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1988 EXPLORATION

of the

YANKEE DUNDEE PROJECT

for

Kingsvale Resources Ltd.
904 -675 West Hastings Street
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by

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1988 EXPLORATION - YANKEE DUNDEE PROJECT

INTRODUCTION

This report is on the 1988 exploration of the Yankee ~~Girl~~-Dundee Project of Kingsvale Resources Ltd. of Vancouver, B.C. It was commissioned by Mr. Carl M. Lalonde, President, on July 26, 1988. The project ended on Nov 10, 1988. The following was done: A grid was established, surface geology, VLF-EM, trenching, underground mapping and sampling of the Yankee Girl Vein, Bonus Vein and Lakeview Vein, limited soil sampling, and finally reclamation with bucking, seeding, filling in some trenches, and placement of water bars. X

This report presents new geology, a possible new ore control, a statistical study, a description of successful geochemistry, and a successful VLF-EM survey. Finally an exploration proposal is presented for next year.

HISTORY

The property has a long history of exploration and development. The Dundee Gold Mining Company was incorporated in December of 1886 and was in almost continuous operation until March 1899 when a fire destroyed the hoisting equipment. In 1900, a considerable amount of promoting was done. The following statements are typical: "Ymir has more stamps falling on ore within ten miles of it than in the whole rest of British Columbia" or " Ymir will, during 1900, have the largest production of ore of any camp in the Province except Rossland." The next phase of development took place in 1910 when a level was driven 1000 feet below the outcrop. In 1940 the Ymir Yankee Girl Gold Mines Ltd. optioned the property and mined 50,000 tons of ore. This operation ceased in 1942.

The Yankee Girl mine was discovered in 1899. Between 1911 and 1934 two tunnels, 540 and 1235 feet below the outcrop proved the vertical continuity of the ore zone. In 1953 and 1954 the Wildhorse tunnel was driven to the Yankee Girl vein and in 1961 Cayzor Athabaska Mines Ltd drove a raise to the 1625 level.

HISTORY - continued.

Throughout the history of both mines one gets the feeling of tremendous energy and tenacity. At the Dundee a crosscut was driven 1850 feet to reach ore at the junction of a granodiorite tongue cutting the sediments. At the Two Star adit a crosscut was driven 3135 feet to reach the Lakeview vein. At the Wildhorse tunnel a crosscut 4500 feet was driven to reach the Yankee Girl vein. At both of the last two crosscuts one can stand at the face and see the light of the portal. A tribute to the skill of the miners.

The property now belongs to ~~Burlington Gold Mines~~ ^{BGM Diversified Energy Inc} ~~Ltd.~~ Kingsvale Resources Ltd has acquired an option to earn a 50% interest in the Yankee Dundee property from B.G.M Diversified Energy Inc. by agreeing to spend one million dollars on exploration work before March 31, 1990. (News release dated Nov 2, 1988)

LOCATION AND ACCESS

(Map 1)

The center of the grid is at Lat: 49 degrees 17.5 minutes North, Long: 117 degrees 11 minutes West. The property is reached by a logging road starting at the Ymir bridge. The road is taken three kilometers on Oscar Creek to a branch road to the left. It is another three kilometers to the Yankee Girl Shaft at elevation 1462 m. (4795 feet).

CLAIM DATA

| Claim | Lot No |
|-----------------|--------|
| Lakeview | 3245 |
| Black Diamond | 3413 |
| Twilight Fr. | 14385 |
| Atlin #2 Fr. | 9336 |
| Klondike #1 Fr. | 13485 |
| Yukon Fr. | 5303 |
| White Pine | 4004 |
| Annie Fr. | 3849 |
| Parker | 1861 |
| Lightheart | 1862 |
| Old Bill | 1863 |
| Rio Grande | 14540 |
| New Mexico | 13848 |
| Isis | 13877 |
| Florence | 3977 |
| Bambino Fr. | 13847 |
| Yankee Girl | 7712 |
| Canadian Girl | 7713 |
| New Brunswick | 3975 |
| Deadwood | 3976 |
| Sockum | 14677 |
| Hidden Fr. | 14678 |
| Hidden #2 Fr. | 14679 |
| St. Patrick | 13878 |
| Morning Star | 3779 |
| Evening Star | 3779 |

In addition to the crown granted claims there are the following contiguous claims of reverted crown grants and located claims.

| Claim | Record No. |
|--------------------|------------|
| Key #1 | 2175 |
| Key #2 | 2176 |
| Key #3 | 2177 |
| Key #4 | 2178-3 |
| B.D. Fr. | 1261 |
| Aerial Fr. | 1262 |
| Mill Fr. | 1263 |
| Mint Fr. | 1264 |
| Southern Cross Fr. | 1265 |
| Parker Fr. | 1266 |
| Commodore | 580-3 |
| Sunrise | 578 |
| Bonanza | 579 |
| Idaho | 581 |

These claims are believed to be in good standing until 1998 although a legal search has not been made. They are in the name of Burlington Gold Mines Ltd. and B.G.M.

REGIONAL GEOLOGY

On the basis of the Geological Survey of Canada map 1090A by H.W. Little in 1960 the property is underlain by the Rosslund formation of lower Jurassic age. (190 my). Recent nomenclature identifies the sediments as the Ymir formation in the Rosslund Group. (1987, Hoy and Andrew). This is subdivided into a lower "generally highly deformed sequence of predominantly fine-grained clastic rocks of the Ymir Group." (Hoy and Andrew). In general, these formations are considered to be a roof pendant in the Nelson Batholith (lower Cretaceous 130my). Traditionally, vein mineralization has also been assumed to be related to the batholith.

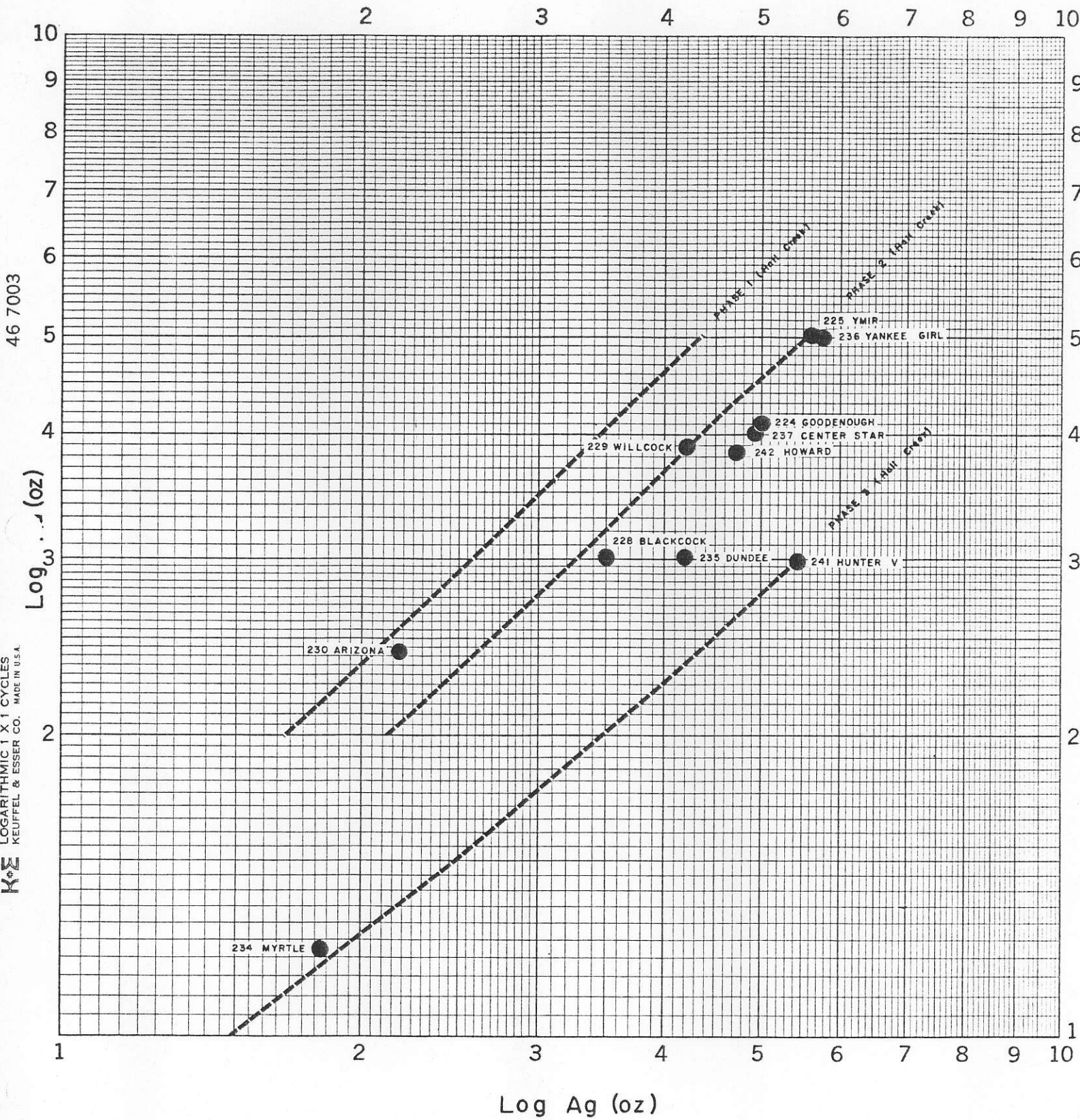
Graph 1, "Ymir, B.C" illustrates the similarities of the mines in the area based on their production figures for gold and silver.

REGIONAL GEOCHEMISTRY

Map 2 "Ag Log" and Map 3 "Zn Log" are from a computer study of stream silt sample data from Open File 514 (1977). The results indicate that the Yankee-Dundee property is close to the center of a silver-lead-zinc anomaly.

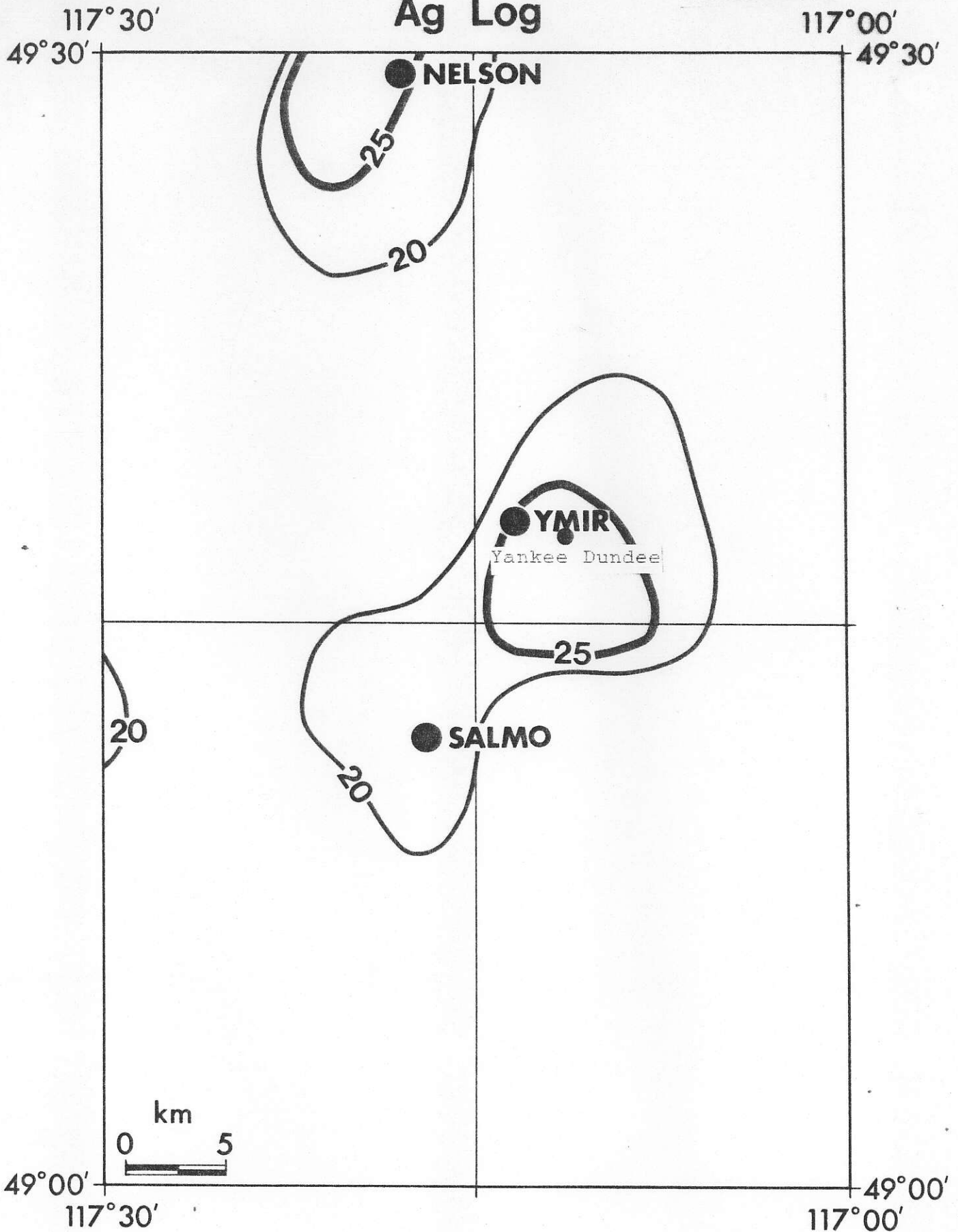
GRAPH I

Ymir, B.C.



MAP 2

Ag Log

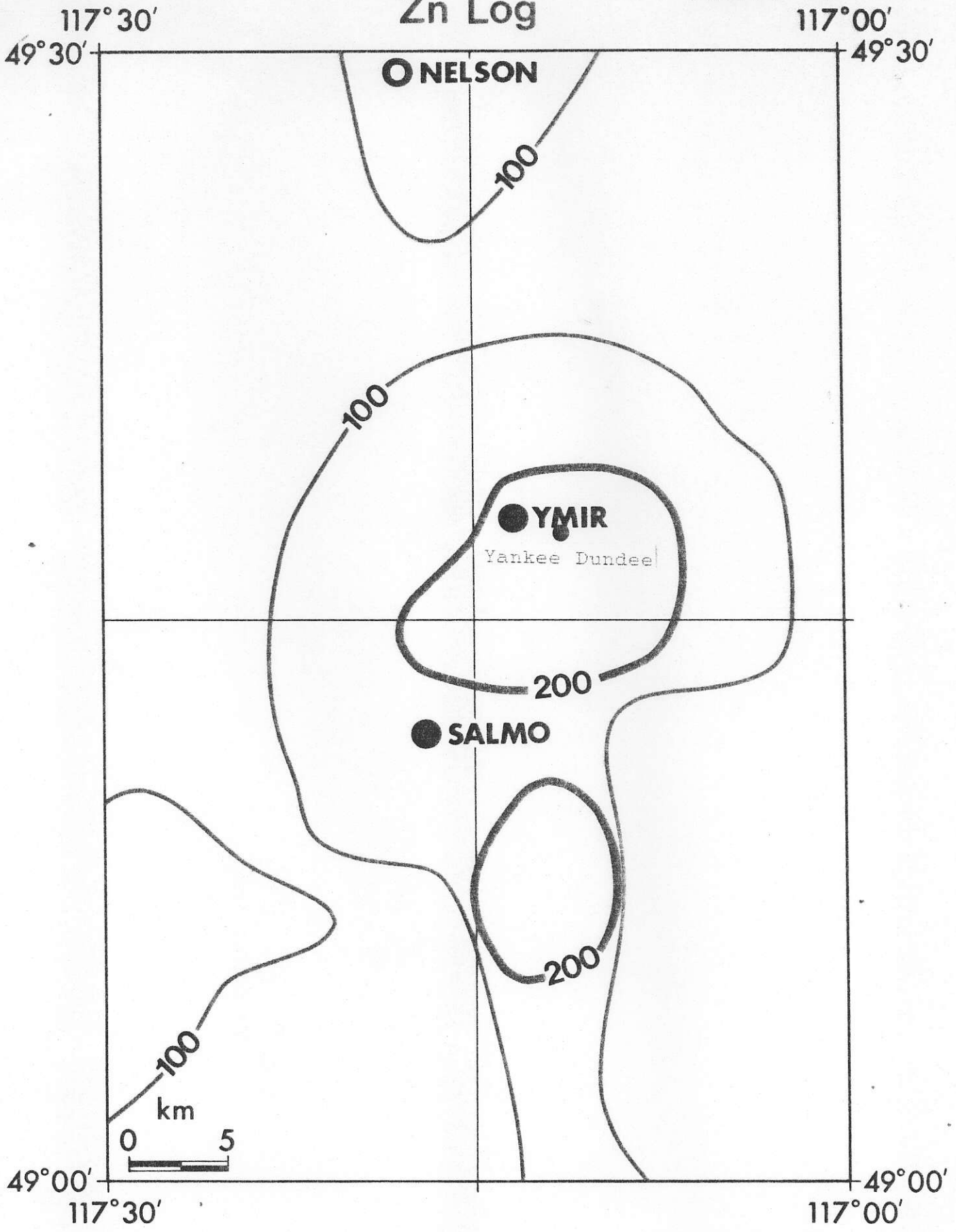


NOTE: THIS FIGURE WAS PUBLISHED IN
E.M.P.R. GEOLOGICAL FIELDWORK 1981

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MAP 3

Zn Log



NOTE: THIS FIGURE WAS PUBLISHED IN
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PROPERTY GEOLOGY

Map 4

The sediments of the Ymir formation are generally fine grained siltstones or sandstones and limestones. However, on the property especially on surface, a considerable thickness of thinly laminated argillites are present. This is in sharp contrast to those sediments seen underground at the Wildhorse adit and the Two Star adit. There, thin bedded siltstones and dolomites bleached by thermal metamorphism are present. Only one limestone outcrop was found on surface. The difference in lithology is important for the formation of ore zones. It would appear that the lower stratigraphy is more competent and accounts for the stope areas which are approximately one hundred feet below surface. There is another factor described under "structural geology" which is important. The beds are highly folded and generally plunge to the south. Thus, in the north west corner of the map, there may be sediments equivalent to those found underground.

At the eastern wedge of sediments thermal metamorphism is present and some of the sediments are bleached.

Properly Geology continued.

In general, metamorphism is in the lower greenschist facies with chlorite, biotite and muscovite. No garnet was seen in the sediments but one aplite dyke does have a little. At the north end of line 1+00E a small showing with tremolite is present.

The intrusion of diorite or granite into the axial planes of some folds or as sills does not produce any special zoning. However at major contacts the sediments are bleached and silicified. At Trench 11 there is a zone of sericite schist with quartz stringers at the contact with altered granite. Unfortunately no gold is present.

The south east portion of the grid is occupied by a granite, and pegmatitic granite rich in quartz. This is in strong contrast to the igneous rocks to the north which are schistose diorite, and occasionally xenolithic diorite. The southern contact area of the diorite contains many aplite dykes. To the west the contact becomes more dyke-like and metamorphism seems to decrease. It is these diorite "tongues" which, when cut by a shear, seem to have the right environment to form ore shoots. The Dundee Mine is an example. This may be due to deflection of the shear or a more competent rock type.

VEIN GEOLOGY

YANKEE GIRL VEIN - Underground

Most of the vein is in highly sheared diorite. Actually very little quartz is present. Alteration varies from albitization to sericite, from chlorite to kaolin. Some of the diorite is so highly sheared at the west end that it looks like a sediment. However the central part of the drift does include ⁺ tightly folded sediments. Although the whole shear zone was sampled in detail no increase in grade was noticed at the contacts. The hanging wall side of the shear zone has xenolithic diorite. X

Of particular interest is a lamprophyre dyke which meets the Yankee Girl vein and is displaced by it. This means that some of the shearing is post Eocene (50 my).

Many of the faults display slickensides and slickolites (vein accretion steps) which indicate that the hanging wall moved downwards. These are therefore extension faults. This is probably why so many of the veins have a vuggy texture. There are also young veins which cut across the main shear zone. No special mineralization was seen associated with them. The ICP data indicates that the Yankee Girl vein is anomalous in manganese as well as lead and zinc.

VEIN GEOLOGY - continued.

BONUS VEIN - underground

This vein is also in a shear zone. Very little quartz is present but at the east face there is pyrrhotite over a small width. This drift was also sampled in detail. It would appear that the east drift may be entering a mineral zone. It is noticed that the dip increases to the east changing from 51 degrees on the west to 80 degrees at the east face. Any shearing on this type of curved plane would create lens like openings. A test diamond drill hole to the east of the face is warranted.

LAKEVIEW VEIN - Two Star Adit Level

This vein is also in a shear zone within diorite for the most part. Very little quartz or pyrite is present. Sampling was less detailed than the other two veins, and very low gold values were obtained. However if the same ore control exists as at the Dundee and Yankee Girl the projection of the rake of the potential ore from the Evening Star Shaft would be to the east of the drift. An exploration drill hole in this area is warranted.

VEIN GEOLOGY - continued.

EVENING STAR SHAFT VEIN

This is a quartz vein with pyrite in shear zone which projects to the Lakeview Vein. A statistical analysis (this report) indicates that the Cd/Zn ratios are the same as at the Yankee Girl and Bonus veins. It is possible that a small ore zone exists in this area which would project to the east of the Lakeview drift. Diamond drill exploration is warranted in this area based on the ore control directions of the Dundee Mine and Yankee Girl Mine.

TRENCH NO 4 VEIN

This is a relatively new discovery. Several old pits were found but it is not known if the original prospectors knew that they were on the same vein. It has a strike of north twenty degrees west and dips 43 degrees west. The true width is approximately one foot and good gold values are present. Native gold is reported by the assay lab on the +100 mesh screen. There is a parallel diorite dyke which is on a fault contact dipping 60 degrees west. It would be interesting to know if the vein continues into the diorite and if the width increases. No silicification of the sediments was seen at this contact. Diamond drilling is warranted.

VEIN GEOLOGY - continued.

Page 11

TRENCH NO 5 WEST

Westward from the Evening Star Shaft a large shear zone has been exposed for 62 meters (203 feet). Numerous quartz stringers are present which returned sporadic high grade gold values. Native gold on the +100 mesh screen is reported by the assay lab. At approximately 57 meters west of the shaft (sta 42 W on the assay plan) a high grade quartz stringer was found in contact with a large lamprophyre dyke. The footwall side of the quartz stringer is slightly silicified and contains an aplite dyke. There is therefore the possibility that at depth the vein is in a more competent rock so that a mining width could be found. Considering the proximity to the Evening Star Shaft, diamond drilling is warranted

TRENCH NO 7 (Line 5E)

Of the four trenches to reach bedrock on the Evening Star-Lakeview-Dundee shear zone only this trench returned good gold values. The vein is in a graphitic shear zone. Yellow-green acicular aragonite crystals are present in the vein. Water is present in the shear zone. This showing definitely warrants further trenching and perhaps drilling as it may be over a new ore zone.

VEIN GEOLOGY - continued

TRENCH 18W (Line 11E, 1+50N)

Three new veins were discovered based on a strong VLF-EM anomaly. They are all in graphitic shear zones. The adjacent siltstones are silicified and contain pyrite. Several diorite dykes are also present. At Line 11E, 0+87.5N a soil geochemical assay of 530 ppb was obtained. Although none of the discovery veins had any gold values it is obvious that further trenching is warranted. Fortunately, the overburden in this area is quite thin (ie one meter). The VLF-EM anomaly is 950 meters long and is open to the east. The discovery veins have the same bearing.

TRENCH 19 (line 8E, 4+35N)

A new vein was discovered based on a relatively weak VLF-EM anomaly. Again it is in a graphitic shear zone. No gold values were found nor were any soil geochemical anomalies found over the VLF-EM anomaly. No further work is warranted in this area at this time.

STRUCTURAL GEOLOGY

It was found in field mapping that the Ymir formation is tightly folded and plunges to the south. (Fig 1 "Phi diagram of 181 bedding plane poles")

This diagram indicates that the structures generally have a bearing of north four degrees east and plunge south at ten degrees. The axial plane is vertical.

Fig 2 "Pole diagram of 53 "ac" joints" confirms the above but there is a spread of the poles giving three nodes. This indicates that other fold directions occur at north twenty-five degrees east and at north thirty degrees west. The latter is interesting as the bearing of the "ac" joint would be north sixty degrees east with a dip of seventy degrees to the north. This is very close to the bearing of the Yankee Girl vein at north seventy degrees east, dipping sixty six degrees north. It is possible then that the vein directions are controlled by the "ac" direction of the folds.

It is interesting to note that if the axial plane schistosity is superimposed on the Yankee Girl vein this would produce a "rake" on the vein of seventy four degrees to the east. From the longitudinal section of this mine the rake is seventy five degrees! The same theory applies to the Dundee vein.

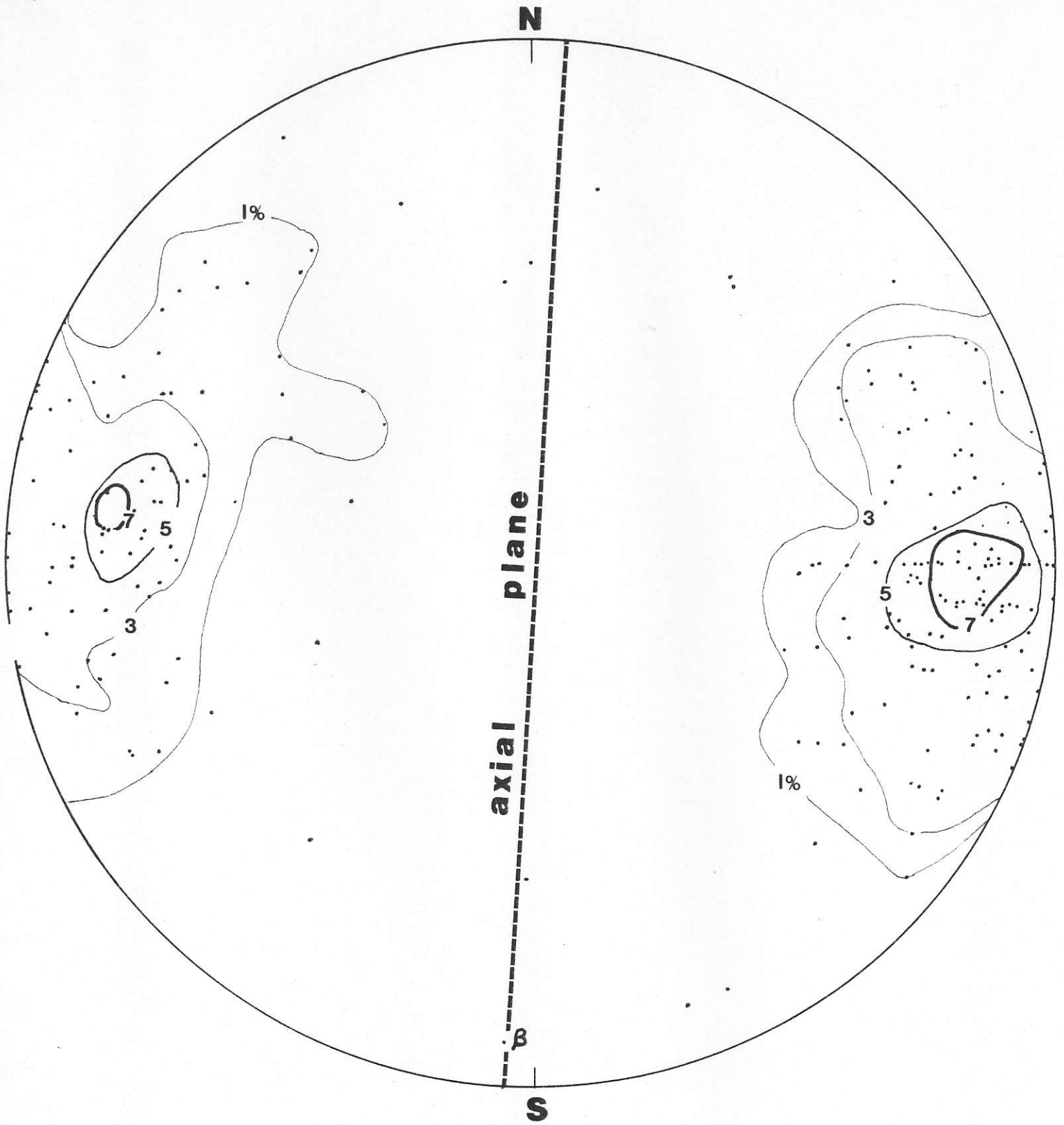


FIG 1 π diagram of 181 bedding plane poles



FIG 2 pole diagram of 53 "ac" joints

GEOPHYSICS

MAGNETIC

Aeromagnetic map 8480G indicates an east-west magnetic high south^h of Oscar Creek and an east-west low on Ymir Creek . The area in between occupied by the Yankee Girl and Dundee Mines does not have any magnetic anomalies. X

VLF-EM

A separate report has been written by "Pacific Geophysical Ltd.

A "Phoenix" instrument No L1718 was used with great success. All the shear zones have graphite giving an excellent response. While four new veins were discovered using this technique the most important contribution was defining the Evening Star-Lakeview-Dundee shear zone. Three of the trenches based on a "Fraser filter" anomaly found the shear zone.

A completely new structure identified as anomaly "B" found three new veins in graphitic shear zones. While no gold values were found a nearby soil sample returned 530 ppb gold. The length of this anomaly is 950 meters and is open to the east.

GEOCHEMISTRY

SOIL

The "B" horizon was sampled over some of the VLF-EM anomalies.

Although the overburden over most of anomaly "A" is over ten feet and composed of glacial drift the geochemical anomalies were coincident with the Fraser Filter anomaly. There must be some unique artesian effect on the shear zone to account for the results. All the EM anomalies should therefore be soil sampled.

STATISTICS (Soil)

| | | Mean | SD | M+SD | M+2SD |
|----|------------|------|------|------|-------|
| Pb | Arithmetic | 73 | 123 | 196 | 319 |
| | Lognormal | 45 | 2 | 47 | 49 |
| Ag | Arithmetic | .44 | .29 | .73 | 1.02 |
| | Lognormal | .34 | 1.96 | 2.3 | 2.6 |
| Au | Arithmetic | 19 | 56 | 75 | 131 |
| | Lognormal | 5.5 | 3.9 | 9.4 | 13 |

STATISTICS (Rock)

Histograms:

Fig 3 "Gold (oz/T)*34.28" No=50

Fig 4 "Silver (oz/T)*34.28 No=50

(Both distributions are lognormal)

GEOCHEMISTRY - continued

STATISTICS (Rock)

Correlation Analysis:

| | |
|--------------------|--------------------|
| Gold/Silver = .418 | Sig. at 99% level |
| Gold/Lead = -.088 | Not sig. |
| Silver/Lead = .595 | Sig at 99.9% level |

(Population size = 50)

Graph 2 "Silver/Gold"

Graph 3 "Silver/Lead"

GEOCHEMISTRY - continued

STATISTICS (Rock)

ICP Analysis No=28

These samples were selected from the assays of 0.1 ozAu/T or better from the Trench 5 area and the Yankee Girl vein (underground). One grab sample from the Dundee surface was included

ICP Histograms

Except for perhaps Cr and Ba all the elements have a lognormal distribution. Au, Ag, Bi, V, and B seem to have a single distribution. Pb, Zn, Mo, Cu, Co, Ni, Mn, As, Sr, Cd, La, may have two distributions.

It should be noted that the sample size is too small to generate good histograms.

ICP Correlation Analysis (Arithmetic)

| | Ag | As | Au | Cu | Co | Ni | Ba | Sr | Au* | Zn | Cd |
|------|----|-----|----|----|----|----|----|----|-----|------|----|
| Mean | 18 | 173 | 11 | 30 | 11 | 15 | 41 | 72 | 10 | 1787 | 44 |
| SD | 17 | 144 | 12 | 21 | 8 | 9 | 62 | 89 | 4 | 2614 | 73 |

Au* Fire assay

| | Pb | Ag |
|------|------|------|
| Mean | 1398 | 18.6 |
| SD | 1453 | 18.6 |

GEOCHEMISTRY - continued.

STATISTICS (Rock)

ICP Correlation Analysis No=28

| | | |
|----------|-------|--------------|
| As/Ag = | .037 | NS |
| As/Au = | -.244 | NS |
| As/Cu = | -1.19 | NS |
| Ni/Co = | .252 | NS |
| Sr/Ba = | -.08 | NS |
| Au*/Pb = | .487 | NS |
| Au*/Ag = | .583 | NS |
| Au*/Sr = | .531 | NS |
| Au*/Zn = | .102 | NS |
| Cd/Zn = | .996 | Sig at 99.9% |
| Ag/Pb = | .238 | Sig at 80% |
| Au/Ag = | .441 | Sig at 95% |

Discussion:

It is clear from the histograms that probably all the elements are lognormally distributed. Thus the data should be "normalized" before doing a statistical analysis. This has only been done for the soil samples. It is quite likely that two populations are present, one for each vein. Also there is the possibility that two periods of mineralization are present.

The high Cd/Zn correlation does mean that their ratios can be used for contouring.

GEOCHEMISTRY - continued.

STATISTICS (Rock)

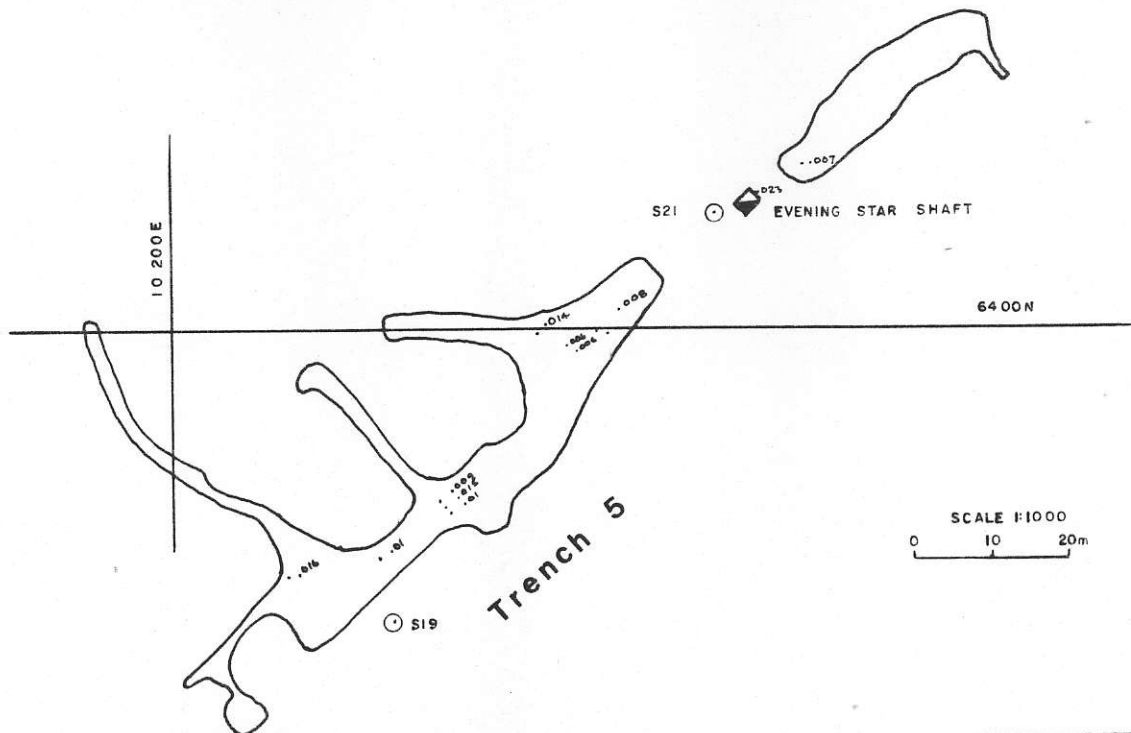
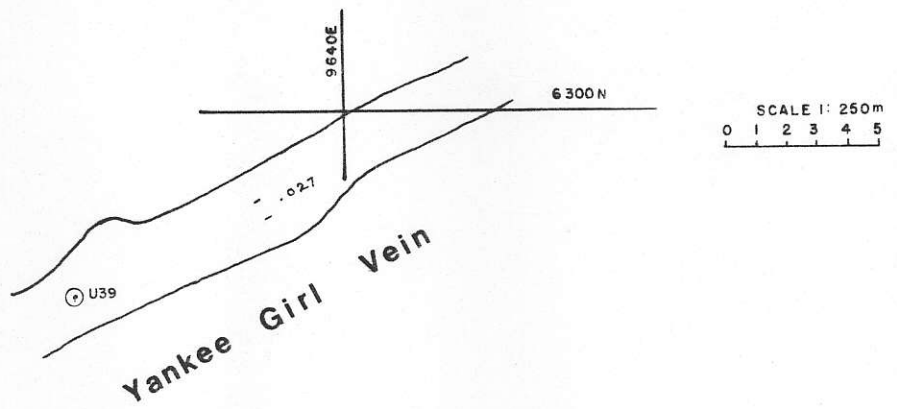
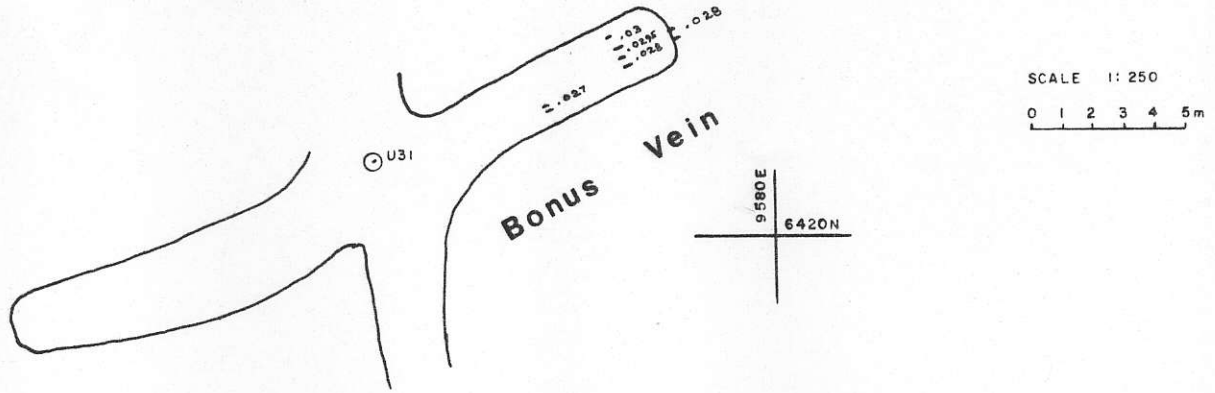
CD/ZN RATIOS

| Sample No | Location | Zn | Cd | Cd/Zn |
|-----------|---------------|------|-----|-------|
| 73437 | Bonus | 1865 | 51 | .027 |
| 73440 | " | 5543 | 165 | .03 |
| 73441 | " | 3594 | 106 | .0295 |
| 73442 | " | 1269 | 36 | .028 |
| 43039 | Yankee | 4999 | 134 | .027 |
| 73246 | Tr#5 | 366 | 6 | .016 |
| 73199 | " | 378 | 4 | .01 |
| 73188 | " | 366 | 2 | .005 |
| 73180 | " | 449 | 4 | .009 |
| 73181 | " | 263 | 4 | .015 |
| 73183 | " | 183 | 2 | .01 |
| 73234 | " | 568 | 8 | .014 |
| 73214 | " | 785 | 5 | .006 |
| 73213 | " | 980 | 6 | .006 |
| 73218 | " | 639 | 5 | .008 |
| 73403 | Evening Star | 1127 | 26 | .023 |
| 48062 | Tr#5N | 145 | 1 | .007 |
| 48017 | Dundee Trench | 143 | 1 | .007 |

It is likely the the Cd/Zn ratios are temperature dependant. Fig 4 "Cd/Zn Ratios" would indicate that the Bonus vein and the Yankee Girl vein have similar temperature ranges.

FIG 6

Cd / Zn Ratios



DIAMOND DRILL PROPOSAL

EXPLORATION STRATEGY

The exploration targets are Yankee Girl or Dundee size ore shoots. They have a small horizontal component, 100 meters for the Dundee Mine, and 200 meters for the Yankee Girl Mine. However, the vertical extent in both cases is in the order of 300 meters for the Dundee and 550 meters for the Yankee Girl. The main workings in both mines are well below surface, 50 meters for the Dundee and 200 meters at the Yankee Girl. Fortunately both mines had small surface showings which led to their development. Thus if a small showing is found the maximum chance of success is to follow the rake of the ore.

A second strategy to consider is that there is an economy of effort if ore can be found near accessible workings. Thus the Bonus vein and the Dundee vein should be explored from the Wildhorse adit. The Evening Star shaft area should be explored because of a natural haulage drift with the Two Star crosscut.

EXPLORATION STRATEGY - continued

A third strategy is to keep all options open, ie deversify. Every showing of high grade must be examined down the rake direction. The following diamond drill proposal covers all three cases.

DIAMOND DRILL PROPOSALS

| No | TARGET | LOCATION | Bearing EG | Angle A/S | DIST | Angle of Intersection A/I | COST (@ \$65.50/m) |
|----|---------|----------------------------|---------------|--------------|-------|------------------------------------|-----------------------|
| 1 | Bonus | ^{sta.} U34 | N10E | 0 | 60 | 54 | 3930 |
| 2 | " | " | " | +30 | 60 | 52 | 3930 |
| 3 | " | ^{sta.} U37+16E | N12W | +48 | 180 | 52 | 11790 |
| 4 | Dundee | U37 | S20W | 0 | 150 | 58 | 9825 |
| 5 | " | " | " | +25 | 220 | 35 | 14470 |
| 6 | " | " | " | -41 | 140 | 70 | 9170 |
| 7 | Tr No 4 | Road | -- | 90 | 15 | 48 | 982.5 |
| 8 | " | " | N70E | -48 | 10 | 90 | 655 |
| 9 | Evening | S21+30N | -- | 90 | 130 | 15 | 8515 |
| 10 | " | " | S20E | -70 | 70 | 32 | 4585 |
| 11 | Tr No 5 | S19+38N, 10E | S | -40 | 25 | 52 | 1637.5 |
| 12 | " | S19+32N, 10W | S | -30 | 27 | 56 | 1768.5 |
| 13 | Tr No 7 | S15 | S | -32 | 35 | 60 | 2292.5 |
| | | | | | ----- | ----- | |
| | | | | | 1122 | | 73491. |

CONCLUSION

The 1988 exploration program has been successful in generating new exploration targets for gold.

The VLF-EM survey was particularly successful in delineating the main structure, ie. the Dundee-Lakeview-Evening Star shear zone. Trench 7 on this zone may be particularly important. However, most of the high-grade gold values came from Trench 5 near the Evening Star shaft. Geochemical soil sampling over the VLF-EM anomaly was successful considering the deep overburden (4 meters) of glacial till. Certainly the Dundee Mine would have been found using geochemistry alone. Two other VLF-EM anomalies were trenched and four new ^{shear zones} ~~veins~~ in graphitic argillite were found. The VLF-EM anomaly at Trench 18 is a major structure which has not been identified before. One soil sample from this anomaly returned 530 ppb Au. The anomaly is 950 meters long and open to the northeast.

A structural analysis of the geology has indicated a new theory of ore control based on the intersection of "ac" joints and the axial plane schistosity.

A statistical analysis of the ICP data indicates a 99.9% confidence level for the Cadmium/Zinc correlation. Thus the ratios can be used for zoning studies.

CONCLUSION - continued.

The general geology is of a roof pendant of the Ymir group sediments between a granite to the southeast and a diorite to the north. The sediments are tightly folded and plunge to the south. The sediments seen underground have more evaporites (dolomite) than seen on surface. This change in lithology with depth to a more competent rock may be important in forming ore zones.

Because of the demonstrated success of soil geochemistry and geophysics along with new geological information it is likely that further work will be successful. A diamond drill program of 1122 meters is proposed for next year to test the targets found in 1988.

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