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Ministry of Energy, Mines & Petroleum Resources Mining & Minerals Division BC Geological Survey

Assessment Report	
<b>Title Page and Summar</b>	y

TYPE OF REPORT [type of survey(s)]: Airphoto	TOTAL COST: \$12,100.00			
AUTHOR(S): J. T. Shearer, M.Sc., P.Geo	SIGNATURE(S)	Stearen		
NOTICE OF WORK PERMIT NUMBER(S)/DATE(S):	$\bigcirc$	YEAR OF WORK: 2013		
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CLAIM NAME(S) (on which the work was done):				
COMMODITIES SOUGHT:				
MINERAL INVENTORY MINFILE NUMBER(S), IF KNOWN:				
MINING DIVISION: New Westminister Mining Division	NTS/BCGS: 92L/6W (92L	034)		
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OWNER(S): 1) J. T. Shearer	2)			
MAILING ADDRESS: Unit 5 - 2330 Tyner Street				
Port Coquitlam, BC V3C 2Z1				
OPERATOR(S) [who paid for the work]: 1) Same as above	_ 2)			
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PROPERTY GEOLOGY KEYWORDS (lithology, age, stratigraphy, structure The area is underlain by Parsons Bay Formation limestone and				
High Au and As were noted in soil samples along the main acce				
REFERENCES TO PREVIOUS ASSESSMENT WORK AND ASSESSMENT R				

Assessment Report 11543, 14086, 27332, 23645, 12404, 11292

TYPE OF WORK IN THIS REPORT	EXTENT OF WORK (IN METRIC UNITS)	ON WHICH CLAIMS	PROJECT COSTS APPORTIONED (incl. support)
GEOLOGICAL (scale, area)			
Ground, mapping			
Photo interpretation			
GEOPHYSICAL (line-kilometres)			
Ground			
Magnetic			
Electromagnetic			
Induced Polarization			
Radiometric			
Seismic			
Other			
Airborne			
GEOCHEMICAL (number of samples analysed for)			
Soil			
A114			
Rock			
Other	Hatele Andrew Albert a		
DRILLING (total metres; number of holes, size) Core	)		
Non-core			
RELATED TECHNICAL			
Sampling/assaying			
Mineralographic			
PROSPECTING (scale, area)			
PREPARATORY / PHYSICAL	State State State State State		
Line/grid (kilometres)			
Topographic/Photogrammetric (scale, area)			
Legal surveys (scale, area)			
Road, local access (kilometres)			
Trench (metres)			
		TOTAL COST:	\$12,100.00

# AIRPHOTO ASSESSMENT REPORT on the TEIHSUM RIVER PROJECT

in the

TEIHSUM RIVER – MERRY WIDOW MOUNTAIN AREA NORTHERN VANCOUVER ISLAND, BC NANAIMO and ALBERNI MINING DIVISION NTS 92L/6 WEST (92L.034) Latitude 50°19'30"; Longitude 127°18' EVENT #5449858

for

Homegold Resources Ltd. Unit 5 – 2330 Tyner Street Port Coquitlam, BC V3C 2Z1

by

J. T. Shearer, M.Sc., P.Geo. (BC & Ontario) Unit 5 – 2330 Tyner Street Port Coquitlam, BC V3C 2Z1

BC Geological Survey Assessment Report 34281

June 3, 2013

Fieldwork completed between December 1, 2012 and May 30, 2013

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## SUMMARY

The current work program began July 2012 and continued in September 2012. Limited prospecting and soil sampling of the northwest part of the claims in 2911 uncovered several gold-in-soil anomalies. The current program consisted of limited prospecting and 16 geochemical soil samples in the south central part of the claim block.

Previous work in 1991 by Granges Inc. identified two 200m wide gold in soil anomalies along the South Branch of Teihsum River between 2,000m and 3,000 metres south of the junction of the East branch and the South branch. The South Branch has also returned highly anomalous gold-in-stream sediment results by past government surveys.

The epithermal arsenic minerals realgar and orpiment are widespread on the northern part of the claims, suggesting an outward metal zoning (Cu, Pb, Zn, Ag, Fe, As and Au) from the Benson Stock.

Previous results from the 2012 soil sampling returned highly anomalous gold results up to 1.29 g/tonne in the central east part of the south creek. Follow-up soil/rock geochemistry and trenching/diamond drilling is recommended.

The most prominent Airphoto linears in the area are the northeast-southwest structures which cross the Creek at almost right angles. These northwest structures appear to control tertiary intrusives and cut through multiple drainages.

Primary bedrock structures/faults appear to be reflected by north-northwest linears along major ridges and gullies. These linears appear to be late stage.

Respectfully submitted

J. T. Shearer, M.Sc., P.Geo. (BC & Ontario) June 3, 2013



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Airphoto Assessment Report on the Teihsum River Project June 3, 2013

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# INTRODUCTION

This report details the results of a preliminary program of prospecting and a geochemical soil survey on the Teihsum Project, located south of Merry Widow Mountain and southeast of Victoria Lake, Northern Vancouver Island.

Previous work in 1991 by Granges Inc. identified two 200m wide gold in soil anomalies along the South Branch of Teihsum River between 2,000m and 3,000 metres south of the junction of the East branch and the South branch. The South Branch has also returned highly anomalous gold-in-stream sediment results.

The epithermal arsenic minerals realgar and orpiment are widespread on the northern part of the claims, suggesting an outward metal zoning (Cu, Pb, Zn, Ag, Fe, As and Au) from the Benson Stock.

The 2012 program consisted of 23 soil samples in the south central portion of tenure #836128 and 928433 in conjunction with prospecting and assaying 36 rock sample. Soil samples assayed up to 1.29 g/tonne gold along a branch road of the south logging road. Rock samples returned values up to 0.084 g/tonne gold. TM-3 assayed 2.3 g/tonne Ag and 502 ppm Cu.

# LOCATION and ACCESS

The Raging River Property is located approximately 25 Km southeast of the town of Port Alice on northcentral Vancouver Island. The claims lie within the Raging River and Teihsum River drainage area on the south slope of Merry Widow mountain, between 200 and 500 metres elevation, overlooking Spruce Bay Campsite on Victoria Lake.

Access to the claims is via the Victoria Lake Main logging road southeast from Port Alice, or west from Port McNeill on the Benson and Alice Lake Mains to V.L. Main. The Teihsum River drainage is accessed by gated logging road controlled by Western Forest Products (temporarily, in 2011, by a Grande Portage Lock). The road system in the Teihsum River valley is currently in poor repair, with several major bridge and road washouts from severe rainstorms during the 1990's and 2010.

The climate of Northern Vancouver Island is mostly mild and wet, with about 400 cm. of precipitation annually. Heavy snowfall covers the higher elevations from November to April, but seldom persists at lower elevations for more than a few weeks in January and February.

The claim area has been partially logged in the last 20 years, and a dense new forest covers the lower elevations. The upper reaches of the valley are covered by first-growth forest with fir, hemlock, red cedar, spruce and cypress being harvested.

A few days were spent cutting small, close spaced, alder trees from the access road to facilitate the geochemistry and prospecting.



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# **MINERAL TENURE (List of Claims)**

The Teihsum River Property consists of 20 MTO Cell claims recorded in the Nanaimo Mining Division as:

List of Claims					
Tenure #	Name	Area (Ha)	Issue Date	Good To Date	Owner
835062	Raging 3	516.35	October 4, 2010	September 23, 2013	J. T. Shearer
835063	Raging 4	516.63	October 4, 2010	September 23, 2013	J. T. Shearer
835082	Kashutl 1	516.78	October 5, 2010	September 23, 2013	J. T. Shearer
835263	T100	495.45	October 6, 2010	September 23, 2013	J. T. Shearer
836128	Vic West	495.25	October 17, 2010	September 23, 2013	J. T. Shearer
836057	Victoria 1	412.92	October 16, 2010	September 23, 2013	J. T. Shearer
836530	Vic 2	495.10	October 23, 2010	September 23, 2013	J. T. Shearer
928433	Vic 3	516.12	November 7, 2011	September 23, 2013	J. T. Shearer
928434	Vic 4	516.02	November 7, 2011	September 23, 2013	J. T. Shearer
928435	Vic 5	495.71	November 7, 2011	September 23, 2013	J. T. Shearer
936689	T 1	474.81	December 8, 2011	September 23, 2013	J. T. Shearer
936690	T-2	495.91	December 8, 2011	September 23, 2013	J. T. Shearer
936691	T-3	495.71	December 8, 2011	September 23, 2013	J. T. Shearer
939511	Rage 1	516.20	January 1, 2012	September 23, 2013	J. T. Shearer
939691	Raging 7	495.40	January 3, 2012	September 23, 2013	J. T. Shearer
940020	Phil 1	516.13	January 5, 2012	September 23, 2013	J. T. Shearer
940070	Raging 11	495.63	January 6, 2012	September 23, 2013	J. T. Shearer
940769	Pellie 1	496.28	January 11, 2012	September 23, 2013	J. T. Shearer
940770	Pellie 2	496.30	January 11, 2012	September 23, 2013	J. T. Shearer
941293	Raging T	495.24	January 18, 2012	September 23, 2013	J. T. Shearer

Table 1

Total ha: 9,953.94 ha

Following revisions to the Mineral Tenures Act on July 1, 2012, claims bear the burden of \$5 per hectare for the initial two years, \$10 per hectare for year three and four, \$15 per hectare for year five and six and \$20 per hectare each year thereafter.

## **PROPERTY HISTORY**

Vancouver Island has been explored for gold, coal, and base metals since the late 1700's, the following review is modified from Laird. The Merry Widow Mountain copper-iron-gold deposits were discovered in the late 1800's, but lack of road access slowed development until the 1950's, when Empire Development Ltd. and Coast Copper Co. Ltd. began production. Coast Copper Co. Ltd. produced more than 2 million tonnes of copper-gold-iron ore from the stratiform skarn replacement "Old Sport Horizon" at the base of the Quatsino Limestone. Mining ceased in 1972 due to mining out the developed ore bodies, but deep drill intersections indicate that other potential ore bodies exist south of the mine workings.

The Merry Widow and Kingfisher mines produced more than 3.7 million tonnes of iron ore from several massive magnetite deposits in limestone and sub-volcanic greenstone breccias near the contact of the gabbro stock. Gold, copper, and cobalt bearing sulphides were considered a serious impurity in the iron ore. In the late 1980's Taywin Resources Ltd. acquired a major land position in the camp, including the Merry Widow and Kingfisher mines. Significant drill intersections of gold-copper-cobalt mineralization indicate a potential ore zone in the former Merry Widow mine.

The first recorded explorations in the Teihsum River Valley area were in 1984 when the Vancouver Island Syndicate completed a geochemical and geological survey over an area several km. west of the claims. Several stream geochemical samples showed high values in gold, zinc, copper and arsenic. No bedrock sources were identified. (MEMPR AR# 12404)

In 1985, Westmin Resources Ltd. completed a program of geochemical stream and soil sampling over the area now covered by the claims. Several strong anomalies were found, with gold values up to 4650 ppb and anomalous copper, zinc, arsenic, antimony, and mercury. No geology is given in the report (MEMPR AR# 14086) and bedrock sources were not identified.

The 1988 geochemical stream survey showed highly anomalous gold-arsenic values in the Teihsum River.

In July of 1990, prospecting by James Laird located several realgar-rich vein systems in the valley but initial sampling results did not contain significant gold.

In the early 1990's, Granges Ltd. has claimed a substantial land position in the valley and has conducted stream and soil geochemistry, mapping and rock sampling.

More recently, Grande Portage has conducted a large exploration program on the adjacent Merry Widow Property and continues to have a presence in the area.



# **REGIONAL GEOLOGY**

The Merry Widow Mining Camp is underlain by a conformable sequence of volcanics and sediments of Upper Triassic to Late Jurassic age collectively known as the Vancouver Group. These rocks were deposited in a dominantly marine environment and have been cut by several generations of structures and basic to felsic intrusives accompanied by distinctive mineral deposits. The bedded rocks have been regionally block-tilted and strike northwest with moderate southwest dips.

The Vancouver Group is comprised of, in ascending order, Karmutsen Formation volcanics, Quatsino Formation limestone, Parson's Bay Formation limestone and sediments, and finally the Bonanza Volcanics.

The Upper Triassic Karmutsen Formation is estimated to be between 2 and 5 km thick in this area with the exposed base resting conformably on the older Sicker Group rocks about 75 km east in the Schoen Lake area. Karmutsen rocks include amygdaloidal basalt flows, pillow lavas and breccias, aquagene tuffs and thin limestone layers near the top of the sequence. The upper flows and sediments are host to sub-economic concentrations of disseminated chalcopyrite and bornite with minor native copper and vanadium minerals. Gold values are often related to propylitic alteration zones. Massive magnetite skarn zones are sometimes present in the upper units regionally.

The Quatsino Formation is estimated to be 1 km thick in the map area, and is composed of thick-bedded to massive grey to white limestone. The limestone has been bleached and re-crystallized within the thermal halo related to the Coast Copper Stock and is currently being mined for industrial purposes by IMASCO Ltd., on the north slope of Merry Widow Mountain.

The Parson's Bay Formation is a complex limestone and sediment package with rapid vertical and lateral changes in facies. Rock types include black limestone, thin-bedded tuffaceous limestone, agglomeratic limestone, grey coralline limestone reefs, thin-bedded calcareous argillite, and other waterlain chemical and clastic sediments. The formation varies from less than 10 metres southeast of Benson River to more than 300 metres in thickness near Victoria Lake.

The depositional environment is interpreted to represent a shallowing basin or shelf with a regressing shoreline. Fine clastic sediments were eroded from the uplifted Karmutsen Range to the east and transported westward into the basin, intermixing with ongoing chemical carbonate deposition. Marine fossils are common in some units and are usually well preserved. Syngenetic mineralization includes geochemical enrichments of Zn, Pb, Cu, Ag, Cd, Ga, and Ge in certain carbonaceous sediments.

At the close of the Triassic period, explosive andesitic volcanics of the Bonanza Volcanics began to fill the basin with heterolithic fragmental breccias, tuffs and flows. The volcanics and lesser interbedded limestone and sediments are up to 3 km. in thickness on parts of Vancouver Island. Near the base, the flows are green to maroon in colour and are commonly feldspar porphyritic, sometime with hexagonal jointing or rarely pillows. Towards the top felsic volcanics become more common, and the final phases of volcanism are locally sub-aerial. The breccias and tuffs often contain disseminations of hematite, pyrite, pyrrhotite, magnetite, jasper and chalcopyrite, and host the nearby Island Copper Mine porphyry copper-gold deposit.

The Keystone Intrusions are a system of greenstone dikes, sills and sub-volcanic heterolithic breccia pipes which formed feeders to the overlying Bonanza Volcanics. The intrusives are intimately associated

with prograde magnetite skarns within the thermal halo of the Coast Copper Stock and are often altered to endoskarn.

The Coast Copper Stock is a gabbroic intrusive complex co-magmatic with Keystone/Bonanza rocks and is the probable original source of magnetite in the skarns. The Quatsino limestone has been bleached and re-crystallized for more than 1 km outwards from the stock contact and all known ore bodies have been found within this halo. The stock varies from a coarse gabbro-diorite with a high magnetite content to anorthosite and pegmatite.

A somewhat younger phase of the stock forms a large central intrusion of potassium feldspar-rich Quartz Monzonite. Regionally, Jurassic potassic granitic rocks known as the Island Intrusions have been linked to felsic volcanism in the upper Bonanza Volcanics and to major economic mineral deposits. The granitic rocks and related felsic porphyries are intimately associated with copper-gold-molybdenum ore at the nearby Island Copper Mine, and to copper-gold-zinc skarns, mantos, and replacements at the Yreka Mine near Port Alice, the Alice Lake mineral belt, the Nimpkish area deposits and many others. On Merry Widow Mountain, the early Keystone Intrusions and iron skarns have been intruded by a younger greenstone suite associated with sulphide deposition and retrograde skarn alteration.

The final phase of intrusive diking observed is probably of Tertiary age and consists of north striking steeply dipping narrow greenstone dikes cutting the sulphide zones and as N-S diorite dikes in the Parson's Bay Formation and Coast Copper Stock.

The structure of Northern Vancouver Island is dominated by major northwest trending high angle faults which have allowed block-tilting of the Vancouver Group. The bedded rocks in the Merry Widow area strike northwest and dip from 20° to 50° to the southwest. North striking faults with steep easterly dips have repeated the stratigraphy east of the Coast Copper Stock with a total cumulative movement of more than 1 km and have a footwall-up relative movement. These faults are sub-parallel to the stock contact, and are very important controls in ore formation.

Northeast striking faults and fracture zones show little displacement as a rule but were also important ore controls. An exception to this is the northeast striking Rainier Creek fault with a footwall-up relative movement of possibly 1 km, indicating it is probably part of a ring-fracture system surrounding the Coast Copper Stock. The local fault-block movements could then be explained as being displaced upward to allow emplacement of the stock in late Jurassic time, possibly during intrusion of the quartz monzonite phase.

Multiple episodes of movement and mineralization of the fault systems is likely, and the youngest event near the Merry Widow Mine is narrow E-W trending structures with coarse crystalline carbonate and ankerite.

Another important depositional control is formational contacts such as the Karmutsen/Quatsino "Old Sport Horizon" and the reducing environment found at the Quatsino/Parson's Bay contact. Detachment-style faulting may have played a part in ground preparation prior to mineralization of the "Old Sport Horizon".

At the Merry Widow Mine, skarn-hosted massive magnetite ore bodies form large lenses parallel to the contact of the Coast Copper Stock, hosted in greenstone and limestone. The adjoining Kingfisher Mine hosts massive, clean magnetite in two converging pipe-like ore bodies in Quatsino limestone. At the



Coast Copper Mine, at least five separate magnetite-chalcopyrite ore bodies have been mined along the Karmutsen-Quatsino contact, hosted in a broad skarn zone updip from the contact with the gabbro stock.

Magnetite zones north of the Merry Widow Mine occur at the contact of intrusive greenstone breccia pipes and limestone, proximal to the stock contact. Chalcopyrite found within the magnetite zones is often poor in gold content. Coarse microcline feldspar is commonly found in the magnetite.

A younger mineralizing event, possibly related to quartz monzonite emplacement, is rich in gold, copper, cobalt and arsenical sulphides associated with mineralized greenstone dikes at the Merry Widow Mine and felsite sills at the Coast Copper Mine. The sulphides are structurally controlled and where magnetite skarns have been intersected a retrograde skarn assemblage is found consisting of actinolite, garnet, quartz, calcite, epidote, chlorite, amphibole, and coarse re-crystallized magnetite, often with a colloform texture. Distal from the magnetite zones, massive sulphides with little or no skarn alteration form mantos and replacements adjacent to fault zones and in solution cavities in limestone.

Observed mineralogy includes; chalcopyrite, pyrrhotite, pyrite, arsenopyrite, bornite, marcasite, cobaltite, bismuth, tellurides, native gold and a little sphalerite, with thin surface alterations of limonite, malachite, azurite, erythrite, nickel bloom, scorodite, covellite, realgar and native copper.

# LOCAL GEOLOGY

The Teihsum River area is underlain by Parson's Bay Formation limestone and Bonanza Volcanics intruded by various ages of basic to felsic dikes and sills, and the Coast Copper Stock. The bedded rocks strike northwest at about 330° and dip southwest at 20° to 50°. Gold and sulphide mineralization is associated with intrusive contacts and north to northeast trending faults and shear zones. The following outline of the local geology is modified from Laird (1984) and Geiger (2004).

The Parson's Bay Formation is exposed as a belt at least 500 m wide extending from near the eastern property boundary along the lower slopes of Merry Widow Mountain to Victoria Lake. Topography in this area closely parallels the dip of the beds. Lithologies include grey to black thin-bedded tuffaceous limestone, agglomeratic limestone and grey limestone reefs with well-preserved fossil corals. Shell fossils are also occasionally found. Near the Coast Copper Stock, the limestone is contorted, bleached, and recrystallized to a skarny jasperoid.

The Bonanza Volcanics overlie the sediments to the north and south, indicating that it is a probable fault block. On the south side of the valley, the volcanics are green and maroon basic flows with thin limestone interbeds. To the north basic volcanics occur on the upper slopes of Merry Widow Mountain, but were not examined in outcrop.

Heterolithic breccias are found as large boulders in the creeks but have not been seen in outcrop. The breccias occasionally have gabbroic or syenitic fragments in a volcaniclastic matrix. Near Victoria Lake, the lower volcanic flows are feldspar porphyritic with areas of chalcedonic amygdule fillings, quartz veins, hematite, pyrite and jasper.

Intrusives noted on the property are Keystone suite "greenstones", Coast Copper Stock gabbro-diorite, mineralized felsite dikes, and Tertiary diorite dikes. To the east of the property large slide blocks of greenstone/quartz monzonite breccia were observed.

The Keystone suite greenstones are seen as series of dikes and sills in the Road Zone, and outcrops along the road at the northern claim boundary show a small endoskarned stock with disseminated sulphides.

The Coast Copper Stock gabbro-diorite outcrops at the Bridge Zone along the Teihsum River and in road ballast pits in the northeast corner of the claims. At the Bridge Zone the gabbro is rather fine-grained and is altered by ankerite, hematite and silicification. The adjoining reef limestone is bleached white and mineralized for over 100 metres from the contact. The road ballast pits show brecciated gabbro with rotated fragments in a matrix of fine-grained diorite. The gabbro-diorite breccia has been cut by greenstone dikes and N-S striking Tertiary diorite dikes. Silicification, chloritization, and realgar veining along the edge of the diorite dikes was noted in one pit, and small fault-bound blocks of sediments in another. Outcrops along the road at the north claim line show gabbro with coarse magnetite crystals contacting skarned tuffaceous limestone with pyrite, hematite, chalcopyrite and minor sphalerite. Areas of gabbro pegmatite and anorthosite were also observed.

Light green to yellow felsite dikes and sills intrude the Road Zone and are mineralized with disseminated pyrite, hematite, pyrrhotite, chalcopyrite and sphalerite.

Late diorite dikes are thought to be Tertiary in age because of the observed geological relationships, visual similarity to the Zeballos and Mt. Washington intrusions of known Tertiary (Miocene) age, and the close association with realgar and polymetallic gold-quartz veins of probable Tertiary age.

To the west of the Raging River Property a gold showing referred to as the Road Zone is well exposed in numerous recent road washouts and along the steep canyon of the Teihsum River near the western claim boundary. The host rock is a dark tuffaceous and agglomeratic limestone striking 320° with a 50° southwest dip. The beds are cut by three generations of intrusives; Keystone dikes and sills of green andesite, mineralized felsite dikes intruding the greenstone dikes, and Tertiary diorite dikes striking N-S with a steep east dip dissecting the existing rocks. Tectonic brecciation and silicification of the limestone has resulted in numerous mineralized fault lenses in an area over 100 metres wide and more than 200m long, open in both strike directions.

The main structures are north striking shear zones with a steep east dip and a conjugate set of shears trending 040° NE and steeply dipping. Quartz-carbonate breccia veins, arsenopyrite, pyrite, sphalerite, chalcopyrite, galena and sometimes realgar are hosted in the north shears, altered limestones and at the edge of diorite dikes in NE trending tensional vein zones. The sheared rock has been silicified and carbonated with ankerite and calcite, kaolinized, and sometimes hosts green mariposite mica. Near the eastern edge of the zone, shearing is accompanied by much chlorite alteration with quartz-pyrite veins and some clear gypsum crystals in quartz vugs.

In the central Road Zone, a 1 metre wide shear zone known as the Red Devil Shear, hosts gold-bearing sulphides and abundant realgar, often forming in drusy vugs filled with small ruby-red realgar crystals and clear quartz crystals. Gold values were 0.607 oz./t (20.8 g/t) in a 40cm chip sample. Realgar is widespread along the edges of the diorite dikes and in joints, and forms the matrix of limestone breccias along detached bedding planes. Realgar veins without other sulphides do not contain gold. Pyrite, sphalerite, and some galena are also found in disseminations.

The Spruce Creek Vein is a NE trending 20 cm. wide shear vein with quartz, carbonate and massive realgar. The vein is hosted in tuffaceous limestone with dikes in the bottom of a small creek. A coarse crystalline black carbonate mineral forms in the wallrock.

The Gold Creek Zone is mineralized for at least 100m above the road in shear zones and in replacements. A 50cm wide shear zone strikes NNE and dips steeply, paralleling the creek. Malachite, chalcopyrite, pyrite, and minor realgar occur in the shear (AR-1, 2). A NS striking diorite dike cuts tuffaceous limestone in the vicinity of the shear and shows replacements of malachite, chalcopyrite and pyrite for about 5 metres in width along the dike edge. A well mineralized area gave assays of 0.276 oz./t Au and 2% Cu in a 1x2 m chip sample.

The Teaser Vein was the original mineral discovery on the claims, and is located in one of the road ballast pits. The vein is 30 cm. of quartz, carbonate, realgar and graphite in a shear zone along a diorite dike cutting gabbro-diorite breccia. Realgar is found in other small shears over a width of 40 metres. Small vuggy quartz-limonite veins occur also.

The realgar veins strike north with the diorite dikes and are exposed for 30 metres in length. Hematite and ankerite alteration is very strong around the shear zones. Strong chloritization and silicification was seen along some shears.

The Bridge Zone is exposed for about 100m along the Teihsum River, near a washed-out bridge. The host rocks are limestone intruded by the Coast Copper Stock and diorite dikes. The limestone is contorted, bleached, silicified and skarny for about 100m from the contact. At the contact, strong shearing occurs in a zone about 10m wide striking 065°. The shear zone hosts quartz-carbonate veins with pyrite, sphalerite and realgar giving assays of 0.116 oz./t Au and 3% Zn across 30 cm.

About 25 m. from the contact, a 1m wide replacement pod contains massive fine-grained sphalerite, chalcopyrite, pyrite and greenockite which gave assays of 0.203 oz./t Au (6.96 g/t) 2.63% Cu and 25.8% Zn across 1 metre. Diorite dikes are close by but apparently not related. (AR-7)





FIGURE 6 Proposed Drill Holes (Topography)

# **PREVIOUS GEOCHEMISTRY 2012**

The geochemical survey consisted of 16 "B" horizon soil samples collected at 25 metre intervals along the main road. Samples were taken with a shovel along the upper bank of the old road and bagged in standard kraft envelopes and any rock or plant fragments were removed. Stations were measured by hipchain and marked with flagging tape. The sample bags were dried and then shipped to Agat Labs Ltd. where they were analysed for gold, mercury and 30 element ICP. Procedures are described in detail on the assay sheets.

Anomalous results were returned, in 2011, up to 96ppb Au at 525m along the road from the gate. This sample was also highly anomalous in arsenic (3470 ppm As), lead and copper (186 ppm Cu). The last 4 samples, 1000m to 1600m, are anomalous in arsenic.

The 2012 program consisted of 23 soil samples in the south central portion of tenure #836128 and 928433 in conjunction with prospecting and assaying 36 rock sample. Soil samples assayed up to 1.29 g/tonne gold along a branch road of the south logging road. Rock samples returned values up to 0.084 g/tonne gold. TMS-1 assayed 2.9 g/tonne Au and 73 ppm Cu. Rock sample TM-2 assayed 2.3 g/tonne silver and 502 ppm copper. Rock sample TM20 assayed 3.2 ppm silver but only 2.7 ppm copper. Rock sample TMC5 assayed 0.06 ppm Au and TM1 assayed 0.084 ppm Au.

Follow-up rock sampling, trenching and diamond drilling were completed along the branch road leading up to sample TMS-1. A bedrock source for the highly anomalous gold in soil sample TMS-1 is expected to be close to the end of the branch road and south. Unfortunately these 2013 samples have not been assayed as yet.



# Figure 7 Garmin on Google









Figure 9 Drill Hole Location Map (Google)



Figure 10 Airphoto Key Map

# **AIRPHOTO INTERPRETATION**

A total of 18 colour airphotos were received on digital DC format (consisting of 5 CD's). Each photo was greater than 1 GB of data. A selection of low digital scans of the printed product are contained in Appendix III. Each photo was plotted on standard airphoto size as to 9 inch by 9 inch and grouped to the flight lines.

The most important series are:

- (1) Flight line 15BCB96017 No. 106, 107, 108, 109, 110
- (2) Flight line 15BCB96017 No. 83, 84, 85, 86, 87, 88
- (3) Flight line 15BCB96017 No. 55, 56, 57, 58, 59
- (4) Flight line 15BCB96017 No. 36, 37, 38, 39, 40
- (5) Flight line 15BCB96017 No. 9, 10, 11

A transparent overlay was attached and the prominent geological features as mapped were noted. Each stereo pair was examined in detail using a Gordon stereoscope type F-71 serial #9466. Detailed attention was given to the mapped location of the known alteration and mineralized zones.

The most prominent Airphoto linears in the area are the northeast-southwest structures which cross the Creek at almost right angles. These northwest structures appear to control tertiary intrusives and cut through multiple drainages.

Primary bedrock structures/faults appear to be reflected by north-northwest linears along major ridges and gullies. These linears appear to be late stage.

The northeast-southwest linears are reflected in the trace of Teihsum River and other parallel structures.



Figure 11 Airphoto 15BCB96017 No. 58



Figure 12 Airphoto 15BCB96017 No. 86

# **CONCLUSIONS and RECOMMENDATIONS**

The Raging River Property and surrounding area hosts a variety of gold and sulphide deposits including; epithermal veins, zinc and copper replacements, skarns, and magnetite zones.

Property mineralization occurs in higher stratigraphic units which have been eroded at the Merry Widow mine, and the Coast Copper "Old Sport Horizon" is at 1000m depth. A vertical zonation between Merry Widow-type massive sulphides and Teihsum River epithermal-style fault veins and replacements is implied by structure and mineralogy. The realgar zones may have been generated by the destruction of massive arsenical sulphides at depth and remobilized along Tertiary dikes. Drilling below the epithermal systems to the reducing horizon at the top of the Quatsino limestone may discover new Merry Widow-type gold-copper zones.

Gold-copper-zinc replacements are an intriguing target but need a detached structure or easily replaceable beds to accumulate a significant mineral deposit. The mineralized felsite dikes are possibly related to a porphyry-style system similar to the Island Copper Mine, and felsites are also found near bonanza-grade zones at the nearby Electrum and Hiller prospects. The Mt. Washington area is probably the most similar to the realgar-rich epithermal veins and breccias and could serve as an exploration model.

The Merry Widow Mountain and Teihsum River areas are within one of the largest and strongest magnetic anomalies on Vancouver Island and the probability of new mines being discovered here is excellent.

The current work program began October 2011 and continued in November 2011. Limited prospecting and soil sampling of the northwest part of the claims uncovered several gold-in-soil anomalies. The program consisted of limited prospecting and 16 geochemical soil samples.

Previous work in 1991 by Granges Inc. identified two 200m wide gold in soil anomalies along the South Branch of Teihsum River between 2,000m and 3,000 metres south of the junction of the East branch and the South branch. The South Branch has also returned highly anomalous gold-in-stream sediment results.

The epithermal arsenic minerals realgar and orpiment are widespread on the northern part of the claims, suggesting an outward metal zoning (Cu, Pb, Zn, Ag, Fe, As and Au) from the Benson Stock.

Anomalous results were returned, in 2011, up to 96ppb Au at 525m along the road from the gate. This sample was also highly anomalous in arsenic (3470 ppm As), lead and copper (186 ppm Cu). The last 4 samples, 1000m to 1600m, are anomalous in arsenic.

The 2012 program consisted of 23 soil samples in the south central portion of tenure #836128 and 928433 in conjunction with prospecting and assaying 36 rock sample. Soil samples assayed up to 1.29 g/tonne gold along a branch road of the south logging road. Rock samples returned values up to 0.084 g/tonne gold. TMS-1 assayed 2.9 g/tonne Au and 73 ppm Cu. Rock sample TM-2 assayed 2.3 g/tonne silver and 502 ppm copper. Rock sample TM20 assayed 3.2 ppm silver but only 2.7 ppm copper. Rock sample TMC5 assayed 0.06 ppm Au and TM1 assayed 0.084 ppm Au.

Follow-up rock sampling, trenching and diamond drilling was along the branch road leading up to sample TMS-1. A bedrock source for the highly anomalous gold in soil sample TMS-1 is expected to be close to the end of the branch road and south. Unfortunately these samples have not been assayed as yet.

The most prominent Airphoto linears in the area are the northeast-southwest structures which cross the Creek at almost right angles. These northwest structures appear to control tertiary intrusives and cut through multiple drainages.

Primary bedrock structures/faults appear to be reflected by north-northwest linears along major ridges and gullies. These linears appear to be late stage.

#### Recommendations

- 1. Enlarge the claim block to cover additional ground.
- 2. Detailed 1:500 scale geological mapping and prospecting of the geochemical anomalies.
- 3. Geological grid mapping.
- 4. 10 km of magnetometer surveys.

Respectfully submitted

J. T. Shearer, M.Sc., P.Geo. (BC & Ontario)

Estimated Cost of Future Work

The following detailed exploration budget is for the continued exploration of the Teihsum-Raging River Property, as detailed in recommendations in this report:

Phase One		
Mobilization		\$ 11,000.00
Geophysical I.P. Surveying , 27.3 km @ \$2500/km		\$68,250.00
Geologist, 40 days @ \$700/day		\$28,000.00
Assistants, 2 x 40 days @ \$400/day		\$32,000.00
Accommodation, 6 x 40 days x \$100/day (includes 2 geoph/crew)		\$24,000.00
Vehicles – 4x4, 3 x 40 days x \$110/day		\$13,200.00
Supplies		\$5,000.00
Equipment Rental, pumps, field equipment, etc.		\$4,000.00
Assays, Rocks		\$10,000.00
Assays, Soils, 950 @ \$35/ea.		\$33,250.00
Assays,Silt , 60 @ \$35/each		\$2,100.00
Report, Word Processing and Reproduction		\$10,000.00
Office, Telephone		\$2,000.00
		\$242,800.00
	Contingency	\$7,200.00
	Subtotal	\$250,000.00
	HST	\$30,000.00
	TOTAL	\$280,000 .00

Contingent upon the success of the above noted first phase detailed exploration program to more precisely delineate mineralized zones and structures. Also, contingent on the successful identification of additional geochemical and geophysical anomalies as a result of the above noted first phase expanded surveys; it is recommended that detailed infill geochemical and geophysical surveys also be conducted during the second phase program to identify more precisely potential drill targets. If the anomalies generated during the first phase program have not been closed off, it is also recommended that grids be extended to allow further soil sampling and/or geophysical surveying.

#### REFERENCES

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#### Geiger, W. K., 2004:

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#### Smitheringale, W. G., P.Eng., 1984:

Report on Stream Sediment Geochemical and Geological Surveys on the VIC Claim near Port Alice, Vancouver Island, BC, Assessment Report 12404

# Walton, G., May 1983:

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**APPENDIX I** 

# STATEMENT of QUALIFICATIONS

June 3, 2013

# STATEMENT of QUALIFICATIONS

I, Johan T. Shearer of Unit 5 – 2330 Tyner Street, in the City of Port Coquitlam, in the Province of British Columbia, do hereby certify:

- 1. I graduated in Honours Geology (B.Sc., 1973) from the University of British Columbia and the University of London, Imperial College, (M.Sc. 1977).
- 2. I have practiced my profession as an Exploration Geologist continuously since graduation and have been employed by such mining companies as McIntyre Mines Ltd., J.C. Stephen Explorations Ltd., Carolin Mines Ltd. and TRM Engineering Ltd. I am presently employed by Homegold Resources Ltd.
- 3. I am a fellow of the Geological Association of Canada (Fellow No. F439). I am also a member of the Canadian Institute of Mining and Metallurgy, the Geological Society of London and the Mineralogical Association of Canada. I am a member in good standing of the Association of Professional Engineers and Geoscientists of British Columbia (P.Geo., Member Number 19,279).
- 4. I am an independent consulting geologist employed since December 1986 by Homegold Resources Ltd. At Unit #5 2330 Tyner Street, Port Coquitlam, British Columbia.
- 5. I am the author of the report entitled "Airphoto Assessment Report on the Teihsum River Property" dated June 3, 2013.
- 6. I have visited the property on March 22, 23 and May 7, 8, 2013. I have carried out mapping and sample collection and am familiar with the regional geology and geology of nearby properties. I have become familiar with the previous work conducted on the Raging River Project by examining in detail the available reports and maps and have discussed previous work with persons knowledgeable of the area.

Dated at Port Coquitlam, British Columbia, this 3<sup>rd</sup> day of June, 2013.

I.T. Shearer, M.Sc., P. Geo.
### **APPENDIX II**

# **STATEMENT of COSTS**

June 3, 2013

#### APPENDIX II STATEMENT of COSTS

Wages		Without HST
J. T. Shearer, M.Sc., P.Geo., Geologist		
4 days @ \$700/day, March 22, 23 + May 7, 8, 2013		\$2,800.00
Expenses		
Truck 1, Rental, fully equipped 4x4, 4 days @ \$120/day		480.00
Truck 2, Rental, fully equipped 4x4, 8 days @ \$120/day		960.00
Fuel, 3,200km		910.00
Brian Howich and crew, Trail Construction, Jan. 5-Jan. 28, 2013		3,800.00
Field Supplies		400.00
Hotel, 4 days for 3 men		680.00
Camp, 3 days for 3 men, \$50/man/day		450.00
Eric Mackenzie, 6 days @ \$400/day, May 7-12, 2013		2,400.00
ATV Rental, 6 days @ \$55/day		330.00
Radios + GPS Rentals		400.00
Data Interpretation and Airphoto Interpretation		1,400.00
Report Preparation		1,400.00
Word Processing and Reproduction		350.00
	Expenses Sub-total	\$ 13,780.91
	Grand Total	\$ 17,980.91

Event # 5449858 Filed: May 20, 2013 Work: \$12,100.00 PAC: \$4,671.72 Total: \$16,771.72

# **APPENDIX III**

### AIRPHOTOS

June 3, 2013













































