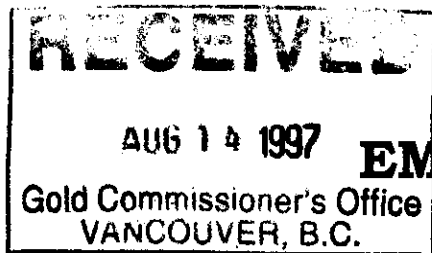


**GEOLOGICAL AND TRENCHING REPORT  
AND EXPLORATION PROPOSAL**



**ON THE**

**EMANCIPATION MINE**

**Longitude 121° 15' W and Latitude 49° 30' N  
NTS 92H/6W and 92H/11W**

**New Westminster Mining Division**

**Coquihalla Gold Belt**

**for**

**Shearer-Angus Joint Venture  
3037-138th Street  
White Rock, B.C.  
V4P 2B7**

**Phone (604) 535-2164, Fax (604) 535-6353**

**by**

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**June 1, 1997**

**Fieldwork completed between May 4 and May 19, 1997**

**GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT**  
**25,113**

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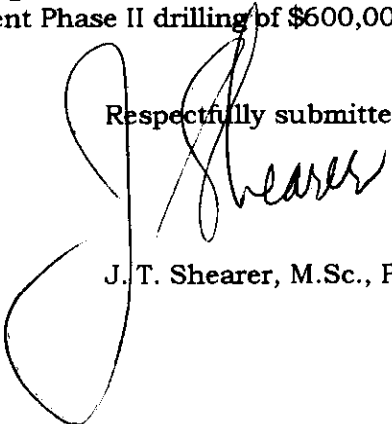
## SUMMARY

- 1) The Emancipation Mine is located approximately 15 km northeast of the town of Hope in the Coquihalla area of south-central British Columbia immediately north of the Coquihalla (#5) Highway.
- 2) This gold mine was operated sporadically from 1913 to 1941 by extracting ore from high-grade shoots which were present along a narrow quartz vein called the Dyke Vein which occurs in the hanging-wall of a much larger lower-grade or barren vein, often referred to as the Boulder Vein.
- 3) Recorded gold production was 2,847 troy ounces, making it the second largest producer in the Coquihalla Gold Belt after the Ladner Creek Mine (Carolin), but much higher in grade. Two known small ore shoots were mined.
- 4) After a long dormant period since 1941, Longbar Minerals Ltd., a precursor of Aquarius Resources Ltd., acquired the property by staking in 1971. Starting in 1976, soil geochemical, geophysical and geological surveys were carried out followed by diamond-drilling on surface and underground in 1981.
- 5) A limited diamond drill program was completed in 1991 by Homegold Resources Ltd. as a follow-up of high-grade gold intersections above 4 Level. A branch road was constructed to the 4 Level Portal and the workings rehabilitated.
- 6) The Emancipation property extends north to be immediately adjacent along strike from the Idaho Gold Deposit which has been the focus of a successful 3 million dollar exploration program between October 1995 and November 1996.

Geological mapping in the northern part of the claims suggests that structural and stratigraphic conditions may be favourable to host Idaho-style disseminated albite-quartz hosted gold mineralization at depth. Reserves at the Idaho and McMaster Deposits are currently: Idaho & McMaster combined Underground: 1,860,000 tonnes averaging 442 g/tonne gold; Open Pit at McMaster: 186,000 tonnes averaging 1.88 g/tonne gold. The McMaster zone is open to the north along strike and downdip to the east.

- 7) A study of all available data indicates that a new program of exploration, including trenching and diamond-drilling, is warranted which, if successful, may be followed by a program of development and mining. The cost for the recommended program is Phase I \$400,000.00, with a contingent Phase II drilling of \$600,000.00.

Respectfully submitted,



J. T. Shearer, M.Sc., P.Geo.

## INTRODUCTION

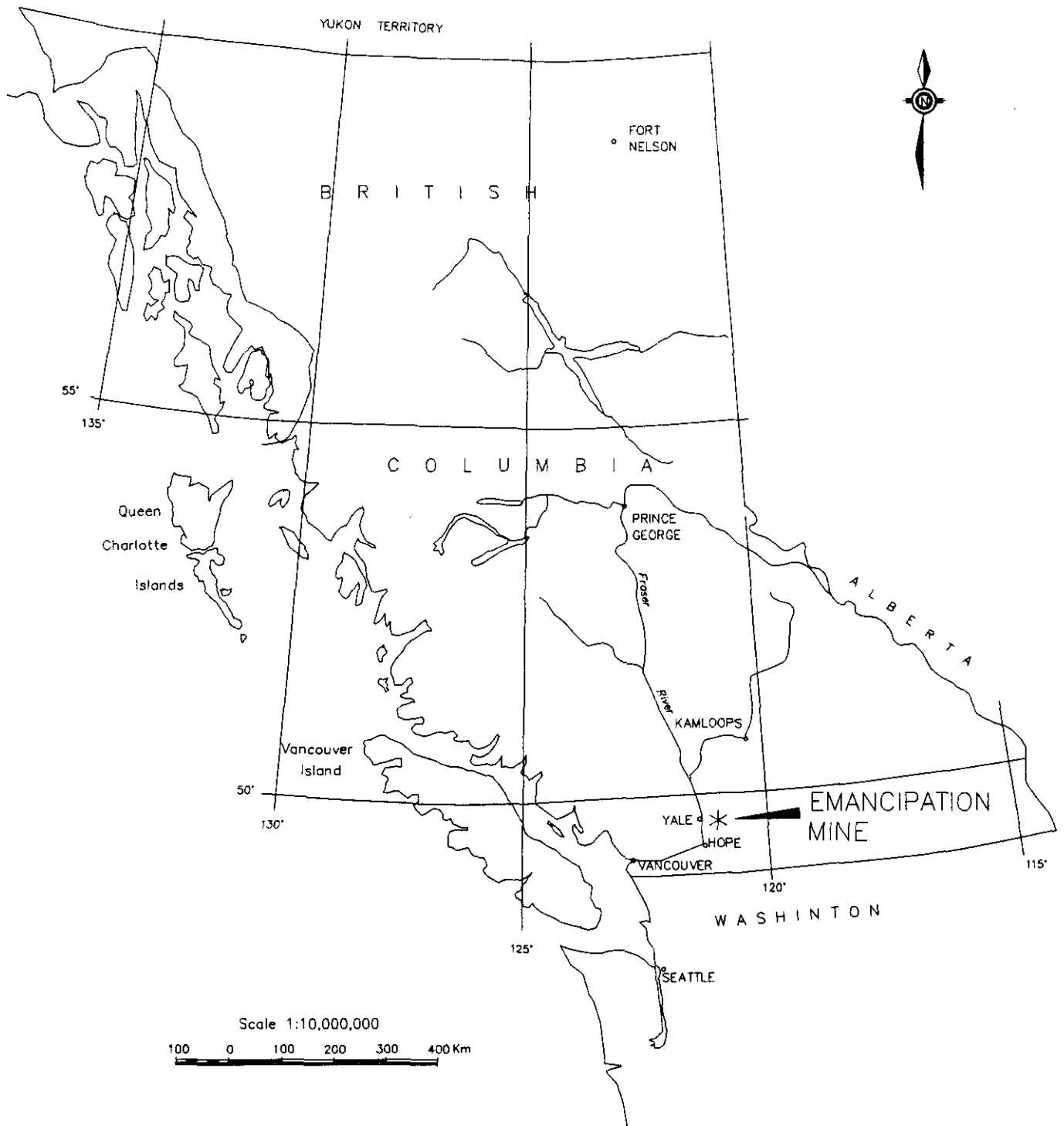
The area covering the Emancipation Mine was restaked when the claims came open during mid-1993 and at the present time the outline of the property held is as shown in Figure 3. The writer was retained by the Shearer-Angus Joint Venture to review the past work on the property with the objective of deciding what future work should be carried out. The recent program of geological mapping focused on the gold potential of the northern part of the claims as the southern continuation of the Idaho Gold Deposit.

The writer wishes to acknowledge the past work and reports which are listed in the bibliography in particular the work by D. Cardinal for Aquarius Resources Ltd. This current report is based on personal examinations and the professional reports of both the private and governmental sectors.

The Emancipation Mine operated intermittently between 1913 and the early 1941 and has a small recorded production (2,897 ounces) of gold from narrow, structurally controlled quartz veins carrying relatively high-grade gold values. A review of the work in the Emancipation Mine area indicates that structural controls are important in controlling the presence of ore shoots. Certain combination of rock types, in particular talcose-altered andesite against serpentinite appear to localize the highest grade gold zones.

During the underground drill program in 1981, intersections of higher grade mineralization (0.6 oz./ton Au over 5 feet, Hole EU-15-81) were found. Also, anomalous gold values were encountered in drilling above to the north and below to the south adjacent to the small decline off 3 Level. This suggests that some tonnage still exists in the upper workings before the vein starts to feather out. The old-timers stopped stoping were the distinct vein came to an end.

Of more interest to the Shearer-Angus Joint Venture in 1997 is a series of high-grade intersections (up to 0.590 over 1.4m, 0.98 oz./ ton over 4.5 feet found in a vertical down hole from 2 Level {EU-22-81} which are 6 to 12 metres above 4 level. A road was constructed down to the 4 Level portal and the workings opened. Blasted material which flowed into 4 Level from the raise to 3 Level has been mucked out. The high-grade intersection in the drill hole is 30 metres north of the raise. Three diamond drill holes were completed in 1991 with encouraging results. In conjunction with these small, high-grade gold targets around the historic underground workings, recent 1997 geological mapping in the northern portion of the claims suggest the potential for Idaho style bulk tonnage disseminated gold in the Lower Ladner Group coarse turbiditic metasediments is very favourable. These disseminated gold targets could be investigated by relatively short diamond drillholes from the top level road near the Ladner Creek Tailings dam.



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EMANCIPATION MINE PROJECT

LOCATION MAP

SCALE as shown	DATE June '93	N.T.S. 92H/6W&11W	Figure: 1
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## **LOCATION and ACCESS**

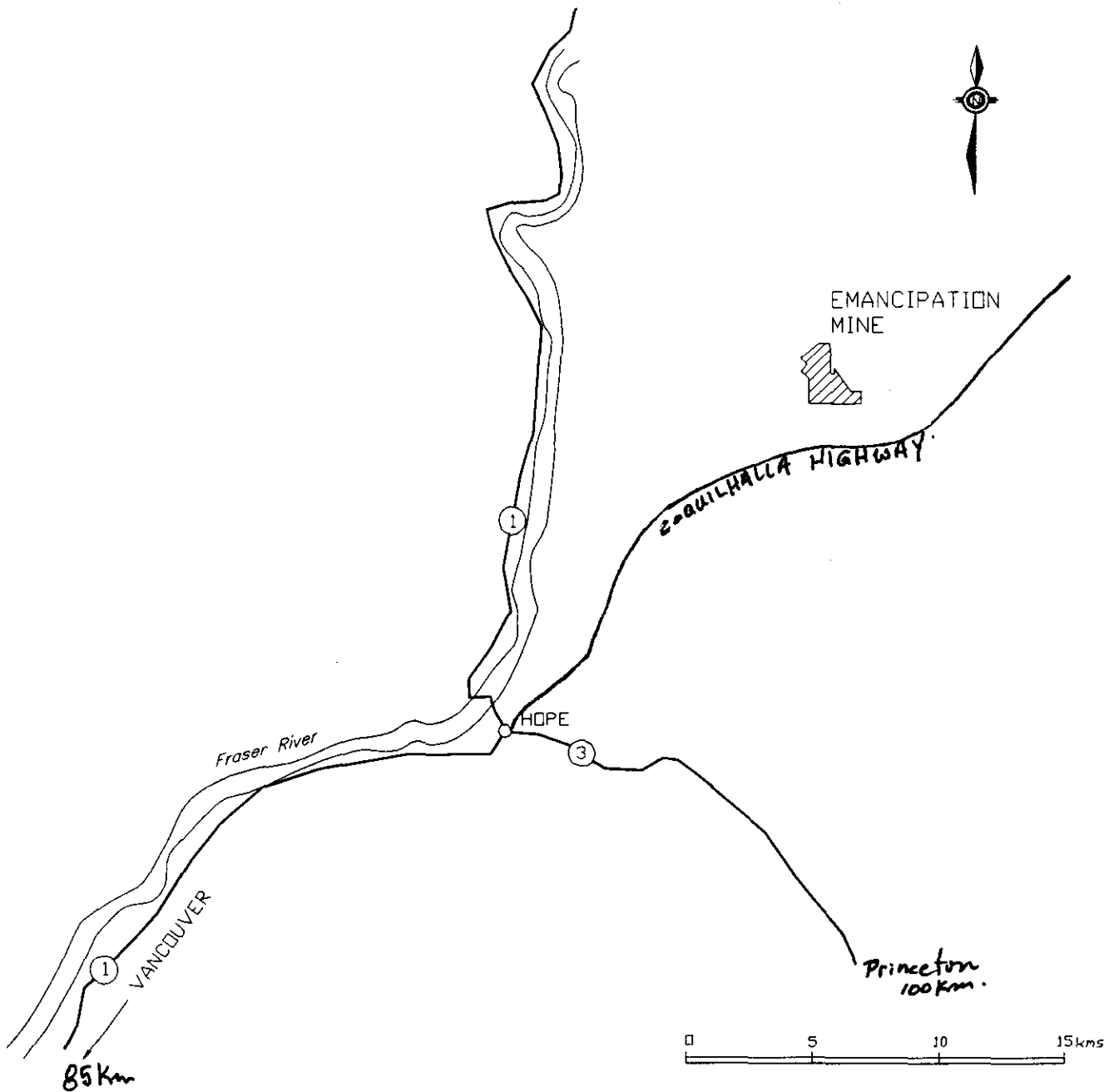
The Emancipation Mine and surrounding claims are situated 15 km northeast of the town of Hope (155 km east of Vancouver), Figure 1. The property is in the New Westminster Mining Division of Latitude 40° 30'N and Longitude 121° 15'W on the NTS Map Sheets 92H/6W and 92H/11W.

Access to the claims is from Hope by the Coquihalla Highway (Highway #5) for 24 km to the Carolin Mine road exit/interchange. Approximately 2.7 km eastward on the Carolin Mine road is the turn-off on the left to the Emancipation Mine road. The mine is 1.6 km in a westward direction from the mine power line, Figure 2. The portals are located approximately 340m above the Coquihalla River valley floor on the south-facing slope of an unnamed mountain locally referred to as Emancipation Mountain.

The upper and northern part of the Emancipation Claims is via the Tailings Pond road near the Ladner Creek Minesite and Mill. There is a metal gate at approximately 3.7 km along the mine road. The junction of the Mine road and the Tailings Pond road is at 5.8 km. The north end of the Emancipation Claims start 1.7 km along the Tailings Pond road. Old logging roads provide access to within 1.2 km above the Emancipation Portals.

The area is characterized by first and second growth fir and cedar forest. Overburden is generally thin with plentiful rock outcrops on the steep slopes. The minesite is drained by a small tributary of Tangent Creek. This creek sometimes dries out completely in the summer months. The minesite often receives accumulations of 1½ to 2½ metres of snow in the winter. However, experience at the Ladner Creek Mine since the early 1970's suggests that exploration can easily be carried out during winter months albeit at some extra cost.

A metal gate has been put in place just above the junction with the Ladner Creek Mine road about 1.5 km east of the Emancipation portals.



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ACCESS MAP

SCALE  
1:250,000

DATE  
June '93

N.T.S.  
92H/6W&11W

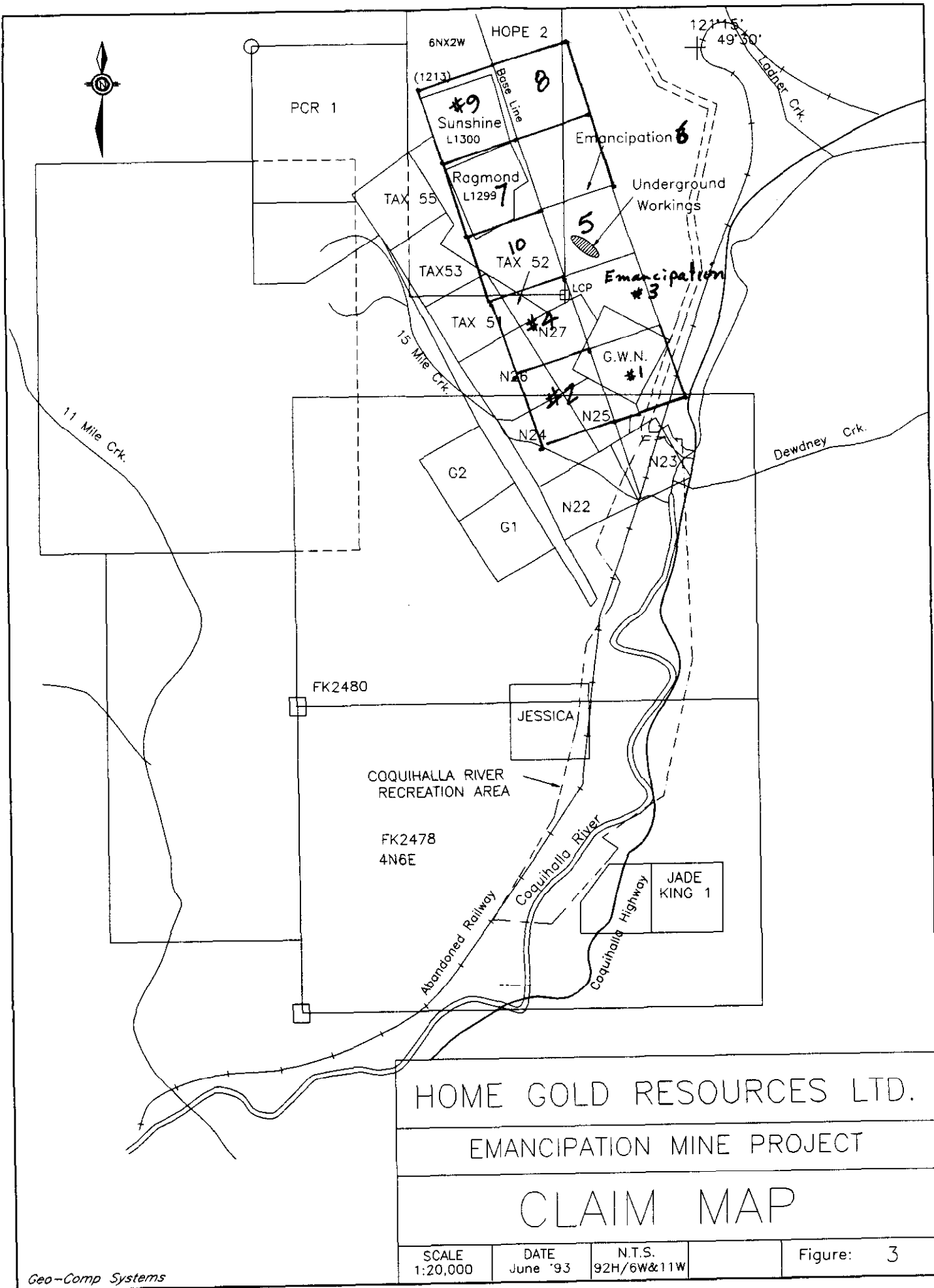
Figure: 2



## CLAIM STATUS

There are two claim blocks comprising the Emancipation Mine property. The 1991 - 1993 exploration program on 4 Level adit was applied mainly off the Hope 2 Claim. The Hope 2 claim is recorded as to 90.1% ownership by Anglo Swiss Mining Corp. and Rupertsland Resources Co. Ltd. 9.9%. (Ownership consolidation is presently being negotiated but assessment credit may be in error in that 20 years of assessment credit was put on in 1981 during the relocation process.) The Hope 2 Claim covers the area between the workings west along strike to the old Raymond Claim, Figure 3, now covered by Emancipation 10, a distance of about 500m. The newly located Emancipation 1 to 10 claims cover the workings and east to the Gypsy Queen Adit. The claim status details are listed as follows:

<b>Claim Name</b>	<b>No. of Units</b>	<b>Tenure No.</b>	<b>Current Owner</b>	<b>Location Date</b>	<b>Current Expiry Date</b>
Hope 2	12	235441	90% Anglo Swiss 9.9% Rupertsland	June 9, 1981	June 9, 2001
Emancipation 1	1	318067	A. E. Angus	June 10, 1993	June 10, 1999 *
Emancipation 2	1	318068	J. T. Shearer	June 10, 1993	June 10, 1999 *
Emancipation 3	1	318069	A. E. Angus	June 10, 1993	June 10, 1999 *
Emancipation 4	1	318070	J. T. Shearer	June 10, 1993	June 10, 1999 *
Emancipation 5	1	318071	J. T. Shearer	June 10, 1993	June 10, 1999 *
Emancipation 6	1	319122	S. E. Angus	June 10, 1993	June 10, 1999 *
Emancipation 7	1	319123	S. E. Angus	July 12, 1993	July 12, 1999 *
Emancipation 8	1	319124	A. E. Angus	July 12, 1993	July 12, 1999 *
Emancipation 9	1	319125	A. E. Angus	July 12, 1993	July 12, 1999 *
Emancipation 10	1	319126	J. T. Shearer	July 12, 1993	July 12, 1999 *
Emancipation 11	1	346146	J. T. Shearer	May 23, 1996	May 23, 1999 *
Emancipation 12	1	346147	J. T. Shearer	May 23, 1996	May 23, 1999 *
Emancipation 13	1	346129	S. E. Angus	May 27, 1996	May 27, 1999*
Emancipation 14	1	346130	S. E. Angus	May 27, 1996	May 27, 1999*
Emancipation 15	1	346131	S. E. Angus	May 27, 1996	May 27, 1999*
Emancipation 16	1	346132	S. E. Angus	May 27, 1996	May 27, 1999*
Emancipation 17	1	346133	S. E. Angus	May 27, 1996	May 27, 1999*
Emancipation 18	1	346134	S. E. Angus	May 27, 1996	May 27, 1999*
Emancipation 19	1	346135	S. E. Angus	May 27, 1996	May 27, 1999*
Emancipation 20	1	346136	S. E. Angus	May 27, 1996	May 27, 1999*
Emancipation 30	1	352783	J. T. Shearer	Nov. 21, 1996	Nov. 21, 1999*
Total 21 Units					
* with application of assessment work documented in this report					



An exhaustive summary of the complex claim history is contained in Handfield 1991 and upon investigation, the Mineral Tenure division of the Ministry of Energy, Mines and Petroleum Resources has accepted this summary and the new claim maps have changed to reflect this sequence of events.

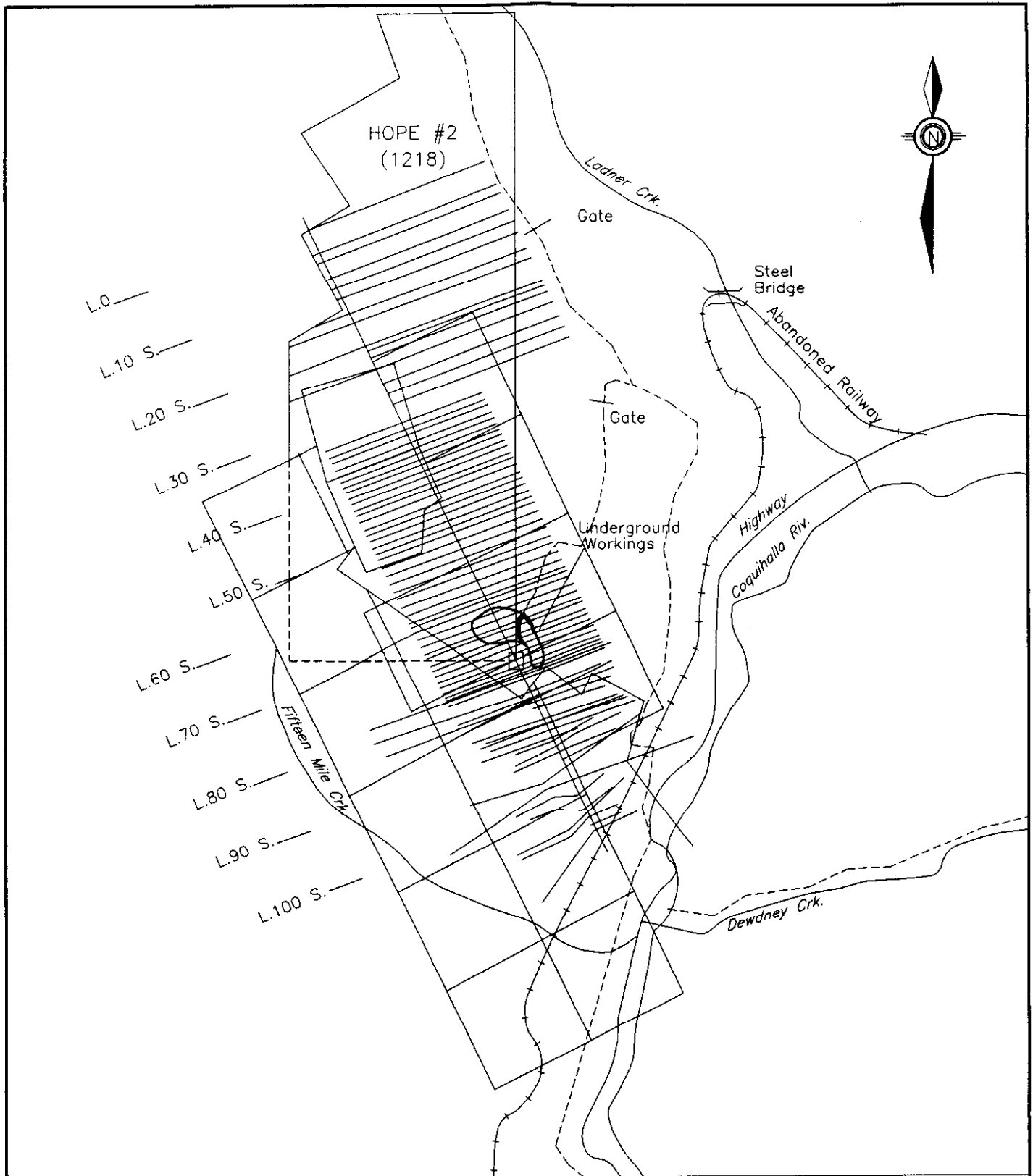
The area covered by the Hope 2 claim is not presently within the Emancipation claim package but the owner T. Wilmot has indicated his willingness to tie his claims to any possible option agreement. Subject to the results of the recommended work program and the determination of the assessment credit errors, the three southeast units of the Hope 2 claim may be needed in the future of work at the Emancipation Mine.

## HISTORY

In 1910, during the construction of the Kettle Valley railway (now abandoned) along the Coquihalla River valley, prospectors exploring the valley and its tributaries for gold found several gold prospects. Between 1913 and 1915, the Emancipation claims plus other adjoining claims were staked by Messrs. M. Merrick, Wm. Thompson and H. Beech to cover gold-bearing quartz veins. Since the discovery, the claims have experienced sporadic exploration and mining activity. During the early life of the Emancipation mine, from 1916 to 1919, some 95 tons of ore was extracted, and returned over \$35,000 (averaging 15 oz/ton). By 1921, considerable amounts of underground development work had been carried out and a five-stamp mill installed with a production capacity of 12 tons per day. The operator was the Liberator Mining Company of Vancouver, B.C. During this period, approximately 118 tons of ore was shipped to Tacoma, Washington, USA, again with a return of approximately \$35,000 and an additional 700 tons of sub-ore valued at \$15.00 per ton was stockpiled at the mill. Work at the mine was intermittent from 1922 through to 1933, during which time the property changed owners several times with Dawson Gold Mines Ltd. being the major operator. Limited work was done in 1937 by Kettle Valley Gold Mine Ltd. As documented by the B.C. Department of Mines, production figures between 1916 and 1941 from the Emancipation were 2,897 oz. gold and 605 oz. silver; total tons of ore mined is unknown. From consideration of the volumes of drift and stoped ground in the underground workings, material produced has been possibly about 10,000 tons. The substantial waste dump at the No. 2 Portal indicates that only a part of production was considered mill fee.

The 1933 Minister of Mines report provides some interesting but limited information regarding the lower tunnel (4 Level) which until 1991 was inaccessible due to sloughing of overburden at the portal. It is described as 210 feet below No. 2 Level. During 1933, the drift was driven 570 feet with cross-cuts at intervals to east and west with the face at that time nearly directly under the ore body in No. 2 winze. The face at that time (1933) of the drift showed a vein zone of about 11 feet wide with intercalated country rock and some calcite. The central part was well mineralized with sulfides. Chip sample over 8 feet assayed 0.40 oz./ton in gold and 0.10 oz./ton in silver. A picked sample from the face at that time assayed 2.12 oz./ton in gold. Observations in 1992 suggest that this mineralized area appears to pinch out a short distance to the north along the drift. At that time, ore was being produced from stoping on No. 2 Level and this material was being transported to the mill lower down by the aerial tram. The mill operated at 25 tons per day. Operations by Dawson Consolidated Ltd. continued at least to 1938 but no quantities or grades of production during the latter part of the operation are preserved.

In recent years (1971 and later) due to the increase in price of gold, the Emancipation Mine and adjoining claims experienced renewed exploration. In 1971, Aquarius Resources Ltd. acquired the existing claims and mineral leases (Sunshine and Raymond) and with additional staking, the claims were collectively called the Hope Group. In 1972, A. R. Bullis surveyed, mapped and sampled the underground workings in the Emancipation mine and Dr. G. C. Stephens of Alrae Engineering in 1973 conducted general surface geological mapping on the entire Hope Group. From 1976-79, under the direction of Cochrane Consultants Ltd., an extensive surface exploration program on the claims was carried out which included detailed geochemical soil surveys and ground geophysical work. In 1980, an all-weather road was constructed to the Emancipation Mine and further underground mapping and sampling was performed by in-house Aquarius staff under the direction of D. Cardinal. The following season (1981), an aggressive surface and underground diamond-drilling



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GRID LOCATION



Geo-Comp Systems

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program was conducted. Results from the drilling program were encouraging and demonstrated the need for continued underground exploratory drilling. However, no further work was conducted until the underground diamond drilling by Homegold Resources Ltd. in 1991-1992 under option from Anglo Swiss Mining Corp.

The work conducted on the Emancipation Mine commenced by Homegold Resources Ltd. during the fall of 1991 with the reopening of the 1.6 km access roads constructed by Aquarius Resources Ltd. in 1980. The roads were overgrown with dense alder trees and brush. An excavator and D8 bulldozer were used to repair and ditch the roads and excavate sloughed material that had covered the 4 Level portal of the Emancipation Mine. A new access road was constructed ramping down from the 3 Level portal to the newly reopened 4 Level portal. The portal was re-timbered, washed out and the 4 Level drift was scaled. Upon completion of the scaling, the drift floor was mucked out, the major obstacle being material from the raise up to 3 Level that had flowed into 4 Level. The narrow gauge (18 inch) track was repaired. A small ore car was set on the tracks and was used to carry the cave material out of the drift. Once the drift was cleaned up, drill stations were established by slashing out openings along the cross-cut and drift walls.

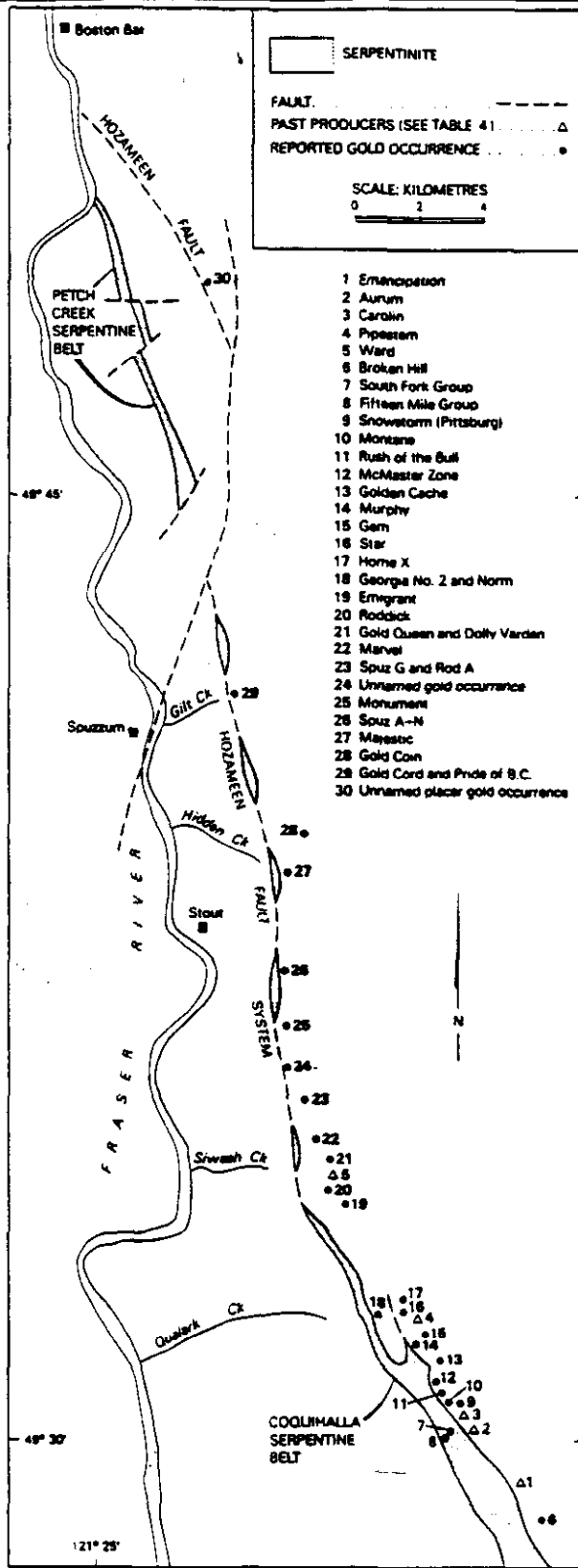
The drill program was designed to explore a possible replacement zone that had been intersected by Aquarius Resources Ltd. in the down-dip extension of the "Boulder" vein. Underground diamond drilling in 1980 and 1981 indicated that sulfide and silica replacement increased with depth and along strike below the 3 Level on the Boulder and subsidiary veins.

The underground workings were surveyed by transit and EDM (S. Nickel and Associates Surveying Ltd.) and accurate plans and sections prepared. A total of 3 holes were drilled in 1991-1992 for 267 feet of core. The mineralized intervals were split and assayed at Chemex Labs Ltd. In 1994, the area around the portals was prospected and the 1991-92 underground core was logged.

Nearby on the Idaho Claim north of Ladner Creek, 6 km north of Emancipation, Carolin Mines Ltd. commenced a wide ranging exploration program in 1974 which culminated in large scale production between December 1981 to September 1984 of about 45,000 ounces of gold. Carolin spent about 40 million dollars installing a 1500 ton per day flotation/cyanide mill-mine complex. The Carolin operation failed due to the mill not recovering the gold (<50% recovery) and severe mismanagement. Recently, Athabaska Resources Ltd. has acquired the Ladner Creek Mine-Mill in early 1995 and initiated an aggressive 3 million dollar exploration program in 1995-1996 supervised by J.T. Shearer which resulted in the discovery of new gold zones and definition of gold reserves at McMaster giving the following new ore reserve calculations (Shearer et.al., May 1997):

- Idaho & McMaster Underground: 1,860,000 tonnes averaging 442 g/tonne gold
- Open Pit at McMaster: 186,000 tonnes averaging 1.88 g/tonne gold.

The database at Ladner Creek Property now consists of over 50,000 metres of diamond drill core and 10 km of underground workings.



- 1 Emancipation
- 2 Aurum
- 3 Carolin
- 4 Pipestem
- 5 Ward
- 6 Broken Hill
- 7 South Fork Group
- 8 Fifteen Mile Group
- 9 Snowstorm (Pittsburg)
- 10 Montana
- 11 Rush of the Bull
- 12 McMaster Zone
- 13 Golden Cache
- 14 Murphy
- 15 Gem
- 16 Star
- 17 Home X
- 18 George No. 2 and Norm
- 19 Emigrant
- 20 Roddick
- 21 Gold Queen and Dolly Varden
- 22 Marvel
- 23 Spuz G and Rod A
- 24 Unnamed gold occurrence
- 25 Monument
- 26 Spuz A-N
- 27 Maystec
- 28 Gold Coin
- 29 Gold Cord and Pride of B.C.
- 30 Unnamed placer gold occurrence

Location of the past-producing mines and minor occurrences comprising the Coquihalla gold belt.

After Ray, 1990

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Figure: 5

## GENERAL GEOLOGY

The Coquihalla Gold Belt has been extensively studied on a regional scale, notably by C. E. Cairnes (1924 and 1930) and G. E. Ray (1981-1989). C. E. Cairnes has mentioned the similarity in geology between the Motherlode district of California and the Coquihalla Gold Belt (Cairnes, 1924).

Over 30 gold occurrences are known to occur in the Coquihalla Gold Belt in the area of Hope-Boston Bar-Coquihalla River area (see figure 4 & 5). The gold occurrences are clustered close to the eastern margin of the Coquihalla serpentine belt, which is sharply delineated by the East Hozameen fault.

Gold often occurs in quartz veins within rocks adjacent to the eastern edge of the Coquihalla serpentine belt. Both the West Hozameen fault and the East Hozameen fault dip to the northeast and separate Jurassic to Cretaceous turbiditic basinal deposits of the Pasayten Trough to the northeast from Permian to Jurassic oceanic supracrustal rocks of the Hozameen Group which occur to the southwest.

The Pasayten Trough, which lies east and northeast of the serpentine belt is made up of a sedimentary succession having a thickness of 9,000 metres. Unconformably underlying the trough and forming a basement to it is a volcanic greenstone sequence of possible Triassic age which has been named the Spider Peak Formation (Ray, 1986A). This formation has been traced, somewhat discontinuously, for over 15 km along the eastern edge of the East Hozameen fault where it often forms a thin strip separating the Serpentine Belt from the Ladner Group of sediments in the Pasayten trough. Locally, the Spider Peak Formation provided the host rock for the previously mined gold at the Emancipation Mine.

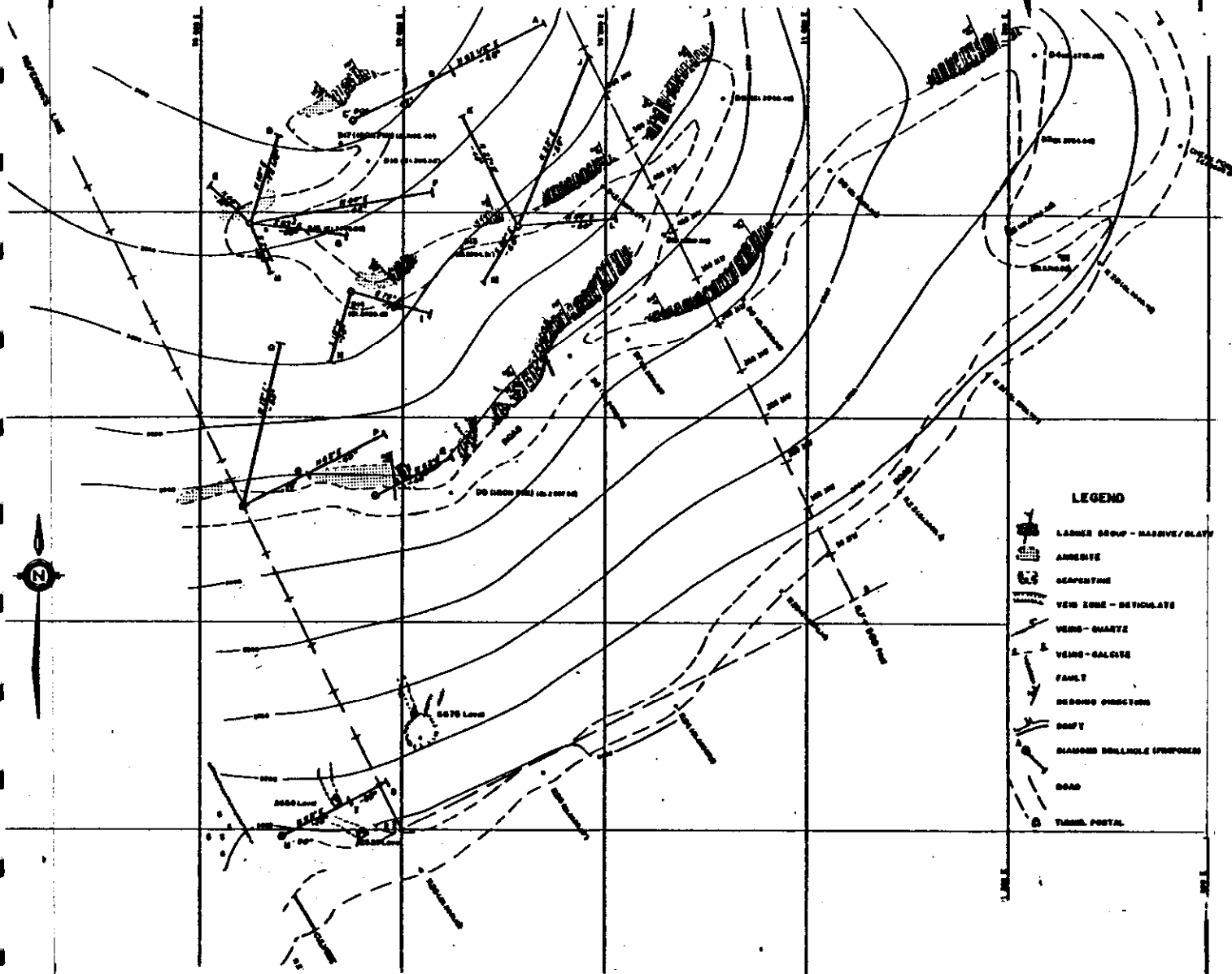
The Ladner Group of early Jurassic age is made up of the oldest sedimentary rocks in the Pasayten trough. These rocks include slaty argillites and siltstones with lesser amount of wacke, lithic wacke and conglomerate. The Ladner Group commonly has an unconformable steeply western-dipping contact with the Spider Peak Formation. Often sections of the Ladner Group have been overturned and intervals of Spider Peak Formation occur to the east of the conglomeratic wacke units.

Sediments of the Ladner Group have provided the host rocks for most of the largest known gold deposits in the Coquihalla Gold Belt. This includes the gold produced and the reserves outlined at the Ladner Creek property (Idaho Gold Deposit), which has been the largest producer to date in the district.













The sedimentary rocks of the Pasayten trough, including the Ladner Group, have been invaded by numerous small intrusive bodies varying from gabbro and diorite to syenite but their relationship to gold deposition, if any, has not been established. However, many of the northern gold showings (north of the forks of Siwash Creek) are hosted by small felsic dykes.


The Aurum mine, which was later absorbed into the Ladner Creek property, ranks as a distant third (16.5 km of gold) in production from the Coquihalla Gold Belt after Idaho and Emancipation. At Aurum, spectacular gold was found in talcose shears and talc schist within the East Hozameen fault which lies at the eastern edge of the Coquihalla Serpentine Belt. After the discovery in 1926, a flurry of activity occurred in the search for other talcose shears carrying gold throughout the district.



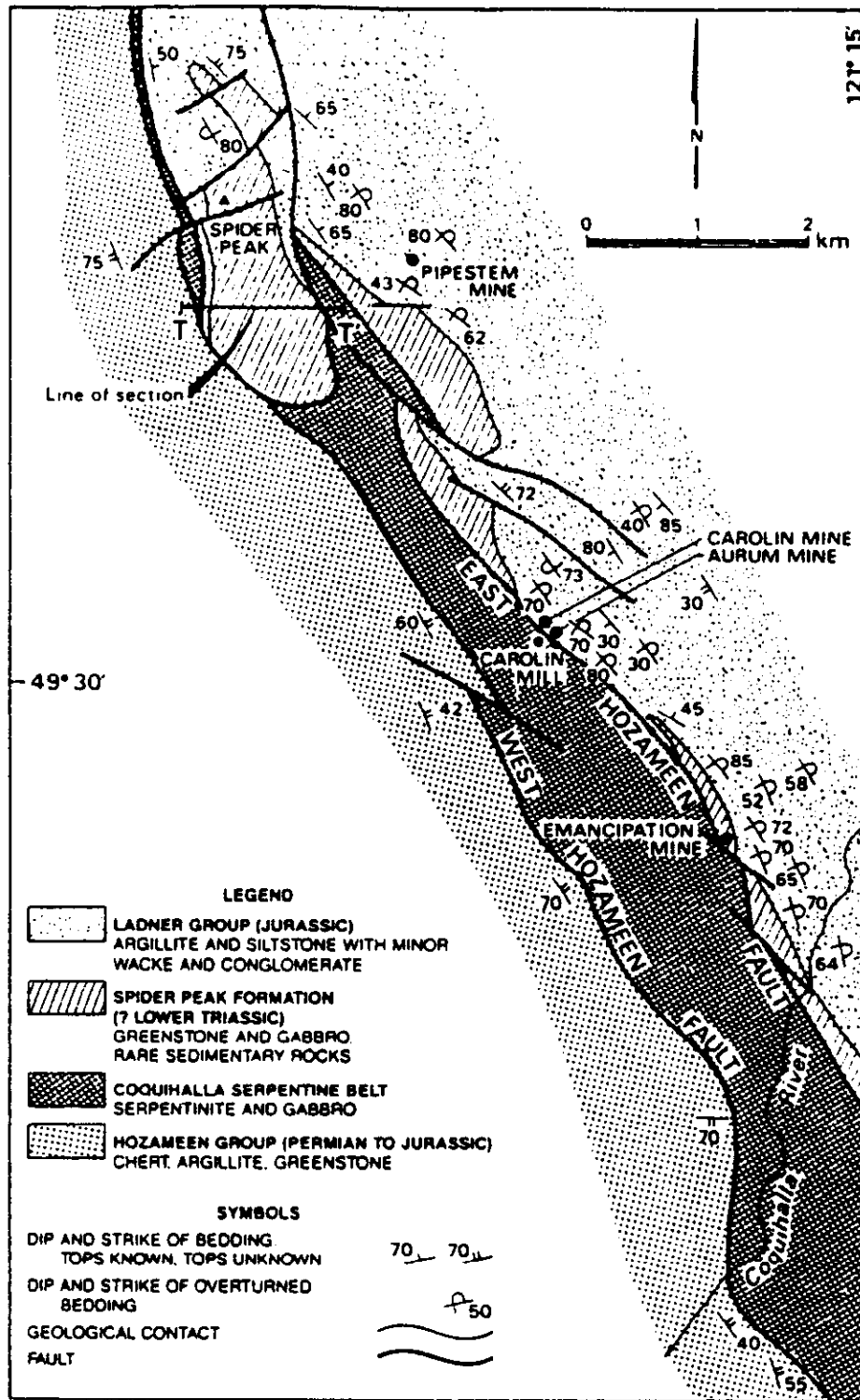


**LEGEND**

-  LADDER GROUP - MASSIVE/CLAY
-  AMPHIBOLITE
-  SERPENTINE
-  VEIN ZONE - DETONALITE
-  VEIN - QUARTZ
-  VEIN - CALCITE
-  FAULT
-  BEDDING ORIENTATION
-  DRAFT
-  DIAMOND DRILLHOLE (PROPOSED)
-  ROAD
-  TRAIL POSTAL

SCALE 1:500  
  
 0 100 200 meters.

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EMANCIPATION MINE PROJECT			
DETAIL GEOLOGY			
SCALE as shown	DATE June '93	N.T.S. 92H/6W&11W	WORK BY: JTS & SPB
			Figure: 7



Geology of area between Spider Peak and the Coquihalla River showing locations of the Emancipation, Aurum, Carolin and Pipestem mines.

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EMANCIPATION MINE PROJECT

REGIONAL GEOLOGY

SCALE  
as shown

DATE  
June '93

N.T.S.  
92H/6W&11W

WORK BY:  
JTS & SPB

Figure: 6

## **LOCAL GEOLOGY and MINERALIZATION**

The Emancipation Mine and surrounding claims are underlain by the important East Hozameen Fault Zone structure. In the vicinity of the mine, the steeply east-dipping fault separates a fault-bounded slice of Lower Triassic Spider Peak Formation altered andesites to the east from the serpentinites of the Coquihalla Serpentine Belt (Figure 6). Further to the east, near the 2 Level Adit, the Spider Peak altered andesite is in contact with Ladner Group (Jurassic) sediments along a high-angle reverse fault (Ray 1990). The Ladner Group rocks are overturned and dip westerly with the tops towards the east. The known gold-bearing veins and replacement alteration occur primarily within the altered Spider Peak Formation altered volcanics but may extend into the Ladner Group.

The Ladner Group in the vicinity of the Emancipation mine is mainly comprised of altered argillites and siltstones. The lower units of the Ladner Group are only represented by a 1 to 2 m-thick unit of lithic wacke and siltstones containing clasts of chert and volcanic rock. This unit is adjacent to the faulted Spider Peak altered andesite. In the Carolin Mine area 3 km to the northwest, the coarse clastic units of the Lower Ladner Group reach a thickness of 200 m (Ray, 1990) (Figure 8) and contain much of the gold mineralization. Mapping in the northern portion of the Emancipation claims and bulk gold potential is discussed later in this section.

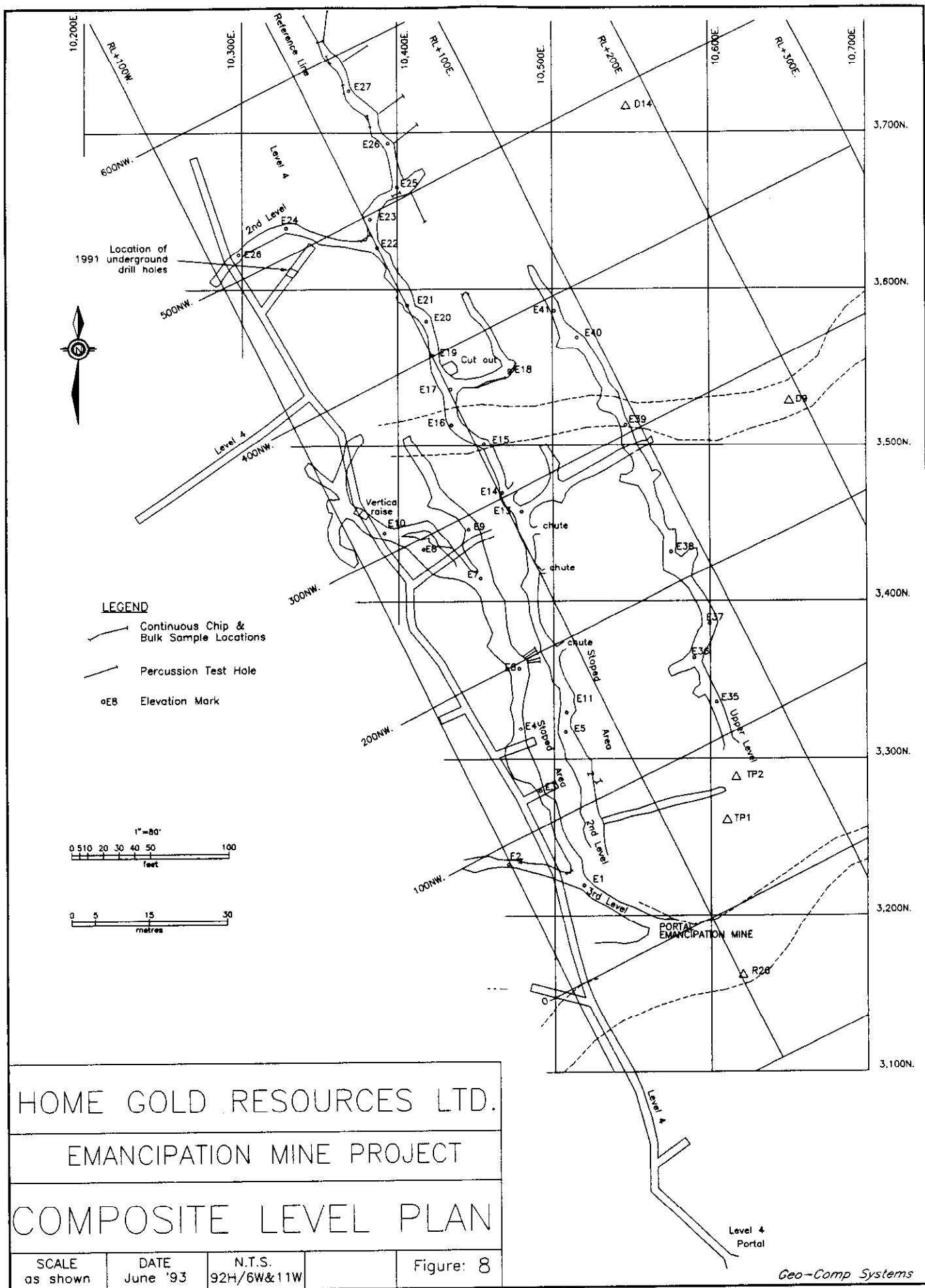
The following discussion is restricted to the historic underground workings which have been carried out on several levels by drifting on quartz veins. The levels are referenced according to the approximate floor level (elevation in feet) at the portal. They are briefly described as follows from the upper to the lower levels.

### **1 Level (Elevation 2,725)**

This drift has followed a major quartz vein which is from 2 feet to 10 feet in width for 340 feet in a 334° direction. The portal is on the immediate hanging wall, or southwest wall of the vein, which is inclined to the west at from 55 degrees to 65 degrees. Some narrow veins occur above the large vein for the first 50 feet, but drift swings to the right and follows the larger vein for the rest of its length. The hanging wall or west wall of the vein is andesite and the footwall is bedded argillite with bedding parallel to the vein in strike, but with a steeper dip, beds being truncated by the vein. The andesite is slightly schistose at its contact with the vein. No assays are available, but apparently previous operators did not get much encouragement as no stoping was attempted, although a raise was connected through from below to handle production from the drive.

### **2 Level (Elevation 2,650)**

This level had the most development, and it may be the earliest tunnel driven. A description of the exposure before tunneling began in 1914, which is contained in the 1915 Minister of Mines Report, resembles this level. The present portal is now accessible with difficulty across a steep rock face on the surface. A quartz vein which was exposed about 50 feet from the large vein has been followed for about 560 feet by the drift. Several crosscuts into the hanging wall and footwall rocks were driven. The large vein was explored by crosscuts and limited drifting for about 320 feet, being 6 feet to 10 feet in width with a dip of 65 degrees to the west. Some stoping was carried out on the hanging wall vein above the level for the first 80 feet of the drift. Stopping from below has broken into the floor for about 100 feet from a point 30 feet inside the portal. The drift is conveniently entered through this opening (which has been timbered) from



SCALE as shown	DATE June '93	N.T.S. 92H/6W&11W	Figure: 8
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the drift below. A major vein about 1 foot in width branches from the vein being followed, with an easterly dip and several minor veinlets occur in the footwall side of the drift. A short winze, now partly covered and inaccessible, has been driven down on the reverse dipping vein which is at 68 degree slope, but it is not accessible for mapping. A crosscut into the footwall nearby intersected the reverse dipping vein and the large vein, but it can not be entered without clearing away backfilled muck. Six raises were started, to follow the vein upward from the drift, but while the vein persisted to the faces, widths were narrow and no stoping was done from the raises. The hanging wall of the main drift is andesite at the start, but from 180 feet to 420 feet, it is serpentine. At that point the transverse fault brings in andesite which is proven by a crosscut extending for at least 120 feet to the west. The vein of the main drift gradually approaches the large vein and shows some increased width and gold values at Section 500 NW. Gold values occur throughout the first 250 feet of the drift. The rock between the drift and the large vein is fractured andesite and the large vein marks the contact with the argillites which lie at a steeper slope than the vein.

### **3 Level (Elevation 2,620)**

This drift started near the outcrop of the large vein, and was driven toward the hanging wall vein through fractured andesite. It was continued for 130 feet until it encountered the vein which had flattened in dip and was picked up the vein in about 100 feet after meeting several reverse dipping and flat dipping veinlets which must have been mineralized as a section of about 100 feet of the roof, was stoped from Section 100 NW to 200 NW. The drift followed the vein to 360 feet NW with scattered good gold assays in the vein and in the fractured andesite footwall. The hanging wall is serpentine. No crosscuts test the large vein at this level.

### **Decline (Elevation 2,597)**

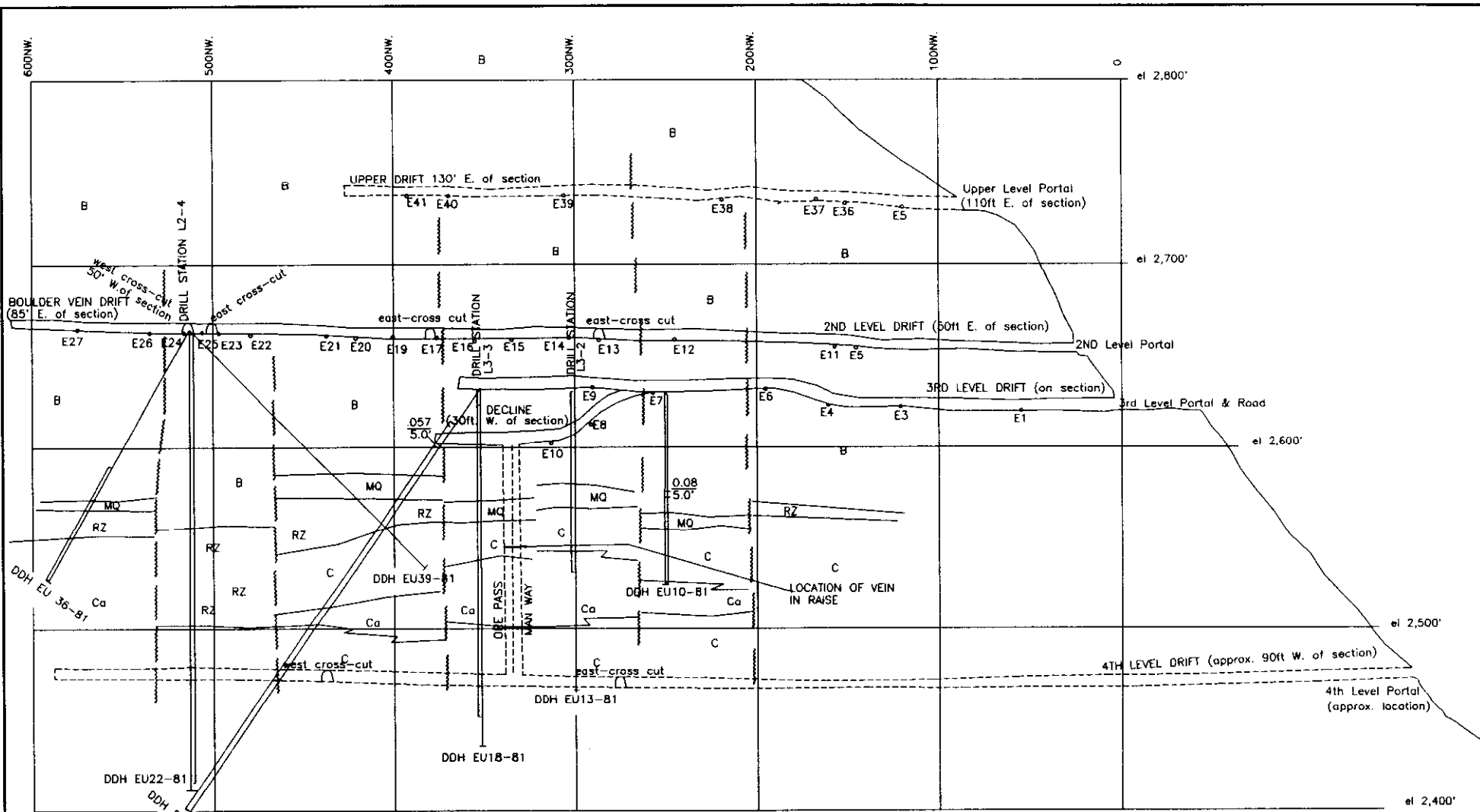
At cross section 250 NW in Level 2,620 drift, an incline was driven at a downward slope of about 20 degrees to follow down the intersection of the main reverse vein with the hanging wall vein. A short drift followed back along the reverse vein, and this section was stoped out. The main hanging wall vein flattens and thins out. It is enclosed on both sides with serpentine. A vertical raise from a lower drift occurs near the bottom of the incline. It is open, but timbering and ladders are rotten, and it cannot be entered.

### **4 Level (Elevation 2,440)**

This drift was opened in 1991. Descriptions of good gold grade at that elevation in an 11 foot vein in the Minister of Mines report of 1933 indicates follow-up work is required. A 1940's report indicates some good gold values about halfway up the raise to Level 2,597. The Hanging Wall is serpentine along the main drift. Cross cuts dip to 200 feet in length investigate the talc schist to the west and the volcanic sequence to the east.

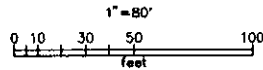
### **Roads Above Workings**

A steep road has been put in above the portals, figure 7. At several points a contact between the andesite of the hanging wall and the argillites was uncovered. There is from 2" to 4" of sheared schist suggesting a fault contact, but there is no quartz. The large vein is exposed some 70 feet to the east at elevation 2,890 where it is entirely enclosed in argillites. The vein dip has flattened to about 40 degrees. Some gold is reported in footwall branches. A vein outcrop at about elevation 2,950 which is reported to carry visible gold, but which has now been covered by the road



**LEGEND**

- B Altered Volcanics (Greenstone) Minor Sulphide Replacement
- C Slate and Argillite
- Ca Volcanic Wacke, Siltstone
- MQ Massive Quartz - "Boulder Vein System" Slate-quartz Breccia; Minor Sulphide Replacement
- RZ "Replacement Zone" - Highly Silicified and Disseminated Sulphide Replacement, Minor Quartz - Slate Breccia, and altered tuffaceous sediments (?)
- E3 Elevation mark
- | sampled section of drill hole



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EMANCIPATION MINE PROJECT

LONGITUDINAL SECTION

R.L+50W.

SCALE as shown	DATE June '93	N.T.S. 92H/6W&11W	Figure: 9
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construction, lies about 280 feet east of the andesite contact fault. The vein termination is possibly a fault displacement. The offset of a band of thinly-bedded argillite suggests that the vein will be picked up in its displaced position above the road. The road provides access for a drill program to locate the vein and test rocks adjacent to it.

Two (2) bulk samples obtained by Aquarius from a brecciated slate/quartz zone on section EM/675/625N ran values of 0.298 oz/ton and 0.104 oz/ton gold. Approximately 600 feet (183 m) north of the Emancipation Mine (EM Zone) a prominent geochemical Au anomaly, identified as the North EM Anomaly (North EM Zone) was outlined during the 1977 field season. At the North EM Zone soil samples collected from the "B" horizon at 50 feet (15.2 m) intervals outlined a geochemical anomaly (Figure ) with values up to 2,200 ppb gold which proved to be a good comparison for previous (1977) geochemical work done at 100 feet (30 m) spacings.

Prospecting in 1994, encountered rock types from east to west starting with:

- a) Unaltered grey to black slate and slaty argillite of the Ladner Group with bedding oriented at 335°/75SW. Cleavage is generally parallel to bedding. Finely laminated, silicified slate and minor cherty quartz pebbles and green clasts of possible volcanic origin occur near the Spider Peak Formation contact.
- b) Replacement alteration of highly siliceous/sulfide-carbonate occur at the volcanic/slate contact. The sulfides make up 3% to 5% and include pyrite, pyrrhotite, arsenopyrite and chalcopyrite.
- c) Less altered fine-grained sheared andesite/basalt with elongated sheared clasts is found between the volcanics and Ladner Slate. This is characteristic of the contact zone along the belt.
- d) Faulted, fine-grained massive volcanics occur immediately to the east of the Hozameem Fault.
- e) Dark green, brittle serpentinite and talc shear mark the west contact of the Hozameem Fault.

A reappraisal of the stratigraphy of the Idaho Gold Mine as known from the Crusher Decline, 800 level portal and Aurum 4 Level area around 10,200N (mine grid co-ordinates) has been extrapolated to the south parallel with the East Hozameem Fault. Preliminary results have been plotted on Figure 8 and general geological cross sections spaced 300 metres apart have been prepared.

The block immediately south of the 10,200N section possibly has been down dropped in the order of 100 to 200 metres by a major structure in the Ladner Creek Valley. This gives the present surface as approximately 400-500 metres above the projected southward extension of 2 Zone surface exposure and 3 Zone surface is about 100m below 2 Zone. This down dropping is consistent with the general trend of south blocks of gently dipping east-west striking, north dipping faults (like the Richardson Fault) being moved down relative to the north block. The effect being that generally the stratigraphic position is higher as we travel north along the belt. The coarse clastic

turbidite sequence in association with conglomerate which is present in the Idaho Mine continues without interruption to the south of Ladner Creek. This package is inverted (stratigraphically upside down) as is the case in the Idaho Mine section. The 9,900N section appears to be similar in structure and stratigraphy as the 11,000N in the vicinity of Hole OG-37.

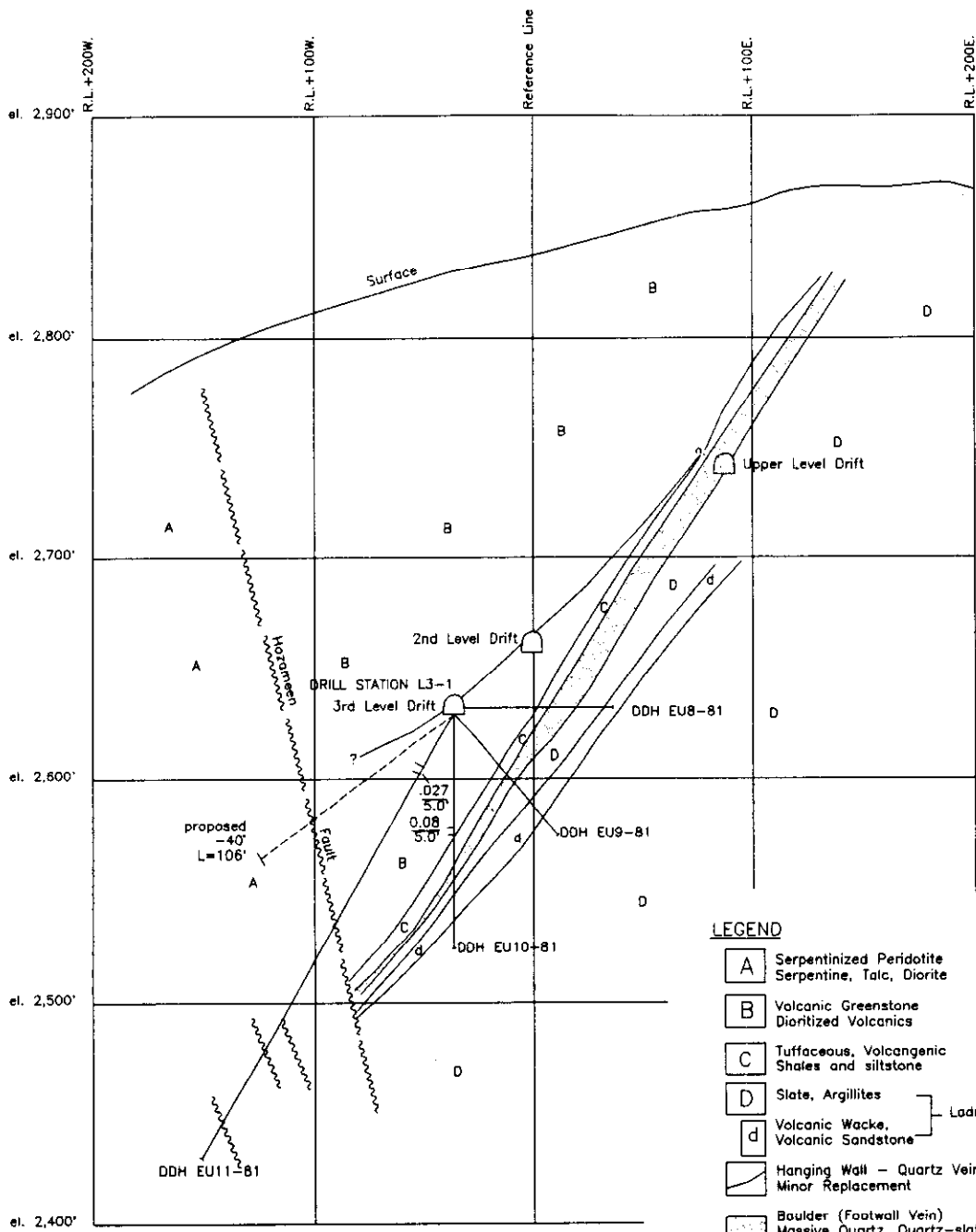
In 1997, a narrow mineralized zone was found near the Hozameen Fault in the vicinity of the Rock Quarry developed for construction of the Tailings Dam just north of the Emancipation Group. Fold structures appear to cross Ladner Creek without interruption. The outcrop of conglomerate and infolded volcanics south to the old Crown grants (Figure 8) Sunshine and Raymond suggest that the mine stratigraphy is coming closer to the surface. Judging by infolded volcanics, the possible mineralized section could be less than 100 metres below the surface. (This is roughly consistent with a 20° northward plunge of a mineralized zone 1,500m south of 9,900N section.)

No surface albite-quartz-carbonate sulfide zones are documented south of Ladner Creek. The south side of Ladner Creek was soil sampled and a ground magnetometer done in 1973 in the early surface work on the property. There were no anomalous soil values on this slope. Ground magnetics indicate broadly similar patterns north and south of Ladner Creek. The extremely high magnetic signature (greater than 2,500 gammas) of the ultramafic complex is missing between 10,200N and 9,900N, which may reflect a preponderance of gabbro dykes in the covered valley bottom. The magnetic pattern of the coarse clastic turbidite unit varies between -500 and +500 gammas. The area south of Ladner Creek on claims Aurum 3 and 5, Monitor, a partial unit of the Hope 2 modified grid claim and the old Sunshine and Raymond Crown grants is an attractive exploration target. Even though there are no surface mineralized showings presently known in the area, this belt has never been drilled in the past and has largely been ignored in previous work. A reappraisal indicates that the Idaho Mine stratigraphy continues south without interruption.

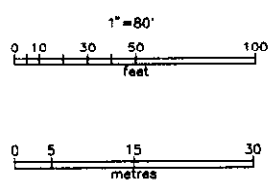
Diamond drilling on 8,400N section is recommended. A 250 to 300m hole is required to test the stratigraphy of the south block. Other holes should be drilled northward, based on the results of the first hole. Minimum footage to drill would be in the neighborhood of 5,000 feet (1,500 m).

Limited mapping was conducted on old logging roads in the northern part of the claims (Figure 8).





- LEGEND**
- A** Serpentinized Peridotite  
Serpentine, Talc, Diorite
  - B** Volcanic Greenstone  
Dioritized Volcanics
  - C** Tuffaceous, Volcanogenic  
Shales and siltstone
  - D** Slate, Argillites
  - d** Volcanic Wacke,  
Volcanic Sandstone
  - [Shaded Box]** Hanging Wall - Quartz Vein,  
Minor Replacement
  - [Stippled Box]** Boulder (Footwall Vein)  
Massive Quartz, Quartz-slate  
Breccia, Minor Replacement
- } Ladhner Group



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EMANCIPATION MINE PROJECT

CROSS SECTION  
250 NW

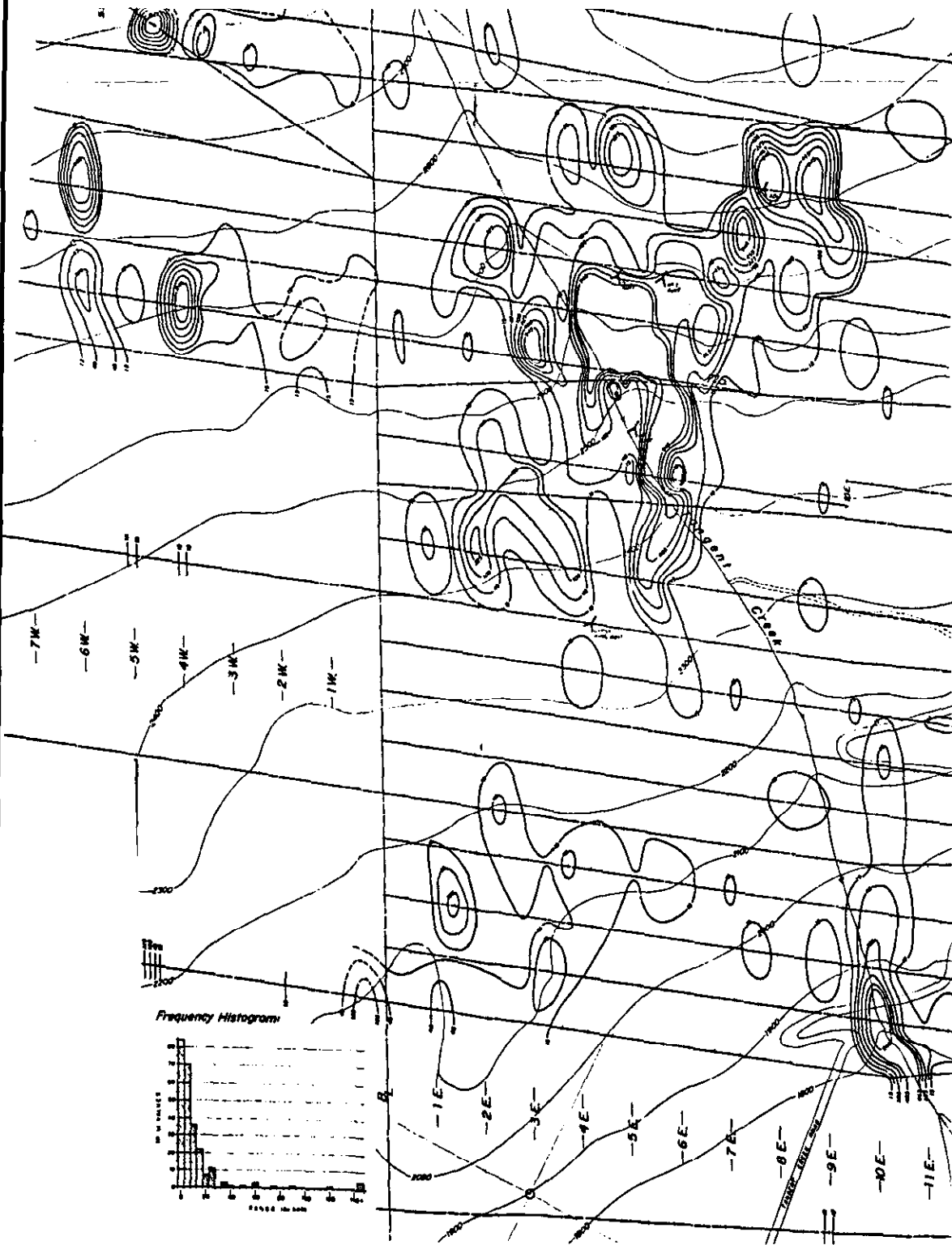
SCALE as shown	DATE June '93	N.T.S. 92H/6W&11W	Figure:10
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## **GEOCHEMISTRY**

Detailed and comprehensive geochemical soil surveys have been completed over the Emancipation Area (Cochrane, 1977). In 1981, detail soil surveys were conducted in the immediate area of the Emancipation portals (Cardinal, 1981). Also crews extended, re-blazed and flagged the existing baseline and crosslines using compass and chain. In 1981, soil samples were obtained at 15 m (50 foot) intervals and a total of 26 line kilometres were completed with 1,677 samples collected. The soils were collected, where possible, from the upper "B" soil horizon although in some cases only the residual "C" soil was present. In steep slopes the soil cover was thin, constituting a shallow "B" and "C" profile with evidence of down slope movement. In low relief terrain the soil was usually thicker (2-4 m and greater) with glacial gravels and boulder clay underlying the soil profile.

The geochemical contour intervals are based on geostatistical and profile studies carried out on the property some years ago by consultant D. R. Cochrane (1977). His study found that values from 15 to 45 part per billion (ppb) gold were to be considered as weakly anomalous; from 45 to 75 ppb gold as moderately anomalous; and 75 ppb and greater as highly anomalous. Based on these intervals at least three anomalous areas were outlined south of the Emancipation mine and one large anomaly about 300 m northwest of the mine.

The anomalies occur along a major structural and geological trend. Two local anomalous zones located at L86S-100E and L91S-100W suggest some relationship to the Hozameen Fault and occur within the volcanics. The L86S anomaly may also partly reflect the altered dioritized volcanics found in the area. The other major anomalous zone with its centre located at L96S-700W tails off to the southwest. This probably in part reflects the old Emancipation mill site and tailings stock pile, found just to the north. This should not entirely ignored due to its location, which occurs at the volcanic and sedimentary contact, as such contact horizons along the belt are known to auriferous, i.e. Idaho Zone. Other anomalous zones are along Tangent Creek and may reflect bedrock geology but could also reflect localized placer gold concentrations.

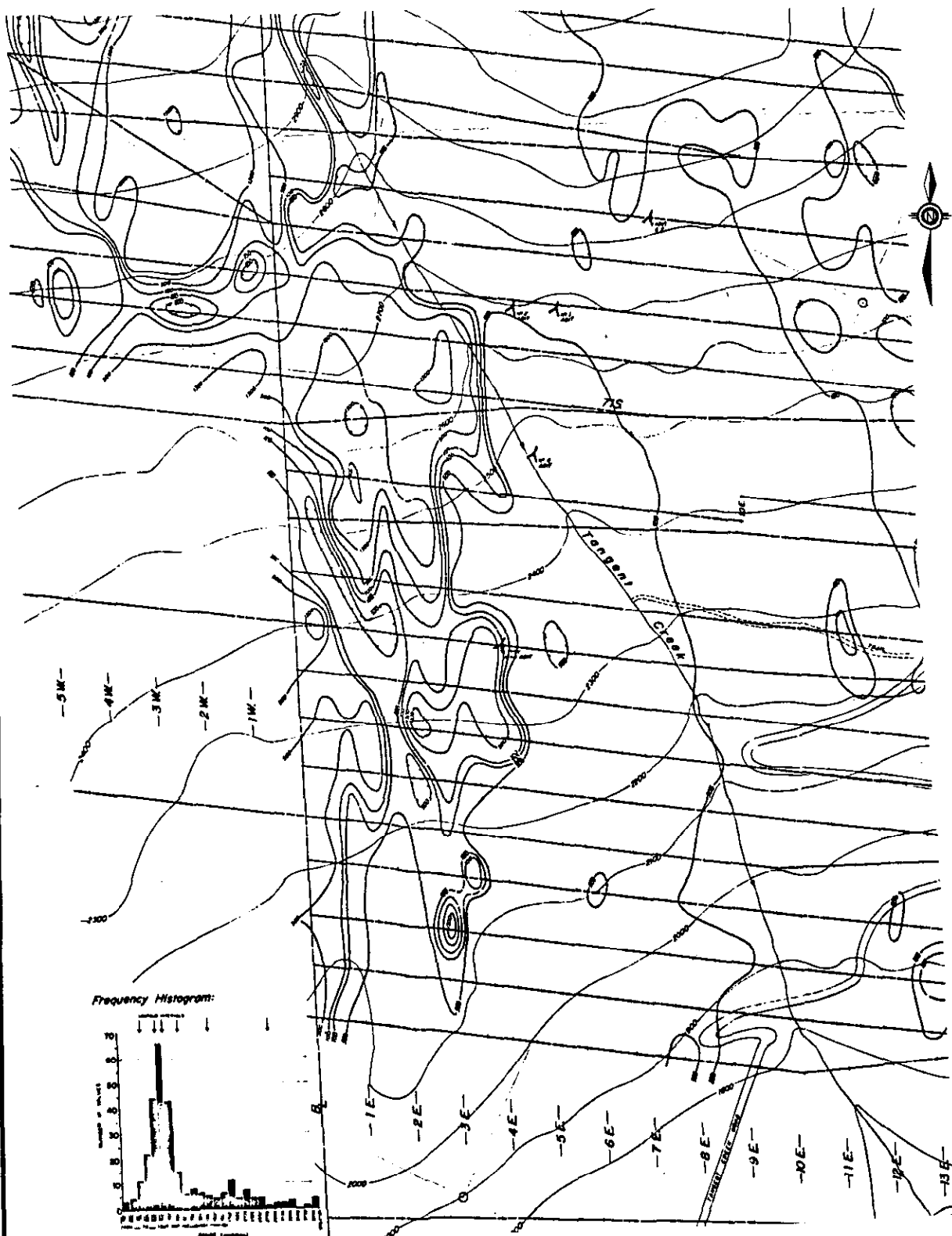


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EMANCIPATION MINE PROJECT			
GOLD IN SOIL GEOCHEMISTRY			
SCALE as shown	DATE June '93	N.T.S. 92H/6W&11W	Figure: 14

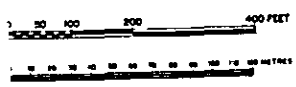
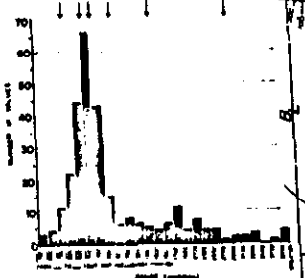
## **GEOPHYSICS**

Limited ground geophysical surveys were conducted in 1981, primarily to test the response of the instruments to bedrock geology and known mineralization.

An Induced Polarization (IP) orientation survey was carried out over drill section 500 N located 152 m north of the Emancipation portal (Cardinal, 1981), where drilling intersected a zoned of replacement mineralization. The Wenner Array System was employed with electrode spacings of 366 m (1200 feet), 183 m (600 feet), and 91 m (300 feet) respectively. At each of these spacings, resistivity, chargeability and self-potential readings were recorded. IP response corresponded well within the known mineralization. The metal factor readings were plotted and superimposed onto geological cross-section 500 m which also illustrated the disseminated sulfide replacement zone.



Frequency Histogram:



ISOMAGNETIC CONTOURS.

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EMANCIPATION MINE PROJECT

COMPOSITE GEOPHYSICS

SCALE as shown	DATE June '93	N.T.S. 92H/6W&11W	Figure: 15
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## **DIAMOND-DRILLING and UNDERGROUND WORK**

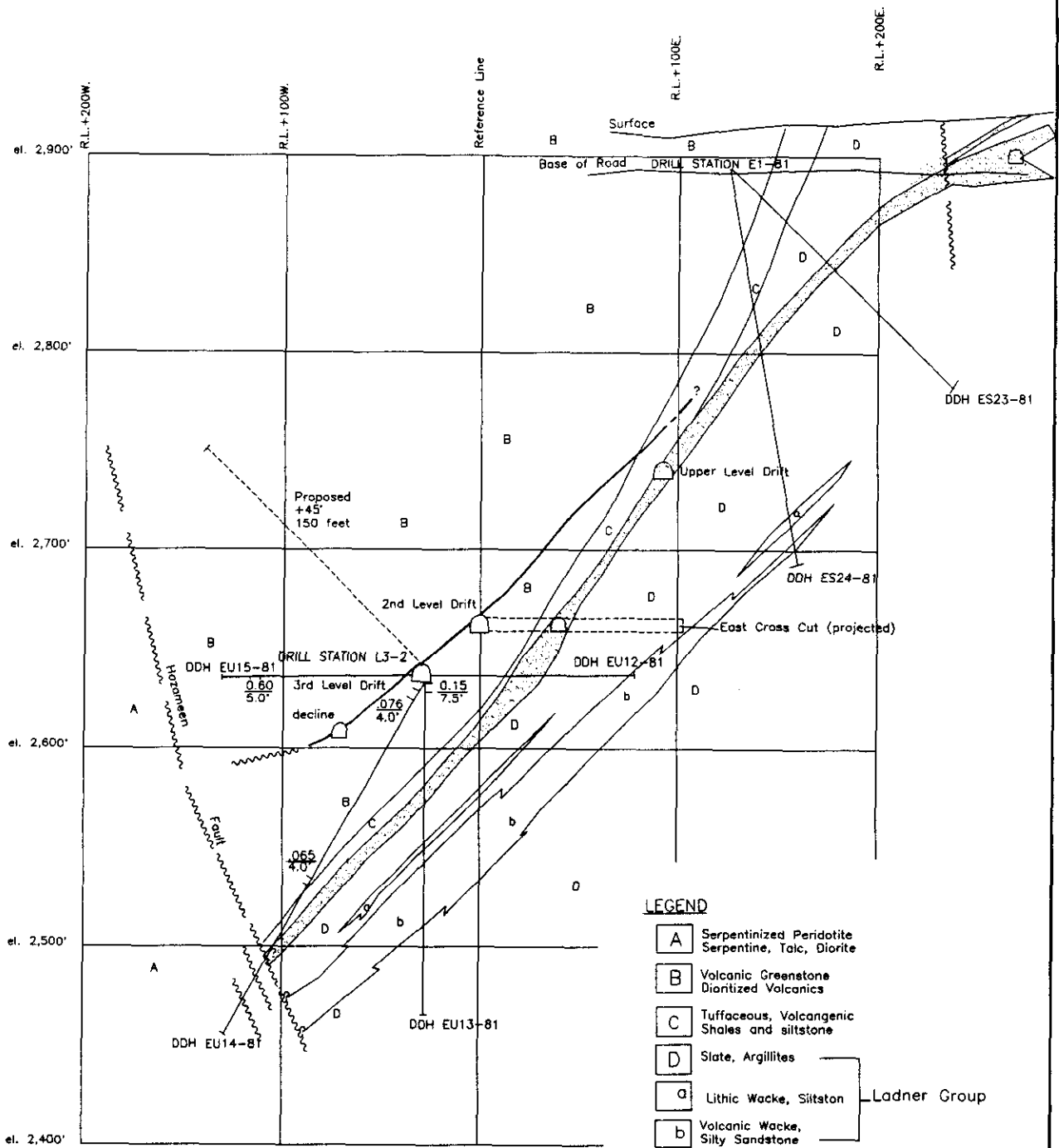
Between May 19, 1981 and October 28, 1981 a total of 2,078 m (6,618 feet) of diamond drilling was completed in the Emancipation mine area by Aquarius Resources Ltd. The drilling was in two phases; an underground phase and a surface phase. The underground drill holes were located and oriented to intersect proposed potential target sites as determined from previous underground mapping and sampling programs. During this period a total thirty-one (31 AQ size underground holes were completed for a total of 1,177 m (3,862 feet) of drilling. This core is presently available for examination at the old Aquarius campsite stored in a covered core rack.

The surface drilling phase was undertaken primarily to define the structure, quartz veins and geochemical highs that occur a short distance north of the Emancipation mine. The drilling consisted of ten BQ size surface holes for a total of 901 m (2,956 feet) of drilling.

One deeper hole (EU-38) intersected slates structurally underneath the serpentine partially (about 2 m in thickness) replaced by sulfides. The majority of the sulfide mineralization intersected occurs along the contact boundaries of the Boulder Vein system, predominantly on the hanging wall side. The sulfides consist of, in decreasing abundance, disseminated pyrrhotite, pyrite, chalcopyrite and arsenopyrite. The Boulder Vein system changes character down-dip and along strike from a more massive quartz vein type to a more quartz stringer and pervasive siliceous replacement type at depth or down-dip. The sulfides also increase with the system down-dip and change to a more siliceous-sulfide replacement zone. The "tuffaceous" sediments located on the hanging wall side of the boulder vein also become more replaced with sulfides down-dip and appear to host much of the mineralized replacement.

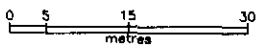
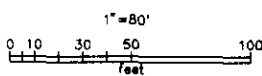
During the logging of the drill core, visible gold was noted in at least three separate areas associated with the above replacement. The gold appears to be directly related to arsenopyrite. Coarse grained arsenopyrite (up to 1 cm in grain size) hosting coarse gold, was observed in one instance. In other sections very fine gold found in quartz or siliceous replacement occurs with fine arsenopyrite crystals resembling "steel cuttings". In most cases an increase in arsenopyrite reflects an increase in the grade of gold as indicated by some of the assays. Sporadic or isolated gold quartz stringers also occur in the altered volcanics suggesting local remobilization.

Surface drilling north of the Emancipation mine was conducted to delineate geological contacts, structures, quartz veins and mineralization, similar to those found in the Emancipation mine and to attempt to define the anomalous high gold associated with the bedrock. The drill holes intersected similar structures and rock types as discussed above with only limited quartz veining and mineralization, accompanied with low gold values. The surface holes outlined northwest trending structures and geological contacts favourable for sulfide replacement zones but no significant altered or mineralized sections were encountered during surface drilling.



**LEGEND**

- A Serpentinized Peridotite  
Serpentine, Taic, Diorite
  - B Volcanic Greenstone  
Dionitized Volcanics
  - C Tuffaceous, Volcanogenic  
Shales and siltstone
  - D Slate, Argillites
  - a Lithic Wacke, Siltston
  - b Volcanic Wacke,  
Silty Sandstone
- } Ladner Group
- / Hanging Wall - Quartz Vein,  
Minor Replacement
  - Boulder (Footwall Vein)  
Massive Quartz, Quartz-slate  
Breccia, Minor Replacement

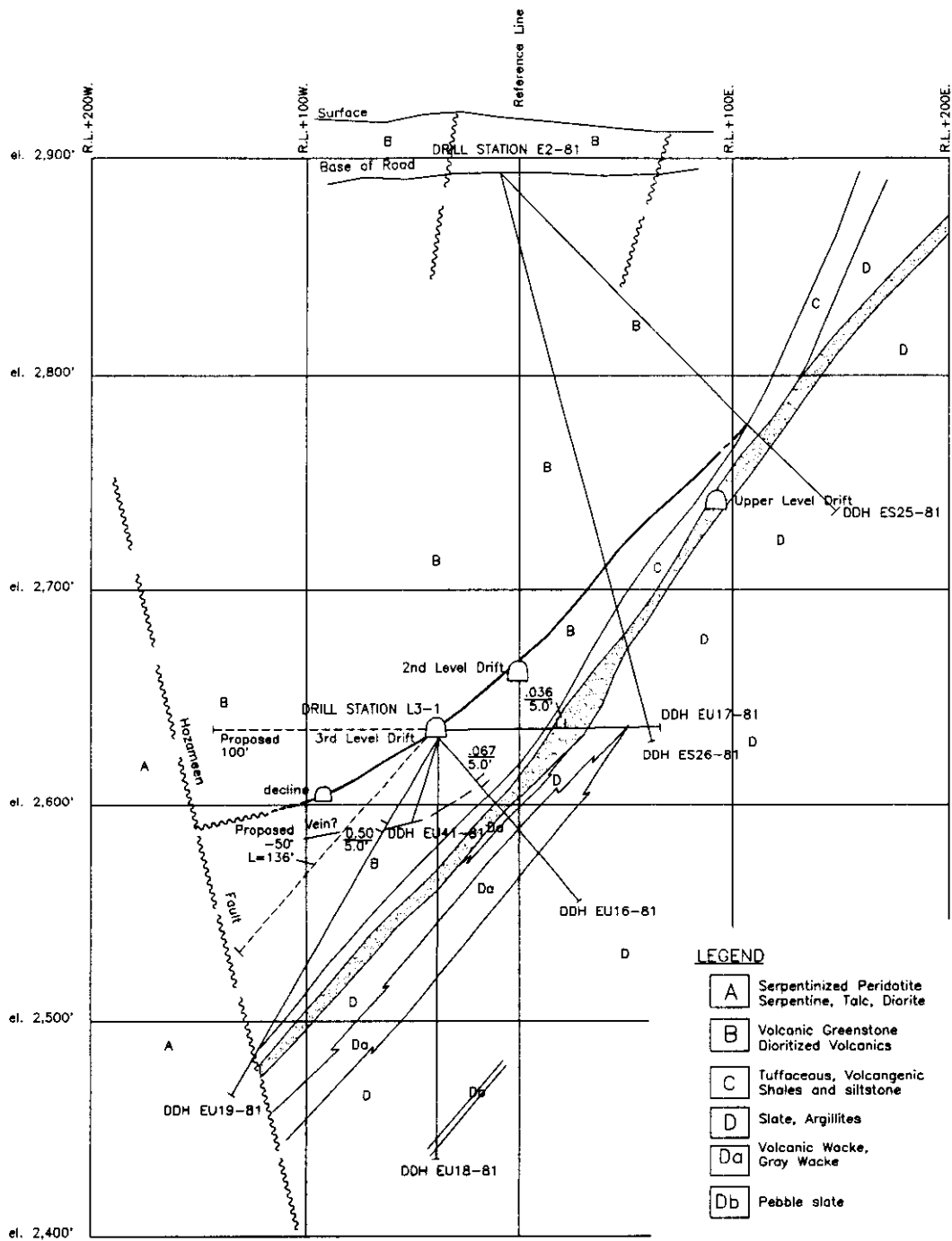


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EMANCIPATION MINE PROJECT			
CROSS SECTION 300 NW			
SCALE as shown	DATE June '93	N.T.S. 92H/6W&11W	Figure:12

**TABLE II**  
**SUMMARY OF 1981 DIAMOND DRILLING**

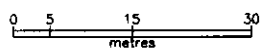
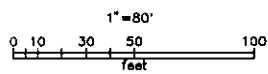
U = Underground Hole (AQ)		S = Surface Hole (BQ)		m = metres				
opt. = troy oz. gold per ton		No Values - 0.02 opt. or less						
No.	Lat	Dep.	Brg.	Dip	Elev.	Depth	Section	Remarks
U-8	3410N	10,462E	N63E	0°	2625	66' 21.1 m	250NW	28.0-50.0' (8.5-15.2 m) Boulder Vein. No values
U-9	3408N	10,460E	N63E	-50°	2629	72' 21.9 m	250NW	34.5-41.0' (10.5-12.5 m) Boulder Vein. No values
U-10	3407N	10,457E	--	-90°	2629	105' 32.0 m	250NW	Quartz Stringers 48.0-53.0' (14.6-16.2 m) 0.08 opt./5.0' 67.0-72.0' (20.4-21.9 m) Boulder Vein. No values.
U-11	3406N	10,455E	S63W	-60°	2629	231' 70.4 m	250NW	25.0-26.0' (7.6-7.9 m) Quartz-Carbonate Vein 0.027 opt. over 5.0' (1.5 m) Reverse Vein. [?] 105.0-145.0' (23.0-44.2 m) Hozameen Fault - Talc Zone.
U-12	3458N	10,447E	N63E	0°	2629	100' 30.5 m		39.5-43.5' (12.0-13.3 m) Boulder Vein. No values. 53.0-55.2' (16.2-16.8 m) Quartz Vein. No values.
U-13	3455N	10,442E	--	-90°	2633	167.5' 50.9 m		0-7.5' (0-2.3 m) Quartz-Carbonate 0.15 opt./7.5' 51.5-59.0' (15.7-18.0 m) Boulder vein. No values
U-14	3455N	10,441E	S63W	-60°	2633	205' 62.5 m	300NW	7.0-11.1' (2.1-3.4 m) Quartz Stringers 0.076 opt./ 4.0'. 108.0-112.0' (32.9-34.1 m) sheared, Quartz Carbonate Veinlets 0.065 opt./4.0'
U-15	3455N	10,440E	S63W	0°	2629	100' 30.5 m	300NW	78.5-83.0' (23.9-25.3 m) 4" Quartz Vein 0.60 opt/4.5'
U-16	3497N	10,413E	N63E	-50°	2633	100' 30.5 m	350NW	25.0-30.0' (7.6-9.1 m) 24" Quartz Vein 0.067 opt./5.0'. 40.5-46.0' (12.3-14.0 m) Boulder Vein. No values. 46.0-52.0' (14.0-15.8 m) Quartz Stringers, well mineralized. No values. 77.0-79.0' (23.5-24.1 m) Brecciated Quartz Vein. No values.
U-17	3497N	10,414E	N63E	0°	2629	100' 30.5 m	350NW	50.0-67.0' (15.2-19.8 m) Boulder Vein. Best Assay 0.036 opt over 5 feet.
U-18	3496N	10,412E	--	-90°	2633	196' 59.7 m	350NW	59.0-70.5' (18.0-21.5 m) Boulder Vein. No values.
U-19	2495N	10,410E	N63W	-60°	2633	192' 58.5 m	350NW	48.0-53.0' (14.6-16.2 m) Brecciated Quartz 0.50 opt./5.0'
U-20	3497N	10,411E	N10W	-55°	2633	281' 8.6 m	350NW	36.0-41.0' (11.0-12.5 m) 30" Brecciated Quartz. No values
U-21	3608	10,288E	N63E	12°	2671	250' 76.2 m	500NW	158.0-162.5' (48.2-49.6 m) 30" Brecciated Quartz. No values.
U-22	3606N	10,283E	--	-90°	2665	251' 76.5 m	500NW	109.5-160.0' (33.4-48.8 m) Mineralized and Quartz Veining. 132.0-136.5' (40.2-41.6 m) 0.59 opt./4.5' 151.0-156.0' (46.0-47.5 m) 0.35 opt./5.0'
S-23	3526N	10,575E	N63E	-45°	2888	154' 46.9 m	300NW	69.5-80.0' (21.2-24.4 m) Boulder Vein. No values.
S24	3526N	10,575E	N63N	-80°	2888	202' 61.6 m	350NW	90.5-102.5' (27.6-31.2 m) Boulder Vein. No values. 163.0-164.5' (49.7-50.1 m) Quartz Vein. No values.





**LEGEND**

- A** Serpentinized Peridotite  
Serpentine, Talc, Diorite
- B** Volcanic Greenstone  
Dioritized Volcanics
- C** Tuffaceous, Volcanogenic  
Shales and siltstone
- D** Slate, Argillites
- Da** Volcanic Wacke,  
Gray Wacke
- Db** Pebble slate
- Hanging Wall - Quartz Vein,  
Minor Replacement
- Boulder (Footwall Vein)  
Massive Quartz, Quartz-slate  
Breccia, Minor Replacement

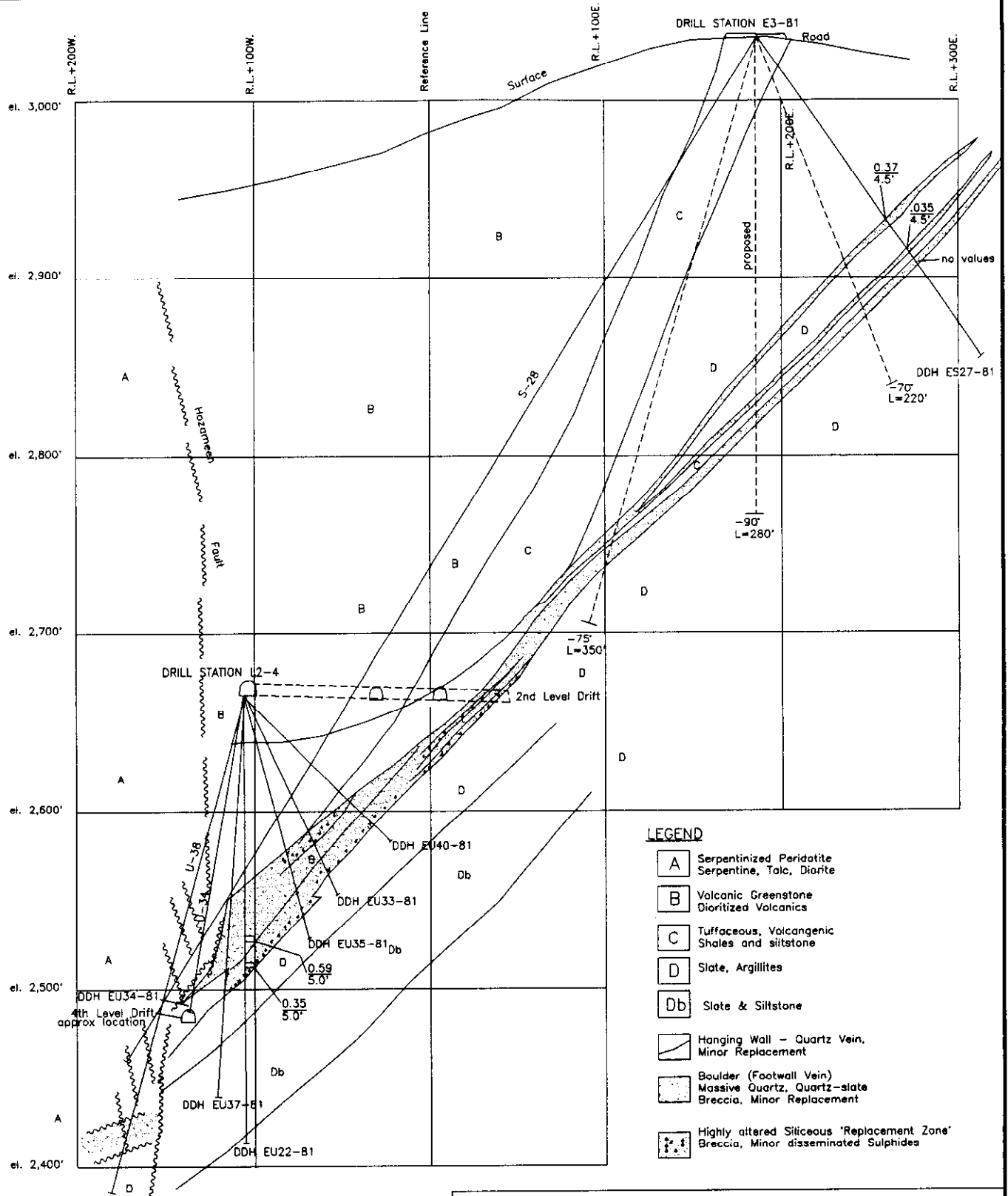


HOME GOLD RESOURCES LTD.

EMANCIPATION MINE PROJECT

CROSS SECTION  
350 NW

U = Underground Hole (AQ)		S = Surface Hole (BQ)		m = metres				
opt. = troy oz. gold per ton		No Values - 0.02 opt. or less						
No.	Lat.	Dep.	Brg.	Dip	Elev.	Depth	Section	Remarks
S-25	3521N	10,459E	N63E	-45°	2888	220' 61.1 m	350NW	169.5-176.0 (51.7-53.7 m) Boulder Vein. No values.
S-26	2519N	10,455E	N63E	-75°	2888	270' 82.3 m	350NW	219.0-225.0' (67.8-68.6 m) Boulder Vein. No values.
S-27	3745N	10,572E	N63E	-55°	3035	220' 67.1 m	500NW	124.5-129.0' (37.9-39.3 m) 30' Quartz 0.37 opt./4.5' 143.5-148.0' (43.8-45.1 m) 24' Quartz 0.035 opt./4.5' 151.5-155.3' (46.2-47.3 m) Boulder Vein. No values.
S-28	3741N	10,565E	S63W	-60°	3035	680' 207.3 m	500NW	429.0-434.0' (130.8-131.4m) Sheared Quartz-Carbonate. No values. 557.0-585.0' (169.9-178.3m) Abundant Quartz-Carbonate. No values. 585.0'-end (178.3 m-end) Talc-Serpentine. Hozameen Fault Zone.
S-29			N63W [?]	-50°		400' 121.6 m	600NW	Volcanic Greenstones. No values.
S-30				-90°		360' 109.8 m		Volcanic Greenstones. No values.
S-31				-90°		300' 91.4 m	1150NW	Volcanic Greenstones. No values.
S-32			N63E	-60°		150' 45.7 m	1150NW	Volcanic Greenstones. No values.
U-33	3607N	10,285E	N63E	-65°	2665	123' 37.5 m	500NW	90.5-94.0' (27.6-28.7 m) Boulder Vein. No values.
U-34	3606N	10,282E	S63W	-80°	2665	179' 54.6 m	500NW	Volcanic Greenstones. No values.
U-35	3607N	10,284E	N63E	-75°	2665	140' 42.7 m	500NW	96.0-102.0' (29.3-31.1 m) Boulder Vein. No values.
U-36	3608N	10,281E	N30W	-60°	2665	157' 47.9 m	500NW	107.5-112.5' (32.8-34.3 m) Boulder Vein. No values.
U-37	3605N	10,282E	S63W	-86°	2665	225' 68.6 m	500NW	153.0-160.0' (46.6-48.8 m) Highly Siliceous, Abundant Sulfides. No values. 160.0-184.0' (48.8-56.1 m) Tectonic Breccia.
U-38	3605N	10,281E	S63W	-75°	2665	298' 88.1 m	500NW	75.0-79.0' (22.9-24.1 m) Abundant Quartz-Carbonate. No values. 79.0-272.0' (24.1-82.9 m) Serpentine-Talc Zone. 272.0-end (82.9 m-end) Volcanic Greenstone.
U-39	3666N	10,405E	S30E	-45°	2633	183' 35.4 m	500NW	0-98.0' (0-29.9 m) Volcanic Greenstones. 98'-end (29.9 m-end) Serpentinized Diorite and Serpentine with Talc.
U-40	3608N	10,286E	N63E	-45°	2665	116' 35.4 m	500NW	35.0-37.0' (10.7-11.3 m) Quartz Vein in Volcanic Greenstones. Not Assayed. 90.0-106.0' (27.4-32.3 m) Brecciated Boulder Vein. No values.
U-41	3495N	10,412E	S63W	-73°	2633	32' 9.8 m	350NW	Drill machine seized up and program terminated 27 Oct. 1981



## CONCLUSIONS

One of the principal structure which has been identified in the Emancipation Mine is the contact between the altered andesites on the southwest and the argillites on the northeast. This contact is evidently a fault contact, since it truncates beds of the argillites. From the lower workings up to about elevation 2750 the large vein (Boulder Vein) follows the line of this fault plane and carries limited gold values.

Below 2750 elevation, a narrow vein (Hanging Wall vein) with a dip to the west of about 45 degrees "branches" from the 65 degree dipping Boulder vein with a small strike difference, so that the intersection line which is at above the portal, plunges gently to the northwest to occur at the extreme northwest end of Level 2650 drift, giving it a plunge of about 12½ degrees to the northwest. This intersection appears to control the areas in which gold has been mined in the past.

Near the intersection of the Hanging Wall Vein with the Boulder vein, widths increase and some gold values occur as illustrated at the portal and at the inner end of Level 2650. This linear zone was not reached by raises driven up from Level 2650.

Within the volcanic rocks of the mine area there appears to be at least one, and possibly several, changes from andesitic, hard, dark, fine-grained rock to soft serpentized volcanic. This change appears to follow an almost horizontal plane. From outcroppings in the road cuts down to about Level 2650, the rock is hard and dark coloured. At this elevation it changes to a greenish serpentized volcanic, except in the wedge between the Hanging Wall Vein and the Boulder Vein. In this wedge, the floor of the harder volcanic rock is about at Level 2597.

Where the Hanging Wall vein has both hard andesite walls, it is narrow and continuous with very low gold values. Where the Hanging Wall vein has serpentized volcanics above it and hard andesite below it, there are good gold values with many branches and "Reverse" dipping veins throughout the zone between the Hanging Wall vein and the Boulder vein.

The geological conditions in the raise from 2440 level to 2520 level are not known, but values reported may be related to other strata of more rigid rocks in the serpentized volcanics which occur below Level 2597.

A limited program of underground core drilling is recommended to explore the portion of fractured volcanics which lies under the serpentine wall between Elevation 2597 and Elevation 2650, and test for gold content. Downward trending holes will verify the position of the floor of the favourable fractured volcanics, and will test the serpentized volcanics for other layers of harder formation in which gold-bearing vein structures might be found.

Four gold-bearing structures are present:

1. The upper part of the Boulder Vein entirely within the argillites.
2. The wider lense at the junction of the Hanging Wall Vein and the Boulder Vein: This linear structure may be too small to present a target for surface drill holes.

3. The fractured lower part of the andesite "wedge" between the Hanging Wall and the Boulder vein in that section: The strike convergence of the hanging wall and the Boulder vein, together with the flat floor to the fractured andesite formation, gives this body of rock the slope of a long tapered pyramid on its side with maximum size at the outcrop and a limit somewhere beyond the end of present workings.
4. The reports of good assays in the raise below Level 2597 and at Level 2440: The limited drilling in 1991 provides information for more detailed follow-up.

The proposed drilling to investigate these structures is shown on geological plans and sections included in this report.

## RECOMMENDATIONS

The following program is suggested as a minimum with further exploration and development to follow if this program is successful:

1. **2 or 3 Level**  
A flat hole should be drilled to the east at some point on the 2 or 3 Level. This should be done as far as possible (minimum 100 feet) from the portal. This hole will check the footwall of the Boulder Vein for additional veins. Only limited footage (up to 120 feet) has been drilled into the footwall in the past. The recommendation is to drill 063° (true), on section direction, for 400 feet. Being well away from the portal, it should ensure good ground and be spatially related to known ore shoots.
2. **3 Level, Section 300NW**  
Drill at +45°, on section 243°, to check continuity of 0.60 oz/ton over 4.5 feet in flat hole ELI 15-81. Drill from the same station as before, L3-2. Length of hole 150 feet.
3. **Section 500NW**  
The values in EU 22-81 can best be checked by short drill holes (50 to 60 feet) from 4 Level. The values are relatively sporadic in this area to require close spaced drilling.
4. **Line 40S on Former M-35**  
Surface geochemical and geophysical surveys indicate much the same profiles as those at the Emancipation production area. A trench at 0+40 feet from the baseline and continuing easterly for 100 feet on line, but the results of the excavation are unknown. In any case, the work was inadequate to check the potential and it appears that trenching by back-hoe or bulldozer should be carried out at specific points of interest along Line 40S. If results are encouraging, a program of diamond-drilling can be carried out.

Under the proposed program, a total of about 3,000 feet of diamond-drilling is required in the immediate area of the old workings and several hundred feet of surface trenching will be needed farther north, after which additional work may be considered. The proposed holes in the immediate mine area are listed below:

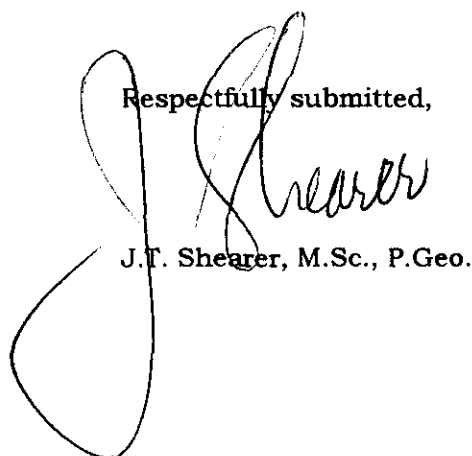
<b>RECOMMENDED DIAMOND DRILLING</b>							
<b>In Immediate Emancipation Mine Area</b>							
Hole No.	Location	Lat.	Dep.	Brg.	Dip	Length	Remarks
1.	Surface 500NW	3745N	10,752E	N63E	-70°	220'	To check H.W. veins and continuity of 0.37 opt. in Ladner sediments, DDH ES-27
2.	Surface 500NW	3745N	10,572E	--	-90°	280'	as preceding
3.	Surface 500NW	2745N	10,572E	563W	-75°	350'	As preceding but at junction of two H.W. veins

**RECOMMENDED DIAMOND DRILLING**  
**In Immediate Emancipation Mine Area**

Hole No.	Location	Lat.	Dep.	Brg.	Dip	Length	Remarks
4.	3 Level 350NW	3497N	10,413E	563W	0°	130'	To check continuity of 0.60 opt. over 5.0' on X-section 300NW in vicinity of Hozameen Fault in DDH EU-15
5.	3 Level 350NW	3497N	10,413E	563W	-50°	136'	To check F.W. of H.W. vein in vicinity of intersection of 0.50 opt. over 5.0' in DDH EU-19
6.	3 Level 250N	3406N	10,455E	563W	-40°	106'	To check F.W. of H.W. vein in vicinity of 0.027 opt over 5.0' in DDH EU-11
7.	3 Level 300 NW	3455N	10,441E	563W	+45°	150'	To check the H.W. for possible other veins and for continuity of 0.60 opt over 5.0' in DDH EU-15
8.	2 Level Face East X-C 300NW	3503N	10,564E	N63E	0°	400'	To explore F.W. of Boulder vein in Ladner Group sediments
9.	4 Level Drift 400NW				+90°	100'	This hole will be collared where drift wall gives 333 ppb in gold and will check continuity of vein from raise and two recent vertical holes in 1991-92
10.	4 Level N. Face 600NW				+90°	100'	This hole will be collared near face which gives 206 ppb in gold and will check on general plunge of ore shoot

In the northern portion of the property several deep exploration diamond drillholes are recommended to test the Lower Ladner Group stratigraphy. Several holes are required in the 150 to 300 metre length.

Respectfully submitted,



J.F. Shearer, M.Sc., P.Geo.

## ESTIMATE OF COSTS FOR FUTURE WORK

### PHASE I

Geological mapping, sampling, (surface and underground)	\$ 8,500.00
Linecutting and orthophoto preparation	14,500.00
Clear 4 Level portal and repair track, general road maintenance, ditching, 225 Hoe 40 hours @ \$50/hr	6,000.00
Repairs to 4 Level access road 30 hours @ \$150/hr	4,500.00
Road Access to North drill targets	25,000.00
Diamond drilling underground 10,000 feet @ \$21.00/ft	210,000.00
Computer processing	15,000.00
Compressor rental 2 months @ \$5,000/m	10,000.00
Geological supervision, core logging and splitting (including room, board and meals)	50,000.00
Repairs to airline and installation	1,500.00
Analytical (core results)	15,000.00
Geological consulting	5,000.00
Governmental reclamation bond	2,500.00
Survey of drill sites	5,000.00
Report preparation and reproduction	2,500.00
Trenching hoe work on Northern portion	<u>25,000.00</u>
TOTAL	<u>\$ 400,000.00</u>

### PHASE II

Contingent on significant gold mineralization being discovered at depth by Phase I work:

Diamond drilling 20,000 feet at 21.00/ft	\$ 410,000.00
Geological supervision, core logging and splitting (including room, board and meals)	100,000.00
Analytical	25,000.00
Computer processing	15,000.00
Road Construction	40,000.00
Survey of drill sites	5,000.00
Report preparation and reproduction	<u>5,000.00</u>
TOTAL	<u>\$ 600,000.00</u>





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**APPENDIX I**

**STATEMENT OF QUALIFICATIONS**

**June 1, 1997**

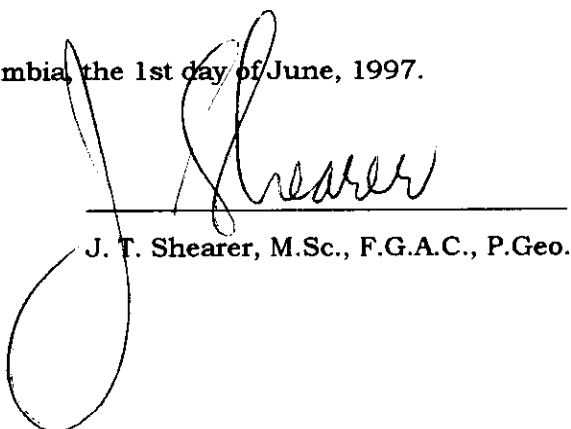
## **APPENDIX I**

### **STATEMENT OF QUALIFICATIONS**

I, JOHAN T. SHEARER, of 1817 Greenmount Avenue, in the City of Port Coquitlam, in the Province of British Columbia, do hereby certify:

1. I am a graduate of the University of British Columbia (B.Sc., 1973) in Honours Geology, and the University of London, Imperial College (M.Sc., 1977).
2. I have over 25 years of experience in exploration for base and precious metals and industrial mineral commodities in the Cordillera of Western North America with such companies as McIntyre Mines Ltd., J. C. Stephen Explorations Ltd., Carolin Mines Ltd. and TRM Engineering Ltd.
3. I am a fellow in good standing of the Geological Association of Canada (Fellow No. F439) and I am a member in good standing with the Association of Professional Engineers and Geoscientists of British Columbia (Member No. 19,279).
4. I am an independent consulting geologist employed since December 1986 by Homegold Resources Ltd. Unit #5-2330 Tyner Street, Port Coquitlam, British Columbia.
5. I am the author of a report entitled "Geological and Trenching Report and Exploration Proposal on the Emancipation Mine" dated June 1, 1997.
6. I have visited the property on numerous occasions in the past since 1981 and conducted geological mapping between May 4 and May 19, 1997. I have mapped surface exposures and underground workings and have collected systematic surface and underground samples. I am familiar with the regional geology and geology of nearby properties. I have become familiar with previous work conducted in the Emancipation claim area by examining in detail the available reports, plans and sections and have discussed previous work with persons knowledgeable of the area.
7. I do own a minority interest in part of the property described herein.
8. I consent to authorize the use of the attached report and my name in the company's Statement of Material Facts or other public document.

Dated at Port Coquitlam, British Columbia, the 1st day of June, 1997.



J. T. Shearer, M.Sc., F.G.A.C., P.Geo.

**APPENDIX II**

**STATEMENT OF COSTS, 1997**

**June 1, 1997**

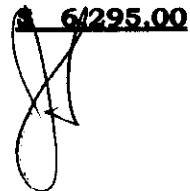
**APPENDIX II**  
**STATEMENT OF COSTS**

**Emancipation Claims**  
**1997**

Wages and Benefits

J. T. Shearer, M.Sc., P.Geo., Geologist May 5, 6, 15, 16, 19, 1997 5 days @ \$350	\$ 1,750.00
A. E. Angus, Prospector May 15, 16 and 17, 1997 3 days @ \$250	750.00
S. E. Angus, Prospector May 15, 16 and 17, 1997 3 days @ \$250	750.00
Subtotal	3,250.00
GST on wages	<u>227.50</u>
<b>WAGES TOTAL</b>	<b>\$ 3,477.50</b>
Transportation, Truck rental 4 days @ \$53.50	267.50
Camp Costs 11 man days @ \$50	550.00
Report Preparation 3 days @ \$350	1,050.00
Drafting	500.00
Word Processing and Reproduction	<u>450.00</u>
<b>GRAND TOTAL</b>	<b><u>\$ 6,295.00</u></b>

To file 2 years on Emancipation 1-12





**APPENDIX III**

**PREVIOUS ASSAYS and RESULTS,**

**1991**

**June 1, 1997**

## APPENDIX III

### PREVIOUS ASSAYS AND RESULTS

A total of at least fifty-four (54) rock samples both bulk and chips were collected from the old Emancipation underground workings (see accompanying compilation assay map) over the last several years. Samples were initially obtained by A. R. Bullis (1972), No. 401-423 inclusive; D. R. Cochrane (1977), E1-E9 inclusive; and subsequently by D. G. Cardinal (1980), EM1-EM23 inclusive. Assay results were tabulated and weighted averages calculated for all the samples.

Below is a brief summary of the weighted averages and includes:




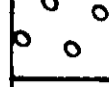


1. West dipping vein - (18 rock samples)  
Wt. avg. gr. = 0.233 oz/ton (7.9 gm/metric ton)  
Avg. width = 1.19 ft. (0.36m)
2. Reverse dipping veins - (6 rock samples)  
Wt. avg. gr. = 1.52 oz/ton (51.7 gm/metric ton)  
Avg. width = 0.90 ft. (0.27m)
3. Boulder vein - (7 rock samples)  
Wt. avg. gr. = 0.013 oz/ton (0.44 gm/metric ton)  
Avg. width - 4.64 ft. (1.41m)
4. Wall Rock - (23 rock samples)  
Wt. Avg. Gr. = 0.043 oz/ton (1.5 gm/metric ton)  
Avg. sample length = 5.16 ft. (1.6m)
5. 3rd level Zone - 100 ft. portion of the 3 revel drift which covers part of the mineralized replacement zone mentioned above.

Samples include portion of the quartz vein (1 and 2) and wall rock samples.  
Wt. Avg. Gr. = 0.22 oz/ton (6.82 gm/metric ton) over a length of 100 ft. (30.5m)  
Sample width = 0.5 ft to 7.0 ft (0.15 to 2.1m)






The third level zone includes part of the west dipping and reverse dipping veins and sheared wall rock which are mineralized and is recommended as a target for additional ore extraction and drilling.

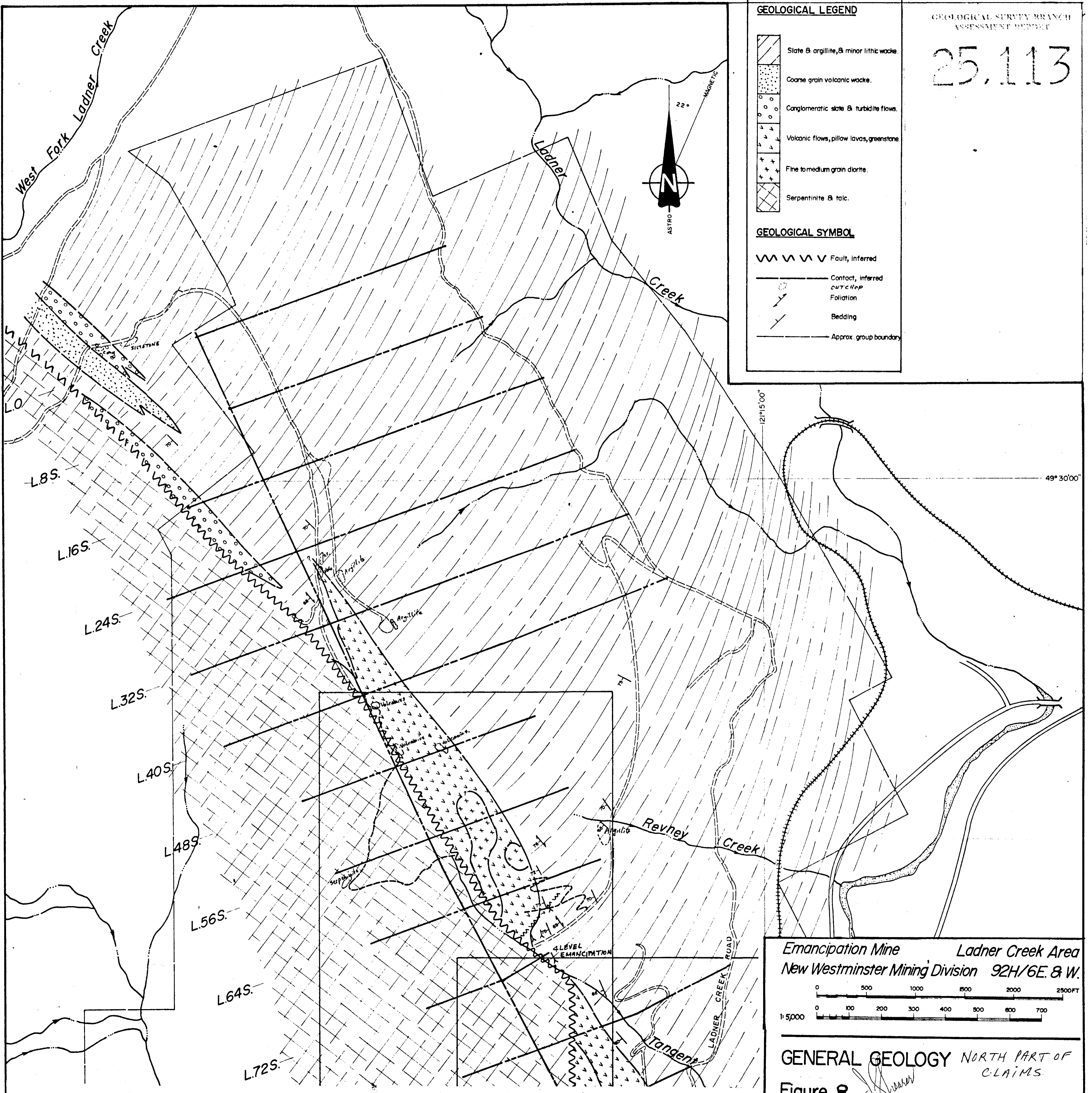
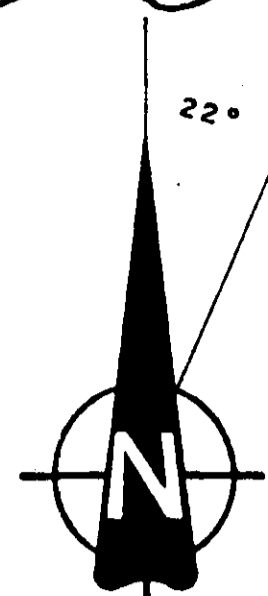
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GEOLOGICAL LEGEND

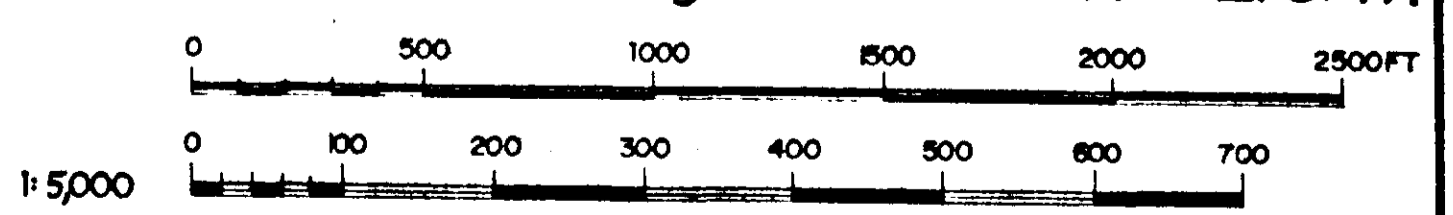
-  Slate & argillite, & minor lithic wacke.
-  Coarse grain volcanic wacke.
-  Conglomeratic slate & turbidite flows.
-  Volcanic flows, pillow lavas, greenstone.
-  Fine to medium grain diorite.
-  Serpentinite & talc.

GEOLOGICAL SYMBOL

-  Fault, inferred
-  Contact, inferred
-  Foliation
-  Bedding
-  Approx. group boundary



Emancipation Mine Ladner Creek Area  
New Westminster Mining Division 92H/6E. & W.



GENERAL GEOLOGY NORTH PART OF CLAIMS

Figure 8