GLACIAL TILL SAMPLING REPORT ON THE

PAW CLAIMS

OMINECA MINING DIVISION, B.C.

093F/3W

BY

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SUMMARY

This report summarizes exploration work which took place on the PAW claims on July 16 and 17, 1997. The PAW claims comprise 4 two-post units. The original 88 unit PAW group of claims were staked in 1992 at the head of glacially transported anomalous multi-element till geochemical samples as reported by the Geological Survey Branch of the Ministry of Energy, Mines and Petroleum Resources of B.C. These claims were allowed to lapse in 1996, and the current 4 units were staked in 1997.

Previous geologic mapping outlined the presence of a granodiorite intrusive body with related hornfelsing (potassic alteration) to propylitic alteration envelopes. Associated stringer and disseminated mineralization was discovered in the intrusive and country rocks. Samples of these rocks returned values up to 791 ppm copper, 783 ppm molybdenum, 828 ppm zinc, with elevated values of silver and gold.

Previous soil sampling on the claims outlined a 1 kilometre elongate multi-element anomaly. Proposals to expand and more clearly define this anomaly through glacial materials sampling were considered.

The 1997 work on the claims included the excavation of 3 hand pits into glacial sediments within the soil grid. Results of the glacial material sampling appear to suggest that in the area of the test pits, soil sampling has effectively outlined the anomaly.

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1.0 INTRODUCTION

The PAW claims were initially staked in July, 1992, following a brief prospecting survey of the area by Perry Grunenberg. The claims were staked to cover two mineralized roadcut outcroppings which were thought to be porphyry related. Additional claims were later staked based on positive till, lake sediment and water geochemistry sample releases from the Ministry of Energy, Mines and Petroleum Resources. This data highlighted several geochemically anomalous traces which correlated with potential geologic sources An integrated exploration program was on the PAW claims. undertaken by Perry Grunenberg involving geological, geochemical, and geophysical surveys in 1994. This work was summarized in a January 1995 assessment report. The original claims lapsed in 1996, and are now restaked in 4 units over the main showing area. In 1997, a small test program was undertaken to compare glacial till against soil geochemical analysis at 3 sites on the claims.

1.1 LOCATION AND ACCESS

The property is located in central British Columbia on the Nechako Plateau near the Entiako Spur at 53°09' N, 125°21' W (NTS 093/3W, Omineca Mining Division). The property lies near the current terminus of the Kluskus-Malaput Forest Service Road (approximately Km 25). The claims cover an area of 1 square kilometre over south facing slopes north of Fawnie Creek, and northeast of Johnny Lake. The general location of the claims are shown on figure 1, and a claim map is presented on figure 2.

Access to the claims is provided by all weather gravel road from Vanderhoof. Travel south following the Kluskus Forest Service Road to the Kluskus logging camp at kilometre 99.5, then west on the Kluskus-Ootsa road to kilometre 142, then further west on the Kluskus-Malaput road to kilometre 23. The east boundary of the claims is located near this point.

1.2 TOPOGRAPHY, CLIMATE AND PHYSIOGRAPHY

The claims are in the physiographic division known as the Nechako Plateau which is a subdivision of the Interior Plateau. Topography is dominated by the Fawnie and Nechako mountain ranges which reach maximum elevations of 1852 metres at Mount Davidson, and 1781 metres at Kuyakuz Mountain. The Entiako Spur is an east west trending area of hills of roughly 1500 metres elevation which passes near to the north of the PAW claims. Physiographic regimes range from subalpine areas near mountain peaks to flat laying bogs



at lower elevations along major and minor drainages. Several larger east-west elongate lakes are present near the claims (Johnny, Cow, Moose and Laidman Lakes), with dimensions up to 9 kilometres length and 1 kilometre width, and elevations around 1000 metres. Smaller lakes are contained along drainages into Fawnie, Mathews and Van Tine creeks.

Tree cover is extensive and consists mostly of lodgepole pine, which is well spaced and movement through forested areas is easy. The forests have been partially infested by mountain pine beetle and tracts of standing dead pines are visible. To control the infestation, parts of the region are currently being logged. Areas of clear-cut logging, with the associated road networks, provides easy access to and around the claim block. Areas of boggy grassland occur around some lakes and flat drainages. These grasslands are in places used for cattle grazing.

The climate in this portion of interior British Columbia is generally warm and dry with a moderately long, cold winter. Frost may occur at any time; however, day time temperatures in excess of 10°C are normal from early May until mid to late October. Temperatures in excess of 25°C are common during the summer months, while winter lows below -40°C are rare. The greatest accumulation of moisture occurs during the fall, winter and early spring mostly in the form of snow. The remainder of the year is generally dry. Moisture in the form of rainfall is confined to afternoon showers during the warmer months.

1.3 PROPERTY STATUS

The property consists four 2-post claims. The record numbers and anniversary dates are listed in Table I.

TABLE I

CLAIM NAME	#UNITS	RECORD #	ANNIVERSARY DATE
PAW 1	1	357773	JULY 16
PAW 2	1	357774	JULY 16
PAW 3	1	357775	JULY 16
PAW 4	1	357776	JULY 16

1.4 HISTORY AND PREVIOUS EXPLORATION

The area has seen sporadic exploration over the years as has most of the Interior Plateau. This is partly due to surface restrictions such as thick glacial overburden, and until recently, limited road access. Regional surveys were conducted through the area by several companies during the late 1960's and early 70's in search of copper and molybdenum porphyry systems. This exploration led to the discovery of several different deposit types, including



the CHU porphyry Cu-Au prospect currently being explored by Placer Dome Inc (minfile 93F001), the NED porphyry Cu-Mo prospect worked by Granges Inc. (minfile 93F039), the Blackwater-Davidson (PEM) transitional Ag-Au prospect currently being explored by Granges Inc. (minfile 93F037), and the WOLF epithermal Au-Ag deposit (minfile 93F045) currently explored by Metall Mining Corporation under option from Lucero Resource Corporation. Interest in the area has recently been renewed with the completion of regional till, lake sediment and water geochemical surveys, and geological surveys by the Geological Survey Branch of the Ministry of Energy, Mines, and Petroleum Resources (open files 1994-18,19 and paper 1993-1), and regional airborne geophysical surveys completed by the Geological Survey of Canada (open file #2785).

An integrated geological, geochemical, and geophysical program was carried out on the Paw claims between June 5 and October 18, 1994. This work is summarized in assessment report dated January 1995. This program culminated in;

- 22.2 kilometres of hip chain and compass flagged survey lines, with an additional 3.5 kilometres of stations on road access. Line spacings of 200 metres with 25 metre stations were placed,
- the collection of 294 "B" horizon soil samples on the surveyed grids,
- the collection of 4 silt samples from streams through the grid area,
- the collection of 39 rock samples from different areas on the property,
- 5) the completion of magnetometer surveys over the entire grid,
- the completion of VLF-EM surveys over the entire grid,
- 7) the completion of 1:10,000 geologic mapping along grid lines.

1.5 WORK COMPLETED ON THE CLAIMS IN 1997

Work on the claims took place in mid July and included the excavation of 3 pits into glacial materials. These pits were hand dug and range from 35 to 60 cm. depth. The pits were mapped, and 1 large sample of material was taken from each pit for analysis.

2.0 GEOLOGY

2.1 REGIONAL GEOLOGY

The geology of the Fawnie Creek map area (93F/3) has recently been compiled at a 1:50,000 scale by the Geological Survey Branch of the Ministry of Energy Mines and Petroleum Resources (Larry Daikow et al, open file 1994-2). In general, the region has similarities to the Basin and Range structural province in Nevada (extensional block faulting), and also has a similar structural style of the Babine area to the northwest (Schroeter and Lane).

The oldest rocks mapped in the area belong to the middle Jurassic Hazelton Group, locally called Naglico Formation. These rocks are composed of volcanic derived sandstone, siltstone, and conglomerates, basalt and andesite flows, and andesite, dacite, and rhyolitic tuffs. The Hazelton Group is characterized by open folding with dips up to 45 degrees.

The Hazelton Group rocks are overlain by Eocene Ootsa Lake rocks. These rocks are composed of andesitic, dacitic and rhyolitic flows and lapilli tuffs which overlay a basal conglomerate. In the vicinity of the PAW claims Ootsa Lake Group rocks unconformably overlay the Jurassic Hazelton Group rocks.

The youngest rocks mapped in the area are represented by the Miocene and Pliocene Chilcotin Group basalt flows. These rocks are mostly confined to the southern areas of the 93F/3 sheet south of Johnny Lake. Mafic dykes mapped on the PAW claim may be feeders to the Chilcotin volcanic flows.

Intrusive rocks in the area are composed of Middle Cretaceous augite porphyry plugs, dikes and sills, Late Cretaceous to Tertiary quartz monzonites and granodiorites (Capoose Batholith, quartz porphyry dikes and plugs, quartz diorite, and felsic sills and dikes.

Rocks of the Interior Plateau are characterized by low grade regional metamorphism. Contact metamorphism around plutons is often pronounced leading to thermally altered zones within Naglico Formation rocks.

2.2 PROPERTY GEOLOGY

Exposures of bedrock on the property comprises roughly 5% of the surface area. Surficial geologic mapping by Victor Levson and Timothy Giles of the Geological Survey Branch of the Ministry of Energy, Mines and Petroleum Resources (open file 1994-4) shows that much of the eastern portion of the PAW claim block (PAW 3 and 2post claims) are covered by sands and gravels representative of glaciofluvial outwash plains. This hampers surface prospecting and does not provide a good medium for soil sampling. Other areas of the east and south claim block are also covered in swamp, further hindering exploration. The western portion of the claim block contains a thin to non-existent soil and till layer providing good prospecting or soil sampling medium.

The northern portion of the claims is underlain by a sequence of volcanic and volcaniclastic rocks ranging from black shaley fine tuffs to courser andesitic breccias. This lithology has a north to north-easterly strike with steep dips to the west. The southern portion of the claims is partially underlain by intrusive granodiorite which is medium grained, equigranular. The outer rim of the intrusive is obscured by overburden to the north, however the contact to the surrounding Naglico formation is highly hornfelsed near the intrusive contact, so that the intrusive shape can be partially derived. The intrusive contact is open to the south where the surface is commonly covered in swamp. Several late stage felsic dikes cut the intrusive and surrounding rocks along the northern contact of the granodiorite. The intrusive is thought to be a satellite plug related to the Capoose Batholith to the east.

The predominant alteration is hornfelsing of Naglico formational rocks, related to the granodioritic contact. These rocks are recrystallized and silicified and commonly contain dark patches of skeletal biotite near the contact, as well as up to 5% pyrite. Hornfelsing may in part be related to potassic alterations outward from the intrusive. Further detailed analysis of Naglico formation rocks in this area may help to define alteration envelopes. A small borrow pit alongside an access road through the grid contains highly altered Naglico formation rocks which contain minor quartz stringers and potassium feldspar patches of possible potassic Propylitic alteration is common in the alteration origin. andesitic rocks out from the intrusive contact for a minimum This alteration is represented by distance of 800 metres. chlorite, calcite and epidote, both pervasive and along microfractures in bedrock. Late stage albite was also identified along microfractures several hundred metres from the intrusive contact.

Pyrite is common throughout Naglico formational rocks in the grid, primarily as disseminate up to 1% in volume. Increased sulphide mineralization is related to the hornfelsing of Naglico rocks with increased pyrite as disseminate and minor veinlets totalling up to 10% locally, as well as minor sphalerite, bornite, and chalcopyrite (to 0.1% combined). Well developed stockwork sulphide mineralization including pyrite, chalcopyrite and molybdenite is present in the granodiorite visible on a roadcut in the south of the grid (PAW minfile 093F 052). This fracture controlled and disseminated sulphide mineralization contains up to 5% pyrite, and locally up to 0.2% combined molybdenite and chalcopyrite. Sulphide mineralization is also found as selvages along quartz veinlets in the intrusive.

3.0 GLACIAL TILL SAMPLING

Glacial till samples were obtained from 3 different locations on the claims. Locations were selected from the previous soil sampling grid results, using the pre-existing grid for pit location. Two of the locations (Pits #1 and #3) were selected along the trend of high anomalous values returned from soil in order to test if the anomaly could be traced further in till. A third site (Pit #2) was selected from an area of low soil values in order to see if values would improve in the till.

Pits were hand dug using pick and shovel. The depths of the pits ranged from 35 to 60 cm. depending upon where good till medium was intersected. One large (30x45cm.) poly-bag of material was filled for sampling at each site.

3.1 GLACIAL TILL SAMPLE RESULTS

The pit locations are shown on figure 3 showing the south part of the original grid, and copper values returned from soil. Results from the pit samples are shown for comparison.

Samples were shipped to Chemex Labs Ltd. in Vancouver. The samples were dried and sieved to -80 mesh. The samples were then analyzed for gold by AAS method, and for 32 elements by ICP-AES. Copies of certificate of analysis for these samples are given in the appendix.

Pit #1 was dug to 60 cm. The top 45 cm. are described as dark brown humus soil, very wet, in an area of swampy ground. From 45 to 60 cm. the material is described as compact till, with 10-20% sub-rounded stones of 10-15 cm. diameter and up to 30% sub-angular pebbles of 3 to 5 cm. diameter, in a fine grey silty clay matrix. Analysis of this material returned values of 237 ppm. copper and 82 ppm. zinc. Here, the copper values are elevated and the zinc values are lower compared to soils taken adjacently.

Pit #2 was dug to 35 cm. The top 10 cm. was described as organic layer. Materials from 10 to 25 cm. are described as red brown soils. Materials from 25 to 35 cm. are described as compacted grey till with 10% rounded 10-15 cm. diameter stones, and 20% sub-rounded less than 5 cm. diameter pebbles in clayey matrix. Analysis of this material returned values of 33 ppm. copper, and 38 ppm zinc. These values very closely approximate the values returned from soil sampling at this location.

Pit #3 was dug to 40 cm. The pit was dug into a furrowed area of ground in an open log cut, so that the natural ground surface may have been 10 to 20 cm. higher than the current disturbed surface. This pit was completely in glacial till described as assorted sub-rounded rock of less than 5 to 30 cm. diameter in weakly compacted, grey-brown sandy silt matrix. Analysis of this material returned values of 60 ppm. copper and 46 ppm. zinc. Here, the copper values are significantly higher, and the zinc values are much lower than those returned from soils sampled at this location.



4.0 CONCLUSIONS AND GENERAL DISCUSSION

The PAW claims were staked to cover source regions for anomalous till multi-element geochemical results as reported by Ministry of Energy, Mines and Petroleum Resources. Fracture controlled and disseminated sulphide mineralization was discovered along a road access to the claims. This mineralization, containing molybdenite and chalcopyrite, is hosted within medium grained granodiorite, and has a porphyry style appearance at this location.

Soil sampling during a 1995 work program outlined an elongate multi-element anomaly on the property. Glacial overburden was thought to hinder soil results in some areas of the region. The 1997 glacial till sampling program was designed to test the till in different areas of the soil grid.

Results of glacial till sampling indicate that glacial till sampling does not greatly improve the results obtained from soil sampling on the property. In some cases, a notable increase in values obtained occur, however, these may be due to other factors outside of the medium sampled, including the size of sample taken, and the exact location of the sample site. On the Paw claims, problems with soil sampling will remain in areas of thick glaciofluvial or glaciolacustrine sediments, or in areas of deep organics such as in bogs, where good sampling medium cannot be obtained.

In order to define porphyry style mineralization further, I.P. geophysical survey followed by trenching and/or drilling is recommended.

5.0 REFERENCES

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- SCHROETER T., LANE R., MINERAL RESOURCES: INTERIOR PLATEAU PROJECT (93F/03 AND PARTS OF 93F/02,6 AND 7), FROM MEMPR GEOLOGICAL SURVEY BRANCH GEOLOGICAL FIELDWORK 1993, PAPER 1994-1

6.0 STATEMENT OF QUALIFICATIONS: PERRY GRUNENBERG B.Sc, F.G.A.C., P.GEO.

I, Perry B. Grunenberg, here certify that:

- 1. I am an independent Consulting Geologist with P&L Geological Services having an office at RR#1, Walcott Road, Telkwa, British Columbia, VOJ 2X0.
- 2. I am a graduate of the University of British Columbia with the degree of Bachelor of Science in Geology (1982).
- 3. I am a member of the Association of Professional Engineers and Geoscientists of British Columbia (Registration No. 19246), and a Fellow of the Geological Association of Canada (Membership No. F5203).
- 4. I have practiced my profession in North America since 1982, having worked as an employee and consultant for Major Corporations and Junior Resource Companies.
- 5. This report is based upon a personal examination of all available company and government reports pertinent to the property, and upon field work undertaken on the property on July 16 and 17, 1997.

January 12, 1998 Telkwa, B.C. Perry Grunenberg, P.Geo., F.G.A.C.

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1)	TRAVEL - mob/demob, 842 km.		
	fuel - 140.7 ltrs @ .60/ltr 4X4 truck - 842 km @ .30/km		84.36 252.60
		sub total	\$336.96
2)	ANALYSES/ASSAYS - Min-En Labs 3 Till samples treated as soils (32 element IC	P + Au)	
	3 @ 18.35 + tax		58.90
		Sub total	\$58.90
3)	EQUIPMENT RENTALS/SUPPLIES		
ω,	Supplies - 1 rolls hip thread		2.75
	1 rolls flagging		4.50
	3 polybags		0.60
		Sub-total	\$7.85
4)	FOOD AND ACCOMMODATION		
•,	Food - 2 mandays @ 20/day		40.00
		Sub-total	 \$40.00
			,
5)	PERSONNEL - 1 Geologist 1 day @ 275.00/day		275.00
	1 helper 1 day @ 90.00/day		90.00
		Sub-total	\$365.00
6)	OTHER EXPENSES - Freight (samples, etc.)		20.00
	TOTAL	COSTS	\$828.71

APPENDIX

CHEMEX LABS LIMITED CERTIFICATES OF ANALYSIS



Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: P & L GEOLOGICAL SERVICES

S4, C20, RR #1 TELKWA, BC V0J 2X0

Project : PAW Comments: ATTN: PERRY B. GRUNENBERG Page Number : 1-A Total Pages : 1 Certificate Date: 03-OCT-97 Invoice No. : 19742834 P.O. Number : Account : MRV

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SAMPLE	PREP CODE	Au-AA ppb	Ag ppm	A1 %	Ав ррт	Ba ppm	Be ppm	Bi ppm	Ca %			Cr ppm	Cu p pm	Fe %	Ga ppm	Hg ppm	K %		Mg %	Mn ppm
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Chemex Labs Ltd.

Analytical Chemists * Geochemists * Registered Assayers 212 Brooksbank Ave., North Vancouver British Columbia, Canada V7J 2C1 PHONE: 604-984-0221 FAX: 604-984-0218 To: P&LGEOLOGICAL SERVICES

S4, C20, RR #1 TELKWA, BC V0J 2X0 Page Number : 1-B Total Pages : 1 Certificate Date: 03-OCT-97 Invoice No. : 19742834 P.O. Number : Account : MRV

Project ; PAW Comments: ATTN: PERRY B. GRUNENBERG

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SAMPLE	PREP CODE	Mo ppm	Na %	Ni ppm	P ppm	Pb ppm	Sb ppm	Sc ppm	Sr ppm	Ti %	T1 ppm	U ppm	V ppm	ррш Ж	Zn ppm	
PIT 1 PIT 2 PIT 3	201 202 201 202 201 202	10 15 5	0.03 0.01 0.01	24 9 8	350 160 400	6 6	< 2 < 2 < 2	5 4 4	41 31 36	0.12 0.16 0.15	< 10 < 10 < 10	< 10 < 10 < 10	57 62 69	< 10 < 10 < 10 < 10	82 38 46	