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**REPORT  
ON THE  
TWIN, TO, ELKIN, TETE, GOLD CLAIMS  
FOR**

**DAUNTLESS DEVELOPMENTS LTD**

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**TASECO RIVER AREA**

**NTS 92 0 /12**

**CLINTON CREEK MINING DIVISION**

**BRITISH COLUMBIA**

**LONGITUDE: 51° 37' N**

**LATITUDE: 123° 46' W**

**September 30, 1992**

**Fred Holcapek, P.Eng**

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**



**22,696**

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## 1 - 00 INTRODUCTION:

At the request of Mr. F.A. Lang, President of Dauntless Developments Ltd, the writer conducted a prospecting programme in the Taseko River - Elkin Creek area, NTS 92 0/12 centering about the Twin 1, Twin 2, and To 4 -22 claims, Clinton Mining Division.

The work programme was executed by the writer during the period August 15 to 27, 1992. The purpose of the work programme was to locate outcrop areas of the Kingsvale Group and establish if variations in float rock, vegetation and topographic features can be used as an indication of the underlying rock types.

## 1 - 10 LOCATION AND ACCESS:

The Twin and To mineral claims are located within the Clinton Mining Division, British Columbia. Coordinates of the area are:

Latitude: 51° 37' N

Longitude: 123° 46' W

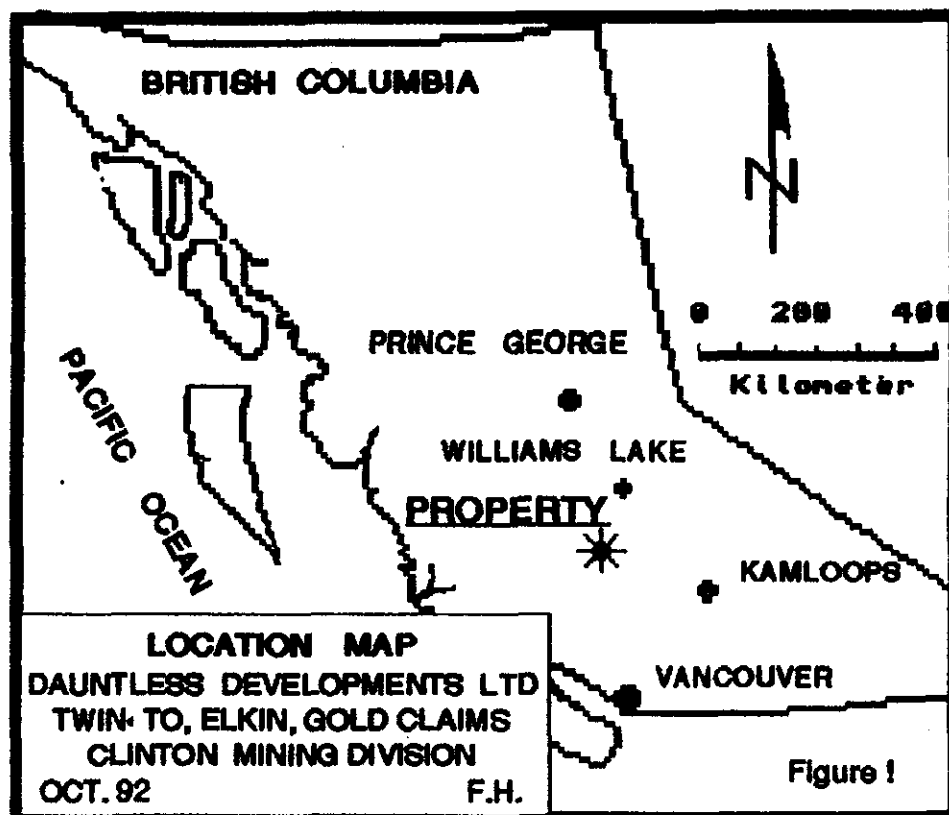
Access to the claim area is from Williams Lake west along the Bela Colla Highway to Hanceville (96 km). From there south along the Taseko Lake road to the Elkin Lodge (90 km) on Elkin Lake.

A rough dirt track leads 3 km east and about 10 km north to the north boundary of the Twin 2 mineral claims (Post 2E lies about 35 m east of the track. Windfalls that block the track had to be cleared.

The To claims lie east of the Taseko River and are accessible from the main Taseko Lake road. About 4 km north of the Vick Creek crossing a dirt track follows an old seismic line about due west 6 km, then crosses a swampy area and turns north for a distance of 3 km stopping at an old tree yarding area.

The initial post of To 10 & 11 is located about 420 m west and 82 m north from the end of the road.

During the programme bottled drinking water was carried in from Williams Lake. Creeks draining the high plateau were dry and the small lakes were reduced to marshy waterholes.



## 1 - 20 PHYSIOGRAPHY:

The claim area is located on the Fraser Plateau, a subdivision of Intermontane Physiographic Provinces, Elkin Creek Map sheet (NTS 92 O/12). The Intermontane province is bounded to the east by the Fraser Fault and to the south and west by the Coast Range.

The Fraser Plateau is characterised by rolling uplands covered by flat lying Miocene and younger basaltic volcanics and deeply incised U shaped glacial valleys occupied by chains of lakes and major rivers.

Glacial till and erratics form a thin veneer throughout the claim area. A well developed northerly trending topographic grain was superimposed by glaciation. Benches, covered by moraines and dissected by glacial outwash channels trend north - south. Numerous kettle lakes, pot holes, boulder trains, felsenmeer and shallow drainage channels follow a pronounced northerly trend on the plateau.

Verdun Lake and Elkin Lake west of the claim area and the Taseko River passing through the claim area occupy broad U-shaped glacial valleys. Valley walls are steep and rimmed by Miocene Volcanics. Talus slopes extend down the steep valley walls. Benches along both sides of the River give evidence of down cutting. The valleys are filled by glacial till.

The undulating plateau area is covered by a thin veneer of glacial erratics. Young basaltic volcanics are exposed as flat irregular surfaces along topographic highs, but along shallow topographic lows and erosional channel felsenmeer has developed.

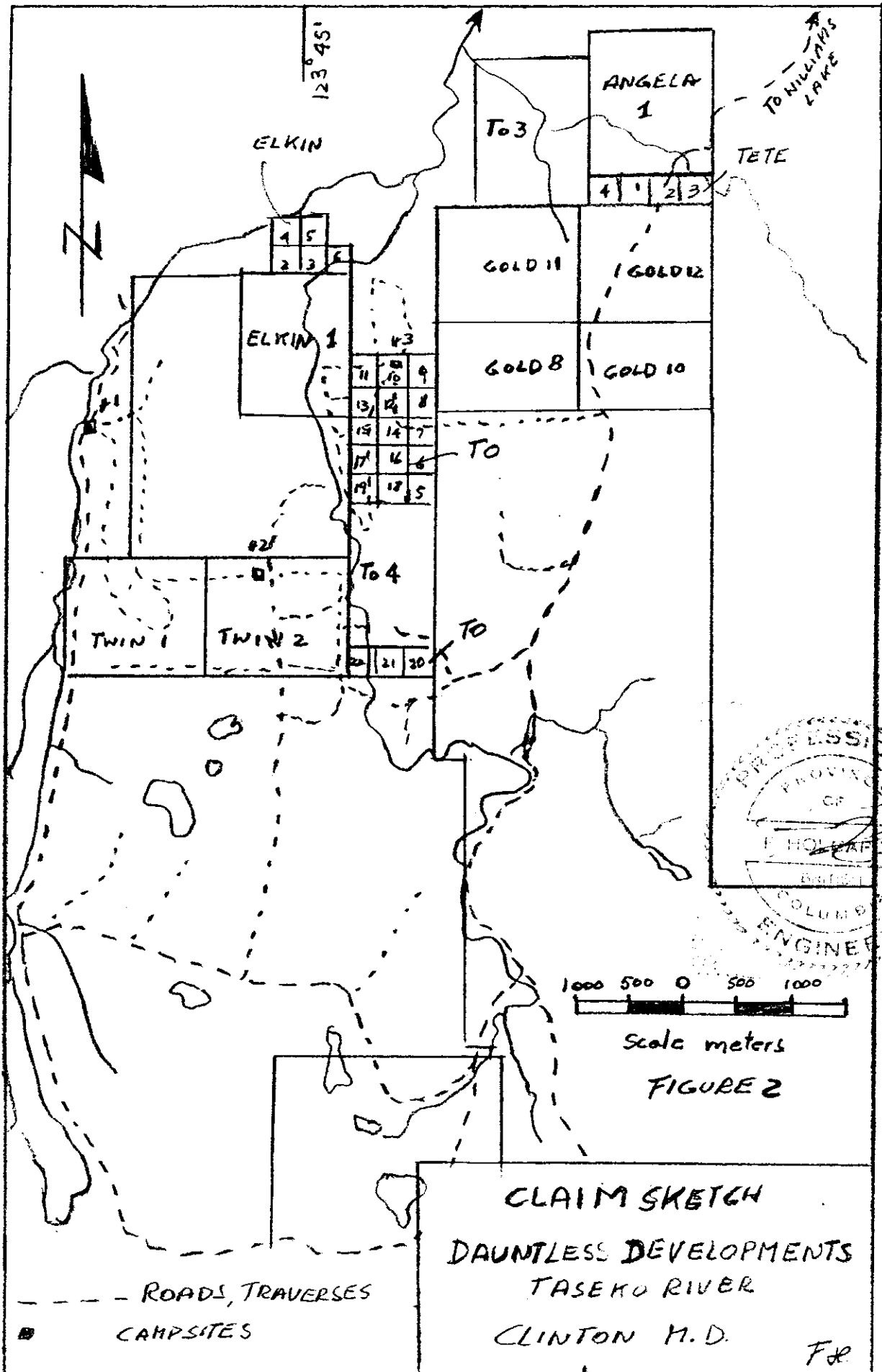
The plateau areas, where underlain by young volcanics, are covered by scrub pine, but along the steep slopes dropping into the Taseko valley, Verdun Lake and Elkin Lake, douglas fir, spruce and large pine grow. Along the glacial till filled valley large lodgepole pine, poplar, willows and dwarf birch predominate.

The climate in the area is continental with hot, dry summers followed by cold winters. Temperatures range from 18°C to 35°C in July and from - 10° to - 40° C in January. Annual precipitation is moderate. Snow cover lasts from November to April.

## 1 - 30 TITLE AND OWNERSHIP:

The claim group is held by Dauntless Developments Ltd. The property consists of the following contiguous mineral claims:

| <u>Claim Name:</u> | <u>Record #:</u> | <u># units:</u> |
|--------------------|------------------|-----------------|
| Elkin 1            | 306972           | 20              |
| Elkin 2 - 6        | 300171 - 75      | 5               |
| To 4               | 305989           | 18              |
| To 5 - 22          | 306104 - 21      | 18              |
| Twin 1             | 306970           | 20              |
| Twin 2             | 306971           | 20              |



## **2 - 00 HISTORY:**

The first mineralization in the Fish Lake - Tascko Lake area was discovered by prospectors during the early 1930's.

During the 1960's the possible porphyry copper potential was recognized leading to detailed exploration within the Fish lake area. A major diamond drill programme was initiated during the period of 1977 to 1985 resulting in indicated ore reserves of 201 million tons grading 0.24% Cu, 0.014 oz/ton Au and 0.033 oz/ton Ag. In addition 2 gold zones were discovered to the east and north of the copper deposit.

The Tascko area was mapped by the Geological Survey of Canada during the same period and the results were compiled by H. W. Tipper and published in 1978 as Open File 534, Tascko Lakes (92 O) map area.

During 1984 and 1985 MineQuest Exploration Associates Ltd on behalf of Brinco Mining Ltd. conducted a programme consisting of geological mapping, geochemical sampling and geophysical surveys followed by road building and percussion drilling of several targets. The results were inconclusive.

During 1990 - 1992 renewed interest centered on the gold - copper porphyry potential of the area. The old discoveries were re-examined and followed up by drilling leading to the discovery of additional ore reserves.

The above new interest lead to a staking rush resulting in numerous exploration programmes by a multitude of companies.

Valerie Gold Ltd. located gold claims covering the area north of Tascko Lake and east of the River including the Vick Creek and the Tote Angela Creek targets of Brinco. A programme of line cutting and geophysical survey covering the geochemical anomalies indicated by Brinco's work was conducted during 1992.

The Captain George Hill, Two Gullie and Cone Hill anomalies of Brinco were staked by Placer - Dome Co.

Dauntless Developments Ltd. located claims covering the Elkin Creek alteration zone, adjoining the Two Gullie to the south and filling in the gap between Placer Dome's claims and Valerie's claims.

Mr. F. A. Lang approached the writer to conduct a regional prospecting programme with the main objective to delineate the distribution of the Eocene volcanics and find areas of Kingsvale Group exposure within the claim group.

### **3 - 00 EXECUTION OF FIELD WORK:**

To accomplish the objective of the prospecting programme the writer conducted a literature search to obtain maximum geological information of the claim area. To facilitate the execution of the field work the writer made use of existing trails, roads and dirt tracks. The claim group was divided into 3 sections as followed.

1. Twin 1 and 2 mineral claims cover the area south of Two Gullie, west of the Taseko River, and the plateau area extending west to Elkin Lake. Access is by the old drill road starting at the Elkin Lake road leading 3 km east. At this point the road turns north for about 7 km where the 5S claim line of Twin 2 crosses. The road continues to the percussion drill sites at Two Gullie an additional 3.5 km.

The camp was set up along the northern claim line at about 2E,0N along the road. Water was obtained from a nearby swampy lake for washing and cooking but it was not fit to drink.

2. Elkin Creek west and north of Twin 2 has steep slopes dropping off from the plateau into the valley. Access is by a dirt track leading north, parallel to Elkin Lake.

Camp was set up at Elkin Creek. The water was not used for drinking because of reports of "Beaver Fever".

3. The To claims located east of Taseko River were accessed by a dirt track along an old seismic line trending west for 7 km and then turning north for 2 km up a low ridge.

Camp was set up at the end of an old logging road about 400 m east and 80 m south of To 10 & 11 initial Post. This was a dry camp. The nearest water supply is a swampy area in the valley. Taseko River lies 1,500 m due west of the camp site.

Field traverses were established with hip chain and compass making use of claim lines, creeks or other prominent topographic features. For ground control a 1:50,000 topographic map was used.

### **4 - 00 GENERAL GEOLOGY:**

The area of interest is located north of the Yalakom Fault. The following is based on mapping by H.W. Tipper, C.J. Higgins and others.

#### **4 - 10 STRATIGRAPHY:**

**QUATERNARY: PLEISTOCENE TO RECENT**  
- Glacial till, sand, gravels etc.

**TERTIARY: UPPER MIOCENE AND/OR PLIOCENE**  
Chilcotin Group - Olivine basalts, andesites, tuffs and breccia, grey to brown, porphyritic and amygdaloidal andesites, basaltic tuffs, breccia, and flows. Friable buff siltstone, greywacke.

**EOCENE (?) OLIGOCENE**  
Sheba Group - Buff, marve, brown dacite and rhyolite tuffs, breccia and flows. Felsite, feldspar porphyry, biotite feldspar porphyry, granodiorite, minor quartz.

----- UNCONFORMITY -----

**CRETACEOUS:           UPPER CRETACEOUS**  
- Granodiorite, quartz diorite, quartz monzonite, diorite.

**CENOMANIAN**  
**Kingsvale Group** - Varicoloured andesitic, dacitic, basaltic pyroclastics; minor flows and volcanic sediments. Interbedded siltstone, greywacke, conglomerate.

**4 - 20 STRUCTURAL GEOLOGY:**

The Chilcotin Volcanics consist of flat lying gently dipping beds resting unconformable on Pre Eocene rocks. These volcanics were affected by late stage faulting causing local tilting.

The main fault direction is represented by the Yalakom Fault, considered to be a splay of the Fraser Fault. At least 2 ages of movement are reported.

The thickness of the Kingsvale Group as exposed north of the fault is drastically less than on the south site of the fault.

At the junction of Taseko River and Elkin Creek a fault zone trending north - south along the Taseko River is reported. The fault appears to be localized along the axial plane of a northerly trending anticline.

Northwest trending faulting, bringing Chilcotin volcanics south of the gully against Kingsvale rocks north of the gully, is exposed in the Two Gullie area west of the Taseko River fault. Dioritic intrusions cut and interfinger with Kingsvale volcanics.

Alteration is intense consisting of silica flooding, calcite veining and bleaching of wall rock. Similar faulting is reported from Vick Creek.

Northerly trending folds in the Kingsvale Group were observed or are indicated along the Taseko River, Tete Angela creek and Vicks Creek.

**5 - 00 WORK PROGRAM COMPLETED:**

**TWO GULLIE AREA:**

1. Cleaning wind fall and boulders from access road north of Twin claim boundary.
2. Examining drill sites.
3. Examining outcrops along creeks and correlating with data from 1984 mapping.

**TWIN MINERAL CLAIMS:**

1. Checking track from south end of Elkin Lake East to Big Lake - 9 km by truck.
2. Cleaning windfall and checking rock along 10 km of dirt track going north from above track by truck.
3. Reconstruction of bridge across creek northern boundary Twin 2 mineral claim.



4. Approx. 5 km of chain and compass lines with station at 50 m interval along the eastern part of Twin 2 claim.
5. About 10 km of traverse on Twin 1 and 2 across the plateau underlain by Chilcotin volcanics.
6. About 6 km of traverses along western boundary of Twin 1, down slope into Elkin Creek and Elkin River. The traverse started at the Corner Post for CSR 10 & 11 and was carried south.

#### **AREA WEST OF MAIN ROAD TO TASEKO RIVER:**

1. Checking logging roads running north east about 1 km from Vicks Creek Crossing.
2. Checking dirt track about 2 km from Vicks Creek Crossing.
3. Checking seismic line about 4 km from Vicks Creek crossing, 10 km to end.

#### **TO MINERAL CLAIMS:**

1. Running chain and compass traverses west to the Taseko River with stations marked at 50 m intervals - 1.5 km
2. Running traverses along eastern slope of river 4 km to south.
3. Running traverses east and north along the top of the ridge to the claim line. Follow line for 4 km to To #10 & #11 Initial Post and beyond.

## 6 - 00 DESCRIPTION OF LOCAL GEOLOGY:

### 6 - 10 ROCK DISTRIBUTION:

#### CAPTAIN GEORGE HILL AND TWO GULLIE:

The writer visited the area to familiarize himself with the local characteristics of the Kingsvale Group volcanics, Kingsvale Group sediment and the Chilcotin volcanic, to examine the reported dioritic intrusion and associated alterations.

West dipping Kingsvale Volcanics (andesites, volcanoclastic andesites) are exposed on Captain George Hill and along the west side of Taseko River.

Along Two Gullie and the eastern slope of Captain George Hill the Kingsvale andesites trending N/60W are affected by a zone of alteration consisting of silicification, calcite veining and iron discolouration, centered about small, interfingering green dioritic intrusions.

South of Two Gullie at the same topographic elevation Kingsvale Volcanics change abruptly into Chilcotin Basalts suggesting faulting. The sense of movement indicated is north side up in respect to the south side.

#### TWIN # 1 AND TWIN # 2:

Along the traverses, following Taseko River south and along the top of the river bank north, Chilcotin volcanics outcrop forming an exposure up to 200 ft thick.

The volcanics consist of interbedded vesicular black basalts and brown to black massive basalts. At many localities the brownish black basalts weather to fine sand of the same colour. The top of the basalt shows a hexagonal fracture pattern suggesting columnar structure. Individual columns observed have diameters 10 to 20 cm across and a maximum length of 30 cm before they become indistinct.

The area above 4,500 ft elevation is a gently rolling plateau. Large areas of flat basaltic exposure interspersed with northerly trending falsemeers are common along the western part of the plateau.

The central and eastern part of the Twin claims is covered by a thin veneer of glacial till interspersed with abundant basaltic boulders. Northerly trending trains of Chilcotin volcanic boulders resting on sub outcrops are common along low ridges. These boulder trains appear to be aligned to the regional trend of glacial movement.

Along the dirt track leading east of Elkin Lake and north to the Twin claims, abundant large, semi angular Chilcotin basalt boulders were dug up during road construction. Similar boulders and sub outcrops of Chilcotin basalts were found along side tracks leading north along the western part of the plateau.

Along the eastern extension of the same track, about 1.5 km from the Twin Claim road andesitic boulders were found along the road and in a northeasterly flowing creek. The andesite is part of the Kingsvale Volcanics.

The traverse along the east side of Elkin valley started at the western edge of the plateau at the Corner post of CVS 10 and 11 and was run south. Outcrop along the plateau is very scarce. Glacial till and mixed glacial erratics prevail.

At about about 1 km south from the post a deeply incised northwest trending gully may be the western extension of the Two Gullie fault.

Along the steep drop off into the valley bands of volcanic outcrops and extensive talus slopes of Chilcotin volcanics were observed. The volcanics are black, vesicular basalts and massive basalts. Goethite filling of vesicles was observed at several localities.

#### **AREA WEST OF MAIN ROAD TO TASEKO RIVER:**

This area was prospected along old logging roads and trails starting at the big bend of the Taseko River - junction with Vick Creek.

At the big bend along a bluff Kingsvale sediments are exposed. The outcrop consists of banded grits and sandstone trending N/60E. The rocks are fractured and show argillic alteration and a multitude of calcite healed fractures.

About 1 km north of Vick Creek crossing, an old logging roads leads about 2 km west stopping on top of a low flat hill. A large lake and swampy area lies to the north. Along the road are flat lying black vesicular basalts area exposed. The logged off area is strewn with numerous large basaltic boulders. These volcanics are part of the Chilcotin Group basalts. A very thin veneer of glacial till and glacial erratics masks in part the young volcanics. Vegetation consists of lodgepole pines where not logged.

About 2 km from Vick Creek a dirt track leads north west towards the Taseko River through pine forest. The road terminates in the swamps surrounding the above lake. No outcrops were seen. Glacial till appears to increase in thickness as compared to the Twin #1 and 2 plateau.

About 2 km further north along the main road a seismic line, cuts west towards the Taseko River. From the main road to the northern end of the above mentioned swamp the line is cutting glacial till. A mixture of erratics consisting of igneous rocks up to boulder size predominate. Only occasional Chilcotin basalt float was observed.

West of the swamp (7 km from main road), the dirt track turns north climbing along the east side of a ridge for 2 km where it terminates in an old landing. Along the side hill glacial till is exposed in the road cuts. The landing is strewn with glacial erratics of all sizes but only a few large Chilcotin vesicular basalt boulders.

#### **TO MINERAL CLAIMS:**

The northern traverse was carried from the road westward to the Taseko River a distance of 1,500 m. The ridge between the road and the river shows no outcrops not even along the steep drop off into the Taseko River.

Vegetation consists of stands of fir, lodgepole pine and douglas fir. Ground cover consists of grasses and minor brush. Glacial till is exposed in the roots of windfalls. No Chilcotin volcanics were observed.

Three benches form the east side of the Taseko Valley. No outcrops were observed along the steep benches. The absence of rock exposure suggests the area may be underlain by the recessive siltstone and sandstone members of the Kingsvale Sediments.

The valley floor consists of glacial till and glacial boulders. Vegetation consists of lodgepole pine, ash and scrub birch (buckbrush). Willows predominate along swampy stretches.

The west side is a steep slope leading 700 ft up to the top of Captain George Hill. Rocks exposed appear to be altered Kingsvale Group as indicated by weathering and colour.

A traverse was run along and up and down the steep eastern bench for a distance of about 4 km. The first rubble and suboutcrop of Kingsvale Sediments were encountered 500 m downstream of the traverse. The outcrops consist of sandstone trending NW/80E, as measured on small exposures.

About 1.5 km downstream, along the valley rim a band 1 m thick of Chilcotin vesicular basalts crops out. The volcanics are flat lying. The Kingsvale sandstone below trends NW/60E and show slight bleaching. Cross fractures trending NE/75S are associated with narrow zones of crenulation.

The sediments crop out for a distance of 3.5 km downstream. They change from siltstone to sandstone down slope. Fracturing is abundant but no calcite veining was observed. The colour changes from tan to white's in areas of fracturing may be related to minor hydrothermal bleaching.

The Chilcotin basalts increase to an exposed thickness of 5 m along the rim in accordance with the rise in elevation along the ridge. Vegetation consists of lodgepole pine.

The traverse was carried 500 m to the east of the river and north following the To location line which angles diagonally up slope to the top of the low ridge. Chilcotin basalt boulders and small suboutcrops are encountered along the traverse to the Initial Post of To #12 and #13. From this point on the slope drops gently northward. For the next 3 km north no outcrops or young basaltic boulders were observed along the location line. Vegetation consists of mixed conifers.

The Initial Post of To #13 and #14 are located just south of a little lake which is located in a very distinct northerly trending depression less than 25 m wide, a possible fault.

The traverse was continued east for about 500 m from a point 1 km north of the Initial Post To # 10 and #11 and then southward to camp. No outcrops were observed along the eastern slopes of the ridge. Glacial till and igneous erratics predominate. The vegetation consists of open stands of mixed conifers which was found to be characteristic for areas underlain by pre Chilcotin Group rock units. To the east of the ridge a north trending, pronounced topographic low is located.

Geophysical work conducted by Valerie Resources Ltd. to the southeast of the To mineral claims along the southern extension of the same topographic low delineated a chargeability anomaly which is offset by a northerly trending fault.

## **6 - 20 DISCUSSION OF ROCK DISTRIBUTION:**

During the mapping it became apparent that the distribution and thickness of the Chilcotin Volcanics is controlled by paleo topography.

Along the Elkin Lake valley and along the Taseko River the unconformity separating Chilcotin Basalts from the older rock units appears to be confined to elevation of 4,000 ft to 4,500 ft suggesting a gently undulating erosional surface.

Captain George Hill and the hill north of Chaunagan Lake are underlain by Kingsvale Volcanics with the contact indicated at the 4,500 ft and 5,000 ft contour respectively suggesting two topographic highs rising above the volcanic plateau.

East of the Taseko River (To and Gold mineral claims) the Chilcotin Volcanics overlay Kingsvale Sediments. The contact follows the 4,000 ft to 4,200 ft contour. The pre Chilcotin erosional surface appears to rise towards the east.

At Two Gullie the Kingsvale rocks are intruded by diorite but to the south Chilcotin Volcanics outcrop at the same elevation indicating faulting.

In the area of investigation the Kingsvale Group outcrops are in general confined to:

1. Erosional windows lying below the 4,200 ft contour of the plateau area. The elevation of the contact is controlled by the undulating paleo erosional surface which underlays the Chilcotin Volcanics and appears to rise towards the east.
2. Pre Chilcotin Group topographic highs rising above the 4,500 ft to 5,000 ft elevation of the plateau.
3. Uplifted fault blocks where recent erosion has stripped the Chilcotin volcanics.

Using vegetation to interpret underlying rock types the following can be postulated:

1. Along the plateau underlain by Chilcotin Group volcanics stunted lodgepole pine predominate.
2. Along the steep slopes mixed conifers - pine, douglas fir, fir etc. grow. These areas are interpreted as being underlain by volcanics, but erosion and weathering is deep enough to allow circulating water to penetrate the young basalt.
3. Douglas fir, large pine and other conifers grow in areas underlain by the Kingsvale Group (To Claims). The size of windfall pines (uprooted) fall within a constant range suggesting a limiting size, but other conifers are not affected.
4. In valleys filled by glacial till normally large pines and minor firs grow. Poplar and willows are confined to the marshy areas. Scrub birch was observed along stranded gravel banks or old, dry channels.

## **6 - 30 STRUCTURAL GEOLOGY:**

### **6 - 31 UNCONFORMITY:**

The contact between Chilcotin Group Volcanic and Kingsvale Group rocks is a paleo erosional surface.

The Chilcotin Group Volcanics observed in the field are normally gently dipping to horizontal with the attitude and thickness of the group depending on the topography of the paleo erosional surface on which they have been deposited. The erosional surface is normally delineated along valley walls and appears to follow the 4,200 ft to 4,300 ft topographic contour (Elkin Lake, Elkin Creek, Taseko River).

Exceptions to the above are Captain George Hill and the area north of Chaunagan Lake which appear to be pre Chilcotin Group topographic highs. Along the southern and eastern side of Captain George Hill the erosional surface is exposed along the 4,500 ft contour, but north of Chaunagan Lake the surface lies at 5,000 ft (contact between Kingsvale Group and Chilcotin Group)..

### 6 - 32 FOLDING:

Along the Taseko River a change of attitude from N/60 W in the Kingsvale volcanics on Captain George Hill to N/60W in the Kingsvale sediments along the west bank of the Taseko River has been observed.

At the big bend of the Taseko River along the west side Kingsvale Group volcanics with apparent westerly dips are exposed, but the bluff along the east side is formed by Kingsvale Group Sediments trending N/80E.

The indicated anticlinal fold axis follows the valley of the Taseko River.

Small scale folding is reported from Tete Angela Creek within the Kingsvale Sediments. The sediments are a recessive rock unit, outcrop areas are too small to allow observation of large scale folding.

### 6 - 33 FAULTING:

#### a. ENE trending Faults

1. At the big bend of the Taseko River an ENE trending fracture is indicated by topographic features and by the sudden change of direction of the river.

North and south of the Big bend the river valley follows a northerly course. The indicated displacement is south side to the east in respect to the north side with a minimum displacement in the order of at least 500 m.

#### b. North trending Faults

1. Along the Taseko River, north of the bend Kingsvale Volcanics, west side, are brought against Kingsvale Sediment, east side, indicating a north trending fault. The fault structure lies along the trace of the anticlinal fold axis.
2. About 3 km east of the Taseko River a northerly trending topographic low was interpreted as a possible fault from topographic features. This fault was confirmed by geophysical observation.

#### c. Northwest trending Faults

1. The major regional fault structures mapped in the district are related to the northwesterly trending Yalakom Fault a branch of the Fraser fault. This structure passes through the northern part of Taseko Lake.
2. Northwesterly faulting was observed along Two Gullie, south of Captain George Hill, where Chilcotin volcanics are thrown against Kingsvale sediments. The indicated movement is north side up in respect to the south side.
3. At the bluff, located along the northeast side of the big bend in the Taseko River, faults and fracture zones cut the Kingsvale sediments and associated alteration zones. They could not be traced across the Taseko River.

## INTERPRETATION:

Evidence on hand suggests the following age relationship and apparent displacements. Additional field data is required to confirm the following interpretation.

1. ENE Faults are considered the youngest. They cut N - S faults and have an indicated horizontal displacement in the order of 500 m, south side to the east in respect to north side. The vertical movement is unknown.
2. N - S Faults cut NW faulting. Indicated horizontal movement is in the order of at least 1 km, east side south in respect to west side. Vertical displacement is indicated by the presence of Kingsvale Volcanics on the west side of the river at the same elevation as Kingsvale Sediments on the east side of the river i.e. east side up in respect to the west side. The apparent direction of displacement by north trending faults is confirmed by geophysical data which indicates a N - S fault displacing a chargeability anomaly.
3. The NW Faults are parallel to the Yalakom Fault and appear to belong to the same system. The magnitude of horizontal and vertical movement is not known. The sense of horizontal movement for northwest trending faults is indicated as north side east in respect to the south side. Vertical movement, as suggested by the sudden increase in thickness in the Kingsvale Group south of the Yalakom Fault, is south side down in respect to north side.

Within the Two Gullie area vertical movement along the northwest trending fault is inconclusive but Kingsvale Volcanics outcropping along strike south of the fault are at a lower topographic elevation suggesting that the north side was moved up in respect to the south side (4,100 ft versus 4,500 ft respectively).

## 6 - 40 ECONOMIC GEOLOGY:

The main mineral deposit in the district is the Fish Lake copper - gold porphyry system. Kingsvale volcanics and sediments are intruded by a differentiated quartz diorite stock.

The wall rocks are hydrothermally altered and mineralized by pyrite, chalcopyrite, bornite and molybdenite. Low gold values occur associated with the sulphides.

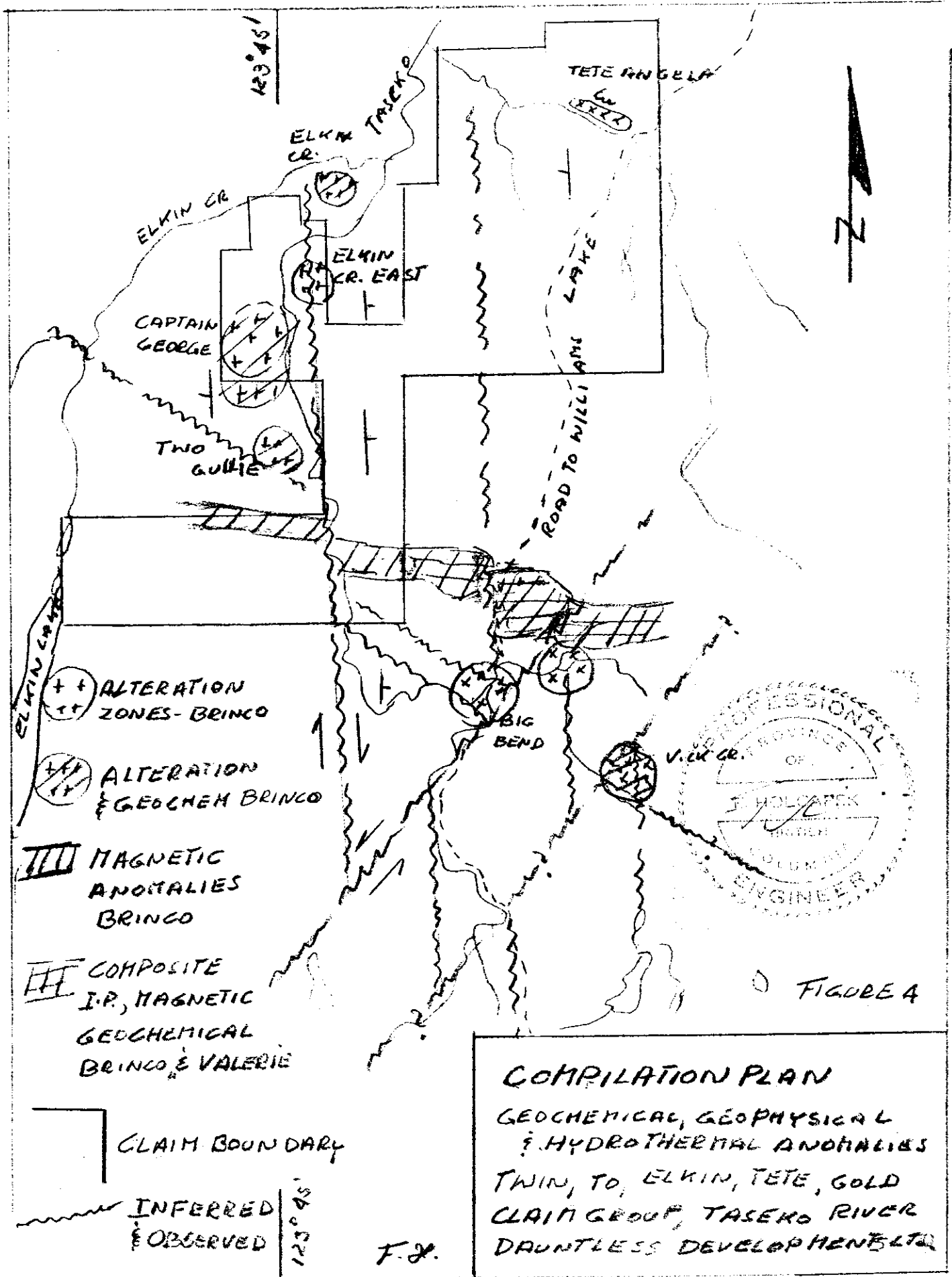
Brinco's work, 1985, delineated the following alteration zones with associated geochemical anomalies within or adjacent to the area now held by Dauntless Developments Ltd:

| <u>Within Claim Area</u> | <u>Adjoining Claim Area</u> |
|--------------------------|-----------------------------|
| 1. Elkin Creek           | 1. Captain George Hill      |
| 2. Elkin Creek East      | 2. Two Gullie               |
| 3. Tete Angela Creek     | 3. Vick Creek               |
|                          | 4. Big Bend                 |

The alteration observed consists of silicification, argillic alteration, calcite veining and intense fracturing. Only at Two Gullie is the alteration known to be associated with intrusives.

The Two Gullie alteration zone is centered about the top of a dioritic intrusion which forms small stocks, dykes and fingers.

No alteration was observed on the Twin 1 and 2 mineral claims. On the To mineral claims slight bleaching and crenulation was seen east of the Taseko River. The Elkin mineral claim covers the Elkin Creek and part of Captain George Hill alteration zone of Brinco.



- (+ +) ALTERATION ZONES - BRINCO
- (+ +) ALTERATION & GEOCHEM BRINCO
- |||| MAGNETIC ANOMALIES BRINCO
- |||| COMPOSITE I.P., MAGNETIC GEOCHEMICAL BRINCO & VALERIE

CLAIM BOUNDARY

INFERRED  
& OBSERVED

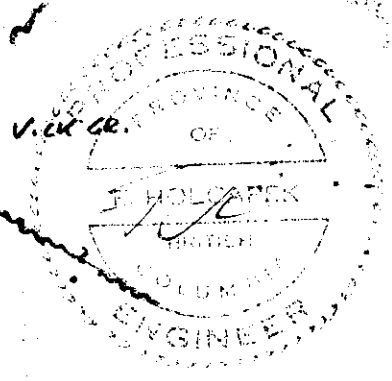


FIGURE 4

**COMPILATION PLAN**  
 GEOCHEMICAL, GEOPHYSICAL  
 & HYDROTHERMAL ANOMALIES  
 TWIN, TO, ELKIN, TETE, GOLD  
 CLAIM GROUP, TASEKO RIVER  
 DAUNTLESS DEVELOPMENT

F.J.



Geochemical anomalies are reported to be associated with the alteration zones, but past work has not defined the extent of the alteration zone nor their economic potential.

A recently completed Induced Polarization survey, executed by Valerie Resources Ltd, delineated a strong chargeability anomaly east of the To # 4 mineral claim which possibly extends into the claims to the west.

The chargeability anomaly is associated with a regional magnetic high, and anomalous mercury, arsenic and gold concentrations in soils, bounded by northwest faulting along the south side and offset by a north trending fault. Indicated movement along the north trending fault is east side south in respect to west side, the same as along the Taseko River fault.

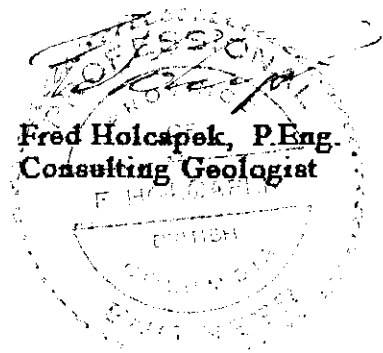
The alteration zone exposed at the Big Bend, and north of Vick Creek are peripheral to the chargeability anomaly and may delineate the limits of the hydrothermal system responsible for producing the alteration zones and the associated geochemical and geophysical anomalies within the Kingsvale Group.

The Two Gullie zone of alteration and intrusions is localized along a northwest trending structure. A faulted off segment of the same structure is indicated to form the southern limits of the chargeability anomaly suggesting that the Two Gullie zone, although moved south, extends through the To #4 mineral claim and underlays the anomalous areas east of the claim boundary.

## 7 - 00 CONCLUSIONS:

1. The Twin 1 and 2 mineral claims are underlain by the Chilcotin Volcanics. The young volcanic forms a blanket of varying thickness making further exploration very difficult.
2. The Elkin Creek claim is underlain by exposed Kingsvale volcanics and sediments. Work by Brinco has delineated alteration zones and geochemical anomalies. This claim warrants further investigation to establish its economic potential.
3. The To mineral claims are underlain by Kingsvale sediments. Several outliers of Chilcotin volcanics have been recognized in the field.
4. The Two Gullie zone of alteration and intrusions is localized along a northwest trending structure. A faulted off segment of the same structure is indicated to form the southern limits of the chargeability anomaly suggesting that the Two Gullie zone, although moved south, extends through the To #4 mineral claim and underlays the anomalous areas east of the claim boundary. Additional exploration is warranted to clarify the structural setting and establish the economic potential of the mineral claims.
5. A preliminary programme of prospecting should be conducted to cover the north-eastern part of Dauntless Developments Ltd. mineral claims.

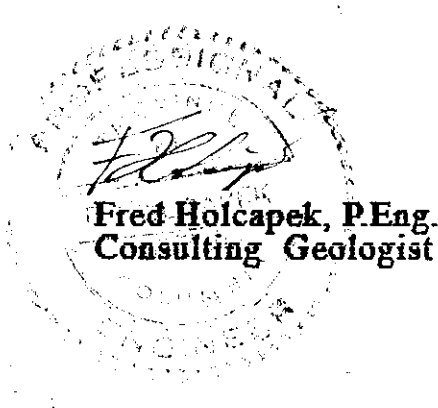
September 30, 1992  
Richmond, B.C.



## CERTIFICATION

1. Ferdinand Holcapek of 8880 Citadel Crescent, Richmond, British Columbia hereby certify that:
  1. I am a graduate of the University of British Columbia with a B.Sc. degree in Geology 1969.
  2. I am a member of the Association of Professional Engineers of British Columbia, registration # 8962.
  3. I have practiced my profession, since graduation, in Canada, United States of America, Australia, Africa, Mexico and Central America.
  4. I was engaged in exploration in the Highland Valley, Afton Mine Area, and the Caribou District during 1966 - 75 for Agilis Engineering Ltd and in the Quesnel Lake - Adams Lake area during 1981 - 85 for Holcapek Engineering Ltd and the Kamloops - Shumway Lake area in 1990 - 91 for Geox Services Ltd.
  5. This report is based on results obtained from geological mapping, and prospecting conducted during the period of August 14 to August 27, 1992 by the writer in the Taseko River Area, the Twin, To and Elkin Mineral Claims, on past experience within the district, and literature research.
  6. I hereby give my consent for submittal of this report to satisfy assessment work requirements for the Department of Mines of British Columbia.
  7. No portion or summary of this report may be used without the written approval of the writer.

September 30, 1992  
Richmond, B.C.



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**FRED HOLCAPEK, BSo., PENG**  
8880 Citadel Crescent, Richmond, B.C.  
Telephone: (604) 274-6288

**EDUCATION**

- 1965 - 1969 University of British Columbia, BSc - Major Geology, Minor Geophysics  
1969 - 1973 Engineer in Training registered with the Association of Profession  
Engineers of British Columbia.

**WORK RECORD**

- 1991 - present: Consultant Geologist: Regional evaluation of areas for potential gold - copper porphyry deposits in British Columbia and Mexico. Evaluation of copper - gold skarns in the High Sierra, Durango, Copper replacement and gold quartz veins in Gurrera, and Nayarit Mexico.
- 1988 - 1991 Consultant Geologist - Geoex Services Ltd: Gold exploration in Cote d'Ivoire including testing of eluvial and alluvial placers, and laterite deposits; Property evaluations in Arizona, California, Nevada and Mexico including gold replacement deposits, volcanogenic and hot spring type gold deposits, and eluvial placers.
- 1985 - 1988 Consultant Geologist - Geoex Services Ltd: Consulting on gold projects in the Western USA, British Columbia, Mexico and Cote d'Ivoire.
- 1981 - 1985 Consultant Geologist - Holcapek Engineering Ltd specializing in examination and evaluation of gold deposits, gold placers and volcanogenic base metal deposits in British Columbia, Yukon, California, Nevada and Idaho.
- 1979 - 1981 Technical consultant CONDEMINA - the Nicaraguan State Mining Co. Evaluation of Nicaraguan mineral resources, Formulating an exploration and exploitation strategy, Training local people as exploration technicians, surveyors, and samplers.
- Supervision of gold production at: Rosita (700 ton/day), 1,300 men  
Bonanza (800 tons/day) 800 men  
La Luz (1,000 tons/day) 1,000 men
- Evaluate and bring into production new deposits: Espanolina 150 tons/day, Guayaba 150 tons/day, La Luna Deposit.
- 1978 - 1979 Holcapek Engineering Ltd. - Exploration and Development Projects in Central America.
- 1976 - 1978 Agilis Engineering Ltd. Chief Engineer for Nicaragua, (Santa Rosa Mine, Santa Elena Mine and Primavera Mina). Development, exploration and production engaging up to 150 men, 1 geologist and Metallurgical Engineer.
- 1972 - 1976 Agilis Engineering Ltd., Geological Engineer and Partner. Projects in British Columbia, Yukon, Ontario, Western United States, Mexico, Central America and Fiji. Management of up to 80 field men, 5 field geologists at 5 exploration projects working simultaneously.
- 1969 - 1972 Agilis Exploration (Australia) Pty. Ltd Manager of Australian Exploration Projects.
- 1965 - 1969 Student, Agilis Exploration Ltd., Summer employment British Columbia, Yukon and North West Territories, Canada. Crew leader - supervision of 5 men exploration camps.
- 1962 - 1964 Student, Alrae Exploration Ltd, Summer employment in mineral exploration, British Columbia and Yukon.
- 1959 - 1962 Cassiar Asbestos Corporation, Assistant to the Mine Geologist

Dauntless Developments Ltd  
1000 - 1177 West Hastings Street  
Vancouver, B.C., V6E 2K3

Invoice #138

Taseko River - Twin, To, Elkin Claims  
Geological Investigations, Report preparation  
August 14 to August 27, 1992

**Field Personnel:**

|                                |              |           |           |
|--------------------------------|--------------|-----------|-----------|
| F. Holcapek, Geologist 14 days | \$250.00/day | \$3500.00 |           |
| C. Karchewski, Asst. 14 days   | \$100.00/day | \$1400.00 | \$4900.00 |

**Office Personnel:**

|                           |              |           |           |
|---------------------------|--------------|-----------|-----------|
| F. Holcapek Geologist     | \$250.00/day | \$1250.00 |           |
| Report preparation 3 days |              |           |           |
| Maps 2 days               |              |           |           |
| Office assistance         |              | \$ 150.00 | \$1400.00 |

**Office expenses**

|                          |         |           |           |
|--------------------------|---------|-----------|-----------|
| Paper, printer tape etc. | \$47.50 |           |           |
| Miscellaneous supplies   | \$75.00 |           |           |
| Parking down town        | \$35.00 |           |           |
| copying,                 | \$ 6.50 | \$ 122.50 | \$ 122.50 |

**Field Expenses:**

|                       |          |  |  |
|-----------------------|----------|--|--|
| Truck Rental          |          |  |  |
| 2 weeks \$40.00/day   | \$560.00 |  |  |
| \$0.10/km on 1,600 km | \$160.00 |  |  |
| \$0.15km on 350 km    | \$ 52.50 |  |  |
| Repairs Muffler, Tire | \$ 61.85 |  |  |
| Gasoline              | \$255.99 |  |  |
| Groceries, Overwaitea | \$182.62 |  |  |
| Cosco                 | \$ 65.00 |  |  |

**Hotel-travel**

|                           |           |           |           |
|---------------------------|-----------|-----------|-----------|
| Dessert Inn Cache Creek   | \$ 63.25  |           |           |
| Sandman                   | \$108.24  |           |           |
| Restaurant meals          | \$ 168.56 |           |           |
| Tips 15%                  | \$ 25.28  |           |           |
| Coquihala Toll            | \$ 10.00  |           |           |
| Camping Equip. Rental     | \$ 280.00 |           |           |
| 14day at \$25.00/day      |           |           |           |
| Propane, mantles, off etc | \$ 68.05  |           |           |
| Engineering supplies      | \$120.00  |           |           |
| Maps                      | \$ 17.63  | \$2193.97 | \$2321.47 |

|                                       |                  |
|---------------------------------------|------------------|
| Total                                 | \$8621.47        |
| <u>Less Advance Exp. Account# 137</u> | <u>\$1665.10</u> |

**Total This Invoice: \$8956.37**

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### GEOLOGY SKETCH

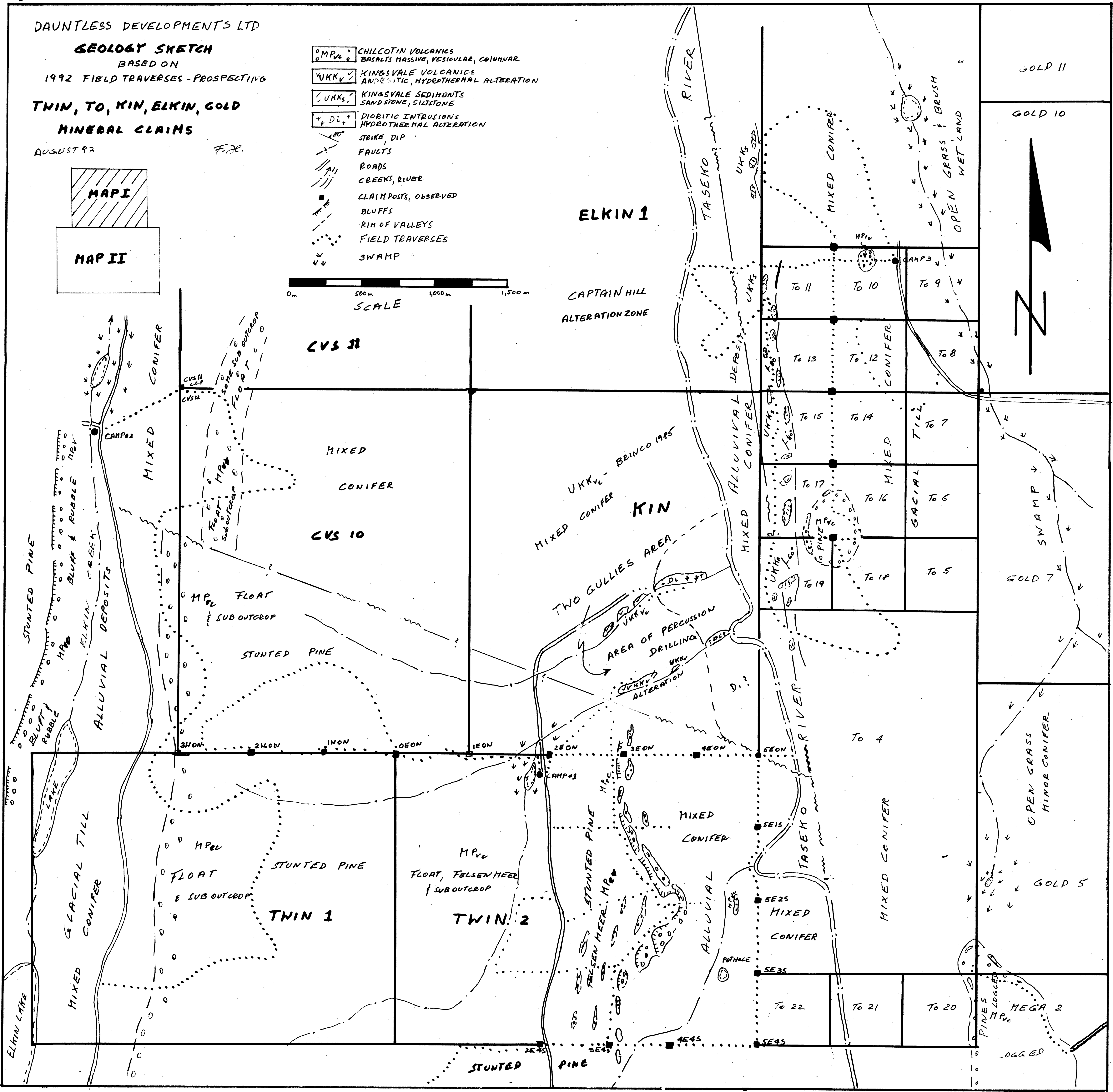
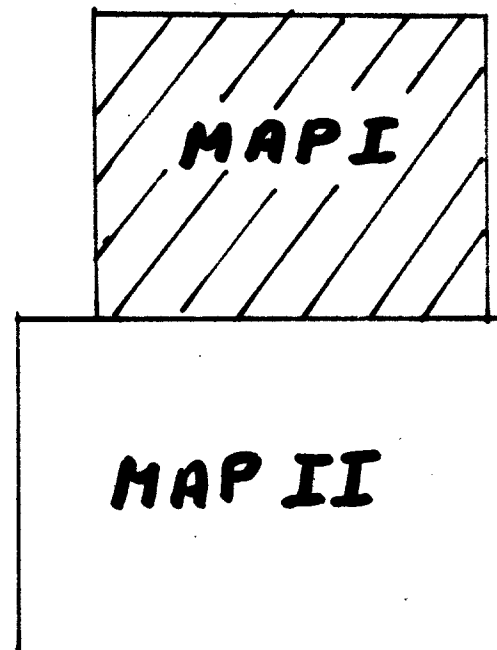
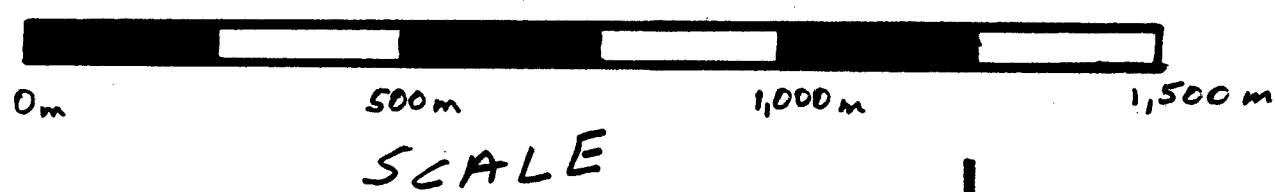
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1992 FIELD TRAVERSES - PROSPECTING

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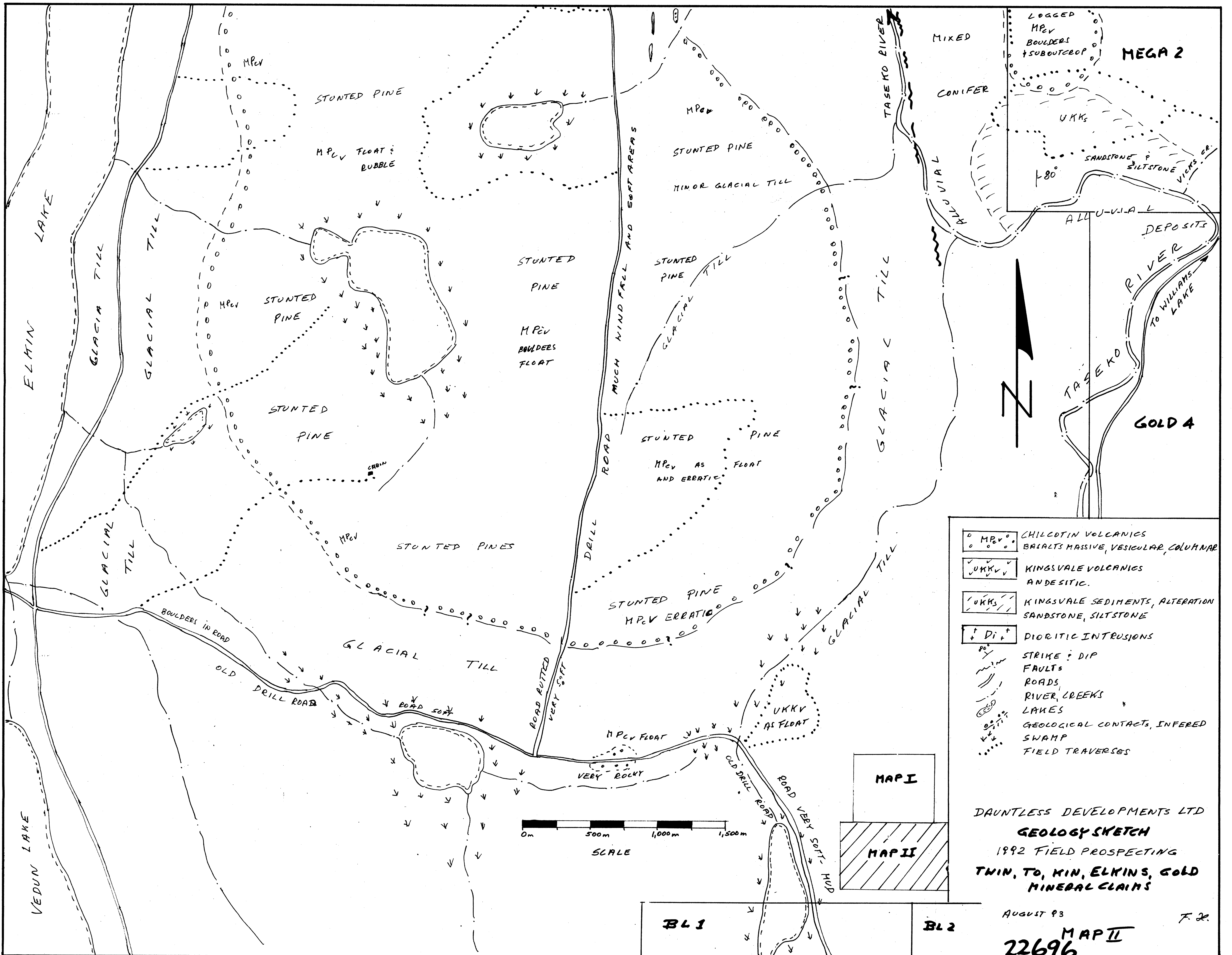
AUGUST 93

F.Z.

- MP<sub>v</sub> CHILCOTIN VOLCANICS  
BASALTS MASSIVE, VESICULAR, COLUMNAR
- UKK<sub>v</sub> KINGSVALE VOLCANICS  
AND EITIC, HYDROTHERMAL ALTERATION
- UKK<sub>s</sub> KINGSVALE SEDIMENTS  
SANDSTONE, SILTSTONE
- D<sub>i</sub> DIORITIC INTRUSIONS  
HYDROTHERMAL ALTERATION
- STRIKE DIP
- FAULTS
- ROADS
- CREEKS, RIVER
- CLAIM POSTS, OBSERVED
- BLUFFS
- RIM OF VALLEYS
- FIELD TRAVERSES
- SWAMP

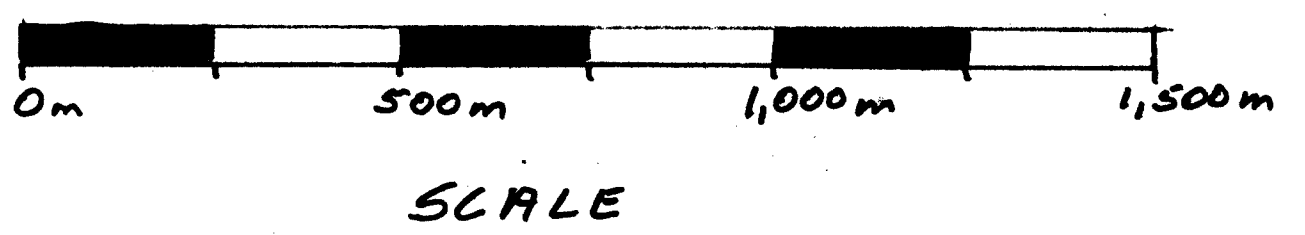






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- ○ LAKES
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- ∨ ∨ SWAMP
- ∨ ∨ FIELD TRAVERSES

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 1992 FIELD PROSPECTING  
 TWIN, TO, KIN, ELKINS, GOLD  
 MINERAL CLAIMS



AUGUST 93

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MAP II  
 22696

BL1

BL2

MAPI  
 MAPII