancouver staked 12-claim Victor group, and F.J. Hemsworth cut several samples of mineralized vein material in the Upper and Middle tunnels. The values ranged from 0.3m with 0.02 oz Au/T, 2.0 oz Ag/T, 1.7% Pb, and 14.3% Zn, to 0.15m with 0.48 oz Au/T, 10.8 oz Ag/T, 3.9% Pb, and 23.6% Zn. In 1969, 1970, and 1971, the Victor Mining Corporation (R. Sostad, president) excavated 5 trenches totalling 64m, and carried out a limited program of surveying, mapping, sampling, and diamond drilling (2 shallow holes totalling 64m) in the immediated mine area. G. Blaney cut 19 samples, and F.J. Hemsworth cut 40 samples in the Middle and Upper tunnels. Using gross values, the best 13-m section at the collar of the Upper tunnel averaged *\$233/T over 0.49m equivalent to \$94/T over 1.2m (minimum mining width). The final 36m to the south (final) face of the Middle tunnel averaged \$240/T over 0.37m, equivalent to #73/T over 1.2m: sampling of this section was incomplete. The face of the Lower tunnel is vertically under the collar of the Upper tunnel.

^{*} Au - \$700/oz, Ag - \$20/oz, Pb & Zn - 40c/1b

Geochemical survey: 47 soil samples, 39 silt samples, 32 rock-chip samples, and

11 large chip samples were taken and analyzed for Cu, Pb, Zn,

Ag, and Au.

Geophysical survey: 1.7 km of line were surveyed at 15-m intervals with an EM-16

unit using the Lualualei and Jim Creek transmitters.

Geological survey: A little over 6 ha were mapped at a scale of 1:1,250, and

more than 2 km of reconnaissance traverses were mapped at

a scale of 1:12,500.

Prospecting: In 12 non-consecutive days, the writer completed 65 km of

reconnaissance prospecting traverses. R. Babcock, Rick Babcock, H. John, and W. Forrest spent a total of 18 days on reconnaissance prospecting, covering about 30% of the claim

area, equivalent to about 375 ha.

Linecutting: The writer established 1.6 km of cut, horizontally chained

compass lines with 30-m pickets.

The following table shows the claims on which each type of work was conducted:

Victor Group	Units or Claims	Geochemical	Geophysical	Geological	Prospecting	Linecutting
Pix I	1	x	x	x	x	x
Pix II	1	х	x	x	x	х
Lynx	8	х			x	
Box	<u>20</u>	x			x	
	30					
Dibble Group						
Last Chance Fraction & Beaver Fraction	1				x	
First Extension of Last Chance Fraction	1	x			x	
Emerald	1	×			x	
Richmond Hill	1				x	
Ax	<u>20</u>	х		x	x	

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GEOCHEMICAL SURVEY

Stream Sediment Sampling

Silt sampling was employed as a reconnaissance tool to attempt to identify new areas of mineralization on the DV Property for further evaluation. While the accumulation of silt in some steep, intermittent streams occasionally was inadequate for sampling, in most instances, sufficient sediment was obtained: rarely, the sample was obtained from several locations over a distance of about 15 m. The samples were collected in kraft paper envelopes. Analyses were conducted by Bondar-Clegg in North Vancouver: dried, seived to -80 mesh, CuPbZnAg analyses by dissolution in hot Lefort aqua regia and atomic absorption analysis, and Au analyses by combined fire assay and atomic absorption.

The locations of 39 silt samples are shown on the DV Property plan, and the analytical results on the accompanying legend. Because of the small number of samples, the values for weakly, moderately, and strongly anomalous results obtained from graphical statistical calculations are subject to considerable error. These values are shown on the legend. Significant results are indicated in the "Remarks" column by a general, descriptive location. The field notes, analytical results, and statistical analysis calculations are included in the Appendix.

- Victor Vein. Weakly to moderately anomalous Pb-Zn-Ag-Au values probably do not represent dump conta mination, since sample 2, above the vein, but still below the dumps, was not anomalous.
- 3. S Br Maus Ck. This weakly anomalous Pb value could be significant, and the area should be prospected for quartz veining.
- 7. N Br Horseshoe Ck. Cu contamination from sample 8 area. Additional silt sampling and prospecting should be conducted upstream to the northeast.
- 8. E Br L5814 Ck. Strongly and moderately anomalous Cu-Zn-Ag values, and weakly anomalous Pb values suggest a nearby source for the anomaly. The writer did not observe any trenching on L5814, but it is likely that significant mineralization occurs in the area, and prospecting for the source mineralization should be undertaken. A major 110°/290° block fault is indicated by McMechan in this area.
- 18. N-1 Br Sunken Creek. Weakly and moderately anomalous Ag-Au values warrant follow-up prospecting and additional upstream sampling.
- 22. N-4 Br Sunken Creek. The weakly anomalous Ag value might derive from the western extension of Dibble Area veining, and should be followed up by additional upstream sampling and prospecting.
- 26. 2nd X Maus Ck. The weakly anomalous Zn value could be derived from the Victor Vein, and should be checked by additional upstream silt sampling in Maus Creek and its tributaries.
- 32) W Br L5814 Ck. These weakly anomalous Zn values, plus weakly anomalous Cu and
- 35) and Ag values in the furthest upstream sample might be derived from min-
- oralization associated with the 110°/290° block fault indicated by McMechan (as with sample 8). Alternatively, the mineralization on which L5814 was crown-granted might be the source. The writer did not observe

any "workings" on east-west and north-south traverses of the claim (Ald-ridge argillites and siltites - PGalq?). The original claim survey should be examined for indications of mineralization ("workings"), and it may be desireable to purchase the crown grant, if possible. Otherwise, prospecting should be conducted to establish the source of the anomalous silt samples.

All additional stream sediment samples should be analyzed for all elements (Cu, Pb, Zn, Ag, Au).

Rock Geochem Sampling

Highly selective rock-chip geochemical sampling was undertaken to locate significant precious metals (Au & Ag) mineralization. Large (4 kg) samples were taken from quartz veins exposed in bedrock, whereas all other samples consisted of a number of small chips. After crushing and pulverizing, the same dissolution and analytical techniques were used as for the silt samples.

The locations of 15 rock geochem samples R18 to R30, plus 2 miscellaneous samples, are shown on the DV Property plan, and the analytical results on the accompanying legend. The analytical results for the initial 17 rock geochem samples taken by R. Babcock also are tabulated in the Appendix, as are the writer's field notes and sample descriptions, and Dibble Area plan.

Samples R19 to R22 were taken from narrow, flat-lying quartz and quartz-calcite vein fillings in a series of metadiorite sills on the mountain ridge north of the Dibble Area. All samples contained anomalous chalcopyrite mineralization, 0.11% Cu to 2.78% Cu, but unfortunately, no significant precious metal values, without which the mineralization is not of commercial value.

Sample R25 from the Upper Pond Vein showed evidence of the tiny patch of chalcopyrite in the sample (122 ppm Cu), and also carried a distinctly above-background lead value (125 ppm Pb).

Sample R28, from a 0.15-m flattish quartz vein 33m northwest, of the Flat Vein, contained an anomalous 80 ppb of Au. High grade (21%) lead mineralization from the Flat Vein contained only 69 ppb of Au (but 111 ppm of Ag, or 3.25 oz Ag/T).

Soil Sampling

Soil sampling was undertaken in 2 areas with significantly mineralized quartz veins to establish whether the technique was useful for defining mineralization in overburden-obscured areas, and to test for possible strike extensions of the veins under shallow overburden. Generally, the soils are well-drained dystric brunisols, and "B-zone" soil development is quite well developed at depths ranging from 5 to 20 cm. Relatively large samples were collected using a grubhoe, coarse-screened by hand, and packaged in kraft envelopes: the analytical procedures were the same as for the silt samples. Analytical results and graphical statistical calculations are included in the Appendix.

In the Victor area, 27 B-zone soil samples were taken from 30-m stations on 1.2km of cut grid line; and in the Flat Vein area 20 samples were taken from 0.4km of line (numerous 15-m samples).

Again, the 47 samples were inadequate for accurate statistical calculations; however, the results of the graphical statistical calculations are shown on each of the soil sampling plans for the two areas.

In the Victor area, weakly anomalous Cu and Pb values at 60m S/60m W could represent either contamination from the Victor Vein, or, possibly, a parallel vein west of the Victor Vein. Similarly, highly anomalous Pb-Zn values, and weakly to moderately anomalous Cu-Au and Ag values, at 180m S/30m W, could represent either Victor-Vein contamination (from blasting, etc.) or parallel veining. In the writer's opinion, contamination is the more likely cause; however, diamond drilling from the west (hangingwall) side of the Victor Vein should pick up any significant parallel veins. Andesitic rocks on the valley floor probably limit the northerly extension of the Victor Vein.

In the Flat Vein area, all elements indicated the presence of the mineralized Flat Vein: Pb was most effective in pinpointing the vein and dump, while Cu appears to define the broader zone containing numerous other smaller, flat-lying quartz veins.

There is no geochemical expression of the probable strike extension of the Victor Vein in this area.

Cu and Pb are the two most useful pathfinder elements in both the Victor and Flat Vein areas, and future analysis for these elements, only, is recommended.

GEOPHYSICAL SURVEY

Aeromagnetic data from sheets 82G11 and 12 clearly define the generally weakly magnetic series (9) of metadiorite dykes and sills on the mountain ridge northeast of the Dibble area. The 40-m dyke along the Horseshoe Creek fault also is clearly defined on the ridge north of Maus Creek; however, its narrow (3m) extension to the southwest is too small for detection. It is interesting that the large (3km x $\frac{1}{2}$ km) Moyie sill west of the claims has no aeromagnetic expression. The writer is uncertain whether the 1000-m difference in elevation or the magnetic properties of the sill itself are responsible for the lack of aeromagnetic definition.

Similarly, the andesitic rocks in the Maus Creek valley north of the Victor Vein have no aeromagnetic expression. A detailed ground magnetometer survey probably would define the andesitic lithologies very well, and, because of the absence of outcrop in this area, allowance should be made for a trial survey.

Detailed <u>VLF-EM</u> surveys were conducted on both the Victor area grid and the Flat Vein grid to determine whether the quartz vein structures were defineable conductors: the Fraser filter was employed, and plans of the surveys are included. With the Victor Vein, the Lualualei (Hawii) transmitter, about 40° off the strike of the vein, was employed. While the Victor Vein coincided with the highest conductivity readings, the maximum conductor strength was only 9%, and the coincidence may be fortuitous. Some assistance in interpreting lithologic and structural trends under overburden on the valley floor indicates that the method should be used over any expanded grid. In general, however, the finely bedded and frequently sheared sedimentary rocks mask the weak quartz vein conductors.

In the Flat Vein area, the same transmitter was employed to try to pick up the over-burden-obscured strike extension of the Victor Vein. A narrow, extremely weak (1%) conductor was picked up in the projected area, but, again, easily could be fortuitous. The highest readings (5%) coincided with the Flat Vein: the direction of the traverse line was parallel to the strike of the vein, and the "high" could be due to the flat dip of the vein. Using the Jim Creek transmitter, 40° off the strike of the Flat Vein, the entire line was weakly conductive; but the 13% high did not coincide with the Flat Vein. The broad conductor probably reflects the sheared nature of the fine-bedded siltstones in the area.

Although the usefulness of the VLF-EM technique in this sedimentary area appears to be very limited, in so far as ore definition is concerned, the very low cost of the surveys justifies its use over any expanded grid. Copies of the field notes and filtering calculations are included in the Appendix. A total of 1.7 km of line were surveyed, with readings at 15-m intervals, employing a Geonics EM-16 unit, Serial Number 3327.

GEOLOGICAL SURVEY

Regional Geology

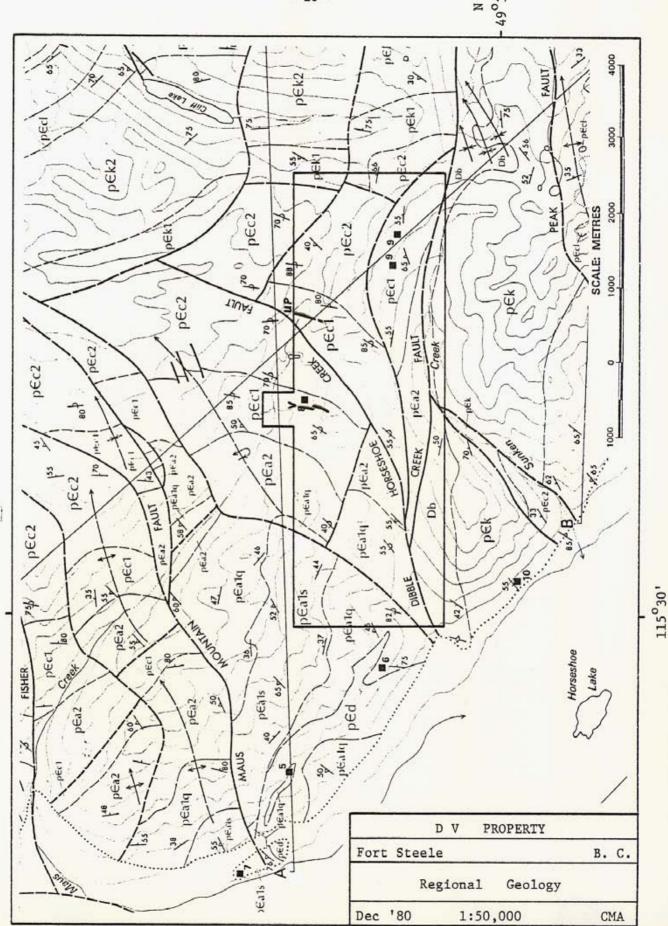
Figure 3 shows the regional geology of the area as recently mapped by M.E. McMechan (1977 and 1978). Due to the general similarity of much of the Middle Proterozoic sedimentary strata on the claim area, the gradational contacts between the various formations, and the writer's inexperience in the area, the contacts between the formations as mapped by McMechan were not always apparent to the writer in the field.

The oldest Precambrian rocks in the area are metamorphosed sediments of the Aldridge Formation, comprised of variably bedded argillaceous quartzites, siltites, and argillites. The lower section of the Aldridge has been subdivided into a quartzite-deficient interval (PGals), overlain by a quartzite-rich interval (PGalq), and the upper section is comprised predeominantly of alternating argillite and siltite beds (PGa2).

"Rocks of the Aldridge Formation grade into those of the overlying Creston Formation over a few hundred metres of section." The Creston is subdivided into a lower section (PGc1) comprised of siltite-argillite couplets, plus interbedded quartzite lenses near the top, and an upper section (PGc2) of thin-bedded siltite to fine grained quartzite, interbedded with quartzite lenses, and becoming dolomitic near the top.

"These siltites grade into the dolomitic siltites of the overlying Kitchener Formation." "The top of the Creston was defined at the top of the last non-dolomitic siltite interval with thickness in excess of 5 metres." The Kitchener Formation is comprised of a basal interlaminated dolomitic and non-dolomitic siltite (PGkl), overlain by silty dolomite, very thin-bedded siltite, and sandy dolomite (PGkl).

Along the south border of the property, south of the Dibble Creek fault, Devonian dolomitic sandstone, sandy dolomite, conglomerate, and shale of the Burnais Formation (Db), unconformably overlie the Kitchener lithologies.



From: B C Dept of Energy, Mines &
Petroleum Resources
Preliminary Map No. 34
McMechan 1979

Province of British Columbia Ministry of Energy, Mines and Petroleum Resources

PRELIMINARY MAP 34

GEOLOGY OF THE MOUNT FISHER-SAND CREEK AREA

Geology by M. E. McMechan 1977, 1972

SCALE: METRES
1600 9 1600 2000 2000 400

LEGEND

UPPER DEVONIAN TO PERMIAN

UNDIFFERENTIATED FAIRHOLME GROUP, PALLISER FORMATION, EXSHAW FORMATION, EASIFY FORMATION, RUNDLE GROUP, ROCKY MOUNTAIN GROUP; LIMESTONE, SHALY LIMESTONE, SHALE, QUARTIZITE, AND DOLOMITIC QUARTIZITE.

MIDDLE DEVONIAN AND (?) EARLIER

LIN OPPER UNIT BURNAIS AND HARROGATE FORMATIONS: SHALY LIMESTONE, SHALY DOLONITE, LIMESTONE SHECKLA, AND GYPSUM, BASAL UNIT: DOLOMESTORE SHECKLA, CONGLOMERATE, AND SHALE

CAMBRIAN

- TANGLEFOOT UNIT'S SHALY LIMESTONE, LIMESTONE, SANDY SHALE, AND
- EAST FORMATION: DIALE, LIMESTONE, SHITSTONE, AND QUARTERIES, CRANBROOK FORMATION: QUARTERIE AND GRAMMES CONGLOMERATE

MIDDLE PROTEROZOIC

p€d MOVIE BILL: HORNBLENDE METADIORITE TO METAGABBRO

PURCELL SUPERGROUP

- PER PHILLIPS FORMATION. RED MICACEDUS QUARTZITE AND SILTITE
- EI GATERAY FORMATION: GREEN, PURPLE SH.TITE, MINOR QUARTZITE, AND DOLOMITIC SELTITE NEAR TOP
- # SHEPFARD FORMATION: STROMATOLITIC DOLOMITE, GREEN, PUMPLE SILTITE,
- TAYA AND SEDIMENT UNIT: MASSIVE TO AMYGOALDIDAL 'ANDESITIC' LAYA, VOLCANCE AND FELDSPATHIC SANDSTONE, SILTITE, AND MINOR DOLOMITIC SILTITE

MIDDLE PROTEROZOIC

PURCELL SUPERGROUP

 $p \in \mathbb{N}$ THEN DOLOMITIC SELTITE UNIT: GREEN, LOCALLY PURPLE SELTITE

UPPER UNIT 1,+1.º NORTH OF DIBBLE CREEK FAULTH: SILTY GOLOMITE, GREY SILTITE, SANDY GOLOMITE, AND STRO-MATOLITIC DOLOMITE.

LOWER UNIT 1/HLI NORTH OF DIBBLE CREEK FAULTS: GREEN OR GREY DOLOMITIC SILTITE, GREEN SILTITE, AND MINOR DOLOMITIC GUARTZITE

- p€< CRESTON FORMATION
 - 2 UPPER SUBUNIT: GREEN, LESSER PURPLE SILTITE, DOLOMITIC BILTITE NEAR TOP, WHITE GUARITZITE LOWER SUBUNIT: PURPLE, GREY OR GREEN, VERY COARSE-GRAINED SILTITE TO FINE-GRAINED GUARIZITE, WHITE QUARIZITE, AND GREEN, PURPLE BILTITE
 - I UPPER SUBUNIT: PURPLE SILTITE WITH WHITE QUARTZITE MIDDLE SUBUNIT: GREEN SILTITE LOWER SUBUNIT: GREY SILTITE BYORTH OF BULL CANYON FAULTI, GREEN, FINE-GRAINED QUARTZITE, WITH GREY SILTITE ISOUTH OF BULL CANYON FAULT UNIT SECTION

PEA ALDRIDGE FORMATION

- 2 GREY SILTITE AND ARGILLITE, WITH TWO DOLOMITIC SILTITE HORIZONS NEAR TOP, SQUTH OF BULL CANYON FAULT JUNIT peaks
- QUARTZITE, GREY SILTITE AND ARGILLITE; I4 QUARTZITE PREDOMI-NANT, Is - SILTITE AND ARGILLITE PREDOMINANT

SYMBOLS

GEOLOGICAL CONTACT: DEFINEO, APPROXIMATE, ASSUMED
BEDDING: TOPS KNOWN, INCLINED, OVERTURINED

CLEAVAGE

FAULT: DEFINED, APPROXIMATE, ASSUMED

FOLD: TRACE OF AXIAL SURFACE ISHOWING PLUNGE OF AXISI

ANTICLINE: OFFINITE, APPROXIMATE, ASSUMED

ANTICLINE: RECUMBENT ISHOWING DIP OF LIMES!

MONOCLINE: DEFINITE, APPROXIMATE, ASSUMED

SYNCLINE: DEFINITE, APPROXIMATE, ASSUMED

LIMITS OF GOLOGICAL MAPPING

MINERAL OCCURRENCE

LIMITS OF OPEN PITS, MINE DUMP IBULL DIVEN MINES

CROSS-SECTION SYMBOLS

CONTACT CONFORMABLE: DEFINED, APPHIDXIMATE

CONTACT UNCONFORMABLE: DEFINED, APPHIDXIMATE

FACULT SEFINITE, APPRIDXIMATE

FAULT WITH KNOWN STRIKE SLIP MOVEMENT INTO PLANE OF SECTION

FAULT WITH KNOWN STRIKE SLIP MOVEMENT OUT OF PLANE OF SECTION

GRANTFRIMARY CEPOSITS

GRANTFRIMARY CEPOSITS

Immediately west of the property, a large "Moyie sill-dyke" occurs (PGd), and "Numerous hornblende metadiorite to metagabbro sills and dykes occur in the Lower Purcell formations." Specifically, a weakly magnetic metadiorite dyke occurs in the steep dipping Horseshoe Creek fault at the headwaters of Maus Creek: the dyke varies in width from 3m on the south ridge to 40m on the north ridge where it coincides with a weak aeromagnetic high. A series of 9 metadiorite sills with similar aeromagnetic expression, occur on the ridge northeast of the Dibble workings: the sills vary in thickness from 4m to more than 100m, and aggregate 400m in thickness, with a total of more than 550m of Creston sediments (PGc2) between the sills. A 2-m to 5-m thick, magnetic metadiorite dyke striking east-west and dipping steeply south cuts and displaces the Victor vein approximately 35m (left hand).

Fine grained andesitic material of unknown continuity, relative age, and extent occurs in the Maus Creek valley below the Victor workings. It is uncertain whether this non magnetic volcanic rock bears a relationship to the Lava and Sediment (PGnc), or possibly to the Moyie sills (PGd).

Several major faults occur on the property, and a brief examination of the air photographs shows that there are numerous other very strong linears that probably represent faults. The Dibble Creek fault is a right hand reverse fault trending easterly and "dips approximately 55° to the north." Together with a branch fault to the north, "A horse of upright Aldridge and Creston strata occurs along the fault(s) in the Sunken Creek area." "The entire region is cut by a series of northwesterly dipping transverse faults that are concave northward and have had a complex history of reverse, strike slip, and normal displacements. Minor folds have developed adjacent to these transverse faults", notably in the Maus Creek valley adjacent to the Horseshoe Creek fault. As previously pointed out, metadiorite sometimes has been intruded along the fault planes.

Victor Vein

The 3 principal adit tunnels on the Victor Vein, and the locations and assays for 9 large (4kg) chip samples taken underground by the writer are shown on the Geology plan. The tunnel walls are sound, but very dirty, and it is essential that the workings be washed down prior to carrying out a definitive back-sampling and geological mapping program.

The average azimuth of the Victor Vein is approximately $15^{\circ}/195^{\circ}$, and the dip is very steep (85° , plus) to the west. The azimuth of the argillite, siltite, and quartzite sediments of the lower section of the Creston Formation (PGcl), though variable, is about $340^{\circ}/160^{\circ}$ in the portal area, and the dip is about 75° westerly. The Victor Vein is exposed at several locations over a vertical interval of 300m, and over a strike length of more than 300m, from the Lower tunnel in the Maus Creek valley to the mountain ridge on the south. Further strike extensions are obscured by overburden.

Quartz veining, with variable proportions of pyrite, sphalerite, and galena sulphide mineralization, fill a very strong and persistent fissure or fault zone (displacement unknown), which probably is related genetically to major faulting in the area. The Upper Pond Vein (see Figure 3), on the south side of the Horseshoe Creek fault (along which a metadiorite dyke has been intruded) some 1250m east of the Victor Vein, could be the faulted extension of the Victor Vein. It is probable that the Victor structure persists to substantial depth, at least 1000m (and possibly several times that amount).

The vein quartz with associated Zn-Pb-Ag-Au mineralization varies from a few cm to more than lm in width; however, because the workings are so dirty, the writer did not obtain a reliable measure of the average vein width. Splits in the vein were observed, and additional veining may occur locally in the walls of the drifts. The wall rock appears to be altered considerably, and, at least locally contains significant base and precious metal values (sample M-1-3 - no other wall rock was sampled). Lead and zinc mineralization, with associated silver and gold values, varies within the vein quartz from lightly disseminated (sample U-1) to semi massive (sample L-2). Some sections with moderate to heavy pyrite disseminations contain very little base or precious metal values (sample M-3). The values in about 50% of the samples taken by the writer are close to ore for narrow vein mining; and, in the writer's opinion, there is a favourable probability that mineable ore shoots may be defined within the Victor Vein. The absence of values at surface near the ridge to the south (rock geochem sample V7400) does not detract from the ore potential.

If the metadiorite dyke that offsets (about 35m left hand) the Victor Vein above the Upper tunnel is Precambrian in age (related to the Moyie sills), the quartz veining and associated sulphide mineralization also would be Precambrian. While deep-seated igneous activity could have been the source of the vein quartz, the base and precious metal values may have been derived from concentrations in the Fort Steele, Aldridge, or Creston Formations traversed by silica rich hydrothermal solutions. This possibility would hold true regardless of the age of the Victor Vein.

In addition to sampling and mapping, both diamond drilling and tunneling are justified to further explore the Victor Vein. The face of the Lower tunnel shows only very narrow mineralization; however, it is significant that no ore values occur in the Middle tunnel vertically above these workings, and the collar of the Upper

tunnel coincides with the face of the Lower tunnel. In other words, it is possible that better mineralization occurs ahead of the face of the Lower tunnel; for example, significant mineralization in the Upper tunnel occurs to more than 100m ahead of the face of the Lower tunnel. The 35-m left hand fault offset of the Victor Vein in the Upper tunnel has not been explored underground along strike. Because of the 75° south dip of the fault, on the Lower level the fault will be more than 130m ahead of the face.

If ore shoots can be delineated by additional work, the Victor Vein, alone, should be capable of supporting a small mining and milling operation.

Upper Pond Vein

As shown on Figure 3 and on the DV Property plan, this strong quartz vein structure is well exposed for 100m on the Maus Creek valley floor, and can be traced in a southerly direction to the mountain ridge, after which it is obscured by overburden. The quartz veining generally varies from 0.1m to 0.5m, although highly altered wall-rock and adjacent branching quartz stringers sometimes increase the width of the zone to 2m. The attitude of the Upper Pond Vein is similar to the Victor Vein, azimuth $15^{\circ}/195^{\circ}$, and dip vertical to 85° east. The country rock is lower Creston Formation (PGc1), similar to that in the vicinity of the Victor Vein.

On surface, the vein quartz and wall rock are lightly iron-stained, indicative of pyrite oxidation. Only one small patch of chalcopyrite was observed, and two large rock geochem samples (R18 and R25) showed no significant values, other than a distinctly above background lead value in R25.

Considering the elevations above datum (sea level), the exposures of Upper Pond Vein coincide with the highest exposures of the Victor Vein near the mountain ridge, and no surface values were found there, either. Accordingly, it is very possible that base and precious metal values occur at greater depths, say 150m, or more.

The strength of the Upper Pond Vein justifies initial testing at depth with 2 or 3 diamond drill holes. As previously mentioned, the Upper Pond Vein could be a faulted extension of the Victor Vein, with a horizontal left hand offset in the order of 2000m.

Flat Vein

A small pit on a rather unusual, 1-m thick occurrence of white vein quartz is located about 400m southerly of the Victor portals on strike of the Victor Vein, and about 100m northwesterly of the overburden-obscured projection of the Victor Vein downslope from the ridge exposure. A genetic association of the quartz veining in the two zones is possible.

The azimuth of the Flat Vein is about $120^{\circ}/300^{\circ}$, and the dip about 25° northeast. A sample from a small stockpile of hand-sorted lead mineralization (sample F7300) assayed 20.75% Pb, and, with 3.25 oz Ag/T, contained a much lower proportion of silver than lead mineralization from the Victor Vein. Considerable bedrock occurs on strike to the northwest, and the vein pinches to only a few cm within a strike length of 5m. The vein is obscured by overburden for 30m to the southeast. The downdip continuity of the vein is untested.

The countryrock is fine bedded, sheared argillite and siltite of the lower section of the Creston Formation (PGcl). Narrower (a few cm to 0.3m) quartz veins with

similar attitude to the Flat Vein occur in a 60-m-wide zone along the ridgeline (60m northeast of the Flat Vein) in lightly iron-stained, sheared, fine bedded siltites. Two rock geochem samples (R28 and R24) showed no significant values, although the 80 ppb Au in the former is distinctly anomalous (compared with 69 ppb in the Flat Vein sample F7300).

That the flat fracture system may be linked genetically, and possibly even physically, with the Victor Vein is a valid possibility, and further field investigation in the area is warranted. Thorough prospecting of the area, followed by linecutting and geological mapping, and possibly also soil sampling, should be undertaken. The Flat Vein should be exposed by trenching and sampled.

Dibble Area

The writer briefly examined all of the major adits and test pits in the Dibble Area, and conducted a geological reconnaissance along the mountain ridge several hundred metres to the north of the workings, along Sunken Creek several hundred metres to the south, and along several traverses northwesterly 1.5km to the Maus Creek area.

The underground workings are extremely dirty, and should be washed down, surveyed, geologically mapped, and sampled. While no samples were taken by the writer in the Dibble workings, R. Babcock took 17 rock geochem samples from surface exposures and dumps in the area, all of which were examined by the writer prior to geochemical analysis (see Appendix). Oxidized quartz veining with light bornite and malachite and azurite mineralization (samples R7 and R9) contained about 1.2% Cu, plus >0.3 oz Au/T and >3 oz Ag/T.

Similar to the previous areas, the countryrock in the Dibble Area is argillites, siltites, and quartzites of the lower section of the Creston Formation (PGc1). The bedding strikes roughly east-west, with dips varying from 45° to 80° north, but generally about 75° north.

The quartz veining is roughly conformable to the bedding, varies in width from a few centimetres to 0.5m, and appears to be quite discontinuous or lensey both along strike and down dip. The wall rock often is intensely fractured, and the shallow, smaller drifts and stopes have caved severely. The "ground" in the longer tunnels generally is very good. The 7 tunnels occur within a zone about 300m long and 100m wide, and, although it known there are many paralled veins, the continuity of the individual veins over the 300-m length is not established. The writer's impression is that most of the veins probably do not exceed 100m in length, and many probably are much shorter. Some dislocation of the veins may be caused by shearing, intense fracturing, and movement roughly parallel both to the bedding and to the quartz veining.

As shown in Figure 3, the Dibble Area occurs within a large, fault-bounded, lenticular "horse" of Aldridge and Creston sediments 5km long (east-west) by a maximum of 3/4km wide. The age of the quartz veining and associated Cu-Au-Ag mineralization (differing from the Zn-Pb-Ag-Au mineralization of the Victor Vein), relative to the major faulting, is not known.

The "ore-making" possibilities of the Dibble Area have not been exhausted; and, in addition to the above-mentioned surveying, washing, sampling, and mapping, a number (3 or 4) of wide-spaced (say 1000m) reconnaissance cross section soil sampling lines should be run into the Sunken Creek valley to attempt to locate other overburden-obscured zones of mineralization. The location of the flagged compass lines should be determined by prospecting, local topography, and outcrop.

PROSPECTING

The writer completed 65 km of reconnaissance prospecting in a 12-day time period: 39 silt samples and 17 rock geochem samples were collected on the traverses, and a small amount of regional mapping was completed. The sampling and mapping have been described in the sections titled "Geochemical Survey" and "Geological Survey". In addition, R. Babcock, Rick Babcock, H. John, and W. Forrest spent 18 man-days prospecting in several areas of the property, totalling approximately 375 ha, prior to the writer's field work. Several areas with significant mineralization were identified and sampled (see Appendix), and this work formed the basis for the writer's more detailed follow-up surveys.

COSTS

At the date of Grouping the claims on the DV Property and filing the Assessment Work, January 15, 1981, all of the costs pertaining to the 1980 field program were not available. The small amount of detailed geological mapping was combined with the reconnaissance mapping, and attributed to "Prospecting". Cost details, including dates, times, and rates, follow; and the distribution of costs is summarized at the end, together with the amounts applied for assessment work credit on January 15, 1981.

Wages			
C. M. Arms	trong, P.Eng., Consulting En	gineer	
1980 -	Aug.23-24 (2 days), Sep.5,1 14-15, 19-20, 22, 28-29 (11 days), Dec.1-3, 16-24 (10 d		
1981 -	Jan.5-7, 14-15 (2.5 days),	Feb.11-15 (4.5 days)	
	Total	50 days @ \$300.00 =	\$15,000.00
R. Babcock			
1980 -	Jul.4-5, 18-20 (5 days), Au 19 (2 days), Oct.4 (1 day)	g.30-31 (2 days), Sep.13,	
	Total	10 days @ \$125 =	1,250.00
Rick Babco	ck		
1980 -	Jul.5, 18-20 (4 days), Aug	. 30-31 (2 days)	
	Total 6 days @ 50% applic	able = 3 days @ \$75.00 =	225.00
H. John			
1980 -	Jul.18-20	3 days @ \$75.00 =	225.00
W. Forrest			
1980 -	Aug. 30-31	2 days @ \$75.00 =	150.00
		Total	\$16,850.00
Food & Acc	omodation		
C. M. Arms	trong, P.Eng. Consulting Eng	ineer	
1980	Sep.19-Oct.9 = 21 days @ \$25	.00 =	525.00
R. Babcock	, Rick Babcock, H. John, W. F	orrest	
1980 -	Jul.4-5, 18-20, Aug.30-31,	Sep.13,19, Oct.4	
	18 man-days applicable @ \$35	.00 =	630.00

Total

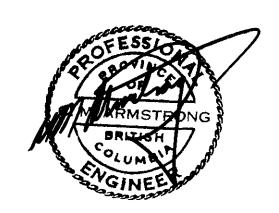
\$1,155.00

Transportation

Transportati							
C. M. Armstr	ong, P.Eng., Consulti	ing Eng	gineer				
1980 - A	ug.24, Sep.19-30, Oc	ct.1-9	,29, Nov.28	B, Dec.1,	19,22,24		
1981 - J	an.5-7, 14-15, Feb.13	L-14					
v	ehicle rental		21 days @ \$	20.00 =		\$	420.00
F	uel						83.81
P	ersonal vehicle		470 km @ \$0	.20 =			94.00
R. Babcock,	Rick Babcock, H. John,	, W. F	orrest				
1980 - J	ul.4-5, 18-20, Aug.29	9-31,	Sep.13-14,	19, Oct.	4		
v	ehicle rentals	4x4	11 days	@ \$50 + f	ue1		867.47
		car	9 days	@ \$25 + f	uel		308.33
С	harter flights	fixed	wing	Jun.24			100.00
		helic	opter		Jul.5,19, Oct.4 2.7 hr	· <u>1</u>	,100.52
			Total			\$ <u>2</u>	,974.13
Other Costs							
	ong, P.Eng., Consult:	ina En	dineer				
	ug.23-24, Sep.5,16,19	_		15 19-20	22		
	8-29, Nov. 18-20, 22-30			,13,13-20,	<i>4.</i> ∠ •		
	an.5-7,14-15, Feb.11-	-15					
. A	ssaying Bondar-Cl	legg				1	,447.15
С	Copying						662.65
T	elephone						224.90
S	supplies & equipment re	entals					120.62
T	yping reports						91.00
M	laps & photographs						50.10
F	reight & miscellaneous	5					286.31
R. Babcock.	Rick Babcock, H. John	n. W. i	Forrest				
	FebJun., Jul.3,5, A			. Oct.10			
	Celephone	,	\$718.43 @ 5		able =		359.22
	rield supplies		_				216.83
	laps						47.05
	reight & copying						31.93
			Total			\$ <u>3</u>	3,537.76
/H	1a # a 1 . a		og en 1917 19				
Ţ	Cotal exploration expension applicable for a					\$ <u>24</u>	,516.89

Distribution of Costs

	<u>Geochemical</u>	Geophysical	Geological/Prospecting	<u>Total</u>
Victor Group	\$7,500	\$4,400	\$4,300	\$16,200
Applied	\$5,100	\$3,400	\$3,900	\$12,400
Dibble Group	\$3,800		\$4,500	\$ 8,300
Applied	\$2,600		\$4,000	\$ 6,600
Total Work Done	\$11,300	\$4,400	\$8,800	\$24,500
Applied	\$7,700	\$3,400	\$7,900	\$19,000



BIBLIOGRAPHY

- Allan, G.B. "Geological and Geophysical Report on the Dibble Creek Property of TVI Mining and Athabasca Columbia Resources Ltd.", Assessment Report 4122, October 1972.
- Armstrong, C.M. "Memorandum DV Property", August 24, 1980.
 "Report of the DV Property", December 20, 1980.
- B.C. Minister of Mines Reports: 1890 p 375, 1891 p 570, 1892 p 538, 1893 p 1065, 1895 p 673, 1896 p 533, 1898 p 1007, 1899 pp 592, 593, 1900 p 798, 1901 p 1005, 1902 p H130, 1904 p G108, 1907 p L84, 1916 p K190, 1917 p F149, 1919 p N115, 1920 p N116, 1921 p G128, 129, 1933 p A202, 1934 pp A24, 25, 1951 p A185, 1969 pp 347, 348, 1970 p 476, 1971 p 418, 1972 p 64.
- McMechan, M.E. "Geology of the Mount Fisher-Sand Creek Area, Southeastern British Columbia", B.C. Dept of Energy Mines and Petroleum Resources, "Notes to Accompany Preliminary Map No. 34", 1979.
- Rice, H.M.A. "Cranbrook Map-Area, British Columbia", G.S.C. Mem. 207, 1937.
- Schofield, S.J. "Geology of Cranbrook Map-Area, British Columbia", GSC Mem. 76, 1915.
- Sostad, R. Personal data Victor Property, 1951 1971.

Aeromagnetic Series	1:63,360	Fernie Cranbrook	82G/11 82G/12	1971 1971
Air Photos		$ \begin{array}{r} 16 - 022 = 7 \\ 68 - 074 = 7 \end{array} $	1:20,000	
Claim Maps	1:50,000	82G11W 82G12	w	
Topographic Series	1:50,000	Fernie Cranbrook	82G/11 82G/12	1973 1976

CERTIFICATION

I, CHRISTOPHER MACKENDRICK ARMSTRONG of the City of Vancouver, Province of British Columbia, do hereby certify:

THAT I am a practicing Geological Engineer residing at 4085 West 29th Avenue, Vancouver, British Columbia, V6S 1V4, Canada.

THAT I am a registered Professional Engineer in good standing in the Provinces of British Columbia and Ontario.

THAT I received the degree of B.Sc. in Geological Engineering from Queen's University, Kingston, Ontario in 1960, and practiced my profession continuously in the period between leaving university in 1959 and returning to university in 1966.

THAT I enrolled in the Department of Mineral Engineering at the University of British Columbia in 1966, and in the period to 1969 completed course work and research work requirements in an M.A.Sc. program, specializing in bacterial-acid leaching systems; thesis writing was not completed; post graduate courses in economic geology and North American geology also were taken and completed.

THAT since leaving university in 1969, I have practiced my profession both as a Geological Engineer and as a Specialist-Advisor in ambient temperature-pressure leaching systems.

THAT the following is a true record of my employment and experience:

- 1957 4 mos. Junior Geologist. Noranda Mines Ltd. Noranda, Quebec.
- 1958 4 mos. Party Chief. Hollinger North Shore Exploration Co. Ltd. New Quebec and Labrador.
- 1959-1961 2 yrs. Assistant Geologist. Pickle Crow Gold Mines Ltd. Pickle Crow, Ontario. Teck Corporation Ltd.
- 1961-1962 1 yr. Assistant Geologist. Willroy Mines Ltd. Manitouwadge, Ontario.
- 1962-1964 2 yrs. Chief Geologist. Metal Mines Ltd. Werner Lake, Ontario. Consolidated Canadian Faraday.
- 1964-1966 2 yrs. Chief Geologist. Tegren Goldfields Ltd. Kirkland Lake, Ontario. Teck Corporation Ltd.
- 1967 ½ yr. Project Geologist. McLeese Lake property, B.C. Geophysical Engineering & Surveys Ltd. Teck Corporation Ltd.
- 1969-1970 l yr. Laboratory Manager, Chief Geologist, and Consulting Engineer. S. M. Industries Ltd. Vancouver, B.C.
- 1970-1981 12 yrs. Independent Consulting Engineer. Canada, U.S.A., and Mexico.

THAT I do not have any interest, direct, indirect, or contingent, in the securities or properties of G. H. Babcock, and his associates.

THAT This report is based on field work conducted by the writer between September 19 and October 9, 1980.

Dated at Vancouver this 15th Day of February, 1981

C. M. Armstrong, P.Eng. Consulting Engineer

APPENDIX

Ι

Analyses

Bondar-Clegg & Co. Ltd.



130 PEMBERTON AVE., NORTH VANCOUVER, B.C. PHONE: 985-0681

TELEX: 04-352667

Geochemical Lab Report

Extraction					Report No	o. <u>20 -</u> 2	2046 PROJECT: DV ARMSTRONG
Method					From	C.M. A	2046 PROJECT: DV ARMSTRONG Sampling by Armstrong R. Babcock
Fraction Used						officers and a supply of the supply of the state of the supply of the su	
SAMPLE NO.	Cu ppm	Pb ppm	Zn ppm	A g ppm	Au ppb		REMARKS
1 ROCKS	19	13	5	0.2	5		Qtz.
2	1	2	25	0.2	< 5		Arg.
3	4	2	55	0.2	< 5		Siltite
4	1	2	20	0.2	< 5		Qtz.
5	6	2	36	0.4	< 5		Siltstone
6	2	2	27	0.2	< 5		Qtz.
7	1.18 of 11800	2	0.1590 1460	>302/T	>0.302/1 10000		Qtz. D-#1 15'
8	13	2	27	1.4	25		Qtzite + strs.
ؤ	1.24 do 12400	2	0.0446 420	>30z/T >100.	> 0.3 0z/	r	Qtz. D - #1 75'E
10	52	2	55	1.9	25		Arg's siltite.
11	47	8	12	3.2	5		atz-al
12	7	2	36	0.3	<u></u>		Arg's siltite
13	9	4	48	0.6	< 5		Arg.
14	1950	< 2	69	5.4	0.06 ~Z/ 7 2200		atz. W end Box cls
15	23	4	8	0.4	< 5		And/dior?
16	22	2	33	0.2	1		Qtz.
17	9200	>20000	8600	>3/T >100.	< 5 0.13 m/7 4325		Qtz. D-#1.
				oz/T			
. 7				23.80 816	22629	76	
9				23.00 789	0.287 02 9840 p		·
17		6.80		713			
						+	AND ASSESSED AS A CARROLL AND

To:	Mr.	C. M.	Arms	trong	
PAGE	No		1_		
	4085	West	29th	Avenue	
	Vance	ouver,	B.C.	v6s	1V 5

BONDAR-CLEGG & COMPANY LTD.

CERTIFICATE OF ASSAY

REPORT NO. A20 - 1502

DATE: _

September 30, 1980

Samples submitted: September 25, 1980

Results completed: September 30, 1980

PROJECT: DV ARMSTRONG

J hereby certify that the following are the results of assays made by us upon the herein described pulp samples.

MARKED	GC	DLD	SIL	VER	Pb							
	Ounces per Ton	Grams per Metric Ton	Ounces per Ton	Grams per Metric Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
Rock Geochem Samples - R. Babcock												
7	0.66		23.80		-							
9	0.287		23.00		-							
17	-		20.80		6.80							
					i							:
								:				
									-			
	·											
									,			
					, Marina							

NOTE:

Rejects retained three weeks Pulps retained three months unless otherwise arranged.

Registered Assayer, Province of British Columbia

Geochemical Lab Report

FROM:	C. M. Armstrong	REPORT NUMBER	: 20 - 2409
			•
DDO IECT.		DATE	October 8 1980

SAMPLE NUMBERS	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au	
Silt 1 Samples 2 3 4 5	52 32 23 19 53	360 87 93 42 86	302 123 90 46 148	1.2 0.2 0.2 0.2 0.2	25 5 < 5 < 5 < 5	
6 7 8 9 10	39 109 410 29 28	32 55 108 53 46	61 169 370 108 106	0.2 0.3 1.8 0.2 0.2	< 5 < 5 10 5 < 5 < 5 < 5 < 5 < 5 < 5 < 5 < 5 < 5	
11 12 13 14 Rock Geochem ¹⁵	50 36 28 53 65	68 30 63 55 29	81 54 51 62 66	0.2 0.2 0.2 0.2 0.2	< 5 < 5 < 5 < 5 < 5 < 5 < 5 < 5	
Rock Geochem Samples 16 R - 18 ROCKS 19 20 21	72 5 1120 6100 11800	42 22 5 22 9	62 8 17 2 3	0.2 0.2 0.2 0.3 1.7	< 5 < 5 < 5 < 5 10	
22 27, ECC 2 23 24 25 26	>20000 430 152 122 30	130 7 8 125 8	22 4 < 1 21 27	5.2 0.2 0.2 1.0 0.2	20 < 5 10 5 < 5	
cc Mr. G. H. Babcock						

Geochemical Lab Report

FROM:M	r. C.	M. Armstrong,	Consulting	<u>EngineerREPORT</u>	NUMBER:	20 - 2541	
PRO JECT:	DV			DATE:		October 17,	1980

SAMPLE NUMBERS	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb		
Silt 17 Samples 18 19 20 21	17 62 24 56 39	58 26 38 18 22	32 43 56 36 56	0.3 1.6 0.2 0.2	< 5 45 5 10 5		
22 23 24 25 26	68 33 16 8 20	24 10 6 7 63	48 35 26 54 190	0.6 0.2 0.2 0.2 0.2	5 < 5 10 < 5 10		
27 28 29 30 31	20 20 45 34 45	39 19 63 35 63	178 86 1 3 0 94 147	0.2 0.2 0.2 0.2 0.2	< 5 < 5 5 < 5 < 5		
32 33 34 35 36	54 43 52 78 134	70 75 82 62 51	170 118 134 184 180	0.2 0.2 0.2 0.2 0.2	20 5 10 < 5 10		
37 Soil 38 Samples 39 FBL - 0.15E 0.3 E	47 55 49 28 37	56 42 42 14 14	146 120 124 66 60	0.2 0.2 0.2 0.2 0.2	< 5 < 5 5 < 5		
0.6 E 0.75E 0.9 E 1.05E 1.2 E	30 13 30 23 16	13 11 16 15	61 46 44 42 65	0.2 0.2 0.2 0.2 0.2	< 5 < 5 < 5 < 5 < 5		
1.35E 1.5 E 1.8 E 0.15W 0.3 W	17 14 17 76 36	12 10 11 124 28	50 45 40 210 67	0.2 0.2 0.2 0.2 0.2	< 5 5 < 5 40 15		
FXL 0.3 N 0.6 N 0.15S 0.3 S	62 70 42 54 40	116 16 16 560 130	162 77 54 170 158	0.7 0.2 0.2 1.0 0.6	65 < 5 < 5 75 95		

BONDAR-CLEGG & COMPANY LTD.

Geochemical Lab Report

REPORT NUMBER: 20 - 2541

PAGE: 2

SAMPLE NUMBERS	Cu	РЪ	Zn	Ag	Au			
	ppm	ppm	ppm	p pm	ppb			
FXL - 0.6 S 0.9 S 1.2 S 06N - 0.3 E 0.6 E	44 40 30 6 8	82 52 36 10 12	114 105 96 25 26	0.2 0.2 0.2 0.2 0.2	10 10 < 5 < 5 < 5		A control of the cont	
0.9 E 1.2 E 0.3 W 0.6 W 0.9 W	10 4 26 21 14	16 8 27 48 39	26 17 82 68 60	0.2 0.2 0.2 0.2 0.2	< 5 < 5 < 5 < 5 < 5 < 5			
1.2 W V.B.L. 06S - 0.6 E 0.9 E 1.2 E	12 22 14 15 12	29 56 36 12 7	64 74 52 40 32	0.2 0.2 0.2 0.2 0.2	< 5 15 < 5 < 5 < 5			
0.6 W 0.9 W 1.2 W 12S - 0.6 E 1.2 E	47 14 13 30 41	93 31 20 44 28	95 16 38 120 53	0.2 0.3 0.2 0.2 0.2	5 < 5 < 5 < 5 < 5			
0.3 W VXL - 0.3 E 0.6 E 0.9 E 1.2 E	44 12 6 5 6	1200 42 9 9	27 50 70 27 21 26	2.4 0.3 0.2 0.2 0.2	145 < 5 < 5 < 5 < 5 < 5			
0.3 W 0.6 W Rock Geochem 0.9 W 1.2 W Samples V.B.L. R - 27 ROCKS	19 22 12 12 24 8	34 58 33 49 37 10	68 85 48 54 66 96	0.2 0.2 0.2 0.2 0.2 0.2	< 5 < 5 < 5 < 5 < 5 < 5 < 5 < 5			
28 29 30	18 19 6	33 63 6	46 53 7	0.6 0.4 0.2	80 10 < 5			
Mr. G. H. Bab	cock							

To:	Mr.	C.	M.	Armstrong,	Ρ.	Eng.
PAGE	No			1		

4085 West 29th Avenue

V6S 1V4

Vancouver, B.C.

BONDAR-CLEGG & COMPANY LTD.

DATE:	October 0	22.	1980

REPORT NO.____

A20 - 1582

CERTIFICATE OF ASSAY

Samples submitted: October 6, 1980

Results completed: October 22, 1980

chip samples

I hereby certify that the following are the results of assays made by us upon the herein described core—samples.

	MARKED		GC	LD	SIL	VER	Cu	РЪ	Zn					
			Ounces per Ton	Grams per Metric Ton	Ounces per Ton	Grams per Metric Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
L-1 L-2 M-1-1 M-1-2 M-1-3 M-2 M-3 U-1 U-2 V-7400 F-7300	13226 13227 13228 13229 13230 13231 13232 13233 13234 13235 13236	0.10 m 0.04 m 0.85 m 0.05 m 1.25 m 0.40 m 0.40 m 0.10 m 0.50 m	0.034 0.10 0.002 0.032 0.020 0.29 0.050 0.043 0.048 0.002		5.73 9.65 0.05 3.57 4.26 23.60 0.26 6.19 8.44 0.41 3.25		0.29 1.78 <0.01 0.18 0.21 0.89 0.01 0.22 0.25 0.01	7.95 18.71 0.10 0.77 0.47 3.70 0.22 1.24 3.68 0.25 20.75	15.05 32.46 0.18 4.43 4.90 8.20 0.16 1.50 2.85 0.09					
	cc Mr.	G. Babco	ck											

NOTE:

Rejects retained three weeks Pulps retained three months unless otherwise arranged.

To:	_C. M	. Armstro	ng	
PΔC	E No	1		

4085 West 29th Avenue

Vancouver, B. C.

V6S 1V4

BONDAR-CLEGG & COMPANY LTD.

EPORT	NO	A20	- 1	73	2
		_	_	_	

DATE:

November 10, 1980

Samples submitted: October 28, 1980

: A V

Results completed: November 10, 1980

CERTIFICATE OF ASSAY

J hereby certify that the following are the results of assays made by us upon the herein described pulp samples.

MARKED	GC	LD	SIL	VER	Мо	Sn	WO ₃	Sb	As	Bi	Со	
	Ounces per Ton	Grams per Metric Ton	Ounces per Ton	Grams per Metric Ton	Percent	Percent	Percent	Percent	Percent	Percent	Percent	
13231					0.001	<0.01	<0.01	0.55	0.10	<0.01	<0.01	
					. •							

NOTE:

Rejects retained three weeks Pulps retained three months unless otherwise arranged.

Registered Assayer, Province of British Columbia

To:Mr	. C. M. Armstrong
PAGE No.	1

BONDAR-CLEGG & COMPANY LTD.

REPORT NO). A20 -	1859
DATE:	November	26, 1980

4085 West 29th Avenue Vancouver, B. C. V6S 1V4

CERTIFICATE OF ASSAY

Samples submitted: November 20, 1980 Results completed: November 26, 1980

I hereby certify that the following are the results of assays made by us upon the herein described pulp samples.

MARKED	GOLD		SILVER		Cu							
	Ounces per Ton	Grams per Metric Ton	Ounces per Ton	Grams per Metric Ton	Percent							
lock Geocham Sample												
22					2.78							
					·							
											:	
cc Mr. G. H. Babcock												
					. •							

NOTE:

Rejects retained three weeks Pulps retained three months unless otherwise arranged.

Registered Assayer, Province of British Columbia

APPENDIX

II

Geochemistry

Graphical Statistical Calculations

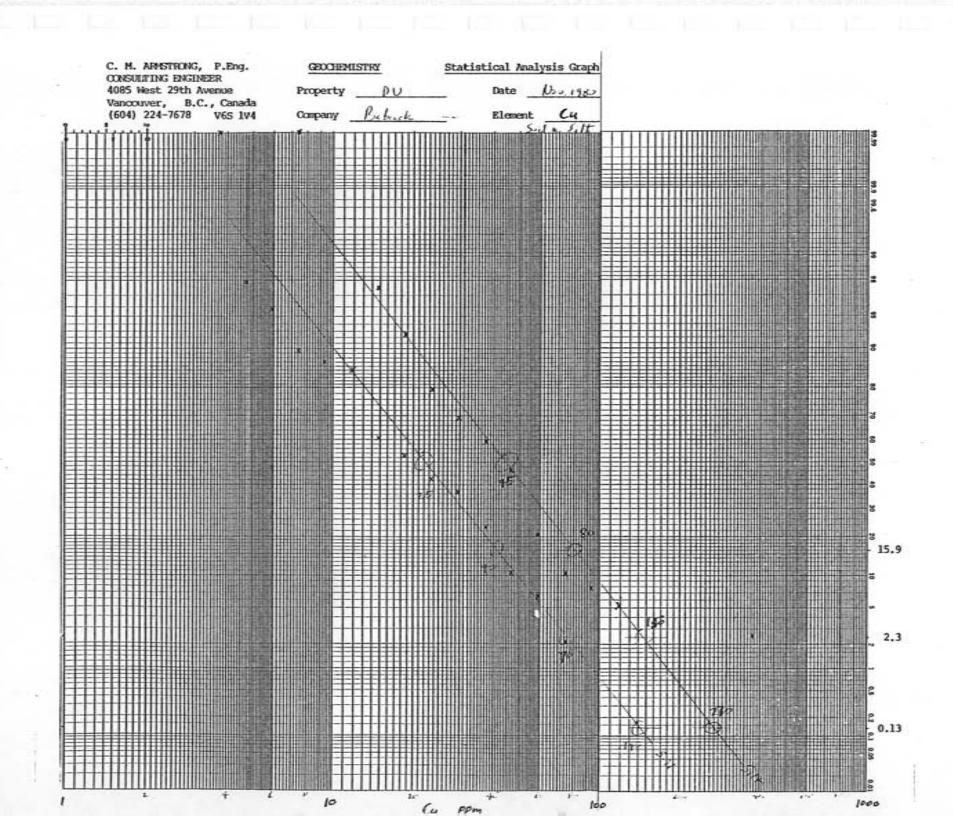
Rock Geochem Sampling & Plan by R. Babcock

Sample Description by C.M. Armstrong

Field Notes Silt & Rock Geochem Samples

			RONG, P.Eng. Engineer	GEO	CHEMIST	<u> TRY</u>	<u>Sta</u>	istic	al Anal	vsis Cal	culations	
4085 West 29th Avenue			Property DV					Date <u>Nov. 1980</u>				
	Vancouver 8, B.C., Canada (604) 224-7678			Company <u>Babcock</u>					Element Cy			
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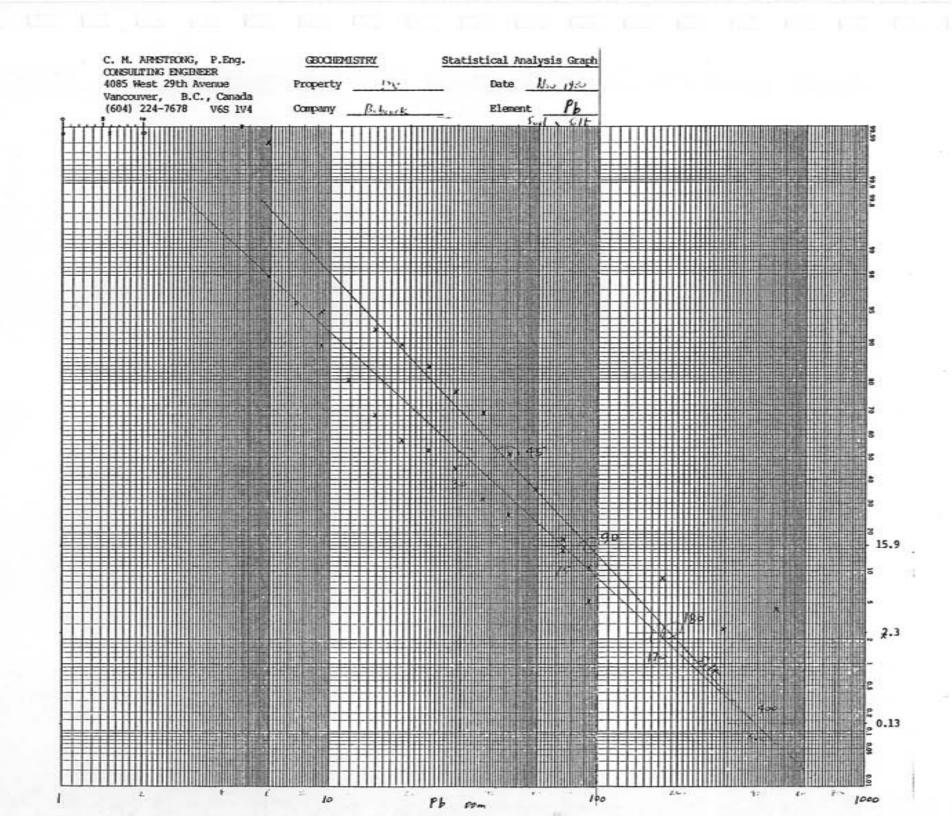
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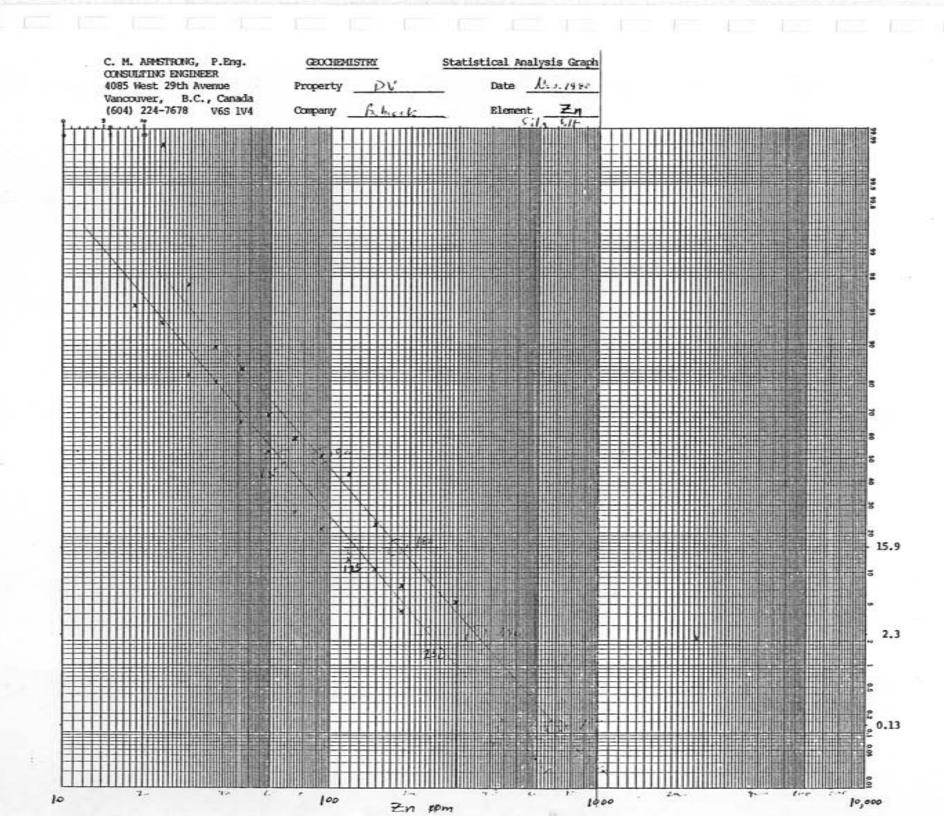
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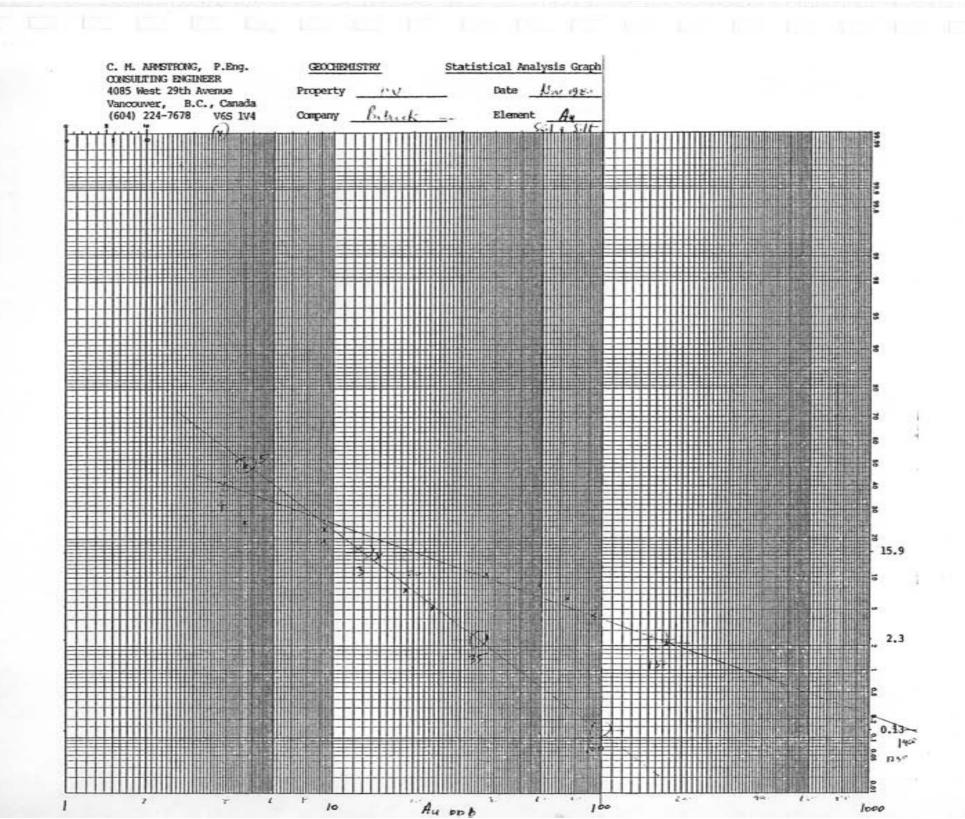
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C. M. ARMSTRONG, P.Eng. GEOCHEMISTRY Statistical Analysis Graph CONSULTING ENGINEER 4085 West 29th Avenue Date Property Nov. 1980 Vancouver, B.C., Canada (604) 224-7678 V6S 1V4 Company Element. 60 15. 132 am ji karas sepada kusu (ji ka suru ji ka mada kasis ji pri sala Ben kusum dariye (ji bi kata kuta kuta 11,6 meta 12,6 meta 12,6 meta 12,6 meta 12,6 meta 12,7 meta 12,7 meta 1 Ben kuta 17,7 meta 12,7 meta 13,7 meta 1 0.1 Ag ppm 10

C. M. ARMSTRONG, P.Eng. Consulting Engineer	GEOCHEMISTRY Sta	tistical Analysis Calculations
4085 West 29th Avenue	Property DV	Date Nov. 1980
Vancouver 8, B.C., Canada (604) 224-7678	Company Babcock	Element Au
Lognormal distribution $n = \frac{\log R}{\log w} = \frac{75.7}{2.7} = 72$	R = ratio of highest to	lowest value =
10g W 3.7	3/+ ±3/1/2	$ H_{+} = \frac{1}{2} \frac{2\pi i}{\pi} = 2\pi i$

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	Soil	Silt
b	4	5
b+ 15	20	13
b+25	150	35
b + 35	1400	100



Sam	<u>ple</u>	
R	1	Float rock - first large ravine west of VLF-EM anomalies (1972).
R	2	90 m west of #6 adit, and 24 m lower than adit.
R	3	70 m west of #6 adit, and 30 m lower.
R	4	100 m west of #6 adit, and 45 m higher.
R	5	90 m west of #6 adit, at same elevation.
R	6	8 cm vein in face of #6 adit.
R	7	Stringer 5m from portal in #1 adit.
R	8	Same location as sample R 2.
R	9	23 m east of #1 adit, at same elevation.
R	10	Same location as sample R 4.
R	11	30 m southof the workings just off the Box claim.
R	12	64 m west of #6 adit directly across gully, and 9 m lower in elevation.
R	13	Float rock on trail 550 m east of Lynx 4S2W post.
R	14	Vein in workings near Box claims.
R	15	30 m east from corner post Lynx 4S2W, on trail.
R	16	90m east of Pix #1 adit - bottom of valley - float rock.
R	17	West wall at portal of #1 tunnel on Pix claim.

The above 17 samples were collected by R. Babcock, examined and described by C.M. Armstrong, P.Eng., and analyzed by Bondar-Clegg & Co. Ltd.

Miscellaneous Rock Samples

- 1 Victor dump #2 2.6% Pb, 1.8% Zn, 3.2 oz Ag/T, 0.04 oz Au/T, 0.3% Cu.
- Victor dump #2 0.2% Pb, 0.2% Zn, 0.3 oz Ag/T, 0.005 ozAu/T, 0.05% Cu.
- 3 Dibble 120 m east of chopper pad on trail badly pitted quart with Fe stains. 0.02% Cu, Nil Ag, Nil Au
- Dibble 60 m north of Dibble Creek dirty quartz from large rock outcrop. $0.04\% \ \text{Cu}, \quad 1.08 \ \text{oz} \ \text{Ag/T}, \quad 0.005 \ \text{oz} \ \text{Au/T}$

DESCRIPTION

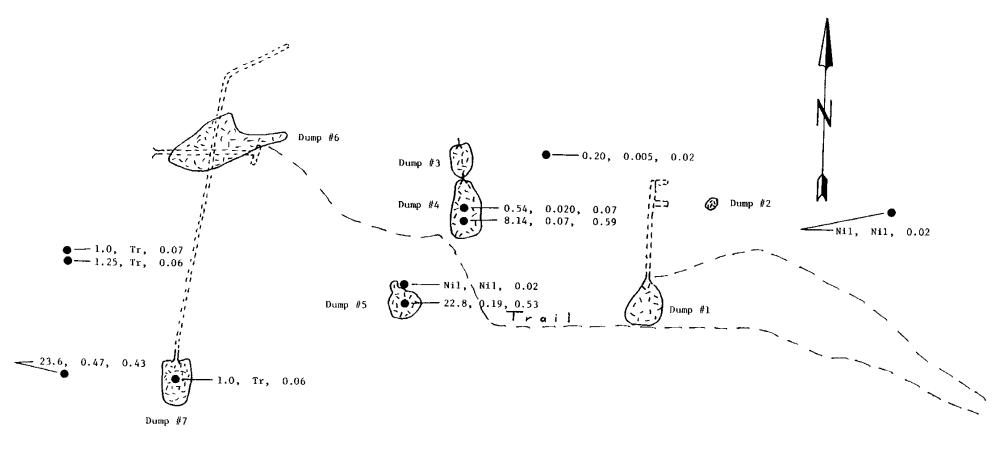
Rock Geochem Samples Taken by R. Babcock

- R 1 White vein quartz with very light, fine grained pyrite dissemination. Ironstained fractures. Pyrite in various stages of oxidation. Few tiny specks galena. Limonitic vugs (pyrite completely oxidized). 19-13-5-0.2-5 *
- R 2 Sheared argillite. Local vuggy limonite-narrow quartz injections with local sulphides (mostly oxidized). Soft. Strong sericitic shearing. Minor disseminated pyrite very fine grained. Argillaceous. 1-2-25-0.2--5
- R 3 Silltite. Quite massive. Argillaceous. Iron-coated fractures. Local iron-rich (mostly oxidized) bedding seams. Some sericitic shearing. 4-2-55-0.2--5
- R 4 Vein quartz ? Pale gray. 2% very light, fine grained, disseminated pyrite mostly oxidized. Calcareous. Quartz stringers in siltite? 1-2-20-0.2--5
- R 5 Strongly sheared siltstone. Calcareous. Tiny Fe spots "peppered" throughout. Argillaceous. 6-2-36-0.4--5
- R 6 Vuggy vein quartz. Pale green, sericitic argillite seams. Muddy limonite patches no pyrite observed. 2-2-27-0.2--5
- R 7 Vein quartz with light sulphide mineralization. Bornite patches to 2 mm. Malachite, azurite, and manganese stain on fractures. Minor very fine pyrite or chalcopyrite. Patchy, orange limonite/hematite. Possibly minor very fine galena. 11800-2-1460-+100-+10000
- R 8 Branching quartz stringers (1 5 mm) cutting pale greenish quartzite healed contacts. Some pyrite in quartz almost completely oxidized to hematite. Minor very fine pyrite. Possibly aplite? 13-2-27-1.4-35
- R 9 White quartz with very light, very fine bornite in patches to 2 mm. Vuggy leached hematite-coated. Malachite and azurite coatings and seams. Not calcareous. 12400-2-420-+100+10000
- R 10 Sheared, argillaceous siltite. Reddish stain. Hematitic coatings. Some fairly massive, fresh siltite. 52-2-55-1.9-25
- R 11 White calcite-quartz veining with few specks oxidized pyrite. Wall rock pale grey, cherty quartzite. Tiny red-brown specks peppered throughout hematite? Very hard, massive, and dense chert? 47-8-12-3.2-5
- R 12 Fairly massive argillaceous siltite. Some shearing. Medium greenish grey. Some hematitic patches and fracture-coatings/fillings. Inconspicuous, very fine hematite? peppering. 7-2-36-0.3--5
- R 13 Argillite. Some coatings of specular hematite. Quite massive. Medium grey. 9-4-48-0.6--5
- R 14 White vein quartz. Local calcite. Hematite/limonite patches and coatings. Minor azurite, malachite, and bornite. Mostly barren. 1950--269-5.4-2200
- R 15 Fine grained andesite or diorite. Massive, uniform. Grey. 23-4-8-0.4--5
- R 16 Irregular white quartz with coarse chloritic clots. Some hematite/limonite seams. Occasional coarse albite patches. 22-2-33-0.2-5
- R 17 Quartz with 15% steel grey, metallic mineral galena/specular hematite? Local very fine pyrite disseminations. Minor patchy sphalerite. 9200-+20000-8600-+100-4325
- * Cu ppm Pb ppm Zn ppm Ag ppm Au ppb

Dibble Area

10 Initial Grab Samples

R. Babcock



Analyses: oz Ag/T, oz Au/T, % Cu

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5 чи,	· 	<u> </u>		VZAIt		2.7.2738		10124 (km 300)	from Plague	<u>. </u>
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		1000 - ex	Transly_re	eley in	ankik flame :			9004 silt. 5920 3:36 - 100' clear		:
		W side -	mulage	duel -main	ly soil from		21	3:36 - 100' clas	1 W - 41	In below (p.
		Whank	?	Ì	ţ	1				
	/							8 d silt.		1
	D V	72813 N	与かかと	K ~ 80	ab unita NA	•		Tiny ck-0.2	7/m~ 30	>0' N WSCH
		HSCK -	200 from	7. 1:02.	Frie - smill.			fair silts		
		1 6	m NF L	1.7			22	fair silts		5525
	·	roud_fro		2:32	.i .	1		5535	sepm ck.	4:28-800
· - · - · - · - · - · - · - · - · - · -	9. 1	l		5995 - de	religion - g		24	4:35 - good si	l+i	
		ماذا حسدا	A-i mil-	fine our	flats. ppm. Fair.	•	25	Day 16 - 6:-	1000	5505
)		-		3:29	-	742		Dry ck - fair	(1,24	(b)
<u> </u>	10, 1			6420 1-2	opm. this.	Dut . 7/85	26	10 m (k - 2 no	- Buchtons -	below amp
· /		Rocky.			1			Mous (k - 2no 5820 5040 - 14 2:31 - pood sil	ř	
Than 5.4.25/80	. /	14.		4 190	6.37	t		5820 5640 - 14 2:31 - pbod sil 5410 5210 - 20 2:47 2 7 3725 345 - 30 3:32 5.2 ni be	*O	, olt.
3.2410	-/	VX ENGLY	100 Pon 1 -	110 J.L	7380			3725 345 -30	below_camp	ن م الموجوع المراجع المراجع المراجع
· .~		behind yk	or - mad	(smell) -3	N). M./1	<u></u>	28.	3:30 5.2 mi be Hore shoc Ck.	campo -f s	and.
	12, 🗸	MCK TO	9 ~ 4re!	ale sould (N). Ma/1		29.	Horn shoe Ck.	3888 3625 4140 - Lin	and
		silf-grit	2000	i. ' '	i .	\		silt elend.		1
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GD. 26/80	13 18	Hana I	Pritich	lain town	Nedge	•	!	1	5		
J-7 7.5			1	000	in enge	=	D 20	17	b 1 11	i), : 740 to i(s`, 2.10	1
		1/2"	14 gc10.	125	17 1 91.2.	1	~ ~ ~ 7				
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		cill OD.	2333,1	log on ch	I'c ittur 5	· wed		mally ox	4. 11 Fe//	Inex	
·	R20	6" wht	gtz floot	اههجار بد	mod up/mal	ued 0 d. 8/80				lim- a ha	
·		on 1 ctt	- patchy	ser.	'		<u>!</u>			d py diss	
Pre	821	Above	2"-4"	,	# .41630	4		1	i	7	
-11-3-1	- X-FU.	8255	1 1 1 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	,	1	1		:	:	i	
			V. CUTT	-w_Auy (khiir marti	g · · · · · · · · · ·		1			;
Pic	K22_	Ctt sill	PV Re	h 4"-12"	Atz-ral una); ;; !:		:	i .		
7 · 1 · · · ·	: 	بر/ور س	el-ni	de preb	(HG) P. 113	:l	:	i			
27/80	R 23	12" gt	t in ck	rpy x 10.	4t 2 - rel une rios = (u. 1915 (HG) 1915 6075 W side), 1919	Tit V i t	<u>!</u>	 İ	i :		. i
71.10 10.25/20_	R 27	6 ~ 12"	ote-fille	d fre in	sill@w	1	I I				
		1			1	- Ti	i E	· •	1		
	!		i	1	(HG) - some	'i	!				
Sun		cals_ 	Hetherenes	4 355	gtz w ult			-			
Sep. 23/80	_R25_	Hppm Por	d Vn. 2	sh wht	gtz w ult		}	i i			i i
		ox'd py.	Hin seem	blkmin	lit possmal	ar Rojenta in terretaria		[[!		
				1	al orlep.	•		; ;	 		i
		Wiggs of	ineled belo	la dis le	P	: :		 	İ		<u>j</u> .
1	RZL	I AVE TO BE		- F 1), / r	!					
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		SAMPLI (SI	Vonankij.	+ <u>CAC</u> e	Insa Goodally	,	 			-	, ,
Sun:		dion). Fo	//12 ex.	ļ <u></u> -			i		i 	•	
Oct. 5/80_	R47	9745 Ota	with obl	Lindhs	+med or Fe	1			1 1	•	
		ox'n. No	2 appares	it. Hin H.	• ox.	/Γ.				!	
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APPENDIX

III

Geophysics

VLF-EM Field Notes

Mon Sep. 29/80	Harwall 2	5)* N	E		Victor	١, ,		Haviaii	242	2.1 +8	o Faire tlli	150 HF N	la
5.p. 29/80.		;	-	150 .46	E than 3	ぴ fi E ねw	04,2/30	(1.8€)	ì	+3	- 12	-11	
CYXD	1.1-1.1			(30 : (1	- IIII - I PO	m L 10 w	Face 150	(1.5E)	-8 -7	-1 +1		0	. .
				•			ľ	رحون	~5	+1	+2	+4	Schooling
<u> </u>	(1.2 E)	+1	+13					1.ZE	-6	+3	+4	+5"	in seds?
325	- 	+1	±13	+26	-2	 	-		-5	19	+7	45	
3∞ 275 92,5	0,4 E	+1	_+13_	+24	-4	! 		D. 9 E	-4	+5	+12-	+8	. !
715 675		<u> </u>		+22-	-2				,	. +7	+17	+9	x
175 52.5	0. b E	#		+21_	+1	_		0.6E	<u>-</u> (+2/	+7	į : !
175 37.5 Ine	0.3 E	1		123	+3			0.3 E	-1 -1	ļ	+24	+7	
75 22.5	-	1		+25	+4				0	+15	+28	+7	
C 25 1 7.5	OEW	/ ₁₊₁	+14		+4		8:45	BL	 + 1	1	+31	+3	
·		+2_	<u>+12</u>		+5	-600/1800			+1	ナバ	+31	+6	· [· · -
	0.3.W	1		+36	+7 +7	9.4 Wak		0.3 W		. ;	+37	+9	!
)	0.6W	14		+39	+4	<u> </u>				+20	+41	+7	~
)			720	+40	+2	<u> </u>		. 0.6 W.	+5	+21 +23	+44	+6	- ;
	0.9W			ليميد	+2_			_0.9 W	1	· i	+47	+5"	Signal Pri
, . 		-44_	<u>+U</u>	+42	+1				1	+25	+49	+3	defined -
	(1,2 4)	16	_+21	+42	0			1.2 W	46	+25	+55 	+6	made masking
<u></u>		+6_	+21	1.4.4	+2				1	+3 0	†57	+7	Getting title-
	(1.5w)	†B_	_+23				·	(1.5 W)	1	!	+59	14	
				 		900' 270~	13001 330 m	(1.8W)	+3 +11	+29 +29 +28	+56	-2	Good delin

Thus	į	House	!i_	<u> </u>	2.	e Herring a label of the	!	•		İ	· 2a.
01.2/20	िव इ	rignel 237	, 2 ⁷ 7, 231	,212,2	3. 1 36,230		!	;		1:45 +1 '	
1 (1.25)	1 84750	12150	!	•		0.6 N					
					i .	:	(1.5E)	t2 +17	يفت		
War.				:	:	:		+3 +17	†3¢		:
tons, of the	1.2 E	-1 +19	+38		i		1.2 €	+3 +6	+33	-2	•
off (3)	•	71 _ +19	+3 <i>§</i>	-				+4 +16	+32	-1	-
	0.9E	0 _419_		-1	· · · · · · · · · · · · · · · · · · ·		0.9E	79 +16	+32	+1	:
	1	I118	+37	-4				+17 +17	+33	+2	. ;
	0.6 €	-2 . +11	+34	-5-			0.6 5	++ ++7	+34	+2-	,
		-2 416	+32	0				+4 +18	+35	+2	!
	0.3E	क क्षेत्र	+34	+5		Harail 27 Lakes	0.3E	+4 +18	736	+3	· i
11.02 4		+1 +19	+37	+7	j	المرا	† 	+5 +20	+38	+5	:
10:10	BL	+2 +22	+41	+9	×	Was 1	BL	+6 +21	+41	+4	! *
201 50 180 F		+5 +24	+46	T9		₩		+6 +21	+42	+2-	
PALL	0.3W	+6 +24	+50	+7	1		0.34	# 122	+43	+2	
,		+6 +27	+53	+5				+7 +22	444	+2	Pit 3m N
	0.6 W	, t6 t28	+55	+6	•	i	0.6	+8 +23	745	+1	•
		. +\$ +3 °	+51	+4				+7 +22	+45	0	
	0.344	! +3 +3	+59	+-7	· · · · · · · · · · · · · · · · · · ·		0.9 W	+8 +23	+45	0	
		! +9+35	+66	+9				+8 +22	+45	-2	1
		+8 +33	-+68	0	i —	12.20	 1.2 W	,	+43	; ;	. CK
,	•	+8_ +33	+66	9	•		,		· ·		
•	(1.5W)	+9 +35	+68	+4	:						
		+9 +35	+10		. - !	· · · · · · · · · · · · · · · · · · ·	!		· · ·		
j•:2.5	Aranna s		} ;		295m	900'	į		1		
	i	. 1	į	;	1	,	į	1	١		İ

Sun,	254	Ch	1-16	FV.	BL to	Value ?	7		267	27#	Free O =	u	!
1.5/00	Howari 260	F	re l	10° Jin	1 (K 267	(Per- 1)		FVn	ļ		1	<u> </u>	ļ <u>.</u>
	·					1	-Ridge-		-4-	-/2_			
FBL	N E				-	:		FXD-0.6n	<u></u>	<u>-14</u>	-31		
*****	:								+2_		-25	+11	
. 19114. 	. 1.8 c	-5	t 13					0.3n	+4		-20	+10	
12:19 ok		-6	+12	+25			King x		+5		-12	+*)	
	1,5 e	-B	+5	+22	-6		1 -	FBL			-11	+8	
ع أدور است الأ		 9	+9	+19	-3		5:30 4		t7	 z	-7	+9 -	
X	1.2 c	-9	77	+19	0	;		0,35			-2	+11	ļ
	1, 2 0	دا		+19	-1	i	<u> </u>		1		+4	+/3	i
*	4		+9	+18	-1	1 . 177			+9		+11		
	0.10	-10	+9	+/9	+1	· <i>y</i> ~	•	0.65	<u>+11</u>		+16	+12 +7	
y		-11	H2	+19	-1	e.75			112		718		1
	0,6c	72	+1	+/8		İ	}	0.91	+12_			+1	_
		-10	49	+18					†12		+17	-3	ļ
	0,3e	-1	+9	# 4	+1		5:53	1,25	+12-	±7_	+55		ļ
y 9:43 1		-11	+10	+21		•		ļ	ļ 				
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pico by		-8	+13	!	+5				midge	<i>(</i>	nto Hans	CK_val	_ ۔ اربرا
. •	0.3.0	-1	+13	+26	+1	!		ļ	! •				
	1	-7	-1 12	+25	-3	1	ļ	 					
	(0.6 w)	-7	+ 11		-4	:							
	! !	-2	410	+21		1	1		i 				
	 	:				i				: :			
			_			•			195	m			
•	[1] 9- 01	İ		255 m		•	(

STREAM	SEDIMENT	SAMPLES

	<u> </u>					
Sample <u>Number</u>	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Remarks
Weakly anomalous	80	90	180	0.6	13	b + 1s
Moderately anomalous	150	180	350	1.8	35	b + 2s
Strongly anomalous	270	400	700	6	100	b + 3s
1	52	360	302	1.2	25	Victor Vein
2	32	87	123	0.2	5	
3	23	93	90	0.2	* - 5	S Br Maus Ck
4	19	42	46	0.2	-5	
5	53	86	148	0.2	-5	
6	39	32	61	0.2	- 5	
7	109	55	169	0.3	- 5	N Br Horseshoe Cl
8	410	108	370	1.8	10	E Br L5814 Ck
9	29	53	108	0.2	5	
10	28	46	106	0.2	- 5	
11	50	68	81	0.2	- 5	
12	36	30	54	0.2	-5	
13	28	63	51	0.2	-5	
14	53	55	62	0.2	-5	
15	65	29	66	0.2	5	
16	72	42	62	0.2	-5	
17	17	58	32	0.3	-5	
18	62	26	43	1.6	45	N-1 Br Sunken Ck
19	24	38	56	0.2	5	
20	56	18	36	0.2	10	
21	39	22	56	0.2	5	
22	68	24	48	0.6	5	N-4 Br Sunken Ck
23	33	10	35	0.2	-5	
24	16	6	26	0.2	10	
25	8	7	54	0.2	- 5	
26	20	63	190	0.4	10	2nd X Maus Ck
27	20	39	178	0.2	-5	
28	20	19	86	0.2	- 5	
29	45	63	130	0.2	5	Ì
30	34	35	94	0.2	5	
31	45	63	147	0.2	-5	<u> </u>
32	54	70	170	0.2	20	W Br L5814 Ck
33	43	75	118	0.2	5	
. 34	52	82	134	0.2	10	
35	78	62	184	0.2	-5	W Br L5814 Ck
36	134	51	180	0.9	10	W Br L5814 Ck
37	47	56	146	0.2	- 5	
38	5 5	42	120	0.2	-5	
39	49	42	124	0.2	5	

 $[\]star$ -5 = less than 5 ppb (parts per billion)

VAL RESCRIPCI, ETANCIA RESESSAMENT REPURT

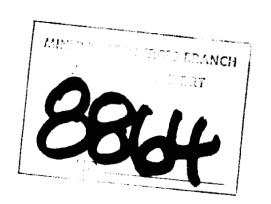
^{1% = 10,000} ppm (parts per million)

¹ Troy oz/Ton = 34.286 grams/tonne (or ppm)

ROCK GEOCHEM SAMPLES

Sample Number	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Au ppb	Remarks			
R-1 to R-17	Samples taken by R. Babcock								
R-18	5	22	8	0.2	*- 5	Upper Pond Vein - 0.1m			
R-19	1,120	5	17	0.2	-5	Diorite vein			
20	6,100	22	2	0.3	5	Diorite vein			
21	11,800	9	3	1.7	10	Diorite vein			
22	27,800	130	22	5.2	20	Diorite vein			
23	430	7	4	0.2	- 5	0.3m quartz vein			
24	152	8	-1	0.2	10	Diorite vein - semi-massive specular hematite			
25	122	125	21	1.0	5	Upper Pond Vein - 1.8m			
26	30	8	27	0.2	- 5	Diorite vein			
27	8	10	96	0.2	- 5	0.5m quartz vein in Aldridge			
28	18	33	46	0.6	80	0.15m quartz vein			
29	19	63	53	0.4	10	0.3m quartz vein			
30	6	6	7	0.2	- 5	Quartz float			
V7400	100	2,500	900	14	69	Victor vein			
F7300	200	207,500	700	111	69	Flat vein			

¹ Troy oz/Ton = 34.286 grams/tonne (or ppm)



^{*-5 =} less than 5 ppb (parts per billion)

^{1% = 10,000} ppm (parts per million)

