AN ASSESSMENT REPORT SUMMARIZING THE 1992 PROGRAM OF GEOLOGICAL MAPPING GEOCHEMICAL SAMPLING AND MAGNETIC SURVEY ON THE AL #1 CLAIM - HARVIC GROUP

HARVIC PROPERTY

NEW WESTMINSTER MINING DIVISION

LATITUDE: 49° 32'N. LONGITUDE: 121° 22'W.

N.T.S. 92 H/11W

6 KM. S.E. OF YALE, B.C. ON QUALARK CREEK.

PREPARED FOR OWNER:

MR. VICTOR WALTERS,
Box 250,
4927 LAUREL ROAD,
SECHELT, B.C. VON 3AO.

BY:

MICHAEL BRADLEY, M.Sc.
MIKE BRADLEY & ASSOCIATES,
4750 WESTLAWN DRIVE,
BURNABY, B.C. V5C 3R3.
299 - 5746

NOVEMBER 2, 1992.

1. SUMMARY: Two consultants visited the Al #1 and Flo-Gold claims, using helicopter support on Sept. 7-8, 1992 and conducted geological mapping, ground magnetic and geochemical surveys. A total of 74 samples were collected - 60 soils, 4 stream sediment and 10 rock chip/channel samples.

Geological mapping indicates the Al#1 and Flo-Gold claims area is underlain by northwest trending, moderately deformed, interbedded and structurally interbanded pelites of the Hozameen Group. The Hozameen Group comprises three mapable subdivisions, including; Unit Al - phyllite, schist and slate; Unit A2 - chert with subordinate pelite bands; Unit A3 - greenstone with tuffaceous bands. The Hozameen group rocks are extensively fractured and are cut by north and northwest trending shear faults. Weakly pyritic quartz sweats and veins are common on low and high angle dilatant zones in the pelitic units. In the eastern protion of the Flow-Gold claim, chert and greenstone units are intruded by north and northwest trending quartz porphyry dykes. These dykes are assumed to be related to the Eocene aged Mount Outran Plutons and appear to stope fault zones located west adjacent to the Hozameen Group-Coquihalla Serpentine Belt fault contact.

Geochemical sampling at 50 and 100m intervals above roads on the north and south sides of Qualark Creek indicates three areas with anomalous gold in soils content: 1. On the north side of Qualark Creek, southeast of Scour Creek, between samples 18-17 and 18-29; located downslope of quartz porphyry dykes intruding chert and greenstone bands, subjacent to the Coquihalla Serpentine Belt. 2. South of Qualark Creek , centered on Gold Creek, located downslope of the projected southeast trend of the gold in quartz veins exposed in Hillsbar Adit. 3. A single point anomaly at sample 17-371 (120 ppb), located on the north side of Qualark Creek, 200m downslope of a northwest trending, low contrast magnetic low. The magnetic low may indicate a fault zone with gold exploration potential.

The author concludes that the soil anomalies are located downslope of three northwest trending structural zones with good to excellent potential to host gold in quartz veins.

Further geochemical sampling, prospecting and geological mapping are recommended upslope of the three gold in soil anomalies.

Respectfully Submitted,

MICHAEL BRADLEY, M.Sc.

TABLE OF CONTENTS

LISTS OF APPENDICES

LIST OF FIGURES

2. INTRODUCTION: Two consultants travelled from Vancouver to Hope early on Sept. 7, 1992 and mobilized by helicopter to a clearing on a logging road on the north side of Qualark Creek, in the western portion of the Flow-Gold Claim. A tent camp was established to support a two day survey of the area.
Purpose of the visit was to investigate the geology of both the Flow-Gold claim and the eastern portion of the Al #1 claim, conduct reconnaissance soil sampling looking for gold anomalous zones and to assess the magnetic contrast of Hozameen Group lithologies.
Bedrock was mapped in exposures along road cuts. Soil samples were collected at 100 & 50 m intervals above road cuts on the north and south sides of Qualark Creek. 2.8 Km. of topofil-compass grid was established in the northeast corner of the Al #1 claim, north of the bridge across Qualark Creek in support of a fluxgate - ground magnetic survey.
The two men collected a total of 74 samples, including; 10 rock chip-channel samples, 60 soil samples and 34 stream sediment samples. Measurments of the earth's magnetic field were made at 50 m intervals over the grid.
This report summarizes property geology, geochemical and litho-geochemical sample results for gold (see figure 4) and results of the magnetic survey (see figure 5).

3. LOCATION AND ACCESS: The Al #1 and Flo-Gold claims are centered on Qualark Creek, east of the Fraser River, located 5 Km. straight line southeast of Yale township, B.C. and 19 Km. north of Hope, B.C.. The area lies within N.T.S. sheet 92 H/11W, at Latitude 49°32'N and Longitude 121°22'W.
Access to the claim is by helicopters operating from nearby bases in Hope and Agassiz. A network of logging roads dating to the early 1980's exists along major west flowing creeks on the Harvic Property, however; these have been washed out in numerous locations, cut banks are eroded and landings and right of ways are densely overgrown with alder. These roads are useful as trails but would require rehabilitation for use by a.t.v.'s or 4 x 4 vehicles, due to the steep terrain. The bridge across Qualark Creek, on the eastern boundary of the Al #1 claim, has been washed out. The mainline access from Hope to Qualark Creek is driveable by 4 x 4 vehicle to the south side of Suka Creek.
Hope is located at the junction of highways 1, 3 and 5 and is a major logistical center for rail traffic, logging and tourism in the area. The Canadian National Railway is located on the east side of the Fraser River and passes over Qualark Creek where it enters the Fraser. Electical power is available at Yale, on the west side of the Fraser River.

4. CLAIMS STATUS: The Harvic Property lies within the New Westminster Mining Division and consists of 9 claims totalling 124 units within the Harvic and Hillsbar Groups. Upon acceptance of this report, submitted in support of work and P.A.C. credits of $6100.00 filed on Sept. 10, 1992, one years assessment is applied on four claims as follows:

CLAIM NAME	REGISTRATION NO.	UNITS	ANNIVERSARY DATE
	HARVIC CLAIM GROUP		
Al #1	3711	18	Aug. 17, 1993
Vic	3733	18	Sept.17, 1993
Hillsbar #2	3847	15	Jan. 18, 1993
John	3848	10	Jan. 18, 1993
Mike	3849	10	Jan. 18, 1993
	Total	71	
	HILLSBAR CLAIM GROUP		
Harry	3734	18	Sept.17, 1993
Hillsbar #1	3846	10	Jan. 18, 1993
Hillsbar #3	303818	5	Sept.10, 1993
Flow-Gold	303819	20	Sept.10, 1993
	Total	53	

All of the above claims are owned by Mr. V. Walters of Sechelt, B.C., who paid for the work completed in the 1992 program of work on the Al #1 and Flow-Gold claims.
The author personally saw the Legal Corner Post for the Hillsbar #3 and Flow-Gold claims, located atop Spider Peak and verifies that it was staked and marked in a proper fashion.

5. HISTORY: The area of interest first gained prominence with the discovery of placer gold on the Fraser River in 1856. Rapid mining of gravel bars along the River had recovered most of their wealth prior to 1874 when government commenced recording production. The presence of a higher percentage of coarser gold in the gravels adjacent to Yale, notably at Hills and Emory Bars, suggested a local source in the area. Intense prospecting of tributary creeks in the early 1870's produced small yields along Hidden, Siwash, and Hillsbar (now Qualark) creeks and colours in the Skagit River area and in tributaries of the Nahatlatch River.
By 1911 placer activity extended along the Coquihalla River and tributaries Ladner, Fifteen Mile, Sowaqua, Peers and Nine Mile creeks. Lode prospecting accompanying the placer mining lead to discovery of gold-bearing quartz veins in Siwash Creek valley in 1891 and the Roddick (1901), Ward (1905), Marvel (1906), Emigrant (1911), Emancipation (1915), and Aurum (1919) properties, in what came to be known as the Coquihalla Serpentine Belt. The belt was recognized in 1927 and actively prospected, after high-grade gold was found associated with serpentine on the Aurum property. Five properties in the belt produced 3,102 tons of ore containing 3,117 oz. of gold in the period 1916 - 1942.
Gold-bearing quartz veins were located on Qualark Creek in 1921 and staked as the "Gold" claim. By 1927 three tunnels were present, the longest had been driven 60 m. and crosscut 6 well defined quartz veins. Government sampling of the No. 3 vein in 1927 averaged $20.00/ton across 3 feet or 0.968 oz Au/ton (1927 price = $20.67/oz). Another sample collected across 3 feet ran 0.82 oz Au/ton.
The Qualark Creek area appears to have had little exploration from 1930 to 1974.

In 1975 Caroline Mines Ltd. optioned the Hillsbar property, conducted geological mapping, geochemical sampling and test pitting, then dropped the option in 1977. No assessment report is on file for this work.
In 1979 Cochrane Consultants surveyed and sampled the Hillsbar Adit and conducted a magnetometer survey over 2 east-west lines, following the logging roads located north and south-adjacent to Qualark Creek.

In 1982 the Hillsbar property was restaked as the Seka claims and Mix Resources Ltd. conducted soil sampling over 8.3 line kilometers of grid. The survey "indicated two possible zones of mineralization" (Sauer, 1982) but the report does not accurately locate the zones on maps.
In 1984 and 1985 extensive soil sampling and geological mapping was undertaken on the Holly claims, which covered the ground south of the Hillsbar Property from the ridgeline between Qualark and Suka Creeks, south across Suka Creek. Despite encouraging geochemical results no further work was recommended.
In 1990 H. Nicholson conducted a soil sampling and geological mapping traverse within the Harvic Group, along the Qualark Creek logging road from the western portion of the Al #1 claim, southwest through the John claim. Three small zones of elevated gold values in soils were located in areas underlain by Custer Gneiss/schist.
In 1991, the author conducted geochemical sampling and geological mapping within and west of Hillsbar Adit on the Al #1 claim. Followup of several gold in soil anomalies was recommended. These anomalies were not examined in the current study.

5. PHYSIOGRAPHY: The Harvic property is located in the Cascade Mountains. The terrain of the Hope mapsheet is steep and rugged, with average elevations of 1220 m. Intense glaciation occurred in the area during the Pleistocene age. Mountains below 1830 m lay below the ice sheet and were rounded. Glaciation of valleys produced cirque headwalls and truncated spurs, U - shaped profiles and hanging side valleys; these features were further modified by recent temperate erosion.
Much of the drainage pattern in the mapsheet is controlled by north, northwest and northeast trending, structures dominated by the Fraser Fault System, which has controlled Fraser River's watercourse above Hope.
The Harvic property extends from Suka Creek in the south to Siwash Creek in the north. Local mountains have elevations of approximately 1433 m, trend north and northwest and have rounded ridgelines above 1220 - 1370 m elevation. The mountains are deeply dissected by arcurate-shaped creeks draining northwest, to the east of the claims and west to southwest, within and west of the claims. The creeks occupy steeply U - shaped valleys with side slopes averaging 45°-50°. Qualark and Siwash creeks pass through steep canyons, near their mouths at Fraser River. The western portion of the Vic claim covers a large, steep, west to northwest - trending cirque headwall, forming a portion of the Fraser Canyon above Yale.
The valley of Qualark Creek was visited in the current study. Outcrop is common at creek level and above 920 m, perhaps averaging 30% by area. Below approximately 920 m elevation the creek has cut through a flat lying sequence of unconsolidated gravel, silt and sandy beds. These fluvial deposits may originate with Fraser River which subsequently cut

to deeper levels in the Fraser Canyon due to tectonic uplift or post Pleistocene isostatic rebound. The sediments extensively mantle the steep bedrock paleotopography below 920 m elevation with perhaps 5 - 10% outcrop exposure located in creek beds and in other erosional windows. Qualark Creek valley was clear cut below 1220 m elevation in the early 1980's. High rainfall in the area has resulted in significant erosion of the steep slopes. A dense undergrowth of salal, devil's club and alder, together with young cedar and Douglas Fir, is revegetating areas adjacent to the active slides. Qualark Creek is choked at intervals with log jams and rock debris. Survey progress is hampered by steep, slippery terrain and the debris from logging and erosion.

7. REGIONAL GEOLOGY: (SEE FIGURE 3)

The geology of the Hope area was mapped in portions by the G.S.C. and graduate students of the University of B.C. in the period 1912 - 1969 and described in G.S.C. Paper 69-47 (Monger, 1969). The B.C. Department of Mines mapped the Coquihalla Gold Belt in the period 1982-1984; this work is described in B.C.M.E.M.P.R. Papers 1982-1, 1983-1, 1984-1 and 1985-1 (Ray, G.E.) and summarized in B.C.M.E.M.P.R. Open File Maps 1986/1A to 1G at a scale of 1:20000. Monger (1989) remapped parts of the Hope map sheet in the period 1984-1986 and compiled this work with that of numerous other authors in G.S.C. Map 41-1989, at a scale of 1:250000.

The geological features of the Hope map area are diverse and complicated by Mesozoic through Tertiary structures. The lithostructural interpretation of the Tertiary deformation is constrained by age dating of intrusions and fault relationships but remains controversial. The following is a brief review - the reader is referred to the above sources for a detailed explanation of the area's geology.

The Hope map area contains two contrasting geological and physiographic provinces: A. East of the Fraser-Pasayten Fault lies the Intermontane Belt; a region of lower topographic and structural relief within Quesnellia Terrane, comprised of predominantly subgreenschist metamorphic grade rocks. B. West of the Fraser-Pasayten Fault are two belts having high topographic and structural relief; the Cascade Belt (located east and south of the Fraser River) and Coast Belt (west and north of Fraser River). The north-northwest trending Cascade belt, in its southern part, comprises both a gneissic and granitic core flanked by belts of sedimentary and volcanic rocks. Further north the core is juxtaposed across the Hope Fault with granitic and amphibolite grade metamorphic rocks of the Coast belt. The difference in metamorphic grade between the two belts suggests to Monger (1969) a greater degree of uplift and erosion for the Coast Mountains than for the Cascades. Monger (1989) separates the pre-late Mesozoic rocks of Hope map sheet into 5 lithotectonic terranes, listed below from east to west:

A. Intermontane Belt- Quesnellia Terrane: The belt comprises predominantly felsic to mafic volcanic and sedimentary facies rocks of the Upper Triassic Nicola Group, extensively cored by partly comagmatic Late Triassic-Early Jurassic intrusive rocks, including; granodiorite plutons, diorite of the Mount Lytton Complex and Hedley Intrusions, alkaline intrusions of the Copper Mountain Stock and Tulameen Complex and by Jurassic through Tertiary aged intrusive rocks. A northwest-trending basin, infilled by Cretaceous Spences Bridge Group intermediate

to mafic volcanic and sedimentary rocks, is centered at Princeton, B.C.
B. Coast-Cascade Belt - Methow-Tyaughton Terrane: The terrane comprises: a. basal ophiolite - the Spider Peak Formation (Tsp) and associated ultramafics (PMu) of Triassic (?) age, together referred to as the Coquihalla Serpentine Belt, is overlain by b. fine-grained clastic sediments of the Lower-Middle Jurassic Ladner Group (JL) containing a subordinate intermediate to basic volcanic facies - the Dewdney Creek Formation (JD), overlain by c. a thin, Late Jurassic clastic succession - the Thunder Lake sequence (lJs), overlain by upper-most d. fine to coarse clastic sediments of the Lower Cretaceous to Upper Cretaceous Jackass Mountain (Kj) and Pasayten (KPw,v) Groups.
The terrane is cored by the Eocene Needle Peak Pluton (Egd) and associated small granodiorite stocks and overlain, in the Podunk Creek area, by intermediate to felsic pyroclastics and flows of the Coquihalla Formation (OMcv).
C. Coast-Cascade belts - Bridge River Terrane: The terrane is located east of Fraser River and is comprised of the Permian to Jurassic Hozameen Complex; a strongly deformed oceanic supracrustal sequence, subjected to greenschist grade metamorphism. The Complex is dominantly a fine clastic sequence, including chert and pelite with small undifferentiated intercalations of mafic volcanics, limestone, gabbro and ultramafics (PJH). A mafic volcanic facies (spilitized basalt - PJHv) is recognized in the central and eastern areas of the Complex, south of Squeah Mountain. The Hozameen Complex is correlative with the Bridge River Complex, located in the northwest of Hope map sheet and in the western areas of Ashcroft map sheet. Both complexes have associated small bodies of ultramafic rock and local gabbro (PJu) which assume mappable dimensions at intervals north of Suka Creek.
D. Coast-Cascade belts - Chilliwack Terrane: In the southwest corner of the Hope mapsheet and west of the metamorphic core of the Cascades lies a complexly folded and faulted, Devonian to Jurassic sequence. The oldest rocks are undifferentiated pelites, sandstone, minor conglomerate, mafic and felsic volcanics and carbonate of the Devonian to Permian Chilliwack Group (DPe). Stratigraphically above are pelites and sandstone of the Upper Triassic and Lower Jurassic Cultus Formation (TJc) and clastics of Upper Jurassic age (Jk).
E. Coast-Cascade belts - Harrison Lake Terrane: The terrane is located north of Fraser River and west of Harrison Lake. This middle Triassic to Lower Cretaceous succession comprises: a. a lower-most unit of siliceous argillites and mafic volcanics - the Camp Cove Formation (Tcc) is unconformably overlain by b. the Harrison Lake Formation (JH); a thick succession of mainly intermediate but locally felsic volcanics of Lower to middle Jurassic age, overlain by c. Mysterious Creek Formation(Jm) shales of the Middle and Upper Jurassic, overlain by d. Billhook Creek Formation intermediate volcaniclastics of Late Jurassic age, overlain by upper-most e. Penninsula Formation (JKp) sandstone and conglomerate, grading upwards into intermediate pyroclastics and flows of the Brokenback Hill Formation of Upper Jurassic (?) and Lower Cretaceous age.
The Harrison Lake Terrane is intruded by granodiorite plutons and stocks of Lower Jurassic, Oligocene and Miocene ages.
Coast-Cascade belts - Metamophic Rocks: A belt of lower greenschist to amphibolite metamorphic grade schists, is located east of Harrison Lake

and west of the Fraser Fault System - Ross Fault lines. The metamorphic rocks have an uncertain protolith age but are believed to be in part correlative with dated, lower grade rocks to the east and west. The Cogburn Schist (PMc), of greenschist to amphibolite metamorphic grade, is said to lithologically resemble the Hozameen/Bridge River Complexes. The structurally highest metamophic rocks are amphibolite grade Settler Schists (Ms), which may derive from Jurassic and Triassic rocks of the Tyaughton-Methow Terrane. Associated gneissic rocks have been dated by U-Pb method and group into Late Triassic, mid Cretaceous and early Tertiary (Custer Gneiss) age.

The structural evolution of the Hope area is complex and subject to ongoing study. Each of the above Terranes represents volcanic arcs, oceanic crust and marine sediments, which are allochthonous to the North American craton and bounded by major faults. "Most uniquely Cordilleran crust was created in Jurassic to earliest Triassic time, probably by structural stacking of rock units on discrete thrust faults and by folding and flow in a generally contractional regime and by addition of mantle-derived magmatic rock to the crust" (Monger, 1989). All Terranes had docked by mid Cretaceous time and orogeny, related to compressional tectonics, dominated through Tertiary time with regional uplift, strong folding, thrust and reverse faulting and local metamorphosing, migmatizing and granitic intrusion of all pre-mid Cretaceous rocks.

Following uplift, Tertiary extensional deformation, related to crustal thinning, dominated in the Cordillera. In Hope map sheet this period of extension is represented by transtension, probably related to wrench faulting, at approximately 50 Ma. The north to north-northwest trending Fraser Fault System (locally the Hope, B.C. and Straight Creek, Wa. Faults) is the major Tertiary structure, dextrally offsetting older northwest-trending structures by 80-100 Km., between 35-47 Ma. Ross Lake Fault, located 5 Km. east of and in part subparallel to Hope Fault, is an Eocene normal and/or dextral strike-slip fault.

Northeast trending faults, noteably Coquihalla Fault, are most prominent in Tyaughton-Methow Terrane and in meta-Nicola and Mount Lytton-Eagle Plutonc Complex. Movement was mainly dextral with a vertical component, occurring post-intrusion of the Needle Peak Pluton (48 Ma) and possibly post-extrusion of the Coquihalla volcanics (22 Ma.). Vedder Fault, south of Chilliwack and other small, northeast trending faults and linears in the Coast Range, may be associated with the Coquihalla Fault set.

8. ECONOMIC GEOLOGY: The Hope map sheet was a hive of placer activity in the late 1850's through 1870's, with most of the productive workings on gravel bars along Fraser River. As the bars became mined out in the 1870's exploration shifted to lode deposits. The area was explored for lode silver (Treasure Mountain) and gold deposits (Coquihalla belt), in the period 1880-present; for copper-nickel (Giant Mascot), from 1920-1958; for porphyry copper-molybdenum (Axe) and copper-gold (Copper Mountain), from the 1950's to present; for gold skarns (Hedley), 1900 to present; for epithermal gold-silver and for platinum (Tulameen Complex), in the 1980's and for volcanogenic massive sulphides (Seneca), in the 1970's and 1980's. Two open pit mines are currently producing in the area: Similkameen Copper - an alkaline porphyry/skarn copper-gold deposit, located 12 Km. south of Princeton and Nickel Plate - an

arsenical gold skarn, located at Hedley.
The Coquihalla gold belt (see Figure 3B) is located 4 Km east of Hillsbar Adit on Al #1 claim. The Belt has been extensively explored for lode gold deposits from the 1880's through the mid 1980's, culminating in production from the Idaho Zone at the Carolin Mine (1981-1984. Recent exploration of the McMaster Zone at Carolin and further south at the Emancipation Mine, have attempted to indicate sufficient ore to justify delineation drilling and small mine gold production.
The Coquihalla gold belt contains 5 former producers and 19 minor gold occurrences (Ray, 1983). The majority of the occurrences are gold - bearing quartz veins, hosted in quartz infilled tensional fractures. In contrast, gold mineralization at the Carolin Mine is an epigenetic mesothermal replacement style, with associated and possibly zoned sulphides, albite, quartz and gold, hosted in deformed Ladner Group metasediments, of Jurassic age. Age of gold mineralization at Carolin Mine is not precisely known but postdated tectonic overturning of the Ladner Group and apparently was pre-contempooraneous with upright to asymmetric folding.
Gold occurrences of the Coquihalla gold belt cluster along the eastern edge of the Coquihalla serpentine belt; a north-northwest trending, steeply dipping sliver of highly sheared to massive serpentinite (after peridotite) and lesser amounts of highly altered gabbro-diabase rocks. The serpentine belt is bounded by east and west splays of the Hozameen Fault and separates supracrustal rocks of the Ladner Group, to the east, from Hozameen Group rocks, to the west. The serpentine belt is 2 Km. wide in the vicinity of the Carolin Mine to Coquihalla River area, narrowing dramatically to the south (Mount Outram) and north (Siwash Creek), where Ladner and Hozameen Groups are in direct fault contact.
Ray (1983) lists the following features of gold deposits and occurrences in the Coquihalla gold belt:
a) Gold zones are proximal to greenstones, fault bounded serpentinites and small fuchsite-bearing quartz-carbonate zones similar to those in the Bralorne Mine, Cassiar Gold Camp and Mother Lode Belt, California.
b) Located predominantly east of the East Hozameen Fault.
c) Gold is fine-grained and coarse visible gold is rare, except at the Aurum Mine.
d) Gold zones occur in highly fractured, therefore more competent host rocks, such as; greenstone (Emancipation, Murphy), felsite pophyry sills (Ward, Emigrant), metasedimentary rocks of the Ladner Group (Idaho and McMaster Zones, Pipestem, Rush of the Bull, Gem, Golden Cache, Homex, Spuz), or in fault zones between competent and incompetent rocks, e.g. greenstones against metasedimentary rocks.
e) Gold mineralization is accompanied by introduction of silica, commonly in discreet, generally narrow quartz veins or in wider zones of intense network veining and diffuse silicification, eg.; saddle reefs as at the Carolin Mine.
f) Gold is associated with varying amounts of sulphides, including; pyrite, arsenopyrite, pyrrhotite and chalcopyrite.
g) Geochemical Associations: Incomplete work suggests no, or rare gold-mercury association. Weak gold-tungsten association in the Spuz occurrence and Idaho Zone. Widespread albitization at the Carolin Mine suggests sodium enrichment within gold zones - probably from subjacent spilitized volcanics, therefore suggesting a possible greenstone source

for the gold.

9. PROPERTY GEOLOGY:

Introduction: Two men spent two days soil sampling and geologically mapping along roads located north and south adjacent to Qualark Creek . Survey control was by metric topofil chainage along logging roads and compass-topofil traverse lines run from accurately positioned points on the roads. Topographic control was established from B.C. airphoto series BC83007 Nos. 258-260 and from Ministry of Forests Inventory Map 92H054 at a scale of 1:20000. A portion of the Forest Service map was enlarged to a scale of 1:5000 and redrafted to provide a base for plotting sample locations and geological information, presented in Figure 4.

Qualark Creek has cut to bedrock near Hillsbar Adit and here discontinuous outcrop exposure at creek level averages 10-20% (locally 90%) by area. The slopes of Qualark Creek valley above 920 m elevation show discontinuous outcrop in bluffs, creek and road cuts, averaging 30% by area. The friable schists and pelites are commonly recessive weathering, exposed in road cuts and subcrop.

The G.S.C. regional geological map 41-1989 at a scale of 1:250000, compiled by Monger (1989), provides a geological framework for the study area. The G.S.C. work appears to be based on ridgeline traverses to the north and south of Qualark Creek. The eastern portion of the Flow-Gold claim was partially mapped by the B.C. Department of Mines and this work is available in B.C.D.M. Open File 1986-1C at a scale of 1:20,000.

General Geology: (Figures 3, 4)

The Al #1 claim straddles a regional fault contact between Custer Gneiss of Tertiary age, in the west and deformed sediments of the Permian to Jurassic Hozameen Group , in the east. The fault is shown in Figure 3 to be north trending and appears to be a splay of the Fraser Fault System. In Monger's (1969) description of Custer Gneiss, he mentions that gneiss in Fraser Canyon "grades through a complex of numerous small granitic intrusions [sills and small composite bodies; Kgd, eTgd - formerly Yale intrusions] into the Hozameen Group. [South of Hope] along Silverhope Creek, gneissic rocks are separated by a zone of highly deformed and sheared schistose rocks a few hundred feet wide from rocks of the uppermost Hozameen Group." The implication of the above is that the Custer - Hozameen contact is not a discrete structure, rather a complex zone of shearing and intrusion.

The granodiorite intrusion (Egd) north of Qualark Creek (Figure 3) has not been isotope dated by the G.S.C.; it was previously grouped with the Yale intrusions but in Monger's recent compilation (Map 41-1989), the intrusion is assigned an Eocene age, contemporaneous with the Mount Outram and Needle Peak Plutons. In the absense of an age date or other definitive criteria, this irregularly shaped intrusion may range in age from Late Cretaceous to Miocene (lKgd, Mgd).

The eastern portion of the Flow-Gold claim straddles the Coquihalla Serpentine Belt - a deep seated fault separating the Hozameen Group (Permo-Jurassic) sediments in the west, from Ladner Group (Jurassic) sediments to the east.

Description of Lithologies: (Figures 3, 4)

Unit A (Permian to Jurassic Hozameen Group):

The Hozameen Group contains the oldest lithologies represented on the Harvic property. Regionally the Hozameen Group achieves an apparent thickness of ~7.8 Km. in four stratigraphic divisions (Monger, 1969):

iv.	Greenstone, chert, pelite, limestone pods	>2.1 Km.
iii.	Ribbon chert and pelite	>1.8 - 3.0 Km.
ii.	Greenstone, minor chert and limestone pods	>0.76 - 1.2 Km.
i.	Ribbon chert, local bodies to 0.37 Km.	>1.5 Km.

Rocks ascribed to the Hozameen Group on the Al #1 claim are located in a narrow northwest trending band between Harry"s Creek and the 1991 camp and from 30 m west of the Hillsbar Adit, eastward up Qualark Creek valley to the Coquihalla Serpentine Belt in the eastern portion of the Flo-Gold property. The Hozameen rocks include Unit Al - a predominantly argillaceous division with narrow chert bands and Unit A2 - comprised of ribbon chert and silicified argillite with subordinate narrow bands of pelite, mainly observed in the area of Hillsbar Adit. Since greenstone and limestone facies have not been observed on the Al #1 claim, the author assumes local Unit A rocks belong to an upper division of the Hozameen Group, probably division iii. (above). Greenstone bands occur on the Flow-Gold claim and these may belong to the uppermost division iv. (above) of the Hozameen.

Unit Al: Thinly banded argillaceous rocks, including medium gray to black coloured argillite, slatey argillite, slate and shale, predominate south of Qualark Creek and west of Hillsbar Adit. East of the adit, Unit Al lithologies are dominantly phyllites and talc/chlorite schists with intercalated bands of slate, argillite and chert. Chert and siliceous argillite/slate bands 1 - 60 cm wide are not uncommon and are recognized by their resistive, bold and blocky weathering character. Colour variations and related grain size variation from fine to very fine-grained, suggest the unit is bedded and upright, striking northwest and dipping moderately to the northeast. The friable nature of the lithology and presence of slatey cleavage commonly obscure bedding attitudes. The unit contains widespaced, discontinuous, folia-form, centimeter scale, milky-white, bull-quartz veinlets and lenses. The veins are commonly barren of sulphides but a few contain sparse, fine-grained, crystalline pyrite. The quartz appears to represent silica mobilized during regional metamophism from chert and siliceous argillite lithologies and redeposited in dilatant zones within shears, fractures and fold hinges.

Unit A2: Medium to dark gray-black ribbon chert, defined by dark gray chert bands interbedded, intercalated and interbanded with 0.1-1.0 m wide pelitic layers, occurs in the central area of Al #1 claim near Hillsbar Adit and in scattered outcrop to the east on the Al #1 and Flow-Gold claims. The cherts are moderately hard and moderately fractured, with a prominent slatey cleavage trending 115°-130°/65°N developed in argillite/slate interbands. Unit A2 weathers light brown to dark gray in color, forming steep subparallel bluffs and bold, flaggy, cleavage controlled cliffs and benches, adjacent to Hillsbar Adit. In the adit area, ribbon cherts appear to have been partially recrystallized and silicified, based on lighter gray colouration in some

parts and 0.5 mm drusy vugs, fine quartzitic textures and presence of light gray conformable quartz veins. The slatey cherts are sheared and gouged at widespaced intervals over widths of 0.20 - 1.3 m, subparallel to cleavage trending 128°/60°NE and are healed in part by sinuous, pinch and swell bull-white quartz veins. Ribbon structured quartz veins in Hillsbar Adit and adjacent along Qualark Creek, carry minor amounts of arsenopyrite, pyrite, chalcopyrite and free gold.

UNIT A3: Outcrops of greenstone are found in the eastern portion of the Flow-Gold claim, north of Qualark Creek. The greenstone is typically dark green in colour, moderately sheared and altered to chlorite, talc and epidote. Tuffaceous, or tuffaceous pelitic bands are common in the greenstone, as are dykes of hornblende-rich basalt dykes, up to 1m wide. Chert bands are located in close proximity to greenstone outcrops but contacts are obscured by faulting and or by quartz porphyry dykes.

UNIT D: Dykes of quartz porphyry are found within scattered outcrops of chert and greenstone in the eastern portion of Flow-Gold claim, north of Qualark Creek. The dykes are 1.5 - 9m wide, light gray - green in colour and rusty weathering. Quartz eyes and rare ghosts of feldspar phenocrysts are common in the size range of 1-2 mm. The dykes are related to north and northwest trending faults within and between the chert and greenstone units. The dykes also seem to have a spatial association with the Coquihalla Serpentine Belt. Contacts of the dykes with enclosing lithologies are silicified and rich in iron and manganese oxides. Pyrite and pyrrhotite are found as disseminations and as fracture fill in the contact selvedges of the dykes. The author assumes these quartz-rich dykes are related to a volatile rich phase of the Eocene aged Mount Outran granodiorite plutons, located elsewhere in the region.

Quartz Veins: Light gray to milky-white bull-quartz veins are relativley common in the study area. Discontinuous metamorphic sweats of folia-form, sulphide-barren quartz are found throughout the pyllites, argillites and slates. Tension fractures and shears in all units contain widely spaced, pinch and swell, bull-quartz veins. These veins contain trace amounts but locally 1-2%, fine-grained crystalline and blebby pyrite. Minor amounts of fine-grained crystalline arsenopyrite were noted with pyrite in quartz veins in the Hillsbar Adit. Trace amounts of blebby chalcopyrite occur with pyrite in a quartz vein in Hillsbar Adit.

Quartz veins in the study area commonly occupy structures trending north (170°-180°/60°E-90°) and northwest (125°-152°/40°-80°NE), dipping moderately to the east. Low angle, vuggy, rusty quartz veins were noted west of Al's Creek (17-375) and near the Coquihalla Serpentine Belt at 17-356.

10. GROUND MAGNETIC SURVEY: A compass-topofil grid totalling 2.8 Km of flagged line with stations marked at 50 m. intervals was established just north of the bridge across Qualark Creek in the eastern portion of Al #1 claim. Purpose of the grid was to provide control for a ground magnetic survey designed to test the magnetic contrast of Hozameen Group sediments in the vicinity of the Hillsbar Adit. A permanent base station was established at grid location Line 0+00W, 0+00N

and a temporary station at grid location 2+00W, 0+00N. Readings of the earth's total magnetic field were made at each 50m station utilizing a Scintrex MF-2 Fluxgate magnetometer. Readings were taken from the 3000 gamma scale of the magnetometer. Gradations at this scale allowed interpolation of magnetic readings to an accuracy of + 20 gammas. Loop traverses closing on the permanent and temporary base stations were made at 2 hour intervals, to measure diurnal variation of the earth's magnetic field. Station readings were then corrected for the diurnal variation. Corrected data are plotted in Figure 5.

11. GEOCHEMICAL SAMPLING PROGRAM: A total of 60 soil samples, 10 rock chip samples and 4 stream sediment samples were collected in the survey. The soils in the survey are dominantly podzols, having a variably developed B horizon. A typical soil profile has 2-5 cm of leafy humus (LH), overlying 5-10 cm of dark gray-black organic-rich material (AH), overlying 5-20+ cm of medium to dark brown, red-brown or orange-brown soil - (B horizon). BF soils are common on the north side of Qualark Creek. Mixed BF and BG (moist, mottled red-orange-brown) soils are found on the south side of the creek.
Complicating the soil profiles in varying degrees, is the variable presence of dominantly fluvial silt, sand and gravel deposits which mantle bedrock up to 40m above the main line road levels, in Qualark Creek valley. In these areas the B horizon is developed in sandy material, passing into a light gray-coloured C horizon, within sandy gravels. In adjacent areas, such as in the vicinity of the adit and outcrop bluffs generally, soils are locally poorly developed, with a 2-5 cm LH + AH layer overlying a 2-10 cm thick BF horizon within basal talus aprons, perched talus, colluvial and residual soils. The effects of steep slopes, mass wasting and slide erosion, related to logging activities have generated colluvial soils in some lower bank areas along Qualark Creek.
Soil samples were collected from the B horizon at stations spaced 50 m apart, at a depth of 15-30 cm below surface. At each station approximatley 0.5 Kg. of soil was collected and placed in a wet strength Kraft envelope, consecutively numbered with the sample number. All sample sites were marked by flourescent flagging, labelled with the sample number, to permit relocation.
Stream sediment samples comprising sand and silt were collected from the middle and side areas within the active portions of Gold Creek and three smaller creeks north and south of Qualark Creek.

Chip-channel samples were collected from quartz veins and silicified zones in various lithologies. Continuous chip samples were collected by hammering along a line, approximately 5 cm wide, across each vein at right angles to the structure. The chips and rock flour from each sample station were directed into consecutively numbered, 18 x 33 mm, 4 mil gauge plastic bags, held by a circular steel sampling ring below the line of sampling. Approximately 3 Kg. of rock chips were collected from each sampled vein and sites were marked for followup with labelled fluorescent flagging.
All samples were delivered to ACME Analytical Laboratories in Vancouver, B.C. for gold analysis by the following method. Soil, and silt samples were dried at 60°C and pulverized to -100 mesh. Rock chip samples were

crushed to 5 mm, then a 250 gm split was pulverized to -100 mesh. A 30 gm split from the -100 mesh portion of each silt and soil sample and 10 gm of each rock chip sample was ignited at 600°C, digested with hot aqua regia, extracted by MIBK and analysed for gold, at a detection limit of 1 ppb, by graphite furnace AA. A further 0.5 gm of the -100 mesh split for each rock chip sample was digested with 3 ml. of 3:1:2 HCl:HNO3:H2O at 95°C for 1 hour and diluted to 10 ml. with H2O then analyzed by Inductively Coupled Plasma (I.C.P.) technique for 30 elements (see Appendices 2,3). This leach is near total for base metals, partial for rock forming elements and very slight for refractory elements. The detection limits of the I.C.P technique using this leach is as follows:

ELEMENT	DETECTION LIMIT
Ag	0.1 ppm
Cd,Co,Cr,Cu,Mo,Mn,Ni,Sr,Zn,W	1.0 ppm
As,Au,B,Ba,Bi,La,Pb,Sb,Th,V	2.0 ppm
U	5.0 ppm
Al,Ca,Fe,K,Mg,Na,Ti	0.01 %
P	0.001 %

12. DISCUSSION OF RESULTS: The magnetic survey has identified a northwest trending zone of low magnetic readings trending from Line 0+00W, 0+00N to Line 3+00W, 2+00N. Readings range from a low of 1950 gammas at L3+00W, 2+25N, to a high of 2560 gammas, located in the northeast corner of the survey block. The magnetic contrast is considered rather high for sedimentary rocks and suggests the presence of volcanic facies rocks in the northeast of the grid. The magnetic low may represent a zone of faulting or a band of pelites with low magnetic susceptibility flanked by a greenstone unit with higher susceptibility. Given the presence of faults throughout the area it is not unreasonable to suspect a fault zone underlies the magnetic low.

Geological mapping, conducted mainly along road cuts, indicates the Flo-Gold and eastern portion of Al #1 claims are underlain by Hozameen Group rocks. The recessive weathering nature of Unit A1 phyllite, schist and slate and the relative paucity of outcrop between Al's and Scour Creeks, suggest that this broad area is dominantly underlain by friable rocks of Unit A1. Outcrop areas of Units A3, A2 and D and the position of the Coquihalla Serpentine Belt, all located northeast of the road on the Flow-Gold claim, were transferred to Figure #4 from a 1:5000 enlargement of B.C.D.M. O.F. 1986-1C (1:20000) and were not examined by the author in this study. Mapping of Unit D - quartz porphyry dykes in the vicinity of sample site 17-360 indicates the dykes stope and alter fault zones within and between the greenstone and chert facies of the Hozameen Group. Dykes of this type apparently do not occur on the northeast side of the Coquihalla Serpentine Belt.

Lithogeochemical sampling of 10 silicified zones has returned low gold values in the range of 5-27 ppb. Sample 18-13, collected from a silicified fault in Scour Creek, contains 27 ppb Au and 0.21% K (both 3 times background) indicating minor gold and potassium enrichment in this structure. Sample 17-360 from a quartz porphyry dyke and adjacent silicification is anomalously low in all elements, suggesting depletion

due to hydrothermal leaching of minerals. Samples 17-357 and 358, taken from quartz veins in black chert, are weakly anomalous (15 and 16 ppm Mo respectively) in molybdenum, suggesting a magmatic association. Sample 17-357 is weakly anomalous (33 ppm = 4 to 6 x background) in arsenic but has a low gold content. The elevated arsenic content is interesting, since it occurs in an area of quartz porphyry dyking subjacent to the Coquihalla Serpentine Belt. Arsenic is a pathfinder element for gold in the Coquihalla Belt and typically has a wider distribution than gold in the various gold occurrences in the Belt. Sample 17-358, taken from a shear zone, is anomalous in Fe (5.88%) - reflecting the fracture fill pyrite at the site, and in V (109 ppm), Mg (1.53%) and Al (2.27%) due to both the mafic composition of the greenstone host and chlorite-clay alteration in the fault. Samples 17-374 (quartz vein) and 17-376 (silicified shear zone), collected from an area of interbedded phyllites, schist and black cherts west of Al's Creek, are weakly anomalous in Cu, (Zn), Ni, Co, (Cr), V, Fe, Mg, Ca, Al. The Ni-Co-(Cr)-V-Fe-Mg and perhaps Cu association suggest that either the metasedimentary host rocks locally have a basic volcanic component, or that a basic volcanic band in the vicinity has been leached of these elements which were concentrated (as sulphides?) in the sampled silicified shears. Slivers of chlorite and talc schist within the local phyllites and slates, east subjacent to 17-364 may represent sheared greenstone bands in the pelitic section.

Geochemical sampling has identified 3 anomalous areas. In the vicinity of Gold Creek, soil samples 18-36(91 ppb), 18-37(56 ppb) and 18-48(30 ppb) have values 2-6 times background gold content. A sediment sample from Gold Creek, 18-49(53 ppb) is anomalous at 2 times background gold values. Together these samples define a gold anomalous zone suggesting that an upslope area dissected by Gold Creek is gold bearing. The upstream area of Gold Creek cuts the southeasterly projected trend of the gold-bearing quartz veins exposed in Hillsbar Adit.

A second anomalous zone is defined by several soil samples collected on the north side of Qualark Creek, east of Scour Creek, between sample sites 18-17 and 18-29. Several soil samples in this area range between 30 and 52 ppb gold, or 3-5 times background gold values. Upslope areas to the northeast of the gold anomalous zone are underlain by the Coquihalla Serpentine Belt and by chert/greenstone facies rocks, faulted and intruded by quartz porphyry dykes.

A third gold anomalous zone is suggested by a single point anomaly of 120 ppb gold at sample site 17-371, located on the north side of Qualark Creek, 300m west of the bridge in the eastern portion of Al #1 claim. The upslope area of this sample is underlain by a magnetic low which may indicate a northwest trending fault zone - a possible gold target.

13. CONCLUSIONS: The gold in soils and stream sediment anomalies located on and adjacent to Gold Creek probably have a source area upslope to the south. This area coicides with the projected trend of the gold-bearing quartz veins examined by the author in Hillsbar Adit in 1991. This anomaly is significant and has a high priority for followup.

The broad, gold anomalous area east of Scour Creek is interesting given the coincidence of upslope faulting and porphyry dyke intrusion adjacent to the Coquihalla Serpentine Belt - a locus for gold occurrences in the region. This zone has a secondary priority for followup, looking for gold in quartz veins within fault/alteration zones both in the chert and greenstone units.

The single point gold anomaly near the bridge may have a source in an upslope fault zone suggested by results of the magnetic survey. This area is assigned a lower priority for followup, due to the lack of other gold anomalous soil samples.

14. RECOMMENDATIONS: It is recommended that all gold anomalous sample sites be resampled to verify anomalous gold values. After reestablishing the known anomalies, the upslope areas of all three gold anomalous zones should be gridded at a line spacing of 50m and soil samples collected every 25m. These grids should also be intensively prospected and geologically mapped at a scale of 1:2,000. A 50 x 25 m grid should be established over Hillsbar Adit and to the southeast to aid in tracing this zone. The data collected in the followup survey will indicate closure of the anomalies and localize source areas.

15. REFERENCES:

Cairnes, C.E. 1923): Hillsbar Gold Claims, Yale District, B.C.; Geol. Surv. Can. Summary Report - 1923, Part A, p. 81A

Cochcrane, D.R. (1979): Brief Sampling and Magnetometer Test Program on Portions of the Rachel Claim; B.C. Min. Energy, Mines, Petrol. Res., Assessment Report #7643.

Daly, R.A. (1912): Geology of the North American Cordillera At the Forty-Ninth Parallel; Geol. Surv. Can. Mem. 38.

Hulme, N.J. (1984): Report of Geological and Geochemical Surveys on the Holly 1 & 2 Mineral Claims; B.C. Min. Energy, Mines, Petrol. Res., Assessment Report #13148.

Kallock, P. (1985): Geological and Geochemical Investigation on the Holly 1 & 2 Mineral Claims; B.C. Min. Energy, Mines, Petrol. Res. Assessment Report #13990.

Monger, J.W.H. (1970): Hope Map Area, West Half, British Columbia; Geol. Surv. Can., Paper 69-47, 75pp.

Monger, J.W.H. (1989): Geology of Hope & Ashcroft Map Areas, British Columbia, Geol. Surv. Can., Map 41-1989 Hope, B.C.

Nichols, H.S. (1924): Gold Group; Report of the Minister of Mines - B.C. - 1924, p. A163.

Nichols, H.S. (1926): Gold; Report of the Minister of Mines - B.C. - 1926, p. A198.

Nichols, H.S. (1927): Hillsbar; Report of the Minister of Mines - B.C. - 1927, pp. C209, 210.

Nicholson, H.D. (1990): Reconnaissance Geological and Soil Geochemical Survey of the Southern Portion of the Harvic Group; B.C. Min. Energy, Mines, Petrol. Res. Assessment Report.

Ray, G.E. (1982): Carolin Mine - Coquihalla Gold Belt, B.C.; Min. Energy, Mines and Petrol. Res., Geological Fieldwork 1981, Paper 1982-1, pp. 87-101.

Ray, G.E. (1983): Carolin Mine - Coquihalla Gold Belt Project, Min. Energy, Mines, Petrol. Res., Geological Fieldwork 1982, Paper 1983-1, pp. 63-84.

Ray, G.E. (1984): Coquihalla Gold Belt Project, B.C. Min. Energy, Mines, Petrol. Res., Geological Fieldwork, 1983, Paper 1984-1, pp. 54-66.

Ray, G.E. and Shearer, J.T. (1986): The Geology of the Carolin Mine Gold Deposit in Southwestern British Columbia and the Geochemistry of Its Replacement Sulphide-Albite-Quartz-Gold Mineralization, B.C. Min. Energy, Mines, Petrol. Res., Geological Fieldwork 1985, Paper 1986-1, pp. 99-100.

Sauer, B.R. (1982): Geochemical Soil Sampling on the Hillsbar Creek - Seka Claims, Min. Energy, Mines, Petrol. Res., Assessment Report #11198.

16. STATEMENT OF QUALIFICATIONS:

I, Michael D. Bradley of Mike Bradley & Associates with an office at 4750 Westlawn Drive, Burnaby, B.C., V5C 3R3, do hereby state as follows:

1. I am a graduate of the University of British Columbia, Vancouver, B.C., where I received a B.Sc. degree in Physics-Geology in 1973.

2. I received an M.Sc. degree in 1975 from Scripps Institute of Oceanography, La Jolla, California.

3. I have been continuously employed as an exploration geologist from 1976 to present; as an employee of B P Resources Canada and since 1989 as a full time consultant.

4. I am a voting member of the Association of Exploration Geochemists since 1989.

5. I am a member of the Canadian Institute of Mining and Metallurgy.

6. I am a member of the Cordilleran Section of the G.A.C.

7. I am a member of the B.C. and Yukon Chamber of Mines.

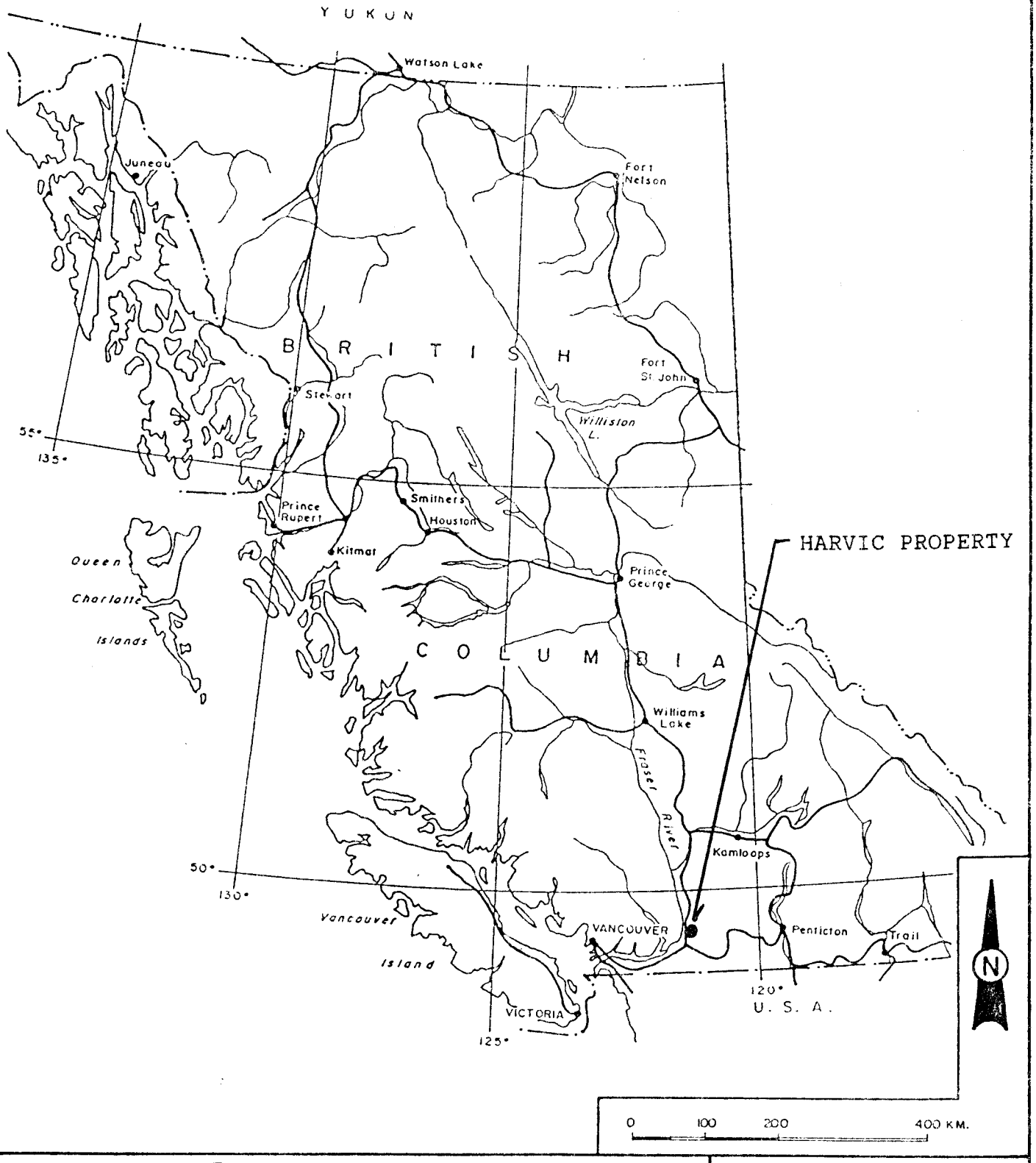
8. I am a past chairman of the Vancouver M.E.G. and currently am publisher of the M.E.G. Directory.

9. I have no interest, either directly or indirectly in the Harvic Group of mineral claims Corporation, nor do I expect to receive any.

10. I hereby grant my permission to Mr. Vic Walters to use this report, or any portion of it, for any legal purposes normal to his business, so long as excerpts used do not materially deviate from the intent of this report, as set out in the whole.

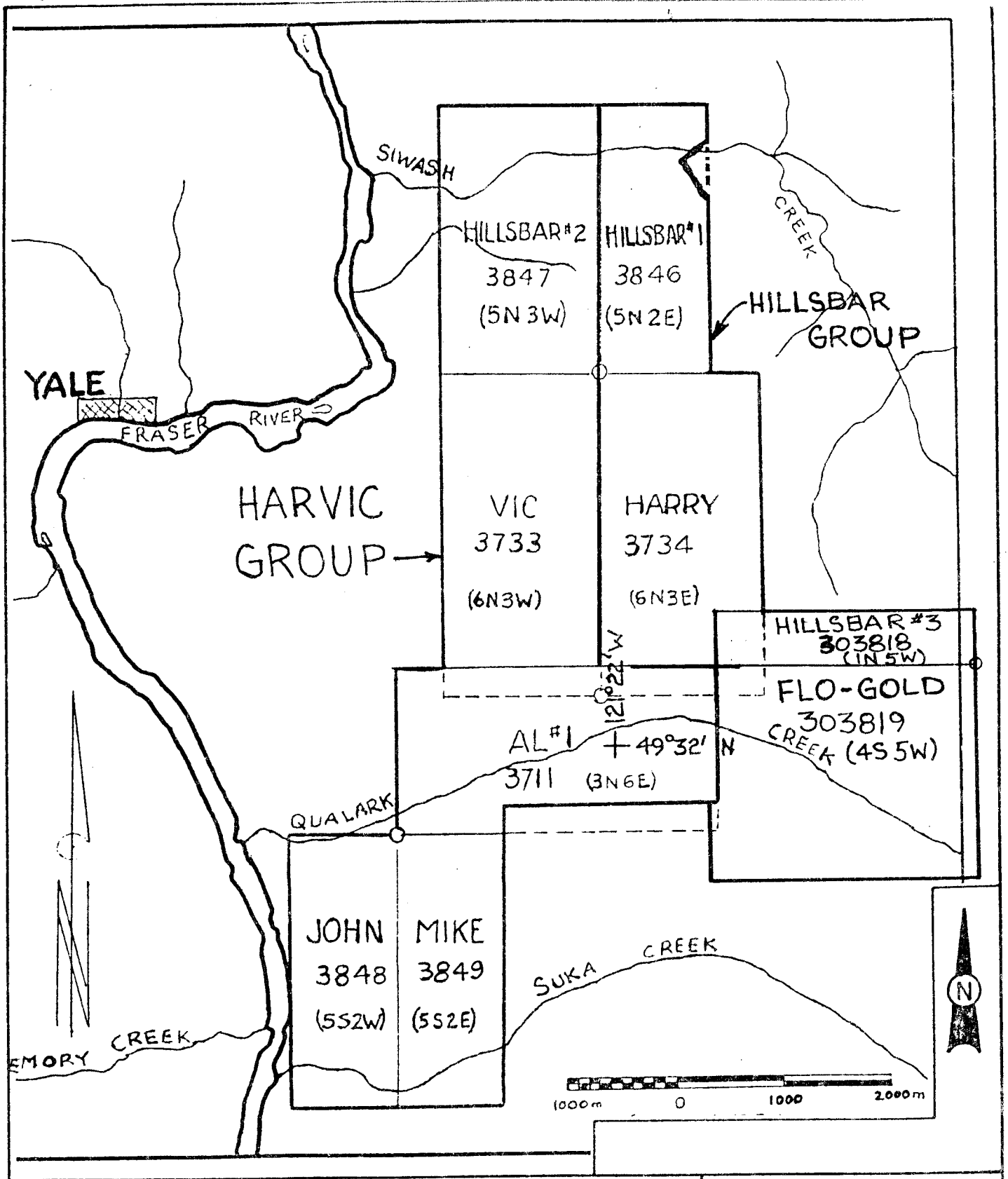
Michael Bradley

Dated At Burnaby, British Columbia, this 2nd day of November, 1992.



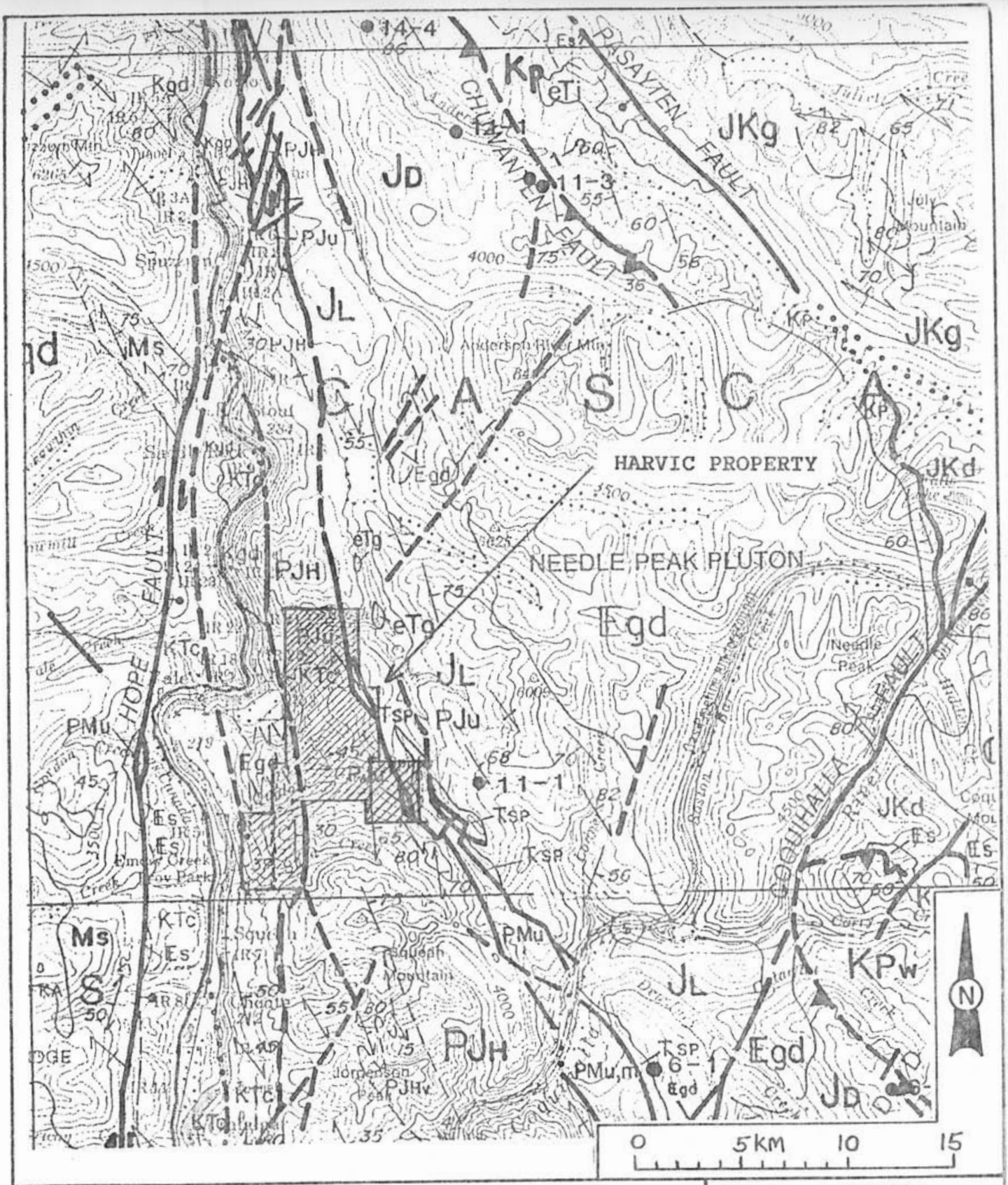
MIKE BRADLEY & ASSOCIATES	SCALE: 1:7,500,000
CLIENT: MR. V. WALTERS	N.T.S.: 92 H/11W
	DRAWN BY: M.D.B.
REGIONAL LOCATION MAP	PROJECT: 92-129
	DATE: NOV./92
HARVIC PROPERTY	FIGURE Nº. 1

CHONG



MIKE BRADLEY & ASSOCIATES	SCALE: 1:50000
CLIENT: MR. V. WALTERS	N.T.S.: 92 H/11W
	DRAWN BY: M.D.B.
CLAIM LOCATION MAP- HARVIC PROPERTY	PROJECT: 92-129
	DATE: NOV./92
	FIGURE Nº. 2

CHONG



MIKE BRADLEY & ASSOCIATES	SCALE: 1:250000
CLIENT: MR. V. WALTERS	N.T.S.: 92 H/11W
	DRAWN BY: M.D.B.
REGIONAL GEOLOGY MAP - HARVIC PROPERTY	PROJECT: 92-129
	DATE: NOV./92
	FIGURE No. 3A

CHONG

LEGEND FOR REGIONAL GEOLOGICAL MAP

Formal names capitalized

CENOZOIC

QUATERNARY
PLEISTOCENE AND RECENT

Thick drift; alluvium; glaciofluvial and lacustrine deposits, till, colluvium, landslides

TERTIARY
MIOCENE

Mgd — *Granodiorite (MOUNT BARR BATHOLITH)*

LATE OLIGOCENE TO EARLY MIOCENE

OMCv — *COQUIHALLA FORMATION: intermediate, felsic pyroclastics and flows*

OLIGOCENE

Qgd — *Granodiorite (CHILLIWACK BATHOLITH)*

EOCENE

Egd — *Granodiorite (NEEDLE PEAK, MOUNT OUTRAN PLUTONS)*

Es — *Sandstone, conglomerate, argillite (includes ALLENBY FORMATION of PRINCETON GROUP)*

EARLY TERTIARY

eTgd,i — *Intrusions of granodioritic (gd) and intermediate (i) composition*

CRETACEOUS AND/OR TERTIARY

KTc — *CUSTER GNEISS: pegmatitic granite gneiss; pelitic schist and amphibolite, minor marble and ultramafic rocks, probably derived mainly from lower Mesozoic and possibly Paleozoic and (?) Precambrian rocks, and metamorphosed in Late Cretaceous and early Tertiary time*

Ms — *Garnet-biotite, staurolite, kyanite and sillimanite schist (in part, SETTLER SCHIST), local amphibolite, minor ultramafic rock and siliceous schist; south of Fraser River includes greenschist-grade sandstone, pelite and broken formation; metamorphosed in Cretaceous*

MESOZOIC

CRETACEOUS

LATE EARLY, EARLY LATE CRETACEOUS
PASAYTEN GROUP

KPw,v — *(a) undifferentiated sandstone, conglomerate, argillite; (b) "Winthrop facies" (Pw) of PASAYTEN GROUP, arkose, conglomerate, argillite and minor red beds and tuff; (c): "Virginian Ridge facies" (Pv) of PASAYTEN GROUP, chert-grain sandstone, argillite): as mapped, Pasayten lies east of Chuwanten Fault, but is probably a non-marine facies equivalent of the upper part of the JACKASS MOUNTAIN GROUP*

EARLY AND MIDDLE CRETACEOUS
JACKASS MOUNTAIN GROUP

Kj — *Sandstone, argillite, conglomerate; lies west of Chuwanten Fault; marine and non-marine; upper part is probably a facies equivalent of PASAYTEN GROUP*

Kgd — *Quartz diorite (qd), diorite (d), granodiorite (gd), minor ultramafic rock (SPUZZUM PLUTON); local gneissic phases*

JURASSIC(?) AND CRETACEOUS
LATE JURASSIC AND EARLY CRETACEOUS

JKgd — *Granodiorite and gneiss (EAGLE PLUTONIC COMPLEX)*

JKd — *Diorite and amphibolite (EAGLE PLUTONIC COMPLEX)*

JKg — *Muscovite-biotite granite and pegmatite (EAGLE PLUTONIC COMPLEX)*

EARLY AND MIDDLE JURASSIC

JH — *HARRISON LAKE FORMATION: intermediate, locally felsic flows and pyroclastics; local argillite, conglomerate*

LADNER GROUP

JL — *Argillite, slate, siltstone, tuff; as mapped, includes minor amounts of Upper Jurassic sandstone and conglomerate, possibly correlative with "Thunder Lake sequence"*

JD — *DEWDNEY CREEK FORMATION of LADNER GROUP: sandstone, argillite; local mafic to intermediate volcanics*

MESOZOIC

TRIASSIC

TSP — *SPIDER PEAK FORMATION: mafic volcanics*

PMu — *Ultramafic rock, local gabbro*

PALEOZOIC AND/OR MESOZOIC

PERMIAN TO JURASSIC
HOZAMEEN COMPLEX (PJH-PJHv)

PJH — *Undifferentiated, chert, pelite, mafic volcanics, minor limestone, gabbro and ultramafic rock*

PJHv — *Mafic volcanics*

BRIDGE RIVER COMPLEX

PJBR — *Siliceous and chlorite schist, phyllite; correlative with HOZAMEEN COMPLEX but west of Fraser River*

PJu — *Ultramafic rock and local gabbro, associated with HOZAMEEN and BRIDGE RIVER COMPLEXES*

Area of outcrop

Geological boundary (defined, approximate, assumed)

Bedding, tops known (inclined, vertical)

Schistosity, gneissosity, cleavage foliation (inclined, vertical)

Lineation, axis of minor fold, mineral/clast elongation (horizontal, inclined)

Major fold axis (syncline, anticline, overturned fold, arrow indicates plunge)

Lineament (from airphoto)

Fault (defined and approximate; assumed and extension beneath drift)

Normal fault (bar indicated downthrown side)

Strike-slip fault (arrow indicates relative movement)

Thrust fault and "layer parallel" fault; teeth on upper plate

Geological mapping by J.W.H. Monger, Geological Survey of Canada (1984-86) in addition this compilation includes material from numerous sources (published reports by G.S.C. and B.C. Geological Survey, theses mainly at the University of British Columbia, and recent mapping by G.E. Ray, B.C. Geological Survey, in the Coquihalla and Hedley areas

Geological cartography by the Geological Survey of Canada

N

MIKE BRADLEY & ASSOCIATES

CLIENT: MR. V. WALTERS

LEGEND FOR REGIONAL GEOLOGY MAP

HARVIC PROPERTY

SCALE:

N.T.S.: 92 H/11W

DRAWN BY: M.D.B.

PROJECT: 92-129

DATE: NOV./92

FIGURE Nº. 3B

CHONG

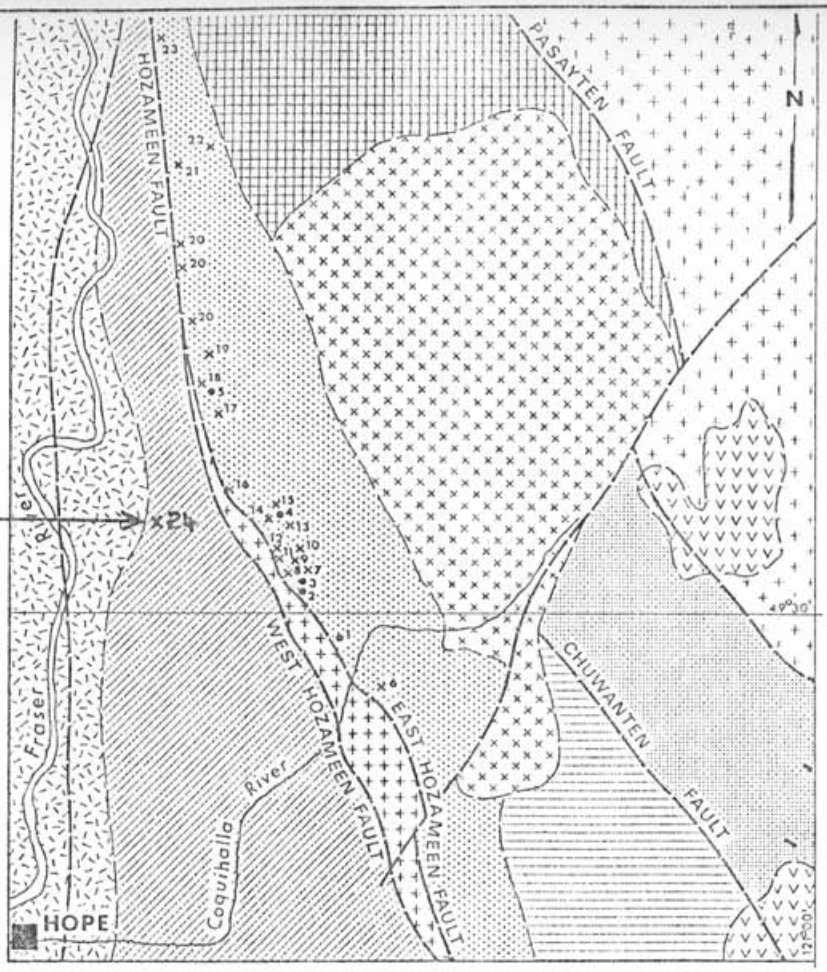
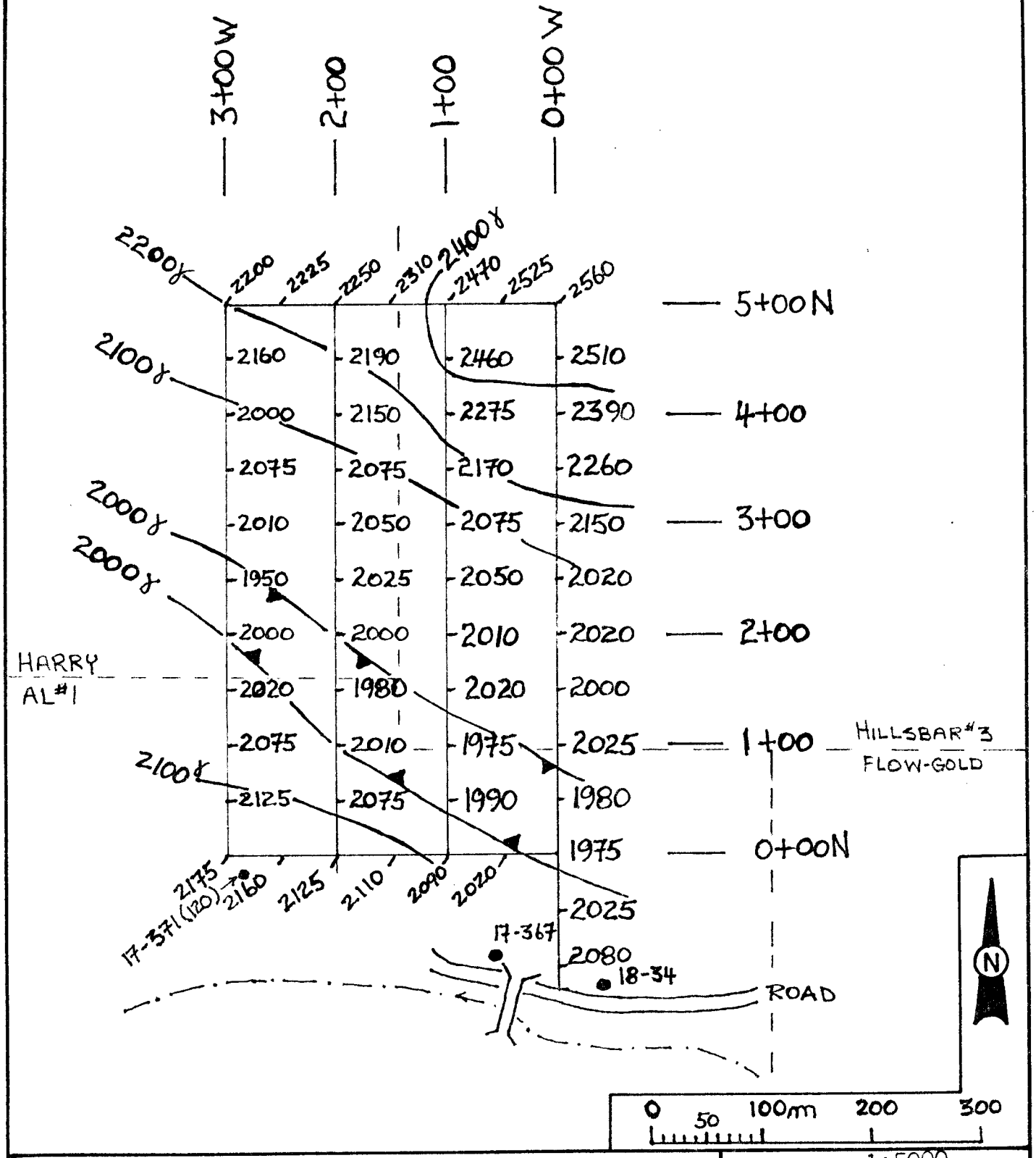


Figure 22. Regional setting of the Coquihalla gold belt showing location of gold deposits and occurrences. (Geology adapted after Monger, 1970).

MIKE BRADLEY & ASSOCIATES	SCALE: 1:300000
CLIENT: MR. V. WALTERS	N.T.S.: 92 H/11W
	DRAWN BY: G.E. Ray
GOLD OCCURRENCES IN THE - Coquihalla Gold Belt.	PROJECT 92-129
	DATE: NOV./92
	FIGURE Nº. 3C

CHONG



MIKE BRADLEY & ASSOCIATES	SCALE: 1:5000
CLIENT: MR. V. WALTERS	N.T.S.: 92H/11W
	DRAWN BY: M.D.B.
GROUND MAGNETIC SURVEY RESULTS HARVIC PROPERTY	PROJECT: 92-129
	DATE: Nov./92
	FIGURE Nº. 5

CHONG

APPENDICES

APPENDIX 1. STATEMENT OF COSTS

APPENDIX 2. ROCK CHIP SAMPLE DESCRIPTIONS & ANALYTICAL RESULTS

APPENDIX 3. GEOCHEMICAL SAMPLES - ANALYTICAL RESULTS.

APPENDIX 1

STATEMENT OF COSTS

STATEMENT OF COSTS

1.	CONSULTING: Fieldwork		
	M. Bradley: Sept. 7-9, 1992: 3d x $375/d = $1125.00		
	B. Lennan : Sept. 7-8, 1992: 2d x $300/d = 600.00		
	Subtotal	$1725.00	$1725.00
2.	HELICOPTER: Valley Helicopters, Hope - B.C. (Bell 206)		
	0.8 Hours		605.00
3.	ANALYTICAL: Acme Analytical Laboratories		
	74 samples for Au analysis by FA/ICP (30 gm)		
	10 rock chip samples for 30 element I.C.P.		626.00
4.	FOOD:		
	$20/Man day x 4 man days =		80.00
5.	SUPPLIES: (batteries, flagging, kraft & plastic bags, etc.)		55.00
6.	CAMP CHARGE: (M.Bradley kitchen & tent, etc. supplies)		
	$54/d x 2 days =		108.00
7.	TRUCK RENTAL: (B.Lennan 3/4 ton 4 x 4 truck)		
	Rental: $54/d x 2d = $108.00		
	Gas: = 35.00		
	Subtotal $143.00		143.00
8.	MAGNETOMETER RENTAL: (M.Bradley)		
	Scintrex MF-2 Fluxgate magnetometer: $43/d x 2d =		86.00
5.	REPORT PREPARATION: Mike Bradley & Associates		
	M. Bradley: 3 days @ $375/d =	$1125.00	
	Typing: 6 hours @ $20/hr.=	120.00	
	Drafting: 9 hours @ $20/hr.=	180.00	
	Reproduction, maps, copies: =	60.00	
	Subtotal	$1485.00	1485.00
	GRAND TOTAL OF ASSESSMENT WORK COSTS		$4913.00

Apportionment of total costs to the **Al#1 claim/Harvic Group:**
1.2 field man days x $4913 = **$1474.00**
4.0 field man days

Apportionment of total costs to the **Flow-Gold/ Hillsbar Group:**
$4913 - $1474.00 = **$3439.00**

APPENDIX 2

ROCK SAMPLE DESCRIPTIONS & ANALYTICAL RESULTS

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Mike Bradley & Associates PROJECT HARVIC #207 File # 92-3038 Page 4

4750 Westlawn Drive, Burnaby BC V5C 3R3 Submitted by: MIKE BRADLEY

SAMPLE#	Mo ppm	Cu ppm	Pb ppm	Zn ppm	Ag ppm	Ni ppm	Co ppm	Mn ppm	Fe %	As ppm	U ppm	Au ppm	Th ppm	Sr ppm	Cd ppm	Sb ppm	Bi ppm	V ppm	Ca %	P %	La ppm	Cr ppm	Mg %	Ba ppm	Ti %	B ppm	Al %	Na %	K %	W ppm	Au* ppb
18-13	1	37	3	32	.1	16	6	532	1.89	14	5	ND	2	3	.2	2	2	13	.04	.007	7	14	.41	37	.01	5	.79	.01	.21	1	27
17-356	3	17	4	20	.1	22	3	177	1.13	3	5	ND	1	2	.2	2	2	7	.06	.002	2	14	.32	9	.03	2	.49	.01	.07	1	9
17-357	15	46	12	55	.1	29	7	683	1.48	33	5	ND	1	4	.2	2	2	25	.09	.013	5	22	.35	14	.09	2	.64	.02	.09	2	8
17-358	1	61	7	79	.3	23	17	563	5.88	7	5	ND	1	11	.2	2	2	109	1.61	.081	3	25	1.53	3	.60	2	2.27	.05	.02	1	4
17-359	16	37	9	65	.3	16	4	318	2.73	17	5	ND	1	6	.2	2	2	31	.14	.055	9	21	.30	14	.01	5	.60	.01	.18	1	9
17-360	2	11	21	49	.1	9	2	307	.91	4	5	ND	6	2	.2	2	2	4	.03	.004	2	9	.04	6	.01	2	.36	.07	.08	2	7
RE 17-357	15	47	12	57	.1	32	7	747	1.55	35	5	ND	1	4	.2	2	2	26	.10	.014	5	23	.37	15	.09	2	.67	.03	.10	2	9
17-374	1	95	7	79	.2	62	21	544	4.12	10	5	ND	1	10	.3	2	2	53	.38	.063	3	71	.84	29	.17	2	1.48	.03	.12	1	14
17-376	3	84	13	120	.1	58	13	2605	4.01	2	5	ND	2	7	.5	2	2	46	.10	.025	15	21	.91	47	.03	2	1.40	.01	.05	1	4
17-378	4	40	4	26	.1	25	6	521	1.15	2	5	ND	1	2	.2	2	2	8	.02	.005	4	19	.13	52	.02	2	.33	.01	.09	2	5
17-379	6	48	7	52	.1	45	8	1120	2.47	4	5	ND	1	34	.3	2	2	18	.03	.011	9	19	.05	100	.01	2	.34	.01	.07	1	7
STANDARD C/AU-R	18	58	40	131	7.3	72	31	1037	3.96	41	23	7	40	52	18.7	14	21	57	.49	.087	39	61	.93	183	.08	34	1.98	.07	.14	10	520

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
ASSAY RECOMMENDED FOR ROCK AND CORE SAMPLES IF CU PB ZN AS > 1%, AG > 30 PPM & AU > 1000 PPB
- SAMPLE TYPE: P1 TO P2 SOIL P3 SILT P4 ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.
Samples beginning 'RE' are duplicate samples.

DATE RECEIVED: SEP 9 1992 **DATE REPORT MAILED:** Sept 15/92 **SIGNED BY** ..... D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

ROCK CHIP/CHANNEL SAMPLE DESCRIPTIONS

SAMPLE NO.	GOLD (PPB)	SAMPLE LENGTH	DESCRIPTION
18-13	27	Grab	Silicified & brecciated fault zone trending 171°/75-85° in Unit A2 cherts.
17-356	9	Grab	Vuggy, milky white qtz veinlets, 2-3 cm. wide trend 155°/5-10°NE in gray chert, chert breccia. Foliation 155°/50°NE; cross joints 075°/90°.
17-357	8	1m x 1m	Numerous 0.3-1.5 cm. wide, rusty, fractured, bull qtz veinlets in black chert. Foliation 165°/75°. Joints 094°/70-85°N. Veinlets 010°/15°W.
17-358	4	30 cm	Shear zone in greenstone adjacent to 1m wide basalt dyke (144°/90°) contain 2% disseminated fine-grained fracture-fill pyrite.
17-359	9	2.0 m	9.0m wide shear zone (170°/70°NE) in black chert is heavily FE + Mn oxide stained. 2m. SE on trend is a light gray-green qtz(feldspar) porphyry dyke + pyrite & pyrrhotite.
17-360	7	1.5 m	1.5 m. wide qtz (feldspar) porphyry dyke - rusty weathering, with 1-2mm diameter euhedral qtz. eyes & anhedral feldspar ghosts. Cuts A3 greenstone at chert contact.
17-374	14	10 cm	Folia-form, rusty, vuggy, qtz. vein + qtz boudins trends 155°/10°NW in pyllitic pelites.
17-376	4	30 cm	Fe+MN oxide-rich, silicified, friable shear zone (092°/60°N) in Unit A2 black cherts, cross-cuts 170°/65-80°W foliation.
17-378	5	20 cm	Rusty, vuggy, fractured ribbon qtz vein (130°/60°E) cross-cuts foliation (130°/90°) in pelite.
17-379	7	1.2 m	Rusty, vuggy, 1.2 m wide qtz vein(?) trends 130°/70°SW parallel to foliation in chloritic phyllite in hanging wall of 30 cm wide shear fault trending 010°/65°E.

APPENDIX 3

GEOCHEMICAL SAMPLES - ANALYTICAL RESULTS

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

Mike Bradley & Associates PROJECT HARVIC #207 File # 92-3038 Page 1

4750 Westlawn Drive, Burnaby BC V5C 3R3 Submitted by: MIKE BRADLEY

SAMPLE#	AU* ppb
18-1	21
18-3	21
18-4	14
18-5	24
18-7	8
18-8	9
18-9	11
18-10	9
18-11	13
18-12	11
18-14	14
18-15	26
18-16	13
18-17	30
18-18	25
18-19	25
18-20	26
18-21	23
18-22	44
18-23	25
18-24	15
18-25	24
18-26	38
18-27	18
18-28	52
18-29	45
18-30	22
18-31	27
18-32	12
18-33	9
18-34	7
18-35	8
RE 18-32	14
18-36	91
18-37	56
18-38	10
18-39	12
STANDARD AU-S	48

- SAMPLE TYPE: P1 TO P2 SOIL P3 SILT P4 ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 30 GM SAMPLE.

Samples beginning 'RE' are duplicate samples.

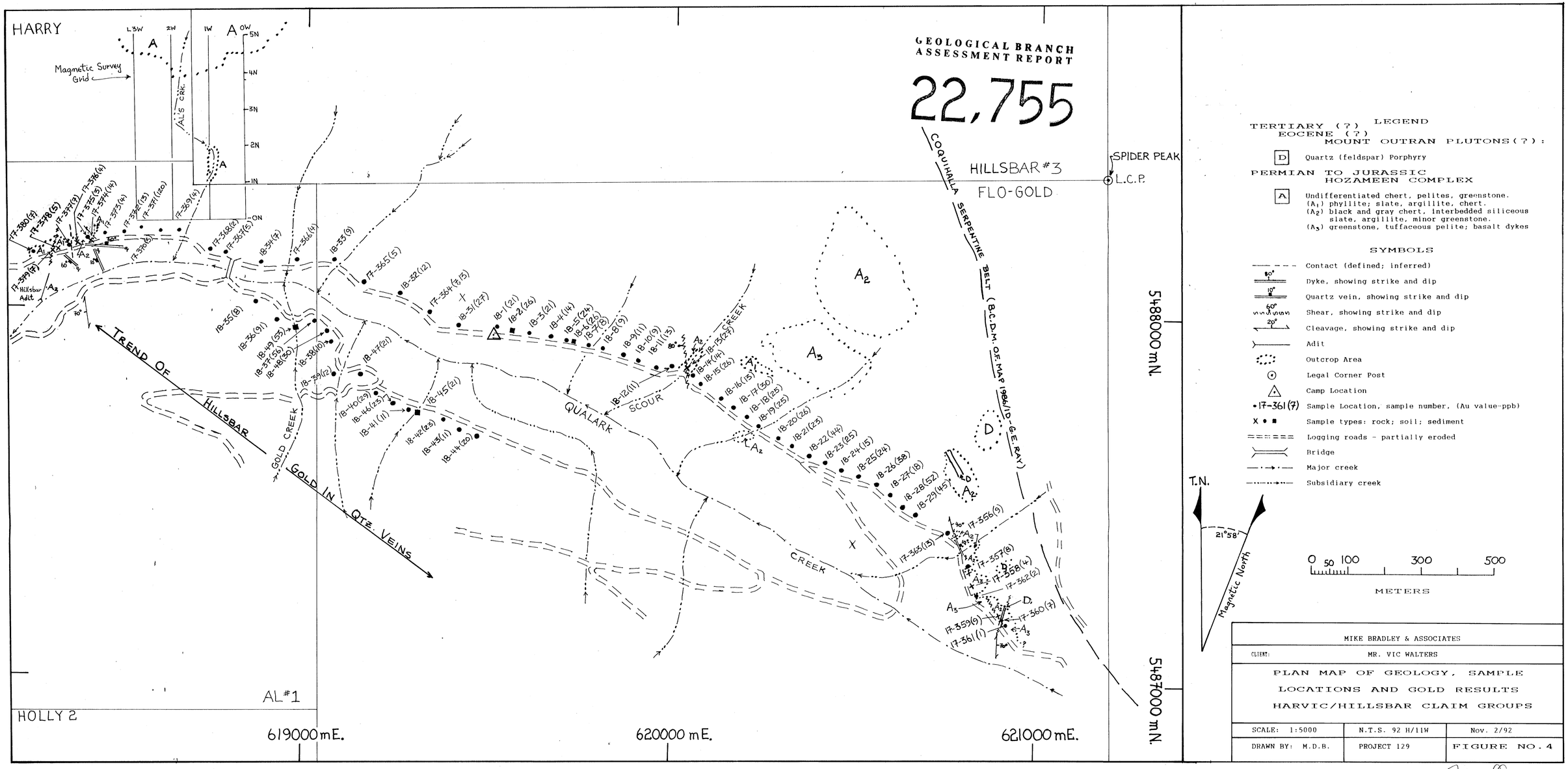
DATE RECEIVED: SEP 9 1992 **DATE REPORT MAILED:** Sept 15/92 **SIGNED BY** C. Leong .D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

SAMPLE#	AU* ppb
18-40	29
18-41	11
18-42	23
18-43	11
18-44	20
18-46	23
18-47	21
RE 17-364	13
18-48	30
17-361	1
17-362	2
17-363	13
17-364	7
17-365	5
17-366	4
17-367	5
17-368	2
17-369	4
17-370	3
17-371	120
17-372	13
17-373	4
17-375	3
17-377	7
17-380	7
STANDARD AU-S	53

Sample type: SOIL. Samples beginning 'RE' are duplicate samples.

SAMPLE#	AU* ppb
18-2	26
18-6	26
18-45	21
18-49	53
RE 18-49	51

Sample type: SILT. Samples beginning 'RE' are duplicate samples.



TERTIARY (?) LEGEND
EOCENE (?)
MOUNT OUTRAN PLUTONS (?):

D — Quartz (feldspar) Porphyry

PERMIAN TO JURASSIC
HOZAMEEN COMPLEX

A — Undifferentiated chert, pelites, greenstone.
(A_1) phyllite; slate, argillite, chert.
(A_2) black and gray chert, interbedded siliceous slate, argillite, minor greenstone.
(A_3) greenstone, tuffaceous pelite; basalt dykes

SYMBOLS

- Contact (defined; inferred)
- Dyke, showing strike and dip
- Quartz vein, showing strike and dip
- Shear, showing strike and dip
- Cleavage, showing strike and dip
- Adit
- Outcrop Area
- Legal Corner Post
- Camp Location
- •17-361(7) Sample Location, sample number, (Au value-ppb)
- X • ■ Sample types: rock; soil; sediment
- Logging roads - partially eroded
- Bridge
- Major creek
- Subsidiary creek

MIKE BRADLEY & ASSOCIATES		
CLIENT: MR. VIC WALTERS		
PLAN MAP OF GEOLOGY, SAMPLE LOCATIONS AND GOLD RESULTS HARVIC/HILLSBAR CLAIM GROUPS		
SCALE: 1:5000	N.T.S. 92 H/11W	Nov. 2/92
DRAWN BY: M.D.B.	PROJECT 129	FIGURE NO. 4