85-820-14041

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ASSESSMENT REPORT

HUN 1 AND HUN 2 CLAIMS

VERNON MINING DIVISION

Lat: 50°6'N Long: 119°7'W

Owner: Aar Resources Inc.

Operator & Author: C.E. Eipke

GEOLOGICAL BRANCH ASSESSMENT REPORT

[4,041]

Kelowna, B.C. 6 November, 1985

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INTRODUCTION

Mr. Dave King of Aar Resources Inc. requested geologist C. Fipke of C.F. Mineral Research Limited to complete \$4,800.00 worth of geochemical development work on the Hun 1 and Hun 2 claims (Record #1111 and 1112, Vernon B.C. Mining Division) in June of 1985. C. Fipke was appointed operator of the claims, responsible for establishing whether or not precious anomalous gold values were glacial or locally derived.

LOCATION AND ACCESS

The Hun claims are located immediately to the west of Aberdeen Lake some 26 Km SE of the town of Vernon, British Columbia. Access to the Hun group is readily available by means of the Vernon - Monashee highway from a point some 10 Km east of Vernon and thence by means of graded logging road a distance of 20 Km in a southerly direction. The logging roads are maintained and serviced on a year-round basis.

TOPOGRAPHY AND VEGETATION

According to C.T. Pasieka:

"The surface presented by the Hun Claims is that of a broken plateau with local elevations approaching 100m from a mean of 1060m ASL. Numerous small creeks traverse the property so that abundant potable water is available for consumption as well as exploration and mining purposes. The area has been selectively logged in the past, however with the exception of yarding areas and road construction the forest cover is intact. The area supports commercial fir, hemlock and pine with lesser spruce and cedar.

Vernon, some 26km to the NW offers a good source of labour and supplies. The Town of Vernon is serviced by a major highway network connecting the Okanagan Valley to major centres such as Vancouver and Calgary.

BED ROCK GEOLOGY

According to C.T. Pasieka:

In the main, the area of the Hun Group is underlain by acidic rocks ranging from grano-diorite to syenite. These rocks are considered to be of Jurrassic or later age and contemporaneous with the Coast Intrusive Series.



The intrusive rocks have made forceful entry through gneisses and phyllites of the Monashee Group. These rocks, of Cambrian Age (and earlier), have suffered various grades of metamorphism so that the original facies offer some difficulty in identification.

The acidic intrusive rocks observed in road cuts and loading yards consisted in the main of porphyritic diorite frequently highly silicified. The silicification may take the form of an incipient soaking and incomplete digestion of the diorite or filling of fractures in the diorite. The silicification carries sulphide mineralization disseminated throught the massive quartz as well as in the inundated diorite. Sampling of the quartz containing oxidized pyrite by the prospector has yielded values up to 0.06 ounces/ton in gold. Sampling by the author yielded values of the order of 0.008 ounces/ton in gold. Sampling by the author was carried out along the road cut along the NW corner of the Hun 1 claim and the north margin of the Hun 2 claim. "

HISTORY

According to C.T. Pasieka:

"The early history of the area of the claims is not known. Examination of government records indicate the ground had been staked before but no comprehensive exploration activity or mineralization is noted. No evidence of previous exploration activity was observed in the field in the manner of prospecting pits or geophysical lines.

The holders of the property have commenced laying out a grid to facilitate a geochemical soil sampling programme with some 10km of line completed to date."

METHODOLOGY

Initially professional prospector and heavy mineral sampling technician, Brent Carr, was contracted to resample the stream sediment sites of two creeks, D156 and D172, that yielded the highest anomalous Au values of 30,000 ppb and 2,700 ppb in heavy mineral concentrates of bulk samples (Please refer to March 2, 1984 Assessment Report). Mr. Carr collected a 8.2 kg sample of -20 mesh stream sediments a few hundred meters upstream from previous site D156 labelled DK2 and a analogous 10.7 kg sample at site D172 labelled DK1. Furthermore Mr. Carr prospected all the drainage area upstream from previous anomalous sites D156 and D172 as well as the area adjacent the stream for a distance of 1.5 km upstream from previous site D177. Mr. Carr also collected a 10 kg sample of unsieved glacial sediments at site DK3 till which he thought to be up-ice from anomalous site D156, (refer to figure 2).

As Mr. Carr reported that only glacial sediments rather than bedrock occur in the anomalous drainage basins of D156 and D172 and no free gold was found in Mr. Carr's bulk heavy mineral stream sediment resamples. C. Fipke and Dr. Murray Roed, a geomorphologist and glacial specialist for the Okanagan Valley completed property examination of the Hun claims.

Dr. Roed mapped the surfical geology of the claims using field observations and air photos. In addition he supervised the collection of nine bulk (11.3 - 16.3 kg.) mostly basal till samples up-ice from the anomalous areas on the claims. In addition a 10.6 kg basal till sample was collected near anomalous site D152. Geologist C. Fipke also collected an additional 9.5 kg bulk sample of -20 mesh stream sediments at the previous site beleived to be D152 and labelled it D152B. As the latter site is immediately upstream from a major drainage Fipke also collected any analogous 8.3 kg sample of -20 mesh sediments at the site labelled G55.

All of the foregoing eleven unsieved bulk glacial till samples and the four bulk -20 mesh stream sediments were transported to the C.F. Mineral Research lab heavy mineral concentration located in Kelowna, B.C.. Here the bulk samples were washed, wet sieved, and jigged. All or to 3000 gms of resultant -20 +35 mesh stream sediments, all or to 3000 gms -35 +60 mesh and all of the washed -60 mesh were then dried and submitted to tetrabromoethane as well as methyline iodide heavy liquid separations. The resultant -20 +60 mesh and -60 mesh heaviest tractions were submitted to five electromagnetic separations. The most non magnetic fractions were checked by laboratory technicans for the presence of maluable metals Au - Ag - electrons etc. using binocular microscopes.

Geologist C. Fipke checked the -20 mesh magnetic heavy fractions of samples D152B and G55 for potential minerals that could possibly carry precious metal values. He mounted 50 grains of pyrite, limonite etc. from the samples for scanning electron microscope energy dispensive analysis. In addition he mounted all of the maluable grains recovered by the laboratory technicans from samples collected in 1985 and most or the maluable grains recovered by laboratory technicians similarly recovered in 1984 (November 6, 1984 assessment report).

Geologists Rosemarie Cappel and C. Fipke carefully checked all of the selected mounted grains using the scanning electron microscope for Au and Ag. A semiquantitative elemental printout was made on all grains of possible economic significance. A randome Au - Ag - Cu - Mo scan was completed on about 0.1 gms of the -150 mesh heavy non-magnetic concentrate fraction of the bulk sample collected at site DK1.

RESULTS

Brent Carr did not find any outcrops upstream from Au anomalous sample sites D156 and D172. In addition he reports there are no outcrops for about 1.5 km upstream from site D177 where a prospectors map notes indicated Au mineralization. Mr. Carr reports that all the drainage basins prospected are covered in glacial fluvial deposits.

Dr. Murray Roed, A PHD geomorphologist that has completed extensive surficial mapping in the Vernon, B.C. area reports the following findings:

"The Hun claims exhibit glacial deposits that were formed as a result of the last major glaciation in British Columbia. This ice-sheet is known as the Fraser Glacier. It flowed southerly across the area rounding off bedrock prominences, and when it melted morraine partly infilled pre-existing valleys and blanketed rock hills. Since glacial time geologic processes have been restricted to some alluvial activity, erosion of steep slopes and accumulating peat in poorly drained depressions.

Glacial deposits on the Hun claims consist mainly of glacial till which is stoney and sandy, and this material occurs in two types of terrain. One is ground morraine that is found in low relief depressions and the flanks of hills. Till here is commonly in excess of three meters thick. The other till terrain type, and most common, consists of a thin veneer of stoney olive brown loamy till over bedrock cored hills and knobs. Bare bedrock outcrops are common in this terrain type. Minor glaciofluvial sand and gravel occurs in places.

Post glacial deposts include peat in organic terrain, gravel in alluvial channels, and loose rock and soil creep materials along colluvial slopes on the claims.

Minerals contained in the glacial till and possibly indicative of lode metal deposits in nearby bedrock will be concentrated in the lower part of the till immediately overlying bedrock. This is generally referred to as basal till. Such mineral indicators usually have a source within one or two kilometers of the indicator site in an up-glacier flow direction. Samples employing this relationship should therefore be taken from the lower meter or till and close to bedrock.

Interpretation of results commonly consider three possible alternatives or combinations. The first is that anomalous gold, for instance, is derived from a lode deposit "upstream". Second, the gold may have been picked up from a pre-existing placer deposit in gravel of Interglacial age that is known to occur in the region. Third, the gold may be primary in origin, that is, formed in situ. Careful analysis of the morphology of gold grains will assist in interpretation, and a detailed knowledge SURFICIAL GEOLOGY OF HUN 1 & 2 CLAIMS

Figure 3



SYMBOLS X E & 1 / 1 | ||Q

Rock outcrop along road, representative Steep scarp edge, post-glacial Scarp, preglacial, bedrock cored Photogeologic contact, approximate Glacial groove, flow trend Rock drumlin, ice-flow direction Stream Logging road Pond or Lake



of the surficial geology will provide a framework for final conclusions or hypothesis on the source of the gold."

Dr. Roed's surficial map of the Hun 1 and 2 claims compiled on field and air photo observations is given as figure 3.

Many of the metalic grains binocular extracted from concentrates of stream sediment samples by technicians were found to be brass, Pb solder, stainless steel, tungsten (carbide) and metal alloys (plates 1 to 5). These are probably a result of the heavy logging activity in the area, especially upstream from sites HU14 and G55.

The scanning electron microscope results and the geologists binocular microscope results of economic significance are plotted on the sample location map (figure 2). Previous anomalous analytical results with the calculated weight of recovered Au in grains from ± 10 kg samples are also plotted on figure 2. Figure 2 illustrates that several natural grains of molybdenite were present from sample locations HU14 and G44 (plates 6 and 7). A very angular grain of a native Au - Ag electron intergrowth was also indentified in concentrates from sample HU14. However, as the single vial containing microscope extracted grains from HU14 was misplaced, we were unable to confirm the geologists identifications of HU14 grains with the scanning electron microscope. Although anomalous gold assays have been reported by C.J. Pasiaka, P.Eng 1983 from silicous pyritic outcrop areas in the northwest parts of the claims no Au could be located in scanning electron microscope analysis of selected pyrite and limonite grains from sites G55 and D156B as well as the random microscope area scan (plates 8 and 9) of grains from site DK1 in the south west parts of the claims.

Samples from stream sediment sites DK1, G55 and D156B all contained minor to moderate amounts of Cr diapside (plates 10 and 11) suggesting that a basic volcanic or ultramatic rock unit may outcrop in the area. Some abundant Cr Diapside was also identified from a glacial till site G51 suggesting that it is possible that some of the Crd grains may be transported onto the claims as a result of glaciation.

No gold or silver was identified in any of the concentrates of samples from the glacial till sample sites selected by Dr. Roed up-ice from the HUN 1 and 2 claims. However glacial site DK3 collected by geologic technician, B. Carr, was found to contain a single irregular pitted grain of native silver (plate 12 and 13). The morphology of the silver grain indicates that the grain originates from a source within 1000 meters up-ice.

CONCLUSIONS AND RECOMMENDATIONS

The fact that no free gold has been found in any glacial till samples collected up-ice from the claims, suggests that the anomalous gold detected in stream sediments from the claims is derived from local sources within or near the boundaries of the claims. The angular auriferous grain previously identified from sampl HU14 from the site previously yeilding the highest anomalous 30,000 ppb Au value is also consistent with a local rather than glacial origin of the anomalous gold on the claims.

As free gold was undetected microscopically in stream sediment concentrate samples DK1, DK2, D156B and G55, these concentrates as well as the concentrates of the up-ice glacial drift samples should be crushed to -60 mesh and neuclear activation analysed for Au. Any resultant anomalous samples could be subsequently scanning electron microscope analysed so that minerals containing submicroscopic inclusions of gold can be identified.

If the anomalous Au results are reproducible and gold is still undetected in concentrates of up-ice glacial samples, the local sources of the anomalous Au values, could be closely defined by sampling basal tills from areas outlined on Dr. Roed's surficial map up and down ice from the creeks containing anomalous Au. Perhaps most of the sampling could be implimented on the pre-existing lines. In this was any areas of gold mineralization outcropping or covered by glacial deposits could be selected for subsequent rock sampling and geologic mapping and/or subsurface geophysics and drilling.



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Plate 1 Brass Alloy

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Plate 2 Pb solder

06-NOV-8501:10:14RATE:CPS00-20KEV:10EV/CHPRST:0FFA: HU15-10FS=6350MEM:AFS=6350



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Plate 3 Stainless steel

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Plate 6 Molybdenite



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Plate 7 Molybdenite with surficial Si - Al - K contaminates



Plate 8 57x assorted -150 mesh concentrate grains from sample DK1. The large bright grain on the lower left is a Au grain from Bralorne B,C. used as a standard for area scan plate 9.

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CU

Q,3,\$ AU MAGENTA

MO CYAN AG BLACK

EDAX YELLOW EDscan

> Plate 9 Scanning Electron Microscope Computer controlled area scan of concentrate grains from DK1 illustrated in plate 8. Only the standard placer grain on lower left yeilded Au - Mo - Ag - Cu results. The other small spots proved to be only background results. Plate 9

06-NOV-85 02:21:08 RATE: CPS TIME 227LSEC 00-20KEV:10EV/CH PRST: OFF A:G156B-17 B: FS= 1479 MEM: A FS= 100



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Plate 10 Cr diopside



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Plate 11 Chrome diopside (Note Au is from sample holder)



Plate 12 Subangular grain of native silver found in sample from site DK3 (180x)



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06-NOV-85 02:03:05 RATE: CPS TIME 127LSEC 00-20KEV:10EV/CH PRST: 0FF A: DK3-16 B: FS= 6374 MEM: A FS= 200

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Plate 13 Native silver grain of plate 12 with surficial Mg - Al -Si clays

STATEMENT OF EXPENDITURES

Dr. Murray Roed 10 hours @ \$65.00/hr total expenses including travel (Kamloops-Hun Claim)650.00 119.00Processing 15 bulk 8 - 17 kg samples glacial drift and -20 mesh stream sediments through washing sizing semigravity concentration; processing to 3000 gms -20 +35, to 3000 gms -35 +60 and all -60 mesh through TBE and a methylene iodide heavy liquid separations; processing the resultant heaviest concentrates through 5 electromagnetic separations @ \$102.10 each1,531.50Total lab technican time completing binocular microscope results 19 hours at \$16.30/hr309.70Geologist C. Fipke time (1 field day) and two days mounting grains for S.E.M. analysis, completing binocular microscope work and preparing report @ \$400.00/day1,200.007 hours scanning electron microscope and energy dispersive analysis at \$60.00/hr420.00TOTAL\$4,973.85Less one year assessment requirement(\$4,800.00)	B. Carr 1 day @ \$150.00/day 10% benefits 1 day 4 wheel drive rental B Carr expenses		\$	150.00 15.00 50.00 18.65
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7 hours scanning electron microscope and energy dispersive analysis at \$60.00/hr 420.00 Drafting, typing, proof reading and copying of report, accounting costs including courier of report to Victoria, B.C. 400.00 TOTAL \$4,973.85 Less one year assessment requirement (<u>\$4,800.00</u>)	Geologist C. Fipke time (1 field day) and two days mounting grains for S.E.M. analysis, completing binocular microscope work and preparing report @ \$400.00/day 1 day 4 x 4 truck rental including gasoline expenses			1,200.00 110.00
Drafting, typing, proof reading and copying of report, accounting costs including courier of report to Victoria, B.C. 400.00 TOTAL \$4,973.85 Less one year assessment requirement (<u>\$4,800.00</u>)	7 hours scanning electron microscope and energy dispersive analysis at \$60.00/hr			420.00
TOTAL\$4,973.85Less one year assessment requirement(\$4,800.00)	Drafting, typing, proof reading and copying of report, accounting costs including courier of report to Victoria, B.C.			400.00
Less one year assessment (<u>\$4,800.00</u>)		TOTAL	\$4	4,973.85
		Less one year assessment requirement	(<u></u>	4,800.00)

Please apply any additional approved expenditures to the PAC account of C.E. Fipke

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APPENDIX B

STATEMENT OF QUALIFICATIONS

The accompanying report and geochemical analysis was completed by geologists R. Capell and C. Fipke of C.F. Mineral Research Ltd.

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Mrs Rosemary Capell is a 1965 BSc graduate of University College of Rhodesia. Between 1966 and 1975 Mrs Capell worked for Anglo American in Rhodesia chiefly on base metal geochemistry.

C. Fipke is a BSC Honors Geology graduate of the University of British Columbia. Between 1970 and 1977, C. Fipke worked as a geologist involved to a large extent in heavy mineral exploration and research for Kennecott Copper in New Guinea, Samedan Oil in Australia, Johannesburg Consolidated Investments in Southern Africa and Cominco Ltd. in Brazil and British Columbia. C. Fipke and L.M. Fipke organized C. F. Mineral Research Ltd. in 1977. Currently the C.F. Mineral Research heavy mineral laboratory which employes 25 to 35 people is involved in heavy mineral exploration and processing on behalf of many international companies.

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Plate 13 Native silver grain of plate 12 with surficial Mg - Al -Si clays

