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GEOLOGICAL AND GEOCHEMICAL

REPORT ON THE DEER CLAIMS

HARRISON LAKE AREA, B.C.

NEW WESTMINSTER MINING DIVISION

NTS 92H /5E

Latitude : 49° 21 ' Longitude : 121° 40 '

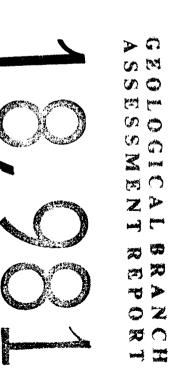
For

STONEY CREEK MINES LTD. 2460-555 W. Hastings St. Vancouver B.C.

Ву

Les Demczuk , M.Sc., F.G.A.C. Consulting Geologist

August 15, 1989



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#### 1.0 SUMMARY

Pursuant to a request by Mr. Alex Guidi, president of Stoney Creek Mines Ltd. a geological evaluation of the Deer 1 and 2 mineral claims was carried out in July 1989. The program was designed to identified the geological setting of the property and evaluated the potential for gold mineralization similar to the nearby RN-ABO deposit.

The Deer claim group is located on the southeast end of Harrison Lake (B.C.) and lies within the Harrison Lake fracture system which hosts a number of precious and base metal deposits.

The subject property is underlain by the Pre-Jurassic metapelites of the Twin and Chilliwack Groups. The west and central part of the property is intruded by a Mid-Tertiary granite pluton. Granodiorite and Quarts-Diorite dykes are common features throughout the Deer claims. In general the geology of the Deer claims is similar to the nearby RN-ABO deposit.

The limited geochemical survey did not delineate any major precious metal and /or base metal trend within the property. However, it is felt that further exploration of the subject property is warranted for the following reasons:

- The geological setting of the Deer claims is similar to the RN-ABO deposit and therefore favorable for precious and base metal mineralization.
- 2 Current new discoveries by Bema indicate that possible extensions of high grade gold zones trend on to the Deer Claims.
- 3 Much of the subject property remains unexplored.
- 4 Easy access and year round favorable weather conditions for exploration and development exist.
- Low capital and operational costs for mining operation because of the property's ideal location near a small lower mainland town where virtually no costs are required to provide housing, transportation, power and related facilities.

In order to fully evaluate the mineral potential of the Deer. Mineral Claims, detailed geological mapping and a geochemical program is recommended. A second phase would include grid establishment, VLF and magnetic surveys, followed by trenching and blasting. Dependant upon positive results of the above program and based upon a review of data, an exploration diamond drilling program will be necessary to define the geometry and grade characteristics of any identified mineralization.

#### 2.0 INTRODUCTION

Pursuant to a request by Mr. Alex Guidi, President of Stoney Creek Mines Ltd. a geological examination and limited geochemical sampling were carried out on the Deer 1 and 2 mineral claims from July 28, to July 30, 1989.

The purpose of the field work was to investigate geological setting of the Deer claims group and to propose additional exploration work in order to assess the mineral potential of the property.

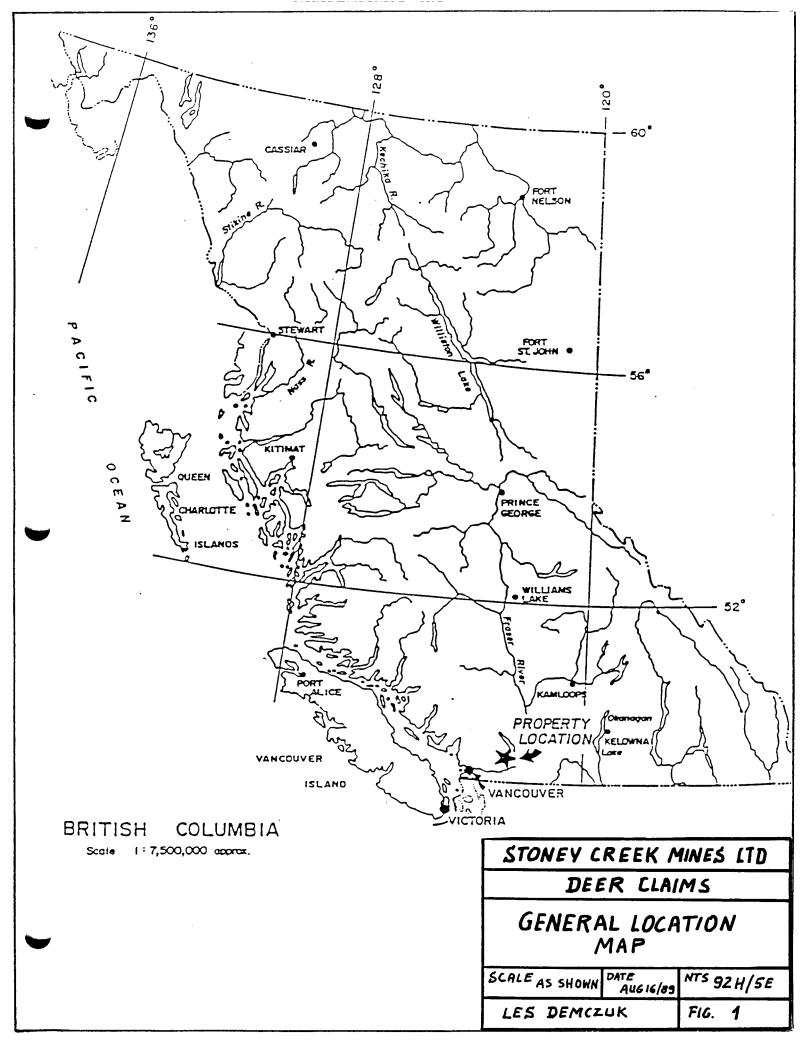
The work and results described within this report are intended to fulfill the assessment requirements for the Deer 1 and 2 mineral claims.

## 2.1 LOCATION , ACCESS AND PHYSIOGRAPHY

The Deer property is located 9 km northeast of Harrison Hot Springs and 500 m south of Deer Lake. The claims are accessed by two wheel drive vehicle via Highway No 7 from Vancouver to Harrison Hot Springs (120 km). From this community, the property can be reached by the partly paved road to Sasquatch Provincial Park.

Elevations on the property range from 200 to 880 m above the sea level with moderate to strong relief. Vegetation is typical of coast rain forest with large logged areas for commercial purpose.

The climate of the region is generally wet year round with the exception of the summer months which are warm and humid. Snowfall is minimal.



#### 2.2 Property Status

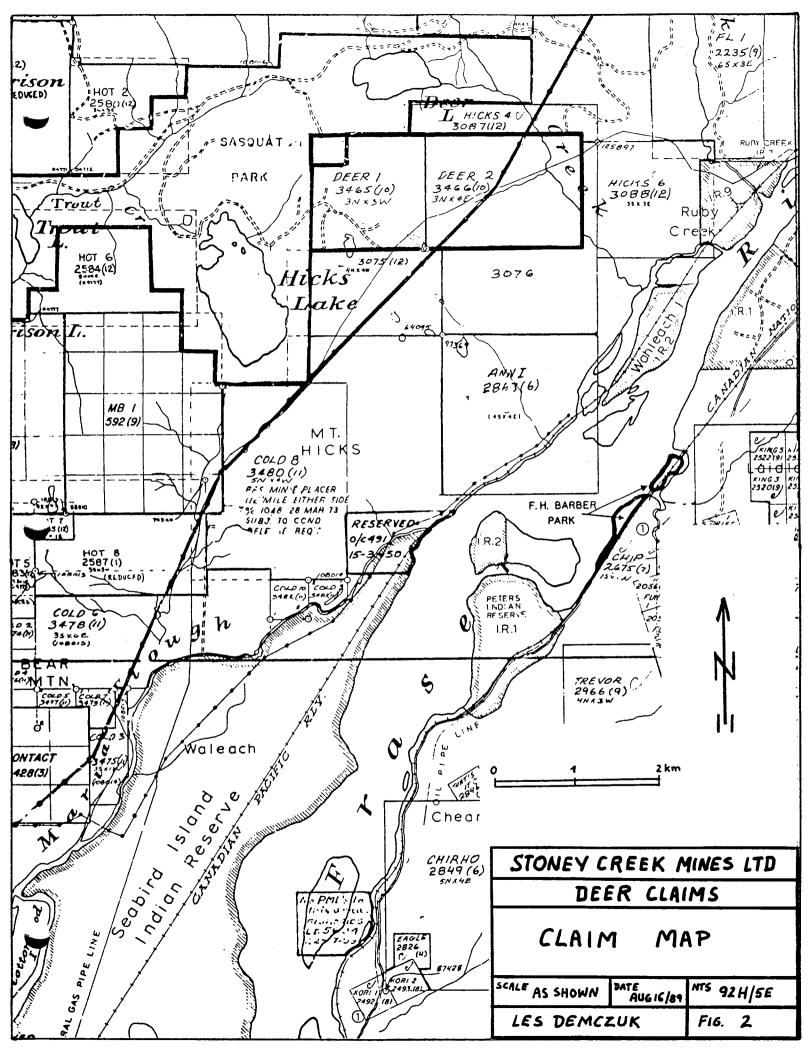
The Deer property consists of two contiguous mineral claim blocks totaling 21 units. These claims blocks are located in the New Westminster Mining Division. Claims location shown on Figure 2 is after government claim map 92-H-5E with pertinent claim data summarized bellow:

Claim	Name	Record No	Units	Expiry Date
Deer	-	3465	9	Oct. 23, 1989
Deer		3466	12	Oct. 23, 1989

The Deer claims are owned by Stoney Creek Mines Ltd.

#### HISTORY AND PREVIOUS WORK

Exploration in the Harrison Lake area began in the 1890's with the discovery and development of gold-quartz veins at Fire Lake, 20 km northwest of the head of Harrison Lake and at the Providence property. In both areas, veins were lensoid and could not support continued mining. The Seneca "Lucy Jim" prospect was discovered in 1950, although Isaac Miller is reported to have explored other copper-zinc showings in the Chehalis area at a much earlier date. massive sulphide at Seneca was mined in 1961. Between 1964 1971 numerous "stringer type" copper-zinc occurrences were staked and explored in the area between Chehalis River Exploration for massive sulphide deposits and Simms Creek. in the Harrison Lake area was pursued during the late 1960's and 1970's by Macdonald Consultants, for Newmont Canada Ltd. Aaron Mining, Amax Exploration, Hudson Bay Oil and Gas and Canadian Superior Ltd. From 1980 to 1982, Territorial Gold Placers Ltd. and TMI Services have located several properties of merit and active exploration in the belt is continuing. The Deer claim group is located approximately 2.5 km east from the ABO deposit (previously known as the RN property). The ABO property is currently being explored by Bema Gold Corporation. Mr. Clive T. Johnson president of Bema International Resources Inc. reports:



## Hill Stock Discovery

"A major gold discovery has been made in step out exploration drilling on the Hill Stock, located 2.5 kilometers to the south of the main Jenner Stock. The Hill Stock is one of seven known mineralized quartz diorite stocks on the Harrison Lake Property roughly ten times the size of the main Jenner Stock.

Hole DDH-130 intersected significant gold mineralization in several near vertical zones. Major intersections were at the following intervals:

<u>Interval</u>	<u>Length</u>	Gold	Silver
200-213 feet	13.1 feet	0.25 oz/ton	0.40 oz/ton
512-538 feet	26.3 feet	0.25 oz/ton	0.40 oz/ton

The gold mineralization is associated with quartz, pyrrhotite veins carrying copper, zinc and molybdenum mineralization. Diamond drilling is continuing to further define this new zone.

#### Breccia Zone

A second significant discovery has been made in a large north-south trending breccia zone to the west and peripheral to the Hill stock. Hole DDH-127 intersected a sulphide zone which occurs within a 250 foot wide breccia with a strike length of 1,500 feet. The sulphide zone contains pyrrhotite, pyrite with chalcopyrite and sphalerite. Gold and silver mineralization has been intersected throughout the breccia zone with the most significant interval as follows:

Interval	Length	Gold	Silver	Zinc
430-453	23 feet	$\overline{0.1}$ oz/ton	0.30  oz/ton	1.2%

Extensive follow-up drilling is planned to evaluate the breccia zone.

# Portal Stock

Drilling on the Potal Stock has intersected significant high grade gold results contained within the footwall zone. Drill hole 88-83 is located 200 feet to the east of drill hole 88-76.

<u>Drill Hole</u>	<u>Interval</u>	<u>Length</u>	<u>Gold</u>
88-76	299-325 feet	26 feet	0.31 oz/ton
88-83	856-866 feet	10 feet	0.60 oz/ton

The zone is open to the east and will be further drill tested during the current program.

#### Jenner Stock

Underground drilling in the Jenner Stock substantially to anticipated reserves. Eight diamond drill holes to date in the current program indicate a significant increase in the size of the Jenner Stock beyond previously reported reserves of 5.0 million containing in excess of 0.1 oz/ton gold. Revised tonnage calculations will be reported on the completion of the present twenty-five thousand foot diamond drill program.

Current exploration and step out drilling has confirmed the existence of significant widespread gold mineralization beyond the previously known Jenner and Portal Stocks. The Harrison Lake Property is a major gold camp with multimillion ton potential" (News Release Nov. 15 1988).

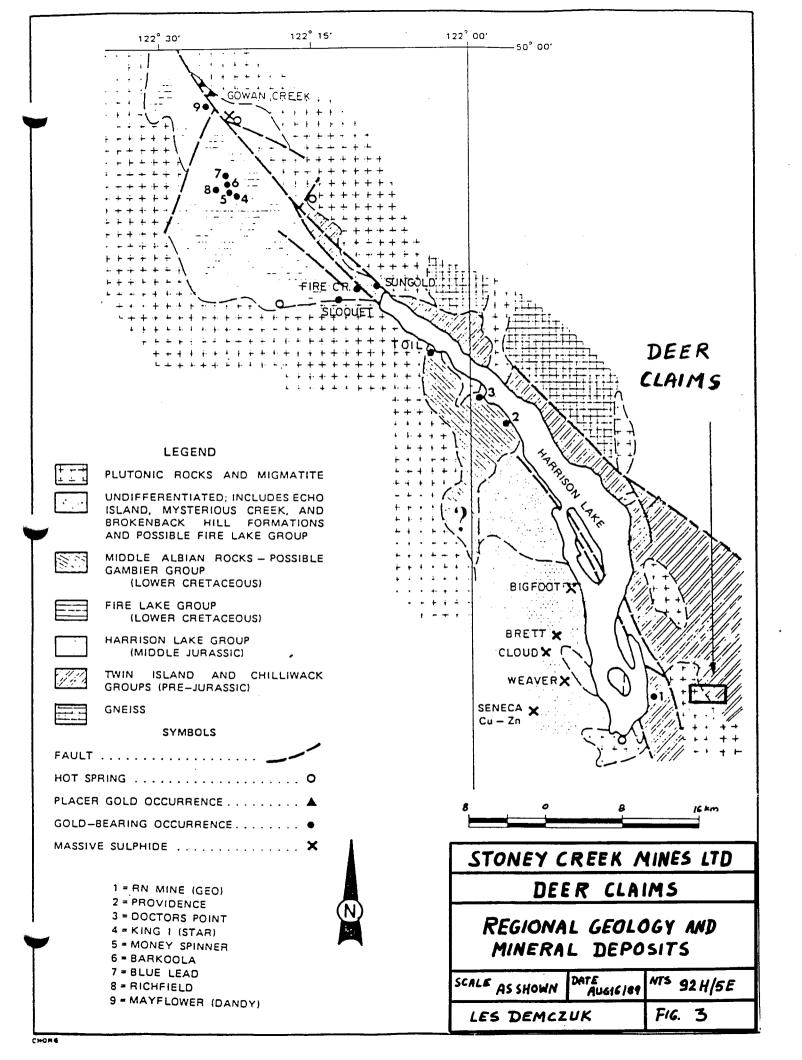
#### 3.0 GEOLOGY

#### 3.1 Regional Geology and Mineral Deposits

The most recent, and most valuable mapping effort in the Harrison Lake has been done by R.Thompson (1972) and D. Pearson (1973) both of the Ministry of Mines.

The area is underlain mainly by rocks of the Harrison Lake Formation, a group of volcanic and epiclastic rocks varying from basaltic to rhyolitic in composition with rhyolites and dacites predominating and textures varying from massive flows to fine pyroclastics. The belt of volcanics is bounded to the west by "Coast Range" granitoid rocks, to the north by overlying fossilferous sedimentary formations and to the east by a major north-trending, eastward dipping thrust fault occupying Harrison Lake. The belt is gently folded and cut by numerous northwest trending faults.

The Harrison Lake Formation was reported by Crickmay to be 9240 feet thick, although Thompson (1973) estimates a thinner section (4500 ft. thick). The unit is underlain by the Camp Cove Formation, exposed in a prominent anticlinal window near Camp Cove, and consisting of greywackes, indicate a Lower Jurassic age.



Overlying the Harrison Lake Formation is the Echo Island Formation, consisting of arkoses, bedded tuffs, sandstones and argillites of probable Middle Jurassic age.

Formations are shown schematically in the accompanying stratigraphic column (Figure 3).

Major structural features of the area are the Camp Cove anticline and several northwest-trending faults, one of which is the Sakwi Creek Fault with the southwest side downthrown (Pearson, 1973). Other faults with similar trends but unknown throw are visible on air photos. One of these, crossing the Aaron mining claims, is marked by rusty outcrops and silicified breccias with pyritic quartz-calcite matrix containing occasional sphalerite specks. A similar trending fault is postulated to cut off the Camp Cove anticline and thus must have the northern side dropped relative to the south. Numerous northwest-trending creeks are probably occupied by faults.

## Mineral Deposits

Many gold-polymetallic and molybdenite porphyry deposits are situated along the Harrison Lake-Lillooet River Valley which marks a major crustal fault comparable with the parallel Fraser River Fault and Cadwallader Faults along with significant gold deposits. Some of the occurrences are briefly described below:

Seneca Deposit - which is situated on the north side of Chehalis River, 10 km north of Harrison Mills, discovered in 1950 and initially explored by Noranda-Size of the deposit in 1982 was estimated to Exploration. be somewhat less than one million short tons of unknown grade. Mineralization consists of massive sphalerite. barite-chalcopyrite-galena-pyrite with textures varying from finely laminated and colloform" banding to sulfide breccias. Bladed barite occurs in sulfides, chalcopyrite varies considerably and silver and gold content significant in some holes. The mineralized horizon occurs within a thin acid pyroclastic host-pyritized rhyolite lithic tuff and lapilli tuff. Lenses of breccia of bleached rhyolite fragments on a fine ground block friable "mud" occur, and thin bands of laminated argillite and andesite lapilli are present in this unit. Thickness of the "ore" horizon varies considerably, from zero to approximately 15 feet.

International Curator Resources Ltd.. in joint venture (50-50%) with Chevron Canada Ltd. have developed at least 1.6 million tons of polymetallic mineralization in the Seneca Deposit (1,660,600 tons grading 0.024 oz/t gold. 1.2 oz/t silver, 0.63% copper, 0.15% lead and 3.57% zinc, with a higher grade reserve of 990,000 tons averaging 0.032 oz/t gold, 1.62 oz/t silver, 0.84% copper and 5.17% zinc.

A significant new discovery showing was found in 1985; the "T" or "Vent" zone. Drill Hole 85.12 intercepted 31 feet averaging 4.1% zinc, 1.45% lead, 0.26% copper, 0.96 oz/t silver and 0.024 oz/t gold. The new zone is situated 1.5 km northwest of the Seneca deposit.

Drill hole 85,3 northeast of the main (Seneca) showing intercepted 2 feet of massive sulfides. The Seneca zone is now considered open and trending to the northeast.

Doctors Point Deposit - a significant gold deposit situated at Doctors Point, about 40 km north of Harrison Hot Springs, is being developed by Rhyolite Resources Ltd. and Harrison Gold Mines. Over 90 drill holes have proven up to 250,000 tons of open pit minable material grading 0.10 oz/t gold and 2.0 oz/t silver.

The deposit consists of flat-lying quartz-arsenopyrite veins in hornfelced volcanics adjacent to a granodiorite stock.

RN Deposit (ABO) - The RN deposit, situated on the east side of Harrison Lake, a few miles north of the town of Harrison Springs, B.C. is a large, low-grade bulk minable The property is currently being explored by Bema deposit. International. Total underground operations and previous drilling indicate a reserve potential in the Jenner Stock to be between 3.0 and 5.0 millions tons at a grade of 0.10 to Based on a mining study gold production 0.12 oz/t gold. cost is forecast at roughly \$190.00 (U.S.) per ounce at a production rate of 1,000 tonnes per day. At this rate of production, the mine would produce 35,400 ounces per year mine life. Low capital costs of with ten year \$25 million for the operation can be achieved approximately the property's ideal location near a small lower mainland town where virtually no costs are required to transportation, provide housing. power and related facilities.

Fab, Hot (Mt. Woodside) - Chalcopyrite, sphalerite and pyrite occur as impregnations and veinlets in siliceous pyroclastic rocks of the Harrison Lake Formation, on the southwest side of Mt. Woodside.

Mad, Rye - Minor sphalerite and (unconfirmed) silver minerals occur in a fault breccia explored by an adit, one mile east of Wolf Lake.

J Am - Several centers of chalcopyrite-sphalerite-quartz "stringer" mineralization occur in pyritized rhyolite to rhyodacite breccias and domes, north and northeast of Weaver Lake.

Con - Minor sphalerite and galena occur in small kaolinitized area in tuffs or sediments adjacent to a maganiferous pyrite-jasper-chert-horizon, 1.5 km south of Camp Cove.

Brett - A large area of solfatarically altered rhyodacite volcanics has a siliceous stringer zone at its centre with sphalerite and manganifereus carbonate in quartz veinlets, 2.5 km up Brett Creek.

Cloud I - Numerous quartz-barite-chalcopyrite-sphalerite stringers cut altered rhyodacite tuffs and flows. 1.5 km southwest of the Brett Creek showings and 1.5 km east of Mt. Klaudt.

Harmony - Similar "stringer"mineralization occurs in a domelike intensive south of Weaver Lake.

Hooey - Shears containing massive sphalerite, galena and chalcopyrite occur in faulted andesites on the bank of Brett Creek.

The subject property is located on the south end of the northwest trending Harrison Lake fracture system. Harrison Lake fracture system is associated with regional This includes two hot springs along hot spring activity. the Lillooet River valley northwest of the lake, one situated at Harrison Hot Springs on the southeastern The gold mineralization along the extremity of the lake. system is hosted in rocks of various ages and lithologies. approximately camp, situated Fire Lake gold kilometers northwest of Harrison Lake, includes six mineralized occurrences, all of which are found in quartzrich veins that cut the Fire Lake Group. Five of these veins are hosted in greenstones and carry chalcopyrite and native gold. These quartz veins are not continuous but form lenses and gash fillings. The sixth mineral occurrence in the camp, the Dandy (Mineral Inventory 92G/NE-10), is hosted and carries lead-zinc brecciated sedimentary rocks mineralization in a quartz-calcite vein.

At the RN mine (Geo Abo), situated on the southwest end of the Harrison Lake (only 2 km west from Deer claim group), the gold is hosted in sulphide-bearing quartz veins that cut both highly deformed metasedimentary rocks of the Chilliwack Group and intrusive diorite plutons.

The Providence mine, situated 5 kilometers southeast of Doctors Point, represents a fracture-filled vein deposit hosted in andesitic rocks of the Harrison Lake Group. rocks in the Doctors Point area, where Rhyolite Resource Inc.'s mineralization was discovered, were originally assigned to the Fire Lake Group (Roddick, 1965) Mysterious Creek Formation (Monger, 1970). However, the prevalence of acidic to intermediate volcanic rocks in the suggest they probably belong to the Harrison Lake In the Providence mine vicinity, andesites and andesitic breccias predominate, but northward toward Doctors Point they become less abundant and are replaced by volcanic rocks of more acidic composition, together with coarse volcanic breccias, tuffs, and a variety of sedimentary rocks. At Doctors Point this supracrustral assemblage is intruded by several diorite-quartz diorite plutons which are surrounded by wide and prominent thermal metamorphic aureoles. The gold-bearing veins at Doctors Point exhibit a pronounced spatial relationship to the pluton margins, but current geological data suggests the intrusions were not necessarily genetically related to the gold mineralization

## 3.2 Property Geology

The simplified geology of the area is shown on Figure 4. (1:5000) The property occurs at the contact of the metapelites of Twin Island and Chilliwack Groups with the Coastal Intrusive complex. Most of the Deer 1 claims is underlain by Mid-Tertiary granitic rocks in a large pluton about 1 km in diameter. The lithology of the pluton is coarse grained massive and weakly sheared granodiorite. Occasionally the thin pluton is intruded by narrow quartz-diorite stocks. The quartz diorite is fine to coarse grained with subhedral texture of hornblende and minor biotite along with 10% quartz and traces of sulphides mostly pyrite.

A metasedimentary unit was mostly seen in the west part of Deer 2 claim group. This unit consists largely of poorly bedded, wel-cleared black to grey slaty argillites that are generally pyritiferous, locally they are interbedded with siltstones and strongly silicified.

The volcanic rocks were located in the east part of Deer 2 property. They are fine to medium grained, generally strongly silicified and range from andesitic to dacitic in composition. Disseminated pyrite is widespread and narrow quartz veins are common feature throughout this unit.

#### 4.0 GEOCHEMISTRY

## 4.1 Geochemical Program

The objective of the 1989 program was to identify geology and areas of interest. A total of 11 rock grab samples and 4 stream sediment samples were taken on the subject property.

Rock grab samples were routinely collected during the course of the geological reconnaissance mapping (1:5000) and prospecting program. These samples generally contained sulphide mineralization and some of them were obtained from quartz veins.

Stream sediment samples were collected from creeks. These samples generally consist of silt and /or fine sand taken from stream beds.

All sample locations in the field were marked with corresponding numbers on red flagging tape.

All were analyzed using F/A and AA methods for gold and silver and JCP method for 20 elements. at SGS General Testing Laboratories at 1001 E. Pender St. Vancouver B.C.

All geochemical results are presented in Appendix II and sample location are shown in Figure 4.

Laboratory Analytical Methods

Fire Gold Geochemical Analysis

After drying the samples at 95 C, soil and sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated polverizer. A suitable sample 15.00 30.00 fire assay weight of to grams are preconcentrated. After pretreatments the samples digested with Agua Regia solution and after digestion the samples are taken up with 25% HC1 to suitable volume. Further oxidation and treatment of at least 75% of the original sample solutions are made suitable for extraction

of gold with Methyl Iso-Butyl Ketone. With a set of suitable standard solution gold is analysed by Atomic Absorption instruments. The obtained detection limit os 1 ppb.

Analytical procedure report for assessment work-26 element ICP Ag, Al, As,

B, Bi, Ca, Cd, Co, Cu, Fe, K, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, U, V, Zn

After drying the samples at 95 C, soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by jaw crusher and polverized by ceramic plated pulverizer. One gram of the sample is digested for 6 hours with HNO3 and HClO4 mixture. After cooling samples are diluted to standard volume. The solutions are analysed by computer operated Jarrell Ash 9000 ICP Inductevely Coupled Plasma Analyser, Reports are formatted by routing computer dotline print out.

#### 4.2 Discussion of Geochemical Results

Gold (Au): Gold values in rocks and silts are in general low and basically not exceeding 0.002 oz/st.

Silver (Ag): There were no anomalous silver values.

Recorded assay values for silver range from
0.11 ppm to 0.91 ppm.

Arsenic (As): The arsenic values are considered slightly anomalous as they average 19.11 ppm and range from 2.38 ppm to 65.23 ppm.

Copper (Cu): One anomalous copper value was recorded in sample 89 DD-05 279.49 ppm.

Lead (Pb): Anomalous lead values exceeding 30 ppm were recorded in four samples. The highest value was 58.13 ppm for sample 89-DD-05.

Zinc (Zn): Values exceeding 200 ppm was recorded in one sample (89 DD07-703.93 ppm). This sample was also anomalous in arsenic and lead.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

The subject property lies within the Harrison Lake fracture system which hosts a number of precious and base metal deposits.

The geological setting of the Deer claims is similar to nearby by the RN-ABO deposit and therefore favorable for precious and base metal mineralization.

Current new discoveries by Bema indicate that possible extensions of high grade gold zones trend on to the Deer Claims.

Much of the subject property remains unexplored.

Easy access and year-round favorable weather conditions for exploration and development exist.

Low capital and operational costs for mining operation because of the property's ideal location near a small lower mainland town where virtually no costs are required to provide housing, transportation, power and related facilities.

In order to fully evaluate the mineral potential of the Deer mineral claims the phase 1 program is recommended. This initial program should include detailed geological mapping, stream and soil geochemical survey and VLF-magnetometer survey. The estimated cost of the recommended program is about \$45,000.

Respectfully submitted

L. Demezak, M.Sc. F.G.A.C.

August 16 1989

#### 6.0 REFERENCES

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- Monger, J.W.H. (1969). Geology Survey of Canada Paper 69-47 and Map 12-1969.
- Monger, J.W.H. (1986). Geology between Harrison Lake and Fraser River, Hope Map Area, southwestern B.C. in current Research, Part B, Geological survey of Canada, Paper 86-1B, p 699-706, 1986.
- Ray, G.E. (1983) Gold Associated with a Regionally Developed Mid-Tertiary Plutonic event in the Harrison Lake Area, B.C. (92G/9, 92H/3,4,5,6,12).
- Ray, G.E., Coombe, S. and White, G. (1983). Harrison Lake Project (92-H/5,12, 92-G/9). Ministry of Energy, Mines and Petroleum Resources. Paper 1984-1, pp. 42-53.
- Roddick, J.A. (1965). Vancouver North, Coquitlam and Pitt Lake Map-Areas, British Columbia, Geol. Surv. Canada, Mem. 335.

APPENDIX I

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# ROCK SAMPLE DESCRIPTIONS

No	Type	Description
89DD-01	Grab	Quartz vein material with py from granodiorite.
89DD-02	Grab	Rusty on surface dark grey- black fine metasediment, strongly silicified with 5% sulphide mostly py.
89DD-03	Grab	Light grey fine sandstone strongly silicified with diss. pyrite, magnetite.
89DD-04	Grab	Rusty sugary qtz vein approx .3 m wide.
89DD-05	Grab	Light grey fine metasediment strongly silicified with stringers of sulphide up to 20% sulp. mineral.
89DD-06	Grab	Strongly silicified metasediment with diss sulphide (30%).
89DD-07	Grab	As above.
89DD-08	Grab	Dark grey metasediment, veinlets qtz. with pyrite.
89DD-09	Grab	Rusty quartz vein .4 m wide occasionally yellow, no visible mineralization.
89DD-10	Grab	Dark grey argillite, contains 30% sulphide.
89DD-11	Chip .3m	Quartz vein material with pyrite magnetite, pyrrhotite and tr.of chalcopyrite.
89DD-12	Grab	White-light grey strongly silicified metasediment with qtz. vein fragments, sulphide mineralization 10%.

APPENDIX II

# CERTIFICATE OF ASSAY

Date:

August 11, 1989

File:

0103-0755



# SGS SUPERVISION SERVICES INC. General Testing Laboratories Division

1001 East Pender Street,

1001 East Pender Street, Vancouver, B.C., Canada. V6A 1W2 Telephone: (604) 254-1647

Telex: 04-507514

TO: MR. TED YARDLEY

2460 - 555 West Hastings St.,

Vancouver. B.C.

We hereby certify that the following are the results of assays on:

ORE

	GOLD	SILVER					ſ <u></u>	I
MARKED	oz/st	oz/st	XXXXXX	XXXXXXXXX	KXXXXXXXX	XXXXXXXXX	xxxxxxxx	XXXXXXX
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TONEY CREEK PROJECT								
ilt No Mark	0.002	0.02		:	:			
9-DLS-01	0.002	0.02						
9-DLS-02	0.002	0.02						
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## CERTIFICATE OF ANALYSIS



# SGS SUPERVISION SERVICES INC. General Testing Laboratories Division

1001 East Pender Street, Vancouver, B.C., Canada. V6A 1W2 Telephone: (604) 254-1647

Telex: 04-507514

Date:

August 11, 1989

No.: File:

0103-0755

To: Mr. Ted Yardley 2460 - 555 W. Hastings St. Vancouver, B.C.

# LCP. ANALYSIS

ORE - STONEY CREEK PROJECT Description:

Element:	SILT NO MARK	89-DLS-01	89-DLS-02	_89-DD-01	89-DD-02
AG (ppm)	0.56	0.33	0.40	0.24	0.52
AL (ppm)	> 1%	> 1%	> 1%	6723.44	> 1%
AS (ppm)	18.07	18.43	19.76	13.26	38.65
BA (ppm)	269.08	258.69	247.55	224.32	215.76
CA (ppm)	2884.17	2351.69	1645.86	2150.74	> 1%
CD (ppm)	2.03	2.13	1.94	0.88	2.22
CO (ppm)	10.98	9.96	127.57	5.64	7.61
CR (ppm)	88.26	90.20	· <b>5</b> 6.13	80.10	71.75
CU (ppm)	29.19	15.26	44.26	<b>7.</b> 46	23.92
FE (ppm)	> 1%	> 1%	> 1%	7919.40	> 1%
MG (ppm)	5521.74	4803.76	2306.32	2790.07	708.17
MN (ppm)	354.35	255.29	2171.30	220.87	95. <b>7</b> 7
MO (ppm)	3.57	3.52	3.89	1.60	7.58
NI (ppm)	<i>57.</i> 93	40.13	42.60	6.58	26. <b>2</b> 6
PB (ppm)	19.63	22.50	26.40	14.70	42.43
P (ppm)	662,43	304.59	659.91	326.02	1167.38
SB (ppm)	4.74	6.31	5.58	3.91	9.27
SR (ppm)	20.91	21.82	13.98	15.29	222.42
TI (ppm)	1163.91	1464.46	1098.71	941.67	905.95
V (ppm)	56.05	60.90	44.62	18.81	38.52
ZN (ppm)	53.62	37.59	36.48	14.42	57.46

IS COMPANY ACCEPTS NO RESPONSIBILITY EXCEPT FOR THE DUE PERFORMANCE OF INSPECTION AND/OR ANALYSIS IN GOOD FAITH AND ACCORDING TO THE RULES OF THE TRADE AND OF SCIENCE.



## CERTIFICATE OF ANALYSIS



# SGS SUPERVISION SERVICES INC. General Testing Laboratories Division

1001 East Pender Street, Vancouver, B.C., Canada. V6A 1W2 Telephone: (604) 254-1647

Telex: 04-507514

August 11, 1989

Date: No.: File:

0103-0755

To: Mr. Ted Yardley 2460 - 555 W. Hastings St. Vancouver, B.C.

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#### LC.P. ANALYSIS

Description: ORE

Element:	89-DD-03	89-DD-04	89-DD-05	89-DD-06	89-DD07
AG (ppm)	 <b>0,3</b> 0	0.31	0.91	0.53	0.55
AL (ppm)	7439.29	480.71	> 1%	0.33 > 1%	0.55 > 1%
AS (ppm)	8.68	2.38	65.23	30.14	27.75
BA (ppm)	- 222.95	2.41	421.75	342.81	230,81
CA (ppm)	1636.38	161.14	> 1%	7390.69	> 1%
CD (ppm)	1.27	0.88	4.28	3.07	6.56
CO (ppm)	3.56	2.80	13.71	7.80	14.80
CR (ppm)	56.04	175.31	120.10	124.18	85.47
CU (ppm)	8.62	24.12	279.49	122.92	149.88
FE (ppm)	> 1%	8715.03	> 1%	> 1%	> 1%
MG (ppm)	1790.95	457.32	7281.42	7728.27	2462.94
MN (ppm)	226.12	48.63	511.15	415.56	204.99
MO (ppm)	1,72	0.90	12,23	5.98	5.97
NI (ppm)	6.20	12.25	23.95	9,83	24.45
PB (ppm)	22.57	13.97	58.13	31.03	34.78
P (ppm)	351.08	49.15	897.07	434.51	1198.79
SB (ppm)	4.04	2.81	15.88	8.59	8.22
SR (ppm)	12.02	1.69	318.30	88.50	161.99
TI (ppm)	516.79	19.39	1753.12	1460.22	1276.14
V (ppm)	4.83	3.72	149.52	71.87	86.88
ZN (ppm)	66.82	8.65	76.13	55.59	703.93

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L. Newnes - Chemist
SIGNATURE AND TILE



# SGS SUPERVISION SERVICES INC.

General Testing Laboratories Division

1001 East Pender Street,

Vancouver, B.C., Canada. V6A 1W2

Telephone: (604) 254-1647

Telex: 04-507514 August 11, 1989

Date: No.:

File:

0103-0755

## LC.P. ANALYSIS

Description:

ORE

Element:	89-DD-09	89-DD-10	89-DD-11	89-DD-12	
AG (ppm)	0.89	0.53	0.11	0.38	
AL (ppm)	1560.87	259.09	5768.60	2884.40	
AS (ppm)	2.67	5.17	7.66	9.06	
BA (ppm)	3.34	1.45	360.08	326.17	
CA (ppm)	798.18	501.55	1679.46	933,58	
CD (ppm)	1.07	5.08	1.62	1.08	
CO (ppm)	2.73	97.61	5.45	3.41	
CR (ppm)	159.23	159.04	106.71	98.51	
CU (ppm)	25,83	11.62	13.49	7.35	
FE (ppm)	> 1%	> 1%	> 1%	9733.97	
MG (ppm)	184.41	> 1%	7747.20	3859.60	
MN (ppm)	56.42	1424.64	387.71	217.14	
MO (ppm)	1.24	10.42	2.20	1.79	
NI (ppm)	8.01	3405.12	105.33	8.21	
PB (ppm)	11.47	20.74	12.94	19.93	
P (ppm)	76.95	56.61	468.62	167.55	
SB (ppm)	2.81	4.27	3.41	4.14	
SR (ppm)	8.34	0.82	28.76	5.61	
TI (ppm)	83.12	4.56	105.20	268.66	
V (ppm)	5.80	6.51	14.73	5.26	
ZN (ppm)	13.82	64.28	30.30	26.74	

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L. Newnes - Chemist SIGNATURE AND TITLE

To: Mr. Ted Yardley

(p. 3)

Vancouver, B.C.

2460 - 555 W. Hastings St.

APPENDIX III

Deer 1

# July 28 - 29, 1989

# Personnel

L. Demczuk M.Sc. Geologist	1.5 days	6	\$	300	\$	450.00
E. Ablay Assistant Prosp.	1.5 days	0	\$	200	\$	300.00
Domicile 3 Man days		0	\$	50	\$	150.00
Truck 4 X 4 ,Gas	1.5 days	0	\$	100	\$	150.00
Lab Analysis					\$	140.40
Field Supplies					\$	50.75
Report 1/2 (Writing, typing,	drafting,	copy)			\$	300.00
			<b></b>	-4-1	<b>*</b>	1541 15
			7	otal	\$	1541.15

Deer 2

# July 29 - 30, 1989

# Personnel

L. Demczuk M.Sc. Geologist	1.5 days	0 4	300	\$ 450.00
E. Ablay Assistant Prosp.	1.5 days	<b>@</b> \$	200	\$ 300.00
Domicile 3 Man days		@ s	5 50	\$ 150.00
Truck 4 X 4 , Gas	1.5 days	<b>@</b> \$	100	\$ 150.00
Lab. Analysis				\$ 141.40
Field Supplies				\$ 41.25
Report 1/2 (Writing, typing,	drafting,	copy)		\$ 300.00
		_		
		7	Total	\$ 1532.65

APPENDIX IV

# STATEMENT OF QUALIFICATION

- I, Les Demczuk, of the city of Vancouver, Province of British Columbia so hereby certify that:
- 1. I am a Mining Geological Engineer residing at 1835 E. 13th Ave., Vancouver B.C.
- 2. I graduated from University of Mining and Metallurgy, Krakow, Poland in 1977 with Master of Science degree in Geology.
- 3. I have worked in mineral and coal exploration since 1977 and have practiced my profession since 1977.
- 4. I am a registered Fellow of the Geological Association of Canada.
- 5. This report is based upon field work carried out by myself and a review of published and privately held literature pertaining to the claim area.

18 19

Les Demczuk, M.Sc.

F.G.A.C

Dated at Vancouver, B.C. this 16. day of August, 1989.

