GEOLOGICAL SUMMARY REPORT

TILLICUM MOUNTAIN GOLD PROJECT
Slocan Mining Division, British Columbia

FOR

MUSTANG MINERALS CORP
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INTRODUCTION

Terms of Reference

This report on the Tillicum Mountain gold project was commissioned by the management of Mustang Minerals Corp., a company with offices at Suite 514, 120 Adelaide Street West, Toronto, Ontario.

The report is based on a review of selected previous reports by a various authors, including those closely connected with exploration on the property, independent consultants and government geologists. Discussions and meetings were also held with one geologist (George Addie) familiar with the property. The authors did not make a property visit in conjunction with preparing this report but Ross Glanville did visit the property approximately three years ago and Robert Handfield travelled to Nelson to review reports and original data

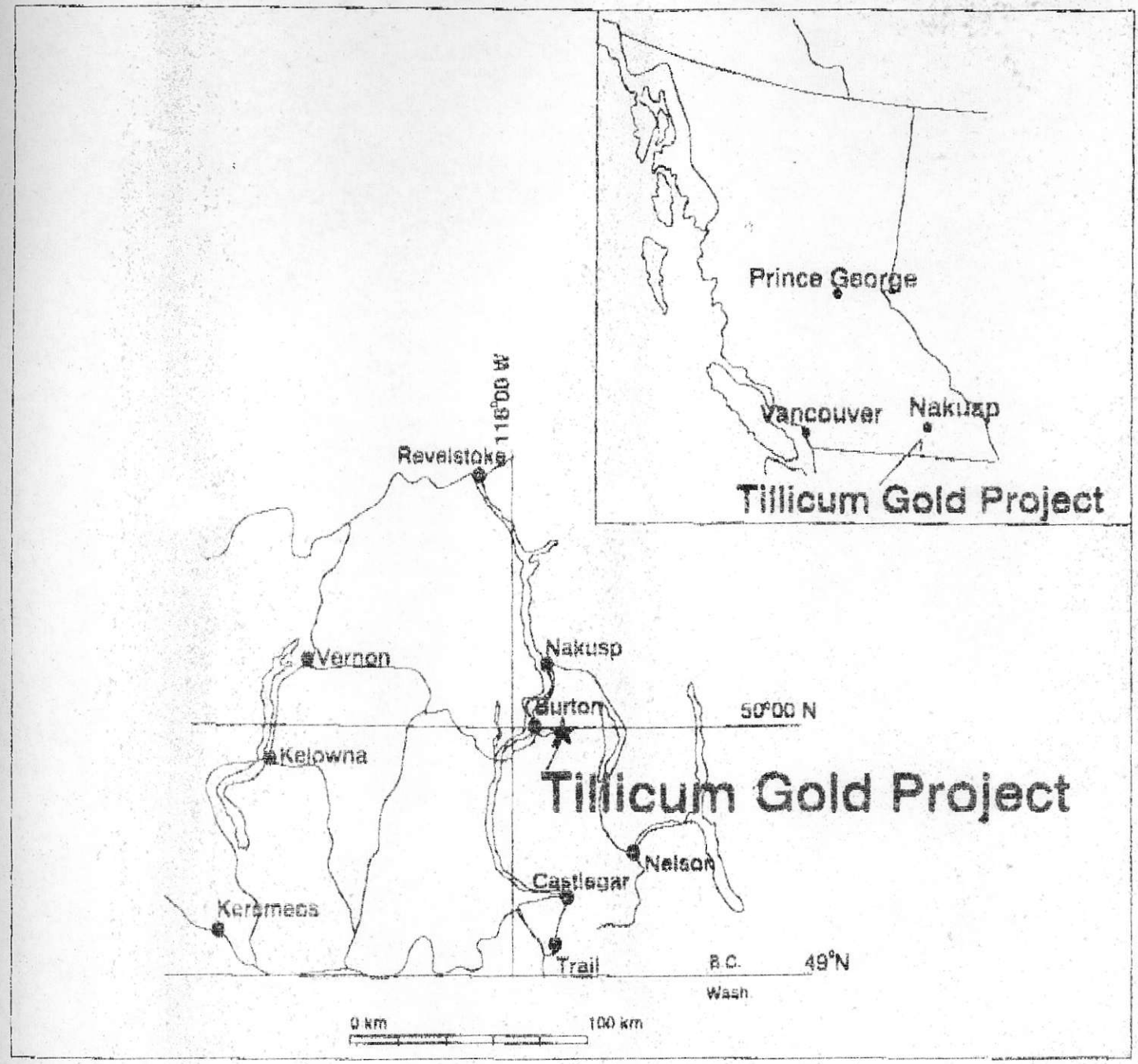
Property Location and Access

The Tillicum Mountain property is located in the Arrow Lakes region of southeastern B.C., approximately 12 km east of the village of Burton (Figure 1). The property is in the Slocan Mining Division on and about the slopes of Tillicum Mt on the western edge of the Valhalla Range. The coordinates are 49° 49' N latitude and 117° 43' W longitude within NTS mapsheets 82F/13 and 83K/4

Elevations on the property range from about 885 m to over 2300 m. The main camp area is located at an elevation of 2000 m. The topography is generally steep and in places, precipitous. Bedrock outcrop, less than 10% of the surface area, is generally restricted to ridge crests. Slopes are mostly covered with overburden consisting of talus slopes, snow-avalanche debris tracks and unconsolidated glacial debris. Coniferous forest covers the entire area with the exception of the highest peaks and ridges

Access to the property from Burton is by way of a network of logging and mine access roads along the watersheds of Burton and Londonderry Creeks. The distance to the Heino-Money mine site is approximately 17 km by road. This portion of the road is accessible by 2-wheel drive truck, whereas access to other areas of the property requires use of a 4x4 vehicle

The Arrow Lakes region of BC is characterized by warm, moderately moist summers and cool, snowy winters. Total annual precipitation in the main valley is 810 mm with about 280 mm of that in the form of rain between May and September. Both precipitation and temperature vary significantly with altitude. It could be expected that during most of the winter months, the temperature at site would be well below freezing, even during the day. The property is generally free of snow from mid-June until into October, but with appropriate equipment, mining operations would be practicable year round. Surface exploration however, would be generally confined to the summer and early fall months.



R. C. HANSENELD

TILLICUM GOLD PROJECT
PROPERTY MAP

Date: Feb. 14, 2000 | Figure: 1

The Village of Burton offers food, fuel and accommodation while the town of Nakusp, approximately 40 km to the north, offers a more extensive range of services.

Claim Status

The property is comprised of a mix of Crown-granted mineral claims, 2-post claims and "Modified Grid" system claims totalling 3,290 hectares (Figure 2). All of the claims are owned by Mustang Minerals. The BC Government website shows the status of the claims as shown in Table 1.

The authors of this report have not undertaken a legal title search and offer no opinion as to the good standing or otherwise of the claims. They do however point out that some assessment work is required during 2000 to maintain the claims.

Environmental and Land Issues

Since mining has taken place previously on the property one might assume there are no overriding reasons why exploration and mining could not be resumed. However, the village of Burton has imposed a "community water shed" claim on the whole of the Caribou drainage system. Mr. George Addie, P. Eng (personal communication) has discussed this issue with the BC Ministry of Energy and Mines office in Cranbrook and they have reportedly given assurances that exploration would be allowed. As with any mineral claim anywhere in Canada (or for that matter, much of the world) there is no absolute assurance that the necessary environmental and mining permits would be granted if an economic mineral deposit is found.

There is some baseline environmental information available from work done during the 1980's but we have not reviewed that information.

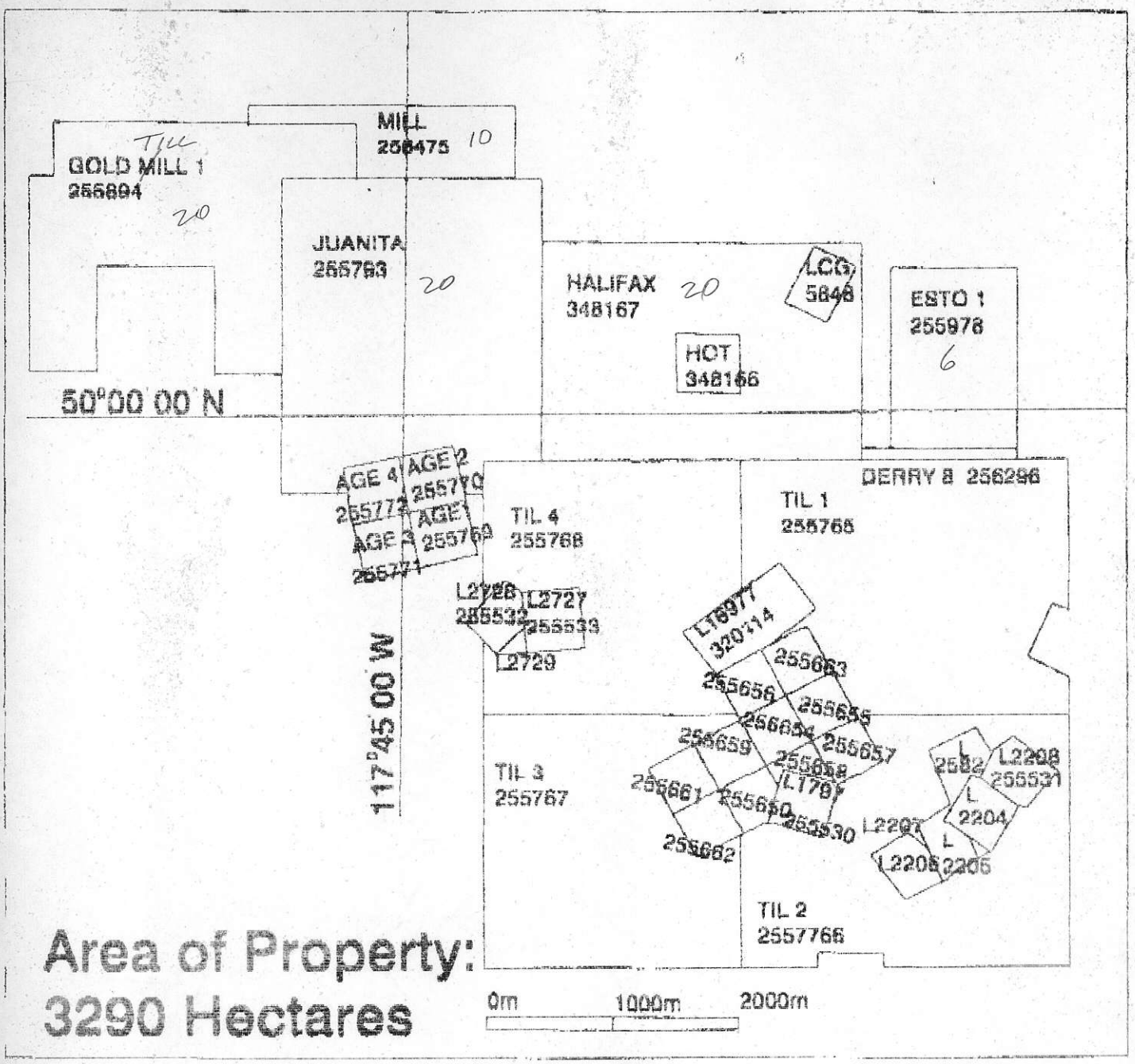
Review of public information available indicates there are no existing aboriginal land claims that cover the Tillicum Mountain area.

Property Data

There are a number of sources of information available. These include the BC Assessment Reports, various publications and unpublished exploration reports and maps. Many of the latter are stored in a private house in Nelson but we were told there is also some information stored in Vernon.

Much of the property data stored in Nelson is not properly archived and we have made no attempt to do an exhaustive review of the data. Such a review would require a substantial effort beyond the scope of this report.

Top Tier = 76 units x 200 = 15,200



Area of Property:
3290 Hectares

PROFESSIONAL ENGINEER
PROVINCE OF BRITISH COLUMBIA
R. G. HANDFIELD
GEOSCIENCE

TILLICUM GOLD PROJECT
CLAIM MAP
(after G. G. Addie, P. Eng., B.C.)

Date: Feb. 14, 2000 Figure: 2

TABLE 1

Claim Name	Number	Units	Due Date
Sandy Too 1-3	255654-56	3	09-20-2000
Molly	255533 (RCG)	1	08-08-2000
Age 1-4	255769-72	4	09-29-2000
Near 1-7	255657-63	7	09-20-2000
Til 1	255765	20	09-29-2000
Til 2	255766	20	09-29-2000
Til 3	255767	16	09-29-2000
Til 4	255768	16	09-29-2000
Little Joe/Molly Fr.	255532 (RCG)	1	08-08-2000
Wolf Lease	320414	1	01-23-2001
Hugh lease	320414	1	01-23-2001
Derry #8 Fr.	256296	1	02-19-2001
Black Bear	255531 (RCG)	1	08-08-2000
Golden Hope	255530 (RCG)	1	08-08-2000
Gold Till 1	255894	20	08-08-2000
Esto #1	255978	6	07-29-2000
Mill #1	256475	10	05-17-2000
Juanita	255793	20	10-28-2000
Halifax	348167	20	07-18-2000
Hot	348166	now included in Halifax	
Crown Grants	Lot No.		
Grey Wolf	2204	1	
Red Fox	2205	1	
Black Fox	2206	1	
Black Fox Fr	2207	1	
Grey Wolf Fr.	2209	1	
Black Bear Fr	2582	1	

-2
-2
-2
-2

HISTORY

Regional

The town of Burton owes its origin to gold miners coming into the area about 1895. Numerous placer gold operations were begun on Caribou Creek and were active in to the early 1900's. Small scale hard-rock mine workings that were active during the period 1896 to 1930 (and occasionally later) are found throughout the area as well. Prospecting was carried out in the Tillicum Mountain area up to 1960 but the hard-rock source of the placer gold was apparently never found.

Property

The Tillicum prospect was discovered in 1980 by prospectors A. and E. Gustafson at the spot that later became the "Heino-Money mine". The discovery sample assayed 25 ounces of gold per ton and is now on display at the Chamber of Mines of Eastern BC in Nelson.

Esperanza Explorations Ltd optioned the property and undertook exploration during the period from 1980 to 1989 during which time approximately $10 million was spent.

Early exploration was understandably focussed on the discovery zone with its "bonanza" grades. During this period exploration of the Heino-Money zone comprised of surface drilling, underground drifting and raising, underground drilling and bulk sampling. By 1989 a mining reserve[1] had been established and confirmed by independent mining consultants (Orcan Mineral Associates Ltd, 1989).

Esperanza also undertook exploration of a new zone, the East Ridge Zone, initially with surface sampling and drilling but later with an underground drift and subsequent underground drilling. A drill indicated "reserve" was established for this zone in the same 1989 ore reserve study.

Also in 1989 a small program of surface drilling was undertaken on the Grizzly Zone with four holes totalling 627 m drilled over a strike length of more than 500 m. Although a large sulphide gold-bearing system was indicated, there was insufficient data to warrant calculating a mineral resource for this zone.

Bethlehem Resources Corporation and Goldnev Resources Inc. optioned the property from Columbia Gold Mines Ltd (formerly Esperanza) in 1993. Permitting for a mining operation was completed in the spring of 1993 followed by rehabilitation of the camp, road and underground workings; mining commenced in mid-August of that year and was completed in late October.

[1] Many of the reports used for this review were prepared in the 1980's and refer to reserves where we would now use the term resource. We have put quotation marks around the word "reserve" when we are using it from an earlier report and where the word reserve would not be currently justified.

mill. Based on mill assays, approximately 3,294 ounces of gold and 5,275 ounces of silver were recovered to a concentrate. Recovery averaged 93% from a calculated head grade of 0.582 oz/ton gold (Tindall, 1993).

GEOLOGY

Regional Geology

The Tillicum Mountain property lies within the Omineca Belt of western North America, which in southern British Columbia consists of the Kootenay terrane and the Barkerville subterrane. Within this terrane metavolcanic and metasedimentary rocks form the highly deformed Nemo Lakes Belt. Jurassic, Cretaceous and Eocene plutons and stocks are common and mostly are post-metamorphic and discordant with the country rocks (Logan et al, 2000).

Supracrustal rocks of the Nemo Lakes Belt are dominated by a clastic sequence of siltstone (more or less calcareous), arkose and wacke with lesser amounts of basalt, tuffs, argillite and carbonates, all of which underwent post-Lower Jurassic regional metamorphism and folding. The metamorphic grade throughout the Nemo Lakes Belt is generally sillimanite facies but around Tillicum Mountain is lower grade with biotite, muscovite chlorite and amphibole the main metamorphic minerals. These rocks have been variously correlated with the Milford Group (Hyndman, 1968) and the Rossland Group (Little, 1960, Ray and Spence, 1986).

Two episodes of contact metamorphism are recognized in addition to the regional metamorphism. The first is associated with swarms of dioritic sills while the second is hornfelsing related to the intrusion of the large monzonitic stocks.

Property Geology

The meta-sedimentary rocks on the property have been correlated with the Lower and Middle Jurassic Archibald and Hall Formations while the predominantly volcanic metamorphic rocks are correlated with the older Lower Jurassic Elise Formation. All these formations belong to the Rossland Group, a 250 km long belt stretching from near the US border to north of Nakusp. Within this belt total recorded gold production exceeds 4 million ounces although most of that production is from deposits not at all similar to the Tillicum Mountain deposits.

All sedimentary and volcanic units on the property have been regionally metamorphosed to lower greenschist facies. Intrusive into these units are deformed and metamorphosed sills of dioritic composition that appear to be related to the regional deformation.

Intrusive into all units are the Cretaceous-age Goat Canyon and Halifax Creek plutons. These intrusions are generally monzonitic in composition with subalkalic, calc-alkaline affinities. Lamprophyre dike swarms cut all rocks on the property.

The Cretaceous-age Goat Canyon and Halifax Creek plutons are intruded into all of the above units. These intrusions are generally monzonitic in composition with subalkalic, calc-alkaline affinities. Lamprophyre dike swarms cut all rocks on the property.

Given the small amount of bedrock outcrop (<10%) the geology of the property is necessarily conjectural in part and broad-brush (Figure 3), with detail available only in restricted areas such as some ridge tops and where roads or underground workings have been constructed

Moderate to steep angle normal and reverse faults further complicate the picture. Generally the faults seem to have minor offsets but several show major amounts of displacement.

Calc-silicate quartz skarns occur throughout the property within the metamorphic rocks, presumably controlled at least in part by the original distribution of the more calcareous units. However not all of the skarn alteration is restricted to the meta-sediments with meta-volcanic rocks and some diorite sills also being overprinted with skarn alteration (Figure 4). Fault structures are thought to control the distribution of skarn mineralization in part. The skarns are spatially associated with (and probably a result of) the feldspar porphyry intrusions that occur as swarms of deformed sill-like bodies of more or less dioritic composition. The sills vary from 1m to about 200 m in thickness.

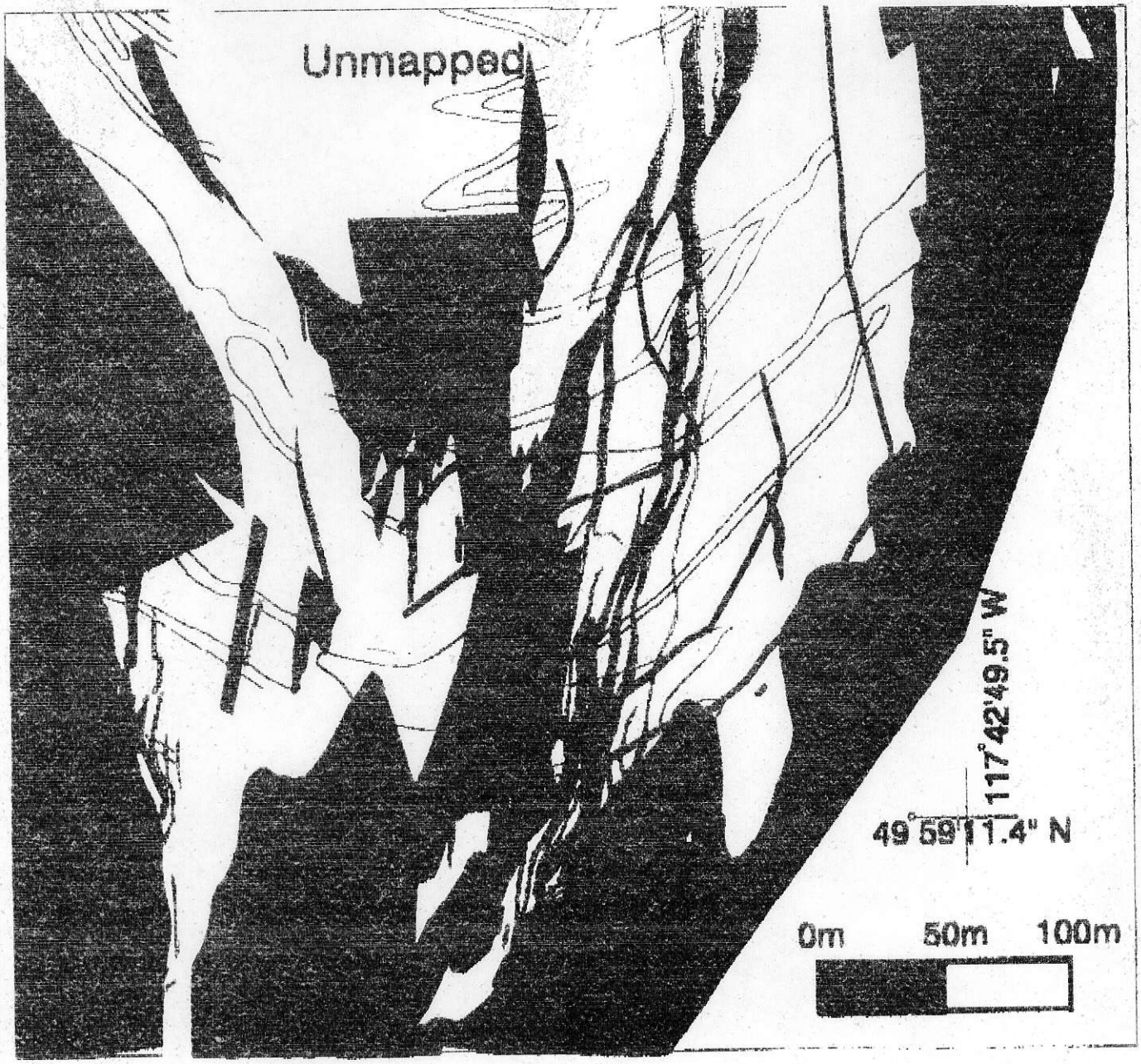
Further details on the property geology and the skarns are available in several publications, including those by Ray, McClintock and Roberts (1985) and Ettlinger and Ray (1989).

MINERALIZATION

Gold and silver mineralization and sulphides occur within siliceous zones and quartz veins found in the skarn zones. Skarn mineralization consists of quartz, plagioclase, tremolite-actinolite, clinozoisite, garnet, biotite, diopside and microcline with minor amounts of carbonate - in other words a fairly typical calc-silicate skarn assemblage. The skarn zones vary in thickness from 1 m to more than 60 m.

Quartz rich zones occur within the skarns as segregations and veins with varying amounts of sulphides. The sulphides include pyrrhotite, pyrite, galena, sphalerite and arsenopyrite. The quartz rich zones vary in thickness from 1 cm to 3 m.

Native gold occurs within the skarn assemblages as grains < 25 microns up to 25mm flakes within and along the margins of the quartz-calc-silicate segregations. Northcote (1983) concluded from polished section work that the gold appears to be nearly contemporaneous with most of the associated sulphides, possibly postdating pyrrhotite and marcasite/pyrite. Read (1982), from a study of polished thin sections, had earlier concluded that "gold is not spatially associated with sulphides, but forms free grains on margins or along cleavage traces of calc-silicate minerals and quartz."

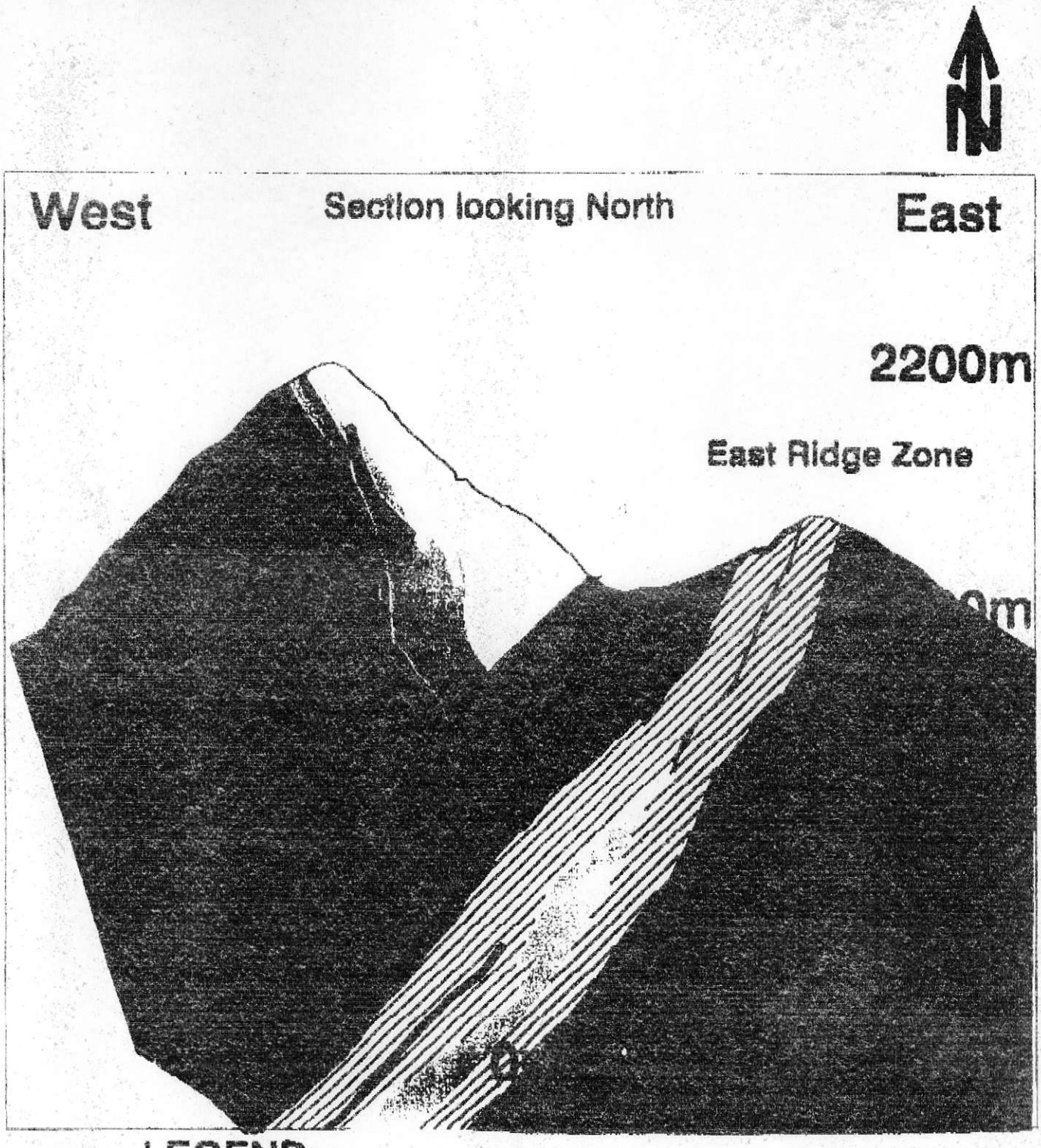


LEGEND

- Shale
- Meta-Andesite
- Meta-volc./seds.
- Hybrid Diorite
- Diorite
- Lamprophyre
- Vein Trace
- Road

Heino-Money / East Ridge
Geology Map
From Esperanza Expl. Ltd. 1984

Date: Feb. 14, 2000 Figure: 3



Tillicum Map
Schematic Geology Sectior
after Esperanza, 1984

Several reports (e.g. Gustafson, 1980) mention tungsten values occurring as scheelite with the highest value reported being 0.77% WO_3. Surprisingly, latter reports generally (with one exception) do not mention the presence of tungsten bearing minerals.

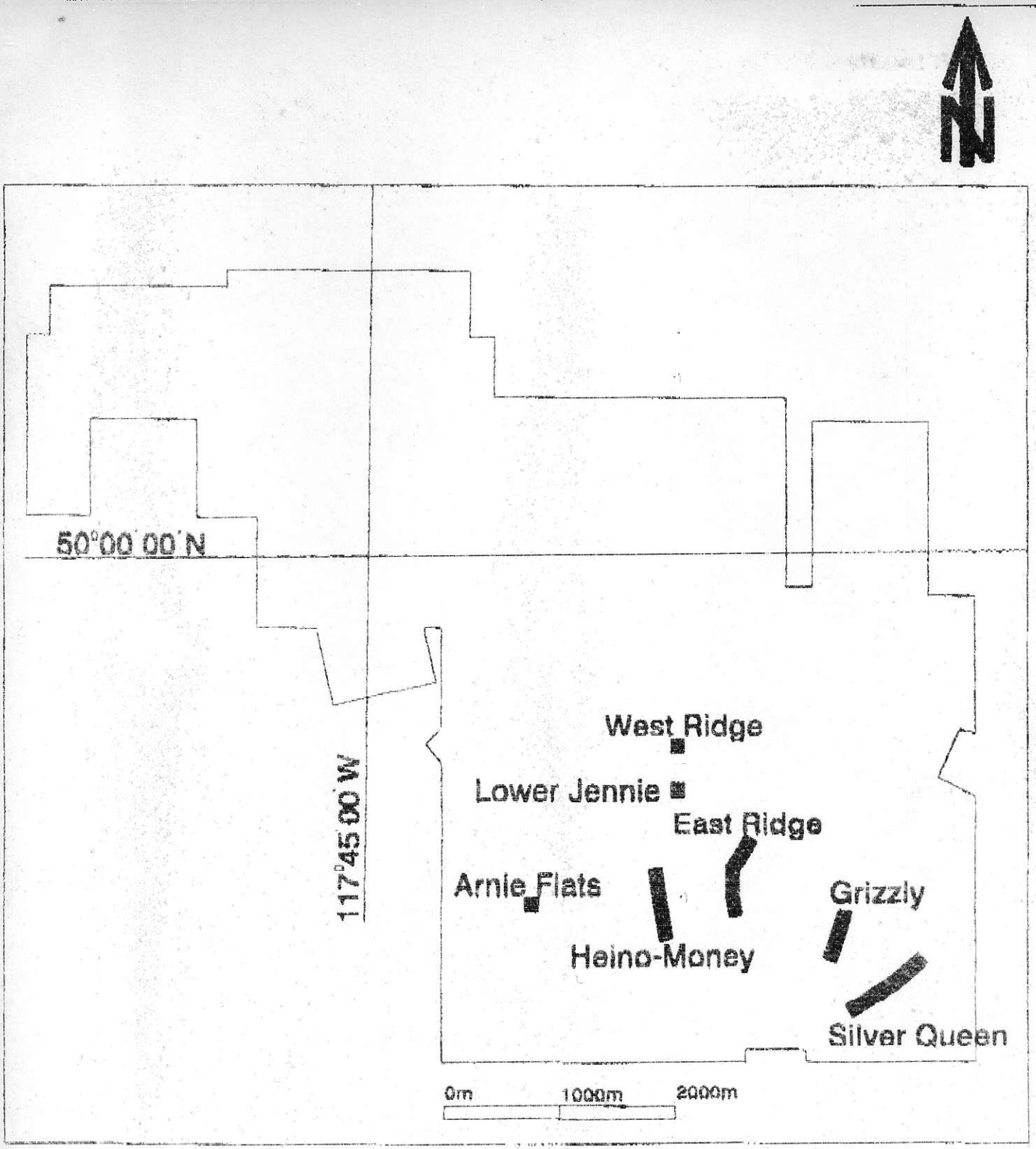
There are a number of different mineralized prospects within the claims (Figure 5) and not all of these are identical in occurrence. Some of the prospects are characterized by veins that are pyrrhotite rich whereas others are polymetallic. While most of the skarns are gold-rich relative to silver, at least one, the Silver Queen, is silver-rich. The amount of sulphides within the veins is variable from nearly massive sulphide to less than 3% sulphide. It might be expected that the milling and metallurgical properties of the various prospects will differ from one another but insufficient information is available to be certain.

Addie (1997) in his report on the 1996 exploration program mentions another type of vein characterized by graphite. To date, the graphite veins have not been found to be significantly enriched in gold although Addie reports they are geochemically anomalous.

Despite some evidence to the contrary, there seems to have been general acceptance that the Tillicum Mountain gold and/or silver enriched deposits are related to the skarn mineralization (Ettlinger and Ray, 1989). Prospecting for skarns has led to the discovery of some of the other zones after the initial discovery of the Heino-Money zone. Gold enriched skarn mineralization is known elsewhere in the Rossland Group rocks, a good example being the Second Relief Mine near Nelson. Worked during the first half of the twentieth century, this deposit produced about 100,000 oz of gold from just over 200,000 tonnes of ore as well as small amounts of silver, copper, lead and zinc. Steeply dipping quartz-skarn veins are associated with widespread wallrock skarn alteration that follows the hangingwall contact of a diorite porphyry dike (Ettlinger and Ray, 1989).

There have been a few dissenting voices however. Kwong (1989) made a reasoned argument for the deposits being epigenetic mesothermal, much of his rationale being the observed wide temperature range at which gold was deposited. Addie (1997) and others have argued that the mineralization is controlled by structures and that while structures cutting skarns might be the best place for mineralization to develop, skarns are not necessary. The Silver Jack zone at Arnies Flats, 1500 m southwest of Tillicum Mountain, could lend support for this theory. Mineralization here extends for at least 300 m along a shear zone with no apparent skarn alteration. Although high in silver (average 170 g/t) there is significant gold present (average 0.7 g/t). Sulphide mineralization includes pyrite, sphalerite, minor chalcopyrite and traces of molybdenite.

Devlin and Tupper (1989), two of the geologists most familiar with the property, had this to say about the East Ridge Zone: "Gold-bearing skarn horizons occur along strongly sheared structures which generally follow the contacts of altered porphyritic sills and volcaniclastic rocks. The skarn structures appear to crosscut stratigraphy. Gold mineralization in the East Ridge deposit closely resembles a shear related gold system postdating associated low grade skarn mineralization".



TILLICUM GOLD PROJECT
Mineral Deposit Location Map

Date: Feb. 14, 2000 Figure: 5

Heino-Money Zone

This mineralized zone (also called the Gustafson Mine in some reports) is the best understood of all the prospects on the property. Although "mined out" it is important for what it does and doesn't tell us about gold mineralization in the Tillicum Mountain area, the potential viability of other prospects and its significance for further exploration.

As previously mentioned, the Heino-Money zone was explored during the 1980's by surface drilling, underground works and underground drilling. A bulk sample was taken to confirm grades and metallurgical characteristics.

As a result of this work, several different ore reserves were calculated at various times, the latest being by Orcan Mineral Associates Ltd in 1989. A mining reserve of 16,830 tons at a grade of 1.022 oz/ton gold (17,200 contained oz) was calculated within a larger geologic resource.

Based on this reserve, mining was undertaken by Bethlehem Resources in 1993. Tindall (1993) has reported in detail on the results of this program. We have only summarized the details that may be important to future exploration of the overall property.

The realization that only 6000 tons of high grade ore containing approximately 3500 oz of gold were able to be mined from a section of the "proven reserve" supposed to contain some 13,000 tons (more than 13,000 oz of gold) is not only sobering but worrisome for future exploration and development. However, at least some of the differences can be rationalized and lessons learned can be applied to other prospects if those prospects seem sufficiently similar to the Heino-Money zone to raise concerns.

Tindall points out that even muck samples (297 samples for 6,067 tons) significantly overestimated the grade because the high-grade samples were not cut. When high-grade samples were cut to 5.0 oz/t the estimated grade (0.563 oz/t) was very close to the actual grade (0.582 oz/t).

In calculating the ore reserves it is obvious in hindsight that all values above 5 oz/t (drill core and muck samples) should have been cut. In most gold mines with a long operating history it is common practice to cut very high assays to some lower value based on years of experience. Since there was no history at Tillicum Mountain in this respect, any significant cutting of assay grades would have been guesswork but would have been a more conservative approach.

This factor, however, probably only accounts in part for the discrepancy between the reserves and the production. Tindall did not reach any conclusion to satisfactorily explain the remaining variation. It is not our intent to conduct a post-mortem but our experience elsewhere suggests that much of the discrepancy can probably be safely attributed to the erratic and highly variable nature of the gold within the veins and the erratic distribution of

the veins within the skarn zones. The Heino-Money zone is not the first or only gold zone to be mined in which the amount of ore (tons and/or grade) varied significantly from the reserve estimate. It is probably also worth noting that muck assays were done on 1/2 assay ton charges. For ore with coarse free gold, one assay ton charges would probably have been more appropriate.

Tindall described the alteration and mineralization in each of the zones mined. The following descriptions are summarized from his paper with some modification in terminology by the present authors:

high sulphide polymetallic mineralization: occurs in the 2112 zone in a high angle crosscutting breccia. Alteration and mineralization were confined to the breccia zone. Alteration consisted of strong silicification and calc-silicate replacement of wall rocks and breccia fragments. Quartz stringers and lenses were common. Sulphides, in order of abundance, were pyrrhotite, sphalerite, galena and pyrite with minor chalcopyrite and arsenopyrite. They occurred as blebs, lenses, stringers and massive accumulations. Sulphide content within the zone was highly variable but averaged in excess of 10%. Visible gold was occasionally noted. Gold grades were noticeably higher in areas of quartz stringer veining or high sulphide content where sphalerite and galena predominated. This zone had the most consistent and the highest average grades of the areas mined. Alteration and mineralization almost always terminated against slip faces.

low sulphide polymetallic mineralization: exemplified by the 2130 zone which crosscut metavolcanic and metasedimentary rocks at a high angle confined by steeply dipping shears. Alteration consisted of strong to moderate hornfelsing and calc-silicate replacement. Quartz stringers, lenses and small veins were common. Sulphide minerals in order of decreasing abundance were pyrrhotite, pyrite, sphalerite and galena with minor chalcopyrite and arsenopyrite. Total sulphide content was variable but massive sulphides were never present and the overall sulphide content was less than 5%. Gold values were extremely variable over short distances but that said, were generally less than 0.5 oz/t. Visible gold was seen only once.

low sulphide, pyrite dominated mineralization: occurred on the 2148, 2160 and 2171 levels. On the 2148 level alteration consisted of moderate to strong hornfelsing and calc-silicate alteration while on the 2160 and 2171 levels wall rock alteration adjacent to the vein zones was highly variable, from weak chloritization to strong calc-silicate alteration. On all levels, veining and alteration were confined to shear zones. Veins in these zones could be either quartz or quartz-calcite. Total sulphide content was generally less than 3% with pyrite predominant and only minor amounts of other base metal sulphides. Gold values tended to be highly erratic but overall were of low grade. Visible gold was very rare.

Ettlinger and Ray (1989) report that whole-rock and trace element analyses of samples from one of the Heino-Money drill holes indicates that there were at least two episodes of mineralization, the first being gold-rich and silver-poor and a slightly younger episode of

silver and lead-rich, gold-poor mineralization. They point out that this latter episode is similar to the silver-rich mineralization at the nearby Silver Queen prospect.

East Ridge Zone

Mineralization at the East Ridge Zone occurs in multiple skarn horizons within a calc-silicate-altered succession of tuffaceous sediments and volcanics approximately 75 m thick overlying a diorite porphyry intrusion (Figure 6). Mineralization has been traced along strike for almost 1100 m and down dip for about 360 m. It appears to be open along strike to the north and down dip. Skarn/mineralized zones appear to be structurally controlled and vary in width from 1.5 to 4.5 m and dip 55° to the west.

High grade gold values are associated with quartz-pyrite-pyrrhotite mineralization with trace amounts of sphalerite and galena. While the high grade zones appear to be restricted to the intense calc-silicate altered areas, lower grades occur over wider intervals. Visible gold was reportedly common in drill core within the more intensely altered structurally controlled zones (Roberts, 1990). Roberts also reported that the assaying of underground muck samples and drift faces in the upper portion of the A zone confirmed drill hole grades.

The overall grade of mineralization in the East Ridge zone is considerably less than in the Heino-Money zone. With fewer bonanza grade assays, one might expect that if and when mining takes place, the recovered grade will be closer to the calculated grade than was the case at the Heino-Money zone.

Grizzly Zone

This area of mineralization is approximately 900 m southeast of the Heino-Money zone. It was found by a large gold-in-soil anomaly and has been traced on surface for about 400 m. Early mention of this zone refers to "significant gold, silver and tungsten values..." (Guild, 1983) but no further references to tungsten have been found.

Addie reports that the mineralization is similar to that found in the Heino-Money zone. The vein system appears to be directly associated with the Grizzly fault zone.

Only four core holes have been drilled into this zone. Three of the four holes intersected gold and silver mineralization with the northernmost hole (89-220) intersecting the broadest zone of gold values (Figure 7). This hole included 3.3 m @ 0.149 oz/t gold and 0.46 oz/t silver in a broader zone of about 15 m averaging 0.077 oz/t gold and 0.45 oz/t silver. Elsewhere in this same hole were several intervals grading 0.02 to 0.03 oz/ton gold indicating widespread gold anomalism in this area.

Although some "possible" mineral resources have been calculated for this zone the present authors do not think it prudent to do so with so few drill holes.

ESPERANZA EXPLORATIONS LTD.

TILLICUM MOUNTAIN PROJECT—EAST RIDGE GOLD ZONE

CROSS SECTION 560 N

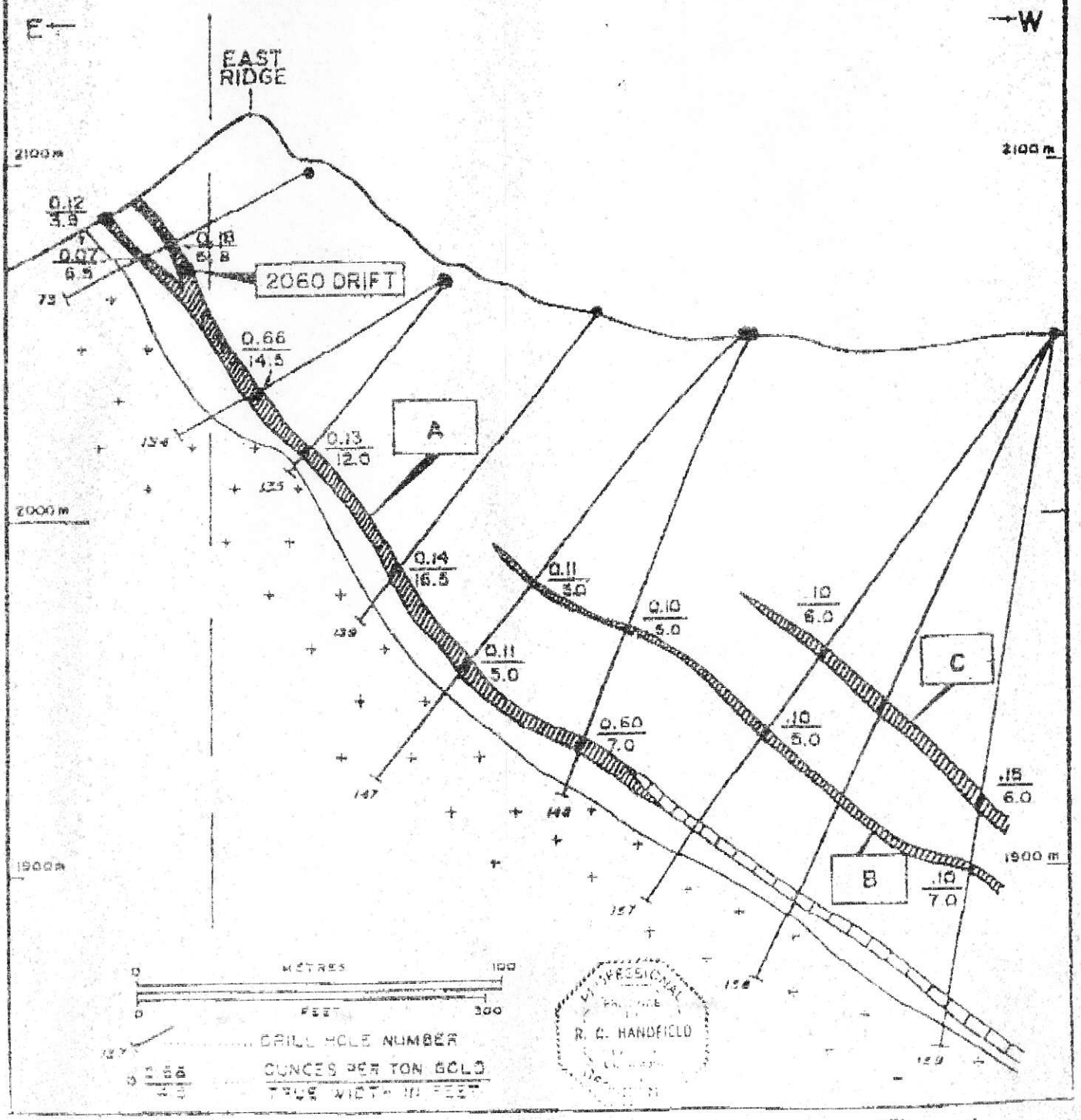
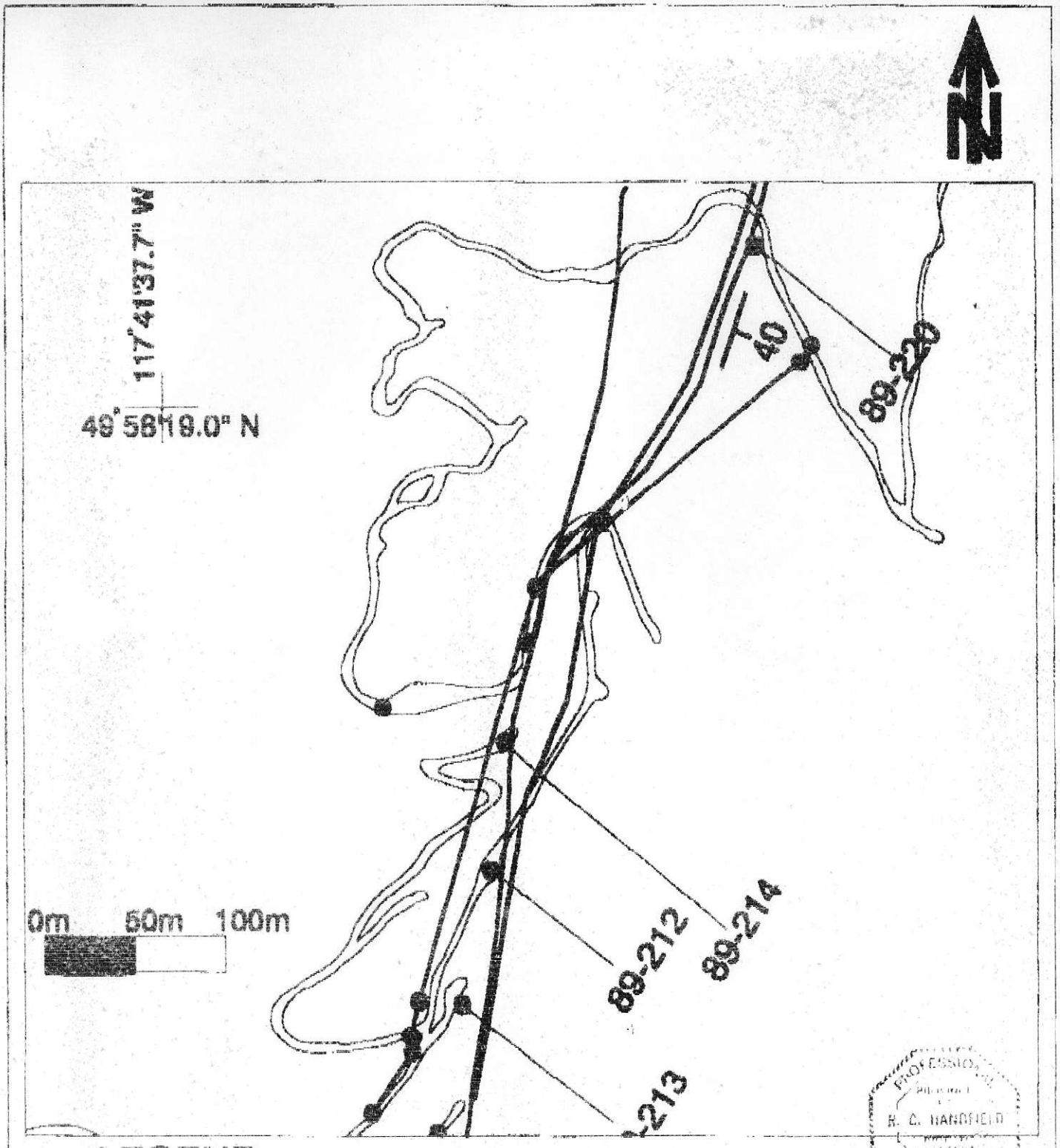


Fig 6



LEGEND

Access Road

89-213 Drill Hole

VLF

Vein Trace

Fault

Grizzly Fault/Vein Map and VLF Anomalies

Date: Feb. 14, 2000 Figure: 7

Silver Queen Zone

This prospect, active in the 1930's, is silver-rich and gold-poor. In other respects however, it is generally like the other zones already discussed. Skarn alteration and mineralization is associated with feldspar porphyry sills intruded into impure calcareous metasedimentary rocks. Skarn minerals include quartz, tremolite-actinolite, clinozoisite, garnet, biotite and carbonate. Sulphides include pyrite, pyrrhotite, tetrahedrite, sphalerite and galena.

Drilling by Esperanza relatively early in the exploration of the Tillicum Mountain area delineated a drill indicated resource of 3 million tons grading 3 oz/t silver (Dewonck, McClintock and Roberts, 1986)

In common with the Heino-Money zone, the garnets and pyroxenes of the Silver Queen prospect are compositionally distinct from all other precious metal enriched skarns in BC for which microprobe data are available (Ettlinger and Ray, 1989). Both of these minerals are enriched in manganese. Although the exact significance of this is uncertain, it may be related to their geologic location relative to oceanic and continental crust at the time of formation. At any rate it suggests that despite the variation in relative abundance of gold and silver in the deposits, they are related. This may have significance for further exploration.

GEOPHYSICS

Several attempts have been made to use various geophysical methods to assist in the exploration but results have been mixed at best. In 1982 a ground magnetic survey was undertaken but as a result of a combination of equipment failures and magnetic storms the results were inconsistent and "difficult to decipher and do not appear to reflect underlying geology" (Guild, 1983). Although there was a recommendation for further work, we could find no record of that having been undertaken. Later in 1982 and in early 1983 two airborne geophysical surveys were flown - first with less detail over a large part of the property and later in detail over the Heino-Money zone.

Geophysical techniques employed in the airborne survey were VLF-EM and magnetics. The regional part of the survey clearly showed three levels of magnetic susceptibility within the Cretaceous monzonite intrusives suggesting that the stocks could be subdivided into different facies on the basis of the concentration of high magnetic susceptibility minerals (Pezzot and White, 1983). They also thought that some major faults were picked up by the survey that showed as prominent magnetic gradients.

As far as the detailed survey was concerned, Pezzot and White reported that: "No anomalies were observed which could be attributed directly to the mineralization in the Heino-Money zone, however, definite magnetic and VLF-electromagnetic trends were noted in the area."

Ground VLF-EM and SP surveys have also been undertaken at various times. Addie (1997) reports that both methods are useful in delineating structures. Since much of the mineralization occurs within structures, these methods might well help define exploration targets.

MINERAL RESOURCES

East Ridge Zone

The same Orcan study that calculated the "mining reserve" for the Heino-Money zone also produced a geologic "reserve" for the East Ridge zone. This study concluded that the East Ridge area contained 262,700 tons at a grade of 0.394 oz/ton gold (103,520 oz) in three zones, A, B and C, using a 0.20 cut-off grade. No high assays were cut but it is worth noting that some drill intercepts that had low assays but for which visible gold had been noted were raised to 0.5 oz/ton for purposes of "reserve" calculations. Such a practice is not unknown in mines with a long operating history but probably should not be done in an area with no mining history. The authors of the Orcan study did point out that "The effect *(of raising these grades)* on average grade was minimal"

Because there was insufficient drilling and underground work, no attempt was made to calculate a "mining reserve"

Addie (1997) did a new resource calculation for the East Ridge Zone and concluded that the "drill-indicated reserve" is 523,203 tons @ 0.28 oz/ton gold in four zones using a cut-off grade of 0.3 oz/t. Addie did not attempt to calculate a "mining reserve" and in fact indicated that additional drilling was required.

Prior to either of these calculations, Esperanza geologists had done their own in-house calculations and arrived at a significantly larger "reserve" using an even lower cut-off grade.

Probably the main point to be made is that no matter what method or cut-off grade is used, no one has yet suggested that there is a reserve but rather that there is a resource and it is of sufficient grade and tonnage as to warrant further investigation. The present authors have not done a detailed review of any of the resource calculations. The Orcan methodology was pretty standard and until additional work is done and/or the present information is digitized and modeled, there is little to be gained from doing another calculation.

EXPLORATION POTENTIAL

General

Virtually every author who has written on the Tillicum Mountain property since 1983 has

commented on the favourable potential to find additional gold and/or silver mineralization in the Tillicum Mountain region. The present writers do not disagree with this assessment.

In reviewing the exploration potential of the property our approach is to first discuss some broader concepts and exploration approaches and then the individual known prospects.

Mineralization is not only widespread within the Tillicum Mountain property but also generally within the region. Two examples of similar prospects to the Tillicum Mountain deposits, are the Strebe and Hailstorm Ridge zones that occur just to the east on adjoining claims. Drill holes at Strebe have intersected gold values as high as 0.3 oz/ton with the gold occurring in sulphides in skarn alteration. Roberts (1989) reports that a drill indicated and inferred resource of 300,000 tons at a grade of 0.25 oz/ton gold had been delineated by drilling. The Hailstorm Ridge prospect is a silver-rich skarn but with gold values to 0.1 oz/t. The mineralization includes pyrrhotite, galena, spahlerite and arsenopyrite (Smith and Ryback-Hardy, 1983).

Visual prospecting was the "tool" that found the Heino-Money zone in 1980 and subsequent exploration has generally focussed on visual prospecting and geochemistry. It is interesting to note that the regional gold stream geochemistry available on the BC Ministry of Energy and Mines website would lead one very quickly to the general Tillicum Mountain area, although by no means exclusively. Most of the geochemistry done has focussed on gold, silver and lead and much of the multi-element geochemical assays were semi-quantatative rather than the more useful (and now more readily available) ICP and other multi-element methods. The writers recommend that future work should probably include more multi-element geochemistry.

As discussed earlier, the attempts at geophysical exploration have been only modestly useful. Further work seems to be warranted, especially with ground magnetics and perhaps with some other EM methods.

There has also been some attention focussed on whether there is any district wide metal zoning that might lead to new areas with mineral potential. Kwong (1985) argues that there is a regional zonation roughly in accordance with the decreasing grade of regional metamorphism, and has specifically pointed to some regional areas that he concluded would have potential based on this zonation. Molybdenum stream geochemistry available from government regional maps suggests that the Tillicum area sits in the "hole" of a large doughnut formed by anomalous molybdenum values with a diameter of perhaps 20 km. Such regional patterns have been shown elsewhere in the world to sometimes be indicative of underlying porphyry systems and are sometimes useful in indicating areas of potential interest on regional scales. Roberts (1989) comments that "It is of significance that silver-rich skarns display a regional zoning pattern in the district and appear to be peripheral to gold-bearing systems."

The widespread mineralization, the apparent precious metal zoning pattern and the presence of tungsten and anomalous amounts of bismuth in at least a few samples suggests

that perhaps some attention should be directed to the new ideas now being proposed with respect to bulk-mineable plutonic-related gold-quartz veins. These deposits can be very large and low-grade (e.g. Fort Knox, Alaska, 143.5Mt @ 0.82 g/t gold) or considerably smaller but very high grade (e.g. Pogo, Alaska, 6.57 Mt @ 18.17 g/t gold). While we do not intend to suggest that there is concrete evidence of either of these deposit types on or near Tillicum Mountain, there seems to be enough clues to make an investigation worthwhile. Logan *et al* (2000) describe these deposit types, the exploration parameters to focus on and the potential for such deposits in British Columbia including southeastern BC. In addition to those indicator guides mentioned at the beginning of this paragraph, association with Cretaceous stocks and the presence of gold-bearing skarns are two additional favourable parameters they mention.

Since these deposit types have only been discovered and recognized in the past seven to ten years, previous exploration at Tillicum Mountain would not have been directed at determining their presence or absence.

Most of the detailed work to date has focussed on selected portions of the property area. Given that something between 85 and 95 percent of the property has no rock exposure and that known mineralization is relatively widespread, it would seem to be time to make a determined effort to use some additional tools to focus on areas of interest. Despite the previous experience with geophysics, we think it may offer the best methods to cost effectively evaluate the covered areas. Our bias would be to look at something other than VLF or SP. Consultation with a geophysicist would be helpful but given the sometimes massive pyrrhotite associated with the gold mineralization, ground magnetics, or fixed-loop EM methods might make sense. Some other airborne methods might also be useful but until there has been an additional review of the previous airborne survey we would be cautious in recommending such a survey.

East Ridge Zone

The main issue with respect to this mineralization is not so much to find additional resources as to confirm the amount already indicated. This will require additional drilling and possibly underground work.

That said, it appears that the East Ridge Zone is open down-dip and also to the north so that it is not unreasonable to expect that additional resources will be found.

Even using the more conservative of the past "reserve" calculations (Orcan), there would appear to be in excess of 100,000 oz of gold in the East Ridge deposit at a grade above 0.25 oz/t. Additional drilling to confirm the ore shoots and determine a resource is justified.

Grizzly Zone

With only four drill holes into this zone, exploration is still in the very early stages. Given the grades intercepted to date, there is no question that further drilling is warranted. Previous soil geochemistry and prospecting indicates that the potential strike length of the vein is in excess of 750 m. The most northerly and southerly of the previous drill holes are about 460m apart with a large gap in the drilling. More than half of the known zone remains to be drill tested.

However, prior to undertaking additional drilling we think it would make sense to attempt to extend the known vein system by means other than drilling, especially to the north of hole 89-220. This hole, the most northerly of the four drilled, intersected by far the widest zone of skarn alteration (76 m) and gold mineralization, although not the highest grades. An argument can be made that once a mineralized vein has been identified in several drill holes (as is the case here) it makes sense to simply keep stepping out with the drill rig, however the cost of doing so if the vein is missed can be high. Given the presence of complicating factors such as the many faults we regard it as prudent to first undertake additional non-drill exploration, whether in the form of geochemistry, prospecting or geophysics.

Addie (1997) noted that an important difference between the Grizzly Zone and the Heino-Money zone is the lack of lamprophyre dikes in the former. None of the previous workers has suggested a connection between the gold mineralization and the lamprophyre dikes. Until such a connection is shown, we would not regard their presence or absence as material.

Jennie (Lower Jennie) Zone

Three core holes drilled into this zone previously failed to produce any significant gold intersections. Nevertheless because of the high values obtained on surface (including a 1996 sample of a quartz stringer that assayed 12.1 oz/ton gold) and the possibility that the zone extends further, additional work is warranted in connection with the West Ridge zone (described below).

West Ridge Zone

This area, approximately 200 m due north of the Lower Jennie zone, is characterized by an area of gossan. It was "rediscovered" in 1996, there being an old trench on the spot. Four samples taken in 1996 were anomalous in silver (>30 ppm), arsenic (4000 ppm), bismuth (40 ppm), zinc (6443 ppm), lead (2946 ppm) and gold (0.094 oz/t). The values shown are the maximum obtained and not all samples were anomalous in all elements. Gold was the consistently most anomalous element, being above 0.04 oz/t in three of the four samples. This may be the 950 zone referred to in some earlier reports.

Approximately 300 m further north an isolated rock chip sample is shown on one of the maps as having 3700 ppb gold (approximately 0.11 oz/t).

There is reference in some earlier reports to a 1250 zone further north along the trend of the Jenny-950 zone. We were unable to find much information about these zones but one Assessment Report refers to banded sulphides in the 1250 zone with up to 10% intermixed sphalerite and gold values to 0.34 oz/t in chip and grab samples (Guild, 1983).

Given that many of the mineral zones strike generally north-south, it is possible that the West Ridge gossan zone, the 1250 zone and the isolated gold sample are extensions of the Lower Jennie zone. Certainly that possibility is worth investigating.

Silver Queen Zone

As previously mentioned, this zone, located approximately 2500 m southeast of the Heino-Money zone, is silver dominant rather than gold dominant. In all other respects it is basically identical to the Tillicum Mountain zones.

This zone may warrant further exploration just on the basis of its silver values (up to 240 g/t silver). Perhaps more important however is the question of whether there is either regional or vertical zoning (or both) of precious metals in the greater Tillicum Mountain region and the significance this might have for gold mineralization at depth below the known mineralization.

Even if the evidence to date for zoning is incomplete at best, the overall similarities between the Silver Queen zone and the Tillicum Mountain zones would be sufficient justification for at least digitizing and modelling the known mineralization and perhaps some further exploration.

Arnies Flats Zone

This is another silver-rich (relative to gold) mineral zone although in this instance there are low gold values rather than no gold values. It would be significant support for the regional zoning hypothesis if Arnies Flats were halfway between Silver Queen and Tillicum Mountain but in fact, Arnies Flats is on the other side of the Tillicum Mountain deposits, approximately 900 m west of the Heino-Money zone.

Drilling here in 1989 returned pretty disappointing results (best assay - 0.06 oz/t gold and 7.9 oz/t silver over 1.5 ft) and there seems to be no real justification for any further work. The zone however is significant in that it increases the area over which mineralization is known and lends encouragement for further property-wide exploration.

Aussie Fault/419 Zone

In reporting on the 1988 drill program at East Ridge, Devlin and Tupper (1989) state that

eleven holes were drilled to test the Aussie Fault - 419 zone and that all eleven intersected skarn alteration. They further report that the zone consists of structurally controlled calc-silicate skarn with an average of 15% sulphides - pyrrhotite, pyrite, galena, sphalerite and arsenopyrite. Drilling returned values up to 0.15 oz/t over 6 ft.

There are very few other mentions of this zone in the reports reviewed by the present writers. Further investigation would appear to be warranted.

Conclusions

Although in our opinion, the Tillicum Mountain property is a property of significant merit and further exploration is justified, a corporate decision is required as to the strategy of implementing further exploration. There are at least two ways to proceed and neither is more "geologically sound" than the other.

One approach would be to focus all effort on the East Ridge Zone with the objective of defining a resource and (given the right gold price and market conditions) achieving some level of production in order to pay for further property exploration from cash flow.

The second approach would be to spread the exploration funds over a number of the potential ore zones on the basis that one's "eggs should not all be in one basket".

The Tillicum Mountain region is an area of significant gold mineralization. There is no currently defined proven ore reserve on the property but sufficient work has been done at the East Ridge Zone to be reasonably confident that more than 100,000 ounces of gold has been confirmed in a geological resource at a grade above 0.25 oz/t. Further work is justified to raise that mineralization to a proven status.

The 1993 mining program at the Heino-Money zone failed to recover the amount of gold ore indicated in the reserve calculations. However, on the basis of what has been learned by that mining experience and the fact that there are differences between the various zones, it is not unreasonable to expect that mining of the other zones would produce better results.

In addition to the East Ridge Zone, there are several other mineralized zones on the property that warrant further exploration work and the amount of mineralization known is sufficient to justify additional exploration on other areas of the property.

Recommendations

No matter what corporate approach is taken to further exploration of the property, the first thing that needs to be done is to properly archive, compile and computerize the existing data. Even ignoring the Heino-Money zone data (which we would not recommend doing) there is a substantial amount of drill hole information (close to 100 holes in the East Ridge zone alone), underground samples and other valuable geologic

data that could be far more meaningful if put into a computerized database. Computer 3-D modelling of the Heino-Money and East Ridge zones might be very useful in not only helping to understand what went wrong previously, but more importantly, in understanding how to do better with the East Ridge and other zones. Such modelling could be very useful in furthering exploration of the Grizzly and other zones.

Therefore our first recommendation is that an experienced exploration geologist be commissioned to undertake a review and compilation of the entire data base and that the relevant information, especially the drill hole information, be digitized and entered into a computer database that can be used for subsequent modelling purposes.

We further recommend that additional exploration and reserve definition of the East Ridge Zone be undertaken and that additional exploration of the Grizzly and other zones be pursued. The exact programs to be implemented will depend to a considerable extent on the results of the compilation and modelling work and for this reason the Stage 1B and Stage 2 programs recommended below should be regarded as very preliminary.

We also recommend that an experienced geophysical consultant be retained to assist with determining which of the many geophysical methods available might be best employed in helping to define exploration targets. It may be that a new airborne geophysical survey would be the most cost-effective way to quickly evaluate the entire property.

Finally, since it has been recognized by all previous workers that structure and fault shears play a significant role in determining the location of mineralization, we strongly recommend that a structural geologist be retained to assist with understanding ore controls and the localization of high grade shoots.

Obviously any further exploration program(s) should be staged such that the scope of each program will be determined by the results of the preceding work programs.

Recommended Exploration and Expenditures

Stage 1A

Review, catalogue and compile existing data	$24,000
Digitize and build a computer database	$16,000
Build 3-D mineralization model(s)	$10,000
Geophysical consulting	$ 5,000
Structural geology consulting	$ 5,000
Subtotal	**$60,000**

Stage 1B

Airborne or ground geophysical survey	$50,000
Geophysical consulting	$12,000
Subtotal	**$62,000**
Contingency @ 10% of stages 1a and 1b	$12,200
Total for Stage 1	**$134,200**

Stage 2

Diamond drilling (2000 m @ $80/m)	$160,000
Restoring core sheds/racks	$ 12,000
Assays	$ 15,000
Road building & repairs	$ 20,000
Geological staff (manager & 2 geologists)	$ 80,000
Other staff (cook, field hand, etc)	$ 30,000
Camp costs, etc	$ 15,000
Vehicle rental	$ 8,000
Other equipment rentals	$ 5,000
Burton office (rent, communications, etc)	$ 20,000
Contingency @ 10%	$ 36,500
Total for Stage 2	**$400,500**

Stage 3

At this point it is premature to outline a specific program, but assuming some success in the earlier phases a further drilling program combined with underground exploration would be warranted. The budget for such an undertaking would probably need to be at least $500,000.

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STATEMENT OF QUALIFICATIONS

I, Ross Glanville, of 7513 Pandora Drive, Burnaby, British Columbia, hereby certify that:

1. I graduated with a B.A.Sc. (Mining Engineering) degree from the University of British Columbia in 1970.

2. I obtained a Masters Degree in Business Administration (MBA) from the University of British Columbia in 1974.

3. I am a registered member of the Association of Professional Engineers and Geoscientists of British Columbia and have been since 1972.

4. I became a member of the Certified General Accountants Association of British Columbia in 1984.

5. I am President of Ross Glanville & Associates Ltd, a company specializing in the valuations of mining companies and exploration properties.

6. I have been practising my mining engineering profession since 1970 and have valued several hundred mining companies and exploration properties in North America, South America, Europe, Asia, Africa and Australia.

7. I was formerly President of Giant Bay Resources Ltd. and Vice-President - Valuations of Wright Engineers Limited (now Fluor Daniel Wright), a large international mining, engineering and consulting company. Prior to that I was a mining engineer and transportation manager with Placer Dome Ltd., and a mining and project analyst with two major investment holding companies.

8. I visited the property approximately three years ago. I have not reviewed the title to the properties since this is best done by legal counsel.

9. This report has been prepared for Mustang Minerals Corp., and is based on information provided to me. Although it is believed that the information is reliable, and while it has been checked as to its reasonableness, Ross Glanville and Associates Ltd. cannot guarantee the accuracy thereof.

10. I have no interest in, nor do I expect to receive any interest, either directly or indirectly, in Mustang Minerals, its subsidiaries or any associated companies.

Signed in Vancouver, British Columbia this 15th day of March, 2000

Ross O. Glanville, B.A.Sc., P.Eng., M.B.A.

STATEMENT OF QUALIFICATIONS

I, Robert C Handfield, of 823 Hendecourt Road, North Vancouver, British Columbia, certify that:

1. I graduated from the University of British Columbia with a B.Sc. (Hons) in geology in 1965.

2. I hold a Ph.D. in geology from Princeton University, Princeton, N.J., granted in 1970.

3. I am a registered Professional Geoscientist with the Association of Professional Engineers and Geoscientists of British Columbia

4. I have practised the profession of exploration geology since 1974 with a number of companies and as a consultant. I have carried out and been responsible for exploration programs in various parts of Canada, the USA, Australia, Indonesia and Papua New Guinea

5. I was formerly the Exploration Manager - Southwest Pacific for Cyprus Amax Minerals Company and prior to that, Exploration Manager for Canada for the same company.

6. I have not examined the property reported on herein but have relied on reports and other information as set out in the terms of reference and which I believe to be reliable but I cannot guarantee the accuracy thereof.

7. I have no interest in, nor do I expect to receive any interest, either directly or indirectly, in Mustang Minerals, its subsidiaries or any associated companies.

Signed in Vancouver this 15th day of March, 2000

Robert C. Handfield, Ph.D, P. Geo.

PROFESSIONAL ENGINEER PROVINCE OF BRITISH COLUMBIA R. C. HANDFIELD GEOSCIENTIST